

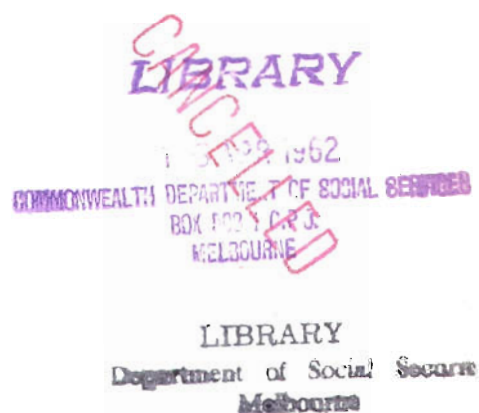
VICTORIAN YEAR BOOK 1962

*No. 76*

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[Gordon De Lisle  
Rocky Valley Reservoir, 5,300 ft. above sea level on the Bogong High Plains  
in the Australian Alps in north-eastern Victoria, is the main storage for the  
State Electricity Commission's Kiewa hydro-electric undertaking.





Filed \_\_\_\_\_

# VICTORIAN YEAR BOOK 1962

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*Deputy Commonwealth Statistician  
and  
Government Statist for Victoria*

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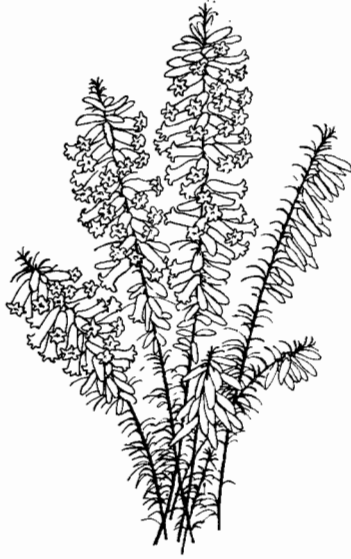
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“The form of the Pink Heath, *Epacris impressa* Labill. was proclaimed by the Governor of Victoria, General Sir Dallas Brooks, to be the Floral Emblem for the State of Victoria on 11th November, 1958. This plant was chosen as the result of a number of plebiscites made throughout Victoria by the Field Naturalists' Club of Victoria, the Tree Planters Association of Victoria, and the Metropolitan Press, over a period of some twenty years”

## PREFACE

In this seventy-sixth volume of the Victorian Year Book, the policy of preparing a Year Book along the general lines of the first volume in the new series published last year has been continued. From the reception accorded that volume, it was clear that there was a place for the type of Year Book which attempted to reflect life in Victoria as a whole.

Much of the descriptive matter in this volume is new and consequently replaces some articles published last year. Those replaced have been listed alphabetically in Appendix "B" which will be brought up to date each year. This will give readers a handy reference tool for locating special articles printed in previous volumes. It will be appreciated that the over-all size of a book of this type must remain reasonably constant, which means the omission or curtailment of some material each year. However, most activities which come within the purview of a Year Book should appear at least once every five years, if not more frequently. The photographs—culled from a variety of public and private sources—are new and the maps have been designed to match the contents of one or more of the longer articles.

The increased amount of descriptive and illustrative matter of these new Year Books in no way presupposes a diminishing emphasis on the Office's statistical activities. On the contrary, during 1961 two major publications were issued for the first time—*Victorian Rural Statistics* and *Local Government Finance Statistics*. These contain detailed statistics such as it would be impossible to include in the Year Book and are recommended as a supplement for readers interested in these subjects. The Victorian Office publications are listed on page 764 and are available on application as shown.

This Year Book contains most tables included in the previous issue and the aim of ensuring both comparability and continuity of information is thus being achieved. Any new statistical information ready for publication will be presented in due course. This brings to mind the 1961 Census. For the first time, such preliminary figures as are available at the time of printing are included in the Special Supplement at the end of this volume. Future issues of the Year Book will progressively incorporate other material derived from the Census tabulations.

The material in the Year Book has been carefully checked throughout, but I would be grateful to be advised of any defects in the text.

Readers requiring the main statistical information of the Year Book in a concise form are referred to the *Victorian Pocket Year Book* which is usually published some three months after this volume.

In view of the number of persons and institutions involved in the preparation of this Year Book, I have expressed my thanks to them in detail in the following pages.

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February, 1962.



## ACKNOWLEDGMENTS

The preparation of this Victorian Year Book has been a complex undertaking which would not have been possible without the willing co-operation of many persons and institutions in the community.

First, I wish to thank members of my own staff who have pursued their task with great enthusiasm and have again endeavoured to make the Year Book a true reflection of Victoria's activities today. It has been edited by the Editor of Publications, Mr. H. L. Speagle, M.A., B.Ed. The revision, compilation, and tabulation of statistics has been the responsibility of the Assistant Deputy Commonwealth Statistician, Mr. F. W. Sayer, B. Com., and the four divisional supervisors working under him :—Mr. P. Collins, Primary and Secondary Production (retired in August, 1961, and was succeeded by Mr. N. Bowden, B. Ec.); Mr. N. L. Dunstan, Business Statistics, Building and Employment; Mr. T. J. Fallon, B.A., Dip. Pub. Admin., A.I.A., Research, Development, and Publications; and Mr. G. E. Kitson, Demography, Social Conditions, Finance, Trade and Transport.

Secondly, my thanks are due to the many persons and institutions listed below who either supplied basic information for the various articles or advised on their preparation. Their suggestions in many cases made possible a continual revision of the scope as well as the contents of various articles.

Thirdly, I must thank the Government Printer and his staff for their interest, skill, and resourcefulness in printing this book.

The following persons and institutions assisted in the preparation of the articles :—

### **Part 1.—Physical Environment**

Commonwealth Bureau of Meteorology  
Department of Crown Lands and Survey  
Forests Commission  
Royal Botanic Gardens and National Herbarium—Mr. J. H. Willis  
Soil Conservation Authority  
State Electricity Commission  
State Rivers and Water Supply Commission  
Surveyor General  
Tourist Development Authority  
University of Melbourne—  
    Department of Botany  
    Department of Geography  
    Department of Geology  
    Miss Joyce Wood (Alpine Map)  
Victorian Railways

## **Part 2—Government and Administration**

Chief Electoral Officer  
Clerk of Parliament  
Crown Law Department  
Messrs. Longmans, Green and Co. Ltd. (Maps)  
Official Secretary to His Excellency, the Governor of Victoria  
Premier's Department  
Public Service Board

## **Part 4—Social Conditions**

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Anti-Cancer Council  
Australian Broadcasting Commission (Victoria)  
Australian Broadcasting Control Board  
Australian Council for Educational Research  
Australian Paper Manufacturers Ltd.  
Australian Red Cross Society (Victoria)  
Australian Wool Testing Authority  
Cancer Institute Board  
Catholic Education Office  
Children's Court  
Children's Welfare Department  
Commonwealth Scientific and Industrial Research Organization  
Commonwealth Serum Laboratories  
Commonwealth X-ray and Radium Laboratories  
Council of Adult Education  
Council of Public Education  
Defence Standards Laboratories  
Education Department  
Fairfield Hospital Epidemiological Research Unit  
Free Library Service Board  
Gas and Fuel Corporation  
Geelong Hospital  
Gordon Institute of Technology, Geelong  
Department of Health  
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Housing Commission of Victoria  
Imperial Chemical Industries of Australia and New Zealand Ltd.  
Kraft Foods, Ltd.  
Licensing Court  
Lord Mayor's Fund  
Melbourne City Council  
Mental Health Research Institute  
Mental Hygiene Authority  
Monash University  
Monsanto Chemicals (Australia) Ltd.  
National Gallery of Victoria  
National Parks Authority  
National Trust, Australia (Victoria)  
Nicholas Institute for Medical and Veterinary Research  
Nursing Adviser to the Minister of Health  
Postmaster-General's Department (Research Laboratories)

Prothonotary of the Supreme Court  
Repatriation Department  
Royal Botanic Gardens  
Royal Children's Hospital  
Royal Melbourne Hospital  
Royal Melbourne Institute of Technology  
St. Vincent's School of Medical Research  
Department of Social Services  
Social Welfare Department  
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Tourist Development Authority  
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    Faculty of Architecture  
    Baillieu Library  
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Geelong Waterworks and Sewerage Trust  
Latrobe Valley Water and Sewerage Board  
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Premier's Department—Division of State Development  
State Rivers and Water Supply Commission

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Fisheries and Wildlife Department  
Forests Commission  
Goldsbrough Mort and Co. Ltd.  
Grain Elevators Board  
Mines Department  
Soil Conservation Authority  
Soldier Settlement Commission  
State Rivers and Water Supply Commission  
Surveyor General  
University of Melbourne—  
    School of Agriculture  
    School of Engineering  
Sir Samuel Wadham, Emeritus Professor of Agriculture, University of Melbourne

## **Part 8—Manufacturing Industry**

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Chamber of Automotive Industries (Victoria)  
Gas and Fuel Corporation  
Premier's Department—Division of State Development  
State Electricity Commission

## **Part 9—Finance**

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Commonwealth Banking Corporation  
Council of Fire and Accident Underwriters  
Crown Law Department  
Life Offices' Association for Australasia  
Registrar of Companies  
Registrar-General of Titles  
Royal Mint  
State Savings Bank of Victoria  
Stock Exchange, Melbourne  
Surveyor General

## **Part 10—Trade, Transport, and Communications**

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Department of Civil Aviation  
Geelong Harbor Trust Commission  
Melbourne Harbor Trust Commissioners  
Melbourne and Metropolitan Tramways Board  
Overseas Telecommunication Commission  
Portland Harbor Trust Commissioners  
Postmaster-General's Department (Victoria)  
Retail Traders' Association of Victoria  
Traffic Commission  
Transport Regulation Board  
Victorian Railways Commissioners

# Part 1

## PHYSICAL ENVIRONMENT

### *Land Flora of Victoria*

#### **History of Investigation**

The first European to note or collect any plants within the area now constituting Victoria was Robert Brown, naturalist on Captain Matthew Flinders' voyage of discovery in the "*Investigator*". After the ship entered Port Phillip Heads, a landing was made near Dromana on 26th April, 1802, when Brown ascended Arthur's Seat. During the week that Flinders remained in this large land locked bay, Brown doubtless made other exploratory sorties around the northern shores of Mornington Peninsula, but he was absent from the party which climbed Station Peak (You Yangs) on the western side of Port Phillip. Little could be found in bloom so late in the autumn, and it is not surprising that very few botanical specimens were taken. Brown returned to Port Phillip (from the Tamar, Tasmania) on 18th January, 1804, and spent another week in the vicinity of present-day Sorrento during the abandonment of Collins' attempt to found a settlement there; he left for Hobart on the "*Lady Nelson*" with the last party of evacuees on 27th January. Among the specimens pressed on this latter occasion was an original sample of the showy, summer-flowering Blue Pincushion (genus *Brunonia*, a latinized form of Brown's name).

The full extent of these earliest botanical collections is not known, but there is evidence that Brown gathered from (or noted) about 100 species, eighteen of which provided the type material of undescribed plants. Owing to the brevity of his two visits, that great botanist unfortunately collected far less from Victorian soil than from any of the other Australian States.

Allan Cunningham, who devoted almost twenty years to constant collecting trips around the coasts of Australia and New Zealand (from 1817 until the time of his death in 1839), apparently by-passed Victoria. Hume and Hovell's epic overland journey from Sydney to Corio Bay late in 1824 was quite unproductive botanically. The Tasmanian botanist Ronald Gunn (1842) mentions his "own collection during a short visit to the south coast of New Holland in March, 1835", and James Backhouse, a visiting Quaker missionary who spent ten days in the environs of Melbourne during November, 1837, may have secured a few plant specimens—his published narrative (1843) certainly refers to several trees noted near the Yarra mouth.

After Brown, it was more than 32 years before any significant attempt was made to unveil the vegetation of Victoria. Between June and October, 1836, Major T. L. Mitchell crossed the western half of the State from Swan Hill to Portland via Pyramid Hill, the Grampians, and Lower Glenelg River, returning to the Murray at Wodonga by a line through the Pyrenees, Mount Alexander, Nagambie and Warby Range. During the four months approximately 1,100 miles were covered and at least 150 numbers of plants collected. Professor John Lindley worked over this collection in London, describing 40 items as species new to science.\* Several of Mitchell's plants had already been discovered around Port Phillip Heads by Brown, so that no more than about 180 species accrued from the combined efforts of these pioneer investigators.

F. M. Adamson, an early settler near Melbourne, collected specimens of local plants between 1840 and 1855, sending them to Sir William Hooker at Kew, England. Simultaneously J. G. Robertson, who managed a pastoral holding in the Casterton district, accumulated a collection of some 4,000 dried specimens which were also presented to Kew upon his return to Britain in the mid-1850's. These, apparently, were the first botanical contributions by residents within the Colony, but none of their material remained here—there was no local repository to receive it.

Probably no more than about 500 plant species had ever been collected in Victoria up to 1852; but early in the winter of that year, a young German migrant, Dr. Ferdinand Mueller, came from Adelaide to the newly discovered Victorian goldfields where he had thoughts of establishing a pharmaceutical business in the Castlemaine district. He arrived with the reputation of a sound botanist, for during the previous four and a half years his extensive travels and collecting trips through South Australia had given him a wide knowledge of the indigenous flora, and important contacts had been made with leading European authorities. At this time, Lieutenant-Governor La Trobe was looking for a capable man to act as colonial botanist and to begin a thorough survey of the country's vegetation. Mueller, recommended by Sir William Hooker of Kew, received the appointment which took effect on 26th January, 1853. This choice could hardly have proved more propitious, and from then until Mueller's death 43 years later, the investigation of Victorian plant life became almost identical with the activities of this extraordinary man. He was virtually alone in the field, confronted with the most meagre information and equipment (all the few prior collections of Victorian plants being overseas and quite inaccessible), so it was necessary to build up a local reference herbarium for indigenous flora.

Within six weeks of appointment, Mueller was away exploring the alpine regions of Mounts Buffalo and Buller by packhorse. After collecting at the highest altitudes, he crossed the rugged intervening terrain to the Latrobe River sources, travelled down to Wilson's Promontory, and so back to Melbourne along the coast—a three-months' trip of about 1,500 miles. Before the same

---

\* See T. L. Mitchell, *Three Expeditions into the Interior of Eastern Australia* Vol 2 : pages 127 to 301 (1838).

year was out, he set off on a more ambitious journey, embracing 2,500 miles and lasting five and a half months. This was westward from Melbourne to the Grampians, across to the Avoca River sources and down that stream almost as far as the Murray River, then west again to Lake Lalbert and through Mallee scrub to Swan Hill, down the Murray to Wentworth and then back along that river to Albury, up the Mitta Mitta to Omeo and the high Cobbobas peaks (6,000 feet), down the Snowy River and then west across the various Gippsland waterways to Melbourne again. He had been practically all around the Colony, the combined 4,000-mile treks of 1853-54 acquainting him with 1,500 species of higher Victorian plants, many being unknown to science and requiring formal publication with descriptions. These were the forerunners of many botanical journeys undertaken within and beyond the boundaries of Victoria.

Books and papers on botanical subjects flowed from Mueller's facile pen, to the number of more than 800 at the time of his death in October, 1896; included were colonial floras, large monographs on eucalypts, acacias, saltbushes, &c., and 94 fascicles of the *Fragmenta Phytographiae Australiae* (1858-82) which has the distinction of being the only Australian scientific periodical entirely in Latin. Between 1858 and 1861, Mueller's herbarium collection grew from 45,000 to 160,000 specimens. By 1868, his estimate was of 350,000—a phenomenal result for one man in just 15 years. So thoroughly did he browse over his "Australia Felix" that remarkably few species were left for subsequent collectors to discover.

Yet Mueller gladly received and acknowledged help from residents in distant places: from pastoralists, miners, clergymen, school teachers, surveyors, local naturalists, &c., whose novelties he often named after their discoverers. Mueller's labours in the cause of science earned a hereditary barony from the King of Würtemberg in 1869, and a K.C.M.G. from Queen Victoria in 1879.

The Field Naturalists' Club of Victoria, founded in 1880, enjoyed the patronage of Baron von Mueller who was a frequent writer for the Club's journal (*Victorian Naturalist*), laying the foundation of a botanical tradition that has lasted up to the present time. Indeed, after the Baron's death, systematic studies of the Victorian flora were very largely carried on by amateur naturalists who roamed the State, collecting and describing their findings in the *Victorian Naturalist*. More than 200 new species of plants have now been published in this journal which has served as a most useful medium for disseminating botanical information.

### Physical Environment

The natural distribution of plant life must be considered against a background of geography and geology; for the vegetative cover of any land surface is governed primarily by climate (viz., average weather at a given place over a long period of years) which, in turn, is a reflection both of geographical position and physiography. Over vast flat expanses of territory the maximum and minimum temperatures will become regularly lower with increasing distance from the Equator; but in mountainous terrain, the isotherms will be strongly influenced

by altitude, following topographic contours instead of retaining a normal east-west trend. The interception of oceanic winds by any lofty mountain chain inevitably means higher precipitation on the windward slopes, whether the latitude be torrid or temperate: either tropical or cool-temperate rain forests may be anticipated on one side of the barrier, and sclerophyllous woodland, scrub, savannah, or even desert on the other.

Changes of soil within a climatic belt commonly result from geological construction; they play an important, if more local and secondary, role in determining vegetational characteristics. For instance, wind-blown sand of low water-holding capacity or gravel deposits will carry a plant community differing markedly in floristic composition and physiognomy from that inhabiting a nearby tract of waterlogged clay. Saline soils favour communities with special adaptations (e.g., leaf succulence). In the Alps, where all soils are frozen for months in succession, underlying rock structure—whether granitic, basaltic, or sedimentary—has little influence on vegetation, being entirely subordinate to the modifications imposed by a vigorous climate.

Such environmental effects are well exemplified within Victoria where, despite its relatively small size of 87,884 square miles (less than 3 per cent. of the whole Australian continent), a surprising diversity of topography, weather, and soil-type is involved: from near desert conditions, with a rainfall of under 10 inches, in the hot lowland interior to alpine meadows, above 5,000 feet, where snow may lie for six months or longer. A rich, varied flora exists at and between these climatic extremes, so that Victoria can claim about 16 per cent. of the 15,000 ( $\pm$ ) species of vascular plants indigenous to Australia.

Geographically Victoria lies entirely south of the 34th parallel of austral latitude (and chiefly south of the 36th), sharing with Tasmania a predominantly temperate climate and flora; but the island State completely lacks the hot, dry continental climate obtaining in Victoria's north-western quarter. The extensive coastline of Bass Strait, coming under the influence of cool water from the Southern Ocean, enjoys a mean maximum summer temperature 15 to 20 degrees lower than in the far north-west, while in the extreme east a warm southward moving ocean current tempers the climate of coastal East Gippsland where frosts are rare.

During the wetter months of winter and spring (May–October), north-westerly winds prevail over Victoria and Tasmania; but in summer and autumn (November–April), when trade winds move down from the tropics, the depressed westerly system is deflected so as to blow into Bass Strait from the south-west. Another feature of Victorian summers is an occasional very hot wind from the northern interior, which desiccates foliage and aids the rapid spread of disastrous fires. Under consistently hot, dry conditions the plant formations become strikingly dissimilar from those characteristic of cool, moist places, e.g., the Mallee scrub in contrast to wet sclerophyll forest with its wealth of ferns.



The major physiographic feature in Victoria is the so-called "Dividing Range" and its ancillary north-south mountain spurs. Entering from New South Wales on a wide front of about 190 miles (between Albury and Cape Howe) this highland wedge extends westward, and gradually contracts, for almost 400 miles through the centre of the State until it terminates rather abruptly at the Grampians; two small detached ridges of similar geological structure (Black and Dundas Ranges) occur 8-14 miles farther west, while the actual "Divide" becomes lost on the plain country near Edenhope which has an elevation of only 400 to 600 feet. A low constriction at Kilmore Gap, only 30 miles north of Melbourne, cuts the mountain backbone into eastern and western portions of which the former is much larger, higher, wetter and colder—alpine conditions exist only to the east, attaining maximum development in the north-east (Bogong region).

Two isolated upland areas, near Cape Otway and in South Gippsland (including the detached mountain mass of Wilson's Promontory), have a rainfall in excess of 50 inches and, although at lower altitude, their climatic and vegetational affinities are with wetter parts of the eastern massif. High average rainfalls are restricted to the highlands; and in three small districts of Victoria (viz., Laver's Hill-Beech Forest in the Otways, Bright-Buckland, and the Bogong High Plains) mean annual precipitation exceeds 70 inches, the highest average for the State being 95.5 inches on the Bogongs where an actual maximum of 169 inches was recorded in 1956—chiefly in the form of snow.

Almost surrounding the Central Highlands are plain tracts: the drier Murray Basin Plains and Wimmera Plains to the north and west, better watered Gippsland Plains to the south-east and basaltic Western District Plains of great extent in the south-west, the last merging into small, sandy, coastal plains near Portland and Peterborough. The northern and coastal plains represent sedimentary basins, chiefly of marine deposition during Tertiary times.

The only other physiographic feature of consequence is that large north-western area (about 20,000 square miles) of sand hills, gypsum flats, and salt pans, collectively known as the Mallee and grading rather imperceptibly into the Wimmera Plains. It lies mostly below the 300-ft. contour and also below the 16-in. isohyet of annual rainfall, the Murray River forming a natural northern boundary. Here the mean maximum temperature for summertime (December-March) is between 84°F. and 92°F., with an actual maximum of 123.5°F. recorded at Mildura.

### **Vegetation Provinces**

#### *General*

With the broader environmental pattern thus briefly sketched, its relationship to the natural distribution of plants may now be discussed. In such a complex region as Victoria, where many types of vegetation overlap each other, merge or blend, it is almost impossible to provide

clear-cut boundaries for even the major communities. The extreme formations of forest and grassland are easily recognizable, but connecting them are woodland, savannah, and scrubs of varying degree.

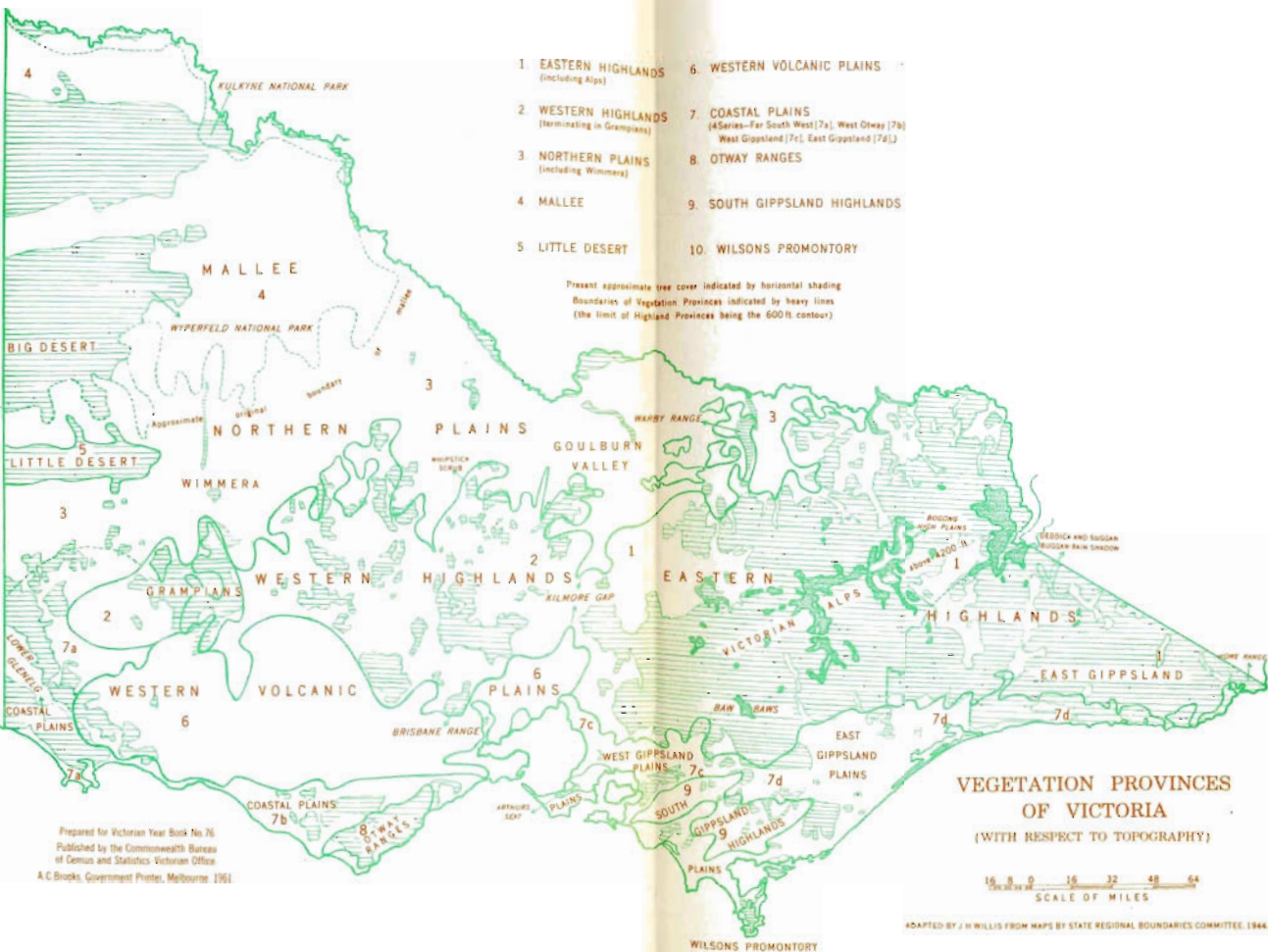
In the accompanying map, all timbered areas are indicated by horizontal shading; these include forests (Reserved Forest and unalienated Crown lands), woodlands, and mallee, but not open heath or scrub of any kind.

Ecologists differ in their interpretation of the higher floristic units of classification, but the largest widest unit recommended for use in Australia is the *alliance* (equivalent to "association" of some writers). This category takes the name of one or two dominant plant species which impart a distinctive physiognomy—for instance, a *Eucalyptus camaldulensis*—*E. largiflorens* Alliance embraces the characteristic forestal and woodland growth still dominating the flood plain of the Lower Murray and Wimmera Rivers, while a *Themeda australis*—*Danthonia caespitosa* Alliance formerly occupied much of the grassland formation on the Keilor basaltic plains near Melbourne. It has been found convenient to divide Victoria into ten "vegetation provinces" which, while defined in the main by topography and soil, do indicate the larger structural groupings of plant-life. These provinces are listed below, with appropriate comments.

### Eastern Highlands

The 600-ft. contour has been taken as the approximate boundary for highland Victoria. Since the State's great mountain wedge is pinched near its centre by the low Kilmore Gap (almost due north of Melbourne and along the 145th meridian), splitting of the former into eastern and western sections is a useful expedient, if quite arbitrary. Before the white man's arrival, the whole east highland region was forested up to an altitude of about 5,500 feet, above which were, and still are, limited areas of alpine grassland, herbfield and sphagnum bog (see pages 22–23). On favourable, moister aspects the tall valuable forests of wet sclerophyll type may even approach true temperate rain forest, whereas lower, more open forests on the northern foothills pass into savannah or grassland—formations now radically altered through grazing and agriculture. Reference to the map facing this page will show that far more forested country survives in this highland province than to the west of Kilmore Gap, probably because steeper slopes, rockier terrain, more persistent scrub, and long winter cold have precluded normal farming.

The important eucalypt alliances on these eastern mountains, from higher to lower altitudes, are: *Eucalyptus pauciflora* var. *alpina* (Snow Gum—usually above 4,500 feet), *E. delegatensis*—*E. dalrympleana* (Alpine Ash and Kindlingbark—at 3,000–4,500 feet), *E. regnans* (Mountain Ash—chiefly south of the Divide, and usually below 3,000 feet), *E. obliqua*—*E. radiata* (Messmate and Peppermint—very widespread), *E. sieberiana*—*E. scabra* (Silvertop and White Stringybark—chiefly East Gippsland), *E. macrorrhyncha*—*E. polyanthemus* (Red Stringybark and Red Box—drier northern ridges where rainfall is below 40 inches). Other trees which may form



**NOTE**

Results of the 1961 Census as available at the time of printing can be found in the Special Supplement following the Index.

extensive societies are *Eucalyptus stellulata* (Black Sallee—damp sub-alpine flats and gullies), *E. dives* (Broad-leaved or Blue Peppermint—drier, stony ridge-tops), *E. viminalis* (Manna Gum—moist valley slopes and stream banks), *E. bicostata* (Eurabbie, leaves of which may attain 30 inches in length), *E. elaeophora* (Bundy or Long-leaf Box), *E. bridgesiana* (But-But or Apple Box), *E. maculosa* (White Brittle Gum) and *E. rubida* (Candlebark). *E. neglecta* is endemic in gully-heads of the Eastern Highlands, while the Monaro species *E. kybeanensis* and *E. glaucescens* are small mallee-like trees restricted in Victoria to a few mountain peaks.

Species of *Acacia* form a prominent under-storey almost throughout the forest communities, and other leguminous shrubs (e.g., *Pultenaea*, *Daviesia*, *Oxylobium*, *Goodia* and *Indigofera* species) may dominate local societies. Representatives of *Pomaderris*, *Pimelea*, *Leptospermum*, *Zieria*, *Tieghemopanax*, *Prostanthera* (chiefly *P. lasianthos*), *Coprosma*, *Olearia*, *Cassinia* and *Helichrysum* are usually abundant, forming scrubs of varying composition wherever fire has opened up the forest. Conspicuous among the larger herbaceous plants are several members of *Senecio* (groundsels and fireweeds) and *Veronica* (speedwells). Ferns are more frequent in this province than elsewhere, and of these *Pteridium esculentum* (Bracken) is ubiquitous. Two noteworthy grasses are the harsh scrambling *Tetrarrhena juncea* (Forest Wire-grass), which may form tangles to 10 feet, among gully trees, and robust erect *Festuca dives* (Giant Mountain Grass) of similar height; the incidence of both is much increased by bushfires. *Wittsteinia vacciniacea* (Baw-Baw Berry) is a procumbent epacrid of damp, shady places in montane to subalpine forests; it has large pendent berries, and the monotypic genus is one of two that are endemic in Victoria.

The fern-gully is a specialized community within mountain forests, chiefly on and south of the Divide, and has a very distinctive facies. Abundant moisture, mild temperatures, and protection from wind are the factors responsible for the variety and luxuriance of ferns that cover the ground in deep sheltered valleys. There may be three distinct canopies above the floor of a typical fern-gully, viz.: tall eucalypts such as Mountain Ash, a mixture of smaller trees (Blackwood, Silver Wattle, Blanket-leaf, Musk Daisy-bush, Sassafras, and sometimes, Myrtle Beech), and beneath these a dense canopy of tree-ferns. So much light is excluded by these successive tiers of foliage that only about one-fiftieth of the possible intensity (in full sunlight) reaches earth, where maximum illumination is comparable with a greenish twilight. Delicate terrestrial or epiphytic ferns, mosses, fungi, and a few very shade-tolerant herbs (such as *Uncinia tenella*, *Chiloglottis cornuta* and *Australina muelleri*) are the principal inhabitants of the gully floor. The best development of fern gully vegetation, with deep humus, is to be found either in association with *Nothofagus cunninghamii* (Myrtle Beech)—toward the south-east of the province—or in East Gippsland where subtropical “jungle” trees and climbers often replace the usual upper storey of eucalypts and acacias.

Within such a large provincial area as the Eastern Highlands certain regions, by virtue of their climate or geological structure, have peculiar floristic features that warrant separate mention. Of such are the Alps (above 4,200 feet), also East Gippsland where pockets of near-coastal jungle contrast with drylands along the Upper Snowy River; both of these are discussed in the next section—"Some Regions of Special Interest." Pine Mountain, in the far north-east near Tintaldra, marks the only Victorian locality for a few noteworthy shrubs, while *Acacia triptera* and *A. decora* are unknown in Victoria beyond the Warby Range—an isolated granitic ridge close to Wangaratta and noted for its rich colourful flora. Immediately west from Warby Range are several detached highland outliers in the Northern Plains, but they lack any particular floristic interest.

### Western Highlands

No part of this hilly sector attains 4,000 feet, and only at Mount Macedon, Mount Buangor and several parts of the Grampians do points exceed 3,000 feet. Consequently, with its lower relief, gentler slopes, and virtual absence of alpine conditions, the flora is deficient in many eastern species and relatively poorer. Far more of the original forestal growth has been removed and the land turned over to grazing. Such fern-gullies as occur are small and very scattered, but larger fungi become conspicuous after autumn rains.

Messmate–Peppermint is again a very widespread eucalypt alliance, passing into Red Stringybark–Red Box on drier northern slopes of the Divide and finally into *Eucalyptus microcarpa*—*E. sideroxylon* (Grey Box and Red Ironbark) where rainfall passes below 25 inches on many parts of the western goldfields—at Bendigo, Maryborough, St. Arnaud, Stawell, &c.; in these places Red Stringybark tends to follow the crests of ridges, with Ironbark on the flatter terrain. *Acacia* species (*A. pycnantha*, *A. diffusa*, *A. acinacea*, *A. aspera*, &c.) and other legumes are still prominent components of the forest undercover, orchids being usually conspicuous during spring.

The transition to savannah of the Northern Plains is often gradual; but a more abrupt change of formation obtains along the southern boundary where Western District lava flows impinge on the older sedimentary hills, bringing grassland against forest. Some points of eruption were in the heart of the highlands, so that elevated sheets of basalt occur as isolated inliers; the two most extensive of these are from Ballarat to Maryborough, and between Daylesford and Kyneton. Such higher-level basalts probably supported a savannah woodland, with *Eucalyptus camaldulensis* (Red Gum) and *E. viminalis* (Manna Gum) variously dominant.

North of Bendigo an interesting extreme of forest carries diminutive, often stunted eucalypts having Mallee affinities, but growing on low ironstone ridges of sedimentary origin. The four chief components are *Eucalyptus behriana*, *E. viridis*, *E. fruticetorum* and *E. froggattii* which have been exploited locally for the extraction of oil. This formation is the so-called "whipstick scrub" which is floristically very rich, in springtime affording a pageant of colour

from numerous undershrubs (species of *Grevillea*, *Acacia*, *Melaleuca*, *Loudonia*, *Prostanthera* and *Dampiera*), with many orchids and other seasonal herbs.

The Grampians, a large circumscribed mountain system of parallel sandstone ranges that rise to above 3,000 feet, has so many botanical points of interest that it is discussed separately (see under "Some Regions of Special Interest").

### Northern Plains

Between the Highlands and Murray River, a vast level expanse stretches east and west for about 360 miles (from the Hume Reservoir near Wodonga to the South Australian border near Edenhope). Undulating Mallee country adjoins it to the north-west, and the south-western boundary is rather indefinite by virtue of a gradual transition to timbered coastal plains of the Lower Glenelg drainage system. In general, the region is delimited by the 15-in. and 25-in. isohyets of annual rainfall (which is more effective at the western extremity). The most frequent soils are neutral silty loams overlying alkaline clays which owe their origin to flood-plain deposition by streams flowing into the Murray. Over much of the Wimmera district (west from Donald) the plains are characterized by heavier grey calcareous clays that swell when wet and crack deeply upon drying (the *gilgai* or "crab-hole" structure in areas of poor drainage).

Before settlement, extensive grasslands alternated with savannah and savannah-woodland in which *Eucalyptus microcarpa* *Casuarina luehmannii* (Grey Box and Bull-oak) was an almost universal alliance, these two dominants each sometimes occurring alone. *Santalum acuminatum* (Quandong), *Acacia homalophylla* (Yarran) and *Melaleuca lanceolata* (Moonah) appeared here and there, the last on shallower soil. The few watercourses were marked by narrow woodlands of *Eucalyptus camaldulensis* (Red Gum), joined by *E. largiflorens* (Black Box) in the Wimmera where Myall (*Acacia pendula*) occurred rarely—it is now almost extinct. Sandy rises supported open groves of Cypress-pine or "Murray Pine" (*Callitris columellaris*), while occasional residuals of bedrock that rise above the alluvium (e.g. Mount Major near Dookie, Mount Hope, Pyramid Hill, and The Terricks, Mount Jeffcott between Charlton and Donald, Mount Arapiles) carried woodlands or scrub. In spring many seasonal herbs made a bright display, viz., certain orchids and lilies, species of *Ptilotus*, *Ranunculus*, *Swainsona*, *Eryngium*, *Convolvulus*, *Wahlenbergia*, *Goodenia*, and *Compositae* (*Brachycome*, *Minuria*, *Helipterum*, *Calocephalus* &c.). In swampy depressions nearer the Murray, *Craspedia globosa* (Drum-stick Buttons) was a striking feature, its large yellow and spherical heads often borne on stems 3-4 feet high.

Virtually all the Northern Plains are now grazed or under cultivation; it is the State's great "wheat bowl", irrigated parts (as in the Goulburn Valley) being turned to orchards and dairy farms. Thus the native vegetation has been either profoundly disturbed or replaced altogether, and only remnants of it now exist along roads, railway lines, creek frontage reserves, in cemeteries, and a few plots of unalienated Crown land.

*Mallee*

Occupying almost the whole arid north-western quarter of Victoria, and typifying many thousands of square miles in southern Australia, the Mallee formation consists of small, highly drought resisting eucalypts having a characteristic life-form, but the region is by no means botanically homogeneous. Its southern boundary with the Wimmera is irregular and now obscured through extensive clearing for crop land; the northern limit, however, is marked by a fringing forest of River Red Gum and Black Box along the flood-plain of the Murray, where swampy tracts may be completely dominated by tangles of *Muehlenbeckia cunninghamii* (Lignum). *Acacia stenophylla* (Eumong), *A. salicina* (Cooba) and *A. victoriae* (Bramble Wattle) are small trees of the river forest where *Glycyrrhiza* (Southern Liquorice), *Trigonella* (Sweet Fenugreek), *Swainsona* and *Psoralea* species are sometimes abundant on open inundated flats. Interspersed throughout the Mallee are areas of dry heath, grassland, saltbush, and halophytic communities on the salt-encrusted beds of dry shallow lakes—a prominent feature of the “Raak” country west from Kulkyn National Park.

The aboriginal name “mallee” refers not to any particular species of tree, but to a habit of growth: a large underground ligno-tuber (“mallee root”) that gives rise to several slender spreading trunks with umbrella-like clusters of branchlets and sparse foliage at their extremities. The canopy resulting from many trees is very even and horizontal at about 10 to 30 feet above the ground, heights depending upon soil quality. True mallee scrub, in which several co-dominant species may be involved, occurs on sandy ground usually underlain by travertine limestone at varying depths. The eucalypts (in Victoria chiefly *E. oleosa* with numerous forms, *E. dumosa*, *E. incrassata*, *E. leptophylla* and *E. gracilis*) are popularly designated by such colour adjectives as Red, Yellow, Blue, White, or Green Mallee. Other small trees frequently associated are *Callitris verrucosa*, *Acacia ligulata*, *Exocarpos aphyllus* and *Dodonaea attenuata*, together with shrubs of great variety (notably *Acacia* and *Olearia* spp.). The curious unisexual Bell-fruit Tree or “Native Poplar” (*Codonocarpus continifolius*) is occasional, but very conspicuous from its pyramidal habit, smooth pinkish bark and bright green oval leaves—with a burning taste like horse-radish. Succulent *Zygophyllum apiculatum* (Twin-leaf) is a common ground cover in more stunted mallee on nodular limestone; stock avoid it.

On ridges of deeper, reddish-brown sand the culminating alliance is *Callitris preissii*—*Casuarina cristata* (Pine and Belah); these two important trees are associated with other smaller kinds, notably *Heterodendron oleifolium* (Cattle-bush), *Pittosporum phillyreoides* (Weeping Pittosporum), *Myoporum platycarpum* (Sugarwood, or locally “sandalwood”), *Eremophila oppositifolia* (Weeooka, an emu-bush), *Hakea vittata* and *H. leucoptera* (needlewoods), *Santalum acuminatum* and *S. murrayanum* (quandongs).

Mallee-heath formation has developed on the white, less consolidated sand dunes of apparently more recent origin; it includes a few shrubby species that are common to coastal heaths (e.g., in *Aotus*,



*Leptospermum*, and *Hibbertia*.) There is a more varied assortment of shrubs than elsewhere in the province, members of *Grevillea*, *Exocarpos*, *Acacia*, *Comesperma*, *Lasiopetalum*, *Baeckea*, *Loudonia*, *Westringia*, *Prostanthera*, *Eremophila*, *Dampiera*, and *Olearia* contributing to the colourful springtime facies; some *Acacia* blossoms are deliciously scented. The hummock-forming, very spiny *Triodia scariosa* and *T. irritans* (Porcupine Grass) are frequent, heightening the interest of this formation, and three xeromorphic sedges may be locally common, viz., *Schoenus subaphyllus*, *Gahnia lanigera* and *Lepidosperma viscidum*.

Natural grassland areas are rather poor in species, representatives of *Danthonia* (wallaby-grasses), *Stipa* (spear-grasses), *Eragrostis* (love-grasses), *Chloris* (windmill-grasses) and *Bromus arenarius* (Sand Brome) being significant. Diminutive ephemerals of the *Cruciferae*, *Crassulaceae* and *Compositae* are very abundant during early spring. This formation has been radically changed through grazing and agriculture, the small introduced *Schismus barbatus* (Arabian Grass) becoming almost ubiquitous and many alien weeds—chiefly from the Mediterranean—exceedingly abundant.

Salt pans, gypsum and clay flats are remarkable for the strong development of succulent vegetation, chiefly low shrubby members of *Chenopodiaceae* in the genera *Atriplex* (saltbushes), *Kochia* (bluebushes), *Bassia*, *Salsola*, *Arthrocnemum* (glassworts) &c., with *Disphyma australe* (Rounded Noon-flower or Pigface) as a carpet-forming pioneer. *Frankenia* and *Plagianthus* species intermingle with the other halophytic shrublets. In the farthest north (between Mildura and Boundary Point) and adjoining the flood-plain forest of the Murray are Mallee-fringed flats that may open out into extensive plains. These areas carry a saltbush formation, sometimes described as "shrub steppe"; its main alliance is *Kochia pyramidata*—*K. sedifolia* (Shrubby and Hoary Bluebushes), with other *Kochia* species, *Bassia* and *Atriplex* in admixture.

There is an appreciable floristic difference between the far north-west and the Big Desert (of higher rainfall) to the south. These major regions of the Mallee are separated by a strip of more fertile country along the Ouyen-Murrayville railway line. Many *Chenopodiaceae* are restricted to the northern sector which is not invaded by several southern eucalypts (e.g., *E. baxteri*, *E. leucoxydon*, *E. porosa*, *E. calycogona*) and *Acacia* species (*A. acinacea*, *A. myrtifolia*, *A. farinosa*, and *A. trineura*). Differences are also apparent among the lower semi-shrubs and seasonal herbs.

The total number of indigenous vascular plants in the far north-west has been estimated as approximately 600 species, mosses as about 30 spp. Among fungi, agarics are poorly represented, but the more drought-tolerant gasteromycetes (puffballs, earth-stars, &c.) are both numerous and varied—20 spp. at least. Such very remarkable fungi as *Montagnites candollei*, *Phellorinia strobilina*, *Chlamydopus meyenianus*, *Gastrum fornicatum* (Arching Earth-star) and *Polyporus basilapiloides* (Stone-making Fungus) are restricted in Victoria to the Mallee.

*Little Desert*

This circumscribed area of about 700 square miles, west from Dimboola to the South Australian border, is almost surrounded by Wimmera plains. It consists of deep "podzolised" sands in low hillocks, intervening sandy flats and clay pans, with outcroppings of ferruginous sandstone here and there. The flora is closely related to that of the Big or Great Desert (lying about 30 miles farther north), with which it actually links up in the vicinity of Keith, South Australia. A double deficiency of copper and zinc affects these "desert" sands. Some plants of more southern range, e.g., in the Grampians, enter, but do not extend beyond the Little Desert, viz.: *Calectasia cyanea* (Tinsel Lily), *Orthoceras strictum* (Horned Orchid), *Grevillea aquifolium* (Prickly Grevillea), *Acacia mitchellii* (Mitchell Wattle), *Pultenaea d'altonii* (Hoary Bush-pea), *Boronia pilosa* (Hairy Boronia), *Eucalyptus viminalis* (Manna Gum), *Epacris impressa* (Common Heath), &c.

Woodland, mallee, and mallee-heath are the principal formations. On the deeper, leached, white sands the chief alliance is dominated by *Eucalyptus baxteri* (Brown Stringybark), associated often with *Callitris rhomboidea* (Oyster Bay Pine) on the crests of sandhills; this woodland community also extends far into the Big Desert north of Serviceton. Within the Brown Stringybark alliance damp hollows of sandy loam may support small stands of *Eucalyptus leucoxylon* (Yellow Gum). Another widespread eucalypt alliance is *E. incrassata*—*E. leptophylla* (Yellow and Slender-leaf Mallee), developed on shallow sand—to 6 inches deep—overlying deep "solonized" clay; it is usually accompanied by dense shrubberies of *Melaleuca uncinata* (Broom-bush) which may form a pure society.

The most varied, floristically rich, and interesting formation is the mallee-heath, with *Banksia ornata*—*Xanthorrhoea australis* (Desert Banksia and Austral Grass-tree) as a ubiquitous, if somewhat unstable, alliance; other shrubs (viz., *Banksia marginata*, *Leptospermum myrsinoides* and *Casuarina pusilla*) may be co-dominant in places. The whole community is based on a pyric succession, and the present dominance of certain species depends on regular burning—after 25 fire-free years the ultimate dominants would probably be *Xanthorrhoea* and *Banksia marginata*. Fires at intervals of less than five years have been found to eliminate species of *Banksia*, *Casuarina* and *Leptospermum*; shrubs could not reach maturity and produce seed in such a short span. Such wholesale destruction is very apparent in parts of the Little Desert that are repeatedly burnt over—presumably for the sake of grazing interests. Colour effects produced in spring by a multitude of orchids, lilies, numerous wattles, bush-peas, guinea-flowers and heaths, species of *Correa*, *Baeckea*, *Calytrix*, *Loudonia*, *Goodenia*, *Stylidium*, *Olearia* and *Helichrysum* are reminiscent of a Western Australian sand-plain, to which the mallee-heath is indeed ecologically akin.

No less than 560 species of indigenous vascular plants and 24 mosses have been collected within this province.

*Western Volcanic Plains*

Stretching for 190 miles between Melbourne and Heywood (with a narrow constriction near Bannockburn), and delimited to the north and south by Palaeozoic rocks of the Western Highlands and sandy or calcareous Coastal Plains, respectively, are some 6,700 square miles of relatively flat lava flows, tuffs, and scoria. Although by no means uniform in age, extending as they do from Middle Pliocene to Recent (some within the last 10,000 years), these deposits may be conveniently grouped together as a "Newer Volcanic Series"—one of the largest unbroken areas of vulcanicity in the world. The gently undulating surface is dotted with lava or cinder cones, to 1,000 feet in altitude, and there are sundry depressions of internal drainage which may form lakes—Lake Corangamite is more than 80 square miles in area and in 1936 its shallow waters were three times as salt as the sea. Basaltic rock and scoria have produced the richest agricultural and pastoral soils of western Victoria, almost the whole plain tract passing early into private ownership and being farmed from the 1840's and 1850's.

The indigenous vegetation has probably suffered greater changes than in any other province, and it is now possible to walk for miles without seeing an Australian plant. Over much of the region, natives have been entirely replaced by alien crop and pasture species or weeds, so that it becomes a difficult matter to visualize the old ecological pattern. Some species may have suffered extinction; others are now extremely rare.

Rainfall varies from less than 20 inches near the You Yangs to more than 30 inches in the south-west, and the plains appear greenest during winter when many plants begin to flower. Growth is practically dormant throughout summer, the dried clay soil opening in numerous cracks.

The basalt grasslands were always deficient in trees and taller shrubs; Hume and Hovell in 1824 remarked on the paucity of arboreal growth over the plains west of Port Phillip. The severities of exposure to wind, and the frequent shallowness of soil derived from underlying rock, have made conditions generally unfavourable for large woody plants. Introduced windbreaks of Monterey Cypress, pine, or various eucalypts are now a landscape feature on many private holdings.

Surviving pockets of indigenous flora indicate a dominance of *Themeda australis* (Kangaroo Grass) and *Danthonia* spp. (Wallaby-grasses) over considerable areas of grassland, with *Poa australis* (Tussock-grass) and *Stipa variabilis* (Variable Spear-grass) each forming an alliance on moister and drier ground respectively. These perennial grasses do not form a continuous turf, but occur in isolated tufts with much bare ground between individuals. Herbs abound everywhere, their life-form being a dense tussock with reduced leaf surfaces, a mat or rosette plant (pussy-tails, bear's-ear, &c.), a low semi-shrub (bluebushes and rice-flowers), perennating tuber (lilies and orchids), or small ephemerals.

About 450 vascular species have been recorded from basaltic areas near Melbourne; they include a high percentage of monocotyledons and *Compositae* (daisies), but such characteristically Australian families as *Proteaceae*, *Epacridaceae* (heaths), *Mimosaceae* (wattles), *Dilleniaceae* (guinea-flowers), *Stylidiaceae* (trigger-plants), and *Goodeniaceae* are very poorly represented or absent altogether. The massed colour of flowers during springtime is similar to that on the Northern Plains, and even the uniform brownness obtaining at the height of summer is relieved by late-flowering blue-bells (*Wahlenbergia bicolor*) or blebs of pink from Blushing Bindweed (*Convolvulus erubescens*).

Occasionally *Eucalyptus camaldulensis*, *E. ovata*, *Casuarina stricta*, *Banksia marginata* and *Acacia melanoxylon* are present as scattered trees in a savannah, the first eucalypt commonly following the courses of streams. Wherever sizeable gorges or canyons have been cut through the basalt, *Hymenanthera dentata* var. *angustifolia* (Tree Violet) takes advantage of the shelter to form dense thickets 8-12 ft. high. It is often accompanied by prickly *Bursaria spinosa* (Kurwan), *Urtica incisa* (Scrub Nettle) and tender *Sambucus gaudichaudiana* (White Elderberry), sometimes also by *Callistemon paludosus* (River Bottle-brush) at the water's edge. *Asplenium flabellifolium* (Necklace Fern) and *Pleurosorus rutifolius* (Blanket Fern) are widespread crevice plants of basalt escarpments and cliff faces, where *Rhagodia nutans*, *Pelargonium australe*, *P. rodneyanum* and *Bulbine bulbosa* also frequently perch. Under the micro-climate provided in collapsed lava tunnels and caves, fern growth may be spectacular—at the Byaduk Caves twenty species have been noted, including tree-ferns. With development of basalt barriers ("stony rises"), as between Colac and Camperdown, *Eucalyptus viminalis* may appear abundantly in pure stands, but this woodland is atypical of the province as a whole. Certain points of eruption (e.g., Mount Napier) became well timbered, but others (e.g., Red Rock near Colac) remained quite treeless, until the white man's arrival. Saline areas afford a few succulent species that are more characteristic of a coastal salt marsh, especially *Salicornia australis*, *Chenopodium glaucum*, *Selliera radicans* and *Pratia platycalyx*.

### Coastal Plains

Tertiary sediments, to a mile thick, underlie an irregular belt of flat country extending from the extreme south-west almost to Mallacoota, and reaching inland for distances up to 50 miles. This near-coastal tract is discontinuous, being broken at several places by later flows of basalt that reach the sea (around Portland and Warrnambool), by the Otway Ranges, the Port Phillip sunkland, South Gippsland hills and a few granite outcrops in East Gippsland. The rainfall gradient descends from about 40 inches in the vicinity of the Otway and South Gippsland Ranges, to less than 25 inches in a rain-shadow area surrounding Sale district and the Ninety-mile Beach. Temperatures throughout are rather uniform, as might be expected from the maritime situation, except that mean minimums in the far east are as much as 6° F. higher than those obtaining in the west. Soils in general are sandy, leached, and copper deficient, those derived from eolianite being calcareous.

In the far south-west of the State it is difficult to fix any definite boundary between Coastal Plains and the West Wimmera section of the Northern Plains. There is a complete mingling of elements; but an arbitrary line, dividing the Glenelg River's northern and western tributaries from streams flowing into South Australia, has been adopted. In East Gippsland the 600-ft. contour conveniently separates plains from highlands. So heterogeneous is the vegetation of this long, effused province that it will be considered in four geographical segments, thus :—

#### *Far South-West*

Between Portland Bay and the South Australian border lies a mixture of forest, woodland, heath, swamp, and now, much open farmland. Originally the major part of the area was forested, with *Eucalyptus baxteri* (Brown Stringybark) as the most important alliance, *E. obliqua* (Messmate) and a peppermint, dubiously referred to *E. vitrea*, being frequent associates. The gums *E. ovata* and *E. viminalis* become dominant on wetter sites, while Gippsland Mallee (*E. kitsoniana*) reappears in a few low-lying parts of this district. South Australian Coast Gum or Soap Mallee (*E. diversifolia*) attains its eastern-most limit at Cape Nelson. River Red Gum occurs along major water courses and as a spreading tree in savannah formation to the north.

Damp heathland soils are exceedingly rich in orchids, more than 80 species being on record for the Portland district. Of exceptional interest botanically is the gorge tract of the Lower Glenelg River which flows between impressive limestone cliffs for several miles; an eastern tributary, Little Moleside Creek, includes the western-most treefern gully on the Australian continent, and the whole Lower Glenelg forest region contains no fewer than 23 fern species, 80 mosses, about 50 orchids and many shrubs with decorative flowers. A small detached strip of coastal plain (between Port Fairy and Tyrendarra) is drained by the Eumerella and Shaw Rivers, but has few outstanding vegetational features; dense thickets of *Leptospermum lanigerum* (Woolly Tea-tree) normally cover flat swampy ground along streams.

#### *West Otways*

Extending from Warrnambool to Barwon Heads (west and north of the Otway Ranges, but south of the basalt plains) is another region of coastal heath, swamp, forest, and woodland, repeating many features of the far south-west but less diversified. Brown Stringybark is again an important alliance of the western portions, but is subordinate to Messmate in the east. Much of the land has been, or is now being, cleared for settlement.

#### *West Gippsland Plains*

This broken series embraces the once extensive heath along the eastern shores of Port Phillip Bay, the Koo-Wee-Rup Swamp region north of Western Port, French and Phillip Islands, heaths and coastal forests of South Gippsland (west of Corner Inlet). Stunted *Eucalyptus viminalis* is a dominant tree on deep sand, providing the main food

for koalas; it associates in places with *E. cephalocarpa* (Silverleaf Stringybark) or *E. obliqua*, *E. pauciflora* being occasional and now rare. *E. considiniana* (Yertchuk) and *E. kitsoniana* enter the province near Corner Inlet. *E. ovata* is typical of damp flats, while very waterlogged areas rich in humus carried a dense growth of *Melaleuca ericifolia* (Swamp Paperbark).

The Port Phillip heathlands were remarkably diverse in composition and floral attractiveness, orchids being frequent; but settlement has brought them almost to vanishing point. The ericoid type of foliage (small, narrow, rigid, and often spine-tipped leaves) was a manifest feature throughout most heathland associations, whether dominated by *Leptospermum laevigatum* (Coast Tea-tree), *L. myrsinoides* (Silky Tea-tree), *Olearia ramulosa* (Twiggy Daisy-bush), *Ricinocarpos pinifolius* (Wedding Bush), *Acacia oxycedrus* (Spike Wattle), *Aotus villosa* (Aotus), *Casuarina paludosa* (Swamp She-oak) or other shrubs.

#### East Gippsland Plains

In their western parts, near Morwell and Port Albert, the plains of this fourth series carry stringybark woodlands intermingling with patches of heath; *Banksia serrata* (Saw Banksia) becomes conspicuous near the coast—stocky, picturesque trees. Around Sale and Bairnsdale are wide park-like areas of savannah dominated by *Eucalyptus tereticornis* (Forest Red Gum), but much of the land is now cleared; *Casuarina littoralis* (Black She-oak) may sometimes be locally plentiful. There is a clay sub-soil and, despite the relatively low rainfall, water may lie in places for long periods. Swamp Gum is occasional on these wetter sites, where ponds may yield the curious, yellow-flowered, rush-like *Philydrum lanuginosum* (Woolly Waterlily) among prevailing species of *Juncus* (true rushes). The Gippsland Lakes themselves are fringed with *Melaleuca ericifolia* and the tall semi-aquatic grass *Phragmites communis* (Common Reed).

Farther east the province is largely wooded with stringybarks (*Eucalyptus scabra*, *E. muelleriana* and *E. obliqua*), but considerable areas of open, often swampy, heath are dominated by *Xanthorrhoea hastilis* (Spear Grass-tree) and known as “grass-tree plains”; orchids are abundant over the latter formation, numbering several species that are absent from other parts of Victoria (*Glossodia minor*, *Caladenia aurantiaca*, *Cryptostylis hunteriana*, *C. erecta*, *Pterostylis baptisti*, &c.). Conspicuous in places are the three small trees *Persoonia linearis* (with bark laminating in thin papery shales), *P. levis* and *Leptospermum attenuatum* which enter the province from New South Wales, while *Eucalyptus gummiifera* (Bloodwood) and *Angophora floribunda* (Gum Myrtle) appear in the extreme east—between Wingan Inlet and Mallacoota. The only known Victorian occurrence of the giant trigger-plant, *Stylidium laricifolium* (to 4 feet high), is at Wingan Inlet.

#### Otway Ranges

Mount Sabine, the highest point of this small maritime province, is only 1,900 feet; but rainfall is high (40–80 inches per annum) and wet sclerophyll forest covers a large portion. Luxuriant fern-gully vegetation

is developed beneath a canopy of *Nothofagus* (Myrtle Beech) in the climax alliance of *Eucalyptus regnans* (Mountain Ash); *E. obliqua* (Messmate), *E. goniocalyx* (Grey Gum) and *E. globulus* (Blue Gum) are very large trees that may be associated with *E. regnans* or form distinct communities that extend into drier country. Northern parts of the ranges are much drier, with lower forests of stringybark and peppermint. Ecological affinities with wetter areas in the Eastern Highlands are strong, and many gully species are common to both—even the uncommon epiphytic orchid, *Sarcophilus australis*, and endemic tree-fern, *Cyathea marcescens*. However, several floristic features of the Otways deserve mention. The small handsome tree, *Phebalium squameum* (Satinwood), is frequent here but unknown elsewhere in the State, although it does extend into Tasmania, New South Wales, and Queensland. There is a deficiency of *Grevillea* species, only a form of *G. aquifolium* occurring in a limited area near Anglesea.

Stands of *Eucalyptus sideroxylon* (Red Ironbark) exist in the drier foothills around Anglesea and Airey's Inlet, an isolated occurrence of a valuable tree. Even more remarkable is the re-appearance, on this eastern side of the Otways, of some Victorian plants, otherwise found only toward the far west (notably the Grampians and Lower Glenelg), e.g., *Schoenus breviculmis* (a low, matted bog-rush), *Thysanotus dichotomus* (Branching Fringe-lily), *Conospermum mitchellii* (Victorian Smoke-bush), *Daviesia brevifolia* (Leafless Bitter-pea), *Spyridium vexilliferum* and *Ixodia achilleoides*. In the vicinity of Anglesea no less than 63 species of orchids have been collected, but outside the strictly highland zone of the peninsula.

### South Gippsland Highlands

Except for slightly lower rainfall, these hills are an eastern counterpart of the Otways, having similar geology (Jurassic mudstones, &c.), height (to 2,000 feet), and proximity to the ocean. The dominant floral types, too, were virtually identical, but land clearance has robbed the Strzelecki Ranges of far more forest cover than in the Otways—fern gullies now exist only in a few isolated pockets (as at the Bulga and Tarra Valley National Parks, where there is a spectacular development). One of the springtime features of this province is the massed display of *Clematis aristata* on the crowns of trees (Blackwood, &c.) that the creeper has ascended.

### Wilson's Promontory

A granitic mountain mass, to 2,400 feet high at Mount Latrobe, the Promontory is tied to the mainland by a low neck of sand. Thus physiographically circumscribed, it is worthy to rank as a distinct, if very small, vegetation province. Much is shared with the South Gippsland Highlands that face it across Corner Inlet: there are mountain forests of *Eucalyptus regnans*, *E. globulus* and *E. baxteri*, fern-gullies and groves of *Nothofagus*, with a basal selvage of sandy heathland and paper-bark swamps. But Wilson's Promontory has a number of peculiar botanical attractions. Among its remarkably rich assemblage of higher plants (about 700 species), at least three have

never been found elsewhere in the State, although they extend to Tasmania, viz., *Lindsaya cuneata* (Oval Wedge-fern), *Lepidium praetervisum* (Island Pepper-cress) and *Pimelea drupacea* (Cherry Rice-flower).

Here too is the western limit of several plants having sub-tropical affinities, notably: *Microsorium scandens* (Fragrant Fern), *Pittosporum undulatum* (Sweet Pittosporum), *Elaeocarpus reticulatus* (Blue Olive-berry), *Eugenia smithii* (Lilly-pilly), also the larger wood-inhabiting fungi *Hexagona tenuis* and *Cymatoderma elegans* var. *lamellatum*. *Kunzea ambigua* (White Kunzea) is an extremely common, honey-scented shrub or small tree, but unknown farther west, while *Melaleuca armillaris* (Giant Honey-myrtle) which covers Rodondo Island (8 miles south of the Promontory) is also typical of far East Gippsland coasts, ranging thence into Queensland. The rare Coast Crimson-berry (*Cyathodes juniperina*) is restricted to a few rocky headlands and off-shore islets, its sole remaining Victorian habitat being Cape Woolamai. A prominent alliance on northern heaths at the foot of Vereker Range is *Banksia serrata* (Saw Banksia) which in places may form a pure woodland community; *Casuarina stricta* (Drooping She-oak) dominates high sand hillocks along the narrow neck south of Yanakie. Ferns and mosses are prolific in shaded gullies, 84 species of the latter having been noted; but this whole National Park of 160 square miles has been devastated, from time to time by severe bushfires, the last in January, 1951.

### Some Regions of Special Interest

#### Coast

In its 682 miles the coast line of Victoria exhibits great variety. There are ocean cliffs of Pleistocene dune-limestone (eolianite), mesozoic mudstone, sandstone, basalt and granite, sandy beaches and dunes, shingle beaches, tidal mud flats and salt marshes (see also pages 40-41). Varied also is the plant-life which, in general, comes under the influence of salt-laden winds, sometimes of direct sea spray. The strand flora is manifestly halophytic, with fleshiness as the most obvious adaptation to such an environment. Dispersal of seed by gales, water currents and ocean-roving birds tend toward a wide distribution for many shore plants, not only around the coasts of southern Australia but also in other temperate parts of the globe. At least ten genera of vascular plants and 33 species are restricted in Victoria to the coast; others (e.g., *Banksia integrifolia*) are principally coastal.

No Victorian tree is more remarkable than *Avicennia marina* (White Mangrove), a tropical species that reaches its farthest south on the sheltered tidal mud-flats of Western Port Bay; there it forms narrow belts around Quail Island, &c., extending for short distances along the banks of tidal creeks. A notable occurrence of mangroves at the mouth of Kororoit Creek, between Williamstown and Seaholme, was destroyed in recent years through the effects of oil discharged into Port Phillip Bay. White Mangrove is an intricate bush to small tree (10-20 feet high), with broad rounded crown. Horizontal roots grow for long distances through the surrounding black saline mud,



## ***Some Native Flora of Victoria***



*Acacia dealbata* (Silver Wattle) on banks of Yarra River, Victoria

[H. T. Reeves.]



*Helichrysum secundiflorum* (Cascade Everlasting) in Sub-alpine parts of Eastern Highlands.

[H. T. Reeves.]





*Eucalyptus camaldulensis* (River Red Gum) widespread in Lowlands. [H T Reeves.





[H. T. Reeves.

*Calytrix alpestris* (Snow Myrtle) Grampians to Wyperfeld National Park.





*Trochocarpa clarkei* (Lilac-berry) Sub-alpine moss beds.

[H. T. Reeves.



Clumps of endemic Silky Daisy (*Celmisia sericophylla*) along cascades near Spion Kop, Bogong High Plains, Victoria—at 5,600 feet.

[J. H. Willis.





[H. T. Reeves.

*Pandorea pandorana* (Wonga Vine) Gullies in Eastern Highlands.



[H. T. Reeves

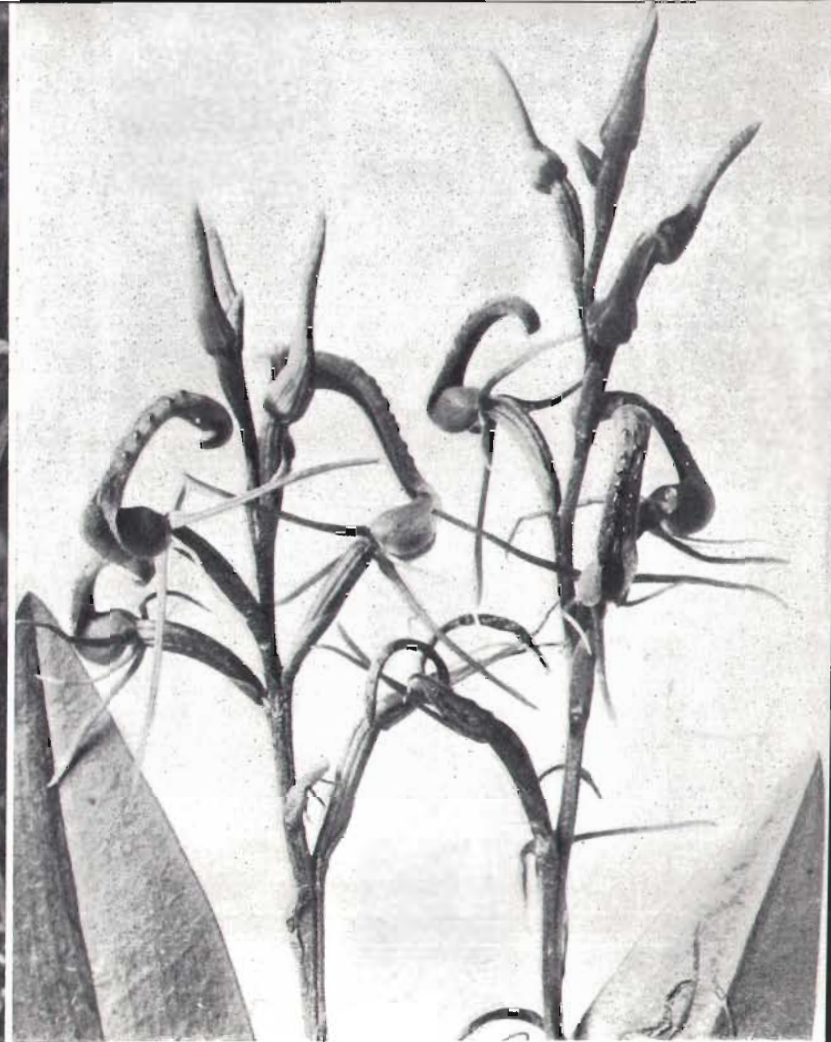
*Telopea oreades* (Gippsland Waratah) Far Eastern Highlands.





*Thysanotus tuberosus* (Common Fringe-lily).

[H. T. Reeves.



*Cryptostylis leptochila* (Small Tongue-orchid).

[H. T. Reeves.





*Grevillea barklyana* (Gully Grevillea) Eastern Sources of Bunyip River.

[H. T. Reeves.]





[H. T. Reeves  
*Oxylobium ellipticum* var. *angustifolium* (Gully Oxylobium).

[H. T. Reeves  
*Correa lawrenciana* (Mountain Correa).



which is permanently waterlogged and poorly aerated, and from these there arise at intervals vertical peg-like structures that are corky or spongy in texture; these specialized breathing roots ("pneumatophores") project several inches above the mud and are exposed to the air twice daily during tidal recessions. Another interesting feature is the vivipary of mangrove seeds, germination taking place on the parent tree and the embryo plant falling into salt water for dispersal.

Mangrove woodland commonly passes into salt marsh, above the limit of high tides, but the latter formation often exists quite independently. Coastal salt marshes in Victoria are usually dominated either by *Arthrocnemum arbusculum* (Shrubby Glasswort) or an alliance of *A. halocnemoides* (Grey Glasswort) and *Salicornia australis* (Austral Glasswort), with other succulent *Chenopodiaceae* in association (e.g., *Atriplex*, *Suaeda* and *Hemichroa* spp.) and sundry small annuals. *Frankenia pauciflora* (Sea Heath) is a frequent dwarf semi-shrub of ericoid appearance; Salt Plagianth (*Plagianthus spicatus*) and Austral Sea-lavender (*Limonium australe*) are occasional components of the marsh flora, both semi-succulent rosette plants. Carpet-forming *Disphyma australe* (Rounded Noon-flower) not only invades any bare ground fringing the salt marsh proper, but is also a pioneer colonizer with *Salicornia* on littoral platforms and spray drenched ledges of rock; it is one of the most salt-tolerant Australian plants, but the sap in its highly succulent foliage maintains an osmotic pressure of only 34–38 atmospheres.

Two noteworthy shrubs peculiar to sea cliffs are *Calocephalus brownii* (Cushion Bush), which forms very dense, rounded, white clumps to several feet wide, the minute appressed leaves being inconspicuous, and *Alyxia buxifolia* (Sea Box) with round, shiny, opposite leaves and red berries. *Asplenium obtusatum* (Shore Spleenwort) is a leathery littoral fern inhabiting only a few spots along the Victorian coast—viz., granite cliffs at Ram Head, Capes Everard and Woolamai, islets off Wilson's Promontory, and the basalt escarpments of Lady Julia Percy Island, but it is more frequent in Tasmania.

Coastal dunes afford a limited but highly interesting flora adapted to withstand strong salt-laden winds and deep humus-deficient sands. Succulent *Cakile maritima* (Sea Rocket) and *Atriplex cinerea* (Coast Saltbush) are typical beach plants, succeeding on bare sand just above the influence of tides; but the chief pioneer of loose and often mobile sand is *Spinifex hirsutus* (Hairy Spinifex), a long-rhizomic grass with silvery foliage and globular seed heads (to 6 inches wide) that break loose and roll about in the wind. Another dominant of unstable dunes is the wiry sedge *Scirpus nodosus*, while a native perennial thistle (*Sonchus megalocarpus*) and Coast Groundsel (*Senecio spathulatus*) may be associated. On the crest and down the fixed landward slopes of dunes a dense shrubbery commonly develops, with the following species in mixture or locally dominant: *Acacia longifolia* var. *sophorae* (Coast Wattle), *Leptospermum laevigatum* (Coast Tea-tree), *Leucopogon parviflorus* (Coast Beard-heath), *Rhagodia baccata* (Seaberry Saltbush) and *Helichrysum gunnii* (Coast Everlasting). Amongst them the honey-scented Bower Spinach (*Tetragonia implexicoma*) or

Little-leaf Clematis (*C. microphylla*) may commonly scramble, and in open glades the tall Coast Sword-sedge (*Lepidosperma gladiatum*) is often conspicuous. Probably the climax vegetation on most old, stabilized and humified dunes is a woodland having *Casuarina stricta* (Drooping She-oak) as an important dominant.

A vast assemblage of marine algae (in the red, brown, green, and blue-green groups) can be observed and studied in coastal rock pools at low tide or dredged from deeper water; but these fascinating, if primitive, cryptogams of the sea lie outside the scope of this essay.

### Grampians

Between the northern and southern terminal peaks of Mount Zero (near Horsham) and Mount Sturgeon (at Dunkeld) the Grampians extend as a wide crescent for 50 miles. Each of the four parallel ranges in this large sandstone belt (Mount William, Serra, Victoria, and Black Ranges) has a bold escarpment on the eastern face but gentler slopes to the west, differential erosion (not block-faulting) being responsible for the arresting topography. The highest, and most easterly, point is Mount William (3,830 feet), where there is an approach to sub-alpine conditions. Farther west lie the Dundas Range and Mount Arapiles, isolated outcroppings of the same hard Carboniferous sandstone but much lower in elevation. Very lofty in comparison with other parts of the Western Highlands, from which they stand aloof, the Grampians make a noble southern terminus to the Great Divide that began at Cape York. Major T. L. Mitchell, who ascended and named Mounts William, Zero, and Abrupt in 1836, was the first white man to visit the region; he was impressed by its great beauty and scientific interest, as were Baron von Mueller in 1853 and many subsequent botanists.

The area is renowned for the great variety, wealth and attractiveness of its flora. About 750 different flowering plants and ferns (almost one third of the State's entire flora) are to be found on or between these ranges, to which the Victorian occurrence of at least three genera and 30 species is restricted. Twenty species are endemic here, including five shrubs in the genus *Pultenaea*; the Rosy Bush-pea (*P. subalpina* of mountain tops) is unique in having rosy-purplish blooms, all of its many other congeners throughout Australia being yellow or reddish-flowered. Other endemics are *Eucalyptus alpina* (Grampians Gum, with large warty buds and fruits), *Bauera sessiliflora* (a tough wiry scrambler with showy magenta flowers in long spikes), and *Stylidium soboliferum* (a trigger plant with compact bristly offshoots of the "hen-and-chicken" type, usually on wet peaty ground). Among the fifteen eucalypts *E. obliqua*-*E. goniocalyx* is a major forest alliance in the higher moisture parts, where Soft Tree-fern (*Dicksonia antarctica*), King Fern (*Todea barbara*) and other components of the fern-gully community may occur in deep sheltered valleys. *E. viminalis* and *E. ovata* are frequent along streams and on wet flats; *E. camaldulensis* enters broader valleys (e.g., Victoria Valley) from the surrounding plains where it is dominant, while *E. baxteri* is often accompanied by peppermint eucalypts or *Callitris rhomboidea* (Oyster Bay Pine) on drier exposed ridges.

Scrub is often thick, especially following fires which have been heavy and disastrous over much of the Grampians. Heath formation is abundantly developed on sandy slopes and flats, and it is the colourful beauty of so many heathland shrubs that give the Grampians its irresistible charm—wattles, bush- and bitter-peas, heaths, honey-myrtles, guinea-flowers, boronias, correas, grevilleas, &c. There are also numerous kinds of lilies (including *Calectasia cyanea* with satiny-lustrous purple flowers of the dry "everlasting" type) and some 70 orchids. In swampy ground there is a wealth of sedges (*Cyperaceae*), rope-rushes (*Restionaceae*) and true rushes (*Juncaceae*).

A highly intriguing aspect of the Grampians concerns past geological history and the origins of the diverse elements that now compose its rich flora. For instance, the isolated occurrence of Coast Banksia (*B. integrifolia*) high up on Mount Rosea is suggestive of a former maritime environment. There is indeed strong evidence that in Miocene times the Grampians massif was a promontory marking the southern limit of a great Murray-Darling gulf over what is the present Mallee and Wimmera. Several Tasmanian plants occur here, but nowhere else in Victoria, notably *Leptospermum nitidum* and *Pomaderris apetala* ('sensu stricto'). Equally remarkable is the disjunction shown by a group of rare Grampians plants that otherwise range only from East Gippsland through the eastern sandstone areas of New South Wales into the sub-tropics, viz., *Psilotum nudum*, *Davallia pyxidata*, *Howittia trilocularis*, *Dodonaea truncatiales*, *Westringia glabra* and *Swainsona brachycarpa*; the last species is unknown between the Grampians and north-eastern New South Wales.

The most interesting link of all is furnished by a number of plants having undoubted Western Australian affinities, e.g., the endemic trigger-plant *Stylidium soboliferum*, *Thryptomene calycina* and the two *Trymalium* species. (*T. d'altonii* and *T. ramosissimum*), *Calectasia cyanea* and *Prostanthera spinosa* which do occur in a few other parts of far western Victoria and South Australia, and the extremely rare *Borya nitida* (Pincushion Lily) which is abundant in south-western Australia but otherwise known solely from one peak in the northern Grampians. Did the ancestors of these relict species once range widely across Australia? It is presumed that some plants have existed continuously in the Grampians from very remote times—from the Middle or even Early Tertiary.

### *Brisbane Ranges*

The Rowsley Scarp north of Geelong consists of intricately folded Ordovician slates and sandstones with intrusions of auriferous quartz. Its generally steep eastern face has been dissected into several narrow winding gorges by lateral stream action, but the western slopes are gentle and there are extensive cappings of Tertiary sand or gravel. This whole system of small complex ridges occupies roughly the triangle between Anakie, She-oaks and Mount Wallace, with Steiglitz as a centre; it is called the Brisbane Ranges and is clearly demarked from surrounding, very sparsely timbered to treeless basalt plains. Soils are poor and for the most part shallow ("skeletal") but there is an astonishing diversity of native plants—420 vascular species,

including 54 orchids. Messmate (*Eucalyptus obliqua*) covers the few better quality sites, intermixing with peppermints (*E. radiata* and *E. dives*) on drier terrain; but the most widespread forest alliance on stony ground is *E. macrorrhyncha* and *E. polyanthemos* (Red Stringybark and Red Box), with *E. sideroxylon* (Red Ironbark) as a frequent co-dominant. Numerous ericoid shrubs enter into the composition of heath on the more level sandy tracts; this formation is very similar floristically to the heaths along the Otway and Port Phillip coasts except that *Xanthorrhoea australis* has here become almost a weed, increasing at the expense of the smaller ground shrubs with each successive bush fire.

*Grevillea steiglitziana* and *Choristemon humilis* are the only species known to be endemic in the Brisbane Ranges, the latter an extremely rare epacrid constituting one of Victoria's two endemic genera—*Wittsteinia* (also of *Epacridaceae*) being the other. Several uncommon Victorian plants (e.g., *Grevillea chrysophaea*, *Pultenaea graveolens*, *Tetradlea glandulosa*, *Phebalium lamprophyllum*, *Prostanthera decussata*, *Poranthera corymbosa* and *Pomax umbellata*) have an isolated, western-most occurrence in this area, all other localities being widely scattered over the east and north-east.

### Alps

Altitudinal effects upon plant life become strongly marked on the elevated mountain plateaux or "High Plains" of eastern Victoria, above about 5,000 feet. These are the alpine and sub-alpine tracts of the State, where snow lies continuously for several months each year, and where the vegetation is exposed not only to freezing winter temperatures but to gale-force winds and high insolation during summer. Here arboreal growth diminishes in height and finally gives way to low shrubberies, herbfields or grassy meadows, interspersed with heaths and moss bogs along shallow drainage channels. The only tree extending into the Alps proper is *Eucalyptus pauciflora* var. *alpina* (Snow Gum) which is ubiquitous, silvery and often very picturesque. Plants of different families commonly assume the carpet forming or rosetted habit of growth. Another conspicuous life-form is the "espalier" type, in which long-lived shrubs cling like mats to the surfaces of boulders and produce only short unilateral shoots; notable in this respect are *Podocarpus lawrencei* (Mountain Plum-pine), *Baeckea gunniana*, *Kunzea muelleri* and a remarkably depauperate condition of the lowland Tree Violet (*Hymenanthera dentata*). Brilliancy of colour is another feature of alpine flowers, and in late summer attractive berries appear on several perennials, e.g., *Astelia*, *Drimys*, *Leucopogon*, *Pentachondra*, *Nertera* and *Coprosma* species. The flowering season extends over three months (December to February), but growth may continue until checked by late autumn frosts. Some species bloom very early, for example, shrubby *Hovea longifolia* (a purple-flowered pea) and the herbaceous *Caltha introloba* (Alpine Marsh-marigold) which may actually open its handsome, white, scented flowers in little caves of ice at the melting edge of snowdrifts.

Although occupying such a relatively small and mostly fragmented area, the Victorian Alps are of great floristic interest, supporting as they do twenty genera and at least 133 vascular species that are

restricted entirely to high moors or rocky summits above 4,200 feet; many of these mountain plants are shared with Tasmania and some with New Zealand. Widespread lowland species (such as *Montia australasica*, *Viola sieberiana*, *Pimelea ligustrina*, *P. axiflora*, *Stylidium graminifolium* and *Helipterum albicans*) are sometimes represented by shorter, stockier, or broader-leaved alpine forms of distinctive appearance. The daisy family (*Compositae*) is richly developed and exemplified by species of the large genera *Brachycome*, *Olearia*, *Helichrysum* and *Senecio*, as well as by endemic species in several small groups—the handsome riparian *Celmisia sericophylla* is apparently confined to rocky creek banks on the Bogong High Plains. Members of *Ranunculus* and *Carex* are frequent, and a boreal element is discernible in the occurrence of some other genera of limited range (*Botrychium*, *Cystopteris*, *Caltha*, *Geum* and *Seseli*). The isolated Baw Baw Plateau furnishes certain Tasmanian species, not found in other parts of the Victorian Alps (viz., *Actinotus bellidifolius*, *Euphrasia gibbsae* and blue-fruited *Coprosma moorei*), while *Coprosma pumila* and the clubmoss *Lycopodium scariosum* are almost confined to the Baw Baws on the Australian mainland. Cushion plants are nowhere as well developed in Victoria as on high moors of Tasmania.

#### East Gippsland

Far eastern Victoria, including the whole County of Croajingalong, has many peculiar features but is difficult to define as a botanic province separate from the Eastern Highlands (which comprise a major part of the region) or the East Gippsland Plains. Interest centres chiefly in the patches of jungle, which are small outliers of sub-tropical rain forest and perhaps relics of a much wider development in southern Australia during a milder, wetter period in the Pliocene. Victorian jungle pockets, although chiefly coastal, may penetrate the mountains. They are very clear-cut from the enveloping eucalypt forest, and are dominated by such smaller trees as *Eugenia smithii* (Lilly-pilly), *Tristania laurina* (Kanooka) and *Pittosporum undulatum* (Sweet Pittosporum) which form a dense closed canopy. Stout vines are numerous, their stems often hanging from the branches of trees like coils of rope; these lianes belong chiefly to the genera *Smilax*, *Geitonoplesium*, *Eustrephus*, *Sarcopetalum*, *Cissus*, *Marsdenia* and *Passiflora*. Ferns are abundant, many being epiphytes and a few not extending to other parts of the State. Four of the five epiphytic orchids in Victoria are not to be found west of the Mitchell River. Five small trees of eastern New South Wales just enter Victoria but do not range beyond the Genoa River; these are *Ficus coronata*, *Trema aspera*, *Santalum obtusifolium*, *Alectryon subcinereus* and *Eucryphia moorei*—the first and last only in the Howe Ranges. *Angophora floribunda* penetrates a little farther, and *Eucalyptus gummiifera* reaches Wingan Inlet. The State's only palm, lofty *Livistona australis*, is extremely localized and limited to a few small colonies on the Cabbage Tree Creek and Lower Brodribb River near Orbost. *Callistemon citrinus* (Crimson Bottle-brush) is a showy bush on wet flats of the near-coastal forests.

A rain shadow east of the Upper Buchan–Snowy River watershed, near the geodetic border with New South Wales, has been responsible for a dryland flora along the valleys of the Suggan Buggan, Upper

Snowy and Deddick Rivers. Here light forests of cypress-pine (*Callitris columellaris*) merge into box woodland (chiefly *E. albens* and *E. melliodora*) or savannah woodland. The occurrence of xeromorphic grasses (*Cymbopogon*, *Paspalidium*, *Enneapogon*, *Aristida*, *Stipa*, &c.), of *Gypsophila*, *Papaver*, *Blennodia* and *Calotis* species is reminiscent of the Mallee or Northern Plains and quite unusual among high mountains. Several plants from the Monaro tableland, New South Wales, intrude into Victoria at this low, dry corridor where *Brachychiton populneus* (Kurrajong) is a scattered but conspicuous tree. The Snowy River Gorge near Gelantipy yields two endemic species (*Westringia cremnophila* and *Hibbertia spathulata*), also showy violet-flowered *Boronia ledifolia* which comes no farther west but is plentiful enough in many parts of New South Wales.

It is possible to recognize an East Gippsland floristic division of the State, that will accommodate all the known scattered pockets of jungle, if the following somewhat arbitrary boundary line be established: north from Metung (on the Lakes) along the western margin of forest land to the Tambo River; then westward around the northern edge of the East Gippsland Plains as far as Stockdale, north again to the junction of Dargo and Wonnangatta Rivers, down the latter to its confluence with the Wentworth River and up the Wentworth to its source on the Divide; thence north-easterly along the crest of the Divide into New South Wales. By this means, no less than 37 genera and 200 species of flowering plants and ferns may be confined to the region east from the line.

### Principal Families and Their Uses

#### General

The uniqueness of the Australian flora has often been exaggerated in popular writings. Only six (or perhaps eight) very small families are peculiar to this continent, and the great majority have a wide distribution in both hemispheres. Those family groups which are largest numerically in Australia are, with few exceptions, also the largest in most other countries. It is at the generic and, particularly, the specific levels that endemism is pronounced.

The latest estimate places the native vascular flora of Victoria at 616 genera and 2,440 species. No less than 32 plant families are represented by only a single species. The twelve families having largest specific representation are as follows, bracketed numbers referring to the known species in Victoria:—

<i>Compositae</i> (262)	<i>Chenopodiaceae</i> (83)
<i>Gramineae</i> (174)	<i>Mimosaceae</i> (80)
<i>Orchidaceae</i> (172)	<i>Proteaceae</i> (64)
<i>Cyperaceae</i> (152)	<i>Epacridaceae</i> (59)
<i>Papilionaceae</i> (131)	<i>Liliaceae</i> (51)
<i>Myrtaceae</i> (130)	<i>Rutaceae</i> (50)

*Rhamnaceae* and *Umbelliferae* follow closely, with 49 and 46 indigenous species respectively. To the former belong 32 local species of *Pomaderris*, hazel-like shrubs with a strong representation in East

Gippsland. Another large Victorian genus is *Hibbertia* (guinea flowers), in the *Dilleniaceae*; golden blooms of many of the State's twenty species are conspicuous on southern heathlands. Endemic species account for only about 4 per cent. of the total flora—*cf.* 16 per cent. in Tasmania, where long isolation has doubtless been an important factor. Following are brief descriptive notes on the twelve main families listed above :—

### *Compositae*

Embracing more than 20,000 species, this is the most widely ranging and numerically the strongest family of flowering plants in the world. It is considered to be young geologically. Infinite variety of form and colour exists within this vast assemblage which includes all daisies and thistles, also such well known garden subjects as lettuce, artichoke, sunflower, dahlia, chrysanthemum, marigold, aster and cornflower. The so-called "flower" throughout this group is a composite structure—hence the family name—and is made up of several to many minute, stalkless, one-seeded flowers (or florets) that are closely packed into heads for maximum fertility. The whole flower head ("capitulum") may be surrounded by a ring of enlarged female florets or coloured bracts that create an illusion of petals; sometimes even the heads of flowers are clustered to form compound heads of great complexity. Seeds are, in general, small and extremely light, being adapted to dispersal by the wind and often provided with a parachute of fine spreading hairs (the "pappus"); thus they may cross mountains, deserts, or even stretches of ocean, and some species of *Compositae* now occupy almost every habitable region.

Species are either *liguliflorous*, with all the florets strap-shaped, or *tubuliflorous* in which the central florets at least (and sometimes all) are regularly tubular. The first category is poorly represented in Australia, except by dandelion, flatweed, skeleton weed, chicory, salsify and a few other introductions, all with a milky latex. The most familiar Victorian member is *Microseris lanceolata*, the so-called yam or "murrnong" of aborigines who used its tuberous roots for food; this herb has yellow dandelion-like heads and is abundant in most parts of the State, from sea-level to the Alps. The overwhelming majority of Australian *Compositae* belong to the *Tubuliflorae*, of which eight tribal divisions are present in Victoria. The State's two largest genera, *Olearia* (daisy-bushes, with 36 local species) and *Brachycome* (daisies, 33 spp.) are both in the aster tribe, the latter being herbaceous and the former consisting of shrubs or even small gully trees. Each genus extends to New Zealand, but not beyond Australasia.

*Helichrysum*, the genus of everlastings, has 29 Victorian species, both herbaceous and shrubby, but it is abundantly represented also in Asia and Africa; *H. bracteatum*, a native herb with large brightly coloured heads, has been brought into garden culture and is popular for dried work (wreaths, &c.). Sunray is the collective name for species of the closely related genus *Helipterum*, mainly of small annuals in the drier northern parts of the State. *Humea elegans* is a tall biennial of humid gullies, and has been called "incense plant"

from the powerful spicy aroma of its big tobacco-like leaves; the inflorescence (to several feet long) is reddish, plume-like, and gracefully drooping.

All but one of the 24 Victorian species of *Senecio* (groundsels) are herbs, and some are known as "fireweeds" from the rapidity with which they colonize burnt-over areas; the genus is extremely large, ranging throughout the world. A few exotic members, e.g., the noxious *S. jacobaea* (Ragwort), have become weeds in Victoria. Very few native *Compositae* have any economic value, but the figured timber from large butts of *Olearia argophylla* (Musk Daisy-bush) has been used in cabinet work. Allergic people may suffer severe dermatitis by contact with certain aromatic species, such as *Centipeda cunninghamii* (Sneezeweed) and *Cassinia aculeata* (Common Cassinia or Dogwood) which is responsible for "dogwood itch" among forest workers. Objectionable burs are produced by native species of *Calotis* (bur-daisies) and several alien weeds, e.g., Bathurst and Noogoora Burs in the genus *Xanthium*.

### Gramineae

The grass family has been estimated to contain about 10,000 species, and new kinds are constantly being described. They are by far the most important economic plants in the world, comprising all cereal crops (rice, wheat, maize, oats, barley, rye, &c.), providing the bulk of sheep and cattle fodder, straw, sugar cane, some sources of paper, perfumery oils, and even building material (from giant bamboo species). In Victoria native and imported grasses are the backbone of the pastoral industry.

Usually a grass is recognizable as such upon sight, the family hallmarks being briefly: hollow stems with hard nodes at intervals, a raised rim (or "ligule") separating the leaf-blade from its split sheathing base, the aggregation of flowers into a spikelet which becomes the unit of floral structure and the chief basis for classification into tribes, absence of sepals and petals. Grass flowers are greenish, simple, but highly specialized structures adapted to wind pollination. The spikelets of flowers may be clustered into heads, carried on long narrow spikes or widely diffused in loose panicles. The grass grain or "seed" is actually a hard one-seeded fruit.

Some indigenous grasses occur in every possible Victorian habitat, from the Mallee and coasts to the highest Alps, but the family is least conspicuous in shaded forests and jungles. Largest genera in the State are *Danthonia* (wallaby-grasses, 24 spp., all being useful fodder plants), *Stipa* (spear or corkscrew-grasses, 22 spp. with long-awned "fruits" that may injure the jaws and skins of sheep), and *Deyeuxia* (bent-grasses, 16 spp. of which thirteen are mountain plants). Forms of *Poa australis* (Tussock Grass) are almost ubiquitous, except in the drier north; those on the High Plains furnish summer feed for cattle. *Themeda australis* (Kangaroo Grass) is also a widespread perennial and of great fodder value, but rabbits have seriously reduced its potential. *Triodia irritans* and *T. scariosa*



(porcupine grasses) are exceeding tough, rigid plants with spine-tipped leaves; on Mallee sand-hills their spherical tussocks may attain widths of 6 feet. Creeping *Cynodon dactylon* (Couch) ranges widely through warmer parts of the globe and has been much used as a drought-resistant lawn grass. *Tetrarrhena juncea* (Forest Wire-grass) is one of the few species that will thrive in shaded mountain gullies; there its wire-like stems may scramble to heights of more than 10 feet by means of tiny siliceous teeth, making progress painful for the bush-walker. *Echinopogon ovatus* (Hedgehog Grass) is another much lower shade lover, having dense, ovoid, bristly heads. *Hierochloë redolens* and *H. rariflora* of eastern mountains are noteworthy for their cumarin-scented foliage, and *Puccinellia stricta* (Saltmarsh Grass) for its tolerance of high soil salinity.

### Orchidaceae

The number of orchid species in the world is approximately 20,000, with some kinds in almost every region except the coldest and driest places; but the chief centres of development are both warm and humid (e.g., New Guinea, Malaya, Central America, parts of Brazil). Orchids of the tropics are predominantly epiphytic, perching on trees or rock surfaces, but those in cooler temperate zones are almost entirely terrestrial. These quaint flowers have always been extremely popular, not only by virtue of their delightful colours or perfumes but also by the extraordinary and often fantastic modifications in floral structure that are concomitant to pollination by special insects—elaborate mobile traps, see-saws, sex mimicry, deep-seated nectar supplies, &c. The distinctive characters of an orchid flower are: three sepals alternating with three petals at the summit of a three-celled ovary, one of the petals being modified to form a lip (or labellum), and the single anther surmounting a central column with which the stigma is fused and often obscure. Seeds are always very minute and borne in prodigious quantities—appearing like dust.

Only five of the 172 known Victorian orchids are epiphytes. With two exceptions (summer flowering *Spiranthes* and *Gastrodia*), the remaining terrestrials all belong to genera that are chiefly or exclusively Australasian. Largest genera in the State are *Pterostylis* (greenhoods, 38 spp.), *Prasophyllum* (leek-orchids, 29 spp.), *Thelymitra* (sun-orchids, 23 spp.) and *Caladenia* (spider-orchids &c., 22 spp.). The greenhoods usually lack gay colours, but have gracefully curved, shell-like flowers in which three segments are connivent to form a galea; the paired lateral sepals may be erect, or deflexed, and in the latter type of greenhood the hinged labellum is always extremely mobile. There is no season when some species may not be found in bloom, and few districts that have no representative, but they are scarcest in the arid north. Flowers of leek-orchids are “reversed”, so that the labellum appears upside down; they are often small and very numerous along the spike, and a group of leafless, autumn flowering species with densely massed dark flowers is distinguished as “midge-orchids”.

Sun-orchids are unique in having almost regular flowers, with a labellum scarcely differentiated from other segments; the species are distinguished by ornate appendages that crown the column, and

by colour (commonly blue, but sometimes pink or yellow). The blooms of some kinds expand only in exceptionally hot weather, hence the vernacular name "sun-orchid". Spider-orchids possess long tentacular segments (sometimes 2-3 inches) and have singular elegance. Other remarkable Victorian orchids are the fleshy, leafless *Dipodium punctatum* (Hyacinth Orchid) and *Gastrodia sesamoides* (Cinnamon Bells or Potato Orchid) which may exceed 4 feet in height, gregarious *Corybas* species (helmet-orchids) with a low cowl-like bloom almost as big as the solitary circular leaf, *Caleana* (Flying Ducks) and *Spiculaea* (Elbow Orchid) with bizarre insectiform flowers, and *Diuris* species (double-tails or "donkeys") with predominantly yellow flowers. No Australian orchid is known to yield any commercial product (such as the genus *Vanilla* in America) and, apart from their considerable aesthetic appeal or ornamental value, Victorian orchids do not have the slightest economic importance.

### *Cyperaceae*

Sedges number about 4,000 species and, although related to grasses, they show an obvious preference for damp situations. Their major points of departure from the *Gramineae* are solid stems, entire (not split) leaf-sheaths without any definite ligule at the summit, and florets each subtended by a *single* glume (not a paired "lemma" and "palea" as in grasses). A few species, notably in the large genus *Carex*, are known to be useful forage plants and some with long pliant culms have been occasionally employed in basketry or mat-weaving, otherwise Victorian sedges are valueless economically, and some tend to be troublesome farm or garden weeds, e.g., *Cyperus rotundus* (Nut-grass). The importance of turf-forming kinds in preventing erosion of mountain catchments should not be overlooked. The principal genera in the State are *Carex* (true sedges, 27 spp.), *Scirpus* (club-rushes, 26 spp.), *Cyperus* (flat-sedges, 22 spp.), *Lepidosperma* (sword- and rapier-sedges, 17 spp.) and *Schoenus* (bog-rushes, 14 spp.). The first three genera are of world-wide range, *Carex* being one of the largest known (about 1,700 spp.). *Lepidosperma* and *Schoenus* are very largely Australian; members of the former group often have knife-sharp margins to their leaves and, together with the saw-edged species of *Gahnia*, are collectively known as "cutting-grass" in Tasmania. *Gahnia clarkei*, of shaded swamps or wet gullies in the south, has a palm-like aspect; in Victoria it may attain heights of 10 to 15 feet, with hard woody trunks to an inch in diameter—surely one of the biggest sedges in the world. The small, red, pendulous nuts of this, and other tall *Gahnia* species, are rather decorative, contrasting with the blackish plume-like inflorescence (1-3 feet long). *Gymnoschoenus sphaerocephalus* (Button Bog-rush or "button grass") is a tufted swamp-lover, with drumstick-like culms rising to 6 feet; it covers many square miles of country in western Tasmania.

### *Papilionaceae*

The pea family is a large assemblage of some 6,000 species, widely dispersed over the globe and abounding in Victoria where the majority of native species are shrubs. It includes garden beans and

peas, the peanut, ornamental brooms and lupins, and such valuable forage plants as clovers, medicks and lucerne. Gorse (*Ulex europaeus*) is one of the few alien species that have proved to be pernicious weeds; it was introduced originally for hedges, but soon escaped. The butterfly-like flowers are very characteristic in this family: a large dorsal petal (the "standard"), two equal laterals ("wings"), and two parallel, fused or adhering petals between them (the "keel"). They are frequently yellow with red or brownish tints, which have earned for them the fatuous popular sobriquet "eggs-and-bacon". Tribal classification is based upon the arrangement of the ten stamens (whether free or variously fused), the type of pod (opening longitudinally or fragmenting like a string of beads) and foliage (simple, compound, with or without tendrils, &c.).

Conspicuous Victorian genera are *Pultenaea* (bush-peas, 46 spp.), *Bossiaea* (bosseas, 12 spp.), *Swainsona* (swainson-peas, 12 spp.), *Dillwynia* (parrot-peas, 11 spp.), and *Daviesia* (bitter-peas, 8 spp.), none of which extends beyond Australia. In the large group of bush-peas, species range from mat-formers to tall forest shrubs, many bearing showy masses of golden or orange-red bloom. Swainson-peas are procumbent, rarely tall, herbs with purplish flowers in racemes and rather inflated pods. They are chiefly plants of open sandy ground, and some are known to cause a wasting sickness in stock that are addicted to grazing them; the toxic principle is cumulative, sheep and horses at last becoming "pea-struck"—emaciated, with general stiffness and defective sight. *Swainsona lessertiiifolia* (Coast Swainson-pea) has caused trouble on Bass Strait islands; it is not uncommon also on littoral dunes of Victoria. *S. procumbens* (Broughton Pea) favours wet depressions in heavier soils of northern and western plains; the large bluish flowers have twisted yellow keels and are as attractive as garden sweet-peas.

*Lotus cruentus* (a diffuse herb of arid places, with tiny red flowers) and *Goodia lotifolia* (Golden-tip, a forest shrub of broom-like appearance) both secrete cyanogenetic glycosides and are reputed poison plants. Species of *Daviesia*, with triangular pods, have bitter tasting flattish leaves that have sometimes been infused for a bushman's tonic; all are highly floriferous, with trusses of small yellow-and-brown or reddish flowers. One of the most strikingly decorative plants in Victoria is the widespread climber *Hardenbergia violacea* (False Sarsaparilla or Purple Coral-pea) which brightens many an open forest in early spring; some forms are in garden culture.

### *Myrtaceae*

Consisting entirely of shrubs or trees, and centred chiefly in the Pacific region, the myrtle family contains more than 3,000 species—only one reaches Europe, and South Africa has about twenty kinds. Important features are the simple, rather leathery and often opposite leaves that are dotted with oil glands, and the inferior ovary. Two well-marked subfamilies are thus definable: the invariably opposite-leaved *Myrtoideae* with fleshy, rather berry-like fruits, and the *Leptospermoideae* with dry capsular fruits that are sometimes woody. Only a single Victorian species, *Eugenia smithii* (Lilly-pilly) belongs

to the former group which is principally tropical; it is a jungle tree of East Gippsland, but much planted for ornament in parks and private gardens, the clusters of fruit varying from white to lilac or rosy-purple.

*Eucalyptus* embraces more species (the "gum trees") than all other Victorian genera of *Myrtaceae* combined. It is by far the most important and valuable genus in the State's whole flora, furnishing the bulk of building and structural timbers, fencing, firewood, paper pulp and such lesser products as oil and honey. Specialists differ somewhat in the limits assigned to eucalypt species, one authority raising to the specific level a population that others would regard as a mere variety or perhaps a hybrid, and *vice-versa*. With such divergencies in mind, it would be safe to say that Victoria has about 70 "good" species, seven of which are endemic.

All eucalypts have only rudimentary petals that never expand; they are fused (often with the sepals also) in a variously shaped cap ("operculum") that circumsciss and falls off at floral maturity. It is the massing of innumerable, sometimes coloured stamens that give character to "gum blossom". Accurate classification has proved extremely difficult; leaves, anthers, fruits, bark, and even oils have been emphasized by various writers, but a satisfactory natural scheme still waits to be devised. Baron von Mueller, more than a century ago, employed a popular sorting based on easily observable bark features. With certain modifications, this is still of use in the field; foresters group the species known to them as *gums* (smooth-barked), *stringy-barks* or *peppermints* (fibrous-barked, the latter also with peppermint-smelling foliage), *boxes* (scaly- or flaky-barked), *ironbarks* (with hard, deeply furrowed bark), &c. Space does not permit reference to individual species in this large genus; suffice it to say that *E. regnans* (Mountain Ash) is the tallest flowering plant in the world—a few specimens in the 640 acre reserve at Cumberland Falls near Marysville just overtop 300 feet, but their height is exceeded by a 322-ft. tree in the Styx Valley near Maydena, Tasmania.

Next to *Eucalyptus*, the main myrtaceous genera in Victoria are *Leptospermum* (tea-trees, 16 spp.), *Melaleuca* (paper-barks and honey-myrtles, 12 spp.) and *Callistemon* (bottle-brushes, 7 spp.). Many are highly attractive subjects, brightly-flowered, quite hardy and admirable for garden culture. Some produce nectar of good quality, valuable to apiarists; other straight-growing kinds provide stakes for brushwood fencing. One of the most popular Victorian bushes for cut flowers is *Thryptomene calycina*, endemic in the Grampians but widely cultivated; its long feathery sprays of massed white blossom last remarkably well indoors. Numerous coloured and double-flowered cultivars of *Leptospermum scoparium* (Manuka) are now on the market, but these have been developed from New Zealand forms of the species.

### *Chenopodiaceae*

Comprising about 1,400 species and distributed through lowland regions of the world, the goosefoot family is well adapted to flourish on saline ground, e.g., in salt marshes near the sea or fringing salt

pans of the arid interior. They are mostly small shrubs or herbs, rarely trees. Some members accumulate quantities of salt in their sap and may have very succulent foliage. None is known to be poisonous. The botanical characteristics are small, green, herbaceous (sometimes mealy) flowers with a single whorl of one to five segments, and minute one-seeded fruits with curved embryos. Despite this rather simple structure, there is considerable variety in the fruiting envelope which may become extraordinarily enlarged. No less than 50 of the 83 indigenous Victorian species are restricted to the Mallee province, the State's largest generic representations being in *Atriplex* (saltbushes, 19 spp.), *Kochia* (bluebushes, 16 spp.), *Bassia* (prickly bluebushes, 14 spp.), and *Chenopodium* (goosefoots, 9 spp.).

All these genera range far beyond Australia, but *Kochia* and *Bassia* find their richest development here. *Atriplex* species are recognized by their curiously modified fruiting valves, viz., a pair of spongy flaps (fused at the base), and *Kochia* by the horizontal, hyaline wings surmounting its fruit-bearing envelope. Members of both genera are very nutritious to stock, and regarded highly by pastoralists in the hot dry interior; but some valuable species have unfortunately been displaced through over-stocking and rabbit infestation, notably *Atriplex nummularia* (Old-man Saltbush). *Kochia georgei*, *K. erioclada* and *K. pentatropis*, with exceptionally large, bronze or rosy fruit-wings, are among the most handsome plants of saline flats and lake beds in the far north-west. Spiny fruits of *Bassia* species are frequently a nuisance in wool clips, *B. birchii* (Galvanized Bur) of western New South Wales and Queensland being a serious offender. *Rhagodia spinescens* (Thorny Saltbush) is a useful hedge plant, if one can disregard its rather fishy odour. *Enchylaena tomentosa* (Barrier or Ruby Saltbush) has brightly coloured, succulent fruits of yellow, red, or amethyst hue; its foliage was used as an effective "green" and antiscorbutic by explorer Charles Sturt in his retreat from the drought-stricken interior during 1845.

### *Mimosaceæ*

This family of probably 2,500 species is widely dispersed through tropical and warmer countries. The fruit is a pod, as in *Papilionaceæ*; but the small regular flowers, with long-protruding stamens, are densely clustered in globose heads or spikes. All Victorian species belong to the wattle genus, *Acacia*, which is the largest in the State (and in the Commonwealth—about 600 species); they vary from low scramblers on the ground to giant forest trees, and, except for the open plains, every vegetation province has its suite of representatives. Seven of the 80 Victorian species retain their bipinnate foliage throughout life (e.g., Silver and Black Wattles), but the remainder discard it in the seedling stage and become completely phyllodinous. The leaf-like phyllodes exhibit great diversity (terete or broadly flattened, one-nerved or with several parallel veins) and have been used in classification; nectiferous glands are usually prominent on the upper edges of phyllodes.

At no time of the year is it impossible to find any wattles in bloom, but early spring is the optimum season for most species. These highly ornamental plants lend beauty to the countryside, some being

excellent garden subjects. A few trees, notably *A. melanoxylon* (Blackwood), yield cabinet timbers of great beauty; other may provide firewood (e.g., *A. dealbata*, Silver Wattle) or tan-bark (*A. mearnsii*, Black Wattle, &c.). Following serious forest fires, the heavy growth of wattle scrub forms a first line of defence against soil losses and deterioration; it also improves the nitrogen status in the soil, by means of root nodules that contain nitrogen-fixing bacteria. *A. longifolia* var. *sophorae* (Coast Wattle) is important in the stabilization of coastal sand dunes, and most species provide pollen for bees.

### *Proteaceae*

Almost entirely restricted to the southern hemisphere, shrubs and trees of this assemblage probably number at least 1,500 species, half being Australian and at the same time endemic. The family takes its name from a Greek sea deity, Proteus, who could assume any form at will, and the aptness of this derivation is apparent in the astounding range of form and colour among flowers in even a single Australian genus; species of waratah, banksia, grevillea, hakea and cone-bush rank with the nation's most spectacular floral treasures. *Proteaceae* is a very ancient group of plants, with no close relationships to other living families. The sexual anatomy is relatively simple: four stamens situated opposite and often fused with the four nearly equal, valvate, flower-segments, a superior ovary with single compartment and one to several seeds that may be winged.

The two natural sub-families are *Proteoideae* (with indehiscent nut or drupe) and *Grevillioideae* (having a capsule or follicle that splits to release the seeds). The former group alone occurs in Africa, the latter in South America, but both are well represented in Australia. Some Australian species of *Banksia*, *Hakea* and especially *Xylomelum* have exceedingly woody follicles (often 1-2 inches thick) and natural seed dispersal is completely dependent upon fire, evidence that conflagrations had been occurring for millions of years before man's advent. In Victoria, the principal genera are *Grevillea* (24 spp.), *Hakea* (13 spp.), and *Persoonia* (11 spp., known as "geebungs"); they tend to favour poor sandy or stony terrain and have little economic importance apart from floral beauty. *Banksia* species, in which myriads of rather wiry, yellowish flowers are packed into dense cylindrical "cones", yield copious nectar; but their honey is rankly flavoured and inclined to candy quickly. The larger trees (e.g., *Banksia integrifolia*, *B. serrata*, *Hakea vittata* and *Telopea oreades*) have attractively grained timbers of some value for turnery, but are in short supply; that of *H. vittata* (Hooked Needlewood) has also been used in pipe manufacture. *Telopea oreades* (Gippsland Waratah), with large crimson heads of flowers during early summer, is the State's most impressive protead, but it is confined to far eastern mountains and unfamiliar to most Victorians.

### *Epacridaceae*

Except for a very few species that penetrate to Malaysia, Hawaii and South America, this family of heaths is entirely indigenous to Australasia where about 360 species are known (33 being in New Zealand). It is replaced in Africa and the northern hemisphere by

the closely related *Ericaceae*. These two families have five-partite, bell-shaped flowers; but in *Epacridaceae* the stamens are equal in number to the petals (not twice as many), the anthers one-celled and opening by long slits (not pores). Epacrids fall naturally into two major groups, viz., *Stypheliae* with fleshy berry-like fruits having a single seed to each compartment, and *Epacreae* with dry capsules having several seeds in each loculus. Both sections are exemplified in Victoria where the largest genera are *Leucopogon* (beard-heaths, 26 spp.) and *Epacris* (true Australian heaths, 7 spp.). Beard-heaths are so named from the fuzz of white hairs on the inner sides of their little petals, giving the whole inflorescence a feathery aspect; some are prostrate on the ground, others almost tree-like (e.g., white-berried *L. parviflorus*, Coast Beard-heath).

*Epacris* includes the very popular Common Heath (*E. impressa*), the State's official floral emblem; it blooms for a long period (May to October), and the handsome flower-spikes may be white, pale pink, rose or deepest red. Flame Heath (*Astroloma conostephioides*) of far western heathlands has large scarlet flowers with a satiny sheen, both flowers and fruits being a favourite food of emus. Cranberry Heath (*A. humifusum*) forms carpets, with flowers and greenish drupes hidden under the foliage. *Acrotriche serrulata* is known as "Honey-pots", because the bulging greenish flowers are full of nectar; these appear during winter in clusters on the old wood of this common dwarf shrub (to 1 foot high). *Richea continentis*, of moss beds in the Alps, is the only mainland representative of a striking genus with eight species in Tasmania. Their leaves are the largest among Australian epacrids, and the fused white petals fall away together, as a cap, from the massed spikes of bloom. Most, and perhaps all, Victorian *Epacridaceae* are self-pollinated, and there are no species of any commercial significance.

### *Liliaceae*

Some recent authorities have split the *Liliaceae* into several smaller families, but in its wider traditional circumscription about 2,500 species are involved and are widely dispersed over the world. They include some familiar garden bulbs, e.g., lilliums, tulips, hyacinths and squills. The common characteristics are six white or coloured flower segments in two series, six stamens and a three-celled superior ovary that becomes a berry or capsule in fruit. The largest Victorian genus is *Lomandra*, with ten local species; these mat-rushes are harsh, tough perennials, several being confined to dry northern districts. Each individual plant is unisexual, and their small waxy yellowish flowers are often tightly clustered in spikes or heads. *L. longifolia* (sometimes called "sagg") is very widespread, its rigid inflorescence bearing spiny bracts.

Bulkiest of Victorian "lilies" are the three species of grass-tree (genus *Xanthorrhoea*), all densely tufted plants with wire-like, angled leaves 1 to 4 feet long; the flowers are extremely numerous in hard, compact, cylindrical, upright spikes that may attain several feet in length and appear like massive, bronzy kangaroo tails. The copious resin that exudes from between the leaf-bases in *X. australis* has a fragrant aroma and has been exploited as a source of picric acid

(15 per cent. to 20 per cent.); it may also be used as a spirit varnish. No other Victorian members of *Liliaceae* appear to have any commercial potentialities, but the yellow-flowered *Bulbine bulbosa* (Bulbine Lily) and *B. semibarbata* (Leek Lily) cause severe gastric irritation when eaten by stock; both are widespread plants of open country. The five local species of *Thysanotus* (fringe lilies) have purple frilly flowers to 1 inch wide and are very attractive; *Dichopogon strictus* (Chocolate Lily) has deliciously caramel-scented blooms, while the large blue berries of *Dianella tasmanica* (Tasman Flax-lily) adorn hilly forests in late summer. Probably the most popular native lily is *Anguillaria dioica* (Early Nancy or "Harbinger-of-Spring"), a small perennial herb with honey-scented, star-like white flowers that are often ringed with purple; it commences to bloom in winter, and may cover loamy ground in open pastures or heaths like a sheet. Major Mitchell was captivated by *Anguillaria* at Mount Hope in June 1836, and suggested for it the name "Australian Snowdrop."

### *Rutaceae*

The rue family, including all citrus fruits, has a wide distribution in warmer countries and embraces approximately 1,000 species of trees and shrubs (rarely herbs). An outstanding feature, as with *Myrtaceae*, is the presence of copious oil glands in the leaves which exhale an aromatic, sometimes pungent odour. There are five sepals, five petals and four or five superior fruiting carpels that are often almost free from each other. The chief genera affecting Victoria are *Phebalium* (13 spp.), *Boronia* (11 spp.), *Eriostemon* and *Correa* with 5 spp. each. *Eriostemon* species are called wax-flowers from their thickish white and pink petals; they grow naturally in poor rocky situations, but make excellent garden shrubs if afforded good drainage. *Boronias* are delightfully coloured, floriferous subjects, one Victorian species (*B. muelleri* of mountain forests) sometimes attaining 10 or even 15 feet in height; however, no eastern examples of this large genus ever develop the powerful, delicious perfume of West Australian *B. megastigma* (Brown Boronia). *Correa* species have long, tubular, pendulous flowers and are frequently called "native fuchsias." Apart from their undoubted horticultural merit, and adornment of the landscape, no Victorian *Rutaceae* are economically important.

### Botanical Research Work at the University of Melbourne

A pioneer of botanical work in Victoria was Professor A. J. Ewart, F.R.S., who came to Australia from Liverpool University to take up the combined posts of Professor of Botany and Government Botanist. His first class at the University in 1906 consisted of six students and extended for only one term. By 1921 the School was large enough to make it necessary to separate the University post from that of Government Botanist, and in 1929, a separate Botany School building was opened. Ewart died in 1937 while still holding office.

He was a plant physiologist by training, but during his early years in Victoria he devoted much time to a study of the flora of the State. He published several books (including one on the weeds and poison plants of Victoria) and 34 papers entitled "Contributions to the Flora of Australia", and his work in this field culminated in the appearance of his *Flora of Victoria* (1931).



The botanical work of the State is not, of course, concerned only with the mapping of the vegetation and the identification of species. Since Professor Ewart's arrival, the Botany School at the University of Melbourne has been responsible for the training of professional botanists as well as for a considerable part of the training of agricultural students and forestry students.

There are now over 700 students, fourteen members of the staff, eight technical staff, twelve post-graduate workers and a librarian; a new wing of the building is being erected to accommodate the teaching and research facilities now needed. Since 1940, members of the Department have published 169 research papers in a great variety of research journals. The School has specialized along four main lines, apart from collaborating with the National Herbarium on taxonomical problems. The first deals with the distribution of the main plant communities in the State, and a book on this subject is about to be published.

Another major contribution to plant ecology in Victoria has been the long-term study of the ecology of the Bogong High Plains, one of the objects of which was to assess the effect of grazing on the vegetation and the soils. In the course of this work some important new techniques for the accurate analysis of vegetation were developed. Another ecological study has been that of the forests of Victoria, particularly those of the Dandenong Ranges and of the *Eucalyptus regnans* (Mountain Ash) forest at Wallaby Creek. This included work on the hydrology of the area and on the regeneration of this very important timber species. At the present time the enlarged ecological staff is beginning work on the heathlands of the State.

Allied to this work has been an intensive study, with the help of the Commonwealth Scientific and Industrial Research Organization, the State Electricity Commission, and the Gas and Fuel Corporation, of the microfossils of the brown coal and more recent peats of Victoria. The remains of plants in the Yallourn brown coal have been identified, and in particular it has now become possible, as a result of this work, to identify the various stratigraphical levels of the deposits by means of the minute microfossils contained in them. This work is throwing a good deal of light on the past history of the Australian flora.

In the field of mycology and plant pathology the Department has also been active, and a very representative collection of the fungi of the State has been developed. Many professional men and women have also been trained in plant pathology. One applied aspect which has received a good deal of attention over the last fifteen years has been the study of the effect of fungi in causing damage to timber in mines. A typical problem now under way is a study of the important disease causing the brown rot of stone fruit.

The study of genetics, which is carried out in collaboration with the Zoology School, is a comparatively recent addition to the programme of the Botany School. Most of the work done to date has concerned the study of the genetics of the Maize plant and of the fungus *Neurospora crassa*. Here again, both schools are playing an important part in training geneticists in science and agriculture.

In the field of plant physiology, research papers have dealt with the subjects of transpiration, respiration, photosynthesis, the hormone control of growth and flowering and the mechanism of the movement of sap in plant stems and roots. Research work in these fields has recently been intensified because it has been possible to obtain funds from the Rural Credits Development Fund and from the wheat industry. At the present time three research students and one member of staff are actively engaged in a study of the physiology of the wheat plant.

During the Second World War the Department was largely mobilized under the Optical Munitions Panel to study the effect of fungal damage caused to optical instruments. This work resulted in the publication of a booklet on the tropic proofing of optical instruments and the development of a highly successful technique which was used by the Army and the Royal Australian Air Force.

Members of the Department have recently been active in studying the biology of our National Parks, and an experimental field laboratory is to be constructed at Tidal River, Wilson's Promontory, in 1961.

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## Geographical Features\*

### Introduction

Australia is situated in middle and lower-middle latitudes, with about two-fifths of its area lying between the Tropic of Capricorn and the Equator. It is, therefore, one of the warm continents and, since most of its area lies within the zone of the dry, sub-tropical anti-cyclones (“the horse latitudes”), it is for the most part a dry continent. Much of the continent has only small variation in temperature from season to season and receives low rainfall with marked concentration into either summer (in the north) or winter (in the south).

Victoria is, in these respects, not typically Australian. It has a cool to cold winter, and although there are hot periods in each summer, they are interspersed with pleasantly warm or even cool periods.

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\* Excluding the mountain regions, which are described in detail on pages 43 to 67.

Rainfalls are rather low in the northern parts of the State, and particularly in the north-west, but the greater part is well watered with no marked seasonal concentration. Most of Australia is plateau or plain country with little relief; Victoria has a larger proportion of high country in its total area than any other State except Tasmania and its highest mountains reach over 6,000 feet above sea level. Not surprisingly, it is often called the "most English" part of the mainland, although a closer climatic and agricultural analogy is probably south-western and south-central France. Victoria is in fact transitional between the sub-tropical situation of New South Wales and the temperate situation of Tasmania, between the high rainfall character of the south-eastern Australian coastlands and the arid interior. One finds, then, year-round, open-air dairying and livestock-and-grass farming in Gippsland and the Western District, and dry-farming of grains and irrigated horticulture of citrus fruits and vineyards in the north. Its climatic conditions made no difficulties for the establishment of secondary industry and, once its power-resource problem had been solved, Victoria reaped the advantages in interstate trade offered by its central position on coastal shipping routes.

Victoria has 2.96 per cent. of the area of Australia (mainland Australia and Tasmania, but not including external territories) and was estimated to have 28.13 per cent. of the Australian population at 30th June, 1960. In relating population to area, Victoria is the most densely populated of the States with an average density at 30th June, 1960, of 32.9 persons per square mile and is exceeded only by the Australian Capital Territory (55.77 per square mile).

The Victorian population is growing rapidly; comparing the enumerated population of the Census of 30th June, 1954, with the estimated population of 30th June, 1960, the population of Victoria increased by about 17.9 per cent., being exceeded only by South Australia (18.6 per cent.), the Australian Capital Territory (72.7 per cent.), and the Northern Territory (32.4 per cent.).

The distribution of population over the State, however, is very uneven. At the 1954 Census no less than 62.15 per cent. of the total population of the State was living in the Melbourne Metropolitan Area, a larger concentration of population into the metropolis than was to be found in any other State of the Commonwealth. On the other hand, there are considerable areas of Victoria which are uninhabited or have only a very sparse and seasonal population; these areas are mainly in the Eastern Highlands and in the western and north-western parts of the State along the South Australian border, as in the Mallee, where sandy soils and low, unreliable rainfalls inhibit agriculture. The non-metropolitan population is fairly evenly divided between the rural population (some 18 per cent. of the State's total in 1954) and the urban centres other than Melbourne (some 19 per cent. of the total in 1954).

In the rural areas, population is densest in the irrigation areas, in the dairying areas of Gippsland and the Western District, and in the livestock-and-crop farming areas between Ballarat and Bendigo. Lower

densities are found in the wheat-farming areas of the Wimmera, and still lower densities in the wheat areas of the Mallee and in the stock-raising areas generally.

Among the non-metropolitan cities four large centres stand out; these are Geelong (estimated population at 30th June, 1960, 90,380), Ballarat (54,800) and Bendigo (42,120), each of which has a variety of manufacturing industries as well as being marketing and transport centres, and the Latrobe Valley group of towns which together contain probably about 50,000 people and are mainly concerned with power generation and distribution. The next group in order of population size has between 12,000 and 15,000 people each and contain, in addition to the normal urban retail and service functions, fairly large-scale industries processing local products: Warrnambool (dairy products, textiles and clothing), Shepparton (fruit canneries), Wangaratta (a rather special case of decentralized industries), and Mildura (fruit and vegetable packing). Next, there are a number of regional urban centres in which retail and service functions predominate; for instance, Hamilton, Colac, Horsham, Ararat, Sale, Maryborough, Benalla and Castlemaine. Smaller towns serve more restricted areas and more local requirements.

Although European settlement in Victoria is little over one and a quarter centuries old, there have already developed distinctive regional characteristics in the various parts of the State, and most of these are recognized in popular speech by regional names. The Mallee is the north-western plain of ancient sand ridges, once waterless and covered with the distinctive dwarf eucalypt from which the name is derived, but now with extensive wheat fields and sheep paddocks and with water for stock and domestic purposes supplied through winding channels from storages outside the region. The Wimmera, with red-brown soils and tall eucalypts, with a denser pattern of farms and market towns, has the highest yielding wheat fields in Australia and a considerable sheep and cattle population as well. The Western District, with lush pastures on its well-watered volcanic plains, has both a long tradition of the growing of fine wools on sheep stations dating back to the early days of the pastoral expansion and a much more recent development of intensive dairying. The north-east has irrigated citrus and stonefruit orchards, market gardens and pastures on the plains of the middle Murray and its tributaries, which give way to cattle stations upstream where the valleys run back into the rugged slopes of the Australian Alps. Gippsland spells dairying and fodder-crop growing, timber extraction in the tall forests of the hills, off-shore and coastal fishing, and the industrial enterprises based on the power derived from the Morwell-Yallourn brown-coal deposits in the Latrobe Valley. The Port Phillip Bay region holds Melbourne, the financial and administrative hub of the State and a fast growing port, metropolitan market, and industrial centre, while on the eastern shore commuters' and holiday homes stretch through the Mornington Peninsula to the ocean shores. On the west, secondary industry is extending through Williamstown and Altona to Geelong.

### **Area and Boundaries**

Victoria is situated at the south-eastern extremity of the Australian continent, of which it occupies about a thirty-fourth part, and contains about 87,884 square miles, or 56,245,760 acres.

Victoria is bounded on the north and north-east by New South Wales, from which it is separated by the River Murray, and by a straight line running in a south-easterly direction from a place near the head-waters of that stream, called The Springs, on Forest Hill, to Cape Howe. The total length of this boundary, following the windings of the River Murray from the South Australian border along the Victorian bank to the Indi River, thence by the Indi or River Murray to Forest Hill and thence by the straight line from Forest Hill to Cape Howe, is 1,175 miles. The length of the River Murray forming part of the boundary is 997 miles, of the Indi or River Murray, 68 miles, and of the straight line from Forest Hill to Cape Howe, 110 miles. On the west it is bounded by South Australia, on the south and south-east its shores are washed by the Southern Ocean, Bass Strait, and the Pacific Ocean. It lies approximately between the 34th and 39th parallels of south latitude and the 141st and 150th meridians of east longitude. Its greatest length from east to west is about 493 miles, its greatest breadth about 290 miles, and its extent of coastline 980 miles, including the length around Port Phillip Bay 164 miles, Western Port 90 miles, and Corner Inlet 50 miles. Great Britain, inclusive of the Isle of Man and the Channel Islands, contains 88,119 square miles, and is therefore slightly larger than Victoria.

The most southerly point of Wilson's Promontory, in latitude 39 deg. 8 min. S., longitude 146 deg. 22½ min. E., is the southernmost point of Victoria and likewise of the Australian continent; the northernmost point is where the western boundary of the State meets the Murray, latitude 34 deg. 2 min. S., longitude 140 deg. 58 min. E.; the point furthest east is Cape Howe, situated in latitude 37 deg. 31 min. S., longitude 149 deg. 59 min. E. The westerly boundary lies upon the meridian 140 deg. 58 min. E., and extends from latitude 34 deg. 2 min. S. to latitude 38 deg. 4 min. S.—a distance of 280 miles.

The following table shows the area of Victoria in relation to that of Australia :—

#### AREA OF AUSTRALIAN STATES

State or Territory					Area	Per cent. of Total Area
					sq. miles	
Western Australia	..	..	..	..	975,920	32·85
Queensland	..	..	..	..	667,000	22·45
Northern Territory	..	..	..	..	523,620	17·62
South Australia	..	..	..	..	380,070	12·79
New South Wales	..	..	..	..	309,433	10·42
<b>Victoria</b>	..	..	..	..	<b>87,884</b>	<b>2·96</b>
Tasmania	..	..	..	..	26,215	0·88
Australian Capital Territory	..	..	..	..	939	0·03
Australia (Total)					2,971,081	100·00

### Coastline

The Victorian ocean coastline stretches some 682 statute miles from the South Australian border to the New South Wales border. Small stations of whalers and sealers were operating along the coast, mainly at Westernport, Portland, and Wilson's Promontory long before the advent of Henty and Batman.

The coastline is now well served with lighthouses, though in the early days it proved hazardous to navigation and no fewer than six ships were wrecked at Port Fairy before 1850. Port Phillip Bay is a safe harbour for shipping and the cities of Geelong and Williamstown afford excellent facilities. The Bay was the first place where settlement was made, at Sorrento in 1803, by a party under Lieutenant-Colonel Collins. In January, 1804, the settlement was abandoned.

Wilson's Promontory is the most southerly part of the State of Victoria; it was rounded by Lieutenant Grant in the *Lady Nelson* in 1801. The original entrance to Lakes Entrance was, owing to silting, closed in 1889, and a new entrance opened  $1\frac{1}{2}$  miles to the west.

When Lieutenant Grant called at an island in Western Port in 1801, he named it Churchill Island (after an English Government official, who supplied a small amount of seed). Wheat was planted and when Lieutenant Murray in the *Lady Nelson* visited the island some months later, the wheat was growing vigorously, being 6 feet high. It was the first wheat planted in Victoria.

The main features of the coastline are as follows :—

Nelson to Cape Bridge-	Sandy beach backed by dunes.
water	
Cape Bridgewater to west	Cliffs of basalt tuff dune limestone
end of Portland Bay	and miocene limestone.
Portland Bay to Port	Sandy beach backed by dunes with
Fairy	low cliffs of basalt and dune
	limestone near Port Fairy.
Port Fairy to Warrnam-	Beach dunes and dune limestone.
bool	
Warrnambool to Childers	Cliffs of dune limestone.
Cove	
Childers Cove to Point	Bold cliffs of tertiary limestone.
Ronald	
Point Ronald to Cape	Cliffs of lower tertiary sandstone
Volney	and dune limestone.
Cape Volney to Castle	Bold cliffs of mesozoic sandstone.
Cove	
Castle Cove to Point	Bold cliffs of dune limestone.
Flinders	
Point Flinders to north of	Cliffs of mesozoic sandstone.
Lorne (Eastern View)	

Eastern View to Torquay	Cliffs of tertiary sandstone and limestone interspersed with bays and sandy beaches.
Torquay to Cape Schanck	Sandy beach backed by dunes with intermittent low cliffs of dune limestone.
Cape Schanck to Nobbies	Bold cliffs of basalt.
South coast of Phillip Island	Sandy beaches backed by dunes with granite at Pyramid Rock and Cape Woolamai.
Cape Woolamai to Anderson's Inlet	Cliffs of mesozoic sandstone.
Anderson's Inlet to Cape Liptrap	Sandy beach backed by dunes with low cliffs of dune limestone at south end.
Cape Liptrap Promontory	Cliffs of lower palaeozoic sediments and diabase.
Waratah Bay as far east as Tongue Point	Sandy beach backed by dunes.
Tongue Point to Mount Hunter	Granite headlands interspersed with bays with sandy beaches backed by dunes.
Mount Hunter to Conran	Sandy beach backed by dunes with lagoons behind dunes.
Cape Conran (granite) to Cape Howe	Granite headlands with beaches between them and some local cliffs of metamorphosed lower palaeozoic sediments at Cape Everard, Little Ram Head and near Mallacoota.

The area of Port Phillip Bay is 762 square miles and the coastline of the bay stretches for some 164 statute miles.

### Rivers

The Main Dividing Range may be regarded as dividing the river basins or catchments in Victoria into two main groups. Of the rivers draining the northern basins the Loddon is the westernmost river that normally reaches the Murray. Except for the internal drainage basin of Lake Corangamite, the rivers south of the Divide flow into the sea.

If we also divide the State into an eastern and western area by a line joining Melbourne and Echuca we have four areas conveniently termed the north-east, north-west, south-east, and south-west. Streams in these four areas whose flows average more than about 100,000 ac. ft. per annum are tabulated on the following page.

For more detailed information concerning stream flows, reference should be made to "River Gaugings", normally published at six-year intervals by the State Rivers and Water Supply Commission.

The total flow in the State is about 17,000,000 ac. ft. per annum, including about 1,000,000 ac. ft. from New South Wales. Although the northern streams contribute about the same flow as those in the south, the flow in the eastern part of the State is about six times that in the west. Differences in average stream flow in the four sectors are primarily a reflection of mean annual rainfall. All streams exhibit pronounced seasonal variation, but the greater rainfall and higher incidence of summer rains in the east give those streams a more regular flow during the year than those in the west.

### VICTORIA—MAIN RIVERS

Area	River	Station	Mean Annual Flow	
			100,000 ac. ft.	
North-east ..	Goulburn	Murchison ..	23	
	Murray ..	Jingellic ..	18 *	
	Mitta ..	Tallangatta ..	11	
	Ovens ..	Wangaratta ..	11	
	Kiewa ..	Kiewa ..	5	
	Broken ..	Benalla ..	2	
		Sub-Total ..	70	
North-west ..	Campaspe ..	Rochester ..	2	
	Loddon ..	Laanecoorie ..	2	
	Wimmera	Horsham ..	1	
		Sub-Total ..	5	
South-east ..	Snowy ..	Orbost ..	18 *	
	Yarra ..	Warrandyte ..	9	
	Latrobe ..	Rosedale ..	7	
	Mitchell ..	Bairnsdale ..	6	
	Macalister	Glenmaggie ..	4	
	Thomson ..	Heyfield ..	3	
	Tambo ..	Bruthen ..	2	
	Bunyip ..	Bunyip ..	1	
		Sub-Total ..	50	
South-west ..	Glenelg ..	Dartmoor ..	6	
	Barwon ..	Geelong ..	2	
	Hopkins ..	Allansford ..	2	
		Sub-Total ..	10	
			135	
		Other Rivers	35 (Estimate)	
		Total ..	170	

\* Includes flow from New South Wales.

In addition to seasonal variation, streams are subject to large variations in annual flows. In very wet years, such as in 1870, the total stream flow would be about three times the mean flow, whereas in drought years, such as in 1914, the flow would only be about a quarter of the average. Although this variability may appear high, it is relatively mild compared with streams in other parts of Australia, excluding Tasmania.

By far the major use for water in Victoria is for irrigation in rural areas (see pages 479 to 484). Storages with a capacity of about 6,000,000 ac. ft., i.e., about one-third of the mean annual flow, enable a



million acres of land, nearly all in northern Victoria, to be irrigated annually. The use of water for urban areas is, by comparison, small.

The amount of water used by urban populations in Victoria is only about 10 per cent. of that used for irrigation—or about equal to that lost by evaporation from storages built for irrigation.

### **Lakes**

For lakes to form, there must be suitable physiographic features and sufficient water supply to offset evaporation and seepage losses. Although the water supply in the western part of the State is comparatively poor, the majority of Victorian lakes occur in the west because of suitable physiography which is attributable to volcanic activity. Some extinct volcanoes carry crater lakes, and on the volcanic plains numerous lakes have been formed, the largest being Lake Corangamite. Lakes on the plains are relatively shallow, their depth and hence volume varying considerably with climatic trends in rainfall.

Lakes also occur in the north-west plains, some of which are intermittently replenished by effluents from rivers. Another type of lake is that which occurs along the coast by sand bars forming across the mouth of a stream. The Gippsland Lakes constitute the main lake system of this type.

Although lakes are often described as “salt or fresh” such a classification is misleading in shallow lakes as salinity varies inversely with the volume of water in the lake. Certain Victorian lakes are so shallow that salt is deposited in the summer when evaporation is high and in some cases, such as Lake Tyrell, it is harvested.

### **State Aerial Survey**

Information about the State Aerial Survey and a list of available printed maps will be found on pages 35–36 of the Victorian Year Book 1961.

### **Physical Geography and Geology**

Articles on the physical geography and geology of Victoria will be found on pages 36 to 56 of the Victorian Year Book 1961. A map and description of the vegetation provinces are shown on pages 5 to 18 of this volume.

## *Victoria's Mountain Regions*

### **Introduction**

The mountainous regions of Victoria comprise the Central Highlands and a belt known as the Southern Uplands lying to the south and separated from the Central Highlands by plains.

The Central Highlands form the backbone of Victoria, tapering from a broad and high mountainous belt in the east until they disappear beyond the Dundas plateau near the South Australian border. They were formed by up-warping and faulting. The eastern sector differs

from the western in its greater average elevation, with peaks such as Bogong, Feathertop and Hotham rising above 6,000 feet, while the western mountains are generally lower, the peaks reaching above 3,000 feet and the valleys being broader. Also in the east patches of older volcanic rocks occur, whereas in the west the volcanic rocks belong mainly to the Newer Volcanic Series. Several well-known volcanic mountains are still preserved, Mounts Buninyong and Warrenheip near Ballarat being examples.

Because of the great variety of geological formations in the highlands and the effects of elevation and deep dissection by streams, the features of the country are very varied and there are many striking mountains and gorges. The severe winter climate, with heavy snow on the higher land, is also a special feature of the eastern sector. Included in the area are several high plains such as those near Bogong and the Snowy Plains. Caves are well known in the limestone around Buchan.

In the west the Grampians, with their striking serrate ridges of sandstone, may be compared with the belt of sandstones stretching from Mansfield to Briargalong in the east.

The Dundas plateau is a dome which has been dissected by the Glenelg River and its tributaries, the rocks being capped by ancient laterite soils which form tablelands with scarps at their edges.

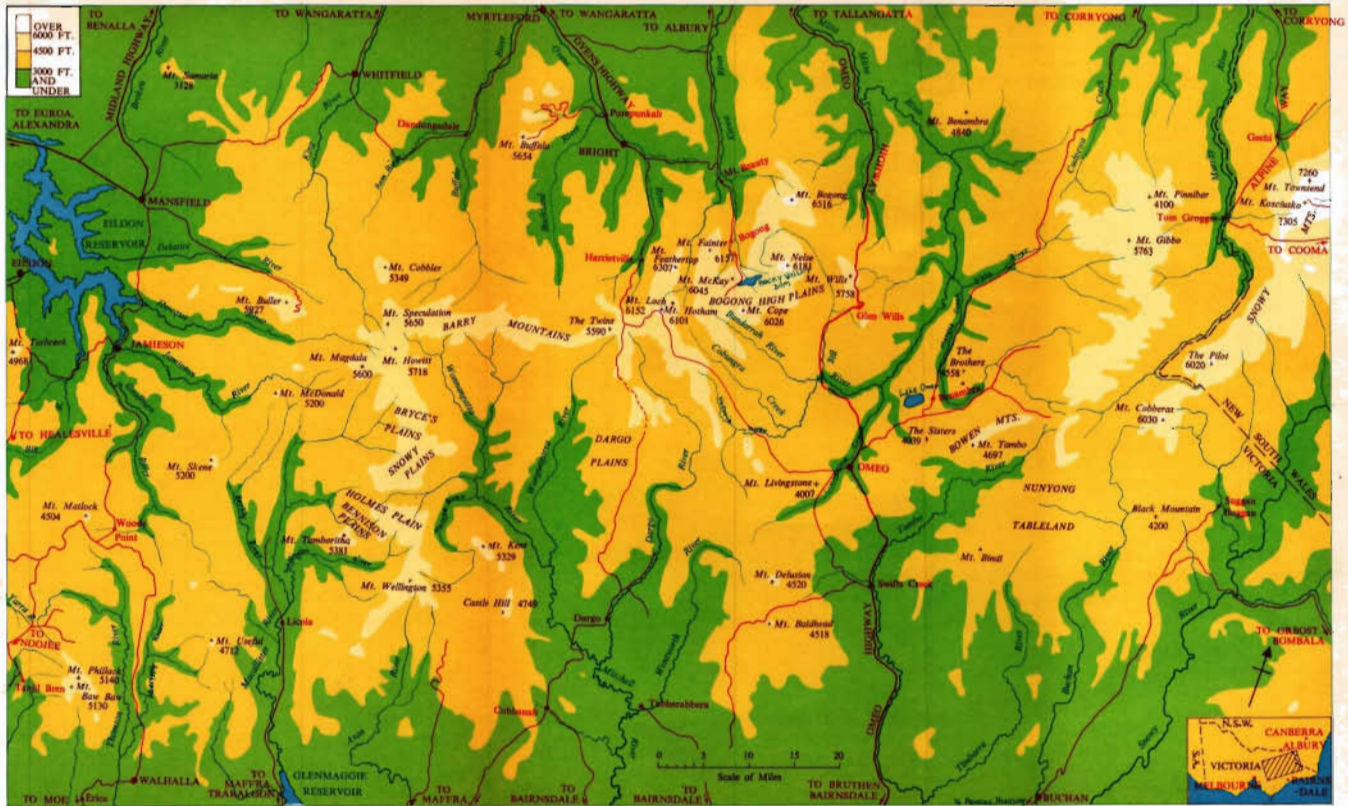
The highlands descend to plains on their southern and northern flanks. On the south are the Western District Plains and the Gippsland Plains, and beyond these again rises a group of uplifted blocks for which faulting is mainly responsible, these constituting the Southern Uplands. The Otway Ranges and the hills of South Gippsland are composed of fresh-water Mesozoic sediments and Tertiary sands and clays, with Older Volcanic rocks in South Gippsland, and the Mornington Peninsula is an upraised fault block of complex geology, including granites.

The highest mountain in Victoria is Mount Bogong, situated in the county of the same name, 6,516 feet above sea-level. Other mountains over 6,000 feet in height are shown on page 46. These, so far as is known, are the only peaks which exceed 6,000 feet in height, although there are numerous peaks between 4,100 and 6,000 feet high. It is known, moreover, that there are many peaks rising to upwards of 4,000 feet above the level of the sea whose actual heights have not yet been determined. Although, during the winter, the peaks and higher plateaux are covered with snow, it is not perpetual and disappears during the spring.

### **Mountain Surveys**

In 1844, the Crown Lands Commissioner for the district of Gippsland, Mr. C. J. Tyers, forwarded a report to Mr. La Trobe (later Lieutenant-Governor of the Colony) together with a map of the district

## ALPINE REGIONS OF VICTORIA



under his administration showing the extent of the different land holdings and their occupants at the time. Apart from the settlement boundaries, this map embraced mountainous areas from Mount Buller near Mansfield to the Omeo district, and such prominent features as the Baw Baw Ranges, Mounts Useful, Wellington, Kent and the lower features skirting the settled districts were depicted. Isolated surveys such as this were effected in many parts of the "Port Phillip" district until the year 1856, when the Government of Victoria determined to make a geodetic survey of the State, based on an origin of latitude and longitude determined astronomically at the Melbourne Observatory. Mr. R. J. L. Ellery was appointed Director of the Geodetic Survey in addition to being responsible for operations at the Observatory. He was also a qualified surgeon but never practised in the Colony.

The geodetic survey of an area involved the observation, by use of precision theodolites, of the angles of triangles formed between inter-visible survey stations usually sited at the summits of mountains—a process also referred to as triangulation. The observed triangles generally form part of more complex geometric figures, the mathematical conditions of which provide useful checks on the accuracy of the original field observations. From the known length of any triangle side, the lengths of all other sides can be calculated throughout the area making due allowance for the shape of the earth and these are used for the purpose of establishing the relative positions of all subsidiary surveys, for the accurate plotting of all features presented on topographic maps, and for determining the extent of the area generally.

The length of the first triangle side presents a problem unique to triangulation. It is determined by a special technique of ground measurement referred to as "base line" measurement. In 1859, such a base line, 26,100 feet in length, was measured near Werribee by the use of specially constructed and calibrated metal bars each 10 feet long. The measurement took four months to complete and the result is quite accurate in accordance with modern standards.

In the early days the tasks of selection of suitable mountains, the movement of pack horses and drays through unexplored country, the cutting of sight lines through massive stands of timber and the erection of large rock cairns (to be visible from other mountains) over the survey station was most arduous. Neatly built cairns may still be found at Smeatons Hill and at Mount Alexander, whilst the remains of cairns originally 20 feet high and 20 feet diameter can be seen at Mount Taylor and at Mount Torbreck. The early surveyors were responsible for these geodetic observations, including several astronomical observations for difference in longitude by use of the revolutionary aid, the electric telegraph. Many of the original reports to the Director of Geodetic Survey written by these surveyors in the field are still preserved.

Calculation of this triangulation was made through the principle of major triangles and the auxiliary or minor stations subsequently computed. As the fundamental mathematical basis for these calculations, the theoretical figure (shape) of the earth, the "spheroid of revolution",

as determined by Captain A. R. Clarke, R.E., in 1858 from his investigations of data originating in England, India, Denmark, Russia and Peru was adapted. At the present time, similar geodetic calculations in Australia are based on the same "figure" while some other countries use Clarke's later 1866 figure of the earth. A more refined theoretical figure has recently been calculated from observations made to the several earth satellites now in orbit.

In the years 1869 to 1872, surveyors Black and Allan undertook the marking of the border line between New South Wales and Victoria from the headwaters of the Murray River to Conference Point (Cape Howe). This survey was carried out through difficult mountainous country and the speed and completeness with which it was accomplished is a tribute to the diligence of the surveyors concerned. After 1875, when the mountainous areas of the State had been embraced by the geodetic survey, only isolated triangulation tasks, involving connexion to the major network, were undertaken and the precise theodolites were packed away until the present time. They are now in the custody of the Museum of Applied Science and are only of historic value.

During the Second World War, the Australian Survey Corps extended a more modern chain of triangles through the mountainous country occupying some old and some new survey stations. This was joined to similar geodetic surveys in the eastern States and calculated in terms of the origin of latitude and longitude at Sydney observatory. An additional "base line" was measured near Benambra using more modern methods and equipment, particularly long Invar bands, for the purpose.

In the years following the war, geodetic surveys for mapping and control of land boundary surveys have been carried out by the Department of Lands and Surveys, Victoria. Many new techniques have been introduced, particularly electronic distance measuring equipment of two types: one, the Geodimeter using pulses of light operated at night time; the other the Tellurometer using modulated radio waves operated during daylight hours. With the latter type of equipment distances up to 50 miles in length can be determined in a few hours with accuracy as good as that achieved in the measurements of base lines taking many weeks to complete. Geodetic survey procedures have been revolutionized by the introduction of such apparatus. Very accurate light-weight precision theodolites, having optical reading of their scales, are now used for modern triangulation observations which can be completed in a fraction of the time formerly required.

Since the general opening up of the country by road systems, it is now possible to establish a more dense network of survey control resulting in greater accuracy of position fixation and more accurate reduction of the heights above sea level of the various triangulation stations. Most recent values for some of the high mountains in Victoria are Mount Bogong, 6,516 feet; Mount Feathertop, 6,307 feet; Mount Nelse, 6,181 feet; Mount Fainter, 6,157 feet; Mount Loch, 6,152 feet; Mount Hotham, 6,101 feet; Mount Niggerhead, 6,048 feet; Mount McKay, 6,045 feet; Mount Cobboras, 6,030 feet; Mount Cope, 6,026 feet; Mount Spion Kopje, 6,025 feet; and Mount Buller, 5,919 feet.

## **Climate of Victoria's Mountain Regions**

### *General*

Victoria's mountains include part of the "Australian Alps", which is the coldest and one of the wettest regions in Australia. The only snow fields in Australia are found, in winter, in the mountains of eastern Victoria, south-east New South Wales, and in central Tasmania, all of which are being developed as sources of hydro-electric power because of their steep terrain and abundant snow and rain.

### *Temperatures*

However, the climate is far from strictly alpine because these mountains are much lower in altitude and nearer the equator than the well-known mountain regions of the Northern Hemisphere. The lowest temperature recorded in Victoria is 9° F. at Hotham Heights (5,776 feet). However, a minimum of minus 8° F. has been recorded in the New South Wales section of the Alps at Charlotte Pass (6,035 feet) and no doubt sub-zero temperatures occur in Victoria, but they have not been recorded because of the lack of observing stations in the mountains. The lowest temperatures are likely to occur, not on the tops of high mountains, but in elevated valleys forming "frost hollows" where cold air can collect during calm clear winter nights, and at one such station, Omeo (2,133 feet), a minimum of 14° F. has been recorded. Apart from this orographic effect, average daily minimum temperatures in the coldest month, July, are below freezing point at stations above 4,000 feet. Average daily maximum temperatures in July are below 40° F. above 4,000 feet. The mean freezing level for July, found by averaging temperatures at all times of the day at each station, is at about 5,000 feet. Daily maximum temperatures below 30° F. are frequently recorded at Hotham Heights.

In the mountain regions, January is slightly warmer than February at most stations. Below 2,000 feet, altitude tempers the effect of the summer sun only slightly, but from 2,000 to 3,000 feet the average January maximum temperature is about 75° F., much the same as at Victorian coastal stations where the sea breeze is effective. Above 3,000 feet, day temperatures are appreciably lower, falling to an average of about 60° F. on the highest mountains, 20 to 30 degrees lower than stations on the plains. Extreme summer temperatures do not affect the highlands, and temperatures over 90° F. are rare above 2,000 feet. Available records indicate that altitude has little effect on average summer night temperatures, as stations with 5,000 feet difference in altitude have only about 10 degrees difference in January average minimum temperatures. However, extreme minimum temperatures in summer are much lower at higher altitudes (as low at 22° F. in January at Hotham Heights) and even in the warmest months frost may occur at stations above about 1,000 feet, particularly in frost hollows.

### *Rain*

Rain in Victoria's mountain regions falls mainly in winter and spring, as it does in most other parts of the State. Other things being equal, the rainfall at a given station will be higher the greater its altitude, but other factors may introduce big variations in this simple relation. There is no broad rain shadow in the Victorian mountains because there are

rain-bearing winds from both north and south, although of two mountains of the same height, the one nearer the coast will have the higher rainfall. The local terrain may affect rainfall to a great extent. Some localities favourable for high rainfall are those at the head of valleys which open towards a prevailing rain-bearing wind, and those on exposed mountains and ridges. Places receiving less rainfall are located in the lee of mountains, and in high country in the centre of a mountainous region.

The heaviest rain in Victoria is in the main mass of the eastern ranges, where the 40-in. rainfall line corresponds very roughly with the 2,000-ft. contour, enclosing an area extending from the hills around Mount Dandenong and Kinglake to the high mountains of the north-east. A number of stations within this area have average annual rainfalls over 70 inches, and the highest rainfall on record in any one year was 131 inches at Mount Buffalo. Nearer the coast, the Strzelecki and Otway Ranges are almost as wet as the higher mountains, and in these regions the 50-in. rainfall line corresponds with the 1,500-ft. contour. Some stations in the Otway Peninsula have average annual rainfalls over 70 inches, and daily rain totals of over 10 inches have been recorded in the Strzelecki Range.

#### VICTORIA—TEMPERATURES AND RAINFALL AT MELBOURNE AND SELECTED HIGHLAND STATIONS

Location	Altitude	Temperature—°F.						Average Annual Rainfall
		Extreme		January Average		July Average		
		Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	
	feet							inches
Hotham Heights	5,776	82	9	61	44	32	25	58·54
Mt. Buffalo ..	4,370	94	18	67	51	38	31	76·57
Rubicon ..	2,700	94	24	75	51	45	35	61·76
Omeo ..	2,133	107	14	80	49	50	32	25·78
Mt. Beauty ..	1,250	103	25	84	52	53	34	52·95
Myrtleford ..	686	114	20	87	53	55	36	34·80
Melbourne ..	140	114	27	78	57	56	42	25·91

#### *Snow*

Every winter snow covers the highest mountains in Victoria, remaining on the ground for a few months down to a snow line at 3,000 to 4,000 feet. The snow season is usually three to five months, beginning about June, and the average depth of snow is 1 to 3 feet above 5,000 feet. In some years there is good snow coverage on the high mountains as early as April, and snowdrifts in sheltered places may last well into the



summer. Blizzards (strong winds carrying falling or drifting snow) are regular occurrences during the snow season. Snow falls have been recorded on the high mountains in all months of the year, and in winter snow sometimes lies on the ground for several days at altitudes below 2,000 feet.

### **Hydro-Electric Resources**

The total Victorian hydro-electric resources, based on a comprehensive survey of feasible schemes, is estimated at 5,000 million kWh. of energy per annum. Included in this total is the Victorian share of output from the Hume hydro-electric power station because the catchment above the Hume Dam is partly in New South Wales and partly in Victoria.

Hydro-electric power resources are dependent upon the quantity of water available and the difference in head. Water quantity is determined by precipitation and evaporation. The head of the water is related to the topography of the country.

Victorian topographic conditions are characterized by the Great Dividing Range which rises to peaks of over 6,000 feet in north-eastern Victoria.

The high ranges on both sides of the Great Dividing Range are greatly affected, particularly during the winter months, by the prevailing westerly winds. The lifting of the air on the western and north-western slopes causes condensation and heavy precipitation on the highlands on both sides of the Great Dividing Range, from the Kinglake Ranges north of Melbourne to the head of the River Murray on the New South Wales border.

These highlands with an average rainfall of 45 to 85 inches per annum form the most valuable catchments in Victoria. As a result, 90 per cent. of the hydro-electric resources are concentrated in this area. The only other areas with significant hydro-electric potentialities are the lower Snowy River basin (including run-off contributed from the New South Wales catchment below Jindabyne) with 6 per cent., and the miscellaneous high areas such as the Otways, Grampians, Strathbogie, South Gippsland and the far eastern portion of East Gippsland with 4 per cent. of the total.

The energy output from the Hume scheme (230 million kWh. per annum) is shared equally between Victoria and New South Wales. In addition, Victoria is entitled to receive one-third of the output from the Snowy Mountains hydro-electric scheme after the Commonwealth has reserved sufficient energy to satisfy the estimated requirements of the Australian Capital Territory. At the completion of the initial Snowy-Tumut stage (about 1963) the Victorian share will amount to a little over 500 million kWh. per annum, rising to 1,200 million kWh. after the completion of the Snowy-Murray stage about 1970.



The degree of development of the Victorian hydro-electric resources by 1960 is indicated below :—

### VICTORIA—HYDRO-ELECTRIC RESOURCES

Existing Hydro-electric Development	Average Annual Output	Purpose of Scheme
	mill. kWh.	
Rubicon Scheme .. .. .	75	Power generation
Kiewa Scheme .. .. .	336	Power generation
Eildon Scheme .. .. .	227	Irrigation and power generation
Cairn Curran Scheme .. .. .	3	Irrigation and power generation
Hume Scheme (Victorian share) .. .. .	115	Irrigation and power generation
Total hydro-electric power developed ..	756	
Percentage of developments .. .. .	15%	

[Source : State Electricity Commission.]

In reading this table, it should be noted that :—

- (1) The above averages are based on the output of completed schemes. In the Kiewa scheme the latest and largest of the power stations (McKay Creek, 96,000 kW.) was not in full production until the end of 1960. Additional aqueduct diversions at Kiewa for increasing the flow available for electricity generation will be brought into service progressively up to 1962. The Cairn Curran scheme did not start operating until the latter months of 1960.
- (2) The table does not include Victoria's entitlement to Snowy output. Transmitted supply to Victoria began in November, 1959, and the total transmitted up to the close of the 1959-60 financial year was 56 million kWh.
- (3) Due to limited plant capacity pending completion of McKay Creek Power Station and incomplete aqueduct diversions in the Kiewa scheme, the availability of Snowy power for only part of the year and general climatic conditions, actual hydro-electric production available to Victoria in the 1959-60 financial year totalled 594 million kWh., about 9.6 per cent. of the total power from all sources generated in the State Electricity Commission's system and by other undertakings outside the State system.

Approximately half of the undeveloped hydro-electric resources of the State occur in the Mitta Mitta catchment area and in adjacent catchment areas of streams draining the northern and southern slopes of

the Great Dividing Range. Estimates of resource potential have been made by assuming that the most economic form of development would be achieved by diverting water from these adjacent areas for power development in the Mitta Mitta Valley and subsequent use of this water for irrigation.

Other remaining resources include extension to existing projects together with a number of areas where small amounts of hydro-electric power could possibly be developed. Much of the power from this last-mentioned group would, however, be very costly to develop.

Considerable scope still exists for the utilization of undeveloped catchment areas by means of multi-purpose hydro-electric projects that provide both irrigation and power supply benefits. However, the hydro-electric resources of the State are small in relation to expected electrical energy requirements and can never be regarded as more than a secondary source for power supply. The primary power and energy requirements will continue to be supplied from thermal generating plant using the extensive brown coal resources of the State. Generally, the extent to which the remaining hydro-electric potential of the State should be exploited will depend on the cost of alternative supply from these thermal generation sources.

### **Mountain Forests**

#### *Introduction*

Almost one-third of Victoria has forest cover of one sort or another. Of Victoria's land area of 56·2 million acres, some 16·8 million acres or 30 per cent. are forested, of which 14·1 million acres represent State forest (reserved forest and protected forest) and 2·7 million acres are in private and commercial ownership.

A glance at a map of Victoria giving the distribution of State forests shows that more than half of such forested areas are situated on or close to the Main Dividing Range. These areas extend from the Grampians State forest in Western Victoria through Beaufort, Ballarat, Daylesford, Trentham to Broadford, which is about 45 miles north of Melbourne, and thence in a north-easterly direction through the Upper Yarra and Upper Goulburn areas into the highest regions of the north-east of Victoria such as Mount Buller, Mount Hotham, Mount Feathertop, Mount Bogong and continuing on into the Australian Alps of New South Wales. There are two other isolated areas of mountain forest in the Otway Ranges towards Cape Otway in south-west Victoria, and in the Strzelecki Ranges towards Wilson's Promontory in the south-east.

If we consider these mountain forests as a whole, including the foothills both north and south of the Main Divide, practically all our forest species are represented. The only major groups of species not included are the boxes and red ironbark of the dry northern plains, the red-gum forests of the flood plains of the River Murray and its tributaries, and the numerous dwarf mallee eucalypts and cypress pines in the far north-west of the State. Perhaps, however, the principal forest types usually recognized as constituting the mountain forests are the snow-gum areas of the higher mountain regions, the mountain ash and alpine ash forests with their associated gully species of blackwood, myrtle beech,

&c., below the snow-gum belts, and at lower elevations, where good rainfall and soil conditions still exist, the messmate, manna gum, and other mixed species forests.

A much simplified diagram of the occurrence of mountain species is as follows. Variable conditions of aspect, soil, and rainfall cause considerable modifications in the distribution.

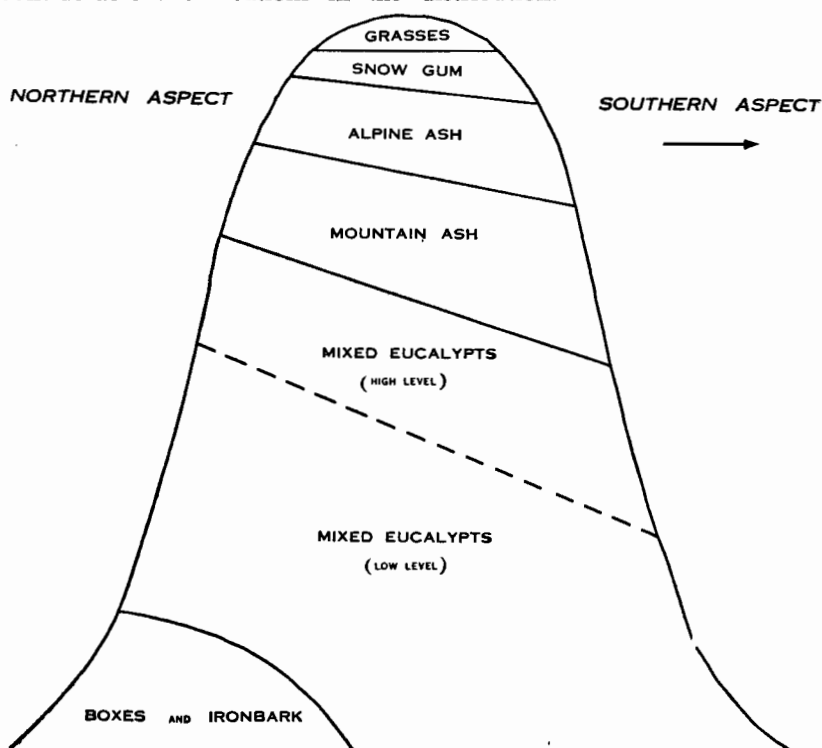


FIGURE 1.—Diagram showing occurrence of main types of mountain species in Alpine Area.

### *Snow-gum Forests*

These forests generally take over from the ash forests at the upper limit of the occurrence of ash with a distinct break, so that there is a noticeable transition into the much shorter, often dwarf-like and multi-stem habit of the snow-gum. Snow-gum forests are generally pure with no admixture of other tree species. They are slow growing because of the harsh climatic conditions and generally poor stony soils, and they produce no commercial timber. They perform a most important function, however, in binding the soil on steep exposed slopes and generally in promoting soil stability. They also have a vital role in holding the snow fall so that, in the spring, the water is more gradually released into springs and streams than would otherwise be the case. Care is taken in alpine villages, such as Mount Buller, to see that the minimum amount of damage to, or removal of, snow-gums occurs in the siting of ski-lodges, ski-tows and other installations. It is also particularly necessary in this high country to prevent over-grazing. In some parts cattle grazing has been severely restricted or prohibited.

*Alpine Ash and Mountain Ash Forests*

These forests include the tallest and fastest growing of the eucalypts. Mountain ash is recognized as being the tallest hardwood species in the world, specimens of over 300 feet in height with over 100 feet of straight clear bole being not uncommon. Alpine ash is of similar good form and general characteristics, but is slower growing and does not attain the large dimensions of its close relative, mountain ash. Silvertop is often associated with ash stands and also shining gum, particularly in the North-Eastern Highlands.

The ash species occur with a minimum rainfall of approximately 50 inches and on deep soils usually of granitic, but sometimes of volcanic origin, although in both the Otway and Strzelecki Ranges the soils are derived from Jurassic sandstones and shales. The ash species are among the most valuable commercial timber species in Australia, producing hardwood timber equal to the world's best for furniture, joinery, weatherboards, internal fittings and similar uses, and they are valuable species for the wood pulp and paper industry. The output of sawmill logs of ash species from State forests is approximately 80 million superficial feet, and pulpwood the equivalent of an additional 40 million superficial feet Hoppus log volume\* per year.

As distinct from all other eucalypt forest types in Victoria which are sclerophyllous or adapted to survive hot dry summers, the ash types are classified as temperate rainfall forests. Associated with them is a prolific understorey of vegetation particularly in the gullies, some of the species of which attain diameters of 2 to 3 feet and heights approaching 100 feet. The principal associated understorey species are blackwood, myrtle beech, silver wattle, sassafras, blanket leaf, musk, hazel and satin box, with masses of tree ferns in the moist sheltered gullies.

Regeneration in eucalypt forests can be obtained from three sources—seed, coppice shoots, and ligno-tubers, each playing a significant part in natural regeneration following cutting operations and fire, with two marked exceptions. Alpine ash and mountain ash do not produce coppice shoots or regenerate from ligno-tubers—their sole source of reproduction is from seed. This is the reason why fire-killed veterans are seen standing in ash forests like giant candles among the young growth which has sprung up since the fires. Eucalypt forests of other species have been subjected to as severe and often more repeated fires, but the trees are not killed—they sprout new shoots along the trunk and main branches from dormant buds. The ash species cannot do this and furthermore they have a thin bark so that the cambium layer is easily damaged and killed by fire. This is almost certainly the reason why ash forests occur in pure even-aged stands over extensive areas—they have originated as a result of the destruction of the previous crop by fire, with natural regeneration being subsequently produced from seed which was on the trees and not consumed by the fire.

Management of these forests presents different problems from those of mixed species. Growing as they do in pure even-aged crops, these forests have generally been worked under a clear felling system either with or without seed trees to provide a source of seed for regeneration.

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\* Hoppus log volume expresses the content of timber in a log which is approximately 78.5 per cent. of true volume.

A selection system of management is not suitable for these species. They need adequate light for establishment of regeneration and consequently reasonably large canopy openings are necessary. Clear felling in small groups, or patches, or, alternatively, a form of shelterwood fellings are likely to meet the silvicultural requirements of the species in the best way, as well as meeting soil stability and water supply considerations in mountain areas.

A technique has been developed for raising mountain ash in nursery beds for subsequent afforestation works. For planting of gaps in burnt over areas and plantation establishment in cleared areas which were formerly ash sites, young seedlings are transferred from seed beds into small wood veneer or metal tubes. When they are about 6 to 9 inches tall, they are planted in their final position at spacings of from 6 to 8 feet apart. Frost and vermin damage can cause difficulties in plantation establishment with these species in certain areas if proper precautions are not taken.

### *Mixed Species Forests*

Occurring in the mountains, although not generally in the higher areas, are mixed forests of messmate, manna gum, narrow-leaved peppermint, mountain grey gum, blue gum and several other species. By far the largest area of forested land in Victoria is occupied by the mixed species forests. They represent possibly  $3\frac{1}{2}$  to 4 million acres of the  $5\frac{1}{2}$  million acres of reserved forest.

Particularly at their upper elevations on good sites, these forests form valuable timber-producing stands. Mount Cole and Mount Disappointment State forests in the Beaufort and Broadford districts contain examples of excellent mixed species stands. Undergrowth conditions are less dense and luxuriant than in the ash forests. The species are more fire resistant and have the ability to sprout following fire so that those mixed stands normally have a different structure to the ash stands. They are generally all-aged, ranging from young seedlings which have developed in small openings, through patches of saplings and pole-size trees following past utilization operations, to mature and over-mature trees.

Management of these mixed forests has usually been, and is likely to be, continued on a selection felling basis, removing small groups of older trees in utilization fellings and creating relatively small openings in which natural regeneration becomes established. Generally, seedling regeneration is obtained without difficulty, but in the event of failure of regeneration, e.g., in a poor seed year, coppice re-growth and seedlings developed from ligno-tubers can usually be depended upon to take its place.

### *Fire Protection*

Due to a combination of weather conditions with hot, dry summers, and inflammable vegetation, Victoria's mountain forest areas are among the world's worst fire hazards. From the early days of settlement they have been subjected to periodic severe fires culminating in the conflagration of 1939 in which 71 lives were lost, great damage to

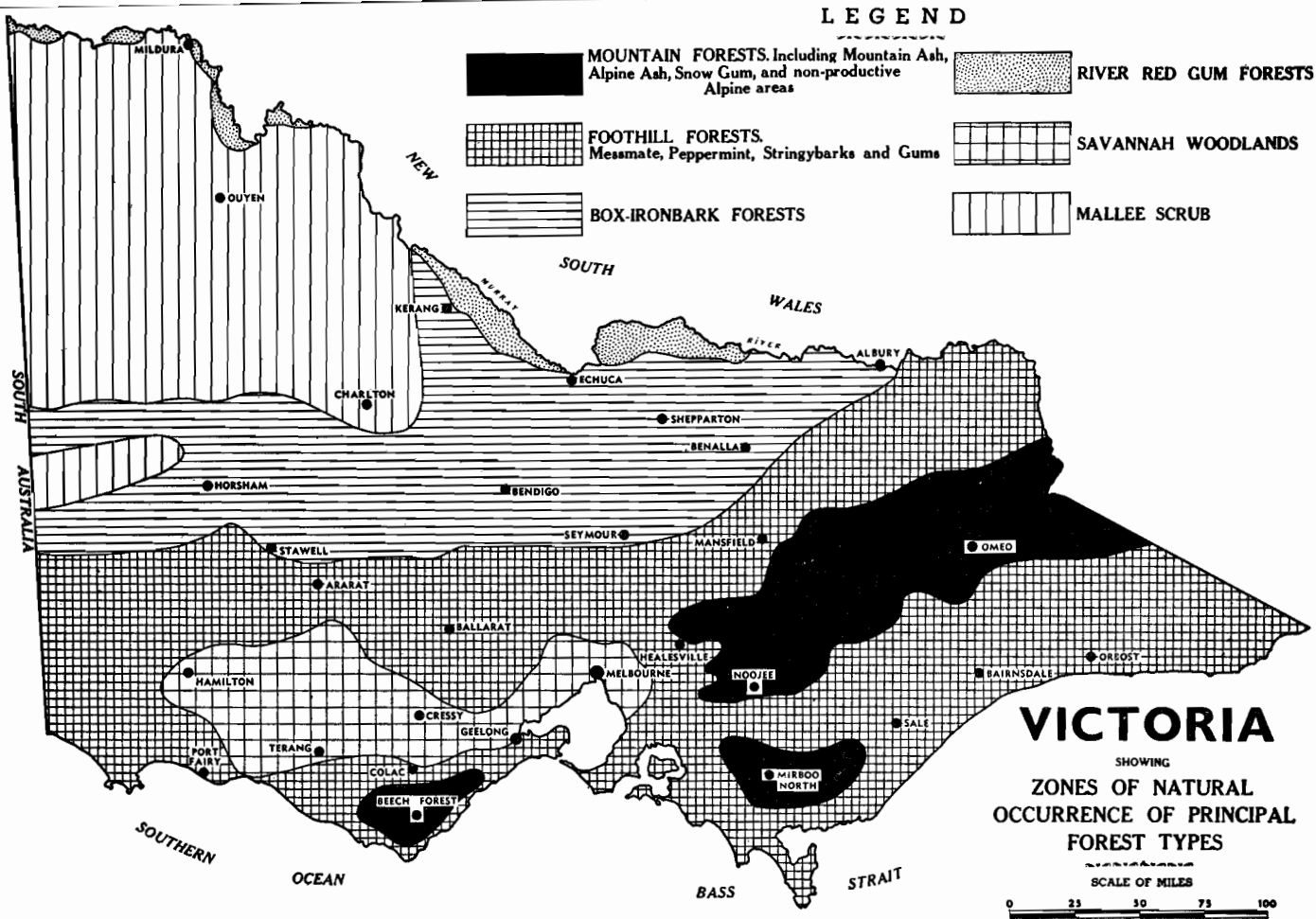


FIGURE 2

property sustained, and an estimated minimum of 2,000 million superficial feet of merchantable timber, principally of ash species, killed. Since that date fire detection and suppression measures have been greatly improved and hundreds of miles of roads and tracks covering large portions of the mountain areas constructed for access of men and equipment to the scene of fires. Much remains to be done, however, to obtain complete protection from fire, both natural and man-made. Early detection, access tracks, modern equipment and trained fire-fighting personnel are essential and are now available in extensive areas of our forested mountains.

Success in fire prevention is essential for the preservation of the State's forest wealth and also for maintenance of regularity of stream flow in water catchments and for soil stability.

### *Water Supply and Hydro-Electric Power*

The vital importance of mountain forests in relation to water supply has already been referred to. Water is used from the forested catchments of streams flowing both north and south of the Main Divide for domestic, irrigation, and hydro-electric purposes. The preservation of these catchments in efficient condition is a vital aim in fire protection. Within domestic water supply catchments, forest management practices have been introduced in all State forests which provide for prescriptions to regulate and control carefully the thinning, utilization fellings, and general harvesting operations of the forest crop so that water supply interests are not adversely affected. Research work is in progress in several catchment areas by various Government authorities to help in determining the effect of various forest management practices on water yields.

### *Forest Recreation*

With the construction of new and better roads throughout much of our mountain country, the grandeur and beauty of Victorian mountain scenery is attracting more and more tourist interest. The attraction of the mountain fern gullies has long been known. The Alpine Highway from Omeo to Bright and the roads to Mount Buller and Mount Buffalo open up vistas of mountain forest, snow gums, and open grassy plains above the timber line with their wealth of spring and summer wildflowers.

It is probable that the area of snow country in Victoria suitable for snow sports exceeds that of Switzerland. At Mount Buller and Falls Creek, alpine villages have been established as first-class tourist and ski resorts. It is certain that other alpine areas will be similarly developed since the popularity of this winter sport is growing rapidly each year.

### *Glossary*

The following are the common and botanical names of species referred to in the section above :—

<i>Common Name</i>	<i>Botanical Name</i>
Alpine Ash ..	.. <i>Eucalyptus delegatensis</i> , R. T. Baker (Syn. <i>E. gigantea</i> , Hook.f.)
Blackwood ..	.. <i>Acacia melanoxylon</i> , R. Br.
Blanket Leaf ..	.. <i>Bedfordia salicina</i> , DC.

Common Name	Botanical Name
Blue Gum .. ..	<i>E. bicostata</i> maiden et al.
Hazel .. ..	<i>Pomaderris aspera</i> Sieb. ex DC.
Manna Gum .. ..	<i>E. viminalis</i> , Labill.
Messmate .. ..	<i>E. obliqua</i> , L'Herit.
Mountain Ash .. ..	<i>E. regnans</i> , F. v. M.
Mountain Grey Gum .. ..	<i>E. goniocalyx</i> , F. v. M. ex Miq.
Musk .. ..	<i>Olearia argophylla</i> , Benth.
Myrtle Beech .. ..	<i>Nothofagus cunninghamii</i> , Oerst.
Narrow-leaved Peppermint .. ..	<i>E. radiata</i> , Sieb. ex DC.
Red Gum .. ..	<i>E. camaldulensis</i> , Dehn. (Syn. <i>E. rostrata</i> , Schlecht).
Red Ironbark .. ..	<i>E. sideroxylon</i> , A. Cunn. ex W. Woolls
Sassafras .. ..	<i>Atherosperma moschatum</i> , Labill.
Satin Box .. ..	<i>Phebalium squameum</i> , Engler
Shining Gum .. ..	<i>E. nitens</i> , Maiden
Silvertop .. ..	<i>E. sieberiana</i> , F. v. M.
Silver Wattle .. ..	<i>Acacia dealbata</i> , Link
Snow Gum .. ..	<i>E. pauciflora</i> var. <i>alpina</i> , Ewart
Tree Fern (common) .. ..	<i>Dicksonia antarctica</i> , Labill.

### Victorian High Catchments

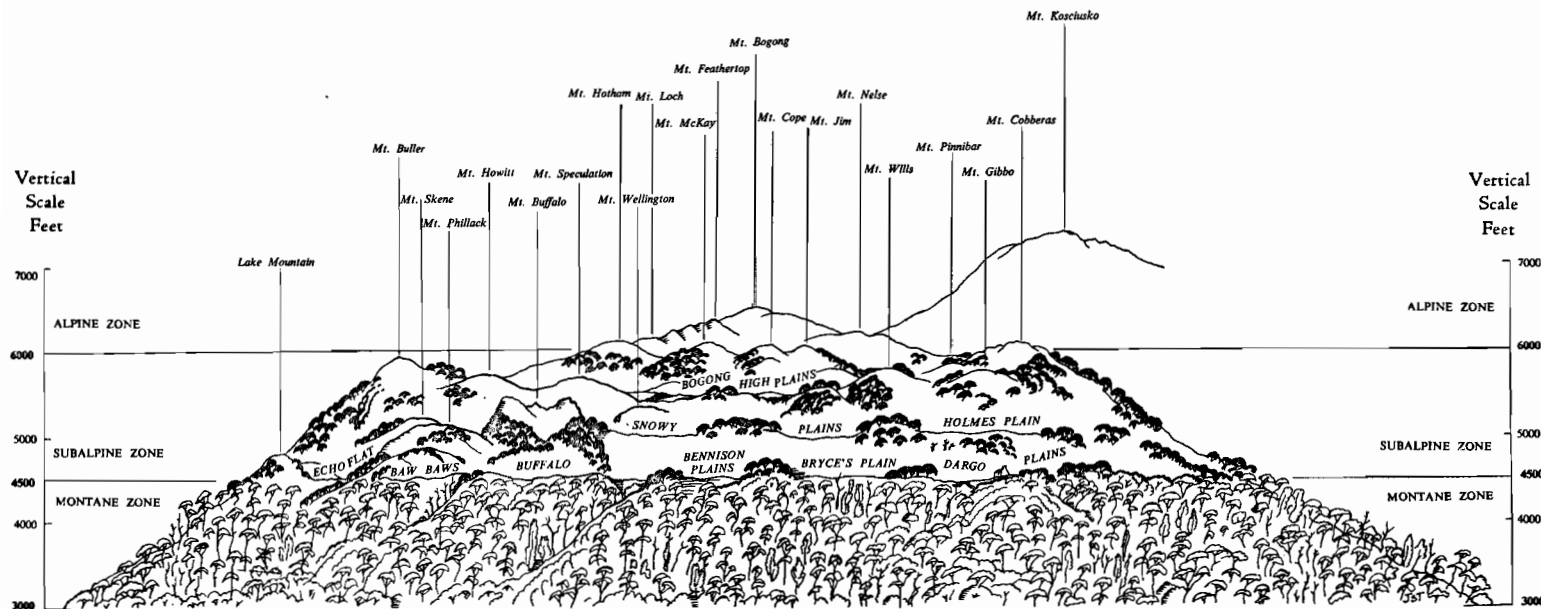
#### Introduction

In the north-east corner of Victoria lies a wild, mountainous and heavily forested region, where few roads run, settled by only a handful of people. Within it, mostly on the Great Divide, there is an area of about 900 square miles with an elevation greater than 4,500 feet, which lies under snow in the winter months. Here are the Victorian Alps, the high catchments in which rise the tributaries of our major rivers—the Mitta Mitta, Kiewa, Ovens, King and Broken, flowing north to the Murray; the Delatite, Howqua and Jamieson in the Eildon Catchment; the Thomson, Avon, Macallister and the Tambo which run south to the Gippsland Lakes.

The high catchments were exploited by the pioneers—the gold prospectors and the graziers—but it is only since 1925 that the State authorities have come to realize their vital importance for water and power production, forestry, nature conservation and the tourist industry. The Victorian mountains lack the usual features of true alps—extensive rocky peaks—and are very largely covered with a deep mantle of soil. Over-grazing and recurrent fires have damaged the protective vegetative cover and soil erosion has become a threat to the catchments. Since 1941, grazing has been restricted by the Soil Conservation Authority, and since 1958, by Government direction, this Authority controls the use of all land above 4,000 feet (see page 62).

The vegetation of the alpine catchments is extremely complex and has not yet been adequately described in scientific papers. It will be convenient to distinguish three major environmental zones—the alpine, sub-alpine, and montane (fig. 3).





A highly simplified diagram of the Victorian Alps seen from the south, showing the three major climatic and vegetational zones, the heights of the major mountains and of the larger plains. The vertical scale is exaggerated and the location of the mountains is only approximate (see Figure 1). The Alpine zone, of small extent in Victoria, is treeless; the Sub-Alpine zone carries Snow Gum (in black), snow grass, heathy shrub communities, and moss beds. The Montane zone is heavily forested; the tree species comprise Woolly Butt, Mountain and Manna Gums, Peppermints and White Sallee, all hardwoods of the genus *Eucalyptus*.

FIGURE 3

*Environmental Zones*

(1) The true *alpine zone* in Victoria is restricted to the summits of the highest mountains above the tree line. The precipitation ranges from 70–100 inches per annum and snow may lie for four months of the year. The major vegetation community is a “herbfield”, comprising many showy species of which the Snow Daisy (*Celmisia longifolia*) is the best known. Although this plant community is better represented on the high peaks of the Snowy Mountains in New South Wales, and although it has been damaged by over-grazing, characteristic examples may still be found on Mount Bogong (6,516 feet), Mount Nelse (6,181 feet), Mount Hotham (6,101 feet), Mount Pinnabar (5,811 feet) and Mount Howitt (5,718 feet).

(2) The *montane zone* is the extensive area surrounding the snow country proper at elevations less than 4,500 feet, with an annual rainfall of 40–70 inches. It is largely covered with mixed hardwood forest, although there is a high belt dominated by the Woollybutt or Alpine Ash (*Eucalyptus delegatensis*), a tree of great importance to the timber industry. Many other tree species occur, including the Mountain Gum (*E. dalrympleana*), the White Gum (*E. pauciflora*), the Manna Gum (*E. viminalis*) and the Peppermints (*E. dives*, *E. radiata*). The best of these forests originally had an open grassy floor, but a century of over-grazing by sheep, cattle, and rabbits and frequent recurrent fires have induced a dense scrub vegetation. Soil erosion is extensive and the rehabilitation of this part of the catchment now presents a very difficult problem.

(3) Between these two zones (4,500–6,000 feet) is the *sub-alpine zone*, with a total annual precipitation of 50–80 inches, much of it in the form of snow, which may lie for one to four months of the year. All this region is below the natural tree line, but is by no means uniformly covered with trees; its shallow valleys and gentler slopes form the characteristic High Plains known to skiers and walkers as one of the most delightful of Victorian landscapes.

Within the sub-alpine zone, four major plant communities have been distinguished :—

- (a) Woodland, in which the major species is the Snow Gum (*E. niphophila*), which is probably only an alpine form of *E. pauciflora*; the Black Sallee (*E. stellulata*) and the Dargo Gum (*E. perriniana*) may accompany it. In their natural state most of these woodlands had an open grassy floor, with snow grass (*Poa australis*) extending right up to the bases of the trunks, but fire has encouraged the growth of shrubs. Many of the larger trees are bare skeletons, regenerating very slowly from the basal ligno-tubers.
- (b) A heath-like community of shrubs, many of them legumes (*Oxylobium*, *Bossiaea*, *Hovea*), with others belonging to characteristic Australian genera (*Epacris*, *Prostanthera*, *Kunzea*). It appears that originally this community was more or less confined to the stonier and poorer soils, but it is now spreading into the damaged grasslands. It is not regarded as good catchment cover.

- (c) Moss beds. In all the wetter parts of the zone are the moss beds or bogs, carrying a rich and varied flora, rooted in an acid peat made up of the moss *Sphagnum cristatum* and the dead remains of higher plants. The smaller mossbeds occur below springs and along the courses of the streams ; more extensive moss beds cover the flats of the larger valleys. Here the streams flow on stony beds between banks of peat up to 10 feet thick. The peat tends to slow down stream flow and to retain water even in the height of summer ; the moss beds regulate the flow of water and add considerably to catchment efficiency. It is most unfortunate that the trampling of grazing animals and recurrent fires have destroyed so many of them.
- (d) Grassland. This is a very extensive treeless community dominated by the Snow Grass (*Poa australis*) or, in snow-patch areas, by a sedge (*Carex hebes*), but containing up to 40 species of herbaceous plants.

The grassland communities of the sub-alpine region present a problem to botanists which has not yet been completely solved. One would normally expect the Snow Gum to occupy all these areas, and it is often found on the higher and rockier peaks within the High Plains. It is usually considered that the absence of trees on the plains is due to cold air drainage during the growing season, leading to heavy frosts at night which cause the soil to heave, and prevent establishment of all but the hardiest seedlings. However, as grassy plains are found on rounded slopes as well as in valleys, there may be other factors at work in restricting the growth of trees, such as strong winds or certain features of the soil.

### Utilization

It seems almost certain that the High Plains were grazed very sparingly by indigenous animals, but since 1850 they have been utilized for summer grazing by sheep, horses, and cattle. The grazing intensity was exceptionally high in drought years and it has steadily become more important as the grass disappeared from the burned montane forests and as the home paddocks suffered from the rabbit and from inadequate fertilization. The deterioration of the vegetative cover, especially in the grasslands and the moss beds, began with periodic over-stocking and has been accelerated by the increased amount of burning since the white man came to Australia. It is not generally realized that the cattle and sheep graze mainly on the young grass shoots and the herbs of the grassland, rather than on the old tussocks, and cattlemen have usually found it necessary to burn in order to encourage the growth of sweeter feed. Accidental and man-made forest fires have also swept into the High Plains and damaged the grasslands.

### Soil Erosion

A first warning that all was not well with the catchments was given in 1893 by Helms in articles on the similar Kosciusko snow leases, but this warning was not heeded. It was not until 1920 that the real dangers of soil erosion in Victoria were brought under notice. The urgent necessity of paying attention to the conservation of soil in the alpine catchments was pointed out in 1941.

Since 1944, the Botany School of the University of Melbourne has organized regular expeditions to the Bogong High Plains, assisted by the Soil Conservation Board\* and the State Electricity Commission, and has carried out a long term study of the vegetation of grazed and ungrazed areas. This work, like that on Kosciusko, has confirmed the earlier opinion that the High Plains are by no means in a natural state, that incipient surface soil erosion is widespread, and that recovery from the effects of grazing, burning and trampling is likely to be a very slow and uncertain process. In 1957, a valuable survey was made of the whole of the Victorian high catchments, and the account clearly shows the urgent need for the control of grazing and the elimination of fire.

### *Catchment Control*

Other Authorities which have stimulated official interest in catchment control include the State Electricity Commission, which is responsible for the Kiewa Hydro-electric Scheme on which some £40 million have been expended to date, the State Rivers and Water Supply Commission, and the Forests Commission. The catastrophic bushfires of 1939 led to the appointment of Mr. Justice Stretton as Royal Commissioner to investigate the causes of bushfires, and in the second of his two reports, which still merit close attention, he commented on the erosion in the alpine catchments. Conservation research in the alpine catchments has also been carried out in New South Wales in the much more extensive Snowy Mountains region, where the great hydro-electric scheme is being operated. The entry of the engineers into the catchments has undoubtedly accelerated the movement towards conservation. In 1956, the Australian Academy of Science appointed a committee of four scientists to report on the condition of alpine catchments in both States. The report was published in 1957, and strongly supported the views of the engineers and of many State conservationists that all grazing above 4,500 feet should be discontinued. This recommendation has been adopted by the New South Wales Government, and grazing has also been withdrawn from the highest and most damaged parts of the Victorian catchments.

### *Potential of Alpine Region*

There is no doubt that the whole region should be regarded as one with multiple uses for the State. Parts of it can be developed for forestry purposes; other large areas must be preserved for the production of hydro-electric power and for increased irrigation potential; the whole area has a tremendous skiing and tourist potential. There are very good arguments for the creation in Victoria of an alpine national park similar to that created by the Government of New South Wales in 1944—the Kosciusko State Park of 923,000 acres.

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\* The Board was replaced by the Soil Conservation Authority in 1950.

## **Responsibility of Soil Conservation Authority in Alpine Areas**

### *Statutory Control*

The Soil Conservation Authority has the legislative responsibility to determine the most suitable use in the public interest of all lands in catchment areas and the conditions under which various forms of land use may be permitted.

The Land Utilization Advisory Council consists of the heads of five Departments all concerned with the use of land—Department of Crown Lands and Survey, Department of Agriculture, State Rivers and Water Supply Commission, Forests Commission, and Soil Conservation Authority. This Council is available to the Authority for consultation in regard to the determination of land use in proclaimed water supply catchments.

The Governor in Council has, at the request of the Soil Conservation Authority, proclaimed most of the important catchments of the State, including those supplying the Hume, Eildon and Glenmaggie Reservoirs. The remainder of the high catchment country in north-eastern Victoria will be proclaimed progressively.

After a catchment area has been proclaimed, the Authority carries out a soil and ecological survey and, with the aid of this and other information, makes a Determination defining the way in which each part of the catchment may be safely used. The objective is to use every parcel of land at a high level of production without loss of soil or impairment of catchment efficiency.

To ensure that all government instrumentalities whose activities take them into alpine areas are aware of the over-all control by the Authority, the Government has directed that the Soil Conservation Authority shall have supervisory control of all grazing and earthworks and the decision as to the use of all land above 4,000 feet elevation.

In its control of the Bogong High Plains, the Authority has been helped materially by the Bogong High Plains Advisory Committee, a body consisting of three cattlemen representing the cattle graziers in the Omeo district, Kiewa, and Ovens Valleys and representatives of the State Electricity Commission, Lands Department and the Soil Conservation Authority. The Committee examines the area towards the end of each grazing season and recommends the grazing intensity to be permitted in the following year. It also recommends to the Authority other measures that should be taken to safeguard the area.

The State Electricity Commission and the Soil Conservation Authority have assisted the Botany School, University of Melbourne, to maintain a continuous survey in Rocky Valley of changes that are taking place in that area, both where the vegetation is grazed at the present controlled intensity and within enclosed areas where grazing does not occur. Improvement in the sward and soil cover has occurred under both conditions, but is more marked within the ungrazed enclosures.

*Soil Conservation In Catchments*

Victoria's expanding population is creating an ever-increasing demand for water, the natural resource which is commonly recognized as the single factor most likely to limit Australia's development. Over large areas of the State, settlement has resulted in forms of land use which have impaired the water-holding capacity of the soil. The too-drastic clearing of trees, over-grazing, and over-cropping have not only upset the ecological balance, but frequently resulted in ever diminishing production. The loss of soil fertility is accompanied by a breaking down of soil structure and inevitably erosion has followed. The twin evils of too frequent flash-flooding and silting of streams and water-courses are a natural consequence.

It is only since the Second World War, that a serious endeavour has been made in Victoria to restore the damaged areas and introduce improved methods of land use which not only protect the soil and lift production, but use the rain which falls to best advantage. Despite the short period, the practice of soil conservation has provided excellent results which have been widely recognized.

One important aspect of this recognition has been the approach by organizations responsible for water supplies to the Authority for the proclamation of catchments as water supply areas. Following such proclamations, which are necessarily provided for by legislation, the Authority determines the most suitable use in the public interest of all lands in catchment areas.

While there are many small catchments operating on this basis, the principle was extended during 1960 when the Government decided that the fourth largest reservoir in the State should be built on the Campaspe River in Central Victoria at a cost of £3 million. The catchment to this reservoir, which is known as the Eppalock Catchment, covers 820 square miles, and the northern part of it is in a severely eroded condition. For the first time in Australia a government has provided funds simultaneously for building a reservoir and soil conservation work throughout the catchment to protect this valuable asset and it is planned to spend £50,000 a year for ten years in a dual approach to the latter problem.

The first approach, which is made urgent by the fact that the reservoir is already being built, is the prevention of silt movement by mechanical means such as concrete structures and groynes in gullies. Gullies will be fenced and planted with trees as further erosion control measures. Termed non-productive, these works are vital and widespread in the early stages of the Eppalock Catchment project.

However, the more important and enduring positive approach of soil conservation is well under way. With pasture improvement over the broad acres as the dominant aspect of control, farm planning for soil conservation purposes has been introduced. As this work proceeds, the necessity for erosion control structures as such will lessen, because of reduction in both the quantity and rate of surface run-off water and consequent reduction of silt.

The aims of soil conservation in catchment control are to stabilize the soil through replacing the original, irretrievably lost, ecological balance by another balance with, if possible, a higher productive level and to ensure that excess water is as pure as possible. The improved land use will result in more rainfall entering the soil and there will be an increased sub-surface flow spread over longer periods and an inevitable and drastic lessening of silt.

### *Control of Grazing*

The high country of Victoria has been used for grazing for about 100 years. In the early days the grass lands and herb fields were grazed mostly by horses. Later, as the surface of the land became more consolidated, more cattle were introduced and in the drought years, particularly of 1901 and 1914, large numbers of sheep were taken to the Bogong High Plains and other high country areas. As these areas are snow covered during the winter months, grazing has always been restricted to the summer, but it was common practice prior to 1944 for stock to be moved from the lower timbered country into the more open snow gum and high plains country immediately after the thaw commenced.

During the years of uncontrolled grazing, it was common practice for the country to be burnt, particularly in the timbered areas. Whilst this practice resulted in a quick growth of palatable vegetation, the result was a heavy development of scrub and young forest to the detriment and virtual destruction of the grazing potential. This habit of burning was not so common on the more open high country, but in bad bushfire years such as 1939, practically the whole of the high mountain country of the north-east of Victoria was swept by fire.

Recovery of the alpine vegetation after fire and severe over-grazing is very slow, bare areas of soil remain exposed and sheet, gully and wind erosion commence.

Since 1944, the Soil Conservation Authority has exercised control over the grazing on the Bogong High Plains. The controls exercised have included a substantial reduction in the number of stock grazed each year, the allocation of specific numbers to each licence holder and run and determination of the date of entry to and departure from the High Plains depending on seasonal conditions. The grazing season is now limited to the period between the middle of December and the middle of April. In late snow years, entry is not permitted until January.

Recently two areas have been completely closed to grazing. These are Mount Bogong and its surrounds, particularly on the Kiewa fall, and a large area surrounding Mount Hotham.

Substantial improvement in vegetative cover has occurred throughout most of the Bogong High Plains since grazing control has been exercised. This is not always by native species, nor by the particular species once inhabiting the particular area, but the over-all effect on improving catchment efficiency is satisfactory.

Most of the cattlemen use the area for grazing of breeding cows and calves, as this is the most profitable line to them. The demand for calves and young stock grazed on alpine areas is keen and this is reflected in the successful autumn calf sales which are held annually in towns near to the high country. Nevertheless, the number of cattle grazed in these areas is small by comparison with the total number of beef cattle in the State.

### **Tourist Attractions**

In the north-east of Victoria, the Alps provide both a summer and a winter tourist playground. In this great alpine region of which the Dividing Range forms a backbone, there are 870 square miles of mountainous country which is covered every year from June until October with a mantle of deep snow.

Here and there the Alps are crossed by roads. By far the greater part, however, is uninhabited and may be visited only on foot or on horseback. In late spring, after the snows thaw, herds of beef cattle are taken up into the Alps and turned out to graze on areas of grass-land known as High Plains. The cattle are returned to pastures below the snowline in autumn, when the onset of snow again blankets the countryside.

The Victorian Alps are ideal for winter sports. They possess the gentle rolling configuration which is particularly suitable for alpine skiing. Winter sun reaches the slopes and penetrates into the valleys without detracting from the perfect snow sports conditions. One of the outstanding features of Victoria's skiing terrain is the entire absence of avalanches.

In the heart of the Alps are chalets, hotels, and alpine villages where informal companionship and comfort is accompanied by slopes that cater for the expert and the beginner. A feature of alpine village life is the club lodges which are built by ski clubs. The lodges are erected on Crown Land which is made available at a nominal rental. Control of village affairs is in the hands of local committees of management on which there is representation of all organizations and official bodies concerned.

There are ski tows and lifts on the principal slopes and expert instructors are present throughout the snow season to give skiing tuition. All resorts are accessible by approach roads which are kept clear of snow during the winter months.

The major ski resorts in the Victorian Alps are at Mount Buller (5,919 feet), Mount Buffalo (5,654 feet), Mount Hotham (6,101 feet) and Falls Creek (5,250 feet).

The chalets that cater for skiers in most cases remain open to cater for summer tourists. Clubs also take advantage of the snow-free months to effect improvements to lodges, and members enjoy summer touring throughout the mountains, using the lodges as bases.



As soon as the warm days of late spring and early summer farewell the great mass of snow, the alpine flora come to life. However, not all of the snow disappears and frequently deep drifts remain on the highest peaks throughout the year.

In spring, summer and autumn, the mountain summits and high plains are covered with carpets of alpine daisies. In the sheltered valleys and on the sunlit banks of swamps and streams, a host of native flowers and trees burst into bloom.

Many roads traverse the foothills of the Alps, following mountain-girt valleys and crossing the ranges at low gaps. There are, however, several major roads that penetrate into the very heart of the mountains, (see map opposite page 45). Principal of these are the Alpine Road—the highest through motor road in Australia—which crosses Mt. Hotham at a height of 5,806 feet; the Omeo Highway which follows the valleys of the Mitta Mitta and Tambo Rivers which have their sources high in the Alps and flow north and south from the Dividing Range, and the Bonang Highway skirting the eastern extremity of the alpine region. Other lesser roads are of interest to the admirer of rugged mountain scenery and the tourist who is conscious of history and enjoys visiting the old mining townships which are so closely linked with the exploration of the Alps.

For the walker, there are hundreds of miles of rugged mountains and valleys with only the minimum of contact with habitation.

### **Mount Buffalo National Park**

Hume and Hovell, the Australian explorers, were the first white men to see Mount Buffalo. They viewed the towering plateau from an angle that brought the shoulder of The Hump close behind the upthrust peak of the horn and gave the rugged outline of the great tableland of granite the appearance of a huge buffalo. It was the inspiration for the name they gave it—Mount Buffalo.

That was in 1824, but it was not until the discovery of gold in Victoria 30 years later that the first white men set foot on the plateau, and many years later, that the scenic fame of Mount Buffalo spread throughout Victoria and mountaineering enthusiasts began to come from Melbourne to holiday in the Alps and explore the precipitous cliffs and walls of The Gorge.

For a long time there was no accommodation for tourists on the plateau. A syndicate had built a primitive house between the Hump and the Horn, but it lasted only one summer and was then abandoned. Later a small hospice that became known as "Bousteads", as well as a number of sleeping huts, were built not far from where the Monolith stands today.

The first Chalet was built on the site of the existing Chalet in 1910, two years after the opening of the road that was constructed by the Victorian Government when it assumed control of the Mount Buffalo plateau as a national park. The road—later graded and widened for

two-way traffic by the Country Roads Board—was built by Mr. C. Catani, Engineer-in-Chief of the Public Works Department. He was also responsible for work on the lake that bears his name.

The Victorian Railways took control of the Chalet in 1924, and two years later started remodelling the famous guest house. This work continued until 1937, when most of the major additions and extensions were completed. Since then the policy of progressively improving the Chalet has been continued, with the result that it now ranks with the world's best mountain holiday resorts.

Mount Buffalo is an ideal vacation spot. Situated at 4,450 feet, the plateau has a climate that tempers summer heat to around 75° F., while in winter a carpet of crisp snow awaits the skier.

The nursery slopes of Dingo Dell, with its rope tow, is suitable for skiing beginners; for the experienced there are the more exhilarating runs at the Cathedral and Cresta.

Mount Buffalo unfolds a never-ending panorama of vistas stretching over the Ovens Valley to the distant blue haze of the Australian Alps. The plateau has numerous fantastically shaped rocky outcrops, winding walks, and breathtaking views of the Alps—many within easy walking distance of The Chalet. Some of the geological curiosities are the Hump, the Horn, the Monolith, the Leviathan (a giant rock estimated to weigh about 30,000 tons), the Cathedral, Egg Rock, Kissing Stone, Table and Loaves, Stonehenge, the Sentinel, the Torpedo, Mahomet's Coffin and the Woolpack.

Over 360 species of wildflowers have been discovered in the National Park—a reservation of more than 27,000 acres. In the flower season, a walk, that takes in the shores of Lake Catani, will reveal at least 60 species in bloom. The bird life in this alpine region includes the lyre bird which, on some days, can be seen within a few hundred yards of the Chalet.

## *Climate*

### **Climate of Victoria**

#### *General*

The State of Victoria experiences a wide range of climatic conditions ranging from the hot summer of the Mallee to the winter blizzards of the snow covered Alps, and from the relatively dry wheat belt to the wet eastern elevated areas where many of Victoria's permanent streams spring.

#### *Temperatures*

February is the hottest month of the year with January only slightly cooler. Average maximum temperatures are under 75° F. along the coast and over elevated areas forming the Central Divide and North-Eastern Highlands. Apart from these latter areas, there is a steady increase towards the north, until, in the extreme north an average of

90° F. is reached. Values decrease steadily with height being under 70° F. in alpine areas above 3,000 feet and as low as 60° F. in the very highest localities.

Temperatures fall rapidly during the autumn months and then more slowly with the onset of winter. Average maximum temperatures are lowest in July; the distribution during this month again shows lowest values over elevated areas, but a significant feature is that apart from this orographically induced area, there is practically no variation across the State. Day temperatures along the coast average about 55° F. in July; much the same value is recorded over the wheat belt, and only a few degrees higher in the far north-west under conditions of few clouds and relatively high winter sunshine. The Alps experience blizzard conditions every season with minimum temperatures 10° F. to 20° F. less than at lowland stations. (See pages 47 to 49.)

Conditions of extreme summer heat may be experienced throughout the State except over the alpine area. Most inland places have recorded maxima over 110° F. with an all time extreme for the State of 123.5° F. at Mildura on 6th January, 1906. Usually such days are the culmination of a period during which temperatures gradually rise, and relief comes sharply in the form of a cool change with rapid temperature drops of up to 30° F. at times. However such relief does not always arrive so soon and periods of two or three days or even longer have been experienced when the maximum temperature exceeds 100° F. On rare occasions extreme heat may continue for as long as a week with little relief.

Night temperatures, as gauged by the average minimum temperature, are, like the maximum, highest in February. Values are below 50° F. over the elevated areas, but otherwise the range is chiefly 55° F. to 60° F. The highest night temperatures are recorded in the far north and along the coast. In mid-winter, average July minima exceed 40° F. along the coast and at two or three places in the far north. The coldest point of the State is the north-east alpine section, where temperatures frequently fall below freezing point. Although three or four stations have been set up at different times in this area, none has a very long or satisfactory record. The lowest temperature on record so far is 9° F. at Hotham Heights (Station height 5,776 feet) at an exposed location near a mountain. However, a minimum of minus 8° F. has been recorded at Charlotte Pass (Station height 6,035 feet)—a high valley near Mount Kosciusko in N.S.W.—and it is reasonable to expect that similar locations in Victoria would experience sub-zero temperatures (i.e., below 0° F.) although none has been recorded due to lack of observing stations.

### *Frosts*

With the exception of the exposed coast, all parts of Victoria may experience frost, but frequencies are highest and occurrences usually more severe in elevated areas and valleys conducive to the pooling of cold air. All inland stations have recorded extreme screen temperatures less than 30° F., whilst at a large number of stations

extremes stand at 25° F. or less. Thus frost may be expected each year over practically the whole of the State, but the bulk of the occurrence is restricted to the winter season. Spring frosts may constitute a serious hazard to agriculture, and in some years a late frost may result in serious crop damage. Periods of frost over Victoria longer than three or four days are most unusual.

### *Rainfall*

Rainfall exhibits a wide variation across the State and although not markedly seasonal, most parts receive a slight maximum in the winter or spring months. The relatively dry summer season is a period of evaporation, which greatly reduces the effectiveness of the rainfall. Average annual totals range between 10 inches in the driest parts of the Mallee to over 60 inches in parts of the North-Eastern Highlands. An annual total exceeding 140 inches has been reported from Falls Creek in the north-east; however, with the sparse population and inaccessibility of the highland localities, it is not practicable to obtain a representative set of observations from this area. Most areas south of the Divide receive an annual rainfall above 25 inches, with over 40 inches in the Central Highlands, Otway Ranges and South Gippsland. The wheat belt receives chiefly between 12 and 20 inches. With the exception of Gippsland, 60 to 65 per cent. of the rain falls during the period May to October. This proportion decreases towards the east, until over Gippsland the distribution is fairly uniform with a warm season maximum in the far east. All parts of the State have on rare occasions been subjected to intense falls, and monthly totals exceeding three times the average have been recorded. Monthly totals exceeding 10 inches have been recorded on rare occasions at most places on and south of the Divide; the chief exception being over the lowlands extending from Melbourne to the Central Western District. Occurrences are more frequent, but still unusual, over the north-east and East Gippsland and isolated parts such as the Otways. This event has, with few exceptions, never been recorded over the north-west of the State. The highest monthly total ever recorded in the State was a fall of 35·09 inches at Tanybryn in June, 1952.

### *Floods*

Floods have occurred in all districts but they are more frequent in the wetter parts of the State such as the north-east and Gippsland. However, although a rarer event over the North-West Lowlands, they may result from less intense rainfall and continue longer owing to the poor drainage in this section of the State. In many instances the frequency of flooding is increased by valley contours and damage is often greater because of the higher density of adjacent property and crops.

### *Snow*

Snow in Victoria is confined usually to the Great Dividing Range and the alpine massif, which at intervals during the winter and early spring months may be covered to a considerable extent, especially over the more elevated eastern section. Falls elsewhere are usually

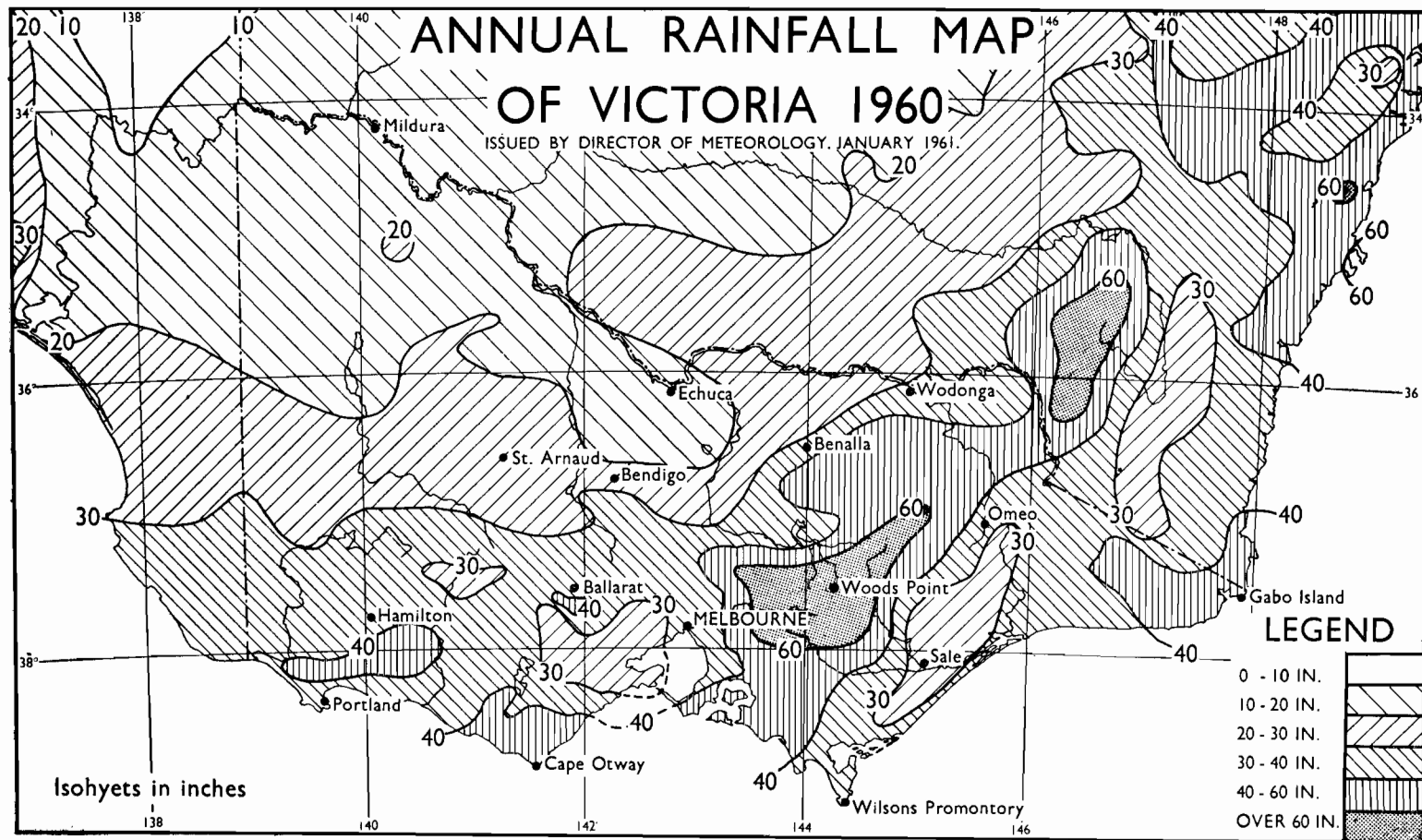


FIGURE 4

light and infrequent. Snow has been recorded in all districts except the Mallee, Wimmera, north, and lower north. The heaviest falls in Victoria are confined to sparsely populated areas and hence general community disorganization is kept to a minimum. Snow has been recorded in all months on the higher Alps, but the main falls occur during the winter. The average duration of the snow season in the alpine area is from three to four months.

### *Winds*

The predominant wind stream over Victoria is of a general westerly origin, although it may arrive over the State from the north-west or south-west. There are wide variations from this general description, however, and many northerlies and southerlies are experienced. The latter is the prevailing direction from November to February with a moderate percentage of northerlies often associated with high temperatures. Easterly winds are least frequent over Victoria, but under special conditions can be associated with some of the worst weather experienced over the State. Wind varies from day to night, from season to season, and from place to place. Examples of the diurnal variation are the sea breeze, which brings relief on many hot days along the coastline, and the valley or katabatic breeze, which brings cold air down valleys during the night. The latter is well developed in many hilly areas of Victoria, being the result of differential cooling after sunset. It springs up during the night, often suddenly, and continues after sunrise until the land surfaces are sufficiently heated again. The sensitive equipment required to measure extreme wind gusts has been installed at only about five or six places in the State and to date the highest value recorded is just slightly over 90 m.p.h. There is no doubt, however, that stronger gusts have been experienced over the State, although not in the vicinity of a recording anemometer. A number of tornadic squalls have been experienced and from the severe local damage engineers have estimated wind strengths over 100 m.p.h. It is considered that any place in Victoria could feasibly experience at some time a local gust of 100 m.p.h. or more.

### *Droughts*

There have been numerous dry spells over the State, most of them of little consequence, but many long enough to be classified as a drought. The latter was recognized as an agricultural hazard in Victoria from the middle of the previous century when population was extending into drier areas of the State. There have been less than ten significant drought periods during the last fifty years. The State of Victoria is situated on the northern fringe of the belt of prevailing westerly winds, which results in fairly uniform and reliable rainfall throughout the year. By and large, Victoria has a rather equable climate. Although severe droughts, devastating floods, scorching bush fires and severe storms are experienced from time to time, compared with other places in Australia and elsewhere over the world, the climate of Victoria is well behaved.

### **Developments in Meteorology**

In recent years new electronic equipment has come into use in the Commonwealth Bureau of Meteorology. For example, there is a device used for the "spotting" of lightning discharges, as an aid to the analysis and forecasting of weather. This is called "sferics", short for "Atmospherics Direction Finding System", and the system comprises a network of three or four stations. At present a Southern Ocean network is being set up and the stations participating are Laverton, near Melbourne; Wilkes, on the Antarctic coastline; and Guildford, near Perth.

Australia has been prominent in the field of Antarctic Meteorology for some years. At present the Bureau of Meteorology plans to place automatic weather stations at two remote localities near the Antarctic coastline, as well as to maintain its three manned stations on the continent.

Other electronic equipment in use is of the radar type, used for wind-finding and storm-watching, and in Victoria this equipment is also located at Laverton.

A new organization called a hydro-meteorological service is being formed within the Bureau of Meteorology to study the State's river habits. In Victoria, a preliminary study has been made of the Morwell River in Gippsland, with the help and co-operation of local authorities.

Weather observations made by ships are still the only source of information of meteorological conditions over the ocean areas. In 1960, the Bureau appointed a Port Meteorological Agent for the Port of Melbourne, and in this way hopes to improve its liaison with over-sea and Australian shipping.

The Melbourne Office of the Bureau is also endeavouring to improve its network of observation stations near and around Port Phillip Bay so that it can provide more accurate information for maritime interests, yachtsmen, and fishermen. New observations have begun at Dandenong, Warragul, Mornington, and Cape Schanck, and it is hoped that regular observations will be despatched from Point Lonsdale.

### **Climate of Melbourne**

#### *Temperatures*

The proximity of Port Phillip Bay bears a direct influence on the local climate of the Metropolis. The hottest months in Melbourne are normally January and February when the average is just over 78° F. Inland, Watsonia has an average of 81° F.; whilst along the bay, Black Rock, subject to any sea breeze, has an average of 77° F. This difference does not persist throughout the year, however, and in July average maxima at most stations are within 1° F. of one another at approximately 55° F. The hottest day on record in Melbourne was January 13, 1939, when the temperature reached 114.1° F. which is the second highest temperature ever recorded in an Australian Capital

City. In Melbourne, the average number of days per year with maxima over  $100^{\circ}\text{F}$ . is about four, but there have been years with up to twelve and also a few years with no occurrences. The average annual number of days over  $90^{\circ}\text{F}$ . is just on nineteen.

Nights are coldest at places a considerable distance from the sea such as at Watsonia, which has a good open exposure and where average minima are a few degrees lower than those observed in the city, where the buildings may maintain the air at a slightly higher temperature. The lowest temperature ever recorded in the city was  $27^{\circ}\text{F}$ . on 21st July, 1869 and likewise the highest minimum ever recorded was  $87.0^{\circ}\text{F}$ . on February 1, 1902.

In Melbourne, the average overnight temperature remains above  $70^{\circ}\text{F}$ . on only about two nights per year and this frequency is the same for nights on which the air temperature falls below  $32^{\circ}\text{F}$ . Minima below  $30^{\circ}\text{F}$ . have been experienced during the months May to August, whilst even as late as October, extremes have been down to  $32^{\circ}\text{F}$ . During the summer, minima have never been below  $40^{\circ}\text{F}$ .

Wide variations in the frequencies of occurrences of low air temperatures are noted across the Metropolitan Area. For example, there are approximately ten annual occurrences of  $36^{\circ}\text{F}$ . or under around the bayside, but frequencies increase to over twenty in outer suburbs and probably to over 30 per year in the more frost susceptible areas. The average frost free period is about 200 days in the outer northern and eastern suburbs, gradually increasing to over 250 days towards the city, and approaches 300 days along parts of the bayside.

### *Rainfall*

The range of rainfall from month to month in the city is quite small, the annual average being 25.89 inches on 156 days. From January to August, monthly averages are within a few points of two inches; then a rise occurs to a maximum of 2.71 inches in October. Rainfall is relatively steady during the winter months when the extreme range is from half an inch to five inches, but variability increases towards the warmer months. In the latter period totals range between practically zero and over seven and a half inches. The number of wet days, defined as days on which a point or more of rain falls, exhibits marked seasonal variation ranging between a minimum of eight per month in January and a maximum of seventeen in August. This is in spite of approximately the same total rainfall during each month and indicates the higher intensity of the summer rains. The relatively high number of wet days in winter gives a superficial impression of a wet winter in Melbourne which is not borne out by an examination of total rainfall.

The highest number of wet days ever recorded in any one month is 27 in August. On the other hand, there has been only one rainless month in the history of the Melbourne records—in April 1923. On occasions, each month from January to May, has recorded three wet days or less. The longest wet spell ever recorded was sixteen days



and the longest dry spell 40 days. Over four inches of rain have been recorded in 24 hours on several occasions, but these have been restricted to the warmer months, September to March. No fall above 2 inches in 24 hours has ever been recorded in the cooler months. Fogs occur on four or five mornings per month in May, June and July, and average 21 days for the year. The highest number ever recorded in a month was twenty in June 1937.

### *Cloud*

Cloudiness varies between a minimum in the summer months and a maximum in the winter, but the range like the rainfall is not great compared with many other parts of Australia. The number of clear days or nearly clear days averages two to three each month from May to August, but increases to a maximum of six to seven in January and February. The total number for the year averages 98. The high winter cloudiness and shorter days have a depressing effect on sunshine in winter and average daily totals of three to four hours during this period are the lowest of all capital cities. There is a steady rise towards the warmer months as the days become longer and cloudiness decreases. An average of nearly eight hours per day is received in January; however, the decreasing length of the day is again apparent in February, since the sunshine is then less in spite of a fractional decrease in cloudiness. The total possible monthly sunshine hours at Melbourne range between 465 hours in December and 289 in June under cloudless conditions. The average monthly hours expressed as a percentage of the possible, range between 55 per cent. for January and February, to 34 per cent. in June.

### *Wind*

Wind exhibits a wide degree of variation, both diurnally, such as results from a sea breeze, etc., and also as a result of the incidence of storms. The speed is usually lowest during the night and early hours of the morning just prior to sunrise, but increases during the day especially when strong surface heating induces turbulence into the wind stream and usually reaches a maximum during the afternoon. The greatest mean wind speed at Melbourne for a 24 hour period was 22.8 m.p.h., whilst means exceeding 20 m.p.h. are on record for each winter month. These are mean values: the wind is never steady. Continual oscillations take place with lulls, during which the speed may drop to or near zero, and strong surges which may contain an extreme gust, lasting for a period of a few seconds only, up to or even over 60 m.p.h. At Melbourne, gusts exceeding 60 m.p.h. have been registered during every month with a few near or over 70 m.p.h., and an extreme of 74 m.p.h. on February 18, 1951. At both Essendon and Aspendale wind gusts up to 90 m.p.h. have been measured.

There have been occurrences of thunderstorms in all months; the frequency is greatest during November to February. The greatest number of thunderstorms occurring in a year was 25. This figure was recorded for both 1928 and 1932.

### *Hail and Snow*

Hailstorms have occurred in every month of the year; the most probable time of occurrence is from August to November. The highest number of hailstorms in a year was seventeen in 1923, and the greatest number in a month occurred in November of that year when seven hailstorms were reported. Snow has occasionally fallen in the city and suburbs; the heaviest snow storm on record occurred on 31st August 1849. Streets and housetops were covered with several inches of snow, reported to be 1 foot deep at places. When thawing set in, floods in Elizabeth and Swanston streets stopped traffic causing accidents, some of which were fatal. One report of the event states that the terrified state of the aborigines suggested they had never seen snow before.

## **Victorian Weather Summary for 1960**

### *Summer 1960*

The highest reported temperature of the year for Victoria was 114° F. at Mildura on 2nd January. Thunderstorm activity was very marked and was associated with hailstorms, duststorms, and torrential downpours. Most of the severe activity occurred in northern Victoria where Chiltern recorded 510 points in 24 hours in one case, and in another a severe tornadic squall in the Tallangatta area damaged buildings, uprooted trees and caused loss of life. A severe heat wave about the middle of the month indirectly caused 31 deaths; about this time the most serious fire of the season raged in the Grampians burning out 5,000 acres of forest country. Summer rains were near average or above over the State except for the eastern districts where East Gippsland reported the greatest deficiency.

### *Autumn 1960*

This season began on a rather dry note with rainfall mostly below average. Bush fires destroyed thousands of acres of forests and grasslands, and at times widespread thunderstorm activity associated with hail smashed glass windows and damaged fruit and vegetable crops. In the latter half of the season, record rainfall was reported from many stations in all districts except East Gippsland. Autumn ended on a cold and very wet note and May was the first month in which all districts registered above average rainfalls. Six large towns (Mildura, Nhill, Echuca, Bendigo, Wangaratta and Sale) experienced the lowest mean temperature ever recorded for May.

### *Winter 1960*

Victoria, along with the southern parts of Australia experienced a cold winter. August was the fifth successive month when mean maximum temperatures failed to reach the average. The rainfall for the State as a whole was very close to normal and although local flooding did occur, none of it was serious. Frosts were reported on a number of mornings each month, some of them severe. Fogs were fairly frequent,

disrupting transport and causing the Melbourne Airport to close on several occasions. Snow fell at many elevated areas from the Grampians to the Alps during July and August and some places reported snow for the first time in 50 years.

The worst gales of the year occurred towards the end of July when power, telephone, and transport services were disrupted, structural damage was reported, and a freighter was blown ashore near Williamstown.

### *Spring 1960*

Spring began with above average rainfall in September and below average temperatures continued. Towards the latter end of this month, a violent storm developed with the passage of a cold front. Winds estimated at 70 m.p.h. in the Numurkah district unroofed buildings, snapped off large trees at the base and flattened sheds during a tornadic storm which lasted five minutes. Roofing iron was whirled up to 3 miles away, power blackouts occurred and damage was estimated at £20,000. Wet conditions were so marked this year that most places had exceeded their normal annual rainfall by September. Flooding occurred in some rivers in each district during the month.

October, which is normally one of the wettest months of the year in southern districts, was dry over most of the State and the driest for Victoria since March. Temperatures also showed a return to more normal conditions after being below the average for six successive months.

November mean temperatures were lower than those in October. Although November, 1960, was not the coldest, it ranks as one of the coldest November months for Victoria. The whole State received above average rain for spring, and almost all places recorded about one fifth above their average totals.

The year came to a close with a heat wave that continued from Christmas day to New Year's Eve and many stations over Victoria recorded temperatures of a century and above on two or three days.

### **Meteorological Records**

Particulars about climate and weather conditions have been furnished by the Commonwealth Bureau of Meteorology, and are given in the following tables. In the first are shown the rainfall for each district and for the whole State for each of the years 1951 to 1960, together with the average rainfall covering a period of 30 years.

### VICTORIA—RAINFALL IN DISTRICTS (Inches)

Year Ended 31st Decem- ber—	Districts								Whole State
	Mallee	Wim- mera	North- ern	North- Central	North- Eastern	Western	Central	Gipps- land	
1951 ..	12·09	19·61	20·26	31·87	37·45	33·32	34·71	41·78	27·91
1952 ..	15·22	21·87	21·86	35·56	46·24	39·30	40·66	48·71	32·75
1953 ..	12·27	19·62	16·81	28·69	35·57	30·40	30·75	35·29	25·38
1954 ..	13·41	17·68	21·22	29·88	35·58	25·92	30·93	34·02	25·02
1955 ..	17·68	22·44	26·00	35·99	49·05	32·40	34·12	33·86	30·24
1956 ..	20·85	24·31	31·45	41·17	55·59	34·02	34·29	44·25	34·69
1957 ..	9·67	14·87	13·55	23·01	27·32	26·82	24·85	31·98	21·03
1958 ..	15·45	17·65	21·40	31·57	37·78	29·05	28·99	35·42	26·35
1959 ..	9·97	15·16	16·56	26·09	27·69	24·46	26·53	33·63	21·70
1960 ..	18·08	24·75	22·70	38·45	40·16	36·01	34·98	37·26	30·42
Avera- ges*	12·49	17·52	18·09	28·16	34·81	27·59	28·89	33·47	24·30

\* Averages for a standard 30 years' period 1911-1940.

The heaviest rainfall in the State occurs in the Eastern Highlands (from the Yarra watershed to the Upper Murray), in the Cape Otway Forest in the Western District, and in the South Gippsland, Latrobe and Thomson Basin sections of the Gippsland District. The lightest rainfall is in the Mallee District, the northern portion of which receives, on the average, from 10 to 12 inches only per year.

An estimate of the areas of the State, subject to different degrees of average annual rainfall is contained in the following table :—

### VICTORIA—DISTRIBUTION OF AVERAGE ANNUAL RAINFALL

Rainfall							Area
inches							square miles
Under 10	..	..	..	..	..	..	Nil
10 to 15	..	..	..	..	..	..	19,686
15 to 20	..	..	..	..	..	..	13,358
20 to 25	..	..	..	..	..	..	15,731
25 to 30	..	..	..	..	..	..	15,819
30 to 40	..	..	..	..	..	..	14,150
Over 40	..	..	..	..	..	..	9,140

The means of the climatic elements for the seasons in Melbourne deduced from all available official records are given in the following table:—

### MELBOURNE—MEANS OF CLIMATIC ELEMENTS

Meteorological Elements	Spring	Summer	Autumn	Winter
Mean Pressure of Air (Inches) .. ..	29.971	29.920	30.075	30.076
Monthly Range of Pressure of Air (Inches)	0.889	0.763	0.816	0.973
Mean Temperature of Air in Shade (° F.) ..	57.7	66.7	59.4	50.1
Mean Daily Range of Temperature of Air in Shade (° F.) .. ..	18.7	21.1	17.4	14.0
Mean Relative Humidity (Saturation = 100)	64	59	69	74
Mean Rainfall in Inches .. ..	7.36	6.10	6.58	5.86
Mean Number of Days of Rain .. ..	40	25	34	44
Mean Amount of Spontaneous Evaporation in Inches .. ..	10.23	17.33	8.09	3.79
Mean Daily Amount of Cloudiness (Scale 0 to 8)* .. ..	4.8	4.2	4.7	5.1
Mean Number of Days of Fog .. ..	1	1	6	12

\* Scale : 0 = clear, 8 = overcast.

In the following table are shown the yearly means of the climatic elements in Melbourne for each year 1956 to 1960. The extremes between which the yearly mean values of such elements have oscillated in the latter periods are also included.

### MELBOURNE—YEARLY MEANS AND EXTREMES OF CLIMATIC ELEMENTS

Meteorological Elements	1956	1957	1958	1959	1960
Atmospheric Pressure (Inches)—					
Mean .. ..	29.915	30.018	30.015	30.080	29.996
Highest .. ..	30.490	30.650	30.522	30.669	30.570
Lowest .. ..	29.233	29.452	29.451	29.233	29.157
Range .. ..	1.257	1.198	1.071	1.436	1.413
Temperature of Air in Shade (°F.)—					
Mean .. ..	58.6	58.7	58.3	59.5	58.8
Mean Daily Maximum .. ..	67.0	68.1	66.6	68.4	67.6
Mean Daily Minimum .. ..	50.3	49.4	49.8	50.7	50.0
Absolute Maximum .. ..	101.0	103.0	101.7	109.0	105.0
Absolute Minimum .. ..	31.3	30.8	32.3	29.5	31.3
Mean Daily Range .. ..	16.7	18.6	16.7	18.4	17.5
Absolute Annual Range .. ..	69.7	72.2	69.4	79.5	73.7
Terrestrial Radiation Mean Minima (°F.) .. ..	47.8	46.0	46.8	47.5	45.9
Rainfall (Inches) .. ..	30.96	20.86	26.98	25.84	33.50
Number of Wet Days .. ..	188	146	156	131	162
Year's Amount of Free Evaporation (Inches) .. ..	35.59	41.40	38.75	38.43	41.44
Percentage of Humidity (Saturation = 100) .. ..	69	62	66	65	65
Cloudiness (Scale 0 to 8)* .. ..	5.0	3.7	4.8	4.6	4.9
Number of Days of Fog .. ..	13	18	21	24	21

\* Scale : 0 = clear, 8 = overcast.

# Part 2

## GOVERNMENT AND ADMINISTRATION

### *Constitution*

#### **Introduction**

The present Constitution of Victoria derives from an Act passed by the Parliament at Westminster in 1855 and known in Victoria as The Constitution Act. That Act, together with *The Constitution Act Amendment Act* 1958 (which consolidates the many constitutional provisions passed by the Victorian Parliament itself since 1855) provides the legal and constitutional background to a system of responsible Cabinet Government based on a legislature of two Houses, both elected upon adult suffrage. The Victorian Constitution has also been affected by the establishment of the Commonwealth Constitution by the *Commonwealth of Australia Constitution Act* 1900, by which legislative and executive powers upon certain specified matters were granted to the Commonwealth Parliament and Government, some of them exclusively, and provision was made that, in the case of inconsistency of valid laws, the Commonwealth law should prevail. In the result, the Parliament of Victoria may now make laws in and for Victoria upon all matters not exclusively granted to the Commonwealth by the Commonwealth Constitution; but upon some of these matters the Victorian law may be superseded by the passing of a Commonwealth Act. Local government, that is, the control exercised by municipal councils within their respective districts, is a matter of State law and wholly within the legislative control of the Victorian Parliament.

#### **Governor**

Under the Victorian Constitution, the ultimate Executive power is vested in the Crown and is exercised by the Governor as the Queen's representative.

The Governor's authority is derived from Letters Patent (issued in 1900 and amended in 1913) under the Great Seal of the United Kingdom, from the Commissions of Appointment and from the Governor's Instructions issued under the Royal Sign Manual and Signet.

As the Queen's representative, the Governor summons and pro-rogues Parliament and at the beginning of each session outlines the Government's legislative programme in his opening speech. In the name of the Queen he gives assent to Bills which have passed all stages in Parliament, with the exception of those especially reserved for the Royal Assent. These include Bills dealing with special subjects such as divorce, or the granting of land and money to himself. His functions in relation to the Legislature are contained in the Constitution Act and the Constitution Act Amendment Act.

As head of the Executive, his functions are based on the Letters Patent, his Commission and the Royal Instructions. These empower him to make all appointments to important State offices other than those under the Public Service Act, to make official proclamations and to exercise the prerogative of mercy by reprieving or pardoning criminal offenders within his jurisdiction. These functions are carried out on the advice of his Ministers.

There are some matters, however, which require the special exercise of the Governor's discretion. Thus he alone must finally decide after taking advice of his Premier, whether to grant a dissolution of Parliament, and whether to call upon a member of Parliament to form a new Ministry. The Governor's powers in respect of the commissioning of a member of Parliament as Premier to form a new Ministry are set out more fully below under the section describing the Cabinet.

The Governor also has power to appoint a Deputy to exercise his functions as the Queen's representative during his temporary absence from the seat of Government whether within or outside Victoria.

In the execution of the powers and authorities vested in him, the Governor shall be guided by the advice of the Executive Council, which is a body created under the Governor's Instructions and which in practice gives effect to Cabinet and Ministerial decisions. If in any case he shall see sufficient cause to dissent from the opinion of the said Council, he may act in the exercise of his said powers and authorities in opposition to the opinion of the Council, reporting the matter to the Queen without delay, with the reasons for his so acting.

This exercise of discretionary powers emphasizes the Governor's position as one above and beyond party politics and in extreme cases provides a safeguard of the Constitution. The general nature of his position is such that he is the guardian of the Constitution and bound to see that the great powers with which he is entrusted are not used otherwise than in the public interest.

On all official State occasions he performs the ceremonial functions as the representative of the Crown, and so becomes the focal point and the unifying symbol of the community.

The present Governor of Victoria is General Sir Reginald Alexander Dallas Brooks, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

A list of representatives of the Sovereign since the establishment of the Port Phillip District in 1839 is set out on pages 68 to 70 of the Victorian Year Book 1961.

### **Lieutenant-Governor**

The Lieutenant-Governor is appointed to this office by a Commission from the Sovereign under the Sign Manual and Signet. In the Commission reference is made to the Letters Patent constituting the office of Governor, and the Lieutenant-Governor is expressly authorized and required by his Commission to administer the Government of the State of Victoria in the events dealt with in such Letters Patent, namely, the death, incapacity, or removal of the Governor, or his departure from the State, or his assuming the administration of the Government of the Commonwealth of Australia.

The Lieutenant-Governor assumes control in any of these events by issuing a proclamation. He then becomes His Excellency the Lieutenant-Governor of Victoria.

However, should the Governor be only temporarily absent for a short period from the seat of Government or from the State (except when he administers the Government of the Commonwealth of Australia) he may, by an Instrument under the Public Seal of the State, appoint the Lieutenant-Governor as his Deputy.

The present Lieutenant-Governor is Lieutenant-General the Hon. Sir Edmund Francis Herring, K.C.M.G., K.B.E., D.S.O., M.C., E.D.

### **Executive Council**

Section 15 of the *Constitution Act Amendment Act 1958* provides that officers appointed as responsible Ministers of the Crown shall also be members of the Executive Council, and provision for their appointment appears in the Letters Patent constituting the office of Governor.

The Executive Council, consisting of Executive Councillors under summons, namely, members of the current Ministry, usually meets weekly or as required. The quorum of three (3) comprises the Governor and at least two (2) Ministers. These meetings are of a formal nature and are presided over by the Governor or in his absence by his Deputy.

Where it is provided in the statutes that the Governor in Council may make proclamations, orders, regulations, appointments to public offices, &c., the Governor acts formally with the advice of the Executive Council, but actually in accordance with Cabinet or Ministerial decisions.

### **Cabinet**

#### *Formation and Composition of Cabinet*

Victoria has followed the system of Cabinet Government evolved in Britain. The Queen's representative in Victoria, the Governor, acts by convention upon the advice of a Cabinet of Ministers, the leader of whom is called the Premier, although there is no mention of Cabinet as such in the Victorian Constitution.

The authority under which Victorian Ministers are appointed is contained in section 15 of the *Constitution Act Amendment Act 1958*, which provides that the Governor may, from time to time, appoint up to fourteen (14) officers who are either members or capable of being elected members of either House of Parliament. No Minister shall hold office for a longer period than three months unless he is or becomes a member of the Legislative Council or the Legislative Assembly. This section further provides that not more than four (4) of such officers shall at any one time be members of the Legislative Council and not more than ten (10) members of the Legislative Assembly.



In practice, a Ministry remains in office only while it has the support of a majority in the Legislative Assembly, and when a change of Government occurs and a new Ministry is to be appointed, the Governor "sends for" that member of the Legislative Assembly who he thinks would be supported by a majority in that House and asks him whether he is able and willing to form a new Government with himself as leader. If that member can assure the Governor accordingly, he may then be commissioned by the Governor to form a Ministry.

The names of those persons who are chosen to serve in his Ministry are then submitted by the Premier-elect to the Governor for appointment by him as responsible Ministers of the Crown.

### *Powers of Cabinet*

The Cabinet is responsible politically for the administrative acts of the Government, but the constitutional powers as set out in the Constitution Act and other Acts are vested in the individual Ministers and the Governor in Council, namely, the Governor with the advice of the Executive Council. Cabinet as such has no legal powers.

Government administration includes departments under direct ministerial control as well as certain public statutory corporations which are subject to varying degrees of ministerial direction. Ministers are sworn in with appropriate portfolios which indicate their particular responsibilities.

### *Functions and Methods of Procedure*

Cabinet normally meets weekly or as occasion requires, in secret and apart from the Governor to consider an agenda made up of matters submitted by the Premier and other Ministers. The Premier's Department prepares a draft agenda for each meeting; but the Premier himself is responsible for the final agenda and the order of items on the agenda.

There is in practice no Cabinet secretariat; but the *Constitution Act Amendment Act 1958* provides for the payment of a salary to any member of the Council or of the Assembly who is recognized as the Parliamentary Secretary of the Cabinet.

The recording of decisions is primarily the responsibility of the Parliamentary Secretary of the Cabinet. There is no special machinery for circulating Cabinet minutes. Where necessary, the Secretary to the Premier's Department issues the instructions; but, where a particular Minister is concerned, the Minister is normally responsible for the execution of Cabinet decisions.

In general, Cabinet decisions are given legal effect either by the appropriate Minister or by the Governor in Council.

## Government

## Ministries

*Ministries, 1945 to 1961*

The following is a list of the Premiers of the Governments from 1945 to 1961 :—

Ministry and Name of Premier	Date of Assumption of Office	Date of Retirement from Office	Duration of Office
Albert Arthur Dunstan ..	18th September, 1943	2nd October, 1945	days 746
Ian Macfarlan, K.C. ..	2nd October, 1945	21st November, 1945	51
John Cain ..	21st November, 1945	20th November, 1947	730
Thomas Tuke Hollway ..	20th November, 1947	3rd December, 1948	380
Thomas Tuke Hollway ..	3rd December, 1948	27th June, 1950 ..	572
John Gladstone Black McDonald	27th June, 1950 ..	28th October, 1952	855
Thomas Tuke Hollway ..	28th October, 1952	31st October, 1952..	4
John Gladstone Black McDonald	31st October, 1952..	17th December, 1952	48
John Cain .. ..	17th December, 1952	31st March, 1955 ..	835
John Cain .. ..	31st March, 1955 ..	7th June, 1955 ..	69
Henry Edward Bolte ..	7th June, 1955 ..	Still in Office	

A list of Government officers administering Victoria from 1851 to 1855 and of Premiers of the Governments from 1855 to 1955 is set out on pages 72 to 74 of the Victorian Year Book 1961.

*Present Ministry*

The last triennial elections for the Legislative Council and the Legislative Assembly were held on 15th July, 1961.

At 1st August, 1961, the 61st Ministry led by the Hon. H. E. Bolte consisted of the following members :—

*From the Legislative Assembly:*

The Hon. H. E. Bolte ..	..	Premier and Treasurer
„ „ A. G. Rylah, E.D. ..	..	Chief Secretary and Attorney-General
„ „ W. J. Mibus ..	..	Minister of Water Supply and Minister of Mines
„ „ J. S. Bloomfield ..	..	Minister of Education
„ „ H. R. Petty ..	..	Commissioner of Public Works, Minister of Immigration, and a Vice-President of the Board of Land and Works
„ „ K. H. Turnbull ..	..	Commissioner of Crown Lands and Survey, Minister of Soldier Settlement, Minister for Conservation, and President of the Board of Land and Works.
„ „ G. O. Reid ..	..	Minister of Labour and Industry, and Minister of Electrical Undertakings
„ „ M. V. Porter ..	..	Minister for Local Government
„ „ A. J. Fraser, M.C. ..	..	Minister of State Development
„ „ E. R. Meagher, M.B.E., E.D.	..	Minister without Portfolio

*From the Legislative Council:*

The Hon. Sir Arthur Warner	..	Minister of Transport and a Vice-President of the Board of Land and Works
„ „ G. L. Chandler, C.M.G.		Minister of Agriculture and a Vice-President of the Board of Land and Works
„ „ L. H. S. Thompson	..	Minister of Housing and Minister of Forests
„ „ R. W. Mack	..	Minister of Health

*Parliament***Introduction**

The Constitution Act, creating a Legislative Council and a Legislative Assembly, was assented to by Her Majesty in Council on the 21st July, 1855, and came into operation in Victoria on the 23rd November, 1855. Under this Act, Her Majesty was given power "by and with the advice and consent of the said Council and Assembly to make laws in and for Victoria in all cases whatsoever". Certain of these unlimited powers, however, are now exercised by the Legislature of the Commonwealth of Australia.

The Legislative Council has 34 members elected from two-member provinces for six year terms and the Legislative Assembly has 66 members elected from single electorates for three year terms. Both Houses are elected on adult suffrage, and their powers are normally co-ordinate, although money Bills must originate in the Legislative Assembly.

The provisions of the Constitution dealing with the Parliament have been frequently amended, as the Constitution Act gives the Victorian Parliament power to "repeal, alter or vary" the Act itself, provided that the second and third readings of certain amending Bills are passed by an absolute majority of both Houses. The most frequently amended sections of the Constitution dealing with the Parliament have been those setting out the relations between Council and Assembly, and the qualifications of candidates and voters. The right, extended in the original Constitution Act, to assume the privileges, immunities, and powers of the House of Commons (as they stood at that time) was taken up in 1857 by the first Act passed by the Victorian Parliament. These include very wide powers to punish contempt. The publication of parliamentary reports and proceedings was made absolutely privileged in 1890.

The landmarks of Assembly suffrage were: 1857, manhood suffrage; 1899, plural voting abolished; and 1908, women's franchise. Adult suffrage for the Council was introduced in 1950. Payment of members has also been frequently adjusted. The present complex scale makes extra payments to the Leader of the third party as well as to the Leader of the Opposition; Opposition and third party Whips and the Deputy Leader of the Opposition are also specially rewarded. Electorates are graded as "metropolitan", "urban", "inner country" and "outer country", and receive different rates.

Parliament is summoned, prorogued, or dissolved by proclamation issued by the Governor. The duration of a Parliament depends upon the life of the Assembly (limited to three years), but may be ended by the Governor dissolving the Assembly before the expiration of that period. The Legislative Council cannot be dissolved except in special circumstances arising from disagreements between the two Houses. Its members are elected for six years, half of them retiring, but being capable of re-election, every three years. A session is that period between the summoning of Parliament and prorogation. When Parliament is prorogued all business on hand lapses and, if it is to be continued in the next session, it must be reintroduced.

There are three political parties at present (August, 1961) represented in the Parliament of Victoria: the Liberal and Country Party, the Labor Party, and the Country Party. Of the 34 members of the Legislative Council, seventeen belong to the Liberal and Country Party, nine to the Labor Party and eight to the Country Party. Of the 66 members of the Legislative Assembly, 40 belong to the Liberal and Country Party, seventeen to the Labor Party and nine to the Country Party. The Liberal and Country Party, having won the majority of seats at the general election of the Assembly in 1955 formed a Government which was returned to office at the last two general elections in 1958 and 1961. The Leader of that Party holds the office of Premier. The Labor Party forms the official Opposition Party, whilst the Country Party sits on the corner benches of the Government side of the Assembly.

### **Functions of Parliament**

The functions of Parliament consist of passing legislation and taking action to make available finances or funds as required for State expenditure. Legislation can be initiated by any member of Parliament in either House with the exception that all money Bills, such as Bills for imposing a duty, rate, tax, or impost, or Bills for appropriating any part of the revenue of the State, must originate in the Assembly on the motion of a Minister. They may be rejected, but not altered, by the Council. The Council, however, may suggest amendments in such Bills, provided these amendments will not have the effect of increasing any proposed charge or burden on the people and the Assembly may make the suggested amendments if they so desire. In practice, almost all Bills are introduced by the Government in office as a result of policy decisions taken in Cabinet.

### **Parliamentary Procedure**

Parliament controls the Government in office by the Assembly's power, in the last resort, to pass a resolution of no-confidence in the Government or to reject a proposal which the Government considers so vital that it is made a matter of confidence. This would force the Government to resign. Procedure of each House is governed by Standing Orders, Rules and practice, based mainly on the procedure of the House of Commons, and administered by the respective presiding officers: the President of the Legislative Council, the Speaker of the

Legislative Assembly, and the respective Chairmen of Committees. The principal innovations in Assembly procedure are time limit of speeches and the elaborate ballot procedure at the opening of a new Parliament for the election of the Speaker.

The President of the Council holds office for the balance of the period for which he is elected as a member and may again be appointed if he retains his seat in the House. The election of a Speaker is the first business of a new Assembly after the members have taken the oath of allegiance. After this the Chairman of Committees is elected. The same order in debate is observed in Committee as in the House itself, the Chairman having final authority over all points of order arising when he is in the Chair.

The sittings of each House commence with the reading of the Lord's Prayer by the respective presiding officers. Before the business of the day, as set down on the Notice Paper, is called on, Ministers may be questioned on matters under their administrative control; notices of motion, such as motions for the introduction of Bills, or motions of a substantive or abstract nature, are given; petitions are presented; papers are laid on the Table; and messages from the Governor and from the other House are read. At this stage, members have the opportunity of moving a motion "that the House do now adjourn" which, under the Standing Orders, enables discussion on matters of urgent public importance.

Under "Orders of the Day" which now follows, Bills are dealt with in their various stages. All Bills, with the exception of the annual Appropriation Bill, when passed by both Houses are presented by the Clerk of the Parliaments to the Governor, who, acting on the advice of his "Council of Legislation", gives the Royal Assent. This advice is set out at the commencement of each Bill and is as follows:—"Be it enacted by the Queen's Most Excellent Majesty by and with the advice and consent of the Legislative Council and the Legislative Assembly of Victoria." The Appropriation Bill is presented to the Governor for assent by the Speaker. Unless otherwise provided, all Acts come into force on the day of assent.

### **Private Legislation**

Private legislation is legislation of a special kind for conferring particular powers or benefits on any person or body of persons including individuals, local authorities, statutory companies, or private corporations—sometimes in excess of, or in conflict with the general law. As such it is to be distinguished from public general legislation, which is applicable to the general community and is treated in Parliament on an entirely different basis.

The essential difference in procedure between a Public Bill and a Private Bill is that, whereas a Public Bill is either presented direct to the House or introduced on motion by a Member of Parliament, a Private Bill is solicited by the parties who are interested in promoting it and is founded upon a petition. Furthermore, the payment of fees by the promoters is an indispensable condition of its progress.

In passing Public Bills, Parliament acts strictly in its legislative capacity; it originates the measures which appear for the general public good, it conducts inquiries, where necessary, for its own information, and makes laws according to its own wisdom and judgment. The forms in which its deliberations are conducted are established for public convenience and all its proceedings are independent of individual parties, who may petition, and are sometimes heard by counsel, but have no direct participation in the conduct of the business.

In passing Private Bills, Parliament still exercises its legislative functions, but its proceedings partake also of a judicial character. The persons who are applying for powers or benefits appear as suitors for the Bill, while those who apprehend injury are admitted as adverse parties in the suit. Many of the formalities of a court of justice are maintained; various conditions are required to be observed and their observance to be strictly proved; and if the parties do not sustain the Bill in its progress, by following every regulation and form prescribed, it is not forwarded by the House in which it is pending. If they abandon it and no other parties undertake its support, the Bill is lost, however sensible the House may be of its value.

In the Victorian Parliament, Private Bills are initiated in the Legislative Assembly, though they must, as with Public Bills pass through both Houses before they become law. The persons by whom the promotion of Private Bills, and the conduct of proceedings upon petitions against such Bill, are carried out, are Parliamentary Agents. They are appointed by the Speaker and fees are payable to them by the parties concerned, and to attorneys, solicitors, and others engaged in the promotion and passage of the Bill. These fees are determined by the President and the Speaker, respectively under the provisions of *The Constitution Act Amendment Act 1958*. Fees are also payable by the promoters of the Bill for the actual proceedings in each House in accordance with Private Bills Standing Orders and are paid direct to the Treasury, but may be waived by each House if the Bill relates to charitable, religious, educational or such other purposes from which no private profit or advantage is derived.

For many years it has been the practice for interests desiring private legislation to seek Government sponsoring of a Bill to achieve their purposes. In such an instance the Bill is introduced in the same manner as a Public Bill, but the Standing Orders provide that whenever Mr. Speaker decides that a Bill introduced as a Public Bill ought to have been introduced as a Private Bill, such Bill shall be dealt with as a Private Bill, unless the House, while not dissenting from Mr. Speaker's decision, shall order that the Bill be dealt with as a Public Bill. The fees applicable to a Private Bill would still be chargeable at the discretion of the House.

Private Bills introduced and proceeded with in this manner, however, have been of a purely formal nature, and have had no opposing interests. It has proved an economical and expeditious method of achieving the necessary Parliamentary enactment of personal or private requirements. It is doubtful, however, whether Parliament would waive the forms and procedure laid down for Private legislation of a more involved and contentious nature.

**Members of the State Parliament****Legislative Council**

The following list shows members of the Legislative Council elected on 21st June, 1958:—

Member	District	Number of Electors on Rolls	Number of Electors Who Voted	Total Percentage of Electors Who Voted
Byrne, The Hon. Murray	Ballaarat ..	56,483	54,151	95·87
Byrnes, The Hon. Percy Thomas	North-Western ..	46,639	43,815	93·94
Fulton, The Hon. William Oliver	Gippsland ..	71,322	66,597	93·38
Garrett, The Hon. William Raymond, A.F.C., A.E.A.	Southern ..	159,543	147,391	92·38
Gross, The Hon. Kenneth Samuel	Western ..	55,901	53,409	95·54
Hamer, The Hon. Rupert James, E.D.	East Yarra ..	128,761	119,138	92·53
Mair, The Hon. William Phillip	South-Eastern ..	110,669	102,505	92·62
Merrifield, The Hon. Samuel Nicol, The Hon. Graham John	Doutta Galla ..	105,778	97,281	91·97
O'Connell, The Hon. Geoffrey John	Monash ..	100,009	89,336	89·33
Smith, The Hon. Arthur ..	Melbourne ..	51,745	45,685	88·29
Swinburne, The Hon. Ivan Archie	Bendigo ..	59,780	56,336	94·24
Thom, The Hon. Geoffrey Walter	North-Eastern ..	49,001	Uncontested	
Todd, The Hon. Archibald Walters, The Hon. Dudley Joseph	South-Western ..	74,100	69,331	93·56
Walton, The Hon. John Malcolm	Melbourne West ..	99,879	92,234	92·35
Warner, The Hon. Sir Arthur	Northern ..	52,195	Uncontested	
	Melbourne North	145,290	134,918	92·86
	Higinbotham ..	121,198	111,538	92·03

Members of the Legislative Council who were elected on 15th July, 1961, are shown in the following table :—

Member	Province
Bradbury, The Hon. Archibald Keith .. ..	North-Eastern
Cameron, The Hon. Sir Ewen .. ..	East Yarra
Chandler, The Hon. Gilbert Lawrence, C.M.G. ..	Southern
Dickie, The Hon. Vance Oakley .. ..	Ballaarat
Elliot, The Hon. Douglas George .. ..	Melbourne
Feltham, The Hon. Percy Victor, M.B.E. ..	Northern
Galbally, The Hon. John William .. ..	Melbourne North
Gawith, The Hon. Charles Sherwin .. ..	Monash
Grigg, The Hon. Thomas Henry .. ..	Bendigo
Hunt, The Hon. Alan John .. ..	South-Eastern
Machin, The Hon. Buckley .. ..	Melbourne West
Mack, The Hon. Ronald William .. ..	Western
Mansell, The Hon. Arthur Robert .. ..	North-Western
May, The Hon. Robert William .. ..	Gippsland
McArthur, The Hon. Sir Gordon .. ..	South-Western
Thompson, The Hon. Lindsay Hamilton Simpson ..	Higinbotham
Tripovich, The Hon. John Matthew .. ..	Doutta Galla

President: The Hon. Sir Gordon McArthur.

Chairman of Committees: The Hon. Sir Ewen Cameron

Clerk of the Legislative Council: R. S. Sarah.



*Legislative Assembly*

The following list shows members of the Legislative Assembly elected at the last general election, held on 15th July, 1961. Details of electoral districts for the previous elections on 31st May, 1958, will be found on pages 79–80 of the Victorian Year Book 1961.

Member	District
Balfour, James Charles Murray, Esquire .. ..	Morwell
Barclay, Nathaniel, Esquire, D.C.M. .. ..	Mildura
Birrell, Hayden Wilson, Esquire .. ..	Geelong
Bloomfield, The Hon. John Stoughton .. ..	Malvern
Bolte, The Hon. Henry Edward .. ..	Hampden
Borthwick, William Archibald, Esquire .. ..	Scoresby
Brose, The Hon. Richard Keats .. ..	Rodney
Christie, Vernon, Esquire .. ..	Ivanhoe
Clarey, Reynold Arthur, Esquire .. ..	Melbourne
Cochrane, Leslie James, Esquire .. ..	Gippsland West
Crick, George Roy, Esquire .. ..	Grant
Darcy, Thomas Anthony, Esquire .. ..	Polwarth
Divers, William Thomas, Esquire .. ..	Footscray
Dunstan, Roberts Christian, Esquire, D.S.O. .. ..	Mornington
Evans, Alexander Thomas, Esquire .. ..	Ballaarat North
Evans, Bruce James, Esquire .. ..	Gippsland East
Fennessy, Leo Michael, Esquire .. ..	Brunswick East
Floyd, William Laurence, Esquire .. ..	Williamstown
Fraser, The Hon. Alexander John, M.C. .. ..	Caulfield
Gainey, Richard John, Esquire, M.B.E. .. ..	Elsternwick
Galvin, The Hon. Leslie William .. ..	Bendigo
Garrison, Peter Wolseley, Esquire .. ..	Hawthorn
Gibbs, George Sampson, Esquire .. ..	Portland
Gillett, Robert Max, Esquire .. ..	Geelong West
Holden, Jack Bruce, Esquire .. ..	Moonee Ponds
Holland, Kevin Myles Stephen, Esquire .. ..	Flemington
Hyland, The Hon. Sir Herbert John Thornhill .. ..	Gippsland South
Jenkins, Dr. Henry Alfred .. ..	Reservoir
Kane, Harold Edward, Esquire .. ..	Broadmeadows
Lovegrove, Denis, Esquire .. ..	Fitzroy
Loxton, Samuel John Everett, Esquire .. ..	Prahran
MacDonald, James David, Esquire .. ..	Burwood
McDonald, The Hon. Sir William John Farquhar .. ..	Dundas
Manson, James Williamson, Esquire .. ..	Ringwood
Meagher, The Hon. Edward Raymond, M.B.E., E.D. .. ..	Mentone
Mibus, The Hon. Wilfred John .. ..	Lowan
Mitchell, The Hon. Thomas Walter .. ..	Benambra
Moss, The Hon. George Colin .. ..	Murray Valley
Mutton, Charles, Esquire .. ..	Coburg
Petty, The Hon. Horace Rostill .. ..	Toorak
Porter, The Hon. Murray Victor .. ..	Sandringham
Rafferty, Joseph Anstice, Esquire .. ..	Ormond
Reid, The Hon. George Oswald .. ..	Box Hill
Reid, Leonard Stanley, Esquire, D.F.C. .. ..	Dandenong
Ring, Eugene Cornelius, Esquire .. ..	Preston
Rossiter, John Frederick, Esquire .. ..	Brighton
Rylah, The Hon. Arthur Gordon, E.D. .. ..	Kew
Scanlan, Alan Henry, Esquire .. ..	Oakleigh
Schintler, George Roy, Esquire .. ..	Yarraville
Scott, Gordon Lincoln, Esquire .. ..	Ballaarat South
Snider, Baron David, Esquire .. ..	St. Kilda
Stirling, Harold Victor, Esquire .. ..	Swan Hill
Stokes, Russell Newton, Esquire .. ..	Evelyn
Stoneham, The Hon. Clive Phillip .. ..	Midlands
Suggett, Robert Harris, Esquire .. ..	Moorabbin

MEMBERS OF THE LEGISLATIVE ASSEMBLY—*continued*

Member	District
Sutton, Patrick Keith, Esquire .. .. .	Albert Park
Tanner, Edgar Stephen, Esquire, C.B.E., E.D. .. .. .	Ripponlea
Taylor, Alexander William, Esquire, E.D. .. .. .	Balwyn
Towers, William John, Esquire, M.M. .. .. .	Richmond
Trewin, Thomas Campion, Esquire .. .. .	Benalla
Turnbull, Campbell, Esquire .. .. .	Brunswick West
Turnbull, The Hon. Keith Hector .. .. .	Kara Kara
Wheeler, Kenneth Henry, Esquire .. .. .	Essendon
Wilcox, Vernon Francis, Esquire .. .. .	Camberwell
Wilkes, Frank Noel, Esquire .. .. .	Northcote
Wiltshire, Raymond John, Esquire .. .. .	Mulgrave

Speaker : The Honorable Sir William John Farquhar McDonald.

Chairman of Committees : Joseph Anstice Rafferty, Esquire.

Clerk of the Parliaments and Clerk of the Legislative Assembly :  
Hugh Kennedy McLachlan, Esquire, J.P.

**Number of Parliaments and Their Duration**

During the period 1856 to 1961 there have been 41 Parliaments. The Forty-second Parliament was opened on 1st August, 1961. A table showing the duration in days of each Parliament (1856 to 1927), the number of days in session, and the percentage of the latter to the former was published in the Year Book for 1928–29, page 21. Similar information for the Twenty-ninth to the Thirty-ninth Parliaments (1927 to 1955) was published in the Year Book for 1952–53 and 1953–54, page 31. As from the commencement of the Thirty-eighth Parliament (20th June, 1950), information about the duration of each Parliament, the number of sittings of each House, and the percentage of the latter to the former is shown in the following table :—

**VICTORIA—DURATION OF PARLIAMENTS AND NUMBER OF SITTINGS OF EACH HOUSE**

Number of Parliament	Period	Duration of Parliament *	Sittings			
			Legislative Assembly		Legislative Council	
			Number of Sittings	Percentage of Sittings to Duration	Number of Sittings	Percentage of Sittings to Duration
		days				
Thirty-eighth ..	1950–52	865	131	15·1	81	9·4
Thirty-ninth ..	1952–55	852	92	10·8	61	7·2
Fortieth ..	1955–58	1,038	139	13·4	99	9·5
Forty-first ..	1958–61	1,059	150	14·2	103	9·7

\* Calculated from the date of opening to the date of dissolution of the Parliament.

### Cost of Parliamentary Government

The following table reviews the expenditure arising from the operation of Parliamentary Government in Victoria. It comprises the State Governor, the Ministry, the Legislative Council, the Legislative Assembly, and Electoral activities. It does not attempt to cover the expenditure on State administration generally.

The table shows this expenditure for the State for the years ended 30th June, 1954 to 1960. In order to avoid incorrect conclusions about the cost of the Governor's establishment, it is pointed out that a large part of the expenditure (with the exception of the item "Salary") under the general heading "Governor" represents official services.

Parliamentary salaries and allowances were amended as from 6th October, 1954. Prior to that date, the President of the Legislative Council and the Chairman of Committees, the Speaker of the Legislative Assembly and the Chairman of Committees, and Ministers of the Crown received salaries and allowances only in connection with their offices. Under the new legislation, however, these persons receive salaries and allowances as members of Parliament in addition to those connected with their offices. These former amounts are included under "Parliament".

#### VICTORIA—COST OF PARLIAMENTARY GOVERNMENT (£)

Year Ended 30th June—	Governor		Ministry	Parliament		Electoral	Royal Commissions, Select Committees, etc.	Total
	Salary	Other Expenses *		Salaries of Members †	Other Expenses ‡			
1954 ..	6,000	55,608	35,144	133,120	154,227	31,763	3,399	419,261
1955 ..	6,000	41,320	27,258	193,814	163,436	101,531	2,180	535,539
1956 ..	6,000	49,143	22,213	225,202	182,257	88,810	13,315	586,940
1957 ..	6,000	54,749	22,584	225,202	241,524	36,547	12,749	599,355
1958 ..	7,500	58,152	22,934	222,400	238,497	103,561	7,761	660,805
1959 ..	7,500	58,984	§38,037	237,846	267,224	101,422	14,248	725,261
1960 ..	7,500	62,400	§39,544	284,291	251,010	30,046	20,608	695,399
1961 ..	7,500	60,768	§41,583	279,794	274,464	59,565	24,817	748,491

\* Includes salaries of staff and maintenance of house and gardens.

† Excludes members who are in the Ministry.

‡ Includes cost of members' railway passes, parliamentary staff and maintenance.

§ Includes cost of oversea conferences in Ministry costs.

## State Acts Passed during 1960

The following Acts were passed by State Parliament during the year ended 31st December, 1960:—

No.		No.	
6607	Anzac Day Act provides for holding sporting events and opening theatres and hotels on Anzac Day afternoon	6624	Public Officers Salaries and Allowances Act increases salaries and allowances payable to certain officers
6608	Agricultural Lime (Amendment) Act refers to the composition of agricultural lime	6625	Legal Profession Practice (Amendment) Act widens the powers of the Council of the Law Institute
6609	Motor Car (Commencement) Act allows provision of the 1959 Act to become operative from varying times	6626	Church of England in Australia Constitution Act
6610	Fisheries (Change of Title) Act alters the title of the Director to include Wildlife in lieu of Game	6627	Companies (Fees) Act substitutes a new schedule of fees payable to the Registrar of Companies
6611	Stamps (Amendment) Act amends licenses for sale of stamps	6628	Motor Car (Amendment) Act amends the 1958 Act and sets out specific penalties for various breaches
6612	Land (Public Authorities) Act allows transfer and exchange of lands between public authorities	6629	Geelong Waterworks and Sewerage (Amendment) Act proclaims additional areas to be served by the Trust
6613	Coal Canal Bridge Act authorizes construction of a service road along portion of the Melbourne to Footscray road	6630	Latrobe Valley (Financial) Act provides for the Board's loans
6614	Metropolitan Fire Brigades (Borrowing Powers) Act increases borrowing powers of the Brigade	6631	Labour and Industry (Amendment) Act refers to determination of, and appeals against determinations of the Industrial Appeals Court
6615	Wodonga Lands Exchange Act	6632	Acts Interpretation Act amends the 1958 Act
6616	Licensing (Fees) Act amends fees payable in respect of temporary victuallers' and packet licences	6633	Childrens Court (Enforcement of Awards) Act removes the upper limit of moneys ordered payable
6617	Home Finance (Loans to Minors) Act provides for loans to minors	6634	Supreme Court (Proceedings before Master) Act repeals sections of the 1958 Act
6618	Co-operative Housing Societies (Amendment) Act amends powers of societies referring to insurance schemes and contracts	6635	Melbourne and Metropolitan Board of Works (Borrowing Powers) Act increases borrowing power of the Board
6619	Racing (Totalizators Extension) Act provides for off-course betting	6636	Electoral Provinces Act increases the number of provinces
6620	Companies Act amends the 1958 Act referring to offer of certain interests to the public and to share hawking	6637	Town and Country Planning (Amendment) Act amends the 1958 Act
6621	Judges Salaries and Allowances Act increases remuneration of Supreme and County Court Judges in Victoria	6638	Racing (Dog Races) Act amends Part III of the 1958 Act
6622	Coal Mines (Pensions Contributions) Act alters the scheme of contribution payable to the Fund	6639	Industrial Safety Advisory Council Act constitutes the Industrial Safety Advisory Council
6623	Landlord and Tenant (Further Amendment) Act amends the constitution and area jurisdiction of Fair Rents Boards	6640	Administration and Probate (Offices) Act separates the offices of Registrar of Probate and Master of Probate
		6641	Justices (Bail) Act extends powers of certain police officers
		6642	National Parks (Amendment) Act extends the power of the the Authority

STATE ACTS PASSED DURING 1960—*continued*

No.		No.	
6643	Medical (Amendment) Act refers to registration of pharmaceutical chemists	6666	Revocation of Crown Reservations Act empowers the Governor in Council to revoke orders referring to certain lands
6644	Melbourne Harbor Trust Lands Act provides for exchange of lands between the Victorian Railways Commissioners and the Trust Commissioners	6667	The Constitution Act Amendment (Expenses) Act increases the expenses payable to Executive and Legislative Councils and their staffs
6645	Weights and Measures (Penalties) Act amends sections of the 1958 Act	6668	Supreme Court (Orders) Act gives the Acting Master certain powers
6646	Transfer of Land (Stratum Estates) Act amends the 1958 Act referring to "own your own" flats	6669	Gippsland Railway Deviation Act
6647	Local Government (Preston Streets Agreement) Act declares certain streets to be public highways	6670	Hamilton Stockyards Railway Construction Act
6648	John Storey Memorial Fund Act provides for establishment of the Fund	6671	Nurses (Amendment) Act empowers the Nursing Council to register and supervise nurses' employment agencies
6649	Police Offences (Amendment) Act amends the 1958 Act	6672	Ministry of Transport (Railway Officers) Act refers to appointment of Co-ordinator of Transport
6650	Motor Car (Third-Party Insurance) Act extends powers of Chief Commissioner concerning driving licences	6673	Fruit and Vegetables (Road Barriers) Act refers to setting up inspection barriers
6651	Social Welfare Act constitutes the Social Welfare Branch	6674	Transport Regulations (Qualifications of Chairman) Act
6652	City of Melbourne Underground Railway Construction Act	6675	Motor Car (Insurance Surcharge Continuance) Act
6653	Valuation of Land Act appoints a Valuer-General and a Valuers' Qualification Board	6676	Geelong Harbor Trust (Freezing Works Agreement) Act validates agreement between the Trust and Sou-West Frozen Food Packers Proprietary Limited
6654	Milk Board (Amendment) Act amends the 1958 Act in respect to compensation and distribution of milk	6677	Western Metropolitan Market (Amendment) Act empowers the Trust to sell or lease surplus land
6655	Victoria Racing Club (Amendment) Act gives the Club wider powers over its land	6678	Racing (Trotting Races) Act permits trotting races at certain agricultural shows
6656	Consolidated Revenue Act	6679	Wattle Park Land Act permits sale of land to City of Box Hill
6657	Consolidated Revenue Act	6680	Surplus Revenue Act
6658	Motor Car (Driving) Act refers to driving of cars by incapable persons	6681	Milk and Dairy Supervision (Research Contributions) Act provides for payment of research costs
6659	Licensing (Amendment) Act refers to restaurant and club licences and Australian wine licences	6682	Tourist (Amendment) Act refers to amount paid into Tourist Fund by the Country Roads Board
6660	Consolidated Revenue Act	6683	Fisheries (Crayfish) Act refers to the taking, possessing and selling of crayfish
6661	Consolidated Revenue Act	6684	Audit (Amendment) Act amends the Audit and Superannuation Acts of 1958 and repeals a section of the Public Accounts Act, 1958
6662	Friendly Societies (Dental Clinics) Act extends the objects of Friendly Societies to include dental treatment	6685	Sale of Allotments of Land (Amendment) Act creates new offences for false representation
6663	Cancer (Amendment) Act widens the scope of the Anti-Cancer Council of Victoria		
6664	Dried Fruits (Amendment) Act alters representation of growers on the Dried Fruits Board		
6665	Barwon Heads Lands Exchange Act alters the site of land reserved for public purposes		

STATE ACTS PASSED DURING 1960—*continued*

No.		No.	
6686	Cattle Compensation (Amendment) Act increases compensation payable to owners of destroyed cattle	6707	Health (Tuberculosis Arrangement) Act authorizes a Commonwealth and State agreement on detection and treatment
6687	Co-operative Housing Societies (Guarantees) Act increases the limits of aggregate liability	6708	Water Supply Loan Application Act
6688	State Library, National Gallery National Museum and Institute of Applied Science Act	6709	Railways Loan Application Act
6689	Medical (Blood Transfusion) Act permits blood transfusions to be given to a child in certain cases when parental permission is refused	6710	Land Tax (Relief) Act refers to remission or postponement of land tax payments by persons in necessitous circumstances
6690	The Constitution Act Amendment (Treating) Act permits election candidates to serve refreshments after meetings	6711	Land Tax (Rates) Act declares rates for 1961
6691	State Forests Loan Application Act	6712	Monash University (Amendment) Act amends the 1958 Act
6692	Local Authorities Superannuation (Amendment) Act	6713	National Fitness Council of Victoria Act
6693	Local Government (Disqualification) Act relates to conflicting interest of private and council business	6714	Local Government (Keilor Waverley and Springvale) Act declares these Shires to be Cities
6694	Superannuation (Additions to Pensions) Act	6715	Explosive Act re-enacts the law dealing with explosives
6695	Police Regulations (Pensions) Act increases pensions payable to certain pensioners and widows	6716	Statute Law Revision Act
6696	Trustee Companies (Amalgamation) Act	6717	Motor Car (Abolition of Owners' Certificates) Act
6697	Geelong and Colac Railway (Deviation) Act	6718	Road Traffic (Amendment) Act
6698	University Colleges Lands Act gives trustees of the colleges titles to the lands	6719	Milk Board (Powers) Act relates to land sales and leases
6699	Local Government (Private Street) Act amends the 1958 Act	6720	Marketing of Primary Products (Members) Act
6700	Northcote School Act extends powers of the Australian trustees of the Children's Emigration Fund	6721	Melbourne and Geelong Mortgages Act relates to borrowing of money
6701	Public Works Loan Application Act	6722	Building Societies (Amendment) Act provides for registration and control of building societies
6702	Tower Hill and Malmsbury Lands Act revokes permanent reservation of lands	6723	Local Government (Scaffolding Inspection) Act
6703	Coal Mines (Pensions) Act increases pension rates payable	6724	State Electricity Commission (Borrowings) Act
6704	Vermin and Noxious Weeds (Financial) Act authorizes use of money for purposes of the Act	6725	Labour and Industry (Butchers' Shops) Act amends trading hours
6705	Navigable Waters (Oil Pollution) Act	6726	Country Fire Authorities (Sawmill Burners) Act permits the use of certain burners at sawmills on days of acute fire danger
6706	Business Names (Public Borrowings) Act prohibits any person borrowing money from the public under a business name	6727	Sewerage Districts (Amendment) Act amends powers of Sewerage Authorities
		6728	Water (Amendment) Act relates to municipal waterworks and their trusts
		6729	Housing (Powers) Act amends certain powers of the Housing Commission
		6730	Entertainments Tax (Amendment) Act alters rates of taxes

STATE ACTS PASSED DURING 1960—*continued*

No.		No.	
6731	Crimes (Kidnapping) Act clarifies the law regarding, and increases the penalties for this crime	6734	Estate Agents (Amendment) Act amends the principal Act referring to licences, trust accounts and liability of principals for employees' acts
6732	Health (Amendment) Act amends the 1958 Health Act		
6733	Game (Licences) Act	6735	Consolidated Revenue Act

*Electoral System***Introduction***Electoral Basis of the Two Houses*

When first constituted, the Legislative Council or Upper House was composed of 30 members, aged 30 years and over, and possessed of freehold of the annual value of £500. Property qualifications were abolished by the *Legislative Council Reform Act* 1950, and, today, the essential qualification of members and electors of the Legislative Council is the attainment of the age of 21 years. A similar provision applies to the Legislative Assembly.

Victoria is divided, for Legislative Council purposes, into seventeen Provinces, each represented by two members, elected for six years—one in each Province retiring every three years by rotation—except at a general election following on the dissolution of the Council, when one-half of the members are to be elected for only three years.

For Legislative Assembly purposes, the State is divided into 66 Electoral Districts, each returning one member. Members are elected for three years, unless Parliament is dissolved before this period.

*Redistributions of Electoral Districts for the Legislative Assembly*

Under the *Electoral Districts Act* 1953, provision was made for a redivision of the State to be carried out on the basis of each of the 33 Commonwealth Electoral Divisions in Victoria being divided into two Electoral Districts for the Assembly. The first general election conducted on the basis of electorates so created took place on the 28th May, 1955. The *Electoral Districts Act* 1953 (now incorporated into *The Constitution Act Amendment Act* 1958) also provided for recurrent redivisions on the same basis to be made whenever there is any alteration in the number of Commonwealth Electoral Divisions in Victoria, or in any of its boundaries, subject to the proviso that no such redivision shall be made if the whole number of members of the Legislative Assembly would be reduced as a result.

Apart from the redivision mentioned above, the only other redivision made following the *Electoral Districts Act* 1953, took place in 1956 and the general election of 15th July, 1961, was held on the basis of the 66 Electoral Districts created as a result (see Fig. 6).

*Enrolment of Electors*

Enrolment on the electoral roll is compulsory for every person, of the age of 21 years or over, who is a natural-born or naturalized subject of the Queen and who has resided in Australia for six months



# VICTORIA

## LEGISLATIVE COUNCIL

### STATE ELECTORAL PROVINCES

- |                    |                  |
|--------------------|------------------|
| A. Melbourne       | J. South-Western |
| B. Melbourne West  | K. Ballarat      |
| C. Doutta Galla    | L. Bendigo       |
| D. Melbourne North | M. North-Eastern |
| E. East Yarra      | N. Gippsland     |
| F. Monash          | O. Western       |
| G. Higinbotham     | P. North-Western |
| H. South-Eastern   | Q. Northern      |
| I. Southern        |                  |

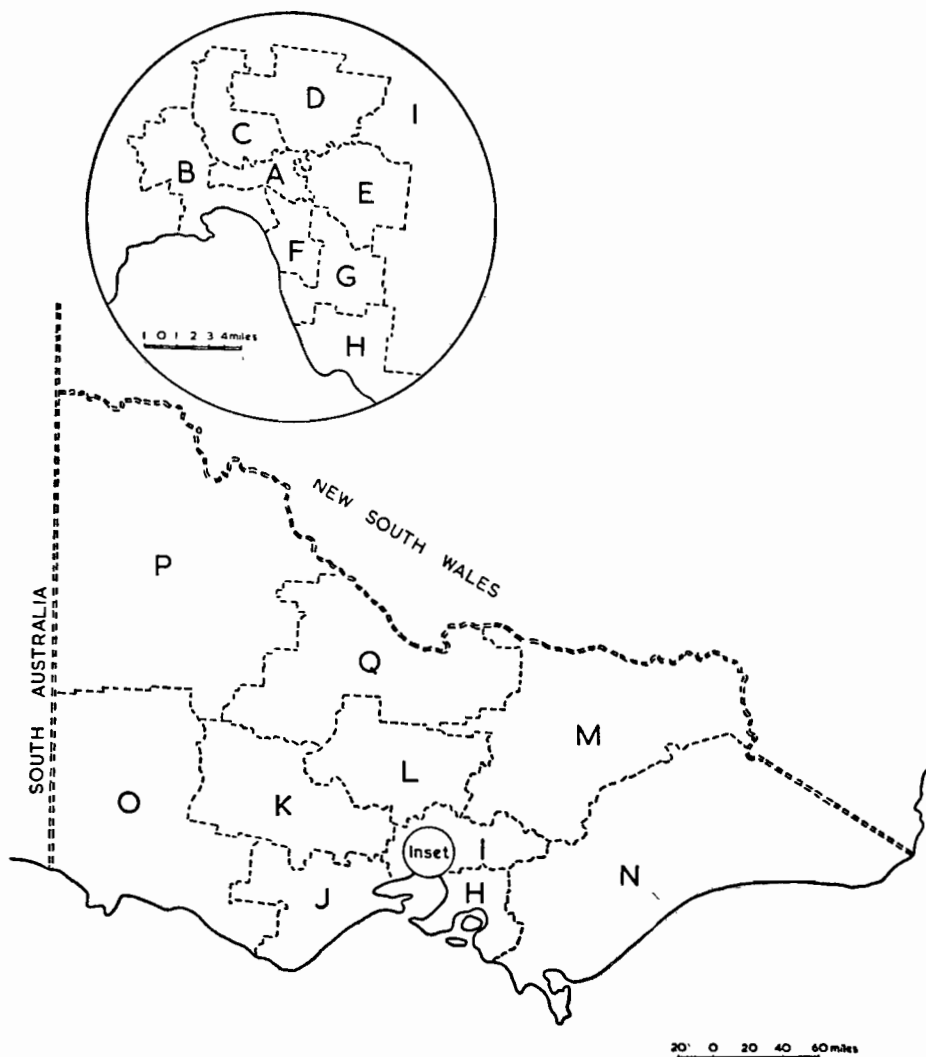


FIGURE 5.—Map of Victoria and inset of Melbourne Metropolitan Area showing State electoral provinces.

# VICTORIA

## LEGISLATIVE ASSEMBLY

### STATE ELECTORAL DISTRICTS

- |                   |                  |                     |
|-------------------|------------------|---------------------|
| 1. Brunswick East | 23. Balwyn       | 45. Geelong         |
| 2. Fitzroy        | 24. Kew          | 46. Geelong West    |
| 3. Melbourne      | 25. Camberwell   | 47. Ballarat South  |
| 4. Flemington     | 26. Burwood      | 48. Ballarat North  |
| 5. Brunswick West | 27. Malvern      | 49. Midlands        |
| 6. Coburg         | 28. Caulfield    | 50. Bendigo         |
| 7. Northcote      | 29. Oakleigh     | 51. Benalla         |
| 8. Ivanhoe        | 30. Ormond       | 52. Benambra        |
| 9. Richmond       | 31. Elsternwick  | 53. Gippsland East  |
| 10. Hawthorn      | 32. Brighton     | 54. Gippsland South |
| 11. Toorak        | 33. Moorabbin    | 55. Morwell         |
| 12. Prahran       | 34. Sandringham  | 56. Gippsland West  |
| 13. St. Kilda     | 35. Grant        | 57. Polwarth        |
| 14. Ripponlea     | 36. Broadmeadows | 58. Hampden         |
| 15. Albert Park   | 37. Evelyn       | 59. Portland        |
| 16. Williamstown  | 38. Box Hill     | 60. Dundas          |
| 17. Yarraville    | 39. Ringwood     | 61. Lowan           |
| 18. Footscray     | 40. Scoresby     | 62. Kara Kara       |
| 19. Moonee Ponds  | 41. Mulgrave     | 63. Mildura         |
| 20. Essendon      | 42. Dandenong    | 64. Swan Hill       |
| 21. Reservoir     | 43. Mentone      | 65. Rodney          |
| 22. Preston       | 44. Mornington   | 66. Murray Valley   |

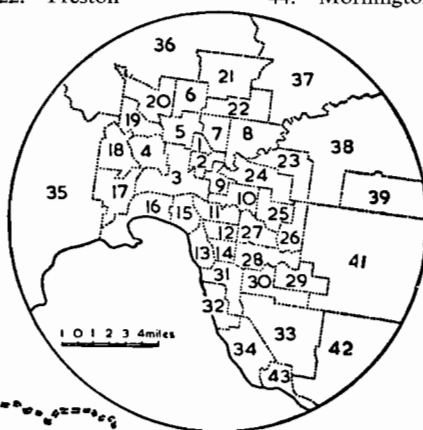
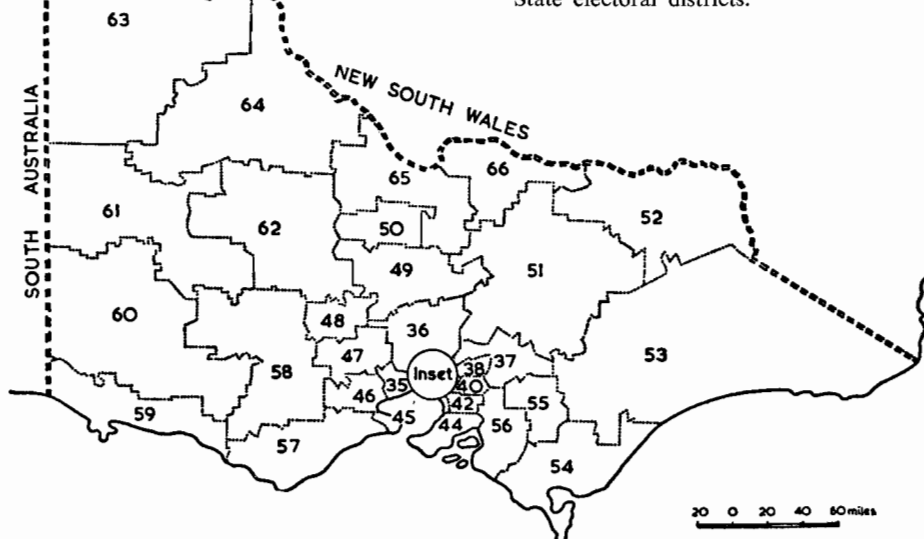


FIGURE 6.—Map of Victoria and inset of the Melbourne Metropolitan Area showing State electoral districts.



continuously, and in Victoria for at least three months. The electoral rolls for the State are compiled by the Commonwealth Electoral authorities under a joint Commonwealth-State agreement, each Government paying half the cost of compilation. All Federal and State parliamentary elections in Victoria are conducted on the basis of these joint rolls.

The compilation of the rolls is aided by the fact that the respective Legislative Council Provinces and Electoral Districts, as well as the Commonwealth Electoral Divisions, are subdivided into 297 common Subdivisions, which form the basic units for enrolment on the joint Commonwealth-State of Victoria rolls.

#### *Number of Enrolments on the Joint Rolls*

Since 1924, when the Joint Rolls Arrangement was made between the Commonwealth of Australia and the State of Victoria, the electoral rolls prepared and maintained by the Commonwealth Electoral Officer for Victoria have been used at all Commonwealth elections and elections for the Legislative Assembly of Victoria.

The *Legislative Council Reform Act* 1950, which came into force on 1st November, 1951, provided in substance for all electors for the Legislative Assembly to be automatically enrolled also for Legislative Council elections.

The Joint Rolls Arrangement was therefore appropriately amended and, since 1952, the joint rolls have been used in Victoria for all Commonwealth elections and State parliamentary elections, whether for the Legislative Assembly or the Legislative Council.

#### VICTORIA—ELECTORS ENROLLED ON JOINT ROLL

Year Ended 30th June—							Number of Electors Enrolled
1955	..	..	..	..	..	..	1,442,020
1956	..	..	..	..	..	..	1,446,913
1957	..	..	..	..	..	..	1,450,035
1958	..	..	..	..	..	..	1,503,434
1959	..	..	..	..	..	..	1,506,476
1960	..	..	..	..	..	..	1,522,481
1961	..	..	..	..	..	..	1,554,856

#### *Voting Features at State Elections*

There is no plural voting at elections for either the Legislative Council or the Legislative Assembly. Provision for voting by post by electors who are ill or temporarily absent from their electorates and are within any part of Australia, or in Great Britain, or New Zealand, is made at elections for both Houses, and there is also a system of "absent" voting whereby any elector, who is not able to record a vote within his own subdivision, is enabled to record a vote at any polling booth open in Victoria on the day of the poll. In addition, a method of so-called "unenrolled voting" has been instituted, under which an elector whose name has been omitted from the official electoral rolls in error is enabled to record a vote upon making a prescribed declaration.

Voting at elections for both Houses is compulsory and is conducted under an adaptation of Ware's system of preferential voting.

This system of preferential voting at Victorian parliamentary elections was provided for by statute in 1911 for Legislative Assembly elections, in 1921 for Legislative Council triennial elections, and in 1936 for Legislative Council general elections following directly upon a dissolution of the Council in consequence of disagreements or deadlock between the two Houses. Under this system a voter is required to number the candidates in order of preference on the ballot-paper, the figure "1" being written opposite the name of the candidate whom the elector wishes to be returned and sequential figures (2, 3, 4, &c.) indicating his relative degree of preference being written opposite the names of the other candidates. Where an elector has indicated his order of preference for all candidates except one, he is thought to have given his last contingent vote or preference to such candidate.

Where only two candidates are involved, the candidate who receives an absolute majority (i.e., half the number of formal votes cast plus one) is declared elected. Similarly, where there are more than two candidates, if one of them receives an absolute majority on the count of first preferences, then he is declared elected.

Where no absolute majority is attained by a candidate at the count of first preference votes, the candidate who has received the fewest first preference votes is declared defeated, and his ballot-papers examined and his second preferences allotted to the candidates to whom they relate. The process of excluding the candidate with the lowest number of votes and distributing his ballot-papers according to the preferences shown on them to the unexcluded or continuing candidates is followed until one candidate attains an absolute majority.

At a general election for the Legislative Council when two members are required to be elected for each Province, the election of the first member is carried out as above. In the case of the election of the second member, however, a slight variation of procedure is necessary. The first step is to take the ballot-papers of the *first elected* candidate and allot the second preferences on them to the candidates to whom they relate. The remaining candidates begin the counting process with their own first preferences plus the second preferences allotted in the distribution of the elected candidate's ballot-papers. If one of the remaining candidates has an absolute majority, he is declared elected to the second vacancy. If no candidate has an absolute majority, the candidate with the fewest first preference votes is declared defeated and his second preferences distributed to the various continuing or unexcluded candidates to whom they refer.

The process of excluding the lowest candidate and distributing his ballot-papers according to the preferences on them to unexcluded or continuing candidates is followed until one candidate attains an absolute majority.

At a general election for the Legislative Council, the candidate first elected is entitled to hold the seat for six years, the candidate next elected holds his seat for three years.

### **Parliamentary Elections**

#### *Legislative Assembly*

At the Legislative Assembly election of 15th July, 1961, there were contests in all of the 66 Electoral Districts and in 65 of them there were more than two candidates engaged.

In 32 of these contests the successful candidate had an absolute majority of the total first preferences recorded and consequently no distribution of further preferences was necessary. After the necessary distribution of second or subsequent preferences had been completed in the other 34 contests, the leading candidate, on the first count, was elected in 21 instances but was defeated in the remaining thirteen instances.

The following table shows the voting in general elections held for the Legislative Assembly since 1927 :—

**VICTORIA—VOTING AT GENERAL ELECTIONS FOR THE LEGISLATIVE ASSEMBLY**

Year of Election	Whole State	Contested Electorates				
		Electors Enrolled	Votes Recorded		Informal Votes	
			Number	Percentage of Voters	Number	Percentage of Total Votes Recorded
1927 ..	993,211	850,494	780,399	91·76	15,125	1·94
1929 ..	1,029,170	682,190	639,368	93·72	6,934	1·08
1932 ..	1,055,301	729,332	687,042	94·20	9,663	1·41
1935 ..	1,099,251	904,191	853,470	94·39	14,150	1·66
1937 ..	1,136,596	848,680	797,430	93·96	10,938	1·37
1940 ..	1,162,967	841,864	786,359	93·41	12,287	1·56
1943 ..	1,261,630	1,015,750	883,679	87·00	22,876	2·59
1945 ..	1,276,949	1,019,063	896,561	87·98	18,689	2·08
1947 ..	1,345,530	1,291,515	1,206,815	93·44	16,102	1·33
1950 ..	1,362,851	1,294,159	1,221,734	94·40	13,901	1·14
1952 ..	1,402,705	1,119,486	1,047,671	93·59	18,991	1·81
1955 ..	1,422,588	1,402,806	1,318,937	94·02	28,934	2·19
1958 ..	1,478,065	1,478,065	1,392,813	94·23	24,760	1·78
1961 ..	1,554,856	1,554,856	1,467,862	92·09	35,937	2·45

NOTE : Detailed statistics are available in publications issued by the Chief Electoral Officer for Victoria.

The following table shows certain particulars of the representation in the Legislative Assembly in which general elections have been held since 1927:—

**VICTORIA—PARLIAMENTARY REPRESENTATION**

Year of Election	Number of Members of Legislative Assembly	Population per Member	Proportion of Persons Enrolled to Total Population	Number of Electors Enrolled on Date of Election	Average Number of Electors per Member
			per cent.		
1927 ..	65	26,500	57·7	993,211	15,280
1929 ..	65	27,300	58·0	1,029,170	15,833
1932 ..	65	27,800	58·4	1,055,301	16,235
1935 ..	65	28,250	59·8	1,099,251	16,912
1937 ..	65	28,550	61·2	1,136,596	17,486
1940 ..	65	28,950	61·8	1,162,967	17,892
1943 ..	65	30,300	64·0	1,261,630	19,410
1945 ..	65	30,900	63·5	1,276,949	19,645
1947 ..	65	31,700	65·3	1,345,530	20,700
1950 ..	65	33,800	62·1	1,362,851	20,967
1952 ..	65	36,300	59·4	1,402,705	21,580
1955 ..	66	38,100	56·6	1,422,588	21,554
1958 ..	66	41,300	54·2	1,478,065	22,395
1961 ..	66	44,398	53·1	1,554,856	23,558

*Proportion of Voters at Elections*

The first general election for the Legislative Assembly was held in 1856. The proportion of voters to electors of contested districts at each of the general elections held since that year for the Legislative Assembly is found on page 86 of the Victorian Year Book 1961.

*Legislative Council*

The Legislative Council consists of 34 members representing seventeen Provinces. Voting in elections held for the Legislative Council since 1928 is shown in the next table. At the triennial election of 15th July, 1961, there were contests in all of the seventeen provinces and in all of them there were more than two candidates engaged.

In six of these the successful candidate had an absolute majority of the total first preferences recorded and consequently no distribution of further preferences was necessary. After the necessary distribution of second or subsequent preferences had been completed in the other eleven contests, the leading candidate, on the first count, was elected in nine instances but was defeated in the remaining two.

The following table shows particulars of elections for the Legislative Council :—

## VICTORIA—VOTING AT ELECTIONS FOR THE LEGISLATIVE COUNCIL

Year of Election	Whole State		Contested Provinces			
	Electors Enrolled	Electors Enrolled	Votes Recorded		Informal Votes	
			Number	Percentage of Voters	Number	Percentage of Total Votes Recorded
1928 ..	444,278	268,164	85,372	31·84	1,388	1·63
1931 ..	470,349	239,975	93,244	38·86	595	0·64
1934 ..	469,395	160,980	47,375	29·43	799	1·69
1937 ..	447,694	265,194	208,925	78·78*	3,055	1·46
1940 ..	471,843	235,784	178,666	75·78	2,823	1·58
1943 ..	465,637	117,584	83,568	71·07	2,135	2·55
1946 ..	517,719	393,907	291,295	73·95	5,912	2·03
1949 ..	550,472	384,188	299,111	77·86	4,272	1·43
1952 ..	1,395,650†	1,078,959	994,190	92·14†	22,595	2·27
1955 ..	1,430,130	1,216,010	1,112,951	91·52	23,189	2·08
1958 ..	1,488,293	1,387,097	1,283,665	92·54	22,085	1·72
1961 ..	1,554,856	1,554,856	§	§	§	§

\* The increase in the percentage of voters is accounted for by voting having been made compulsory for all resident electors by Act No. 4350, passed on 10th December, 1935.

† The increases in enrolments and percentages of voters are due to the operation of Act No. 5465, which was passed on 11th November, 1950, and abolished the former Legislative Council ratepayers and general rolls. Instead, every person enrolled for Legislative Assembly purposes became automatically entitled and required to vote at Legislative Council elections.

§ Not yet available.

### Parliamentary By-elections

The following are details of by-elections held between the General Elections in 1958 and 31st May, 1961 :—

#### *Legislative Assembly—*

8th October, 1958: Mr. W. T. Divers was elected unopposed for Footscray Electoral District.

17th September, 1960: Mr. W. A. Borthwick was elected for the Scoresby Electoral District.

12th November, 1960: Mr. A. T. Evans was elected for the Ballarat North Electoral District.

#### *Legislative Council—*

6th August, 1960: Mr. J. M. Tripovich was elected for the Doutta Galla Province.

6th August, 1960: Mr. D. G. Elliot was elected for the Melbourne Province.

### Further References

Chief Electoral Officer for Victoria—*Various Publications Giving Detailed Statistics of State Elections.*

Department of Political Science, University of Melbourne—*The Government of Victoria* (1958).

### *Agent-General for Victoria*

An article on the “Agent-General for Victoria” was published on pages 21 and 22 of the Victorian Year Book 1937–38.

The *Agent-General's Act* 1945 simplifies and consolidates the statutory provisions relating to the administration of the office of the Agent-General for Victoria. Colonel the Hon. Sir William Leggatt, D.S.O., M.C., E.D., was appointed Agent-General for Victoria in Great Britain from 3rd February, 1956.

### *Victorian Public Service*

An article on the Victorian Public Service, showing the functions of the fifteen departments, was published on pages 89 to 92 of the Victorian Year Book 1961.

### *Victorian Government Instrumentalities*

#### **Administration in Victoria**

The administration of the State of Victoria is carried on through a variety of administrative agencies ranging from the Public Service departments and the large statutory corporations to small regulatory or advisory boards or committees set up under statute for specific limited purposes. There is no rigid pattern, diversity of form and organization being a feature of the agencies which make up the whole administrative structure. Diversity is a natural concomitant of the

adaptation of existing agencies to new requirements and of the devising of new agencies, where such are being established, to meet particular circumstances. The use of the term "administrative structure" is not intended to suggest a precise and orderly system of administrative arrangements designed on mechanical lines. The collection of administrative agencies resembles rather a complex organism made up of many differing components, all contributing to the ultimate objective, but some with greater independence of action than others.

### Nature of an Instrumentality

The fifteen Public Service departments and their functions have already been described on pages 89 to 92 of the Victorian Year Book 1961. The purpose of this chapter is to describe the Victorian Government instrumentalities as distinct from the Public Service departments proper. In its normal use, the term "instrumentalities" is wide enough to include the departments, but for present purposes its application will be limited to statutory bodies which are not departments, even though some may be administered within, or associated with, departments.

There is, of course, no clear dividing line between instrumentalities in this sense and the departments proper. They merge. While the departments and the larger statutory corporations are clearly recognizable and distinguishable from each other, difficulty arises in defining and classifying other statutory non-departmental bodies which form part of the administrative structure and are sometimes placed inside and sometimes outside of the departmental organization.

The fifteen departments constituting the Public Service proper may be regarded as the inner core of the State's administration, and the other administrative agencies, which are removed—to a greater or lesser degree—by their respective statutes from direct ministerial control over day to day administration, as the more loosely attached agencies at varying distances from the administrative centre. Subject to the qualification in the following paragraph, the latter agencies will be covered by the term "instrumentalities".

The overlapping and merging between departments and instrumentalities already referred to prevents even this tentative distinction from being entirely satisfactory. There are some instrumentalities which direct the work of departments (for the purpose of the *Public Service Act* 1958 in relation to administration, the Chairman of the Forests Commission and the Chairman of the State Rivers and Water Supply Commission are deemed to be, respectively, the permanent heads of the State Forests Department and the Water Supply Department), or of branches of departments (for example, Housing Commission—Treasury; Mental Hygiene Authority—Department of Health). Others are associated with departments and staffed by members of the Public Service (for example, Soil Conservation Authority—Premier's Department; Workers Compensation Boards—Chief Secretary's Department; Milk Board—Department of Agriculture). Others again determine, or advise on, defined aspects of policy



within departments, the administration of such policy, subject in most cases to the Minister, being in the hands of the department (for example, Commission of Public Health—Department of Health; Milk Pasteurization Committee—Department of Agriculture).

The account of the Public Service in the Victorian Year Book 1961 covered the activities of the Public Service departments and included reference to instrumentalities staffed by members of the Public Service. The inclusion here of these instrumentalities does, to this extent, overlap the description of the work of the Public Service. However, as it is unreal to attempt a sharp division and desirable to provide a complete account of the instrumentalities, even where they are virtually departments or branches of departments, the overlapping is considered to be justified.

The term "instrumentality" as used here does not cover single officials vested with statutory powers within the departmental structure such as the Chief Commissioner of Police, Government Statist, Insurance Commissioner, and Public Trustee. Courts, also, have been excluded.

### **Some Features of Instrumentalities**

The form of the directing authority, the nature and scope of its powers, the control of financial arrangements, the method of staffing, and the method of determination of staff salaries and conditions of employment vary quite considerably from instrumentality to instrumentality, but for at least the larger instrumentalities not staffed by members of the Public Service, the overall pattern follows the same broad lines. These are a constituent statute; a controlling board or commission appointed by the Governor in Council; usually freedom, in practice, from direct ministerial control over day to day administration, but subjection to governmental or ministerial control in matters of major policy; and, subject in some cases to the approval of the Governor in Council or the Minister, control over the appointment of staff and the determination of salaries and other conditions of employment. Financial arrangements differ more considerably.

There is no uniformity amongst the instrumentalities in title (for example, the terms "Board," "Commission," "Authority," "Trust" and "Corporation" all appear); in the number of members on the controlling body; in the qualifications of the members (for example, some have members representing particular interests); or in the basis of membership (for example, some are full time and others part time).

The largest of the instrumentalities are engaged in public utility or developmental activity and include the Railways Commissioners, State Electricity Commission, Melbourne and Metropolitan Tramways Board, Melbourne and Metropolitan Board of Works, Country Roads Board, Gas and Fuel Corporation, Melbourne Harbor Trust, State Rivers and Water Supply Commission and the Forests Commission.

### Classification of Instrumentalities in Administrative Structure

The following statement lists the instrumentalities according to the Minister under whom each instrumentality is administered, and shows which instrumentalities are staffed by members of the Public Service within the meaning of the Public Service Act and, in these cases, the department with which the instrumentality is associated:—

Minister	Instrumentalities with Public Service Staffs and Department with which the Instrumentality is Associated		Other Instrumentalities
	Department	Instrumentality	
Premier ..	Premier's ..	National Parks Authority Public Service Board Tourist Development Authority	Gas and Fuel Corporation Latrobe Valley Development Advisory Committee
Minister of Conservation	Premier's ..	Soil Conservation Authority	
Treasurer ..	Treasury ..	Home Finance Trust Superannuation Board Tender Board	Rural Finance Corporation State Savings Bank
Chief Secretary	Chief Secretary's	Aborigines Board .. Free Library Service Board Parole Boards Police Classification Board Police Discipline Board Premiums Committee Traffic Commission Trustees, Institute of Applied Science Trustees, National Gallery Trustees, National Museum Trustees, State Library Workers Compensation Boards Youth Advisory Council	Country Fire Authority Dog Racing Control Board Exhibition Trustees Metropolitan Fire Brigades Board Trotting Control Board Zoological Board
Attorney-General	Law ..	Companies Board Discharged Service-men's Employment Board Patriotic Funds Council	Council of Legal Education
Minister of Transport	.. ..	.. ..	Melbourne and Metropolitan Tramways Board Railways Commissioners Transport Regulation Board

CLASSIFICATION OF INSTRUMENTALITIES IN ADMINISTRATIVE  
STRUCTURE—*continued*

Minister	Instrumentalities with Public Service Staffs and Department with which the Instrumentality is Associated		Other Instrumentalities
	Department	Instrumentality	
Minister of Agriculture	Agriculture . .	Dairy Produce Board Milk Board Milk Pasteurization Committee Stock Medicines Board	Grain Elevators Board Inland Meat Authority Marketing Boards :— Chicory Dried Fruits Egg and Egg Pulp Maize Onion Seed Beans
Commissioner of Public Works	Public Works	Marine Board . .	Architects Registration Board Country Roads Board Geelong Harbor Trust Commissioners Melbourne Harbor Trust Commissioners Portland Harbor Trust Commissioners
Minister of Health	Health . .	Advisory Committee to Mental Hygiene Authority Cinematograph Opera- tors Board Clean Air Committee Commission of Public Health Consultative Council for Influenza Consultative Council for Maternal Mor- tality Consultative Council for Poliomyelitis Consultative Council for Quarantinable Diseases Consultative Council for Revision of British Pharmacopoeia Food Standards Com- mittee Mental Hygiene Autho- rity (Medical officers not subject to Public Service Act) Plumbers and Gasfit- ters Board Proprietary Medicines Advisory Committee Superintendents Com- mittee Tuberculosis Advisory Committee	Anti-Cancer Council Cancer Institute Board Fairfield Hospital Board Hospitals and Charities Commission Trustees, Various Ceme- teries Various Professional and Occupational Registration Boards :— Dental Dietitians Registra- tion Hairdressers Regis- tration Masseurs Registration Medical Nurses' Council Opticians Registra- tion Pharmacy

CLASSIFICATION OF INSTRUMENTALITIES IN ADMINISTRATIVE  
STRUCTURE—*continued*

Minister	Instrumentalities with Public Service Staffs and Department with which the Instrumentality is Associated		Other Instrumentalities
	Department	Instrumentality	
Minister of Water Supply	Water Supply	State Rivers and Water Supply Commission	Geelong Water Works and Sewerage Trust Latrobe Valley Water and Sewerage Board Various Local Water and Sewerage Autho- rities Various River Improve- ment and Drainage Trusts
Minister of Mines	Mines ..	Board of Examiners for Mine Managers Board of Examiners of Engine Drivers Coal Mine Workers' Pension Tribunal Coal Miners' Accident Relief Board Sludge Abatement Board	
Minister of Edu- cation	Education ..	Council of Public Edu- cation Teachers Tribunal	Council of Adult Educa- tion
Minister of Housing	Treasury ..	Housing Commission	
Commissioner of Crown Lands and Survey	Crown Lands and Survey	Surveyors Board Vermin and Noxious Weeds Destruction Board	
Minister of Soldier Settle- ment	.. ..	.. ..	Soldier Settlement Com- mission
Minister of Labour and Industry	Labour and Industry	Apprenticeship Com- mission Industrial Safety Ad- visory Council State Relief Committee Wages Boards	
Minister of Electrical Un- dertakings	.. ..	.. ..	State Electricity Com- mission
Minister for Local Government	Local Government	Building Regulations Committee Municipal Auditors Board Municipal Building Surveyors Board Municipal Clerks Board Municipal Electrical Engineers Board Municipal Engineers Board Local Government Advisory Board	Local Government Superannuation Board Melbourne and Metro- politan Board of Works Town and Country Planning Board
Minister of Forests	State Forests	Forests Commission	

### Classification of Instrumentalities According to Function

In the following list, the instrumentalities are classified according to function. The classification structure is based, with some modifications, on that used in "The Government of Victoria" (Melbourne University Press)—a study prepared by the Department of Political Science of the University of Melbourne. On a strict classification on this basis, many of the instrumentalities would fall under more than one heading. To avoid too much complexity, however, each instrumentality has been listed once only under the heading most nearly according with its main function. For example, the State Electricity Commission regulates standards of safety of electrical appliances and electrical work, the Melbourne and Metropolitan Board of Works regulates standards of plumbing and sanitary fittings, the Public Service Board determines salaries and wages of the Public Service, the Teachers Tribunal determines salaries of the teaching Service and the Police Classification Board determines salaries of the Police Force. The first two have been classified under their main function of public utility services and the other three as internal administrative services rather than under regulation of labour conditions.

- |  |   |
|--|---|
| <p>(1) <i>Legal, Protective, Registry Services :</i><br/>Country Fire Authority<br/>Metropolitan Fire Brigades Board<br/>Parole Boards</p> <p>(2) <i>Regulations of Primary Production :</i><br/>Chicory Marketing Board<br/>Dairy Produce Board<br/>Dried Fruits Board<br/>Egg and Egg Pulp Marketing Board<br/>Maize Marketing Board<br/>Milk Board<br/>Onion Marketing Board<br/>Seed Beans Marketing Board<br/>Sludge Abatement Board</p> <p>(3) <i>Regulation of Industry and Commerce :</i><br/>Premiums Committee<br/>Transport Regulation Board</p> <p>(4) <i>Regulation of Labour Conditions :</i><br/>Apprenticeship Commission<br/>Coal Mine Workers' Pension Tribunal<br/>Coal Miners' Accident Relief Board<br/>Local Government Superannuation Board<br/>Wages Boards<br/>Workers Compensation Boards</p> <p>(5) <i>Regulation of General Standards :</i><br/>Building Regulations Committee<br/>Food Standards Committee<br/>Marine Board<br/>Stock Medicines Board</p> <p>(6) <i>Regulation of Professional and Occupational Standards :</i><br/>Architects Registration Board<br/>Board of Examiners for Mine Managers<br/>Board of Examiners of Engine Drivers</p> | <p>Cinematograph Operators Board<br/>Companies Auditors Board<br/>Council of Legal Education<br/>Dental Board<br/>Dietitians Registration Board<br/>Hairdressers Registration Board<br/>Masseurs Registration Board<br/>Medical Board<br/>Municipal Auditors Board<br/>Municipal Building Surveyors Board<br/>Municipal Clerks Board<br/>Municipal Electrical Engineers Board<br/>Municipal Engineers Board<br/>Nurses' Council<br/>Opticians Registration Board<br/>Pharmacy Board<br/>Plumbers and Gasfitters Board<br/>Surveyors Board</p> <p>(7) <i>Public Utility, Conservation and Development :</i><br/>Country Roads Board<br/>Exhibition Trustees<br/>Forests Commission<br/>Gas and Fuel Corporation<br/>Geelong Harbor Trust Commissioners<br/>Geelong Waterworks and Sewerage Trust<br/>Grain Elevators Board<br/>Home Finance Trust<br/>Housing Commission<br/>Inland Meat Authority<br/>Latrobe Valley Development Advisory Committee<br/>Latrobe Valley Water and Sewerage Board<br/>Local Government Advisory Board<br/>Melbourne and Metropolitan Board of Works</p> |
|--|---|

### CLASSIFICATION OF INSTRUMENTALITIES ACCORDING TO FUNCTION—*continued*

Melbourne and Metropolitan Tramways Board	Trustees, National Gallery
Melbourne Harbor Trust Com- missioners	Trustees, National Museum
Portland Harbor Trust Commis- sioners	Trustees, State Library
Railways Commissioners	Zoological Board
Rural Finance Corporation	(10) <i>Public Health :</i>
Soil Conservation Authority	Advisory Committee to Mental Hygiene Authority
Soldier Settlement Commission	Anti-Cancer Council
State Electricity Commission	Cancer Institute Board
State Rivers and Water Supply Commission	Clean Air Committee
State Savings Bank	Commission of Public Health
Town and Country Planning Board	Consultative Council for Influenza
Traffic Commission	Consultative Council for Maternal Mortality
Trustees, Various Cemeteries	Consultative Council for Polio- myelitis
Various Local Water and Sewerage Authorities	Consultative Council for Quar- antinable Diseases
Various River Improvement and Drainage Trusts	Consultative Council for Revision of British Pharmacopoeia
Vermin and Noxious Weeds Destruction Board	Fairfield Hospital Board
(8) <i>Social Welfare :</i>	Hospitals and Charities Commis- sion
Aborigines Board	Mental Hygiene Authority
Discharged Servicemen's Employ- ment Board	Milk Pasteurization Committee
Patriotic Funds Council	Proprietary Medicines Advisory Committee
State Relief Committee	Superintendents Committee
Youth Advisory Committee	Tuberculosis Advisory Committee
(9) <i>Education and Recreation :</i>	(11) <i>Industrial Health :</i>
Council of Adult Education	Industrial Safety Advisory Council
Council of Public Education	(12) <i>Internal Administrative Services :</i>
Dog Racing Control Board	Police Classification Board
Free Library Service Board	Police Discipline Board
National Parks Authority	Public Service Board
Tourist Development Authority	Superannuation Board
Trotting Control Board	Teachers Tribunal
Trustees, Institute of Applied Science	Tender Board

### Co-ordination in the Administrative Structure

There are strong co-ordinating influences, both formal and informal, running through the whole of the administrative structure and affecting both departments and instrumentalities. Means of co-ordination, either of overall policy or particular sectors of administrative activity, include:—

#### (1) The Governor in Council

In relation to a number of matters affecting instrumentalities, the Governor in Council is the legal authority for executive action. Before the submission of documents for formal action or approval by the Governor in Council, they are subjected to scrutiny with due regard to the requirements of co-ordination.

#### (2) Parliament

Co-ordination is achieved through legislation and Parliamentary Committees.

(3) The Premier, Cabinet, and Individual Ministers

Subject to the legislative pattern laid down by Parliament, and to such separate powers as are conferred on the respective instrumentalities by statute, a continuous co-ordinating process is carried on through the political executive.

(4) The Departments

This applies in those cases where oversight is exercised over instrumentalities administered within departments. Such oversight may have reference to such matters as staffing, procedures, and the exercise of powers conferred by legislation.

(5) The Treasury

The Treasury is concerned with the administration of the State's financial policy and through its financial controls, co-ordinates expenditure from loan, revenue, and fund sources in accordance with the programme laid down by Parliamentary or Government decision.

(6) The Public Service Board

The Public Service Board, in addition to carrying out the functions allotted to it by Parliament in respect of the Public Service, acts, through its Chairman, as the Government's co-ordinating authority in industrial matters affecting both departments and instrumentalities. This ensures a common approach by government bodies to conditions of employment by such departments and instrumentalities of persons outside the Public Service who are covered by industrial awards or determinations. Further, the Board's salary determinations for the Public Service have a persuasive influence on the instrumentalities whose staffs are not under the Public Service Act and the advice of the Chairman of the Board is frequently sought on the salary rates for the staff of a number of these instrumentalities.

(7) The Auditor-General

The Auditor-General's responsibilities for the audit of government accounts and report to Parliament extend beyond the departments to the instrumentalities, and his activities provide another co-ordinating force with particular application to the accounts of the instrumentalities.

(8) Interlocking Control

This is provided for in a number of instances by having representation of departments or other instrumentalities on the controlling bodies of some instrumentalities.

(9) Joint Committees

Joint committees may be set up either as standing committees or for particular purposes, with membership comprising representatives of departments or instrumentalities as required.

(10) Day to day contact between officers of departments and instrumentalities.

# Part 3

## DEMOGRAPHY

### *Population*

#### **Historical**

According to manuscript notes made by Captain Lonsdale, the first enumeration of the people was taken by an officer from Sydney on the 25th May, 1836, less than one year after the date of the arrival of John Batman (29th May, 1835). This was the first official census in Victoria, which was at that time known as the district of Port Phillip, and it disclosed that the band of first arrivals consisted of 142 males and 35 females of European origin.

At the Census taken in 1838, it was ascertained that the number of inhabitants had increased to 3,511. During each of the years 1840 and 1841 the population increased by nearly 100 per cent., due principally to the number of assisted immigrants who arrived in the district, and it continued to increase to the end of 1850.

The discovery of gold in 1851 (the year of separation from New South Wales) was the greatest influence in populating Victoria, the numbers increasing from 77,345 at the Census in 1851 to 538,628 in 1861, a gain of 596 per cent. In the next ten years the natural increase (excess of births over deaths) was the main factor in the growth of population. From the end of 1870 the population advanced steadily to 1,133,728 at the end of 1890, the increase being 409,803 (natural increase 307,246, gain from migration 102,557). The latter portion of this period was known as the "Land Boom" period which was followed by a marked reaction.

Between 1891 and 1905 the population of the State advanced very slowly, the total increase in this period being 76,693. The gain by natural increase, 247,078, was offset by the loss from migration, 170,385—the discovery of gold in Western Australia being the principal cause of migration from Victoria in the period. A steady annual increase was maintained from 1905 to the end of 1927 (exclusive of the years relating to the War), the population increasing from 1,210,421 to 1,741,832.

During the period 1928 to 1938 the population of the State increased slowly, the lowest annual increase for the period being recorded in the year 1935. The rate of natural increase dropped considerably and, in seven years of the period, a loss from migration was experienced.



The world wide depression of 1929 to 1933 had its effect on the population of the State. The population at the end of 1938 was 1,871,099.

During the period of the Second World War the population of Victoria increased by 144,008. There was a considerable increase from migration during the early part of the period due to war conditions. In each of the years 1946 and 1947 the increase in the population was due entirely to natural increase, as there was a slight loss from migration in each year. In 1948 a substantial gain by natural increase and in migration was recorded. This was followed by further substantial increases by both natural increase and migration in each of the years 1949 to 1954, the gain from migration in 1950 being the highest recorded to that time, excluding the return of troops from overseas after the First World War. During the five year period to the end of 1960 the population of Victoria increased by 370,512, of which 185,129 was due to natural increase and 185,383 to net migration, the increase from net migration in 1960, 43,152, exceeding the previous record established in 1956.

The estimated population at the end of 1960 was 2,925,533.

The following table shows the estimated population of Victoria from 1836 to 1960 :—

#### VICTORIA—ESTIMATED POPULATION

Year	Estimated Population, 31st December		
	Males	Females	Total
1836 (25th May) .. .. .	142	35	177
1840 .. .. .	7,254	3,037	10,291
1850 .. .. .	45,495	30,667	76,162
1860 .. .. .	330,302	207,932	538,234
1870 .. .. .	397,230	326,695	723,925
1880 .. .. .	450,558	408,047	858,605
1890 .. .. .	595,519	538,209	1,133,728
1900 .. .. .	601,773	594,440	1,196,213
1910 .. .. .	646,482	654,926	1,301,408
1920 .. .. .	753,803	774,106	1,527,909
1930 .. .. .	892,422	900,183	1,792,605
1940 .. .. .	947,037	967,881	1,914,918
1950 .. .. .	1,114,497	1,122,685	2,237,182
1951 .. .. .	1,150,009	1,149,529	2,299,538
1952 .. .. .	1,189,262	1,177,457	2,366,719
1953 .. .. .	1,212,060	1,203,975	2,416,035
1954 .. .. .	1,246,591	1,234,286	2,480,877
1955 .. .. .	1,288,058	1,266,963	2,555,021
1956 .. .. .	1,328,357	1,304,266	2,632,623
1957 .. .. .	1,360,540	1,340,095	2,700,635
1958 .. .. .	1,394,876	1,376,043	2,770,919
1959 .. .. .	1,431,373	1,411,530	2,842,903
1960 .. .. .	1,473,501	1,452,032	2,925,533

### Increase of Population

The elements of increase in the population of Victoria during the years 1957 to 1960 are shown in the following table :—

#### VICTORIA—ELEMENTS OF POPULATION INCREASE

Particulars	1957	1958	1959	1960
Estimated Population, 1st January ..	2,632,623	2,700,635	2,770,919	2,842,903
Births .. ..	60,464	61,269	62,245	64,025
Deaths .. ..	24,131	23,625	25,078	24,547
Natural Increase	36,333	37,644	37,167	39,478
Recorded Migration by Sea, Rail, and Air—				
Arrivals .. ..	616,425	622,865	737,520	814,452
Departures .. ..	584,746	590,225	702,703	771,300
Gain by Recorded Migration*	31,679	32,640	34,817	43,152
Estimated Population, 31st December ..	2,700,635	2,770,919	2,842,903	2,925,533

\* Excess of arrivals over departures. Interstate migration relates to recorded movements by rail, sea, and air, and certain special movements by road, together with an allowance for unrecorded movement into the Australian Capital Territory.

The table which follows shows, for each decennium from 1860, and for each year of the ten years, 1951 to 1960, the natural increase of the population and the gain or loss by migration.

#### VICTORIA—INCREASE OF POPULATION BY EXCESS OF BIRTHS OVER DEATHS, AND THE GAIN OR LOSS BY MIGRATION

Period	Increase during Period			Increase Per Cent. during Period		
	Natural	Net Migration	Total	Natural	Net Migration	Total
1860-69 ..	143,888	31,802	175,690	27·62	6·10	33·72
1870-79 ..	148,375	(-) 3,380	144,995	21·30	(-)0·49	20·81
1880-89 ..	156,036	107,145	263,181	18·54	12·73	31·27
1890-99 ..	176,917	(-)93,314	83,603	16·01	(-)8·44	7·57
1900-09 ..	154,608	(-)66,127	88,481	13·01	(-)5·57	7·44
1910-19 ..	178,067	47,946	226,013	13·94	3·76	17·70
1920-29 ..	189,326	85,908	275,234	12·60	5·71	18·31
1930-39 ..	113,606	(-) 8,734	104,864*	6·39	(-)0·49	5·90
1940-49 ..	197,096	99,552	285,751*	10·47	5·29	15·77
1950-59 ..	327,489	346,530	674,019	15·10	15·98	31·08
1951 .. ..	27,107	35,249	62,356*	1·21	1·58	2·79
1952 .. ..	30,416	36,765	67,181*	1·32	1·60	2·92
1953 .. ..	30,911	18,405	49,316*	1·30	0·78	2·08
1954 .. ..	32,106	32,736	64,842*	1·33	1·35	2·68
1955 .. ..	33,809	40,335	74,144	1·36	1·63	2·99
1956 .. ..	34,507	43,095	77,602	1·35	1·69	3·04
1957 .. ..	36,333	31,679	68,012	1·38	1·20	2·58
1958 .. ..	37,644	32,640	70,284	1·39	1·21	2·60
1959 .. ..	37,167	34,817	71,984	1·34	1·26	2·60
1960 .. ..	39,478	43,152	82,630	1·39	1·52	2·91

(-) Indicates excess of departures over arrivals, also a decrease.

\* Figures shown for natural increase and net migration during the years 1939 to 1947 do not add to the total increase, for the reason that during the period September, 1939, to June, 1947, the natural increase represents the excess of births over civilian deaths, whereas deaths of defence personnel, whether in Australia or overseas, were taken into account in calculating total increase.

Figures for the years 1947 to 1954 have been adjusted in accordance with the results of the Census of 30th June, 1954.

## Migration

## General

The recorded interstate and overseas movement of people to and from Victoria, during the years 1956 to 1960, is shown in the following table:—

## VICTORIA—RECORDED MIGRATION

Year	Arrivals in Victoria			Departures from Victoria			Excess of Arrivals over Departures		
	Inter-state	From Other Countries Direct	Total	Inter-state	To Other Countries Direct	Total	Inter-state	Other Countries Direct	Total
1956 ..	562,136	81,022	643,158	575,520	24,543	600,063	(-)13,384	56,479	43,095
1957 ..	553,812	62,613	616,425	562,545	22,201	584,746	(-) 8,733	40,412	31,679
1958 ..	559,528	63,337	622,865	562,530	27,695	590,225	(-) 3,002	35,642	32,640
1959 ..	660,294	77,226	737,520	669,737	32,966	702,703	(-) 9,443	44,260	34,817
1960 ..	729,601	84,851	814,452	736,472	34,828	771 300	(-) 6,871	50,023	43,152

(-) Indicates excess of departures over arrivals.

The overseas migration between Victoria and British or Foreign countries for the period 1956 to 1960 is shown in the following tables:—

## VICTORIA—OVERSEA MIGRATION : ARRIVALS

Place of Departure	1956	1957	1958	1959	1960
<b>British—</b>					
United Kingdom and Ireland ..	21,384	18,850	20,958	23,200	22,259
Canada .. ..	66	85	208	394	420
Ceylon .. ..	626	304	612	605	521
Fiji .. ..	247	34	301	444	149
Hong Kong .. ..	118	290	224	250	298
India .. ..	414	172	339	376	546
Malta .. ..	2,152	1,084	1,032	1,380	1,471
Malaya .. ..	4	20	127	110	183
Nauru .. ..	214	338	296	307	390
New Guinea .. ..	29	29	50	38	26
New Zealand .. ..	4,467	3,708	5,148	7,317	8,917
Pakistan .. ..	82	..	22	45	41
Papua .. ..	23	8	17	14	23
Singapore .. ..	264	292	1,247	2,168	1,528
Union of South Africa ..	418	314	474	530	793
Other British Countries ..	540	307	1,445	391	555
<b>Total British Countries ..</b>	<b>31,048</b>	<b>25,835</b>	<b>32,500</b>	<b>37,569</b>	<b>38,120</b>

VICTORIA—OVERSEA MIGRATION : ARRIVALS—*continued*

Place of Departure	1956	1957	1958	1959	1960
Foreign—					
Egypt .. .. .	1,626	372	234	128	168
France .. .. .	24	15	19	820	98
Germany .. .. .	5,658	6,121	4,986	8,562	12,728
Greece .. .. .	8,052	3,469	2,869	3,338	5,417
Indonesia .. .. .	134	65	75	131	149
Italy .. .. .	19,028	16,263	13,572	15,951	19,707
Japan .. .. .	258	152	155	244	434
Netherlands .. .. .	7,461	4,845	4,151	4,813	5,064
United States of America ..	462	211	683	999	557
Other Foreign Countries ..	7,271	5,265	4,093	4,671	2,409
Total Foreign Countries ..	49,974	36,778	30,837	39,657	46,731
Total British and Foreign ..	81,022	62,613	63,337	77,226	84,851

## VICTORIA—OVERSEA MIGRATION: DEPARTURES

Place of Destination	1956	1957	1958	1959	1960
British—					
United Kingdom and Ireland ..	10,266	9,852	10,090	11,006	11,449
Canada .. .. .	14	168	138	326	523
Ceylon .. .. .	384	241	344	367	261
Fiji .. .. .	..	14	245	477	126
Hong Kong .. .. .	58	111	96	88	121
India .. .. .	348	235	280	269	307
Malta .. .. .	35	489	223	218	291
Malaya .. .. .	89	13	70	123	83
Nauru .. .. .	285	277	292	295	309
New Guinea .. .. .	15	31	60	23	39
New Zealand .. .. .	3,909	3,649	4,590	6,940	7,919
Pakistan .. .. .	73	1	21	19	18
Papua .. .. .	5	7	18	18	29
Singapore .. .. .	319	297	1,177	1,739	1,597
Union of South Africa ..	278	339	402	496	393
Other British Countries ..	304	254	404	424	503
Total British Countries ..	16,382	15,978	18,450	22,828	23,968

VICTORIA—OVERSEA MIGRATION : DEPARTURES—*continued*

Place of Destination	1956	1957	1958	1959	1960
Foreign—					
Egypt .. ..	103	53	15	41	101
France .. ..	389	151	294	277	614
Germany .. ..	236	260	202	294	353
Greece .. ..	247	22	360	381	862
Indonesia .. ..	117	28	73	131	145
Italy .. ..	4,056	4,419	4,658	5,296	5,836
Japan .. ..	385	270	282	341	471
Netherlands .. ..	325	161	470	816	1,087
United States of America ..	521	237	783	1,051	897
Other Foreign Countries ..	1,782	622	2,108	1,510	494
Total Foreign Countries ..	8,161	6,223	9,245	10,138	10,860
Total British and Foreign ..	24,543	22,201	27,695	32,966	34,828

The following table shows the overseas migration for the period 1956 to 1960 classified according to permanent and temporary migrants :—

## VICTORIA AND AUSTRALIA—OVERSEA MIGRATION

Year	Victoria				Australia				
	Long Term and Permanent*	Short Term Movement		Total	Long Term and Permanent*	Short Term Movement		Total	
		Australian Residents Returning or Departing Temporarily	Visitors			Australian Residents Returning or Departing Temporarily	Visitors		
ARRIVALS									
1956	..	63,061	9,181	8,780	81,022	123,822	57,608	66,018	247,448
1957	..	50,462	8,133	4,018	62,613	118,695	56,017	58,616	233,328
1958	..	47,567	9,887	5,883	63,337	109,857	59,065	61,342	230,264
1959	..	57,215	11,577	8,434	77,226	124,022	61,754	68,120	253,896
1960	..	63,671	12,546	8,634	84,851	139,371	75,167	84,623	299,161
DEPARTURES									
1956	..	8,390	8,440	7,713	24,543	37,717	51,400	64,333	153,450
1957	..	9,588	8,285	4,328	22,201	41,073	53,438	60,085	154,596
1958	..	11,188	10,880	5,627	27,695	44,978	58,888	61,032	164,898
1959	..	11,021	13,607	8,338	32,966	40,444	64,631	72,030	177,105
1960	..	12,288	14,337	8,203	34,828	46,595	77,761	84,670	209,026

\* "Long Term and Permanent Movement" relates to persons arriving who state that they intend to reside in Australia for a period of one year or more, and to persons departing who state that they intend to reside abroad for a period of one year or more. As from 1959, Australian residents departing overseas for one year or more, who stated Australia as their country of intended future residence, have been included under "Short Term Movement".

The following table shows the nationalities of the permanent new arrivals in 1960 whose State of disembarkation was Victoria :—

**VICTORIA—NATIONALITY OF PERMANENT NEW  
ARRIVALS, 1960**

Nationality	Persons	Nationality	Persons	Nationality	Persons
British ..	20,040	French ..	65	Norwegian ..	96
Irish ..	414	Finnish ..	867	Polish* ..	773
American (U.S.)	116	German ..	10,705	Portuguese ..	3
Argentinian ..	5	Greek ..	5,276	Romanian ..	30
Austrian ..	1,788	Hungarian ..	116	Russian† ..	54
Belgian ..	59	Indonesian ..	14	Ukrainian ..	2
Brazilian ..	6	Israeli ..	31	Spanish ..	1,007
Burmese ..	1	Italian ..	11,980	Swedish ..	153
Chinese ..	54	Japanese ..	4	Swiss ..	358
Czechoslovak ..	6	Latvian ..	12	Turkish ..	9
Danish ..	401	Lebanese ..	99	Yugoslav ..	726
Dutch ..	3,705	Lithuanian ..	2	Other‡ ..	4,688
Estonian ..	5	Mexican ..	1	Total ..	63,671

\* Includes "Stateless" who were formerly Polish. † Includes "Stateless" who were formerly Russian. ‡ Includes 4,634 "Stateless" with former nationality stated but other than Polish or Russian.

### *Assisted Migration*

The Migration Scheme in operation prior to the war ceased on the outbreak of war. During the war assisted immigration was discontinued, except in cases of close family reunion involving wives and dependent children, and other special cases having exceptional features, for which special approval was required.

Two new agreements were signed between the Commonwealth and United Kingdom Governments on the 5th March, 1946, the first for the granting of free passages from the British Isles to British Ex-service personnel, their wives and children, who wish to come here, and are accepted as suitable for settlement in this country; and the second for the granting of assisted passages from the United Kingdom to British civilians not eligible under the free passage scheme. The Free Passage Agreement was terminated in 1955.

### *Naturalization*

The *Nationality and Citizenship Act* 1948 commenced on Australia Day (26th January), 1949, and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation, for the first time, of the status of "Australian Citizen". In this respect, the Act was complementary to citizenship legislation passed or about to be passed by other countries of the British Commonwealth. All Australian citizens, and the citizens of other countries of the British Commonwealth, are declared to be British Subjects.

The number of naturalization certificates granted in Victoria in the period 1956 to 1960 was 54,759. Of these 17 per cent were to persons of Polish origin and just under 21 per cent. were to Italian nationals.

The following table shows the persons of each nationality granted naturalization certificates in Victoria during the five years 1956 to 1960:—

### VICTORIA—PREVIOUS NATIONALITY OF PERSONS NATURALIZED

Nationality	Number of Naturalization Certificates Granted					Total Granted 1956 to 1960	
	1956	1957	1958	1959	1960	No.	%
Albanian ..	44	39	23	23	29	158	0.3
Austrian ..	83	114	79	100	169	545	1.0
Belgian ..	8	11	15	12	11	57	0.1
Bulgarian ..	28	23	18	21	21	111	0.2
Czechoslovak ..	603	413	282	191	159	1,648	3.0
Danish ..	11	6	16	12	13	58	0.1
Dutch ..	672	725	1,093	1,258	2,065	5,813	10.6
Estonian ..	134	168	137	121	161	721	1.3
Finnish ..	7	1	11	5	24	48	0.1
French ..	25	25	26	47	45	168	0.3
German ..	295	386	537	849	1,669	3,736	6.8
Greek ..	222	323	323	536	1,170	2,574	4.7
Hungarian ..	767	553	390	253	340	2,303	4.2
Italian ..	899	1,326	2,079	2,953	4,136	11,393	20.8
Latvian ..	733	769	762	600	485	3,349	6.1
Lithuanian ..	295	430	340	329	267	1,661	3.0
Norwegian ..	15	15	15	15	18	78	0.1
Polish ..	1,936	1,989	1,691	1,952	1,822	9,390	17.2
Romanian ..	106	89	71	73	50	389	0.7
Russian ..	102	103	121	154	111	591	1.1
Swedish ..	1	3	8	13	11	36	0.1
Swiss ..	45	54	34	43	46	222	0.4
Ukrainian ..	479	623	649	751	723	3,225	5.9
Yugoslav ..	685	716	728	735	818	3,682	6.7
Other European ..	21	34	35	54	61	205	0.4
U.S. American ..	10	8	10	10	13	51	0.1
Other Nationalities	63	139	123	242	361	928	1.7
Stateless ..	361	498	312	204	244	1,619	3.0
Total ..	8,650	9,583	9,928	11,556	15,042	54,759	100.0

*Note.*—The above figures relate to the number of certificates granted, and do not represent the total number of persons affected by the certificates. In addition to the figures shown, there were 2,100 children in 1957, 2,474 in 1958, 3,071 in 1959, and 4,231 in 1960, affected by the grant of certificates. Corresponding figures for 1956 are not available.

### Population of the Melbourne Metropolitan Area and of the Remainder of the State

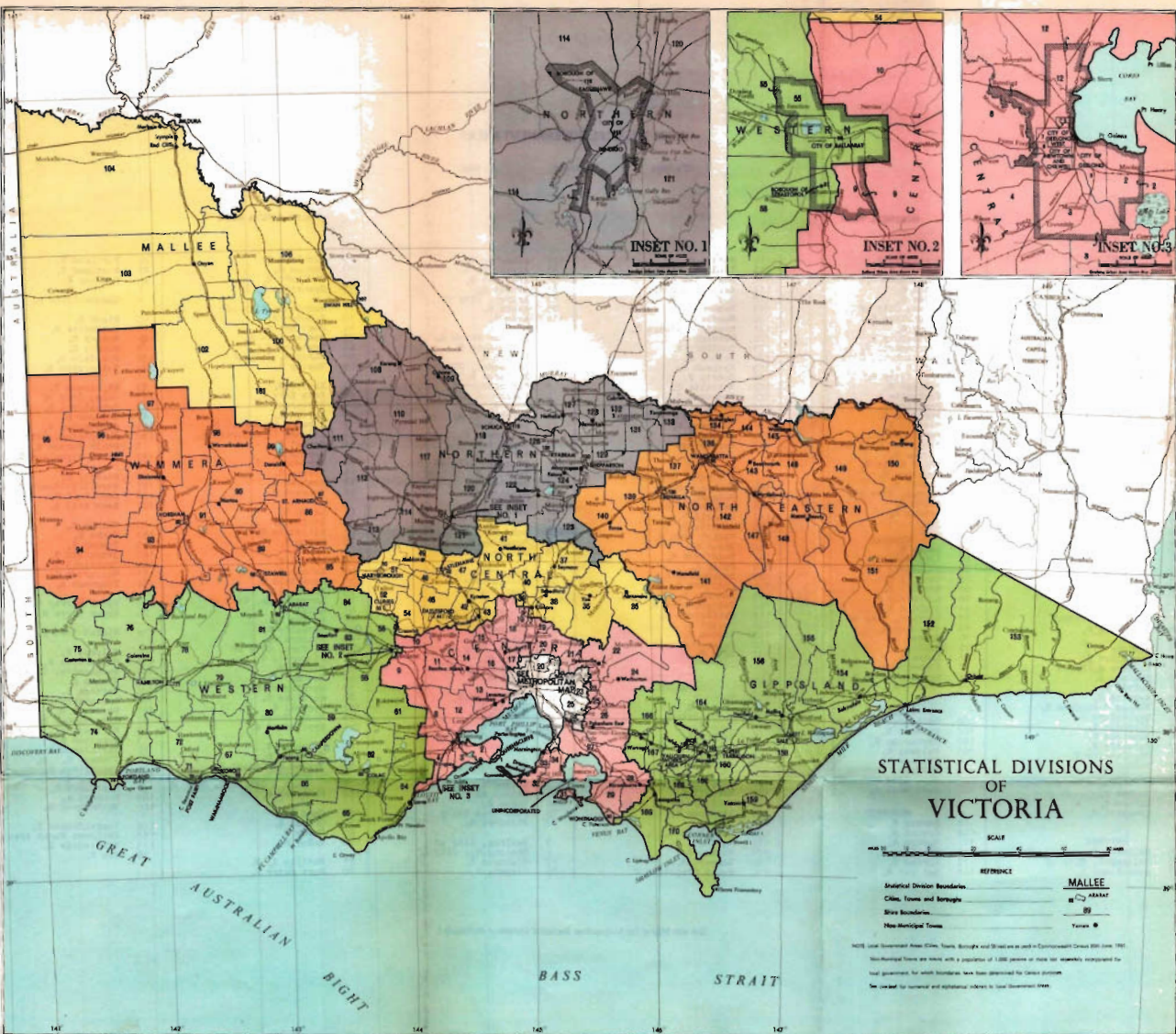
For many years the population of Melbourne Metropolitan Area was estimated as that contained in an area within a radius of 10 miles from the Elizabeth-street Post Office. To conform with the growth of the urban population in certain directions, the Metropolitan Area was re-defined in 1929, 1947, and 1954, and consists of those municipalities shown on pages 120–121. The population of the Metropolitan Area increased from 139,916 at the Census of 1861 to 1,831,100 at the 30th June, 1960. In the same period the

population of the remainder of the State increased from 398,712 to 1,060,648. During only one intercensal period—1891 to 1901—was the percentage increase greater in the country than the metropolis. There was little increase in the population of Melbourne Metropolitan Area in this period, due to the severe industrial depression which prevailed in Victoria during the eight years 1892 to 1899. With the decline in the goldmining industry, the rate of increase in the country areas diminished until, at the beginning of the present century, the rural population became almost stationary. Between 1901 and 1933, the population of Melbourne Metropolitan Area increased by 495,855; in the same period the population of the remainder of the State increased by 123,336. The closing years of the period were years of world wide depression, during which Melbourne lost population, to a slight degree, to the rural districts of the State. Following the depression, the population of Melbourne Metropolitan Area increased steadily until the outbreak of war in 1939. In the war years which followed, there was a considerable increase in the population of the Metropolitan Area, due partly to migration from the rural areas of the State. In 1946, the country areas showed a substantial increase in population. The enlargement of the area of Melbourne Metropolitan Area in 1947 resulted in the country areas losing approximately 30,000 persons and a further enlargement in 1954 resulted in a similar loss of approximately 115,000 persons. During the period 1948 to 1960 oversea migration had a pronounced effect on the increase in the population in Victoria. In the table below are given the population of Victoria, Melbourne Metropolitan Area, and the Remainder of the State at each Census since 1861, and for each year since the Census of 30th June, 1954.

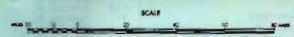
VICTORIA—POPULATION OF VICTORIA, MELBOURNE METROPOLITAN AREA AND REMAINDER OF THE STATE

Date					Population		
					Victoria	Melbourne Metropolitan Area	Remainder of State
Census—							
1861	..	..	..	..	538,628	139,916	398,712
1871	..	..	..	..	730,198	206,780	523,418
1881	..	..	..	..	861,566	282,947	578,619
1891	..	..	..	..	1,140,088	490,896	649,192
1901	..	..	..	..	1,201,070	496,079	704,991
1911	..	..	..	..	1,315,551	593,237	722,314
1921	..	..	..	..	1,531,280	782,979	748,301
1933	..	..	..	..	1,820,261	991,934	828,327
1947	..	..	..	..	2,054,701	1,226,409	828,292
1954	..	..	..	..	2,452,341	1,524,111	928,230
Estimated at—							
1955 (31st December)	..	..	..	..	2,555,021	1,595,300	959,721
1956 (31st December)	..	..	..	..	2,632,623	1,649,000	983,623
1957 (30th June)	..	..	..	..	2,673,498	1,677,100	996,398
1958 (30th June)	..	..	..	..	2,741,397	1,726,100	1,015,297
1959 (30th June)	..	..	..	..	2,814,523	1,777,700	1,036,823
1960 (30th June)	..	..	..	..	2,891,748	1,831,100	1,060,648





# STATISTICAL DIVISIONS OF VICTORIA



- KEY/PROVINCE
- Statistical Division Boundary
  - City, Town and Borough
  - Shire Boundary
  - Non Municipal Towns
- MALLEE  
ARARAT  
99  
TRENCH

NOTE: Local Government Areas (Cities, Towns, Boroughs and Shires) as well as Unincorporated Districts (UDs) have been used for statistical purposes. For statistical purposes, the population of 1,000 persons or more has been used to designate for local government. For statistical purposes, the population of 1,000 persons or more has been used to designate for local government. For statistical purposes, the population of 1,000 persons or more has been used to designate for local government.

# INDEX TO LOCAL GOVERNMENT AREAS

T = Town

B = Borough

S = Shire

## NUMERICAL INDEX

1	CENTRAL	58	Grenville S.
2	Queenscliffe S.	59	Kempden S.
3	Bellarine S.	60	Camperdown T.
4	South Harrow S.	61	Leigh S.
5	Barrabool S.	62	Colac S.
6	Geelong, City of	63	Colac, City of
7	Geelong, City of	64	Winchelsea S.
8	Geelong, City of	65	Otway S.
9	Geelong, City of	66	Geelong, City of
10	Geelong, City of	67	Warrambol S.
11	Geelong, City of	68	Warrambol, City of
12	Geelong, City of	69	Koroit B.
13	Geelong, City of	70	Port Fairy S.
14	Geelong, City of	71	Belfast S.
15	Geelong, City of	72	Winchelsea S.
16	Geelong, City of	73	Portland T.
17	Geelong, City of	74	Portland S.
18	Geelong, City of	75	Geelong S.
19	Geelong, City of	76	Warrambol S.
20	Geelong, City of	77	Hamilton, City of
21	Geelong, City of	78	Dundas S.
22	Geelong, City of	79	Mount Rouse S.
23	Geelong, City of	80	Mortlake S.
24	Geelong, City of	81	Araucan S.
25	Geelong, City of	82	Araucan, City of
26	Geelong, City of	83	Ripon S.
27	Geelong, City of	84	Linton S.
28	Geelong, City of	85	Warrambol S.
29	Geelong, City of	86	Koroit S.
30	Geelong, City of	87	Warrambol S.
31	Geelong, City of	88	Warrambol S.
32	Geelong, City of	89	Warrambol S.
33	Geelong, City of	90	Warrambol S.
34	Geelong, City of	91	Warrambol S.
35	Geelong, City of	92	Warrambol S.
36	Geelong, City of	93	Warrambol S.
37	Geelong, City of	94	Warrambol S.
38	Geelong, City of	95	Warrambol S.
39	Geelong, City of	96	Warrambol S.
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42	Geelong, City of	99	Warrambol S.
43	Geelong, City of	100	Warrambol S.
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50	Geelong, City of	107	Warrambol S.
51	Geelong, City of	108	Warrambol S.
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53	Geelong, City of	110	Warrambol S.
54	Geelong, City of	111	Warrambol S.
55	Geelong, City of	112	Warrambol S.
56	Geelong, City of	113	Warrambol S.
57	Geelong, City of	114	Warrambol S.
58	Geelong, City of	115	Warrambol S.
59	Geelong, City of	116	Warrambol S.
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61	Geelong, City of	118	Warrambol S.
62	Geelong, City of	119	Warrambol S.
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67	Geelong, City of	124	Warrambol S.
68	Geelong, City of	125	Warrambol S.
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77	Geelong, City of	134	Warrambol S.
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85	Geelong, City of	142	Warrambol S.
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90	Geelong, City of	147	Warrambol S.
91	Geelong, City of	148	Warrambol S.
92	Geelong, City of	149	Warrambol S.
93	Geelong, City of	150	Warrambol S.
94	Geelong, City of	151	Warrambol S.
95	Geelong, City of	152	Warrambol S.
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97	Geelong, City of	154	Warrambol S.
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101	Geelong, City of	158	Warrambol S.
102	Geelong, City of	159	Warrambol S.
103	Geelong, City of	160	Warrambol S.
104	Geelong, City of	161	Warrambol S.
105	Geelong, City of	162	Warrambol S.
106	Geelong, City of	163	Warrambol S.
107	Geelong, City of	164	Warrambol S.
108	Geelong, City of	165	Warrambol S.
109	Geelong, City of	166	Warrambol S.
110	Geelong, City of	167	Warrambol S.
111	Geelong, City of	168	Warrambol S.
112	Geelong, City of	169	Warrambol S.
113	Geelong, City of	170	Warrambol S.

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114	Warrone S.	159	Alberton S.	145	Glenlyon S.	74	Portland S.
115	Bendigo, City of	160	Alexandra S.	110	Gordon S.	75	Portland T.
116	Anglehawk S.	91	Arapiles S.	103	Goulburn S.	40	Pyralis S.
117	East Loddon S.	81	Araucan S.	58	Grenville S.	1	Queenscliffe S.
118	Beauchamp S.	62	Araucan, City of	77	Hamilton, City of	51	Ripon S.
119	Bolton S.	59	Avoca S.	59	Hampton S.	118	Rockcastle S.
120	Burly S.	154	Bacchus Marsh S.	51	Hastings S.	128	Rockcastle S.
121	Stratfield-Kensley S.	154	Bairnsdale S.	52	Hawthorn S.	128	Rockcastle S.
122	Burra S.	11	Balla S.	19	Hawthorn S.	129	Rockcastle S.
123	Goulburn S.	56	Balla S.	42	Hawthorn, City of	128	Rockcastle S.
124	Rodney S.	55	Balla S.	120	Hawthorn, City of	128	Rockcastle S.
125	Kynbar S.	11	Balla S.	95	Kaniva S.	57	St. Andrew T.
126	Dewlin S.	55	Balla S.	86	Kara Kara S.	177	Sale, City of
127	Nathalia S.	4	Balla S.	102	Kararooc S.	57	Sebastopol S.
128	Muramba S.	21	Balla S.	108	Karoona S.	57	Sebastopol S.
129	Shepparton S.	21	Balla S.	108	Karoona S.	57	Sebastopol S.
130	Shepparton, City of	93	Bella S.	108	Karoona S.	57	Sebastopol S.
131	Tungamah S.	17	Bella S.	108	Karoona S.	57	Sebastopol S.
132	Cobram S.	2	Bella S.	108	Karoona S.	57	Sebastopol S.
133	Yarrambool S.	18	Bella S.	108	Karoona S.	57	Sebastopol S.
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		11	Bella S.	108	Karoona S.	57	Sebastopol S.
		11	Bella S.	108	Karoona S.	57	Sebastopol S.
		11	Bella S.	108			

The following table shows the population and the number of dwellings in each of the municipalities of Victoria, by Statistical Division, at the Census of 30th June, 1954 and as estimated at the 30th June, 1960, together with the area at 30th June, 1960.

For the purpose of the Census, a "dwelling" is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or any part of a building. The term has, therefore, a very wide reference and includes, in addition to houses and flats, a single-roomed shack to a multi-roomed hotel or institution. In the following tables the figures for dwellings represent all dwellings, whether private or other, and whether occupied or unoccupied.

### VICTORIA—POPULATION, DWELLINGS, AND AREA BY MUNICIPALITY

Municipality	Population		Dwellings		Area at 30.6.60
	At 30.6.54 (Census)	At 30.6.60 (Estimated)	At 30.6.54 (Census)	At 30.6.60 (Estimated)	
					acres
<b>MELBOURNE METROPOLITAN AREA</b>					
Altona Shire* .. ..	6,700	13,100	1,633	3,369	10,135
Box Hill City .. ..	35,554	49,100	9,795	13,513	5,309
Brighton City .. ..	40,458	42,600	12,157	12,827	3,380
Broadmeadows City† ..	23,065	54,900	5,772	14,294	17,490
Brunswick City .. ..	53,620	50,600	14,754	14,969	2,625
Camberwell City .. ..	90,397	102,300	26,618	29,897	8,682
Caulfield City .. ..	75,217	72,100	22,941	23,726	5,431
Chelsea City .. ..	16,857	22,200	5,027	6,490	3,020
Coburg City .. ..	62,077	70,400	16,616	18,911	4,616
Collingwood City .. ..	27,155	25,500	7,387	7,476	1,180
Dandenong City‡ .. ..	27,748	21,600	7,418	5,912	8,960
Doncaster and Templestowe Shire .. ..	6,814	16,500	1,958	4,636	22,090
Eltham Shire (Part)§ ..	7,499	12,000	2,143	3,364	9,505
Essendon City .. ..	57,873	59,900	16,519	17,160	4,073
Fern Tree Gully Shire (Part)§	22,019	30,400	7,661	10,035	32,790
Fitzroy City .. ..	30,312	28,700	8,436	8,342	904
Footscray City .. ..	57,915	62,600	15,599	16,866	4,441
Frankston and Hastings Shire (Part)§ .. ..	15,478	25,100	5,036	7,678	17,460
Hawthorn City .. ..	37,188	35,100	11,731	12,209	2,411
Heidelberg City .. ..	60,007	82,400	15,350	21,421	30,490
Keilor Shire¶ .. ..	10,681	24,300	2,829	6,598	24,265
Kew City .. ..	31,518	33,100	8,642	9,144	3,596
Lillydale Shire (Part)§ ..	16,619	26,300	5,291	7,963	57,365
Malvern City .. ..	46,910	45,500	14,574	15,265	3,935
Melbourne City .. ..	93,172	88,300	22,800	22,748	7,765
Moorabbin City   .. ..	65,332	92,000	17,777	25,165	12,655
Mordialloc City .. ..	21,025	26,300	5,876	7,323	3,013
Mulgrave Shire   .. ..	20,293	40,500	5,263	10,881	14,585
Northcote City .. ..	43,604	42,800	12,473	13,092	2,819
Nunawading City .. ..	23,855	48,700	6,475	13,162	10,275
Oakleigh City   .. ..	24,305	45,500	6,694	12,251	7,486
Port Melbourne City ..	13,104	12,400	3,501	3,412	2,628
Prahran City .. ..	54,009	50,700	18,468	19,398	2,361

For footnotes see page 125.

VICTORIA—POPULATION, DWELLINGS, AND AREA—*continued*

Municipality	Population		Dwellings		Area at 30.6.60
	At 30.6.54 (Census)	At 30.6.60 (Estimated)	At 30.6.54 (Census)	At 30.6.60 (Estimated)	
					acres
MELBOURNE METROPOLITAN AREA— <i>continued</i>					
Preston City .. ..	63,868	81,000	16,324	20,940	9,155
Richmond City .. ..	35,213	32,400	10,083	10,148	1,513
Ringwood City .. ..	12,951	23,500	3,713	6,601	5,625
Sandringham City ..	31,758	38,200	9,152	10,919	3,700
South Melbourne City	37,995	34,000	11,564	11,041	2,203
Springvale and Noble Park Shire   .. ..	‡	26,200	‡	7,071	24,000
St. Kilda City .. ..	53,301	51,300	18,102	19,212	2,118
Sunshine City .. ..	41,332	58,500	9,481	14,008	19,775
Williamstown City ..	29,313	31,700	8,014	8,754	3,377
Remainder of Melbourne Metropolitan Area (Parts of Shires of Bulla, Melton, and Whittlesea).. ..	†¶	800	†¶	180	26,540
Total—Melbourne Metro- politan Area .. ..	1,524,111	1,831,100	431,647	528,371	445,746

## CENTRAL STATISTICAL DIVISION

Bacchus Marsh Shire ..	3,972	4,420	1,053	1,197	144,640
Ballan Shire .. ..	2,752	2,870	921	955	227,200
Bannockburn Shire ..	2,126	2,240	623	659	174,080
Barrabool Shire .. ..	1,917	3,230	959	1,381	146,560
Bass Shire .. ..	3,761	4,100	1,176	1,283	129,920
Bellarine Shire .. ..	7,015	10,560	2,280	3,431	81,920
Berwick Shire .. ..	12,412	18,630	3,812	5,714	248,960
Broadmeadows Shire†	1,010	†	307	†	†
Bulla Shire (Part)†	3,232	4,050	488	743	89,779
Bungaree Shire .. ..	1,966	2,160	484	543	56,320
Buninyong Shire .. ..	3,953	4,330	1,107	1,220	192,000
Corio Shire .. ..	15,808	25,190	3,612	6,722	172,800
Cranbourne Shire ..	8,201	9,950	2,596	3,142	183,680
Eltham Shire (Part)§	3,942	3,510	1,394	1,277	64,736
Fern Tree Gully Shire (Part)§	3,427	4,190	1,483	1,725	42,093
Flinders Shire .. ..	12,072	20,520	6,405	9,296	116,480
Frankston and Hastings Shire (Part)§ .. ..	2,622	3,160	826	992	35,661
Geelong City .. ..	20,034	20,940	5,263	5,546	3,322
Geelong West City ..	17,313	18,770	4,805	5,275	1,299
Gisborne Shire .. ..	2,122	2,280	750	800	64,000
Healesville Shire** ..	5,168	6,650	1,550	2,004	248,960
Kilmore Shire (Part) (see North-Central Division)†**	**	480	**	121	63,360
Korumburra Shire ..	7,386	8,040	1,962	2,162	151,680
Lillydale Shire (Part)§	4,488	5,070	1,613	1,799	49,197
Melton Shire (Part)** ..	1,424	1,670	424	497	100,378
Mornington Shire ..	5,793	8,860	2,191	3,173	22,400
Newtown and Chilwell City**	11,191	12,100	3,056	3,347	1,480
Phillip Island Shire ..	1,231	1,840	528	726	24,960
Queenscliffe Borough ..	2,551	3,290	1,002	1,232	2,099
Romsey Shire** .. ..	2,813	2,840	842	848	152,960
South Barwon Shire** ..	11,016	16,310	3,304	5,054	40,856

For footnotes see page 125.

VICTORIA—POPULATION, DWELLINGS, AND AREA—*continued*

Municipality	Population		Dwellings		Area at 30. 6. 60
	At 30. 6. 54 (Census)	At 30. 6. 60 (Estimated)	At 30. 6. 54 (Census)	At 30. 6. 60 (Estimated)	
					acres
CENTRAL STATISTICAL DIVISION—continued					
Upper Yarra Shire .. ..	6,952	6,620	1,995	2,181	391,680
Werribee Shire* .. ..	9,414	11,930	2,017	2,831	165,120
Whittlesea Shire (Part)† ..	5,724	9,770	1,548	2,825	146,758
Wonthaggi Borough .. ..	4,461	4,590	1,327	1,367	13,088
Not Incorporated .. ..	178	180	39	39	41,600
Total—Central Statistical Division .. ..	209,447	265,340	63,742	82,107	3,792,026
NORTH-CENTRAL STATISTICAL DIVISION					
Alexandra Shire .. ..	6,523	5,570	1,533	1,651	462,080
Broadford Shire .. ..	1,939	2,090	580	626	144,640
Castlemaine Town .. ..	6,577	7,290	1,894	2,118	5,760
Clunes Borough .. ..	871	920	307	321	5,760
Creswick Shire .. ..	3,554	3,740	1,084	1,142	136,320
Daylesford Borough .. ..	3,216	3,400	1,019	1,079	4,013
Glenlyon Shire .. ..	2,273	2,360	853	876	146,560
Kilmore Shire (Part) (see Central Division)†** ..	1,932	1,910	442	462	60,160
Kyneton Shire .. ..	6,063	6,450	1,958	2,077	179,200
Maldon Shire .. ..	2,030	2,050	737	747	138,240
Maryborough Borough ..	6,827	7,510	2,034	2,256	5,760
McIvor Shire .. ..	2,201	2,220	642	650	357,120
Metcalfe Shire .. ..	2,425	2,600	726	778	145,920
Newham and Woodend Shire	2,058	2,180	651	687	60,800
Newstead Shire .. ..	2,088	2,160	669	688	101,120
Pyalong Shire .. ..	483	500	144	153	149,120
Seymour Shire .. ..	11,596	12,680	1,963	2,310	234,240
Talbot Shire .. ..	803	820	293	300	126,080
Tullaroop Shire .. ..	1,416	1,480	430	446	157,440
Yea Shire .. ..	2,866	2,970	887	919	338,560
Total—North-Central Statis- tical Division .. ..	67,741	70,900	18,846	20,286	2,958,893
WESTERN STATISTICAL DIVISION					
Ararat City** .. ..	7,414	8,100	1,804	2,026	4,710
Ararat Shire** .. ..	4,659	5,070	1,323	1,454	903,629
Ballaarat City .. ..	39,945	43,230	11,218	12,269	8,550
Ballarat Shire .. ..	6,145	9,070	1,327	2,258	117,760
Belfast Shire .. ..	1,949	2,020	489	516	128,000
Camperdown Town** ..	3,205	3,470	906	990	3,591
Colac City** .. ..	8,032	9,290	2,164	2,559	2,688
Colac Shire .. ..	6,963	7,140	1,799	1,855	360,320
Dundas Shire .. ..	3,903	4,220	1,038	1,143	856,320
Glenelg Shire .. ..	5,949	6,420	1,684	1,833	885,120
Grenville Shire .. ..	1,862	1,920	575	592	208,640
Hamilton City .. ..	8,507	9,720	2,273	2,675	5,351
Hampden Shire .. ..	8,781	9,210	2,384	2,517	647,040
Heytesbury Shire .. ..	6,464	7,120	1,632	1,837	381,440
Koroit Borough .. ..	1,401	1,440	350	360	5,696

For footnotes see page 125.

VICTORIA—POPULATION, DWELLINGS, AND AREA—*continued*

Municipality	Population		Dwellings		Area at 30.6.60
	At 30.6.54 (Census)	At 30.6.60 (Estimated)	At 30.6.54 (Census)	At 30.6.60 (Estimated)	
					acres
WESTERN STATISTICAL DIVISION— <i>continued</i>					
Leigh Shire .. ..	1,096	1,390	334	421	242,560
Lexton Shire .. ..	1,350	1,490	393	431	202,880
Minhamite Shire .. ..	2,520	2,810	678	768	337,280
Mortlake Shire .. ..	4,060	4,570	1,088	1,249	528,000
Mount Rouse Shire .. ..	2,859	3,110	786	864	350,720
Otway Shire .. ..	4,197	4,450	1,204	1,283	435,840
Port Fairy Borough .. ..	2,265	2,660	683	807	5,683
Portland Town** .. ..	4,759	6,020	1,470	1,867	5,978
Portland Shire** .. ..	7,056	7,460	1,992	2,121	912,000
Ripon Shire .. ..	3,365	3,810	1,020	1,170	378,880
Sebastopol Borough .. ..	3,265	3,720	863	1,011	1,747
Wannon Shire .. ..	3,949	4,370	1,078	1,209	488,320
Warrnambool City .. ..	10,850	14,780	2,907	4,190	7,091
Warrnambool Shire .. ..	8,920	7,970	2,217	1,870	392,320
Winchelsea Shire .. ..	4,361	4,950	1,509	1,696	344,960
Not Incorporated .. ..	..	..	..	..	2,112
Total—Western Statistical Division .. ..	180,051	201,000	49,188	55,841	9,155,226
WIMMERA STATISTICAL DIVISION					
Arapiles Shire .. ..	2,160	2,250	573	600	491,520
Avoca Shire .. ..	2,381	2,470	744	773	277,760
Dimboola Shire .. ..	6,224	6,630	1,724	1,856	1,215,360
Donald Shire .. ..	2,864	3,090	790	861	357,760
Dunmunkle Shire .. ..	4,110	4,360	1,141	1,223	382,080
Horsham City .. ..	7,767	9,230	2,152	2,611	5,939
Kaniwa Shire .. ..	2,290	2,550	620	703	762,240
Kara Kara Shire .. ..	1,663	1,710	488	503	567,040
Kowree Shire .. ..	5,012	5,530	1,308	1,473	1,331,200
Lowan Shire .. ..	3,999	4,240	1,161	1,237	663,040
St. Arnaud Town .. ..	3,037	3,250	865	931	6,279
Stawell Town** .. ..	5,463	5,990	1,603	1,770	5,952
Stawell Shire .. ..	2,286	2,420	751	795	645,760
Warracknabeal Shire .. ..	4,861	5,260	1,366	1,493	454,400
Wimmera Shire .. ..	3,569	3,820	963	1,039	645,760
Total—Wimmera Statistical Division .. ..	57,686	62,800	16,249	17,868	7,812,090
MALLEE STATISTICAL DIVISION					
Birchip Shire .. ..	1,745	1,890	459	503	362,880
Karkaroc Shire .. ..	4,424	4,660	1,151	1,220	919,040
Mildura City .. ..	10,972	12,620	2,884	3,403	5,408
Mildura Shire .. ..	15,727	16,850	4,258	4,611	2,605,440
Swan Hill Borough .. ..	5,197	6,290	1,323	1,678	3,373
Swan Hill Shire .. ..	11,147	11,960	2,908	3,164	1,619,200
Walpeup Shire .. ..	4,310	4,530	1,151	1,219	2,667,520
Wycheproof Shire .. ..	4,548	4,810	1,166	1,250	1,016,960
Total—Mallee Statistical Division .. ..	58,070	63,610	15,300	17,048	9,199,821

For footnotes see page 125.

VICTORIA—POPULATION, DWELLINGS, AND AREA—*continued*

Municipality	Population		Dwellings		Area at 30.6.60
	At 30.6.54 (Census)	At 30.6.60 (Estimated)	At 30.6.54 (Census)	At 30.6.60 (Estimated)	
					acres
NORTHERN STATISTICAL DIVISION					
Bendigo City .. ..	28,726	31,830	8,364	9,366	8,032
Bet Bet Shire .. ..	2,296	2,370	735	758	229,120
Charlton Shire .. ..	2,359	2,590	639	707	290,560
Cobram Shire .. ..	3,642	4,460	943	1,205	108,800
Cohuna Shire .. ..	3,872	4,350	997	1,150	122,880
Deakin Shire .. ..	4,635	5,260	1,232	1,429	237,440
Eaglehawk Borough ..	4,696	5,150	1,404	1,544	3,584
East Loddon Shire ..	1,446	1,550	407	432	295,040
Echuca Borough .. ..	5,405	6,370	1,489	1,793	4,378
Gordon Shire .. ..	2,969	3,150	857	915	499,840
Goulburn Shire .. ..	1,760	2,250	505	674	254,720
Huntly Shire .. ..	2,247	2,340	670	698	216,960
Inglewood Borough ..	957	1,010	289	307	2,560
Kerang Shire .. ..	8,483	9,240	2,277	2,516	823,680
Korong Shire .. ..	2,986	3,070	938	966	586,880
Kyabram Borough .. ..	3,335	4,050	888	1,115	5,152
Marong Shire .. ..	5,421	6,190	1,532	1,780	368,000
Nathalia Shire** .. ..	**	3,740	**	1,036	305,920
Numurkah Shire** ..	8,027	5,470	2,128	1,474	178,560
Rochester Shire .. ..	6,330	6,790	1,713	1,858	480,000
Rodney Shire .. ..	9,181	10,700	2,328	2,691	254,080
Shepparton City .. ..	10,848	13,150	3,004	3,755	4,716
Shepparton Shire .. ..	5,376	5,980	1,362	1,559	230,400
Strathfieldsaye Shire ..	4,213	5,320	1,120	1,472	152,960
Tungamah Shire .. ..	2,258	2,390	627	667	282,240
Waranga Shire .. ..	4,655	4,730	1,326	1,342	408,320
Yarrawonga Shire .. ..	3,770	4,230	965	1,116	155,520
Total—Northern Statistical Division .. ..	139,893	157,730	38,739	44,325	6,510,342
NORTH-EASTERN STATISTICAL DIVISION					
Beechworth Shire .. ..	4,417	4,650	1,039	1,107	190,720
Benalla Borough** ..	6,045	7,520	1,652	2,017	4,544
Benalla Shire** .. ..	4,407	3,740	1,016	1,062	573,440
Bright Shire** .. ..	8,060	5,820	2,092	1,418	733,440
Chiltern Shire .. ..	1,613	1,650	502	515	122,880
Euroa Shire .. ..	4,476	4,920	1,303	1,447	330,880
Mansfield Shire .. ..	5,023	5,230	1,447	1,539	965,120
Myrtleford Shire** ..	**	3,790	**	895	176,000
Omoo Shire .. ..	2,072	2,110	609	622	1,428,480
Oxley Shire .. ..	4,393	4,650	1,180	1,264	691,200
Rutherglen Shire .. ..	2,897	3,050	852	897	131,200
Towong Shire .. ..	4,385	4,590	1,187	1,270	1,025,280
Upper Murray Shire ..	2,521	2,770	669	747	607,360
Violet Town Shire .. ..	1,424	1,470	412	426	231,040
Wangaratta City** ..	10,715	13,080	2,761	3,529	5,478
Wangaratta Shire .. ..	2,267	2,340	608	632	226,560
Wodonga Shire .. ..	10,924	12,950	1,890	2,598	85,760
Yackandandah Shire ..	3,131	3,210	825	852	274,560
Total—North-Eastern Statistical Division .. ..	78,770	87,540	20,044	22,837	7,803,942

For footnotes see page 125.



VICTORIA—POPULATION, DWELLINGS, AND AREA—*continued*

Municipality	Population		Dwellings		Area at 30.6.60
	At 30.6.54 (Census)	At 30.6.60 (Estimated)	At 30.6.54 (Census)	At 30.6.60 (Estimated)	
					acres
<b>GIPPSLAND STATISTICAL DIVISION</b>					
Alberton Shire .. ..	5,602	5,990	1,665	1,787	461,440
Avon Shire .. ..	3,215	3,450	744	820	588,800
Bairnsdale Shire .. ..	10,104	11,340	2,707	3,108	606,720
Buln Buln Shire .. ..	8,015	8,650	2,212	2,428	311,040
Maffra Shire .. ..	8,554	9,080	2,269	2,460	1,031,040
Mirboo Shire .. ..	1,862	2,010	507	553	62,720
Moe Borough** .. ..	**	13,920	**	3,814	5,286
Morwell Shire .. ..	13,033	16,340	3,334	4,270	165,760
Narracan Shire** .. ..	21,023	9,140	5,499	2,340	570,880
Orbost Shire .. ..	5,492	5,750	1,562	1,643	2,368,000
Rosedale Shire .. ..	3,860	4,420	1,193	1,364	562,560
Sale City .. ..	6,537	7,630	1,737	2,075	5,363
South Gippsland Shire .. ..	4,882	5,270	1,302	1,422	353,920
Tambo Shire .. ..	5,085	5,700	1,418	1,613	867,840
Traralgon Shire .. ..	10,036	11,780	2,692	3,245	120,320
Warragul Shire .. ..	8,605	9,790	2,242	2,627	87,040
Woorayl Shire .. ..	7,046	8,340	2,130	2,542	307,840
Yallourn Works Area .. ..	5,580	5,040	1,213	1,266	8,653
Not Incorporated .. ..	..	..	..	..	82,886
Total—Gippsland Statistical Division .. ..	128,531	143,640	34,426	39,377	8,568,108

\* In 1957 the Shire of Werribee was reduced and re-defined, the Altona Riding being constituted as the Shire of Altona.

† Parts of the Metropolitan portion of the Shire of Broadmeadows were annexed to the Shires of Bulla (1955 and 1958) and Whittlesea (1955). Prior to these transfers both the Shires of Bulla and Whittlesea were entirely outside the Metropolitan Area.

The entire Extra-Metropolitan portion of the Shire of Broadmeadows (Central Division) was annexed to the Shire of Kilmore in 1955. Prior to this transfer the Shire of Kilmore was entirely in the North-Central Division. Broadmeadows was proclaimed a city in 1956.

‡ The Shire of Dandenong was reduced and re-defined in 1955, the annexed portion becoming the Shire of Springvale and Noble Park.

Dandenong was proclaimed a city in 1959.

§ The following portions of the Shires of Eltham, Fern Tree Gully, Frankston and Hastings, and Lillydale are in the Melbourne Metropolitan Area :—

*Eltham* : West, Eltham, and part of Northern Ridings.

*Fern Tree Gully* : North, Centre, and East Ridings.

*Frankston and Hastings* : Seaford, Frankston, and Mt. Eliza Ridings.

*Lillydale* : Western, North, and Southern Ridings.

The remaining portions of these Shires are in the Central Division.

¶ In 1959 part of the Shire of Keilor was annexed to the Shire of Melton. Prior to this transfer the Shire of Melton was entirely outside the Metropolitan Area.

|| Parts of the Shires of Mulgrave (1,920 acres), Springvale and Noble Park (1,600 acres) and the City of Moorabbin (640 acres) were transferred to the City of Oakleigh with effect from 1st October, 1959.

\*\* The following changes in Non-Metropolitan Local Government Areas have taken place since 30th June, 1954 :—

*New Local Government Areas constituted* : Nathalia Shire, by annexation of portion of Numurkah Shire (1957) ;

Moe Borough by annexation of portion of Narracan Shire (1955) ;

Myrtleford Shire, by annexation of portion of Bright Shire (1960).

*Annexation of portion of Shires* : Ararat Shire to Ararat City (1960) ; South Barwon Shire to Newtown and Chilwell City (1960) ; Melton Shire to Bulla Shire (1959).

Eltham Shire to Healesville Shire (1958) ; Romsey Shire to Kilmore Shire (1958) ;

Portland Shire to Portland Town (1958) ; Benalla Shire to Benalla Borough (1956).

*Changes in Status* : Declared Cities : Colac (1960) ; Wangaratta (1959).

Declared Towns : Camperdown (1959) ; Stawell (1957).



## VICTORIA—POPULATION, DWELLINGS, AND AREA—continued

Municipality	Population		Dwellings		Area at 30.6.60
	At 30.6.54 (Census)	At 30.6.60 (Estimated)	At 30.6.54 (Census)	At 30.6.60 (Estimated)	
					acres

SUMMARY

Statistical Divisions—					
Metropolitan .. ..	1,524,111	1,831,100	431,647	528,371	445,746
Central .. ..	209,447	265,340	63,742	82,107	3,792,026
North-Central .. ..	67,741	70,900	18,846	20,286	2,958,893
Western .. ..	180,051	201,000	49,188	55,841	9,155,226
Wimmera .. ..	57,686	62,800	16,249	17,868	7,812,090
Mallee .. ..	58,070	63,610	15,300	17,048	9,199,821
Northern .. ..	139,893	157,730	38,739	44,325	6,510,342
North-Eastern .. ..	78,770	87,540	20,044	22,837	7,803,942
Gippsland .. ..	128,531	143,640	34,426	39,377	8,568,108
Migratory .. ..	8,041	8,088	..	..	..
Total—Victoria ..	2,452,341	2,891,748	688,181	828,060	56,246,194

VICTORIA—

Municipalities—					
Metropolitan .. ..	1,524,111	1,831,100	431,647	528,371	445,746
Rest of State .. ..	914,431	1,047,340	255,282	298,384	55,665,197
Yallourn Works Area ..	5,580	5,040	1,213	1,266	8,653
Not Incorporated .. ..	178	180	39	39	126,598
Migratory .. ..	8,041	8,088	..	..	..
Total—Victoria ..	2,452,341	2,891,748	688,181	828,060	56,246,194

URBAN AREAS\*—

Geelong and Suburbs ..	72,595	90,380	19,006	24,888	29,146
Ballarat and Suburbs ..	48,030	54,800	13,104	15,170	17,709
Bendigo and Suburbs ..	36,918	42,120	10,726	12,332	14,304

\* For statistical purposes these areas are defined as follows :—

Geelong and Suburbs : Cities of Geelong, Geelong West, Newtown and Chilwell, and parts of the Shires of Bellarine, Corio, and South Barwon.

Ballarat and Suburbs : City of Ballarat, Borough of Sebastopol, and parts of the Shires of Ballarat and Buninyong.

Bendigo and Suburbs : City of Bendigo, Borough of Eaglehawk, and parts of the Shires of Marong and Strathfieldsaye.

### Population of Australian States

In the following table is given the estimated population of each Australian State at 31st December, 1960 :—

#### POPULATION OF AUSTRALIAN STATES AND TERRITORIES AT 31ST DECEMBER, 1960

State or Territory	Area in Square Miles	Estimated Population at 31st December, 1960	Persons to the Square Mile	Proportion in Each State or Territory
				per cent.
New South Wales .. ..	309,433	3,872,809	12·52	37·25
<b>Victoria .. ..</b>	<b>87,884</b>	<b>2,925,533</b>	<b>33·29</b>	<b>28·13</b>
Queensland .. ..	667,000	1,466,879	2·20	14·11
South Australia .. ..	380,070	956,939	2·52	9·20
Western Australia .. ..	975,920	740,245	0·76	7·12
Tasmania .. ..	26,215	359,789	13·72	3·46
Northern Territory .. ..	523,620	20,704	0·04	0·20
Australian Capital Territory ..	939*	55,272	58·86	0·53
<b>Australia .. ..</b>	<b>2,971,081</b>	<b>10,398,170</b>	<b>3·50</b>	<b>100·00</b>

\* Includes Jervis Bay.

### Census Populations to 1954

In the following table is given the census population of each Australian State from 1901 to 1954:—

#### CENSUS POPULATIONS OF AUSTRALIAN STATES AND TERRITORIES

State or Territory	Population at Census of—					
	1901	1911	1921	1933	1947	1954
New South Wales ..	1,354,846	1,646,734	2,100,371	2,600,847	2,984,838	3,423,529
Victoria .. ..	1,201,070	1,315,551	1,531,280	1,820,261	2,054,701	2,452,341
Queensland .. ..	498,129	605,813	755,972	947,534	1,106,415	1,318,259
South Australia .. ..	358,346	408,558	495,160	580,949	646,073	797,094
Western Australia .. ..	184,124	282,114	332,732	438,852	502,480	639,771
Tasmania .. ..	172,475	191,211	213,780	227,599	257,078	308,752
Northern Territory ..	4,811	3,310	3,867	4,850	10,868	16,469
Australian Capital Territory ..	..	1,714*	2,572	8,947	16,905	30,315
<b>Australia .. ..</b>	<b>3,773,801</b>	<b>4,455,005</b>	<b>5,435,734</b>	<b>6,629,839</b>	<b>7,579,358</b>	<b>8,986,530</b>

\* Part of New South Wales prior to 1911.

The populations of Australian capital cities at each Census, 1901 to 1954, are shown in the following table:—

### POPULATIONS OF AUSTRALIAN CAPITAL CITIES

Metropolitan Area	Population at Census of—					
	1901	1911	1921	1933	1947	1954
Sydney ..	481,830	629,503	899,059	1,235,267	1,484,004	1,863,161
Melbourne ..	<b>496,079</b>	<b>593,237</b>	<b>782,979</b>	<b>991,934</b>	<b>1,226,409</b>	<b>1,524,111</b>
Brisbane ..	119,428	139,480	209,946	299,748	402,030	502,320
Adelaide ..	162,261	189,646	255,375	312,619	382,454	483,508
Perth ..	66,832	106,792	154,873	207,440	272,528	348,647
Hobart ..	34,604	39,937	52,361	60,406	76,534	95,206

The population of Canberra at the Census of 1954 was 28,277.

At the Census of 1954, approximately 53 per cent. of the population of Australia was concentrated in the capital cities of the six States.

Sydney has been the most populous city in Australia since 1902.

The population of Victoria at each Census from 1861 to 1954, and the numerical and percentage increase during each census period, are shown in the following table:—

### VICTORIA—POPULATION

Year of Census	Persons			Males			Females		
	Population	Increase in Census Period		Population	Increase in Census Period		Population	Increase in Census Period	
		Numerical	Percentage		Numerical	Percentage		Numerical	Percentage
1861 ..	538,628	461,283*	596.40*	327,605	281,403*	609.07*	211,023	179,880*	577.59*
1871 ..	730,198	191,570	35.57	400,266	72,661	22.18	329,932	118,909	56.35
1881 ..	861,566	131,368	17.99	451,623	51,357	12.83	409,943	80,011	24.25
1891 ..	1,140,088	278,522	32.33	598,222	146,599	32.46	541,866	131,923	32.18
1901 ..	1,201,070	60,982	5.35	603,720	5,498	0.92	597,350	55,484	10.24
1911 ..	1,315,551	114,481	9.53	655,591	51,871	8.59	659,960	62,610	10.48
1921 ..	1,531,280	215,729	16.40	754,724	99,133	15.12	776,556	116,596	17.67
1933 ..	1,820,261	288,981	18.87	903,244	148,520	19.68	917,017	140,461	18.09
1947 ..	2,054,701	234,440	12.88	1,013,867	110,623	12.25	1,040,834	123,817	13.50
1954 ..	2,452,341	397,640	19.35	1,231,099	217,232	21.43	1,221,242	180,408	17.33

\* Since 1851

The ratio of males to females, at each Census from 1861 to 1954, was as follows :—

Census								Males to 100 Females
1861	..	..	..	..	..	..	..	155.25
1871	..	..	..	..	..	..	..	121.32
1881	..	..	..	..	..	..	..	110.17
1891	..	..	..	..	..	..	..	110.40
1901	..	..	..	..	..	..	..	101.07
1911	..	..	..	..	..	..	..	99.34
1921	..	..	..	..	..	..	..	97.19
1933	..	..	..	..	..	..	..	98.50
1947	..	..	..	..	..	..	..	97.41
1954	..	..	..	..	..	..	..	100.81

### Census of 1954

The last census of the Commonwealth was taken on 29th-30th June, 1961, and the results as available at the time of printing are shown in the Special Supplement following the Index. The population and number of dwellings in each municipality of Victoria at the 1954 Census, and as estimated at 30th June, 1960, appear on pages 120 to 125.

The population of the statistical divisions of Victoria enumerated at the Census of 1954 are shown in the following table:—

### VICTORIA—POPULATION OF STATISTICAL DIVISIONS, ACCORDING TO SEX AT CENSUS OF 1954

Statistical Division					Males	Females	Persons
1. Metropolitan	..	..	..	..	747,712	776,399	1,524,111
2. Central	..	..	..	..	109,015	100,432	209,447
3. North-Central	..	..	..	..	36,805	30,936	67,741
4. Western	..	..	..	..	90,656	89,395	180,051
5. Wimmera	..	..	..	..	29,526	28,160	57,686
6. Mallee	..	..	..	..	30,620	27,450	58,070
7. Northern	..	..	..	..	70,920	68,973	139,893
8. North-Eastern	..	..	..	..	41,496	37,274	78,770
9. Gippsland	..	..	..	..	67,854	60,677	128,531
Migratory	..	..	..	..	6,495	1,546	8,041
Total Victoria	..	..	..	..	1,231,099	1,221,242	2,452,341

NOTE.—The boundaries of the Metropolitan Division were re-defined as from 1st January, 1954

The next table shows the change which has taken place in the age constitution of the population of Victoria since 1947:—

**VICTORIA—AGE DISTRIBUTION OF THE POPULATION AT CENSUSES OF 1947 AND 1954**

Age Last Birthday (Years)	Census, 1947			Census, 1954			Increase of Persons 1947 to 1954
	Males	Females	Persons	Males	Females	Persons	
0-4 .. ..	100,830	96,409	197,239	132,184	126,151	258,335	61,096
5-9 .. ..	78,593	75,518	154,111	122,204	116,653	238,857	84,746
10-14 .. ..	68,738	66,655	135,393	92,175	88,632	180,807	45,414
15-19 .. ..	76,723	75,271	151,994	78,776	74,945	153,721	1,727
20-24 .. ..	82,121	83,762	165,883	83,734	77,196	160,930	(-) 4,953
25-29 .. ..	78,719	80,764	159,483	101,392	93,078	194,470	34,987
30-34 .. ..	78,988	81,337	160,325	100,487	95,108	195,595	35,270
35-39 .. ..	76,149	75,585	151,734	87,819	85,875	173,694	21,960
40-44 .. ..	71,431	67,871	139,302	88,548	84,036	172,584	33,282
45-49 .. ..	66,437	66,565	133,002	78,969	73,389	152,358	19,356
50-54 .. ..	58,920	63,955	122,875	69,714	67,798	137,512	14,637
55-59 .. ..	54,231	57,809	112,040	55,039	59,817	114,856	2,816
60-64 .. ..	42,105	47,274	89,379	50,136	58,306	108,442	19,063
65 and over ..	79,882	102,059	181,941	89,922	120,258	210,180	28,239
Total .. ..	1,013,867	1,040,834	2,054,701	1,231,099	1,221,242	2,452,341	397,640
Under 21 .. ..	340,417	330,031	670,448	440,629	420,827	861,456	191,008
21-64 .. ..	593,568	608,744	1,202,312	700,548	680,157	1,380,705	178,393
65 and over ..	79,882	102,059	181,941	89,922	120,258	210,180	28,239
Total .. ..	1,013,867	1,040,834	2,054,701	1,231,099	1,221,242	2,452,341	397,640

NOTE.—Minus sign (—) denotes decrease.

Numerical and percentage increases of the population in selected age groups from 1947 to 1954 are contrasted in the following table, with corresponding increases from 1933 to 1947:—

**VICTORIA—INCREASE OF POPULATION IN AGE GROUPS : CENSUSES, 1933 TO 1954**

Age Group	Census, 1933	Increase, 1933 to 1947		Increase, 1947 to 1954	
	Persons	Numerical	Percentage	Numerical	Percentage
Under 21 .. ..	665,650	4,798	0·7	191,008	28·5
21-64 .. ..	1,017,070	185,242	18·2	178,393	14·8
65 and over .. ..	137,541	44,400	32·3	28,239	15·5
Total .. ..	1,820,261	234,440	12·9	397,640	19·4

The following table shows the population of Victoria classified according to conjugal condition:—

**VICTORIA—CONJUGAL CONDITION OF POPULATION AT CENSUSES OF 1947 AND 1954**

Conjugal Condition	Census, 1947			Census, 1954		
	Males	Females	Persons	Males	Females	Persons
Never Married—						
Under Fifteen Years of Age	248,161	238,582	486,743	346,563	331,436	677,999
Fifteen Years of Age and over	245,767	219,852	465,619	257,342	196,891	454,233
Total—Never Married ..	493,928	458,434	952,362	603,905	528,327	1,132,232
Married .. .. .	463,979	463,406	927,385	570,204	564,688	1,134,892
Married but Permanently Separated .. ..	15,291	18,550	33,841	15,214	18,144	33,358
Widowed .. .. .	31,793	90,164	121,957	30,906	99,058	129,964
Divorced .. .. .	5,689	6,774	12,463	7,250	9,062	16,312
Not Stated .. ..	3,187	3,506	6,693	3,620	1,963	5,583
Total .. .. .	1,013,867	1,040,834	2,054,701	1,231,099	1,221,242	2,452,341

The following table shows the birthplace of the population at the Census of 1954:—

**VICTORIA—BIRTHPLACE OF THE POPULATION AT CENSUS OF 1954**

Birthplace	Males	Females	Persons
AUSTRALASIA—			
Australia .. .. .	1,020,836	1,062,543	2,083,379
New Zealand .. ..	5,456	5,675	11,131
Other .. .. .	118	139	257
Total Australasia .. ..	1,026,410	1,068,357	2,094,767
EUROPE—			
England .. .. .	66,190	57,498	123,688
Wales .. .. .	1,743	1,279	3,022
Scotland .. .. .	17,282	14,793	32,075
Northern Ireland ..	1,808	1,295	3,103
Ireland, Republic of ..	1,139	633	1,772
Ireland—Undefined ..	4,753	3,315	8,068
Albania .. .. .	612	84	696
Austria .. .. .	2,064	1,899	3,963
Belgium .. .. .	288	325	613
Czechoslovakia .. ..	2,579	1,489	4,068
Denmark .. .. .	428	202	630

VICTORIA—BIRTHPLACE OF THE POPULATION AT CENSUS OF 1954—  
*continued*

Birthplace					Males	Females	Persons
<i>EUROPE—continued</i>							
Estonia	..	..	..	..	652	697	1,349
France	..	..	..	..	725	772	1,497
Germany	..	..	..	..	11,029	10,743	21,772
Greece	..	..	..	..	5,009	2,636	7,645
Hungary	..	..	..	..	2,624	1,683	4,307
Italy	..	..	..	..	27,709	14,720	42,429
Latvia	..	..	..	..	3,021	2,672	5,693
Lithuania	..	..	..	..	1,763	1,199	2,962
Malta	..	..	..	..	4,469	2,662	7,131
Netherlands	..	..	..	..	9,188	6,786	15,974
Norway	..	..	..	..	481	112	593
Poland	..	..	..	..	12,836	8,592	21,428
Romania	..	..	..	..	619	441	1,060
Sweden	..	..	..	..	474	106	580
Switzerland	..	..	..	..	518	448	966
Ukraine	..	..	..	..	2,710	1,968	4,678
U.S.S.R.	..	..	..	..	1,685	1,706	3,391
Yugoslavia	..	..	..	..	4,060	2,058	6,118
Other	..	..	..	..	1,593	877	2,470
Total Europe	..	..	..	..	190,051	143,690	333,741
<i>ASIA—</i>							
China	..	..	..	..	1,726	492	2,218
Cyprus	..	..	..	..	1,760	636	2,396
Federation of Malaya	..	..	..	..	436	209	645
India, Pakistan, Ceylon	..	..	..	..	2,695	1,638	4,333
Indonesia	..	..	..	..	551	283	834
Israel	..	..	..	..	772	754	1,526
Syria and Lebanon	..	..	..	..	321	224	545
Other	..	..	..	..	1,310	754	2,064
Total Asia	..	..	..	..	9,571	4,990	14,561
<i>AFRICA—</i>							
Union of South Africa	..	..	..	..	882	850	1,732
Egypt	..	..	..	..	1,523	1,225	2,748
Other	..	..	..	..	255	218	473
Total Africa	..	..	..	..	2,660	2,293	4,953
<i>AMERICA—</i>							
Canada	..	..	..	..	582	480	1,062
United States of America	..	..	..	..	1,349	905	2,254
Other	..	..	..	..	221	211	432
Total America	..	..	..	..	2,152	1,596	3,748
OTHER	..	..	..	..	255	316	571
GRAND TOTAL	..	..	..	..	1,231,099	1,221,242	2,452,341

The Censuses of 1947 and 1954 show the nationality of the population as follows:—

VICTORIA—NATIONALITY OF THE POPULATION AT  
CENSUSES OF 1947 AND 1954

Nationality	Census, 1947			Census, 1954		
	Males	Females	Persons	Males	Females	Persons
BRITISH* ..	1,005,324	1,037,770	2,043,094	1,148,786	1,167,012	2,315,798
FOREIGN—						
American (U.S.)	617	270	887	1,042	606	1,648
Austrian ..	193	116	309	699	651	1,350
Chinese ..	1,030	82	1,112	1,401	189	1,590
Czechoslovakian	78	43	121	1,462	809	2,271
Dutch ..	468	191	659	9,255	7,035	16,290
Estonian ..	15	5	20	565	609	1,174
French ..	87	94	181	514	493	1,007
German ..	801	354	1,155	6,078	5,414	11,492
Greek ..	1,101	207	1,308	4,037	2,241	6,278
Hungarian ..	60	44	104	1,683	1,118	2,801
Italian ..	1,747	573	2,320	23,225	11,981	35,206
Latvian ..	13	11	24	2,992	2,814	5,806
Lithuanian ..	3	6	9	1,646	1,148	2,794
Norwegian ..	155	23	178	239	61	300
Polish ..	575	480	1,055	9,370	6,889	16,259
Portuguese ..	13	4	17	425	7	432
Romanian ..	9	13	22	267	180	447
Russian ..	57	36	93	548	495	1,043
Swiss ..	89	28	117	310	264	574
Ukrainian ..	†	†	†	3,185	2,453	5,638
Yugoslavian ..	128	25	153	3,450	2,045	5,495
Other ..	852	177	1,029	2,446	988	3,434
Stateless ..	452	282	734	7,474	5,740	13,214
Total Foreign	8,543	3,064	11,607	82,313	54,230	136,543
GRAND TOTAL	1,013,867	1,040,834	2,054,701	1,231,099	1,221,242	2,452,341

\* Includes Irish.

† Included with U.S.S.R.



The next table shows the period of residence in Australia, at Censuses of 1947 and 1954, of persons who were not born in Australia:—

**VICTORIA—PERIOD OF RESIDENCE IN AUSTRALIA, AT CENSUSES OF 1947 AND 1954, OF PERSONS WHO WERE NOT BORN IN AUSTRALIA**

Number of Completed Years of Residence	Census, 1947			Census, 1954		
	Males	Females	Persons	Males	Females	Persons
0 .. ..	4,550	3,077	7,627	18,237	13,343	31,580
1 .. ..	930	1,283	2,213	10,416	9,128	19,544
2 .. ..	391	306	697	22,428	13,659	36,087
3 .. ..	167	106	273	24,115	17,329	41,444
4 .. ..	148	70	218	26,517	19,140	45,657
0-4 .. ..	6,186	4,842	11,028	101,713	72,599	174,312
5 .. ..	663	335	998	19,547	14,009	33,556
6 .. ..	869	486	1,355	5,975	4,483	10,458
7 .. ..	1,363	909	2,272	2,583	2,243	4,826
8 .. ..	2,640	2,204	4,844	4,233	3,325	7,558
9 .. ..	1,866	1,223	3,089			
10-14 .. ..	3,471	3,227	6,698			
5-14 .. ..	10,872	8,384	19,256	32,338	24,060	56,398
15 and over ..	79,670	63,452	143,122	72,948	59,243	132,191
Not Stated ..	2,623	2,571	5,194	3,264	2,797	6,061
Born outside Australia ..	99,351	79,249	178,600	210,263	158,699	368,962
Born in Australia	914,516	961,585	1,876,101	1,020,836	1,062,543	2,083,379
Total ..	1,013,867	1,040,834	2,054,701	1,231,099	1,221,242	2,452,341

The following table shows the religion of the population at Censuses of 1947 and 1954:—

**VICTORIA—RELIGION OF THE POPULATION AT CENSUSES OF 1947 AND 1954**

Religion	Census, 1947			Census, 1954		
	Males	Females	Persons	Males	Females	Persons
CHRISTIAN—						
Baptist ..	14,803	17,217	32,020	16,084	18,232	34,316
Brethren ..	1,125	1,459	2,584	1,479	1,782	3,261
Catholic, Roman (*) ..	71,179	62,986	134,165	99,128	82,083	181,211
Catholic (*) ..	133,744	151,752	285,496	188,492	194,951	383,443
Church of Christ	13,746	15,976	29,722	15,797	17,811	33,608
Church of England ..	360,028	369,874	729,902	413,591	418,882	832,473
Congregational	5,058	6,316	11,374	5,417	6,505	11,922
Greek Orthodox	†	†	†	12,219	7,902	20,121
Lutheran ..	5,244	4,758	10,002	11,785	11,108	22,893

\* So described on individual census schedules. † Not available.

**VICTORIA—RELIGION OF THE POPULATION AT CENSUSES OF 1947  
AND 1954—continued**

Religion	Census, 1947			Census, 1954		
	Males	Females	Persons	Males	Females	Persons
<b>CHRISTIAN—continued</b>						
Methodist ..	112,874	121,721	234,595	122,377	130,425	252,802
Presbyterian ..	139,628	148,755	288,383	158,811	167,611	326,422
Protestant, Undefined ..	13,397	13,876	27,273	18,787	18,966	37,753
Salvation Army ..	5,060	5,924	10,984	5,291	6,100	11,391
Seventh Day Adventist ..	1,298	1,978	3,276	1,906	2,562	4,468
Other ..	6,118	7,148	13,266	6,967	7,981	14,948
<b>Total Christian</b>	<b>883,302</b>	<b>929,740</b>	<b>1,813,042</b>	<b>1,078,131</b>	<b>1,092,901</b>	<b>2,171,032</b>
<b>NON-CHRISTIAN—</b>						
Hebrew ..	7,696	7,214	14,910	12,211	11,805	24,016
Other ..	895	130	1,025	1,830	453	2,283
<b>Total Non-Christian ..</b>	<b>8,591</b>	<b>7,344</b>	<b>15,935</b>	<b>14,041</b>	<b>12,258</b>	<b>26,299</b>
Indefinite ..	2,547	2,281	4,828	2,579	2,239	4,818
No Religion ..	5,517	2,441	7,958	4,564	2,073	6,637
No Reply ..	113,910	99,028	212,938	131,784	111,771	243,555
<b>Grand Total ..</b>	<b>1,013,867</b>	<b>1,040,834</b>	<b>2,054,701</b>	<b>1,231,099</b>	<b>1,221,242</b>	<b>2,452,341</b>

In the following table the male and female populations of Victoria are classified according to the industry in which they are usually engaged :—

**VICTORIA—INDUSTRY OF THE POPULATION AT  
CENSUS OF 1954**

Industry	Males	Females	Persons
<b>Primary Production—</b>			
Agricultural, Grazing, and Dairying ..	102,949	8,355	111,304
Other .. .. .	5,175	21	5,196
<b>Total Primary Production .. ..</b>	<b>108,124</b>	<b>8,376</b>	<b>116,500</b>
<b>Mining and Quarrying .. .. .</b>	<b>4,463</b>	<b>123</b>	<b>4,586</b>
<b>Manufacturing—</b>			
Founding, Engineering, and Metalworking ..	65,219	10,006	75,225
Manufacture, Assembly, and Repair of Ships, Vehicles, Parts and Accessories ..	40,121	3,044	43,165
Manufacture of Clothing, Knitted Goods, Boots, Shoes, &c. ..	19,561	36,518	56,079
Manufacture of Food, Drink, and Tobacco ..	33,378	9,027	42,405
Paper, Printing, Bookbinding, and Photography ..	18,694	5,939	24,633
Other .. .. .	75,259	24,638	99,897
<b>Total Manufacturing .. .. .</b>	<b>252,232</b>	<b>89,172</b>	<b>341,404</b>

**VICTORIA—INDUSTRY OF THE POPULATION AT CENSUS OF 1954—  
continued**

Industry	Males	Females	Persons
Building and Construction .. .. .	84,401	1,067	85,468
Transport and Storage .. .. .	58,608	4,086	62,694
Communication .. .. .	17,870	4,936	22,806
Finance and Property .. .. .	18,938	9,690	28,628
Commerce .. .. .	109,765	51,909	161,674
Public Authority ( <i>n.e.i.</i> ) and Professional Activities	72,584	51,521	124,105
Amusement, Hotels, Cafes, Personal Service, &c...	28,306	32,826	61,132
Electricity, Gas, Water, &c. .. .. .	24,116	1,491	25,607
Industry Inadequately Described or Not Stated ..	7,541	2,249	9,790
Persons Not in Work Force .. .. .	444,151	963,796	1,407,947
Grand Total .. .. .	1,231,099	1,221,242	2,452,341

The following table shows the occupational status of the population at Censuses of 1947 and 1954 :—

**VICTORIA—OCCUPATIONAL STATUS OF THE POPULATION  
AT CENSUSES OF 1947 AND 1954**

Occupational Status	Census, 1947			Census, 1954		
	Males	Females	Persons	Males	Females	Persons
<b>In Work Force—</b>						
<b>At Work—</b>						
Employer .. .. .	53,696	7,545	61,241	59,396	8,975	68,371
Self-employed .. .. .	96,689	14,741	111,430	103,083	16,302	119,385
Employee (On Wage or Salary) .. .. .	498,202	188,491	686,693	608,575	225,965	834,540
Helper (Not on Wage or Salary) .. .. .	7,356	1,138	8,494	5,154	2,751	7,905
Total at Work .. .. .	655,943	211,915	867,858	776,208	253,993	1,030,201
Not at Work * .. .. .	13,838	4,191	18,029	9,659	2,997	12,656
Total in Work Force	669,781	216,106	885,887	785,867	256,990	1,042,857
Not in Work Force .. .. .	339,269	823,390	1,162,659	444,151	963,796	1,407,947
Not Stated .. .. .	4,817	1,338	6,155	1,081	456	1,537
Grand Total .. .. .	1,013,867	1,040,834	2,054,701	1,231,099	1,221,242	2,452,341

\* Includes persons who were (1) unable to secure employment, (2) temporarily laid off from their jobs, and (3) not actively seeking work at the time of the Census on account of sickness or accident, industrial dispute, resting between jobs, or for any other reason.

The following is a list of extra-metropolitan localities in Victoria which contained a population of 1,000 persons or over at the Census of 1954:—

### VICTORIA—POPULATION OF EXTRA-METROPOLITAN LOCALITIES

Locality	Population at Census, 1954	Locality	Population at Census, 1954
Alexandra .. ..	1,712	Euroa .. ..	2,657
Ararat* .. ..	7,414	Geelong* .. ..	20,034
Avoca .. ..	1,025	Geelong West* .. ..	17,313
Bacchus Marsh .. ..	2,825	Hamilton* .. ..	8,507
Bairnsdale .. ..	5,718	Hastings .. ..	1,022
Ballaarat* .. ..	39,945	Healesville .. ..	2,707
Beaufort .. ..	1,281	Heathcote .. ..	1,273
Beechworth .. ..	3,153	Heyfield .. ..	2,184
Benalla* .. ..	6,045	Horsham* .. ..	7,767
Bendigo* .. ..	28,726	Irymple .. ..	1,068
Broadford .. ..	1,451	Kerang .. ..	3,227
Camperdown* .. ..	3,205	Kilmore .. ..	1,474
Casterton .. ..	2,391	Koroit* .. ..	1,401
Castlemaine* .. ..	6,577	Korumburra .. ..	2,858
Charlton .. ..	1,408	Kyabram* .. ..	3,335
Cobram .. ..	1,695	Kyneton .. ..	3,232
Cohuna .. ..	1,542	Lakes Entrance .. ..	1,252
Colac* .. ..	8,032	Leongatha .. ..	2,304
Coleraine .. ..	1,393	Maffra .. ..	3,161
Creswick .. ..	1,606	Mansfield .. ..	1,861
Daylesford* .. ..	3,216	Maryborough* .. ..	6,827
Dimboola .. ..	1,814	Merbein .. ..	1,768
Donald .. ..	1,480	Mildura* .. ..	10,972
Dromana .. ..	1,257	Moe† .. ..	8,770
Drouin .. ..	2,104	Mooroopna .. ..	1,796
Eaglehawk* .. ..	4,696	Mornington .. ..	3,589
Echuca* .. ..	5,405	Mortlake .. ..	1,048
Eildon Weir .. ..	2,913	Morwell .. ..	9,040

VICTORIA—POPULATION OF EXTRA-METROPOLITAN LOCALITIES—  
*continued*

Locality			Population at Census, 1954	Locality			Population at Census, 1954
Mount Beauty	..	..	1,782	St. Arnaud*	..	..	3,037
Murtoa	..	..	1,132	Stawell*	..	..	5,463
Myrtleford	..	..	1,538	Sunbury	..	..	2,385
Nathalia	..	..	1,046	Swan Hill*	..	..	5,197
Newborough	..	..	3,657	Tatura	..	..	1,929
Newtown and Chilwell*	..	..	11,191	Terang	..	..	2,365
Nhill	..	..	2,208	Tongala	..	..	1,465
Numurkah	..	..	2,195	Trafalgar	..	..	1,537
Ocean Grove	..	..	1,353	Traralgon	..	..	8,845
Orbost	..	..	2,214	Wangaratta*	..	..	10,715
Ouyen	..	..	1,426	Warburton	..	..	1,320
Pakenham East	..	..	1,110	Warracknabeal	..	..	3,009
Penshurst	..	..	1,026	Warragul	..	..	5,324
Port Fairy*	..	..	2,265	Warrnambool*	..	..	10,850
Portland*	..	..	4,759	Werribee	..	..	4,335
Queenscliffe*	..	..	2,551	Werribee South	..	..	1,480
Red Cliffs	..	..	2,361	Winchelsea	..	..	1,234
Rochester	..	..	1,791	Wodonga	..	..	5,259
Rosebud	..	..	1,694	Wonthaggi*	..	..	4,461
Rutherglen	..	..	1,370	Woodend	..	..	1,093
Rye	..	..	1,055	Wycheproof	..	..	1,006
Sale*	..	..	6,537	Yallourn North	..	..	1,457
Sebastopol*	..	..	3,265	Yallourn Works Area*	..	..	5,580
Seymour	..	..	3,736	Yarragon	..	..	1,096
Shepparton*	..	..	10,848	Yarram	..	..	1,800
Shepparton East	..	..	1,071	Yarrawonga	..	..	2,953
Sorrento	..	..	1,823	Yea	..	..	1,131

\* The area covered by these localities coincides with the Local Government Area of the same name, and estimates of their populations as at 30th June, 1960, are therefore included in pages 120 to 125.

† The Borough of Moe was created in 1955; its estimated population at 30th June, 1960, is shown on page 125.

### Aborigines in Victoria

The estimated number of persons with a significant amount of aboriginal blood living in this State on 30th June, 1960, was 2,260 of whom twenty were recorded as full-blood.

In 1957, following investigation by a Board of Inquiry appointed by the State Government to inquire into the operation of legislation under which aboriginal affairs were being administered, Parliament passed the present Aborigines Act. It repealed the law then existing and constituted the Aborigines Welfare Board to replace the former Board for the Protection of the Aborigines. The function of the Board is to promote the moral, physical and intellectual welfare of aboriginal people living in Victoria, irrespective of their place of birth or degree of native blood, with a view to their assimilation into the general community.

After a preliminary survey of the conditions, the Board gave priority to plans for housing aboriginal people who are living in depressed camp settlements or in sub-standard metropolitan dwellings. Ten houses at Mooropna and twelve at Robinvale have been completed and are occupied by families transferred from river-bank camps. Land has been acquired at Dimboola, Nowa Nowa, and Orbost for similar projects.

The aborigines under the direct care of the Board are maintained on Lake Tyers Aboriginal Station, in East Gippsland, which is under the control of the resident manager. The number on the Station at 30th June, 1960, was 147 of whom ten were recorded as full-bloods.

Approximately 80 part-aborigines live on another aboriginal reserve at Framlingham, in the Western District, which is supervised by a local Welfare Committee whose funds are subsidized by the Board. These aborigines are provided with Government cottages, for which they are charged a nominal rental, and maintain themselves with assistance from the Welfare Committee. Many of them receive social service allowances.

The Board has arranged for women to be transferred from the Lake Tyers Aboriginal Station to the Bairnsdale District Hospital for confinement. Four male and four female children were born to part-aboriginal Lake Tyers parents at that hospital during the year.

Two part-aboriginal couples were married and two part-aborigines died at the Station in the same period.

The Board derives its revenue almost wholly from an Annual Appropriation by Parliament and loan funds. The amount expended by the Board during 1959-60 was £47,974. The Housing Commission, Victoria, constructs houses for aborigines as the Board's agent. The Board has accepted responsibility for payment of the economic rent of the houses and charges the aboriginal occupants a small weekly rental according to their means.

## Vital Statistics

### Introduction

#### *Registration of Births, Deaths, and Marriages*

The system of compulsory registration of births, deaths, and marriages in Victoria has been in force since 1853, and the registers contain all necessary information bearing on the family history of the people. The statutory duties under the Registration Acts are performed by the Government Statist, who has supervision over the registrars of births and deaths, the registrars of marriages, and (so far as regards their registration duties) the clergymen who celebrate marriages. Copies of entries certified by the Government Statist or by an Assistant Government Statist are *prima facie* evidence in the Courts of Australia of the facts to which they relate. At the Government Statist's Office there is kept for reference a complete collection of all registrations effected since 1st July, 1853, as well as originals or certified copies of all existing church records relating to earlier periods, as far back as 1837.

#### *Law Relating to Births, Deaths, and Marriages*

The various Acts relating to the registration of births, deaths, and marriages in Victoria were consolidated in 1958.

In November, 1959, a Bill was placed before Parliament to re-organize the system of registration of births and deaths in Victoria. This new legislation known as the *Registration of Births, Deaths, and Marriages Act 1959*, which came into operation on 1st October, 1960, was designed to allow registrations of births and deaths to be effected by post and to remove the responsibility of registering these events from the persons who previously held office as Registrars of Births and Deaths. No alteration, however, has been made to the system of registration of marriages.

The repealed legislation providing for registration of births and deaths in Victoria had remained unchanged in principle since the year 1853, and was originally drafted from English legislation enacted in the year 1837.

Under this legislation the State was divided into districts which warranted the creation of an Office of Registrar of Births and Deaths. Persons appointed to such office were citizens residing within the district and the method of appointment left much to be desired. Untrained persons, and in many cases persons totally unsuitable for such a position, were appointed which resulted in almost insurmountable administrative difficulties and unnecessarily added to costs.

The system required the responsible person to attend at a Registrar's Office for the purpose of giving information and to sign the registration entry, which had been prepared by the Registrar, of the event being registered. Under present day economic and industrial conditions, this procedure placed a monetary hardship and some

inconvenience upon the responsible person in view of loss of time from employment and in many instances the cost of travel to and from the Registrar's office.

Under the present system, forms for giving of information for registration of births and deaths are made available to the public through maternity hospitals, funeral directors, institutions, Police Stations, and Collecting Agents. With the ready co-operation of maternity hospitals in the State, a form for registration of a birth is made available to either parent before the mother is discharged from hospital. This form, when completed, signed, and witnessed may be delivered or posted direct, to reach the Office of the Government Statist within 60 days of birth or delivered to a local Collecting Agent, whose duty it is to check the particulars contained in the form and post it to the Government Statist. The person responsible for the establishment in which a birth occurs is also required to forward notification of such event to the Government Statist.

Information forms relating to deaths are usually completed, under the supervision of a funeral director, by some relative with knowledge of the particulars to be registered. In cases of deaths reported to a Coroner, the required information is ascertained by the police. Every funeral director is required to notify particulars of burial, cremation or disposal of any dead body and any medical practitioner in attendance during the last illness is obliged to submit a medical certificate concerning death, unless the case has been reported to a Coroner.

All registrations are now prepared in standard form in the Office of the Government Statist by officers specially trained in this particular type of work, and registrations are effected without the personal attendance of the informant. The original Information Form, which is a statutory document under the Regulations to the above Act, will be retained in volume form as a duplicate record of the event registered.

Provision is also made in the new legislation for the person giving particulars relating to a birth or death, to be notified that such particulars have been duly registered by posting to him an Extract from the entry. This provision is being carried out by photographing the first four columns of each registration entry and the column stating the name and address of the informant and posting the result in a window-faced envelope. This method was adopted for reasons of economy and lessens the possibility of altering the document. However, investigation on this matter by producing a document laminated in a plastic cover is proceeding.

The response and co-operation from persons placed under an obligation by the Act and from the general public is most encouraging. Although the system has been in operation for a short period and no conclusive statistics are yet available, it would appear from the impression gained that the change has been justified.



The principal numbers and rates relating to vital statistics are given in the following table :—

### VICTORIA—SUMMARY OF VITAL STATISTICS, 1960

Division	Number of—				Rate per 1,000 of Mean Population			Infant Mortality
	Marriages	Live Births	Deaths	Deaths under One Year †	Marriages	Live Births	Deaths	Deaths under One Year per 1,000 Live Births
Melbourne Metropolitan Area ..	*	39,168	16,275	734	*	21·54	8·95	18·74
Remainder of State ..	*	24,857	8,272	448	*	23·44	7·80	18·02
Victoria .. ..	20,627	64,025	24,547	1,182	7·13	22·14	8·49	18·46

\* Not available

† Included in figure for deaths

The average annual rate of natural increase (i.e., the excess of births over deaths, per 1,000 of the mean population), in each Australian State and the Commonwealth of Australia, as well as detailed particulars for Victoria, for certain periods since 1935, are shown in the following tables :—

### AUSTRALIA—NATURAL INCREASE PER 1,000 OF THE MEAN POPULATION

Period	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia
1935-39* ..	7·91	<b>5·64</b>	10·06	6·12	9·85	10·36	7·67
1940-44* ..	9·36	<b>7·82</b>	12·01	9·05	11·37	11·47	9·52
1945-49* ..	12·77	<b>11·73</b>	15·70	14·31	15·30	16·82	13·41
1950-54 ..	12·44	<b>12·68</b>	15·40	14·30	16·74	16·97	13·63
1955-59 ..	12·31	<b>13·42</b>	15·66	13·50	16·48	17·36	13·77
1956 .. ..	11·71	<b>13·25</b>	14·80	13·40	16·75	17·35	13·37
1957 .. ..	12·74	<b>13·58</b>	15·86	13·68	16·81	17·46	14·04
1958 .. ..	12·91	<b>13·74</b>	15·85	13·72	15·84	17·35	14·09
1959 .. ..	12·14	<b>13·21</b>	16·18	13·49	16·16	16·97	13·69
1960 .. ..	12·26	<b>13·65</b>	15·66	13·93	15·35	17·64	13·80

\* Excess of births over civilian deaths in the Australian States from September, 1939 to June, 1947.

### VICTORIA—NATURAL INCREASE PER 1,000 OF THE MEAN POPULATION

Period	Average Annual Excess of Live Births over Deaths	Annual Rates per 1,000 of Mean Population			Period	Annual Excess of Live Births over Deaths	Annual Rates per 1,000 of Mean Population		
		Live Births	Deaths	Natural Increase			Live Births	Deaths	Natural Increase
1935-39 ..	10,473	15·87	10·23	5·64*	1956 ..	34,507	22·42	9·17	13·25
1940-44 ..	15,250	18·53	10·71	7·82*	1957 ..	36,333	22·61	9·03	13·58
1945-49 ..	24,188	22·13	10·40	11·73*	1958 ..	37,644	22·36	8·62	13·74
1950-54 ..	29,605	22·47	9·79	12·68	1959 ..	37,167	22·13	8·92	13·21
1955-59 ..	35,892	22·34	8·92	13·42	1960 ..	39,478	22·14	8·49	13·65

\* Excess of births over civilian deaths in the Australian States from September, 1939 to June, 1947.

**Marriages**

Marriages in Victoria in 1960 numbered 20,627, an increase of 171 as compared with the number registered in 1959. The rate per 1,000 of mean population in 1960 was 7·13 as compared with a rate of 7·27 in 1959, and was the lowest recorded in Victoria since the depression year of 1933, when the rate was 6·96. The highest rate ever recorded in Victoria was 12·06 in 1942, and the lowest 5·66 in 1931.

The following table shows the number of marriages, the quarters in which they were registered, and the proportion per 1,000 of the mean population for certain periods since 1935 :—

**VICTORIA—MARRIAGES**

Period	Average Annual Number of Marriages	Quarter of Registration				Rate per 1,000 of Mean Population
		March	June	September	December	
1935-39 ..	16,406	3,699	4,484	3,414	4,809	8·84
1940-44 ..	20,609	5,089	5,383	4,812	5,325	10·56
1945-49 ..	19,689	4,995	5,057	4,205	5,432	9·54
1950-54 ..	20,060	5,049	5,101	4,156	5,754	8·59
1955-59 ..	20,307	5,078	5,141	4,228	5,860	7·60
1956 ..	20,137	5,360	4,825	4,368	5,584	7·73
1957 ..	20,239	4,754	5,183	4,376	5,926	7·57
1958 ..	20,649	5,146	5,586	4,028	5,889	7·54
1959 ..	20,456	5,312	5,064	4,246	5,834	7·27
1960 ..	20,627	5,277	5,447	4,078	5,825	7·13

The crude marriage rate—per 1,000 of the mean population—like birth and death rates similarly estimated, is apt to be misleading in the early settlement stages of countries like Australia, but it affords a ready and approximate comparison between years not widely separated.

The following table shows the marriage rate per 1,000 of the mean population in the Australian States for each of the five years 1956 to 1960 :—

**AUSTRALIA—MARRIAGE RATES**

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia
1956 .. ..	7·68	<b>7·73</b>	7·27	7·40	7·50	8·07	7·61
1957 .. ..	7·94	<b>7·57</b>	7·33	7·53	7·08	7·59	7·64
1958 .. ..	7·73	<b>7·54</b>	7·25	7·25	7·14	7·33	7·51
1959 .. ..	7·50	<b>7·27</b>	7·36	7·18	7·49	7·45	7·39
1960 .. ..	7·66	<b>7·13</b>	7·01	6·99	7·28	7·74	7·34

The relative ages of bridegrooms and brides who were married in Victoria in 1960 are shown in the following table :—

**VICTORIA—RELATIVE AGES OF BRIDEGROOMS AND BRIDES, 1960**

Ages of Bridegrooms	Ages of Brides														Total Bridegrooms
	14	15	16	17	18	19	20	21 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 and over	
15 ..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	2
16 ..	1	1	4	3	1	3	..	..	..	..	..	..	..	..	13
17 ..	1	3	13	21	12	5	4	2	..	..	..	..	..	..	61
18 ..	..	17	45	73	82	35	19	16	1	..	..	..	..	..	288
19 ..	1	13	66	108	147	107	55	60	2	..	..	..	..	..	559
20 ..	2	15	50	113	196	212	143	160	13	1	..	..	..	..	905
21 to 24 ..	..	25	150	358	787	1,225	1,454	3,661	365	34	6	2	..	..	8,067
25 to 29 ..	..	4	44	81	213	498	665	2,639	1,039	227	47	12	3	1	5,473
30 to 34 ..	..	..	6	12	40	71	124	721	720	416	141	51	9	4	2,315
35 to 39 ..	..	..	2	..	9	16	21	136	242	262	194	91	43	10	1,026
40 to 44 ..	..	..	..	1	..	2	3	35	76	121	129	97	33	21	518
45 to 49 ..	..	..	..	..	..	1	1	8	26	55	92	96	105	46	430
50 to 54 ..	..	..	..	..	..	..	1	6	4	9	32	49	83	93	277
55 to 59 ..	..	..	..	..	..	..	..	..	2	10	26	35	57	133	263
60 to 64 ..	..	..	..	..	..	..	..	1	..	3	6	12	23	132	177
65 and over	..	..	..	..	..	..	..	..	..	..	1	5	13	234	253
Total Brides	5	78	381	771	1,487	2,175	2,490	7,445	2,490	1,138	674	450	369	674	20,627

Of every 1,000 men married during 1960, 778 were older and 134 were younger than their brides, and 88 were of the same age. In 1960 the oldest bridegroom was aged 99 years and the oldest bride 86 years ; the youngest bridegroom was aged fifteen years, and the youngest bride fourteen years.

The percentages of marriages in 1960 by the age of both bridegrooms and brides are shown in the following table :—

**VICTORIA—PERCENTAGES OF BRIDEGROOMS AND BRIDES IN AGE GROUPS, 1960**

Age Group	Percentage of Total—		Age Group	Percentage of Total—	
	Bridegrooms	Brides		Bridegrooms	Brides
Under 16 ..	..	0.4	35 to 39 ..	5.0	3.3
16 ..	0.1	1.8	40 to 44 ..	2.5	2.2
17 ..	0.3	3.7	45 to 49 ..	2.1	1.8
18 ..	1.4	7.2	50 to 54 ..	1.3	1.2
19 ..	2.7	10.5	55 to 59 ..	1.3	0.9
20 ..	4.4	12.1	60 and over..	2.1	1.2
21 to 24 ..	39.1	36.1			
25 to 29 ..	26.5	12.1			
30 to 34 ..	11.2	5.5		100.0	100.0

The number of minors marrying at each age and the proportion of each sex to the total marriages are given in the following table for each of the five years 1956 to 1960 :—

### VICTORIA—MARRIAGES OF MINORS

Year	Age in Years								Total	
	13	14	15	16	17	18	19	20	Number	Percentage of Total Marriages
<b>BRIDEGROOMS</b>										
1956	..	..	..	1	4	41	167	378	785	6.83
1957	..	..	..	..	9	41	184	434	855	7.53
1958	..	..	..	1	11	58	213	465	851	7.74
1959	..	..	..	..	12	55	218	494	869	8.06
1960	..	..	..	2	13	61	288	559	905	8.86
<b>BRIDES</b>										
1956	..	1	5	66	245	667	1,335	1,951	2,147	31.87
1957	..	2	8	64	287	684	1,373	2,010	2,392	33.70
1958	..	1	9	89	321	731	1,417	2,036	2,512	34.46
1959	..	..	19	77	327	742	1,377	2,060	2,458	34.51
1960	..	..	5	78	381	771	1,487	2,175	2,490	35.81

A feature of Victorian marriages since the end of the Second World War has been the steady increase in the proportion of marriages which involve minors. In 1947, 4.82 per cent. of bridegrooms and 22.94 per cent. of brides were under 21 years of age, but by 1960 these percentages had increased to 8.86 and 35.81 respectively, whilst in 7.63 per cent. of marriages both parties were under 21 years of age.

The mean ages at marriage, according to conjugal condition, are shown in the following table for each of the five years, 1956 to 1960 :—

### VICTORIA—MEAN AGE AT MARRIAGE

Year		Bridegrooms				Brides			
		Bachelors	Widowers	Divorced	All Bride- grooms	Spinsters	Widows	Divorced	All Brides
1956	..	26.8	56.0	40.5	28.9	23.7	49.0	36.8	25.6
1957	..	26.7	56.3	41.3	28.7	23.5	48.9	37.0	25.3
1958	..	26.7	56.9	41.0	28.6	23.4	48.7	36.9	25.2
1959	..	26.6	56.3	40.4	28.6	23.2	48.9	37.1	25.2
1960	..	26.3	56.8	41.1	28.3	23.1	49.2	37.1	25.0

In the following tables are given the number of persons in each conjugal condition marrying during each of the five years 1956 to 1960, and the proportions in each condition for periods since 1930 :—

### VICTORIA—CONJUGAL CONDITION OF PERSONS MARRYING

Period	Bridegrooms			Brides			Total Marriages
	Bachelors	Widowers	Divorced	Spinsters	Widows	Divorced	
1956 ..	18,078	911	1,148	17,969	900	1,268	20,137
1957 ..	18,405	859	975	18,264	848	1,127	20,239
1958 ..	18,740	808	1,101	18,610	834	1,205	20,649
1959 ..	18,406	841	1,209	18,287	833	1,336	20,456
1960 ..	18,742	830	1,055	18,541	858	1,228	20,627

### VICTORIA—TOTAL MARRIAGES IN 1960 AND PERCENTAGE OF PERSONS MARRYING IN EACH CONJUGAL CONDITION, 1930 TO 1960

Marriage Between—	1960		Conjugal Condition	Percentage of Total—			
	Num-ber	Per-cent-age		1930-39	1940-49	1950-59	1960
				BRIDEGROOMS			
Bachelors and Spinsters ..	17,695	85.8	Bachelors	92.3	90.5	89.5	90.9
Bachelors and Widows ..	340	1.7	Widowers	5.5	4.9	4.5	4.0
Bachelors and Divorced Women .. ..	707	3.4	Divorced	2.2	4.6	6.0	5.1
Widowers and Spinsters ..	288	1.4	Total ..	100.0	100.0	100.0	100.0
Widowers and Widows ..	368	1.8					
Widowers and Divorced Women .. ..	174	0.8		BRIDES			
Divorced Men and Spinsters .. ..	558	2.7	Spinsters	94.4	91.4	89.2	89.9
Divorced Men and Widows	150	0.7	Widows	3.4	3.9	4.4	4.2
Divorced Men and Divorced Women .. ..	347	1.7	Divorced	2.2	4.7	6.4	5.9
Total Marriages .. ..	20,627	100.0	Total ..	100.0	100.0	100.0	100.0

The proportion of divorcees remarrying per 100 marriages has, despite year to year fluctuations, generally continued to rise. Between the periods 1910 to 1914 and 1950 to 1959 the percentage of bridegrooms who were divorcees increased from 0.7 to 6.0 and the percentage of brides from 0.9 to 6.4. The increased proportion of

divorced persons remarrying reflects the higher number of decrees for dissolution of marriage granted in recent years. The numbers of such decrees and of remarriages of divorced men and of divorced women for certain periods since 1910 are shown in the following table :—

### VICTORIA—DIVORCED PERSONS REMARRYING

Period	Decrees Granted	Remarriages	
		Divorced Men	Divorced Women
1910-19.. ..	2,258	867	1,096
1920-29.. ..	4,392	2,125	2,116
1930-39.. ..	6,059	3,172	3,099
1940-49.. ..	14,686	9,297	9,310
1950-59.. ..	16,349	12,032	12,760
1956 .. ..	1,255	1,148	1,268
1957 .. ..	1,345	975	1,127
1958 .. ..	1,698	1,101	1,205
1959 .. ..	1,861	1,209	1,336
1960 .. ..	1,296	1,055	1,228

In 1960 the number of marriages celebrated by ministers of religion was 18,695 representing 91 per cent. of the total marriages. Civil marriages numbered 1,932, or 9 per cent. of the total.

The numbers and proportion of civil marriages and of marriages solemnized according to the rites of the principal religious denominations for the years 1940, 1950, and 1960 are shown in the following table :—

### VICTORIA—MARRIAGES, RELIGIOUS AND CIVIL

Denomination	1940		1950		1960	
	Number	Per-centage of Total Marriages	Number	Per-centage of Total Marriages	Number	Per-centage of Total Marriages
Church of England .. ..	6,817	30·57	5,908	29·07	4,803	23·28
Roman Catholic .. ..	4,296	19·27	4,093	20·14	5,954	28·87
Presbyterian .. ..	4,194	18·81	4,009	19·73	3,121	15·13
Methodist .. ..	3,332	14·94	2,946	14·50	2,539	12·31
Baptist .. ..	826	3·70	366	1·80	319	1·55
Church of Christ .. ..	547	2·45	326	1·60	371	1·80
Congregational .. ..	336	1·51	317	1·56	240	1·16
Lutheran .. ..	100	0·45	236	1·16	277	1·34
Hebrew .. ..	139	0·62	219	1·08	167	0·81
Salvation Army .. ..	155	0·70	107	0·53	87	0·42
Other Denominations .. ..	228	1·02	246	1·22	817	3·96
Civil Marriages .. ..	1,329	5·96	1,547	7·61	1,932	9·37
Total .. ..	22,299	100·00	20,320	100·00	20,627	100·00

The following table shows the number and proportion of civil marriages to total marriages performed for each of the five years 1956 to 1960. In addition the number and proportions of civil marriages performed in the Office of the Government Statist are also shown.

### VICTORIA—CIVIL MARRIAGES

Year	Total Civil Marriages		Performed in the Office of the Government Statist	
	Number	Percentage of Total Marriages	Number	Percentage of Total Civil Marriages
1956 .. ..	1,721	8·55	1,599	92·91
1957 .. ..	1,663	8·22	1,535	92·30
1958 .. ..	1,776	8·60	1,620	91·22
1959 .. ..	1,863	9·11	1,687	90·55
1960 .. ..	1,932	9·37	1,764	91·30

### Divorce

Until the proclamation by the Commonwealth of the *Matrimonial Causes Act* 1960, which was proclaimed to operate from 1st February, 1961, the law in Victoria in regard to divorce was contained in the *Marriage Act* 1958.

The following table gives the number of petitions filed by husbands and wives respectively, and the number of dissolutions of marriage, nullities of marriage, and judicial separations during the year 1960. Every decree of dissolution of marriage is in the first instance a decree *nisi* and is not made absolute till the expiration of not less than three months thereafter.

### VICTORIA—DIVORCES, 1960

Petition for—	Petitions Filed by—			Decrees Granted to—		
	Husbands	Wives	Total	Husbands	Wives	Total
Dissolution of Marriage	860	938	1,798	612	684	1,296
Nullity of Marriage ..	5	12	17	6	10	16
Judicial Separation ..	..	2	2	..	1	1
Total .. ..	865	952	1,817	618	695	1,313

The grounds upon which divorces were granted during the year 1960 were as set out in the following table :—

### VICTORIA—GROUNDS FOR DIVORCE, 1960

Grounds on Which Granted	Dissolution of Marriage		Nullity of Marriage	
	Husbands' Petitions	Wives' Petitions	Husbands' Petitions	Wives' Petitions
Adultery .. .. .	219	154	..	..
Assault and Cruelty .. .. .	..	3	..	..
Desertion .. .. .	344	485	..	..
Desertion and Adultery .. .. .	42	28	..	..
Drunkenness and Failure to Support .. .. .	..	2	..	..
Drunkenness and Cruelty .. .. .	..	8	..	..
Drunkenness and Neglect of Domestic Duties .. .. .	3	..	..	..
Impotence .. .. .	..	..	5	9
Insanity .. .. .	4	2	..	..
Invalid Marriage .. .. .	..	..	1	..
Prior Marriage (Bigamy) .. .. .	..	..	..	1
Sentences for Crime .. .. .	..	2	..	..
Total .. .. .	612	684	6	10

There was also one judicial separation granted during 1960 on the ground of desertion.

The following table shows the number of petitioners to whom decrees were granted in 1960, the ages of such petitioners at date of petition and the number of their issue :—

### VICTORIA—DIVORCE PETITIONS GRANTED : AGES OF PETITIONERS (AT DATE OF PETITION) AND ISSUE, 1960

Ages of Petitioners in Years	Dissolution of Marriage		Nullity of Marriage		Number of Children*	
	Husbands' Petitions	Wives' Petitions	Husbands' Petitions	Wives' Petitions	Husbands' Petitions	Wives' Petitions
Under 21 .. .. .	1	2	..	..	..	4
21-24 .. .. .	15	45	..	3	11	47
25-29 .. .. .	108	131	1	1	96	125
30-34 .. .. .	120	163	2	3	126	243
35-39 .. .. .	110	117	..	..	148	162
40-44 .. .. .	100	89	1	1	140	170
45-49 .. .. .	86	76	..	..	113	125
50-54 .. .. .	37	32	1	2	47	36
55-59 .. .. .	17	18	..	..	25	18
60 and over .. .. .	18	11	1	..	20	17
Total .. .. .	612	684	6	10	726	947

\* Of the total of 1,673, two children were issue of marriages which were annulled.

In addition there was one judicial separation granted on the petition of a wife aged 48, with one child.



In the following table particulars are given of the duration of marriage and issue in respect of the petitions granted for dissolution of marriage during 1960 :—

**VICTORIA—DISSOLUTIONS OF MARRIAGE : PETITIONS GRANTED : DURATION OF MARRIAGE AND ISSUE, 1960**

Duration of Marriage in Years	Number of Children									Total Dissolutions of Marriage	Total Children
	0	1	2	3	4	5	6	7	8 and over		
1 .. ..	3	..	..	..	..	..	..	..	..	3	..
2 .. ..	4	2	..	..	..	..	..	..	..	6	2
3 .. ..	7	1	1	..	..	..	..	..	..	9	3
4 .. ..	27	11	2	..	..	..	..	..	..	40	15
5 .. ..	46	29	7	..	..	..	..	..	..	82	43
6 .. ..	41	20	11	3	1	..	..	..	..	76	55
7 .. ..	29	20	15	3	..	..	..	..	..	67	59
8 .. ..	37	36	18	3	2	..	..	..	..	96	89
9 .. ..	39	28	10	3	..	..	..	..	..	80	57
10 .. ..	29	23	25	2	..	..	..	..	..	79	79
11 .. ..	23	20	17	6	3	..	..	..	..	69	84
12 .. ..	26	21	17	12	1	1	..	..	..	78	100
13 .. ..	25	16	10	12	3	1	..	..	..	67	89
14 .. ..	16	16	23	6	4	3	..	..	1	69	123
15-19 ..	58	45	52	37	11	5	2	..	..	210	341
20-24 ..	28	28	35	31	6	4	4	1	..	137	266
25-29 ..	19	16	21	15	4	4	2	..	2	83	168
30-34 ..	5	8	9	5	2	1	2	..	..	32	66
35-39 ..	2	..	2	3	1	..	..	..	..	8	17
40 and over ..	..	1	1	..	3	..	..	..	..	5	15
Total Dissolutions of Marriage ..	464	341	276	141	41	19	10	1	3	1,296	..
Total Children ..	..	341	552	423	164	95	60	7	29	..	1,671

The following table shows the ages of the parties concerned in the decrees for dissolution of marriage, petitions for which had been granted during 1960 :—

**VICTORIA—DISSOLUTIONS OF MARRIAGE : PETITIONS GRANTED : AGES OF PARTIES AT DATE OF PETITION, 1960**

Ages of Husbands in Years	Ages of Wives in Years										Total Husbands
	Under 21	21-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and over	
Under 21 .. ..	2	..	..	..	..	..	..	..	..	..	2
21-24 .. ..	1	26	2	..	..	..	..	..	..	..	29
25-29 .. ..	2	60	116	23	..	..	1	..	..	..	202
30-34 .. ..	..	16	110	120	18	4	2	1	..	..	271
35-39 .. ..	..	3	21	122	94	18	1	1	..	..	260
40-44 .. ..	..	1	10	29	57	71	21	2	1	..	192
45-49 .. ..	..	..	2	12	36	55	57	4	..	..	166
50-54 .. ..	..	..	..	3	7	15	36	23	7	1	92
55-59 .. ..	..	..	..	1	2	3	10	8	16	3	43
60 and over ..	..	..	..	..	2	1	3	10	8	15	39
<b>Total Wives ..</b>	<b>5</b>	<b>106</b>	<b>261</b>	<b>310</b>	<b>216</b>	<b>167</b>	<b>131</b>	<b>49</b>	<b>32</b>	<b>19</b>	<b>1,296</b>

The following is a table of the number of decrees granted in Victoria for dissolution of marriage and for judicial separation since 1911 :—

### VICTORIA—DISSOLUTIONS OF MARRIAGE AND JUDICIAL SEPARATIONS

Period	Decrees Granted For—		Year	Decrees Granted For—	
	Dissolution of Marriage	Judicial Separation		Dissolution of Marriage	Judicial Separation
1911-20 ..	2,499	14	1956	1,255	2
1921-30 ..	4,403	16	1957	1,345	2
1931-40 ..	6,495	16	1958	1,698	..
1941-50 ..	15,460	22	1959	1,861	..
1951-60 ..	16,054	11	1960	1,296	1

### Births

#### General

The number of births registered in Victoria during the year 1960 was 64,025, the highest ever registered in Victoria.

The rate per 1,000 of mean population in 1960 was 22·14, as compared with 22·13 in 1959, 22·36 in 1958, 22·61 in 1957, and 22·42 in 1956.

In young communities, birth-rates calculated per 1,000 of the mean population are to some extent misleading. In the earlier periods when, owing to immigration, the population consists for the most part of men and women at the reproductive period of life, such rates are naturally high. As time proceeds, notwithstanding that immigration of reproductive adults may be maintained, the proportion of such adults to the total population must diminish, and, with it, consequently the birth-rate.

Stillbirths, which are excluded from both births and deaths, numbered 850 and corresponded to a ratio of 13·28 per 1,000 infants born alive in 1960. The compulsory registration of still-born children became effective in 1953.

There were 1,052 male to every 1,000 female births in 1960, as compared with 1,061 in 1959, 1,059 in 1958, 1,050 in 1957, and 1,065 in 1956.

The following table shows the number of births (male and female), the quarters in which they were registered, and the proportion per 1,000 of the mean population for certain periods since 1935 :—

## VICTORIA—BIRTHS

Period	Average Annual Number of Births	Sex		Quarter of Registration				Rate per 1,000 of Mean Population
		Males	Females	March	June	September	December	
1935-39 ..	29,467	15,113	14,354	7,285	7,154	7,466	7,562	15·87
1940-44 ..	36,154	18,539	17,615	8,873	8,611	9,211	9,459	18·53
1945-49 ..	45,646	23,453	22,193	11,185	10,919	11,366	12,176	22·13
1950-54 ..	52,468	26,905	25,563	13,137	12,684	13,228	13,419	22·47
1955-59 ..	59,741	30,706	29,035	14,773	14,644	15,030	15,294	22·34
1956 ..	58,393	30,115	28,278	14,757	14,268	14,579	14,789	22·42
1957 ..	60,464	30,968	29,496	15,273	14,544	14,958	15,689	22·61
1958 ..	61,269	31,517	29,752	15,187	14,302	15,968	15,812	22·36
1959 ..	62,245	32,041	30,204	14,715	16,304	15,465	15,761	22·13
1960 ..	64,025	32,825	31,200	15,229	16,063	17,019	15,714	22·14

NOTE.—Owing to changes in registration procedure, figures for September and December quarters, 1960, are not strictly comparable with corresponding quarters for other years.

The following statement shows the birth-rate per 1,000 of the mean population in the Australian States for each of the five years 1956 to 1960 :—

## AUSTRALIA—BIRTH-RATES

Year			New South Wales	Vic-toria	Queens-land	South Aus-tralia	Western Aus-tralia	Tas-manian	Aus-tralia
1956	..	..	21·29	<b>22·42</b>	23·72	22·35	24·98	25·15	22·50
1957	..	..	21·93	<b>22·61</b>	24·25	22·35	24·47	25·55	22·86
1958	..	..	21·67	<b>22·36</b>	23·95	22·35	23·71	25·37	22·59
1959	..	..	21·51	<b>22·13</b>	24·77	22·12	23·80	25·05	22·56
1960	..	..	21·41	<b>22·14</b>	24·14	22·19	23·14	25·26	22·40

The average ages of fathers and of mothers of nuptial children whose births were recorded in 1960 were 31·3 and 28·0 years respectively. The proportions of both parents in various age groups are shown in the following table for the year 1960 :—

VICTORIA—NUPTIAL BIRTHS: PERCENTAGE OF PARENTS  
IN EACH AGE GROUP, 1960

Age Group						Percentage of Total	
						Fathers	Mothers
Under 20	..	..	..	..	..	0·80	5·35
20-24	..	..	..	..	..	14·72	29·91
25-29	..	..	..	..	..	30·94	30·84
30-34	..	..	..	..	..	28·30	20·83
35-39	..	..	..	..	..	15·88	10·33
40-44	..	..	..	..	..	6·08	2·56
45-49	..	..	..	..	..	2·39	0·18
50 and over..	..	..	..	..	..	0·89	..
						100·00	100·00

The number of cases of multiple births and the proportion per 1,000 of the total cases of births in each of the five years 1956 to 1960 were as follows :—

VICTORIA—MULTIPLE BIRTHS

Year			Cases of Twins	Cases of Triplets	Total Multiple Cases	Multiple Cases per 1,000 of Total Cases
1956	..	..	691	4	695	12·04
1957	..	..	695	10	705	11·80
1958	..	..	759	9	768	12·69
1959	..	..	711	7	718	11·67
1960	..	..	734	4	738	11·66

The last case of quadruplets occurred in 1951.

On the average of the five years 1956 to 1960, the proportion of mothers of twins was one in 84, of mothers of triplets, one in 8,906, and of mothers of all multiple births, one in 83 mothers.

*Adoption of Children*

Provision for the legal adoption of children and the registration of each adoption is contained in the *Adoption of Children Act* 1958. Details of the history of this legislation are contained on page 483 of the Victorian Year Book 1954–58.

The following table shows the number of legal adoptions (male and female) from 1956 :—

## VICTORIA—CHILDREN LEGALLY ADOPTED

Period					Number of Children Adopted	
					Males	Females
1956	..	..	..	..	600	643
1957	..	..	..	..	612	612
1958	..	..	..	..	633	665
1959	..	..	..	..	576	656
1960	..	..	..	..	633	649

*Children Legitimated*

Provision for the legitimation of children is contained in the *Registration of Births, Deaths, and Marriages Act* 1958.

The table below shows the number of legitimations and the proportion per 100 ex-nuptial births from 1956 :—

## VICTORIA—LEGITIMATIONS

Period					Number of Legitimations	Proportion per 100 Ex-nuptial Births
1956	..	..	..	..	97	4·9
1957	..	..	..	..	124	6·0
1958	..	..	..	..	87	3·9
1959	..	..	..	..	86	3·7
1960	..	..	..	..	107	4·5

Legitimation Acts are in force in all the Australian States, but differ greatly in content, and as a consequence there are marked differences in the numbers of legitimations resulting from them. In proportion to every 100 children born out of wedlock in 1960, the numbers of legitimations in the several States during that year were as follows :—Victoria, 4·5 ; New South Wales, 7·1 ; Queensland, 9·6 ; South Australia, 5·5 ; Western Australia, 22·6 ; and Tasmania, 15·7.

*Ex-nuptial Births*

The following table shows the number of ex-nuptial births and their percentage to total births for certain periods since 1935 :—

## VICTORIA—EX-NUPTIAL BIRTHS

Period	Average Annual Number of Births	Average Annual Number of Ex-nuptial Births			Percentage of Total Births
		Male	Female	Total	
1935-39 .. ..	29,467	613	615	1,228	4.17
1940-44 .. ..	36,154	701	638	1,339	3.70
1945-49 .. ..	45,646	801	777	1,578	3.46
1950-54 .. ..	52,468	892	875	1,767	3.37
1955-59 .. ..	59,741	1,070	1,026	2,096	3.51
1956 .. ..	58,393	1,025	955	1,980	3.39
1957 .. ..	60,464	1,055	1,010	2,065	3.42
1958 .. ..	61,269	1,141	1,078	2,219	3.62
1959 .. ..	62,245	1,161	1,147	2,308	3.71
1960 .. ..	64,025	1,241	1,139	2,380	3.72

The percentages of ex-nuptial to total births in the various States in 1960 were as follows :—Victoria, 3.72 ; New South Wales, 5.02 ; Queensland, 6.17 ; South Australia, 3.50 ; Western Australia, 5.44 ; Tasmania, 4.89 ; and Australia, 4.77.

## Deaths

The following table shows the number of deaths (male and female), the quarters in which they were registered, and the proportion per 1,000 of the mean population for certain periods since 1935 :—

## VICTORIA—DEATHS

Period	Average Annual Number of Deaths	Sex		Quarter of Registration				Rate per 1,000 of Mean Population
		Males	Females	March	June	September	December	
1935-39* ..	18,994	10,109	8,885	4,043	4,780	5,630	4,541	10.23
1940-44* ..	20,904	11,009	9,895	4,389	5,142	6,338	5,035	10.71
1945-49* ..	21,458	11,299	10,159	4,558	5,262	6,300	5,338	10.40
1950-54 ..	22,863	12,273	10,590	4,891	5,669	6,653	5,650	9.79
1955-59 ..	23,849	12,888	10,961	5,119	5,950	7,012	5,768	8.92
1956 ..	23,886	12,862	11,024	4,867	5,770	7,340	5,909	9.17
1957 ..	24,131	13,084	11,047	5,378	5,728	7,157	5,868	9.03
1958 ..	23,625	12,779	10,846	4,949	5,857	7,019	5,800	8.62
1959 ..	25,078	13,730	11,348	5,609	6,679	6,860	5,930	8.92
1960 ..	24,547	13,376	11,171	5,584	6,114	7,861	4,988	8.49

\* Excludes deaths of defence personnel from September, 1939 to June, 1947.

NOTE.—Owing to changes in registration procedure, figures for September and December quarters, 1960, are not strictly comparable with corresponding quarters for other years.

In 1960 there were 1,197 male to every 1,000 female deaths, the average for the preceding five years being 1,176. The corresponding proportion of male to female births in the same quinquennium was 1,058.

The following table shows the death-rate per 1,000 of the mean population in each of the Australian States for each of the five years 1956 to 1960 :—

### AUSTRALIA—DEATH-RATES

Year	New South Wales	Victoria	Queens-land	South Australia	Western Australia	Tasmania	Australia
1956 .. ..	9·58	<b>9·17</b>	8·92	8·95	8·23	7·80	9·13
1957 .. ..	9·20	<b>9·03</b>	8·39	8·67	7·66	8·09	8·81
1958 .. ..	8·76	<b>8·62</b>	8·10	8·63	7·87	8·02	8·50
1959 .. ..	9·38	<b>8·92</b>	8·59	8·62	7·65	8·07	8·87
1960 .. ..	9·15	<b>8·49</b>	8·48	8·26	7·79	7·62	8·61

The ages of males and of females who died in each of the years 1958 to 1960 are shown in the following table :—

### VICTORIA—AGES AT DEATH

Ages	1958			1959			1960		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Under 1 year .. ..	644	534	1,178	744	576	1,320	681	501	1,182
1 year .. ..	54	40	94	57	36	93	50	38	88
2 years .. ..	41	24	65	28	32	60	36	35	71
3 .. ..	19	13	32	32	17	49	23	20	43
4 .. ..	26	10	36	22	21	43	16	18	34
5-9 years .. ..	84	51	135	82	53	135	81	52	133
10-14 .. ..	50	39	89	60	41	101	53	42	95
15-19 .. ..	99	23	122	124	48	172	140	51	191
20-24 .. ..	147	49	196	155	41	196	134	47	181
25-29 .. ..	112	49	161	118	58	176	130	61	191
30-34 .. ..	168	75	243	171	89	260	168	96	264
35-39 .. ..	212	150	362	259	125	384	223	140	363
40-44 .. ..	281	200	481	287	182	469	306	204	510
45-49 .. ..	479	293	772	498	318	816	515	318	833
50-54 .. ..	708	414	1,122	755	400	1,155	750	387	1,137
55-59 .. ..	1,031	534	1,565	1,121	576	1,697	1,049	532	1,581
60-64 .. ..	1,317	887	2,204	1,332	828	2,160	1,337	831	2,168
65-69 .. ..	1,748	1,183	2,931	1,849	1,219	3,068	1,761	1,250	3,011
70-74 .. ..	1,713	1,461	3,174	1,885	1,500	3,385	1,960	1,504	3,464
75-79 .. ..	1,630	1,614	3,244	1,813	1,716	3,529	1,648	1,648	3,296
80-84 .. ..	1,141	1,480	2,621	1,217	1,590	2,807	1,261	1,621	2,882
85-89 .. ..	746	1,132	1,878	780	1,159	1,939	709	1,114	1,823
90-94 .. ..	264	477	741	276	561	840	282	527	809
95-99 .. ..	53	98	151	56	150	206	55	121	176
100 years and over .. ..	2	12	14	5	11	16	4	12	16
Unknown .. ..	10	4	14	1	1	2	4	1	5
Total .. ..	12,779	10,846	23,625	13,730	11,348	25,078	13,376	11,171	24,547

Of the 73,250 persons who died in Victoria during the above three years, 14,919 (or approximately 24 per cent.) were aged 80 years and upwards, and 46—11 males and 35 females—were stated as having attained or passed the age of 100 years. In 1900, deaths of persons aged 80 years and over represented about 7 per cent. of the total deaths in that year.

### *Causes of Death*

The Sixth (1948) Revision of the International List of Causes of Death was adopted for use in 1950.

The Revision introduced international rules for a uniform method of selecting the main cause of death to be tabulated if more than one cause is stated on the death certificate.

The comparability of statistics for years subsequent to 1950 with those for years prior to 1950 has been affected by the adoption of the new method.

The Seventh (1955) Revision of the International List of Causes of Death was adopted for use in 1958.

The causes of death in Victoria for 1960, according to the abbreviated List of the Seventh (1955) Revision of the International List of Causes of Death, the proportion of total deaths from each cause, and the rate per million of mean population are shown in the following table :—

VICTORIA—CAUSES OF DEATH : NUMBERS AND RATES, 1960

Cause of Death*	Number of Deaths	Proportion of Total	Rate per 1,000,000 of Mean Population
		per cent.	
1. Tuberculosis of Respiratory System (1-8) ..	125	0·51	43
2. Tuberculosis, Other Forms (10-19) ..	13	0·05	4
3. Syphilis and Its Sequelae (20-29) ..	24	0·10	8
4. Typhoid Fever (40) ..	..	..	..
5. Cholera (43) ..	..	..	..
6. Dysentery, All Forms (45-48) ..	..	..	..
7. Scarlet Fever and Streptococcal Sore Throat (50,51)	..	..	..
8. Diphtheria (55) ..	..	..	..
9. Whooping Cough (56) ..	..	..	..
10. Meningococcal Infections (57) ..	7	0·03	2
11. Plague (58) ..	..	..	..
12. Acute Poliomyelitis (80) ..	..	..	..
13. Smallpox (84) ..	..	..	..
14. Measles (85) ..	2	0·01	1
15. Typhus and Other Rickettsial Diseases (100-108) ..	..	..	..
16. Malaria (110-117) ..	..	..	..
17. All Other Diseases Classed as Infective and Parasitic	72	0·29	25
18. Malignant Neoplasms, Including Neoplasms of			
Lymphatic and Haematopoietic Tissues (140-205)	3,901	15·89	1,349
19. Benign and Unspecified Neoplasms (210-239) ..	74	0·30	26
20. Diabetes Mellitus (260) ..	396	1·61	137
21. Anaemias (290-293) ..	74	0·30	26
22. Vascular Lesions Affecting Central Nervous System			
(330-334) ..	3,243	13·21	1,122
23. Nonmeningococcal Meningitis (340) ..	29	0·12	10
24. Rheumatic Fever (400-402) ..	4	0·02	1
25. Chronic Rheumatic Heart Disease (410-416) ..	221	0·90	76
26. Arteriosclerotic and Degenerative Heart Disease			
(420-422) ..	7,225	29·43	2,499
27. Other Diseases of the Heart (430-434) ..	752	3·06	260



VICTORIA—CAUSES OF DEATH : NUMBERS AND RATES, 1960—  
*continued*

Cause of Death*	Number of Deaths	Proportion of Total	Rate per 1,000,000 of Mean Population
		per cent.	
28. Hypertension with Heart Disease (440-443) ..	511	2.08	176
29. Hypertension without Mention of Heart (444-447) ..	297	1.21	103
30. Influenza (480-483) .. .. .	46	0.19	16
31. Pneumonia (490-493) .. .. .	745	3.04	258
32. Bronchitis (500-502) .. .. .	462	1.88	160
33. Ulcer of Stomach and Duodenum (540, 541) ..	164	0.67	57
34. Appendicitis (550-553) .. .. .	30	0.12	10
35. Intestinal Obstruction and Hernia (560, 561, 570)	119	0.49	41
36. Gastritis, Duodenitis, Enteritis and Colitis, except Diarrhoea of the Newborn (543, 571, 572) ..	88	0.36	30
37. Cirrhosis of Liver (581) .. .. .	169	0.69	58
38. Nephritis and Nephrosis (590-594) .. .. .	239	0.97	83
39. Hyperplasia of Prostate (610) .. .. .	127	0.52	44
40. Complications of Pregnancy, Childbirth, and the Puerperium (640-689) .. .. .	16	0.07	6
41. Congenital Malformations (750-759) .. .. .	368	1.50	127
42. Birth Injuries, Postnatal Asphyxia and Atelectasis (760-762) .. .. .	425	1.73	147
43. Infections of the Newborn (763-768) .. .. .	37	0.15	13
44. Other Diseases Peculiar to Early Infancy, and Immaturity Unqualified (769-776) .. .. .	248	1.01	86
45. Senility without Mention of Psychosis, Ill-defined and Unknown Causes (780-795) .. .. .	196	0.80	68
46. All Other Diseases .. .. .	2,435	9.92	842
47. Motor Vehicle Accidents (E810-E835) .. .. .	742	3.02	257
48. All Other Accidents (E800-E802, E840-E962) ..	627	2.55	217
49. Suicide and Self-inflicted Injury (E963, E970-E979)	257	1.05	89
50. Homicide and Operations of War (E964, E965, E980-E999) .. .. .	37	0.15	13
Total .. .. .	24,547	100.00	8,490

\* Figures in parentheses are in respect of the Seventh Revision of the International List of Causes of Death.

### *Tuberculosis*

The number of deaths ascribed to tuberculosis during 1960 was 138, the rate per million of mean population being 47.

The deaths from tuberculosis of the respiratory system in 1960 numbered 125 and equalled a rate of 43 per million of the mean population. Rates for previous periods were 130 for 1950-54, 294 in 1945-49, 660 in 1918-22, 855 in 1908-12, and 1,365 in 1890-92. In 1960, tuberculosis of the respiratory system was responsible for 91 per cent. of the total deaths from tuberculosis. Of the 97 males and 28 females dying from tuberculosis of the respiratory system in 1960, four males and seven females were under the age of 45 years.

### *Infective and Parasitic Diseases*

There has been a remarkable decrease in both the incidence and mortality rate of certain infective and parasitic diseases since the beginning of the century. Particulars of the decreases in diseases such as tuberculosis, typhoid fever, scarlet fever, streptococcal sore throat, diphtheria, whooping cough, meningococcal infections, small-pox and measles appeared on pages 493 to 495 of the Victorian Year Book 1954-58.

The incidence of poliomyelitis in Victoria has been recorded since the year 1916, when the disease was added to the list of compulsorily notifiable diseases. Since that year the most serious epidemic occurred in 1937-38 when 2,096 cases were reported, resulting in 113 deaths. Other epidemics occurred in 1918 (303 cases, 21 deaths), 1925 (140 cases, 25 deaths), 1949 (760 cases, 48 deaths), and 1954 (569 cases, 36 deaths).

During 1960, there were 25 cases notified which represented a rate of nine per million of population. No deaths occurred during the year.

Distribution of the Salk poliomyelitis vaccine began in July, 1956, and there was a marked decline in the number of cases reported since that date. (See pages 246-247).

### *Malignant Neoplasms*

Deaths classified as malignant neoplasms since 1950 include deaths from Hodgkins' disease and leukaemia and aleukaemia, which were not formerly included with neoplasms. Deaths from malignant neoplasms in 1960 numbered 3,901 and represented a rate of 1,349 per million of mean population.

Rates for previous periods were 1,403 in 1959, 1,329 in 1958, 1,401 in 1957, and 1,405 in 1956.

Death-rates relating to malignant neoplasms, computed in relation to the general population in earlier and in later periods, are not comparable owing to the changed age distribution of the people. Satisfactory comparisons are obtained by relating the deaths with the number of persons in the community of the same sex, in age groups. This has been done for six census periods, when the numbers of the people in age groups were accurately known, and the results are given in the appended table :—

### VICTORIA—DEATH-RATES FROM MALIGNANT NEOPLASMS IN AGE GROUPS

Age Group			Annual Deaths from Malignant Neoplasms per 10,000 of Each Sex					
			1900-02	1910-12	1920-22	1932-34	1946-48	1953-55
MALES								
Under 5	..	..	0.30	0.73	0.46	0.27	0.60	1.11
5-9	..	..	0.42	0.25	0.13	0.20	0.34	0.98
10-14	..	..	0.20	0.16	0.14	0.24	0.24	0.69
15-19	..	..	0.22	0.15	0.30	0.37	0.61	0.93
20-24	..	..	0.33	0.71	0.64	0.73	0.69	1.27
25-34	..	..	1.26	0.96	0.76	0.93	1.20	1.32
35-44	..	..	3.69	3.16	3.31	3.04	3.00	4.01
45-54	..	..	14.14	16.03	13.94	10.13	11.65	13.25
55-64	..	..	36.00	36.36	40.46	37.25	32.73	36.99
65-74	..	..	59.04	74.15	78.21	85.19	80.46	82.41
75 and over	..	..	74.04	88.40	110.12	133.78	148.20	163.06
All Ages	..	..	7.52	8.50	9.52	11.63	13.51	13.76

**VICTORIA—DEATH-RATES FROM MALIGNANT NEOPLASMS IN AGE GROUPS—*continued***

Age Group			Annual Deaths from Malignant Neoplasms per 10,000 of Each Sex					
			1900-02	1910-12	1920-22	1932-34	1946-48	1953-55
<b>FEMALES</b>								
Under 5	..	..	0·26	0·19	0·39	0·38	0·48	1·37
5-9	..	..	0·04	0·10	0·17	0·17	0·18	0·60
10-14	..	..	..	0·27	0·05	0·08	0·40	0·71
15-19	..	..	0·28	0·44	0·15	0·17	0·04	0·49
20-24	..	..	0·23	0·41	0·30	0·39	0·60	0·56
25-34	..	..	1·61	1·39	1·28	1·57	1·75	1·81
35-44	..	..	6·05	7·26	6·61	6·00	6·23	6·14
45-54	..	..	18·13	17·87	19·14	17·31	16·47	16·46
55-64	..	..	33·05	38·03	34·48	35·82	33·40	30·93
65-74	..	..	51·18	61·66	63·05	61·17	61·44	59·38
75 and over	..	..	62·70	86·19	92·86	106·19	111·49	117·02
All Ages	..	..	6·64	8·76	9·63	12·00	14·50	14·16

Deaths from malignant neoplasms occur at all age periods, but the rates in the above table show that it is essentially a disease of later life, increasing rapidly in the groups past middle age and reaching a maximum mortality rate in the oldest age group.

The number of deaths from malignant neoplasms in the year 1960, classified according to sex and age group, is given in the following table :—

**VICTORIA—DEATHS FROM MALIGNANT NEOPLASMS IN AGE GROUPS, 1960**

Age Group	Males	Females	Total	Age Group	Males	Females	Total
0-4 ..	16	17	33	45-49 .. ..	97	133	230
5-9 ..	16	7	23	50-54 .. ..	161	134	295
10-14 ..	9	10	19	55-59 .. ..	205	172	377
15-19 ..	14	9	23	60-64 .. ..	243	218	461
20-24 ..	12	6	18	65-69 .. ..	301	272	573
25-29 ..	6	14	20	70-74 .. ..	318	244	562
30-34 ..	19	35	54	75-79 .. ..	226	204	430
35-39 ..	27	56	83	80-84 .. ..	271	315	586
40-44 ..	48	66	114	Total ..	1,989	1,912	3,901

Ninety per cent. of the deaths from malignant neoplasms in the year 1960 were at ages 45 years and upwards.

The following table shows the site of the disease in persons who died from malignant neoplasms in 1960 :—

VICTORIA—DEATHS FROM MALIGNANT NEOPLASMS, 1960

Site of Disease*	Males	Females	Total
Buccal Cavity and Pharynx (140-148) ..	41	27	68
Oesophagus (150) .. .. .	48	21	69
Stomach (151) .. .. .	268	190	458
Intestine, except Rectum (152, 153) ..	192	277	469
Rectum (154) .. .. .	96	77	173
Larynx (161) .. .. .	29	4	33
Trachea, and Bronchus and Lung, Not Specified as Secondary (162, 163) .. .. .	401	74	475
Breast (170) .. .. .	1	378	379
Cervix Uteri (171) .. .. .	..	112	112
Other and Unspecified Parts of Uterus (172-174)	..	67	67
Prostate (177) .. .. .	230	..	230
Skin (190) .. .. .	21	26	47
Bone and Connective Tissue (196, 197) ..	27	21	48
All Other and Unspecified Sites .. ..	458	486	944
Leukaemia and Aleukaemia (204) .. ..	86	79	165
Other Neoplasms of Lymphatic and Haemato- poietic System (200-203, 205) .. ..	91	73	164
Total .. .. .	1,989	1,912	3,901

\* Figures in parentheses are in respect of the Seventh Revision of the International List of Causes of Death.

### *Diabetes Mellitus*

During 1960 diabetes was responsible for 155 male and 241 female deaths, representing a rate of 137 per million of the mean population. Rates for previous periods were 131 in 1959, 150 in 1958, 167 in 1957, and 176 in 1956.

### *Vascular Lesions Affecting Central Nervous System*

In 1960, 1,281 male and 1,962 female deaths were ascribed to vascular lesions affecting the central nervous system, the total—3,243—corresponding to a rate of 1,122 per million of the mean population. Of the 3,243 deaths in 1960, 172 were due to subarachnoid haemorrhage, 1,637 to cerebral haemorrhage, 1,165 to cerebral embolism and thrombosis, and 269 to other vascular lesions.

### *Diseases of the Heart*

During 1960 there were 8,709 deaths ascribed to diseases of the heart, including 221 due to chronic rheumatic heart disease, 7,225 to arteriosclerotic and degenerative heart disease, 752 to other diseases of

the heart, and 511 to hypertension with heart disease. The total of these causes in 1960 represented a rate of 3,011 per million of the mean population.

#### *Diseases of the Respiratory System*

In 1960 deaths from diseases of the respiratory system numbered 1,560 which represented a rate of 540 per million of the mean population. Of these deaths in 1960, 46 were due to influenza, 93 to lobar pneumonia, 533 to broncho-pneumonia, 119 to other and unspecified pneumonia, 462 to bronchitis, four to empyema and abscess of lung, five to pleurisy, 16 to pulmonary congestion and hypostasis, 23 to bronchiectasis, and 259 to other diseases.

The 46 deaths from influenza in 1960 represented a rate of 16 per million of the mean population.

Influenza has generally proved more fatal to elderly people than to those at middle or young ages. In the epidemic of 1919, however, 72 per cent. of the deaths were of persons between 20 and 50 years of age. In 1960, 11 per cent. of the deaths were of persons under 50 years of age.

#### *Diseases of the Digestive System*

In 1960 there were 436 male and 354 female deaths from diseases of the digestive system, representing a rate of 270 per million of the mean population. Rates for previous periods were 303 in 1959, 288 in 1958, 289 in 1957, and 297 in 1956. Deaths from these causes in 1960 were :—164 from ulcers of the stomach and duodenum, two from gastritis and duodenitis, 30 from appendicitis, 119 from intestinal obstruction and hernia, 86 from gastro-enteritis and colitis, except diarrhoea of the newborn, 169 from cirrhosis of the liver, 83 from cholelithiasis and cholecystitis, and 137 from other diseases.

#### *Diseases of the Genito-urinary System*

In 1960 there were 544 deaths attributed to diseases of the genito-urinary system. This number represented a rate of 188 per million of the mean population. In 1960 nephritis and nephrosis were responsible for 239 deaths, infections of the kidney for 116, calculi of urinary system for twelve, hyperplasia of prostate for 127, and other diseases of genito-urinary system for 50.

#### *Maternal Deaths*

The death-rate of women in childbirth is usually ascertained by comparing the number of deaths of parturient women with the total number of live births.

This rate varies considerably at different ages, and is higher at older than younger ages. The number of deaths of women in childbirth and

the death-rates in various age groups in Victoria for the period 1926 to 1930 and the years 1958, 1959 and 1960 are shown in the following table :—

## VICTORIA—MATERNAL DEATHS

Age Group	Deaths of Mothers				Deaths per 10,000 Children Born Alive to Mothers in Each Age Group			
	1926-30 *	1958	1959	1960	1926-30	1958	1959	1960
Under 20 ..	8	1	..	1	47.1	2.8	..	2.5
20-24 ..	30	2	..	..	39.1	1.1	..	..
25-29 ..	47	4	6	5	46.5	2.1	3.1	2.6
30-34 ..	45	8	4	4	56.8	6.2	3.1	3.0
35-39 ..	45	2	4	3	88.1	3.1	6.2	4.6
40 and over ..	22	2	2	3	117.8	10.9	11.2	17.0
Total ..	197	19	16	16	57.4	3.1	2.6	2.5

\* Average annual number

The experience of the years 1926-30 showed that, for the age period 35 years and upwards, the deaths of mothers in childbirth were 96 per 10,000 children born alive to mothers in that age group, as compared with 47 per 10,000 for those under that age. Corresponding figures for 1960 were 7 per 10,000 live births and 2 per 10,000 live births respectively.

*Accidental Deaths*

The following table shows particulars of deaths in Victoria in 1960 which were due to accidents, and which represented 6 per cent. of the total deaths :—

## VICTORIA—ACCIDENTAL DEATHS, 1960

International List No.	Cause of Death	Males	Females	Total
E800-E802 .. ..	Railway accidents .. ..	17	4	21
E810-E835 .. ..	Motor vehicle accidents .. ..	537	205	742
E840-E845 .. ..	Other road vehicle accidents .. ..	12	4	16
E850-E858 .. ..	Water transport accidents .. ..	8	2	10
E860-E866 .. ..	Aircraft accidents .. ..	9	1	10
E870-E888 .. ..	Accidental poisoning by solid and liquid substances .. ..	21	16	37
E890-E895 .. ..	Accidental poisoning by gases and vapours .. ..	7	8	15
E900-E904 .. ..	Accidental falls .. ..	82	118	200
E912 .. ..	Accident caused by machinery .. ..	17	..	17
E914 .. ..	Accident caused by electric current .. ..	13	2	15
E916 .. ..	Accident caused by fire and explosion of combustible material .. ..	30	25	55
E917, E918 .. ..	Accident caused by hot substance, corrosive liquid, steam, and radiation .. ..	2	4	6
E919 .. ..	Accident caused by firearm .. ..	29	1	30

VICTORIA—ACCIDENTAL DEATHS, 1960—*continued*

International List No.	Cause of Death	Males	Females	Total
E924, E925 .. ..	Accidental mechanical suffocation ..	9	2	11
E927 .. ..	Accidents caused by bites and stings of venomous animals and insects ..	1	..	1
E928 .. ..	Other accidents caused by animals ..	3	1	4
E929 .. ..	Accidental drowning and submersion ..	92	22	114
E935 .. ..	Lightning .. ..	1	..	1
E910, E911, E913, E915, E920-E923, E926, E930-E934, E936, E940-E946, E950-E959, E960-E962 .. ..	All other accidental causes .. ..	49	15	64
	Total .. ..	939	430	1,369

For the five years 1956 to 1960, the female mortality rate from accidents was 42 per cent. of the rate for males.

*Accidental Deaths Involving Motor Vehicles*

The number of motor vehicles (including motor cycles) registered in Victoria and the deaths in which they were involved, for the years 1956 to 1960, were as follows :—

## VICTORIA—DEATHS INVOLVING MOTOR VEHICLES

Year	Number of Motor Vehicles at 30th June	Deaths Involving Motor Vehicles		
		Number	Per 10,000 Motor Vehicles	Per 1,000,000 of Mean Population
1956 .. ..	677,916	592	8·7	227
1957 .. ..	708,582	667	9·4	249
1958 .. ..	747,834	597	8·0	218
1959 .. ..	789,358	670	8·5	238
1960 .. ..	846,830	742	8·8	257

The mortality rate per 10,000 vehicles was 8·7 for the period 1956 to 1960, as compared with a rate of 11·1 in 1951 to 1955. The mortality rate (277) per million of mean population in 1951 was the highest on record.

In 1960, motor cars, &c., were involved in 8·6 deaths per 10,000 cars registered, and motor cycles in 15·9 deaths per 10,000 motor cycles registered.

*Transport Accidents*

In 1960, deaths from all transport accidents numbered 799, as against 739 in 1959, 659 in 1958, 714 in 1957, and 634 in 1956.

During the year 1960, deaths connected with transport represented 58 per cent. of the total deaths from accidents. The corresponding percentage in 1959 was 54.

In the following table details are given of deaths due to collisions between various types of transport, and to other fatal accidents in which transport was concerned, for the year 1960 :—

### VICTORIA—DEATHS FROM TRANSPORT ACCIDENTS, 1960

Particulars	Deaths from Collisions Between—									Deaths from Other Transport Accidents	Total Deaths from Transport Accidents	
	Motor Car	Motor Omnibus	Other Motor Vehicle (Except Motor Cycle)	Motor Cycle	Horse-drawn Vehicle	Bicycle	Animal	Fixed Object	Total Deaths from Collisions		Males	Females
Railway Vehicle .. .. .	25	7	8	..	..	..	..	2	42	19	40	21
Tramcar .. .. .	7	..	..	..	..	..	..	..	7	10	13	4
Motor Car .. .. .	93	2	58	12	..	40	1	2	208	385	423	170
Motor Omnibus .. .. .	..	..	1	..	..	2	..	..	3	1	3	1
Other Motor Vehicle (Except Motor Cycle) .. .. .	..	..	10	9	..	8	..	..	27	57	73	11
Motor Cycle .. .. .	..	..	..	..	..	1	..	..	1	13	10	4
Horse-drawn Vehicle .. .. .	..	..	..	..	..	..	..	..	..	..	..	..
Bicycle .. .. .	..	..	..	..	..	..	..	..	..	5	4	1
Aeroplane .. .. .	..	..	..	..	..	..	..	..	..	10	9	1
Water Transport .. .. .	..	..	..	..	..	..	..	..	..	10	8	2
Animal .. .. .	..	..	..	..	..	..	..	..	..	1	1	..
Total .. .. .	125	9	77	21	..	51	1	4	288	511	584	215

\* Includes rail accidents to six railway employees.

### Suicide and Self-inflicted Injury

In the year 1960, 171 males and 86 females committed suicide or died from self-inflicted injury not specified as accidental. These deaths represented a rate of 89 per million of the population as compared with 94 in 1959, 90 in 1958, 89 in 1957, and 70 in 1956.

Of the 171 male deaths in 1960, 62 (36 per cent.) were connected with firearms and explosives.

A much lower rate occurs among females than among males, the rate for the former for the five-year period 1956 to 1960 being 44 per cent. of that of the latter.

### Homicide

The deaths ascribed to homicide in 1960 numbered 34 (22 males and 12 females).

These deaths represented a rate of 12 per million of the population in 1960 as compared with 10 in 1959, 12 in 1958, 6 in 1957, and 10 in 1956.

Since 1930, deaths from criminal abortion have been excluded from this category and included with deaths from maternal causes.

### Infant Mortality

The mortality of children under one year, in proportion to live births, reveals a remarkable decline since 1890—the deaths per 1,000 children born having fallen from 133 in 1885 to 1889 to 20 in 1956 to 1960—a reduction of 85 per cent. In other words, where 100 infants died in the earlier period, only fifteen died in the latter.



The reduction has been contributed to by various health Acts and educative measures, including the notification of infectious diseases, the regulation of the manufacture, sale and distribution of foodstuffs and patent medicines, and the ensuring of a pure water supply. The passing of the Midwives Act in 1915 and the inauguration of the Infant Welfare Movement in 1917 coincide with and, in a large degree, account for the reduction of the rate in latter years.

The infant death-rates for Melbourne Metropolitan Area, for the remainder of the State, and for the whole State, for certain periods since 1935, are shown in the following table :—

### VICTORIA—INFANT MORTALITY

Period	Melbourne Metropolitan Area		Remainder of State		Victoria	
	Average Annual Number of Deaths under One Year	Rate per 1,000 Live Births	Average Annual Number of Deaths under One Year	Rate per 1,000 Live Births	Average Annual Number of Deaths under One Year	Rate per 1,000 Live Births
1935-39 ..	543	37.9	574	37.9	1,117	37.9
1940-44 ..	738	36.4	594	37.5	1,332	36.8
1945-49 ..	643	25.0	516	25.9	1,159	25.4
1950-54 ..	559	20.1	547	22.2	1,106	21.1
1955-59 ..	665	19.0	511	20.7	1,176	19.7
1956 ..	623	18.3	505	20.7	1,128	19.3
1957 ..	695	19.6	524	20.9	1,219	20.2
1958 ..	710	19.6	468	18.6	1,178	19.2
1959 ..	758	20.3	562	22.5	1,320	21.2
1960 ..	734	18.7	448	18.0	1,182	18.5

The practice was introduced in 1923 of allotting all births and deaths to the place of usual residence of the parties. In the cases of births and infant deaths the mother's residence is considered to be that of the child. This accounts for the slight increase in the rate for the remainder of the State in the period 1920 to 1924, and the corresponding decrease in the rate for the metropolis.

The infant death-rates have shown a decrease in each quinquennial period from 1885 onwards. In 1954 the rate fell below 20 per 1,000 births for the first time on record. The lowest rate recorded was in 1955 when the figure was 18.4. In 1960 the rate was 18.5.

The decrease in the infant death-rate, since the earlier periods, has been shared proportionally by each age group except that of "under one week". The rate per 1,000 births for infants "under one week" has varied from 21.5 in the quinquennium 1910 to 1914 to 22.7 in 1925 to 1929 and 12.7 in 1955 to 1959. The rate for infants "one week and under one month" declined from 11.1 in 1910 to 1914 to 1.8 in 1955 to 1959, a decrease of 84 per cent., and that for infants "one month and under one year" from 41.2 to 5.2, a decrease of 87 per cent. Between the ages of one month and one year, Victoria lost 64 out of every 1,000 children born in 1900 to 1904, 33 in 1915 to 1919, and 5 in 1955 to 1959. In 1960 the mortality of infants "under one week" comprised 65 per cent. of the total infant mortality.

The rate for male infants is consistently higher than that for females, and in 1955 to 1959 exceeded the female rate by 17.8 per cent.

The following tables show infant mortality rates at certain ages under one year :—

### VICTORIA—INFANT MORTALITY AT CERTAIN AGES

Period	Deaths under One Year per 1,000 Live Births							Males	Females
	Under One Week	One Week and under One Month	One Month and under Three Months	Three Months and under Six Months	Six Months and under Twelve Months	Total under One Year			
1935-39 ..	21.1	5.1	3.7	2.9	5.1	37.9	42.0	33.6	
1940-44 ..	19.8	5.6	4.0	3.2	4.2	36.8	41.0	32.5	
1945-49 ..	15.9	2.9	2.3	1.9	2.4	25.4	28.4	22.3	
1950-54 ..	13.4	2.1	1.7	1.8	2.1	21.1	23.4	18.5	
1955-59 ..	12.7	1.8	1.6	1.8	1.8	19.7	21.2	18.0	
1956 ..	12.4	1.8	1.6	1.7	1.8	19.3	20.9	17.7	
1957 ..	13.2	1.8	1.7	1.7	1.8	20.2	21.4	18.8	
1958 ..	12.8	1.7	1.4	1.8	1.5	19.2	20.4	17.9	
1959 ..	13.4	1.8	1.8	2.2	2.0	21.2	23.2	19.1	
1960 ..	12.1	1.7	1.5	1.6	1.6	18.5	20.7	16.1	

### VICTORIA—INFANT MORTALITY AT CERTAIN AGES, BY SEX, 1960

Sex	Under One Week	One Week and under One Month	One Month and under Three Months	Three Months and under Six Months	Six Months and under Twelve Months	Total under One Year
<b>Males—</b>						
Number .. ..	432	64	61	60	64	681
Rate* .. ..	13.2	1.9	1.9	1.8	1.9	20.7
Percentage at Each Age ..	63.43	9.40	8.96	8.81	9.40	100.00
<b>Females—</b>						
Number .. ..	338	44	37	41	41	501
Rate* .. ..	10.9	1.4	1.2	1.3	1.3	16.1
Percentage at Each Age ..	67.47	8.78	7.39	8.18	8.18	100.00

\* Number of deaths under one year of age per 1,000 live births.

An examination of the principal causes of infant mortality over a period of years and at various ages reveals the direction in which improvement has been achieved, and discloses those causes and factors to which future investigations need to be directed if the decline in the rate is to be maintained. From 1950 infant deaths were classified according to the Sixth (1948) Revision of the International List of Causes of Death. Owing to the change in classifications, figures since 1950 are not exactly comparable with figures for previous years. The Seventh (1955) Revision of the International List of Causes of Death was adopted for use in 1958.

A comparison of infant mortality rates from the principal causes for certain periods from 1891 to 1949 was shown on page 506 of the Victorian Year Book 1954-58.

The following table shows the number of deaths of infants at certain ages by causes in 1960 :—

**VICTORIA—INFANT MORTALITY AT CERTAIN AGES,  
BY CAUSES, 1960**

Cause of Death*	Deaths under One Year					
	Under One Week	One Week and under One Month	One Month and under Three Months	Three Months and under Six Months	Six Months and under Twelve Months	Total under One Year
Infective and Parasitic Diseases (1-138) ..	1	2	3	5	4	15
Pneumonia and Bronchitis (490-493, 500-502) ..	..	..	22	18	17	57
Gastro-enteritis and Colitis, except Ulcerative, Age Four Weeks and over (571) ..	..	..	2	5	5	12
Congenital Malformations (750-759) ..	93	48	33	32	36	242
Certain Diseases of Early Infancy— Birth Injuries (760, 761)						
(a) Without Mention of Immaturity ..	91	6	..	..	..	97
(b) With Immaturity ..	104	3	..	..	..	107
Postnatal Asphyxia and Atelectasis (762)— (a) Without Mention of Immaturity ..	45	2	..	1	..	48
(b) With Immaturity ..	167	5	1	..	..	173
Infections of the Newborn (763-768)— Pneumonia of Newborn—						
(a) Without Mention of Immaturity ..	14	8	..	..	..	22
(b) With Immaturity ..	5	3	..	..	..	8
Diarrhoea of Newborn—						
(a) Without Mention of Immaturity ..	..	..	..	..	..	..
(b) With Immaturity ..	..	2	..	..	..	2
Other Infections of the Newborn— (a) Without Mention of Immaturity ..	2	1	1	..	..	4
(b) With Immaturity ..	1	..	..	..	..	1
Other Diseases Peculiar to Early Infancy (769-775)— (a) Without Mention of Immaturity ..	40	5	1	..	..	46
(b) With Immaturity ..	25	4	2	..	..	31
Immaturity Unqualified (776) ..	167	6	..	..	..	173
All Other Diseases ..	15	13	30	35	36	129
Accidents, Poisonings, and Violence ..	..	..	3	5	7	15
<b>Total All Causes ..</b>	<b>770</b>	<b>108</b>	<b>98</b>	<b>101</b>	<b>105</b>	<b>1,182</b>

\* Figures in parentheses are in respect of the Seventh Revision of the International List of Causes of Death.

In 1960, 501 deaths were connected with immaturity, either directly or in association with other causes, and all except three of these deaths were of children under one month of age. The deaths connected with immaturity represented 42 per cent. of the total infant deaths. Congenital malformations were responsible for 242, or 21 per cent., of the infant deaths. It will thus be seen that 63 per cent. of the total infant mortality in 1960 was related to immaturity and congenital malformations.

The following statement shows the infant death-rate per 1,000 live births in each of the Australian States for the years 1956 to 1960 :—

**AUSTRALIA—INFANT MORTALITY RATES\***

Year	New South Wales	Vic-toria	Queens-land	South Aus-tralia	Western Aus-tralia	Tas-manian	Aus-tralia
1956 ..	23·47	19·32	22·74	19·88	22·70	20·98	21·72
1957 ..	22·70	20·16	21·68	20·63	21·09	20·15	21·41
1958 ..	21·29	19·23	19·40	22·40	21·52	19·49	20·49
1959 ..	22·65	21·21	20·25	20·71	20·16	23·42	21·54
1960 ..	21·16	18·46	21·01	18·94	21·62	19·09	20·16

\* Number of deaths under one year of age per 1,000 live births.

*Stillbirths*

Registration of stillbirths came into operation in Victoria in 1953. For registration purposes a "still-born child" means any child born of its mother after the 28th week of pregnancy, which did not at any time after being born, breathe or show any other sign of life, and, where the duration of pregnancy is not reliably ascertainable, includes any foetus weighing not less than 2 lb. 12 oz.

The following table contains information about stillbirths and infant mortality in Victoria :—

## VICTORIA—STILLBIRTHS AND INFANT MORTALITY

Year	Stillbirths		Deaths under One Month		Deaths under One Month plus Stillbirths		Deaths under One Year plus Stillbirths	
	Number	Rate per 1,000 Births (Live and Still)	Number	Rate per 1,000 Births (Live and Still)	Number	Rate per 1,000 Births (Live and Still)	Number	Rate per 1,000 Births (Live and Still)
1956 ..	819	13.83	845	14.27	1,664	28.10	1,947	32.88
1957 ..	870	14.18	907	14.79	1,777	28.97	2,089	34.06
1958 ..	826	13.31	887	14.28	1,713	27.59	2,004	32.27
1959 ..	799	12.67	950	15.07	1,749	27.74	2,119	33.61
1960 ..	850	13.10	878	13.53	1,728	26.64	2,032	31.32

The causes of the 850 stillbirths in Victoria in 1960, classified according to the International Statistical Classification, are given in the following table :—

## VICTORIA—CAUSES OF STILLBIRTHS, 1960

Classification Number	Cause of Stillbirth				Number of Stillbirths
Y 30 ..	Chronic Disease in Mother	..	..	..	32
Y 31 ..	Acute Disease in Mother	..	..	..	9
Y 32 ..	Diseases and Conditions of Pregnancy and Childbirth	..	..	..	52
Y 33 ..	Absorption of Toxic Substance from Mother	..	..	..	..
Y 34 ..	Difficulties in Labour	..	..	..	80
Y 35 ..	Other Causes in Mother	..	..	..	4
Y 36 ..	Placental and Cord Conditions	..	..	..	342
Y 37 ..	Birth Injury	..	..	..	17
Y 38 ..	Congenital Malformation of Foetus	..	..	..	84
Y 39 ..	Diseases of Foetus, and Ill-defined Causes	..	..	..	193
	Cause Unspecified	..	..	..	813
					37
	Total	..	..	:	850

## Cremation

There are now four crematoria in Victoria—one at Springvale, one at the new Melbourne General Cemetery, Fawkner, one at Ballarat, and one at Western Suburbs Memorial Park, Altona North. The history of the establishment of the first two is contained in an article published in the Year Book 1942-43, page 307. The Ballarat Crematorium commenced operations in 1958, and the Western Suburbs Crematorium in 1961.

The number of cremations in relation to total deaths are shown in the following table :—

## VICTORIA—CREMATIONS AND DEATHS

Year	Cremations at Fawkner	Cremations at Springvale	Cremations at Ballarat	Total Cremations	Total Deaths	Percentage of Cremations to Deaths
1935-39 ..	2,192	2,621	..	4,813	94,971	5·07
1940-44 ..	3,728	6,313	..	10,041	104,520	9·61
1945-49 ..	5,962	10,553	..	16,515	107,288	15·39
1950-54 ..	9,061	16,616	..	25,677	114,315	22·46
1955-59 ..	11,418	22,446	299	34,163	119,247	28·65
1956 ..	2,282	4,451	..	6,733	23,886	28·19
1957 ..	2,366	4,483	..	6,849	24,131	28·38
1958 ..	2,238	4,580	95	6,913	23,625	29·26
1959 ..	2,515	4,830	204	7,549	25,078	30·10
1960 ..	2,479	5,127	233	7,839	24,547	31·93

# Part 4

## SOCIAL CONDITIONS

### *Cultural and Recreational*

#### **State Library of Victoria**

Founded in 1853, the Melbourne Public Library, as it was then known, opened in a small building facing Swanston-street on 11th February, 1856. The library contained 3,846 volumes with room for 8,000 in all.

The library outgrew its increasing accommodation as the years went by, and the present collection of 800,000 volumes is housed in the Great Reading Room, octagonal in shape, 114 feet in diameter and 114 feet in height. There are 32,000 volumes placed in open access in the Room with the remaining books and bound periodicals housed in the surrounding stack rooms.

While the Library has continued to collect judiciously in all fields of knowledge, there are certain fields in which it is particularly strong. The extensive collection of early MSS. and early and fine printing may be cited. The earliest complete book in the Library is a fine copy of Boethius "De Musica"—a MS. written in the late 10th century. Extraordinarily well preserved, the colours in the music diagrams have not faded over the centuries. The Library holds 24 MSS. of the pre-printing era, most of them fine examples of illumination as well as of penmanship, and these form an interesting history of the making of books up to the invention of printing with movable types in the mid-15th century, the earliest being a copy of Augustine's "De Civitate" printed by Mentelin in Strassburg before 1468.

The earliest example of printing is a single sheet of the famous Bible ascribed to Johann Gutenberg, believed, until recently, to have been the first book ever printed. The Sticht Collection, containing 2,200 typographical specimens dating from 1460 to 1600 A.D., contains some unique items and many others of great rarity; it was bought for the Library by the Felton Bequest in 1924 and represents nearly all the early printers. The collection of English printing begins with the 2nd edition of Caxton's "Myrrour of the World", London 1490; this, too, is in a fine state of preservation. The history of printing is followed through the centuries in examples of the work of the English and continental printers who followed in the footsteps of the pioneers. There is also a very fine and wide collection of the great private presses of the late 19th and early 20th century.

The botanical and ornithological collections gathered in the first place as necessary reference books, round off the history of book-making in so far as illustration is concerned. The complete set of Gould's "Birds", containing in all 2,999 colour plates, together with the complete Audubon "Birds of America" with its 455 magnificent plates, are choice and spectacular items in this field. Thornton's "Temple of Flora" is just one example, equally spectacular, on the botanical side. Redoute's "Les Liliacées" (8 vols.), Sander "Reichenbachia" (4 vols.), and Sibthorpe "Flora Graeca" (10 vols.) are other fine examples.

### Further References

State Library of Victoria—*Annual Reports*.

*Public Library of Victoria*, 1856–1956 (*Centenary Volume*).

A. B. Foxcroft (comp.)—*Catalogue of English Books and Fragments*, 1933.

A. B. Foxcroft (comp.)—*Catalogue of 15th Century Books and Fragments*, 1936.

A historical outline of the State Library of Victoria is contained on pages 155–156 of the Victorian Year Book 1961.

### Free Library Service Board

In 1935, the Munn-Pitt Report of Australian libraries was published and it disclosed a serious deficiency in the provision of local library services throughout Australia.

In Victoria, the Government formed a Library Service Board in 1940, which was required to inquire into the standards and extent of local library services and to report on the steps necessary to improve and extend them. The Board's Report was submitted in 1944 and its most important recommendation was that a permanent State Library Authority should be set up to promote the establishment of municipal libraries of an adequate standard throughout Victoria.

The Free Library Service Board was established by Act of Parliament in 1946. It was constituted to represent a number of bodies and authorities which it was considered would be most interested in local library development, namely, the Municipal Association of Victoria, the Library Association of Australia, the Education Department and the Trustees of the State Library of Victoria. In addition, the Chief Librarian of the State Library of Victoria was to be a member *ex officio*, and two members were to be appointed as Government nominees.

The Board commenced its task of promoting library establishment by seeking from the Government the provision of a grant to all municipal councils which undertook to expend the equivalent of 1s. per head of their population per annum on library services of a standard considered adequate by the Board. Apart from several hundred Mechanics Institute Libraries, only twelve municipally

controlled libraries existed in 1948, when the first municipal library subsidy totalling £10,000 was paid. But expansion has been steady since then; by 1951, there were 50 municipal libraries and Government library subsidy had risen to £81,000. In 1961, there were 91 municipal libraries in existence and a further twenty councils were planning library services. A total of £302,000 was paid in Government library subsidy for 1960-61, making the total since 1947-48 more than £2,220,000. In 1960, more than 350,000 readers used the library services, and book issues totalled over 6,200,000 from a collection of more than 1,500,000 books covering a wide range of subjects.

A feature of the country library services has been the development of regional library services. These co-operative services, formed by a number of adjacent councils pooling their financial resources, form one unit of library service. This service is supervised from one centrally situated library, and service to the entire group is provided by circulating one large book-stock to branches throughout the participating municipalities, or by using bookmobiles (mobile libraries) instead of branches. Because of rising costs and the relatively small populations of most country areas, this idea is being received more favourably. There are now seventeen regional groups in Victoria comprising 54 councils, and at least two more will be formed soon. To encourage councils in this type of co-operation, the Government makes available annually a special Regional Library Development Grant, which totalled £20,000 in 1960-61.

The Board has built up a highly trained and qualified professional library staff providing technical advisory services to councils in such items as library planning, architecture, and design of furniture and fittings. In addition, advice in book selection is provided through the issue of a monthly booklist with which is associated a central cataloguing service. This service provides printed catalogue cards for every book listed, and saves much staff-time in the libraries which avail themselves of the service.

Assistance is available in children's library work through a qualified children's librarian. Two field officers conduct library surveys and compile reports for councils on the requirements for establishing libraries; they also carry out regular inspections of libraries, and generally attempt to maintain close liaison with all municipal libraries in the State.

### **National Gallery of Victoria**

#### *Planning of New Cultural Centre*

In 1860, the establishment of a National Gallery in Melbourne was being discussed by the Trustees of the Public Library. Now, 100 years later, plans are being drawn up for a new National Gallery and Cultural Centre to be built facing St. Kilda-road. This building will provide the best possible conditions for the display and storage of collections built up since 1861 and of those which may be acquired in the future.



The long tradition of benefaction to public institutions has helped create the need for the new building. From the Felton Bequest alone the National Gallery has received many works of considerable scale, and new works are continually being acquired. The present building precludes the adequate display of many of the best objects, which are therefore placed in storage in areas demanding constant attention by the curatorial and works staff to minimize the risk of damage.

Plans for the new building envisage the display of objects in settings designed for clear viewing by spectators and for protection of the objects from damage by light or atmosphere. Variety and stimulation to the eye of the spectator will be provided by changes of floor surface, room colouring and lighting. Storage of objects not on formal display will be provided by a principle of "study storage", whereby the reserve material will be set out clearly but informally so that all objects can be seen and studied.

The spectators' comfort will be provided by the inclusion of adequate seating throughout the galleries, and by proximity to restaurant and other such facilities. In addition to the Gallery proper, the new building will provide a wider service than has been possible in the past. Educational facilities will be such as to aid students at all levels of education, and meeting and lecture rooms will be available for the use of cultural societies. A large exhibition gallery will serve the needs of the Gallery for the temporary display of fine and applied arts, and it will also be available at various times of the year for the exhibition of design and trade goods. In this it will fill a much needed want for an exhibition gallery for shows not requiring the extensive floor areas of the Exhibition building, but which are too large for the smaller halls and showrooms in the city. As the building is to be a cultural centre, not merely a visual arts centre, the provision of auditoria and stage facilities has been considered so that music, drama, and the dance may also be enjoyed.

#### *Acquisitions during 1960*

The programme of acquisition, continued during 1960, has covered works varied in origin and kind and ranging from a magnificent Byzantine manuscript of the early twelfth century to an important recent work by the English sculptor Henry Moore. The Department of Prints and Drawings has benefited considerably, particularly in the acquisition, from an American collection, of *The Battle of the Nude Men* by Pollaiuolo, one of the great engravings of the Italian Renaissance.

English portrait painting has always been a particular interest of the National Gallery and the additions made during 1960 have been of the utmost value in this field. The Felton Bequest Committee purchased the *Portrait Group of the Leigh Family* by George Romney (illustrated in the photographic section) thus adding a new dimension to this group of works, a full scale and very representative "conversation piece". But the English portraits were reinforced most noticeably from a comparatively new source, that of the Everard Studley Miller Bequest. This Bequest, which came in 1956, is specifically stated to be for the purchase of portraits of persons of merit in history, and

a number of important works, including excellent examples of Lawrence, Highmore, and Richard Wilson, have been acquired. These works, and many others which cannot be noted here, add further to the richness of a collection which is certainly without parallel in the British Commonwealth outside London, and when these collections are adequately and fully displayed in the new building, which should be opened in 1964, Melbourne will have a new mark of distinction.

#### Further References

National Gallery Trustees—*A Catalogue of Paintings, Drawings, and Sculpture* (1948) *With Appendices to July, 1954.*

National Gallery Trustees—*Some Australian Landscapes.*

Sir Kenneth Clark—*The Idea of a Great Gallery.*

#### National Museum of Victoria

##### Museum of Applied Science of Victoria

Articles describing the activities of these institutions will be found on pages 158–159 of the Victorian Year Book 1961.

#### Drama

Information dealing with drama in Victoria is set out on pages 159–160 of the Victorian Year Book 1961.

#### Music

A survey of music in Victoria will be found on pages 161 to 163 of the Victorian Year Book 1961.

#### The Press

During 1960 the Victorian press maintained a steady growth, both in the Metropolitan Area and in the country, the increased volume of advertising being linked with the general expansion of the economy. Newcomers in industry throughout the State began advertising campaigns and existing organizations increased advertising appropriations as sales increased. There was a rapid expansion in advertising by public companies for the purpose of borrowing money and from organizations advertising land subdivisions. These were perhaps the two most notable sources of new advertising in the year. In the field of retail advertising, a marked trend toward credit selling in hire purchase instalments was clearly established.

Sales of daily newspapers increased and reflected the steady development of the population. The impact of television on newspaper circulation, particularly evening circulation, has been less severe in Victoria than in any other State.

The significant development of Melbourne suburban newspapers quickened in the year under examination. The trend towards chain publication, which began soon after the Second World War, has grown, and sales and advertising have improved. In the country,

newspapers in some small country towns have either been closed or have been absorbed by organizations in larger neighbouring towns. Country proprietors have found some advantage in centralized production. Both suburban and country publishers are increasingly publishing "area" newspapers, identical in advertising and features, but with "slip" editions carrying local news for specific suburbs or towns.

### Further References

A historical survey of the press in Victoria will be found on pages 167 to 171 of the Victorian Year Book 1961.

### Broadcasting

#### *Australian Broadcasting Control Board*

Broadcasting and television services in Australia are under the general control of the Board which operates under the provisions of the *Broadcasting and Television Act 1942-1956*.

The Board's functions were enlarged by the provisions of the *Broadcasting and Television Act 1960*, which empowers the Board to give directions to prevent the monopolization of television (programme) media. There were also provisions covering the retention of recorded political or historical matter, and the tendering of advice and assistance to prevent interference with transmission and reception. The facilities for this latter function are provided by the Postmaster-General.

The provision of suitable programmes on radio and television for children and family groups is receiving the Board's constant attention.

#### *National Broadcasting Stations*

There were in operation throughout the Commonwealth at 30th June, 1960, 57 medium wave services, and nine short wave services, under the control of the Australian Broadcasting Commission. Five medium wave and three short wave services are in Victoria. In addition, five services are operated from Shepparton and provide overseas broadcasts known as "Radio Australia".

National stations provide a range of programmes which include dramas and features designed to afford listeners the opportunity of hearing regularly the best local and overseas plays.

Attention is given to youth education through regular broadcasts to schools (about 92 per cent. of all schools in Victoria are listening schools), and for the very young the "Kindergarten of the Air" programme is provided.

The Rural Broadcasts Department of the Commission conducts a series of programmes on a regional, State, and Commonwealth basis, many of which are directed to a particular district. The material for these broadcasts is provided by the Commonwealth Department of Primary Industry, the State Agricultural Departments, and by overseas and other sources.

National stations devote 56 per cent. of transmission time to musical broadcasts. News services, weather information supplemented by flood and fire warnings, religious matter, sporting and outdoor events, are fully covered. Broadcasts of Parliamentary proceedings of both Houses of the Commonwealth Parliament and interviews with persons of importance in the community are also a feature of national stations.

### *Commercial Broadcasting*

There were 108 commercial stations operating throughout the Commonwealth at 30th June, 1960, and of these twenty were in Victoria.

About half of the programme time available is devoted to light and popular music, whilst the remainder of the time is allocated to a wide and varied range of items—drama, news broadcasts, weather reports, religious matter, and a good coverage of sporting and outdoor events are provided.

Although advertising is presented at all times of the day, and is a significant feature of commercial broadcasting, it absorbs less than 12 per cent. of transmission time.

The competition from established television stations and the increased use of portable radio receivers has had a marked effect upon the type of programmes provided. The "top tune" programme with its "spot" advertising is now a familiar feature.

### MELBOURNE—COMPOSITION OF BROADCASTING PROGRAMMES, 1960

National Stations				Commercial Stations			
			%				%
Music—				Music—			
Classical .. .. .			24·8	Serious .. .. .			2·3
Light .. .. .			11·8	Light .. .. .			19·7
Variety and Popular .. .. .			19·5	Popular .. .. .			36·5
Total Music .. .. .			56·1	Total Music .. .. .			58·5
Drama and Features .. .. .			3·7	Drama .. .. .			7·2
Children's .. .. .			2·8	Children's .. .. .			0·8
Religious .. .. .			3·7	Religious .. .. .			3·4
Talks Including Women's Session, Interviews, Discussions, News Commentaries, Documentaries .. .. .			6·8	Talks, Interviews, Demonstrations, Women's Session .. .. .			5·9
News .. .. .			7·2	News, Weather, Community Service .. .. .			7·0
Sport .. .. .			4·7	Sport .. .. .			3·2
Education .. .. .			3·9	Variety, Talent .. .. .			1·4
Parliament .. .. .			4·2	Quiz, Game, Panel .. .. .			0·8
Rural .. .. .			1·7	Advertisements—			
Announcements, Fill-ins, &c. .. .. .			5·2	Sponsored Programmes .. .. .			5·6
				Spot Advertisements .. .. .			6·2
Total .. .. .			100·0	Total .. .. .			100·0

## VICTORIA—BROADCAST LISTENERS' LICENCES

Year							Number of Listeners' Licences at 30th June
1924	..	..	..	..	..	..	187
1930	..	..	..	..	..	..	140,072
1940	..	..	..	..	..	..	348,264
1950	..	..	..	..	..	..	505,078
1957	..	..	..	..	..	..	554,909
1958	..	..	..	..	..	..	557,960
1959	..	..	..	..	..	..	605,340
1960	..	..	..	..	..	..	606,587
1961	..	..	..	..	..	..	589,437

## Television

Television transmissions are made by six national stations and ten commercial stations situated in the State capital cities of the Commonwealth. At 30th June, 1960 there were one national and two commercial stations in Melbourne.

National and commercial services are soon to be established in thirteen country areas of the Commonwealth. These will include the Ballarat, Bendigo, Latrobe Valley, and Goulburn Valley areas of Victoria.

The importance of television in family life is reflected in the size of evening audiences; there are, in Melbourne, some 275,000 families viewing at the peak hour of 8 p.m. and 9 p.m. Young persons under eighteen years of age watching during the hours 8 p.m. to 10 p.m. comprise one-sixth of the total audience. The age groups which constitute this one-sixth are distributed in the following approximate week-night proportions:—0 to 5 years—5 per cent.; 6 to 8 years—15 per cent.; 9 to 11 years—25 per cent.; 12 to 14 years—35 per cent.; and 15 to 17 years—20 per cent., with slight variations on Saturdays and Sundays.

Increasing use is being made by all stations of video tape recording which facilitates exchange of programmes between stations.

The following table shows the composition of television programmes on national and commercial stations :—

### MELBOURNE—COMPOSITION OF TELEVISION PROGRAMMES, 1960

National Stations		Commercial Stations	
	%		%
Music—		Music—	
Classical .. .. .	2·0	Light .. .. .	0·4
Light .. .. .	0·3	Popular .. .. .	1·8
Variety and Popular .. .. .	7·8		
Drama .. .. .	21·9	Drama .. .. .	47·9
Children's (Including Cartoons) .. .. .	10·0	Children's (Including Cartoons) .. .. .	11·3
Religious .. .. .	2·3	Religious .. .. .	2·2
Talks Including Women's Session, Interviews, Discussions, News Commentaries, Documentaries .. .. .	18·8	Talks, Women's Session, Interviews, Documentaries .. .. .	8·4
News .. .. .	8·5	News and Weather .. .. .	3·4
Sport .. .. .	11·4	Sport .. .. .	4·7
Education .. .. .	4·3	Variety and Talent .. .. .	8·8
Rural .. .. .	2·4	Quiz, Game and Panel .. .. .	1·4
Announcements, Fill-ins, &c. .. .. .	10·3	Advertisements in Sponsored Programmes .. .. .	3·9
		Spot Advertisements .. .. .	5·8
Total .. .. .	100·0	Total .. .. .	100·0

### VICTORIA—TELEVISION VIEWERS' LICENCES

Year	Number of Viewers' Licences at 30th June
1957.. .. .	44,986
1958.. .. .	147,721
1959.. .. .	270,073
1960.. .. .	353,091
1961.. .. .	401,395

### Further References

Historical information about the introduction and early history of radio broadcasting and television will be found on pages 164 to 167 of the Victorian Year Book 1961.

### Royal Botanic Gardens, Melbourne\*

Very shortly after the foundation of Melbourne, strong pressure was brought to bear upon the administration of the Colony for the foundation of a Botanic Gardens near the town itself.

\* With which is associated the National Herbarium of Victoria.  
C2323/61.—7

This was accomplished in the year 1846 when Superintendent C. J. La Trobe reserved a site of five acres for the purpose at what is now the intersection of Anderson-street and Alexandra-avenue, South Yarra. He also appointed John Arthur, a trained landscape gardener from Scotland, as the first Superintendent of the Gardens. Arthur fenced in these five acres, and immediately planted out the area in lawns, trees, and shrubs, and so successful were his efforts that within a few months La Trobe held a vice-regal garden party there. Some of the original trees planted by Arthur survive to the present day. From this very humble beginning sprang the Royal Botanic Gardens as we know them today.

Successive Directors, notably Baron von Mueller and William Guilfoyle, added more land to this area, at the same time developing the site scientifically and artistically, and finally winning world recognition. To William Guilfoyle, Director from 1873 to 1909, must be given the greatest credit for the detailed landscaping of lawns, shrubs, and lakes which have made the gardens the most beautiful in Australia.

The Royal Botanic Gardens, which are situated less than one mile from the centre of the city proper, now occupy an area of approximately 88 acres, of which 10 acres are lakes, 35 acres lawns and 43 acres gardens. The lakes, three in number, are at different levels, and house many species of native birds, which breed on the islands in the lakes. The largest lake was originally part of the River Yarra system, but in the late 1890's, when the course of the river was straightened, the area cut off became an artificial lake with underwater access to the river. This lake is up to twenty feet deep in parts, and contains numerous specimens of eels and the large Singapore Carp.

The *Nymphaea* lake, near Birdwood-avenue, is an artificial lake which now grows a large number of varieties of beautiful water lilies.

The gardens proper fulfil three main functions :—

- (1) They provide a classical example of landscape gardening, possibly the finest in the world;
- (2) they provide for the people of Melbourne an example of the best types of trees and shrubs suitable for growing in such an environment; and
- (3) they provide an area where new shrubs and trees can be tested for their suitability for Victorian conditions.

In all, the Royal Botanic Gardens in Melbourne contain over 12,000 species of plants, of which there are some 30,000 individual specimens. These are all labelled with botanical name, common name, botanical family and country of origin.

Numerous memorial trees have been planted throughout the gardens by distinguished persons, the Hopetoun Lawn near Government House containing a number of trees planted by members of the Royal Family, including Her Majesty Queen Elizabeth II., Her Majesty Queen Elizabeth the Queen Mother, and Her Royal Highness Princess Alexandra of Kent. Of recent years, trees have also been planted by the Prime Ministers of Great Britain and Canada, and the Governor-General of Australia. The gardens received Royal Assent on 25th June, 1958, for the use of the title "Royal Botanic Gardens".

Associated with the Royal Botanic Gardens is the National Herbarium of Victoria, a scientific institution in which is housed the largest herbarium collection of plants in Australia—approximately 1½ million specimens from all parts of the world. It was founded in the year 1857 by Baron Ferdinand von Mueller, the first Government Botanist (see pages 2–3), and now contains his world-famous collection of Australian plant specimens, including over 2,000 types. It also houses some important historical material, notably plant specimens collected by Banks and Solander during Captain Cook's voyage to Australia in 1770, while its library collection of early botanical works is one of the most important in Australia.

Both the Royal Botanic Gardens and the National Herbarium of Victoria are State controlled organizations, being administered by the Department of Crown Lands and Survey.

### Further References

*Guide Book of the Gardens.*

Crosbie Morrison—*Melbourne's Garden.*

### National Parks

#### *Recent Developments*

Since the formation of the National Parks Authority in 1957, Government allocations totalling £145,000 have been distributed by the Authority among Victoria's national parks. Further sums approximating £45,000, representing revenue from services provided for park visitors, have also been spent on the national parks. While this expenditure is far from adequate, it does represent a notable measure of progress. Details of the major allocations are as follows :—

#### VICTORIA—NATIONAL PARKS ALLOCATIONS, 1957 TO 1960

National Park						Allocation
						£
Wyperfeld National Park	..	..	..	..	..	14,098
Kinglake National Park	..	..	..	..	..	22,430
Fern Tree Gully National Park	..	..	..	..	..	9,346
Wilson's Promontory National Park	..	..	..	..	..	32,484
Mount Buffalo National Park	..	..	..	..	..	23,871
Churchill National Park	..	..	..	..	..	12,170
Fraser National Park	..	..	..	..	..	11,948
Other National Parks	..	..	..	..	..	18,653
Total	..	..	..	..	..	145,000

During the period under review, the following new national parks have been declared: Fraser (6,600 acres), Hattah Lakes (44,000 acres), Mount Eccles (80 acres), and Mount Richmond (1,550 acres). Other areas are under consideration for national parks. The Authority continues to be engaged in close liaison with the Committees



of Management which are entrusted with the control of the parks and with the various constructional authorities such as the Public Works Department, Forests Commission, Lands Department, Soil Conservation Authority, &c. Regulations relating to the conduct of visitors in national parks have been prepared and promulgated.

The Authority has formed within itself a Fire Protection Committee, a Tracks and Conservation Committee, and a Fauna Protection Committee, to ensure that these aspects of the Authority's responsibilities are adequately covered. On the financial side, machinery has been devised whereby the respective Committees of Management operate under clearly defined delegated powers in accordance with operations budgets approved by the Authority.

The amendment of the National Parks Act in 1960 now enables private enterprise to participate in the development of Victoria's national parks, by establishing hotels, motels, restaurants, ski-ing facilities, &c. It is anticipated that this provision will greatly accelerate tourist developments in our national parks.

### **Further References**

A list of the main national parks of Victoria, showing their location and area will be found on pages 173 to 176 of the Victorian Year Book 1961.

### **Tourist Development Authority**

#### *General*

The travel industry is one of the world's fastest growing businesses. Developments in transportation, advances in the means of production, laws providing for long service leave, and greater productivity which enables the wage and salary earner to put a little aside for holidays, are all factors which increase expenditure on travel. Realizing the economic importance of tourism, the Victorian Government has established, within the Premier's Department, a Tourist Development Authority to encourage and develop the tourist industry.

The Authority consists of a chairman (who is the Minister or his nominee) and eight members appointed by the Governor in Council. One member represents country municipalities; one represents persons having a special interest in publicizing tourist attractions in Victoria; one is the Chairman of the Country Roads Board or his nominee; and the remaining five are nominated respectively by the Treasurer, Commissioner of Public Works, Commissioner of Crown Lands and Survey, Minister of Forests, and Minister of Transport. The chief executive officer of the Authority is the Director of Tourist Development.

The functions of the Authority are :—

- (1) To recommend to the Minister measures for the publicizing and development of the tourist industry in Victoria;
- (2) to recommend to the Minister the making of payments out of the Tourist Fund for or towards the improvement of tourist facilities in Victoria;

- (3) subject to the general direction and control of the Minister, to operate and administer tourist bureaux in any part of the world ;
- (4) to promote, assist, and co-ordinate the activities of persons and organizations interested in the development of the tourist industry in Victoria ; and
- (5) generally to investigate such matters relating to the tourist industry as are referred to it by the Minister.

#### *Tourist Fund*

A Tourist Fund has been established to carry out measures for the publicizing and development of the tourist industry. Income for the Fund is derived from a statutory payment of 2 per cent. per annum of the amount credited to the Country Roads Board Fund from motor registration fees, and an annual allocation of loan funds is also provided.

The Fund is used as a source of limited financial assistance where communities are endeavouring to create tourist facilities, but find that the completion of desirable improvements is beyond their means. Financial assistance is also given for the production of posters, folders, films and other forms of publicity for Victoria's tourist attractions.

#### *Victorian Government Tourist Bureaux*

Tourist bureaux are located in Melbourne, Ballarat, Geelong and Mildura, and in Sydney and Adelaide. Their operation is an important means of introducing the tourist attractions of Victoria to the public. The bureaux provide information and booking facilities which encourage tourism. Operating costs are provided for in the State Budget supplemented by a contribution from the Victorian Railways, in return for which a railway booking and enquiry service is maintained at bureaux.

## *Scientific and Technical Research*

### **Introduction**

The first industries which developed in Victoria were craft industries, such as weaving, metal founding, tanning, fellmongering, brick making, furniture production, and so on. Until the end of the 19th century, there was not a great deal of industrial development other than that in the industries associated with wool and textiles, and agriculture, which included the production of superphosphate, the refining of sugar, and the manufacture of agricultural implements. Generally, these industries did not involve scientific research, although much ingenuity was shown in inventing new agricultural implements, and advanced scientific control methods in sugar refining were applied in the 1880's.

The First World War gave great encouragement to Victorian industry. Deprived of overseas supplies, Australia sought to manufacture goods previously imported, and major developments took place in the metallurgical, chemical, electrical, and communications industries. Government factories undertook the manufacture of explosives and weapons of war.

In the period between the wars, the range and volume of Australian manufactures steadily increased, but the standard of technology was not always high and the "Made in Australia" label was not always sought out. Despite this, some industries did develop embryonic research units: paper, zinc, lead, and radio equipment may be mentioned as examples.

The Second World War saw Australia virtually isolated from supplies essential for maintenance of the civilian population and its armed forces. Australia set out to develop in a matter of months manufacturing activities which had taken years or decades in older established countries. Fighting vehicles, aeroplanes, guns, complex electronic gear including radar and communication equipment, optical instruments, explosives, drugs and chemicals, previously considered beyond the range of Australian manufacturers, were produced within a remarkably short time. At the end of the war, the skills and manufacturing experience remained, and the post-war years have seen the development of a vast industrial pattern.

In view of the history of its development it is not surprising that Victorian manufacturing industry is based essentially on imported technology. Industries which were established in Victoria commenced operations in this country when practice had already developed to an advanced stage overseas. The Victorian manufacturer obtained the advantage of overseas technical knowledge by direct purchase, or because it was available to him as a subsidiary or associate of an established overseas firm. The position is unlikely to change in the foreseeable future because the size of the Australian market is in most cases not sufficiently large to support a major effort in research and development.

Because the Australian environment differs from that of other countries, because raw materials available in Australia are different from equivalent materials used overseas, and because Australian cost factors are also different, it is necessary that local manufacturers carry out some developmental research, even though processing methods may be based on overseas practice. These factors have influenced some of the larger manufacturers to build up research and development groups in the post-war period, but this type of activity is relatively new, though expanding. The number of firms in Victoria with research laboratories is still quite small, and much of the activity now carried on is probably developmental rather than research. Any future industrial expansion will bring with it a corresponding expansion of research activities.

### **Research Sponsored by Government**

#### *C.S.I.R.O. Establishments in Victoria*

The Commonwealth Scientific and Industrial Research Organization is a corporation established by the *Science and Industry Research Act* 1949, of the Parliament of the Commonwealth of Australia. It replaced the Council for Scientific and Industrial Research which had been established in 1926.

The major functions of the Organization are the initiation and carrying out of research for the benefit of the primary and secondary industries of Australia and its territories, or in connexion with any matter referred to the Organization by the Minister; the training of research workers; the making of grants in aid of pure scientific research; the testing and standardization of scientific apparatus and instruments, and the carrying out of scientific investigations connected with standardization; the collection and dissemination of information relating to scientific and technical matters; the publication of scientific and technical reports and periodicals; and acting as a means of liaison with other countries in matters of scientific research.

The Organization, whose Head Office is in Melbourne, is governed by an Executive of nine members, five of whom must be scientists. The Executive is advised by an Advisory Council and six State Committees. The Organization's link with the Commonwealth Government is the Minister in charge of C.S.I.R.O. Associated with the Organization's Head Office are a library, groups concerned with the translation of scientific papers, the production of special scientific films, and the production of journals and other publications describing the results of the Organization's research, as well as two liaison sections concerned with promoting the use of C.S.I.R.O. research results in the agricultural and industrial fields.

To carry out its work, the Organization has established a considerable number of research groups operating in laboratories and field stations throughout Australia. The major establishments and activities in Victoria are:—

#### *Division of Animal Health*

It comprises the Animal Health Research Laboratory at Parkville, the McMaster Animal Health Laboratory at Sydney, and the Veterinary Parasitology Laboratory at Brisbane, together with field stations at Werribee and Tooradin (Victoria), Badgery's Creek (New South Wales), and Amberley (Queensland). Its headquarters are at the Parkville (Melbourne) Laboratory.

The Division undertakes research on problems such as tick-borne infections in cattle, animal diseases caused by internal parasites and viruses and those diseases presumably caused by toxic effects of noxious weeds.

The Poultry Research Centre of the Division of Animal Genetics is located at Werribee. Work at the Centre includes long range fundamental studies on population genetics, methods of livestock improvement, and studies of egg production in poultry.

#### *Division of Building Research*

A major part of the Division's research programme is concerned with building materials, although investigations into other aspects of building research are carried out. The Division collaborates closely with the Commonwealth Experimental Building Station of the Commonwealth Department of Works, New South Wales, and a number of co-operative investigations are carried out with industrial establishments. Current investigations include studies of architectural acoustics, bituminous materials, clays and clay products, concrete,

glass and glazing, gypsum, plaster, light-weight aggregates, lime and lime products, paint on plaster, and thermal characteristics of buildings. The Division's Laboratories are located at Highett.

#### *Chemical Research Laboratories*

In the Chemical Research Laboratories, formerly the Division of Industrial Chemistry, the major concentration of chemical research within the organization is carried out. This work is directed towards (a) the promotion of technical efficiency in established industries, (b) the stimulation of new industries, (c) the increased use of Australian raw materials, (d) the development of substitutes for imported materials, and (e) the utilization of by-products from industry at present unused. The Laboratories, by virtue of their experience in many fields, are also able to contribute to other problems of national importance. The Laboratories' major units are three independent divisions and three independent sections located at Fishermen's Bend, Melbourne. These units and the work they are engaged on are :—

The *Division of Chemical Physics*, whose work is concerned with (a) the development and application of chemical and physical techniques, (b) the chemical physics of the solid state, (c) protein structure investigations, and (d) the determination of molecular structure and energetics.

The Division also carries out considerable collaborative and service work for industry and Australian universities.

The *Division of Physical Chemistry's* research programme has particular reference to problems of photo-, electro-, biological and surface chemistry, to thermodynamics and to reactions at high pressure. Amongst current investigations are studies of water conservation and bush fire control.

The *Division of Mineral Chemistry* has as its main objective the chemical transformation of Australian minerals into various derivatives of actual or potential industrial use. Current work includes studies of electrode metallurgical refining processes; the hydrometallurgy of bismuth and gold; and the extraction of uranium, germanium and thorium.

The *Cement and Refractories Section* undertakes studies of the basic chemistry of cement and concrete, and the fabrication of special refractories and hard materials.

The *Chemical Engineering Section* studies the development of chemical engineering processes and equipment. Part of the Section's present work is concerned with the utilization of brown coal and the de-salting of saline water.

The *Organic Chemistry Section* is concerned with all aspects of research in organic chemistry. Particular attention is given to Australian plants and animals as sources of chemical raw materials. This work at present includes studies of the chemical components of the wool fleece, sugar cane wax, alkaloids, and other biologically active components of Australian plants.

The Laboratories also have a small section concerned with investigations into foundry sands.

*Dairy Research Section*

This Section is located at Highbury. It is responsible for research investigations into the processing, transport, and storage of milk and other dairy products. Major projects of the Section are concerned with the development of new milk products, factors affecting the flavour of dairy products, the production of casein, and research aimed at providing greater knowledge and a better understanding of milk proteins. Mechanization of cheese manufacture has been a long-term project of the Section and a process has now been developed which is being adopted by the industry.

*Engineering Section*

The Engineering Section carries out engineering research in certain specific fields. The Section also undertakes developmental work for other units of the Organization. Current work includes the development of equipment and automatic control systems for the precise control of environmental conditions for animal and plant research. The development of equipment for the utilization of solar energy and studies of agricultural engineering problems are also major activities.

*Fodder Conservation Section*

The Section's investigations are aimed at improving methods of fodder conservation. Current projects are concerned with the field operations of hay making and the preparation of silage.

*Division of Forest Products*

The Division of Forest Products was formed to carry out investigations on Australian forest products and to give direct assistance to those concerned with the utilization of forest resources. The Division's research is aimed towards a more effective use of these resources by reducing waste in forest, mill and factory ; by reducing losses from decay and insect attack ; by improving the quality of timber produced in the growing forest ; and by the study of the relationship between silvicultural treatment and timber properties. As part of this work, the Division undertakes fundamental research to determine the basic properties, potentialities, and correct methods of treatment of Australian timbers. This work includes investigations into the structure (physical, mechanical, and chemical) and pulping properties of wood and wood fibres.

In conjunction with these studies, a major effort is directed towards solving production and other problems of the timber industry and many investigations are carried out in co-operation with private concerns. The Division's Laboratories are located in South Melbourne.

*Irrigation Research Station*

The Commonwealth Research Station, which is located in Merbein, is concerned with problems of the Murray Irrigation Area. The major research activities of the Station deal with ground water hydrology and viticulture.

*Division of Meteorological Physics*

The Division of Meteorological Physics conducts research into the physical processes underlying and controlling the weather and climate. The work is not only aimed at improving the forecasting of atmospheric effects, but also at increasing fundamental knowledge in this field. The effects of heat on air flow, micro-meteorological problems including those associated with agriculture, and the study of radiation are amongst the special studies being considered by the Division. The Division's Laboratories are located at Aspendale.

*Mineragraphic Investigations and Ore-Dressing Laboratory*

The Mineragraphic Investigations Section is located in the Geology Department of the University of Melbourne and works in close collaboration with the Organization's Ore-Dressing Laboratory which is situated in the Mining Department of the University. These two units provide information to the mining industry on the composition of Australian ore deposits or on methods of full-scale treatment.

*Physical Metallurgy Section*

This Section is a small group located at the Research School of Metallurgy at the University of Melbourne. It is maintained by the Organization in collaboration with the University. Research is undertaken on special problems in metallurgy—recent work has been concerned with the deformation of metals and studies of titanium alloys.

*Soil Mechanics Section*

Research of the Section embraces the soil aspects of two principal fields of civil engineering research—building and road construction. The Section, which is located at Syndal, works in close collaboration with the C.S.I.R.O. Division of Soils and the Civil Engineering Department of the University of Melbourne.

*Division of Tribophysics*

The Division of Tribophysics was originally established during the Second World War as a group studying wartime problems of friction and lubrication. Investigations in these fields are still carried out by the Division, but the work has been expanded to include fundamental studies in metal physics, surface physics, and the chemistry of solids. The Division's Laboratories are located in the grounds of the University of Melbourne.

*Wool Research Laboratories*

The Divisions of Protein Chemistry, Textile Industry, and Textile Physics constitute the Wool Research Laboratories. The Division of Protein Chemistry and the Division of Textile Industry are located in Victoria, the former at Melbourne and the latter at Geelong. The Division of Textile Physics is located in Sydney.

The major aims of the Organization's wool textile research are :—  
(1) to increase the knowledge and understanding of the complex structure of the wool fibre and its physical and chemical properties ;  
(2) to use this knowledge to improve technology in wool processing, and to utilize by-products more fully ; and (3) to improve machinery used in wool textile manufacture.

The Division of Protein Chemistry conducts research into the structure of wool and its reactivity with chemicals, while the Division of Textile Industry is mainly concerned with research into the production of improved wool products and the study of processes used in the conversion of greasy wool into fabric.

Included in the current investigations of the Laboratories are new methods of dyeing, shrink-proofing and moth-proofing, improved methods of yarn manufacture, improved techniques for cleaning greasy wool, production of washable non-iron woollen fabrics and methods of permanently pleating woollen garments. The parallel work of the Laboratories on the fundamental behaviour and nature of wool has made an outstanding contribution to world knowledge of this fibre.

#### *Other Research Groups*

Smaller research groups, belonging to divisions and sections with headquarters in other States, are also located in Victoria. These are :—

Barracouta Investigations—Melbourne (Division of Fisheries and Oceanography).

Officers of the Division of Mathematical Statistics—located at the University of Melbourne, at the Division of Forest Products, and at the Division of Building Research.

Plant Nutrition Investigations—Melbourne (Division of Plant Industry).

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#### *Research Laboratories, Postmaster-General's Department*

The Research Laboratories of the Postmaster-General's Department form part of the Central Administration and are situated in Melbourne. Beginning with one engineer in 1923, the section has now grown to a staff of 236, including 58 with professional qualifications.

The basic aim of the Laboratories is to undertake research into all forms of communication and materials used in the Australian Post Office. This is carried out by three distinct groups, namely, radio, line communication, and physical sciences, which are backed by a fourth—laboratory services—to provide measuring and testing equipment, design and model construction facilities.

#### *Radio*

On the radio side there are six divisions : time and frequency standards ; radio propagation ; pulse techniques ; microwave techniques ; plant applications ; and equipment development.

The time and frequency standards group occupies an interesting place as it is responsible for the operation and calibration of the Post Office Standard. This is controlled by the " quartz clock " installation, a series of special crystal oscillators and associated frequency dividers and synchronous clocks, which provides the calibrating signal for



regulating the time indicated by the speaking clock installations in Sydney, Melbourne, Brisbane, Adelaide and Perth. The "quartz clock" is rated every working day by the Mount Stromlo Observatory, near Canberra. The frequency of the quartz clock is compared regularly with an ammonia Maser oscillator (molecular clock) in the Laboratories which produces a highly stable output frequency. This equipment, which is the only one of its type in the Southern Hemisphere, enables this comparison to be made to an accuracy of two parts in 10,000 million.

Preparatory to the planning of high-capacity radio-telephone systems, field parties from the Laboratories undertake special radio propagation measurements to determine the effect of echoes from topographical features and to arrange the most efficient siting of the relaying aerials. A typical example is the work recently carried out in the Sydney-Wollongong-Canberra system. Work of a more unusual nature is being carried out for the proposed microwave link between Melbourne and Launceston due to the very long section across Bass Strait from Wilson's Promontory to Flinders Island—115 miles.

In the television field the Laboratories have developed special testing facilities to ensure that studio and transmitter equipment is up to the required standard. One of the current important investigations of the group is a system of coding television signals to obtain greater facilities from standard transmission systems provided between large centres.

New modes of radio communication are constantly being investigated. Tests are currently in hand to assess the feasibility for long distance communication of using radio waves scattered by the troposphere, i.e., that portion of the earth's atmosphere below about 50,000 feet. In association with this project, developmental work is being carried out on equipment which would be required to implement this mode of propagation, such as the design of parametric amplifiers. These amplifiers also have application as low noise pre-amplifiers for the possible future development of communication by satellites.

#### *Line Communication*

Research into the field of line communication is carried out by five divisions, namely, telephony and acoustics; multichannel telegraph and telephone; transmission lines and computations; circuit theory and design; and voice frequency transmission, signalling and switching.

This group is responsible for the maintenance of telephone transmission standards and for the assessment of user satisfaction with the technical performance aspects of subscribers' apparatus.

The Department, where appropriate, makes use of the latest transmission and switching equipment which is available commercially both locally and from overseas. However, a considerable amount of developmental work is undertaken mainly for the following three purposes:—

- (1) The development of equipment for difficult areas such as the outback. Recently developed solid-state devices such as transistors, by virtue of their modest power requirements, have been the main stimulus to work in

this field. Specific examples are an improved telephone for subscribers who are located from 20 to 200 miles from the nearest exchange ; a two-band carrier system to improve service on long multi-office trunk lines ; and pole-mounted repeaters to permit installation of standard trunk-line systems through isolated areas where buildings for conventional repeaters are not available and would be expensive to erect.

- (2) The development of equipment employing modern devices for future application in automatic exchanges, the future national dialling scheme, and subscribers' and telegraph plant. This includes memory devices, small digital computers and static switching systems.
- (3) The development of equipment for unusual functions. An interesting development which evolved out of other work is a device which enables blind telephonists to operate lamp-signalling switchboards. The attachment consists of a photo-sensitive element mounted on a thimble worn on the operator's finger. The operator moves his hand along the row of lamps until a distinctive tone is heard in his headset. This indicates the position of the illuminated lamp.

One of the more spectacular items of equipment used in the Laboratories is a 1.4 mill. volt surge generator. This apparatus is used to simulate the effects of lightning strokes on lines and associated plant and hence to assess the effectiveness of protective measures.

#### *Physical Sciences*

The Physical Sciences Group includes three divisions dealing with physics, metallurgy and chemistry. In particular, extensive work is done to prevent corrosion due to such causes as galvanic action, anodic electrolysis and chemical reactions. In addition, damage caused by pest and insect attack, bacteriological action and metal fatigue are investigated.

Among the specialized equipment available is an X-ray fluorescent spectograph. This apparatus determines qualitatively and quantitatively the composition of metal-alloy systems by irradiating the samples with a strong beam of X-rays. It is of particular use in determining the constituents of contact metal for switches. The importance of such analyses is evident when it is realized that approximately 2,000 mill. contacts are involved in the automatic switching network in Australia.

#### *Laboratory Services*

The Laboratory Services Group consists of three divisions providing, respectively, measuring and testing equipment, mechanical and electrical design, and machine shop construction facilities. The latter two divisions work in close co-operation to produce experimental equipment and prototype models. The equipment division, as well as being responsible for the purchase, repair, and calibration of laboratory equipment, maintains the departmental electrical reference standards and develops special measuring techniques.

The Services Group also render an information service which includes a technical reference and lending library for use by the whole of the Engineering Division of the Central Administration. The library co-operates, on an inter-library loan basis, with other Governmental and commercial libraries. Within this information service, an officer specializes on patents ensuring that the interests of the Post Office are safeguarded in such matters.

### *Aeronautical Research Laboratories*

#### *Historical*

The earliest records of aeronautical research in Australia date back to the 1880's. Lawrence Hargrave, whose name is commemorated in the Chair of Aeronautics at Sydney University, was the pioneer worker in this field and the author of nineteen papers which appeared in the Journals of the Royal Society of New South Wales between the years 1884 and 1909.

However, it was not until 1937 that the Commonwealth Government seriously considered setting up a full-time Aeronautical Research Laboratory in this country. In that year a recommendation was made to the Commonwealth Government that a laboratory be set up in Melbourne to serve the needs of the aircraft industry, the R.A.A.F., Civil Aviation and the automotive industry, all of which had been established on a small scale. In January, 1939, a Division of Aeronautics under C.S.I.R.O. was established in Melbourne. The Laboratories grew rapidly during the early war years. By April, 1940, the first group of buildings were completed on the present 15-acre site at Fishermen's Bend and the first wind tunnel began operation two days before the Japanese attack on Pearl Harbour in December, 1941. In 1949, the Laboratories were transferred from C.S.I.R.O. to become one of a group of Defence Science Laboratories under the Department of Supply.

The research work of the Laboratories is divided among four main divisions : aerodynamics, structures, mechanical engineering, and materials.

Another division provides the craftsmen and modern workshop facilities necessary to make the ideas of the scientist a reality.

#### *Functions of the Laboratories*

These are :—

- (1) To undertake research in the fields of aerodynamics of aircraft and missiles ; structural design and safety of aircraft ; operational requirements and design of missiles ; propulsion by means of air-breathing engines of aerial vehicles and materials used in the construction of aircraft missiles and engines ;
- (2) to act as consultants and conduct investigations for government departments, semi-government agencies, armed forces, and private industry not directly engaged on defence projects, where such work requires the special facilities or resources which exist only at the Laboratories ; and

- (3) as a member of the Commonwealth Advisory Aeronautical Research Council, take part in a co-ordinated effort with other Commonwealth countries to keep the British Commonwealth abreast with world advances in aeronautical and guided weapon research.

#### *Aerodynamics Division*

The Aerodynamics Division deals with aerodynamic problems arising out of the design, development, and operation of aircraft and missiles. It is also called upon from time to time to give advice on industrial airflow problems.

The main items of equipment are two wind tunnels. These are mainly used for testing in model form new or improved designs of aircraft and missiles in order to provide design information. The low-speed tunnel with a 9 ft. x 7 ft. working section runs at a maximum speed of about 280 ft./sec., while the high speed with a working section of 20 in. x 32 in. can reach approximately 1.3 times the speed of sound and is operated by a 2,700 horse-power electric motor.

Apart from the main function of testing new aircraft designs, the low-speed wind tunnel undertakes some non-aeronautical work. A study of smokestack heights to avoid smoke contamination from power stations; the selecting of the most suitable site for a runway on Lord Howe Island; and the effect of wind forces on the Myer Music Bowl are samples of the varied problems tackled.

This Division designed, constructed, and now operates special electronic analogue computers for solving the problems of dynamics encountered in aircraft and missile systems, and is also responsible for problems in the fields of human engineering and mathematical assessment.

#### *Structures Division*

Research aims to eliminate structural failure in aircraft, to increase structural efficiency, and to simplify design methods. To achieve this, work is being carried out in the fields of structures theory, applied mechanics, vibration and aeroelasticity, structures experiment, and life of aircraft structures.

In the structures wing bay, more than 200 wings have been tested under conditions varying from constant repeated loading to those closely simulating actual flight. An original type of machine has been evolved capable of reproducing the stresses placed on an aircraft wing in actual flight, and Australia is now recognized as a leading authority on the fatigue and life of aircraft structures. The machine can select any one of 23 different loadings of greater or less intensity and apply them in random sequence in the same way as gusts are encountered in the air.

The mechanical testing laboratory is equipped with the largest testing machine in Australia. It is capable of testing materials, components, or structures in either tension, compression, or bending with loads up to 300 tons. This machine, like others at the Laboratories, has also assisted in answering the problems encountered by private industry.

*Mechanical Engineering*

This Division is responsible for the air-breathing propulsion systems of aircraft and missiles. Investigations carried out on the more important aspects of the turbine engine and ramjet include research on intakes, compressors, combustion, turbines, and re-heat systems. In conjunction with the Department of National Development, experimental investigations are being conducted into the possible use of brown coal as a fuel for gas turbine engines. A Flight Research Group within the Division co-operates with the Aircraft Research and Development Unit of the Royal Australian Air Force and the Department of Civil Aviation, and other bodies requiring special flight investigation.

The Ministry of Supply in the United Kingdom has made available an Avro 707A aircraft for research flying. This research is being carried out by members of flight group who are obtaining as complete a picture as possible of the air-flow conditions on the wing in flight.

*Materials Division*

Metallurgists at the Laboratories are currently conducting long-term investigations into improving the fatigue strength and stress corrosion of aluminium alloys ; into the reasons for the intercrystalline corrosion of the strong aluminium alloys ; into the development of improved heat-resistant alloys based on chromium ; and into the properties of high-strength steels.

To assist them in their research, metallurgists have at their disposal arc and induction furnaces for melting metals and alloys at temperatures up to 3,400° C.; electric, gas, and salt bath furnaces for heat treatment of alloys ; metal working and testing equipment ; corrosion oxidation equipment ; electron and optical microscopes ; X-ray diffraction apparatus ; and electron diffraction cameras.

*Defence Standards Laboratories*

Defence Standards Laboratories is a scientific establishment of the Research and Development Branch of the Department of Supply doing research, undertaking developmental work, and providing consulting, calibration and special testing services in the fields of physics, chemistry, and metallurgy for the armed services and for private firms engaged in defence contracts. In addition to this research and development work for the services, the establishment also does some non-defence work (estimated at 10 to 15 per cent. of total effort) comprising mainly calibration work for other laboratories (especially those sponsored by the National Association of Testing Authorities) and consultative work for authorities operating services of national or industrial importance.

The establishment is situated at Maribyrnong, Victoria, with branches at Alexandria, New South Wales, and Finsbury, South Australia. The laboratories at Maribyrnong cover some 250,000 square feet extending over 12 acres and, although well equipped, the establishment strives to improve its facilities by obtaining modern instruments and equipment as these become available. In many of the fields in which the establishment operates, its facilities are unique in the Melbourne area, and the laboratory as a whole is unusual for the breadth of scientific and technological subjects handled and the range of disciplines represented.

The Laboratories at Maribyrnong are staffed by about 150 professional scientists who have the help of about 400 technical and other staff. There is also a workshop and instrument shop capable of most diverse and accurate work.

Many of the activities of the Laboratories do not lend themselves to non-technical description, and some are not publishable for security reasons.

#### *Commonwealth X-ray and Radium Laboratory*

Following on suggestions from the Cancer Advisory Committee (set up by the Commonwealth Minister for Health in 1925), the Cancer Research Committee of the Sydney University and the Federal Health Council, the Commonwealth Government decided in 1928 to purchase 10 grams of radium and to establish the Commonwealth Radium Laboratory. The radium was purchased at a cost of £100,000 and the Laboratory set up in the University of Melbourne.

The primary function of the Laboratory at this time was to act as the custodian of the radium, to organize its equitable distribution and to provide a radon service. An international secondary standard of radium is held at the Laboratory and acts as the national radium standard for Australia.

Radium from the national holding was made available to establish radon centres in other States. Centres for the development of centralized radon services, financed by local bodies, were originally set up in all capital cities except Hobart, but only those in Brisbane and Sydney are operative at the present time, the radon required by other centres being obtained directly from Melbourne. During the year 1959-60, 32,150 millicuries of radon were prepared and issued by the Laboratory in the form of needles, implants and tubes.

In 1935, the activities of the Laboratory were expanded to include the physical aspects of the use of X-rays in treatment, and at the same time the name was changed to the "Commonwealth X-ray and Radium Laboratory". The free-air chamber maintained at the laboratory is recognized as the Australian standard for the dosimetry of X-rays. The Laboratory calibrates portable sub-standard dosimeters for other centres as required. This makes it possible for the measurement of X-rays at all Australian centres to be made in terms of the same standard. Biological material is irradiated for research workers by arrangement.

The functions of the Laboratory were again expanded in 1939 to include physical aspects of diagnostic radiology. Of particular interest in this field are the means of reducing the exposure to radiation of patients subjected to X-ray examination and the use of high-kilovoltage techniques in radiology. Other interests in this field are miniature radiography, as used in the campaign against tuberculosis, and cephalometry.

Investigations of the degree of protection necessary in particular applications of X-rays and radioactive materials are an important activity of the Laboratory. It prepares specifications of the protection facilities necessary in departments and laboratories employing ionizing radiation in medicine, research, and industry, and carries out

measurements of radiation levels in existing departments and laboratories. A film badge service to measure the radiation dose received by those exposed to ionizing radiation is maintained. In 1958-59, 18,049 film badges were processed and assessed. The corresponding figure for 1959-60 was 21,351 films.

The functions of the Laboratory include the importation and distribution in Australia of radio-isotopes for all purposes. Some stable isotopes are also imported. Radio-isotopes were first imported into Australia in 1946. The importation of radio-isotopes is restricted under the Customs (Prohibited Imports) Regulations, approval being given through the Laboratory by the Director-General of Health after it has been established that the isotopes will be used safely and usefully. Isotopes used in Australia are obtained from Great Britain, Canada and the United States of America. During 1959-60, 54 different radio-isotopes were imported in 820 separate shipments.

Bulk supplies of radio-isotopes for medical purposes are distributed by the Laboratory as individual doses for use on patients in accordance with a policy developed by the Committee on Radio-isotopes of the National Health and Medical Research Council. These radio-isotopes are issued free of charge. In 1959-60, six of the radio-isotopes, imported in 389 shipments, were for medical use, the remainder being distributed for purposes of industry and research.

The Laboratory has an extensive library of radiological literature and issues library bulletins at appropriate intervals. Technical communications on topics related to its functions are issued from time to time to medical men engaged in the clinical investigation and treatment of cancer, and to research workers and those in industry interested in applications of radiation.

Officers of the Laboratory serve on a number of committees, both national and international, and the services of the Laboratory are available to all who work with ionizing radiation.

### *Australian Wool Testing Authority*

#### *General*

The Authority was established in September, 1957, by a Commonwealth Act of Parliament entitled the Australian Wool Testing Authority Act. The functions of the Authority are to carry out tests on wool and wool products, and to issue relevant certificates with the immediate objective of establishing a service for testing the moisture content of scoured and carbonized wools.

The initial need to establish the Authority arose out of the difficulties experienced by firms trading in processed wools in establishing the true weight of a shipment of wool, without scientific test. Changes in the moisture content of wool occur during transit, causing appreciable alteration in the weight of the bales of wool, and it was considered that an impartial testing body providing certification on other important properties of wool would assist the trade in the marketing of wool. Consequently the Australian Wool Testing Authority was constituted to permit expansion into fields of work from greasy wool to the finished fabric.

The Authority conducts its affairs so that its costs are recovered by the charges made for its services. A grant of £50,000 has been received from the Commonwealth Government to cover the establishment of laboratories in Melbourne and Sydney, and the cost of operating these facilities until sufficient income could be earned from the tests conducted. The members of the Authority serve for three years, and are elected to represent a wide group of the wool industry.

The head office and laboratory of the Authority are located in Melbourne and there are testing laboratories in Sydney and Fremantle. Facilities for sampling wool are available at all wool-selling centres in Australia, and the samples are forwarded for testing and certification to the central laboratories at Melbourne and Sydney. To operate on this basis, it was necessary to develop a sampling technique that would provide a representative sample and also one which would be accepted by the International Wool Textile Organization, as the Authority is listed by this body as a Public Conditioning House, and must operate according to the accepted regulations for conducting tests and issuing certificates. A sampling instrument was developed which takes a core sample from a bale of wool, and allows the sampling to be conducted quickly according to a scientifically designed procedure, prior to shipment of the wool.

#### *Testing Services*

Considerable quantities of scoured, carbonized, and skin wools are exported from Australia. Thus in the year ending 30th June, 1960, 463,454 bales were shipped overseas. Although the use of a condition certificate for this commodity is not compulsory by legislation, considerable use is now being made of this service. In 1958-59, 51,243 bales were tested, while in 1959-60 the number had increased to 134,054. The number of conditioning certificates issued during the respective years was 1,680 and 3,654.

At the Melbourne laboratory of the Authority, investigations into new testing techniques are conducted in order to develop tests for those properties of wool that are of commercial importance. Once a new procedure has been established in Melbourne, it is extended to the laboratories in Sydney and Fremantle.

In August, 1958, the Authority established the testing of yield on greasy wool. This was started in Melbourne, and has since been extended to other States. The most widely used section of this involves the use of hand samples submitted by wool-buying firms and the results obtained from the Authority provide a useful guide on seasonal variations on the yield of wools purchased by them.

Hand samples do not always ensure that a representative sample is obtained from a bulk lot, and a significant development has been the use of the core-sampling technique for greasy wools. This method gives a highly representative sample for yield testing and is being investigated at the Melbourne laboratory for use in the issue of yield certificates on consignments of greasy wool exported from Victoria and other States.



Various commercial tests on wool are also conducted at the Melbourne laboratory. These cover a number of properties that are of interest to the wool trade and the processor from raw wool to wool tops, and include the following :—vegetable matter in greasy and scoured wool ; residual wax and soap in scoured wool and wool tops ; degree of damage on carbonized wools ; fibre characteristics of greasy and processed wools ; wool content of waste materials ; and fibre analysis of wool mixtures.

A total of 655 tests was conducted in the year 1959–60, and interest has increased considerably in these fields. Progress is being made to extend this service to the Sydney laboratory in the near future, and improved and faster testing procedures are being examined.

#### *Tests on Other Wool Products*

The Authority operates a well-equipped textile testing laboratory in Melbourne. The main function of this has been in investigation work connected with the development of the “ Seal of Approval ” performance scheme for wool goods. This section also attends to inquiries from the textile importer, manufacturer or other trade organizations.

Under the Authority’s “ Seal of Approval ” scheme, woollen goods of satisfactory performance are permitted to bear an official label showing that the garment has been pre-tested. Thirty-eight firms in Victoria have been given a “ shrink resistant tested ” label by the Authority which ensures these goods are machine washable. During the year 1959–60, over 750,000 garments were sold to the public in Victoria with the Authority’s performance label.

Under the financial assistance of the National Council of Wool Selling Brokers of Australia, the Authority is engaged in the development of consumer standards of performance for woollen goods. This information will assist the Authority in establishing the “ Seal of Approval ” as a hallmark of woollen goods which are good value for money.

#### *Gas and Fuel Corporation*

The management of the Gas and Fuel Corporation, conscious of world-wide rapid developments in the industry, has consistently endorsed the need for basic research in its organization. New concepts can only be successfully applied by a staff conversant with the latest technical and scientific advances, and for this purpose professional chemists, physicists and engineers are specifically engaged on research basic to this developing industry. Research in the Corporation is directed mainly into two fields—gas utilization and processing.

#### *Gas Utilization*

One project now brought to an advanced stage of application is the search for alternative blends of gaseous fuels which are interchangeable from the point of view of their combustion characteristics in existing combustion equipment. Further scope for new types of gaseous fuel is also sought by adaptation of burner design to suit gases which can be produced more economically. In this way research has created a fruitful inter-relationship between the production and utilization of

fuel gas. The situation is complicated by the fact that, apart from the familiar coal gas, water gas and carburetted water gas, the Corporation is also blending brown coal gas from high-pressure Lurgi generators, refinery tail gas, liquefied petroleum gas, and gas which is produced by the catalytic reforming of various hydrocarbon stocks.

The formidable problems posed by these marked changes in manufacturing techniques have been turned to economic and technical advantage ; gasification and blending is better controlled, combustion equipment has been improved, and fuel gas is being blended to fine limits consistent with the very best standards of purity and of combustion control between wider limits than ever before.

This new approach has necessitated further research into refined and fast methods of control. Chromatographic analysis of gas mixtures has completely superseded the familiar absorption and explosion techniques, and the flame ionization detector has been developed to a reliable chromatographic accessory for the determination of higher hydrocarbons. This new technique is sufficiently powerful to identify and measure odours from waste water and other sources and to evaluate the effect on combustion of minute fractions of specific higher hydrocarbons which do have an effect on combustion characteristics.

The velocity of sound is a function of the density of the gas. This principle has been used in the design of a sonic electronic gas density recorder. An accurate silver mirror dew point recorder has been designed to check fugacity calculations of mixtures of hydrocarbon gases, and is now applied to control condensation in pipe-lines.

Research on the intensification of combustion and flame retention has paved the way for a number of new applications for gas in industry. Gas-heated drying of paper sheet behind the "wet end" of paper machines, and using actual flame impingement, now increases the output of paper by 8 per cent. In another portable device, pulsating combustion is used to produce hot combustion products ready for piping under pressure without the use of fans or blowers.

Industrial atmospheres based on fuel gas, and ranging from pure nitrogen and carbon dioxide to atmospheres used for bright annealing, case hardening, brazing or the production of carbon monoxide, can be produced by means of a well-equipped "atmosphere bar", for the benefit of prospective industrial clients.

### *Process Research*

In collaboration with the University of Melbourne and the State Electricity Commission of Victoria, methods for the production of hard char from brown coal for metallurgical purposes are being developed. This development has been based on fundamental research and a semi-commercial unit, with a capacity of 25 tons of briquettes per day, is now operating at Morwell. Basic research has also been carried out, on small pilot plant scale, of the production of oil and petrol from brown coal gas rich in nitrogen by Fischer-Tropsch synthesis.

### **Research Sponsored by Private Industry**

#### *Introduction*

It is more difficult to obtain a completely accurate and detailed account of all scientific research work carried out in private industry. The following examples, though not exhaustive, illustrate some aspects of this type of research undertaken in Victoria.

#### *Pulp and Paper Industry*

The only industrial research organization in the paper industry in Victoria is maintained by Australian Paper Manufacturers Limited, manufacturers of pulp, papers and boards. Subsidiary companies carry out forestry, pulp moulding, lime-stone quarrying and open-cut brown coal mining operations.

Because of the special requirements of the local raw material available to the industry, Australian pulp and paper companies have been, for many years, conscious of the need for research. Prior to 1923, this research was done by Government organizations, but from 1923 onwards, industry has maintained its own research organizations, first in co-operative groups and later in companies' own individual research organizations. Government and co-operative industrial research programmes are still carried out at the Division of Forest Products (see page 187), C.S.I.R.O., where a programme of research for the pulp and paper industry is subsidized by the major pulp and paper producing companies of Australia and New Zealand.

However, the three major companies in Australia also maintain their own research organizations. Australian Paper Manufacturers Limited has its Research Division and a major part of its operations in Victoria. The research force of A.P.M. Limited was consolidated into a Research Division in 1936, and research facilities then consisted of a small laboratory and a pilot mill for semi-commercial pulping investigations. Since then, research facilities have been expanded to include two laboratories at Fairfield and Darebin, in addition to a pilot mill at Maryvale in Gippsland. These laboratories now provide, in addition to normal chemical and physical laboratories, special accommodation for work involving electron and light microscopy, pulping and paper-making technology, radioactive tracers and for packaging and printing research.

The present staff of 59 includes 33 who are graduates in either chemistry, physics, engineering, chemical engineering, mathematics or botany. A.P.M. Forests Limited, a wholly-owned subsidiary, also maintains a small research group at Traralgon which collaborates with the Research Division of the parent company on projects of common interest.

The Research Division is divided into three groups. The biggest section, No. 1 Research Laboratory, undertakes basic and applied research in all phases of pulp and paper manufacture, but is concerned almost entirely with laboratory scale investigation. The other sections, Applications and Sales Research, work in the field to a greater extent. Applications Section undertakes investigations into aspects of pulping and paper-making which cannot readily be studied on the laboratory

scale, and commercial scale evaluation and application of processes developed in the laboratory. Sales Research Section is concerned with the end uses of the company's products and its work is mainly directed towards the study of the requirements of the packaging and printing industries, and to the development of new packaging applications for fibreboard.

The research programme covers all phases of the industry from raw material supplies, pulping, and paper-making to uses of the finished product. While much of the work is applied, there is a core of basic research aimed at accumulating knowledge of the raw materials, products and processes of the industry. This basic work is mainly concentrated on the chemistry of cellulose and wood and the physics of fibre, paper and paperboard assemblies.

The major raw materials are wood and waste paper. The research groups of Australian Paper Manufacturers and A.P.M. Forests Limited find common ground in the investigation of wood properties in relation to pulping and paper-making characteristics on one hand, and to species, age, and conditions of growth on the other. Collaboration in this area is important in planning future forestry activities. Research on waste paper is confined to investigations of processing methods to obtain the best and most economical use of the material available. Pulping investigations are mainly aimed at the production of specific types of pulp from local raw materials. The work involves both the adaptation of known processes and development of new processes. Much of the work is concerned with processes giving improved efficiency in the use of wood.

Investigations of paper-making processes involve the study of preliminary processing of the pulp and of factors in the design and operation of paper-making machines. Some emphasis is placed on studies of the hydrodynamics of paper and board machines and investigations into the control of the process whereby papers and boards are formed from aqueous suspensions of fibre.

Additives are used in paper to impart special properties and research is directed towards the development of additives for special purposes and towards their effective and economical use.

Paper is a complex, visco-elastic material and the control and modification of its physical properties is the subject of important investigations, particularly where the end use in packaging applications calls for special attention to its ability to withstand stresses of varying severity and endurance. Work on packaging includes both the study of the physical properties required in papers and boards to be used in the packaging industry and the design of fibreboard containers, and packaging methods to extend the use of papers and paperboards in the packaging field.

The printing industry is an important user of paper and paperboards and development in that industry places new and more stringent requirements on paper and paperboard. The printing section of the Sales Research Laboratory investigates the printer's requirements of paper and paperboard of both basic and applied fields, and also develops a means of obtaining the quality to meet those requirements.

### *Kraft Foods*

The Research Laboratories at Kraft Foods Limited are organized into four sections and employ some 40 people, of whom about half are graduates. The work of the Laboratories is scientific and developmental. It is concerned with the existing products of the company and with the introduction of new ones.

The scope of the company's interests includes the dairy industry, especially the manufacture of cheese and cheese processing ; the growth and autolysis of yeast to produce a yeast extract ; meat canning ; the manufacture of dried products such as macaroni, spaghetti, other cereal products and ice cream mix, &c.; and salad products such as mayonnaise. Problems associated with these activities include the chemistry and biochemistry of cheese ripening and of yeast autolysis, dairy microbiology, fermentation, and the microbiology of certain refrigerated products, some unprocessed, and of canned meats. In addition, a considerable amount of attention has been given to product development and to packaging.

### *Chemistry*

Vapour phase chromatography, augmented by paper chromatography, has been used to investigate the nature of cheese flavour. Results obtained to date agree with work carried out in America and New Zealand on cheddar cheese. No major differences are as yet apparent, and it seems likely that the concentration balance between the flavour components is responsible in the main for cheese flavour differences.

Other work includes studies on oxidative rancidity in cheese and salad products and the oxidative breakdown of sorbic acid. Biochemical and technological studies of the autolysis of yeast have long been a field of study and this work continues. Acid hydrolysis of protein has also been of interest. An important practical aspect of this section is the establishment of specifications for raw materials, finished products and packaging materials, and also the development and application of analytical methods in the company's two control laboratories.

### *Food Technology*

The work of this department is concerned with the modification of existing products and the development of new ones, which may be variations of those already produced by the company or completely new to it. An additional function of this section is the evaluation of new plant. Provision is made for trying out specific items of plant which may do better something already being done in the company or which may be required for a new product.

For some years the company has been packaging rindless cheese in flexible wrapping materials, which must meet certain rigid specifications. It must be moisture proof to withstand drying out and the formation of rind on the cheese. It must prevent the ingress of oxygen which would support the growth of mould on the surface. It must seal well to give an air-tight package, and the bond strength between the laminates must be high enough to give the film stability during handling and transport.

These requirements lead to a considerable programme of gas and water transmission studies, and the regular determination of seal strength and bond strength. This company has pioneered these studies with the suppliers of flexible packaging materials, and works closely with them in the maintenance of specifications.

Microbiological investigations have recently included considerable work on the phage relationships of various cheese starters. Some of this is being prepared for publication in the scientific literature. Results of these studies enable cheese makers to avoid to some extent the incidence of slow vats when using the single-strain starters commonly in use in Victoria.

Following the drive against penicillin in milk supplies which has now been under way for some months in the United States, a modification of a method for the determination of penicillin in milk has been developed to a degree of sensitivity not hitherto attained. Results obtained with this test on numerous samples of Victorian milk have shown considerable incidence of detectable penicillin. Other investigational work has been associated with product development, and has included surveys of the flora of egg yolk and of butter.

This section provides a continuing service to production on all microbiological problems, and in particular supervises the company's sanitation programme relating results obtained with cleaning procedures.

#### *Technical Library*

This is an important part of the research laboratories, maintaining a constant flow of technical information to staff members at all locations.

#### *Monsanto Chemicals (Australia) Limited*

The company's chemical research activities are concentrated in the fields of agricultural, veterinary and industrial chemicals, drugs, and plastic raw materials.

During the last war extensive work was done in introducing the manufacture of sulphha drugs to Australia to supply the wartime needs of the armed forces. Much work has also been done on devising suitable manufacturing processes for Australian conditions for drugs such as aspirin and chloromycetin, hormone weedkillers and many specialized industrial chemicals. In the veterinary field the chemistry of phenothiazine is being thoroughly investigated. Phenothiazine is of considerable economic importance to the sheep industry, where it is used for the control of intestinal worms.

A large part of the company's research effort is in the field of plastics and synthetic resins. Examples include polyvinylacetate and styrene emulsions for water base or latex household paints, polystyrene familiar to the public as refrigerator linings and lighting fixtures, polyester resins for fibre-glass boats, and phenolic and amino resins for industrial purposes.

Of necessity, much of the research effort is of an applied nature, but progressively exploratory research is being increased. Close contact is maintained with the universities, C.S.I.R.O., government bodies and other industrial firms in fields of mutual interest.

*Nicholas Institute for Medical and Veterinary Research*

The Institute does research work in pharmacology and veterinary medicine with a view to finding new medicaments that may be useful in either human or veterinary medicine.

The Institute, which was established in 1955, is on an estate of about 150 acres at Sherbrooke in the Dandenong Ranges.

The staff of scientists, technical and administrative assistants and animal and farm attendants comprises 45 persons.

A staff of thirteen scientists is engaged in making new chemical compounds and testing them in animal experiments and in the laboratories to determine their possible value as medicaments for use on man or domestic animals. Drugs that are found in laboratory tests to be of possible value in treating human diseases are subjected to exhaustive study and then submitted for trial in human patients at clinics or hospitals. The research programme is directed particularly to medicaments that may be useful in diseases affecting the circulatory or nervous systems.

In the veterinary field the research work is concerned chiefly with sheep, cattle and poultry and, in particular, with diseases caused by parasites or by malnutrition. Large numbers of laboratory animals are bred and maintained for research purposes. These include rats, mice, guinea pigs and rabbits, while flocks of sheep and poultry are kept specifically for veterinary research.

*Imperial Chemical Industries of Australia and New Zealand Ltd.*

Prior to 1940, little organized research work was carried out in Australia by I.C.I.A.N.Z. Ltd. and the company's technical procedures were based on information from Imperial Chemical Industries Limited in Britain. However, development teams had been working at the Leathercloth and Nobel factories at Deer Park since 1932, mainly for the improvement of existing manufacturing methods and processes.

The outbreak of war cut off the supply of overseas materials and some technical information; problems associated with the manufacture of new and urgently needed products hastened the formation of a research department with laboratories at Deer Park to investigate matters of direct or indirect defence value. A major project at this stage was the establishment of a process for the manufacture of sulphamerazine which was required for disease control in tropical areas. In the immediate post-war period, it was recognized that the increased tempo of industrial activity required a substantial research effort on a permanent basis. This would act as a focus for the assimilation of information received from overseas which would be supplemented as required with local experimental activities. To implement the new policy a £500,000 Central Research Laboratory was constructed in 1956 at Ascot Vale.

Some part of industrial research is devoted to the discovery of new products that meet previously unsatisfied needs or perform substantially better than existing materials. This work requires five types of research and development covering determination of market potential;

establishment of manufacture on a laboratory scale, on a semi-technical scale, and on a full plant scale ; and finally, introduction into the customers' factories. In the company, the market potential of a product is investigated by the techno-commercial section of the development department. Market surveys are carried out as a standard procedure before any project passes the planning stage.

Research effort in the company is divided between the Central Research Laboratory, which now has a branch establishment at Botany, N.S.W., and the "Merrindale" Biological Research Station at Croydon, Victoria.

Coupled with these laboratories are the facilities of the company's biological technical service organization for more extensive regional trials.

The Central Research Laboratory has a staff of 170 people, of whom approximately half are university graduates. Their work covers a very wide range of topics, but at present special attention is being devoted to the polymer field. This involves the search for ways of using cheaper raw materials, mainly from petrochemical sources. Polymerization conditions are examined, either to obtain superior products or to increase productivity and so reduce costs. The performance of polymers under Australian conditions in surface coatings and other applications is also an important subject for investigation. A recent study of bushfires has shown that fire breaks can be formed quickly and conveniently by the spray application of finely powdered salts. Ways of increasing the efficiency of existing products such as phenothiazine have also received a good deal of attention.

The effectiveness of the laboratories is greatly dependent on effective analytical support, and considerable effort has been devoted to this subject. Among the results has been the development of a high sensitivity detector for gas chromatography which is now used in laboratories in most parts of the world. The recent discovery of the technique of atomic beam spectroscopy is also arousing considerable interest. A further important function of the Central Research Laboratory is the provision of a statistical service for the design and evaluation of experimental work and this section will shortly have its own electronic computer.

"Merrindale" Biological Research Station was established in 1953 on a 140-acre experimental farm. It is concerned with evaluation and application of agricultural chemicals for pest and disease control in animals and plants, and for weed control.

The staff of the "Merrindale" laboratories, numbering 27, is distributed amongst four sections—entomology, mycology, veterinary science and botany. The laboratories provide all necessary facilities for growing or breeding experimental plants, insects, or parasites under controlled conditions, and for the evaluation of the effectiveness of such chemical control agents as can be studied in Victoria. Each factory maintains a developmental team that works in close collaboration with the Central Research Laboratory. The emphasis is mainly on production problems and development of new products.



Since a major part of the company's products is not sold direct to the public, but is used by other manufacturers in producing other goods, technical service sections are maintained to give advice on utilization of company products to the best advantage. This service is available to the public as well as to other manufacturers. Two of these technical service sections maintain laboratories for investigation of customers' difficulties. The Plastics Technical Service and Development Laboratories at Ascot Vale have a staff of some 40 persons, about half of whom are technically qualified. Equipment includes the latest types of plastic processing machinery. The Dyestuffs Technical Service Laboratory, also at Ascot Vale, maintains a staff of twenty experts on dyeing techniques and dyes, pigments and textile auxiliaries.

### *Education*

#### **Secondary Education in Victoria, 1945-1960**

##### *Introduction*

The Second World War was, for the State system of education, a watershed between two views of secondary education: the one seeing it as the education of an academic élite, the other as a stage of education through which all children would pass for at least some of their adolescent years. The problems created by this change in view are the theme songs of the history of secondary education since 1945: the problems of curriculum change, of organization and instructional methods, of shortages of buildings and equipment to house and influence the children concerned, and the problem of obtaining adequate teachers for them—adequate in numbers as well as adequate in preparation for teaching.

The problems faced authorities responsible for all kinds of schools (State, Catholic, and other) but most of all the State authorities, who had an inescapable responsibility to permit the system of schools offered by the State to do its job efficiently.

This section will be concerned therefore almost wholly with the State Education Department. It will deal with secondary education as a second stage in education, lasting for six years between the ages of twelve and eighteen, regardless of the nomenclature of schools, or organization for their administration within the Education Department. Hence it will include high schools, higher elementary schools, central schools or classes, junior technical schools, girls' schools, but not senior technical schools.

##### *Educational Principles*

Two main pre-occupations have concerned educators. Convinced that secondary education for all has come to stay, and that the whole of the school age population will at some stage be in secondary schools, those responsible have ensured that the schools will be concerned not alone with preparation for tertiary courses, but will give an education likely to fit children to become competent citizens in the post-school world. Hence there has been introduced a greater diversity of subjects, more differentiation of courses, and methods of instruction and examination more suited to the needs of the children of lesser ambition and ability. More craft work, greater

reality in course content, greater adaptation to the needs of rural areas, and more specialized work in music, art, and physical education, were all introduced into schools during the decade and a half.

### *Organization*

#### *Entry to Secondary School*

For a time in the late 1940's and early 1950's, it was impossible for some children to find places in State secondary schools. This position was righted by 1952, and choice of type of secondary school was placed on the shoulders of parent and child. Special placement committees were then formed, and still operate, to place children in the type of school desired by parent and child. No entrance tests for particular schools operated thereafter, and schools were expected to cater for the wide range of ability thereby entering. Some schools used ability streaming; others refused it. In some schools very low performance in reading and arithmetic was encountered, and special remedial classes, or individual remedial work was undertaken. Classes, however, have remained large throughout the period, and made it difficult to undertake remedial work in the most efficient way—by the teacher concerned.

#### *Type of School*

Despite several strong statements about the undesirability of continuing parallel work in high and junior technical schools, both have continued and increased in numbers. An attempt has been made to establish greater uniformity in the courses for the first two years, but the schools are still basically different in approach. Girls' schools have developed to provide courses more suited to the girl not concerned with an academic career, and they have been permitted to award their own Intermediate and Leaving Certificates. The junior technical schools have also been permitted to award their own Junior and Intermediate Technical Certificates, with a large element of autonomy available to them. The high schools have been encouraged to become accredited for the public Intermediate and Leaving Examinations, in order to give them the opportunity to adopt flexible courses suited to the needs of the children attending. As in all other similar schools, they have found the high standard of matriculation requires careful, lengthy preparation, and that this alone substantially restricts the opportunity to modify courses or school organization.

### *Teachers*

Since 1945 there have been grave shortages of fully qualified and trained teachers applying for positions on the permanent staffs. Many well qualified temporary teachers, mostly women, have been available, but not sufficient for the needs of an expanding variety of schools. Technical schools have lacked teachers of English, social studies, and mathematics, and the high schools have been most noticeably lacking in full-time teachers of science and mathematics. Great strides were taken to remedy deficiencies. Bursaries to encourage further secondary study, liberal training allowances, new secondary and technical teachers' colleges, recruiting drives in Australia and elsewhere, have all helped to lessen the deficiency between needs and numbers available, but there are still grave shortages, and still too many temporary teachers.

Many of the latter are untrained, or in need of refresher courses, and special courses have been arranged for their pedagogic training. Refresher courses conducted by the University, or by associations of subject teachers, or by the Education Department in residential seminars, have been popular with teachers, but have as yet only touched the fringe of in-service training needs.

Special seminars have also been arranged for new principals of all kinds of secondary schools to make their induction into a new job easier for them.

### *Buildings*

Inadequate building programmes dogged the progress of secondary education throughout the era discussed. It was not until the early 1950's that a plan to deal with great and obvious need showed signs of realization in practice. A great number of new schools has since been built, beginning with a small core of essential class-rooms for the first-year students, and adding class-rooms and specialized rooms in successive years as the numbers grew. This four stage plan of building has provided the essential buildings for most newly developed areas, although there are still many new schools operating in rented premises and other temporary accommodation.

Shortages of equipment, a source of constant complaint in the immediate post-war years, have been almost overcome, and shortages that do exist are due to inadequacy of funds available rather than to a lack of production, or an excess of demand over supply.

### *Numbers*

Some indication of the growth in numbers of pupils and schools is obtained from the following table, which refers to secondary schools of the Education Department :—

VICTORIA—STATE SECONDARY SCHOOLS : NUMBER AND PUPILS

Particulars	1945	1950	1955	1960
<b>Number of Schools—</b>				
High Schools.. .. .	44	48	84	150
Higher Elementary Schools .. .. .	48	46	32	24
Junior Technical Schools .. .. .	28	30	39	65
Girls' Schools .. .. .	14	14	15	16
Other Secondary (i.e. Central Schools and Classes) .. .. .	41	27	28	24
<b>Numbers of Pupils* in—</b>				
Form 1 .. .. .	14,499	18,058	25,011	39,905
Form 4 .. .. .	4,351	5,331	7,952	16,574
Form 6 (Matriculation) .. .. .	409	703	1,084	2,422

\* These include all post-primary classes.

A more general indication of the growth of numbers is given by the following figures.

For Victoria as a whole, including registered schools, there were at school on 1st August, 1949, about 26,900 children aged thirteen. Of these, less than 10 per cent. stayed on at school for at least four more years, and in 1953, about 2,600 were still at school, aged seventeen.

On 1st August, 1959, there were about 46,600 children aged thirteen, and the best estimate possible, based on trends over the intervening decade, is that almost 19 per cent. will still be at school in 1963.

### Further References

A historical survey of the development of the Victorian Education Department will be found on pages 176 to 179 of the Victorian Year Book 1961.

### Salient Features of Contemporary State Education

#### 1. *Types of Schools*

##### (a) *Primary*:—

- (i) Normal—for Grades I to VI;
- (ii) Consolidated—for Grades I to VI and special post-primary courses of four years in rural areas;
- (iii) Special Schools—for handicapped children, and pupils in institutions;
- (iv) Special Classes—for remedial works;
- (v) Correspondence School—correspondence classes for primary and secondary pupils and teachers.

##### (b) *Secondary*:—

- (i) High Schools—six years of post-primary school to University entrance;
- (ii) Girls' Schools—five years of post-primary school;
- (iii) Higher Elementary Schools—four years of post-primary school;
- (iv) Central Schools and Classes—two years of post-primary school.

##### (c) *Technical*:—

- (i) Junior Technical—four years of post-primary school;
- (ii) Senior Technical—four years of post-Junior Technical school.

## 2. *Special Services*

Special Services are maintained and extended through officers and staffs in the following fields:—

- (i) Library Services
- (ii) Visual Aids Department
- (iii) Music and Speechcraft
- (iv) Physical Education
- (v) Art
- (vi) Forestry
- (vii) Publications (Including certain texts)
- (viii) Survey and Planning (School sites, Teachers' Colleges, &c.)
- (ix) Curriculum and Research (Revision of certain curricula)
- (x) Australian Broadcasting Commission Liaison
- (xi) Welfare (Teachers' accommodation)
- (xii) Domestic Arts (Primary)
- (xiii) Psychology and Guidance Services.

In addition, the State Schools' Nursery provides valuable instruction for teachers and pupils, and supplies plants to schools.

The School Medical and Dental Services provide inspection and guidance to pupils throughout the State (see page 248). Other school activities such as the Gould League of Bird Lovers and Red Cross are fostered and assisted by teachers.

## 3. *Examinations*

An increasing number of Secondary Schools are providing Class A, or internal examinations, for the University Intermediate and Leaving Certificates. In addition, the Department provides its own Intermediate Certificate for consolidated and girls' schools, and Leaving Certificate for the latter. Teachers may obtain qualifications by in-service courses.

## 4. *Teachers*

Rights of teachers for promotion and transfer have been greatly improved. Teachers' residences and flats for women teachers have been provided in increasing numbers in recent years.

Further details of the State Education system, including particulars of subjects taught and facilities provided, were given on pages 317 to 332 of the Victorian Year Book 1954–1958.

### **Primary and Secondary Schools**

Particulars of the number of State schools, teachers and pupils for the years 1956 to 1960 are shown in the following tables.

The Correspondence School, which serves both primary and secondary pupils, has not been counted in either of the two following tables. However, Correspondence School teachers have been included

in the numbers of teachers according to whether they were primary or secondary division classification. The number of correspondence pupils has been included only in the school census enrolments.

Particulars of Primary Schools include Post Primary Classes in Consolidated, Group, and Central Schools.

### VICTORIA—STATE PRIMARY SCHOOLS : ENROLMENT AND ATTENDANCE

Year Ended 31st December—	Number of Schools at End of Year	Number of Teachers at End of Year*	Number of Pupils		
			Enrolled during Year	In Average Attendance	Census Enrolment†
1956.. ..	1,892	9,170	299,374	237,272	260,232
1957.. ..	1,908	9,946	312,468	244,113	272,666
1958.. ..	1,918	11,089	325,525	263,114	286,351
1959.. ..	1,927	11,960	334,159	271,105	291,967
1960.. ..	1,928	12,694	342,877	273,574	296,762

\* Including student teachers, but excluding teachers temporarily employed, the number of whom was 1,945 in 1956, 1,443 in 1957, 1,573 in 1958, 1,344 in 1959, and 1,241 in 1960.

† At 1st August in each year.

### VICTORIA—STATE SECONDARY SCHOOLS : ENROLMENT AND ATTENDANCE

Year Ended 31st December—	Number of Schools at End of Year	Number of Teachers at End of Year*	Number of Pupils		
			Enrolled during Year	In Average Attendance	Census Enrolment†
1956.. ..	209	2,882	83,650	72,197	78,421
1957.. ..	222	3,339	93,148	79,266	87,910
1958.. ..	233	3,681	103,202	89,142	97,566
1959.. ..	255	4,208	118,259	103,544	111,995
1960.. ..	279	4,680	132,600	116,467	125,633

\* Figures given are at 30th June for the years 1956 and 1957, and at 30th September for 1958, 1959 and 1960. They include student teachers, but exclude teachers temporarily employed, the number of whom was 1,005 in 1956, 924 in 1957, 1,166 in 1958, 1,402 in 1959, and 1,602 in 1960. They also exclude teachers in Junior Technical Schools.

† At 1st August in each year.

**VICTORIA—STATE SECONDARY SCHOOLS : CLASS OF  
SCHOOL : ENROLMENT AND ATTENDANCE, 1960**

Class of School	Number of Schools	Number of Pupils		
		Enrolled during Year	In Average Attendance	Census* Enrolment
Central Schools and Classes†	24	4,752	4,295	4,459
Higher Elementary Schools†	24	2,961	2,504	2,558
Girls' Secondary Schools ..	16	6,987	5,850	6,410
Junior Technical Schools‡ ..	65	34,857	30,184	34,130
District High Schools ..	150	83,043	73,634	78,076
Total .. ..	279	132,600	116,467	125,633

\* At 1st August.

† Central Schools and Higher Elementary Schools are not independent establishments ; they are worked in conjunction with Primary Schools.

‡ Junior Technical Schools are worked in conjunction with Technical Schools.

The following tables show the census enrolments in State schools (excluding Senior Technical), and include full-time and part-time correspondence pupils. Numbers of pupils refer to census date (1st August in the year concerned) and ages of pupils refer to age at birthday preceding the census date.

**VICTORIA—CENSUS ENROLMENTS OF STATE SCHOOL  
PUPILS BY AGE GROUPS**

At 1st August—	Under Six Years	From Six to Fourteen Years	Over Fourteen Years	Total
1956 .. ..	26,889	295,822	15,942	338,653
1957 .. ..	29,837	311,006	19,733	360,576
1958 .. ..	34,893	326,453	22,571	383,917
1959 .. ..	35,962	340,795	27,205	403,962
1960 .. ..	38,499	352,912	30,984	422,395

**VICTORIA—CENSUS ENROLMENTS OF STATE SCHOOL  
PUPILS BY AGE GROUPS AND CLASS OF SCHOOL, 1960**

Class of School	Under Six Years	From Six to Fourteen Years	Over Fourteen Years	Total
Primary .. .. .	38,499	256,281	226	295,006
Central School (Post Primary) ..	..	323	60	383
Consolidated and Group School (Post Primary) .. ..	..	1,193	180	1,373
Central Schools and Classes (Secondary) .. .. .	..	4,417	42	4,459
Higher Elementary Schools ..	..	2,104	454	2,558
Girls' Secondary Schools ..	..	5,358	1,052	6,410
Junior Technical Schools ..	..	26,646	7,484	34,130
District High Schools .. ..	..	56,279	21,797	78,076
<b>Total .. .. .</b>	<b>38,499</b>	<b>352,601</b>	<b>31,295</b>	<b>422,395</b>

Note :—Census enrolments are those at 1st August.

**Technical Schools**

Enrolments in Senior Technical Schools for the years 1956 to 1960 are shown in the following table :—

**VICTORIA—SENIOR TECHNICAL SCHOOL  
ENROLMENTS**

Classification	Year Ended 31st December—				
	1956	1957	1958	1959	1960
Full-time Students .. ..	4,286	4,776	5,340	6,089	6,586
Part-time Students .. ..	50,294	52,331	57,528	58,845	61,130
<b>Total Individual Enrolments</b>	<b>54,580</b>	<b>57,107</b>	<b>62,868</b>	<b>64,934</b>	<b>67,716</b>

**State Expenditure on Education**

During 1959–60, £46,335,877 was spent by and on behalf of the Education Department of Victoria. This amount covers expenditure from both revenue and loan and includes payments made by the



Treasury to the University, except for an amount paid for Bacteriological Laboratory Services. The amount of £46,335,877 and expenditure shown in the following table for earlier years differ from the figures on education expenditure shown on pages 627 and 644 of the Year Book, in that the amounts shown in the Finance Section include expenditure on Agricultural Education, but exclude payments for superannuation and pensions and workers' compensation.

Expenditure on education for each of the years 1955-56 to 1959-60 is shown in the following table :—

**VICTORIA—STATE EXPENDITURE ON EDUCATION**  
(£'000)

Expenditure on—	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Primary and Secondary Education—					
Primary (Including Special Subjects) ..	11,469	12,575	13,760	15,147	15,807
Secondary ..	4,325	5,007	5,752	6,502	7,620
Buildings and Land..	5,016	5,214	5,486	5,548	7,096
Technical Education—					
Junior and Senior Schools ..	3,557	4,037	4,356	4,645	5,936
Buildings and Land..	930	1,087	1,066	1,209	1,914
Training of Teachers ..	1,723	2,047	2,313	2,694	3,361
Administration ..	491	541	584	651	742
Pensions ..	599	632	684	758	851
General Expenditure ..	698	781	822	903	1,026
University—					
Special Appropriation, &c. ..	901	1,018	1,212	1,534	1,971
Scholarships and Bursaries, &c. ..	10	10	11	13	12
Total ..	29,719*	32,949*	36,046*	39,604*	46,336*
*These Totals Exclude—					
Pay-Roll Tax ..	369	427	467	517	576
Expenditure on School Medical and Dental Services ..	240	282	278	319	359
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Per Head of Population	11 11 9	12 9 7	13 6 11	14 5 9	16 6 0

In addition to the expenditure shown in the preceding table, the following fees, donations, &c., were retained and expended by the various technical school councils :—

(£'000)

1955-56	1956-57	1957-58	1958-59	1959-60
273	471	528	557	693

Of the amount of £46,335,877 shown in the preceding table as being expended by the State on Education in 1959-60, £1,970,800 was appropriated to the University; £12,034 was spent in scholarships and bursaries to the University; £56,500 was spent on Adult Education; £2,000 was granted to the Post-graduate Committee; and the remaining £44,294,543 was expended on education in State schools, as shown in the following table :—

**VICTORIA—EXPENDITURE ON EDUCATION IN STATE  
SCHOOLS, 1959-60**  
(£)

Classification	General Expendi- ture	Primary Education	Secondary Education	Technical Education	Corres- pondence School	Teachers' Colleges	Total Expendi- ture
Cost of Administra- tion ..	430,096	158,947	73,874	71,360	2,723	5,455	742,455
Cost of Co-ordin- ate Activities* ..		29,725					29,725
Cost of Instruction	321,854	13,027,617	5,897,602	5,333,513	82,117	674,283	25,336,986
Operation of School Plant† ..	2,324	847,375	422,106	111,169	1,052	34,640	1,418,666
Maintenance of School Plant‡ ..	5,097	929,391	251,195	156,285	269	40,594	1,382,831
Auxiliary Costs§ ..	604,434	846,823	906,864	303,550	312	2,604,330	5,266,313
Fixed Charges   ..	861,870	146,900	80,541	41,537	729	10,562	1,142,139
Capital Expenditure	22,613	3,050,827	3,174,639	1,903,896	..	823,453	8,975,428
<b>Total ..</b>	<b>2,248,288</b>	<b>19,037,605</b>	<b>10,806,821</b>	<b>7,921,310</b>	<b>87,202</b>	<b>4,193,317</b>	<b>44,294,543</b>

\* Refers to Attendance Branch.

† Includes cost of cleaning, fuel, water, &c., and wages of caretakers.

‡ Includes cost of repair of buildings, upkeep of grounds, &c.

§ Includes cost of transportation of pupils, hostel expenses, and board allowances for teachers, &c.

|| Includes pensions and superannuation, rent of buildings, and workers' compensation.

### Registered Schools of Victoria

#### General

The Registered Schools of Victoria are those for which the Government takes no responsibility in the matter of their finance, staffing, or organization. However, some control is exercised in that all such schools must be approved by the Council of Public Education as having adequate buildings and trained staff, and they may be subject to inspection by inspectors of the Education Department.

In the main, these schools are not co-educational and a large number are primary schools provided by the Roman Catholic Church. At the secondary level these schools include boys' schools which are

members of the Headmasters' Conference of the Independent Schools of Australia and girls' schools which are members of the Headmistresses' Association of Australia.

It is generally true that these schools owe their foundation to private individuals or groups of individuals or corporate bodies, rather than to the churches to which they belong, except in the case of the Roman Catholic schools.

However, a few of the larger schools which are now just over a century old owe their origin to churchmen; to Bishop Perry of the Church of England, the Free Church Presbytery of Victoria and the Roman Catholic Bishop of Melbourne, Archbishop Goold. As was the case in England, secondary education in Australia was left to the churches to pioneer, although the Victorian Government in the 1850's made substantial grants to the Anglican, Presbyterian and Roman Catholic Churches for the foundation of Melbourne Grammar, Geelong Grammar, Scotch and St. Patrick's, which later became Xavier College.

The ultimate control of each of these schools is vested in an autonomous, and usually incorporated, body independent of both State and any other school. This body generally takes the form of a council made up of representatives of the church and of interested and devoted men or women who give their services to promoting the well being of the school.

The council appoints the headmaster (or headmistress) who in turn selects the staff, some members of whom may well devote their whole life to the service of the one school. Thus, there is likely to develop a continuity of belief and behaviour which gradually builds up an individual character peculiar to that school.

All of the Independent schools derive their working income from fees charged, very few having any endowments, and most are day schools with some accommodation for boarders. In the main the size of classes is limited to 30 with smaller numbers in certain subject groups. All schools offer scholarships by competition and a full scholarship generally gives remission of all tuition fees.

The methods of teaching within these schools are similar to those employed in the State schools, but emphasis is given to religion in the life of the school, and more use is made of "out of school" activities, including games, as an educational instrument.

In the field of experiments in teaching techniques the Independent schools have, perhaps, no spectacular record. But some schools have their individual schemes for developing a sense, and habits, of community service whereby service projects on behalf of certain sections of the public are undertaken. Other schools give rural training at country centres near Melbourne, while the development of self-reliance, leadership, and independence is encouraged through schemes similar to the "Outward Bound Schools" in England. But probably the major educational experiment that has been undertaken in recent years has been that of Geelong Grammar School at Timbertop near

Mansfield in the Victorian Alps. Under this scheme all boys in the fourth year of their secondary education (average age fourteen and half to fifteen and half years) spend a whole year at Timbertop. The normal academic curriculum is covered, but there are no organized conventional games and the boys help with domestic and other labour.

The scheme has as its objectives "the developing of self-reliance and independence—the satisfying of the desire for adventure and the less recognized relationship between man and nature, with its understanding of the importance of the land, not only to those who work upon it, but to all men". Altogether the contribution of the Independent schools to educational thought and practice in the State, and in Australia, has been a worthy one.

No Independent school in Victoria is permitted to employ anyone who is not registered with the Council of Public Education and to secure registration a teacher must have had some form of recognized training or hold a Diploma of Education from a University. (See pages 220–221.) The training of teachers is mainly in the hands of the State through its training colleges, but the Independent schools have their own training institution at Mercer House, Malvern. Finance for Mercer House comes from voluntary donations from the schools (based on a *per capita* levy) and from fees from the students. The courses are of one or two years' duration and on completion, give the students registration as sub-primary, primary, or junior secondary teachers.

Mercer House is the only Independent Teacher Training Institution in Australia training teachers for the independent primary and secondary schools. In addition to its function as a training institute, Mercer House is developing "in service" training in the form of refresher courses for teachers and also acts as a centre for bringing together teachers of various subjects for the interchange of ideas.

### **Victorian Girls' Registered Schools**

An article dealing with this subject will be found on pages 187–188 of the Victorian Year Book 1961.

### **Catholic Education**

#### *Primary Schools*

The first Catholic school in Victoria was set up in 1839. Development continued somewhat haphazardly for a few years, but when the Denominational Schools Board was set up in 1848, the number of Catholic schools increased sharply. A new phase began when government aid was withdrawn from all denominational schools in 1872, Catholic schools continuing, under great difficulties, as an independent system.

The religious teaching orders provided the majority of teachers, as many of the lay teachers were attracted to the State Education Department by the better salaries and conditions then offering. By 1900, there were 786 religious teachers in Catholic schools.

Since the Second World War, the population increase has led to an extensive increase in the number of schools and a consequent need for more teachers; during this period the Church has had to rely more on lay teachers.

### *Secondary Schools*

Similar development has taken place in the provision of separate secondary schools for boys and for girls. This development really commenced in the 1850's. By 1961, 27 boys' secondary schools, and 61 girls' secondary schools were in operation. The following table shows the number of teachers engaged in Catholic schools from 1950 to 1960 :—

VICTORIA—NUMBER OF PRIMARY AND SECONDARY  
TEACHERS IN CATHOLIC SCHOOLS

Year	Religious	Lay	Total
1950 .. .. .	1,333	263	1,596
1955 .. .. .	1,659	388	2,047
1960 .. .. .	1,935	784	2,719

### *Curricula*

The curricula formulated by the State Education Department have been adopted by Catholic schools. Regular inspections are carried out both by district inspectors and the inspectors appointed by the bishops to staff the Catholic Education Offices.

### *Teacher Training*

The bishops have always been sensitive of the need for well trained teachers and have entrusted the task of teacher training to the various teaching orders. For many years these training centres mainly catered for religious, but, especially in the last decade, lay teachers have also been trained. Four training centres for lay teachers were established in Melbourne in 1955 and 1956, and since that time 465 young ladies have been trained in them for Catholic parish primary schools, mostly for the Archdiocese of Melbourne.

### *University Education*

The church has directed its attention to all sections of education from the pre-school through to University level. Newman College, within the University of Melbourne, caters for male students, and St. Mary's Hall in Parkville, for female students. These are conducted respectively by the Jesuit Fathers and the Sisters of the Institute of the Blessed Virgin Mary.

### *Pre-School Education*

With the assistance of grants from the Department of Health, this aspect of the Catholic education system has developed to the point where in 1961, 22 Catholic kindergartens exist in Victoria.

### *Modern Trends*

Despite the difficulties which are common to all education systems in the modern era, the Catholic education system continues to develop. Beside the expert training given in the various training centres, vacation seminars and frequent teacher conferences are means used to keep teachers abreast of the latest techniques and methods of teaching, both in regard to secular and religious topics.

### *Latest Developments*

The largest increase in recent years has been in the primary section. As well as a larger teacher training system mentioned above, many new Catholic schools have been built and others enlarged. This has been done by means of the Schools Provident Fund. Catholic and other investors have lent to the Archdiocese of Melbourne, £4½ mill. since 1956. Much of this has been repaid to the lenders, but currently over £3 mill. is invested in the fund. As a result, 120 parishes out of a total of 162 have received advances and 320 class-rooms have been built for 20,000 more children. Sites for new schools have been purchased and convents built for religious teachers.

In the secondary department seven new boys' secondary schools have been established in the last decade, two of them regional schools. New primary schools and secondary schools are being planned.

### **Further References**

An historical survey of Catholic education in Victoria will be found on pages 188 to 192 of the Victorian Year Book 1961.

### **Council of Public Education**

#### *Constitution*

The *Registration of Teachers and Schools Act* 1905 came into operation on the 1st January, 1906, and provided for the registration of schools, other than State schools, and of those teaching in them. It continued until the *Education Act* 1910 came into operation.

This latter Act provided that the Council of Public Education should consist of twenty members with the Director of Education as President.

A new Council is elected every three years and any person who was a member of the previous Council is eligible for re-appointment. Nine members form a quorum. It is the duty of the Council to report to the Minister upon—

- (a) methods of or developments in public education in other countries, if in its opinion, it is desirable to introduce such methods or developments into Victoria; and
- (b) any matters in connexion with public education referred to it by the Minister.

### *Registration of Teachers*

The Council's chief functions deal with the registration of teachers and schools, ensuring that schools are registered and properly staffed, and that persons employed in them are registered as teachers or have been granted temporary permission to teach. A Register of Schools and Teachers is kept by the Council with a Supplementary Register prepared each year.

Part III. of the *Education Act* 1958, deals with schools other than State schools. "School" is defined as "An assembly at an appointed time of three or more persons between the ages of six and eighteen years for the purpose of their being instructed by a teacher or teachers in all or any of the undermentioned subjects, namely, reading, writing, arithmetic, grammar, geography, English or other language, mathematics, history, any natural or experimental or applied science, book-keeping, shorthand, accountancy ; but 'School' does not include the University of Melbourne or any college affiliated therewith or any assembly of persons, all of whom are members of not more than two families, or any State school, or any school aided by the State or any school in any part of Victoria declared by the Governor in Council to be a sparsely populated district for the purposes of the Act".

The Act makes it possible for qualified teachers, if they so desire, to be registered as teachers of art, art and crafts, music, or physical education. Such registration is not compulsory.

To deal with applications for the registration of schools and teachers, the Council appoints a special committee which is called the "Registration Committee". This Committee consists of nine members of the Council.

A total of 22,210 teachers has been registered since 1906 and over 900 have been registered in each of the last two years. Each person applying for registration has to give sufficient information to permit the Registration Committee determine whether he should be registered as a sub-primary, primary, junior secondary, or secondary teacher, or as a teacher of special subjects.

### *Registration of Schools*

At 30th June, 1961, there were 572 registered schools each of which is registered in the Register of Schools as a sub-primary school, primary school, junior secondary school, secondary school, or school of any two or more of such descriptions.

Provision is also made in the *Education Act* 1958 for the registration of technical schools and special schools. In addition, the Council can refuse to register any school if it is satisfied that its premises or the instruction to be given in it will not be of a satisfactory standard.

Furthermore it cannot register any school unless it is satisfied that the instruction in such school will be given through the medium of the English language except only so far as the use of a language other than English is necessary for giving instruction in such other language as a special subject.

To ensure the competency of those who desire to teach in Registered schools in Victoria, there exist in Victoria a total of nine training institutions, seven of which are under the jurisdiction of the various orders of Sisters and Brothers within the Roman Catholic Church, one under the Incorporated Association of Registered Teachers and one under the Free Kindergarten Union of Victoria. Each of these establishments is visited triennially by the Council's inspectors.

Particulars of Victorian Registered Schools are shown in the following tables. In these tables "census" enrolments are those at 1st August in the year concerned.

### VICTORIA—NUMBER OF REGISTERED SCHOOLS AND TEACHERS

Particulars	Number of Schools					Number of Teachers				
	1956	1957	1958	1959	1960	1956	1957	1958	1959	1960
Denominational—										
Roman Catholic ..	400	413	424	433	439	2,219	2,340	2,482	2,659	2,826
Church of England ..	35	34	34	35	36	694	690	724	734	788
Presbyterian ..	15	15	14	14	14	330	349	340	356	385
Methodist ..	4	4	4	4	4	165	171	177	178	188
Other ..	23	24	23	24	23	163	179	187	210	233
Undenominational ..	44	42	34	35	35	349	318	330	310	325
Total ..	521	532	533	545	551	3,920	4,047	4,240	4,447	4,745

### VICTORIA—REGISTERED SCHOOLS : CENSUS ENROLMENTS BY DENOMINATIONS

At 1st August—	Denomination					Total Denominational	Undenominational	Total Registered Schools
	Roman Catholic	Church of England	Presbyterian	Methodist	Other			
1956 .. ..	102,948	12,355	6,514	3,518	3,025	128,360	5,114	133,474
1957 .. ..	109,184	13,015	6,635	3,568	3,378	135,780	4,121	139,901
1958 .. ..	116,700	13,382	6,982	3,686	3,548	144,298	4,059	148,357
1959 .. ..	121,901	13,557	7,086	3,687	3,857	150,088	4,065	154,153
1960 .. ..	127,275	13,957	7,295	3,675	4,290	156,492	4,083	160,575

### VICTORIA—REGISTERED SCHOOL CENSUS ENROLMENTS : AGE GROUPS AND DENOMINATIONS, 1960

Denomination		Under Six Years	From Six to Fourteen Years	Over Fourteen Years	Total
Denominational—					
Roman Catholic .. ..	..	11,785	107,193	8,297	127,275
Church of England .. ..	..	531	9,839	3,587	13,957
Presbyterian .. ..	..	209	5,031	2,055	7,295
Methodist .. ..	..	42	2,239	1,394	3,675
Other .. ..	..	278	3,351	661	4,290
Undenominational .. ..	..	379	2,891	813	4,083
Total ..	..	13,224	130,544	16,807	160,575



### VICTORIA—REGISTERED SCHOOLS : CENSUS ENROLMENTS BY AGE GROUPS

At 1st August—	Under Six Years	From Six to Fourteen Years	Over Fourteen Years	Total
1956 .. .. .	10,686	110,712	12,076	133,474
1957 .. .. .	11,124	115,780	12,997	139,901
1958 .. .. .	12,457	121,746	14,154	148,357
1959 .. .. .	12,443	126,456	15,254	154,153
1960 .. .. .	13,224	130,544	16,807	160,575

A comparison between census enrolments in State schools (excluding Senior Technical) and Registered schools for the five years 1956 to 1960 is shown in the following table :—

### VICTORIA—STATE AND REGISTERED SCHOOLS : CENSUS ENROLMENTS

At 1st August—	State Schools	Registered Schools	Total Enrolments
1956 .. .. .	338,653	133,474	472,127
1957 .. .. .	360,576	139,901	500,477
1958 .. .. .	383,917	148,357	532,274
1959 .. .. .	403,962	154,153	558,115
1960 .. .. .	422,395	160,575	582,970

The census enrolments in State schools (excluding Senior Technical) and Registered schools for the five years 1956 to 1960, by age groups, are shown in the following table :—

### VICTORIA—STATE AND REGISTERED SCHOOLS : CENSUS ENROLMENTS BY AGE GROUPS

At 1st August—	Under Six Years	From Six to Fourteen Years	Over Fourteen Years	Total
1956 .. .. .	37,575	406,534	28,018	472,127
1957 .. .. .	40,961	426,786	32,730	500,477
1958 .. .. .	47,350	448,199	36,725	532,274
1959 .. .. .	48,405	467,251	42,459	558,115
1960 .. .. .	51,723	483,145	48,102	582,970

## University of Melbourne

### *General*

The University of Melbourne was incorporated and endowed by an Act of the Governor and the Legislative Council of Victoria on 22nd January, 1853. The University consists of and is governed by a Council of 33 members and a Convocation consisting of all graduates. The University buildings, together with those of the affiliated residential colleges, are situated on 100 acres of land in Parkville.

To ensure recognition in the United Kingdom of the degrees of the infant University, Royal Letters Patent, issued on 14th March, 1859, laid down that the degrees of the University should be recognized as "academic distinctions and rewards of merit and be entitled to rank, precedence and consideration in our United Kingdom and in our colonies and possessions throughout the world as if the said degrees had been granted by any University of our said United Kingdom".

### *Faculties*

The University of Melbourne maintains Chairs either out of general revenue or from endowments, as follows: Accounting (G. L. Wood Professor), Agriculture, Anatomy, Applied Mathematics, Architecture (The *Age* Professor), Bacteriology, Biochemistry, Botany and Plant Physiology, Chemistry, Child Health, Civil Engineering, Classical Studies, Commerce (Sydney Myer Professor), Commercial Law, Conservative Dentistry, Dental Medicine and Surgery, Dental Prosthetics, Economics (Truby Williams Professor), Economic History, Education, Electrical Engineering, English Language and Literature, Experimental Neurology, Fine Arts (The *Herald* Professor), French, Geography, Geology and Mineralogy, Germanic Languages, History, History (Ernest Scott Professor), Jurisprudence, Mechanical Engineering, Medicine (James Stewart Professor), Medicine, Metallurgy, Music (Ormond Professor), Obstetrics and Gynæcology, Organic Chemistry, Oriental Studies, Pathology, Pharmacology, Philosophy, Physics (Chamber of Manufactures Professor), Physiology, Political Science, Psychology, Public Law, Pure Mathematics, Semitic Studies, Statistics, Surgery (James Stewart Professor), Zoology. Research chairs have been established in Economics (Ritchie Professor), Experimental Medicine, and Metallurgy.

In addition, other departments, under the charge of an Associate-Professor, senior lecturer-in-charge, or other officer are Anthropology, Criminology, Forestry, History and Philosophy of Science, Indian, Indonesian and Malayan Studies, Industrial Relations, Journalism, Languages (Science Course), Medical Jurisprudence, Meteorology, Microscopy, Mining, Physical Education, Russian, Social Studies, Surveying, Town and Regional Planning, and Veterinary Science.

### *Fees*

The annual fees payable to the University by a student in any course do not, in general, exceed £150.

Fees include a small Union fee, payable by all students, who are thereby entitled to share in the corporate and social activities centred round the University Union. The students, through their Students' Representative Council, have a large measure of self-government in all matters concerning the University Union.

Students may obtain financial assistance in many ways. Scholarship schemes based on academic merit are provided by the Commonwealth and State Governments and there is a great variety of scholarships provided by private foundations. In addition, the University makes loans in approved cases out of the Students' Loan Fund. In 1960, 55 per cent. of all students were receiving some form of financial assistance. The largest group was that of Commonwealth Scholarship holders (2,935); another 1,580 students held Victorian Education Department Studentships which are granted to students who will undertake to enter the teaching service on completion of their courses and to teach for a period of at least three years.

### Public Examinations

#### *Intermediate and School Leaving Examinations*

The University, through a Schools' Board (on which the Education Department, the Registered secondary schools, the University teaching staff and the business community are represented), conducts examinations each year for the School Intermediate and School Leaving Certificates.

The following table shows the number of candidates entered for these examinations and the number who passed fully for the years 1956 to 1960 :—

#### VICTORIA—PUBLIC EXAMINATIONS

Year				Number Who Attempted to Pass Full Examination	Number Who Passed Fully (Including Supplementary Examinations)*	
					Total	Percentage
SCHOOL INTERMEDIATE						
1956	..	..	..	13,162	8,738	66·4
1957	..	..	..	14,812	9,404	63·5
1958	..	..	..	17,228	11,293	65·6
1959	..	..	..	19,323	12,501	64·7
1960	..	..	..	21,230	14,023	66·1
SCHOOL LEAVING						
1956	..	..	..	7,564	5,275	69·7
1957	..	..	..	8,615	5,442	63·2
1958	..	..	..	10,393	6,288	60·5
1959	..	..	..	12,192	7,328	60·1
1960	..	..	..	13,733	8,528	62·1

\* Examinations are held in December of each year and supplementary examinations for School Leaving were held in February of the succeeding year up to December, 1956. The February School Leaving examination has been discontinued, the last one being held in February, 1957.

Of those who passed fully, a number satisfied the examination requirements by submitting a Headmaster's Certificate from an approved school. Details of these students are shown in the following table :—

**VICTORIA—PUBLIC EXAMINATIONS: NUMBER OF STUDENTS SUBMITTING HEADMASTER'S CERTIFICATES**

Examination	1956	1957	1958	1959	1960
School Intermediate ..	5,673	6,240	8,154	8,414	9,809
School Leaving ..	2,473	2,787	2,824	2,847	3,620

*Matriculation Examination*

For many years prior to 1944, the University's matriculation qualification had been gained by the passing of the School Leaving Examination in a prescribed manner. Then, a new Matriculation Examination was introduced to which the award of the School Leaving Certificate is pre-requisite, and the matriculation qualification is now gained primarily at this Examination. Statistics of the Matriculation Examinations for the years 1956 to 1960 are as follows :—

**VICTORIA—MATRICULATION EXAMINATIONS**

Candidates	1956	1957	1958	1959	1960
Total Entries .. ..	5,264	6,070	7,161	8,151	9,304
Number Who Attempted to Pass Fully	3,328	3,760	4,257	4,723	5,466
Number Who Passed Fully ..	2,180	2,442	2,808	3,127	3,537
Percentage Who Passed Fully ..	65·5	64·9	66·0	66·2	64·7

Candidates for degrees must matriculate as prescribed by the regulations before being admitted as undergraduates. The number of undergraduates admitted and the number of degrees conferred for each of the years 1956 to 1960 are as follows :—

**VICTORIA—MELBOURNE UNIVERSITY :  
UNDERGRADUATES ADMITTED AND DEGREES  
CONFERRED**

Year	Number of Undergraduates Admitted	Number of Degrees Conferred
1956 .. .. .	1,706	1,083
1957 .. .. .	1,703	997
1958 .. .. .	2,335	1,053
1959 .. .. .	2,620	1,097
1960 .. .. .	2,597	1,284

*Student Enrolments*

In 1961, provisional figures indicated that 11,451 students were enrolled at Melbourne University including 26 at R.A.A.F. College, Point Cook. Enrolments had previously reached a high level between 1947 and 1950 when a great number of ex-service students entered the University through the Commonwealth Reconstruction Training Scheme.

The influx of ex-service students was a temporary matter and, although it imposed strains on the University, temporary measures were sufficient to meet the situation. The increase in student numbers since 1954 is not of this type ; it is due to three factors :—

- (1) Increase in population of University entry age, due to increased birth rates about seventeen to eighteen years ago, i.e., in 1941 and the later war years;
- (2) increase in population due to immigration;
- (3) socio-economic factors: industrial development and population growth leading to greater demand for University graduates ; a higher standard of living which permits children to remain longer at school and qualify for University entry.

The following table shows the numbers of full-time, part-time and external students, by sex, for the five years 1957 to 1961 :—

**VICTORIA—MELBOURNE UNIVERSITY : STUDENTS  
ENROLLED : CLASSIFIED BY SEX AND TYPE OF COURSE**

Year	Full-time		Part-time		External		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
1957.. ..	3,622	1,312	2,018	500	398	66	6,038	1,878
1958.. ..	4,063	1,490	2,404	613	366	84	6,833	2,187
1959.. ..	4,555	1,755	2,675	822	388	84	7,618	2,661
1960.. ..	5,004	1,890	2,816	915	417	115	8,237	2,920
1961* ..	5,241	2,018	2,753	938	397	104	8,391	3,060

\* Provisional figures.

Enrolments in the various faculties for the years 1957 to 1961 are shown in the next table :—

**VICTORIA—MELBOURNE UNIVERSITY : ENROLMENTS  
CLASSIFIED BY FACULTIES**

Faculty	1957	1958	1959	1960	1961*
Agricultural Science .. ..	215	236	219	227	208
Architecture .. ..	190	263	324	367	420
Arts .. ..	2,170	2,675	3,137	3,268	3,335
Commerce .. ..	1,039	1,330	1,472	1,519	1,615
Dental Science .. ..	158	143	151	151	163
Education .. ..	582	548	607	681	713
Engineering .. ..	543	685	689	753	775
Journalism .. ..	29	29	29	43	40
Law .. ..	841	1,021	1,109	1,224	1,117
Medicine .. ..	903	927	967	976	994
Music .. ..	155	174	183	193	183
Physical Education .. ..	90	75	97	126	148
Science .. ..	974	1,122	1,308	1,507	1,578
Social Studies .. ..	102	111	145	143	104
Town and Regional Planning ..	42	49	50	71	58
<b>Student Total .. ..</b>	<b>7,916†</b>	<b>9,020†</b>	<b>10,279†</b>	<b>11,157†</b>	<b>11,451</b>

\* Provisional figures.

† In the years 1957 to 1960 students taking combined courses are counted in both faculties and accordingly the sum of faculty enrolments exceeds the student total shown at the foot of the table.

Since the war many Asian students have been admitted to Australian educational institutions. Enrolments of Asian students at Melbourne University have increased from 100 in 1949 to 418 in 1961, of whom 33 were studying on Colombo Plan Scholarships. All South-East Asian countries are represented as well as India, Ceylon, Mainland China, Hong Kong, the Phillipine Islands and Fiji.

A statement of income and expenditure for the years 1956 to 1960 is shown in the following table :—

**VICTORIA—MELBOURNE UNIVERSITY : INCOME AND  
EXPENDITURE  
(£'000)**

Particulars	Year Ended 31st December—				
	1956	1957	1958	1959	1960
<b>INCOME</b>					
<b>INCOME OF BUILDINGS FUNDS</b>					
State Government Grants .. ..	60	263	50	270	650
Commonwealth Government Grants ..	..	..	9	408	521
Donations .. ..	153	83	41	354	191
Income from Investments .. ..	17	21	6	18	31
Contribution to Cost of Purchasing Buildings .. ..	..	..	30	..	..
Loans .. ..	..	..	..	..	67
<b>Total Income of Buildings Funds ..</b>	<b>230</b>	<b>367</b>	<b>136</b>	<b>1,050</b>	<b>1,460</b>
Donations and Bequests to Increase Endowments .. ..	48	91	86	273	129

VICTORIA—MELBOURNE UNIVERSITY : INCOME AND EXPENDITURE  
—continued  
(£'000)

Particulars	1956	1957	1958	1959	1960
<b>OTHER INCOME</b>					
State Government Grants—					
General .. .. .	756	819	940	1,003	1,066
Other (Except for Buildings) ..	159	183	196	196	194
Commonwealth Government Grants and Reimbursements—					
General .. .. .	453	510	810	962	1,170
Other (Except for Buildings) ..	85	89	114	131	173
Students' Fees—					
Lectures .. .. .	417	452	508	559	773
Other .. .. .	129	151	165	188	223
Public, Music Examination and Certificate Fees .. .. .	84	114	127	147	156
Bequests and Donations (Other than for New Buildings or Increasing Endowments) .. .. .	151	166	151	238	289
Interest, Dividends, and Rent .. .. .	90	98	101	112	143
Other .. .. .	80	109	116	131	148
<b>Total Other Income .. .. .</b>	<b>2,404</b>	<b>2,691</b>	<b>3,228</b>	<b>3,667</b>	<b>4,335</b>
<b>EXPENDITURE</b>					
Land and Buildings .. .. .	578	658	499	485	1,033*
<b>OTHER EXPENDITURE</b>					
Salaries, Research Scholarships, Pensions, and Provident Fund Contributions ..	1,656	1,765	2,120	2,426	2,899†
Apparatus and Laboratory Materials ..	137	147	225	245	301
Books, Periodicals, and Music .. .. .	40	43	55	54	69
Examiners' Fees .. .. .	30	43	47	52	58
Exhibitions and Bursaries .. .. .	12	12	15	17	16
Furniture, Furnishings, and Office Machines .. .. .	23	23	37	38	42
Payment of Students' Fees to Allied Institutions .. .. .	70	94	100	113	118
Pay-roll Tax .. .. .	40	41	49	57	66
Printing and Stationery .. .. .	44	54	62	70	72
Repairs, Alterations, and Grounds ..	94	79	95	127	91†
Service Charges—Gas, Electricity, Fuel, Water, and Telephones .. .. .	39	42	50	63	83
Other .. .. .	252	240	270	323	369
<b>Total Other Expenditure .. .. .</b>	<b>2,437</b>	<b>2,583</b>	<b>3,125</b>	<b>3,585</b>	<b>4,184</b>

This statement covers all University funds. A substantial portion of the University's income is available for specific purposes only, and may not be used to meet general running expenses. At 31st December, 1960, the accumulated deficit in the University General Fund was £107,625.

\* Includes £45,000—grants to residential colleges for new buildings.

† Salaries of University Maintenance Staff have been included in "Salaries" instead of under the heading "Repairs, Alterations, and Grounds" as in previous years.

*Problems Posed by Increasing Enrolments*

In 1960, the University of Melbourne enrolled nearly 11,500 students, and even though quotas have been imposed on entry to all faculties except Music and Architecture, student numbers will continue to rise because of the increasing numbers of new students admitted in the last few years who have not yet completed their courses.

This situation has arisen mainly because there are more and more young people of University age in the population, but superimposed on this is a trend for increasing proportions of school children to continue their education to Matriculation standard and to seek entrance to the University.

The rising numbers of adolescents in the population are the result of an almost continuous increase in births in Victoria which commenced in 1935 and has been going on, at varying rates, ever since. The present rate of increase in the numbers of young people in the population may slow down very slightly after a few years, but their numbers will certainly not decline. Supplementing the rising number of Victorian-born young people, are migrants and their children.

The increasing proportions of school children qualifying for University entry are due partly to the continued prosperity which allows parents to maintain their children longer at school and partly to the great opportunities offered to graduates by the rapidly developing economy.

The Victorian Universities—Monash University commenced teaching in 1961—are therefore faced with accommodation problems on a scale greater than ever before. It is estimated that the number of new applicants for University places will double in the next six years and that this will result in a total demand for over 20,000 places in 1966; by 1970, total demand may exceed 25,000.

The two major problems raised by the student influx are the acquisition of staff and the provision of adequate buildings. The accommodation problem has become acute in some faculties; many Melbourne University buildings are obsolete and cannot be economically adapted to modern demands. New buildings are being erected as finance becomes available, and properties outside the University perimeter have been bought or leased to accommodate staff in some of the smaller academic departments as well as to relieve the Arts and Commerce Faculties.

The increasing demand for graduates in the community as a whole means that the University is competing for staff in a market where the demand exceeds the supply. The possibility of recruiting staff from overseas is limited because overseas Universities are experiencing similar problems of expansion with a resultant shortage of staff.

The pressure of student numbers forced the University to place quotas on entry to most first-year courses in 1959, except Arts, Law, Music, and Architecture. In 1960, Arts was included and in 1961, Law. The effect of quotas in 1959 was not unduly restrictive, as only



111 students in all faculties were refused admission and some of these were of doubtful calibre. But not all of those admitted gained entry to the course of their first choice.

The increasing financial aid both in capital and revenue from the Commonwealth and Victorian Governments has given rise to high hopes of reasonable expansion in the next few years. The Murray Committee by its work in 1957 produced important substantial grants that just fell short of needs because of the unexpectedly high student numbers in 1958-60.

The first report of the Australian Universities Commission was presented in November, 1960. This will enable the University to erect new buildings for Bacteriology, Economics and Commerce, Architecture, Mechanical Engineering and Veterinary Science, and to make substantial additions to Botany, Zoology, Hydraulics, Chemistry, Geology, Agriculture, and International House.

There has also been provision for expansion in University income, but whether this will be sufficient for future needs depends on the rise in inflation and in the actual number of students that secure entry.

The greatest need of the University is the further development of post-graduate schools. This entails firstly, an adequate staff and secondly, a substantial increase both in scientific equipment and in the research vote.

### *Melbourne University Building*

The problem of University building has changed greatly since the earlier years of this century. Then an elegant Gothic façade was planned, whether for library or laboratory—the design of the interior was subordinated to that of the exterior. The cost of Gothic is now prohibitive, but there are other reasons for the fundamental change in the concept of University planning. Firstly, the modern laboratory has become more complex and demands a multitude of services—hence the building must be planned around the working areas instead of concealing the laboratories behind a facade which gives neither adequate light nor ventilation. Again, Gothic libraries rarely provide efficient interiors for the needs of a modern library. Secondly, student numbers have increased so rapidly that the greatest area of accommodation must be obtained at the lowest possible cost. Thirdly, the spirit of the age, making a virtue of necessity, leans to a simple austerity which emphasizes function rather than traditional form.

University architects are meeting the challenge by combining economy with a design that produces well-lit, warm and friendly interiors in which the needs of the particular department may be best met. Thus the Baillieu Library (90,000 square feet) and the North Building (116,000 square feet) were completed at a cost of £6 10s. per square foot, but both are pleasant and indeed elegant structures.

Much reconstruction has also taken place. Thus, the old library occupied the northern end of the cloisters and this area has been remodelled so as to provide an adequate Law School and Law Library. Two new floors were inserted in the building without disturbing the Gothic facade.

In the old spacious days the allowance of space for each student in the laboratories was rather too liberal. Re-benching has enabled many more students to be accommodated. The same method has been applied to lecture theatres.

A master plan for the University is faced with the difficulty that our predecessors sited their buildings without much thought for the future. Within the limits thus set a co-ordinated plan has now been devised. Landscaping of gardens and the liberal planting of trees will help to soften the outlines of buildings which cannot yet be demolished, and pleasant garden courts are being created, sheltered from the cold winter winds.

#### *Notable Bequest to Baillieu Library*

The holdings of the Baillieu Library in the fields of the Greek and Roman classics, as well as in examples of fine printing from the private presses, have been greatly enriched by the recent magnificent gift of 3,000 volumes from Dr. J. Orde Poynton of Adelaide.

The books are representative of the whole history of fine printing and several items date from the earliest period of printing in the fifteenth century. Most famous printers are included and the books, many from famous libraries and eminent collectors, are all in the finest condition. It is a scholar's library containing material available nowhere else in Australia.

Among the choicest items are the following:—

*Scriptorum classicorum in usum Serenissimi Delphini*, Paris, 1674–1732, in 60 volumes. This, from the Holford Library, is one of the few complete copies in existence.

A set of the Barbou Classics, Paris, 1743–77, in 67 volumes from the library of the Earl of Malmesbury.

A set of the Valpy Classics, London, 1819–30, in 189 volumes.

Eleven volumes of unpublished Greek manuscripts copied in the XVIIIth century from the originals in the British Museum and Bodleian libraries by Edward Fawconer for the Earl of Malmesbury.

A fine set of the classics printed by Foulis, of Glasgow, in the XVIIIth century in 64 volumes.

The second folio edition of the works of William Shakespeare, London, 1632.

Arnold de Villanova's *Regimen Sanitatis*, Strasburg, 1491.

Nuremberg Chronicle, 1493.

Some 40 examples of the books printed by William Morris at the Kelmscott Press.

Associated with the books is an outstanding collection of some 2,500 engravings and etchings as well as paintings in oil and water colour. Some 600 artists are represented in this collection including such great masters as Dürer and Rembrandt. Its greatest strength, and therefore its greatest value, is in the works of the lesser masters of the XVIth and XVIIth centuries.

### Further References

An account of the Baillieu Library will be found on page 201 of the Victorian Year Book 1961.

### *Faculty of Applied Science*

The Faculty of Applied Science was established at the end of 1959. It was the first new faculty since 1924 when the Faculty of Commerce came into being. The immediate cause was a request from the Gordon Institute of Technology at Geelong for a degree course in Textile Technology of which the fundamental science would be taught at the University of Melbourne and the technology at Geelong, utilizing the facilities of the Textile College. (See pages 236 to 239.)

The Professorial Board, realizing the wider implications of this request, decided that it would be best to set up a new faculty, the functions of which would be to plan and control courses utilizing the facilities of the University and of any other institutions of higher education in the State.

At an inaugural meeting in March, 1960, a policy was considered and adopted, and included the following major objectives :—

- (1) To re-group existing courses in the University for a degree in Applied Science ;
- (2) to introduce material of a non-technical nature to widen the interest of studies ; and
- (3) to work in collaboration with technical colleges to organize courses of a technological nature.

Regulations provide for courses of four years' duration which may be taken part-time if desired. When the scheme is fully developed in connexion with one or more technical colleges, it will be possible to supply evening as well as daytime instruction. Provision is made for both pass and honours degrees.

Six foundation courses were approved to start in 1961. These were a general course in applied physical science (with a heavy loading of non-technical subjects), dietetics, electronics, metallurgy, optometry, and textile technology. The first four of these fall into objective (1) and the last two into objective (3), as listed above.

### *Affiliated Residential Colleges*

During 1960, the Council of the University passed statutes affiliating two new foundations—St. Hilda's College, promoted jointly by the Presbyterian and Methodist Churches and intended to accommodate women students, and a men's college to be instituted by the Baptist Church. Both have been included in the recommendations for financial assistance of the Universities Commission for the

triennium 1961-63. A further accession to the ranks of autonomous colleges occurred early in 1961 when, after 75 years' existence as part of Trinity College, Janet Clarke Hall became legally independent on its existing site. This move, which terminated an association which has brought many advantages to both partners, directly resulted from the growth of numbers in the post-war period to the point at which it was considered that separation was necessary to avoid undue complexity of administration. It is a generally accepted principle that collegiate life is at its best in relatively small communities.

The roll of affiliated colleges has thus almost doubled in little more than twelve months. However, for the present this will not mean any dramatic increase in the number of places in residence, though it is of great significance for the future, as is the large increase in numbers planned by International House in the next three years. In 1939, the number of places for students in the colleges amounted to 450; by 1959, if International House and Medley Hall, the two halls of residence directly controlled by the University, are included, this figure had more than doubled to 960. If present plans come to fruition, the number of places available by 1963 will have risen to about 1,350.

### **Further References**

An account of the Affiliated Residential Colleges will be found on page 203-204 of the Victorian Year Book 1961.

### **Monash University**

Following the adoption of the plan for the development of the University site, the first buildings were completed in accordance with the approved programme but, until all the buildings are completed, teaching faculties will be housed in accommodation designed for others. It is the firm policy of the University to avoid temporary buildings.

The Vice-Chancellor and the Registrar took up duty early in 1960, and the academic and other staff were subsequently appointed. Teaching commenced in Arts and Commerce subjects in March, 1961, as well as in Science, Engineering and Medicine.

In 1961, there were 347 undergraduate students and ten post-graduate students in the faculties, and an enrolment of about 1,000 students is anticipated for 1962.

In June, 1961, all University activity was taking place in those buildings of the Faculty of Science which had been completed, namely, the first year chemistry and physics laboratories and lecture theatres, and the science administration block. The library, housed in the science building and consisting of 30,000 volumes, will later move to the engineering library building, where it will remain until the permanent library is completed in 1965. Other buildings coming into use for 1962 are the remainder of the Science block (senior physics, chemistry and biology), part of the Engineering block and the first of the Halls of Residence. Work is commencing on the Medical School and on the Arts, Union and Administration buildings.

The Victorian Government has decided that, in addition to the Medical School, a teaching hospital will eventually be built.

The general plans for the development of the University during the period 1961-63 were considered by the Australian Universities Commission, which made the following recommendations for capital grants totalling £7,780,000 :—

**MONASH UNIVERSITY—CAPITAL GRANTS RECOMMENDED,  
1961 TO 1963  
(£'000)**

Particulars	Amount	Particulars	Amount
Science Block—		Arts Block—	
Physics ..	2,200	Arts ..	1,150
Chemistry ..		Commerce ..	
Biology ..		Education ..	
Science Engineering Library	374	Law ..	
Engineering ..	1,295	Sports Facilities ..	14
Maintenance Workshop ..	42	Administration ..	322
Site Works and Service ..	454	Library ..	629
Medicine ..	500	Union ..	600
Hall of Residence ..	200		

### Royal Melbourne Institute of Technology

The Royal Melbourne Institute of Technology was founded in the year 1882. The Hon. Francis Ormond (honoured as the College Founder) in the previous year publicly announced that he would donate £5,000, contingent upon the granting of a site by the Government and the subscription of a similar amount by the citizens of Melbourne, for the establishment of a scientific and technological institute in Melbourne.

The scheme was approved and public subscriptions were sought for a Working Men's College. The money was eventually subscribed, the Government donated the site, a provisional governing Council was appointed, and the first building erected and opened in June, 1887. Over 600 students had enrolled for single subjects by the end of that year.

At first, classes were divided into two groups : adult or general education classes and technical lectures. Gradually the range of subjects was widened by the inclusion of more trade classes and professional courses until the technical classes came far to outnumber all others. In 1934 the name of the institution was legally changed to Melbourne Technical College and in July, 1954, a little more than 70 years after its foundation, Her Majesty Queen Elizabeth II. conferred the title "Royal" upon the College and authorized the use of the Royal Cypher on the College Diplomas. In December, 1960, the name was changed to the Royal Melbourne Institute of Technology.

Since its inception the Institute enrolment has grown from 600 to 16,000 students, and its accommodation has increased from eleven class-rooms to sixteen acres of studios, laboratories, workshops, and lecture rooms.

The Council of Royal Melbourne Institute of Technology is responsible for the control of the Institute, appointment of staff, and administration of its funds.

The income of the Institute is derived from Government grant, fees, interest on various investments, rent, and income earned by its various services to industry, Government bodies, and other schools.

Teaching at the Institute is given at three levels : professional, technician, and trade or craft.

### *Professional Courses*

Technological, Fellowship and Associateship diploma courses, both full-time and part-time, are offered, the major fields of study being engineering, metallurgy, chemistry, physics, architecture, art and business management.

Tuition for diploma courses is regarded in general as teaching to a level or standard which is recognized by professional bodies as satisfactory for entry to their institutions, and so giving professional standing to successful students. Certificate courses which give a basic professional qualification are available in certain professions and can be completed in about four years of part-time study.

### *Technician Courses*

These courses are distinct from the trade courses in that they do not lead to competency in a particular skilled trade or craft, nor, on the other hand, do they reach the standard of technical knowledge demanded by the professional course. They are designed to close the gap between apprenticeship and the professional course. They give to the successful student the skill and knowledge, at technician level, required for a technical occupation. Certificates are issued to students completing these courses.

### *Trade Courses*

These are courses of instruction complementary to trade experience leading to competency in a skilled craft or trade. Most skilled trades are under the control of the Apprenticeship Commission, and this body prescribes the details of the courses of instruction, which are of four to five years' duration, and accompany the period of apprenticeship. Classes are offered in a large number of skilled crafts and trades, including engineering, building and construction, communications, and applied art. Post-apprenticeship courses and classes are also offered in many of the trade groups.

The Royal Melbourne Institute of Technology also provides a number of extra-mural activities. Chief among these are correspondence courses in art, commercial, scientific, mathematical, literary, technical and trade subjects. In addition, the Institute provides certain classes as its own special contribution to adult education.

Public Lectures, Training Within Industry programmes, special courses for defence personnel and employees of some Commonwealth authorities, and professional advice, testing and research are other services provided by the Institute.

Details relating to the Institute during the years 1956 to 1960 are shown in the following table :—

**VICTORIA—ROYAL MELBOURNE INSTITUTE  
OF TECHNOLOGY**

Particulars	1956	1957	1958	1959	1960
<b>Individual Students</b>					
Enrolled—					
Males .. ..	15,176	15,782	17,385	17,533	18,115
Females ..	2,327	2,433	2,296	2,538	2,806
<b>Total*</b> ..	<b>17,503</b>	<b>18,215</b>	<b>19,681</b>	<b>20,071</b>	<b>20,921</b>
<b>Courses—</b>					
Commercial† ..	1,567	251	248	273	335
Science .. ..	5,568	7,315	7,500	8,491	8,837
Trade .. ..	8,298	8,596	9,841	9,201	9,591
Art .. ..	1,553	1,580	1,573	1,491	1,524
Other .. ..	517	473	519	615	634
<b>Receipts—</b>	£	£	£	£	£
Government Grant	582,411	601,404	633,796	705,150	781,724
Fees .. ..	149,809	213,597	231,244	245,192	313,291
Sale of Class Material	14,582	12,599	10,458	13,248	11,822
Miscellaneous ..	26,190	35,113	58,365	44,070	47,805
<b>Total</b> ..	<b>772,992</b>	<b>862,713</b>	<b>933,863</b>	<b>1,007,660</b>	<b>1,154,642</b>
<b>Expenditure—</b>	£	£	£	£	£
Salaries—					
Instructors ..	441,105	477,558	524,784	576,316	688,691
Other .. ..	167,733	180,750	193,921	205,781	221,781
Buildings, Furn- iture, etc. ..	82,384	113,964	112,092	113,482	122,740
Miscellaneous ..	80,194	91,531	101,601	113,259	120,625
<b>Total</b> ..	<b>771,416</b>	<b>863,803</b>	<b>932,398</b>	<b>1,008,838</b>	<b>1,153,837</b>

\* These totals exclude Correspondence enrolments, which, in 1960, were estimated at 12,000.

† Commercial courses partially allotted to Science after 1956.

**Gordon Institute of Technology, Geelong**

**General**

The Gordon Institute of Technology, or the Gordon Technical College as it was originally called, was founded in 1887 as a memorial to General Gordon of Khartoum. Finance for the new college came from a benefaction from Sir Francis Ormond, the public of Geelong, and a government grant.

The function of the Institute was "to provide facilities for the instruction of students in the theory and practice of matters relating to local industries, and also to enable them to pursue independent enquiries into the various branches of science."

Until 1910 the courses offered were mainly part-time, but since that date full-time diploma courses have been introduced, and, at present, twelve of these are available.

The area that the Institute now serves has been extended to include the whole of Australia, many parts of South-East Asia, as well as Pakistan and India. Asian students have been accepted at the Institute since 1946 and for several years there have been more than 100 enrolled annually in the various courses.

In 1946, the Textile College was established and equipped with machinery now valued at more than £300,000. Advanced training is given in the principles and practice of the spinning and weaving of fibre on woollen, worsted, and cotton manufacturing plant. Research and *ad hoc* investigations are undertaken and public testing facilities for the industry are provided.

Diplomas issued by the Institute are accepted by the Royal Australian Institute of Architecture, Royal Australian Institute of Chemists, Institution of Engineers, Australia, Australian Society of Accountants, and the Dietetic Association, for admission to corporate membership without further examination, and by the Textile Institute for exemption from the Part I. Examination for Associateship. Diplomates in Applied Chemistry, Architecture, and Engineering are admitted to the relevant degree courses at the University of Melbourne and may receive exemptions from all but the last two years of those courses.

Full-time students are not required to pay tuition fees and financial assistance is available in the form of scholarships offered by the Victorian Education Department, the Council of the Institute, and the Wool Industry Research Fund. Students entering the second year of diploma courses are eligible to apply for assistance from the Commonwealth Scholarship Scheme.

The control of the Institute is vested in a Council appointed by the Governor in Council. Finance for operating the Institute comes from a government grant and from tuition fees. The educational activities of the Institute are :—

- (1) Full-time diploma courses, usually of four years' duration, and with a minimum entrance qualification of Intermediate Certificate, are provided in Applied Chemistry, Architecture, Art, Commerce, Civil Engineering, Electrical Engineering, Mechanical Engineering, Textile Chemistry, Textile Industries, Institutional Management, Foods and Cookery, and Needlecraft.
- (2) Post-graduate Diplomas and Certificates are offered in Textiles. These include research and investigation work and the submission of a thesis.
- (3) Full-time vocational courses are provided for Commercial Practice, Dressmaking, Wool Sorting and Classing.



- (4) Part-time courses are offered for Apprenticeship trades, Accountancy, Art, Engineering Certificates, Textiles, Wool Sorting and Classing, as well as for a large number of hobby-type subjects.
- (5) Correspondence courses are offered in a number of subjects relating to the textile industry.
- (6) Short courses of instruction in Wool Sorting and Classing are given annually in a number of country centres.

### *Textile Research and Testing*

Textile research has covered investigations on staple crimp, fibre fineness, staple length, and quality number of Australian wools. Research into the physical properties of the raw material in the worsted manufacturing processes has included studies of the significance on fabric properties of fibre cross sectional shape and thickness ; of the effect of weave and sett in a fabric upon its strength ; of the difference between normal and anomalous (or doggy) wool on the spinning properties of yarn ; and on the subjective characters of fabric handle and appearance. Investigations have been made on wool colour, fibre strength (by ballistic methods), cattle hair dimensions, and on the chemistry of sulphur determination in wool, as well as in scouring, and the carbonization and neutralization of burry wools. Water repellency of heavy woollens has also been examined. Spectrophotometric studies of dye shade differences of wools of different origins have been organized.

Public testing has been provided since 1938 in the following categories:—

#### *(1) Fleece Measurement*

Mid-side samples, which give the mean value for the fleece, are tested for yield of clean scoured wool, so that the clean fibre content of the whole fleece may be estimated by calculation from the greasy fleece weight. Fibre thickness, staple crimp and length are measured to assess the quality number of the wool produced. The information is provided to aid the sheepbreeder in selecting breeding animals with the best clean fleece weights. Tests are made for pastoralists and for State Departments of Agriculture. For the coarser wools, the estimation of the occurrence of medullation in fibres is available.

#### *(2) Raw Material Measurement*

In this is included maturity and strength tests on cotton as well as yield, fineness, crimp and length of commercial wool samples for the woolbroker and buyer.

#### *(3) Textile Testing*

(a) *Mechanical Testing.* This includes tensile strength by constant-rate-of-traverse and rate-of-loading of fibre, yarn and fabric, ballistic and bursting testing of fabrics, water repellency, fabric shrinkage, resistance to abrasion, fastness of dyes to light and rubbing, count and twist of yarn, levelness of roving and yarn, trash, content of cotton, fibre length and strength of cotton, flexure and drape, picks and ends in fabrics, and fabric weight and thickness.

(b) *Chemical Testing.* Examples include rate of wetting, oil content, washing fastness, fibre identification and quantitative determination, size and contaminant estimation, and general analytic tests on auxiliary products.

The laboratory has official recognition from the National Association of Testing Authorities for specific mechanical and chemical testing.

The following table shows details of enrolments, staff and receipts at the Gordon Institute of Technology, Geelong, for each year from 1956 to 1960:—

**VICTORIA—GORDON INSTITUTE OF TECHNOLOGY:  
ENROLMENTS, STAFF AND RECEIPTS**

Particulars		1956	1957	1958	1959	1960
<b>ENROLMENTS</b>						
Full Time—						
Diploma .. ..		301	294	327	365	427
Vocational .. ..		136	130	140	149	136
Part Time—						
Apprentices .. ..		538	535	528	500	494
Other .. ..		1,232	1,376	1,351	1,450	1,563
<b>STAFF</b>						
Full Time—						
Teaching .. ..		60	64	68	74	78
Other .. ..		45	44	41	43	41
Part Time—						
Teaching .. ..		39	48	43	54	58
Other .. ..		7	8	13	12	12
<b>RECEIPTS</b>						
Government Grant	£	130,200	137,650	145,900	154,300	188,324
Fees .. ..	£	17,500	21,600	23,200	23,300	27,028
Other Receipts	£	21,750	22,550	24,500	23,500	22,080

**Council of Adult Education**

*General*

The Council of Adult Education was set up in 1946, under an Act of the State Parliament constituting the Council and defining its functions. The Adult Education Act, amended in 1958, is now embodied in the Education Act.

The primary purposes of the Council are to plan and administer a system of adult education for Victoria, and to advise the Minister of Education on new developments and proposals. The Council

consists of twenty members, widely representative of educational interests. All are volunteers, the majority being nominated for appointment by the Minister, in accord with the provisions of the Act.

The Director, as the Executive Officer of the Council, is appointed by Cabinet on the recommendation of the Council. His term is for five years, and is renewable. A small professional staff has been built up since 1947.

### *Activities of the Council*

There are three principal phases of the Council's work:—

(1) Evening classes, generally 10–20 week courses, organized in the Metropolitan Area. About 100 classes of this kind are organized each year and are taught by tutors engaged by the Council. The greater part of these classes are non-vocational and no diplomas or recognition for attendance is granted. The aim is to provide systematic courses of instruction in subjects suitable for study by adults, at a relatively high level. Guided reading, discussion, encouragement to improve written and spoken expression, and facility in expressing ideas are all features of the work.

Classes meet weekly, for periods up to two hours, principally at the Council's class centre in Flinders-street, Melbourne.

Attendances vary with the number of classes but average approximately 5,500 per annum.

(2) Discussion Groups. The basis of the discussion group is prepared material—books, pamphlets, records, art material, together with discussion and study guides sent out to groups from the centre. A normal group consists of 10–12 people, meeting regularly, generally in private houses, for reading and discussion. Groups select their own leaders. Efforts are made, by visitation of groups, and by the organization of week-end and other schools, to provide training for group leaders, but the principal emphasis in this work is upon the training which the scheme offers of critical reading and discussion. Groups are organized in all parts of the State, material being despatched by rail.

The discussion group has been found to be a very valuable instrument of adult education and is no longer regarded as a substitute for a regular class under a tutor.

There are at present 261 groups, involving 2,880 individuals. Matters covered are principally literature, international and social affairs, art, and music.

(3) Extension Activities. The Community Arts Service, consisting principally of regular tours to country centres of drama, music, art exhibitions, opera, ballet, etc., has been a feature of the Council's work since 1948. The purposes served are:—(a) to provide opportunities for the enjoyment of the arts in centres remote from the city; (b) to set standards of performance and to offer encouragement to local artistic endeavour; and (c) to provide opportunities for young professional artists, actors, and others, to gain experience.

Tours, using professional artists engaged by the Council, are sent out generally for eight-week periods. Professional fees are paid and charges corresponding to standard theatre entrance prices are levied.

The result of this work over a period has been a great stimulus to local endeavour, and many music clubs, dramatic societies, practical painting groups, etc., have been formed as a result.

It is part of the Council's normal work to assist such societies wherever possible by advice and encouragement. Art exhibitions are arranged each year in co-operation with the National Gallery of Victoria.

### *Supplementary Services*

The Council organizes two main Summer Schools each year; a general school usually held at Albury, and an art school, held at the National Gallery in Melbourne. Many lectures are organized in country centres at the request of local organizations.

In Melbourne, the Council has recently established a theatre and conference room. The theatre is available to all groups for the performance of plays, operas, etc. The conference room is principally used by the voluntary Adult Education Association, working in close co-operation with the Council for classes and lectures, but is available for other organizations.

The Council has been called upon with increasing frequency to advise and assist country centres in organizing arts festivals and for advice about the planning of stages in country halls.

It may well be said that as far as the country districts of Victoria are concerned, the Council occupies a position of central importance.

### *Finance*

The Council is financed by (a) a statutory grant (£25,000 per annum); (b) an annual appropriation (1960-61, £35,000); and (c) revenue derived from the Council's activities (1959-60, £51,556).

## VICTORIA—ADULT EDUCATION: LECTURE CLASSES AND ENROLMENTS

Lecture Classes	1958		1959		1960	
	Autumn Term	Spring Term	Autumn Term	Spring Term	Autumn Term	Spring Term
Courses Offered ..	87	44	147	58	150	62
Students Enrolled ..	3,767	1,418	4,875	1,436	4,929	1,963

## VICTORIA—ADULT EDUCATION: GROUP ACTIVITIES

Particulars	1957-58	1958-59	1959-60
Discussion Groups—			
Number of Groups .. ..	231	250	267
Students Enrolled .. ..	2,556	2,702	2,880
Performances, &c., Given—			
Music .. ..	145	94	108
Drama .. ..	65	134	147
Ballet and Dance Recitals ..	..	..	64
Art Exhibitions .. ..	29	37	45

## Victorian College of Pharmacy

Since 1884 pharmaceutical education in Victoria has been provided by the Victorian College of Pharmacy, the school of the Pharmaceutical Society of Victoria. This institution has trained entrants to pharmacy for the examinations of the Pharmacy Board as required by the Medical Act Part III. Until recently, the course of training was a concurrent apprenticeship and part-time academic course, but in keeping with modern trends this has been replaced by a three year full-time academic course plus a fourth year of practical training. For this the existing school was inadequate.

A grant from the Victorian Government and financial support from the pharmaceutical profession and the drug and pharmaceutical industry of Australia provided funds for a new college. A site was secured in Parkville within walking distance of the University, and on it the new Victorian College of Pharmacy War Memorial Building was erected in 1960. Planned for an annual intake of 220 students it provides the lecture rooms, laboratories, and amenities necessary for a three-year course to meet the needs of modern pharmaceutical practice.

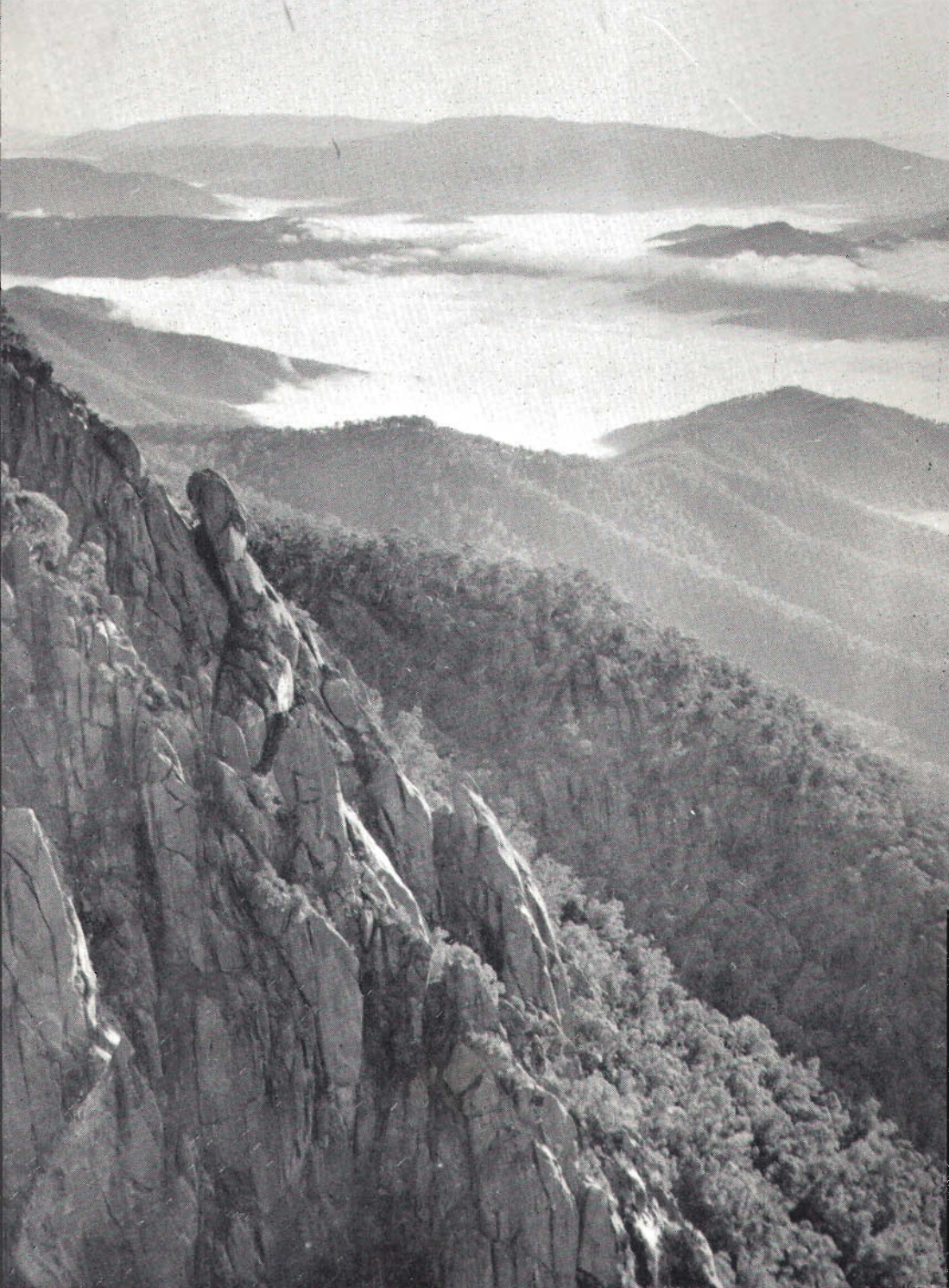
The building is of modern functional design with steel and concrete framing and aluminium curtain walls. Floors are of concrete and ceilings are sound-absorbent and fire-proof.

The number of students attending the College from 1956 to 1960 and principal items of receipts and expenditure are shown below :—

## VICTORIAN COLLEGE OF PHARMACY—STUDENTS

Course	1956	1957	1958	1959	1960
Pharmacy .. ..	546	536	533	558	603
Medical .. ..	128	124	139	165	148
Post Graduate (Pharmacy) ..	17	12	21	7	10
Total .. ..	691	672	693	730	761





[*Victorian Government Railways.*]

In the heart of Victoria's Alps : morning mist in the Buckland Valley as seen  
from Mt. Buffalo National Park.

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***Life in Victoria Today***





*[Soil Conservation Authority.]*

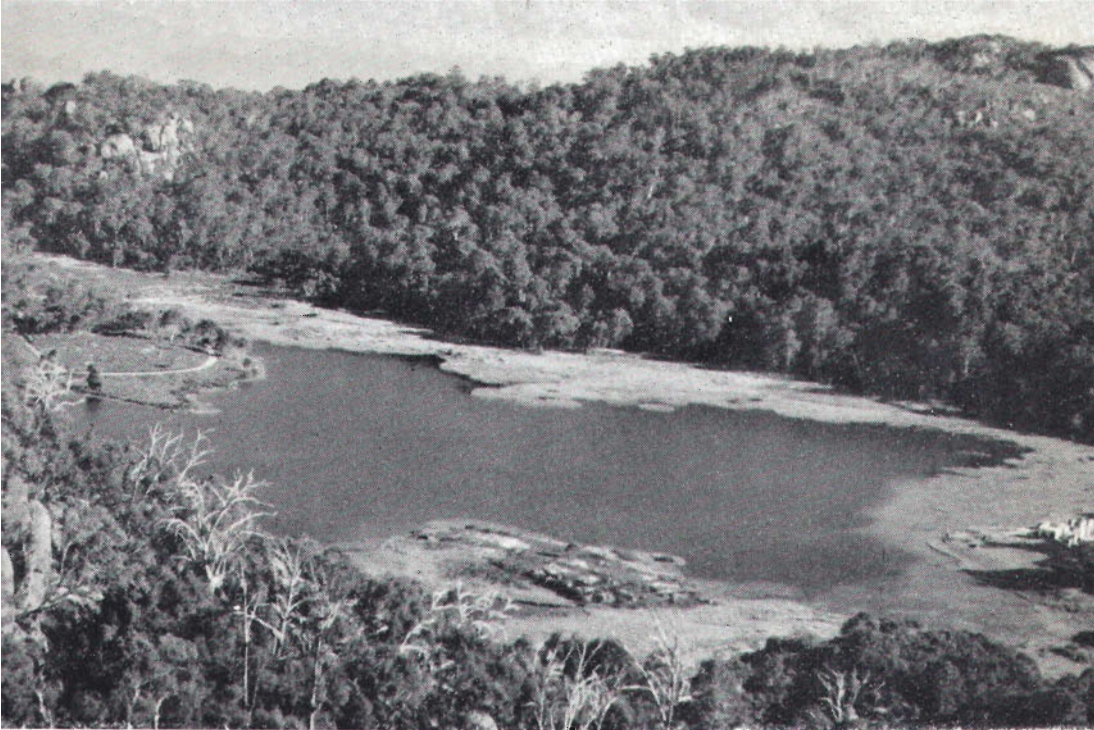
The Pretty Valley branch of the Kiewa River, showing the steep fall of the high plains of alpine woodland.



*[Victorian Government Railways.]*

Machinery Spur with Mts. Feathertop and Fainter in the background. Note cattle grazing on slopes.





[Dr. L. H. Smith.]

Lake Catani, with its wooded slopes, provides enjoyment for many visitors to Mt. Buffalo National Park—swimming, boating, fishing, ice skating—according to the season of the year.



[Victorian Government Railways]

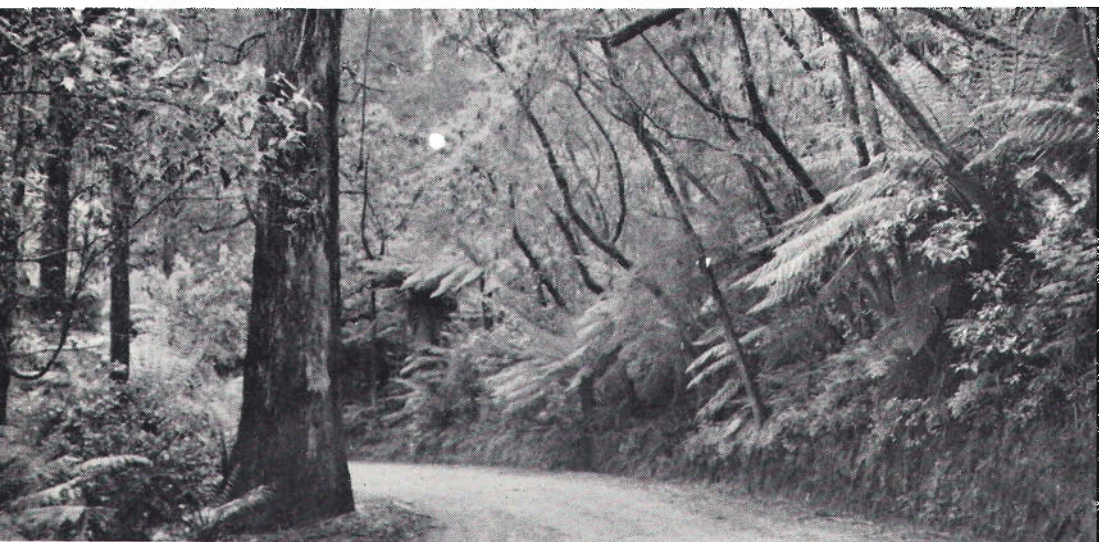
View from Mackey's Lookout, Mt. Buffalo, to Ovens Valley and Australian Alps.





[Forests Commission.

Mountain Ash (*E. regnans*) in the Cumberland Valley.



[Forests Commission.

Gully-type vegetation in mountain forest zone.





*[Dept. of Agriculture*

Mechanization has done much to boost wheat yields in Victoria.

Shearing is a major and hectic  
activity on Victoria's pastoral  
properties every year in  
the spring.



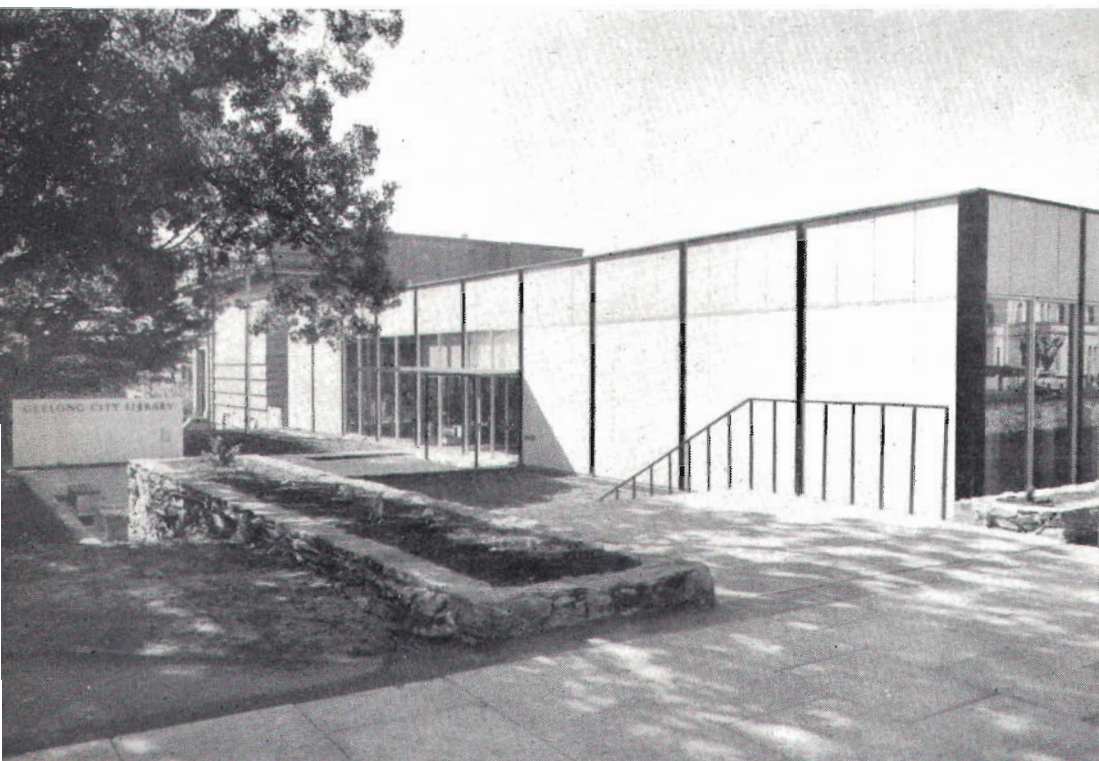
*[Dept. of Agriculture.*





[Robert Pockley, Geelong.

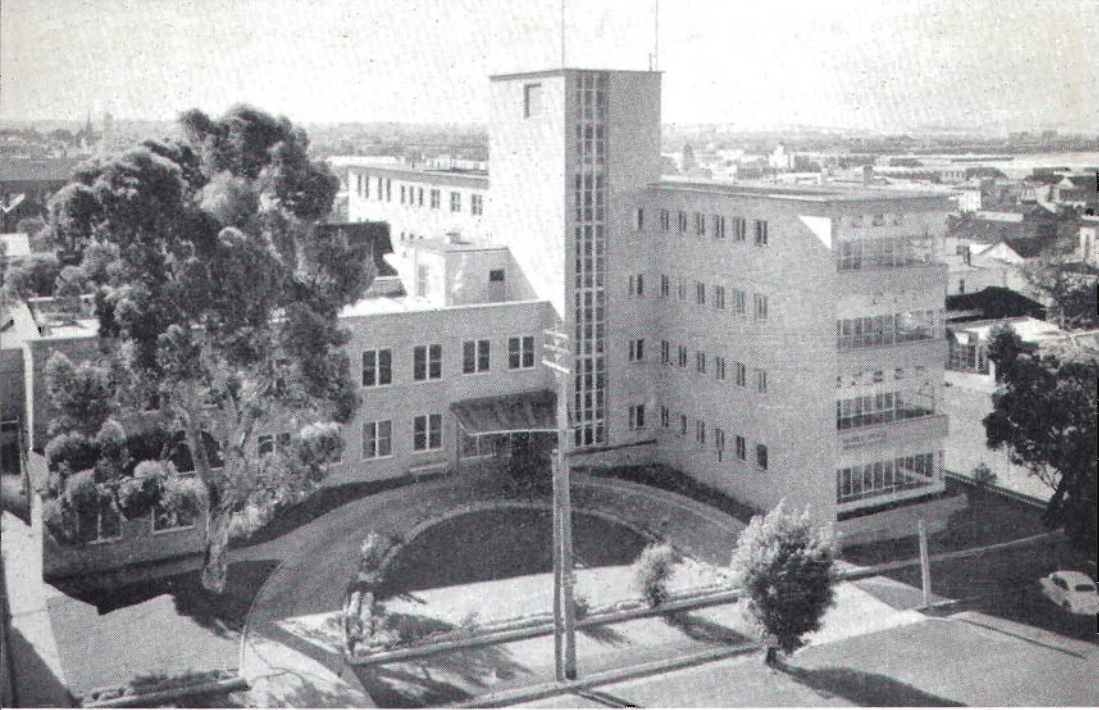
Housing Commission development around Geelong—aerial view taken over Norlane (in foreground) showing Melbourne road (right of centre); Corio Quay and wheat storage (left middle background); motor works (middle background centre); and Geelong City in distance.



[Robert Pockley, Geelong.

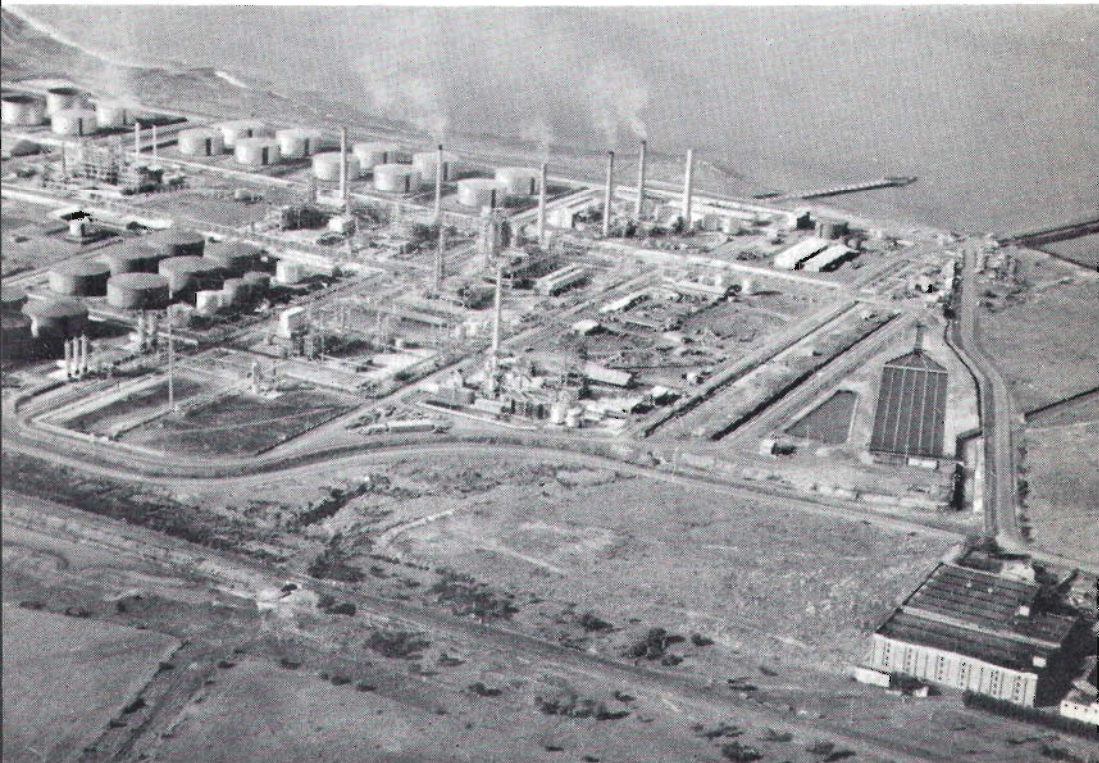
The new Geelong City Library.





[Robert Pockley, Geelong.

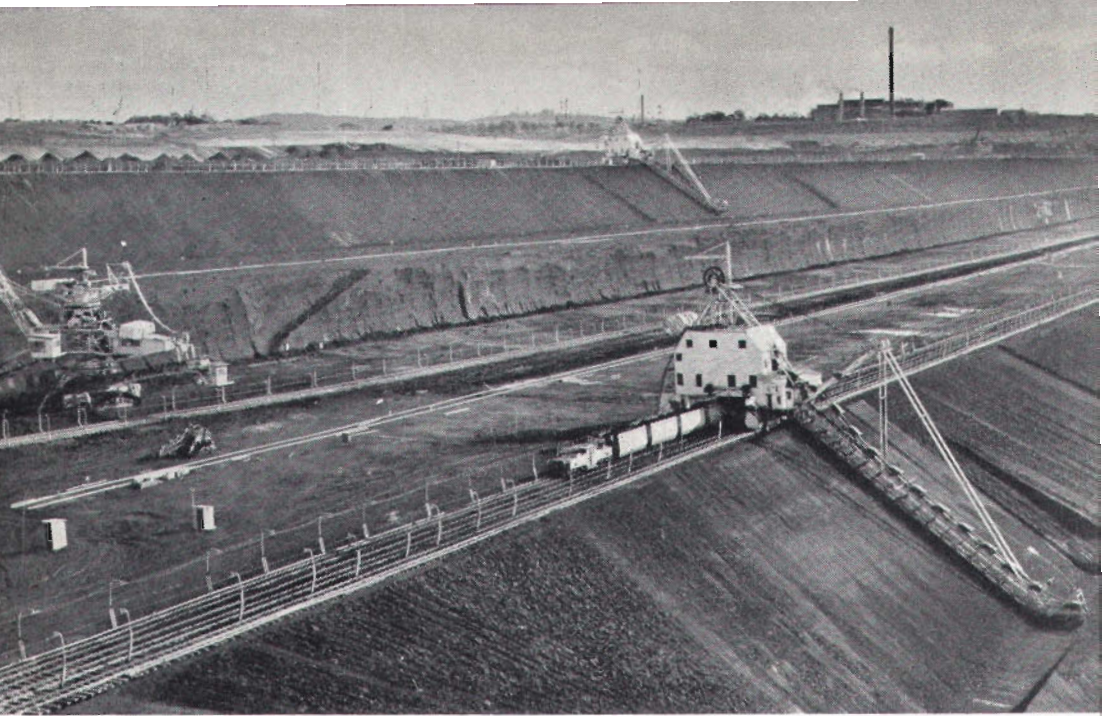
Baxter House Maternity Hospital, Geelong.



[Robert Pockley, Geelong.

Aerial view of oil refinery, Geelong.





*[State Electricity Commission.]*

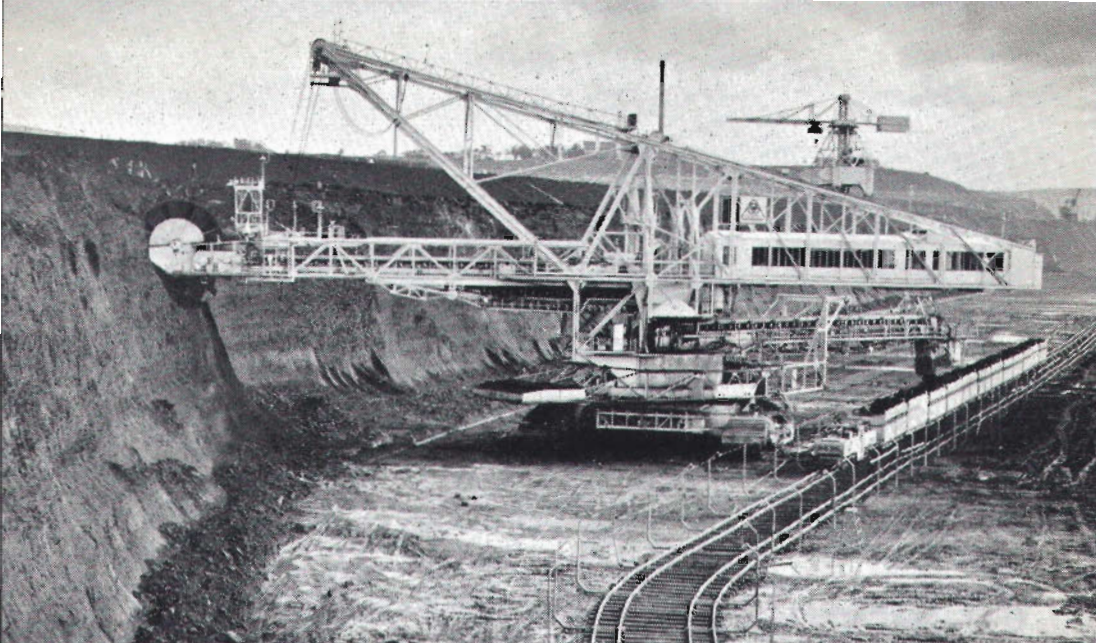
Yallourn open cut: located in the Latrobe Valley in eastern Victoria, it has an output of about 13 million tons a year and all operations are highly mechanized.



*[International Harvester.]*

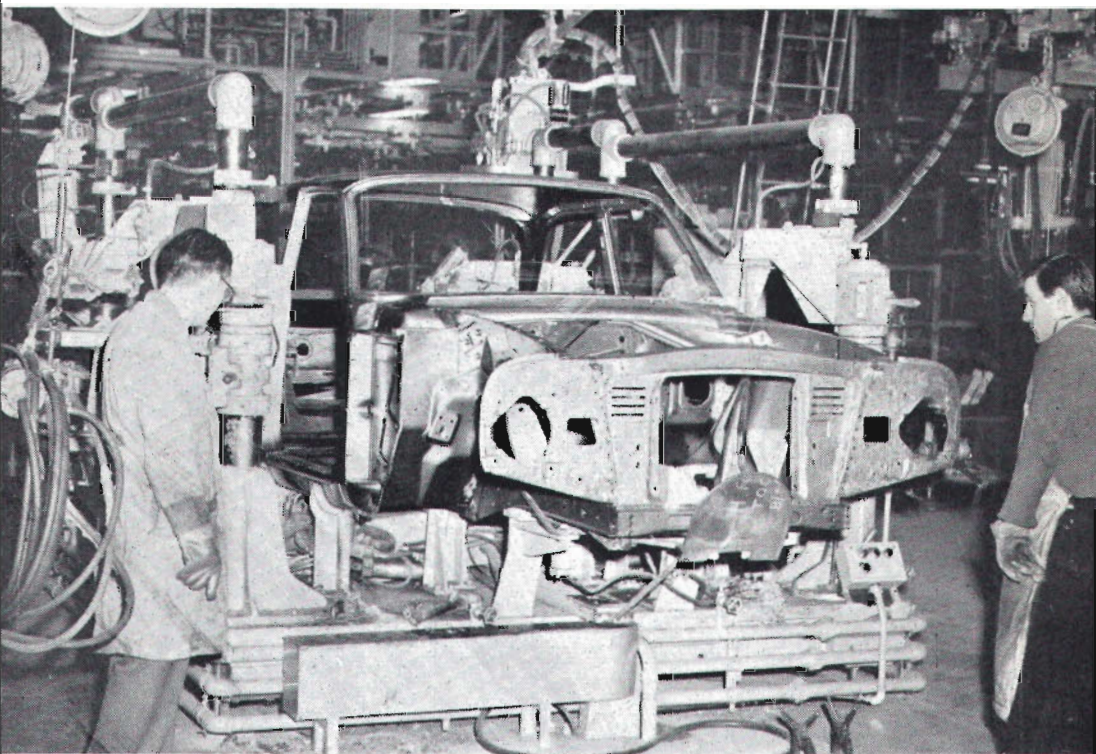
The assembly line of a company's works at Dandenong, built in 1952 on a 57-acre site at the junction of the Princes and South Gippsland highways.





[State Electricity Commission.

Yallourn open cut the bucket-wheel dredger wins coal at the rate of 1,350 tons per hour. The coal is excavated by means of buckets mounted on a revolving wheel, and fed on to conveyors for delivery to the electric coal trains which transport it to the bunkers serving the power station and the briquette works.



[Ford Motor Company.

A motor car body is shown in a hydraulic welding press which automatically welds the floor pan to the body of the car. The machine welds 32 spots simultaneously at the rate of 20 bodies an hour.



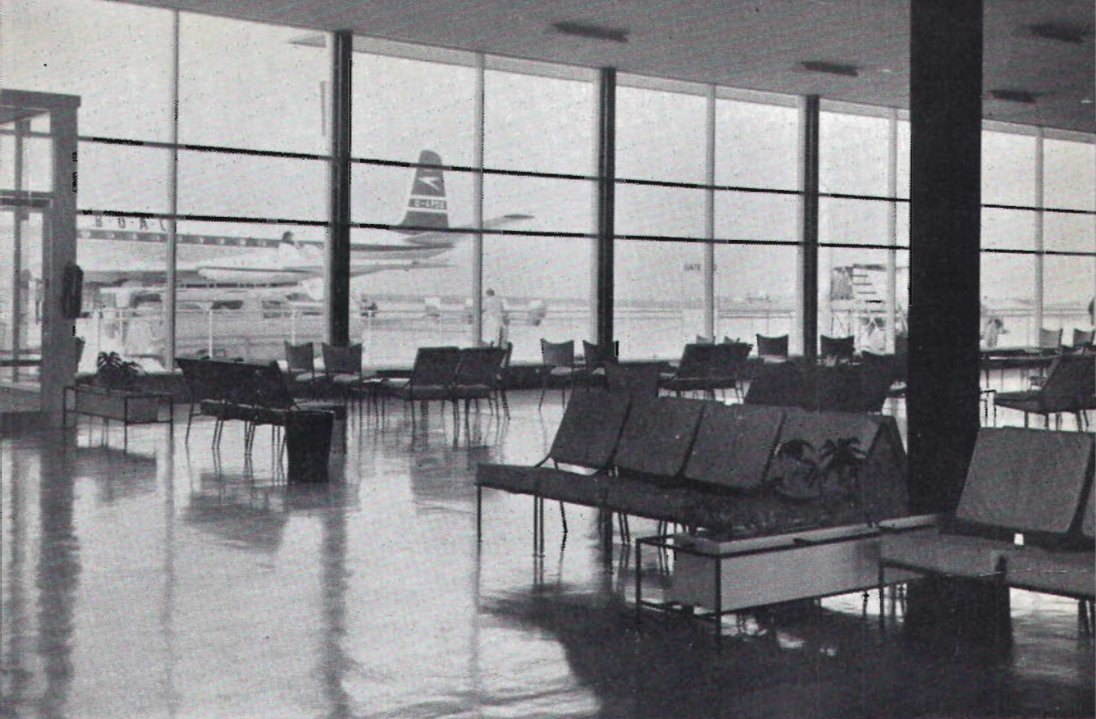


[Robert Pocklev, Geelong.  
Geelong—view showing Corio Quay area in the foreground.

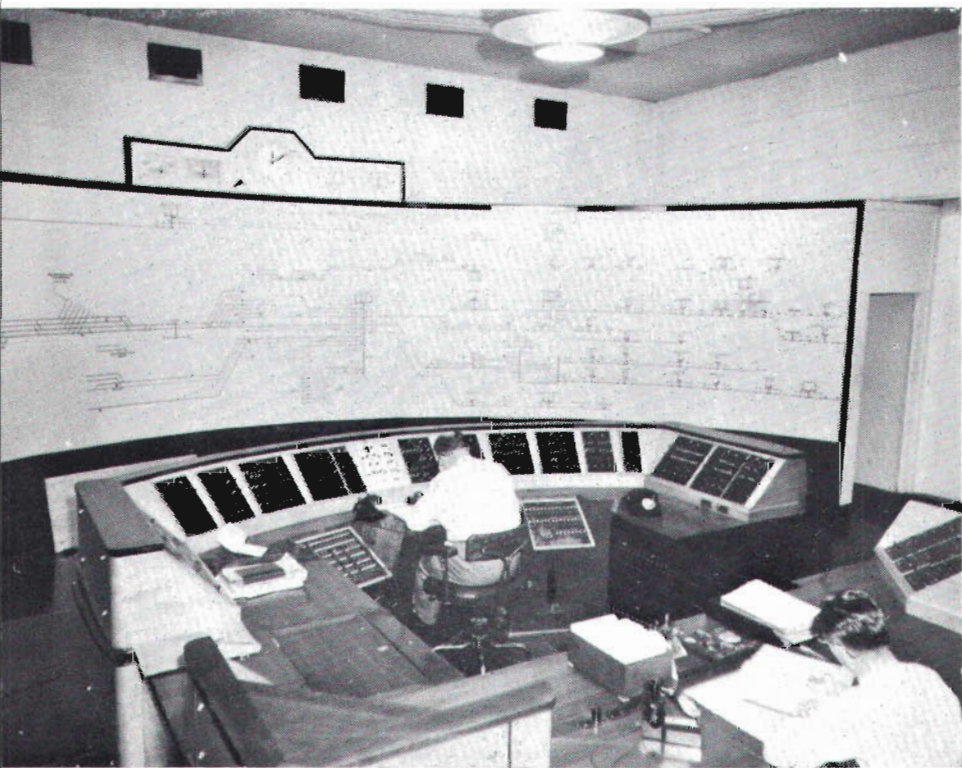


[Victorian Government Railways.  
Track laying for the new standard gauge line between Melbourne and Albury.





[Dept. of Civil Aviation.  
Interior of the Melbourne Airport Terminal.



[Victorian Government Railways.  
Power operations room at Jolimont, near Flinders Street Station.





*[Brian McArdle—C.S.I.R.O.]*

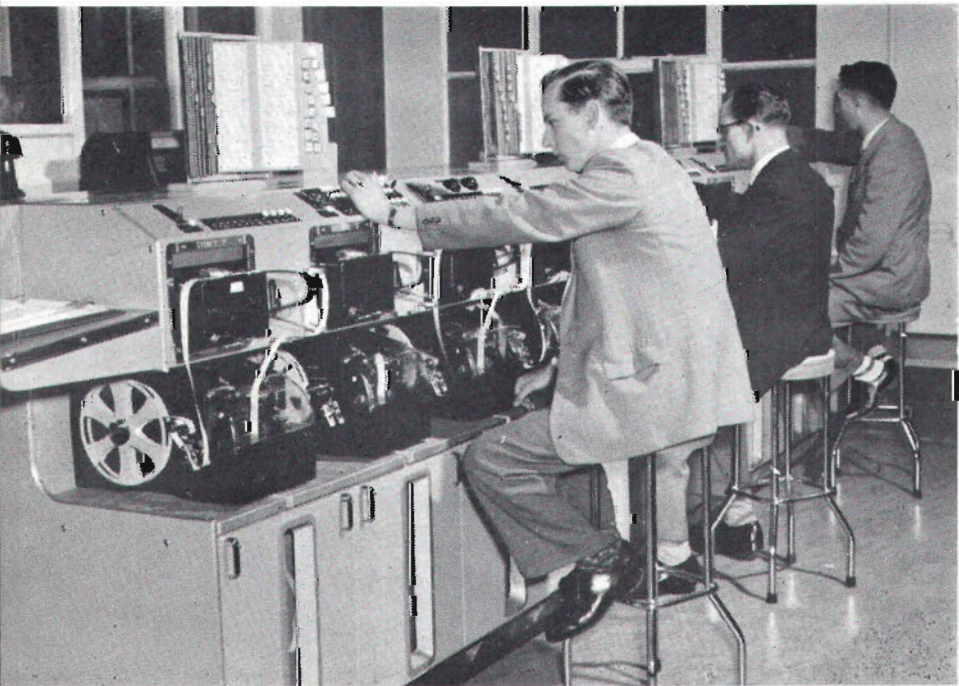
A scientist of the C.S.I.R.O. Division of Protein Chemistry building a model of a protein molecule.





[P.M.G.'s Department

A 28-foot parabolic receiving aerial at Dunn's Hill, Victoria. This is one of three being used on the P.M.G.'s experimental tropospheric scatter link between Tasmania and Victoria.



[P M.G.'s Department.

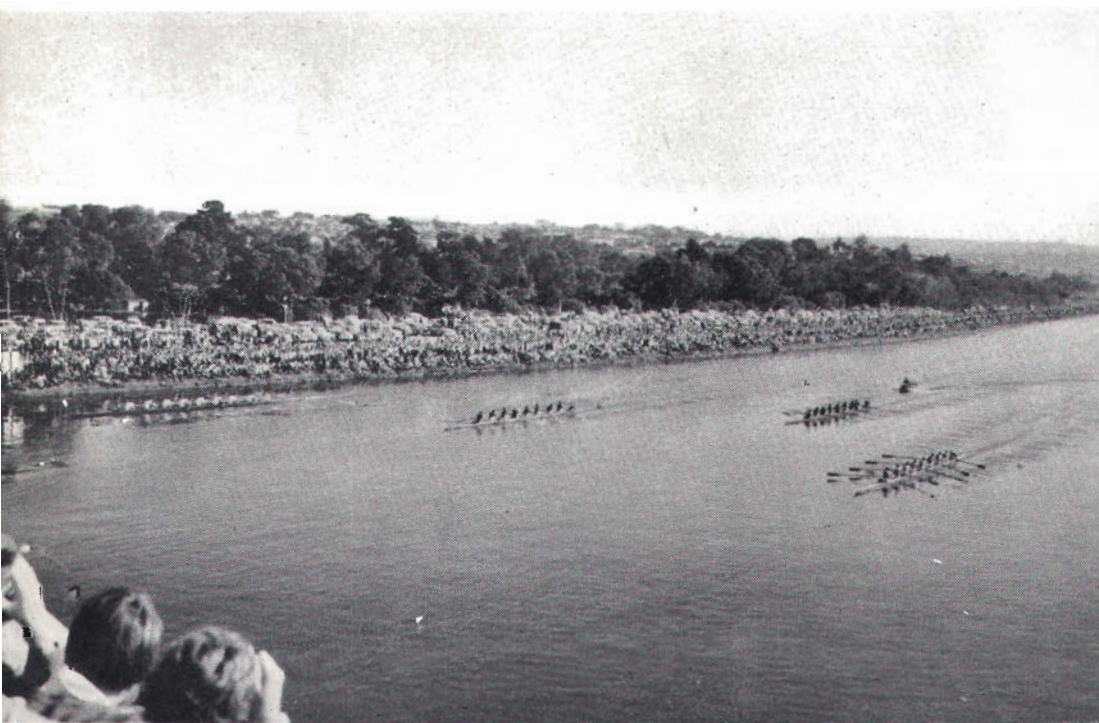
Telegraphists operating push button suites in the *Tress* (Teleprinter Reperforator Switching System) installations at the Central Telegraphic Office, Melbourne.





*[Australian News and Information Bureau]*

One of the ornamental lakes in the Royal Botanic Gardens, Melbourne, with the tower of Government House in the background.



*[Robert Pockley, Geelong.]*

Head-of-the-River race on the Barwon River, Geelong : view showing facilities for rowing and spectators.





*[Australian News and Information Bureau.*

Wild dash for the sea starts the day at the Melbourne Lord Mayor's Holiday Camp.

In the last five summers, 12,000 children have come from the remote townships and farms of the Australian outback to spend part of their school vacation by the sea.



*[Victorian Department of Health.*

An important aspect of public health : the inoculation of school children with the Salk vaccine.





*[Trustees of National Gallery of Victoria.]*

Portrait group of the Leigh family by George Romney (1734-1802). Purchased under the terms of the Felton Bequest in 1959.

# VICTORIAN COLLEGE OF PHARMACY—PRINCIPAL ITEMS OF RECEIPTS AND EXPENDITURE

(£)

Particulars	1956	1957	1958	1959	1960
<b>RECEIPTS</b>					
Lecture Fees .. ..	38,956	43,749	48,624	52,041	73,383
Examination Fees .. ..	1,352	1,670	1,628	1,861	1,798
Total .. ..	40,308	45,419	50,252	53,902	75,181
<b>EXPENDITURE</b>					
Salaries and Fees to Lecturers	16,257	18,068	20,203	25,097	33,297
Drugs and Chemicals ..	2,466	1,853	1,949	2,833	8,382
Administration and Other Expenses .. ..	18,125	22,548	20,743	22,695	26,471
Total .. ..	36,848	42,469	42,895	50,625	68,150

## Health and Medical Research

### Health of the Victorian Community

The health of the community is difficult to assess without objective measurement. Indeed, until Dr. William Farr, the English pioneer of vital statistics, compiled what he called "his little sums about human lives", we had no means of measuring it. England adopted compulsory registration of births, deaths and marriages in 1837, and study of these figures enabled Dr. Farr to produce facts instead of opinions. On these facts the whole structure of public health is built.

Farr showed that death and disease did not strike in a haphazard fashion, but took their heaviest toll in particular groups: the mother and the young child, the adolescent, the elderly, the neglected, the handicapped, the overworked, the overcrowded, and the undernourished. He was also able to show the great and increasing harm which industrialization, with its overcrowding, overworking and undernourishment, entailed. He showed that deaths from epidemic, endemic, and contagious disease in cities were more than twice those in the

counties. The heavy loss of infant lives, hitherto only suspected, was revealed in its stark reality by the accurate recording of their births and their deaths. He showed that one out of every five infants failed to survive the first year of life.

The groups which Farr described as the most vulnerable 100 years ago are an almost accurate classification of special divisions of health departments today.

Scientific knowledge was not available to solve these problems, but the link between dirt and disease had been clearly shown. Improvement in sanitation had caused so dramatic a reduction in bowel diseases that the community was ready to believe that all infectious diseases could be eradicated by attention to hygiene—a false, but, from the viewpoint of practical sanitation, a valuable impression.

Victoria had a hazardous and turbulent beginning and, for 50 years after its separation from New South Wales, health authorities were fully occupied in improving the appalling conditions which the feverish scramble for gold had created. Early mistakes were gradually corrected and healthy living and working conditions became accepted as a human right.

Health legislation requiring improved sanitation met with little opposition as it dealt with things rather than people. Trouble arose, however, when measures infringing personal liberty were attempted. Freedom loving Victorians first disobeyed and finally rejected compulsory vaccination against smallpox. This has been the first and last attempt to translate health knowledge into action by force.

Voluntary acceptance of disease-prevention measures in Victoria has been achieved mainly by the great voluntary societies. These societies have been formed by enthusiasts who perceived a need in the community. At the expense of their time and their money they translated ideas and hopes into reality. The successful ones have had the satisfaction of seeing their plans adopted for the benefit of the whole community. Members of these societies comprise a veritable army of dedicated health workers, workers who are enthusiastic, altruistic and completely independent. Victoria is fortunate in the number and calibre of these societies. Outstanding examples are the Red Cross, Tuberculosis, Anti-Cancer, and Crippled Children Societies, Bush Nursing and greatest of all—the municipal councils.

It was due to the work of voluntary societies that the lessons taught by Sir Truby King in New Zealand were adopted with such success in Victoria. Truby King showed that infants in all grades of society were being murdered by ignorance. He showed mothers that adherence to a detailed and rigid procedure protected their babies from dietary disorders and killing infections. His plan was adopted by enthusiasts in Victoria. A rival group, equally enthusiastic, adopted the principle but contested the detail. Their arguments stimulated interest and reinforced the common purpose, and both proved successful. Although each society has now handed over the main part of its work to municipal councils and the Department of Health, both are still actively engaged in training an expert work force and sustaining public interest. There

were in 1961 more than 600 Infant Welfare Centres in Victoria to which 86 per cent. of the mothers bring their babies for advice and supervision. This sets the pattern for the rest of our personal health service in Victoria, pioneered by voluntary effort, accepted by the community, adopted by municipal councils and supported by Government funds. This joint effort has achieved a 90 per cent. reduction in infant mortality.

This large reduction in mortality and morbidity is not confined to baby health. Comparable improvements have been achieved in maternal mortality and industrial disease and, most strikingly of all, in infectious disease. The decrease in tuberculosis mortality has been dramatic. Reduction in diphtheria, scarlet fever, typhoid fever and poliomyelitis have been more gradual but no less real. Hospital accommodation previously reserved exclusively for the treatment of infectious diseases is now available for non-infectious illness.

It must be stressed that the nature of infectious diseases has not altered and epidemics on a scale comparable with those encountered in the 1930's could still occur unless outbreaks are immediately investigated, their nature established, and control measures instituted. These investigations include field work and laboratory techniques which constantly become more expert and revealing, and unfortunately, more costly. The Public Health Laboratory at the Melbourne University in 1946 was able to supply service to the Department of Health by the employment of one graduate with two assistants at a cost of £4,000 a year. Last year ten graduates with 25 assistants were required and the cost had risen to £43,000. This is only a part of the picture, as the work being carried out by the University does not include work on the important diseases caused by viruses. These include poliomyelitis, polyneuritis, measles, German measles, mumps, Murray Valley encephalitis, infectious hepatitis and a host of others. The virus work for the Health Commission is carried out by the Epidemiological Research Unit at Fairfield Hospital, the Walter and Eliza Hall Institute at the Royal Melbourne Hospital (see pages 276, 277 to 279), and the Commonwealth Serum Laboratories at Parkville (see pages 280-281).

The most powerful weapon in infectious disease control is immunization. A recent example of voluntary acceptance of this preventive health measure is Salk vaccination. In the past four years more than a million Victorians have received this treatment. The success of immunization against diphtheria, tetanus, whooping cough, smallpox and tuberculosis which is being given by municipal authorities to children throughout this State ensured enthusiastic acceptance of protection against poliomyelitis.

No health programme can function efficiently without the co-operation of the medical profession as a whole. Government and municipal medical officers are supported by their colleagues in general practice. The medical profession in Victoria recognizes a double responsibility—firstly, to their patients, and secondly, to the community.



The sustained reduction in sickness and death rates from preventable diseases indicates that effective measures for promotion of health and reduction of disease are being carried out in Victoria. Our figures compare favourably with other States of the Commonwealth and other countries. They are not a cause for complacency; they can and will be improved. They indicate, however, that our public health procedure is on sound lines and they give encouragement to workers in all branches to pursue their work with confidence and enthusiasm. Diseases incurable today may be preventable tomorrow. It is the Health Commission's responsibility to ensure that the discoveries of preventive medicine are made known and clearly explained to the Victorian community so that their adoption will not be just accepted but demanded.

### **Further References**

A short history of the Department of Health will be found on pages 215-216 of the Victorian Year Book 1961.

### **Department of Health**

#### *Salk Vaccine Campaign*

From 1937 onwards, Victoria experienced a high incidence of poliomyelitis, the disease occurring in epidemics of varying severity.

Mass immunization commenced in Victoria in July, 1956, using a Salk-type vaccine made at the Commonwealth Serum Laboratories. The vaccine was supplied to the States by the Commonwealth free of charge and municipalities were invited to co-operate with the State in carrying out immunization of all children. The size and scope of this immunization campaign was much greater than any previously attempted. Despite this, it proceeded smoothly from the outset, and this was largely due to the fact that municipalities were accustomed to carrying out immunization campaigns against diphtheria and other diseases.

Before the introduction of the vaccine, most of the cases occurring were in the school-age group. Initially, the vaccine was restricted to children under fifteen years of age and campaigns were centred on schools in an effort to immunize the greatest number of children in the shortest space of time. Although the mechanics of the campaign varied somewhat from one area to another, the basic pattern was unchanged. Consent cards were distributed to parents through schools and inoculations were given (with the co-operation of the Education Department) during normal school hours. Children who had not reached school age were immunized at pre-school centres and other suitable places.

In the earlier stages, vaccine was not available in unlimited quantities and, apart from school children, was limited to special groups such as medical, dental, and hospital staffs, and pregnant women. In May, 1957, supplies were more freely available and municipalities were invited to extend campaigns to young adults in the fifteen to nineteen years age group.

In December, 1959, all restrictions were removed and at the same time the vaccine was made available to private medical practitioners. In spite of this, however, the response from adults was very poor. From the returns furnished by municipalities, it is estimated that over 80 per cent. of children under fifteen years of age have been immunized compared with only 20 per cent. in the age group from fifteen to 44.

### *Industrial Hygiene Division*

An outline of the functions of the Industrial Hygiene Division is given on page 217 of the Victorian Year Book 1961.

### *Elderly Citizens Clubs*

In Victoria interest in clubs for elderly citizens is rapidly growing. Since October, 1955, the State Government has subsidized all municipal councils who established and/or maintain elderly citizen clubs. Up to 1st November, 1960, a total of 70 clubs had been granted subsidies, 43 of which were in the Metropolitan Area and 27 in provincial towns.

The capital grant available for each club established by a council is £4,000, payable on a £2 for £1 basis. Capital expenditure may include such items as the purchase of property, building costs, architects' fees, and furniture and equipment. The maintenance subsidy is payable on the basis of four-fifths of the net cost to the council up to £800 per annum. Maintenance may include heating, lighting, the wages of the staff, the purchase and delivery of food and any other items needed to maintain the club. Before a subsidy can be granted certain conditions must be fulfilled, such as the approval of the site, plan, and specifications by the Health Department. All these conditions are aimed at helping the elderly people to obtain a club suitable for their needs.

Clubs vary considerably from locality to locality according to the particular need in the area and the finance available. However, the Health Department, through which the grant is payable, encourages the councils to establish clubs open to all the elderly of the municipality rather than to one particular group. Emphasis is placed on the benefit of services such as hot midday meals at the clubs and "Meals on Wheels", foot clinics, libraries, visiting services and handicraft classes.

### *Home Help Service*

Home Help Services conducted by municipal councils have been subsidized by the Victorian State Government since 1946. At first the subsidies offered were small but gradually over the years have been increased until today the amount is four-fifths of the net cost to the council for the maintenance of the service. In addition £50 per annum is paid towards the administrative costs.

The objects of the Service are to provide help in the home to expectant and nursing mothers, and to young families where, through illness, the mother is unable to attend to her normal family needs. The Service also gives assistance to the aged and infirm and other necessitous persons when their health or age prevents them attending

to certain household tasks. By the provision of such assistance much is achieved in preserving the health of young mothers and families and in keeping the aged and infirm from seeking hospital or institutional care.

Each person receiving home help is expected to pay as much as he or she can afford towards the cost of the service. Priority, however, is based on the person's need of the service. Full time home help may be made available for a maximum period of three weeks unless exceptional circumstances require an extension. Hourly and part-time help to the aged and infirm may be given for such time as is needed provided the case is reviewed from time to time and the help is not required more urgently elsewhere.

Government subsidies have now been granted to a total of 107 councils throughout Victoria and of these 96 are at present operating. During 1959-60, a total of 10,122 households received home help assistance—double the number assisted for a similar period two years earlier.

### *School Medical Service*

A recent major development in the School Medical Service is the increasing importance being given to health education. It is recognized that the school teacher is in a position to exert a profound influence on the habits of the pupils, and thus, indirectly, on the attitudes of their parents. Consequently, the Teachers' Training Colleges have become the main channel through which the School Medical Service attempts to inculcate desirable and healthful living patterns. At the same time a special survey is being conducted to ascertain the real health needs of the community, so that the health education programme can be rendered fully effective; this survey is being conducted by selected school nurses.

Special services that were developed in 1960 to further the general aims of the Service were:—

- (1) A considerable extension was made in the psychiatric consultant service by seconding a full-time psychiatrist from the Mental Hygiene Authority;
- (2) a survey was made to determine the incidence of phenylketonuria in retarded children;
- (3) a Reference Manual and Handbook were prepared for the guidance of the staff; and
- (4) the medical records of the Service were extensively revised so that statistical analysis on a mass basis can be undertaken at any time.

In the process of implementation is provision of a student health service at the Monash University. Plans for the future include an experimental course in health for secondary schools which is scheduled for 1962.

### *School Dental Service*

An outline of the functions of the School Dental Service is given on pages 219-220 of the Victorian Year Book 1961.

*Pre-Natal, Infant Welfare and Pre-School Services**Infant Welfare*

The Maternal and Infant Welfare Division of the Maternal and Child Welfare Branch of the Department of Health is responsible for administering the pre-natal, infant welfare and pre-school services in Victoria. The pattern of development has been a decentralized one, the infant welfare centres being established in the municipalities throughout Victoria as a responsibility of the local authorities. The buildings are the property of the local municipal councils, although the State Government pays capital grants (a maximum of £3,000) towards their erection. The councils employ the infant welfare sisters, but again the State Government pays a maintenance grant approximately equal to half the sister's salary.

The infant welfare service provided for a community varies with its population, composition and density and more specifically its number of births per year. It is estimated that for a municipality with 200 birth notifications per year, a full-time sister is required. Sale, with a population of 8,000, has approximately 200 birth notifications per year and employs a full-time service of one infant welfare sister and has one complete infant welfare centre building with a residence attached. Towns of smaller size do not require the full-time service of a sister and a shire may employ one sister to provide the needs of four or five townships within the municipality.

In addition to the time spent in consultations, the sister requires time to make home visits and to keep records, so that a full-time sister working a 40-hour week can only really afford to have twenty hours for consultation. A full day's consultation time is regarded as five hours, so that if a centre is open for four days per week for five hours, the remaining twenty hours are spent in home visiting, records, and preparatory work.

As well as actually supervising the health of the child under five years of age and advising the mother, the sister may give demonstrations on preparation of foods, bathing and dressing the infant, and may arrange other health education activities with parents, such as discussion groups or invite speakers to address them. Sometimes films can be obtained on different aspects of child health and a member of the Health Department staff may attend to conduct discussions on the topic illustrated.

In the more sparsely populated areas where the sister has to spend more of her time travelling, she will not be able to see as many mothers and babies in one week as in the urban areas.

In the most sparsely populated areas, the shires are not able to meet the cost of providing static infant welfare centres and, in addition, many mothers would have to travel too great a distance to reach them. Accordingly the Government provides Mobile Infant Welfare services, pays the infant welfare sisters and provides specially fitted vans for their use as centres. Several shires may be served by one of these vans and may make contributions towards the cost in proportion to

the amount of service received. As townships spring up and develop along these routes, temporary centres are established where the mothers can congregate and so save the sisters' travelling time. When these townships grow more permanent, the shires establish static centres and relieve the State of the heavy cost of providing the mobile services.

There are some mothers who, because of their situation, are unable to avail themselves of either the static or the mobile services, and for these assistance is provided through the Infant Welfare Correspondence Scheme which is conducted by the Maternal and Infant Welfare Division. These mothers correspond regularly with the sister in charge and receive progress letters throughout their child's development. Many mothers in outback areas have benefited from this scheme.

### *Infant Welfare Centres*

In 1960, every municipality in the State, except one, was contributing to an infant welfare service for the people within its boundaries. Subsidy to municipalities for this service was £600 per annum for each full-time sister employed. Seven Mobile Infant Welfare vans, staffed by seven Department of Health infant welfare sisters, provide services in sparsely populated areas in the State. The Infant Welfare Correspondence Scheme continues to give service to mothers in inaccessible areas.

Particulars of Infant Welfare Centres in Victoria for the years 1958 to 1960 are shown below:—

### VICTORIA—INFANT WELFARE CENTRES

Particulars	1958	1959	1960
Metropolitan Centres .. .. .	152	159	164
Country Centres .. .. .	397	406	417
Mobile Units .. .. .	20	21	21
Centres in Non-Rate Paying Areas .. .. .	12	14	14
Total Number of Infant Welfare Centres	581	600	616
Number of Infant Welfare Nurses in Centres	275	287	296
Number of Birth Notifications Received .. .. .	60,937	61,292	63,824
Number of Children Attending Centres .. .. .	146,251	153,045	158,787
Total Number of Attendances at Centres .. .. .	1,289,497	1,331,403	1,335,435
Infant Welfare Correspondence Scheme			
Number of Children Enrolled .. .. .	337	368	236
Expectant Mothers Enrolled .. .. .	10	10	10

### *Infant Welfare Nurses*

The number of registered Infant Welfare Nurses in Victoria was 2,220 in 1959 and 2,312 in 1960. Approximately 70 nurses are being trained per year, but these provide staff for hospital maternity units as well as for infant welfare centres. There are three infant welfare training schools for nurses; the examination is conducted by the Victorian Nursing Council which issues the certificates.

*Pre-school Services*

The building of Pre-school Centres throughout Victoria has been aided in a similar way to Infant Welfare Centres. In this case, however, the building may be owned by the council, and often it is then combined with the infant welfare centre to reduce cost, or it may be owned by a church body or a voluntary organization. In these latter cases, the council must be willing to sponsor the project. A similar building grant on a two to one basis up to a maximum of £3,000 is paid towards the erection of these buildings, which, like the infant welfare centres, have to be approved in the planning stage. Again, these buildings vary in size and complexity according to the needs of the municipality in which they are to be established. In general, the unit is a single one providing for 30 children, but in bigger areas a double unit accommodating up to 60 children at one time may be provided. To give as many children as possible the benefit of attending these centres, different groups are taken often in the mornings and afternoons so that, although a building may only accommodate 30 children at one time, up to 60 children may benefit from the centre. Besides giving the opportunity for group play, these centres give a great deal of parent education and evening meetings are held at which there may be speakers on different aspects of child welfare and, in addition, parent discussion groups are held, so that, indirectly, more than the number of children attending benefit from the establishment of pre-school centres in the community.

Even though the pre-school centre may not adjoin the infant welfare centre, the functions of these two centres are closely linked and continuity in the supervision of the child under five years of age is achieved.

Although the most general type of pre-school centre required by a community is that of a kindergarten, in some areas a pre-school play group may be all that can be established at first. This type of pre-school centre is conducted by a pre-school play leader who is a person with less training than a kindergarten teacher. Only fifteen children can be cared for by such a person at any one time and she is not qualified for parent education.

In urban areas, a third type of pre-school centre for the all-day care of children whose mothers have to work is required. There are fourteen of these day nurseries (*crèches*) subsidized by the Government in Victoria. They take children from infancy to five years of age and the matron in charge must be a State registered nurse with experience in the care of infants and young children. Her staff consists of mothercraft nurses and, where possible, those with a pre-school certificate. The building requirements for day nurseries are necessarily more elaborate since provisions for sleeping and mid-day meals are required as well as for mid-morning or afternoon milk or fruit.

All children attending pre-school centres have the opportunity for a free medical examination each year. Their parents are present at these examinations and may ask the advice of the doctor on any matters concerning them. All children attending pre-school centres require to be immunized and at the time of this medical examination the opportunity is given for checking whether all the necessary booster shots have been given and when the next ones are due.

Although some 90 per cent. of all mothers in Victoria avail themselves of the infant welfare service, up to date the provision of pre-school services is only sufficient to meet less than 20 per cent. of the pre-school population. The cost of maintaining this service is a heavy one and although the State subsidizes to the extent of more than two-thirds of the kindergarten teachers' salaries, the additional maintenance costs have to be met by the community, either by local councils, church organizations, individual parents, or voluntary efforts of some kind. It is, in fact, a self-help project involving a good deal of community effort, but one which most parents appreciate and see the value in the establishment of good family life.

#### *Pre-school Maintenance Subsidies*

The subsidy for a full-time kindergarten in 1960 was £750 per annum for ten sessions, for a pre-school play centre £325 per annum, and for day-care centres a per capita subsidy of £100 per annum.

The number of subsidized pre-school centres and the number of children enrolled in the years 1958 to 1960 are as follows:—

#### VICTORIA—SUBSIDIZED PRE-SCHOOL CENTRES AND ENROLMENTS

Particulars	1958		1959		1960	
	Number	Enrolment	Number	Enrolment	Number	Enrolment
Metropolitan—						
Kindergartens ..	218	*	226	10,984	225	11,124
Pre-school Play Centres	25	*	38	1,039	36	1,096
Total .. ..	243	11,705	264	12,023	261	12,220
Country—						
Kindergartens ..	95	*	117	6,135	132	7,013
Pre-school Play Centres	65	*	70	1,716	65	1,979
Total .. ..	160	7,082	187	7,851	197	8,992
Day Nurseries (All-Day Care)—						
Metropolitan ..	12	*	12	*	12	*
Country .. ..	1	*	1	*	1	*
Total .. ..	13	1,166	13	1,376	13	1,237

\* Not available.

#### *Building Grants*

The number of grants made over the years are shown below :—

#### VICTORIA—INFANT WELFARE AND PRE-SCHOOL CENTRES: NUMBER OF CAPITAL GRANTS

Buildings Subsidized	1958	1959	1960	From Inception to 1960
Infant Welfare Centres .. ..	22	20	44	337
Pre-school Centres .. ..	31	23	27	388
Total .. ..	53	43	71	725



*Mothercraft Nurses*

The mothercraft nursing training is of fifteen months' duration and trains girls to care for babies and their mothers during the nursing period. There are nine mothercraft training schools and the examination is conducted by the Victorian Nursing Council. In 1959, 145 nurses gained their certificate and in 1960, 172. In 1960 there were 1,710 mothercraft nurses on the register of the Mothercraft Nursing Bureau conducted by the Department of Health.

*Pre-natal Service*

In all Infant Welfare Centres advice is given by the infant welfare sisters on pre-natal hygiene and preparation for motherhood. In 1945, pre-natal medical services were introduced at certain centres and there are now 30 municipal centres at which pre-natal clinics are held. These are run in conjunction with public maternity hospitals serving these areas. The extent to which the services are used is shown by the fact that, in 1960, 6,435 expectant mothers availed themselves of the service.

*Expenditure*

The State expenditure on maternal, infant, and pre-school welfare in the years 1957-58 to 1959-60 is shown in the following table:—

VICTORIA—DEPARTMENT OF HEALTH: EXPENDITURE  
ON MATERNAL, INFANT, AND PRE-SCHOOL WELFARE  
(£)

Particulars	1957-58	1958-59	1959-60
Salaries .. .. .	73,386	77,967	94,743
Subsidies, &c., to—			
Municipalities—			
Infant Welfare Centres .. ..	151,088	173,288	179,969
Training Schools—			
Infant Welfare .. .. .	5,000	5,000	5,000
Mothercraft .. .. .	9,000	9,000	9,000
Kindergartens and Pre-school Centres ..	261,910	274,105	292,992
Crèches and Day Nurseries ..	46,537	47,044	50,906
Infant Welfare and Pre-school Scholarships ..	16,829	15,874	15,415
Other Expenditure .. .. .	40,984	51,550	42,560
Total .. .. .	604,734	653,828	690,585

*Tuberculosis Bureaux and Sanatoria*

Two sanatoria are functioning in the Metropolitan Area and accommodation is also provided for tuberculosis patients at the Austin Hospital. Ex-servicemen and ex-servicewomen are accommodated at the Repatriation Department Hospitals at Heidelberg and Macleod.

In country districts tuberculosis clinics have been established at Base Hospitals and in a number of cases tuberculosis chalets are also attached.

Visiting nursing services operate throughout the State. Twelve nurses visit homes of patients and contacts in the Metropolitan Area and six nurses visit in the country.

Mobile units are used in the mass X-ray surveys and between 1949 and 1960 the service has undertaken nearly 4,500,000 chest X-ray examinations.

The following tables show particulars of the operation of the Tuberculosis Service:—

### VICTORIA—TUBERCULOSIS SANATORIA: ACCOMMODATION, ETC.

Sanatoria	1956	1957	1958	1959	1960
ACCOMMODATION					
Metropolitan ..	577	558	541	541	541
Country ..	211	211	203	203	203
Total ..	788	769	744	744	744
ADMISSIONS					
Metropolitan ..	1,005	844	1,081	1,046	978
Country ..	275	239	218	271	208
Total ..	1,280	1,083	1,299	1,317	1,186
DISCHARGES					
Metropolitan ..	870	804	1,055	988	970
Country ..	237	192	186	216	223
Total ..	1,107	996	1,241	1,204	1,193
DEATHS					
Metropolitan ..	69	31	58	65	66
Country ..	12	16	16	22	15
Total ..	81	47	74	87	81

### VICTORIA—TUBERCULOSIS BUREAUX ACTIVITY

Particulars	1956	1957	1958	1959	1960
New Cases Referred for Investigation	12,244	10,303	11,365	10,196	9,614
Re-attendances (Old Cases and New)	60,814	64,534	61,846	64,538	62,419
Visits to Patients' Homes by Nurses	12,984	12,970	12,895	14,656	14,547
X-ray Examination—Films—					
Large .. ..	44,925	43,882	37,748	38,809	37,084
Micro .. ..	6,337	7,078	6,959	6,600	6,999

*Mental Hygiene Authority*

The Mental Hygiene Authority is in charge of the Mental Hygiene Branch of the Department of Health. The Branch consists of institutions for in-patient care and out-patient clinics and other services necessary for a comprehensive community mental health programme.

During 1960 a great deal of progress was made in the establishment of community mental health services in Victoria, and four new clinics were opened.

The Malvern Clinic and Day Hospital, where there are also twenty residential patients, will treat, near their homes, people with nervous disorders. The Alexandra Parade Clinic is for the care of cases of alcoholism and others who have had treatment from the penal medical officers. The Clarendon Clinic caters for the after care of patients discharged from hospital, and a sheltered workshop is provided there to keep occupied, during the period of their rehabilitation, those who are unemployed. A new children's clinic has been built in association with the Children's Court for the investigation of children who are in difficulties due to emotional problems.

Two further hostels have been acquired: the one by the Mental Hygiene Department and the Kew Welfare Group, and the other by the Mental Hospitals Auxiliary. These are for homeless patients who may stay there for periods after discharge from the hospital.

Wards have been remodelled at Pleasant Creek, Stawell, Mont Park, Kew Cottages, and Ballarat Mental Hospital; gradually all the old wards are being completely remodelled. New wards have been opened at Kew Cottages, Mont Park and at Warrnambool, giving accommodation to relieve the overcrowding and to reduce the waiting time for admission. New wards are also under construction at Ballarat, Mont Park and at the Kew Cottages, to relieve overcrowding still further.

A building has been bought to make a day hospital and clinic in association with the Preston and Northcote Community Hospital. This will provide early treatment and make further provision towards supplying a complete mental health service for the north of Melbourne. It will be staffed in conjunction with the nearby psychiatric hospital at Larundel.

Land has been purchased at Sunshine and Dandenong for the building of future psychiatric units. These psychiatric units will form the basis for future regional planning, as they are to be the headquarters for the staffing organization of the mental health services.

Extra-Metropolitan Victoria has been divided into five country areas, and in four of them new psychiatric units are being erected. The first of these, at Traralgon, has made considerable progress; the others at Benalla, Bendigo, and Geelong have not, as yet, been started, although in each case the land has been purchased or reserved.

The following table sets forth the numbers under the care of the Mental Hygiene Authority for the years 1955 to 1959:—

**VICTORIA—CERTIFIED PERSONS AND VOLUNTARY  
BOARDERS ON THE REGISTERS OF THE MENTAL  
HYGIENE AUTHORITY**

Location				1955	1956	1957	1958	1959
In State Hospitals	..	..	..	6,705	6,718	6,699	6,899	6,753
On Trial Leave from State Hospitals	..			911	1,044	1,198	1,153	1,203
Boarded Out	..	..	..	293	287	320	249	206
Absent without Leave	..	..	..	25	23	29	26	35
Total Number of Certified Insane				7,934	8,072	8,246	8,327	8,197
In Receiving Institutions	..	..		57	72	59	63	96
On Trial Leave, &c., from Receiving Houses	..	..	..	3	68	177	182	199
Total	..	..	..	7,994	8,212	8,482	8,572	8,492
Voluntary Boarders	..	..	..	667	870	1,179	1,398	1,599
Military Mental Cases, Bundoora (Not Included in Above Table)	..	..	..	265	267	258	308	320

The number of admissions of certified patients to State mental hospitals for each of the years 1955 to 1959 was as follows :—

**VICTORIA—MENTAL HOSPITALS: ADMISSIONS**

Year			Direct Admissions			From Receiving Houses			Total Admissions
			Males	Females	Total	Males	Females	Total	
1955	..	..	130	103	233	474	475	949	1,182
1956	..	..	143	98	241	653	558	1,211	1,452
1957	..	..	142	119	261	681	651	1,332	1,593
1958	..	..	223	135	358	605	676	1,281	1,639
1959	..	..	178	87	265	611	625	1,236	1,501

The number of certified patients who were discharged from, or who died in State mental hospitals for each of the years 1955 to 1959 is given below:—

### VICTORIA—MENTAL HOSPITALS: DISCHARGES AND DEATHS

Year	Discharges			Deaths			Total Discharges and Deaths
	Males	Females	Total	Males	Females	Total	
1955 .. ..	293	223	516	224	303	527	1,043
1956 .. ..	369	240	609	311	394	705	1,314
1957 .. ..	438	275	713	310	396	706	1,419
1958 .. ..	499	366	865	290	353	643	1,508
1959 .. ..	465	475	940	307	372	679	1,619

### Hospitals and Charities Commission

#### General

Although public hospitals in Victoria received State financial assistance from their inception, it was not until 1864 that the State introduced a measure of control. It required charities to be registered, and provided conditions for the election of committees. From 1881 to 1923, the public hospitals functioned under the aegis of an Inspector assisted by an Advisory Council of four, all of whom were appointed by the Government.

In this regard, it is significant that in 1890 a Royal Commission on charitable institutions recommended . . . "the appointment of a central board of charity to allocate Government grants to the various districts and for control of all charities within the colony". This recommendation was not implemented until 1923, when the Hospitals and Charities Act 1922 brought into being the Charities Board of Victoria.

The Board exercised extensive responsibilities and powers of control over the activities of charities seeking voluntary contributions from the public. It classified hospitals and assisted them considerably to improve facilities. It distributed Government grants to the institutions.

In 1948, under the Hospitals and Charities Act, the Board was replaced by the Hospitals and Charities Commission consisting of three full-time Commissioners and staff. The Commission was given more extensive authority than the Board, particularly in its power to exercise oversight of public hospitals and other institutions, including ambulance services. The combination under one authority of hospitals and charities was a wise provision, because with the passage of time many charitable institutions have come to work in close association with hospitals; for example, benevolent homes for the care of the aged, schools for handicapped or crippled children, orphanages and the like.

The Commission is the authority under the Minister for the payment of maintenance and capital subsidies to registered hospitals and institutions. It exercises a close scrutiny over hospital budgets and expenditure for capital and maintenance purposes.

One of its most important functions is to co-ordinate hospital activities, firstly in that it is the authority responsible for determining the site and extent of new hospital construction, and secondly, for co-ordinating hospital and institutional activities after these are established. As part of its general administrative responsibility, the Commission may enquire into the administration of institutions and societies. The Commission determines, in consultation with the Victorian Nursing Council, those hospitals which should be used for nurse training, and the standards required of nurses in hospitals. It conducts a continuous recruiting campaign for nurses, provides bursaries to encourage girls to enter the nursing profession, and generally assists hospitals in nursing matters.

The Commission promotes collective buying of standard equipment, furnishings and supplies. This led to the establishment of the Victorian Hospitals' Association, which acts as a central purchasing organization for Victorian hospitals. It is a non-profit company of which the hospitals themselves are the shareholders. By way of encouragement to purchase, the Commission originally offered an inducement by way of a 25 per cent. subsidy upon collective purchases made by hospitals from the Association; the amount of this subsidy has now been decreased to 15 per cent. and the Association operates as an active purchasing organization handling all types of equipment, drugs, and commodities generally used by hospitals. Total sales by the Victorian Hospitals' Association in the year 1959-60 amounted to £1,569,000.

In the year 1959-60, the Commission distributed a gross amount of £4,536,000 from loan funds for new buildings, additions or re-modelling projects, together with furnishings and equipment for hospitals, institutions and ambulance services. It distributed £12,658,124 for maintenance purposes.

The Commission exercises control over State funds:—

- (1) For capital works. Commission approval is required at all stages of the building project from the original narrative through the preliminary sketches to documentation, tendering, and supervision of the project.
- (2) For maintenance purposes. Each institution is required to submit for Commission approval a budget covering the succeeding year's operation.

### *Public Hospitals*

Since their inception in 1846, Victorian public hospitals have maintained a distinctive pattern. Firstly, they are managed by autonomous committees elected by contributors—following closely the practice applying in the United Kingdom prior to the introduction of the National Health Service. Secondly, they have received financial assistance by way of Government subsidies. With rising costs, this has increased steadily in amount and proportion. At present, from

Government sources, hospitals in Victoria derive 68 per cent. of their income. Thirdly, medical staffing has followed the former traditional British pattern of honorary service. In recent years this has been necessarily supplemented by salaried doctors employed either in University teaching departments or in diagnostic and technical therapeutic fields.

Patients are broadly separated into two groups, according to an income test. Those earning below a determined level of income are eligible for public hospital care at a fee of approximately half the actual cost; medical care is free through the honorary system. Those patients whose incomes are above the level prescribed, are required to pay intermediate or private hospital accommodation charges at higher rates, but only rarely does the charge cover cost; they must, in addition, meet medical fees, against which they may insure.

For a premium of 3s. a week a public patient can cover himself and his family against the public hospital accommodation charge of £3 a day. The insurance benefit includes an amount of £1 per day derived from Commonwealth hospital benefits. Private and intermediate patients may insure against their higher hospital charges and may, in addition, take a medical benefits cover to meet the doctor's bill.

The difference between these fee charges and actual cost is met by State Government subsidy. For the last complete financial year (1959-60) the total public hospital maintenance expenditure of £19,990,997 was met from:—

	£
Patients' fees .. .. .	5,623,403
Charitable contributions .. .. .	402,331
Miscellaneous .. .. .	462,899
State Government subsidy .. .. .	11,274,323
Commonwealth Government payments .. .. .	2,482,585

A buoyant economy, together with Government subsidized medical and hospital insurance plans within easy reach of most wage earners, has resulted in a marked trend towards private care, either in the doctor's consulting room or in the private bed. This trend has been accentuated in Melbourne itself by such rapid growth of the city, that distance from, and cost of travel to, major hospitals centrally situated, has become a significant factor.

Improved medical methods and more effective drugs have shortened the average patient stay in hospital, with an important effect upon the community need for acute hospital beds. In Victoria today, the acute hospital bed need is assessed at fewer than four beds per thousand of population as compared with 7.5 beds in 1948. The fall is significant, not only in its effect on hospital building costs to provide for an expanding population, but in terms of cost to the patient. Although hospital costs and charges have risen steeply since the war, the Victorian spends, on the average, only half the number of days in hospital.

Improved medical and hospital care have shortened bed stay, but they have also increased the length of life expectancy, with a corresponding increase in the proportion of older people in the community. The effects of this trend are being met through energetic efforts by State instrumentalities, in collaboration with the hospitals, and with religious and charitable organizations.

The programme embraces education towards prevention of infirmity, rehabilitation of patients with established infirmities, and institutional care when that is unavoidable. Home care is favoured when possible and the "day hospital" is appearing to assist families meet their obligations to the aged.

Money for the programme is derived from Commonwealth and State sources, together with very substantial contributions from the public. The programme has developed with harmonious relationships between all of the bodies concerned, but much remains to be done. It is directed towards helping old persons physically and mentally, and to restore them to a useful life with standing in the community.

Victoria is rapidly increasing the facilities necessary to care for old people and to provide for the long-term patient, including rehabilitation services in both cases. By these means, the real needs of the community are met in two ways: by the opportunity to give improved services to old people and those suffering from long-term illnesses, with correspondingly improved results; and by freeing acute hospital beds of these patients. This is good economy, but even better medicine.

The significant feature in Victoria's hospital and institutional services is the part played by charitable organizations and voluntary effort. The activities of these bodies are closely co-ordinated with those of the State departments concerned which render, in addition to financial subsidy, advice and technical help in meeting their problems.

The growth of public hospital services in Victoria since 1951 is indicated in the following table, which shows the number of public hospitals functioning and the number of beds available:—

#### VICTORIA—NUMBER OF PUBLIC HOSPITALS AND BEDS

Year	Number of Hospitals		Number of Hospital Beds (Including Private and Intermediate Sections)		Estimated Population of Victoria at 31st December
	Metropolitan	Country	Metropolitan	Country	
1951 .. ..	21	72	4,478	4,634	2,299,538
1952 .. ..	21	75	4,568	4,669	2,366,719
1953 .. ..	22	81	4,723	5,009	2,416,035
1954 .. ..	24	85	5,018	5,134	2,480,877
1955 .. ..	26	88	5,782	5,339	2,555,021
1956 .. ..	28	93	5,867	5,483	2,632,623
1957 .. ..	29	98	6,014	5,681	2,700,635
1958 .. ..	29	100	6,177	5,694	2,770,919
1959 .. ..	30	103	6,188	5,814	2,842,903
1960 .. ..	31	105	6,407	5,891	2,925,533

NOTE.—This table excludes the Cancer Institute, auxiliary hospitals, convalescent homes, sanatoria, mental hospitals and receiving homes, details of which are shown in the table on page 265.



At 30th June, 1960, the Commission had on its register 1,202 institutions and societies. Some registered hospitals are not yet functioning, and are therefore excluded from the previous table. Details of the registrations for the years 1958 to 1960 are shown in the following table :—

**VICTORIA—INSTITUTIONS REGISTERED WITH THE  
HOSPITALS AND CHARITIES COMMISSION**

Particulars	At 30th June—		
	1958	1959	1960
Hospitals .. .. .	145	147	146
Benevolent Homes and Hostels .. ..	76	79	79
Children's Homes .. .. .	52	52	52
Foundling and Rescue Homes .. ..	16	16	16
Organizations for Welfare of Boys and Girls..	188	222	251
Crèches and Kindergartens .. .. .	87	84	82
Bush Nursing Centres .. .. .	17	16	17
Ambulance Organizations .. .. .	37	34	34
Relief Organizations .. .. .	114	108	109
Miscellaneous Organizations .. .. .	121	140	161
Private Hospitals .. .. .	244	242	255
Total ..	1,097	1,140	1,202

### *Hospital Regional Planning*

In 1954, Victoria instituted a plan of regional hospital service. Its object was to provide a complete hospital coverage for all parts of the State and to do this as economically as possible. It was appreciated at once that this could be achieved only through very close co-operation between the hospitals themselves, and first efforts were directed towards breaking down the traditional individual outlook of hospital authorities.

The State was divided geographically into eleven regions, the boundaries of which generally determined themselves about established commercial centres, on the assumption that, all other things being equal, the patient will seek the doctor where the family shops. Hospitals themselves were freely consulted and boundaries adjusted in the light of local knowledge.

The hospital service in each region comprised a well established large hospital and up to ten or fifteen smaller hospitals serving the remoter parts of the region. In size these hospitals varied considerably, some having as few as six to ten beds, others up to 400.

Voluntary regional councils were established, comprising representatives from each of the hospitals concerned; the number of representatives was varied according to the size of the hospital concerned. Regional councils were invited to share facilities and co-ordinate their activities as much as possible to the benefit of all. The Hospitals and Charities Commission, for its part, undertook to build up wards and services as quickly as possible.

Emphasis in the first place was given to diagnostic and therapeutic facilities in each base hospital. Pathology departments and laboratories were established in each, and because of a shortage of specialists, a training scheme was established for pathologists. Similarly X-ray departments were provided or extended, and with the aid of the Red Cross Society, central blood banks were established in each region. These services were regarded as those of first importance and others soon followed. Physiotherapy was in constant demand and central departments were established with itinerant physiotherapists visiting hospitals in the regions; central medical libraries were provided and the service made available to each hospital.

At the same time general hospital services were not forgotten. Regional engineers were appointed to visit small hospitals to advise committees upon maintenance problems or to do a job on the spot. This has proved one of the most successful moves in the service. Central laundries soon followed, and many hospitals now participate in centralized regional linen services. Central stores of essential equipment were established and these have proved valuable in reducing capital outlay to provide an efficient service and to ensure that technical equipment is regularly and expertly serviced.

From its inception the plan was voluntary, but today, every public hospital in the State participates; moreover regions themselves have made valuable contributions. One of these is a regional fund raising campaign in which all hospitals share.

Regional councils have no executive authority. It is not obligatory therefore for any individual hospital to accept a decision taken at a regional council meeting; nevertheless a council decision carries much weight as representing the common view of a hospital service as distinct from an individual outlook. The Hospitals and Charities Commission itself gives serious consideration to any recommendation from a regional council.

The regional plan has been in operation for six years and has achieved much towards improving the hospital service for the ultimate benefit of the patient, and at a cost which could not have been achieved but for the co-operation between hospitals themselves.

### *Private Hospitals*

The Hospitals and Charities Commission controls the standards in private "non-public" hospitals through continual inspections. At the 30th June, 1960, there were, in the Metropolitan Area, 173 registered private hospitals with a total of 3,933 beds, whilst in country areas there were 82 registered private hospitals with a total of 1,245 beds.

Bush nursing hospitals are registered with the Commission as private hospitals.

### *Nurse Training*

Victorian public hospitals do not have all of the nurses that they could employ. This is particularly so in the case of nurses holding the additional midwifery certificate; nevertheless by comparison with other countries and, to some extent, other States, the Victorian situation is good. At present there are 100 nurses to every 91 patients in public hospitals; moreover this proportion has been rising steadily over the past five years.

Shortages, where they occur to any serious extent, are local in character and often related to a local situation. The Commission attributes this favourable situation to a continuous nurse recruitment programme conducted by the Commission and directed toward schools in particular, from which most nurse applicants come; a nursing bursary scheme under which the Commission provides a bursary of £78 to assist the girl remain at school for another year; and the provision of modern accommodation.

### *Nursing Aides*

Training for qualification as a nursing aide is available to girls not having the necessary qualifications or temperament to undertake general nurse training. Preliminary training of six weeks is undertaken at the Melbourne Nursing Aide School, at Mount Royal, at the Wimmera Regional Nursing Aide School (Warracknabeal), at the Warrnambool and District Base Hospital, at the Bendigo Benevolent Home and at "Alexander", Castlemaine. Practical training is given in an affiliated hospital.

### *Post-graduate Scholarships*

The Commission awards scholarships to selected nurses enabling them to undertake post-graduate training in particular fields.

### *District Nursing Service*

The Melbourne District Nursing Service, which operates throughout the metropolitan and outer metropolitan districts, employs 68 nursing sisters providing domestic nursing care for patients. In addition, country services operate at Ballarat, Geelong, Hamilton, Mooroopna, Mildura and Warrnambool.

*Ambulance Services*

Ambulance services are organized on a regional basis. Costs of maintaining services are met from voluntary donations, income from contributory schemes, transport fee charges to non-subscribers and special grants by the Commission.

Particulars of the ambulance services from 1957-58 to 1959-60 are shown in the following table :—

## VICTORIA—AMBULANCE SERVICES

Particulars	1957-58	1958-59	1959-60
Vehicles .. .. .	199	182	187
Staff .. .. .	338	356	384
Contributors .. .. .	255,388	271,570	288,281
Patients Carried .. .. .	149,983	173,593	183,325
Mileage Travelled .. .. .	2,556,119	2,929,806	3,169,163
Maintenance Grants .. .. .	£ 139,952	167,309	172,540
Capital Grants .. .. .	£ 137,222	86,199	118,103

**Further References**

Further details of these services are set out on page 234 of the Victorian Year Book 1961.

*Care of the Aged*

There is an ever-increasing need to provide accommodation for old people. Many committees have been assisted by grants from the Commission and by grants available from the Commonwealth Department of Social Services under the Aged Persons Homes Act.

Accommodation for elderly people in benevolent homes and hostels has increased from 5,814 beds in 1954-55 to 9,295 beds in 1959-60. This figure includes the provision made for such patients in private hospitals. About 230 beds are available for elderly people in over-night hostels.

Geriatric units have been established at most of the larger benevolent homes. It is expected that these units will do as much for the aged as paediatrics has done for children.

Further to the development of geriatric units has been the establishment of "half-way houses" for the rehabilitation of elderly infirm people who, before the development of these services, would have been bedridden for their remaining years.

Foster-home service or accommodation in private homes is an alternative to institutional care for older people. One such service has been established in Melbourne by the Citizens' Welfare Service.

## Public Hospitals and Charitable Institutions

Information dealing with the receipts, expenditure, accommodation, and inmates of public hospitals and charitable institutions (subsidized) in Victoria during the years 1955-56 to 1959-60 is contained in the following tables. The numbers of indoor and outdoor patients refer to the "cases" treated and not to persons. It is considered probable that some persons obtained relief or became inmates at more than one establishment, but there is no information upon which an estimate of the number of these duplications can be based.

## VICTORIA—NUMBER OF PUBLIC HOSPITALS AND CHARITABLE INSTITUTIONS

Institution	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>Hospitals—</b>					
Special Hospitals* .. ..	10	10	10	11	11
General Hospitals—					
Metropolitan .. ..	17	19	19	20	20
Country .. ..	93	98	100	103	105
Auxiliary Hospitals .. ..	2	2	1	1	2
Convalescent Homes .. ..	1	1	1	2	1
Sanatoria .. ..	2	2	2	2	2
Mental Hospitals and Receiving Houses .. ..	14	15	15	15	15
Total Hospitals .. ..	139	147	148	154	156
<b>Other Institutions and Societies—</b>					
Infants' Homes .. ..	8	8	8	8	8
Children's Homes .. ..	36	35	33	33	34
Maternity Homes .. ..	4	4	4	4	4
Institutions for Maternal and Infant Welfare .. ..	3	3	3	3	3
Rescue Homes .. ..	4	4	4	4	4
Benevolent Homes .. ..	9	9	9	10	9
Deaf Dumb and Blind Institutions .. ..	4	5	5	6	6
Hostels for the Aged .. ..	10	10	10	12	13
Hospital for the Aged† .. ..	..	..	1	1	1
Medical Dispensaries .. ..	2	2	2	2	2
Total Other Institutions‡ ..	80	80	79	83	84

\* Special Hospitals are those that have accommodation for specific cases only or for women and/or children exclusively and in this table include the Cancer Institute.

† Since 1958 Mt. Royal Benevolent Home has been classified as a Hospital for the Aged.

‡ In addition, there are a number of institutions, including bush nursing hospitals, youth clubs, benevolent societies, and church relief organizations.

# VICTORIA—PUBLIC HOSPITALS AND CHARITABLE INSTITUTIONS: RECEIPTS AND EXPENDITURE

(£'000)

Institutions	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>Hospitals—</b>					
Receipts—					
Government .. ..	13,593	15,517	16,307	16,911	18,065
Patients .. ..	3,183	3,769	4,337	4,852	5,598
Other .. ..	1,446	2,114	2,006	1,878	2,415
Total .. ..	18,222	21,400	22,650	23,641	26,078
Expenditure—					
Salaries and Wages ..	8,229	9,292	9,749	10,390	11,599
Capital .. ..	4,441	5,170	4,641	4,238	4,244
Other .. ..	6,579	7,303	7,628	8,247	8,969
Total .. ..	19,249	21,765	22,018	22,875	24,812
<b>Sanatoria—</b>					
Receipts .. ..	575	505	503	510	499
Expenditure—					
Salaries and Wages ..	254	293	285	288	305
Other .. ..	321	212	218	222	194
Total .. ..	575	505	503	510	499
<b>Mental Hospitals and Receiving Houses—</b>					
Receipts .. ..	6,286	7,013	7,316	7,370	7,856
Expenditure—					
Salaries and Wages ..	2,194	2,592	2,760	3,190	3,528
Capital .. ..	1,506	1,710	1,667	1,575	1,425
Other .. ..	2,586	2,711	2,889	2,605	2,903
Total .. ..	6,286	7,013	7,316	7,370	7,856
<b>Other Charitable Institutions—</b>					
Receipts .. ..	4,092	5,592	6,279	6,731	7,823
Expenditure—					
Salaries and Wages ..	1,442	1,940	2,125	2,372	2,717
Capital .. ..	782	1,043	1,417	1,321	1,500
Other .. ..	1,931	2,543	2,649	3,072	3,443
Total .. ..	4,155	5,526	6,191	6,765	7,660
<b>Total Receipts ..</b>	<b>29,175</b>	<b>34,510</b>	<b>36,748</b>	<b>38,252</b>	<b>42,256</b>
<b>Total Expenditure ..</b>	<b>30,265</b>	<b>34,809</b>	<b>36,028</b>	<b>37,520</b>	<b>40,827</b>

NOTE.—Some of these figures differ slightly from those shown previously.

**VICTORIA—PUBLIC HOSPITALS AND CHARITABLE  
INSTITUTIONS : DETAILS OF SOURCES OF INCOME AND  
ITEMS OF EXPENDITURE**

(£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>INCOME</b>					
Government Aid .. ..	22,186	25,751	26,977	28,429	30,062
Municipal Aid .. ..	214	245	256	228	300
Collections, Donations, Legacies ..	441	542	787	881	858
Fees—					
Out-patients .. ..	522	559	651	683	779
In-patients—					
Public .. ..	1,916	2,157	2,733	2,595	3,504
Private and Intermediate ..	1,585	2,160	2,312	2,499	2,743
Other .. ..	2,311	3,096	3,032	2,937	4,010
<b>Total .. ..</b>	<b>29,175</b>	<b>34,510</b>	<b>36,748</b>	<b>38,252</b>	<b>42,256</b>
<b>EXPENDITURE</b>					
In-patients and Inmates ..	21,417	24,168	25,767	27,452	30,075
Out-patients .. ..	1,695	1,927	1,975	2,182	2,755
Capital .. ..	6,729	7,924	7,679	7,134	7,171
Other .. ..	424	790	607	752	826
<b>Total .. ..</b>	<b>30,265</b>	<b>34,809</b>	<b>36,028</b>	<b>37,520</b>	<b>40,827</b>

See footnote on page 266.

**VICTORIA—PUBLIC HOSPITALS: ACCOMMODATION AND  
INMATES, 1959–60**

Institution	Number of Beds in—		Daily Average of Occupied Beds in—		Total Cases Treated in—		Out-patients (Including Casualties)
	Public Section	Inter-mediate and Private Section	Public Section	Inter-mediate and Private Section	Public Section	Inter-mediate and Private Section	
Special Hospitals .. ..	2,093	304	1,555	216	43,209	9,108	156,869
General Hospitals—							
Metropolitan .. ..	2,846	795	2,099	646	56,654	30,689	226,280
Country .. ..	2,955	2,936	1,703	1,836	36,453	83,222	187,871
Auxiliary Hospitals .. ..	469	..	421	..	2,481	..	..
Convalescent Hospitals ..	46	..	25	..	350	..	..
Sanatoria .. ..	373	..	308	..	993	..	..
Mental Hospitals and Receiving Houses .. ..	9,326	..	9,279	..	17,503	..	..
<b>Total .. ..</b>	<b>18,108</b>	<b>4,035</b>	<b>15,390</b>	<b>2,698</b>	<b>157,643</b>	<b>123,019</b>	<b>571,020</b>

**VICTORIA—CHARITABLE INSTITUTIONS, ETC.:  
ACCOMMODATION, 1959-60**

Institution	Number of Beds for—		Daily Average	Accommodated during Year	
	Children	Adults		Children	Adults
Infants' Homes .. ..	385	80	341	901	168
Children's Homes .. ..	2,837	..	2,497	4,360	..
Maternity Homes .. ..	168	134	179	570	616
Institutions for Maternal and Infant Welfare .. ..	76	20	58	1,434	2,037
Rescue Homes .. ..	..	457	424	..	805
Benevolent Homes .. ..	..	2,678	2,397	..	3,812
Deaf, Dumb, and Blind Institutions	318*	..	270	336*	..
Hostels for the Aged .. ..	..	564	474	..	755
Hospital for the Aged .. ..	..	688	648	..	1,344

\* Details unavailable as to whether children or adults.

### Lord Mayor's Fund

The Lord Mayor's Fund was inaugurated by the Lord Mayor of Melbourne in 1923. The object of the founder was to rationalize and regularize the collection and distribution of voluntary contributions to support the hospitals and charities of the Metropolis through federation, which is a term commonly applied to a plan for a community-wide campaign for funds for a group of health and welfare organizations.

This was not the first attempt to establish federated giving, as in 1873 two Melbourne groups of citizens formed two separate committees known as the Hospital Saturday and the Hospital Sunday Committees respectively. Both conducted unified campaigns within the community, the first through business, industry, and generous private citizens, and the second through church congregations on one Sunday each year which has become historically known as the Hospital Sunday Appeal.

The Hospital Saturday Committee merged with the Lord Mayor's Fund, but the Hospital Sunday Committee still remains active in association with the Lord Mayor's Fund and is responsible for the conduct of the appeal to the churches in October each year.

Events in recent years have made it clear that fund raising should be placed on a rational basis and has proved the wisdom of the founder in his conception of the Lord Mayor's Fund.

Collection of funds through a central agency for the support of our hospitals and charities has many advantages and a committee is currently engaged in an examination of the needs of all organizations, the present method of financing their operations, and the means whereby their needs may be more effectively met and the generous public relieved of the constant spate of demands made on them.



The total annual receipts of the two funds during the period 1955-56 to 1959-60 were as follows :—

VICTORIA—LORD MAYOR'S FUND AND HOSPITAL SUNDAY FUND : RECEIPTS

(£)

Year Ended 30th June—	Lord Mayor's Fund	Hospital Sunday Fund	Total
1956 .. .. .	180,846	29,517	210,363
1957 .. .. .	199,478	31,070	230,548
1958 .. .. .	290,469	29,946	320,415
1959 .. .. .	240,164	30,486	270,650
1960 .. .. .	236,165	33,720	269,885

Bush Nursing Centres

Bush Nursing Centres are distributed throughout the State in the rural areas. At 31st March, 1960, there were 59 centres, including 44 hospitals, supplying 508 beds and employing approximately 170 trained nurses and 23 partly-trained nurses. During the year ended 31st March, 1960, the total number of cases attended by bush nurses was 32,143. The 44 hospitals admitted 14,690 in-patients and treated 10,177 out-patients.

Details of the receipts and expenditure of Bush Nursing Centres for the years ended 31st March, 1956 to 1960, are shown in the following table:—

VICTORIA—BUSH NURSING CENTRES: RECEIPTS AND EXPENDITURE

(£)

Particulars	Year Ended 31st March—				
	1956	1957	1958	1959	1960
<b>RECEIPTS</b>					
<b>Grants—</b>					
Government* .. ..	112,076	190,407	200,112	176,350	200,498
Municipalities .. ..	244	315	500	435	440
Collections, Donations, &c.	50,413	71,778	85,197	81,764	70,879
Proceeds from Entertainments	8,460	10,761	11,798	5,338	11,393
Patients' Fees .. ..	188,480	211,095	226,221	233,814	226,268
Members' Fees .. ..	18,399	18,733	19,272	22,650	22,285
Interest and Rent .. ..	232	314	1,500	1,930	2,333
Miscellaneous .. ..	7,539	17,332	4,375	6,531	10,215
<b>Total Receipts ..</b>	<b>385,843</b>	<b>520,735</b>	<b>548,975</b>	<b>528,812</b>	<b>544,311</b>

\* Includes £35,741 received under the Hospital Benefits Scheme for 1956, 058 for 1957, £30,337 for 1958, £32,576 for 1959, and £31,813 for 1960.

VICTORIA—BUSH NURSING CENTRES : RECEIPTS AND EXPENDITURE—  
*continued*  
 (£)

Particulars	Year Ended 31st March—				
	1956	1957	1958	1959	1960
<b>EXPENDITURE</b>					
Salaries—					
Nurses (Paid to Central Council) .. ..	138,000	134,714	133,268	149,420	168,121
Other .. ..	81,899	100,178	107,634	114,714	98,726
Provisions, Fuel, Lighting, &c. ..	70,904	79,709	77,693	79,352	78,614
Surgery and Medicine .. ..	11,803	14,017	16,283	14,460	15,550
Repairs and Maintenance .. ..	15,022	13,899	14,779	15,589	13,834
Furniture and Equipment .. ..	15,846	13,596	11,885	9,493	9,097
Printing, Stationery, &c. .. ..	8,855	10,202	10,677	11,305	11,912
Interest, Rent, Bank Charges, &c. .. ..	1,971	1,165	1,373	1,327	1,336
Miscellaneous .. ..	12,082	30,614	15,894	13,607	12,464
Loan and Interest Repayments ..	1,739	2,081	8,766	3,145	5,504
Land and Buildings .. ..	13,509	32,336	65,998	85,881	95,207
Alterations and Additions .. ..	14,607	18,344	18,639	21,252	25,089
<b>Total Expenditure ..</b>	<b>386,237</b>	<b>450,855</b>	<b>482,889</b>	<b>519,545</b>	<b>535,454</b>

### Graduate Nursing Education

#### *Victorian Nursing Council*

In accordance with the provisions of the *Nurses Act* 1958 and subsequent amendments to that Act, the Victorian Nursing Council is responsible for standards of training, examination, registration and supervision of the practice of all branches of nursing and ancillary nursing in Victoria.

Provisions are made to ensure that the high standard of nursing service enjoyed in this State will be maintained and the supervisory powers of the Council enable it to prevent unqualified persons from nursing in any field.

The Council has power to determine the length and content of and the educational standards for entrance into courses of training for all classes of nurses and to recognize courses of training and examination alternative or additional to those established under the Act.

Registers are kept of the names and particulars of training, qualifications and experience of persons who are qualified for registration under the Act. These include general nurses, midwives, mental nurses, mental deficiency nurses, mothercraft nurses, and nursing aides.

Trained nurses coming to Victoria from other States or countries are carefully considered individually on their training and qualifications and may, before registration, be required to undertake further training with or without examination according to the requirements of the Council.

All hospitals wishing to establish a training school for any branch of nursing must be approved by the Council and careful inspections are carried out and reports received before such approval is considered. Inspections are also carried out at frequent intervals of all hospitals with established nursing schools and any weakness or discrepancy is reported by the Council to the Board of Management of any particular hospital, with a request to bring any such school up to standard.

The Council has power to authorize and to carry out research and investigation into all matters concerning nursing and may carry out or authorize special or experimental courses.

An amendment to the Act passed by the Parliament in November, 1960, extends the powers of the Council, enabling it to register and supervise the administration and activities of nurses' agents and nurses' agencies.

Breaches of the Act in regard to the employment of unqualified persons and excess charges of fees and commissions are punishable by law ; these powers will have the effect of ensuring that the public will receive the services of persons qualified in the particular field in which they are to be employed and at the recognized scale of fees.

#### *Approved Training Schools*

There are 88 hospitals approved by the Council as training schools for the various branches of nursing in Victoria. Of these, 43 are general nursing training schools (including 26 for complete training, seven for affiliated training, and ten associated with the two Schools of Nursing); midwifery training schools number eleven; mental and mental deficiency, fifteen; nursing aide training schools, 35 (including 29 affiliated with nursing aide schools); and mothercraft training schools, nine.

The organization of nursing education and service in Victoria is developing rapidly and received added impetus in April, 1961, when Australia was host country to the International Council of Nurses 12th Quadrennial Congress. This Congress, held in Melbourne, gave the nursing profession in Australia the opportunity to see and hear leaders of the profession from some 70 countries who are in membership with the International Council of Nurses and also enabled overseas nurses to observe something of our own progress.

#### **Royal Melbourne Hospital**

The history of the Royal Melbourne Hospital as a public institution dates from March, 1848. In that month, the first block of a new hospital was completed and occupied. Prior to that time, makeshift buildings had been converted into hospitals to serve the needs of the convict population and members of the military forces, but no provision existed for the hospital treatment of the free settlers of the Port Phillip District.

The first public hospital was built by public subscription and was located in the heart of the growing city. At first, it consisted of twenty beds and an outpatient department, but this accommodation was soon quite inadequate to cope with the influx of patients, especially when the

lure of gold attracted a rush of new arrivals to the Colony in 1851. New wings were added to the original structure to cope with each wave of population growth.

By the early years of this century, it was obvious that the expanding hospital was antiquated and unsatisfactory in every respect, and that a completely new hospital was required. One proposal was made that the hospital should vacate its present site and be rebuilt in close proximity to the university, but this visionary proposal was rejected and the hospital was rebuilt on the original site.

Such was the growth of the City of Melbourne that soon it became obvious that the site in the centre of the city was undesirable, that the rebuilt hospital was quite inadequate for the present and future needs of the community, and that the separation of the University and its teaching hospital was neither in the best interests of the medical student or of the hospital.

In 1920, the Committee of Management accepted the principle that the hospital should be moved to a site adjacent to the University, but it was not until 1935 that the site could be secured by Act of Parliament. The new building was commenced in 1938 and completed in 1942. As the war with Japan had commenced, the buildings on completion were occupied by the United States Fourth General Hospital as the base hospital for the American forces in the Pacific. When the war moved further northwards, the American forces vacated the building and in December, 1944, patients were finally moved from the centre of the city to the new hospital and the history of the new Royal Melbourne Hospital commenced.

In order to ensure that the hospital was as modern as possible, a world-wide survey of hospital thought was undertaken before planning was commenced. At this time new concepts of design and construction were changing the face and shape of hospitals in Europe and America, and the majority of these concepts were incorporated in the new Royal Melbourne Hospital.

The result of this preliminary study was a hospital which has excited admiration throughout Australia and from oversea visitors. The hospital was planned to be as functional as possible, and yet flexible enough to allow of the future incorporation of advances in medicine and surgery as they occurred.

The fundamental principle adopted was the centralization of services—of transport of patients, staff and goods, of sterilization, of linen, of operating theatres, and of medical records.

At the same time, the activities of the wards, the outpatients and the casualty department were closely integrated and expanded.

Considerable thought was given to the prevention of overcrowding in the wards, and it is a tribute to this planning that each ward unit of 30 beds has remained unaltered in size in spite of the tremendous increase in the demand for beds which has faced all hospitals in the last fifteen years. Balconies are available to every bed in the hospital, but these balconies are so designed that it is not possible to nurse patients on them and so increase the hospital bed state without increasing the hospital facilities.

The recent development by the hospital of a central linen service, designed to serve the majority of hospitals in Melbourne, is another innovation which has created interest in the hospital world of Australia.

The hospital today is the main teaching hospital of the Medical School of the University of Melbourne, and geographically it is in an ideal situation to carry out this function. The gradual transfer of the whole of the Medical School of the University to the area adjacent to the hospital will facilitate and enlarge the association. The hospital, which at present has 630 beds, is an adult general hospital but it does not provide for paediatrics or obstetrics. All other specialties are provided within the hospital.

In addition to the training of medical students and nurses, the hospital also assists in the training of students of physiotherapy, occupational therapy, speech therapy, social studies, dietetics, radiography, chiropody, pharmacy, social service—in fact, in all branches of medical ancillary work.

### **Geelong Hospital**

With the development of Geelong it became apparent to many citizens as early as 1849 that a public hospital was necessary in the town. The first public hospital was built and opened for patients in Geelong in 1852. At that time the hospital not only served the community of the Geelong district, but also the mining areas of Ballarat and Ararat. This first small hospital was extended and enlarged to meet the requirements of the growing population, but it became inadequate both in size and design before the First World War. In 1924, a new pavilion-type hospital was built as a memorial to Lord Kitchener and opened with 200 beds. Although this number of beds appeared adequate at the time, it became necessary to build a new three-storey private and intermediate hospital of 54 beds in 1940, a two-storey infectious diseases block of 64 beds in 1943, and a four-storey maternity block of 96 beds in 1953, for both public and private patients.

Not only has the number of beds increased in the hospital with the growth of population in Geelong, but with the advances in modern medical ancillary aids, departments for the investigation and treatment of patients have also been added to the hospital. A modern, well-equipped pathology department with highly-trained professional and technical staff was opened in 1956 rendering a complete pathological service to the medical profession and the patients in this area. This department also supervises the blood bank which has its own panel of donors giving over 3,500 donations of blood per year to supply the requirements of all hospitals in the Barwon Region. The physiotherapy department has developed and plays an important role in assisting the recovery and rehabilitation of many patients injured as a result of trauma in industry and road accidents. The X-ray department is being renovated, enlarged, and equipped with units of modern design to meet the growing demands of advanced radiological investigations and to make available to the community a complete radiological service. A superficial X-ray therapy machine has been installed recently by the Peter MacCallum Clinic for the treatment of certain types of cancer so that this form of therapy is now available in Geelong and patients no longer need to travel to Melbourne for their treatment.

The Geelong Hospital is a training school for nurses and usually has about 160 nurses undergoing different stages of training. The nursing staff of both trainees and trained is over 350, whilst the total staff of the hospital of over 600 includes fifteen full-time doctors. More than 50 doctors and dentists give their service in an honorary capacity to help maintain a medical service to the hospital and the community. The Geelong and District Hospital is the base for other hospitals in the Barwon area, namely, Winchelsea, Birregurra, Beeac, Lorne, Apollo Bay and Colac. Planning is now in progress for a new modern multi-storey building to replace the present public wards which have gradually become out of date.

### **Fairfield Hospital**

An article on this hospital will be found on pages 241–242 of the Victorian Year Book 1961.

### **Cancer Institute Board**

#### *General*

From the outset the policy of the Cancer Institute Board has been to ensure the provision of maximum clinical service to patients and to carry out related research. To this end, it has collaborated to the highest level with appropriate specialists in the fields of medicine and surgery and has directed its attention to the development of radiation and chemotherapy services. For an institute which is engaged primarily in the treatment of cancer by radiation, the most significant advance towards the alleviation and arrest of this disease is the development of megavoltage equipment. This type of equipment may be in the form of Linear Accelerators or Cobalt 60 as the source of energy. A 4 MeV. Linear Accelerator was installed in Melbourne in 1956, a Cobalt 60 Unit in Launceston in 1957 and another 4 MeV. Linear Accelerator was purchased for installation in Melbourne during 1961. Large-scale alterations were involved and an old two-storey building demolished to make way for the installation of this latest unit. Planning for this building included space for a third piece of megavoltage equipment, and work commenced in February, 1961.

Other developments of radiotherapy are being closely studied. One is based on the advantage of oxygen during irradiation. There is convincing evidence both at the clinical and laboratory level that radio-sensitivity of tumours relative to surrounding normal tissue may be raised by a factor of more than two. Suitable equipment is now being manufactured. Another advance is a technical development in the distribution of radiation within the body. This is provided by the use of beams of electrons at selected high energies most conveniently supplied by a betatron. Such apparatus has not yet been installed in Australia.

#### *Research*

A Radiobiological Research Unit was established in 1956, the first of its kind in Australia. The science of radiobiology deals with the effect of ionizing radiations (X-rays and related types of radiation) on

living matter. It is a field which owes its present-day importance to the post-war development of nuclear physics and engineering. As a result, machines and apparatus have been devised which produce radiations of much higher energies and different qualities and provide important means of treatment of cancer and allied diseases. The Radiobiological Research Unit encourages a close exchange of experience between clinical and research personnel. Individual research workers are currently engaged on current problems. In addition research is being conducted by the departments of physics, pathology, biochemistry and clinical radiotherapy.

### Further References

Further information about the activities of the Cancer Institute Board will be found on pages 242 to 245 of the Victorian Year Book 1961.

### Medical Research

#### *Anti-Cancer Council*

The Anti-Cancer Council of Victoria is entrusted by Parliament with the responsibility for fostering and co-ordinating research within Victoria into the causation and treatment of cancer. The encouragement of cancer research, cancer education, and assistance to cancer sufferers form the major activities of the Council, and of these, research is the most important, accounting for 75 per cent. of the annual expenditure.

Funds to sustain the Anti-Cancer Council's activities, including research, are derived entirely from public subscription. A public appeal in 1958 raised approximately £1,400,000. Owing to this gratifying response, the amounts expended by the Council on cancer research have considerably increased, and in 1960 the amount was £120,000.

The major portion of this sum provided grants in aid to cancer research projects in hospitals, research institutes, and the University of Melbourne. In all, 35 projects were supported in ten university departments, two research institutes, and four hospitals. The projects cover a wide field, ranging from fundamental studies in the nature of the cell growth and division to clinical trials of new agents in treatment of cancer. The two major fields of investigation supported by the Council in Melbourne are studies on carcinogenesis and investigations into the origin, diagnosis, and treatment of leukemia.

The Council maintains a Carden Research Fellow and staff, who are accommodated in laboratories within the Walter and Eliza Hall Institute of Medical Research.

The Anti-Cancer Council also maintains the Central Cancer Registry, Melbourne, which is a centre of research on statistical aspects of cancer incidence. The Cancer Registry maintains a close liaison with the Victorian Office of the Commonwealth Bureau of Census and Statistics. A major project in 1960, in conjunction with the Victorian Department of Health, was a survey of the incidence of skin cancers and allied conditions in a sample of the Victorian population.

Under the Anti-Cancer Council's auspices, the first Victorian Cancer Congress was held in August, 1960. The members of the congress included eminent research workers from all parts of the Commonwealth and from overseas. The success of the congress has proved a great stimulus to the efforts of Victorian investigators in the field of cancer.

**Walter and Eliza Hall Institute of Medical Research  
Baker Medical Research Institute  
Research Work at Alfred Hospital**

Information about these institutions will be found on pages 245 to 247 of the Victorian Year Book 1961.

*Mental Health Research Institute*

Among researches undertaken in 1960 have been further epidemiological studies on the occurrence of mongoloid deficiency in Victoria, and these have been extended to include other anomalies of the central nervous system. A statistical study is being made of the incidence of mental disorders in the migrant, as contrasted with the native-born, population. New drugs, which are being introduced into psychiatry at a rapid rate (where indicated) are being evaluated systematically. Further studies have been evolved in the fields of neurosurgery, electrophysiology and neuropathology, and these include application of the latest electronic advances. Alcoholism, criminality, and other such problems are being investigated through general statistical collection, as well as through carefully designed evaluation of specific areas of these problems. Among the many other studies are the continuing evaluation of mental health problems of ageing; the social implications of having a defective child in a family; and an attempt to bring together the concepts of the artist and psychiatrist through a study designed to evaluate systematically the art productions of patients who are mentally ill.

Finally, in order to create that public understanding which will improve the climate for mental health research and will simultaneously improve the mental outlook of the community as a whole, a comprehensive in-service and community programme of education has been undertaken. It is aimed at professional and semi-professional workers in the field of mental health and instruction, and seminars have been arranged for doctors, nurses, clergymen, police, probation officers, marriage guidance counsellors, and youth leaders.

**Further References**

An outline of the aims and functions of the Mental Health Research Institute will be found on pages 248-249 of the Victorian Year Book 1961.

*Paediatric Research*

The development within the Royal Children's Hospital, Melbourne, of departments dedicated specifically to research in paediatric medicine, surgery and pathology, and staffed by whole-time medical and science graduates, dates from the end of the Second World War.



Prior to 1946, research in medical science rested on the initiative and uncoordinated activities of individual workers, but a substantial endowment from the estate of the late Mr. T. E. Burton enabled the Committee of Management, in 1946, to establish a Department of Clinical Research. This was followed by the Mary and Evelyn Burton Research Fellowship in 1948. In the post-war expansion of the Department of Pathology, initiated in the same year, provision was made for research study in paediatric pathology, including virology, a field of research to which access was provided by the new virus laboratory. The Department of Surgical Research was formally established in 1956. Other research units in being are pursuing studies in haematology, radiology, and the incidence of developmental defects in the offspring of women who contract rubella early in the course of pregnancy.

At first, the administrative work had been discharged by the Board of Research, a small committee appointed by the Committee of Management, but organized research at the Royal Children's Hospital had reached a stage of development by 1959 which required a special controlling body for the effective management of available finance, the appointment of staff, the approval of projects for research and general supervision of the activities of research workers. In 1960, the Royal Children's Hospital Research Foundation was established as an incorporated body.

In 1959, the University of Melbourne founded the Stevenson Chair of Child Health, following a most generous donation for this purpose by Mrs. G. I. Stevenson, of Melbourne. Following the appointment of a Professor of Child Health in August, 1959, this University Department of Child Health was established in the Royal Children's Hospital. It will develop further research both at the hospital and in the community, and will collaborate closely with the Foundation. Many more facilities will be available for research activities when the new Royal Children's Hospital is completed in 1962.

There is now a steady flow of original publications from the several research departments of the Royal Children's Hospital; the articles have appeared in scientific journals published in Australia and overseas, and an annual review of current work is published for private circulation among Australian and overseas hospitals for sick children, research institutes, appropriate university departments, libraries and individuals in teaching positions, and those otherwise identified with or interested in the study of paediatrics.

#### *Fairfield Hospital Epidemiological Research Unit* *Infectious Diseases*

Since 1920, and over the last two decades in particular, there has been a steady decline in cases of diphtheria and scarlet fever. Regression of these diseases, which had provided the major epidemic problems in public health practice, was accompanied by a rising incidence of other infections. Control of diphtheria, therefore, altered the pattern, but did not signify the conquest of infectious disease.

Most of the classical infectious diseases due to bacteria, such as whooping cough or gastroenteritis or typhoid fever, remain public health problems and still occur in epidemic form from time to time. In addition, certain virus diseases, those originating in the gastrointestinal and respiratory tracts in particular, have increased in frequency and variety. Poliomyelitis reappeared in epidemic form in Victoria during 1944, after a virtual absence for six years, and remained epidemic over the next ten years. Virus meningitis became more prevalent. Infectious hepatitis soon appeared in major epidemic proportions and promises to become as great a problem as was diphtheria half a century ago. Respiratory virus infections, formerly regarded as relatively simple and homogeneous in nature, but now recognized to be highly complex, occur with undiminished frequency. Occasional world-wide pandemics occur, as shown by Asian-type influenza in 1957.

Fairfield has remained as the specialized infectious diseases hospital for Victoria since 1904 and, of necessity, many changes had to occur to meet the altered pattern of infectious disease presented to it. One essential change was the enlargement of laboratory facilities and staff with the incorporation of a section concerned with viral disease. This led to the formation, in early 1950, of the Fairfield Epidemiological Research Unit.

The State Health Department was actively concerned in the new Unit and provided a medical liaison and field investigational officer. Co-operation of the Walter and Eliza Hall Institute was shown by the provision of two virus research officers (one part-time) who initiated the virus laboratory. Financial assistance was provided by the National Health and Medical Research Council.

#### *Recent Activities*

During 1950-52, virological studies were almost wholly restricted to influenza because this was one of the few viruses which could be readily cultivated. The viruses were grown in developing eggs. Little diagnostic work was possible and no large-scale studies could be carried out. The major output from the unit over these years was bacteriological. Methods for making fine distinctions between strains of *C. diphtheriae* and between strains of *Str. pyogenes* were developed and these new epidemiological tools enabled infection chains to be traced in the community. Leptospirosis was identified for the first time as an endemic disease in Victoria and shown to be strictly occupational in occurrence, being confined to meat workers and dairy farmers. Surveys of brucellosis in Victoria were also carried out using newer sensitive methods.

During 1953 and 1954 a major change in the activities of the Unit took place when a tissue culture laboratory was established. Most of the early tissue culture work was related to poliomyelitis. On the diagnostic side it soon became possible to test patients for poliovirus in the same routine fashion used for diphtheria. On the more broadly investigational side it was possible, by serological surveys before Salk vaccine was used, to estimate degrees of immunity to poliovirus in

different age groups and different social levels in the community. When Salk vaccine production in the Commonwealth was planned, Fairfield was asked, as an added safety measure, to conduct an independent check test on the virological sterility of all vaccine produced by the Commonwealth Serum Laboratories before its issue to the public. A specially equipped separate laboratory was set up for this purpose and check testing, originally visualized as a temporary measure, has been carried out ever since.

With poliomyelitis work well established it became necessary, as knowledge advanced rapidly, to search for other gastrointestinal viruses such as the E.C.H.O. and Coxsackie groups. This soon furnished valuable diagnostic help in patients with aseptic meningitis because it became apparent that the one clinical entity might be due to infection with about twenty different enteroviruses.

Virological studies of the respiratory viruses were soon added to the work on enteroviruses and at the present time this aspect of virology is receiving more attention. Rather unique large-scale studies of Asian influenza were carried out in 1957, 1959 and 1961. Of necessity, adenoviruses and parainfluenza viruses must be studied because clinically it is not possible to make distinctions between so many respiratory illnesses. The current work on the parainfluenza viruses, not yet published in full, appears to place on a firm footing their role in producing croup.

The Fairfield Epidemiological Research Unit is fulfilling the purpose for which it was intended. It does little truly basic or fundamental work, but functions at a clinical research level, mostly by the practical application of academic research. In so doing it acts as an intelligence service to the State Health Department, and also to other Australian States in certain aspects of virology, as well as providing precise diagnostic knowledge for clinical teaching at a university and postgraduate level. It is fair to state, however, that the real value of this unit to the community stems from the unique position of Fairfield Hospital which concentrates, in one centre, the important infectious diseases in a large metropolitan and rural population.

### *St. Vincent's School of Medical Research*

The St. Vincent's School of Medical Research was created on 27th November, 1952, and its development was made possible by the bequest of the late John Holt, amounting to £200,000. The authorities of St. Vincent's Hospital appointed a Research Advisory Committee which advised that a research biochemical department should be established.

It may well be asked: Why should a centre for the investigation of chemical events in the normal animal organism be established at a hospital where the study and treatment of the human body in disease is the main function? The answer is, that medical science cannot grow beyond the basis formed by our knowledge of how the normal organism works. Therefore, results won through the study of biological processes in a wider sense—be it physiology, biochemistry, immunology, microbiology or other branches of biology—are of importance, directly

or indirectly, for the advancement of medicine. To quote one instance of many, the recent striking advances in thoracic surgery, where completely artificial circulation and respiration are being introduced, would have been unthinkable had not the physiology and biochemistry of these processes been so well known and had not the problems of anaesthesia and secondary infection been mastered beforehand.

The research activities of the department, as they are at present envisaged, will be concentrated on the study of the relationship between biological activity and structure of proteins. This wide field of study, comprising such problems as the structural basis of enzymic and immunological activities, has only recently been opened to chemical investigation, but results already won hold out great promise for the future. It appears that many pathological conditions can be traced to defects in these mechanisms, and it is therefore likely that an extended knowledge will help us to diagnose and cure diseases caused by malfunctions in these respects.

Another activity at the School of Medical Research, particularly important at this time of shortage of scientists, is the training of research workers.

The research laboratories of the biochemical unit have been newly built and occupy some 5,000 square feet on the second and third floors of the pathology building. The equipment is the most modern obtainable and in certain respects the only of its kind. However, the guiding principle for its acquisition has been rather to facilitate as much as possible the special kind of work envisaged for the unit, than to provide a full range of standard equipment for biochemical research.

#### *Commonwealth Serum Laboratories*

One of the major developments at the Commonwealth Serum Laboratories in the last year has been the preparation of quadruple antigen. It was first developed in North America. This vaccine is an important advance in preventive medicine as it combines four immunity building antigens in one injection. The diseases which it is designed to prevent are diphtheria, tetanus, whooping cough, and poliomyelitis. The vaccine is administered to infants, beginning at the age of six months, and the course comprises three injections at monthly intervals followed by a booster dose in the second year, and produces prolonged immunity to these diseases. The number of injections that a baby must receive has thus been reduced to a minimum and protection from these diseases is assured. The new vaccine has had extensive field trials both here and overseas and has been found to be fully satisfactory. Quadruple antigen, which is administered to infants and children from six months to two years of age, was released in February, 1961.

Australia is very fortunate in being a beef-producing country. Large quantities of pancreas (sweetbread) glands are available for the production of insulin for the treatment of diabetes. In many countries where there is little beef, insulin is in very short supply. The Commonwealth Serum Laboratories now prepare a full range of therapeutic insulins: soluble insulin, isophane insulin, the insulin zinc suspensions, protamine zinc insulin and a number of special insulins

(only available from the C.S.L.) for treatment of patients who are allergic or resistant to ordinary forms of insulin. Research at the laboratories has resulted in the preparation of very highly purified insulins which are unsurpassed in quality.

In the last year the full range of insulin zinc suspensions, the latest type of insulin preparations, has been prepared, clinically tested and released for the treatment of diabetic patients. These insulins together with isophane, soluble insulin, and protamine zinc insulin are widely used in the management of diabetics who require insulin.

The treatment of snakebite has been a particular interest since Tiger Snake antivenene was developed at the laboratories in 1930. In recent years Taipan, Death Adder, and Papuan Black Snake antivenenes have also been prepared. The production of a Brown Snake antivenene has presented many difficulties in the past, as the snakes have been difficult to collect and yield only very small quantities of venom. It was not possible to obtain sufficient venom to carry out horse immunization and prepare the antivenene. An intensive drive has changed all this, and Brown Snake antivenene is now available and has been used successfully in treatment. This is a distinct advance as frequently patients who have been bitten by Brown Snakes do not respond well to Tiger Snake antivenene.

The polyvalent influenza virus vaccine is modified when necessary to incorporate the strains of this virus which are causing epidemic influenza overseas, or to strengthen a particular component that may present a particular threat.

Research and development are proceeding in many other fields to ensure that the most advanced biologicals are available for prevention, diagnosis and treatment of disease in Australia.

## *Social Welfare*

### **Commonwealth Social Services**

#### *History*

Until the end of the 19th century, responsibility for social services rested with the six States, their principal activities being in public health and public education. The range of organized statutory welfare services was not large, and voluntary organizations played the major part in charitable relief. In the 1890's there was considerable discussion of old age and invalid pensions in some of the States, but no legislation had actually been introduced before the end of the century.

In 1901, the Federal Constitution conferred upon the new Federal authority expressly enumerated powers, the general residuary powers remaining with the States. As far as social services were concerned, the specific Federal powers were limited to the provision of invalid and old age pensions.

This marks the beginning of the Australian social security programme, which has gradually been expanded into the present comprehensive system. Two main trends are noticeable in this growth—the evolution of statutory social services out of voluntary schemes and the growing interest of the Commonwealth in this field. Services not previously undertaken by any statutory authority have been provided, and services previously provided by some of the State Governments have been superseded by similar services provided by the Federal authority. As a result of both these trends, the Commonwealth has now assumed responsibility for the main income security services, as well as for some of the health services.

Important functions still remain with the States. Over the years they have been active, not only in public health and education, but also in such fields as child, youth and family welfare, labour legislation, workers' compensation and community services, details of which will be found elsewhere in this Year Book.

The development of social security in Australia falls into three distinct periods.

The first, from the beginning of the century up to 1912, saw the introduction of several new provisions. In 1901, both New South Wales and Victoria introduced old age pensions, followed by Queensland in 1908. These measures were superseded by a Federal old age pensions scheme in 1909. In 1907, New South Wales enacted legislation for invalid pensions, but this was replaced by a Commonwealth-wide invalid pension scheme which came into force in 1910. In 1912, the Commonwealth introduced a system of maternity allowances.

In the second period—from 1912 to 1939—there was little development as far as the Federal jurisdiction was concerned. In 1913, discussion centred on the possibilities of introducing a comprehensive system of benefits based on contributory insurance principles, but this was interrupted by the First World War. Similar attempts were made in 1928 and 1938. Both of these were unsuccessful and, though legislation for health and pensions insurance was actually passed in 1938, the scheme did not come into operation.

Some of the States were more active during this period. New South Wales introduced widows' pensions in 1926 and child endowment in 1927; Queensland introduced an unemployment insurance scheme in 1923; and all States assumed extra responsibilities for the relief of the unemployed during the general depression of the late 1920's and early 1930's.

The third period—from 1939 to the present time—has seen a great expansion of Commonwealth social services and health services.

Child endowment was introduced in 1941 and widows' pensions in 1942, both enactments superseding similar schemes in New South Wales. Legislation in 1943 provided for funeral benefits for old age and invalid pensioners, and for allowances to wives and children of

invalid pensioners. In 1945, unemployment and sickness benefits were introduced, and in 1948 the Commonwealth Rehabilitation Service established facilities for the treatment and training of the physically handicapped. Reciprocity with New Zealand was introduced in 1943 and with the United Kingdom in 1954. Another innovation came in 1958 with the payment of supplementary assistance to certain groups of pensioners who were in greater need than others. In addition to these new social services, many changes were made in the provisions for old age and invalid pensions, not only in increasing the rates of pensions but in liberalizing many of the qualifying conditions.

Before 1947, Federal social service benefits were paid under several Acts of Parliament. In 1947, all legislation connected with income security was consolidated into one Act. Many anomalies and obsolete clauses were removed, the title "old age pension" was changed to "age pension", and administration was simplified. The Act is at present styled the *Social Services Act 1947-1960*.

Another development of the period was the passage, in 1954, of the Aged Persons Homes Act. This provides for the payment of grants to eligible organizations providing accommodation for old people.

The Constitution of 1901 gave the Commonwealth power only over invalid and old age pensions in the social services field, and over quarantine in the health field. At first, those measures not specifically provided for under constitutional authority were undertaken by the Commonwealth through its general powers. The position was altered in 1946. In that year, the Commonwealth was granted more extensive powers when the Constitution was amended as a result of a referendum, and the clauses in Section 51 which relate to social security now read—

"(xxiii) Invalid and old age pensions ;

(xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances."

### Finance

When age and invalid pensions were introduced in 1909 and 1910, respectively, finance was provided from Consolidated Revenue. Maternity allowances, introduced in 1912, were financed similarly. When child endowment was introduced in 1941 and widows' pensions in 1942, they were also financed from Consolidated Revenue.

A change was made when the National Welfare Fund was established in 1943. At first it was used to finance funeral benefits and maternity allowances, but as time went on, other benefits were made a charge on the Fund. At present, expenditure on all social and health benefits, except repatriation and a few minor benefits, is met from the Fund, but it is not used to finance the cost of administering benefits nor of the capital works associated with them.

Though the Fund was formerly financed by revenue from certain specific sources, e.g., the social services contribution, it was placed on a different basis in 1952. In that year, an amendment to the law provided that sums should be paid into the Fund from Consolidated Revenue equal to the amount of money paid out of the Fund. In addition to these appropriations from Consolidated Revenue, the Fund receives interest from its investments. The National Welfare Fund, as at present constituted, does not represent revenue from certain sources paid into a special fund for social services; rather it represents an appropriation from Consolidated Revenue equal to expenditure from the Fund.

Expenditure from the National Welfare Fund in the years 1957–58 to 1959–60 is shown in the following table:—

AUSTRALIA—NATIONAL WELFARE FUND : EXPENDITURE  
(£'000)

Service	Year Ended 30th June—		
	1958	1959	1960
Funeral Benefits .. .. .	325	346	353
Age and Invalid Pensions .. .. .	121,577	129,571	147,005
Widows' Pensions .. .. .	9,832	10,777	12,137
Maternity Allowances .. .. .	3,560	3,599	3,652
Child Endowment .. .. .	58,734	67,540	62,532
Unemployment and Sickness Benefits .. .. .	7,331	8,652	7,253
Commonwealth Rehabilitation Service .. .. .	608	670	681
Medical Benefits .. .. .	7,086	7,780	9,292
Medical Benefits for Pensioners .. .. .	3,198	3,806	4,113
Hospital Benefits .. .. .	10,823	14,802	18,599
Pharmaceutical Benefits .. .. .	12,911	18,455	20,761
Pharmaceutical Benefits for Pensioners .. .. .	2,123	2,517	3,574
Nutrition of Children .. .. .	2,756	3,069	3,359
Miscellaneous Health Services .. .. .	855	768	689
Tuberculosis Benefits .. .. .	5,766	5,850	5,363
Commonwealth and State Housing Agreement Rental Losses .. .. .	..	25	..
Total .. .. .	247,485	278,227	299,363

### *Social Security Benefits*

The benefits provided under the Social Services Act are outlined below:—

#### *Age Pensions*

Age pensions, or old age pensions as they were then called, were introduced in 1909 and were the first of the income security services to be introduced on a Commonwealth-wide basis. Though the rates of pension and qualifying conditions, e.g., the means test, have changed considerably since then, fundamentally the provisions have not altered. The main essentials throughout have been that pensions are granted subject to age, nationality and residential requirements and to a means test on income and on property.



The main provisions at March, 1961, were as follows :—

*Age:* Qualifying age for men, 65 years ; for women, 60 years.

*Residence:* In order to qualify, a claimant must have lived in Australia continuously for at least twenty years. Continuity of residence is not regarded as broken by absence in a Territory of the Commonwealth. Periods of absence count as residence in certain circumstances.

*Nationality :* Aliens are ineligible.

*Rate of Pension :* The maximum rate of pension is £260 a year (£5 a week).

If the pensioner is an invalid or blind, a Child's Allowance of 11s. 6d. a week is paid free of the means test for the first child under sixteen years. An extra 10s. a week pension may be paid, subject to the means test, for every other child. An allowance of £1 15s. a week may also be paid to his non-pensioner wife ; this is subject to the means test.

Supplementary assistance of 10s. a week is available to single pensioners and to married couples where only one is a pensioner and no wife's allowance is paid. This is payable only to persons who pay rent and who are considered to depend entirely on their pensions.

If a pensioner lives in a benevolent home, £1 15s. a week of the pension is paid to him. The rest is paid to the home for his maintenance, except where he is a patient in an infirmary ward.

*Means Test :* In March, 1961, a new merged means test came into effect, replacing the tests previously applied separately on income and property.

The amount of pension now payable depends on the claimant's " means as assessed ". These consist of his annual rate of income plus a property component equal to £1 for each complete £10 of his net property above £200.

A person's " means as assessed " may consist entirely of income, entirely of property component or of various combinations of income and property component. The pension payable is calculated by deducting from the maximum annual rate of pension the amount by which " means as assessed " exceed £182. No pension is payable if the value of property is £4,620 or more.

" Income " includes earnings and any other form of income derived from any source, with certain exceptions.

The main exceptions are—Income from property ; gifts or allowances from children ; payments, other than annuities, by way of benefit from friendly societies ; payments for children ; Commonwealth health benefits ; and amounts received from registered benefit organizations.

For means test purposes up to 10s. a week of a claimant's income may be disregarded for each dependent child under sixteen.

"Property" includes all real and personal property, e.g., money, bonds, shares, real estate. The value of the claimant's home in which he lives permanently is disregarded in determining his eligibility for pension. The surrender value of life insurance policies (up to £750) and certain other types of property are also exempt.

*Married Persons:* For married couples, except where they are separated or in other special circumstances, the income and property of each is taken to be half the combined income and property of both, even if only one of the couple is a pensioner or claimant. The pension is then assessed as for a single person.

*Numbers, &c.:* On 30th June, 1960, there were 538,022 age pensioners in the Commonwealth. Of these, 369,837 or 68·7 per cent. were women and 168,185 or 31·3 per cent. were men.

The number of pensioners has grown considerably since the scheme was introduced. A larger population and an increasing number of people in the pensionable age groups have contributed to this, as have liberalizations of the qualifying conditions, particularly those connected with the means test.

The proportion of age pensioners in the pensionable age groups also shows a long-term increase. The percentages at the various censuses were—1911, 32·0; 1921, 32·1; 1933, 32·5; 1947, 37·5; 1954, 42·1. At 30th June, 1960, the estimated percentage was 50·1.

### *Invalid Pensions*

The original pensions legislation contained provisions for invalid as well as age pensions and, though some of the qualifying conditions necessarily differ, the two schemes have always had many common characteristics. This applies more particularly to the means test provisions.

As with age pensions, the conditions governing invalid pensions have changed over the years, but there have always been fundamental requirements connected with age, incapacity, residence, nationality, income, and property.

The main features of invalid pensions legislation at March, 1961, were :—

*Age:* Qualifying age is sixteen years or over.

*Incapacity:* To qualify, a person must be permanently incapacitated for work to the extent of at least 85 per cent., or permanently blind.

*Residence:* Five years' continuous residence in Australia is required. This need not be immediately prior to claiming the pension. If the incapacity or blindness first occurred outside Australia, except during a temporary absence, a total of twenty years' residence is required. Certain absences count as residence.

*Nationality:* As for age pensions.

*Rate of Pension:*  
*Means Test :*  
*Supplementary Assistance:* } As for age pensions, except for blind persons.

*Blind Persons :* All permanently blind persons, qualified in other respects, receive a pension of £5 a week and child's allowance of 11s. 6d. a week free of the means test. Payment of wife's allowance, the extra pension of 10s. for each child after the first and supplementary assistance are subject to the means test. There are limits to the amount a blind person may receive from invalid and war pension.

*Numbers, &c.:* At 30th June, 1960, there were 80,816 invalid pensioners in Australia, comprising 42,834 men and 37,982 women.

With a growing population and with changes in eligibility conditions, numbers of invalid pensioners have also increased since the inception of the programme.

The percentage of invalid pensioners in the population is at present 0.79.

The following table giving data for Victoria illustrates the growth in numbers of and expenditure on age and invalid pensioners during the past ten years :—

#### VICTORIA—AGE AND INVALID PENSIONS

Year Ended 30th June—	Pensioners*			Total Payments †
	Age	Invalid	Total	
				£'000
1951 .. ..	86,210	13,977	100,187	11,959
1952 .. ..	87,845	13,973	101,818	14,449
1953 .. ..	93,353	15,019	108,372	17,476
1954 .. ..	98,210	15,882	114,092	19,978
1955 .. ..	106,406	17,074	123,480	21,527
1956 .. ..	112,649	18,113	130,762	24,836
1957 .. ..	118,788	19,207	137,995	26,773
1958 .. ..	123,536	20,019	143,555	29,796
1959 .. ..	128,152	21,132	149,284	31,645
1960 .. ..	136,098	17,546	153,644	35,935

\* Before 1957, excludes pensioners in benevolent homes.

† Includes allowances for wives and children of invalid pensioners.

*Funeral Benefits*

A funeral benefit of £10 is payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner. The rate of benefit has been unchanged since its inception in 1943.

*Widows' Pensions*

These pensions were introduced on a Commonwealth-wide basis in 1942. There have been some changes in conditions but, like age and invalid pensions, widows' pensions have always been subject to residential and nationality qualifications and to a means test on income and property. They are payable to widows and other women in several classes.

The main features of the programme at March, 1961, were as follows :—

*Classes:* The various classes of women provided for are—

Class A.—A widow who has one or more children under sixteen years in her care.

Class B.—A widow, not less than 50 years of age, who has no children ; or a widow of 45 years whose Class A pension has ceased because she no longer has a child in her care.

Class C.—A widow, under 50 years of age, who has no children, but who is in necessitous circumstances within the 26 weeks following her husband's death. If the widow is pregnant, payment may continue until the birth of her child when she may qualify for a class A pension.

For Classes A and B, the term "widow" includes a deserted wife, a divorcee, a woman whose husband has been imprisoned for at least six months, and a woman whose husband is in a mental hospital. Certain "dependent females" may qualify for A, B or C class pensions.

A Class A widow may continue to receive her pension until her child is eighteen, if the child is a full-time student, is not employed, and is dependent on her.

*Residence :* Five years' residence in Australia immediately prior to claiming the pension is required. This period is reduced to one year if the woman and her husband were living permanently in Australia when he died. Certain absences count as residence.

*Nationality :* Aliens are not eligible.

*Rates of Payment:* Maximum pension rates at March, 1961, were—

Class A.—£5 5s. a week, plus 10s. a week for each child except the first under sixteen years.

Class B.—£4 7s. 6d. a week.

Class C.—£4 7s. 6d. a week.

Widow pensioners may receive Supplementary Assistance of 10s. a week if they pay rent and are considered to depend entirely on their pensions.

*Means Test :* In general, the means test for Class A and Class B widows operates in a similar way to that for age and invalid pensioners. The maximum rate of pension is not affected unless the widows' "means as assessed" exceed £182.

A widow's "means as assessed" comprises her annual rate of income together with a property component equivalent to £1 for every complete £10 by which the value of her property is in excess of a stipulated sum. In the case of a Class B widow, £200 of property is exempt. A Class A widow has a basic exemption of £1,000 where the value of her property exceeds £2,250, but no property component is calculated where she has property of no more than £2,250 in value.

A Class A pension is not payable where a widow has property valued at £5,550 or more ; no Class B pension is payable where property is £4,300 or more.

There is no specific means test for the Class C pension which is paid where it is evident that a widow has insufficient means of support.

The definitions of "income" and "property" are the same as for age and invalid pensions.

*Women Disqualified :* These include—

- (1) a woman who is receiving a war widow's pension under the Repatriation Act because of her husband's death ;
- (2) a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband.

*Numbers, &c.:* The number of widow pensioners has not varied greatly since the pension scheme was introduced. On 30th June, 1960, there were in Australia altogether 51,922 widow pensioners, of whom 23,240 were in Class A, 28,359 in Class B, 87 in Class C, and 236 in Class D. Class D (covering pensions payable to women whose husbands had been imprisoned for at least six months) was abolished in October, 1960. Widows who were in Class D were transferred to either Class A or Class B.

Numbers and expenditure in Victoria during the past ten years are shown in the table below :—

### VICTORIA—WIDOWS' PENSIONS

Year Ended 30th June—	Number of Widow Pensioners	Total Payments
		£'000
1951 .. .. .	10,638	1,196
1952 .. .. .	10,229	1,390
1953 .. .. .	10,185	1,535
1954 .. .. .	9,838	1,567
1955 .. .. .	9,801	1,622
1956 .. .. .	10,253	1,799
1957 .. .. .	10,879	2,036
1958 .. .. .	11,252	2,331
1959 .. .. .	12,141	2,546
1960 .. .. .	12,547	2,916

### Maternity Allowances

When these were first introduced in 1912, they were paid to all mothers. During the depression years a means test was imposed, but this was abolished in 1943. The amount of allowance was increased at the same time.

The allowances are paid to mothers to help them with the expenses associated with childbirth and are additional to Commonwealth health benefits.

Current provisions are as follows :—

*Eligibility* : Mothers are entitled to the allowance if they live, or intend to live, permanently in Australia and give birth to a child in Australia. The allowance may be paid for a birth on board a ship travelling to Australia unless the mother is entitled to a similar benefit from another country. In some circumstances, an Australian who gives birth to a child while temporarily overseas is entitled to the allowance.

Payment may be made for the birth of a stillborn child, or a child which lives less than twelve hours, provided the child had developed for at least five and a half calendar months.

*Rates* : The allowance is £15 where there are no other children, £16 where the mother has one or two other children under sixteen years, or £17 10s. where she has three or more such children.

An extra £5 is paid for each additional child in multiple births.

The number of maternity allowances paid annually has increased greatly in the post-war period, reflecting the influence of the immigration programme and the higher birth-rate of

recent years. The total number of allowances granted in Australia in 1959-60 was 229,389, and expenditure amounted to £3,651,499.

Details of allowances paid in Victoria during the past ten years are set out in the following table :—

### VICTORIA—MATERNITY ALLOWANCES

Year Ended 30th June—					Number Granted	Total Payments
						£'000
1951	..	..	..	..	50,210	807
1952	..	..	..	..	52,144	836
1953	..	..	..	..	55,297	872
1954	..	..	..	..	54,219	874
1955	..	..	..	..	55,720	892
1956	..	..	..	..	58,385	935
1957	..	..	..	..	59,648	949
1958	..	..	..	..	60,666	969
1959	..	..	..	..	63,428	1,020
1960	..	..	..	..	62,853	1,008

### *Child Endowment*

Though there had been discussion for many years of a system of family allowances and though a Royal Commission on Child Endowment had been conducted in 1927, no Commonwealth scheme was introduced until 1941. Initially this provided for child endowment to be paid at the rate of 5s. a week for each child under sixteen years, other than the first in a family. The rate was increased on two occasions, and in 1950 the first child was included.

Child endowment may now be claimed by any resident of Australia who has the custody, care, and control of one or more children. There is no means test.

Usually the mother makes the claim and receives the payments. There are special arrangements to meet cases where families are divided by divorce, separation, or death of parents.

The main provisions are :—

*Residence* : Twelve months' residence is required if the mother and the child were not born in Australia. This requirement is waived if the Department of Social Services is satisfied that they are likely to remain in Australia permanently.

Under certain conditions endowment may be continued while the mother is temporarily overseas.

*Nationality* : Where the child's father is not a British subject, endowment is payable if the child was born in Australia, if the mother is a British subject, or if the Department is satisfied that the child is likely to remain permanently in Australia.

*Rates* : The amount of endowment is 5s. a week for the first or only child under sixteen in a family, and 10s. a week for each other child under sixteen. Endowment of 10s. a week is paid for each child in an approved institution.

Following demographic trends and migration influences, the number of endowed families and children has increased considerably in recent years. The total number of endowed families in the Commonwealth on 30th June, 1960, was 1,476,835, and the number of endowed children in families was 3,228,657. There were also 23,487 endowed children in institutions. Expenditure for the year 1959-60 was £62,531,977.

The following table gives details of endowment payments in Victoria since 1950 :—

#### VICTORIA—CHILD ENDOWMENT

Year Ended 30th June—	Number of Endowed Families	Number of Endowed Children in Families	Number of Endowed Children in Institutions	Total Payments
				£'000
1951 ..	301,805	605,673	5,026	10,948
1952 ..	317,591	642,693	4,795	12,015
1953 ..	328,561	672,525	4,710	13,996*
1954 ..	339,022	699,220	4,734	13,165
1955 ..	350,395	729,399	4,709	13,735
1956 ..	361,848	760,667	4,840	16,165*
1957 ..	373,121	791,026	4,852	15,169
1958 ..	383,926	818,258	5,032	15,719
1959 ..	396,476	851,489	5,041	18,369*
1960 ..	403,934	874,014	5,365	16,963

\* There were five twelve-weekly payments made to the credit of bank accounts instead of the usual four during these years.

#### Unemployment and Sickness Benefits

Legislation for these benefits was enacted in 1944, and the programme came into operation the following year. Apart from increases in rates in 1952 and again in 1957, when permissible income was also raised, no major amendments have been made since.

Unemployment and sickness benefits are essentially short-term benefits. They are paid to people who, through unemployment, sickness or accident, suffer temporary loss of regular earnings. There is a means test on income, but none on property. There are no nationality requirements. Both



benefits are payable subject to a waiting period of seven days. Though qualifying conditions differ to some extent between unemployment and sickness benefits, both benefits have many common characteristics.

The following is an outline of the main features :—

*Age* : Men, sixteen to 64 years ; women, sixteen to 59 years. People over these age limits who are temporarily unemployed and who intend to resume work may apply for special benefit (see page 294).

*Residence* : Twelve months' residence in Australia immediately prior to the date of claim is required, or evidence of intention to reside in Australia permanently.

*Other Qualifications :*

(1) *Unemployment Benefit*.—To receive this benefit a person must (a) be unemployed and show that his unemployment is not due to his being a direct participant in a strike ; (b) be capable and willing to undertake suitable work ; and (c) have taken reasonable steps to obtain work. Registration with the Commonwealth Employment Service is necessary.

(2) *Sickness Benefit*.—To receive this benefit a person must be temporarily incapacitated for work because of sickness or accident, and have suffered a loss of income as a result.

A married woman is usually not qualified to receive sickness benefit in her own right if it is reasonably possible for her husband to maintain her. If her husband is able to maintain her only partially, some benefit may be paid.

*Rates of Benefit* : Maximum weekly benefit for an adult or a married minor is £3 5s. ; unmarried minors are paid at lower rates. An additional £2 7s. 6d. a week is paid for a dependent spouse, and 10s. for one child.

*Effect of Income* : Income of up to £2 a week in the case of adults and married minors, and £1 a week in the case of unmarried minors does not affect the rate of benefit. If income exceeds these amounts, the benefit is reduced by the amount of the excess.

“Income” includes earnings and any other form of income. For unemployment benefit, the income of the spouse is also taken into account.

Certain types of income are exempt, e.g., child endowment, war pension, Commonwealth health benefits.

*Special Benefits* : This benefit may be granted to a person not qualified for an unemployment or sickness benefit if, because of age, physical or mental disability or domestic circumstances, or for any other reason, he is unable to earn a sufficient livelihood for himself and his dependants. Maximum rate is the same as for unemployment or sickness benefit.

The number of unemployment benefits granted varies from one year to another according to the general employment situation and to dislocations in industry caused by industrial stoppages. Except for one or two brief periods, the post-war decade has been one of full employment and the numbers receiving unemployment benefit have not been large. During 1959-60, a total of 108,224 unemployment benefits were granted, and on 30th June, 1960, there were 16,541 persons receiving benefit. Comparable figures for Victoria were 17,635 and 3,676.

The number of sickness benefits shows little variation from year to year. Altogether 59,159 grants of sickness benefits were made in Australia during 1959-60 (13,672 in Victoria), and there were 8,569 persons on benefit at the end of the year (2,082 in Victoria). Total expenditure in the Commonwealth on unemployment, sickness, and special benefits in 1959-60 was £7,252,947 ; expenditure in Victoria during the same period was £1,683,752.

### *Rehabilitation*

The Commonwealth Rehabilitation Service is one of the more recent additions to the social security programme. In 1941, a limited scheme for the vocational training of invalid pensioners was introduced. Following war-time developments in the training of disabled ex-servicemen, a comprehensive civilian rehabilitation service was begun in 1948. Its general aim is to restore disabled men and women to a state of fitness enabling them to earn their own living and to lead independent, useful lives. Rehabilitation may be effected through medical and hospital treatment, physiotherapy, remedial physical training, occupational therapy, vocational training, and job placement.

Rehabilitation is provided free to (1) those receiving or eligible for an invalid or widow's pension ; (2) those receiving or eligible for a sickness, unemployment, or special benefit ; (3) those receiving a tuberculosis allowance ; and (4) boys and girls of fourteen or fifteen years who, without treatment or training, would be likely to qualify for an invalid pension at sixteen.

People are chosen from these groups if the disability is a substantial handicap for employment but is remediable (except in the case of the blind), and if there are reasonable prospects of the person going to work within three years of starting treatment or training.

Training and living-away-from-home allowances may be paid, and artificial aids and appliances are supplied free.

Disabled people who cannot qualify for the free service pay for rehabilitation.

During 1959-60, 1,287 persons were accepted for rehabilitation, 249 of them being in Victoria; 1,243 were placed in employment, 255 of them being in Victoria. Expenditure on rehabilitation in Victoria during the year was £200,886.

### *Reciprocal Agreements*

The Social Services Act provides, inter alia, for the Commonwealth to enter into reciprocal agreements with the Government of any other country in matters concerning pensions and benefits under the Act. Arrangements of this kind have been made with New Zealand and with the United Kingdom.

The general basis of both agreements is that Australian residential requirements are waived for former residents of New Zealand or the United Kingdom living permanently in Australia. In return, Australians who go to those countries for permanent residence receive concessions enabling them to qualify for equivalent benefits there.

## **Hospital Benefits Scheme**

### *Public Hospitals*

The existing agreement between the Commonwealth and the State, for the provision of financial assistance by the Commonwealth to the State for persons treated in public hospitals, is authorized by the *Commonwealth National Health Act 1953-1961* and the *Victorian Hospital Benefits Act 1958*.

For the year ended 30th June, 1960, total payments by the Commonwealth to the State amounted to £2,120,411 of which £1,196,148 was for public wards. On 1st July, 1948, the Hospital Benefits rate was increased from 6s. to 8s. per day. The rate for pensioners or their dependants, enrolled under the Pensioners' Medical Service and who do not contribute to a Hospital Benefits organization, is 12s. per day.

### *Private Hospitals*

The agreement mentioned above was confined wholly to public hospitals, but the Commonwealth Act also provides for the payment of hospital benefits, at such rates and subject to such conditions as are prescribed, for patients in private hospitals.

Such regulations, which are administered in Victoria by the Hospitals and Charities Commission, provide for hospital benefits at the rate of 8s. per day, to be allowed as a deduction from the hospital accounts of qualified patients in approved hospitals.

Payments made to private hospitals in Victoria, under the scheme, during the year ended 30th June, 1960, amounted to £523,325.

The following table shows the hospital benefit payments by the Commonwealth Government to the State on account of Victorian hospitals :—

**VICTORIA—HOSPITAL BENEFIT PAYMENTS**  
(£'000)

Payments on Account of—	1955-56	1956-57	1957-58	1958-59	1959-60
Public Hospitals—					
Public Beds ..	1,089	1,080	1,119	1,195	1,196
Non-public Beds ..	343	361	398	399	401
Total Public Hospitals	1,432	1,441	1,517	1,594	1,597
Private Hospitals ..	495	485	490	510	523
Total ..	1,927	1,926	2,007	2,104	2,120

*Additional Benefits*

Commonwealth Statutory Rules No. 119 of 11th October, 1951, introduced an Additional Benefit of 4s. per day (i.e. additional to the 8s. per day mentioned before) payable to public hospital patients and “approved” private hospital patients who are “qualified” and are contributors to a registered Hospital Benefits organization. The Additional Benefits are paid by the Hospital Benefits organizations which are reimbursed by the Commonwealth.

On 1st January, 1958, additional benefit was increased to 12s. per day where a qualified patient contributed for a fund benefit of not less than 16s. per day.

As from 1st January, 1959, the Commonwealth guaranteed “Special Accounts” of registered organizations. These accounts provide cover under certain conditions for persons (a) 65 years of age and over, or (b) whose illness or disability was in evidence prior to becoming contributors or during qualifying periods, or (c) suffering from chronic complaints, or (d) where maximum fund benefits have been paid.

The additional benefits are payable to the patient who is a contributor of a benefit organization.

### *Pharmaceutical Benefits*

Under the provisions of the *Commonwealth National Health Act* 1953–1961, the Commonwealth reimburses through the State, the cost of pharmaceutical benefits supplied free of charge to all patients in public hospitals and mental institutions.

Payments to hospitals, benevolent, and mental institutions for the year ended 30th June, 1960, totalled £649,572.

## **Social Welfare Department**

### *General*

The *Social Welfare Act* 1960 provided for the establishment of a new branch of the Chief Secretary's Department under a Director-General of Social Welfare. All the functions previously exercised by the Children's Welfare Department and the Penal Department were absorbed by the new branch and a number of significant additional functions introduced. These have then been re-aligned and re-grouped into divisions.

In addition to a central administration which is primarily responsible for the whole branch there are the following divisions:—Family Welfare, Youth Welfare, Prisons, Research and Statistics, Training, and Probation and Parole. The function of each division is defined in the Social Welfare Act and is summarized below.

### *Family Welfare Division*

This Division, under the Director of Family Welfare, is responsible for all functions promoting and maintaining family welfare and for child care within the meaning of the *Children's Welfare Act* 1958. It will provide for family counselling, family assistance, and child care for children up to the age of fourteen years. It will maintain reception centres for children in need of care and protection and will be responsible for State wards, many of whom will be placed in foster care with individuals or in approved children's homes maintained by numerous voluntary organizations. It will also maintain family group homes and small specialized institutions for children in need of specialized care.

Regional centres will be developed throughout the State so that local assistance will be readily available for families in these areas. Considerable emphasis is to be given to the maintenance of family units wherever possible, as it is clear that early preventive work will be more effective than later remedial measures.

This Division will have the benefit of advice from the Family Welfare Advisory Council which will take the place of the Children's Welfare Advisory Council. This Council of twelve members is representative of various voluntary agencies and its members are all closely associated with community work in family welfare.

*Youth Welfare Division*

This Division, under the Director of Youth Welfare, is responsible for all functions promoting youth welfare in the community. In addition to what may be described as normal youth activity, it will be responsible for institutions known as Youth Training Centres for delinquent youths aged fourteen to 21 years. It will also maintain remand centres and training centres for this age group.

All delinquents aged fourteen to seventeen, previously under the care of the Children's Welfare Department, and many offenders aged seventeen to 21, hitherto under the care of the Penal Department, will come under the Youth Welfare Division.

This Division will have the benefit of advice from the Youth Advisory Council which takes the place of the Youth Organizations Assistance Committee. The Director of Youth Welfare will be a member of this Council and one of its functions is to advise the Government on the distribution of funds in the Youth Organizations Assistance Fund.

*Prisons Division*

This Division under the Director of Prisons is responsible for the control of all prisons (see pages 336 to 340).

*Research and Statistics Division*

This Division will conduct research into social welfare problems. It will co-operate with non-governmental research projects and supervise any investigations made in relation to such projects within the departmental organization or institutions. It will supervise the preparation of statistics for all divisions and the collation of all material for issue from the Branch.

*Training Division*

Under Division 5 of the *Social Welfare Act 1960*, a Social Welfare Training Council is established. The twelve members include the Superintendent of Training, the Director of Family Welfare, the Director of Youth Welfare, the Director of Prisons, representatives of the University of Melbourne and the Department of Education, and persons experienced in the field of social work training. The Council will provide courses available to persons engaged in social work in governmental and non-governmental agencies. A very wide range of subjects and courses will be provided and personnel to be covered include: staff of State and non-State children's homes, staff of State and non-State Youth Training Centres, staff of Prisons, youth leaders in various organizations, honorary and stipendiary probation officers, parole officers, and social workers in specialized fields. Examinations will be conducted and certificates issued.

In addition, the Training Division will be responsible for educational programmes in all institutions in the Branch. This includes physical and recreational education, as well as academic and vocational training

for all persons in the care of the Department. The Division will establish and control a central reference library and institutional and circulating libraries throughout the Branch.

### *Probation and Parole Division*

This Division is responsible for all work relating to probation under the *Children's Court Act 1958* and the *Crimes Act 1958*, and for the supervision of trainees on parole from Youth Training Centres and of prisoners on parole from prisons.

Under Division 6 of the *Social Welfare Act 1960*, a Youth Parole Board is to be established. Its three members will be a Judge in General Sessions as Chairman, the Director-General of Social Welfare, and in any matter relating to a male trainee, one man appointed by the Governor in Council, and in any matter relating to a female trainee, a woman appointed by the Governor in Council. This Board has power to release on parole any trainee from any youth training centre.

Under the *Crimes Act 1958*, a Parole Board was established. Its five members consist of a Judge of the Supreme Court as Chairman, the Director-General of Social Welfare, and in any matter relating to a male prisoner, three men appointed by the Governor in Council, and in any matter relating to a female prisoner, three women appointed by the Governor in Council.

This Board, which has operated from 1st July, 1957, has power to release on parole any prisoner after the expiration of the minimum term set by the Court.

### *Development of Branch*

It is clear from this brief outline of the functions of each division that a more intensive and comprehensive coverage of the various aspects of social welfare will be maintained when the Act is fully operative and the divisions fully established. Emphasis is to be given to preventive work by extensive use of qualified social workers for family counselling and for supervision of wards on return to their families. The maintenance of the family unit is essential to our way of life and the rehabilitation and reabsorption into the community of persons under the care of the Social Welfare Department is the primary objective of all divisions.

## **Children's Welfare Department**

### *General*

As the *Social Welfare Act 1960* was not passed until June, 1960, and was not fully operative at the end of that year, the following tables deal with the activities of the Children's Welfare Department, one of the Departments absorbed by the Branch created under the new Act.

An analysis of the causes of "admission" and "committal" by the Children's Courts during the years 1958 to 1960 is shown in the following table :—

**VICTORIA—REASONS FOR ADMISSIONS AND COMMITTALS  
TO THE CHILDREN'S WELFARE DEPARTMENT BY THE  
CHILDREN'S COURTS**

Particulars	1958			1959			1960		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
<b>Committals—</b>									
Pursuant to Section 28, Children's Court Act—									
Larceny and stealing	46	..	46	33	..	33	40	3	43
Breaking and entering (shops, houses, factories, &c.) ..	60	..	60	47	..	47	54	..	54
Illegally using ..	52	..	52	55	..	55	68	1	69
Miscellaneous ..	23	..	23	23	..	23	28	..	28
<b>Total Committals</b>	<b>181</b>	<b>..</b>	<b>181</b>	<b>158</b>	<b>..</b>	<b>158</b>	<b>190</b>	<b>4</b>	<b>194</b>
<b>Admissions—</b>									
Pursuant to Section 16, Children's Welfare Act—									
Found wandering or abandoned ..	9	3	12	8	4	12	14	7	21
No means of support or no settled place of abode ..	73	65	138	121	97	218	113	77	190
Not provided with proper food, nursing, clothing, or medical aid ..	49	44	93	63	57	120	87	68	155
In care and custody of persons who are unfit guardians ..	47	48	95	84	66	150	52	54	106
Lapsing or likely to lapse into a career of vice or crime ..	146	34	180	175	35	210	217	52	269
Exposed to moral danger ..	5	38	43	2	31	33	3	46	49
Truancy ..	9	7	16	11	4	15	9	3	12
Other ..	11	8	19	1	5	6	..	..	..
Pursuant to Section 19, Children's Welfare Act—									
Uncontrollable ..	20	7	27	15	4	19	19	4	23
<b>Total Admissions</b>	<b>369</b>	<b>254</b>	<b>623</b>	<b>480</b>	<b>303</b>	<b>783</b>	<b>514</b>	<b>311</b>	<b>825</b>
<b>Total number of children made wards of State through Victorian Children's Courts ..</b>	<b>550</b>	<b>254</b>	<b>804</b>	<b>638</b>	<b>303</b>	<b>941</b>	<b>704</b>	<b>315</b>	<b>1019</b>



The following table shows the number of children "admitted and committed" to the Department for the years 1958 to 1960 :—

### VICTORIA—CHILDREN BECOMING WARDS OF THE CHILDREN'S WELFARE DEPARTMENT

Particulars	1958			1959			1960		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Court Committals (Children's Court Act)—									
Section 28—Offences—									
To Children's Welfare Department ..	57	..	57	32	..	32	48	..	48
To Juvenile School ..	124	..	124	126	..	126	142	4	146
Court Admissions (Children's Welfare Act)—									
Section 16—Protection Applications ..	349	247	596	465	299	764	495	307	802
Section 19—Uncontrollable Applications ..	20	7	27	15	4	19	19	4	23
Admissions on Application to Department (Children's Welfare Act) ..	144	115	259	141	84	225	126	100	226
Total Admissions and Committals	694	369	1,063	779	387	1,166	830	415	1,245

At 31st December, 1960, there were 4,775 children wards of the Department. The location of wards for the years 1956 to 1960 is shown in the following table :—

### VICTORIA—LOCATION OF WARDS OF CHILDREN'S WELFARE DEPARTMENT

At 31st December—	Boarded Out in Foster Homes	In Foster Homes with a View to Legal Adoption	Placed, without Payment, with Relatives or Foster Parents	In Departmental Institutions	In Non-Departmental Institutions	In Government Subsidized Hostels	Under Employment Agreement	Total
1956 ..	449	60	433	317	1,715	88	142	3,204
1957 ..	492	67	537	376	1,893	90	135	3,590
1958 ..	463	62	667	432	2,123	105	99	3,951
1959 ..	665	52	743	538	2,151	81	116	4,346
1960 ..	711	78	1,044	568	2,178	80	116	4,775

#### *Allowances for Children in Necessitous Circumstances*

Part V. of the *Children's Welfare Act* 1958 enabled a parent or any other person having care and custody of any child, who is without sufficient means of support for such child, and is unable by any available legal proceedings to obtain sufficient means of support for such child, to apply in the prescribed form to the Director of the Children's Welfare Department for a weekly sum towards the child's maintenance. "Child" means any person under the maximum age provided under the Education Acts at which attendance at school ceases to be compulsory.

The number of children for whom assistance was being given at the 31st December in the years 1956 to 1960, and the total amount of such assistance paid in each year, is shown in the following table :—

**VICTORIA—CHILDREN'S WELFARE ACT (PART V.):  
ALLOWANCES PAID**

Year						Number of Children Assisted	Total Amount of Assistance Payments
							£
1956	..	..	..	..	..	3,177	153,229
1957	..	..	..	..	..	3,659	161,608
1958	..	..	..	..	..	4,446	199,119
1959	..	..	..	..	..	4,847	235,036
1960	..	..	..	..	..	4,881	242,306

*Infant Life Protection*

Part VII. of the Children's Welfare Act (Infant Life Protection) provides that no person shall, for payment or reward, retain in or receive into her charge in any house, any infant under the age of five years for the purpose of rearing, nursing, or maintaining such infant apart from its parents, unless such person and such home are registered by the Department. The provisions of this Part do not apply to a hospital or to an educational establishment. Where the infant is in the care of a relative, exemption may be made by the Minister.

Where payments which are required to be made through the Department fall into arrears for a period of four weeks, the child becomes a ward of the Children's Welfare Department.

The following is a statement of the operations of this Part for the years 1956 to 1960 :—

**VICTORIA—CHILDREN'S WELFARE ACT : CHILDREN  
UNDER INFANT LIFE PROTECTION PROVISIONS**

Particulars	1956	1957	1958	1959	1960
Children Already Placed at 1st January	215	236	215	233	256
Children Placed during Year .. ..	528	576	588	619	672
Children under Supervision at 31st December .. .. .	236	215	233	256	269

*Finance*

The financial operations of the Children's Welfare Department for the years ended 31st December, 1958, 1959 and 1960 are shown below:—

**VICTORIA—CHILDREN'S WELFARE DEPARTMENT :  
RECEIPTS AND EXPENDITURE**

(£)

Particulars	1958	1959	1960
<b>RECEIPTS</b>			
Payments by Parents of Wards ..	41,037	44,198	49,199
Child Endowment .. ..	7,924	12,146	13,257
Miscellaneous Receipts .. ..	2,813	2,574	6,197
<b>Gross Receipts .. ..</b>	<b>51,774</b>	<b>58,918</b>	<b>68,653</b>
<b>EXPENDITURE</b>			
Boarded-out Children (Foster Homes)	53,269	63,857	87,698
Boarded-out Children (Children's Homes) .. ..	285,492	280,483	332,951
Juvenile Schools .. ..	31,616	35,775	34,595
Departmental Establishments ..	313,585	379,040	404,521
Hostels .. ..	5,471	7,694	8,717
Clothing Outfits .. ..	6,493	9,247	11,152
Maintenance of Children in Necessitous Circumstances .. ..	199,119	235,036	242,306
Migrant Children .. ..	3,482	2,778	1,757
General Maintenance Items .. ..	28,962	18,429	12,960
Administration .. ..	103,719	119,444	161,794
<b>Gross Expenditure .. ..</b>	<b>1,031,208</b>	<b>1,151,783</b>	<b>1,298,451</b>
<b>Net Expenditure .. ..</b>	<b>979,434</b>	<b>1,092,865</b>	<b>1,229,798</b>

**Workers Compensation**

The first Workers Compensation legislation in this State was passed in 1914 to give certain industrial workers and their dependants the right to claim limited compensation from their employer, without proof of negligence or breach of statutory duty by the employer, in respect of accidental injuries sustained by them arising out of and in course of their employment.

Since the passing of the original legislation the class of persons entitled to benefit, the scope of employment, the types of injuries included, and the extent of the benefits have all been greatly widened by frequent amendments, which were consolidated by the *Workers Compensation Act 1958*.

Since 1946, compensation has been payable for injuries arising out of or in the course of employment, thus removing from the worker the onus of proof of a causal connection between the employment and the injury.

As the law now stands, all workers whose remuneration does not exceed £2,000 a year, excluding overtime, are included, and such workers are also protected whilst travelling to and from work and during recess periods. Injuries also include the aggravation or acceleration of diseases which in themselves are unassociated with the employment, in addition to employment diseases. The extent of the benefits is seen from the following summary :—

- (1) Where death results from the injury: if the worker leaves a widow or any childen under sixteen years of age or any dependant wholly dependent on his earnings—the sum of £2,240 plus £80 for each such child. If the worker leaves dependants only partially dependent on his earnings the amount of compensation shall be such sum (not exceeding £2,240) as is awarded by the Workers Compensation Board ;
- (2) where total incapacity for work results from the injury: the compensation for total incapacity of an adult worker is a weekly payment during incapacity of £8 16s. in respect of the worker plus £2 8s. for his wife or relative standing in *loco parentis* to the children if the wife or relative is wholly or mainly dependent on the earnings of the worker, plus 16s. for each dependent child under sixteen years of age.  
The total weekly payment in respect of the worker, his wife and children is limited to his average weekly earnings or £12 16s. per week whichever is the lesser and the whole amount payable is limited to £2,800 unless the Workers Compensation Board otherwise determines ; and
- (3) costs of medical, hospital, and other services: in addition to compensation payable for death or for incapacity, the employer is liable to pay the reasonable costs of all medical, hospital, and other treatment services necessitated through the injury, to an unlimited amount.

### *Compulsory Insurance*

It is obligatory on every employer (with the exception of certain schemes approved by the Board) to obtain from the State Accident Insurance Office, or from an insurance company approved by the Governor in Council, a policy of accident insurance for the full amount of his liability under the Act. The number of approved insurance companies at 30th June, 1960, was 122.

Insurers, and employers for whom a certificate of a Scheme of Compensation is in force, are required to furnish a statistical return to the Government Statist annually, and the following table shows details of Workers Compensation business transacted during each of the years 1955-56 to 1959-60:—

### VICTORIA—WORKERS COMPENSATION BUSINESS

Year	Wages on Which Premiums Were Charged	Gross Premiums Received, less Adjustments	New Claims Arising during Year		Claims Paid during Year	Claims Outstanding at End of Year
			Fatal	Non-fatal		
	£'000				£'000	
1955-56 ..	617,569	8,236	513	174,511	6,183	5,599
1956-57 ..	674,345	10,115	512	164,579	6,502	7,362
1957-58 ..	698,177	12,443	586	174,168	7,374	9,266
1958-59 ..	741,000	13,253	578	184,902	7,765	11,045
1959-60 ..	812,146	13,670	669	186,136	8,540	12,099

The amount paid in claims during 1959-60, viz. £8,539,738, was allocated as follows:—

#### A. Under Workers Compensation Act—

(a) Compensation—	£	£
1. Weekly Compensation ..	3,338,189	
2. Lump Sum—Death ..	1,221,089	
3. Lump Sum—Maim ..	1,224,265	
		5,783,543

#### (b) Medical, &c., Services—

1. Doctor .. ..	1,075,952	
2. Hospital .. ..	546,642	
3. Chemist or Registered Nurse	70,886	
4. Ambulance .. ..	44,734	
5. Other Curative, &c., Services	108,706	
		1,846,920

(c) Legal Costs, &c. .. .. 344,580

#### B. Under Other Acts and at Common Law, Damages, &c. .. ..

564,695

Total .. 8,539,738

Figures for premiums and claims in this table differ somewhat from those shown on pages 671-672 of the Finance section of the Year Book. In that section Schemes of Compensation are not included

and the figures shown do not always relate strictly to the financial year, as some insurance companies close their books at other times. With regard to claims paid, the Finance section refers to claims paid during the period, plus claims outstanding at the end of the period less outstanding claims at the beginning.

### Friendly Societies

The law dealing with friendly societies is contained in the *Friendly Societies Act* 1958. An amending Act of 1960 makes provision for the reimbursement of moneys paid for dental treatment to a member, his wife, children, or dependants and for the establishment by societies of dental clinics.

The historical development and benefits paid by friendly societies are set out on pages 277 to 281 of the Victorian Year Book 1961.

The tables which follow contain information about friendly societies in Victoria (excluding dispensaries and specially authorized societies) for the three years 1957–58 to 1959–60. There are juvenile branches connected with some of the societies, but the information about these has not been considered of sufficient importance to be included below.

#### VICTORIA—FRIENDLY SOCIETIES : MEMBERSHIP

Particulars	Year Ended 30th June—		
	1958	1959	1960
Number of societies .. .. .	148	146	145
Number of branches .. .. .	1,262	1,253	1,223
Number of sick, funeral, and whole life and endowment assurance benefit members, the majority of whom also contribute for medical and hospital benefits .. .. .	173,671	171,834	170,466
Number of members contributing for medical and hospital benefits only .. .. .	57,040	75,739	85,345
Number of honorary members (no benefit) ..	3,629	3,444	3,515
Number of members who received sick pay ..	33,706	32,756	30,877
Weeks for which sick pay was allowed ..	454,606	459,496	458,732
Deaths of sick and funeral benefit members ..	2,512	2,578	2,456
Deaths of wives and widows entitled to funeral benefits .. .. .	841	873	782

**VICTORIA—FRIENDLY SOCIETIES : RECEIPTS AND  
EXPENDITURE**  
(£'000)

Particulars	Year Ended 30th June—		
	1958	1959	1960
<b>RECEIPTS</b>			
Sick and Funeral Funds and Whole Life and Endowment Assurance Funds .. ..	554	631	647
Medicine and Management Funds .. ..	387	391	430
Medical Services Funds .. .. ..	1,323	1,427	1,609
Hospital Benefit Funds .. .. ..	484	696	846
Other Funds .. .. ..	361	381	409
Less Inter-Fund Transfers .. ..	186	213	234
Total Receipts .. .. ..	2,923	3,313	3,707
<b>EXPENDITURE</b>			
Sick and Funeral Funds and Whole Life and Endowment Assurance Funds .. ..	402	460	454
Medicine and Management Funds .. ..	368	368	406
Medical Services Funds .. .. ..	1,273	1,366	1,603
Hospital Benefit Funds .. .. ..	392	581	754
Other Funds .. .. ..	299	285	326
Less Inter-Fund Transfers .. ..	186	213	234
Total Expenditure .. .. ..	2,548	2,847	3,309
Excess of Receipts over Expenditure ..	375	466	398

**VICTORIA—FRIENDLY SOCIETIES : FUNDS**  
(£'000)

Funds	At 30th June—		
	1958	1959	1960
Sick and Funeral Funds and Whole Life and Endowment Assurance Funds .. ..	7,464	7,635	7,828
Medicine and Management Funds .. ..	480	503	527
Medical Services Funds .. .. ..	650	712	717
Hospital Benefit Funds .. .. ..	384	499	592
Other Funds .. .. ..	1,781	1,877	1,960
Total Funds .. .. ..	10,759	11,226	11,624

The following table shows the amounts disbursed by societies (excluding specially authorized societies) in sick pay, funeral and mortuary benefits, endowments, medical services, medicine, and hospital benefits during each of the years 1957-58 to 1959-60 :—

**VICTORIA—FRIENDLY SOCIETIES: AMOUNTS DISBURSED  
IN BENEFITS**  
(£'000)

Nature of Benefit	Year Ended 30th June—		
	1958	1959	1960
Sick Pay .. .. .	266	273	269
Funeral and Mortuary .. .. .	74	78	82
Endowment .. .. .	22	25	30
Medical Services—Society Benefit .. .. .	557	601	751
—Government Subsidy .. .. .	561	598	669
Hospital—Society Benefit .. .. .	244	337	457
—Government Subsidy .. .. .	84	165	204
Medicine .. .. .	135	137	141

### *Dispensaries*

At the end of 1959-60 there were 36 United Friendly Societies' Dispensaries registered under the Friendly Societies Act as separate friendly societies. There was also one society consisting of these registered friendly societies. The chief object for which the dispensaries are established is to provide the societies with a means of supplying medicine and medical and surgical appliances to members and to persons claiming through members. The number of members connected with dispensaries at the end of 1959-60 was 88,549. As the greater portion of the receipts and expenditure of the dispensaries are interwoven with those of the medicine and management funds of ordinary societies, they are not given here. The assets and liabilities of dispensaries at the end of 1959-60 amounted to £832,145 and £156,071 respectively.

### *Specially Authorized Societies*

At the end of 1959-60 there were four societies, registered under the Friendly Societies Act, which do not provide any of the customary benefits of friendly societies. Their registration was specially authorized under Section 6 of the Friendly Societies Act. These four societies are known as Total Abstinence Societies. Their membership at the end of 1959-60 was 95 and their assets amounted to £83,588.

### **Co-operative Societies**

In December, 1953 the Victorian Parliament passed the Co-operation Act, now the *Co-operation Act* 1958. The Act, which was proclaimed on the 2nd August, 1954, provides for the formation, registration, and management of co-operative societies which are classified into various kinds according to their objects.



Prior to the Co-operation Act coming into operation, co-operatives were registered under the Companies Act or the Industrial and Provident Societies Act.

The following kinds of societies are provided for in the Co-operation Act:—

- (1) Producers' society, which is intended in the main as an organization of producers, but is also given authority to act in many respects as a trading society;
- (2) trading society, which may carry on any business, trade, manufacture or industry specified in its rules;
- (3) community settlement society, designed to settle and retain people on the land;
- (4) community advancement society, the object of which is to provide any community service or benefit;
- (5) credit society, which may make, arrange or guarantee loans to assist members in many directions ; and
- (6) investment society, which provides a means whereby individuals with small amounts of money to invest may combine in order to secure jointly investments which might otherwise be unobtainable.

Any of these societies may, if authorized by its rules, raise money on loan. With the exception of community advancement societies and investment societies, money may also be received on deposit—again if the rules permit.

Two or more societies of the same kind may form an association to supervise the affairs of and render services to its component societies. A producers' society, which is authorized to carry on trading business, may join an association of trading societies.

Any two or more associations may form a union of associations to supervise the affairs of and render services to its component associations.

The Act designates associations and unions as societies and provides objects and powers which may be written into their rules.

At the 30th June, 1960, there were 130 societies registered under the Act, the classification being:—

#### VICTORIA—CO-OPERATIVE SOCIETIES\*

Type				Number
Producers'	..	..	..	22
Trading	..	..	..	21
Community Settlement	..	..		3
Community Advancement		..		43
Credit	..	..	..	39
Associations	..	..	..	2
Total				130

\* Registered under the Co-operation Act. Information regarding co-operative organizations is given on pages 677-678 of this Year Book.

The Act permits the Treasurer of Victoria to guarantee the repayment of any loan raised by a society for the implementation of its objects. To the 30th June, 1960, fourteen guarantees were in force, the amount involved being £323,960.

Under the direction of the Treasurer, the Act is administered by the Registrar of Co-operative Societies, who is also Registrar of Co-operative Housing Societies. He is assisted by an advisory council constituted under the Act.

A summary of the operations of Societies for the year ended 30th June, 1960, is given in the following statement :—

**VICTORIA—SUMMARY OF OPERATIONS OF SOCIETIES REGISTERED UNDER THE CO-OPERATION ACT, 1959–60**

Society	Number	Number of Members	Liabilities		Assets
			Members' Funds	External	
			£		
Producers' Societies ..	22	5,998	302,468	350,030	652,498
Trading Societies ..	21	10,707	285,856	377,083	662,939
Community Settlement Societies ..	3	235	(-) 4,074	102,898	98,824
Community Advancement Societies ..	43	2,574	72,531	64,798	137,329
Credit Societies ..	39	4,025	23,137	184,150	207,287
Associations ..	2	11	89	1,211	1,300
Total ..	130	23,550	680,007	1,080,170	1,760,177

**Repatriation**

Under the *Repatriation Act* 1920–60, the Commission is charged with the administration of the Act which, with associated legislation, provides :—

- (1) A comprehensive pension plan for both incapacity and death due to war service ;
- (2) service pensions (broadly the equivalent of age and invalid pensions) ;
- (3) medical treatment ;
- (4) artificial limbs and surgical aids ;
- (5) vocational training ; and
- (6) education and training of certain classes of ex-servicemen's children.

At 30th June, 1960, 654,336 war pensions were payable to ex-servicemen and their dependants ; of these 188,508 were payable in Victoria. The overall expenditure totalled £54,361,865 of which £16,100,551, or 30 per cent., was payable to Victorian pensioners. Expenditure on service pensions amounted to £6,748,223 in respect of 45,818 pensions—Victorian payments totalled £1,518,196 to 11,058 pensioners.

In the field of medical care it is the Repatriation Department's policy to provide an efficient service in keeping with modern procedures and practices at both in-patient and out-patient level at the institutions under its control. These include large modern general hospitals, sanatoria for the treatment of tuberculosis patients, artificial limb factories for the manufacture and fitting of prostheses, surgical aids, and out-patient clinics separate from the general hospitals. In each of the mainland States, Repatriation blocks or separate institutions have been set up in conjunction with the State authorities for the care of ex-servicemen suffering severe mental illness, whilst special wards and facilities have been provided in Repatriation General Hospitals for psychiatric cases. In Victoria and Queensland, Anzac Hostels provide facilities for the care of a limited number of ex-servicemen who, while not in need of active hospital treatment, are severely incapacitated because of war service and are unable to fend for themselves. These institutions provide a homely atmosphere for this type of patient.

A Local Medical Officer Scheme embracing 1,428 medical officers in Victoria, allows those eligible for treatment to choose a local doctor to treat them on the family doctor principle.

During the period ended 30th June, 1960, there was an important extension of the medical benefits available to the widows, children and certain dependants of deceased ex-servicemen where death has been accepted as due to war service. Medical treatment for this class of person was extended to provide for the full range of departmental facilities for specialist examinations and treatment, including physiotherapy, chiropody and other special services—this includes out-patient treatment at departmental Out-patient Clinics and in-patient treatment for certain types of disabilities at the Repatriation General Hospital.

During the same period the Commission also decided to use suitable vacant wards at its sanatoria to accommodate selected entitled patients not requiring the full service of a general hospital. These will include post-operative (convalescent) cases and certain categories of aged, infirm, and chronic long-stay cases. The Repatriation Sanatorium at Macleod is included in this scheme.

By far the largest of the institutions in Victoria is the Repatriation General Hospital, Heidelberg. This institution is a recognized post-graduate training centre and teaching seminars are held weekly. Training facilities at the hospital also include schools for student nurses and nursing aides. Technicians are trained in pathology and radiography. At the 30th June, 1960, the number of staff employed full-time totalled 1,198, comprising 39 medical officers, 294 nursing staff, 135 administrative, and 730 miscellaneous. During the twelve months to 30th June, 1960, 10,151 patients were treated at the hospital.

A fine example of the co-operation between Commonwealth and State Governments is exemplified in the treatment of ex-servicemen suffering from mental illnesses at the Repatriation Hospital, Bundoora. This institution which is owned and financed by the Commonwealth is staffed and administered by State Government employees under the

control of the Victorian Mental Hygiene Authority. The Authority conducts the institution along the lines of its own mental hospitals and is reimbursed by the Commonwealth on a per capita basis.

The other institutions in Victoria conducted by the Department are—the Repatriation Sanatorium, Macleod ; Anzac Hostel, Brighton ; Out-patient Clinic, St. Kilda-road, Melbourne ; Out-patient Clinic Annexe, Caulfield ; and Repatriation Artificial Limb Factory, South Melbourne.

Particulars of war and service pensions in Victoria are shown below:—

#### VICTORIA—WAR AND SERVICE PENSIONS

Year Ended 30th June—	Members of Forces	Dependants—		Total	Amount Paid during Year
		Of Incapacitated Members	Of Deceased Members		
					£'000
WAR PENSIONS					
1956 .. ..	57,452	97,402	13,974	168,828	12,718
1957 .. ..	58,204	101,319	14,131	173,654	13,372
1958 .. ..	59,430	106,161	14,246	179,837	14,871
1959 .. ..	60,389	110,156	14,430	184,975	15,201
1960 .. ..	61,057	112,763	14,688	188,508	16,101
SERVICE PENSIONS					
1956 .. ..	5,279	2,463	446	8,188	959
1957 .. ..	6,058	2,717	492	9,267	1,090
1958 .. ..	6,688	2,870	500	10,058	1,320
1959 .. ..	7,230	2,950	512	10,692	1,387
1960 .. ..	7,636	2,906	516	11,058	1,518

#### Red Cross Society

##### General

The Victorian Division of the Australian Red Cross Society is responsible for all the Society's services and activities in the State of Victoria, and has a total financial membership of 71,199.

As a voluntary organization sustained by public subscription, the Division undertakes in peace-time a wide variety of services: firstly, for the welfare of ex-service personnel, and secondly for the community generally.

##### Principal Activities

The principal activities carried out by the division cover a wide range and include the Blood Transfusion Service (with 79,541 aggregate collections during 1959–60); the Red Cross Homes ; various welfare hospital services ; the teaching of handicrafts to disabled ex-servicemen ; transport ; disaster relief ; a tracing bureau as part of the International Red Cross Tracing Service ; medical loan depots ; assistance to refugee migrants ; and training in first aid and home nursing.

*Services in Mental Hospitals*

In Victoria, Red Cross has pioneered certain therapeutic services in mental hospitals of which the major service is music, introduced as an experiment ten years ago with "live" concerts. As these proved successful, a suggestion was made by the Department of Mental Hygiene in 1954 that a record library should be established to supplement the "live" recitals. The library, which opened with a few gift discs, has grown steadily and now contains 1,350 discs. Some hospitals use Red Cross records to supply rhythmical background music for occupational therapy sessions, for it has been found that withdrawn patients tend to respond to rhythm, thus making contact with them less difficult.

In some of the larger hospitals a music librarian is present to give brief annotations with the playing of records. Red Cross now provides recorded sessions for 33 groups in mental hospitals and psychiatric clinics in Victoria, and "live" recitals in four hospitals.

When the librarian does not visit a clinic, boxes of records with typed annotations are despatched regularly, and her place is taken by a member of the clinic staff. Country hospitals receive regular parcels of records on loan.

A second service—libraries containing both books and magazines—is maintained by Red Cross in twelve Victorian psychiatric hospitals. A Red Cross hospital visitor is on duty for regular library hours each week.

*Junior Red Cross*

An activity of considerable importance is the promotion of Junior Red Cross, the State membership of which is 8,400. The aims are service, health, and international understanding. On these principles Juniors carry out a wide programme, including giving assistance in their own community and helping less fortunate children overseas.

The following table gives some indication of the continuing nature and scope of the work of the Victorian Red Cross Society :—

## VICTORIA—RED CROSS SOCIETY

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Income .. .. .	£ 325,400	368,036	365,221	384,726	443,708
Expenditure .. .. .	£ 341,036	398,354	375,458	395,935	437,157
Gross Expenditure over Income .. .. .	£ 15,636	30,318	10,237	11,209	..
Gross Income over Expenditure .. .. .	£ ..	..	..	..	6,551
Accumulation Account .. .. .	£ 629,731	630,162	631,828	632,745	651,259
Expenditure on—					
Blood Transfusion Service .. .. .	£ 105,660	129,367	135,525	145,635	171,841
Convalescent Homes and Hostels .. .. .	£ 71,384	78,456	80,526	81,877	88,577
Handcraft and Curative Training .. .. .	£ 15,816	15,104	16,792	18,172	15,823
Social Service and Welfare .. .. .	£ 24,989	31,022	26,199	27,484	29,353
Service and Repatriation Hospitals } Including Recreation Centres } Civilian Hospital and Civilian Relief }	£ 33,052	36,898	36,441	39,187	38,808
Red Cross Branches and Companies .. .. .	No. 436	475	436	469	498
Junior Red Cross Circles .. .. .	No. 230	252	244	270	271
Blood Donations .. .. .	No. 56,078	62,463	72,077	72,801	79,541
Blood Distributed .. .. .	pints 44,548	47,649	49,301	50,478	52,402
Serum Distributed .. .. .	litres 2,075	2,250	2,061	1,848	1,557
Volumes in Red Cross Libraries .. .. .	No. 43,787	44,113	48,989	53,553	56,092
Transport Mileage .. .. .	349,987	372,218	367,884	370,772	363,302
Admissions to Convalescent Homes .. .. .	No. 925	1,076	1,255	1,231	1,240

### **Lord Mayor's Children's Camp, Portsea**

The Lord Mayor's Children's Camp is situated on the Nepean Highway, Portsea, 59 miles from Melbourne, on high ground overlooking the entrance to Port Phillip Bay. Its object is to give selected children from country and metropolitan areas a holiday, to have each child medically and dentally examined, and to provide the services of qualified optometrists, physiotherapists, audiometrists, and radiographers. The Camp accommodates 150 girls and 150 boys in five lined huts and five lined dormitories.

Since its inception in 1944, nearly 40,000 children have enjoyed the facilities of the Camp. During each annual series several Camps, each of twelve days' duration, are held. The syllabus includes physical education, life saving, swimming, launch trips, hikes to points of interest, quiz sessions, educational and feature films, and concerts. The kitchen can cater for 500 children and adults. The main dining hall seats 400 children; the staff dining hall has a capacity of 90.

Children are selected on a priority basis by various authorities and sponsoring bodies, and are brought to the Camp by selected leaders. In the event of specialist treatment being required, children are taken to the Alfred Hospital by Camp transport. The Camp is equipped with its own hospital, physiotherapy solarium, dental, optometry, audiometry and radiography rooms, concert stage, and playing areas. It is considered one of the leading Camps of its kind in the world.

During the 1959-60 series, 3,097 children and 256 leaders attended the ten Camps held. Income was £33,563 and running costs amounted to £33,780. All amenities and prizes for the sporting and other entertainments are provided by the Camp.

## *Justice and the Administration of Law*

### **Law in Victoria**

#### *Historical*

Law is the body of rules, whether proceeding from formal enactment or from custom, which a particular state or community recognizes as binding on its members or subjects, and enforceable by judicial means. It has been said that "substantially speaking, the modern world acknowledges only two great original systems of law, the Roman and the English."

English law came to Australia with Governor Phillip in 1788, though for many years in a severely attenuated and autocratic form. Immediately prior to Federation, the law operative in Victoria consisted of the laws enacted by its legislature up to that time; the law of England applicable to the colony up to 1828; the laws of New South Wales up to 1851; and certain Imperial statutes since 1828 applicable as of paramount force, or adopted by the local legislature since. In addition, the common law applied.

In 1901 the Commonwealth of Australia was established by an Imperial Act under which certain powers were conferred upon the newly created Commonwealth Parliament, and the remaining powers

were left to the Parliaments of the six States. Subject to that proviso, State law in Victoria continues as it did prior to Federation; and Victoria, like its sister-States, retains some sovereign powers.

### *Legal Profession*

Prior to 1891, the legal profession in Victoria was divided into two separate branches, barristers and solicitors—as it still is in England and in New South Wales. Solicitors prepared wills, contracts, mortgages and transfers of land, and instituted legal proceedings generally. Barristers appeared for litigants and accused persons in court and wrote opinions on legal questions in Chambers. A litigant or accused person could not approach a barrister directly, but only through a solicitor who “instructed” the barrister for him.

In 1891 Parliament amalgamated the two branches, and since then every Victorian lawyer has been admitted to practise as a barrister *and* solicitor, and is entitled to do the work of both. Despite this compulsory legal fusion most lawyers voluntarily continued the segregation of the profession into two separate branches as before, though a few practitioners took advantage of their legal rights. These latter have their successors today, although most Victorian lawyers, on admission to practice, still choose to make their career in one or other of the two branches—not in both.

### *Legal Departments and Officers*

The political head of the Crown Law Department is the Attorney-General, under whose direction and control the department functions. The Solicitor-General, who advises the Government and appears for the Crown in important constitutional, criminal, and civil cases, is a practising barrister, appointed, under the provisions of the Solicitor-General Act, by the Governor in Council, from among Queen’s Counsel.

The administrative problems of the Crown Law Department are the responsibility of the Secretary, who is a public servant. Included in the Department is the Crown Solicitor, who gives legal advice to government departments, and acts as solicitor for the Crown in all its cases both criminal and civil. In the former, he is the instructing solicitor to the Prosecutors for the Queen, who appear for the Crown in criminal matters in the Supreme and General Sessions Courts. There are eight such Prosecutors who, like the Solicitor-General, are not public servants, but barristers.

## **Courts in Victoria**

The courts of justice are the base upon which administration of the legal system is built. They are graduated in status, according to the gravity of the matters which may be brought before them, and may be conveniently classified into three divisions: the Supreme Court, the County and General Sessions Courts, and Petty Sessions Courts.

### *Supreme Court*

The Supreme Court, as its name implies, and by virtue of the Supreme Court Act, is the supreme court of the State, having jurisdiction over all matters, criminal and civil (including probate and divorce),

which have not been excluded by statute. It is the counterpart of the English Courts of Queen's Bench, Chancery, and Probate, Divorce and Admiralty. The Court consists of a Chief Justice and twelve puisne\* judges, appointed from the ranks of practising barristers of not less than eight years' standing, and retiring at the age of 72.

The Full Court (usually three, and sometimes five judges) hears and determines appeals from single judges of the Supreme Court and from the County Court, and criminal appeals from the Supreme Court and General Sessions Courts.

The main activities of the Supreme Court are at Melbourne, but judges go "on circuit" to Ballarat, Bendigo, Geelong, Hamilton, Horsham, Mildura, Sale, Shepparton, Wangaratta, and Warrnambool.

The officers of the Court are the Masters (two at present), the Taxing Master, the Prothonotary, and the Sheriff. The Masters deal with various matters entrusted to them by Rules of Court made by the judges, are responsible for the investment of moneys ordered to be paid into court, and are Registrars in Divorce. The Taxing Master taxes and settles bills of costs. The Masters and the Taxing Master must be barristers and solicitors of five years' standing; or, in the case of the Taxing Master, of equivalent experience. The Prothonotary is virtually the secretary of the Court. Writs are issued from his office, and he has the custody of documents filed therein. The Sheriff who, like the Prothonotary, is a public servant—the Masters and Taxing Master are not under the Public Service Act—is responsible for the execution of writs, the summoning of juries and the enforcement of judgments. There is a Deputy Prothonotary and a Deputy Sheriff at all Supreme Court circuit towns. The Clerk of Courts acts as such in each instance.

Civil proceedings in the Supreme Court are commenced by the plaintiff issuing, through the Prothonotary's Office, a writ (properly called a writ of summons) against the defendant from whom he claims damages or other remedy. The writ is a formal document by which the Queen commands the defendant, if he wishes to dispute the plaintiff's claim, to "enter an appearance" within a specified time, otherwise judgment may be given in his absence. A defendant who desires to defend an action files a "memorandum of appearance" in the Prothonotary's Office.

When the matter comes before the Court, it is desirable that the controversial questions between the two parties should be clearly defined. This clarification is obtained by each side in turn filing documents, stating his own case, and answering that of his opponent. Such statements and answers are called "pleadings", and this method of clarifying the issues has been practised in England from the earliest times, and is as ancient as any part of English procedural law.

Ultimately the action comes to trial, before a judge alone, or a judge and jury. When a judge sits alone he decides questions of both law and fact. If there is a jury, the judge directs them on the law, the jury decides the facts. The judgment of the Court usually provides for payment by the loser of his opponent's legal costs.

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\* Judges of the Supreme Court other than the Chief Justice are called puisne judges.



Normally these are assessed by the Taxing Master. The disappointed party in the action has a right of appeal to the Full Court. If a successful plaintiff fails to obtain from the defendant money which the latter has been ordered to pay, he may issue a writ of *fiery facias*, addressed to the Sheriff and directing him to sell sufficient of the defendant's real and personal property to satisfy the judgment.

There is no general right of appeal in civil matters, *on the facts*, from a decision of a Petty Sessions court. Nevertheless, a dissatisfied party may apply to a Supreme Court judge to review the case, *on the law*.

An appeal lies as of right from decisions of the Supreme Court to the High Court of Australia. An appeal from the Supreme Court or the High Court to the Judicial Committee of the Privy Council lies as of right in certain cases, and at the discretion of the Court in other cases.

The following table gives particulars of Supreme Court civil business during the five years, 1956 to 1960 :—

#### VICTORIA—SUPREME COURT CIVIL CASES

Particulars	1956	1957	1958	1959	1960
Number of Places at Which Sittings Were Held .. .. .	11	11	11	11	11
Causes Entered—					
For Assessment of Damages ..	7	30	10	13	15
For Trial .. .. .	1,142	1,330	1,493	1,477	1,795
Number of Cases Tried—					
By Juries of Six .. .. .	247	265	291	174	283
By a Judge .. .. .	43	54	57	68	73
Verdicts Returned for—					
Plaintiff .. .. .	252	274	299	209	289
Defendant .. .. .	38	45	49	33	45
Amounts Awarded .. .. .	£ 464,728	496,832	503,228	656,129	763,782
Writs of Summons Issued ..	2,483	2,890	2,891	3,253	5,452
Other Original Proceedings ..	49	45	41	87	155
Appellate Proceedings (Other than Criminal Appeals Heard and Determined)—					
By Full Court .. .. .	74	55	53	63	86
By a Judge .. .. .	72	77	75	47	76

#### County Court

The County Court has jurisdiction in civil matters where the amount claimed does not exceed £1,000 in ordinary cases and £2,500 in motor vehicle accident cases. At present there are fifteen County Court judges and one acting judge, who are also Chairmen of General Sessions, and three acting Chairmen of General Sessions. In General Sessions, all indictable criminal offences (i.e., broadly, those in respect of which the accused will be tried by a jury) are triable save treason, murder, attempted murder, and certain other statutory exceptions.

General Sessions also sits, without a jury, as an Appeals Court to hear appeals from Petty Sessions Courts. In theory, justices of the peace may sit with the Chairmen of General Sessions, but in fact they never do. County Court judges (and Chairmen of General Sessions) must be practising barristers of seven years' standing and retire at the age of 72. No judge, either of the Supreme Court or County Court, is, of course, under the Public Service Act. All are appointed by the Governor, on the advice of the Government, and once appointed become independent of the executive.

The County and General Sessions Courts sit continuously at Melbourne, and visit eight circuit towns throughout the State as well as the ten towns also visited by the Supreme Court. The principal officer of the court is the Clerk of the Peace and Registrar of the County Court at Melbourne, who occupies a position parallel to that of the Prothonotary of the Supreme Court. He is a public servant, appointed from among senior clerks of courts. The clerk of courts at each circuit town is also Clerk of the Peace and Registrar of the County Court for his particular bailiwick.

Particulars of County Court cases for the years 1956 to 1960 are shown in the following table :—

#### VICTORIA—COUNTY COURT CASES

Year					Number of Cases Tried	Amount Sued for	Amount Awarded*
						£'000	£'000
1956	..	..	..	..	2,451	4,807	337
1957	..	..	..	..	2,212	4,802	310
1958	..	..	..	..	2,211	4,487	349
1959	..	..	..	..	2,161	4,926	372
1960	..	..	..	..	2,336	7,295	597

\* These figures do not include instances where judgment was entered by consent or default.

The table below records the number of writs received by the Sheriff in the five years, 1956 to 1960 :—

#### VICTORIA—WRITS RECEIVED BY THE SHERIFF

Year				Sovereign's Writs against Person and Property	Subjects' Writs against--		Total
					The Person	Property	
1956	..	..	..	15	5	204	224
1957	..	..	..	2	4	235	241
1958	..	..	..	4	3	258	265
1959	..	..	..	2	8	335	345
1960	..	..	..	7	3	387	397

*Courts of Petty Sessions and Stipendiary Magistrates*

Petty Sessions Courts, which sit at Melbourne and suburbs, and at approximately 200 other towns throughout Victoria, are presided over by stipendiary magistrates and justices of the peace, the administrative work being done by a clerk of courts. Stipendiary magistrates are public servants, appointed under the Public Service Act, but independent in the exercise of their judicial functions. They retire at the age of 65. Justices of the peace are citizens of standing in the community—both men and women—who have been granted a Commission of the Peace, and who serve in an honorary capacity, being retired from judicial functions at the age of 72. As well as having practical experience in Petty Sessions Courts, a clerk of courts must pass an examination conducted by the Department. Stipendiary magistrates are, ordinarily, clerks of courts of ten years' standing, who have passed an additional examination, and they attain the Petty Sessions Bench as vacancies occur.

Petty Sessions Courts deal summarily with the less serious criminal cases; hold preliminary inquiries in indictable criminal offences; and have a civil jurisdiction where the amount involved does not exceed £100 in ordinary debt cases; and £250 in cases of contract, and, subject to certain exceptions, in cases of tort. (A tort is a wrong or injury committed by one person against another, or an infringement by one person of another person's right.) Children's Courts deal with juveniles under seventeen years of age, and Coroners' Courts conduct inquiries where the cause of death appears to be violent or unusual.

When an accused person is charged with an indictable criminal offence, a Petty Sessions Court holds a preliminary inquiry to decide, not his guilt or innocence, but whether there is sufficient evidence to justify him being tried at all. If the evidence warrants it, the magistrates transmit the matter to the appropriate court—Supreme Court or General Sessions. There the accused stands trial before a judge and jury, the prosecution case being conducted by a prosecutor for the Queen. The judge directs the jury on the law, and sentences the prisoner if he is convicted. The jury are the sole judges, on the facts, of the guilt or otherwise of the accused, who is presumed to be innocent until (and unless) they find him guilty. The onus is upon the prosecution to prove such guilt to the satisfaction of the jury, and to prove it beyond reasonable doubt.

In accordance with a cardinal principle of English law, justice in Victoria is administered publicly. In the words of a Lord Chief Justice of England: "It is not merely of some importance, but it is of fundamental importance, that justice should not merely be done, but that it should manifestly and undoubtedly be seen to be done".

Particulars of criminal cases and certain other misdemeanours heard in Courts of Petty Sessions are shown on pages 325 to 327.

Particulars of cases of a civil nature heard in Courts of Petty Sessions for the years 1956 to 1960 are shown in the following table:—

**VICTORIA—COURTS OF PETTY SESSIONS : CASES OF A CIVIL NATURE**

Particulars	1956	1957	1958	1959	1960
Civil Cases—					
Number Heard .. ..	96,136	118,634	133,041	142,915	164,792
Debts or Damages—					
Claimed .. £'000	1,994	2,809	3,189	3,611	3,956
Awarded .. £'000	1,538	2,153	2,425	2,749	3,019
Other Cases—					
Appeals against Rates ..	305	1,080	746	1,483	1,791
Eviction Cases* ..	3,043	3,662	3,851	3,805	3,240
Fraud Summonses ..	3,148	3,913	5,211	7,722	8,783
Garnishee Cases ..	2,001	3,151	4,976	7,281	8,013
Maintenance Cases ..	1,676	1,912	1,934	1,979	1,992
Show Cause Summonses ..	4,446	7,937	10,622	15,445	17,336
Applications under Landlord and Tenant Acts ..	302	136	235	49	237
Miscellaneous .. ..	5,916	7,090	10,610	12,200	17,877
Licences and Certificates Issued	15,498	15,585	16,126	18,899	19,430

\* Figures shown represent cases listed before Courts. Eviction orders granted are available for the Metropolitan Area only; see next table.

Details of eviction orders granted are available for the Metropolitan Area only, which, for these purposes, consists of the Courts listed in the footnote to the following table :—

**VICTORIA—EVICTION CASES AND ORDERS GRANTED IN THE MELBOURNE METROPOLITAN AREA\***

Year							Cases Heard	Eviction Orders Granted
1956	..	..	..	..	..	..	2,576	1,669
1957	..	..	..	..	..	..	3,068	2,174
1958	..	..	..	..	..	..	3,115	2,253
1959	..	..	..	..	..	..	2,968	1,991
1960	..	..	..	..	..	..	2,522	1,745

\* In this table the Metropolitan Area is considered to include Courts of Petty Sessions at Box Hill, Brighton, Brunswick, Camberwell, Carlton, Cheltenham, Coburg, Collingwood, Dandenong, Elsternwick, Eltham, Fitzroy, Flemington, Footscray, Geelong, Glenroy, Hawthorn, Heidelberg, Kew, Malvern, Melbourne, Moonsee Ponds, Northcote, North Melbourne, Oakleigh, Port Melbourne, Prahran, Preston, Richmond, Ringwood, Sandringham, South Melbourne, Springvale, St. Kilda, Sunshine, and Williamstown.

*Consolidation of the Statutes*

Details of the 1958 Consolidation of the Victorian Statutes are shown on page 296 of the Victorian Year Book 1961.

*Bankruptcies*

A Bankruptcy Act passed by the Commonwealth Parliament in October, 1924, and amended in 1927, was brought into operation on 1st August, 1928. It supersedes the Bankruptcy and Insolvency Acts of the States, with the exception of any provisions relating to matters not dealt with in the Commonwealth Act.

The number of sequestrations, &c., in Victoria during the five years ended 30th June, 1956 to 1960, under the *Commonwealth Bankruptcy Act 1924-60*, and the amount of liabilities and assets relating to them were as follows :—

## VICTORIA—BANKRUPTCY BUSINESS

Year Ended 30th June—	Sequestration Orders and Orders for Administration of Deceased Debtors' Estates	Compositions, Assignments, &c., under Part XI. of the Act	Deeds of Arrangement under Part XII. of the Act	Total
NUMBER				
1956 .. ..	153	8	45	206
1957 .. ..	258	5	72	335
1958 .. ..	357	2	59	418
1959 .. ..	305	1	88	394
1960 .. ..	395	4	95	494
LIABILITIES				
	£'000	£'000	£'000	£'000
1956 .. ..	403	69	240	712
1957 .. ..	562	27	403	992
1958 .. ..	717	4	300	1,021
1959 .. ..	1,016	19	679	1,714
1960 .. ..	1,225	88	706	2,019
ASSETS				
	£'000	£'000	£'000	£'000
1956 .. ..	199	43	280	522
1957 .. ..	288	21	352	661
1958 .. ..	431	8	237	676
1959 .. ..	412	12	529	953
1960 .. ..	658	21	503	1,182

The yearly average of bankruptcy business, declared liabilities, and assets are shown in the table below for each of the quinquennial periods ended 1950, 1955, and 1960 :—

## VICTORIA—BANKRUPTCY BUSINESS : YEARLY AVERAGE FOR QUINQUENNIAL PERIODS

Years	Yearly Average Number	Yearly Average Declared Liabilities	Yearly Average Declared Assets
		£'000	£'000
1945-46 to 1949-50 .. ..	65	164	85
1950-51 to 1954-55 .. ..	144	468	247
1955-56 to 1959-60 .. ..	369	1,292	799

NOTE.—In the above table figures prior to 1955-56 deal with the year ended 31st July.

*Children's Courts*

In Victoria a Children's Court is held at every place where a court of petty sessions sits in the Metropolitan Area and in some provincial cities.

In 1939, a stipendiary special magistrate was appointed with jurisdiction throughout the State. An additional stipendiary special magistrate was appointed in 1958 to help the existing magistrate deal with the increasing volume of work. These two magistrates almost invariably constitute all Children's Courts in the Metropolitan Area and Geelong.

In addition, honorary special magistrates are appointed for some metropolitan courts and some provincial cities. At country courts to which no special magistrate is appointed, the local stipendiary magistrate usually constitutes the bench.

With certain exceptions, the jurisdiction of the Children's Court is restricted to children up to seventeen years of age. The most important exception is where a child is brought before the Court for an offence committed prior to his seventeenth birthday, provided that the appearance takes place before his nineteenth birthday.

In dealing with cases, the Children's Court adopts the criminal jurisdiction and procedure of petty sessions as governed by the Justices Act. However, its powers, by virtue of a section in the Children's Court Act, are considerably wider than the criminal jurisdiction of petty sessions. The Children's Court may deal with all offences except homicide. Nevertheless, consent to the jurisdiction of the Children's Court must be indicated by the child (or by a parent if the child is under fourteen years of age) before an indictable case may proceed.

The primary aim of the Children's Court is reformation and rehabilitation of the offender. Punishment is considered only where a child has consistently offended and other attempts at reformation have not succeeded. Indeed, the Court is strictly bound to consider reformation before all other considerations by section 27 (3) of the *Children's Court Act 1958*: "The Court shall firstly have regard to the welfare of the child."

The persons who may accompany a child in Court are strictly limited, and a newspaper or broadcast report of proceedings is forbidden.

Section 28 (1) of the Children's Court Act enumerates the ways of dealing with children who come before the Court. The most important is the probation system, under which the case against a child is postponed by releasing the child on probation for a specified period not exceeding three years. This enables the Court to appoint a person skilled in handling children who will help and guide and, if necessary, direct the child during the period appointed.

The probation system became operative in 1907—long before the very recent adult probation service. There are now, in Victoria, a large number of honorary probation officers as well as six stipendiary probation officers, and a number of full-time probation officers appointed by the churches.

Important in the rehabilitation of children who have offended is the Children's Court Clinic. It is the task of this Clinic, which is staffed by a team of psychiatrists, psychologists, and social workers, to investigate problem cases referred to it by the Court, to advise the Court in its decisions, and, in certain cases, to offer counsel to children after their appearance in the Court.

The number of cases which were disposed of in Children's Courts in each of the five years 1956 to 1960 is given in the following table :—

#### VICTORIA—CHILDREN'S COURTS : NUMBER OF CASES

Nature of Offence	1956	1957	1958	1959	1960
Against the Person .. ..	134	159	286	393	382
Against Property .. ..	4,439	5,416	6,207	5,963	6,917
Against Good Order .. ..	247	276	312	338	380
In Need of Care and Protection	714	925	1,018	1,325	1,513
Other Offences .. ..	993	1,252	1,861	1,771	2,317
Total .. ..	6,527	8,028	9,684	9,790	11,509

The following table gives particulars of the manner in which the cases in the Children's Courts were disposed of in the years 1956 to 1960 :—

#### VICTORIA—CHILDREN'S COURTS : RESULT OF HEARING

Result of Hearing	1956	1957	1958	1959	1960
Summarily Convicted—					
Adjudged for Period without Probation .. ..	1,261	1,810	2,321	2,405	2,835
Released on Probation .. ..	1,949	2,230	2,619	2,266	2,927
Committed or Admitted to Care of Children's Welfare Department .. ..	989	1,068	1,275	1,411	1,404
Committed to Reformatory or Juvenile School* .. ..	139	131	194	276	327
Fined .. ..	971	1,040	1,506	1,671	1,860
Committed to Care of a Private Person or Institution .. ..	5	9	12	11	38
Released on Recognizance to Come up for Sentence When Called† .. ..	..	156	79	56	140
Sentenced to a Term of Imprisonment and Suspended Sentences .. ..	36	78	67	71	88
Otherwise Dealt With .. ..	126	64	95	68	69
Total Summarily Convicted .. ..	5,476	6,586	8,168	8,235	9,688
Summarily Dismissed, &c. .. ..	1,036	1,433	1,488	1,521	1,787
Total Committed for Trial .. ..	15	9	28	34	34
Total .. ..	6,527	8,028	9,684	9,790	11,509

\* Reformatories ceased to exist under the *Penal Reform Act 1956*.

† Figures for 1956 are included in "Otherwise Dealt With".

The following table shows the nature of the offence and the result of hearing in Children's Court cases during 1960, but excludes cases of children brought before the Court as being in need of care and protection :—

**VICTORIA—CHILDREN'S COURTS : NATURE OF OFFENCE  
AND RESULT OF HEARING, 1960**

Nature of Offence	Summarily Disposed of—		Committed for Trial	Total Cases
	Dismissed, Withdrawn, or Struck Out	Convicted		
<b>Against the Person—</b>				
Assaults .. ..	39	116	..	155
Other .. ..	58	168	1	227
Total ..	97	284	1	382
<b>Against Property—</b>				
Larceny, &c. ..	923	5,176	31	6,130
Wilful Damage ..	63	198	..	261
Other .. ..	59	467	..	526
Total ..	1,045	5,841	31	6,917
<b>Against Good Order—</b>				
Drunkenness .. ..	5	22	..	27
Other .. ..	81	272	..	353
Total ..	86	294	..	380
<b>Other Offences—</b>				
Breaches of Traffic Regulations .. ..	111	685	..	796
Miscellaneous ..	154	1,365	2	1,521
Total ..	265	2,050	2	2,317
<b>Grand Total ..</b>	<b>1,493</b>	<b>8,469</b>	<b>34</b>	<b>9,996</b>



## Crime

### *Administration of the Criminal Law*

In nearly all cases where the criminal law has been broken the alleged offender is brought, at the very first opportunity, before a Court of Petty Sessions, comprising two honorary justices or a stipendiary magistrate, or both, or in some cases a single justice if all parties so consent. The court, if the matter is one which comes within its summary jurisdiction, then disposes of the case summarily. If the offence is an indictable one, the magistrates hold a preliminary investigation, and, if they are satisfied that a *prima facie* case has been made out by the prosecution, the accused is committed to a superior court for trial. There are two superior courts with criminal jurisdiction, namely, the Supreme Court, and a Court of General Sessions, which are held at various places throughout the State. The latter court may deal with all cases of an indictable nature, except ten of the most serious crimes which are expressly excluded from its jurisdiction.

A person may be brought before magistrates as a result of an arrest by a police officer on warrant issued on a sworn information ; or, in a limited number of cases, without warrant if the offence has been witnessed by the arresting constable ; or by a summons. If at a coroner's inquest a verdict is returned of murder or manslaughter, the accused person is sent for trial to the Supreme Court without any investigation before magistrates. The Attorney-General or Solicitor-General also has the power of presenting any person for trial before a superior court without the necessity of a preliminary magisterial hearing. Upon the application of any person, properly supported by affidavit, a grand jury may be summoned, on the order of the Full Court, if the affidavit discloses that an indictable offence has been committed by a corporate body ; or that such an offence has been committed by any person, and that some justice has refused to commit such person for trial ; or, in the case of a committal, that no presentment has been made at the court at which the trial would in due course have taken place. The grand jury, which consists of 23 men, investigates the charge, and, if it is of the opinion that a *prima facie* ground of action has been made out, the case is sent for trial. The cases which are presented under these latter forms of procedure are, however, very rare.

### *Victoria—Courts of Petty Sessions*

In the following statistical tables details are given of the total number of cases dealt with in Courts of Petty Sessions, but excluding Children's Courts, details of which have been shown under that heading, and cases of a civil nature which are shown on page 320. If it is desired to compare the figures in these tables with those relating to other States or countries it is necessary that consideration be given to several points. The first is that the criminal law in the places compared be substantially the same ; the second, that it be administered with equal strictness ; and the third, that proper allowances

be made for differences in the age and sex composition of the population. These points must also be taken into account in comparing crime in recent years with that in previous periods when there may have been differences in the law and when the population was very differently constituted in regard to sex and age.

### VICTORIA—COURTS OF PETTY SESSIONS : ARREST CASES SUMMARILY DISPOSED OF, 1960

Result of Hearing	Males	Females	Total
Fined .. .. .	14,463	1,157	15,620
Imprisonment for—			
Under 1 Month .. .. .	6,672	519	7,191
1 Month and under 6 Months .. .. .	2,536	122	2,658
6 Months and under 12 Months .. .. .	445	8	453
1 Year and over .. .. .	150	..	150
Admonished (Convicted and Discharged) ..	13,380	974	14,354
Ordered to Find Bail or Sentence Suspended on Entering Surety .. .. .	595	63	658
Released on Probation* .. .. .	986	53	1,039
Otherwise Dealt With .. .. .	9	..	9
Total Convicted .. .. .	39,236	2,896	42,132
Dismissed, Withdrawn, Struck Out ..	4,060	288	4,348
Total Summarily Disposed Of ..	43,296	3,184	46,480

\* Probation for adult offenders was introduced by the *Penal Reform Act* 1956, see pages 299 and 336.

### VICTORIA—COURTS OF PETTY SESSIONS : ARREST AND SUMMONS CASES : NATURE OF OFFENCE AND RESULT OF HEARING, 1960

Nature of Offence	Summarily Disposed of—				Committed for Trial		Total Cases
	Dismissed, Withdrawn, or Struck Out		Convicted				
	Males	Females	Males	Females	Males	Females	
Against the Person ..	1,172	88	1,399	83	924	20	3,686
Against Property ..	1,861	222	7,461	535	3,355	87	13,521
Forgery and Offences against the Currency ..	26	2	43	..	324	53	448
Against Good Order ..	2,222	187	33,854	2,759	59	..	39,081
Other Offences—							
Breaches of—							
Education Act ..	559	112	3,153	694	..	..	4,518
Licensing Act ..	624	77	2,582	210	..	..	3,493
Motor Car Act..	2,622	92	38,569	954	194	5	42,436
Traffic Regulations	2,858	190	101,690	6,122	..	..	110,860
Miscellaneous ..	2,385	231	34,485	2,745	211	8	40,065
Total Other Offences	9,048	702	180,479	10,725	405	13	201,372
Total ..	14,329	1,201	223,236	14,102	5,067	173	258,108

Particulars of the disposal of arrest and summons cases for 1960 are given in the table below :—

**VICTORIA—COURTS OF PETTY SESSIONS: DISPOSAL OF ARREST AND SUMMONS CASES, 1960**

Cases			Summarily Convicted	Dismissed, Withdrawn, or Struck Out	Committed for Trial	Total
Arrest .. ..	Males		39,236	4,060	4,589	47,885
	Females		2,896	288	147	3,331
	Persons		42,132	4,348	4,736	51,216
Summons .. ..	Males		184,000	10,269	478	194,747
	Females		11,206	913	26	12,145
	Persons		195,206	11,182	504	206,892
Total Cases ..	Males		223,236	14,329	5,067	242,632
	Females		14,102	1,201	173	15,476
	Persons		237,338	15,530	5,240	258,108

### *Offences*

#### *Offences against the Person and Property*

Almost all serious crimes are offences against the person or offences against property. The first-named consist mainly of assault, but include murder, manslaughter, shooting, wounding, and sexual offences. Offences against property consist principally of larceny and similar offences, but include burglary, house and shop-breaking, robbery, etc., cattle stealing, and wilful damage to property.

#### *Other Offences*

The only other serious crimes are forgery, counterfeiting, conspiracy, and perjury. Most of the remaining cases are breaches of various Acts of Parliament, by-laws, etc., which indicate no degree of criminal instinct or intent on the part of the person charged, or are offences against good order (including drunkenness), offensive behaviour, indecent language, vagrancy, etc.

#### *Drunkenness*

During 1960, 29,717 persons, including 1,782 females, were charged with drunkenness. Arrests of young people under twenty years of age for drunkenness numbered 586.

### *Inquests*

A coroner has jurisdiction to hold an inquest concerning the manner of death of any person who is slain or drowned or who dies suddenly or in prison or while detained in any mental hospital and whose body is lying dead within the district in which such coroner has jurisdiction.

His duties in relation to this are regulated by the Coroners Acts and there are special provisions relating to inquests in other Acts, such as the Mines Act, Children's Welfare Act, and Registration of Births, Deaths, and Marriages Act. Coroners and deputy-coroners are appointed by the Governor in Council, every stipendiary magistrate being appointed a coroner for the State of Victoria. Deputy-coroners

have jurisdiction in the districts for which they have been appointed. In addition, a justice of the peace has jurisdiction, within his bailiwick, to hold an inquest, but only if requested to do so by a police officer in charge of a station, or by a coroner.

In the majority of cases the coroner acts alone in holding an inquest, but in certain cases a jury is empanelled. This is done (a) when the coroner considers it desirable ; (b) when in any specified case a law officer so directs ; and (c) when it is expressly provided in any Act (as is the case under the Mines Act) that an inquest shall be taken with jurors. Amending legislation in 1953 provided that the viewing of the body is not essential and is necessary only where the coroner or jury deem it advisable.

When a person is arrested and charged before a justice or court with murder or manslaughter, those proceedings are adjourned from time to time pending the holding of the inquest. If the inquest results in a finding against that person of murder or manslaughter, the coroner issues a warrant committing him for trial, the other proceedings being then withdrawn.

The following table shows the number of inquest cases in Victoria during the years 1956 to 1960, and the number of persons subsequently committed for trial :—

#### VICTORIA—INQUEST CASES

Year	Inquests into Deaths of—			Persons Committed for Trial		
	Males	Females	Total	Males	Females	Total
1956 .. ..	1,401	668	2,069	38	1	39
1957 .. ..	1,445	776	2,221	34	2	36
1958 .. ..	1,499	753	2,252	28	6	34
1959 .. ..	1,453	731	2,184	35	..	35
1960 .. ..	1,533	674	2,207	43	1	44

The table below shows the charges on which persons were committed for trial by coroners during the years 1956 to 1960 :—

#### VICTORIA—COMMITTALS BY CORONERS

Year	Murder			Manslaughter		
	Males	Females	Total	Males	Females	Total.
1956 .. ..	17	..	17	21	1	22
1957 .. ..	11	2	13	23	..	23
1958 .. ..	7	6	13	21	..	21
1959 .. ..	13	..	13	22	..	22
1960 .. ..	17	1	18	26	..	26

*Higher Courts*

The tables which follow relate to distinct persons who have been convicted in the Supreme Court and Courts of General Sessions in Victoria. In cases where a person was charged with more than one offence, the principal offence only has been counted.

**VICTORIA—HIGHER COURTS: NUMBER OF OFFENDERS  
CONVICTED OF SPECIFIC OFFENCES**

Nature of Offence	1956	1957	1958	1959	1960
<b>Against the Person—</b>					
Murder .. .. .	4	2	1	3	3
Manslaughter .. .. .	4	13	14	5	8
Attempted Murder, Wound with Intent to Murder .. .. .	2	2	1	2	1
Shoot, Wound, &c., and Inflict Grievous Bodily Harm with Intent .. .. .	33	31	26	31	37
Assault with Actual Bodily Harm	3	22	24	21	31
Assault .. .. .	23	16	11	16	22
Rape, Attempted Rape, &c. ..	6	7	11	15	17
Carnal Knowledge, Attempted Carnal Knowledge, &c. ..	35	77	99	137	169
Incest, Attempted Incest .. ..	7	15	16	13	9
Indecent Assault (on Female) ..	39	62	68	79	93
Unnatural Offence, Attempted Unnatural Offence .. .. .	43	62	125	83	93
Indecent Assault (on Male), &c.	22	41	41	26	26
Bigamy .. .. .	11	14	16	3	13
Other .. .. .	15	12	28	15	27
<b>Total .. .. .</b>	<b>247</b>	<b>376</b>	<b>481</b>	<b>449</b>	<b>549</b>
<b>Against Property—</b>					
Robbery under Arms, in Com- pany, with Violence, &c. ..	46	34	34	58	46
Larceny .. .. .	177	170	201	204	185
House, Shop, Office, &c., Break- ing and Stealing, Burglary ..	502	696	694	727	811
Cattle and Sheep Stealing, &c. ..	16	16	11	15	12
Assault with Intent to Rob ..	6	10	9	2	..
Receiving .. .. .	50	57	49	44	57
Embezzlement, False Pretences, Fraudulent Conversion, &c. ..	39	44	59	47	76
Illegal Use of Motor Vehicles*	43	44	54	56	39
Other .. .. .	22	27	32	34	24
<b>Total .. .. .</b>	<b>901</b>	<b>1,098</b>	<b>1,143</b>	<b>1,187</b>	<b>1,250</b>
<b>Other Offences—</b>					
Driving under the Influence* ..	10	24	28	18	33
Dangerous Driving* .. .. .	14	37	45	37	40
Miscellaneous .. .. .	77	108	82	108	124
<b>Total .. .. .</b>	<b>101</b>	<b>169</b>	<b>155</b>	<b>163</b>	<b>197</b>
<b>Grand Total .. .. .</b>	<b>1,249</b>	<b>1,643</b>	<b>1,779</b>	<b>1,799</b>	<b>1,996</b>

\* By amendment to the appropriate Acts, these became indictable offences during 1956, giving the offender the right to have his case tried in a higher court before a judge and jury.

**VICTORIA—HIGHER COURTS : AGES OF PERSONS  
CONVICTED OF SPECIFIC OFFENCES, 1960**

Nature of Offence	Distinct Persons Convicted—Age Groups (Years)						Total
	Under 20	20-24	25-29	30-34	35-39	40 and over	
<b>Against the Person—</b>							
Murder .. .. .	..	..	..	1	1	1	3
Manslaughter .. ..	1	1	2	1	2	1	8
Attempted Murder, Wound with Intent to Murder .. ..	..	..	..	..	..	1	1
Shoot, Wound, &c., and Inflict Grievous Bodily Harm with Intent .. .. .	4	5	6	7	6	9	37
Assault with Actual Bodily Harm	5	8	2	6	4	6	31
Assault .. .. .	4	10	1	3	2	2	22
Rape, Attempted Rape, &c. ..	4	7	2	2	1	1	17
Carnal Knowledge, Attempted Carnal Knowledge, &c. ..	85	56	19	8	..	1	169
Incest, Attempted Incest ..	..	1	..	1	1	6	9
Indecent Assault (on Female) ..	12	19	11	14	7	30	93
Unnatural Offence, Attempted Unnatural Offence ..	4	19	19	6	18	27	93
Indecent Assault (on Male), &c.	..	6	2	6	1	11	26
Bigamy .. .. .	..	2	..	2	4	5	13
Other .. .. .	5	6	3	5	1	7	27
<b>Total .. .. .</b>	<b>124</b>	<b>140</b>	<b>67</b>	<b>62</b>	<b>48</b>	<b>108</b>	<b>549</b>
<b>Against Property—</b>							
Robbery under Arms, in Company, with Violence, &c.	15	13	7	5	3	3	46
Larceny .. .. .	31	42	20	26	27	39	185
House, Shop, Office, &c., Breaking and Stealing, Burglary .. .. .	299	212	98	85	49	68	811
Cattle and Sheep Stealing, &c. ..	3	3	4	1	..	1	12
Receiving .. .. .	2	9	11	6	13	16	57
Embezzlement, False Pretences, Fraudulent Conversion ..	5	9	8	16	15	23	76
Illegal Use of Motor Vehicles ..	17	16	3	1	1	1	39
Other .. .. .	10	6	2	2	2	2	24
<b>Total .. .. .</b>	<b>382</b>	<b>310</b>	<b>153</b>	<b>142</b>	<b>110</b>	<b>153</b>	<b>1,250</b>
<b>Other Offences—</b>							
Driving under the Influence ..	1	2	2	3	6	19	33
Dangerous Driving .. ..	4	10	2	8	3	13	40
Miscellaneous .. .. .	23	36	19	11	11	24	124
<b>Total .. .. .</b>	<b>28</b>	<b>48</b>	<b>23</b>	<b>22</b>	<b>20</b>	<b>56</b>	<b>197</b>
<b>Grand Total .. .. .</b>	<b>534</b>	<b>498</b>	<b>243</b>	<b>226</b>	<b>178</b>	<b>317</b>	<b>1,996</b>

# VICTORIA—HIGHER COURTS : OFFENDERS CONVICTED OF SPECIFIC OFFENCES: RESULT OF HEARING, 1960

Nature of Offence	Result of Hearing—							
	Fined	Im- prisoned Twelve Months and under	Im- prisoned over Twelve Months	Death Sen- tence*	Sen- tence Sus- pended on En- tering a Bond	Pro- ba- tion	Other	Total
<b>Against the Person—</b>								
Murder .. ..	..	..	..	3	..	..	..	3
Manslaughter ..	..	..	7	..	1	..	..	8
Attempted Murder, and Wound with Intent to Murder ..	..	..	1	..	..	..	..	1
Shoot, Wound, &c., and Inflict Grievous Bodily Harm with Intent .. ..	..	7	14	..	11	5	..	37
Assault with Actual Bodily Harm ..	..	11	7	..	12	1	..	31
Assault .. ..	5	5	3	..	6	3	..	22
Rape, Attempted Rape, &c. ..	..	2	15	..	..	..	..	17
Carnal Knowledge, Attempted Carnal Knowledge, &c. ..	..	22	6	..	80	61	..	169
Incest, Attempted Incest .. ..	..	..	5	..	4	..	..	9
Indecent Assault (on Female) .. ..	6	20	9	..	38	20	..	93
Unnatural Offence, Attempted Un- natural Offence ..	3	11	16	..	48	14	1	93
Indecent Assault (on Male), &c. ..	4	8	4	..	8	1	1	26
Bigamy .. ..	..	6	3	..	4	..	..	13
Other .. ..	2	9	1	..	12	3	..	27
<b>Total ..</b>	<b>20</b>	<b>101</b>	<b>91</b>	<b>3</b>	<b>224</b>	<b>108</b>	<b>2</b>	<b>549</b>
<b>Against Property—</b>								
Robbery under Arms, in Company, with Violence, &c. ..	..	8	29	..	3	6	..	46
Larceny .. ..	..	66	33	..	50	36	..	185
House, Shop, Office, &c., Breaking and Stealing, Burglary Cattle and Sheep Stealing, &c. ..	..	302	172	..	132	203	2	811
Receiving .. ..	..	15	10	..	22	10	..	57
Embezzlement, False Pretences, Fraud- ulent Conversion ..	..	33	8	..	25	10	..	76
Illegal Use of Motor Vehicles .. ..	2	21	8	..	5	3	..	39
Other .. ..	..	9	4	..	7	4	..	24
<b>Total ..</b>	<b>2</b>	<b>454</b>	<b>264</b>	<b>..</b>	<b>253</b>	<b>275</b>	<b>2</b>	<b>1,250</b>
<b>Other Offences—</b>								
Driving under the Influence .. ..	18	11	1	..	3	..	..	33
Dangerous Driving ..	31	5	1	..	3	..	..	40
Miscellaneous .. ..	2	54	11	..	39	18	..	124
<b>Total ..</b>	<b>51</b>	<b>70</b>	<b>13</b>	<b>..</b>	<b>45</b>	<b>18</b>	<b>..</b>	<b>197</b>
<b>Grand Total ..</b>	<b>73</b>	<b>625</b>	<b>368</b>	<b>3</b>	<b>522</b>	<b>401</b>	<b>4</b>	<b>1,996</b>

\* Two commuted to life imprisonment. One commuted to ten years' imprisonment.

### VICTORIA—HIGHER COURTS : AGES OF PERSONS CONVICTED

Age Group		1956	1957	1958	1959	1960
Under 20 Years	Males	290	381	367	450	525
	Females	10	4	10	11	9
20-24 Years	Males	250	367	436	442	488
	Females	6	9	9	5	10
25-29 Years	Males	219	261	260	231	238
	Females	10	12	16	7	5
30-34 Years	Males	167	203	230	228	220
	Females	9	6	10	11	6
35-39 Years	Males	101	150	178	157	169
	Females	4	1	6	7	9
40 Years and over	Males	175	244	245	240	307
	Females	8	5	12	10	10
Total	Males	1,202	1,606	1,716	1,748	1,947
	Females	47	37	63	51	49
	Persons	1,249	1,643	1,779	1,799	1,996

### VICTORIA—HIGHER COURTS : NUMBER OF OFFENDERS CONVICTED : RESULT OF HEARING

Result of Hearing		1956	1957	1958	1959	1960
Fined	Males	14	26	56	45	71
	Females	2	..	..	2	2
Imprisoned 12 Months and under	Males	418	507	553	569	615
	Females	12	9	18	14	10
Imprisoned over 12 Months	Males	192	244	298	379	366
	Females	..	1	2	3	2
Detained at Governor's Pleasure	Males	..	1	..	1	..
	Females	..	..	..	..	..
Death Sentence*	Males	4	1	1	2	2
	Females	..	..	..	..	1
Sentence Suspended on Entering Bond	Males	541	549	478	442	501
	Females	33	19	29	21	21
Probation†	Males	..	256	327	310	388
	Females	..	8	14	11	13
Other	Males	33	22	3	..	4
	Females	..	..	..	..	..
Total	Males	1,202	1,606	1,716	1,748	1,947
	Females	47	37	63	51	49
	Persons	1,249	1,643	1,779	1,799	1,996

\* The death sentence was not carried out in any of these instances, various terms of imprisonment being substituted.

† Probation for adult offenders was introduced by the *Penal Reform Act 1956*



## Licensing Court

### *General*

The Licensing Court has power to grant liquor and billiard table licences and to grant registration of clubs. Its functions are fully described on pages 310–311 of the Victorian Year Book 1961. The following is a summary of the more recent legislation dealing with licensing.

### *Anzac Day Act*

This amending Act, which became effective on 7th April, 1960, authorizes normal trading after 1 p.m. and the granting of permits for the supply of liquor with meals between 12 noon and 1 p.m., when Anzac Day does not fall on a Sunday.

### *Licensing Fees Act*

This amending Act was brought into effect on 10th May, 1960, following a decision of the High Court of Australia that certain provisions of the *Licensing Act* 1958 were invalid.

These provisions, which purported to impose a fee of 6 per cent. on liquor purchased for the grant of a temporary victualler's licence, were replaced by a scale of fixed fees which vary as between race-courses and other sports grounds; and between race-courses and other sports grounds within a 20-mile radius of the Elizabeth Street Post Office, and those outside this radius.

### *Licensing (Amendment) Act*

This Act came into operation on 11th July, 1960. Some amendments were of an administrative nature relating to court procedure, whilst others dealt with the provision of new types of licences and permits, and conditions of issue and time limits applicable.

A new type of licence now available is the Restaurant Licence, permitting the holder to sell all liquors other than beer, ale, and porter with meals between the hours of 12 noon and 10 p.m.

No more Australian Wine Licences will be granted, but provision has been made for a two-year period during which holders of existing licences may apply for transfer or renewal of licence, or seek a Restaurant Licence which also covers the "bistro" type establishment with permission to sell bottled liquor for consumption away from the premises. At the end of the two-year period any Australian Wine Licences will permit sale of bottled wine for consumption away from the premises only.

A new supper permit is also available whereby a licensed victualler may supply liquor with substantial refreshments between 10.30 p.m. and 11.30 p.m. daily, excepting Sundays and Good Friday.

Certain other provisions cover the granting of club and other licences in dry areas, the time of grace for drinks with meals, or drinks ordered before bar-closing time; the removal of bottled liquor from licensed premises; and the granting of Sunday permits for sporting bodies.

Financial arrangements between owner and licensee, and the computation of rentals, are subject to the approval of the Licensing Court.

### *Licensing Fund*

Revenue and expenditure of the Licensing Fund for the years ended 30th June, 1956 to 1960 are shown below :—

#### VICTORIA—LICENSING FUND : REVENUE AND EXPENDITURE £'000

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>REVENUE</b>					
Licences, Certificates, and Permits .. ..	2,311	2,515	2,818	2,908	2,995
Interest on Investments	11	10	10	10	10
Fees and Fines ..	17	22	22	23	24
<b>Total .. ..</b>	<b>2,339</b>	<b>2,547</b>	<b>2,850</b>	<b>2,941</b>	<b>3,029</b>
<b>EXPENDITURE</b>					
Annual Payments to Municipalities ..	59	58	58	58	57
Compensation .. ..	..	1	17	13	9
Transfer to Police Superannuation Fund	23	23	23	23	23
Salaries, Office Expenses, &c. .. ..	89	97	104	108	140
Transfer to Revenue ..	2,168	2,368	2,648	2,739	2,800
<b>Total .. ..</b>	<b>2,339</b>	<b>2,547</b>	<b>2,850</b>	<b>2,941</b>	<b>3,029</b>

### *Licensing Areas*

Under the Act, the whole of Victoria constitutes one Licensing District in respect of which there is no numerical limitation of licences. By order of the Governor in Council, the State was divided into Licensing Areas to take effect from 1st September, 1954. A statement showing Licensing Areas at that date was published on page 198 of the Victorian Year Book 1952-53 and 1953-54,

*Number of Liquor Licences*

The following table gives details of liquor licences of various types in force in Victoria for the years stated :—

## VICTORIA—NUMBER OF LIQUOR LICENCES

Type of Licence	At 30th June—				
	1956	1957	1958	1959	1960
Hotel .. .. .	1,647	1,637	1,614	1,606	1,590
Registered Club .. .. .	155	169	176	203	219
Grocer .. .. .	290	299	329	356	376
Wholesale Spirit Merchant .. .. .	69	69	65	65	64
Australian Wine .. .. .	101	99	95	92	91
Railway Refreshment Room .. .. .	22	22	22	21	21
Vigneron .. .. .	10	10	10	10	11
Brewers .. .. .	12	12	12	11	8
Total .. .. .	2,306	2,317	2,323	2,364	2,380

**Racing**

The Racing Act 1957 collated and presented, in consolidated form, existing legislation from various sources dealing with horse, pony, trotting and dog racing, and allied subject-matters.

Legislation from these sources is represented in the Act in six parts, dealing, respectively, with race-courses and race-meetings, trotting control, dog racing, registration of bookmakers and bookmakers' clerks, totalizators, and payments to racing clubs.

This Act was further consolidated in 1958 with the general consolidation of Victorian statutes and therefore the law on this subject is now to be found in the *Racing Act 1958*.

The Act provides that race-meetings for horse races or for trotting races can only be held on race-courses licensed for the purpose. The number of days on which race-meetings can be held on the metropolitan race-courses during the year is set out in the Second Schedule to the Act (e.g., Flemington on seventeen days). A race-course not being within 30 miles radius of the General Post Office, Melbourne, can hold race-meetings on twelve days in the year.

The days on which and the hours during which race-meetings may be held are also governed by this legislation and can be found in Sections 13 and 14 of the Act.

Trotting and dog racing are under the control of the Trotting Control Board and the Dog Racing Control Board respectively. These Boards are both established under the Racing Act.

The registration of bookmakers and bookmakers' clerks is also dealt with under the Act by a registration committee. Bookmakers are required, besides obtaining registration, to obtain a permit from the management of the race-course before they can operate.

The Third Schedule to the *Stamps Act* 1958 sets out the fees required to be paid by bookmakers and their clerks for the issue to them of a registration certificate in accordance with the *Racing Act*. These fees vary according to the race-course and the enclosure on that race-course at which they field. The *Stamps Act* also provides for a stamp duty on all betting tickets issued by a bookmaker, and the amount of the tax is set out in the Third Schedule to the Act.

As already mentioned, the *Racing Act* also deals with the use of the totalizator at a race-meeting, its management during the meeting, and the commission on the revenue received which is paid into Consolidated Revenue.

The *Racing (Totalizators Extension) Act* 1960 established the Totalizator Agency Board, a corporate body of eight members appointed by the Governor in Council, and representatives of racing clubs and associations and of the Trotting Control Board. The principal function of the Totalizator Agency Board is to establish agencies and to provide the necessary facilities enabling persons, who might place a bet lawfully on a totalizator operating on a racing or trotting course, to place a bet lawfully through an agency away from the course. Bets may be placed in cash or through a credit previously established with the Board. The Board commenced operations early in March, 1961.

## Penal Service

### *General*

As mentioned on page 297, the activities of the Penal Department will come under the Social Welfare Branch of the Chief Secretary's Department as soon as the Social Welfare Act becomes fully operative. However, as this does not yet obtain at the time of compilation, the following information deals mainly with the operations of the Penal Department as constituted prior to the passing of that Act, when services comprised probation, prisons and parole (dealing with offenders over seventeen years of age).

### *Probation Service*

Probation is an alternative to imprisonment and offenders may be admitted to probation for any offence for any period up to five years. During the period of probation, probationers are required to observe the conditions laid down in the probation order to which they agree as a condition of probation being granted. They are under the supervision of trained probation officers who act as guides, philosophers, and friends to them.

Breach of any of the conditions of probation may cause the offender to be brought before the Court of Petty Sessions appointed under the order as the supervising court, to be dealt with under the *Crimes Act* 1958. He may then be fined or dealt with for the original offence, or be required to be brought before the original court to be dealt with for the original offence.

If the conditions of the order are fulfilled, the probationer is discharged at the expiration of the probation period.

Probation is regarded as a more effective instrument than imprisonment for suitable offenders, as it enables the offender to make good in the community without severing family ties. In addition to being more effective, it is very much less costly than institutional treatment.

The probation provisions of the Crimes Act came into being through the *Penal Reform Act* 1956, now incorporated in the *Crimes Act* 1958, and became operative on 1st July, 1957. From that date to December, 1960, approximately 3,960 persons were admitted to probation. Of these, 667 successfully completed probation by 31st December, 1960, and approximately 265 were dealt with for breach of probation.

All stipendiary probation officers for adult courts are university graduates who have undergone an intensive six months training course at post-graduate level. At present these officers operate from their headquarters in Melbourne and visit country areas, but the service is to be developed on a regional basis.

The Probation Service prepares pre-sentence reports for Courts, if required. For the year ended 31st December, 1959, there were 191 of these reports prepared, 34 for the Supreme Court, 125 for General Sessions Courts, and 32 for Petty Sessions Courts. During the same year, 1,048 males and 113 females were placed on probation; of the total of 1,161, there were 55 persons admitted to probation by the Supreme Court, 443 by General Sessions Courts, and 663 by Petty Sessions Courts. There were 599 under 21 years of age and 562 adults.

During 1959, there were 317 persons who completed their probation and 75 who breached their probation, leaving 2,228 persons still on probation at the end of 1959.

### *Prison Service*

Victoria has ten prisons for males and one for females. In addition, in some country centres, police gaols are used for short sentences not exceeding 30 days.

Pentridge is the main central prison, and a classification centre established there enables the classification committee to classify prisoners and transfer them to the most appropriate institution. In addition there are separate divisions for trial and remand prisoners, a hospital and psychiatric clinic, a maximum security division, a young offenders' division, a vagrants' division, a long term division, and other general divisions.

Many industries are operated including printing, textiles, wire-netting, tailoring, shoemaking, laundry, brushmaking, sheet metal, engineering, and carpentry. All manufacture is for State use. The total output of these industries for 1959 was valued at £140,322.

At Langi Kal Kal, McLeod (French Island) and Beechworth, large-scale farming is practised. At Beechworth a large pine plantation has been developed. At Coorlemungle, forest land is cleared and farms established for settlement under the Lands Settlement Act.

In all prisons extensive educational services have been established with teachers provided by the Education Department and trade instructors and voluntary helpers. The Chief Training Officer of the Penal Department has developed academic education, vocational training and recreational training, whilst full-time chaplains are responsible for spiritual instruction.

The activity programme of all prisons is specifically designed to encourage the fullest participation by inmates, so that every prisoner has the opportunity to leave prison better equipped to live in the community than when he entered.

The following table contains information relating to gaols (excluding police gaols) in Victoria for the six months ended 30th June, 1960 :—

**VICTORIA—GAOL ACCOMMODATION AND PRISONERS,  
1960**

Institution	Number of Prisoners							
	Accommodation		Daily Average		Total Received (Including Transfers)*		In Confinement at 30th June, 1960†	
	Males	Females	Males	Females	Males	Females	Males	Females
Pentridge .. ..	1,212	..	1,055	..	5,326	..	1,134	..
Ballarat .. ..	65	..	47	..	174	..	57	..
Beechworth Training Prison .. ..	105	..	93	..	60	..	99	..
Bendigo .. ..	100	..	75	..	39	..	74	..
Castlemaine ..	107	..	99	..	114	..	96	..
Coorlemungle Prison Farm .. ..	49	..	43	..	38	..	44	..
Geelong .. ..	130	..	112	..	241	..	118	..
Sale .. ..	35	..	26	..	125	..	28	..
McLeod Settlement (French Island) ..	90	..	84	..	45	..	85	..
Langi Kal Kal ..	64	..	60	..	53	..	63	..
Fairlea Female Prison .. ..	..	100	..	33	..	386	..	38
Total .. ..	1,957	100	1,694	33	6,215	386	1,798	38

\* Future statistics will relate to financial years, instead of calendar years, as previously. Figures for "Total Received" in this table, therefore relate to the six months ended 30th June, 1960.

† Including 149 males and nine females awaiting trial.

The number of prisoners received at, and discharged from, gaols (excluding police gaols) in Victoria is given in the following table for the years 1956 to 1959 and for the six months ended 30th June, 1960 :—

**VICTORIA—PRISONERS RECEIVED AT AND DISCHARGED FROM GAOLS**  
(Exclusive of Police Gaols)

Particulars	Year Ended 31st December—				Six Months Ended 30th June—
	1956	1957	1958	1959	1960
Number in Confinement at Beginning of Period—					
Convicted .. .. .	1,229	1,462	1,461	1,397	1,539
Awaiting Trial .. .. .	66	102	111	99	139
Total .. .. .	1,295	1,564	1,572	1,496	1,678
Received during Period—					
Convicted of Felony, Misdemeanour, &c. .. .. .	7,469	7,749	9,322	8,462	4,425
Transfers from—					
Other Gaols .. .. .	1,078	1,269	1,187	1,145	574
Hospitals, Asylums, Reformatory Schools, &c. * .. .. .	62	53	35	81	50
For Trial, not Subsequently Convicted For Trial, Released on Bond or Probation .. .. .	2,789	3,582	2,626	2,261	1,332
Returned on Order .. .. .	107	88	149	320	121
Total .. .. .	11,505	12,741	13,319	12,457	6,601
Discharged during Period .. .. .	11,236	12,733	13,395	12,275	6,443
Number in Confinement at End of Period—					
Convicted .. .. .	1,462	1,461	1,397	1,539	1,678
Awaiting Trial .. .. .	102	111	99	139	158
Total .. .. .	1,564	1,572	1,496	1,678	1,836

\* Since 1st July, 1957, reformatories ceased to exist under the *Penal Reform Act 1956*.

The following table shows the number of prisoners under sentence at the end of each of the years 1951 to 1959 and at 30th June, 1960 :—

**VICTORIA—PRISONERS UNDER SENTENCE**

At 31st December—	Males	Females	Total	Number per 10,000 of Population
1951 .. .. .	1,089	38	1,127	5·0
1952 .. .. .	1,294	42	1,336	5·6
1953 .. .. .	1,134	42	1,176	4·9
1954 .. .. .	1,144	42	1,186	4·8
1955 .. .. .	1,203	26	1,229	4·8
1956 .. .. .	1,427	35	1,462	5·6
1957 .. .. .	1,428	33	1,461	5·4
1958 .. .. .	1,373	24	1,397	5·0
1959 .. .. .	1,504	35	1,539	5·4
1960 (At 30th June) .. .. .	1,798	38	1,836	6·3

A statement is given below of the daily average number of prisoners in detention in the gaols of the State in each of the years 1956 to 1959, and in the six months ended 30th June, 1960 :—

**VICTORIA—DAILY AVERAGE NUMBER OF PRISONERS  
IN CONFINEMENT**

Year					Daily Average Number of Prisoners in Confinement		
					Males	Females	Total
1956	..	..	..	..	1,340	40	1,380
1957	..	..	..	..	1,537	46	1,583
1958	..	..	..	..	1,493	40	1,533
1959	..	..	..	..	1,534	37	1,571
1960 (To 30th June)	..	..	..	..	1,694	33	1,727

*Parole Service*

The *Penal Reform Act 1956* (now incorporated in the *Crimes Act 1958*) abolished the indeterminate sentences provisions of the Crimes Act and the Indeterminate Sentences Board. It established a Parole Board consisting of a Judge of the Supreme Court, the Director of Penal Services, and three men appointed by the Governor in Council, who are replaced by three women when female prisoners are concerned.

The Board's major function is to implement the parole provisions of the Act.

Section 534 provides that sentences of twelve months or more shall have a minimum term fixed by the Court, and for sentences of less than twelve months a minimum term may be fixed. The minimum term represents the part of the sentence which must be served before the offender becomes eligible for consideration for parole.

The Board may release the prisoner at any time in its discretion after the minimum term has been served, and such prisoner is then on parole for the unexpired portion of his sentence.

To assist in its determinations the Board has access to complete case histories of each offender, including comprehensive institutional reports, and a parole report and plan prepared by stipendiary parole officers, who discuss plans with offenders during their sentence and supervise and assist them whilst on parole.

Provision is made for cancellation of parole at the discretion of the Board and for automatic cancellation by imprisonment for any offence.



The following table shows particulars of Parole Board cases for the years ended 30th June, 1959 and 1960 :—

### VICTORIA—PAROLE BOARD CASES

Particulars	Year Ended 30th June—			
	1959		1960	
	Males	Females	Males	Females
Prisoners Released on Parole .. .. .	648	12	679	7
Prisoners Sentenced to Preventive Detention ..	..	..	1	..
Parolees Returned to Gaol—				
Parole Cancelled by Re-conviction .. ..	120	1	155	..
Parole Cancelled by Parole Board .. ..	21	..	18	1
Successful Completion of Parole during Year ..	309	7	408	8

### Victoria Police

#### General

Historically, law enforcement appears a mixture of administrative work and physical enforcement of the law. The British system of law enforcement, comparatively speaking, is very modern. It is based upon self-discipline on the part of the citizen, aided by a law enforcement body which is not an instrumentality in the hands of a Government, but rather a statutorily appointed organization to assist ordinary citizens in law abidance. The village policeman, who in fact was basically no more than an ordinary citizen with a little more power than the average citizen, played an important part in the affairs of the village. He was the predecessor of the constable in the British-type Police Force.

Today, crime is solved by a combination of information received and straightout detective measures. However, prevention is recognized as being of greater importance than administrative police work or detection. Prevention of crime has become the main role of the Police Forces which succeeded the village police system.

Although police methods have been adapted, this principle of prevention has remained the same. Modern police have still a burden of administrative work, but they regard their main roles as being prevention and detection of crime. Science and technology have entered into police methods, particularly in the sphere of detection of crime and in communication.

The Victoria Police Force was one of the first to employ radio-controlled motorized police. In the 1930's, a mobile reserve was formed, and, from this beginning, the present organization of radio-controlled patrols emerged. Later, methods of detection were revised, and special training of personnel in detection was instituted. Scientific investigation within the Police Force became a part of detective method. There was co-operation with outside scientific laboratories. Nevertheless, the factors which have remained most important are those involving human relations.

*Some Modern Developments*

Certain demands for police service have not yet been officially recognized. For example, members of the Force are serving in a voluntary capacity in approximately 120 youth organizations throughout the community. Some of these are known as "Police and Citizen" Youth Clubs. In fact, the word "Police" has no significance other than to illustrate the hope of a community that the Police Force will continue to take an unofficial interest in its youth movement, and that individual members of the Police Force will continue to fill important roles as instructors, office-bearers and advisers to the organization. Here, then, is a clear demand for the service of police in a capacity of guidance officers.

Another indication may be seen in the demand for police lecturers in schools, cultural organizations, business and professional associations and in numerous organizations connected with churches. In most cases, requests for police lecturers indicate a desire on the part of adults to be better informed of the process of maintaining law and order and the process of justice. Any police activity which has to do with teaching people how to overcome the complexities of modern living, rather than prosecuting them for not overcoming their personal problems, is welcomed.

With the coming of the motor car into the lives of people, in such a manner that it has become essential to our modern way of life, there has come another wide bracket of laws which must be obeyed by motorists. Because of the lethal power of the motor car, laws relating to its use must necessarily be restrictive and involved. As a result, there has been created another class of offenders against the law, most of whom are merely inefficient masters of a piece of mechanical equipment, or drivers lacking self-discipline, rather than wilful law breakers. There is a constant demand for police who will guide, teach and persuade the motorist to be careful, courteous and more efficient. Police are asked to promote better driving and to conduct corrective courses in preference to prosecuting motorists. It is estimated that as few as 30 per cent. of the motorists who are apprehended by police for performing badly on the roads are the subject of prosecution.

The following statement gives the numerical strength of the Police Force in Victoria and the number of inhabitants to each police officer at the end of the five years 1956 to 1960 :—

## VICTORIA—POLICE FORCE : NUMERICAL STRENGTH

Year—							Total Strength (Including Police-women)	Number of Inhabitants to Each Police Officer
1956	..	..	..	..	..	..	3,392	768
1957	..	..	..	..	..	..	3,709	721
1958	..	..	..	..	..	..	3,754	730
1959*	..	..	..	..	..	..	3,753	739
1960*	..	..	..	..	..	..	3,867	737

\* At 30th June.

The next table shows the total amount and the amount per head of population expended in connexion with the police, and with the penal establishments and gaols of Victoria, in each of the five years, 1956 to 1960 :—

### VICTORIA—EXPENDITURE ON POLICE AND GAOLS

Year Ended 30th June—	Amount Expended (Exclusive of Pensions) on—					Amount per Head of Popu- lation
	Salaries, &c.		Buildings and Rents		Total	
	Police	Gaols and Penal Establish- ments	Police	Gaols and Penal Establish- ments		
	£'000					£ s. d.
1956 ..	5,008	628	282	143	6,061	2 8 0
1957 ..	5,803	779	353	164	7,099	2 14 6
1958 ..	6,318	854	461	204	7,837	2 18 7
1959 ..	6,624	882	488	125	8,119	2 19 3
1960 ..	7,117	964	519	127	8,727	3 2 1

### Further References

An outline of the history of Victoria Police will be found on pages 318 to 321 of the Victorian Year Book 1961.

## Housing and Building

### Development of Architecture in Victoria

The first settlers in the Port Phillip District came from the older Australian Colonies, bringing with them an established knowledge of pioneer building methods and the seeds of an indigenous architecture. Their first buildings were of split timber, sheets of bark, wattle-and-daub and local stone, either the durable basalt or the undurable sandstone or mudstone of the area. The lack of a stone which combined good structural qualities with an attractive appearance gave the new settlement a very different expression from that of the sandstone cities of Sydney and Hobart, and brick became the accepted building medium of Melbourne. In the early western towns where better stone was available it was used for all important buildings.

Geelong had early hopes of rivalling Melbourne, and its ambitious buildings were of a local limestone of very pleasant colour, but limited lasting capacity, with the result that many have disappeared or been refaced. The same stone was often used in early Melbourne with the same unfortunate result.

Melbourne's own stone, basalt or bluestone, whilst being an excellent material has such a sombre and stern appearance that it can only be fittingly employed in solid and forbidding buildings, such as the early warehouses in the south of the City, the prisons, and in the later Defence Department building in St. Kilda-road. Elsewhere it was generally hidden in foundations and interior walls.

Melbourne's first really ambitious building, was the Cathedral Church of St. James, designed in 1937 by Russell, the Assistant Surveyor, and here can be seen the earliest expression of the architecture of the State. In this building the local stone was rejected in favour of an imported one and the design is a rustic rendering of the typical Georgian church of the time.

Despite a rapid growth of population in the early days, Melbourne was a minor rural town and the western ports were mere villages, until 1851, when gold was discovered and the State of Victoria gained its independence from New South Wales.

Gold was the basis of the fantastic increase in population and the immense wealth of the State, and Melbourne became the largest and most progressive city in Australia. Forty years of construction and prosperity ended with a collapse and severe depression in the 1890's, when people moved out of the State, but those years have left most satisfactory memorials in the great public works still in use today.

The gold rush attracted all sorts of immigrants, including architects from England, who continued working in the manner of their earlier experience. Their buildings were not of the simple colonial type, but could be classed as international or English. As the designers were cut off by distance from the waves of building fashion which were sweeping across England, they continued working in a manner which had been abandoned there, but was happily suitable to the new sunny conditions.

The wealth brought by gold made possible immense public works and this period and these architects produced the magnificent group of public buildings of Melbourne—the Customs House in Flinders-street, a reticent classic building; the Houses of Parliament, grand in concept; the Old Treasury; and the brick and stucco Royal Mint in William-street. This collection of splendid public buildings is unique in Australia and will stand comparison with any of the period anywhere, but they are not typically local, and local expression must be sought in investment buildings, particularly in housing and city offices.

The design of the Victorian house came from the older States where the verandah was already part of the vernacular; sometimes its roof was supported by light classic columns to integrate it with the house it sheltered; sometimes by light wooden posts to mark it clearly as an addition, to protect the home from the sun. After 1851, the verandah became general in Victoria, except in the cheapest and most temporary houses and was regarded as so essential that it was placed on every house, sometimes on the south side where it could do nothing against the sun.

Victoria selected the light wooden support as a standard, and some of these, here and elsewhere, were given decorative wooden brackets supporting the ends of a single or double beam ; where a double beam was provided, the space between the two members was occasionally given some wooden decoration. But the bulk of Victorian housing was built during the cast-iron age and the history of the verandah is the history of cast iron supplanting wood. In place of the wooden brackets and decoration, imported cast-iron panels were substituted, but soon the local foundries were producing local designs of increasing complexity.

Cast-iron decoration was used elsewhere in Australia and had been common in England and the United States ; the idea may have come from either country but it flourished here with such gusto as to become the most obvious characteristic of Victorian domestic building. Whole streets of houses in Melbourne and the country towns can still be seen with the cast-iron decoration casting complicated shadows on the walls behind. Its charm is more apparent when it can be seen adjacent to similar buildings which have lost it in fashionable modernization.

The prosperity of the times prompted investment in housing, and the older suburbs of Melbourne show thousands of terrace houses of one and two stories, all adorned with the characteristic cast-iron elaboration, giving that consistency and repose to the streets which is so singularly lacking in the later periods of building.

In another investment field—that of city office building—Victoria made a contribution of world importance. The invention of the hydraulic passenger lift made possible an economic increase in the height of buildings, and Melbourne businessmen seized on the idea and commissioned office buildings of startling height. The Australia Building of 1888 at the corner of Elizabeth-street and Flinders-lane rose to a then record height of 158 feet and to its west were a group nearly as tall. In their time these were the highest commercial buildings of the world, rivalled only in Chicago and exceeding in height anything in London or New York, and for a very brief period Melbourne building secured world attention.

There was a similar vigour in all branches of building in this period. Then were erected the characteristic suburban town halls, the churches and the offices which give the city its present character. Commercial building showed something of the restlessness of other countries, and, although there were not the same extravagance as in Europe and America, the streets showed a medley of styles. Only in the provincial cities was the early dignity kept, and it is remarkable that the gold mining towns, typified by Ballarat and Castlemaine, should be such sober and pleasant places.

The unexpected depression of the early 1890's put an end to expansion and building ; population deserted the State and whole streets of new houses were left unoccupied. The later slow recovery gave little opportunity for the investor, either in city buildings or housing, and practically the only houses built were solitary ones for owners who preferred a new house to a much cheaper old one. The pattern is still being followed and houses are regarded as personal efforts with eccentricity of design as a virtue.

The outbreak of the First World War put a stop to the slow progress, but a new spirit was abroad when building resumed. Practically all the new architects were local men and practically all the younger ones had seen other countries during their war service and many had attended short courses in England. Design looked overseas for inspiration, even in the smallest works, but it looked to America rather than Europe.

Even before the First World War the American small house had its clumsy imitators here, but after the war practically every building was American inspired. The most popular designs in houses were Spanish, where the walls were so roughly plastered as to resemble mud, or English, with an expensive steep roof and tiny windows filled with leaded lights. No building in Spain or England looked like these, but many in America did. In city buildings an American version of an elongated Renaissance palace was the accepted model.

Not all American influence was so questionable ; during the war Walter Burley Griffin, the Chicago winner of the Canberra competition, settled in Melbourne and produced works of radical logic which quite upset the staid local profession. Other pioneers had worked before him, but they had been regarded as fairly harmless cranks whereas Griffin's international status made his work a threat to the existing order.

The world depression of 1930 called another halt, but before the next check of the Second World War, there were signs of better things. A few houses, admittedly American inspired, aimed at simplicity and efficiency and were becoming popular. After the war the simple design grew in popularity and the Victorian example was followed in other States.

Simplicity was exciting at first, but when it was no longer eccentric to be simple, other things had to be tried. It was no longer fashionable to imitate exotic styles except in the higher income group where Georgian remained acceptable in the inner suburbs and Cape Cod in the outer, so interest centred on peculiar construction. Odd plan shapes were chosen and materials were used in unusual ways, commonly bad construction being regarded as originality.

In the city, new buildings were of light construction and glass panel walls imitated America, as did heavy building costs and maintenance charges. It can be said that no city building has shown any advance on those of oversea cities. In 1960, the first sign of public revolt against architectural extravagance appeared ; it may be that public demand will insist on sound planning and construction, and it may well be that Victoria will regain something of her previous reputation in building.

### **Building Development in the City of Melbourne in 1960**

During the year there was a continuation of the heavy programme of demolition and re-building which has been accelerating within the City for the last four years.

The buildings demolished and replaced are mostly of little note, with one outstanding exception—the demolition of the Colonial Mutual Life Assurance Society Building at the corner of Collins and Elizabeth streets. Originally known as the Equitable Building, it was a landmark in Melbourne for many years. Heavily built of stone and brick, it showed little mark of the 70 years or so since it was erected and physically could probably have lasted for many more years. Its very massiveness however was its downfall: wide corridors, high ceilings, a large portico entrance to Collins-street—all these items added to its appearance, but at the same time reduced the area of letting or working space and it became uneconomic for the valuable site on which it stood.

The new building to replace it will rise 197 feet above road level to the roof and 265 feet to the top of the service tower.

Major new buildings (of over £500,000 each) completed during 1960 included :—

Bank of Adelaide	..	265-69 Collins-street
Coates Building Ltd.	..	18-22 Collins-street
Prudential Assurance Co. Ltd.		148-50 Queen-street
Shell Co. of Australia Ltd.	..	155-65 William-street

There were also many smaller buildings and some major alterations. Worthy of special mention amongst the alterations is the old Latrobe Bond and Free Stores building in Latrobe-street. Obsolete as a store, well conceived alterations have resulted in converting it to excellent offices with a large car park in the basement.

Major new buildings (of over £500,000 each) at present (December, 1960) in course of erection include :—

Ansett Transport Industries Pty. Ltd.	..	465-501 Swanston-street
Sir Owen Dixon Barristers Chambers Ltd.	..	205-19 William-street
Colonial Mutual Life Assurance Society Ltd.	..	Cnr. Elizabeth and Collins streets
Consolidated Zinc Pty. Ltd.	..	89-101 Collins-street
Dental Hospital	..	Cnr. Royal-parade and Flemington-road
National Mutual Life Association of A/asia Ltd.	..	435-55 Collins-street
North Building—University of Melbourne	..	Grattan-street
Pearl Assurance Co. Ltd.	..	143-51 Queen-street
Royal Automobile Club of Victoria	..	113-25 Queen-street
Royal Children's Hospital	..	Flemington-road
South British Insurance Co. Ltd.	..	157-59 Queen-street
Southern Cross Hotel	..	131-41 Exhibition-street
The Age (including alterations)	..	233-35 Collins-street

One continuing feature of the re-building since the war, is that, in nearly every case, the new building is erected primarily for occupation by the owner. In most cases there is also available space, in varying proportions for tenants, but the day of the office building erected to be let as an investment seems to have passed—at least for the time being. The proportion of floor space in the new building which is let, serves also as a reserve for future expansion of the owning company.

Outside the City proper, a new area is developing along Footscray-road, on the old West Melbourne swamp. Originally salt swamp and lagoons, the part north of Footscray-road was gradually filled, in the long period when it was used as a tip by the Melbourne City Council. Over the last few years, 50 acres were purchased by the Melbourne City Council and on part of this the new fish market has been erected at a cost of £500,000. The Tramways Board acquired 15 acres for future use and a further 87 acres has been made available under lease by the Lands Department in blocks varying from 1 half-acre to 5 acres. The development has been as a transport area, for which purpose indeed it is zoned under the Board of Works plan. Already about £1,250,000 has been expended on buildings which continue to be erected at a rapid rate. There is pressure for additional land in this locality from proposing purchasers and lessees, and this will be available when planning for future Railway and Harbor Trust purposes is complete.

There is still a large amount of unleased land there, although most of it requires further filling, but the 87 acres already leased show a remarkable transformation in four years from a rubbish tip to a busy commercial and industrial area.

### **Supervision and Control of Building**

The *Town and Country Planning Act* 1958, and the *Local Government Act* 1958, provide regulations for the preparation of planning schemes and the uniform control of building operations throughout Victoria. In general, the administration of the provisions of these Acts is carried out by councils of the local government authorities in the areas to which they apply.

### **Town and Country Planning**

The passing of the Town and Country Planning Act, enabled statutory planning schemes to be prepared and approved and also provided for the setting up of a Town and Country Planning Board, charged with certain duties and responsibilities. Details regarding these responsibilities, planning procedure, responsible authorities, the Metropolitan Planning Scheme, and Interim Development Control, may be found on page 325 of Victorian Year Book 1961.

### **Local Government Act**

Under the *Local Government Act* 1958, Uniform Building Regulations provide for the uniform control of building operations in Victoria. Particulars relating to the powers and controls provided by these regulations may be found on page 327 of Victorian Year Book 1961.



**Building Statistics***General*

The statistics in succeeding pages deal only with the construction of buildings, as distinct from the construction of railways, bridges, earthworks, water storage, &c. Additions of £5,000 and over to existing buildings (other than houses) are included as new buildings. With the exception of the table relating to building approvals, particulars of minor alterations, and additions are excluded, and in all tables particulars of renovations and repairs to buildings are excluded, because of the difficulty in obtaining complete lists of persons who undertake such operations. Figures for houses exclude converted military huts, temporary dwellings, flats, and dwellings attached to other buildings.

Since the September quarter 1945, a quarterly collection of statistics of building operations has been undertaken, which comprises the activities of all private contractors and government authorities engaged on the erection of new buildings, and owner-builders who erect buildings without the services of a contractor.

The bases of the collection are building permits issued by local government authorities, and contracts let or day labour work authorized by Commonwealth, State, semi- and local government authorities. As a complete list of government authorities and building contractors is maintained, details shown in succeeding tables embrace all local government areas. However, details for building approvals and owner-builders cover only those areas subject to building control by local government authorities, and exclude some rural areas not subject to permit issues. Thus, some buildings on farms are excluded, but this does not affect the figures materially.

The following definitions of terms used in the succeeding tables are necessary for an understanding of the data presented :—

**Building Approvals :** These comprise private permits issued by local government authorities together with contracts let or day labour work authorized by Commonwealth, State, semi- or local government authorities.

**Private or Government :** Building is classified as private or government according to ownership at the time of commencement. Thus building carried out directly by day-labour or for government instrumentalities by private contractors, even though for subsequent purchase, is classed as government. Building carried out by private contractors for private ownership or which is financed or supervised by government instrumentalities but erected for a specified person is classed as private.

**Owner-built :** A building actually erected or being erected by the owner or under the owner's direction, without the services of a contractor who is responsible for the whole job.

**Commenced :** A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, interpretations made by informants may not be entirely uniform.

**Completed :** A building is regarded as having been completed, when the building contractor has fulfilled the terms of the contract, or, in the case of owner-built houses, when the house is either completed or substantially completed and occupied (whichever occurs first). The value shown in all cases is that of the house as a finished project as planned. As with commencements, the interpretation placed on this definition may not be entirely uniform.

**Under Construction :** Irrespective of when commenced, if a building, on which work has not been permanently abandoned, remains uncompleted at the end of a period, it is regarded as being under construction, regardless of whether construction was actively proceeding on that particular date.

**Numbers :** The numbers of houses, flats, and shops with dwellings attached, represent the number of separate dwelling units. Each flat in a block of flats is counted as a separate flat dwelling unit.

**Values :** All values shown exclude the value of the land and represent the estimated cost of the buildings on completion.

### *Building Approvals*

The following table shows the value of private and government building approved in Victoria, for the years 1955-56 to 1959-60 :—

**VICTORIA—VALUE OF PRIVATE AND GOVERNMENT  
BUILDING APPROVED  
(£'000)**

Year Ended 30th June—	Houses and Flats	Other New Buildings	Alterations and Additions to Buildings	Total All Buildings
1956 .. ..	68,303	52,086	12,391	132,780
1957 .. ..	65,113	38,520	13,341	116,974
1958 .. ..	76,275	44,975	15,721	136,971
1959 .. ..	78,942	56,201	16,334	151,477
1960 .. ..	96,708	63,936	19,277	179,921

In normal circumstances, information concerning building approvals is a primary indicator of building trends and gives some indication of the effect of varying economic conditions on the building industry.

However, a complete comparison of buildings approved cannot be made against buildings commenced, as the relationship is affected by the fact that (a) some intended buildings are never begun and new building plans may be re-submitted later, due to rising costs caused by the lack of, or delay in, supply of finance, and shortages of labour and materials, (b) estimated values recorded for building approvals may be affected by rising costs owing to delays in the commencement of buildings, and (c) as previously mentioned, building permits do not embrace the whole of the State.

Although increases in value are not wholly "real", but are subject to rising costs over a period of time, nevertheless, during the year 1959-60, the steady increase of previous years was maintained, in the value of approvals for other new buildings and alterations and additions to buildings, whereas the increase was accelerated in the value of houses and flats approved. This can be mainly attributed to increased flat building, as indicated by the table below.

#### *Value of New Buildings Commenced*

The following table shows the value of all new buildings commenced in Victoria, according to the kind of building for the years 1955-56 to 1959-60. It should be noted that additions to existing buildings (other than houses) of £5,000 and over are included and minor alterations, additions, renovations and repairs to buildings are excluded.

#### VICTORIA—VALUE (WHEN COMPLETED) OF TOTAL NEW BUILDINGS COMMENCED : CLASSIFIED BY KINDS (£'000)

Kind of Building	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Houses .. .. .	65,768	63,005	72,078	74,496	79,519
Flats .. .. .	1,910	2,711	3,542	4,391	11,346
Shops with Dwellings .. ..	472	440	488	691	509
Shops without Dwellings .. ..	3,135	2,380	3,173	5,345	5,986
Hotels, Guest Houses, &c. .. ..	1,585	1,210	1,078	1,261	2,283
Factories .. .. .	19,415	13,258	16,013	16,599	19,270
Business Premises—					
Offices .. .. .	9,740	6,008	5,482	9,715	10,626
Other .. .. .	5,312	4,221	5,411	4,803	6,693
Educational .. .. .	5,011	5,816	4,207	5,314	8,990
Religious .. .. .	1,783	1,328	1,539	1,516	1,658
Health .. .. .	3,169	3,807	5,320	2,157	2,325
Entertainment and Recreation .. ..	1,436	1,505	2,056	1,375	1,107
Miscellaneous .. .. .	2,680	3,645	1,746	3,944	3,292
Total .. .. .	121,416	109,334	122,133	131,607	153,604

As with building approvals, the increase in value of buildings commenced is not wholly attributable to increased building activity, but is partly the result of an almost continuous rise in the cost of building. It should also be realized that, in any period, where there are appreciable increases in the value of buildings commenced for industrial, commercial, business, health, &c., purposes, this movement could be misinterpreted to some extent, as these buildings may include the commencement of large scale projects, the completion of which may spread over several years. The table shows similar trends to that of buildings approved for the same period, in that, generally the steady expansion of previous years was maintained in the value of buildings commenced, with a substantial increase in flat building activity, during year 1959-60. The value of all new building commenced in the year was the highest recorded, viz., £153,604,000 (£114,990,000 in the Metropolitan Area; £38,614,000 in the remainder of the State).

#### *Value of New Buildings Completed*

The following table shows the value of all new buildings completed in Victoria, according to the kind of building for the years 1955-56 to 1959-60. As with commencements, additions to existing buildings (other than houses) of £5,000 and over are included and minor alterations, additions, renovations and repairs to buildings are excluded.

#### VICTORIA—VALUE OF TOTAL NEW BUILDINGS COMPLETED : CLASSIFIED BY KINDS (£'000)

Kind of Building	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Houses .. .. .	68,208	65,771	70,282	80,958	81,748
Flats .. .. .	3,154	2,340	2,914	3,814	5,460
Shops with Dwellings .. ..	554	470	468	707	552
Shops without Dwellings .. ..	3,439	2,894	3,198	4,054	4,830
Hotels, Guest Houses, &c. .. ..	1,510	1,681	1,400	1,292	1,693
Factories .. .. .	18,640	17,416	19,219	16,096	21,506
Business Premises—					
Offices .. .. .	2,407	3,211	9,043	8,683	7,986
Other .. .. .	3,375	6,576	5,348	5,237	7,315
Educational .. .. .	4,592	4,826	7,600	4,495	6,521
Religious .. .. .	701	1,050	1,510	2,096	2,356
Health .. .. .	2,004	3,385	6,753	3,993	2,913
Entertainment and Recreation ..	915	3,546	1,334	2,120	1,292
Miscellaneous .. .. .	2,095	1,664	2,687	3,892	3,990
Total .. .. .	111,594	114,830	131,756	137,437	148,162

The text on page 352, regarding the reasons for increases in the value of new buildings over a period of time, also applies to the foregoing table, which shows that the value of all new buildings completed in the year 1959-60 was the highest recorded, viz., £148,162,000 (£110,116,000 in the Metropolitan Area ; £38,046,000 in the remainder of the State).

### *Value of New Buildings under Construction*

The value of all new building work remaining uncompleted has risen from £120,179,000 in 1958-59, to £127,773,000 in 1959-60 ; however, this does not necessarily imply a decline in building activity. Completions for the same periods have risen from £137,437,000 in 1958-59, to £148,162,000 in 1959-60—a rise of £10,725,000 ; at the same time, commencements have shown a greater rise from £131,607,000 in 1958-59 to £153,604,000 in 1959-60—a rise of £21,997,000. This indicates an expansion in building activity during the period, particularly in the commencement of large-scale projects which are still uncompleted, thereby maintaining the high level of the “under construction” figure.

### *Number of New Dwellings*

The following table shows the number of new houses, individual flat units (excluding conversions to flats) and shops with dwellings, commenced and completed in the Metropolitan Area and the remainder of the State of Victoria for the years 1955-56 to 1959-60:—

### **VICTORIA—NUMBER OF NEW HOUSES, FLATS, AND SHOPS WITH DWELLINGS CONSTRUCTED : GEOGRAPHICAL DISTRIBUTION**

Year Ended 30th June—			Commenced				Completed			
			Houses	Flats	Shops with Dwellings	Total	Houses	Flats	Shops with Dwellings	Total
<b>METROPOLITAN AREA *</b>										
1956	..	..	14,316	681	68	15,065	15,453	1,225	90	16,768
1957	..	..	13,160	984	63	14,207	13,732	845	70	14,647
1958	..	..	15,020	1,244	68	16,332	14,544	1,005	74	15,623
1959	..	..	14,678	1,690	105	16,473	16,827	1,331	104	18,262
1960	..	..	15,628	3,437	80	19,145	16,125	1,966	85	18,176
<b>REMAINDER OF THE STATE</b>										
1956	..	..	6,929	34	32	6,995	7,199	48	30	7,277
1957	..	..	6,489	126	19	6,634	6,453	52	29	6,534
1958	..	..	6,913	39	27	6,979	6,823	99	23	6,945
1959	..	..	7,765	136	26	7,927	7,502	103	31	7,636
1960	..	..	7,573	84	23	7,680	8,032	96	21	8,149
<b>STATE TOTAL</b>										
1956	..	..	21,245	715	100	22,060	22,652	1,273	120	24,045
1957	..	..	19,649	1,110	82	20,841	20,185	897	99	21,181
1958	..	..	21,933	1,283	95	23,311	21,367	1,104	97	22,568
1959	..	..	22,443	1,826	131	24,400	24,329	1,434	135	25,898
1960	..	..	23,201	3,521	103	26,825	24,157	2,062	106	26,325

\* Metropolitan as defined for statistical purposes. Details of this definition are given on pages 120-121.

The table shows that, as in the previous two years, the total number of dwellings commenced and completed rose during year 1959-60. This rise can be mainly attributed to the rapid rise in flats constructed during the year, which have reached a peak of 3,521 commenced and 2,062 completed—in both cases the highest recorded figures. On the other hand, the number of houses commenced, rose by 510 (from 21,933 to 22,443) during year 1958-59, and by 758 (from 22,443 to 23,201) during year 1959-60; at the same time, the number of houses completed, rose by 2,962 (from 21,367 to 24,329) during year 1958-59, but dropped by 172 (from 24,329 to 24,157) in 1959-60. This slight drop in completions can be attributed to the decreased activity for government instrumentalities and by owner-builders as shown in the next table.

### Number of New Houses

The following table shows the number of new houses commenced and completed in Victoria, for private and government ownership for the years 1955-56 to 1959-60 :—

### VICTORIA—NUMBER OF NEW HOUSES CONSTRUCTED FOR GOVERNMENT INSTRUMENTALITIES AND PRIVATE PERSONS (OR FIRMS)

Year Ended 30th June—				New Houses Erected for—			Total Houses	
				Government Instrumentalities*	Private Persons (or Firms)*			
					By Contractors	By Owner-Builders		Private
COMMENCED								
1956	..	..	..	2,489	10,665	8,091	18,756	21,245
1957	..	..	..	1,981	10,390	7,278	17,668	19,649
1958	..	..	..	2,333	13,321	6,279	19,600	21,933
1959	..	..	..	2,223	14,955	5,255	20,220	22,443
1960	..	..	..	2,058	17,314	3,829	21,143	23,201
COMPLETED								
1956	..	..	..	3,392	10,998	8,262	19,260	22,652
1957	..	..	..	2,321	10,838	7,026	17,864	20,185
1958	..	..	..	2,129	12,501	6,737	19,238	21,367
1959	..	..	..	2,313	15,131	6,885	22,016	24,329
1960	..	..	..	2,081	16,119	5,957	22,076	24,157
UNDER CONSTRUCTION AT END OF PERIOD								
1956	..	..	..	1,230	4,286	12,883	17,169	18,399
1957	..	..	..	890	3,838	13,135	16,973	17,863
1958	..	..	..	1,094	4,658	12,677	17,335	18,429
1959	..	..	..	1,004	4,492	11,047	15,539	16,543
1960	..	..	..	981	5,687	8,919	14,606	15,587

\* See definitions on page 349.

As previously mentioned, the number of houses commenced rose during the year 1959-60. This table (see also fig. 7) clearly shows that, although the number erected for government instrumentalities and owner-builders dropped during the year, the increased activity can be attributed to erections

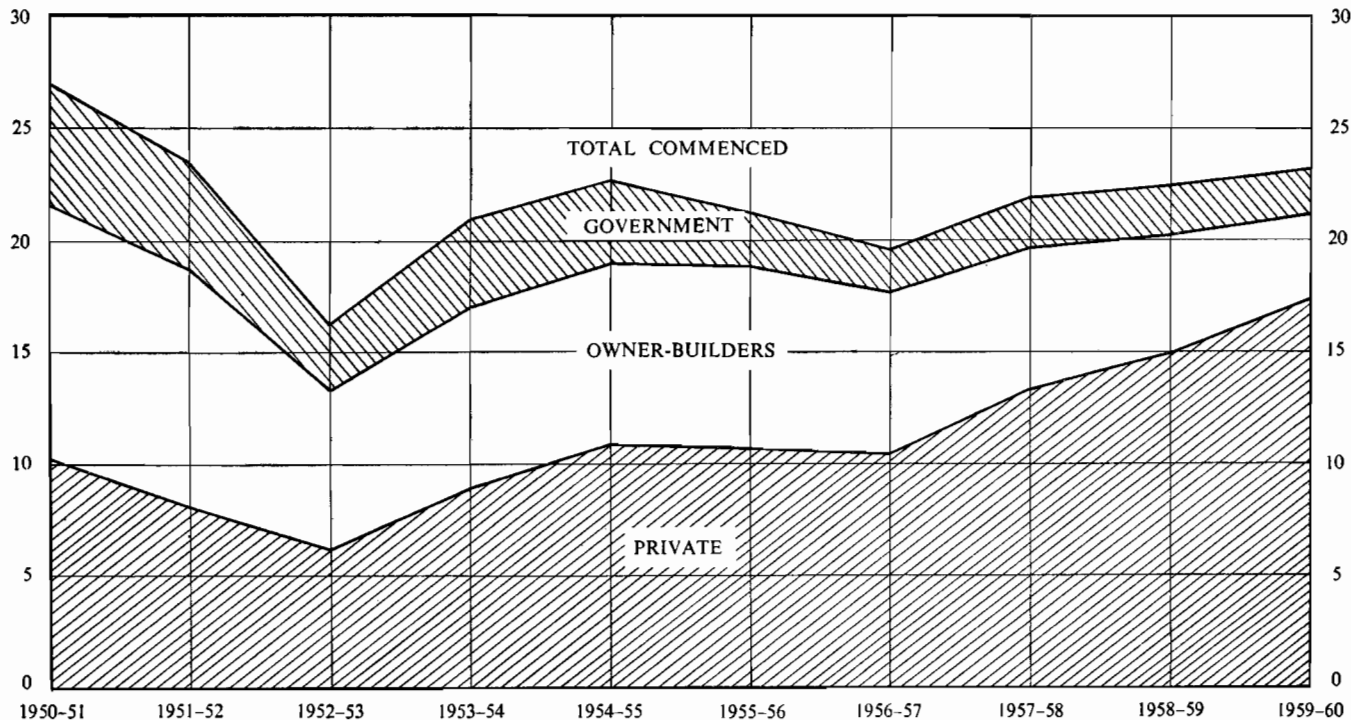
# VICTORIA—NUMBER OF NEW HOUSES COMMENCED,

1950-51 TO 1959-60

FOR GOVERNMENT INSTRUMENTALITIES, OWNER BUILDERS, AND PRIVATE PERSONS (OR FIRMS)

THOUSANDS

THOUSANDS

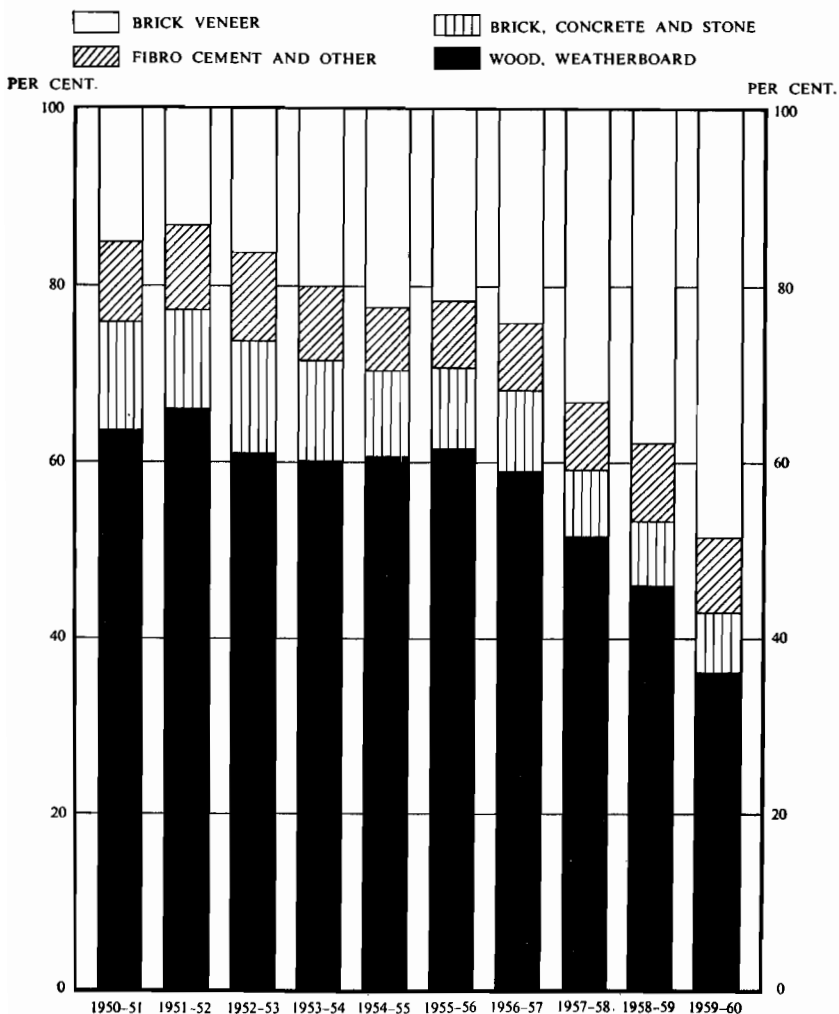


Graph showing number of houses classified according to building authority.

FIGURE 7.

by contractors for private persons (or firms), which reached the highest recorded figure of 17,314. Houses completed during the year 1959-60 show the same trend—a rise in houses erected by contractors for private persons (or firms) and a drop in both government and owner-built houses. For both private and government, the excess number of houses completed to the number commenced in the past two years, has resulted in a considerable reduction in the back log of houses remaining uncompleted, which has fallen from a peak of 27,308 houses under construction at 30th June, 1951, to 15,587 at 30th June, 1960.

VICTORIA—PERCENTAGE NUMBER OF NEW HOUSES  
COMMENCED BY KINDS, 1950-51 TO 1959-60



Graph showing percentage of houses commenced, classified according to materials used.

FIGURE 8.



Particulars of the number of houses, classified by the material of outer walls, commenced and completed for the years 1955-56 to 1959-60, are shown in the following table :—

**VICTORIA—NUMBER OF NEW HOUSES CONSTRUCTED :  
CLASSIFIED BY MATERIAL OF OUTER WALLS**

Year Ended 30th June—				Houses					
				Brick, Concrete, and Stone*	Brick Veneer	Wood	Fibro- Cement	Other	Total
COMMENCED									
1956	..	..	..	1,936	4,609	13,077	1,155	468	21,245
1957	..	..	..	1,779	4,755	11,594	1,199	322	19,649
1958	..	..	..	1,647	7,288	11,307	1,185	506	21,933
1959	..	..	..	1,667	8,452	10,331	1,610	383	22,443
1960	..	..	..	1,517	11,228	8,436	1,808	212	23,201
COMPLETED									
1956	..	..	..	2,047	4,891	13,983	1,333	398	22,652
1957	..	..	..	2,001	5,039	11,627	1,128	390	20,185
1958	..	..	..	1,846	6,059	11,796	1,201	465	21,367
1959	..	..	..	1,708	8,692	11,996	1,417	516	24,329
1960	..	..	..	1,732	10,131	9,987	2,020	287	24,157

\* Includes Housing Commission Holmesglen factory-type concrete houses.

This table shows that, during year 1959-60, the marked movements of previous years in the use of materials for external walls of houses have continued. (See fig. 8.) The trend is still away from brick, concrete and stone solid walls, and wood or weatherboard external walls, to brick-veneer and fibro-cement external walls.

### Employment

An indication of the labour resources of the building industry is shown in the following table. The information is obtained from returns collected from private builders and governmental authorities and relates to persons actually working on the jobs of contractors who undertake the erection of new buildings, and of government instrumentalities which erect new buildings on their own account. They include persons actually engaged on alterations, additions, repairs, and maintenance, when these jobs are undertaken by such contractors and instrumentalities. The figures include working principals and their employees, men working as or for sub-contractors, and men temporarily laid off on account of weather. Contractors and government instrumentalities are asked to give details of the persons employed on a specified day, but because of frequent movement between jobs and because some tradesmen (such as electricians, &c.) may work on several jobs which are under construction simultaneously by different contractors, some duplication may occur. The figures exclude persons working on owner-built buildings, and employees of builders who undertake only alterations, additions, repairs, and maintenance.

The following table shows details of persons engaged on jobs carried out by builders of new buildings at the 30th June of each year 1956 to 1960 :—

**VICTORIA—PERSONS WORKING ON JOBS CARRIED OUT  
BY BUILDERS OF NEW BUILDINGS**

Particulars	At 30th June—				
	1956	1957	1958	1959	1960
<b>CLASSIFIED BY STATUS</b>					
Contractors* .. ..	2,617	2,412	2,456	2,473	2,688
Sub-Contractors* .. ..	4,039	3,760	4,077	4,627	6,267
Wage Earners Working for—					
Contractors .. ..	20,095	18,294	18,073	17,530	17,890
Sub-Contractors .. ..	5,555	6,077	7,028	7,996	10,688
Total Wage Earners .. ..	25,650	24,371	25,101	25,526	28,578
Total Persons Working .. ..	32,306	30,543	31,634	32,626	37,533
<b>CLASSIFIED BY OCCUPATION</b>					
Carpenters .. ..	13,489	12,508	12,636	12,921	14,044
Bricklayers .. ..	2,643	2,629	3,000	3,120	3,964
Painters .. ..	2,877	2,823	2,947	3,099	3,174
Electricians .. ..	1,192	1,190	1,425	1,461	1,783
Plumbers .. ..	2,326	2,238	2,541	2,735	3,163
Builders' Labourers .. ..	6,045	5,074	4,690	4,662	5,363
Other .. ..	3,734	4,081	4,395	4,628	6,042
Total Persons Working .. ..	32,306	30,543	31,634	32,626	37,533
<b>CLASSIFIED BY TYPE OF BUILDING WORK</b>					
New Buildings—					
Houses and Flats .. ..	13,274	12,511	14,987	15,504	19,487
Other Buildings .. ..	12,810	11,701	10,907	12,144	12,814
Total .. ..	26,084	24,212	25,894	27,648	32,301
Alterations and Additions—					
Houses and Flats .. ..	657	653	886	612	706
Other Buildings .. ..	3,920	3,900	3,177	2,845	2,898
Total .. ..	4,577	4,553	4,063	3,457	3,604
Repairs and Maintenance—					
Total .. ..	1,645	1,778	1,677	1,521	1,628
Total Persons Working .. ..	32,306	30,543	31,634	32,626	37,533

\*Actually working on jobs

**Housing Commission of Victoria**

The Housing Commission of Victoria was appointed on 1st March, 1938, as a result of a preliminary investigation into housing conditions in Victoria begun in July, 1936, when a board for the purpose was appointed by the Government.

Particulars about the establishment of the Housing Commission, together with its powers and duties, may be found on page 336 of Victorian Year Book 1961.

Since its inception to 30th June, 1960, the Commission has built 42,353 dwellings, under Commonwealth—State Agreements and the State Housing Scheme, and at that date there were another 1,713 which

were either under construction or for which contracts had been let and work not started. Furthermore a total of 9,981 houses has been sold.

During 1959-60, the Housing Standards Section of the Commission inspected 871 houses, resulting in 456 being declared as unfit for human habitation, and 162 in a state of disrepair. Of the 456 houses "declared", 387 were found to be incapable of being satisfactorily repaired, and orders were issued for their demolition. The remaining 69 houses were considered as capable of being repaired, and orders were issued for these, and the 162 houses declared "in a state of disrepair", to be made to comply with the regulations. As a result of orders issued, 416 houses were demolished during the year, and 271 houses have been repaired in accordance with the Commission's requirements.

Expansion of the Commission's slum reclamation activities was maintained during the year, when 14.9 acres were acquired, 14.8 acres were proclaimed and subsequently acquired, and 22.12 acres were proclaimed in the Metropolitan Area. The sum of £672,570 gross, was spent on slum reclamation, and expenditure of loan money on rebuilding totalled £1,508,811.

Finance for housing is provided by the Commonwealth Government under the Commonwealth-State Housing Agreement. During the year 1959-60, £7,560,000 was advanced by the Commonwealth Government, and the total outlay upon purchase and development of sites, and the erection of buildings, including the capital costs of houses sold, was £10,649,409. Rental charges for the year were £5,833,068, against which £240,351 was allowed in rent rebates to tenants on low incomes, including pensioners, and £30,606 in rents was lost through vacancies. The steady rise in rebates over recent years is due to the higher rents chargeable for new houses and flats, and to the increasing number of elderly people, mainly pensioners, being housed.

The following tables which are compiled from annual reports furnished by the Housing Commission, show its activities for the years 1955-56 to 1959-60 :—

#### VICTORIA—HOUSING COMMISSION : DWELLING CONSTRUCTION

Geographical Distribution	Houses and Flat Units				
	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>COMPLETED</b>					
Metropolitan Area* .. ..	2,625	1,438	1,347	1,347	1,329
Remainder of State .. ..	1,527	1,142	1,067	1,213	1,265
State Total .. ..	4,152	2,580	2,414	2,560	2,594
<b>UNDER CONSTRUCTION AT END OF PERIOD (INCLUDES CONTRACTS LET, WORK NOT STARTED)</b>					
Metropolitan Area* .. ..	833	748	771	765	962
Remainder of State .. ..	685	602	697	885	751
State Total .. ..	1,518	1,350	1,468	1,650	1,713

\* Metropolitan as defined for statistical purposes. Details of this definition are given on pages 120-121.

**VICTORIA—HOUSING COMMISSION : REVENUE,  
EXPENDITURE, ETC.**

(£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>REVENUE</b>					
Rentals .. .. .	4,617	4,983	5,414	5,568	5,562
Gross Surplus—House Sales ..	1,010	1,022	1,041	1,028	1,029
Loan Redemption Written Back less Allowances to House Purchasers .. .. .	21	58	75	111	130
Interest—House Sales (Net) ..	11	117	210	313	453
Sundry .. .. .	2	3	11	9	42
Miscellaneous .. .. .	3	2	10	12	23
Total Revenue .. .. .	5,664	6,185	6,761	7,041	7,239
<b>EXPENDITURE</b>					
Interest—Less Amounts Capital- ized and Applied to House Sales	2,133	2,252	2,503	2,544	2,579
Loan Redemption— Commonwealth—State Agree- ment .. .. .	649	738	729	796	778
Contribution to National Debt Sinking Fund .. .. .	3	3	3	3	2
Redemption of Debentures and Debenture Loan Sinking Fund Contribution .. .. .	5	5	5	16	6
Administration—General ..	234	255	329	345	360
House Sales .. .. .	34	62	72	150	166
Rates—Less Amount Capitalized	624	741	780	812	843
Provision for Accrued Main- tenance .. .. .	928	934	989	1,004	999
Provision for Irrecoverable Rents House Purchasers' Death Benefit Fund Appropriation .. .. .	..	80	48	29	6
Transfer to House Sales Reserve	2	50	84	119	171
Suspense Account .. .. .	809	872	709	831	940
Other .. .. .	38	56	49	53	144
Total Expenditure .. .. .	5,459	6,048	6,300	6,702	6,994
<b>SURPLUS .. .. .</b>	<b>205</b>	<b>137</b>	<b>461</b>	<b>339</b>	<b>245</b>
Fixed Assets at 30th June ..	85,195	89,048	94,192	95,815	96,531
Loan Indebtedness at 30th June— Government Advances .. .. .	83,434	90,403	97,545	103,889	110,569
Loan Indebtedness at 30th June— Debenture Issues .. .. .	466	462	457	442	510

**War Service Homes***General*

The War Service Homes Commission was set up in 1919 by the Commonwealth Government after the First World War to help provide homes for ex-servicemen and their dependants. It was empowered to build houses for sale on easy terms and to make long term loans at a relatively low rate of interest for the erection of houses, the purchase of existing homes and the discharge of mortgages.

In 1947, the Commission was reconstituted as a Division of the Department of Works and Housing and in 1951 was transferred to the Department of Social Services and in 1956 to the Department of National Development. No new legislation affecting the operations of the Division was enacted during the year 1959-60.

Particulars about those eligible for assistance, the sources of funds, types of assistance, and terms and conditions of loans, may be found on page 339 of the Victorian Year Book 1961.

During 1959-60, there was evidence of a slackening in the demand for War Service Homes finance, particularly over the last six months. Nevertheless the intake of new applications remained at a high level. The trend, away from assistance to build a house, towards assistance to purchase an already erected house continued; significant factors contributing to this being increasing building costs and the significant rises in the prices being paid for land.

In Victoria, although all materials, with the exception of bricks, were in full supply and the supply of labour was satisfactory, there was, nevertheless, a decline in the number of tenders received for homes built under the Division's supervision, and only four tenders per job were received during the last quarter of the year as compared with an average of over seven tenders per job for the same period of the previous year. On the basis of tenders received, there appears to have been an average rise of approximately 2.5 per cent. in the Division's building costs during the year.

The sum of £35 mill. was provided by the Commonwealth for expenditure under the War Service Homes Act during the year. This amount, together with an additional amount of £67,849 available for expenditure from miscellaneous receipts, was expended, making a total capital expenditure of £35,067,849 for the year. The Victorian share was £10,977,143.

From its inception to 30th June, 1960, the total Commonwealth sum paid as instalments of principal and interest amounted to £150,616,947, whilst the arrears of instalments totalled £542,402, the percentage of arrears to the total amount due being 0.36. The Victorian figures are £46,883,294, £153,441, and 0.33 respectively.

The following table, which is furnished by the War Service Homes Division of the Department of National Development, shows the activities of the Division for the years 1955–56 to 1959–60 and since 1919 :—

#### VICTORIA—WAR SERVICE HOMES ACTIVITIES

Year Ended 30th June—	Applications Approved	Homes Built and Assisted to Build	Homes Purchased	Mortgages Discharged	Transfers and Resales
1956.. ..	3,168	1,251	1,480	616	418
1957.. ..	4,481	958	2,132	576	341
1958.. ..	4,507	1,299	2,316	517	370
1959.. ..	3,920	1,170	2,368	401	342
1960.. ..	4,070	725	2,964	219	302
From Inception to 30th June, 1960 .. ..	65,339	17,466	32,074	10,224	4,534

#### Soldier Settlement Commission

The War Settlement Land Agreement provides that the State shall, *inter alia*, develop and improve land to a stage when it can be brought into production within a reasonable time. (See also pages 474 to 477.) This work envisaged, amongst other things, the erection of farm residences.

At 30th June, 1960, contracts had been let for 2,818 farm houses and 40 town houses, since the inception of the Commission in 1945. Of the 2,818 farm houses, 2,779 had been completed, thirteen were not started, and 26 were still under construction; all of the 40 town houses had been completed, and for the same period a total of 178 existing houses had been renovated. During the year 1959–60, 145 farm houses, and three town houses were completed, and six existing houses were renovated.

#### State Savings Bank of Victoria

Under the provisions of the *State Savings Bank Act* 1958, power was given to the Commissioners of the State Savings Bank of Victoria, to provide dwelling-houses for eligible persons upon such terms and subject to such covenants and conditions as are prescribed or are fixed by the Commissioners. Particulars relating to the exercise of this authority may be found on page 630 of the Victorian Year Book 1961, and on pages 661 to 663 of this volume.

#### Co-operative Housing Societies

The *Co-operative Housing Societies Act* 1958, under which co-operative housing societies operate, provides for the financing of home building and purchase on a purely co-operative basis. It empowers societies to raise loans and to make advances to their members under certain terms and provisions, details of which appeared on page 341 of the Victorian Year Book 1961.

At the 30th June, 1960, the regional distribution of the 518 societies on register, based on the situation of the registered office was: metropolitan and outer metropolitan, 343; urban, 58; and country, 117. Since September, 1945 to date, 34,007 members had obtained homes under the scheme, and 4,698 homes were in the course of erection. During the same period Government guarantees given by the Treasurer with respect to loans (other than those of a temporary nature) raised by societies totalled £61,829,000. During the year an amount of £3,488,721 was made available to societies from the Home Builders' Account, under the Commonwealth-State Housing Agreement; £3,100,000 being housing loan funds paid into the account, and £388,721 being provided from the revolving nature of the account.

The following table, compiled from annual reports furnished by the Registrar of Co-operative Housing Societies, provides aggregate particulars relating to the operations of Societies at 30th June of each of the five years 1956 to 1960:—

### VICTORIA—OPERATIONS OF CO-OPERATIVE HOUSING SOCIETIES

Particulars	Unit	At 30th June—				
		1956	1957	1958	1959	1960
Societies Registered ..	No.	288	400	442	482	518
Members Registered ..	No.	25,507	31,687	33,024	34,828	36,641
Shares Subscribed ..	No.	905,989	1,210,271	1,291,614	1,418,663	1,544,714
Nominal Share Capital Subscribed ..	£'000	47,353	62,488	66,925	72,851	79,194
Advances Approved* ..	No.	21,773	24,824	26,929	29,200	31,645
	£'000	42,169	50,269	56,436	63,448	71,293
Government Guarantees Executed*	No.	280	305	345	378	408
	£'000	47,138	50,862	54,777	57,946	61,829
Indemnities Given and Subsisting ..	No.	2,670	2,848	3,103	2,705	2,694
Indemnities Subsisting ..	£'000	330	372	434	429	457
Housing Loan Funds Paid into Home Builders' Account ..	£'000	..	2,000	4,000	7,100	10,200
Dwelling-houses Completed*	No.	21,420	24,607	27,691	30,850	34,007
Dwelling-houses in Course of Erection ..	No.	4,797	5,195	4,912	4,812	4,698

\* Since September, 1945 to date.

### **Approved Housing Institutions**

The *Home Finance Act* 1958 empowers the Treasurer of Victoria, with the approval of the Governor in Council, to execute a guarantee in favour of an approved institution for the repayment of part of a housing loan made by the institution, on the security of a first mortgage over land on which is erected or is to be erected a dwelling-house.

Particulars of the conditions and terms that apply to the execution of these guarantees may be found on page 345 of the Victorian Year Book 1961.

At the 30th June, 1960, there were 21 approved institutions, and guarantees executed and subsisting totalled 472 : the aggregate amount involved being £304,409.

### **Home Finance Trust**

The Home Finance Trust is a body corporate, constituted under the *Home Finance Act* 1958, to administer the Acts.

It is authorized to receive money on deposit, on such terms and conditions as are agreed upon, from any institution, person or body of persons, corporate or unincorporate, for the purpose of making housing loans on the security of a first mortgage.

Particulars of the conditions and terms that apply to these loans may be found on page 343 of the Victorian Year Book 1961.

To the 30th June, 1960, loans granted and subsisting totalled 1,485, the amount involved being £4,052,875.

### **National Trust of Australia (Victoria)**

The National Trust has been formed to preserve the finest of Australia's historic heritage as a basis for educational and cultural purposes, endeavouring to save places and things of natural and historic importance or beauty.

The Trust has already applied itself to one of the State's most urgent needs, in providing places of real and living interest for the public to visit. In the diminishing heritage of fine early buildings, few of the larger homes have escaped demolition or drastic alteration. Some serve for the moment as nursing homes, schools or hostels, but few are accessible to the public to show the architecture, furniture, and way of life of early Victorian society.

One of the finest colonial homesteads, in architecture and setting, is Como, South Yarra, for a century the home of the Armytage family, and now the property of the National Trust. One of Victoria's earliest dwellings, is the cottage once occupied by Captain Lonsdale, recently purchased by the Trust for re-erection when funds and a suitable site are available.

In addition, the Trust has other objectives : to form libraries ; to sponsor classes, conferences, lectures, research and publications ; and to arrange broadcasts and films, both in Melbourne and in country centres, thus making its influence felt throughout the State.



# Part 5

## LOCAL GOVERNMENT

### *Administration*

#### **Municipalities**

##### *General Description*

At 30th June, 1961, Victoria was divided, for local government purposes, into 208 municipal districts and the Yallourn Works Area. This latter was severed from the municipal districts of which it then formed part by the *State Electricity Commission (Yallourn Area) Act 1947*. For certain purposes, it is deemed to be a borough and municipal administration is the responsibility of the Commission, assisted by an Advisory Council. The 208 municipalities comprised :—

Cities	..	..	..	51
Towns	..	..	..	5
Boroughs	..	..	..	14
Shires	..	..	..	138
				<hr/>
				208
				<hr/>

The only unincorporated areas of the State are French Island (65 square miles) in Westernport Bay, Lady Julia Percy Island (1·02 square miles) off Port Fairy, Bass Strait Islands (1·51 square miles), Gippsland Lakes (Part) (128 square miles), and Tower Hill Lake Reserve (2·28 square miles) adjacent to the Borough of Kororoit.

##### *Local Government Department*

The *Local Government Department Act 1958* constituted a department called the Local Government Department “for the better administration of the laws relating to local government in Victoria”. The legislation was brought into operation on 23rd December, 1958, by a proclamation of the Governor in Council published in the Government Gazette on that date. Officers and employees of the Local Government Branch of the Public Works Department were, as a result of this, transferred and attached to the new Department, and the Minister for Local Government assumed responsibility for administration of the following Acts of Parliament :—

##### **Local Government Act**

Acts relating to local government in the Cities of Melbourne and Geelong

##### **Town and Country Planning Act**

##### **Melbourne and Metropolitan Board of Works Act**

##### **Local Authorities Superannuation Act**

##### **Petrol Pumps Act**

##### **Drainage Areas Act**

##### **Pounds Act**

##### **Dog Act.**

In addition, the Minister is now also responsible for the *Valuation of Land Act 1960* which was passed at the 1960 autumn sitting of Parliament.

### *Constituting and Altering the Constitution of Municipalities*

The *Local Government Act 1958* provides machinery for the creation of new municipalities and for alterations to the boundaries of existing ones. The power to make Orders on this subject is conferred on the Governor in Council, who acts on the recommendation of the Minister for Local Government. All such Orders are published in the *Government Gazette*. The powers conferred on the Governor in Council include authority to do the following :—

1. To constitute new shires. Practically the whole of Victoria is included in municipal districts, and therefore any new municipalities will almost inevitably be created from the territories of existing ones. Any portion of Victoria containing rateable property of a net annual value of at least £60,000 may be constituted a shire.
2. To constitute new boroughs. Any portion of Victoria may be constituted a borough provided that it—
  - (a) does not exceed nine square miles in area. (Special Acts of Parliament have been passed to permit larger areas to become boroughs, towns, or cities, and any existing city, town, or borough may annex additional territory even though its area is, as a result, increased beyond nine square miles. Seventeen cities, three towns, and one borough do exceed nine square miles);
  - (b) has no point within its area distant more than six miles from any other point ;
  - (c) contains a population of at least 500 inhabitant householders ;
  - (d) contains rateable property of a net annual value of at least £40,000 ; and
  - (e) does not comprise portions of different boroughs.
3. To sever parts of one municipality and annex such parts to another.
4. To subdivide or re-subdivide any municipality. (The subdivisions of a city, town, or borough are called *wards* and those of a shire *ridings*. The maximum number of subdivisions permitted in any municipality, except the City of Melbourne, is eight. Melbourne has eleven wards. Twenty-nine municipalities, including seven shires, are not subdivided.)
5. To declare boroughs, cities, or towns. If its revenue from general and extra rates in the preceding year is not less than £15,000, a borough may be declared a town. If the revenue is not less than £30,000 it may be declared a city.

Action on these matters can be initiated locally, in some instances, by a request addressed to the Governor in Council and signed by a prescribed number of persons enrolled on the municipal voters' roll. The proposal set out in the request must be submitted to a poll held in conjunction with the next annual election of councillors. In other instances, a petition under the seal of the council suffices. There is an Advisory Board of three persons, constituted under the Local Government Act, which investigates these matters and advises the Minister on them.

Changes in the status of municipalities during the period 1st April, 1960, to 30th June, 1961, were as follows :—

1960—The Shire of Frankston and Hastings was renamed the Shire of Frankston on 8th November, 1960.

1961—The Borough of Maryborough was declared the City of Maryborough on 31st March, 1961.

The Shire of Mulgrave was declared the City of Waverley on 14th April, 1961.

The Shire of Springvale and Noble Park was declared the City of Springvale on 22nd April, 1961.

The Shire of Keilor was declared the City of Keilor on 29th April, 1961.

In the same period, the following municipalities were created :—

1960—The Shire of Myrtleford was constituted by severance from the Shire of Bright on 31st May, 1960.

The Shire of Hastings was constituted by severance from both the Shire of Frankston and Hastings and the Shire of Flinders on 19th October, 1960.

1961—The Shire of Croydon was constituted by severance from the Shire of Lillydale on 24th May, 1961.

The Borough of Traralgon was constituted by severance from the Shire of Traralgon on 31st May, 1961.

In addition, the Borough of Inglewood was annexed to the Shire of Korong on 1st February, 1961.

### *Municipal Councils*

The powers vested in municipal corporations are exercised by councils elected by persons who are enrolled on the municipal voters' rolls. The number of councillors for each municipality must be some multiple of three, not less than six, nor more than 24 (except the City of Melbourne, which has 33 councillors). Subdivided municipalities have three councillors for each subdivision.

Any person who is the owner or occupier of property of a rateable value of at least £20, is eligible to stand for election as a councillor of the municipality in which the property is situated. Councillors serve in an honorary capacity. They must elect one of their number to be chairman. In a city, town, or borough the chairman is called the Mayor (the Lord Mayor in the case of the City of Melbourne) and in a shire, the President. Councillors hold office for three years, and each year one-third of the total number allotted to each municipality retire in rotation.

Generally speaking, councillors may not, at a council meeting, discuss or vote on any matter in which they have a pecuniary interest, and they may become incapable of being or continuing as councillors if they are in any way concerned in a contract with the municipality. A councillor who acts while incapacitated may be subjected to heavy penalties. Councillors are also liable for heavy penalties if moneys are wrongfully borrowed or expended and may have to repay the money so borrowed or expended.

### *Elections*

Municipal elections are held annually in August. Extraordinary elections may be held to fill vacancies occurring between annual elections. To be enrolled on the voters' roll for any municipality, a person must have reached the age of 21, be a natural born or naturalized subject of Her Majesty, and be liable to be rated on rateable property in the municipality. No person is entitled to be enrolled for property which has an annual value of less than £5, unless there is a house on such property and the person resides there. An occupier of rateable property is entitled to be enrolled instead of the owner. Plural voting is provided for, up to a maximum of three votes per person, according to the value of the rateable property for which the enrolment is made.

Voting is compulsory in 47 municipalities.

### *Officers*

Every council must appoint a municipal clerk (he is called a town clerk in a city, town, or borough and a shire secretary in a shire), a treasurer and an engineer, together with such other officers as may be necessary. The other officers usually include a valuer, a rate collector, a medical officer of health, and a health inspector. The Local Government Act requires that certain officers must obtain special qualifications from examining boards constituted under the Act. The officers who must hold these special qualifications before appointment are municipal clerks, engineers, electrical engineers, and building surveyors. The Health Act requires that medical officers of health shall be duly qualified medical practitioners, and that every health inspector shall hold a prescribed Certificate of Competency.

### *Powers and Duties of Municipalities*

The Local Government Act and other Acts of Parliament confer powers and impose duties on municipal councils. Some of these are as follows :—

#### *By-laws*

Councils may make by-laws on a number of subjects specified in the Local Government Act and other Acts. The power to make laws of local application is delegated by Parliament, and councils must be careful not to exceed the authority conferred upon them.

### *Roads and Bridges*

The construction and maintenance of roads and bridges has always been one of the principal functions of municipalities. With the exception of those roads which are the responsibility of the Country Roads Board and the Melbourne and Metropolitan Board of Works, councils have the care and management of all public highways (i.e., streets and roads which the public have a right to use) in the municipal district, and have a duty to keep them open for public use and free from obstruction. The Country Roads Board is wholly responsible for the cost of maintaining proclaimed State highways, tourist roads, and forest roads, and shares the cost of maintaining main roads with local councils. Subsidies are also granted to councils from the funds administered by the Board for works on unclassified roads. In the Melbourne Metropolitan Area, the Melbourne and Metropolitan Board of Works is wholly responsible for any roads or bridges declared to be metropolitan main highways or metropolitan bridges.

### *Private Streets*

A "Private Street" as defined in the Local Government Act is, broadly speaking, a street set out on privately owned land, as opposed to a street set out on land of the Crown or of a public authority. Under certain circumstances, councils may construct private streets and charge the cost, or part of the cost, to the owners of the land abutting on the street.

After construction, the maintenance of a private street becomes the responsibility of the council. When a council constructs a street which is not a private street as defined in the Act, it may charge abutting owners half the cost of making the footpath and kerb.

### *Sewers, Drains, and Water-Courses*

With certain exceptions, every council has vested in it, responsibility for all public sewers and drains within its municipal district, or of which it has the management and control, and all sewers and drains, whether public or not, in and under the streets of such municipal district. The exceptions to this rule are sewers and drains vested in any other municipality, the Board of Land and Works, the Melbourne and Metropolitan Board of Works, the Geelong Waterworks and Sewerage Trust, the Latrobe Valley Water and Sewerage Board, and any sewerage authority under the Sewerage Districts Act. Councils may enlarge or otherwise improve any sewers or drains vested in them and may also scour, cleanse, and keep open all ditches, creeks, gutters, drains, or watercourses within or adjoining their municipal districts. When a drainage area is constituted in any municipal district under the Drainage Areas Act, additional drainage powers are conferred on the council. Drainage areas may be constituted by the Governor in Council on the petition of the council or of land owners in the area. Both the Local Government Act and the Health Act confer powers on councils to provide for the proper drainage of houses, buildings, or land, and, in some instances, the owners of land benefiting as a result of this may be required to meet the cost.

### *Water Supply and Sewerage*

In the Melbourne Metropolitan Area, the Melbourne and Metropolitan Board of Works is responsible for water supply and sewerage (See page 400). The members of the Board are municipal councillors nominated by the councils in the Metropolitan Area. Outside the Metropolitan Area, the special water and sewerage needs of the Geelong district and the Latrobe Valley are served by the Geelong Waterworks and Sewerage Trust and the Latrobe Valley Water and Sewerage Board respectively. Elsewhere in the Extra-Metropolitan Area of the State, the Governor in Council may constitute Waterworks Trusts and Sewerage Authorities, under the provisions of the Water Act and the Sewerage Districts Act, respectively (See pages 411 to 415). Members of a municipal council may, together with Government nominees, be the members of the Sewerage Authority or Waterworks Trust. Alternatively, some members of these bodies may be elected by councillors or ratepayers. In many instances, municipal officers also carry out duties for Waterworks Trusts and Sewerage Authorities. The Water and Sewerage Districts Acts are administered by the Minister of Water Supply. Some councils operate waterworks under powers provided in the Local Government Act and, in addition, twelve municipalities have been constituted local governing bodies, under the provisions of the *Water Act* 1958, with defined water supply districts.

### *Building Control*

Since 1945, building in most Victorian municipalities has been subject to a building code, known as the Uniform Building Regulations, which is administered by municipal councils. These regulations apply in cities and towns and may be applied in the whole or any part of any other municipality, if the council so desires. At 30th June, 1961, only two boroughs and twenty shires had not adopted the regulations.

Municipalities have power to make by-laws regulating buildings, but the Uniform Building Regulations, in the municipalities where they apply, would over-ride any provisions of such by-laws. The regulations leave certain matters to be determined by councils which are empowered to make by-laws for the purpose. These by-laws are subject to approval by the Governor in Council.

### *Town and Country Planning*

Councils have power under the Local Government Act to make by-laws prescribing areas as residential or business areas, and, by this means, may achieve a degree of town planning. Since 1944, however, councils have had power to prepare planning schemes to regulate the use of land in the whole or any part of their municipal districts and may join with other councils to prepare a joint planning scheme. When a council has commenced preparation of a planning scheme, it may make an Interim Development Order to control use of land in the planning area, until a scheme is in force. Both the Interim Development Order and the planning scheme are subject to the approval of the Governor in Council. The Town and Country Planning Board, constituted under the Town and Country Planning Act, makes reports and recommendations to the Minister on planning schemes and town

# ***Architecture in Victoria***



*[Visual Aids Department, University of Melbourne.]*

'Como'. Built in 1852. Formerly the home of the Armytage family, now the headquarters of the National Trust of Australia (Victoria).



*[Wolfgang Sievers.]*

505 St. Kilda-road. A private home typifying the prosperity of the gold mining period





Old Treasury Building, Spring-street.

[Jack Cato.





‘Toorak’. St. Georges-road, Toorak    Formerly used as Victoria’s second Government House. [Wolfgang Sievers.]

Entrance to the Old Melbourne Gaol.

[Mark Strizic]







St. Patrick's Cathedral.

[Mark Strizic.]





*[Mark Striziv.*

St. James Old Cathedral, King-street. Erected in 1838. Moved from its original site in William-street to its present position in King-street.





*[Jack Cato.*

Interior of State Parliament House.

Forecourt of the Shrine of Remembrance which was dedicated by Her Majesty Queen Elizabeth II. on 28th February, 1954.

*[Wolfgang Sievers.*







[Mark Shreeve]

The Customs House, Flinders-street. As finally completed after three rebuildings.





[Wolfgang Sievers.

Olympic Swimming Pool opened for the 1956 Olympic Games in Melbourne.

planning matters generally. The Board may itself prepare a planning scheme for a particular area at the direction of the Minister. By legislation enacted in 1949, the Melbourne and Metropolitan Board of Works was charged with the duty of preparing a planning scheme for the Melbourne Metropolitan Area. Some municipal councils in this area already have planning schemes in force or are preparing schemes.

### *Other Powers and Duties*

Some of the powers available to municipal councils have rarely been used or are now falling into disuse. Councils may prepare housing schemes to provide dwellings for persons of small means, but this power has rarely been exercised. They may operate gasworks or generate electricity, but there are now no municipal gasworks and the number of municipalities generating electricity (at present eleven) is steadily dwindling. However, a number still purchase electricity in bulk and retail it. Some of the other more usual functions of municipalities are :—

- (1) Supervision of land subdivision and the laying out of streets on private property;
- (2) removal and disposal of household and trade waste;
- (3) sweeping, cleansing, and watering of streets;
- (4) supervision of boarding houses, lodging houses, and eating houses;
- (5) provision and maintenance of parks, gardens, recreation reserves, libraries, and museums;
- (6) registration of dogs under the Dog Act;
- (7) establishment of infant and pre-school welfare centres;
- (8) establishment of emergency home-help services;
- (9) appointment of street parking areas and off-street parking areas for motor cars, and the collection of parking fees; and
- (10) supervision of weights and measures.

### *Revenue*

The works and services provided by Victorian municipalities are financed largely from local taxes (rates) which are levied on the owners or occupiers of rateable property in each municipal district.

Other sources of revenue include income from public works and services, Government grants, licence fees, and miscellaneous income.

Revenue from public works and services comprises charges for garbage disposal, sanitary, and other health services, contributions to road and pavement works, and sundry income from the hire of council properties.

Some municipalities also operate business undertakings, such as electric supply, abattoirs, pipe works, quarries, and waterworks, and, for the 1959 municipal year, the combined turnover of these undertakings exceeded £15 mill.

*Rating of Land and Property*

All land (including houses and buildings) in a municipal district is rateable, unless specifically exempted by the Local Government Act.

Non-rateable land is defined fully in the Act, but, in general, it consists of land owned or used by the Government, by certain public bodies, and by charitable organizations.

The council of every municipality is required, from time to time, to have a valuation made of all rateable property within the municipal district, and this must be done at least once in every six years. An extension of this period may be approved by the Governor in Council in certain circumstances. Valuations are required to be carried out by a competent person or persons appointed by the council.

In any newly constituted municipality, a valuation is required within three months after constitution.

Under the *Valuation of Land Act* 1960, the provisions of the Local Government Act relating to valuers and valuations will be substantially altered. At 30th June, 1961, however, the relevant provisions of the Act had not been brought into operation.

In Victoria, a municipality is required to rate on the net annual value of the rateable property unless, at the instance of the council, or as the result of a poll of its ratepayers, it has adopted the provisions of Part XI. of the Local Government Act for the purpose of rating on unimproved capital valuations.

The net annual value of a property is the rental it might be expected to earn from year to year if let, after deducting expenses such as rates, taxes, and insurances, but shall not be less than 5 per cent. of the capital value.

The unimproved capital value, however, is the amount a property might be expected to realize if sold in an unimproved state. It is the amount a purchaser might reasonably expect to pay for land, assuming that no improvements had been effected to it.

Of the 205 Victorian municipalities at 30th September, 1959, 162 were rating on net annual values and 43 on unimproved capital values. The principal rate levied by a municipality is the general rate. This is made for the purpose of defraying the ordinary expenditure of the council, and is paid into the general fund of the municipality known as the Municipal Fund.

The general rate must be made at least once in each municipal year, and in any one year is limited to 4s. in the £1 of the net annual value of the rateable property. For certain special purposes, however, a municipality may raise its general rate above the limitation imposed by the Local Government Act.

Before making a general rate, a municipality must prepare an estimate of the amount required to defray the expenditure of the council for the period to be covered by the rate, and to strike a rate that will be sufficient to raise the money so required. In a subdivided municipality, an extra rate may be made by the council, in any



subdivision or any part of it, on the request of not less than two-thirds of the councillors of the subdivision in which it is to be raised. In certain circumstances, an extra rate may also be made and levied in a municipality which is not subdivided.

Except for the special purposes mentioned above, the aggregate amount of general and extra rates levied in any subdivision is not to exceed 4s. in the £1 of the net annual value of the rateable property. An extra rate may be made for a period not exceeding one year or less than three months, as the council thinks fit.

Apart from general and extra rates, a municipality, in certain circumstances, may levy a separate rate (or make a special improvement charge) on a section of the municipality, for the purpose of defraying the cost of special works or undertakings which benefit the ratepayers in that particular area.

Other types of rates, which may be levied by municipalities, include a sanitary rate (or sanitary charge) under the provisions of the Health Act, for the purpose of providing for the disposal of refuse, rubbish, or nightsoil, and a rate under the provisions of the Country Roads Act for the purpose of raising certain moneys payable by the council to the Country Roads Board.

### *Government Grants*

Although Government grants (apart from those allocated through the Country Roads Board), form only a small part of municipal revenue, the special purposes for which they may be obtained have tended to increase. Subsidies are now paid, in certain circumstances, for infant welfare centres, pre-natal centres, pre-school centres, free kindergartens, crèches, maintenance and treatment of persons suffering from infectious diseases, libraries, vermin destruction bonuses, public halls, swimming pools, main drains in country centres and drainage works in drainage areas. Since 1884, when the Government took over the collection of fees under the Licensing Act, a licences equivalent has been paid to municipalities. It is the nominal equivalent of the amount collected in that year. For the year ended 30th June, 1959, the amount paid to municipalities from the Licensing Fund was £57,512. (A statement of receipts and expenditure of the Licensing Fund appears on page 334.) Municipal endowment for the more needy municipalities was paid almost from the inception of local government in Victoria until the onset of the depression. Subsequently, unemployment relief grants were made available annually for a number of years for various municipal works, and after the Second World War, an amount of £100,000 was provided annually towards the cost of works of municipalities and other public bodies. In 1950, the Municipalities and Other Authorities Finances Act put this arrangement on a permanent basis.

### *Municipalities Assistance Fund*

Under the *Municipalities and Other Authorities Finances Act 1950* (legislation which is now incorporated in part in the *Local Government Act 1958*), the amount of the annual fee for a motor driver's licence was increased from 5s. to 10s., and it was provided that the additional

revenue, less the cost of collection, should be paid to the Municipalities Assistance Fund. Payments are made from the Fund, firstly, towards the cost of works of municipalities and other public bodies, and secondly, towards the annual cost of the Country Fire Authority, in order to relieve country municipalities of the contributions to that body which they were formerly required to make. The municipal works, usually subsidized from the Fund, are the establishment and improvement of recreation reserves (including toilet blocks, dressing sheds, and fencing), children's playgrounds, and public comfort stations. The amount which may be allocated by the Minister from the Fund, in any one financial year, for subsidies towards the cost of works of municipalities and other public bodies was originally fixed at £100,000. The *Local Government (Municipalities Assistance Fund) Act 1959*, increased this to £150,000.

For the year ended 30th June, 1959, subsidies paid to various municipalities for works from the Municipalities Assistance Fund amounted to £100,675, while, for the same period, the amount contributed to the Country Fire Authority was £175,252.

#### *Country Roads Board Recoups and Grants*

Municipalities throughout Victoria undertake construction and maintenance work on main roads within their boundaries, on behalf of the Country Roads Board, under the provisions of the Country Roads Act. Expenditure on this work is incurred in the first instance by the municipalities, but, subject to adherence to prescribed conditions and satisfactory performance of the work, this expenditure is refunded to the municipalities by the Board. Each municipality undertaking main road maintenance work is required, however, to make an annual contribution to its cost and this is calculated by the Board, as a proportion of the total maintenance expenditure on each road for the particular year. The proportion payable varies according to the capacity of the municipality to pay, and the extent to which it has benefited from the work done.

For the purpose of making and maintaining certain rural roads (known as unclassified roads), municipalities also receive grants from the Country Roads Board from funds provided by the Commonwealth Government under the provisions of the Commonwealth Aid Roads Acts.

#### *Expenditure*

The ordinary revenue of a municipality is applied in providing works and services for its ratepayers. These works and services comprise construction and maintenance of roads, streets, and bridges, provision of sanitary, garbage, and other health services, the provision and maintenance of parks, gardens, and other council properties, repayment of moneys borrowed for permanent works and undertakings, and other sundry works and services.

#### *Borrowing Powers*

Extensive borrowing powers are conferred on municipalities by the Local Government Act to enable them to undertake large scale

works, or purchase expensive equipment in circumstances where it is advisable, on economic grounds, for the costs to be spread over a number of years. In practice, municipalities seldom borrow to the limit of their powers, and their capacity to borrow is limited by the general allocation of loan funds and the state of the loan market.

Money may be borrowed on the credit of the municipality for permanent works and undertakings (as defined in the Local Government Act), or to liquidate the principal moneys owing by the municipality on account of any previous loan. Under a municipality's ordinary borrowing powers, the amount borrowed shall not exceed the net annual valuation of all rateable property in the municipal district, as shown by the municipality's last audited financial statement; provided that, where money is borrowed for gas or electric supply, water, quarrying, or abattoirs, an additional amount may be borrowed, not exceeding one-half of the net annual value of all rateable property in the municipal district, as shown by the last audited financial statement.

Under extended borrowing powers, a municipality may borrow additionally, on the security of its income, an amount not exceeding five times the average amount of such income for the preceding three years. Income for this purpose excludes rates and licence fees.

Moneys borrowed under the ordinary or extended borrowing powers may be raised by the sale of debentures or by mortgage agreement. Repayment of any such loan may be made by periodical instalments of principal and interest, or by the creation of a sinking fund for the purpose of liquidation of the loan at the end of its term.

Before proceeding to borrow money for permanent works and undertakings, a municipality is required to prepare plans and specifications and an estimate of the cost of the works and undertakings to be carried out, together with a statement showing the proposed expenditure of the amount to be borrowed. This information is to be available for a specified period for inspection by any ratepayer. The Local Government Act provides that notice of intention to borrow shall be advertised, and also contains provisions under which a number of ratepayers may oppose the proposal to borrow and demand that it be submitted to a poll of ratepayers. Should a poll be held and a majority of ratepayers vote against the proposal, the loan is forbidden.

Subject to the approval of the Governor in Council, a municipality may also borrow, to a limited extent, from an adjoining municipality, by a mortgage or first charge over a proportion of its income, for the purpose of making or repairing roads leading into the district of the municipality which lends the money.

A municipality may also borrow by mortgage agreement or by the issue of debentures, on the security of a separate rate or special improvement charge, for the purpose of carrying out the works for which the rate was levied or the charge made.

In addition to the powers mentioned above, a municipality may borrow, by means of overdraft from its bankers, for any of the following purposes :—

- (a) Temporary accommodation on current account ;
- (b) private street construction ;
- (c) works carried out under the Country Roads and Commonwealth Aid Roads Acts ; or
- (d) purchase and acquisition of land, or the payment of compensation in connexion with certain specified schemes.

### *Accounts*

Every municipality is required to keep proper books of account in the form prescribed for use by all Victorian municipalities, and these must be balanced to the 30th September, in each year. The accounts must be audited by an auditor qualified in terms of the Local Government Act, and appointed by the Governor in Council.

### *Valuer General and the Valuers' Qualification Board*

The purpose of the *Valuation of Land Act* 1960 is the co-ordination of rating valuations for municipalities and other rating authorities and the improvement of the standard of such valuations. Valuations will still be carried out at municipal level, but an organization is being established to guide and assist valuers and councils.

The legislation provides for appointment of a Valuer General, a Deputy Valuer General and other necessary officers who are to be members of the Public Service within the Local Government Department. Provision is also made for a Valuers' Qualification Board of three members. The Board is empowered to conduct examinations of persons desiring to qualify themselves as valuers under the Act; to issue certificates of qualification; and to keep a Register of Qualified Valuers. The Board has discretion to grant certificates of qualification to certain persons practising as valuers when the legislation was enacted. Application must be made within twelve months of the commencement of the relevant part of the Act.

At 30th June, 1961, the only portions of the legislation which had been brought into operation were those dealing with the appointment and functions of the Valuer General and other officers, and the Valuers' Qualification Board.

### *Commission of Inquiry into Local Government in Victoria*

By an Order published in the *Government Gazette* of 16th September, 1959, the Governor in Council appointed a Commission to inquire into and report upon Local Government in Victoria with particular reference to the following matters :—

- (1) Any disabilities suffered by municipalities in Victoria which prevent or substantially hinder the efficient, economical, and satisfactory performance of their statutory functions;

- (2) whether the existing division of the State of Victoria into municipalities and/or municipal districts is such as to provide for efficient, economical, and satisfactory units of municipal government;
- (3) whether the Commission considers that any, and if so what, alterations should be made to municipalities as at present constituted or to the boundaries or subdivisions of the municipal districts of such municipalities to provide more efficient, economical, and satisfactory units of municipal government; and
- (4) whether the requirements of the Local Government Acts in relation to the constitution of new municipalities and the declaration of cities and towns are satisfactory, and, if not, what amendments would be required to make them satisfactory.

By 30th June, 1961, the Commission had largely completed the taking of evidence and expected to present its report in 1962.

#### *Municipal Association of Victoria*

All Victorian municipalities are members of the Municipal Association which began its existence in 1879 and was given statutory recognition by the *Municipal Association Act* 1907. The Association was established—to quote the preamble to that Act—“for the purpose of promoting the efficient carrying out of municipal government throughout the State of Victoria and of watching over and protecting the interests, rights, and privileges of Municipal Corporations”. The State Government has also found the Association a valuable organization, because it simplifies its task of dealing with the municipalities. The annual conference, which determines Association policy, is held in October. The Association also operates the Municipal Officers' Fidelity Guarantee Fund.

#### **Further References**

Reference to the historical development of Victorian local government administration will be found on pages 347-348 of the Victorian Year Book 1961.

#### **Melbourne City Council**

##### *Traffic Engineering Progress*

Traffic engineering deals exclusively with the planning and geometric design of streets and highways. It is a specialized field of civil engineering. Traffic engineers are basically interested in the functional and operational aspects of the streets as distinct from the structural aspects of pavement thickness and materials. The objective is to obtain the highest degree of efficiency from the various traffic facilities and attain fast, safe, and economical transportation of goods and persons. Two methods of approach are available: firstly, the rebuilding of existing inadequate, and in some instances, completely obsolete road systems; and secondly, the use of tried and tested traffic control methods, including an abundance of legal devices and restrictions on an existing street system.

The city traffic engineer is concerned mainly with the latter. His job is to obtain the best use of the present facilities as distinct from designing new highways in relatively open spaces. City work is often unspectacular and highly controversial.

In 1954, the Melbourne City Council created, within the framework of the City Engineer's Department, a traffic engineering branch with the clearly defined traffic functions of planning traffic surveys and studies, traffic design, traffic signals, traffic signs and markings. This was the first attempt in an Australian city to establish traffic engineering and attack the problem on a planned engineering basis. Although well established in the U.S.A., this was unique in this country. The first three years of operation aimed to put traffic engineering on a sound basis; to convince the public that engineering had a place in a traditionally police field and the actual practical job of improving traffic conditions and achieving tangible results. The success of these formative years is now obvious in that traffic engineering is well established, both in the results obtained and even in Acts of Parliament. In Victoria, this is due largely to the efforts of the Melbourne City Council.

The Council pioneered a number of important engineering principles which are now defined in law; at first, however, these were quite novel to Australian motorists. These principles include methods of pedestrians' control; special pedestrian signals (Walk, Don't Walk); scramble system; clearing periods; "diamond" or inside turn; the use of off-centre lane flow on an arterial route, firstly using rubber "witches hats" and, later, by overhead lane signals; the use of modern traffic signal systems including radio and cable co-ordination; overhead signals flashing amber and red; parking meters; and a parking sign system using the principle of red sign for parking limitations and green for allowable parking. Nearly all these involved extensive "selling" campaigns to interested bodies.

The engineering side of traffic control has grown to almost a quarter of a million pounds per annum expenditure (quite apart from the large capital works programme) since 1954. During the past five years, the Council has installed over 7,000 parking meters, costing nearly £350,000; constructed 26 channelization schemes costing £65,000; erected over 14,000 parking and traffic signs; erected 53 sets of traffic signals, eighteen pedestrian crossings and modernized many others for £130,000; purchased sites for off-street parking purposes, valued at £1½ mill.; and painted regularly 75 miles of traffic lines, 8,000 parking bays, and 70 marked intersections. This is quite apart from the improvements to certain main outlets, which in some cases, increased the capacity by up to 200 per cent. for very little capital outlay.

Since 1955, five Council engineers have been to the United States of America to keep abreast of the latest developments. Three attended the Yale traffic school.

The Council's work has also been largely instrumental in creating an active public interest in the traffic problem. The pioneering work is now completed and, bearing in mind that the Melbourne and Metropolitan Board of Works is now the planning and constructing

authority for metropolitan highways, and that the Traffic Commission now functions as a supervising authority on traffic matters and regulations (neither of these bodies existed in the 1954 traffic field), the Council's responsibility lies principally in the broad fields of parking, signals, highways, pedestrian facilities, channelization, restrictive legal measures and pressing for action on staggered hours, public transport improvement, bus terminals, heliports, &c.

The Council's course of action for the next four to five years has been determined and consists of an active off-street parking programme, incorporating a desirable objective of one 500-car facility in each city block and, if possible, 500 new car spaces per annum, with emphasis on the development of increased parking facilities at the Queen Victoria market, the old Fish Market and swinging basin area; the steady pursuance of the past policies of an expanding signal installation and modernization programme; more channelizing island systems at trouble spots; the pressing for early implementation of the Ring Road, and underground railway; the staggering of working hours; and development of a bus terminal.

All this is in addition to the bulk of routine engineering work which forms a major part of city traffic engineering.

### Further References

A description of the history and functions of the Melbourne City Council can be found on pages 359 to 362 of the Victorian Year Book 1961.

### Geelong

#### *History*

The history of Geelong dates back to 1802 when the area was first explored by white men. Lieutenant John Murray, R.N., of the brig *Lady Nelson*, arrived outside Port Phillip Bay early in that year, and an exploration of the Bay was made from a launch.

Later in the same year, Captain Matthew Flinders explored Corio Bay and climbed the You Yangs, which are situated some 15 miles to the north of where Geelong now stands. Flinders built a stone cairn on the top of one of the peaks which was later called Flinders Peak. The next white persons to visit the area were Hume and Hovell in 1824, and they found that the natives called the area Jillong and Coraiya. It was then some years before any settlement took place, but by 1835, there were definite signs that it had—one group had settled near the mouth of the Yarra (this was to become Melbourne), and another group at Geelong. There was considerable feeling and rivalry between the two settlements.

Geelong was proclaimed a Township on 28th November, 1838, by the Governor of New South Wales, the Hon. E. D. Thompson, following the acceptance of surveyor Robert Hoddle's plan of subdivision.

A magistrate was appointed from New South Wales in 1837, and in the same year, the first house was built at Geelong. The first town allotments were sold in 1839, and from this point, the township began to grow. A driving force was Dr. Alexander Thomson, who had come over from Tasmania (Van Diemen's Land) and was destined to become Geelong's first mayor.

In the meantime, Melbourne had also progressed and in 1842 was given local government. Geelong was granted this privilege in 1849. The Town of Geelong was incorporated by Special Act of Parliament of the New South Wales Legislative Council. This Act extended the Melbourne Act of 1842 to Geelong. The first meeting of the Corporation was held on 9th February, 1850, at which Dr. Alexander Thomson was elected mayor. The original area of the town extended over 20,000 acres, but because of the severance of portions into South Barwon District, Newtown and Chilwell, and Geelong West, the area of the municipality today is only 3,000 acres.

With a population of about 8,000 in the 1850's, Geelong had become firmly established and it continued to prosper and develop. Parks were created, roads made, and drainage schemes carried out. The Geelong Harbor Trust was incorporated in 1905, and the Water Trust constituted in January, 1908. On the 8th December, 1910, Geelong was proclaimed a City, and it was already showing signs that it would become the leading provincial city in Victoria.

By 1925, the population of the Geelong area had reached 40,000, and it was at this time that rapid development took place, because of the decision of the Ford Motor Company to establish its headquarters at Geelong. This was the beginning of the era of heavy industry. There had been woollen mills, cement works, salt works and others, but more large industries were now being attracted to the area.

The greatest development in Geelong has come since the end of the Second World War. From a population of 51,000 in 1945, it has now grown to 100,000. Many heavy and large industries have been established, and with these has come the rapid development of the port and other utilities and services.

### *Geelong and District Joint Planning Scheme*

Geelong is situated on Corio Bay, an arm of Port Phillip Bay, and is 45 miles south-west of Melbourne by road or rail. It comprises the Cities of Geelong, Geelong West, Newtown and Chilwell, and the Shires of Corio, South Barwon, Bellarine, Barrabool, and Bannockburn—an area of some 26 square miles generally referred to as Greater Geelong.

The Geelong and District Town Planning Scheme was commenced in 1946 by the creation of a Joint Committee of representatives of the Municipalities of Greater Geelong and the appointment of town planners. The Joint Committee, in conjunction with town planning consultants and with the full co-operation of the municipal and shire councils, and other public authorities, prepared a comprehensive Joint Planning Scheme which was exhibited publicly in 1955.



Following the exhibition period, objections to the Scheme were received and examined. The Joint Committee heard representatives of the objectors and made alterations to the Scheme in accordance with the decisions reached.

In June, 1959, the proposed Scheme, consisting of eighteen plans and an ordinance were presented to the Minister for Local Government who submitted it to the Town and Country Planning Board for examination. This examination is still proceeding with progressive amendments being made. The Joint Committee will administer the Scheme for twelve months following approval by the Governor in Council, after which time it will be administered by local municipal councils who may then exercise their rights under the Scheme to submit proposals to the Town and Country Planning Board.

### *Pattern of the Plan*

The plan envisages the orderly development of Greater Geelong with co-ordinated extension of services as opposed to ribbon development and suburban sprawl. To achieve this end, the general zonings of Agricultural, Residential, Commercial, and Industrial are grouped into further zonings<sup>1</sup> to allow for transition from one zone to another as development requires. There are also zonings covering uses by municipalities and public authorities.

On the periphery of the Scheme lie the original farming hamlets of Batesford in the north-west, Ceres to the south-west, Grovedale to the south and Leopold in the east. These are now regarded as potential dormitory towns.

If settled on the basis of fifteen persons per acre, the current and potential residential zonings can accommodate 200,000 persons, and leave adequate land for industry. The planned distribution of industrial areas in relation to residential areas and the existing and proposed road system, together with railways and the sea board, are directed at the efficient movement of population and products. The relationship of the road system to satellite towns on the Bellarine Peninsula and in the Western District indicates the economic and strategic importance of the area covered by the Scheme.

## *Statistics of Local Government*

### **General**

Municipal finance statistics are compiled from statements of accounts and returns furnished by the local councils.

As the Metropolitan Area was re-defined in 1954, information concerning municipalities in the Metropolitan Area and municipalities outside the Metropolitan Area is not comparable with that for years prior to 1953-54.

For statistical purposes, the Metropolitan Area is as set out in the table on pages 120-121. In compiling municipal finance statistics, however, it is not practicable to dissect those municipalities which lie

only partly within this area. Accordingly, in municipal tables in this section, the classification "Other Metropolitan Municipalities" varies from the defined area as follows :—

1954-55 to 1956-57—Includes the whole of the Shires of Eltham, Fern Tree Gully, Frankston and Hastings, Lillydale, and Werribee (as constituted prior to severance of Shire of Altona), and excludes the whole of the Shires of Bulla, Melton, and Whittlesea.

1957-58 to 1958-59—As for 1954-55 to 1956-57, with the exception that the new Shire of Altona is included, and the reduced and redefined Shire of Werribee is transferred to "Municipalities outside the Metropolitan Area".

At 30th September, 1959, in municipalities throughout the State, there were 2,259 councillors, namely, 33 in the City of Melbourne, 492 in 41 other metropolitan municipalities, and 1,734 in 163 municipalities outside the Metropolitan Area.

#### Properties Rated, Loans Outstanding, &c.

In the following table, the number of properties rated, the value of rateable property, General Account income, the amount of loans outstanding, &c., are shown for each of the years 1954-55 to 1958-59 :—

#### VICTORIA—LOCAL GOVERNMENT AUTHORITIES: PROPERTIES RATED, LOANS OUTSTANDING, ETC.

Year Ended 30th September—	Number of Rate- payers	Number of Properties Rated	Value of Rateable Property		General Account Income	Loans Out- standing
			Net Annual Value	Estimated Capital Improved Value		
	'000	'000	£'000	£'000	£'000	£'000
CITY OF MELBOURNE						
1955 .. ..	34	36	7,914	158,286	1,988	9,001
1956 .. ..	32	35	8,766	175,313	2,286	9,751
1957 .. ..	32	35	9,526	190,511	2,757	10,751
1958 .. ..	33	36	10,422	208,443	2,902	11,838
1959 .. ..	35	36	11,299	225,973	3,006	12,630
OTHER METROPOLITAN MUNICIPALITIES*						
1955 .. ..	539	592	42,696	826,053	8,742	9,635
1956 .. ..	571	592	47,325	918,426	10,143	9,992
1957 .. ..	587	608	55,077	1,088,129	11,854	11,355
1958 .. ..	617	614	60,133	1,193,886	12,664	12,442
1959 .. ..	650	629	67,373	1,328,536	14,220	14,078
MUNICIPALITIES OUTSIDE METROPOLITAN AREA						
1955 .. ..	311	401	34,241	682,957	8,466	6,359
1956 .. ..	326	414	39,314	785,849	9,676	6,900
1957 .. ..	339	424	42,703	853,875	10,865	7,918
1958 .. ..	358	438	46,097	918,812	11,860	9,818
1959 .. ..	384	450	50,509	1,005,216	12,871	10,945
TOTAL MUNICIPALITIES						
1955 .. ..	884	1,029	84,851	1,667,296	19,196	24,995
1956 .. ..	929	1,041	95,405	1,879,588	22,105	26,643
1957 .. ..	958	1,067	107,306	2,132,515	25,476	30,024
1958 .. ..	1,008	1,088	116,652	2,321,141	27,426	34,098
1959 .. ..	1,069	1,115	129,181	2,559,725	30,097	37,653

\* See above definition.

### Municipal Revenue and Expenditure

The following tables show, for each of the years ended 30th September, 1955 to 1959, the revenue and expenditure of municipalities in Victoria.

The first table gives particulars of the ordinary services provided by municipalities, while the second table shows details of the business undertakings under municipal control. Transactions presented are generally on a revenue basis.

Particulars relating to Loan Accounts, Private Street Accounts, and Special Improvement Charge Accounts are excluded.

#### VICTORIA—LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES : REVENUE AND EXPENDITURE (£'000)

Year Ended 30th Sep- tember—	Revenue				Expenditure			
	Metropolitan Municipalities*		Municipalities outside Metro- politan Area	Total	Metropolitan Municipalities*		Municipalities outside Metro- politan Area	Total
	City of Mel- bourne	Other			City of Mel- bourne	Other		
1955 ..	1,988	8,742	8,466	19,196	2,007	8,779	8,423	19,209
1956 ..	2,286	10,143	9,676	22,105	2,306	10,332	9,973	22,611
1957 ..	2,757	11,854	10,865	25,476	2,683	11,720	10,897	25,300
1958 ..	2,902	12,664	11,860	27,426	2,868	12,594	11,748	27,210
1959 ..	3,006	14,220	12,871	30,097	2,985	14,225	12,757	29,967

\* See definition on pages 381-382.

#### VICTORIA—LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS : REVENUE AND EXPENDITURE (£'000)

Year Ended 30th Sep- tember—	Revenue				Expenditure			
	Metropolitan Municipalities*		Municipalities outside Metro- politan Area	Total	Metropolitan Municipalities*		Municipalities outside Metro- politan Area	Total
	City of Mel- bourne	Other			City of Mel- bourne	Other		
1955 ..	3,156	4,799	815	8,770	3,139	4,710	762	8,611
1956 ..	3,582	5,709	704	9,995	3,536	5,583	681	9,800
1957 ..	4,164	6,542	756	11,462	4,086	6,300	718	11,104
1958 ..	4,563	7,504	954	13,021	4,494	7,130	917	12,541
1959† ..	4,994	9,089	1,159	15,242	5,005	8,718	1,092	14,815

\* See definition on pages 381-382.

† Includes business undertakings excluded in previous years, viz :—Quarries, iceworks, and reinforced concrete pipe culvert works.

### General Account

The ordinary revenue of a municipality, consisting of rates, Government grants, &c., is payable into the General Account, and such Account is applied towards the payment of all expenses incurred in respect of administration, debt services, ordinary municipal services, &c.

Details of the principal items of revenue during the year ended 30th September, 1959, are given below :—

**VICTORIA—LOCAL GOVERNMENT AUTHORITIES :  
ORDINARY SERVICES : REVENUE, 1958-59  
(£'000)**

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
<b>Taxation—</b>				
Rates (Net) .. .. .	1,620	10,345	8,276	20,241
Penalties .. .. .	5	40	25	70
<b>Licences—</b>				
Dog .. .. .	1	46	40	87
Health, Dairy, Slaughtering, and Noxious Trades ..	2	18	10	30
Other .. .. .	2	7	11	20
<b>Total Taxation ..</b>	<b>1,630</b>	<b>10,456</b>	<b>8,362</b>	<b>20,448</b>
<b>Public Works and Services—</b>				
Sanitary and Garbage Services	24	751	596	1,371
<b>Council Properties—</b>				
Parks, Gardens, Baths, and Other Recreational Facilities	71	165	137	373
Markets .. .. .	341	93	128	562
Halls .. .. .	27	85	94	206
Libraries .. .. .	†	8	22	30
Weighbridges .. .. .	20	2	14	36
Sale of Materials .. .. .	15	52	170	237
Plant Hire .. .. .	..	318	1,477	1,795
Grazing Fees .. .. .	..	1	5	6
Pounds .. .. .	†	2	7	9
Other .. .. .	148	159	139	446
Street Construction .. .. .	51	523	530	1,104
Private Street Supervision ..	..	182	25	207
<b>Other—</b>				
Car Parking .. .. .	283	34	..	317
Building Fees .. .. .	15	115	33	163
Miscellaneous .. .. .	19	157	61	237
<b>Total Public Works and Services ..</b>	<b>1,014</b>	<b>2,647</b>	<b>3,438</b>	<b>7,099</b>
<b>Government Grants—</b>				
Roads .. .. .	6	36	162	204
Libraries .. .. .	10	132	72	214
Parks, Gardens, &c. .. .. .	..	10	129	139
Infant Welfare Centres .. ..	9	112	109	230
River Works .. .. .	..	..	16	16
Licences Equivalent .. .. .	8	14	35	57
Other .. .. .	..	184	129	313
<b>Total Government Grants</b>	<b>33</b>	<b>488</b>	<b>652</b>	<b>1,173</b>
<b>Transfers from Business Under-</b>				
<b>takings .. .. .</b>	<b>47</b>	<b>247</b>	<b>31</b>	<b>325</b>
Police Court Fines .. .. .	123	34	9	166
Other .. .. .	159	348	379	886
<b>Total Revenue ..</b>	<b>3,006</b>	<b>14,220</b>	<b>12,871</b>	<b>30,097</b>

\* See definition on pages 381-382.

† Under £500.

After exclusion of an amount of £640,643 transferred from other funds, the net General Account income during 1958-59 was £29,455,881. Of this total, 69·4 per cent. was derived from taxation (68·9 per cent. from rates and penalties, and 0·5 per cent. from licences); 24·1 per cent. from public works and services; 1·1 per cent. from transfers from business undertakings; 4·0 per cent. from government grants; and 1·4 per cent. from other sources. The total amount collected from taxation (£20,447,453) was equivalent to £7 6s. 5d. per head of population or to £19 2s. 7d. per ratepayer.

Details of the principal items of expenditure from the General Account during the year ended 30th September, 1959, are set out below :—

VICTORIA—LOCAL GOVERNMENT AUTHORITIES :  
ORDINARY SERVICES : EXPENDITURE, 1958-59  
(£'000)

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
General Administration—				
Pay-roll Tax .. .. .	36	133	94	263
Other .. .. .	605	1,770	1,833	4,208
Total General Administration	641	1,903	1,927	4,471
Debt Services (Excluding Business Undertakings)—				
Interest—				
Loans .. .. .	381	428	373	1,182
Overdraft .. .. .	..	20	79	99
Redemption .. .. .	156	677	737	1,570
Other .. .. .	3	33	6	42
Total Debt Services ..	540	1,158	1,195	2,893
Public Works and Services—				
Roads, Streets, and Bridges ..	365	4,415	4,653	9,433
Street Lighting .. .. .	..	436	175	611
Health—				
Sanitary and Garbage Services	189	1,417	632	2,238
Other .. .. .	100	750	429	1,279
Council Properties—				
Parks, Gardens, Baths, and Other Recreational Facilities	287	1,216	640	2,143
Markets .. .. .	152	61	74	287
Halls .. .. .	94	329	209	632
Libraries .. .. .	21	266	197	484
Weighbridges .. .. .	10	1	8	19
Materials .. .. .	..	2	70	72
Plant .. .. .	119	669	1,058	1,846
Grazing Expenses .. .. .	..	..	6	6
Pounds .. .. .	†	17	20	37
Other .. .. .	23	363	213	599
Other—				
Car Parking .. .. .	83	70	6	159
River Works .. .. .	..	1	17	18
Miscellaneous .. .. .	2	100	57	159
Total Public Works and Services .. .. .	1,445	10,113	8,464	20,022

\* See definition on pages 381-382.

† Under £500.

**VICTORIA—LOCAL GOVERNMENT AUTHORITIES : ORDINARY  
SERVICES EXPENDITURE, 1958-59—continued**  
(£'000)

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
<b>Grants—</b>				
Country Roads Board ..	..	108	591	699
Fire Brigades ..	72	385	1	458
Hospitals and Other Charities ..	13	45	38	96
Other .. ..	101	265	167	533
<b>Total Grants ..</b>	<b>186</b>	<b>803</b>	<b>797</b>	<b>1,786</b>
<b>Other .. ..</b>	<b>173</b>	<b>248</b>	<b>374</b>	<b>795</b>
<b>Total Expenditure ..</b>	<b>2,985</b>	<b>14,225</b>	<b>12,757</b>	<b>29,967</b>

\* See definition on pages 381-382.

After exclusion of an amount of £634,593 transferred to other funds, the net General Account expenditure during 1958-59 was £29,332,000. Of this total, 15·2 per cent. was for administration ; 9·9 per cent. for debt services ; 12·0 per cent. for health services ; 7·3 per cent. for parks, gardens, &c. ; 32·2 per cent. for roads, streets, &c. ; 6·3 per cent. for plant and equipment ; 10·5 per cent. for other public works and services ; 6·1 per cent. for grants and contributions ; and 0·5 per cent. for miscellaneous items.

### Municipal Administrative Costs

Particulars of the principal items of expenditure, other than Pay-roll Tax, during each of the years ended 30th September, 1955, to 1959, in respect of general municipal administration, are given in the following table :—

**VICTORIA—COST OF MUNICIPAL ADMINISTRATION**  
(£'000)

Particulars	Year Ended 30th September—				
	1955	1956	1957	1958	1959
Salaries* .. ..	1,906	2,350	2,649	2,875	3,108
Mayoral and Presidential Allowances .. ..	62	72	77	80	87
Audit Expenses .. ..	21	22	25	28	33
Dog Registration Expenses ..	27	28	33	42	48
Election Expenses .. ..	24	28	28	30	26
Insurances .. ..	165	174	235	328	378
Legal Expenses .. ..	27	49	64	68	51
Printing, Stationery, Advertising, Postage, Telephone ..	291	289	329	346	389
Other .. ..	76	94	101	91	88
<b>Total .. ..</b>	<b>2,599</b>	<b>3,106</b>	<b>3,541</b>	<b>3,888</b>	<b>4,208</b>

\* Including cost of valuations and travelling expenses, but excluding health officers' salaries, which are included with "Health—Other" on page 385.

### Municipal Business Undertakings

In Victoria, during 1958-59, 24 municipal councils conducted electricity supply undertakings. These constituted the principal trading activities of municipalities. Other trading activities included water supply, abattoirs, hydraulic power, quarries, iceworks, and reinforced concrete pipe and culvert works, but, relatively, these were not extensive.

The tables which follow show, for the year ended 30th September, 1959, revenue and expenditure of the various types of local authority business undertakings :—

#### VICTORIA—LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS : REVENUE, 1958-59 (£'000)

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
Water Supply— Rates, Sale of Water, &c. ..	..	110	167	277
Electricity— Charges for Services and Sales of Products, &c. .. ..	4,610	8,779	622	14,011
Abattoirs— Charges for Services and Sales of Products, &c. .. ..	347	139	191	677
Other†— Charges for Services and Sales of Products, &c. .. ..	37	61	179	277
Total Revenue ..	4,994	9,089	1,159	15,242

#### VICTORIA—LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS : EXPENDITURE, 1958-59 (£'000)

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
Water Supply— Working Expenses .. ..	..	105	88	193
Depreciation .. ..	..	..	16	16
Debt Charges .. ..	..	1	34	35
Other .. ..	..	1	8	9
Total Water Supply ..	..	107	146	253

\* See definition on pages 381-382.

† Includes hydraulic power, quarries, iceworks, and reinforced concrete pipe and culvert works.

VICTORIA—LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS: EXPENDITURE, 1958-59—*continued*  
(£'000)

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
Electricity—				
Working Expenses .. ..	3,988	7,719	493	12,200
Depreciation .. ..	177	173	15	365
Debt Charges .. ..	107	279	79	465
Other .. ..	295	254	16	565
Total Electricity ..	4,567	8,425	603	13,595
Abattoirs—				
Working Expenses .. ..	324	90	131	545
Depreciation .. ..	15	7	4	26
Debt Charges .. ..	34	14	27	75
Other .. ..	36	10	22	68
Total Abattoirs ..	409	121	184	714
Other†—				
Working Expenses .. ..	24	51	136	211
Depreciation .. ..	2	1	9	12
Debt Charges .. ..	..	1	11	12
Other .. ..	3	12	3	18
Total Other .. ..	29	65	159	253
Total Expenditure ..	5,005	8,718	1,092	14,815

\* See definition on pages 381-382.

† See footnote on page 387.

### Municipal Loan Finance

#### *Municipal Loan Receipts*

The following tables show loan receipts of municipalities exclusive of redemption loans and loans raised for works in private streets.

The first table details the loan raisings for ordinary services and business undertakings during the year ended 30th September, 1959, and, in the second table, particulars of total loan receipts for each of the years 1954-55 to 1958-59 are shown. It will be seen that, during the years 1956-57 to 1958-59, increased recourse to loan moneys has been made by municipalities.



VICTORIA—LOCAL GOVERNMENT AUTHORITIES :  
LOAN RECEIPTS, 1958-59

(Excluding Redemption Loans)

(£'000)

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
Loan Raisings for—				
Ordinary Services .. ..	856	1,807	1,558	4,221
Business Undertakings—				
Water Supply .. ..	..	..	279	279
Electricity .. ..	364	264	59	687
Abattoirs .. ..	20	..	15	35
Other Receipts (Government Grants, Recoups, &c., to Loan Fund) ..	902	123	136	1,161
Total Receipts ..	2,142	2,194	2,047	6,383

\* See definition on pages 381-382.

VICTORIA—LOCAL GOVERNMENT AUTHORITIES :  
LOAN RECEIPTS

(Excluding Redemption Loans)

(£'000)

Year Ended 30th September—	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
1955 .. ..	530	1,772	1,405	3,707
1956 .. ..	780	1,212	1,248	3,240
1957 .. ..	1,392	1,862	1,730	4,984
1958 .. ..	2,134	2,226	2,269	6,629
1959 .. ..	2,142	2,194	2,047	6,383

\* See definition on pages 381-382.

*Municipal Loan Expenditure*

Details of the principal items of expenditure from loan funds, exclusive of expenditure on private streets, during the year ended

30th September, 1959, are given in the first of the following tables. In the second table, particulars of total loan expenditure for each of the years 1954-55 to 1958-59 are shown.

**VICTORIA—LOCAL GOVERNMENT AUTHORITIES :  
LOAN EXPENDITURE, 1958-59**  
(£'000)

Particulars	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
Ordinary Services—				
Roads, Streets, and Bridges ..	201	1,327	956	2,484
Council Properties—				
Parks, Gardens, Baths, and Other Recreational Facilities	52	93	107	252
Markets .. .. .	308	78	44	430
Plant .. .. .	17	41	200	258
Other .. .. .	57	241	344	642
Infant Welfare Centres ..	1	13	21	35
Pre-School (Crèches, &c.) ..	19	3	..	22
Other .. .. .	145	15	39	199
Total Ordinary Services	800	1,811	1,711	4,322
Business Undertakings—				
Water Supply .. .. .	..	..	299	299
Electricity .. .. .	869	237	58	1,164
Abattoirs .. .. .	21	..	23	44
Total Business Undertakings .. .. .	890	237	380	1,507
Total Expenditure ..	1,690	2,048	2,091	5,829

\* See definition on pages 381-382.

VICTORIA—LOCAL GOVERNMENT AUTHORITIES :  
LOAN EXPENDITURE

(£'000)

Year Ended 30th September—	Metropolitan Municipalities*		Municipalities outside Metropolitan Area	Total
	City of Melbourne	Other		
1955 .. .. .	1,137	1,275	1,376	3,788
1956 .. .. .	1,305	1,586	1,337	4,228
1957 .. .. .	1,665	1,831	1,508	5,004
1958 .. .. .	1,921	1,994	2,096	6,011
1959 .. .. .	1,690	2,048	2,091	5,829

\* See definition on pages 381-382.

At 30th September, 1959, there were unexpended balances in Loan Accounts amounting to £3,046,635.

*Municipal Loan Liability*

The loan liability of the municipalities in Victoria, at the end of each of the five years 1954-55 to 1958-59, is given below :—

VICTORIA—MUNICIPAL LOAN LIABILITY

At 30th September—	Due to—		Gross Loan Liability	Accumulated Sinking Funds	Net Loan Liability	
	Government*	Public			Amount	Per Head of Population
	£'000					£ s. d.
1955 ..	395	24,600	24,995	2,315	22,680	8 18 2
1956 ..	409	26,234	26,643	2,580	24,063	9 3 4
1957 ..	475	29,549	30,024	2,889	27,135	10 1 8
1958 ..	637	33,461	34,098	3,160	30,938	11 4 6
1959 ..	858	36,795	37,653	3,145	34,508	12 3 10

\* Excluding liability to Country Roads Board.

**Construction of Private Streets**

The council of any municipality may construct roads or streets on private property, and may also construct, on land of the Crown or of any public body, means of back access to, or drainage from, property adjacent to such land. The cost of this work is recoverable

from the owners of adjoining or neighbouring properties where, in the opinion of the council, the work performed accrues to the benefit of those properties. At the request of any owner, the amount apportioned as his total liability may be made payable by 40 or, if the council so directs, 60 quarterly instalments, bearing interest on the portion that, from time to time, remains unpaid.

For the purpose of defraying the costs and expenses of work for which any person is liable to pay by instalments, the council may, on the credit of the municipality, obtain advances from a bank by overdraft on current account, or borrow money by the issue of debentures, but such borrowings shall not exceed the total amount of instalments payable.

The following table details the receipts and expenditure, for 1958–59, on the Private Street Account for areas outside that controlled by the Melbourne City Council (which has no such account) :—

**VICTORIA—LOCAL GOVERNMENT AUTHORITIES : PRIVATE STREET ACCOUNT : RECEIPTS, EXPENDITURE, ETC.,**  
1958–59  
(£'000)

Particulars—	Metropolitan Municipalities (Excluding City of Melbourne)*	Municipalities outside Metropolitan Area	Total Victoria
<b>Receipts—</b>			
Loans .. .. .	340	205	545
Bank Overdraft (Increase) .. .. .	156	..	156
Owners' Contributions .. .. .	2,360	397	2,757
Other .. .. .	170	15	185
<b>Total Receipts .. .. .</b>	<b>3,026</b>	<b>617</b>	<b>3,643</b>
<b>Expenditure—</b>			
Works .. .. .	2,308	457	2,765
Bank Overdraft (Decrease) .. .. .	..	58	58
Debt Charges—			
Redemption of Loans .. .. .	147	34	181
Interest on Loans .. .. .	78	22	100
Interest on Overdraft .. .. .	65	12	77
Other .. .. .	2	..	2
Other .. .. .	220	53	273
<b>Total Expenditure .. .. .</b>	<b>2,820</b>	<b>636</b>	<b>3,456</b>
<b>Cash in Hand or in Bank at 30.9.1959 ..</b>	<b>710</b>	<b>79</b>	<b>789</b>
<b>Bank Overdraft at 30.9.1959 .. .. .</b>	<b>2,328</b>	<b>328</b>	<b>2,656</b>
<b>Loan Indebtedness at 30.9.1959 .. .. .</b>	<b>1,571</b>	<b>501</b>	<b>2,072</b>

\* See definition on pages 381-382.

Details of receipts and expenditure of the private street account including the net increase or decrease in bank overdraft, during each of the years 1954-55 to 1958-59 are shown in the following table :—

VICTORIA—LOCAL GOVERNMENT AUTHORITIES : PRIVATE STREET ACCOUNT : RECEIPTS AND EXPENDITURE  
(£'000)

Particulars—	Year Ended 30th September—				
	1955	1956	1957	1958	1959
Receipts—					
Loans .. .. .	561	241	286	339	545
Bank Overdraft (Increase) ..	..	601	686	84	98
Owners' Contributions ..	1,849	2,095	2,591	2,660	2,757
Other .. .. .	50	67	48	168	185
Total Receipts ..	2,460	3,004	3,611	3,251	3,585
Expenditure—					
Works .. .. .	2,044	2,876	3,211	2,606	2,765
Bank Overdraft (Decrease) ..	30	..	..	..	..
Debt Charges—					
Redemption of Loans ..	90	102	120	152	181
Interest on Loans ..	49	62	88	85	100
Interest on Overdraft ..	29	55	65	103	77
Other .. .. .	..	..	..	..	2
Other .. .. .	20	48	152	169	273
Total Expenditure	2,262	3,143	3,636	3,115	3,398

**Length of Roads and Streets**

The following table shows the estimated length of all roads and streets in the State in the year 1959. The mileage of roads, &c., (excluding mileage of State highways, Tourists' roads and Forest roads, which was supplied by the Country Roads Board) has been compiled from information furnished by all municipal authorities.

VICTORIA—LENGTH OF ALL ROADS AND STREETS AT  
30TH SEPTEMBER, 1959  
(Miles)

Type of Road or Street	State Highways	Tourists' Roads	Forest Roads	Other Streets and Roads	Total
Wood or stone .. .. .	..	..	..	106	106
Portland cement concrete ..	..	..	..	159	159
Asphaltic concrete and sheet asphalt ..	7	..	..	432	439
Tar or bitumen surface seal over tar or bitumen penetrated or water-bound pavements .. .. .	3,337	165	73	13,691	17,266
Water-bound macadam, gravel, sand, and hard loam pavements ..	500	247	303	31,688	32,738
Formed, but not otherwise paved ..	..	3	2	23,398	23,403
Surveyed roads (not formed) which are used for general traffic ..	1	..	..	26,489	26,490
Total .. .. .	3,845	415	378	95,963	100,601

*Semi-Governmental Authorities\****Country Roads Board***Road Research*

The scope and extent of research in field and laboratory into the properties, use, and discovery of materials for road and bridge works is steadily increasing. The Board has for many years maintained a Materials Research Division, and testing officers are on the staff of each field division. Routine tests are made on stones and gravels to be used for road pavements or concrete aggregates, and on tars and bitumens.

The Board has radar and electric speed meters for traffic research, uses strain gauges to measure stresses in bridge members and has installed porous blocks underneath pavements to investigate changes in moisture content. A portable seismic instrument is employed to explore geological conditions where deep cuttings are involved and to locate stone deposits. The use of this instrument has enabled prediction of depths and types of material beneath the surface without the necessity of test drilling or sinking of shafts.

*Traffic Engineering*

Highway engineering today depends increasingly on a careful, scientific analysis of both material and human factors. The community has come to depend more and more upon road transportation so that, in recent years, "traffic engineering" has emerged, in which scientific methods are applied to the study of road usage. (See also pages 738-739.) A brief summary of some of the techniques used follows:—

- (1) A basic factor to be determined in all road design and planning is the volume of traffic which will use the road.
- (2) For every project under the Board's control, pavement and bridge widths are determined from a prediction of traffic volumes and the thickness of a road pavement is determined from the volume of commercial vehicle traffic. Economic studies require a knowledge of the numbers of the various types of vehicles on each road. Information of the various turning movements affects intersection design. Much of the basic information is collected by observers at regular counts throughout the whole system of State highways and main roads.
- (3) Mechanical counters provide further information where less detail is required. The simpler mechanical counters give the total traffic volume over a pre-determined period. The more complex models record volumes at 15-minute intervals over long periods, and require attention only once each fortnight.
- (4) Increases in population, vehicle ownership, and vehicle usage have led to rapid growth of traffic in the post-war years. The prediction of traffic growth on

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\* This section includes only those semi-governmental authorities having close associations with local government.

individual roads requires the checking of several methods of estimation. Some examples of volume estimates and predictions are :—

- (a) Princes Highway just north of Geelong : 1960 average daily traffic, 7,500 vehicles. This is increasing annually by 500 vehicles per day.
- (b) Princes Highway near Springvale : 1960 average daily traffic, 25,000 vehicles. This is increasing annually by 2,500 vehicles per day.
- (5) The techniques of traffic engineering are used in the planning and design of roads to meet the requirements of present and future traffic. The traffic-carrying capacity of new roads and intersections can be calculated, delays to traffic can be predicted, and even accident rates can be estimated for many new road facilities prior to construction. Conclusions gained from studies of human abilities are also applied to the design of road signs and other traffic control devices.

### *By-Pass Roads*

An important enactment passed by Parliament in June, 1956, was the Country Roads Act, part of which deals with "by-pass roads", sometimes referred to as "freeways". The particular feature of a by-pass road is that no access is permitted from property fronting on to the by-pass road, or from side roads.

Any roads which cross the route of a by-pass road are taken over or under the by-pass route, and no gates or entrances exist in the boundary fences. No animals are permitted on a by-pass road, unless confined in a motor vehicle lawfully using the road. Drivers using by-pass roads, therefore, have no worries regarding wandering stock or intersecting traffic, as neither of these hazards exist on such roads. In all countries where freeways have been built, the accident records of this new type of road facility are greatly superior to the accident records of conventional roads or streets.

A by-pass road may serve as a direct route for traffic between large centres of population and industry, or to prevent through traffic cluttering up the main street of a township on a major route. This makes for more economical transportation, since times of travel are shortened and stops are eliminated. Local traders in the town are protected, as no business premises are permitted along a by-pass road. Shopping in the town is safer and more convenient. If travellers desire to make purchases during their journey, the alternative route through the town is still available to them.

The first by-pass roads constructed were at Whitelaw, Werribee, and Frankston. That at Whitelaw is a two-lane facility 2·4 miles long providing a new link in the route of the South Gippsland highway approaching Korumburra, and avoiding the necessity to pass over two railway level crossings. The Werribee by-pass road, 6½ miles long, is a four-lane facility on an alternative route to that of the Princes Highway through the main street of the township. Frankston by-pass road, with two lanes in the first stage, will enable some of the traffic to

Mornington Peninsula to by-pass the business centre of Frankston, and will also enable traffic to and from Frankston to avoid a congested section of the Nepean Highway in Chelsea.

Additional projects include the Hume Highway by-pass road from south of Chiltern to Barnawartha which, by providing an arterial route to the east of the railway line, will enable the closing of seven railway level crossings, and a by-pass road at Craigieburn, which will serve to eliminate the existing railway level crossing.

By-pass roads are relatively expensive as not only must pavements suitable for high speed traffic be provided, but also bridges are required to take traffic on roads which cross the by-pass route, and specially designed interchanges at the beginning and end of the by-pass route are necessary to cope with traffic to and from the by-pass road intersecting or merging with the ordinary roads.

The cost of the Werribee by-pass road is nearly £1 mill. Its two carriageways each of two lanes (designed so that an additional lane may be added to each carriageway when required) are separated by a depressed median strip 30 feet wide, which will be grassed and planted with shrubs to provide a screen against head light glare. The pavements consist of consolidated granitic sand obtained from forest reserves in the You Yangs. Initially, the surface will be protected with a sprayed bituminous seal coat, but the design provides for the addition of an asphalt carpet 3 inches thick which will be added in stages as required. The project contains nine bridges, consisting of twin bridges over the Werribee River, two grade separation structures at the end interchanges, three overpass structures carrying intersecting roads, and two minor bridges over the Melbourne and Metropolitan Board of Works main sewer.

Estimated traffic when opened is 7,300 vehicles per day with peak holiday traffic of 17,500 while the estimated traffic in five years' time is 11,500 vehicles per day with a peak day of 27,000.

### *King's Bridge*

In Victoria, the construction of a bridge over the River Yarra at King-street has been the subject of discussion for many years. In 1954, the Minister for Public Works requested the Country Roads Board to report concerning the river crossing and any desirable approach facilities.

In 1955, the Board's proposals were approved in principle providing for :—

- (a) Two low-level outer carriageways, each with two lanes and a footway across the river for local traffic movements ;
- (b) a central four-lane roadway commencing at the north bank of the river and rising over the St. Kilda and Port Melbourne railway lines and continuing as an elevated roadway into Hanna-street, south of the City-road intersection; and
- (c) a separate overpass to carry tram and road traffic in Flinders-street above the King-street approach of the main structure.



The Country Roads Board was appointed the constructing authority, the cost of the project being shared by the State Government of Victoria (65 per cent), the Melbourne City Council (30 per cent.), and the South Melbourne City Council (5 per cent.).

The Board prepared specifications for the design and construction work and invited tenders in Australia, the United Kingdom, and in the United States of America. A tender was accepted in September, 1957. Over most of the works area, silts and soft clays extend to a depth of some 100 feet below ground level. The approved design of substructure provided for concrete-lined cylinders, of diameter 5 feet, through the silts and clays to the underlying Silurian siltstones. These cylinders were later filled with concrete. In all, 123 cylinders were sunk to an average depth of 130 feet, the deepest being 180 feet. The cylinders were capped with heavy concrete beams supporting columns of diameter 3 feet which, in turn, carry crossheads forming supports for the superstructure. The main girders are fabricated from high tensile steel-plate, specially rolled in Australia for the project. Girders vary in length from 64 feet to 161 feet and, in weight, from 4 to 29 tons.

On the Flinders-street overpass, the girders, except for three spans over and adjacent to King-street, are of pre-stressed reinforced concrete. The deck is of reinforced concrete surfaced with asphaltic pavement.

Completed during 1961, King's Bridge is now carrying upwards of 45,000 vehicles a day, and estimates indicate that the community will, in from two to four years, save in vehicle operating costs the total cost of the project—some £4 mill.

### *Classification of Roads*

The Board was given power in 1912 to declare any existing road as a "main" road, to improve or reconstruct it, to construct new main roads after investigation, and to arrange for works both of construction and maintenance to be carried out under supervision of municipal engineers. In succeeding years, loan moneys continued to be made available to the Board for permanent works.

The *Developmental Roads Act* 1918 empowered the Board to declare other rural roads as developmental roads, when considered sufficiently important to the development of the State in providing farmers with access to railway stations or to main roads. Construction was financed from loan moneys. The funds under this Act were exhausted by 1937, when the length of declared developmental roads was 2,290 miles, but additional sources of revenue derived from Commonwealth taxes on petrol ensured continuation of the policy of construction and maintenance of unclassified roads, progressively year by year, according to the needs throughout the State-wide network of something like 80,000 miles of public roads of this type.

In 1925, legislation was enacted to empower the Board to declare the more important arterial roads as State highways. For these roads, the Board assumes full responsibility for construction, improvement, and maintenance. In 1936, tourists' roads and, in 1943, forest roads were added to the classes of roads under the Board's sole financial

control. At 30th June, 1960, the following were the mileages of declared roads in Victoria, approximately 72 per cent. having been provided with a bituminous seal :—

**VICTORIA—DECLARED ROADS AT 30TH JUNE, 1960**  
(Miles)

Particulars					Total Length	Sealed Length
State Highways	..	..	..	..	3,845	3,379
Tourists' Roads	..	..	..	..	417	171
Forest Roads	..	..	..	..	378	87
Main Roads	..	..	..	..	9,751	6,682
Total	..	..	..	..	14,391	10,319

The Board is a member of the National Association of Australian State Road Authorities, a continuing body with several technical committees which co-ordinates Australian road and bridge standard practices and research activities, estimates the needs of the national road network as a whole (generally on the basis of a five or ten year programme), and prepares relevant statistics of annual road improvements and road finance.

*Receipts and Expenditure*

Receipts and expenditure, covering the operations of the Board for each of the years 1955–56 to 1959–60, were as follows :—

**VICTORIA—COUNTRY ROADS BOARD : RECEIPTS AND EXPENDITURE**  
(£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>RECEIPTS</b>					
Fees and Fines—Motor Car Act (Less Cost of Collection) .. ..	5,185	6,420	8,233	8,625	9,394
Municipalities Repayments—Permanent Works and Maintenance—Main Roads	501	530	560	686	724
Commonwealth Aid Roads Acts ..	4,430	5,247	6,159	6,871	8,461
Proceeds from Commercial Goods Vehicles Act .. ..	216	1,315	1,529	1,873	2,117
Advance from Public Account ..	500	..	..	..	..
State Loan Funds .. ..	1,093	405	403	76	160
Commonwealth-State Agreement—Flood Restoration .. ..	..	237	460	53	5
Other Receipts—Fees and Fines ..	25	28	37	31	44
Total .. ..	11,950	14,182	17,381	18,215	20,905

**VICTORIA—COUNTRY ROADS BOARD: RECEIPTS AND EXPENDITURE**  
*—continued*  
 (£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>EXPENDITURE</b>					
Construction and Maintenance of Roads and Bridges .. .. .	9,870	10,983	14,726	15,021	17,220
Traffic Line Marking and Traffic Lights .. .. .	23	28	37	35	38
Plant Purchases .. .. .	627	621	1,053	713	1,028
Interest and Sinking Fund Payments .. .. .	747	807	831	862	875
Payment to Tourists' Resorts Fund .. .. .	72	76	109	145	152
General Expenditure .. .. .	693	1,340*	824	970	1,636†
<b>Total .. .. .</b>	<b>12,032</b>	<b>13,855</b>	<b>17,580</b>	<b>17,746</b>	<b>20,949</b>

\* Includes £500,000 repayment of advance from Public Account.

† Includes £452,000 expenditure on Kew office.

*Expenditure on Roads and Bridges*

The following is a summary of the total expenditure by the Country Roads Board on roads and bridges during each of the five years 1955-56 to 1959-60 :—

**VICTORIA—COUNTRY ROADS BOARD : EXPENDITURE  
ON ROADS AND BRIDGES**  
 (£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>State Highways—</b>					
Construction .. .. .	854	172	2,984	3,484	3,735
Maintenance and Reconditioning .. .. .	2,641	3,907	2,005	1,873	2,117
<b>Main Roads—</b>					
Permanent Works .. .. .	340	325	4,243	4,357	4,991
Maintenance and Reconditioning .. .. .	3,549	3,596	1,186	1,179	1,268
<b>By-Pass Roads .. .. .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>29</b>	<b>267</b>
<b>Unclassified Roads—</b>					
Construction and Maintenance .. .. .	1,947	2,509	3,615	3,371	3,974
<b>Tourists' Roads—Construction and Main- tenance .. .. .</b>	<b>343</b>	<b>285</b>	<b>458</b>	<b>454</b>	<b>551</b>
<b>Forest Roads—Construction and Main- tenance .. .. .</b>	<b>145</b>	<b>116</b>	<b>128</b>	<b>191</b>	<b>192</b>
<b>River Murray Bridges and Punts— Maintenance .. .. .</b>	<b>51</b>	<b>73</b>	<b>107</b>	<b>83</b>	<b>125</b>
<b>Total .. .. .</b>	<b>9,870</b>	<b>10,983</b>	<b>14,726</b>	<b>15,021</b>	<b>17,220</b>

**Further References**

An outline of the history and functions of the Country Roads Board will be found on pages 375 to 379 of the Victorian Year Book 1961.

### Water Supply Authorities

The principal authorities controlling water supply for domestic purposes in Victoria at 31st December, 1960, are listed in the following statement :—

#### VICTORIA—WATER SUPPLY AUTHORITIES

Authorities	Administered under the Provisions of—
Melbourne and Metropolitan Board of Works ..	Melbourne and Metropolitan Board of Works Act
State Rivers and Water Supply Commission ..	Water Acts
Waterworks Trusts (146) .. ..	
Local Governing Bodies—	
Ballarat Water Commissioners .. ..	
Municipal Councils—	
Ararat City .. ..	
Bacchus Marsh Shire .. ..	
Beechworth Shire .. ..	
Bet Bet Shire .. ..	
Clunes Borough .. ..	
Creswick Shire .. ..	
Inglewood Borough .. ..	
Korong Shire .. ..	
Stawell Town .. ..	
Talbot Shire .. ..	
Warrnambool City .. ..	
Werribee Shire .. ..	
Geelong Waterworks and Sewerage Trust ..	Geelong Waterworks and Sewerage Act
Latrobe Valley Water and Sewerage Board ..	Latrobe Valley Act
First Mildura Irrigation Trust .. ..	Mildura Irrigation Trusts Acts
Mildura Urban Water Trust .. ..	

Information about the activities of the State Rivers and Water Supply Commission will be found on pages 479 to 484. The finances of the Commission (which form part of the Public Account and are subject to annual Budget review) are included in the tables in Part 9 of the Year Book.

#### Melbourne and Metropolitan Board of Works

The first essentials for healthy community life are an adequate supply of pure water and an efficient sanitation system.

In the Metropolis of Melbourne, the task of providing these necessities lies in the hands of the Melbourne and Metropolitan Board of Works.

A full description of the Board's functions and activities such as water supply, sewerage, and drainage are set out on pages 380 to 385 of the Victorian Year Book 1961.

Constituted in December, 1890, the Board assumed duties early in 1891, and since then has built a number of storage and service reservoirs and constructed over 4,800 miles of aqueducts, pipe-lines, and distribution mains. These have been provided at a capital cost of £48,732,894 up to the end of 1959-60.

The prime factor, however, which led to the constitution of the Board was the need for a sewerage system, and the present system has been wholly provided by the Board at a cost, to the end of 1959-60, of £36,828,903.

#### *Board's Borrowing Powers*

The Board is empowered to borrow £115 mill. This amount is exclusive of loans amounting to £2,389,934 originally raised by the Government for the construction of waterworks for the supply of Melbourne and suburbs. These works were vested in and taken over by the Board on 1st July, 1891.

#### *Loan Liability*

The Board's liability under loans was £85,489,746 at 30th June, 1960. The Board was, at that date, empowered to borrow a further £31,900,188 before reaching the limit of its borrowing powers.

#### *Revenue, Expenditure, &c.*

The following is a table of the revenue, expenditure, surplus or deficiency, and capital outlay of the Board, during each of the five years 1955-56 to 1959-60:—

### VICTORIA—MELBOURNE AND METROPOLITAN BOARD OF WORKS: REVENUE, EXPENDITURE, ETC.\*

(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>REVENUE</b>					
Water Supply—					
Water Rates and Charges (Including Revenue from Water Supplied by Measure) .. .. .	2,554	2,729	3,038	3,273	3,757
Sewerage—					
Sewerage Rates .. .. .	2,262	2,662	2,983	3,275	3,546
Trade Waste Charges .. .. .	185	190	198	212	214
Sanitary Charges .. .. .	65	47	51	54	55
Metropolitan Farm—					
Grazing Fees, Rents, Pastures, &c. .. .. .	12	13	11	18	15
Balance, Live Stock Account .. .. .	111	148	168	169	259
Metropolitan Drainage and Rivers—					
Drainage and River Improvement Rate	402	443	504	554	608
River Water Charges .. .. .	13	9	10	10	10
<b>Total Revenue .. .. .</b>	<b>5,604</b>	<b>6,241</b>	<b>6,963</b>	<b>7,565</b>	<b>8,464</b>

\* Excluding Metropolitan Improvement Fund (see page 406).

VICTORIA—MELBOURNE AND METROPOLITAN BOARD OF WORKS :  
REVENUE, EXPENDITURE, ETC.\*—*continued*  
(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>EXPENDITURE</b>					
Water Supply—					
Management and Incidental Expenses	425	482	480	502	537
Maintenance .. .. .	652	713	722	841	907
Sewerage—					
Management and Incidental Expenses	419	441	434	466	513
Maintenance .. .. .	437	477	506	529	565
Metropolitan Farm—					
Administrative Expenses .. ..	19	15	15	17	23
Maintenance .. .. .	270	297	302	321	369
Metropolitan Drainage and Rivers—					
Management and Incidental Expenses	31	40	43	38	41
Maintenance .. .. .	48	61	59	57	63
Main Drainage Works .. .. .	201	221	252	277	304
Pensions and Allowances .. ..	63	53	72	75	79
Loan Flotation Expenses .. .. .	85	53	80	68	154
Interest (Including Exchange) .. ..	2,392	2,761	3,137	3,607	4,221
Contribution to—					
Sinking Fund .. .. .	132	149	171	403	527
Renewals Fund .. .. .	143	139	136	143	181
Superannuation Account .. ..	51	58	62	61	70
Depreciation .. .. .	16	7	11	20	22
Municipalities .. .. .	7	17	17	17	17
Exchange Reserve .. .. .	175	90	150	74	..
Rates Equalization Reserve .. ..	..	150	95	40	(Cr) 63
Insurance Account .. .. .	..	..	200	..	..
Investment Reserve .. .. .	33	..	..	..	..
Total Expenditure .. .. .	5,599	6,224	6,944	7,556	8,530
Net Surplus or Deficiency .. .. .	5	17	19	9	(—) 66
Capital Outlay at 30th June—					
Water Supply .. .. .	33,148	37,254	41,037	45,437	48,733
Sewerage .. .. .	24,081	25,905	28,194	31,556	36,829
Drainage and River Improvement Works	4,909	5,850	6,843	7,772	8,454

\*Excluding Metropolitan Improvement Fund (see page 406).

### *Water Supply Assessments and Rates*

The rate to be paid in respect of any lands and houses for the supply of water for domestic purposes, otherwise than by measure, is limited to an amount not exceeding 9d. in the £1 of the net annual value of the lands and houses served. The water rate levied in the year 1959-60 was 8d. in £1 on the annual value of the property served. Properties with an annual value of £14 and under are charged a minimum rate of 10s. per annum. The charge for water supplied by measure, in excess of the quantity which at 1s. per 1,000 gallons would produce an amount equal to the water rate payable, was 1s. 6d.

per 1,000 gallons. For shipping at Melbourne wharves, the charge is 4s. 6d. per 1,000 gallons, unless supplied from a fixed meter, when the charge is 2s. 3d. per 1,000 gallons.

### *Cost of Waterworks System*

The cost of capital works for the water supply system under the control of the Board is shown in the following table for each of the years 1955–56 to 1959–60, together with the total expenditure (less depreciation) to 30th June, 1960 :—

## VICTORIA—CAPITAL OUTLAY ON WATERWORKS

(Melbourne and Metropolitan Board of Works Area)

(£'000)

Particulars	During Year Ended 30th June—					Total Cost to 30th June, 1960
	1956	1957	1958	1959	1960	
Yan Yean System ..	*	7	3	*	88	783
Maroondah System ..	5	1	26	*	7	1,762
O'Shannassy — Upper Yarra System ..	2,787	2,478	543	232	52	20,962
Service Reservoirs ..	29	14	346	331	189	1,574
Large Mains .. ..	862	1,148	2,077	2,398	1,932	13,026
Reticulation .. ..	405	449	777	1,429	1,019	10,342
Afforestation .. ..	13	5	9	5	4	255
Investigations, Future Works .. ..	1	4	2	5	5	29
Total .. ..	4,102	4,106	3,783	4,400	3,296	48,733

\* Less than £500.

### *Storage and Service Reservoirs*

Six storage reservoirs, namely, Yan Yean, Toorourrong, Maroondah, O'Shannassy, Silvan, and Upper Yarra have a total capacity available for consumption, of 65,453 mill. gall. Twenty-five service reservoirs, including one at the Metropolitan Farm, Werribee, and two elevated tanks have a total capacity of 327·1 mill. gall.

The Upper Yarra reservoir, with a usable storage capacity of 44,120 mill. gall., was completed in 1957. An earth and rock fill structure, the dam, with a height of 293 feet and a capacity to spillway level of 45,400 mill. gall., has trebled the available water storage under the Board's control. Cost is estimated at £14·2 mill. The dam is connected to Silvan reservoir by a 22 mile long conduit of 68-in. diameter steel pipes and 1½ miles of tunnels. The conduit is capable of delivering 75 mill. gall. daily to the Silvan reservoir. The tunnels have been built with sufficient capacity to allow the laying of a duplicate pipe-line, with a similar capacity when the need arises

*Output of Water*

The total output of water from the various sources of supply for each of the years 1955-56 to 1959-60 was as follows :—

**OUTPUT OF WATER**  
(Melbourne and Metropolitan Board of Works Area)  
(’000 gall.)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Yan Yean Reservoir ..	5,788,300	6,807,500	5,865,600	3,347,400	4,041,100
Maroondah Reservoir ..	16,711,900	16,713,400	15,408,400	15,392,300	14,783,100
O’Shannassy River, Upper Yarra, and Silvan Reservoirs ..	18,952,300	20,224,800	25,740,300	30,149,000	34,377,600
Total Output ..	41,452,500	43,745,700	47,014,300	48,888,700	53,201,800

*Consumption of Water*

During the year ended 30th June, 1960, the maximum consumption of water in Melbourne and suburbs on any one day was 322·8 mill. gall. on 7th January, 1960 (the highest on record to this date), and the minimum consumption was 62·5 mill. gall. on 20th September, 1959.

The following table shows, for each of the years 1955-56 to 1959-60, the number of properties supplied with water and sewers, the quantity of water consumed, the daily average consumption, and the daily average consumption per head of population :—

**WATER CONSUMPTION IN MELBOURNE AND SUBURBS**  
(Melbourne and Metropolitan Board of Works Area)

Year			Properties Supplied with Water at 30th June	Properties for Which Sewers Were Provided at 30th June	Total Annual Consumption of Water	Daily Average of Annual Consumption of Water	Daily Consumption of Water per Head of Population Served
			No.	No.	mill. gall.	mill. gall.	gall.
1955-56	..	..	424,500	358,805	41,377	113·05	73·99
1956-57	..	..	440,159	366,507	43,652	119·59	75·45
1957-58	..	..	454,853	373,019	47,006	128·78	78·67
1958-59	..	..	483,410	378,738	48,917	134·02	77·02
1959-60	..	..	496,841	384,844	53,169	145·27	81·20

*Sewerage Assessments, Rates, &c.*

The Board is empowered to levy a general sewerage rate not exceeding 1s. 4d. in the £1 of the net annual value of properties in sewered areas. The sewerage rate for the year 1959-60 was 1s. 2d. in the £1. The total annual value of property in the Board’s area in



1959-60 was £73,968,426, of which £59,948,309 was liable to the sewerage rate, the balance being the value of property in unsewered districts. The receipts from general sewerage rates and charges in 1959-60 amounted to £3,815,118.

### *Cost of the Sewerage System*

The cost of sewerage works during each of the years 1955-56 to 1959-60, and the total cost (less depreciation) to 30th June, 1960, are shown in the following table :—

### CAPITAL OUTLAY ON SEWERAGE SYSTEM (Melbourne and Metropolitan Board of Works Area) (£'000)

Particulars	During Year Ended 30th June—					Total Cost to 30th June, 1960
	1956	1957	1958	1959	1960	
Farm Purchase and Preparation .. ..	212	191	216	209	195	3,836
Treatment Works .. ..	19	72	68	23	20	431
Outfall Sewers and Rising Mains .. ..	1	16	39	136	56	786
Pumping Stations, Buildings, and Plant .. ..	8	29	23	334	1,606	2,376
Main and Branch Sewers .. ..	139	286	648	1,367	1,382	7,708
Reticulation Sewers .. ..	1,293	1,220	1,249	1,482	1,887	20,856
Cost of House Connexions Chargeable to Capital .. ..	..	..	..	Cr. 274	..	397
Sanitary Depots .. ..	6	24	36	75	115	319
Investigations .. ..	19	Cr. 14	10	11	11	120
<b>Cost of Sewerage System .. ..</b>	<b>1,697</b>	<b>1,824</b>	<b>2,289</b>	<b>3,363</b>	<b>5,272</b>	<b>36,829</b>

### *Metropolitan Sewage Farm*

Statistical data for the year ended 30th June, 1960, are as follows :—

Total area of farm .. ..	26,854 acres
Area used for sewage disposal .. ..	15,892 acres
Average rainfall over 65 years .. ..	18·72 inches
Net cost of sewage purification per head of population served .. ..	4s. 5d.
Profit on cattle and sheep .. ..	£258,579

### *Disposal of Nightsoil from Unsewered Premises*

The responsibility for the collection, removal, and disposal of nightsoil from unsewered premises within the Metropolis was transferred from the individual municipal councils to the Melbourne and Metropolitan Board of Works as from 19th November, 1924. By agreement, each council pays to the Board a prescribed amount per annum to offset the cost of the service, &c.

For the year 1959–60, the working expenses were £84,771 and interest £10,403, making a total of £95,174. The revenue was £13,696, leaving a deficiency of £81,478.

#### *Metropolitan Drainage and River Improvement Rate*

The Board is empowered to levy a metropolitan drainage and river improvement rate not exceeding 3d. in the £1 in respect of the properties in the Metropolis rateable by any municipality. The rate was 2d. in the £1 for the year 1959–60.

#### *Assessed Value of Property*

The total annual value of property assessed for drainage and river purposes for 1959–60 was £73,968,426.

#### *Cost of Drainage and River Improvement Works*

The total cost of drainage and river improvement works (less depreciation) to 30th June, 1960, was £8,453,638. The length of main drains under the control of the Board at 30th June, 1960, was 181 miles.

#### *Metropolitan Improvement Rate*

The Board is empowered to levy a rate not exceeding 4d. in the £1 for the purposes set out on page 382 of the Victorian Year Book 1961. The rate is levied in respect of properties in the Metropolitan Area. For the purposes of this rate the Metropolitan Area is that area described in the schedule to the *Town and Country Planning Act* 1958. For the year 1959–60, the rate was fixed at 3d. in the £1 of the net annual value of properties in this area.

#### *Assessed Value of Property*

The total annual value of property assessed in 1959–60, for metropolitan improvement purposes, was £76,238,645.

#### *Metropolitan Improvement Fund*

Proceeds of the Metropolitan Improvement Rate and any other moneys received by the Board under the *Town and Country Planning Act* 1958 are paid into the Metropolitan Improvement Fund. The fund is kept separate from all other funds of the Board and is applied towards—

- (a) the payment of any moneys by the Board under Part VI. of the *Melbourne and Metropolitan Board of Works Act* 1958 or the *Town and Country Planning Act* 1958;
- (b) the repayment of moneys borrowed by, or advanced to, the Board under Part VI. of the *Melbourne and Metropolitan Board of Works Act* 1958 together with interest thereon.

At 30th June, 1960, the balance to the credit of the fund was £2,578,308.

#### **Further References**

A full description of the Board's functions and activities such as water supply, sewerage, and drainage, are set out on pages 380 to 385 of the Victorian Year Book 1961.

*Melbourne Metropolitan Planning Scheme**History*

The planning of Melbourne commenced with the first settlement that occurred on the site selected for a village by John Batman in 1835, and the pattern of the early growth of this village was planned by the Government Surveyor, Robert Hoddle. The city's wide streets and spacious central parks are the legacy of these early plans.

Following the discovery of gold in the colony, however, Melbourne soon outstripped its plan and underwent a period of great expansion for which there was little co-ordination or control of development. The defects inherent in this lack of planning, such as the mixed and poor development in the city's inner areas, and the sprawling unserved development in the outer suburbs, have been recognized for many years, and an attempt to remedy the position was made by the appointment of a Town Planning Commission in 1922. This Commission presented a well considered and comprehensive report on its findings in 1929, but, unfortunately and, in many respects, understandably at that time, these were not then implemented.

During the Second World War there was an awakening to the need for planning and, in 1944, legislation was passed giving municipal councils power to prepare planning schemes for all or parts of their own municipal districts. A number of councils have since prepared planning schemes for their own districts or joint schemes covering limited combined areas, but it was apparent by 1949 that the 1944 Act would not produce an adequate solution to the problems of metropolitan planning. In that year, the Town and Country Planning (Metropolitan Area) Act was passed making it obligatory for the Melbourne and Metropolitan Board of Works, already a well established metropolitan service authority, to prepare a planning scheme for the Metropolitan Area of Melbourne, as defined in a schedule to the Act.

*Metropolitan Planning Area*

Very broadly, this area comprises all the land within 15 miles of Melbourne's General Post Office with slight extensions beyond this limit to include the whole of some municipalities (such as Heidelberg and Ringwood), together with some larger extensions in the south and south-east to encompass most of the suburban type development at Frankston and Dandenong. In all, the total area is 688 square miles and includes the whole of 38 municipalities, as well as portions of eight others, as shown in the accompanying map.

In 1950, when the Metropolitan Planning Scheme was commenced, the population within this area was about 1,350,000 persons; in 1961 it is over 1,750,000 and is increasing by nearly 50,000 persons annually.

*Factors Influencing the Metropolitan Plan*

A feature of Melbourne's population distribution is that, for many decades, two-thirds of the population increase has chosen to settle in the eastern and southern suburbs, about one-quarter in the north, and the remainder in the west.



Map of Melbourne Metropolitan Area as defined by the Greater Melbourne Plan.  
FIGURE 9.

Many factors have, of course, contributed to this, including the general topography of the suburbs, the nature of the soil, and the early established pattern of the public transport system. All these have had their effect on Melbourne's development.

The design of the transport system, in particular, has contributed to the high degree of centralization within the Metropolitan Area. The present trend to centralization within Victoria is well known. At present, nearly two-thirds of the State's population live and work in the Metropolitan Area, but, within this area, there is a high degree of concentration of activities in or near the central city area.

This presented no great impediment to urban living so long as the Metropolitan Area remained reasonably small, and all parts of it were reasonably accessible to the city centre, but, as Melbourne has expanded outwards, travelling time and transport costs have increased, with the result that the latter now represents a large proportion of all expenditure.

In this respect, the basic factors influencing the design of the Metropolitan Planning Scheme are, firstly, the importance of the central city region as the focal point of metropolitan activities and, secondly, the importance of improving the overall communications system.

#### *Basic Features of the Planning Scheme*

With a recognition of these factors, the basic features incorporated in the design of the Planning Scheme can be summarized as follows :—

(1) Better distribution of major land uses : One of the objectives of the plan is the encouragement of the decentralization of various activities throughout the Metropolitan Area, in order to achieve a better balance between home and workplace in each Board section of the area, by the location of industrial zones in the outer suburbs, and the provision of "District Business Centres" (at Footscray, Preston, Box Hill, Moorabbin, and Dandenong) to provide, in each district, many of the facilities previously available only in the city's commercial centre.

(2) Central City Area : It is not envisaged that the proposed redistribution of commercial and industrial activities throughout the Metropolitan Area should be detrimental to the existing business activities in the central city area. The Planning Scheme fully recognizes the importance of the central business area, and plans for an extension of this area. There is, however, a need for a greater dispersion of activities within the area, and the proposed city underground railway should have a big influence toward achieving this end.

(3) Open Space : Because of the foresight of the city's early planners, Melbourne's inner areas are liberally endowed with open areas, but, in the next ring of suburbs, there is a deficiency of such areas, which the plan aims to remedy by reserving sufficient space to meet the community's future requirements for various forms of out-door recreation.

(4) Highways : The question of transport facilities is of vital concern to every metropolitan community, particularly Melbourne, where there are at present almost as many motor vehicles as houses. To meet the future demands of this form of transport, the Planning Scheme incorporates a basic network of roads containing three principal elements:—

- (a) A city ring road to permit traffic to by-pass the central business area, thus facilitating a more even distribution of traffic within this area, and giving outgoing traffic better access to the suburban highways;
- (b) radial road routes branching outwards from the city through the suburbs, and usually joining up with the main country highways; and
- (c) inter-suburban road routes to provide easier and safer movement of vehicles between the suburbs.

Reservations of land for these roads have been made in the Scheme.

#### *Present Position*

The preparation of the present planning scheme for the Melbourne Metropolitan Area was commenced in 1950 and, after much research and detailed planning, it was placed on public exhibition in 1954. Since then, its various provisions have been modified in the light of the objections received and of development which has occurred since planning commenced. The resulting modified scheme was adopted by the Board of Works in October, 1959, and then submitted to the Governor in Council for approval.

Pending approval, control over usage and development of land throughout the Metropolitan Area is being exercised by the Board in accordance with the provisions of the Planning Scheme through an Interim Development Order which is renewed each year.

This, of course, does not mean that the present position is static, as planning, of necessity, is a continuing process even after a scheme is approved. The provisions of the present scheme are aimed at meeting the estimated requirements of a metropolitan community of about 2,250,000 persons. If the present rate of expansion continues, this will be reached in about another ten years, so one of the projects which the Board has just completed is an amending planning scheme to increase the potential population capacity of the area to about 2,500,000 people.

#### **Water Supply to Country Towns**

When the State Rivers and Water Supply Commission was constituted in 1905, it was given general control over water supply to 111 towns with 261,000 persons.

From works managed directly by the Commission, 75,000 people were supplied in fifteen centres, including the mining towns of Bendigo and Castlemaine and the seaport of Geelong. The other 96 towns

were served by local authorities, a quarter in the Wimmera-Mallee Waterworks Trust Districts, a similar number along the route from Melbourne to Wodonga, and the rest concentrated in Ballarat and the old mining towns to the north and north-west of that city, towns in the Sunbury-Kyneton-Lancefield area, and the northern irrigation areas.

Control of town water supply by Trusts has been satisfactory. They have never had to contend with the problems of irregular revenue and divided control of headworks experienced by the Irrigation and Waterworks Trusts. The Commission has always encouraged this form of control and, in general, acts only in a supervisory capacity. It has retained its own direct management only where essential.

The Commission system serving the largest population is the Mornington Peninsula System, which dates back to 1916, when supply was given to Flinders Naval Base. It now serves towns throughout the Mornington Peninsula and in the Dandenong district. The Commission has retained control over the Coliban system serving the Bendigo-Castlemaine area, which provides water for irrigation as well as for a town supply.

These two systems contain two-thirds of the population of about 200,000 served directly by the Commission. Other important groups include nearly 40 small towns in the Wimmera and Mallee and twenty in the irrigation areas, but the majority of the urban population in these areas are served by local authorities taking a bulk supply from the Commission.

Local authorities controlling town water supplies now number 156, and serve 180 cities and towns with a combined population of 534,000. As the Commission serves only about 200,000 people—and only 60,000 outside the Mornington Peninsula and Coliban Systems—it is clear that local control is predominant. Furthermore, whereas the Commission provides direct supplies to few more towns than it did twenty years ago, the number served by Trusts has increased by nearly 60 per cent. in the same period.

### **Water and Sewerage Authorities**

#### *General*

With one minor exception, local authorities control the sewerage systems of the 40 cities and towns with works in operation.

Sewerage has, of course, always followed behind water supply. The first provincial city to install a sewerage system was Geelong, in 1909, and, by 1936, there were only ten systems operating in the State. However, an increase in activity followed the adoption by the Government of a liberal basis of financial aid for sewerage smaller towns, and schemes were operating in seventeen cities and towns by 1940. At the end of the Second World War, 175,000 persons were served in 27 cities and towns.

In the post-war period, and particularly the last decade, these figures have increased rapidly. There are now 40 provincial cities and towns (having a combined population of 404,000) with sewerage systems in operation.

*Geelong Waterworks and Sewerage Trust.*

The Trust was constituted as the Geelong Municipal Waterworks Trust on 25th January, 1908. It was reconstituted as a Water and Sewerage Authority under the *Geelong Waterworks and Sewerage Act* 1909, and further reconstituted in September, 1950, to include a Government nominee (chairman). Provision was also made for a commissioner to be elected by the ratepayers of the Shire of Corio, thus making a total of seven commissioners instead of five as formerly.

The amount of loans which may be raised is limited to £6,500,000 for water supply, £5 mill. for sewerage works, and £370,000 for sewerage installations to properties under deferred payments conditions. The expenditure on these services to 30th June, 1960 was—water supply, £3,765,549; sewerage, £1,763,410; and sewerage installation, £335,697 of which £46,997 was outstanding. The revenue for the year ended 30th June, 1960, was £391,623 on account of waterworks and £193,466 on account of sewerage. Since 1913, the Trust has appropriated and set apart sums out of revenues for the creation of a sinking fund to redeem loans. To 30th June, 1960, the amount so appropriated was £408,627 and of this sum £253,276 had been used to redeem loans which have matured from time to time.

At the 30th June, 1960, the population supplied was estimated by the Trust at 97,500, the number of buildings within the drainage area was 23,276, and the number of buildings within sewered areas was 19,776.

For some years, the Trust has been engaged on an expansion programme which will involve a total loan expenditure of approximately £6 mill. and which, for the current and several succeeding years, will require an annual borrowing of at least £750,000.

The principal work in this construction programme is the building of a large dam on the Upper Barwon River at an estimated cost of £2,500,000. Work on this project was commenced in 1960.

This expansion programme, both for water supply and sewerage works, has been made necessary by the past and expected future growth of population of Geelong.

*Water Supply*

**Moorabool System.** The catchment of the watersheds is about 38,000 acres. There are six storage reservoirs and five service basins. The total storage capacity of the reservoirs and service basins of the Moorabool System is 4,356 mill. gall.

**Barwon System.** This was acquired from the State Rivers and Water Supply Commission in 1955.

The catchment area of the watersheds is about 17,000 acres in extent and comprises the head waters of the Barwon River and its tributaries. There is one storage reservoir and six service basins. The total storage of the reservoir and service basins of the Barwon System is 4,280 mill. gall. The Trust is required to supply up to 700 mill. gall. per year to the State Rivers and Water Supply Commission's Bellarine Peninsula System.



### *Water Rates*

The water rate is 1s. 7d. in the £1 of the net annual value of all rateable properties, with a minimum of £1 per annum for land on which there is a building, and a minimum of 10s. per annum for land on which there is no building.

### *Sewerage*

The sewerage system consists of a main outfall sewer 4 feet by 3 ft. 3 in. to the ocean at Black Rock, a distance of about 9 miles from Geelong, and 220·14 miles of main and reticulation sewers. The outfall sewer is laid on a gradient of 1 in 2,500, and was designed to take the discharge from a contributing population of 120,000. The sewerage area, which is 10,559 acres, includes the Cities of Geelong, Geelong West, and Newtown and Chilwell, and suburban areas in the Shires of Corio, South Barwon, and Bellarine.

### *Sewerage Rate*

The general sewerage rate is 1s. 4d. in the £1 of the net annual value of all rateable properties.

### *Latrobe Valley Water and Sewerage Board*

The Latrobe Valley Water and Sewerage Board was constituted on the 1st July, 1954. The Board consists of seven members: the manager, who is *ex officio* chairman, appointed by the Governor in Council; three members being elected by water supply, sewerage and river improvement authorities within the Latrobe Valley; one member representing the State Electricity Commission of Victoria; one member representing the Gas and Fuel Corporation of Victoria; and one member appointed by the Governor in Council as a Government nominee.

### *Water Supply*

The Board is empowered to construct water supply works within the area of the Latrobe Valley, but, at present, in confining its main construction activities to the central and industrialized area, particularly around the Towns of Morwell and Traralgon.

The Board has constructed a pumped water supply scheme from the Tyers River, and is in process of converting this to a gravitation scheme, including the construction of a major storage on the upper Tyers River. The capacity of this storage will be approximately 7,000 mill. gall., and water will be conveyed from the storage, a distance of approximately ten miles, by a pipe-line 60 inches in diameter.

The capital cost of construction of waterworks was £2,032,164 to the 30th June, 1960. The liabilities amounted to £2,317,556 at 30th June, 1960, including loans, due to the Government, totalling £2,278,338. The income for the year 1959-60 was £140,787, and expenditure during the year amounted to £104,456, including interest charges amounting to £52,773. Redemption payments to 30th June, 1960, amounted to £46,113.

The Board does not strike a rate, but charges consumers, including local water supply authorities, by measure.

Water supplied during the year ended 30th June, 1960, totalled 2,020 mill. gall.

#### *Sewerage*

The Board has constructed an outfall sewer some 50 miles in length to convey wastes to an area where they are disposed of on agricultural land. Wastes conveyed by the outfall sewer consist mainly of industrial wastes such as paper wastes, and gasification wastes, together with small quantities of domestic sewage.

The capital cost of sewerage construction works to the 30th June, 1960, was £2,133,899.

The scheme is financed by Government Loan, the liabilities on account of loans at the 30th June, 1960, amounting to £2,292,180. Income during 1959-60 amounted to £157,012 and expenditure, which included £49,847 interest on loans, amounted to £99,039. Redemption payments to 30th June, 1960, amounted to £67,363.

The Board does not strike a sewerage rate, but charges by measure for the receipt of wastes, both from industries and public authorities, such as sewerage authorities, in the area.

#### *Ballarat Water Commissioners*

The local governing body by the name of "The Ballarat Water Commissioners" was constituted on the 1st July, 1880, by the *Waterworks Act* 1880.

The water supply district of the Ballarat Water Commissioners embraces an area of approximately 65 square miles, including the City of Ballarat, the Borough of Sebastopol, and portions of the Shires of Ballarat, Buninyong, Bungaree, and Grenville. Water is also supplied in bulk to the recently constituted Buninyong Waterworks Trust, which is responsible for a reticulated supply to the Township of Buninyong. The total estimated population supplied is 57,000. The works comprise seven reservoirs, which have a total storage capacity of 5,435 mill. gall. The catchment area is 23,872 acres. The Commissioners supply water to 19,387 ratepaying tenements, of which 12,058 are connected to the sewers.

For the year 1960, the total consumption was 1,830 mill. gall., including 65 mill. gall. supplied to Lake Wendouree, on which important rowing and other aquatic sports are held, e.g., the 1956 Olympic rowing and canoeing events were held on the lake.

The average per capita consumption for the year 1960 was 84·6 gall. per day. Approximately 79 per cent. of the properties supplied are metered and, to reduce leakage losses and wastage to a minimum, the Commissioners have planned to meter at least 90 per cent. of the properties supplied.

To 31st December, 1960, the capital cost of construction was £2,546,468, and loans outstanding (including private loans) were £1,497,109. During 1960, revenue amounted to £176,874, and expenditure to £175,976.

The water rate is 1s. 1d. in the £1 of the net annual value of all rateable properties, with a minimum of £1 10s. per annum for land on which there is a building, and £1 per annum for land on which there is no building. The charge for water supplied by measure in excess of the quantity which, at 1s. 4d. per 1,000 gall., would produce the amount of water rate payable, is 1s. 4d. per 1,000 gall.

#### *Ballarat Sewerage Authority*

The Ballarat Sewerage Authority was constituted under the provisions of the *Sewerage Districts Act 1915*, by Order in Council dated 30th November, 1920, which provides that the members of the Water Commissioners shall be the Sewerage Authority.

The Ballarat Sewerage District embraces the City of Ballarat, portions of the Shires of Ballarat, Bungaree, and Grenville, and the Borough of Sebastopol.

At 31st December, 1960, there were 17,767 assessments in the sewerage district, and 13,880 in declared sewerage areas, where 12,058 tenements were connected.

Construction is financed by debenture issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1960, amounted to £1,039,927; redemption payments at that date totalled £301,647. Revenue during 1960 amounted to £120,451, and expenditure, which included £58,185 on interest and redemption, was £116,606. During 1960, 125 contracts were completed under the Deferred Payments System, the amount outstanding at 31st December being £50,023.

A sewerage rate of 1s. 4d. in the £1 is levied with a minimum charge of £3 on the net annual valuation of any rateable sewered property on which there is a building, and £1 on any rateable sewered property on which there is no building.

#### **Further References**

A description of the system operated by the Ballarat Sewerage Authority will be found on pages 395-396 of the Victorian Year Book 1961.

#### *Properties Connected to Sewers*

The following table shows the number of properties connected to sewers in Victoria at the end of each of the years 1955-56 to 1959-60 :—

#### **VICTORIA—NUMBER OF PROPERTIES CONNECTED TO SEWERS**

Authority	At End of Year—				
	1955-56	1956-57	1957-58	1958-59	1959-60
Melbourne and Metropolitan Board of Works ..	358,805	366,507	373,019	378,738	384,844
Other Authorities .. ..	73,988	79,109	84,403	91,569	96,792
Total .. ..	432,793	445,616	457,422	470,307	481,636

### Metropolitan Fire Brigades Board

Municipalities, within the Metropolitan Fire District, contribute one-third and fire insurance companies, transacting business in the same area, provide two-thirds of the amount required to maintain metropolitan fire brigades. During 1959-60, contributions by municipalities were equivalent to 1.64d. in the £1 on the annual value of property amounting to £71,122,492, while fire insurance companies contributed at a rate of £15 7s. 6d. for every £100 of fire insurance premiums paid on insured property. Premiums received in the Metropolitan Fire District in 1958 amounted to £6,321,001.

Particulars of revenue, expenditure, and loan indebtedness of the Metropolitan Fire Brigades Board for each of the five years 1955-56 to 1959-60 are as follows :—

#### VICTORIA—METROPOLITAN FIRE BRIGADES BOARD : REVENUE, EXPENDITURE, ETC. (£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>REVENUE</b>					
Contributions—					
Municipal .. ..	297	394	345	447	486
Insurance Companies ..	593	787	689	893	972
Receipts for Services ..	115	122	141	139	141
Interest and Sundries ..	113	118	120	131	198
<b>Total Revenue ..</b>	<b>1,118</b>	<b>1,421</b>	<b>1,295</b>	<b>1,610</b>	<b>1,797</b>
<b>EXPENDITURE</b>					
Salaries .. ..	719	806	870	963	1,076
Administrative Charges, &c.	218	231	301	281	340
Partially-paid Firemen and Special Service Staff					
Allowances .. ..	74	84	85	88	94
Plant—Purchase and Repairs	82	102	120	127	147
Interest .. ..	4	3	4	8	12
Repayment of Loans ..	10	9	8	8	10
Superannuation Fund ..	30	32	35	39	59
Motor Replacement Reserve	12	13	14	15	20
Pay-roll Tax .. ..	22	24	26	28	31
Miscellaneous .. ..	4	6	6	5	7
<b>Total Expenditure ..</b>	<b>1,175</b>	<b>1,310</b>	<b>1,469</b>	<b>1,562</b>	<b>1,796</b>
<b>Net Surplus (+) or Deficit (—)</b>	<b>(—) 57</b>	<b>(+) 111</b>	<b>(—) 174</b>	<b>(+) 48</b>	<b>(+) 1</b>
<b>Loan Indebtedness (At 30th   June) .. ..</b>	<b>77</b>	<b>93</b>	<b>119</b>	<b>191</b>	<b>271</b>

**Further References**

An outline of the functions and activities of the Metropolitan Fire Brigades Board will be found on page 397 of the Victorian Year Book 1961.

**Country Fire Authority**

Particulars of revenue, expenditure, surplus, and loan expenditure and indebtedness of the Country Fire Authority, for each of the years 1955-56 to 1959-60, are shown in the first of the following tables. The second table gives details of the number of fire brigades, personnel, and motor vehicles for the same years.

**VICTORIA—COUNTRY FIRE AUTHORITY : REVENUE,  
EXPENDITURE, ETC.  
(£'000)**

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>REVENUE</b>					
Statutory Contributions—					
State Government ..	123	142	166	175	182
Insurance Companies ..	245	285	333	351	365
Other .. .. .	21	28	26	26	23
<b>Total Revenue ..</b>	<b>389</b>	<b>455</b>	<b>525</b>	<b>552</b>	<b>570</b>
<b>EXPENDITURE</b>					
Salaries and Wages ..	146	163	172	187	208
Depreciation .. ..	16	18	23	25	28
Insurance .. .. .	9	12	19	18	21
Interest .. .. .	25	29	31	32	34
Maintenance .. ..	82	88	95	89	91
Motor Replacement Fund ..	33	36	40	44	49
Other .. .. .	70	81	92	94	95
<b>Total Expenditure ..</b>	<b>381</b>	<b>427</b>	<b>472</b>	<b>489</b>	<b>526</b>
<b>Net Surplus .. ..</b>	<b>8</b>	<b>28</b>	<b>53</b>	<b>63</b>	<b>44</b>
<b>Loan Expenditure ..</b>	<b>109</b>	<b>134</b>	<b>70</b>	<b>111</b>	<b>131</b>
<b>Loan Indebtedness (At 30th June) .. .. .</b>	<b>619</b>	<b>628</b>	<b>673</b>	<b>686</b>	<b>691</b>

**VICTORIA—COUNTRY FIRE AUTHORITY : NUMBER OF  
FIRE BRIGADES, PERSONNEL, AND MOTOR VEHICLES**

Particulars	At 30th June—				
	1956	1957	1958	1959	1960
<b>Fire Brigades—</b>					
Urban .. .. .	200	200	203	203	205
Rural .. .. .	1,020	1,026	1,028	1,033	1,031
<b>Personnel—</b>					
Professional .. ..	92	95	97	102	109
Volunteer .. .. .	98,402	95,678	98,307	99,477	100,865
<b>Motor Vehicles—</b>					
Transport .. .. .	40	42	43	44	45
Fire Service .. ..	722	765	804	819	833

**Further References**

An outline of the history and functions of the Country Fire Authority will be found on pages 399-400 of the Victorian Year Book 1961.

**Local Government and Semi-Government Bodies—  
New Money Loan Raisings**

In the following statement, particulars are given of the new money loan raisings, during each of the years 1954-55 to 1958-59, by local government, semi-governmental and other public bodies in Victoria :—

**VICTORIA—LOCAL GOVERNMENT, SEMI-GOVERNMENTAL  
AND OTHER PUBLIC BODIES : NEW MONEY LOAN  
RAISINGS  
(£'000)**

Particulars	Year Ended 30th June—				
	1955	1956	1957	1958	1959
<b>LOCAL GOVERNMENT</b>					
Due to Government .. ..	99	76	131	113	420
Due to Public Creditor .. ..	3,824	3,304	4,402	5,266	5,160
<b>Total Local Government ..</b>	<b>3,923</b>	<b>3,380</b>	<b>4,533</b>	<b>5,379</b>	<b>5,580</b>
<b>SEMI-GOVERNMENTAL, &amp;c.</b>					
Due to Government* .. ..	14,712	14,282	15,182	12,161	13,999
Due to Public Creditor .. ..	39,708	31,645	38,948	36,357	36,010
<b>Total Semi-Governmental, &amp;c.</b>	<b>54,420</b>	<b>45,927</b>	<b>54,130</b>	<b>48,518</b>	<b>50,009</b>
<b>ALL AUTHORITIES</b>					
Due to Government .. ..	14,811	14,358	15,313	12,274	14,419
Due to Public Creditor .. ..	43,532	34,949	43,350	41,623	41,170
<b>Total .. ..</b>	<b>58,343</b>	<b>49,307</b>	<b>58,663</b>	<b>53,897</b>	<b>55,589</b>

\* Including the following advances by the Commonwealth Government under the Commonwealth-State Housing Agreement :—£9,450,000 in 1954-55, £10,800,000 in 1955-56, £8,400,000 in 1956-57, £8,400,000 in 1957-58, and £7,560,000 in 1958-59.

## *State Development and Regional Planning*

### **Historical**

The Division of State Development of the Premier's Department was set up as a Regional Planning and Decentralization Division in 1950 by the amalgamation of the staffs of the Central Planning Authority, the Latrobe Valley Development Advisory Committee, and the former Decentralization Committee, and was given its present designation of Division of State Development in 1959.

The first unit of the Division had its beginnings in March, 1942, when an Evacuation of Industries Committee comprising representatives of Commonwealth and State authorities met to examine the need to move essential industry from the Metropolis to less vulnerable areas. Later in the same year, the Committee was named the Victorian Industries Location Committee. When this Committee ceased operations in 1943, a State Decentralization Committee was formed to encourage and assist the establishment of secondary industry in decentralized locations, and thus provide further opportunities for employment for country people. This Committee ceased to function in 1949, although the Chairman carried on as Industries Location Consultant to the Government.

Early in 1950, the retiring Agent-General for Victoria was appointed Director of Decentralized Industries Development, and continued in that capacity until 1954.

A Decentralization Advisory Panel, consisting of the Minister of State Development and Decentralization, representatives of country industries and of the Trades Hall Council, was set up in August, 1954, and, over the next twelve months, reviewed various problems associated with the establishment and operation of secondary industry in country areas.

In the past five years, the Division's operations in the industrial field broadened considerably to embrace the establishment and expansion of both overseas and local industries in the Metropolitan Area as well as in country districts.

### **Functions**

The Division provides the administrative organization for :—

- (1) Regional Planning in the State (the Central Planning Authority);
- (2) the promotion of secondary industry in Victoria, particularly in the country areas ;
- (3) the co-ordination of works and services associated with development in the Latrobe Valley (the Latrobe Valley Development Advisory Committee); and
- (4) the State Development Committee.

The Division acts in a consultative capacity to industrialists and offers the services of officers thoroughly versed in the resources of the State and the requirements of industry—such as the availability and value of factory sites and premises; industrial zone requirements; sources of raw materials; water, power and fuel requirements; sewerage and effluent disposal; labour available; rail sidings; transport facilities, freight rates and service charges, &c. These officers are supported by a qualified statistical research group within the Division.

Close liaison is maintained with Federal, State, semi-governmental and local instrumentalities, and banks, ensuring expeditious handling of enquiries concerning any of the multiple special needs of particular industries. Where necessary, introductions to such organizations are effected.

The Division relates the requirements of an industry to the facilities offered by various centres and, where it appears that a country area fulfils all the requirements for economic and successful operation, every reasonable encouragement is given for establishment in such a location. However, no attempt is made to direct an industry in its selection of a site.

Financial assistance is made available to country industries from a decentralization fund for a variety of purposes. This fund was established during 1944 for the purpose of providing improved amenities in rural areas and concessions to decentralized secondary industry by way of subsidies in respect of the transfer of plant, machinery, and key personnel to the industry, and to meet the costs of moving raw materials and finished products to and from the country site during the "teething stage".

If, when established, an industry is still placed at a disadvantage because of freight charges, the Joint Committee on Freight Subsidies for Decentralized Industry—set up in 1954 with representatives from the Division, Victorian Railways, Treasury, and Transport Regulation Board—may investigate the actual disability under which the industry operates, and recommend an appropriate degree of assistance to place the undertaking on a competitive basis with its metropolitan counterparts.

In addition to financial assistance, the Division may support applications made by industry under the *Land Act* 1958, whereby Crown lands may be made available, with or without financial consideration, for the purpose of industrial establishment, and under certain conditions for associated housing requirements.

The Division has played a leading part in attracting industries to Ballarat and Bendigo where they have been established on Crown lands. At Ballarat, in 1949, the Government purchased the greater part of what was formerly the guncotton factory set up by the Commonwealth during the Second World War. The whole area purchased by the State has now been occupied by secondary industries which have all essential services and requirements readily available.



### Regional Planning

In accordance with an agreement reached between the Prime Minister and the Premiers of all States to plan future development on a regional basis, the Government of Victoria, on 12th April, 1944, appointed a State Regional Boundaries Committee "to make enquiries and to submit recommendations as to the regional boundaries which might be adopted within the State of Victoria".\* This Committee made extensive enquiries into the physical, economic, and human resources of the State, and undertook a broad survey of the whole State, so that its determination would satisfy, as far as possible, the requirements of State and national planning, as well as local and regional planning. As a result of its enquiries, the Committee recommended that "to facilitate the investigation of resources and the planning of future development, the State of Victoria be divided into thirteen regions".\*



Map of Victoria showing boundaries which are applicable to Regional Planning only, and are not Statistical Divisions or Districts.

FIGURE 10.

\* Report on Regional Boundaries, Victoria, 1944.

To afford an opportunity for local people to participate in the planning and development of these regions, Regional Committees consisting of six members elected by the local municipalities and six members representing Government Departments and other interests in the regions, were appointed by the Government.

The function of each Committee is to make an intensive study of the resources and development of its region and, arising from that study, to recommend the means by which the region's resources, both physical and economic, can best be developed. They also study problems of a broad regional nature. The Committees are advisory bodies only ; they have no executive powers, and their functions do not conflict with those of local or governmental authorities. They can provide a common ground for discussion of methods of co-ordinating public and community services within the region, and aim to co-ordinate the activities of various interested local bodies and semi-governmental authorities, for the purpose of promoting developmental schemes which would be beyond the scope of the individual organizations concerned.

The Central Planning Authority, with the Minister of State Development as Chairman, was set up by the State Government in April, 1946, to arrange the constitution of the Regional Committees, to advise them on procedure, to assist in surveying the resources of the respective regions, and to co-ordinate the work of the Committees with that of other bodies in the State. The Authority also acts as the advocate of the Committees in placing their recommendations before the Cabinet or any Department concerned, and disseminates information concerning regional planning.

The surveys of the resources of the region involve the collection of information concerning climate, physiography, water supplies, forests, soils, types of land use and minerals ; population and employment ; production from primary and secondary industries, commerce and trade ; public utilities, health services and general social facilities. Already, eight resources survey reports, each of which includes a series of large scale colour maps, have been published. These cover the Goulburn, Upper Murray, Upper Goulburn, Loddon, Mallee, East Gippsland, Central Highlands, and Corangamite regions. Reports dealing with the remaining four non-metropolitan regions have been prepared in draft form.

Completion of the initial survey of resources has enabled the Regional Committees to re-examine the developmental problems of their regions. Each Committee has accordingly investigated and reported upon land use and primary production, and the potential

development of the tourist industry. Several Committees have submitted valuable reports on the provision of educational facilities, and on opportunities for industrial development. Typical of other subjects investigated or studied are the potential development of water resources, means of preserving wild life, and the development of alpine areas.

### **Latrobe Valley Development Advisory Committee**

The Latrobe Valley Development Loan and Application Act was enacted in 1949 to meet the need for the co-ordination of activities being carried out throughout the area in consequence of the developmental works of the State Electricity Commission at Yallourn and Morwell, and for the provision of financial assistance towards the cost of essential works beyond the normal capacity of the public authorities concerned. This Act provided for the constitution of the Latrobe Valley Development Advisory Committee of five members, appointed by the Governor in Council, and for the establishment of a fund of £1 mill. for expenditure on approved works designed to develop the Valley.

The Committee is responsible for making recommendations to the Minister regarding advances from this fund; it is also required to convene conferences with the object of securing co-ordination between the respective authorities in the Latrobe Valley with regard to proposed works and activities.

The Latrobe Valley Development Advisory Committee thus constituted, absorbed the functions of the Morwell Project Co-ordinating Committee (set up in 1948 on the recommendation of the Central Planning Authority), of co-ordinating plans for works associated with the opening of the new brown coal development at Morwell. As a result of the work of the two committees, an advanced stage of co-ordination of planning has been reached, and all authorities concerned are able to proceed with their works programmes in the knowledge that each particular project will conform to the general plans of other authorities.

Up to 30th June, 1960, £586,000 had been allocated on the recommendation of the Committee towards the cost of works in the Latrobe Valley, of which over £500,000 had been expended. The works undertaken to date include road widening and deviation, town drainage and road construction, provision of recreational facilities (including swimming pools), and the construction of railway bridges, pedestrian subways, &c. Local participation in the co-ordination of development is provided by conferences of the authorities actively engaged in the Latrobe Valley, convened by the Committee at approximately six-monthly intervals.

**State Development Committee**

This is a Parliamentary Committee of six members appointed under the State Development Act to enquire into and report to the Governor in Council on matters concerning the economic, industrial, and rural development of the State.

The most recent reports of the Committee have dealt with the question of logging in the water catchment areas of the State, and with problems associated with the fishing industry in Victoria.

# Part 6

## WAGES, EMPLOYMENT, AND PRICES

### *Industrial Conditions*

#### **Industrial Arbitration**

##### *General*

In Victoria there are two systems of industrial arbitration for the adjustment of relations between employers and employees: the State system which operates under the law of the State within its territorial limits, and the Commonwealth system which applies to industrial disputes extending beyond the limits of the State.

Under Commonwealth law there are special tribunals to determine the industrial conditions of employment in the public service of the Commonwealth and in the stevedoring industry, and there is a joint Commonwealth and State tribunal for the New South Wales coal mining industry.

##### *Commonwealth-State Relations in Industrial Arbitration*

The relation between the State and Commonwealth systems of industrial arbitration rests upon the distribution of legislative powers between the Commonwealth and the component States. The powers of the Commonwealth in regard to industrial arbitration are as defined in the Commonwealth of Australia Constitution Act; all residual powers remain with the States. The Commonwealth Constitution Act provides that if a State law is inconsistent with a valid Commonwealth law, the latter prevails and the State law becomes inoperative in so far as it is inconsistent. An award of the Commonwealth Court of Conciliation and Arbitration\* has been held to be a Commonwealth law, and therefore awards of the Commonwealth industrial tribunal override those made by State tribunals.

The Commonwealth jurisdiction is limited by the Constitution Act to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State". In interpreting the law, the High Court of Australia has decided that the Commonwealth Parliament cannot empower an industrial tribunal to declare an award a "common rule" or industry-wide award to be observed by all persons engaged in the industry concerned.

Notwithstanding these limitations of the Commonwealth jurisdiction in industrial matters, the Commonwealth system has gradually become predominant in the sphere of industrial arbitration throughout Australia.

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\* Now Commonwealth Conciliation and Arbitration Commission.

Its influence extended in the first place with the gradual adoption of the principle of federation in trade unionism and in political organization, a tendency which gathered force during the First World War period. As industry expanded over interstate borders, uniformity of industrial conditions was sought by employers, while employees were attracted to the Commonwealth jurisdiction in the expectation of better terms as to wages, &c., than those awarded under State legislation. In many cases, also, the organizations concerned in a Commonwealth award have taken action to have its terms embodied in State awards so that they become binding as a common rule in the industry. Again, for the sake of uniformity, legislatures of some States, notably Victoria and New South Wales, have adopted the Commonwealth wage standards as the basis of State awards and agreements. In Victoria, for instance, the basic wages determined by the Commonwealth Conciliation and Arbitration Commission have been adopted for State awards and agreements by the Wages Boards.

### *Victorian Wages Boards*

(1) *General*.—In each State, industrial tribunals have been established to regulate and arbitrate in industrial matters. In Victoria this function is carried out by Wages Boards which are set up for specific industries or occupations. A General Wages Board operates for industries where there is no special Wages Board.

The Wages Board method of fixing wages and of settling the conditions of employment had its origin in Victoria and was incorporated in an Act of Parliament introduced in 1896. A Board may be appointed for any trade or branch of it. Each Board consists of an even number of members and a chairman. Originally, each Board was composed of equal numbers of employers and employees, with a qualification that each representative should be actively engaged in the trade concerned. However, under the provisions of the *Factories and Shops Act* 1934, this qualification was modified to permit a paid officer of any corporation, public body, or association of employers being nominated as one of the members to represent employers and, if such officer is appointed, then one of the representatives of the employees on that Board shall likewise be an officer of the trade union concerned.

The *Labour and Industry Act* 1958 requires that every Wages Board shall, in determining wages rates or piecework prices, take into consideration relevant awards of or agreements certified by the Commonwealth Conciliation and Arbitration Commission.

The *Labour and Industry Act* 1958 gives Wages Boards the same powers relating to wages and conditions of labour as those incorporated in the Commonwealth Conciliation and Arbitration Act. These powers enable Wages Boards to make determinations concerning any industrial matter whatsoever in relation to any trade or branch of trade for which such a board has been appointed and, in particular, to determine all matters relating to :—

- (a) work days and hours of work ;
- (b) pay wages and reward ;

- (c) privileges rights and duties of employers and employés ;
- (d) the mode terms and conditions of employment or non-employment ;
- (e) the relations of employers and employés ;
- (f) the employment or non-employment of persons of any sex or age ;
- (g) the demarcation of functions of any employés or class of employés ; and
- (h) questions of what is fair and right in relation to any industrial matter having regard to the interest of the persons immediately concerned and of society as a whole.

Wages Boards are not empowered to determine any matter relating to the preferential employment or dismissal of persons as being or as not being members of any organization, association, or body.

The determinations of a Wages Board are decided by a majority vote of the members except that where a majority view cannot be obtained the chairman can decide. Witnesses may be called by the Wages Boards which however are not to disclose the financial position or trade secrets of an informant without his consent. A lawyer is not to be a member of a Wages Board and is not to appear as Counsel before a Board. Otherwise, the Boards are free to determine their own procedures which are usually informal.

(2) *Board of Reference and Appeals Court.*—A Wages Board has power to set up a Board of Reference to deal with any dispute of fact (but not of law) which may arise concerning a determination. The Board of Reference consists of the chairman of the Wages Board and a maximum of two employer and two employee representatives—one of each must be a member of the Wages Board. The decision of the Board of Reference has the same force and effect as a Wages Board determination.

Appeals against the determination of a Wages Board or against the decision of a Board of Reference may be made to the Industrial Appeals Court. Such appeals must be made by the employer's or employee's organization or by a majority of the employer or employee representatives on the Board concerned. In addition any person may apply to the Supreme Court to have a determination quashed on grounds of illegality.

The Industrial Appeals Court is appointed for a term of five years and consists of a president—a County Court judge—and two lay members, one representing the employers and one the employees. The Court has all the powers of the Wages Board and may amend the whole or any part of a Board's determination. The Court may also hear appeals relating to contraventions of the Act or of a Wages Board or Court determination. The Court's decisions are final and are not subject to further appeal.

The decisions of a Wages Board and of the Industrial Appeals Court are legally binding, and to this end provision is made for inspection, enforcement, and prosecution of breaches.

On 31st December, 1960 there were 230 Wages Boards existing or authorized.

(3) 1960 *Amendment*.—Intervention by Minister. The *Labour and Industry (Amendment) Act* 1960 empowers the Minister of Labour and Industry to intervene in the public interest in any appeal to the Industrial Appeals Court against a determination of a Wages Board. Further, as consumers are not represented on Wages Boards, the Act also authorizes the Minister to refer, under appropriate circumstances, the determination of a Wages Board to the Court.

In both cases the Act provides that the Court when dealing with such matters shall consider whether the determination appealed against or referred, detrimentally affects the public interest or restricts reasonable competition in the particular trade.

#### *Commonwealth Industrial Court and Commonwealth Conciliation and Arbitration Commission*

The *Conciliation and Arbitration Act* 1904–1961 defines an industrial dispute to be dealt with under that Act as “(a) A dispute (including a threatened, impending or probable dispute) as to industrial matters which extends beyond the limits of any one State ; and (b) a situation which is likely to give rise to a dispute as to industrial matters which so extends ; and includes—(c) such a dispute in relation to employment in an industry carried on by, or under the control of, a State or an authority of a State ; (d) a dispute in relation to employment in an industry carried on by, or under the control of, the Commonwealth or an authority of the Commonwealth, whether or not the dispute extends beyond the limits of any one State ; and (e) a claim which an organization is entitled to submit to the Commission under section 11A of the *Public Service Arbitration Act* 1920–1960 or an application or matter which the Public Service Arbitrator has refrained from hearing, or from further hearing, or from determining under section 14A of that Act, whether or not there exists in relation to the claim, application or matter a dispute as to industrial matters which extends beyond the limits of any one State.”

The Conciliation and Arbitration Act was extensively amended by an Act assented to on 30th June, 1956. This amendment altered the structure of the arbitration machinery by separating the judicial functions from the conciliation and arbitration functions. The Commonwealth Industrial Court was established to deal with judicial matters under the Act and the Commonwealth Conciliation and Arbitration Commission to handle the functions of conciliation and arbitration. Further amendments have since been incorporated.

The Commonwealth Industrial Court is composed of a Chief Judge and not more than three other Judges. The Commonwealth Conciliation and Arbitration Commission comprises a president, not less than two deputy presidents, a senior commissioner, not less than five commissioners and a number of conciliators. Judges of the Commonwealth Courts of Conciliation and Arbitration were made either members of



the Commonwealth Industrial Court or presidential members of the Commonwealth Conciliation and Arbitration Commission. Conciliation Commissioners became non-presidential members of the Commission.

The jurisdiction of the Commonwealth Industrial Court shall be exercised by not less than two Judges except in the following circumstances. A single Judge may exercise the jurisdiction of the Court with respect to the dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning eligibility of membership of an organization, disputes between an organization and its members and a prescribed matter of practice or procedure. A single Judge may refer a question of law for the opinion of the Court constituted by not less than two Judges. The Court is a Superior Court of Record with the same power to punish contempts of its power and authority as is possessed by the High Court. In general, decisions of the Industrial Court are final; however, an appeal lies to the High Court but only when the latter grants leave to appeal. The Act provides for the registration of associations of employees and employers and for inquiries to be held concerning disputed elections in organizations and certain powers in connexion therewith are, by the Act, given to the Industrial Court. Provision is also made for the Commission to exercise the powers of the Court with regard to an application for cancellation of registration of an organization. Any such change of jurisdiction must be notified by proclamation. This provision could be used if the powers of the Court in this regard were declared, in whole or in part, to be invalid.

The Commonwealth Conciliation and Arbitration Commission is empowered to prevent or settle industrial disputes by conciliation or arbitration, and to make suggestions and to do such things as appear right and proper for (a) effecting a reconciliation between parties to industrial disputes; (b) preventing and settling industrial disputes by amicable agreement; and (c) preventing and settling, by conciliation or arbitration, industrial disputes not prevented or settled by amicable agreement. The Commission may exercise its powers of its own motion or on the application of a party.

The President may assign a Commissioner to deal with industrial disputes relating to particular industries, or members of the Commission to deal with a particular industrial dispute. However, subject to the approval of the President, it is the duty of the Senior Commissioner to organize and allocate the work of the Commissioners and Conciliators.

When an industrial dispute occurs or is likely to occur, a Commissioner shall take steps for the prompt prevention or settlement of that dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. A Commissioner may arrange with the Senior Commissioner for a Conciliator to assist the parties to reach an amicable agreement and shall do so if the parties so request. If an agreement is reached, a memorandum of its terms shall be made in writing, and may be certified by the Commission. A certified memorandum shall have the same effect as an award.

The Commission in Presidential Session, that is, the Commission constituted by at least three presidential members nominated by the President and not otherwise, is empowered to deal with making awards, or certifying agreements, in so far as they concern standard hours, basic wages, and long service leave.

Upon application by a party to an industrial dispute, a Commissioner shall consult with the President as to whether in the public interest the dispute or part of it should be dealt with by a Commission consisting of not less than three members nominated by the President, at least one of whom shall be a presidential member and one, where practicable, the Commissioner concerned. The President may direct the Commission to hear the dispute or a part of the dispute. However, after consideration the Commission may refer the dispute or a part of it back for determination by the Commissioner originally dealing with the dispute. The Commission will then hear and determine any part of the dispute it has not referred back to the Commissioner.

An appeal against the decision of a Commissioner shall be heard by not less than three members nominated by the President, of whom at least two are presidential members of the Commission. However, an appeal will not be heard unless the Commission considers it is necessary as a matter of public interest.

Provision is also made in the Act for a presidential member of the Commission to deal with industrial matters in connexion with the Maritime Industries, Snowy Mountains Area and Stevedoring Industry, except in those matters for which the Act requires that the Commission shall be constituted by more than one member.

### **Standard Hours of Work**

#### *General*

In the fixation of weekly wage rates most industrial tribunals prescribe the number of hours constituting a full week's work for the wage rates specified. In 1914 the 48-hour week was the recognized standard working week for most industries.

In 1927, the Commonwealth Court of Conciliation and Arbitration granted a 44-hour week to the Amalgamated Engineering Union and intimated that this reduction in standard hours of work would be extended to industries operating under conditions similar to those in the engineering industry. However, the economic depression delayed the extension of the standard 44-hour week until improvement in economic conditions made possible a general extension to employees under Commonwealth awards.

#### *40-hour Week*

Soon after the end of the Second World War, applications were made to the Commonwealth Court of Conciliation and Arbitration for the introduction of a 40-hour week. The judgment, given on 8th September, 1947, granted the reduction to 40 hours from the start of the first pay period in January, 1948. In Victoria, the Wages Board

met and incorporated the shorter working week in their determinations. From the beginning of 1948 practically all employees in Australia whose conditions of labour were regulated by industrial authorities had the advantages of a standard working week of 40 hours or, in certain cases, less.

In the 1952-53 Basic Wage and Standard Hours Inquiry, the employers sought an increase in the standard hours of work per week claiming it to be one of the chief causes of inflation\*. The Court found that the employers had not proved that the existing economic situation called for a reduction of general standards in the matter of the ordinary working week.

### *Average Weekly Hours of Labour*

The number of hours constituting a full week's work (excluding overtime) differs in some instances between various trades and occupations and between the same trades and occupations in the several States. The particulars of weekly hours of labour given in the following tables relate to all industrial groups except rural, shipping, and stevedoring. These groups are excluded because for earlier years the hours of labour for some of the occupations included were not regulated either by awards or determinations of industrial tribunals or by legislation. As a result, the necessary particulars for the computation of average working hours for these groups are not available.

### VICTORIA—WEIGHTED AVERAGE STANDARD WEEKLY HOURS OF WORK: ADULT MALES: INDUSTRIAL GROUPS

Industrial Group‡	Hours of Work			Index Numbers (Base : Australia : 1954 = 100†)		
	At End of Quarter—			At End of Quarter—		
	31st March, 1939	31st March, 1948	31st December, 1960	31st March, 1939	31st March, 1948	31st December, 1960
Mining and Quarrying ..	44.34	40.52	40.00	111.0	101.4	100.1
Manufacturing ..	44.19	40.05	39.99	110.6	100.2	100.1
Building and Construction ..	44.18	40.00	40.00	110.6	100.1	100.1
Railway Services ..	43.96	39.97	39.96	110.0	100.0	100.0
Road and Air Transport ..	46.70	40.10	40.00	116.9	100.4	100.1
Communication ..	44.00	40.00	40.00	110.1	100.1	100.1
Wholesale and Retail Trade	45.47	40.11	40.00	113.8	100.4	100.1
Public Administration and Professional ..	42.75	38.93	38.93	107.0	97.4	97.4
Amusement, Hotels, Personal Service, &c. ..	45.35	40.04	40.00	114.7	100.2	100.1
All Industrial Groups‡ ..	44.46	40.03	39.97	111.3	100.2	100.0

\* Commonwealth Arbitration Reports, Vol. 77, page 505.

† Base : Weighted average for Australia 1954=100.

‡ Excludes Rural and Shipping and Stevedoring.

**VICTORIA—WEIGHTED AVERAGE STANDARD WEEKLY  
HOURS OF WORK: ADULT FEMALES: INDUSTRIAL GROUPS\***

Industrial Group	Hours of Work	Index Numbers (Base : Australia : 1954 = 100†)
Engineering, Metal Works, &c. .. ..	39·87	100·5
Textiles, Clothing, and Footwear .. ..	40·00	100·8
Food, Drink, and Tobacco .. ..	40·00	100·8
Other Manufacturing .. ..	39·94	100·7
All Manufacturing Groups .. ..	39·97	100·8
Transport and Communication .. ..	37·94	95·6
Wholesale and Retail Trade .. ..	40·00	100·8
Public Administration and Professional .. ..	39·25	98·9
Amusement, Hotels, Personal Service, &c. .. ..	39·94	100·7
All Industrial Groups .. ..	39·81	100·4

\* The above weighted average standard weekly hours and index numbers are applicable to 31st March, 1951, and to the end of each subsequent quarter to 31st December, 1960, as there has been no change in weighted average standard hours for females during this period.

† See footnotes on previous page.

**Industrial Disputes**

The collection of information relating to industrial disputes involving stoppage of work was initiated by the Commonwealth Statistician in 1913 and figures have been published regularly ever since.

The following tables give statistics of the numbers of industrial disputes and workers involved, and numbers of working days lost. The figures are given as averages over a period of years and annual totals are shown from 1956 onwards. Particulars of all disputes in progress during the year are included in the annual figures whether the dispute commenced in that year or was in progress at the beginning of the year. Consequently, details of "the number of disputes" and "workers involved" in disputes which commenced in any year and were still in progress during the following year will be included in the figures for both years.

**VICTORIA—INDUSTRIAL DISPUTES\***

Period	Number of Disputes	Number of Workers Involved			Number of Working Days Lost
		Directly	Indirectly†	Total	
Ten Year Averages—					
1930-39 .. ..	13	4,881	470	5,351	53,118
1940-49 .. ..	28	24,559	610	25,169	154,486
1950-59 .. ..	53	40,988	2,775	43,763	195,905
Five Year Averages—					
1951-55 .. ..	54	45,933	1,591	47,524	97,965
1956-60 .. ..	65	41,410	994	42,404	72,732
Annual Totals—					
1956 .. ..	54	35,594	2,283	37,877	111,665
1957 .. ..	47	8,728	453	9,181	13,444
1958 .. ..	66	45,594	1,124	46,718	99,855
1959 .. ..	60	31,134	1,107	32,241	35,890
1960 .. ..	98	86,002	2	86,004	102,805

\* Refers only to disputes involving a stoppage of work of ten man-days or more.

† Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the disputes.

## VICTORIA—INDUSTRIAL DISPUTES\*: INDUSTRIAL GROUPS

Year	Mining and Quarrying	Manufacturing	Building and Construction	Transport		Other Groups	All Groups	
				Stevedoring	Other			
NUMBER OF DISPUTES								
1956	..	1	15	17	14	5	2	54
1957	..	..	19	7	14	6	1	47
1958	..	..	27	11	16	8	4	66
1959	..	..	31	3	18	7	1	60
1960	..	..	28	20	36	10	4	98
WORKERS INVOLVED								
1956	..	485	4,120	750	28,278	2,704	1,540	37,877
1957	..	..	1,967	1,347	5,090	727	50	9,181
1958	..	..	5,836	1,637	38,048	783	414	46,718
1959	..	..	8,090	252	10,788	13,007	104	32,241
1960	..	..	7,584	4,032	41,065	29,241	4,082	86,004
WORKING DAYS LOST								
1956	..	2,037	14,928	11,509	75,041	2,293	5,857	111,665
1957	..	..	8,622	1,441	1,212	2,154	15	13,444
1958	..	..	32,858	17,390	44,481	4,585	541	99,855
1959	..	..	25,410	1,169	4,962	4,032	317	35,890
1960	..	..	8,736	13,044	60,819	15,040	5,166	102,805
ESTIMATED LOSS IN WAGES								
(£)								
1956	..	7,674	52,003	39,822	262,655	7,656	16,329	386,139
1957	..	..	29,894	4,433	4,246	6,945	58	45,576
1958	..	..	112,468	52,592	155,688	17,960	1,638	340,346
1959	..	..	94,143	5,632	18,137	12,853	675	131,440
1960	..	..	33,227	63,265	243,209	42,425	14,991	397,117

\* Refers only to disputes involving a stoppage of work of ten man-days or more.

## Labour Organizations

## Registration

(1) *Under Trade Union Acts.*—The Commonwealth Year Book of 1953 (No. 39, p. 448) gives some information on the registration of trade unions under the Trade Union Acts. In general this section indicates that the available information is inadequate for statistical purposes.

(2) *Under Victorian State Industrial Legislation.*—In 1884, the Victorian Parliament passed a Trade Union Act, based on an English Act of three years earlier, but the unions refused to register under it and the Act was amended in 1886. The *Trade Unions Act* 1958 still makes provision for registration on compliance with certain standards. Registration gives a trade union a corporate identity and legal status for the purpose of engaging in strikes. However, registration has never been compulsory and few unions have sought the benefits of the legislation.

(3) *Under the (Commonwealth) Conciliation and Arbitration Act.*—Under Part VIII. of the *Conciliation and Arbitration Act* 1904–1961, any association of employers in any industry who have, or any employer who has, employed, on an average taken per month, not less than 100 employees during the six months preceding application for registration, or any association of not less than 100 employees in any industry, may be registered. Under the Public Service Arbitration Act an association of less than 100 employees may be registered as an organization, provided that its members comprise at least three-fifths of all persons engaged in that industry in the Service. Such Public

Service organizations are included in the figures shown below. Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. At the end of 1960, the number of employers' organizations registered under the provisions of the Conciliation and Arbitration Act was 63. The number of unions of employees registered at the end of 1960 was 154, with a membership of 1,558,465, representing 81 per cent. of the total membership of all trade unions in Australia.

#### *Particulars Regarding Trade Unions*

(1) *Types*.—The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organizations :—(a) the local independent ; (b) the State ; (c) the interstate ; and (d) the Australasian or international. However, a number of variations occur from each of these classes and the schemes of organization of interstate or federated unions vary greatly in character. In some unions, the State organizations are bound together under a system of unification with centralized control, while in others the State units are practically independent and self-governing, the Federal bond being loose and existing only for one or two specified purposes.

(2) *Number, Membership, and Proportion of Wage and Salary Earners*.—Returns showing membership by States as at 31st December each year are obtained for all trade unions and employee organizations. The affairs of single organizations are not disclosed in the published results and this has assisted in securing complete information. In addition to the numbers of unions and of members the following table shows the estimated percentages of wage and salary earners in employment who are members of trade unions. As current estimates of wage and salary earners in employment do not include employees engaged in rural industry or females in private domestic service, the percentages have been calculated on figures obtained by adding to the end-of-year estimates the number of employees in rural industry and females in private domestic service recorded at the Census of 30th June, 1954. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

#### VICTORIA—TRADE UNIONS

Year	Number of Separate Unions	Number of Members			Proportion of Total Wage and Salary Earners		
		Male	Female	Total	Male	Female	Total
					%	%	%
1956 .. ..	162	356,531	84,755	441,286	58	34	51
1957 .. ..	162	356,223	86,817	443,040	58	34	51
1958 .. ..	161	355,272	88,878	444,150	57	34	50
1959 .. ..	159	369,169	92,145	461,314	58	34	51
1960 .. ..	157	381,147	98,097	479,244	58	35	51

(3) *Classification in Industrial Groups.*—The following table shows the number of unions and membership classified by industrial groups at the end of each of the years 1959 and 1960:—

VICTORIA—TRADE UNIONS : INDUSTRIAL GROUPS

Industrial Group	1959		1960	
	No. of Unions	No. of Members	No. of Unions	No. of Members
Agriculture, Grazing, &c. ..	2	10,220	2	10,066
Manufacturing—				
Engineering, Metal Works, &c. ..	10	71,173	10	74,744
Textiles, Clothing, and Footwear	5	47,555	5	50,451
Food, Drink, and Tobacco ..	14	20,382	14	23,022
Sawmilling, Furniture, &c. ..	3	11,542	3	11,202
Paper, Printing, &c. ..	6	16,313	6	17,463
Other Manufacturing ..	16	32,518	15	33,540
Total Manufacturing ..	54	199,483	53	210,422
Building and Construction ..	10	34,929	10	35,001
Railway and Tramway Services ..	6	28,091	5	27,686
Road and Air Transport ..	7	12,881	7	16,731
Shipping and Stevedoring ..	7	7,759	7	7,624
Banking, Insurance, and Clerical	10	25,207	10	26,756
Wholesale and Retail Trade ..	3	20,922	3	17,614
Public Administration *	37	75,607	37	76,887
Amusement, Hotels, Personal Service, &c. ..	8	14,806	8	15,259
Other Industries† ..	15	31,409	15	35,198
Total .. ..	159	461,314	157	479,244

\* Includes Communication and Municipal, &c.

† Includes Mining and Quarrying and Professional Services.

*Central Labour Organizations*

Delegate organizations consisting of representatives from a group of trade unions have been established in each of the capital cities and in a number of industrial centres elsewhere. Their revenue is raised by means of a *per capita* tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated with them for Victoria at the end of each of the years 1958 to 1960:—

VICTORIA—CENTRAL LABOUR ORGANIZATIONS

Organization	1958	1959	1960
Number of Councils .. ..	9	9	9
Number of Unions and Branch Unions Affiliated .. ..	269	284	289

The figures given in the preceding table concerning the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

A central labour organization, now called the Australian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the trade unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May, 1927. The A.C.T.U. consists of affiliated unions and affiliated Metropolitan and/or State Labour Councils and Provincial Councils. The Metropolitan or State Labour Council in each State is the State Branch of the A.C.T.U. and has the right to appoint one representative to act on the executive of the Council. In addition to the representatives of the State Branches of the A.C.T.U. six delegates are elected by and from Congress, one from each of the following industry groups of unions:—Building, Food and Distributive Services, Manufacturing, Metal, Services and Transport. To this Executive are added the four officers, namely, President, two Vice-Presidents and Secretary, who are elected by and from the Australian Congress of Trade Unions.

The objectives of the A.C.T.U. are the socialization of industry, i.e., production, distribution, and exchange, and the utilization of the resources of Australia for the benefit of the people—ensuring full employment, with rising standards of living, security, and full cultural opportunities for all. The methods to be adopted are the closer organization of the workers by the transformation of the Australian trade union movement from a craft to an industrial basis, by grouping of unions in their respective industries, and by the amalgamation of unions in order to establish one union in each industry; the consolidation of the Australian Labour Movement with the object of unified control, administration, and action; the centralized control of industrial disputes; educational propaganda among unions; and political action to secure satisfactory working class legislation.

The A.C.T.U. was the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the trade union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the annual International Labour Conference.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines and composed of delegates from separate unions whose members' interests are closely connected because of their occupations. Delegate councils of bakers, bread carters, and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.



### Apprenticeship Commission

Under the *Apprenticeship Act* 1928, which was proclaimed on 8th May, 1928, an Apprenticeship Commission was appointed to administer the Act and to supervise apprenticeship in trades proclaimed as apprenticeship trades.

The proclaimed apprenticeship trades and the number of probationers and apprentices employed under the Act on 30th June in each of the years 1956 to 1960 are shown in the following table. These figures are extracted from the Annual Reports of the Apprenticeship Commission of Victoria.

#### VICTORIA—NUMBER OF PROBATIONERS AND APPRENTICES EMPLOYED\*

Trade	1956	1957	1958	1959	1960
<b>BUILDING TRADES</b>					
Plumbing and Gasfitting .. ..	1,693	1,745	1,788	1,800	1,785
Carpentry and Joinery .. ..	2,473	2,236	2,323	2,329	2,324
Painting, Decorating, and Signwriting ..	296	303	346	380	368
Plastering .. ..	58	58	75	74	60
Fibrous Plastering .. ..	207	235	256	280	285
Bricklaying .. ..	134	125	149	131	122
<b>Total Building, &amp;c. ..</b>	<b>4,861</b>	<b>4,702</b>	<b>4,937</b>	<b>4,994</b>	<b>4,944</b>
<b>METAL TRADES</b>					
Engineering .. ..	2,605	2,693	2,763	2,808	3,038
Electrical .. ..	1,945	2,163	2,157	2,126	2,125
Motor Mechanic .. ..	2,473	2,433	2,356	2,413	2,477
Moulding .. ..	105	105	123	121	105
Boilermaking and/or Steel Construction	305	354	408	436	459
Sheet Metal .. ..	173	202	226	234	245
Electroplating .. ..	12	12	13	12	13
Aircraft Mechanic .. ..	90	93	86	82	71
Radio Tradesman .. ..	95	146	157	208	224
Instrument Making .. ..	50	57	58	61	66
Silverware and Silverplating .. ..	13	12	14	10	4
Vehicle Industry .. ..	413	603	688	820	878
Refrigeration Mechanic .. ..	29	37	46	64	81
<b>Total Metal Trades ..</b>	<b>8,308</b>	<b>8,910</b>	<b>9,095</b>	<b>9,395</b>	<b>9,786</b>
<b>FOOD TRADES</b>					
Breadmaking and Baking .. ..	47	53	45	55	59
Pastrycooking .. ..	76	85	87	85	88
Butchering and/or Small Goods Making ..	707	738	808	881	851
Cooking .. ..	23	27	23	23	34
<b>Total Food Trades ..</b>	<b>853</b>	<b>903</b>	<b>963</b>	<b>1,044</b>	<b>1,032</b>
<b>MISCELLANEOUS</b>					
Bootmaking .. ..	394	413	486	442	374
Printing .. ..	1,054	1,114	1,185	1,265	1,332
Hairdressing .. ..	720	812	865	1,027	1,299
Dental Mechanic .. ..	29	28	26	28	26
Watchmaking .. ..	33	31	31	34	26
Furniture .. ..	421	487	502	511	559
<b>Total Miscellaneous ..</b>	<b>2,651</b>	<b>2,885</b>	<b>3,095</b>	<b>3,307</b>	<b>3,616</b>
<b>Total .. ..</b>	<b>16,673</b>	<b>17,400</b>	<b>18,090</b>	<b>18,740</b>	<b>19,378</b>

\* At 30th June.

### Factories and Shops

#### *Labour Legislation*

The earliest attempt at regulating the conditions of labour in Victoria was made by the passing of an Act dated 11th November, 1873, forbidding the employment of any female in a factory for more than eight hours in any day. This Act defined "factory" to be a place where not fewer than ten persons were working. Since 1873 the definition of "factory" has been broadened until now it includes any place in which mechanical power exceeding one-half horse-power is in use or in which two or more persons are engaged in any manufacturing process. In some circumstances, one or more persons constitutes a factory even where no mechanical power is used. The general recognition of the necessity of securing the health, comfort and safety of the workers has been expressed in many further legislative enactments.

The industrial legislation formerly included in the Factories and Shops Acts has been revised and amended from time to time and the most important of the amendments have been noted in earlier editions of the Victorian Year Book. It has now been consolidated in the *Labour and Industry Act* 1958.

#### *Closing Hours of Shops*

The trading hours for shops under the Labour and Industry Acts in both metropolitan and country areas are generally between 8 a.m. and 6 p.m., Mondays to Fridays, and 8 a.m. and 1 p.m. on Saturdays. Certain shops are permitted certain extensions to their hours of trading and, in some cases, to operate during certain hours on Sundays. These are booksellers and newsagents; butchers; bread, pastry and confectionery; cooked meat (other than tinned meat); fish and oyster; flowers; fruit and vegetables; hairdressers and tobacconists; motor oil, motor spirit, and accessories; motor car and motor cycle; and chemists.

However, because some shops' Wages Boards have fixed penalty rates for work done, for example, before 9.5 a.m. and after 5.30 p.m., these times are the effective trading hours for many shops, particularly within the Metropolitan Area.

The first seven classes of shops above, with the exception of butchers' shops, belong to the category known as Fifth Schedule Shops and in these shops the following kinds of foods, &c. may be sold without involving any modification of trading hours, i.e., non-intoxicating beverages, butter, eggs, milk, cream, tea, coffee, tobacco, cigarettes, cigarette papers, matches, toilet soap, shaving soap, razor blades, and powders and tablets for relief of pain.

## Wages

### Basic Wage

#### *Wage Determinations in Victoria*

In all States, including Victoria, the basic wage is determined in two ways. Firstly, for industries which extend beyond the boundaries of one State, the basic wage is determined by the Commonwealth Conciliation and Arbitration Commission. Secondly, industrial tribunals, which in Victoria are Wages Boards, are set up for industries which do not extend beyond the State boundary\*. The Boards, constituted from representatives of employers and employees and an independent chairman for each industry group or calling, determine the minimum rate of wage to be paid in each industry or calling. In general, these Boards have adopted a basic wage in determining the rate of wage to be paid.

#### *Commonwealth Basic Wage Determinations*

(1) *Awards 1907 to 1953.*—The first basic wage, as such, was declared in 1907 by Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration. The rate of wage declared was 7s. per day or £2 2s. per week for Melbourne, and by virtue of the fact that it had been determined in connexion with H. V. McKay's Sunshine Harvester Works it became popularly known as the "Harvester Wage".

In 1913, the Court took cognizance of the Retail Price Index compiled by the Commonwealth Statistician covering food, groceries and the rents of all houses ("A" Series), and thereafter the basic wage was adjusted in accordance with variations disclosed by that index.

An amount known as the "Powers three shillings" was added in 1922 to the weekly rate of wage for the purpose of securing to the worker, during a period of rising prices, the full equivalent of the "Harvester" standard. The system of making regular quarterly adjustments of the basic wage was also instituted in that year.

In 1931, in view of the depressed financial conditions prevailing, the Court reduced all wages under its jurisdiction by 10 per cent.

In consequence of continued applications from organizations of employees for the cancellation of the order providing for the 10 per cent. reduction, the Court in its judgment of 5th May, 1933, transferred the basis of fixation and adjustment of wages to a new set of index numbers, the "D" Series. This award was made applicable only to workers who had suffered the full 10 per cent. reduction.

The judgment of the Arbitration Court relative to the Basic Wage Inquiry of 1934 ordered a vital change in the method of calculating the basic wage. The "D" Series was superseded by the "C" Series as the measure for assessment and adjustment of the basic wage. The 10 per cent. reduction of wages—mentioned above—was removed.

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\* For further information on industrial arbitration see "Industrial Conditions" page 425.

As a result of the Basic Wage Inquiry of 1937, the Arbitration Court prepared and issued its own series of retail price index numbers based on and directly related to the Commonwealth Statistician's "C" Series Index. The new series was known as the "Court" Index. Provision was also made for the addition of a "fixed loading" known as a "Prosperity" loading of 6s. for Melbourne and 5s. for the six capitals' basic wage.

Applications by organizations of employees for an increase in the basic wage prescribed by awards of the Arbitration Court were considered at the Basic Wage Inquiry of 1940-41. The Court was of the opinion that the application should not be dismissed but should stand over for further consideration because of the uncertainty of the economic outlook during war-time. The hearing was not resumed until 1946.

Pending the hearing and final determination of the claims which had already been lodged or which might in the near future be lodged, the Court delivered judgment on its "Interim Inquiry" on 13th December, 1946. An increase of 7s. a week was granted in the "needs" portion of the basic wage then current, the rate for the six capital cities as a whole being increased from 93s. to 100s. a week. For automatic quarterly adjustments a new "Court" index was adopted.

The Arbitration Court, as a result of the Basic Wage Inquiry of 1949-50, decided to increase the basic wage by 20s. per week. At the same time the "prosperity" loading was incorporated in the new wage at a uniform amount of 5s. throughout Australia. As a result, the basic wage payable in Melbourne was increased by 19s. per week as from the first full pay period after 1st December, 1950. The female basic wage was increased to 75 per cent. of the male rate.

Following the hearing of the Basic Wage and Standard Hours Case, the Arbitration Court decided, on 12th September, 1953, to discontinue the automatic adjustment to the basic wage. The last quarterly wage adjustment made was based on the Court Series Index Numbers for June quarter, 1953, and became payable as from the first full pay period in August, 1953.

(2) *Awards 1956 to 1959.*—In the Basic Wage Inquiry of 1956, the Amalgamated Engineering Union and others applied for an increase in the basic wage to the amount it would have reached if automatic quarterly adjustments deleted by the Court in September, 1953, had remained in force; for an increase of a further £1 in the basic wage; for the re-introduction of automatic quarterly adjustments; and for the abolition of what is known as the 3s. country differential.

In delivering its judgment on 26th May, 1956, the Court rejected each claim made by the unions but decided to increase the adult male basic wage by 10s. (females 7s. 6d.) a week payable from the beginning of the first pay period in June.

The Court took the view that "so long as the assessment of the basic wage is made as the highest which the capacity of the economy can sustain, the automatic adjustment of that basic wage upon price

index numbers cannot be justified, since movements in the index have no relation to the movements in the capacity of the economy”\*. The Court was satisfied “that a basic wage assessed at the highest amount which the economy can afford to pay cannot in any way be arrived at on the current price of listed commodities. There is simply no relationship between the two methods of assessment.”†

“The Court’s examination of the economy and of its indicators—employment, investment, production and productivity, overseas trade, overseas balances, the competitive positions of secondary industry and retail trade and its consideration of inflation and its possible disastrous extension has led to the Court’s conclusion that the nation now has not the capacity to pay a basic wage of the amount to which automatic quarterly adjustments would have brought it.”‡

In the course of setting out the reasons for its decision the Court considered the period over which the capacity of the economy should be assessed, and concluded: “A year has been found almost universally to be a sensible and practicable period for such a purpose in the case of trading institutions the world over. The Court considers—fortified by the Judges’ experience of considering from time to time Australia’s capacity—that a yearly assessment of the capacity of Australia for the purpose of fixing a basic wage would be most appropriate. We would encourage any steps to have the Court fulfil such a task each year . . .”§

In the Basic Wage Inquiry of 1956–57, the Amalgamated Engineering Union and others again sought for an increase in the basic wage to the amount it would have reached if the automatic quarterly adjustments deleted by the Court in September, 1953, had remained in force, and for the re-insertion in the award of the provisions for the quarterly adjustment of the basic wage.

The Commonwealth Conciliation and Arbitration Commission’s judgment, delivered on 29th April, 1957, rejected the claims made by the unions and granted a uniform increase of 10s. a week in the basic wage for adult males (7s. 6d. females) to come into effect from the first pay period to commence on or after 15th May, 1957. The Commission said it would be available in February, 1958, for an annual review of the basic wage. However, the Commission considered that “it would not be proper for it nor would it wish to curtail the existing right of disputants to make an application at whatever time they think it necessary to do so.”§

On the 12th May, 1958, the Commission delivered judgment on the 1958 Basic Wage Inquiry increasing the basic wage for adult males by 5s. as from the first pay period starting on or after 21st May, 1958. The Commission refused to restore the automatic quarterly adjustments.

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\* Commonwealth Arbitration Reports, Vol. 84, page 175.

† 84 C.A.R., page 176.

‡ 84 C.A.R., page 177.

§ 87 C.A.R., page 445.

The Commission's judgment on the 1959 inquiry, delivered on 5th June, 1959, refused to reduce the basic wage in the Pastoral Award, refused to restore automatic quarterly adjustments, and increased the basic wage of adult males by 15s. per week (females 75 per cent.) as from the first pay period starting on or after 11th June, 1959. The claim for automatic quarterly adjustments was rejected by a majority decision (two to one). The Commission was unanimous that the basic wage should be increased but each member held different opinions as to the amount, and two members differed on the date of introduction. Decision was reached in that one member, whilst holding to his opinion, concurred in the decision proposed by the President.

(3) *Basic Wage Inquiry, 1960\**.—The Commonwealth Conciliation and Arbitration Commission considered an application by the Amalgamated Engineering Union (Australian Section) and others seeking the restoration of the automatic quarterly adjustments and an increase in the amount of the basic wage. The application was in both respects refused by the Commission.

The Commonwealth Government intervened in the public interest in accordance with the provisions of section 36 of the *Conciliation and Arbitration Act 1904–1959*. In addition, appearances were announced for the States of Victoria, South Australia, Queensland, Western Australia and Tasmania. The Commonwealth Government on this occasion presented, as it has done in the past, a detailed analysis of the economic situation of Australia, together with comments on fiscal and budgetary policy. In addition to this, it announced its opposition to the unions' application both to restore automatic quarterly adjustments and for an increase in the basic wage.

In view of the submissions made by the Commonwealth Government about the role of Governments in basic wage proceedings, the Commission made the following observations :—" In its complex and difficult task of assessing the capacity of the economy the Commission welcomes whatever assistance it can get from parties and from interveners. Governments are in a special position to give the Commission a proper conspectus of the public sector of the economy the state of which is an important factor for our consideration. They can also, of course, give us assistance in our task of reviewing the economy as a whole. It is a matter for each Government concerned to decide whether it will appear before the Commission and, if so, whether it will present material or state an attitude or both. It is obvious enough that the more comprehensive the material presented to the Commission by a Government, the greater the assistance the Commission derives from it, but it is not our province to attempt to influence Governments as to their attitude to basic wage cases."

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\* Quotations taken from "Reasons for Judgment", dated 12th April, 1960, by Commonwealth Conciliation and Arbitration Commission.

Dealing with the application for restoration of quarterly adjustments, the Commission determined that, bearing in mind the interest of employees, employers and the public generally, it would be preferable to fix a just and reasonable basic wage knowing that it would be effective for the ensuing year and then be reviewed, rather than fix a basic wage for an undefined period and adjust the money amounts of the wage automatically in accordance with movements in a price index.

On the question of increasing the basic wage the Commission felt it must seriously take into account the attitude of the Commonwealth Government which submitted that any further wage increases would add new fuel to the inflation of demand, inflation of home prices and inflation of costs in industry. The Commission decided that the basic wage should not be increased bearing in mind the substantial increases in both basic and secondary wages received by employees under Federal awards during the previous twelve months.

(4) *Basic Wage Inquiry, 1961.*—The Commonwealth Conciliation and Arbitration Commission considered an application by the Amalgamated Engineering Union and others for an increase of 52s. in the basic wage and re-introduction of automatic quarterly adjustments based on the "C" Series Index. The Metal Trades Employers Association sought to increase the ordinary working hours per week from 40 to 42 with a concomitant increase in weekly wages and to effect other consequential variations.

The Commission issued its judgment on the 4th July, 1961, when it announced an increase of 12s. in the basic wage for adult male employees covered by Federal awards. The applications for an increase in standard hours of work and the restoration of automatic quarterly adjustments were both refused.

In dealing with the question of automatic adjustments, the Commission indicated that although the Consumer Price Index would enable the fixing of a standard which is more likely to be properly maintainable than recent past standards, the application of this index should always be subject to Commission control. The Commission will assume each year that the effect of movements in the Consumer Price Index should be reflected in the basic wage unless persuaded to the contrary by those seeking to oppose the change.

The basic wage as now fixed is considered to have taken into account productivity increases up to June, 1960. The increase of 12s. granted reflects price increases during the past year.

The Commission considers a review of the economy generally and in particular of productivity increases could more properly take place at longer periods of time, say, every three or four years.

In the absence of special circumstances the next review of the basic wage will be a review only of the money wage and not the real wage. It is anticipated that a review of the real basic wage will not be required for some three years, i.e., in 1964.

A table of basic weekly rates of wage is shown below:—

MELBOURNE—BASIC WEEKLY WAGE RATES FIXED BY  
COMMONWEALTH CONCILIATION AND ARBITRATION  
COMMISSION\*

(Adult Males)

Payable from—	Amount	Payable from—	Amount	Payable from—	Amount
	<i>s. d.</i>		<i>s. d.</i>		<i>s. d.</i>
1907 .. ..	42 0	1930—		1940—	
1911 .. ..	45 6	February ..	90 0	February ..	81 0
1914 .. ..	50 6	May .. ..	86 0	May .. ..	82 0
1915 .. ..	53 0	August ..	85 6	August ..	84 0
1916 .. ..	61 6	November ..	83 0	November ..	84 0
1917 .. ..	63 0	1931—		1941—	
1918 .. ..	62 0	February ..	70 2†	February ..	86 0
1919 .. ..	65 0	May .. ..	68 5	May .. ..	87 0
1920 .. ..	71 0	August ..	65 8	August ..	87 0
1921 .. ..	86 0	November ..	63 5	November ..	88 0
1922—		1932—		1942—	
February ..	80 6	February ..	63 5	February ..	89 0
May .. ..	78 0	May .. ..	68 11	May .. ..	92 0
August ..	81 0	August ..	63 0	August ..	94 0
November ..	82 6	November ..	61 8	November ..	97 0
1923—		1933—		1943—	
February ..	82 0	February ..	60 4	February ..	98 0
May .. ..	81 6	May .. ..	63 4‡	May .. ..	93 0
August ..	87 6	August ..	62 5	August ..	99 0
November ..	91 6	November ..	62 10	November ..	93 0
1924—		1934—		1944—	
February ..	87 6	February ..	63 4	February ..	97 0
May .. ..	85 6	May .. ..	64 0§	May .. ..	97 0
August ..	85 0	June .. ..	64 0	August ..	98 0
November ..	84 6	September ..	64 0	November ..	98 0
1925—		December ..	64 0	1945—	
February ..	84 0	1935—		February ..	98 0
May .. ..	85 6	March .. ..	66 0	May .. ..	98 0
August ..	87 0	June .. ..	66 0	August ..	98 0
November ..	87 6	September ..	66 0	November ..	98 0
1926—		December ..	66 0	1946—	
February ..	87 6	1936—		February ..	98 0
May .. ..	88 6	March .. ..	66 0	May .. ..	98 0
August ..	92 0	June .. ..	66 0	August ..	99 0
November ..	89 0	September ..	66 0	November ..	99 0
1927—		December ..	69 0	December ..	106 0¶
February ..	88 6	1937—		1947—	
May .. ..	87 6	March .. ..	69 0	February ..	107 0
August ..	87 0	June .. ..	69 0	May .. ..	107 0
November ..	90 0	July .. ..	72 0	August ..	108 0
1928—		September ..	73 0	November ..	109 0
February ..	89 6	October ..	76 0	1948—	
May .. ..	88 0	December ..	77 0	February ..	113 0
August ..	86 0	1938—		May .. ..	115 0
November ..	86 0	March .. ..	77 0	August ..	117 0
1929—		June .. ..	77 0	November ..	120 0
February ..	86 0	September ..	78 0	1949—	
May .. ..	89 6	December ..	79 0	February ..	123 0
August ..	90 0	1939—		May .. ..	125 0
November ..	90 0	March .. ..	79 0	August ..	128 0
		June .. ..	81 0	November ..	130 0
		September ..	81 0	1950—	
		December ..	80 0	February ..	134 0
				May .. ..	137 0
				August ..	140 0
				November ..	143 0
				December ..	162 0**

For footnotes see following page.



MELBOURNE—BASIC WEEKLY WAGE RATES FIXED BY COMMONWEALTH  
CONCILIATION AND ARBITRATION COMMISSION\*—*continued*

(Adult Males)

Payable from—	Amount	Payable from—	Amount	Payable from—	Amount
	s. d.		s. d.		s. d.
1951—		1953—		1958—	
February ..	170 0	February ..	229 0	May .. ..	260 0
May .. ..	177 0	May .. ..	232 0		
August ..	189 0	August ..	235 0	1959—	
November ..	199 0			June .. ..	275 0
1952—		1956—		1961—	
February ..	209 0	June .. ..	245 0	July .. ..	287 0†
May .. ..	212 0	1957—			
August ..	224 0	May .. ..	255 0		
November ..	228 0				

\* Prior to 30th June, 1956, the Commonwealth Court of Conciliation and Arbitration ; † 10 per cent. "cut" operated ; ‡ "D" series introduced ; § "C" series introduced and 10 per cent. "cut" ceased to operate ; || "Prosperity" loading (3s.) added ; ¶ Interim basic wage adjustment of 13th December, 1946 ; \*\* Court decision (12th October, 1950) ; †† The 1960 Basic Wage Inquiry resulted in no change.

NOTE.—The system of making regular quarterly adjustments was instituted in 1922 and was discontinued after the August, 1953, adjustment. From this date the principal variations occurred between the wages determined by State Wages Boards and those determined by the Conciliation and Arbitration Commission. Previously the Wages Boards had followed the Federal awards to a large extent. The State Wages Board awards concerned were :—1953, Nov.—Dec. 237s. ; 1954, Feb. 238s., May 237s., Aug. 236s., Nov. 234s. ; 1955, Feb. 235s., May 237s., Aug. 240s., Nov. 246s. ; 1956, Feb. 251s., May 256s., Aug. 263s. Automatic quarterly adjustments to Wages Board awards were stopped by amendment to the Factories and Shops Act proclaimed 17th October, 1956. The Commonwealth awards of June, 1959, and July, 1961 were followed by the State Wages Boards.

### Victorian Wages Board Determinations

(1) *General*.—By an amendment to the *Factories and Shops Act* 1934, Wages Boards were given discretionary power to include in their determinations appropriate provisions of relevant Commonwealth awards. A further amendment to this Act in 1937 made it compulsory for Wages Boards to adopt such provisions of Commonwealth awards. This amending Act also gave Wages Boards power to adjust wage rates "with the variation from time to time of the cost of living as indicated by such retail price index numbers published by the Commonwealth Statistician as the Wages Board considers appropriate". The Wages Boards thus adopted the basic wages declared by the Commonwealth Court of Conciliation and Arbitration and followed that Court's system of adjusting the basic wage in accordance with variations in retail price index numbers.

(2) *Basic Wage outside Metropolitan Area*.—Prior to 1934, the basic wage for Victoria differed only slightly from that for Melbourne. In its judgment in that year, the Court made special reference to the basic wage payable in industries outside the Metropolitan Area, and it ruled that, except in certain specified districts where the cost of living appeared to be correctly indicated by the local "All Items" Index Numbers, or where known circumstances indicated that the general rule should not apply, the basic wage for provincial places should be a constant three shillings per week less than that for the metropolitan district in the same State. Special provision was made also for assessing or adjusting the wage in certain places.

(3) *Quarterly Adjustments 1953 to 1956.*—After the system of automatic adjustment of the Commonwealth basic wage was discontinued a number of Wages Boards met in September, 1953 and deleted references to these adjustments. However, an amendment to the Factories and Shops Act in November 1953 required Wages Boards to provide for automatic adjustment of wage rates in accordance with variations in retail price index numbers.

In general this requirement was repeated by the *Labour and Industry Act* 1953 which replaced the *Factories and Shops Act* 1928–1953. Then an amendment to this new Act, proclaimed on 17th October, 1956, deleted the automatic adjustment provision and directed Wages Boards in determining wage rates to take into consideration relevant awards of, or agreements certified by, the Commonwealth Conciliation and Arbitration Commission. The last automatic quarterly adjustment of the basic wage, based on the variation in retail price index numbers for the June quarter 1956, became payable from the beginning of the first pay period in August 1956.\*

### Wage Margins

#### 1954 Judgment

On 5th November, 1954, the Commonwealth Court of Conciliation and Arbitration delivered a judgment † which, in effect, became a general determination of the basis upon which all relevant wage and salary margins should be assessed. This became known as the Metal Trades Case, 1954.

General principles of marginal rate fixation had previously been enunciated by the Court in the Engineers' Case of 1924, the Merchant Service Guild Case of 1942 and the Printing Trades Case of 1947, and the Court adopted these in so far as they were applicable to current circumstances.

“Margins” were defined as—

“minimum amounts awarded above the basic wage to particular classifications of employees for the features attaching to their work which justify payments above the basic wage, whether those features are the skill or experience required for the performance of that work, its particular laborious nature, or the disabilities attached to its performance.”

A brief account of the Metal Trades Case is as follows :—

The Amalgamated Engineering Union, the Electrical Trades Union, and other employee organizations which were parties to the Metal Trades Award, 1952, filed applications during 1953 for increased margins for all workers covered by this award.

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\* For details of quarterly adjustments made in Victoria during this period refer to “Note” at foot of Basic Wage table, page 445.

† Extracts from the judgment were set out in some detail in Labour Report No. 46, pages 101 to 108.

The applications came on for hearing before J. M. Galvin, C.C., who decided they raised matters of such importance that, in the public interest, they should be dealt with by the Commonwealth Court of Conciliation and Arbitration. On 16th September and 6th October, 1953, the Conciliation Commissioner, pursuant to section 14A of the Conciliation and Arbitration Act referred these applications to the Court.

The actual claims of the trade unions were that the marginal rate of 52s. a week payable to a fitter in the metal trades should be increased to 80s. a week (86s. for certain electrical trades) with proportionate increases for other award occupations. The margins then current, with a few exceptions, had been in existence since 1947. The employees' claims were in the nature of a test case to determine the attitude of the Court to applications for increased margins.

The Metal Trades Employers' Association and other respondents to the Metal Trades Award had counter-claimed that existing margins for skilled tradesmen should remain unaltered, while those paid to partly skilled or unskilled workers should be reduced.

The Court decided to take the Commissioner's two references together, and the matter came on for hearing before the Full Arbitration Court in Melbourne on 13th October, 1953.

In a judgment delivered on 25th February, 1954, the Court held that a *prima facie* case had been made for a re-assessment of margins, but that the economic situation at that time, particularly in regard to the level of costs, did not permit of such a comprehensive review. The Court decided that to avoid the creation of new disputes, to save expense, and to obviate procedural difficulties, it would not reject the claims but adjourn them until 9th November, 1954.

On 25th and 26th August, 1954, summonses were filed by the employees' organizations for orders that proceedings in this case be brought forward and the hearing was resumed on 5th October, 1954.

In a judgment delivered on 5th November, 1954, the Court made an order re-assessing the marginal structure in the Metal Trades Award by raising the current amount of margin to two and a half times the amount of the margin that had been current in 1937. However, in cases in which the result of that calculation produced an amount less than the existing margin, the existing margin was to remain unaltered. In effect, this decision increased the margin of a fitter from 52s. a week to 75s. a week, increased similarly margins of other skilled occupations, and made no increase in margins of what may generally be described as the unskilled or only slightly skilled occupations under the Metal Trades Award.

At the end of its judgment the Court stated that, while its decision in this case related immediately to one particular industry, it was expected to afford general guidance to all authorities operating under

the Conciliation and Arbitration Act or under other legislation which provided for tribunals having power to make reference, or being subject to appeal, to the Court, where the wage or salary may properly be regarded as containing a margin. The Court added observations for the guidance of these and of other tribunals "which may regard decisions of this Court as of persuasive authority".

### *1959 Judgment*

On the 27th November, 1959 the Commonwealth Conciliation and Arbitration Commission delivered a unanimous judgment in the case presented by the Australian Council of Trade Unions for increased margins in the Metal Trades Award. The Commission awarded increases of 28 per cent. on the current margins to apply from the beginning of the first full pay period in December, 1959.

In concluding its judgment on the case the Commission stated :—

" . . . . . we have come to the conclusion that the employers' application to reduce wages under this Award should be rejected and that increases in margins may properly be granted. We have tested the amount of increase to be awarded by taking certain representative classifications for which we award the following increases :—

			Present Margin		Increase		New Margin	
			s.	d.	s.	d.	s.	d.
Duster	..	..	125	0	35	0	160	0
Forger	..	..	105	0	29	6	134	6
Fitter	..	..	75	0	21	0	96	0
Machinist—2nd class	..	..	50	0	14	0	64	0
Process Worker	..	..	22	0	6	0	28	0

It will be seen that these new margins represent an increase of 28 per cent. and we award for all other classifications adjustments of 28 per cent. on current margins, the amount of the increase to be taken to the nearest 6d. We do not regard the method of adjusting margins by percentages as a satisfactory one in all cases. In these proceedings, however, not having before us the question of work values which in most cases is an important factor in assessing margins and having decided not to alter the 1954 relativities it is inescapable that the increases granted be capable of being expressed as a percentage. Accordingly on this occasion we express the increases awarded within this industry as a percentage of current margins, but this is not to be taken as an endorsement of this method of fixing margins. . . . . This decision is based on the material placed before us and our general industrial knowledge which, in view of our functions under the Act, we think it proper to use. Both that material and that knowledge relate to the Metal Trades industry, and to the economy generally. Our decision, however, relates only to the Metal Trades Award. We realize that on occasions in the past, margins fixed in the Metal

Trades Award, and in particular the margin of the fitter, have been used as standards for other awards. The use of the increases which we have granted as a guide in other disputes will be a matter for the parties as far as conciliation is concerned and, if arbitration is necessary, for this Commission however constituted.”\*

Following the 1959 Metal Trades judgment, marginal increases for skill, &c., were applied generally throughout Victoria for industries under both Federal and State wages determinations. In addition, marginal increases were granted to the Commonwealth and State Public Services and to salaried and executive staffs of the banking, insurance, transport, retail, clerical, manufacturing, &c., industries.

### *Professional Engineers Case*

After a hearing lasting 2½ years, the Commonwealth Conciliation and Arbitration Commission issued its judgment in the Professional Engineers case on the 15th June, 1961. The Commission has prescribed a national minimum salary for Professional Engineers of £2,200 per annum to be received by graduates after four years' and diplomates after five years' experience.

## **Rates of Wage**

### *General*

In 1913, the Commonwealth Bureau of Census and Statistics first collected information on current wage rates for different callings and for occupations in various industries.

Early in 1960, the Bureau introduced new indexes of minimum weekly wage rates for adult males and females, base 1954 = 100·0, to replace the old series of nominal weekly wage rate index numbers for adult males and females with 1911 and 1914 respectively as base years. In general this revision was necessary to match changes in industrial structure. The particulars are obtained primarily from awards, determinations and agreements under Commonwealth and State Industrial Acts and are therefore the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which are not carried on in the capital cities, e.g., mining, agriculture, &c., the rates in the more important centres are taken.

The new index numbers are based on the occupation structure of 1954 and cover sixteen industrial groups for adult males and eight industrial groups for adult females. Weights for each occupation and each industry were derived from two sample surveys made in that year. The first was the Survey of Awards in April, 1954, which showed the number of employees covered by individual awards, determinations, and agreements. This provided employee weights for each industry as well as a basis for the Survey of Award Occupations made in

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\* See judgment, dated 27th November, 1959, by Commonwealth Conciliation and Arbitration Commission.

November, 1954. This second survey showed the number of employees in each occupation within selected awards, &c., thereby providing occupation weights.

The minimum wage rates used are for representative occupations within each industry. They have been derived from representative awards, determinations and agreements in force at the end of each quarter as from 31st March, 1939, for adult males and 31st March, 1951, for adult females. Using the industry and occupation weights determined by the sample surveys the various wage rates were combined to give weighted averages for each industrial group for Australia, and weighted averages for industrial groups for each State. These weighted averages are shown in the following tables, in shillings and pence, and as index numbers. The indexes are designed to measure movements in prescribed minimum rates of "wages" as distinct from "salaries". Consequently, awards, &c., relating solely or mainly to salary earners are excluded.

#### MINIMUM WEEKLY WAGE RATES: ADULT MALES\*

Date	Rates of Wage†		Index Numbers (Australia 1954=100‡)	
	Victoria	Australia	Victoria	Australia
	<i>s. d.</i>	<i>s. d.</i>		
31st December, 1951 .. ..	240 6	242 5	85·2	85·8
31st December, 1952 .. ..	270 8	273 2	95·8	96·7
31st December, 1953 .. ..	278 7	280 2	98·6	99·2
31st December, 1954 .. ..	284 10	286 10	100·9	101·6
31st December, 1955 .. ..	295 7	297 0	104·7	105·2
31st December, 1956 .. ..	309 7	313 0	109·6	110·8
31st December, 1957 .. ..	316 0	317 5	111·9	112·4
31st December, 1958 .. ..	319 8	322 11	113·2	114·3
31st December, 1959 .. ..	344 0	344 7	121·8	122·0
31st March, 1960 .. ..	349 0	348 10	123·6	123·5
30th June, 1960 .. ..	349 3	350 8	123·7	124·2
30th September, 1960 .. ..	349 6	352 3	123·8	124·7
31st December, 1960 .. ..	349 8	354 6	123·8	125·5

\* Weighted average minimum weekly wage rates, all groups, shown as rates of wage and in index numbers—excludes rural.

† The amounts shown should not be regarded as actual current averages, but as indexes expressed in money terms, indicative of trends.

‡ Base—weighted average weekly wage rate for Australia, 1954=100.

**MINIMUM WEEKLY WAGE RATES\*: INDUSTRIAL GROUPS:  
ADULT MALES, 31ST DECEMBER, 1960**

Industrial Group	Rates of Wage†		Index Numbers (Australia 1954=100)‡	
	Victoria	Australia	Victoria	Australia
	<i>s. d.</i>	<i>s. d.</i>		
Mining and Quarrying § ..	347 11	414 9	123·2	146·9
Engineering, Metal Works, &c. ..	347 1	349 10	122·9	123·9
Textiles, Clothing, and Footwear..	338 3	340 2	119·8	120·4
Food, Drink, and Tobacco ..	357 7	352 0	126·6	124·6
Sawmilling, Furniture, &c. ..	338 7	345 8	119·9	122·4
Paper, Printing, &c. ..	382 8	376 3	135·5	133·2
Other Manufacturing ..	340 3	345 6	120·5	122·3
All Manufacturing Groups ..	347 7	349 10	123·1	123·9
Building and Construction ..	361 4	356 10	127·9	126·3
Railway Services ..	326 1	346 5	115·5	122·7
Road and Air Transport ..	344 11	352 1	122·1	124·7
Shipping and Stevedoring    ..	345 4	344 6	122·3	122·0
Communication ..	382 11	383 7	135·6	135·8
Wholesale and Retail Trade ..	355 5	357 0	125·8	126·4
Public Administration and Professional ..	342 5	347 2	121·2	122·9
Amusement, Hotels, Personal Service, &c. ..	327 5	337 0	115·9	119·3
All Industrial Groups ..	349 8	354 6	123·8	125·5

\* Weighted average minimum weekly wage rates shown as rates of wage and in index numbers—excludes rural.

† The amounts shown should not be regarded as actual current averages, but as indexes expressed in money terms, indicative of trends.

‡ Base—weighted average weekly wage rate for Australia, 1954=100.

§ For mining, the average rates of wage on which index numbers are based are those prevailing at the principal mining centres in each State.

|| For shipping, average rates of wage on which index numbers are based are for occupations other than masters, officers and engineers in the Merchant Marine Service; and include value of keep, where supplied.

**MINIMUM WEEKLY WAGE RATES: ADULT FEMALES\***

Date	Rates of Wage†		Index Numbers (Australia 1954=100)‡	
	Victoria	Australia	Victoria	Australia
	<i>s. d.</i>	<i>s. d.</i>		
31st December, 1951 ..	172 2	170 4	86·5	85·6
31st December, 1952 ..	195 9	193 7	98·3	97·2
31st December, 1953 ..	201 4	198 9	101·1	99·8
31st December, 1954 ..	200 9	199 2	100·8	100·0
31st December, 1955 ..	210 5	206 11	105·7	103·9
31st December, 1956 ..	220 3	217 3	110·6	109·1
31st December, 1957 ..	225 0	221 3	113·0	111·1
31st December, 1958 ..	227 6	225 8	114·3	113·4
31st December, 1959 ..	241 3	242 2	121·2	121·6
31st March, 1960 ..	246 3	247 6	123·7	124·3
30th June, 1960 ..	246 4	248 9	123·7	124·9
30th September, 1960 ..	246 5	250 0	123·8	125·6
31st December, 1960 ..	246 7	251 8	123·9	126·4

\* † ‡ See footnotes to table on page 450.

**MINIMUM WEEKLY WAGE RATES\*: INDUSTRIAL GROUPS:  
ADULT FEMALES, 31st DECEMBER, 1960**

Industrial Group	Rates of Wage†		Index Numbers (Australia 1954=100‡)	
	Victoria	Australia	Victoria	Australia
	<i>s. d.</i>	<i>s. d.</i>		
Engineering, Metal Works, &c. ..	245 11	249 9	123·5	125·5
Textiles, Clothing, and Footwear..	239 1	240 8	120·1	120·9
Food, Drink, and Tobacco ..	240 10	246 4	121·0	123·7
Other Manufacturing ..	243 11	248 0	122·5	124·6
All Manufacturing Groups ..	241 2	244 7	121·1	122·9
Transport and Communication ..	254 11	259 6	128·0	130·3
Wholesale and Retail Trade ..	258 9	263 7	130·0	132·4
Public Administration and Professional .. ..	255 4	257 9	128·3	129·5
Amusement, Hotels, Personal Service, &c. .. ..	238 8	244 10	119·9	123·0
All Industrial Groups ..	246 7	251 8	123·9	126·4

\* † ‡ See footnotes to table on page 451.

**Average Weekly Wage Earnings**

*Average Weekly Total Wages Paid and Average Earnings: All Industries*

The following figures are derived from employment and wages recorded on pay-roll tax returns and from other direct collections. Pay of members of the armed forces is not included. Corresponding figures for each quarter are published in the Monthly Review of Business Statistics and the Monthly Bulletin of Employment Statistics in which a seasonally adjusted index will also be found. Quarterly figures of average weekly earnings are also published in the Victorian Monthly Statistical Review.

**AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS\***

Period	Average Weekly Total Wages Paid (£'000)		Average Weekly Earnings per Employed Male Unit † (£)	
	Victoria	Australia	Victoria	Australia
1948-49 .. .. .	5,710	19,905	9·12	8·77
1949-50 .. .. .	6,600	22,737	10·08	9·66
1950-51 .. .. .	8,223	28,540	12·05	11·55
1951-52 .. .. .	10,171	35,697	14·48	14·13
1952-53 .. .. .	10,816	38,154	15·71	15·45
1953-54 .. .. .	11,767	41,148	16·64	16·26
1954-55 .. .. .	12,901	44,739	17·59	17·13
1955-56 .. .. .	14,144	48,896	18·78	18·28
1956-57 .. .. .	14,925	51,644	19·70	19·16
1957-58 .. .. .	15,510	53,349	20·22	19·67
1958-59 .. .. .	16,240	55,519	20·69	20·19
1959-60 .. .. .	18,123	61,268	22·28	21·76

\* Includes salaries.

† Total wages divided by total civil employment expressed in male units. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. The same ratio has been used in each State and because the average ratio of female to male earnings may vary between States precise comparisons between average earnings in different States cannot be made on the basis of the figures above.



## *Employment and Unemployment*

### **Control of Employment**

#### *State Department of Labour and Industry*

The State Department of Labour and Industry deals generally with Wages Boards, the Apprenticeship Commission, registration and inspection of factories and shops, and licensing of servants' registry offices and tobacco sellers. The Labour and Industry Act which was passed in 1953 revised and consolidated the Factories and Shops Acts and provided for the administration by the Department of certain additional Acts (concerning boiler inspection and Sunday trading). It also extended the activity of the Department in several new directions—especially in providing for the Department to encourage "the establishment, development and expansion of industries throughout Victoria" and the "prevention and mitigation of unemployment". The new Act includes a description of the general powers and duties of the Minister which do not appear in the previous legislation. These comprise control of the following :—

- (1) conditions of employment generally including wages hours of work rest periods and holidays ;
- (2) establishment of employment offices and the prevention and mitigation of unemployment ;
- (3) the employment of women children and young persons including vocational guidance and training and apprenticeship ;
- (4) industrial safety health and welfare including the control of dangerous methods and materials the guarding of machinery, the prevention of accidents, the control and regulation of the industrial aspects of noxious trades, industrial lighting and ventilation, and the provision of amenities ;
- (5) industrial relations including the prevention and settlement of industrial disputes ;
- (6) training of persons for industrial services ;
- (7) initiation and direction of research and the collection preparation publication and dissemination of information and statistics relating to any of the matters referred to in this section ; and
- (8) encouragement of the establishment development and expansion of industries throughout Victoria.

#### *Commonwealth Department of Labour and National Service*

At the Federal level, the Commonwealth Department of Labour and National Service is responsible for the supervision and regulation of industrial relations, the regulation and control of stevedoring operations through the Australian Stevedoring Industry Board, the administration of the re-instatement and apprenticeship provisions of the *Re-establishment and Employment Act 1945-59* and the control of Commonwealth industrial training schemes.

*Commonwealth Employment Service*

The Commonwealth Employment Service was established under section 47 of the *Re-establishment and Employment Act* 1945. The principal functions of the Service, as set out in section 48 of this Act, are to provide services and facilities for the benefit of persons seeking employment or to change employment, or to engage labour, and to provide facilities to assist in bringing about and maintaining a high and stable level of employment throughout the Commonwealth.

The Commonwealth Employment Service is a decentralized service operating within the Employment Division of the Department of Labour and National Service. The Employment Division and other elements are under the control of a Departmental Regional Director responsible to the Permanent Head of the Department. In the State of Victoria the Regional Office Headquarters are located in Melbourne and there are seventeen District Employment Offices in the Metropolitan Area and fourteen in various country centres. In addition, there are also four part-time offices and a number of agents in country towns who work in conjunction with the District Employment Officer responsible for the area in which the part-time offices and agencies are located.

In assisting persons to obtain employment and to engage labour, the Commonwealth Employment Service provides specialist facilities for those with physical and mental handicaps, older workers, rural workers, young people and, through its Higher Appointments Office, for persons with professional and technical qualifications.

It assists in the administration of the unemployment and sickness benefits provisions of the *Social Services Act* 1947-1960 and of the re-employment allowance provisions of the *Re-establishment and Employment Act* 1945-59 for certain classes of discharged members of the forces. All persons who wish to claim unemployment benefits or re-employment allowances are required to register at a District Employment Office, which is responsible for certifying whether or not suitable employment can be offered to them.

In this State and, in fact, all States, with the exception of New South Wales, vocational guidance is provided free of charge by a staff of qualified psychologists. Whilst vocational guidance is available to anybody, it is provided particularly for young people and the physically handicapped.

The Service is responsible for placing in initial employment all Commonwealth-nominated migrant workers coming to Australia under the assisted passage schemes from the United Kingdom and other countries, and, as required, it provides assistance to other migrants wishing to obtain employment. When migrants coming under Commonwealth nomination arrive in Australia, the Service arranges for them to move to their initial employment and for their admission, if necessary, to Commonwealth-controlled hostels.

Since 1951, the Service has been responsible for recruiting experts for the Colombo Plan and the United Nations Expanded Programme of Technical Assistance. The principal spheres in which experts have been supplied are agriculture, education, engineering, geology, health, and economic and scientific research and development. The Service also arranges training in industry for Colombo Plan and United Nations people who come to Australia for such training.

In association with its placement activities, the Service carries out regular surveys of the labour market in all areas and industries and supplies detailed information to interested Commonwealth and State Government Departments and instrumentalities and to the public. It also advises employers, employees and others on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

No charge is made for any of the services rendered by the Commonwealth Employment Service.

Particulars of the major activities of the Service during the five years ended 30th June, 1960, are given in the following table:—

### VICTORIA—COMMONWEALTH EMPLOYMENT SERVICE

Activity, &c.	1955-56	1956-57	1957-58	1958-59	1959-60
Applications for Employment* ..	132,327	159,881	157,412	167,993	174,102
Number Placed in Employment ..	68,934†	64,562	65,568	73,083	84,277
Number of Vacancies Notified ..	102,313	89,721	94,949	108,016	130,671
Vacancies at 30th June .. ..	11,402	6,292	5,530	7,081	11,590

\* Includes unemployed persons and persons already in employment who are seeking improved positions.

† Revised.

### Employment Statistics

#### Total Occupied Persons

(1) *Australia*.—The total number of occupied persons in Australia is obtained from the results of each population census, supplemented by data concerning Australian defence personnel serving outside Australia, who, in accordance with usual census procedure, are not recorded in the census. The figures shown on page 456 are derived from the 1933, 1947, and 1954 Censuses.

(2) *Victoria*.—The figures in the next table are divided into three categories :—(a) defence forces ; (b) all persons fully occupied as employers, or as self-employed in businesses or on farms ; and (c) wage and salary earners employed, or occupied as casual part-time, intermittent or seasonal workers. “ Unemployed ” persons are excluded (see page 460).

All unpaid “ helpers ” in non-rural industry have been included with wage and salary earners. Male unpaid “ helpers ” in rural industry have been included with employers and self-employed persons, as the majority of these are considered to be sons or other close relatives of farmers working in *de facto* partnership, or as learners with the farm owner. Unpaid female “ helpers ” on farms are fairly numerous. Generally they are occupied mainly in home duties, and, with all other women occupied in unpaid home duties, have been excluded from the category of occupied persons.

# VICTORIA—TOTAL OCCUPIED PERSONS (’000)

At 30th June—	Defence Forces*	Employers and Self-employed			Wage and Salary Earners			Total Occu- pied Civilians	Total Occu- pied Persons (In- cluding Defence Forces) •
		Rural Industry	Other In- dustries	Total	Rural Industry	Other In- dustries	Total		
MALES									
1933	..	2.2	78.6	71.0	149.6	44.4	288.1	332.5	484.3
1947	..	15.9	77.5	80.6	158.1	28.3	462.2	490.5	648.6
1954	..	†15.0	75.6	91.5	167.1	27.2	569.7	596.9	764.0
FEMALES									
‡									
1933	..	..	5.2	18.6	23.8	0.8	148.1	148.9	172.7
1947	..	0.4	4.3	18.2	22.5	1.9	\$200.1	202.0	224.5
1954	..	0.8	5.6	19.7	25.3	1.4	225.6	227.0	252.3
PERSONS									
1933	..	2.2	83.8	89.6	173.4	45.2	436.2	481.4	654.8
1947	..	16.3	81.8	98.8	180.6	30.2	662.3	692.5	873.1
1954	..	15.8	81.2	111.2	192.4	28.6	795.3	823.9	1,016.3

\* Includes those serving outside Australia.

† Excludes approximately 3,000 males undergoing full-time National Service training at the time of the Census. With the exception of full-time students, these persons have been included in the figures of occupied civilians.

‡ Includes females in private domestic service—30,200 in 1933, 10,900 in 1947, and 7,900 in 1954.

§ Includes an estimate of 12,200 part-time workers not classified as wage earners at the Census.

During the fourteen years from 1933 to 1947, the number of persons actually occupied at work in Victoria increased by 232,400, or by an average of 16,600 persons per annum, and during the seven years from 1947 to 1954, the increase amounted to 142,700 or 20,400 per annum. Practically all of the increase in the number of occupied persons during the years 1947 to 1954 was due to the growth of the total available work force. During the previous intercensal period (1933 to 1947) the increase in the number of persons occupied comprised approximately 100,000 who had been unemployed in 1933 and approximately a 130,000 growth in the total available work force.

The total numbers of employers, self-employed and wage and salary earners of both sexes classified at the census as engaged in agricultural, pastoral and dairying industries (excluding female "helpers"—see above) declined from 129,000 in 1933 to 112,000 in 1947 with a further slight decline to 109,800 in 1954.

The number of male employers and self-employed in industries other than rural declined from 19.8 per cent. of occupied civilian males in these industries in 1933 to 14.8 per cent. in 1947, and to 13.8 per cent. in 1954. The corresponding number of female employers and self-employed declined from 11.2 per cent. of all

occupied females in non-rural industries in 1933 to 8·3 per cent. in 1947, with a further slight drop to 8 per cent. in 1954. The increase in the numbers of employers and self-employed in non-rural industries during the years 1947 to 1954 averaged only 1,800 a year. The average increase during the same period in the number of wage and salary earners in these industries was 19,000 a year.

The occupied population of Victoria (including defence forces, but excluding unemployed, pensioners, retired, persons of independent means and dependants) increased from 1947 to 1954 by 16 per cent.

### *Wage and Salary Earners in Civilian Employment*

(1) *General.*—Monthly estimates of the number of wage and salary earners in civilian employment (excluding employees in the rural industry and female private domestics) are obtained from three main sources :—

- (a) Monthly employment in factories as shown at annual factory censuses ;
- (b) current monthly returns of governmental bodies ; and
- (c) current monthly pay-roll tax returns.

These sources are supplemented by other direct records of monthly employment (e.g., hospitals) and by estimates for employees not otherwise covered. Pay-roll tax returns at present are lodged by all employers paying more than £200 a week in wages, other than certain Commonwealth Government bodies, religious and benevolent institutions, public hospitals and other similar organizations exempted under the *Pay-roll Tax Assessment Act 1941–1960*.

All figures in this series of tables are compiled on an establishment or enterprise basis, and therefore do not cover exactly the same area of industry as do the industry tabulations of the general Censuses of 1947 and 1954 which are based on the returns of individual employees.

The purpose of these estimates of employment is to measure, as nearly as may be with available data, current trends in employment in the defined field.

(2) *Victoria: Industrial Groups.*—The following table shows total male and female wage and salary earners in civilian employment (excluding employees in rural industry, female private domestics, persons on the paid strength of the defence forces and National Service trainees in camp) subdivided to show the extent of employment provided by government bodies and by private employers respectively. Principal industrial groups shown in the table include both private

employees and government employees, if any. The manufacturing employment figures published in this table comprise (a) the series showing actual monthly employment in factories as recorded at successive annual Censuses of Factories to June, 1960, with interim estimates for subsequent months, and (b) estimates of the number of employees in industrial establishments outside the scope of the definition of a factory and persons employed by factory proprietors but engaged in selling and distribution. Industry groups here are not identical in coverage with census groups.

**VICTORIA—WAGE AND SALARY EARNERS IN CIVILIAN  
EMPLOYMENT: INDUSTRIAL GROUPS\***  
(’000)

Industrial Group	June, 1956	June, 1957	June, 1958	June, 1959	June, 1960	Decem- ber, 1960	March, 1961
<b>MALES</b>							
Mining and Quarrying ..	4.8	4.6	4.6	4.6	4.7	4.7	4.8
Manufacturing, &c.,† ..	265.2	265.0	267.5	273.8	288.0	292.4	286.4
Building and Construction ..	53.6	50.6	50.8	50.7	50.7	51.1	52.2
Transport‡ ..	54.8	56.4	55.7	56.0	55.2	55.6	57.0
Communication... ..	17.3	18.5	19.2	19.9	20.1	20.2	20.6
Property and Finance ..	18.5	19.4	20.0	20.9	22.3	22.3	23.4
Retail Trade ..	37.8	37.9	38.9	39.1	40.2	42.3	40.7
Wholesale and Other Commerce ..	43.2	43.1	44.3	45.0	46.4	48.4	48.2
Public Authority Activity, n.e.i. ..	28.6	28.9	29.4	29.5	29.3	29.1	29.4
Health ..	6.6	6.8	6.9	7.0	7.1	7.2	7.2
Education ..	13.0	13.8	14.5	15.7	16.8	16.8	17.2
Personal Service§ ..	16.8	17.0	17.0	16.8	17.4	18.2	17.9
Other   ..	23.0	24.0	24.1	24.4	25.2	25.6	26.0
Total ..	583.2	586.0	592.9	603.4	623.4	633.9	631.0
Government¶ ..	160.0	162.7	166.1	169.3	168.9	167.7	172.2
Private ..	423.2	423.3	426.8	434.1	454.5	466.2	458.8
Total ..	583.2	586.0	592.9	603.4	623.4	633.9	631.0
<b>FEMALES</b>							
Mining and Quarrying ..	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Manufacturing, &c.,† ..	97.3	96.6	97.1	100.0	108.6	110.6	109.5
Building and Construction ..	1.3	1.4	1.5	1.5	1.7	1.8	1.8
Transport‡ ..	6.0	5.8	5.8	6.0	6.4	6.5	6.7
Communication... ..	5.6	5.6	5.5	5.6	5.5	5.6	5.7
Property and Finance ..	11.8	12.6	13.2	13.9	15.2	15.1	16.3
Retail Trade ..	33.8	32.8	34.4	34.9	36.3	39.0	36.8
Wholesale and Other Commerce ..	12.5	12.8	13.1	13.4	14.2	14.3	14.5
Public Authority Activity, n.e.i. ..	7.2	7.4	7.5	7.8	7.7	7.8	8.0
Health ..	22.4	23.0	23.7	25.4	26.0	26.0	26.6
Education ..	13.6	14.7	15.3	16.5	17.8	17.5	19.1
Personal Service§ ..	15.6	15.6	15.4	15.3	15.5	15.7	15.6
Other   ..	11.3	12.0	11.9	12.4	13.1	13.1	13.3
Total ..	238.5	240.4	244.5	252.8	268.1	273.1	274.0
Government¶ ..	41.7	42.1	43.1	45.2	46.6	46.3	48.7
Private ..	196.8	198.3	201.4	207.6	221.5	226.8	225.3
Total ..	238.5	240.4	244.5	252.8	268.1	273.1	274.0

\* For Footnotes see next page.

**VICTORIA—WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT :  
INDUSTRIAL GROUPS\*—continued**

('000)

Industrial Group	June, 1956	June, 1957	June, 1958	June, 1959	June, 1960	Decem- ber, 1960	March, 1961
<b>PERSONS</b>							
Mining and Quarrying ..	4.9	4.7	4.7	4.7	4.8	4.8	4.9
Manufacturing, &c.† ..	362.5	361.6	364.6	373.8	396.6	403.0	395.9
Building and Construction ..	54.9	52.0	52.3	52.2	52.4	52.9	54.0
Transport‡ ..	60.8	62.2	61.5	62.0	61.6	62.1	63.7
Communication ..	22.9	24.1	24.7	25.5	25.6	25.8	26.3
Property and Finance ..	30.3	32.0	33.2	34.8	37.5	37.4	39.7
Retail Trade ..	71.6	70.7	73.3	74.0	76.5	81.3	77.5
Wholesale and Other Commerce ..	55.7	55.9	57.4	58.4	60.6	62.7	62.7
Public Authority Activity, n.e.i. ..	35.8	36.3	36.9	37.3	37.0	36.9	37.4
Health ..	29.0	29.8	30.6	32.4	33.1	33.2	33.8
Education ..	26.6	28.5	29.8	32.2	34.6	34.3	36.3
Personal Services§ ..	32.4	32.6	32.4	32.1	32.9	33.9	33.5
Other   ..	34.3	36.0	36.0	36.8	38.3	38.7	39.3
<b>Total ..</b>	<b>821.7</b>	<b>826.4</b>	<b>837.4</b>	<b>856.2</b>	<b>891.5</b>	<b>907.0</b>	<b>905.0</b>
<b>Government¶ ..</b>	<b>201.7</b>	<b>204.8</b>	<b>209.2</b>	<b>214.5</b>	<b>215.5</b>	<b>214.0</b>	<b>220.9</b>
<b>Private ..</b>	<b>620.0</b>	<b>621.6</b>	<b>628.2</b>	<b>641.7</b>	<b>676.0</b>	<b>693.0</b>	<b>684.1</b>
<b>Total ..</b>	<b>821.7</b>	<b>826.4</b>	<b>837.4</b>	<b>856.2</b>	<b>891.5</b>	<b>907.0</b>	<b>905.0</b>

\* Excludes rural wage earners, female private domestics, personnel in Defence Forces, and National Service Trainees in camp.

† Includes employees engaged in selling and distribution, who are outside the scope of the factory employment figures as defined and published in Part 8 of the Year Book.

‡ Includes road transport ; shipping and stevedoring ; rail and air transport.

§ Includes hotels, restaurants, hairdressing, and other personal services (except female private domestics).

|| Includes forestry, fishing, and trapping ; law and order ; religion and social welfare ; other professional ; amusement, sport, and recreation.

¶ Includes employees of Commonwealth, State, semi-government, and local government authorities.

### Government Employees

The following table includes all employees of government authorities in services such as railways, tramways, banks, post office, air transport, education, broadcasting, television, police, public works, factories and munitions establishments, migrant hostels, &c., as well as administrative employees :—

**VICTORIA—CIVILIAN EMPLOYEES OF GOVERNMENT  
AUTHORITIES**

('000)

Date	Commonwealth			State and Semi- Government			Local Government			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
June, 1956	50.7	16.2	66.9	96.2	24.0	120.2	13.1	1.5	14.6	160.0	41.7	201.7
June, 1957	50.3	15.2	65.5	99.2	25.1	124.3	13.2	1.8	15.0	162.7	42.1	204.8
June, 1958	51.7	15.0	66.7	100.9	26.2	127.1	13.5	1.9	15.4	166.1	43.1	209.2
June, 1959	52.7	15.3	68.0	102.9	27.9	130.8	13.7	2.0	15.7	169.3	45.2	214.5
June, 1960	52.3	14.9	67.2	102.5	29.7	132.2	14.1	2.0	16.1	168.9	46.6	215.5
March, 1961	52.6	15.2	67.8	105.1	31.4	136.5	14.5	2.1	16.6	172.2	48.7	220.9

## Unemployment

## Census

The total of persons "unemployed" has been recorded only at the dates of the various censuses. Before the 1947 Census, persons who were "unemployed" were requested to furnish particulars of the cause and duration of unemployment, but from 1947 onwards, the inquiry was broadened to include all persons (usually engaged in industry, business, trade, profession or service) who were out of a job and "not at work" at the time of the census for whatever reason, including any not normally associated with unemployment. This change in the form of the questionnaire probably resulted in some variation in response. The following table sets out the number of persons recorded within these categories at the Censuses of 1933 to 1954. The percentage of "unemployed" at each date to all wage and salary earners, comprising those estimated to be in employment and those unemployed, is also shown.

**VICTORIA—UNEMPLOYMENT (ALL CAUSES):**  
**CENSUSES, 1933, 1947, AND 1954**

Date	Wage and Salary Earners Unemployed ( <sup>'000</sup> )			Proportion of Wage and Salary Earners Unemployed (Per Cent.)		
	Males	Females	Persons	Males	Females	Persons
June, 1933* .. ..	98·7	21·1	119·8	22·9	12·5	20·0
June, 1947† .. ..	13·9	4·2	18·1	2·7	2·0	2·5
June, 1954† .. ..	9·7	3·0	12·7	1·6	1·3	1·5

\* As recorded at the Census. In addition, there were considerable numbers of youths and young women of working age who had never been employed and were "not at work" at the time of the Census.

† Persons in the work force who were "not at work" at the time of the Census.

**VICTORIA—CAUSES OF UNEMPLOYMENT :**  
**CENSUSES, 1933, 1947, AND 1954**

Year	Unable to Secure Employment	Temporarily Laid Off	Illness	Accident	Industrial Dispute	Other	Total
<b>MALES</b>							
1933 .. ..	89,549	*	5,627	1,279	600	1,696	98,751
1947† .. ..	2,737	2,417	3,294	674	69	4,748‡	13,939
1954† .. ..	1,884	852	2,922	649	81	3,287‡	9,675
<b>FEMALES</b>							
1933 .. ..	16,467	*	3,261	145	31	1,136	21,040
1947† .. ..	350	581	1,106	93	8	2,079‡	4,217
1954† .. ..	596	336	994	72	5	998‡	3,001
<b>PERSONS</b>							
1933 .. ..	106,016	*	8,888	1,424	631	2,832	119,791
1947† .. ..	3,087	2,998	4,400	767	77	6,827‡	18,156
1954† .. ..	2,480	1,188	3,916	721	86	4,285‡	12,676

\* Not available.

† Persons in the work force who were "not at work" at the time of the Census.

‡ The majority of these persons were resting between jobs or changing jobs.



*Persons Receiving Unemployment Benefit*

The number of persons receiving unemployment benefit in Victoria, as stated by the Department of Social Services, is given in the following table :—

**VICTORIA—NUMBER OF PERSONS RECEIVING  
UNEMPLOYMENT BENEFIT\***

Year					Males	Females	Persons
1956-57	..	..	..	..	2,745	604	3,349
1957-58	..	..	..	..	3,765	1,362	5,127
1958-59	..	..	..	..	3,793	1,950	5,743
1959-60	..	..	..	..	2,871	1,396	4,267
1960-61	..	..	..	..	3,627	1,257	4,884

\* Average of monthly figures for financial year. For definition, benefits, &c., see pages 292-293.

*Prices***Retail Price Indexes**

Retail price index numbers for Australian cities are compiled by the Commonwealth Statistician, the aim being to measure the degree of change in prices for a selected field taken as a whole.

In compiling the retail price indexes the price of each item is multiplied by its quantity "weight" and then by its appropriate population or household "weight." The sum of these products for all items at any given date represents an "aggregate expenditure." The "aggregate expenditures" for successive periods are converted into an index by representing the aggregate of a selected or "base" period by an appropriate number (e.g. 100 or 1,000), and calculating index numbers for all periods to such base by the proportions which their aggregates bear to the aggregate of the base period.

The list of items must be a selected list because it is impossible in practice to obtain at regular intervals prices of all goods and services entering into household expenditure. Considerable difficulty is often experienced in ensuring that the selected items are always a true sample. Some items which it would be desirable to include must be excluded because comparative prices cannot be accurately ascertained for them at different times. Similarly many items of small aggregate or individual importance are excluded.

The lists used are simply selected items combined in certain proportions for the purpose of measuring price variations, and are representative of the fields covered, the proportions approximating to those in average consumption so far as can be ascertained. It must be emphasized that retail price indexes are designed to measure the extent of changes in price levels only. While they may be used to

indicate the effect of price change on cost of living they do not measure the absolute cost of living nor the extent of changes in the cost of living. They measure, as nearly as may be, the proportionate change in the aggregate cost of specified quantities and qualities of the selected list of items included in the index.

### *Previous Retail Price Indexes*

Due to changes in the pattern of household expenditure and in the mode of living, it becomes desirable from time to time to compile a new index with a list of items and weights more representative of current usage than those of the previous index.

The first retail price index compiled by the Statistician was the "A" Series in 1912 which related to the prices of food, groceries, and rents of all houses. It was discontinued in 1938. The "B" Series Index was first compiled in 1925 and continued until the December Quarter, 1953. It was the food and rent constituent of the "C" Series Index and was designed to replace the "A" Series Index for general statistical purposes.

The "C" Series Retail Price Index was first compiled in 1921 (retrospectively to 1914) to supply the need for a more adequate index. In its early years it was described as the "All Items" Index (to distinguish it from the "A" Series) because it included many items in addition to Food, Groceries, and House Rents, viz., Clothing, Household Drapery and Utensils, Fuel, Lighting, Fares, Smoking and some other miscellaneous items. This index was last published for the December Quarter of 1960 and it has now been discontinued. The "D" Series Index, derived by combining the "A" and "C" Series Indexes, was used by the Commonwealth Court of Conciliation and Arbitration from May, 1933, to May, 1934, and then discontinued.

Rapid changes in the pattern of wage earner expenditure and consumption occurred in the post-war period, and in 1953 the Conference of Statisticians recommended that "an Interim Retail Price Index be compiled with putative weights and components representative, as nearly as may be, of the post-war pattern of consumer usage and expenditure." The Interim Index was first published in March, 1954, and although it embraced a wider range of commodities and services than did the "C" Series Index, it did not take into account successive major changes in the pattern of expenditure and modes of living that began to occur early in 1950 and through to 1960. These changes could not, in fact, be detected and measured promptly, and incorporated into an index, concurrently with their happening in those years.

In this period, home owning largely replaced house renting, the number of government owned houses increased appreciably, the use of the motor car greatly increased and partly replaced use of public transport, various items of electrical household equipment and television came into widespread use, household consumption of electricity greatly increased, and technological developments such as the introduction of new synthetic materials produced a number of changes in clothing and other groups of items.

Through the impact of these continuing changes in usage, combined with disparate movements in prices, the Interim Retail Price Index became outmoded. As studies progressed and new data became available, it was clear that no single list of items and no single set of fixed weights would be adequately representative as a basis for measuring retail price changes at all times throughout the post-war period. In consequence, the situation was met by compiling the Consumer Price Index constructed as a chain of linked indexes with significant changes in composition and weighting effected at short intervals during the period 1950–1960. The Interim Index was last published for the March Quarter of 1960 and it is now discontinued.

### *Consumer Price Index*

The title “Consumer Price Index” does not imply that the new index differs in definition or purpose from its predecessors. This title is adopted in conformity with world trends in naming indexes of retail prices (including prices of services, accommodation, &c.) paid by consumers, and wherein these prices are weighted according to patterns of consumption.

The Consumer Price Index is a quarterly measure of variations in retail prices for goods and services representing a high proportion of the expenditure of wage earners’ households. The Index is designed only to measure the proportionate change in prices as combined in the individual groups in the Index. This is a basic principle of all price indexes, and failure to grasp it gives rise to misconceptions concerning price indexes and their uses.

The Consumer Price Index covers a wide range of commodities and services arranged in the following five major groups: Food, Clothing and Drapery, Housing, Household Supplies and Equipment, and Miscellaneous. These groups do not include every item of household spending. It is both impracticable and unnecessary for them to do so.

The Index has been compiled for each quarter from September Quarter, 1948, and for each financial year from 1948-49. "All Groups" index numbers, and Group index numbers for each of the five major Groups, are compiled and published regularly for six State capital cities separately and combined. The reference base for each of these indexes is: Year 1952-53 = 100.0. The separate city indexes measure price movements within each city individually. They enable comparisons to be drawn between cities as to differences in degree of price movement but not as to differences in price level.

Similarly, the separate group indexes measure price movements of each group individually, and compare the degree of price change in the different groups. The index for the six capital cities combined is a weighted average of price movement in the individual cities.

Changes in the pattern of expenditure of wage earner households since 1950 have been such as to render it necessary to construct the index with additional items and changes in weighting patterns at intervals (rather than on the basis of a list of items and set of weights which remain unchanged throughout the period). Consequently the Consumer Price Index is a chain of "fixed weight aggregative" indexes, with significant changes in composition and weighting effected at June Quarter, 1952, June Quarter, 1956, and March Quarter, 1960.

The principal changes are :—

- (1) The introduction of private motoring (June Quarter, 1952) and of television (March Quarter, 1960);
- (2) altered proportions of houses under the various modes of occupancy (June Quarters, 1952 and 1956); and
- (3) changes in weights of fuel and fares (June Quarters of 1952 and 1956) and of private motoring (June Quarter, 1956).

It is envisaged that future links will be made in the index when significant changes in the pattern of household expenditure render it necessary to do so.

The sets of weights used for the different periods covered by the index have been derived from analyses of statistics of production and consumption, the general Censuses of 1947 and 1954, the Censuses of Retail Establishments of 1948-49, 1952-53 and 1956-57 and the continuing Survey of Retail Establishments; from information supplied by manufacturing, commercial, and other relevant sources; and from special surveys.

The principal ways in which the Consumer Price Index differs from the Interim Retail Price Index are the following :—

- (1) The list of items has been expanded to include :—
  - (i) Home ownership—price of new house ; rates and charges payable to local government authorities (including water and sewerage authorities); and repairs and maintenance of houses ;
  - (ii) weekly payments for houses let by State housing authorities ;
  - (iii) household appliances such as refrigerators, washing machines, and television sets ;
  - (iv) private motoring ; and
  - (v) beer and other additional items.
- (2) It is constructed as a series of linked indexes with significant changes in composition and weighting effected at June Quarter, 1952, June Quarter, 1956, and March Quarter, 1960. (This linking has not affected the level of the index at the time of changes.)

The question of linking the Consumer Price Index and the "C" Series Index to provide an approximate measure of long term retail price movements is receiving consideration.

Consumer Price Index Numbers for Melbourne are shown in the following table :—

**MELBOURNE—CONSUMER PRICE INDEX NUMBERS**  
(Base of Each Index : Year 1952–53 = 100)

Year Ended 30th June—		Food	Clothing and Drapery	Housing	Household Supplies and Equipment	Miscellaneous	All Groups
1950	..	59·2	67·5	79·9	69·9	68·3	66·2
1951	..	69·8	77·3	84·5	76·8	74·4	74·6
1952	..	89·4	93·0	92·0	92·0	90·8	91·0
1953	..	100·0	100·0	100·0	100·0	100·0	100·0
1954	..	104·4	100·6	102·9	101·2	99·9	102·0
1955	..	103·9	101·2	105·4	100·6	99·7	102·0
1956	..	112·2	102·8	113·8	101·6	108·3	108·1
1957	..	117·8	104·9	122·8	105·2	117·8	114·0
1958	..	114·3	108·4	127·3	106·2	118·8	114·4
1959	..	116·1	109·6	129·4	109·2	122·2	116·6
1960	..	120·8	110·7	135·8	110·9	125·5	120·0
1961	..	130·2	112·8	151·2	112·5	129·2	125·9

NOTE:—The above are averages of the four quarterly index numbers.

*Retail Prices of Food*

The average retail prices of various food and grocery items in Melbourne are shown in the following table. The figures represent the means of the monthly prices as at the 15th day of each month in the years shown.

**MELBOURNE—AVERAGE RETAIL PRICES OF SELECTED  
COMMODITIES\***  
(Pence)

Item	Unit	1939	1945	1950	1955	1960
<b>Groceries—</b>						
Bread† .. .. .	2 lb.	5.40	5.55	8.50	14.63	17.96
Flour—Plain .. .. .	2 lb.	4.25	4.25	5.72	11.14	13.22
" Self-raising .. .. .	2 lb.	7.48	7.40	9.98	18.10	21.85
Tea .. .. .	1 lb.	27.74	27.00	36.50	84.53	77.49
Sugar .. .. .	1 lb.	4.00	4.00	5.00	9.00	10.62
Tapioca, Seed .. .. .	1 lb.	3.09	6.88	7.88	12.87	13.07
Jam, Plum .. .. .	1½ lb.	8.40	11.25	16.68	27.18	29.68
Golden Syrup .. .. .	2 lb.	7.14	7.33	9.54	19.00	21.56
Oats, Flaked .. .. .	1 lb.	3.56	3.79	6.37	9.42	10.77
Raisins, Seeded .. .. .	1 lb.	10.43	13.09	18.80	28.38	33.24
Currants .. .. .	1 lb.	8.76	10.58	14.86	22.66	28.58
Apricots, Dried .. .. .	1 lb.	15.52	18.00	25.17	58.07	63.77
Peaches, Canned .. .. .	29 oz.	9.43	13.26	20.25	33.12	33.38
Pears, Canned .. .. .	29 oz.	10.02	14.20	21.53	35.07	33.52
Potatoes .. .. .	7 lb.	17.70	8.40	24.08	40.99	46.09
Onions .. .. .	1 lb.	3.53	2.62	4.02	9.13	11.36
Soap .. .. .	1 lb.	6.97	7.11	11.39	18.02	20.32
Kerosene .. .. .	quart	5.15	6.43	7.34	8.24	8.81
<b>Dairy Produce—</b>						
Butter, Factory .. .. .	1 lb.	19.50	20.50	26.35	50.93	57.13
Cheese, Mild .. .. .	1 lb.	13.41	16.28	18.50	34.13	42.04
Eggs, New Laid .. .. .	1 doz.	19.17	26.00	39.61	66.88	67.14
Bacon, Rashers .. .. .	1 lb.	19.90	22.78	44.06	71.54	91.10
Milk—Condensed .. .. .	tin	9.33	10.27	14.63	22.41	23.64
" Fresh† .. .. .	quart	7.15	7.43	11.45	18.00	18.50
<b>Meat—</b>						
Beef—Sirloin .. .. .	1 lb.	10.77	13.69	21.28	40.34	56.34
" Rib .. .. .	1 lb.	8.66	11.53	18.21	39.77	55.62
" Steak—Rump .. .. .	1 lb.	15.63	21.06	30.62	54.46	91.32
" " Chuck .. .. .	1 lb.	7.05	10.12	15.48	33.88	46.57
" Sausages .. .. .	1 lb.	5.48	8.15	13.47	20.21	25.96
" Corned Silverside .. .. .	1 lb.	8.95	12.54	20.37	39.56	55.34
" Corned Brisket .. .. .	1 lb.	6.85	9.35	14.51	29.11	41.61
Mutton—Leg .. .. .	1 lb.	7.74	11.37	15.41	25.79	28.25
" Forequarter .. .. .	1 lb.	4.63	6.57	9.39	16.47	20.02
" Loin .. .. .	1 lb.	7.37	9.54	14.22	23.86	27.22
" Chops, Loin .. .. .	1 lb.	8.37	10.64	15.12	25.16	29.11
" Chops, Leg .. .. .	1 lb.	8.65	11.60	15.78	27.52	31.87
Pork—Leg .. .. .	1 lb.	12.62	15.95	33.58	52.96	63.70
" Loin .. .. .	1 lb.	12.91	16.80	34.49	54.03	65.37
" Chops .. .. .	1 lb.	13.30	17.65	35.12	54.54	66.04

\* In some cases the averages are price relatives.

† Delivered.

**Wholesale Price Indexes**

The main wholesale price index compiled by the Commonwealth Statistician is the Wholesale Price (Basic Materials and Foodstuffs) Index which extends back to 1928 and is issued monthly.

Prices used in this index are in the main obtained directly from manufacturers and merchants, and, with a few important exceptions, from Melbourne sources. Commodities are priced in their primary or basic form wherever possible, with the price of imported goods being taken on an ex-bond (or into factory) basis. The list of items is divided into seven main groups, each being subdivided into goods which are mainly imported and those which are mainly home produced.

The index is constructed on the simple aggregative fixed-weights formula. The weights are based on estimates of the average annual consumption of the commodities in Australia during the period 1928-29 to 1934-35, inclusive. Changes in usage, changes of category as between "imported" and "home produced" for some commodities, and changes in the industrial structure have affected the validity of some of the weights in the index.

During 1956, supplies and prices of potatoes and onions fluctuated violently and dominated the movement of the "Foodstuffs and Tobacco", "Goods Principally Home Produced" and "Total All Groups" sections. In order to provide a representative measure of the general trend in wholesale prices, the index shown in the following table has been reconstructed as from the base period (average three years ended June, 1939 = 100) by omitting potatoes and onions.

Index numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are given in the following table:—

# WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS

(Base of Each Group : Average of Three Years Ended June,  
1939 = 100)

Period	Basic Materials							Foodstuffs and Tobacco*	Basic Materials and Foodstuffs		
	Metals and Coal	Oils, Fats, and Waxes	Textiles	Chemicals	Rubber and Hides	Building Materials	Total		Goods Principally Imported†	Goods Principally Home Produced*	Total All Groups*
1928-29	127	106	129	121	115	95	114	107	91	118	110
1929-30	126	111	99	116	87	94	107	110	94	118	111
1930-31	116	117	80	117	73	96	105	91	100	99	99
1931-32	108	113	77	119	74	95	101	86	100	92	95
1932-33	104	109	75	119	69	95	98	80	97	87	90
1933-34	103	84	102	111	80	94	92	84	89	89	90
1934-35	97	90	78	102	77	93	89	87	92	89	90
1935-36	92	95	100	99	88	93	90	92	95	92	93
1936-37	96	99	118	99	111	99	99	98	99	98	99
1937-38	101	101	100	100	97	104	102	102	102	101	101
1938-39	103	100	82	101	92	97	99	101	99	100	100
1939-40	105	115	104	107	116	108	109	99	111	101	104
1940-41	107	137	111	124	126	128	122	107	133	106	114
1941-42	117	151	118	137	135	135	133	116	153	112	124
1942-43	129	167	147	142	138	163	149	126	176	120	136
1943-44	131	170	150	143	140	174	153	130	182	122	140
1944-45	131	168	152	143	140	175	152	132	182	124	141
1945-46	130	156	152	142	140	177	149	136	178	127	142
1946-47	132	145	191	140	131	180	149	139	177	130	144
1947-48	146	161	283	148	126	190	166	154	192	145	159
1948-49	185	173	342	159	130	198	188	174	201	172	180
1949-50	214	184	434	187	143	225	214	196	223	196	204
1950-51	256	196	641	242	292	268	264	225	256	240	244
1951-52	343	220	577	314	298	370	321	276	288	300	297
1952-53	392	234	607	350	224	404	350	293	292	331	319
1953-54	388	222	566	323	191	363	332	308	271	339	319
1954-55	391	214	510	314	246	372	330	315	277	340	322
1955-56	404	220	456	317	328	415	345	325	292	352	334
1956-57	409	241	520	344	302	463	367	324	311	357	344
1957-58	398	238	437	349	280	453	355	332	301	355	339
1958-59	392	231	362	327	293	423	340	332	283	358	336
1959-60	395	225	403	331	379	431	347	348	281	375	348

\* During 1956 these indexes were reconstructed from July, 1936, by excluding potatoes and onions.

† Represents only such imported commodities as are included in the Wholesale Price Index and does not measure changes in prices of all imports.

*Wholesale Prices of Principal Products*

The following table shows the monthly average of Melbourne wholesale prices of the principal agricultural, dairying and pastoral food products for the years shown :—

## MELBOURNE—WHOLESALE PRICES

Item	Unit	1939	1945	1950	1955	1960
		<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
<b>AGRICULTURE</b>						
Wheat .. ..	bushel	2 7-56	3 11-25	6 9-13	14 0-83	15 0-33
Barley—						
English .. ..	"	3 1-06	6 0-19	7 3-50	15 2-97	14 10-73
Cape .. ..	"	2 10-06	5 3-19	6 6-50	13 0-00	12 5-33
Oats, Milling ..	"	2 10-44	4 1-75	6 10-56	8 4-75	7 8-25
Maize .. ..	"	5 2-94	8 4-00	12 3-44	15 4-00	18 5-50
		<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>
Bran .. ..	ton	4 19 6	6 0 0	11 5 8	21 11 0	21 0 0
Pollard .. ..	"	4 19 8	6 0 0	11 5 8	21 11 0	22 0 0
Flour (First Quality)	"	12 16 6	12 17 6	17 14 7	32 17 6	38 12 6
Chaff .. ..	"	4 17 3	9 9 4	12 0 6	17 18 4	16 16 3
Potatoes .. ..	"	15 12 10	7 10 0	23 12 4	34 11 10	24 18 10
Onions .. ..	"	21 11 2	14 12 6	21 17 6	48 18 8	47 8 11
<b>DAIRY AND FARMYARD PRODUCE</b>						
		<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Butter .. ..	lb.	1 5-00	1 5-88	1 11-75	3 11-41	4 6-22
Bacon .. ..	"	1 0-81	1 3-50	2 2-00	4 0-50	5 2-71
Ham .. ..	"	1 5-44	1 6-50	2 9-00	4 6-50	6 4-25
Cheese (Matured) ..	"	1 2-44	1 4-50	1 7-00	3 0-42	3 3-75
Honey .. ..	"	4-94	7-50	7-50	11-25	1 2-92
Eggs .. ..	dozen	1 4-13	1 10-25	2 11-19	4 11-54	4 9-92
		<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>
<b>BUTCHERS' MEAT</b>						
Beef, Prime .. ..	100 lb.	1 14 0	2 11 1	4 11 3	7 9 10	11 11 3
		<i>d.</i>	<i>d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Mutton .. ..	lb.	3-31	5-32	9-20	10-96	11-88
Veal .. ..	"	4-31	5-84	8-94	1 9-05	2 5-67
Pork .. ..	"	7-13	9-69	1 10-57	2 6-51	3 2-16
Lamb .. ..	"	6-25	8-75	1 4-00	2 2-07	1 11-83

**Further References**

*Labour Report*, Commonwealth Bureau of Census and Statistics  
(Canberra)



# Part 7

## PRIMARY PRODUCTION

### *Land Settlement and Irrigation*

#### **Development of Victoria's Pastures**

At its simplest, pasture improvement means the treatment of grazing land in such a way that the pasturage it bears is capable of carrying more livestock or of carrying them more effectively, or both. Further, it implies a transition from a primitive type of husbandry to a higher grade which requires more knowledge, more skill, and, incidentally, more capital investment. As better species of pasture plants grow luxuriantly, they naturally require more nutrients, and so fertile soils are necessary for their growth; any deficiency must be made good if they are to be encouraged. Each type of plant has its own requirements of moisture and temperatures and these conditions must be fulfilled if it is to grow luxuriantly. The ideal pasture must therefore consist of species which are best suited to the climatic conditions of the district concerned. The strains within a species may also be important and the soils must be capable of supporting that growth. Finally, if the pasture is to remain for years, the way in which it is managed, whether by the control of animals grazing on it, by cutting, or harrowing, or by the periodical addition of fertilizers, is all important. The whole process of pasture improvement may be summed up in the four words—species, strains, fertility, and management.

When the trees and shrubs were removed, the natural pastures which occupied most of south-eastern Australia, having between 30 inches and 18 inches of rainfall in the average year, were perennial grasses with a summer resting period. Their normal growth started when the rains of late summer and autumn moistened the soil, and it continued through winter to the spring when they flowered, seeded and then died down to ground level. During the dry summer only the basal part remained alive. The range of species was considerable, Wallaby grasses (*Danthonia Spp*) being the commonest with Silver Tussocks (*Poa Caespitosa*) and Rushes (*Juncus Spp*) in the wetter spots. Among them grew many annual weeds. On the poorer soils, heathy types of vegetation occurred. The former type was generally capable of carrying a dry sheep to the acre. The latter type was generally unsuitable for carrying stock for reasons which were only discovered in recent years.

Many attempts were made to introduce more productive species, especially from Britain. But these required a higher level of soil fertility than was generally present and also a better distributed rainfall. Introductions were seldom successful except on the more fertile alluviums of river valleys or on some of the cones of volcanic ash in the Western District.

The success of superphosphate on wheat crops about 1900 encouraged some farmers to try the effects of topdressing some of their pastures with the fertilizer. The results varied but were sometimes spectacular. The Royal Agricultural Society of Victoria carried out a large programme of simple trial plots in many parts of the State. As they were not netted, rabbits often benefited, and it became clear that not only the rabbit but the sheep preferred the growth on phosphated plots. This new development met with much criticism—wool would be coarser, foot and worm troubles with sheep would increase. But gradually graziers learned that all these difficulties, if real, could be avoided by more intelligent flock management.

The success of the movement was greatly influenced by the discovery that plants were at hand which could luxuriate when the level of soil phosphate was raised. The first was Wimmera Rye grass (*Lolium hybridum*), an unfixed hybrid which occurred by chance near Minyip. The second was Subterranean Clover (*Trifolium Subterraneum*), a native of the Mediterranean region with its autumn-winter-spring rainfall. The study of a collection of plants of the latter species growing in many parts of the State revealed that it had developed numerous "fixed" varieties some of which are specially suitable for certain districts. Another factor of significance in the growth of pasture improvement was the fertilizer subsidy of 15s. per ton first granted by the Commonwealth Government in 1933 and which continued at varying rates until 1951. In Victoria, the Pasture Improvement League was formed. Various commercial firms subscribed money to it so that a comprehensive scheme of pasture trials could be operated—mainly in dairy districts. The work was done by officers of the Department of Agriculture.

The balance of clovers and grasses is not always easy to maintain in a pasture. Generally the clover raises the nitrogen in the soil and this stimulates a more luxuriant growth of grasses. In seasons when rainfall is well distributed in the autumn, winter, and spring, the growth of these pastures may be very heavy and crops of meadow hay or silage are often taken for use in time when winter cold or drought has reduced growth.

The introduction of the tractor, the haybaler, and the buckrake and, later, the forage harvester, have greatly facilitated these processes. Better prices for farm products from 1943–1956 gave farmers enough income to buy this machinery and to construct haysheds, additional fences and water supplies, all of which are necessary for more effective stock management. The concession which the Taxation Department made in allowing a proportion of such expenditure to be a deduction in the computation of net taxable income was a great stimulus.

The process as described was important over wide areas, but parallel results were also obtained by raising soil fertility in regions where the rainfall was higher or lower. In much of the Wimmera, the Mallee, and the North-Central districts the spread of the rainy season in the average year is often too narrow for Subterranean Clover to complete its growth and reproductive cycle. For these regions other leguminous plants have been sought, and numerous species of medics (notably *Medicago tribuloides*) are promising. (See also pages 500–502.)

A special note is necessary on the use of Lucerne (*Medicago sativa*) which on deep friable soils can develop a root system of 10 to 20 feet. This perennial species is capable of growing effectively on the Mallee sandhills if it is given adequate phosphate and is grazed with discretion. In irrigation districts it has a great reputation where drainage is efficient, although in recent years its position in irrigated country has been challenged by mixed pastures wherever the supply of water permits an irrigation as frequently as once a fortnight in summer.

In areas with higher and more frequent rainfall, pastures largely composed of the British species of Ryegrass (*Lolium perenne*), Cocksfoot (*Dactylis glomerata*), White and Strawberry clovers (*Trifolium repens* and *fragiferum*) are now common. Local strains of these grasses and clovers have developed and seed of these is now generally available. In addition summer-growing grasses are sometimes used in these pastures—notably *Paspalum dilatatum*, which came from South America via New South Wales, and occasionally Kikuyu (*Pennisetum Cladestinum*) from South Africa. It is noteworthy that all these species are introduced, the reason being that the natural vegetation of such districts was usually dense forest in which the grasses were highly specialized shade species unsuitable for growth in pastures.

In these regions of higher rainfall the soils are often heavily leached and consequently deficient in many elements necessary for the healthy nutrition of pasture plants or of animals. This is especially true where they are of sand or derived from sedimentary rocks. Apart from shortages of phosphorus, calcium and sulphur (which are overcome by the use of superphosphate), potassium is often a main deficiency, while some soils are so acid that lime may be necessary for effective establishment of the clovers. More significant still are the discoveries of recent years which have shown that the addition of traces of one or more other elements are often necessary before pasture improvement can occur. Four ounces of a salt of molybdenum to the acre may be all that is necessary on some soils to turn phosphate topdressing from a failure to a success. In other places a few pounds of a salt of copper or zinc may be required.

These recent discoveries have made it practicable to establish improved pastures on several million acres of land which was previously useless or of limited value. This has been a great stimulus to development, but it is necessary to emphasize that the transformation of low quality scrub land into effective farms cannot be achieved without large expenditure of capital and a considerable annual outlay. If the income from the proceeds of farming has to earn interest on that capital the price level of products is important.

Statistically the progress of pasture improvement is a somewhat difficult matter, because in some districts the mere application of superphosphate to a natural pasture over a period of years will sometimes lead to an invasion by better species—such areas have not been, technically speaking, “sown to improved species.” In some ways the area top-dressed is a better measure of pasture improvement;

but some farmers only top-dress land every second or third year. A further development in the last decade is the increased use of potassic fertilizers on pastures in dairy districts.

The positive results of pasture improvement are to be seen not only in the increasing numbers of stock carried in recent years and in the greater conservation of hay and silage, but also in the increased cut of wool per head, and milk per cow, and in the slaughter of beef animals at earlier ages.

The introduction of improved pastures for two or more years in the crop rotation on cereal farms has been a factor in the increased yields of wheat and other cereals which have been noteworthy in recent years. Conversely, in some districts with higher rainfall, areas of improved pasture when ploughed up and cropped give heavy crops of cereals. (See also pages 500 to 502.)

### Alienation of Land

The total area of the State is 56,245,760 acres. On 31st December, 1959, this comprised:—

	Acres
Lands alienated in fee-simple .. ..	31,301,377
Lands in process of alienation .. ..	1,587,302
Crown lands .. ..	23,357,081
<b>Total .. ..</b>	<b>56,245,760</b>

The Crown lands comprise:—

	Acres
Permanent forests (under Forests Act) ..	4,845,415
Timber reserves (under Forests Act) ..	710,541
State Forest and timber reserves (under Land Act)	151,499
Water reserves .. ..	317,295
Reserves in the Mallee .. ..	410,000
Other reserves .. ..	545,256
Roads .. ..	1,644,434
Water frontages, beds of rivers, lakes, &c., unsold land in cities, towns, and boroughs ..	3,846,111
Land in occupation under—	
Perpetual leases .. ..	1,087,932
Leases of former agricultural college lands ..	29,926
Other leases and licences .. ..	1,991
Temporary grazing licences and leases ..	*5,985,655
Unoccupied .. ..	3,781,026
<b>Total .. ..</b>	<b>23,357,081</b>

\* In addition, 80,950 acres of land listed under Reserves are held under grazing licences.

In the following table are shown the area of Crown lands sold absolutely and conditionally, and the area of lands alienated in fee-simple during the five years 1955 to 1959. A portion of the area

conditionally sold reverts to the Crown each year in consequence of the non-fulfilment of conditions by the selectors. The lands alienated each year include areas selected in previous years:—

### VICTORIA—ALIENATION OF CROWN LANDS

Year Ended 31st December—	Area of Crown Lands Sold			Crown Lands Alienated in Fee-simple	
	Absolutely, at Auction, &c.	Conditionally to Selectors	Total	Area	Purchase Money
	acres	acres	acres	acres	£
1955.. ..	1,637	..	1,637	129,796	144,570
1956.. ..	3,475	4,901	8,376	96,010	130,775
1957.. ..	2,070	1,120	3,190	123,726	141,545
1958.. ..	5,480	23,763	29,243	51,396	151,672
1959.. ..	30,972	51,075	82,047	123,202	310,895

### Transfer of Land Act and Assurance Fund

Information on these topics will be found on pages 451–452 of the Victorian Year Book 1961.

### Soil Conservation Authority

In addition to the information set out on pages 62 to 65, a statement of the functions and activities of this Authority will be found on pages 452 to 454 of the Victorian Year Book 1961.

### Land Utilization Advisory Council

The members of the Council are the permanent heads, or their nominees, of the Soil Conservation Authority, Department of Agriculture, Forests Commission, Department of Crown Lands and Survey, and State Rivers and Water Supply Commission.

Its functions are to recommend to the Soil Conservation Authority the constitution and definition of catchment areas, and advise the Minister for Conservation and the Authority concerning policy on the use of land, including Crown land, in any catchment area. After consultation with the Council, the Authority determines the most suitable use in the public interest of all lands in catchment areas.

The practical result is that decisions are made about which land should be used permanently for forest purposes, and what land may be used for pasture, agriculture, or any other purpose without adversely affecting the catchment as a water supply area.

The conditions under which the various forms of land use may be permitted are defined by the Authority. There is, however, an aspect concerning the imposition of the conditions which is of particular interest. The Soil Conservation Authority, as provided for in its legislation, is obliged to consult the appropriate district advisory committee, and the Minister's approval must be obtained before the conditions of the use of land can be applied.

Landholders are liable to a penalty of up to £50 for non-compliance with the decisions, but there is a right of appeal. Should a landholder refuse to comply, the Authority may carry out any remedial work necessary and the costs may be recovered by reasonable instalments.

### **Soldier Settlement**

#### *Soldier Settlement Commission*

Prior to the end of the Second World War, the Commonwealth Government and various State Governments made arrangements for the settlement of discharged soldiers on the land as part of a general scheme of rehabilitation of ex-members of the Services.

An Agreement was finally concluded between the Commonwealth and the various States in 1945 on this matter. This Agreement provided that Victoria, New South Wales, and Queensland would act as principal States and that Western Australia, South Australia, and Tasmania would act as agents for the Commonwealth Government.

In 1945, the Victorian Government completed an Agreement with the Commonwealth Government. The State Parliament ratified the Agreement and also passed legislation constituting the Soldier Settlement Commission which was to have three full-time members and was given the necessary authority to appoint staff.

Following the acquisition of a farm property or the setting apart of suitable Crown land, the Commission prepared a subdivisinal plan. The holdings were advertised and settlers chosen after careful scrutiny of all applicants.

The Commission was charged with the responsibility of developing the holding to a point where the settler could anticipate earning a living from the holding within a reasonable time. This development programme included the construction of a farm dwelling, farm outbuildings, water supply (dams or bores), fencing, as well as pasture improvement work to lift the production of the holding.

In the initial stages the Commission provided suitable temporary accommodation pending erection of the farm house, and the settler entered into occupation of the holding and assisted in the development programme, such as erection of fencing, for which he was paid appropriate wages or contract rates.

When the stage was reached where the settler could expect a reasonable living from the holding, he was regarded as being in "effective occupation". From this time his career as a soldier-settler farmer commenced.

The Commission then determined an individual valuation of his block and was required by the Act to consider the yields and prices over a long-term period of the products which the holding was capable of producing.

The Agreement provided that the difference between this valuation and the total cost of acquiring, developing and improving the holding would be written off and shared equally between the Commonwealth and State Governments.

The settler is issued with a lease at the time the valuation is determined and the capital liability is repayable over a period of 55 years, including interest at the rate of 2 per cent. per annum. When the whole of the capital repayment is made, a negotiable freehold title issues.

### *Land Acquired and Allocated*

Since the inception of soldier settlement to the 30th June, 1959, the Commission had acquired by voluntary negotiation or compulsory acquisition 1,206,560 acres of alienated land and 119,663 acres of Crown lands had also been set apart for soldier settlement purposes.

During the financial year 1959-60, 88,200 acres of this land were transferred to settlement under the Land Settlement Act 1959. With the transfer of this land, there evolved a clearer picture of the extent of the land actually dealt with under the Soldier Settlement Act.

The area of alienated land acquired totalled 1,192,601 acres purchased at a cost of £19,513,259, whilst a further 50,954 acres of Crown lands were set apart bringing the total area acquired or set apart to 1,243,555 acres. This land has been dealt with in the following manner:—

### VICTORIA—SOLDIER SETTLEMENT COMMISSION : LAND ALLOCATION, 1945 TO 1960

Particulars	Area
	acres
Allocated for settlement involving 3,021 holdings .. .. .	1,172,280
Awaiting allocation .. .. .	8,675
Sold or disposed of as unsuitable for settlement purposes for reasons such as over-capitalised homestead areas or appropriation for public purposes .. .. .	62,600
Total .. .. .	1,243,555

An analysis of the blocks made available for soldier settlement is as follows:—

**VICTORIA—SOLDIER SETTLEMENT COMMISSION :  
BLOCK ALLOCATION, 1945 TO 1960**

Type of Holding						Number of Blocks
<b>Irrigation Holdings—</b>						
Dairying .. .. .	..	..	..	..	..	674
Soft Fruit Orchards .. .. .	..	..	..	..	..	68
Dried Vine Fruits .. .. .	..	..	..	..	..	246
<b>Rainfall Holdings—</b>						
Dairying, and Dairying and Mixed Farming .. .. .	..	..	..	..	..	622
Grazing, and Grazing and Mixed Farming .. .. .	..	..	..	..	..	1,280
Cereal Growing and Grazing .. .. .	..	..	..	..	..	126
Miscellaneous (Berries, Vegetables) .. .. .	..	..	..	..	..	5
Total .. .. .	..	..	..	..	..	3,021

*Classification of Applicants*

No new applications for classification were registered during the 1959–60 financial year and thus the total number received to the 30th June, 1960, stands at 16,673.

*Single-Unit Farm Loans*

As distinct from the general subdivisonal scheme, the Soldier Settlement Act also provided for the Commission to make loans to assist suitable and qualified ex-servicemen to purchase farms of their own choosing or to discharge existing encumbrances on farm properties already owned by them.

The interest rate on these loans, which were secured by first mortgage on the land, is 2 per cent. per annum and the Act authorized the Commission to advance up to 90 per cent. of its valuation of the farm to a maximum of £9,000. The period of repayment was similar to the general scheme, but varied according to the type of primary production involved.

This form of rehabilitation which has proved an outstanding success is solely a State responsibility and has been keenly sought by ex-servicemen possessing some capital, as it enabled them to get into production quickly and also possibly to remain in districts with which they are familiar.

Up to the 30th June, 1960, 2,883 ex-servicemen had been granted loans amounting to £12,006,650.



*Commonwealth Agricultural Loans and Allowances*

The Commission, on behalf of the Commonwealth, administered that portion of the *Commonwealth Re-establishment and Employment Act* 1945 which related to the granting of agricultural allowances and the making of agricultural loans.

These loans were limited to £1,000 in each case and were designed to assist ex-servicemen to rehabilitate themselves in the farming industry they had left to join the forces. The loans were used either to assist in the purchase of a farm property or to help in restocking, acquiring plant, &c., so that an ex-serviceman could re-establish himself on his farm.

Loans totalling £1,796,787 have been made to 2,970 cases, including 548 applicants, who have been assisted in purchasing farm properties.

Agricultural allowances to 2,311 applicants have been granted at an estimated cost of £296,013. These allowances, which were not repayable and were made in the form of a weekly sum for a period of twelve months, aimed to assist the ex-serviceman again to find his feet in his pre-war farming occupation.

Owing to the statutory limits on the time in which applications may be made for Agricultural Loans and Allowances, there has been no change in numbers during the past year and it is not anticipated there will be any future increase.

*Summary*

The total number of former members of the forces who have received rural rehabilitation on the land is as follows:—

**VICTORIA—RURAL REHABILITATION OF EX-SERVICEMEN,  
1945 TO 1960**

Act	Number of Ex-servicemen
<b>Soldier Settlement Act—</b>	
Number allotted a holding under the general subdivisional scheme	3,021
Number allotted a holding under the general subdivisional scheme, but for various reasons (ill health, death, compulsory forfeiture, &c.) have relinquished holdings allotted to them .. .. .	219
Number granted single-unit farm loans .. .. .	2,883
<b><i>Commonwealth Re-establishment and Employment Act 1945—</i></b>	
Number granted agricultural loans for purchase of land ..	548
Number granted agricultural loans for purchase of stock, plant, &c., to work properties .. .. .	979
<b>Total .. .. .</b>	<b>7,650</b>

## Other Land Settlement

### *Introduction*

The *Land Settlement Act* 1953, which was repealed and replaced by the *Land Settlement Act* 1959, envisaged a general civilian settlement scheme (on similar lines to that provided under the Soldier Settlement Act) which would come into operation as soldier settlement tapered off.

The 1959 Act lays down the principles under which this scheme is to operate.

The Commission is given authority to purchase privately owned land or set apart suitable Crown land for development and subdivision.

Generally speaking, any male British subject over the age of 21 years is eligible to apply for land made available, but the actual allocation is made having regard to a number of factors laid down in the Act, including the applicant's experience and prospects of success.

### *Tenure*

After a settler is allocated a holding, he may in the first instance be employed by the Commission on wages, or he may be granted a temporary lease of his holding. It has been necessary to provide for a wide range of contingencies in the temporary lease stage to cover a wide range of circumstances, such as the allocation of a more or less ready-made farm as compared with a farm where considerable developmental work is still required. The minimum period for a temporary lease is one year and the maximum period is five years. A settler with temporary lease will be required to pay such rent as the Commission thinks fit and reasonable, taking into account differing circumstances, particularly those connected with production.

When a farm has been developed to a stage where the settler of average efficiency can successfully carry on, provision is made for the grant of a purchase lease. This purchase lease provides for the determination of a capital liability on which the settler pays 5 per cent. per annum, which includes interest at 4 per cent. per annum on the liability from time to time outstanding. This means that in about 41 years a settler would freehold his farm although it can be freeholded earlier if larger amounts are paid against the capital liability. The purchase lease is not negotiable for a period of six years, but this six-year period may be reduced by up to three years if he has been in occupation under temporary lease up to three years. In determining the capital liability under the lease, the Commission has regard to market values of the holdings, but disregards any abnormality in seasonal or economic conditions which may affect current market value.

### *Settlers' Credit Account*

Under the Act settlers will be encouraged to make additional payments in excess of those required under the lease. These excess payments would earn interest in a special credit account at a rate equal to long-term bond rates.

*Advances to Settlers*

Advances may be made to settlers for stock, plant, seasonal requirements, living and working expenses and for permanent improvements. Interest at the rate of 4 per cent. per annum is charged on the amount of the advance from time to time outstanding, and the repayment of the advance with interest made over such a period as determined by the Commission in any particular case.

*Conclusion*

As mentioned on page 475, an area of 88,200 acres was transferred from soldier settlement to settlement under the Land Settlement Act.

During 1959–60 considerable development work was completed at the three land settlement projects, namely, Heytesbury near Cobden, Yanakie on Wilson's Promontory, and the East Goulburn Project in the Parish of Dunbulbalane.

At the 30th June, 1961, 86 holdings had been allocated under the new scheme, and of these 62 blocks were allotted during the year under review. The demand for this form of settlement is exceedingly keen and this is evidenced by the fact that the 62 holdings allocated during 1960–61 attracted over 3,000 applicants.

**Water Supply and Land Settlement***Irrigation*

There has been much irrigation development in Victoria, which has led the rest of Australia in this field, and today water is supplied annually to more than a million acres of agricultural lands which yield almost one-fifth of the total primary production of the State.

There were isolated instances of irrigation in Victoria more than 100 years ago—with some cases recorded as early as 1844—but seasons were deceptively good in the 1860's and early 1870's and there was no large-scale development.

However, from 1877 to 1881, conditions were very dry, and as this followed the decline of alluvial gold mining with consequent large-scale agricultural settlement on the Northern Plains under the Macpherson Grant Land Act of 1869, there was a great deal of agitation for Government action to improve water supplies. This led to the first big step—the appointment in 1880 of an engineer and a surveyor, to report on the water supply and irrigation of the Northern Plains.

Their reports led to the Water Conservation Act of 1881 and the Irrigation Act of 1883, but neither had much impact on irrigation. In 1884, only 163 farmers were irrigating 7,000 acres—three-quarters being wheat land—mostly in Swan Hill Shire.

In the same year, however, advocates of irrigation were rewarded by the appointment of a Royal Commission on Water Supply, led and inspired by Alfred Deakin, then Victorian Minister of Water Supply and later Prime Minister of Australia. The work of this Royal

Commission was responsible for the revolutionary Victorian Irrigation Act of 1886 which, among other things, virtually nationalized the State's water resources (by vesting in the Crown the right to the use of water in any watercourse) and provided for the establishment of local Trusts to carry out works with Government loan funds.

The 1886 Act put irrigation on the map. At the turn of the century, a total of roughly 100,000 acres were watered by nearly 90 Trusts. However, control by Trusts proved a failure owing to insufficient conservation, divided control of water resources, inadequate charges, and irregular revenue because water was used on a large scale only in dry years.

In 1899, the State wrote off three-quarters of the Trusts' capital liabilities and finally, by the Water Act 1905, abolished the Irrigation Trusts, providing instead for control by a Government instrumentality, the State Rivers and Water Supply Commission\*. On behalf of the Crown, this authority controls the development and utilization of all of Victoria's water resources, except those specifically reserved to supply the Melbourne Metropolitan Area. Since its constitution 55 years ago, there has been a tenfold increase in the area irrigated.

To overcome the problem of irregular revenue experienced by the Trusts, the 1905 Act introduced a system under which all lands in irrigation districts were apportioned water rights, assuring them of specified quantities of water for which they had to pay in all years, whether they used these quantities or not. The aim was to compel landowners to use water or sell their lands to those who would develop them for irrigation.

Nationalization of surface water resources and the introduction of compulsory water rights—the two main planks of Victoria's irrigation policy—were thus established, and a third important feature, that of closer settlement, was instituted by Dr. Elwood Mead, a leading U.S. irrigationist who was invited by the Government of Victoria to become Chairman of the State Rivers and Water Supply Commission. Mead held this position from 1907 to 1915, when he returned to the U.S.A., later becoming head of the U.S. Bureau of Reclamation. Before his arrival, irrigation was used mainly as an adjunct of large area "dry" farming, but Mead saw that these large area farmers were not vitally interested in irrigation and that they did not make the best use of the water available to them.

Mead's aim was intensive irrigation on small farms, and his policy of acquiring and subdividing large holdings for closer settlement was followed energetically from 1910 to 1930. In that period, more than 4,000 new farmers—ex-soldiers and civilians—were established on irrigated holdings throughout the State, and the total area irrigated in 1930 was some 500,000 acres.

Many new works were constructed during this period, including the first works to regulate the River Murray. Controversy had raged

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\* Subject to overall supervision by the Commission, the First Mildura Irrigation Trust still controls the famous pioneer settlement at Mildura started in 1886 by the Chaffey Brothers, two Canadians invited to Australia by Alfred Deakin.

over the development of the Murray for 50 years owing to the conflicting interests of the three interested States, New South Wales, Victoria and South Australia. Finally, after an interstate conference in 1902, and a conference of engineers in 1913, the three State Governments and the Commonwealth Government reached agreement and signed the River Murray Waters Agreement in 1915. Under this, the four contracting parties agreed to share equally in the cost of certain named works, and a formula was reached guaranteeing South Australia certain quantities of water, the remainder being shared equally between Victoria and New South Wales. This Agreement still stands in principle, although substantial variations have been made to the original by the addition of new works, &c.

Irrigation development was slowed down by the depression of the early 1930's, which was particularly severe on primary producers, and when some signs of recovery were evident, the Second World War brought the construction of storages and channels almost to a standstill. The prices of primary products rose rapidly during the War, however, with a resultant increase in the demand for water which put a great strain on existing works. Following the end of hostilities in 1945, new projects were started at an unprecedented rate.

Much post-war construction has been concentrated on development of the Goulburn-Loddon System which serves an area of some 1,250,000 acres between the Goulburn and Loddon Rivers. New works completed since 1955 to serve this area are the Eildon Reservoir enlargement on the Goulburn River, and Cairn Curran and Tullaroop Reservoirs on the Loddon and one of its tributaries, respectively, adding in all some 2,625,000 acre-feet to the storage capacity of the system, whilst work is currently proceeding at Eppalock Dam on the Campaspe River to add some further 250,000 acre-feet.

Other major projects in the post-war period have been the development of large soldier settlements around Numurkah, Robinvale and Maffra, resulting in the establishment of almost 1,000 new farms.

In 1945, the capacity of Victorian storages used solely or almost solely for irrigation was about 1,700,000 acre-feet; at 30th June, 1960, it was approximately 4,700,000 acre-feet, and when works under construction are finished, the figure will rise to 5,250,000 acre-feet. Besides the Goulburn System storages referred to, Hume Reservoir on the Murray River and Glenmaggie Reservoir on the Macalister River have both been enlarged. The area irrigated has exceeded 1,000,000 acres in the last two years and substantial increases are certain.

Following the policy instituted by Elwood Mead, the Commission has continued to foster intensive development. In the Goulburn System very few new areas are being served, the extra water being given to existing irrigators, especially in the less well developed areas. The new settlements which have been established are all highly intensive.

Major storages devoted principally to irrigation are shown in the following table:—

### VICTORIA—MAJOR IRRIGATION STORAGE SYSTEMS

River	Name	Capacity	Principal System or District Served
		acre-feet	
Goulburn ..	Eildon Reservoir ..	2,750,000	Goulburn-Loddon
	Goulburn Weir ..	20,700	Goulburn-Loddon
	Waranga Reservoir ..	333,400	Goulburn-Loddon
Loddon ..	Cairn Curran ..	120,600	Goulburn-Loddon
	Tullaroop ..	60,000	Diversers
Murray ..	Hume ..	900,000*	Murray
	Murray River Weirs ..	111,420*	Murray
Macalister ..	Glenmaggie ..	154,300	Macalister (Gipps-land)
Pykes Creek ..	Pykes Creek ..	19,400	Bacchus Marsh
Werribee ..	Melton ..	15,500	Werribee
Total ..		4,697,480†	

\* Victoria's half share of River Murray storages under the River Murray Agreement. When completed, Hume will have a total capacity of 2,500,000 acre-feet.

† In addition to the storages named, the total includes a system of natural lakes in the Kerang-Swan Hill area and the Coliban River storages used for both irrigation and town supply around Bendigo.

The following table compiled by the Commission shows the total areas of the various irrigation systems and the areas under irrigated culture during 1959-60:—

### VICTORIA—AREAS OF SYSTEMS AND LANDS IRRIGATED, 1959-1960 (Acres)

System or District	Total Area	Area Irrigated							Total
		Pastures		Lucerne, Sorghum, &c.	Vineyards	Orchards	Market Gardens	Other	
		Native	Sown						
Goulburn-Loddon System ..	1,257,023	23,160	379,737	24,538	254	20,633	3,427	24,181	475,930
River Murray System—									
Torrumbarry System ..	340,986	32,208	179,521	8,794	4,271	1,568	1,573	10,568	238,503
Murray Valley Area ..	267,810	2,029	91,652	8,509	13	5,253	459	2,043	109,958
Pumped Supply* ..	80,736	582	579	678	36,112	2,824	264	623	41,662
Total River Murray ..	689,532	34,819	271,752	17,981	40,396	9,645	2,296	13,234	390,123
Macalister District (Gippsland)	132,876	2,862	49,609	1,711	..	..	8	583	54,773
Werribee-Bacchus Marsh ..	16,376	1,636	4,505	730	..	561	3,956	715	12,103
Other Systems ..	†19,735	1,019	8,784	1,448	5	3,532	1,733	626	17,147
Private Diversions‡ ..	§	9,844	59,881	9,173	3,123	5,241	9,208	6,236	102,706
Total ..	2,115,542	73,340	774,268	55,581	43,778	39,612	20,628	45,575	1,052,782

\* Including First Mildura Irrigation Trust (13,722 acres irrigated) supervised by the Commission.

† Campaspe District only.

‡ Area authorized to be irrigated, excludes 37,529 acres irrigated by private diversers in the Torrumbarry Irrigation System.

§ Not available.

The most important works under construction are the £15 mill. channel enlargement and remodelling programme in the Goulburn-Loddon Irrigation System. This has been necessitated by the enlargement of Eildon Reservoir and the construction of Cairn Curran and Tullaroop Reservoirs, which have enabled more than twice as much water to be supplied to the System as was previously available. Half of the new channel works have been finished, and at the present rate of progress, the programme should be finished in six years, subject to the availability of funds.

A major job commenced in 1959-60 is the enlargement of the small Eppalock Reservoir on the Campaspe River to store up to 250,000 acre-feet. With associated works, this will cost £5 mill. over a period of three years, and will benefit mainly the Coliban System and Goulburn Irrigation System.

Victoria will also benefit greatly by enlargement works being carried out for the River Murray Commission at Hume Reservoir.

### *Domestic and Stock Supply*

A system of storages in the Grampians, on the Wimmera and Glenelg Rivers, provides a domestic and stock supply for 10,000 square miles of land in the Wimmera and Mallee Districts. Another 1,300 square miles in the Mallee are served by water pumped direct from the Murray River and 400 square miles in the Walpeup area are served by sub-artesian bores. The total area in the Wimmera and Mallee given a domestic stock supply is thus 11,700 square miles—more than one eighth of the State.

The Wimmera-Mallee Domestic and Stock Supply System is the largest scheme of its kind in the world. Without this water supply, development of the area would be meagre in most parts, and in some areas it would be impossible. With the water supply, however, the area can support about 65,000 persons, and yield primary production worth about £30 mill. or about 10 per cent. of Victoria's total primary production.

Some attempt was made to provide an artificial supply of water to the Wimmera as early as 1844, but nothing much was done until the 1880's when Wartook Reservoir was built for a local trust (see pages 410-411 for description of trusts). However, this storage proved inadequate in the disastrous drought of 1902. The trust system was taken over by the State Rivers and Water Supply Commission in 1909 and since that date a series of extensive improvements have been carried out, largely necessitated by ever-increasing development in the area and usually receiving impetus or authorization from a drought or a threatened failure of supply. With the completion of Rocklands Reservoir on the Glenelg River in 1953, the security of the water supply was assured. The capacity of the Grampians storages now totals 538,900 acre-feet (Rocklands 272,000) and even a limited amount of irrigation can be carried on. The problems of the area now centre round the distribution of water with maximum efficiency.

As with irrigation, the area is divided into districts. Water is channelled into farmers' dams each winter and spring—the seasons of minimum evaporation—total deliveries being 100,000 acre-feet in a normal year. Another feature shared with the irrigation districts is that interest on the capital cost of the system (£7,500,000) is carried by the State; the farmers pay for operation and maintenance only. The average farmer pays about £50 per year for his water supply.

The removal of sand drifting into the channels used to be a very great problem, but has now been reduced by better farming, regulations governing fallowing and burning near channels, and planting rye corn to stop drift.

#### *Flood Protection, River Improvement and Drainage\**

The major flood protection work in Victoria has been the drainage of the Koo-wee-rup Swamp, a depression of 80,000 acres along the seaboard of Westernport Bay, south of the main Gippsland railway. Once useless, this area supports a population of about 4,000 and yields primary production worth approximately £3 mill. annually.

Another important area controlled by the Commission is the Carrum Drainage District comprising 30 square miles of low-lying land extending four to five miles inland from Port Phillip Bay and separated from the sea by a broad sand ridge on which are established six bayside towns from Aspendale to Seaford. About 7,000 persons benefit to some degree from flood protection works in this district and construction works, estimated to cost £500,000 over a period of years, are being carried out to bring in further areas and provide still greater assurance against flooding.

A comparatively recent development has been in the field of river improvement—the removal of obstructions and the prevention of erosion and siltation. Under the *River Improvement Act* 1948, provision was made for the formation of local trusts operating under the supervision of the Commission with power to carry out works and levy rates. Nineteen trusts have since been established and are assisted by grants from the Government amounting to about £175,000 annually. In addition, river improvement work is helped by grants from the Rivers and Streams Fund (about £40,000 annually) which comprises mainly licence and permit fees paid for the right to divert water from streams.

A major work recently completed at a cost of about £500,000 is the Lake Corangamite project, north-west of Colac. About 12,500 square miles of private land were flooded between 1952 and 1956 and as there is no outlet from the Lake, it would have been necessary to rely on evaporation for relief by natural agencies. Accordingly, work was undertaken to divert floodwaters, which would otherwise have entered Lake Corangamite, by a channel leading 24½ miles into the Warrambine Creek, which is a tributary of the Barwon River. Besides relieving flooding, this scheme will free a large part of the area around the lake for agricultural use in most years.

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\* Drainage works are also needed in most irrigation districts.



### *Spray Irrigation in Agriculture and Dairying*

Spray irrigation in Victoria, for the growing of pastures and fodder crops, is mainly used in connection with private irrigation schemes, and consequently the area irrigated by this method is very small compared with that irrigated by flood systems.

Of the three types of spray irrigation equipment available (low pressure, medium pressure, and high pressure), the medium pressure (35 to 50 pounds per square inch) is the most popular. The normal delivery of water from the spray heads is equal to 20 to 30 points of rain per hour. Various automatic systems have been devised to eliminate the shifting of portable spray lines, which requires three-quarters of an hour's work per acre per irrigation. Naturally, these automatic systems are more expensive to install and may cost up to £200 per acre compared with a figure around £40 per acre for manually shifted lines.

Some large individual areas of over 100 acres of spray irrigation per farm can be found in Victoria, but the vast majority of private schemes employing this method are of 10 to 20 acres only. This area is generally all that the available water supply can irrigate.

The main crop irrigated is perennial pasture, in which the main species employed (in varying proportions) are perennial ryegrass, cocksfoot, paspalum, white clover and strawberry clover. However, some maize, Japanese millet, saccaline, and cruciferous fodder crops are also grown.

The expense attached to a small private irrigation scheme is high, and consequently efficient utilization of the fodder produced is necessary if the full benefit of the scheme is to be obtained. Rationing of the feed by subdivision, strip grazing or restriction of time allowed for grazing, is usually considered necessary. Using such methods, one acre of irrigated perennial pasture can maintain the lactation of up to four cows throughout the whole of the summer, and this is profitable. The employment of an expensive private irrigation scheme for fodder conservation alone is not by any means as profitable.

## *Agricultural Research, Extension, and Education*

### **Department of Agriculture**

#### *Research*

The high standard of Victoria's agriculture, which produces more than one quarter of Australia's primary produce (measured in terms of value) from less than one thirtieth of the nation's area, is due in no small measure to the programme of research and advisory services undertaken in recent years.

Backed by large financial allocations, the Department of Agriculture programme has concentrated on the strengthening of existing research stations with new and up-to-date facilities, establishing new research centres, developing new research projects, and intensifying advisory services.

In recent years, improvements have included a new animal husbandry research laboratory and extensions to the plant breeding laboratory at the State Research Farm, Werribee; considerable additions to the Plant Research Laboratory, Burnley; new laboratories at the Scoresby and Tatura Horticultural Research Stations; and additional research facilities at the Mallee Research Station, Walpeup, Rutherglen Research Station, Tobacco Research Station, Myrtleford, Dairy Research Station, Ellinbank, and the Potato Research Station, Healesville.

Two new research stations—the Pastoral Research Station, Hamilton, and the Irrigation Research Station, Kyabram—have been established and considerable areas of adjoining land have been bought at Scoresby and Rutherglen to ensure the expansion of research in those areas.

At research centres strategically located in Victoria's rural areas, highly trained scientists are seeking the answers to a wide range of problems which face the primary producer trying to improve the efficiency of his farm. These scientists have already made many notable discoveries which have benefited Victorian agriculture. Outstanding results during the last few years include:—

- (1) Release of the following new plant varieties to growers—

*Wheat*: Olympic, Beacon, and Stockade.

*Oats*: Alpha.

*Medic*: Harbinger.

*Linseed*: Hazeldean and Bonnydoon.

*Flax*: Currong and Standard.

*Tobacco*: Golden Crest.

*Peaches*: Tatura Sunrise, Tatura Dawn, Tatura Sunset, Tatura Aurora. New varieties of beans, brussels sprouts, cauliflowers and strawberries, have also been made available to farmers.

- (2) A new technique for crossing previously incompatible species of tomatoes. This was done for the first time in the world.
- (3) A new cool storage technique to reduce brown rot damage on peaches.
- (4) Further progress in controlling cool storage rot in Granny Smith apples.
- (5) A storage technique to control black spot in potatoes.
- (6) A cool storage technique to provide high quality pears for the market throughout the year.
- (7) A method of controlling bitter pit of apples.
- (8) Techniques for the eradication of swine plague and the establishment of pneumonia-free piggeries.
- (9) A new method of identifying milk from cows which have been treated with penicillin.
- (10) Field tests for ovine brucellosis.

### *Extension*

To speed these research results to the farming community, the Department of Agriculture is appointing each year additional trained advisory officers throughout rural Victoria and recruitment of this staff has been greatly stimulated by scholarships in agricultural science at Melbourne University, in veterinary science at Sydney and Queensland Universities and in dairy science at Massey Agricultural College, New Zealand.

These advisory officers use every method of communication to channel technical facts to farmers. Much of their time is taken up with on-the-farm advice, but they also speak at field days and hold discussion group meetings. Their work is also backed by the Department of Agriculture's intensified production of publications, films, and radio services.

The monthly *Journal of Agriculture*, once the Department's only major publication, is now accompanied by the regular industry digests and bulletins. Specially prepared to cater for specific industries (livestock, dairying, potato, horticulture, vegetable and beekeeping) these publications now have a total distribution of about 250,000 copies a year.

Agricultural films produced by the Department and other organizations are screened to farmers by touring mobile projection units. These films are shown to many thousands of primary producers each year. Many favourable comments on the educational value of the Department's farm radio programme—the *Voice of Agriculture*—have been received from primary producers. This programme emanates weekly from every commercial station in rural Victoria. Total broadcasting time is over four hours a week.

## **Agricultural Education**

### *Department of Agriculture*

The Victorian Department of Agriculture through its Division of Agricultural Education has the responsibility for agricultural education at the diploma level in the residential agricultural colleges at Dookie and Longerenong and the non-residential horticultural college at Burnley Gardens.

The main purpose of the colleges is to teach the principles and practice of agriculture and horticulture to those who intend to adopt practical farming or horticulture as a vocation and require a more intimate knowledge of agriculture or horticulture than can be acquired merely through practical experience. In addition to achieving this main purpose, the diploma courses also provide a basic training for technical officers who are later employed by government instrumentalities and by firms which manufacture or distribute farmers' requisites or handle farm produce. Some diploma holders engage in teaching agricultural science in schools and others in agricultural journalism. From the horticultural college, some diploma holders proceed to a career in the administration of municipal parks and gardens as well as to such occupations as orchardist, nurseryman, florist, and landscape gardener. Each college offers a diploma course of three years' duration.

With the recent completion of new main buildings, the college at Dookie has accommodation for 260 full-time students, including about 50 second-year University degree students. Longerenong accommodates 70 students. A current building programme will shortly increase the accommodation at Longerenong to 100 students. Burnley Horticultural College has accommodation for 60 diploma students, but also conducts numerous part-time evening classes for persons engaged in horticultural industry and for home gardeners.

As well as training in the vocational subjects, the students are given a good grounding in the related sciences—chemistry, soil science, physics, botany, zoology, entomology, bacteriology, plant pathology and genetics, and in elementary mathematics and agricultural engineering, including surveying. English is taught to Matriculation standard and a good grounding is given in book-keeping and rural economics and management. Students who do well in the diploma course and pass in Matriculation English Expression can, if they so desire, proceed to a degree course in agricultural science and other courses at the University of Melbourne.

Short intensive courses of from one to three weeks' duration in specialized farm subjects are conducted regularly at Dookie Agricultural College for the benefit of members of the farming community. These include a special class each year for country women and a junior young farmers' course.

The Agricultural Education Division is also closely associated with the Royal Agricultural Society of Victoria in the administration and fostering of the Senior Sections of the Young Farmers' Clubs in Victoria and, through a representative Advisory Council, administers an annual government grant for this purpose. The Division also takes a prominent part in the organization of training of visiting Fellows who have been awarded fellowships for training in Australia either through the Colombo Plan or the Food and Agricultural Organization.

### *Melbourne University School of Agriculture*

The School of Agriculture of the Melbourne University provides a four year degree course for undergraduates leading to the Degree of B.Agr.Sc. and post graduate work for higher degrees in Agricultural Science. The undergraduate course is based on a first year devoted to pure science subjects; this is followed by three years in which the scientific principles upon which the practice of agriculture is based are presented and the more intensive training is given in those scientific disciplines required by research workers in agriculture. During the second year of the course, the students are in residence at Dookie Agricultural College, where they have the opportunity of combining the advantages of communal college life with close observation and contact with the practice of agriculture.

Research activities at the School of Agriculture cover a wide field including agronomy, agrostology, and animal nutrition and physiology, with basic work in the fields of soil chemistry and agricultural biochemistry as related to both the plant and the animal. Research

into various aspects of agricultural economics and farm management, together with studies of the sociological relationships of the farming community and of the farmer himself, are also undertaken.

The graduates from the School find employment over a wide range of positions. Many join the State Service in such departments as Agriculture, the State Rivers and Water Supply Commission and the Soil Conservation Authority. The more academic students after taking post graduate training go to research positions in the Commonwealth Scientific and Industrial Research Organization or the Universities, but a number with more commercial interests are taking positions in industrial organizations related to agriculture.

## *Rural Industries*

### **Introduction**

#### *Collection of Statistics*

Since the year 1904, police officers have been required to collect agricultural, pastoral, and dairying statistics from land holders in Victoria. Prior to 1904, the statistics were collected by the municipal authorities who were required by statute to furnish information on such forms and in such manner as was required by the Governor in Council.

The rural statistics contained in this chapter are in the main compiled from annual returns of agricultural, pastoral, and dairying production collected from 70,000 rural holdings in Victoria at 31st March each year. Schedules are distributed to farmers by about 330 local police officers who act as collectors of statistics as required by the Victorian *Statistics Act* 1958. Statistics from these schedules are compiled for each county and municipality.

Every holding of 1 acre and upwards used for the production of agricultural products or for the raising of livestock and the production of livestock products is visited, and full particulars are obtained of the area occupied, the rural population, the number of persons employed, the area and yield of each kind of crop cultivated, artificial fertilizer usage, numbers of certain items of farm machinery, the number and description of livestock and the quantity of wool clipped.

Data relating to area sown, production, yield per acre, and number of holdings growing crops are for the season ended 31st March, thus including crops which are sown and harvested, or sown or harvested, during the twelve months ended 31st March.

In cases where harvesting of certain crops has not been completed by the 31st March (potatoes, fruit, vines, &c.) supplementary collections are made later in the year.

Livestock numbers, farm machinery on rural holdings, and the number of persons working are reported at 31st March, whilst wage and salary payments relate to the twelve months ended 31st March.



*Land Occupied in Different Districts, 1959-60*

For the season 1959-60, the number of occupiers of rural holdings was 69,778, the area devoted to agriculture 6,663,023 acres, and the total area occupied 37,736,530 acres.

It should be noted that statistics in this part of the Year Book have been compiled for statistical districts, which are groups of counties, namely, land areas with immutable boundaries. A map defining the boundary of each statistical district appears on the opposite page.

**VICTORIA—LAND IN OCCUPATION IN EACH DISTRICT,  
SEASON 1959-60**

(Areas of 1 acre and upwards)

Statistical Districts	Total Area of Districts (Acres)	Number of Holdings	Acres Occupied				
			For Agricultural Purposes	For Pasture		Unproductive	Total
				Sown Grasses, Clover, or Lucerne	Natural Grasses		
	'000	No.			'000		
Central ..	4,065	14,475	394	1,110	900	287	2,691
North-Central ..	2,930	4,423	116	393	1,409	176	2,094
Western ..	8,775	12,753	475	3,385	2,121	562	6,543
Wimmera ..	7,395	6,128	1,736	1,431	2,311	546	6,024
Mallee ..	10,784	6,299	2,443	464	3,748	860	7,515
Northern ..	6,337	11,538	1,118	1,227	2,948	183	5,476
North-Eastern ..	7,221	5,057	160	615	1,885	1,034	3,694
Gippsland ..	8,739	9,105	221	1,109	1,085	1,284	3,699
Total ..	56,246	69,778	6,663	9,734	16,407	4,932	37,736
PERCENTAGE OF ABOVE TO AREA OCCUPIED							
Central ..	..	..	14·63	41·24	33·45	10·68	100·00
North-Central ..	..	..	5·53	18·79	67·26	8·42	100·00
Western ..	..	..	7·27	51·73	32·41	8·59	100·00
Wimmera ..	..	..	28·81	23·76	38·37	9·06	100·00
Mallee ..	..	..	32·51	6·18	49·87	11·44	100·00
Northern ..	..	..	20·42	22·41	53·84	3·33	100·00
North-Eastern ..	..	..	4·34	16·65	51·02	27·99	100·00
Gippsland ..	..	..	5·96	29·98	29·34	34·72	100·00
Total ..	..	..	17·66	25·79	43·48	13·07	100·00
PERCENTAGE IN EACH DISTRICT OF TOTAL IN STATE							
Central ..	7·23	20·74	5·91	11·40	5·49	5·82	7·13
North-Central ..	5·21	6·34	1·74	4·04	8·59	3·58	5·55
Western ..	15·60	18·28	7·13	34·78	12·92	11·39	17·34
Wimmera ..	13·14	8·78	26·05	14·70	14·09	11·07	15·96
Mallee ..	19·17	9·03	36·67	4·77	22·85	17·44	19·92
Northern ..	11·27	16·53	16·78	12·60	17·97	3·70	14·51
North-Eastern ..	12·84	7·25	2·41	6·32	11·48	20·97	9·79
Gippsland ..	15·54	13·05	3·31	11·39	6·61	26·03	9·80
Total ..	100·00	100·00	100·00	100·00	100·00	100·00	100·00

*Size of Holdings Showing Areas Cultivated and Grazed*

A detailed cross classification of holdings by size and area of main crops or number of livestock is prepared approximately every five

years. The following table shows some of the information, in summary form, from the last classification of this type taken at 31st March, 1956:—

**VICTORIA—SIZE OF HOLDINGS SHOWING AREAS UNDER WHEAT AND STOCK DEPASTURED, 31st MARCH, 1956**

Size of Holdings (Including Crown Lands Held)	Number of Holdings	Area Occupied	Wheat, 1955-56	Sheep	Dairy Cattle	Beef Cattle	Pigs
acres		acres	acres	No.	No.	No.	No.
1- 99 ..	22,095	860,845	3,802	181,445	268,655	25,435	55,758
100- 199 ..	12,387	1,750,435	13,507	636,536	535,984	53,785	62,665
200- 299 ..	6,346	1,536,059	19,225	859,495	278,518	58,691	34,064
300- 399 ..	5,186	1,752,632	61,298	1,312,906	179,258	66,827	20,899
400- 499 ..	3,344	1,488,982	64,454	1,277,891	98,744	61,857	13,804
500- 999 ..	11,190	7,887,925	607,475	6,793,088	185,078	231,095	21,999
1,000-1,399 ..	3,614	4,256,983	414,042	3,076,428	43,808	99,623	5,829
1,400-1,999 ..	2,445	4,041,291	361,697	2,896,267	22,829	83,133	3,006
2,000-2,999 ..	1,468	3,505,790	288,140	2,237,791	25,880	74,912	3,577
3,000-4,999 ..	908	3,369,086	219,284	1,933,920		65,797	
5,000 and over ..	545	7,406,447	88,486	2,082,936	7,549	124,581	1,212
Total ..	69,528	37,856,475	2,141,410	23,288,703	1,646,303	945,736	222,813

*Artificial Fertilizers*

In 1959-60 artificial fertilizers were used on 2,273,647 acres of wheat; 1,036,263 acres of other cereal crops; 81,612 acres of vegetables; 92,553 acres of orchards; 594,931 acres of other crops (including grass and clover hay); and 9,153,030 acres of pastures. Superphosphate is the main fertilizer used on both crops and pastures and in 1959-60 amounted to 175,895 tons or 81 per cent. of the total artificial fertilizer used on all crops and 495,553 tons or 95 per cent. of that used on pastures.

A summary of the area fertilized, quantity used, and number of holdings on which artificial fertilizers were used is shown below for each of the years 1955-56 to 1959-60:—

**VICTORIA—ARTIFICIAL FERTILIZERS**

Year	Crops			Pastures		
	No. of Holdings	Area Fertilized	Quantity Used	No. of Holdings	Area Fertilized	Quantity Used
		'000 acres	'000 tons		'000 acres	'000 tons
1955-56 ..	34,907	3,500	174	40,256	8,537	480
1956-57 ..	34,454	2,906	151	41,659	8,729	494
1957-58 ..	41,167	3,690	191	43,234	9,684	548
1958-59 ..	*	4,580	229	40,452	8,925	502
1959-60 ..	40,460	4,079	217	38,327	9,153	523

\* Not available.



*Aerial Agriculture*

During recent years aircraft have been used for topdressing and seeding pastures and for spraying and dusting crops and pastures. Since 1956-57 statistical information has been collected by the Department of Civil Aviation and details are shown in the following table:—

## VICTORIA—AERIAL AGRICULTURE

Particulars	Unit	1956-57	1957-58	1958-59	1959-60
Total Area Treated* ..	acres	230,781	339,019	408,745	506,821
Topdressing and Seeding Area Treated—					
Superphosphate .. ..	acres	164,326	252,311	252,529	370,597
Seed .. ..	..	16,642	35,500	10,336	1,200
Other .. ..	..	..	..	1,360	800
Total Area Treated† ..	..	164,326	253,596	253,489	372,597
Materials Used—					
Superphosphate .. ..	tons	11,745	17,065	15,895	22,976
Seed .. ..	lb.	4,940	7,240	8,320	24,000
Spraying and Dusting Area Treated—					
Insecticides .. ..	acres	9,826	51,813	82,740	73,129
Fungicides .. ..	..	..	2,200	600	..
Herbicides .. ..	..	57,644	32,713	75,747	67,556
Total Area Treated† ..	..	66,455	85,423	155,256	134,561

\* Excludes dingo baiting operations, areas baited for rabbit destruction, and mosquito eradication.

† Areas treated with more than one type of material in one operation are counted once only.

*Mechanization of Farming**Harvesting*

The first settlers in Victoria brought with them the simple equipment they used in Britain—single furrow ploughs, peg tooth harrows, the scythe, the sickle, and the flail. By the 1840's, the most urgent problem, in what was becoming a commercialized industry, was how to gather the wheat harvest without a horde of men and scythes. This was successfully met in 1844 by the invention of Ridley's stripper in South Australia, accompanied by the hand winnower to complete the job and was only a decade after McCormick's reaper (i.e. the mower) in the United States of America, and forty years ahead of the American twine reaper and binder.

By that time (c. 1885) Hugh Victor McKay in Ballarat had, by combining the winnower with the stripper, made a 'complete' harvester. Though 'Combine' reaper-thrashers were coming into use in America by the 1900's, the modern Australian variety stems from a local development of the same theme about 1912.

Though the harvesting end of the wheat cycle up to bulk handling has been mechanized in these successive steps over a century and more, the cultivation of the crop went more slowly.

### *Cultivation*

Not until the 1880's, with the "discovery" of the value of superphosphate and of bare fallows, and the extension of cropping into the lighter soil types, did we see the use of 3 and 4 furrow ploughs, with shorter mouldboards and shallower working than the traditional English styles.

The universal use of superphosphate called for a drill that sowed the superphosphate with the seed; the fallowing principle called for a telescoping of the sowing with cultivation, leading to the "combine" drill cultivator.

By the turn of the century, Australian wheat farmers, masters in the control of large teams of horses, were covering broad acres with wide ploughing and tillage tools.

### *Clearing*

The ever widening expansion of the wheat areas into uncleared land was confronted not only by the greater cost of clearing but the increasing hindrance to cultivation imposed by the tree roots. The root problem in ploughs was met, around 1876, by Smith's stump-jump principle, which soon was applied also to the tine cultivators, and later to the disc implements. Stump-jump implements were an essential element in the attack on the Mallee scrub, when these areas were invaded in the 1890's and over the next 30 years. The other aspect of this attack was the Mallee roller, followed by fire. The essentials of these methods are still followed in the modern highpower clearing for closer settlement.

### *Mechanical Power*

Though large scale ploughing with steam traction engines and cable gear was used in England and 'abroad' in the 1860's, the method was not significantly employed in Australia. The application of mechanical power to the towing of the implements and machines of agriculture in Australia had to await the development of the tractor with its light weight high speed engine; the First World War had shown these to be feasible and reasonably successful.

Even then, the farmers of the depression years were in no mood to accept these new things wholeheartedly: they knew and preferred their horses, which, anyway, cost less to breed and to maintain.

But with the flexibility and economy acquired by the tractor with pneumatic tyres, and the pressure of work during the war years and the post-war prosperity, the old order gave way to the new, especially when sons, experienced in the machines of war, returned with new knowledge to the pursuits of farming in peace. Today the tractor, with its several power outlets, wide range of speeds, pneumatic tyres and hydraulic lifts and controls, is as essential to farming as the tools it works; it is equally essential to graziers in their raising and storing of fodder for their stock.

*Electrical Power*

On the other hand, in the closer settled areas, electricity has come to be the preferred source of stationary power, supplanting the engine and often the windmill. Electricity in the dairying areas not only drives the milking machine, and lights the shed; it heats the wash-up water, and in growing measure cools the milk for bulk collection. The milking machine itself is worth noting as a remarkably successful mechanical treatment of a biological process.

The number of the principal items of farm machinery on rural holdings at the 31st of March during each of the past five years are given in the table below:—

## VICTORIA—FARM MACHINERY ON RURAL HOLDINGS

Particulars	Number at 31st March—				
	1956	1957	1958	1959	1960
Milking Machines—Units ..	77,602	81,729	83,819	85,608	89,657
Shearing Machines—Stands ..	32,245	34,884	34,955	35,951	37,015
Tractors—Wheeled Type ..	49,584	52,275	55,263	57,818	59,438
—Crawler Type ..	1,645	1,621	1,652	1,684	1,730
Rotary Hoes ..	9,749	9,166	8,777	9,429	9,180
Fertilizer Distributors and Broadcasters ..	26,470	27,336	26,692	27,290	27,948
Grain Drills—Combine ..	19,994	19,363	18,360	19,428	18,517
—Other ..	8,209	8,206	8,531	8,525	9,531
Maize Planters ..	1,050	1,041	972	1,020	998
Headers, Strippers and Harvesters ..	14,168	13,722	13,641	13,507	14,216
Pick-up Balers ..	5,055	5,468	6,173	7,073	8,040
Stationary Hay Presses ..	3,371	3,077	2,658	2,518	2,465

NOTE.—Details of items which have not been collected since 1955 are published in the Victorian Year Book 1954–58, page 88.

*Rural Finance Corporation*

The Corporation was established in April, 1950. Its objects, which are set out in section 5 of the *Rural Finance Corporation Act 1958*, include the making of advances by way of loan at low rates of interest to existing or proposed country industries, both primary and secondary. The Corporation is the successor in law of the Farmers' Debts Adjustment Board and is empowered to advance moneys to, or for the benefit of, any farmer for the purpose of carrying into effect a composition or scheme of arrangement between him and his creditors.

Revenue, expenditure, &c., of the Corporation for each of the five years 1955–56 to 1959–60 is given in the following table:—

VICTORIA—RURAL FINANCE CORPORATION: REVENUE, EXPENDITURE, ETC.  
(£'000)

Particulars	1955–56	1956–57	1957–58	1958–59	1959–60
REVENUE					
Interest .. ..	248	283	337	381	405
Other .. ..	5	6	5	7	10
Total Revenue ..	253	289	342	388	415

VICTORIA—RURAL FINANCE CORPORATION : REVENUE, EXPENDITURE,  
ETC.—*continued*

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>EXPENDITURE</b>					
Administration .. ..	38	41	47	49	54
Interest .. ..	138	167	202	250	261
Sinking Fund .. ..	16	18	23	19	20
Other .. ..	22	7	8	21	9
<b>Total Expenditure ..</b>	<b>214</b>	<b>233</b>	<b>280</b>	<b>339</b>	<b>344</b>
Net Surplus .. ..	39	56	62	49	71
Loans and Advances Outstanding at 30th June .. ..	6,915	7,559	8,147	8,611	8,731
Loan Indebtedness to State Government at 30th June ..	5,668	6,557	7,223	7,734	7,836

*Progress of Cultivation*

The first Statistical Register of Victoria published in 1854 shows that in 1836 there were 50 acres of land under cultivation in the colony of Victoria. By the year 1840 this figure had increased to 3,210 acres. This progress continued until 1852 when 57,472 acres were under cultivation. With the discovery of gold in Victoria, agricultural progress received a temporary setback, the area of land cultivated declining to 34,816 acres in 1854. However with the influx of population came a demand for agricultural products and, by the end of 1860, the area of land under cultivation amounted to 407,740 acres.

The following table shows the area under cultivation at decennial intervals from 1856 to 1955 and for each of the following five seasons 1956 to 1960 :—

VICTORIA—ACREAGE CULTIVATED ANNUALLY

Period or Year (Ended March)	Annual Average Area in Each Decennium, 1856-1955, and Actual Area Each Year 1956-1960, under—		
	Crop	Fallow	Total Cultivation
	acres	acres	acres
1856-65 .. ..	325,676	12,146	337,822
1866-75 .. ..	624,377	57,274	681,651
1876-85 .. ..	1,306,920	137,536	1,444,456
1886-95 .. ..	2,109,326	364,282	2,473,608
1896-1905 .. ..	3,022,914	524,197	3,547,111
1906-15 .. ..	3,756,211	1,276,148	5,032,359
1916-25 .. ..	4,594,244	1,852,145	6,446,389
1926-35 .. ..	5,233,894	2,501,357	7,735,251
1936-45 .. ..	4,435,645	2,142,953	6,578,598
1946-55 .. ..	4,635,982	2,311,401	6,947,383
1956 .. ..	4,542,096	1,982,742	6,524,838
1957 .. ..	3,637,352	1,879,812	5,517,164
1958 .. ..	4,051,249	1,644,764	5,696,013
1959 .. ..	4,790,989	2,187,212	6,978,201
1960 .. ..	4,482,757	2,180,266	6,663,023

*Crops and Growers*

The following table shows the area under, the yield from, and the gross value of each of the principal crops in Victoria for the season 1959-60:—

VICTORIA—AREA, YIELD, AND GROSS VALUE OF CROPS,  
1959-60

Crop	Area	Yield	Gross Value*
	acres		£
Cereals for Grain—			
Barley—			
2 row .. .. .	263,731	5,318,404 bushels .. ..	2,544,652
6 row .. .. .	13,870	274,441 bushels .. ..	98,476
Maize .. .. .	3,383	180,454 bushels .. ..	131,367
Oats .. .. .	673,002	12,701,029 bushels .. ..	4,797,282
Rye .. .. .	22,344	138,438 bushels .. ..	88,831
Wheat .. .. .	2,260,730	38,792,616 bushels .. ..	26,743,415
Hay—			
Barley and Rye .. .. .	2,761	3,494 tons .. ..	34,530
Lucerne .. .. .	61,443	115,831 tons .. ..	1,576,493
Meadow .. .. .	534,285	855,379 tons .. ..	8,937,462
Oaten .. .. .	207,351	320,343 tons .. ..	3,458,960
Wheaten .. .. .	41,708	55,956 tons .. ..	576,106
Green Fodder .. .. .	88,443	.. .. .	653,161
Grey and Other Field Peas .. .. .	19,146	403,613 bushels .. ..	602,820
Grass and Clover Seed .. .. .	17,724	17,663 cwt. .. ..	317,715
Industrial Crops—			
Broom Millet .. .. .	239	1,160 cwt. fibre .. ..	8,922
Linseed .. .. .	24,850	450 cwt. seed .. ..	582
Hops .. .. .	466	295,644 bushels .. ..	535,089
Mustard .. .. .	1,026	6,788 cwt. .. ..	283,498
Tobacco .. .. .	6,424	4,115 cwt. .. ..	26,404
		66,080 cwt. .. ..	4,146,258
Vegetables—			
Onions .. .. .	3,994	27,808 tons .. ..	1,012,092
Potatoes .. .. .	48,506	242,548 tons .. ..	5,808,377
Other .. .. .	35,211	209,705 tons .. ..	9,342,151
Stock Fodder—			
Pumpkins .. .. .	1,524	3,401 tons .. ..	54,416
Turnips, Beet, &c. .. .. .	32,182	50,776 tons .. ..	558,536
Vineyards—			
Grapes—			
Table .. .. .	1,790	6,082 tons .. ..	349,107
Wine .. .. .	4,250	9,445 tons .. ..	203,120
Drying .. .. .	36,204	195,908 tons producing—	
		38,652 tons of sultanias .. ..	5,425,894
		6,113 tons of raisins .. ..	868,319
		3,331 tons of currants .. ..	487,411
Vines, Unproductive .. .. .	1,885		
Orchards—			
Productive .. .. .	46,918	.. .. .	10,529,869
Unproductive .. .. .	21,649	.. .. .	..
All Other Crops .. .. .	5,718	.. .. .	2,209,581
Total Crops .. .. .	4,482,757	.. .. .	92,410,896

\* The gross value is based on the wholesale price realized in the principal markets. The places where primary products are absorbed locally or where they become raw materials for a secondary industry, are presumed to be the principal markets.

The following table shows the numbers of growers of certain primary products, in each statistical district of the State, for the season 1959-60.

The information has no relation to the number of rural holdings in the State, as numbers of occupiers are engaged in the cultivation of more than one of the crops enumerated.

### VICTORIA—GROWERS OF CERTAIN CROPS, SEASON 1959-60

Crops Grown	Growers in Each Statistical District								Total
	Central	North-Central	West-ern	Wim-mera	Mallee	North-ern	North-East-ern	Gipps-land	
Grain Crops—									
Wheat ..	538	325	751	3,676	2,595	3,267	437	52	11,641
Oats ..	555	475	1,386	2,401	1,468	2,312	586	68	9,251
Barley ..	654	101	365	787	1,007	768	99	89	3,870
Maize ..	3	1	..	..	..	..	47	170	221
Green Fodder—									
Maize ..	556	53	300	5	4	21	57	744	1,740
Lucerne ..	69	40	99	27	35	73	31	52	426
Millet ..	344	50	232	15	55	340	268	481	1,785
All Other ..	424	173	618	30	9	81	105	387	1,827
Other—									
Potatoes ..	1,874	519	792	19	21	18	177	587	4,007
Onions ..	300	..	288	6	10	7	..	6	617
Other Vegetables	1,334	24	202	56	361	559	32	100	2,668
Orchards ..	1,994	167	125	149	1,251	1,093	202	95	5,076
Vineyards ..	6	1	..	10	2,375	90	23	..	2,505
Grass and Clover Seed	20	53	109	19	11	72	57	9	350
Tobacco ..	..	..	..	2	3	55	228	..	288*

\* Excluding share-farmers.

A summary of the area under cultivation in each statistical district of the State for the season 1959-60 is given in the following table:—

### VICTORIA—AREA UNDER CULTIVATION, SEASON 1959-60 (Acres)

Crop	Statistical District								Total
	Central	North-Central	West-ern	Wim-mera	Mallee	North-ern	North-East-ern	Gipps-land	
Grain Crops—									
Wheat ..	31,234	16,232	48,175	726,725	963,512	435,209	37,487	2,156	2,260,730
Oats ..	19,098	17,684	75,525	178,028	219,443	142,905	17,757	2,562	673,002
Barley ..	39,158	2,783	12,334	57,124	125,713	35,685	2,251	2,553	277,601
Maize ..	25	5	..	..	..	..	348	3,005	3,383
Field Peas ..	10,442	781	7,203	83	137	38	133	329	19,146
All Hay ..	135,158	44,114	199,264	64,560	24,312	165,158	69,985	144,997	847,548
Green Fodder	16,918	5,179	24,353	2,063	4,528	9,400	6,564	19,438	88,443
Grass and Clover for Seed	1,069	2,290	5,659	1,010	1,635	3,666	2,144	251	17,724
Tobacco ..	..	..	..	13	59	1,178	5,174	..	6,424
Potatoes ..	26,220	7,523	7,903	53	128	67	978	5,634	48,506
Onions ..	1,458	..	2,428	6	18	35	..	49	3,994
All Other	..	..	..	..	..	..	..	..	..
Vegetables ..	20,295	66	4,458	212	3,556	5,294	167	1,163	35,211
Vines ..	8	35	..	663	41,309	672	1,442	..	44,129
Orchards ..	23,576	2,584	705	3,998	6,545	29,164	1,631	364	68,567
All Other Crops	10,814	1,456	40,018	877	22,064	3,184	1,900	8,036	88,349
Total Area under Crop	335,473	100,732	428,025	1,035,415	1,412,959	831,655	147,961	190,537	4,482,757
Land in Fallow	58,237	15,138	47,341	700,543	1,030,313	286,467	12,363	29,864	2,180,266
Total Area under Cultivation	393,710	115,870	475,366	1,735,958	2,443,272	1,118,122	160,324	220,401	6,663,023

The following table shows the yields, in statistical districts, of the principal crops for the season 1959-60 :—

### VICTORIA—YIELDS OF PRINCIPAL CROPS, SEASON 1959-60

Crop	Statistical District							Total
	Central	North-Central	Western	Wimmera	Mallee	Northern	North-Eastern	
Grain Crops—								
Wheat bush.	802,538	440,055	1,285,208	13,871,622	10,725,665	10,611,872	992,905	38,792,616
Oats "	606,540	520,547	2,824,348	3,163,448	1,451,555	3,549,388	527,881	12,701,029
Barley "	1,664,976	94,532	420,728	845,203	1,507,721	897,844	69,543	5,592,845
Maize "	1,245	100	..	..	..	..	12,658	180,454
Field Peas "	215,431	17,419	149,714	..	11,340	905	1,665	403,613
All Hay tons	230,752	70,355	296,305	76,494	22,242	261,370	130,332	1,351,003
Grass and Clover for Seed cwt.	893	2,552	6,663	507	1,744	4,158	1,037	17,663
Tobacco "	..	..	..	10	368	11,821	53,881	66,080
Potatoes tons	137,710	33,805	37,583	217	601	330	2,777	242,548
Onions "	9,330	..	17,748	42	124	214	..	27,808
Wine Made gall.	*	*	..	*	*	*	*	2,146,676
Dried Vine Fruits—								
Raisins tons	..	..	..	..	6,098	15	..	6,113
Sultanas "	..	..	..	..	38,652	..	..	38,652
Currants "	..	..	..	..	3,331	..	..	3,331

\* Details for individual districts are confidential.

### General

### Principal Crops

The cereals wheat, oats, and barley are the principal crops grown in Victoria and these, together with hay, represent about 90 per cent. of the total area sown, although there is some variation from year to year. The growing of potatoes, grapes, and apples is also important.

In the following section some detailed descriptive and statistical information is given for all main crops grown in the State including those mentioned above.

### Wheat

Wheat is the main crop grown in Victoria, occupying approximately 2½ million acres or about half the total acreage under crop. The average annual production is about 44 million bushels, of which 60 per cent. is exported. Only 2 per cent. of the area sown is cut for hay. Grain yield averages 20 bushels per acre, but can be as high as 60 bushels per acre on individual farms in good seasons. The highest yield officially recorded is 78·8 bushels per acre for 50 acres grown at Murtoa in 1960.

The main wheat belt lies in the Mallee, Wimmera, and Northern Districts, where 95 per cent. of the crop is grown. The average annual rainfall varies from 11 inches in the northern Mallee to about 20-22 inches at the southern and eastern boundaries.

Wheat is grown in three major soil types: (1) the high-fertility, self-mulching, grey soils of heavy texture in the southern Wimmera; (2) red-brown earths of varying texture in the northern Wimmera and the Northern District; and (3) solonized brown soils in the Mallee.

Sheep are run on most wheat farms for wool and/or fat lamb production. Wheat crops are generally grown on bare fallow land, seeding taking place from April to June. Superphosphate is applied at seeding to virtually all crops. The crop is harvested in December-January. Diseases are not a major problem, but occasionally some heavy losses can occur due to stem rust and root rots. Weeds are controlled by fallow, cultivation and crop spraying.

The wheat varieties grown in Victoria are of the soft white class. The environment does not generally favour the production of wheat of very high baking quality, but recent developments, including the adoption of clover and medic ley rotation systems and the production of high yield, high quality varieties, are leading to considerable quality improvement.

Victorian wheat is marketed by the Australian Wheat Board in one grade known as fair average quality (f.a.q.).

### *Legume Pastures in the Wheat Belt of Victoria*

Over the years since 1880, when research first demonstrated that increased yields were obtained when wheat crops were sown on fallowed land, the accepted rotation on most wheat lands of Victoria has been fallow—wheat, or fallow—wheat—oats.

There has been increasing evidence in recent years that this intensive cropping programme has lowered the organic matter content of soils treated in this manner with a resultant decrease in the protein content of the wheat grain.

Research investigations have shown that for the maintenance of soil fertility, it is desirable to widen the wheat rotation to include a grazed pasture preferably containing a legume. This is a relatively simple matter in the higher rainfall areas of the eastern portion of the Northern District wheat belt where soils are more acidic in nature and where subterranean clover grows prolifically. In such areas "clover ley" has been accepted as part of the normal wheat rotation with material benefit to the farmer in increased yields of wheat and improved protein content of the grain.

In the more alkaline soils of the Mallee and Wimmera, with their lighter rainfall, subterranean clover has not proved a satisfactory pasture legume and research workers of the Department of Agriculture have been seeking for a legume to replace subterranean clover in the wheat rotation.

Investigations at the Mallee Research Station, Walpeup, have now shown that even in the twelve inch rainfall belt of this region, lucerne (*Medicago sativa*) and barrel clover (*Medicago tribuloides*) can be satisfactorily grown as pasture legumes in a wheat rotation with material benefit to the cereal crop. Not only has adoption of this practice been of benefit to the wheat crop, but it is playing a major part in controlling wind erosion of the sandy soils of the region.



Subsequent Departmental research in the Wimmera has demonstrated the success of these legumes in the alkaline red and black soils of the Wimmera region also. This has been of particular importance since the continued intensive cropping of the high priced self-mulching soils of the Wimmera over a considerable number of years has had a marked effect in reducing the protein content of much of the wheat produced from this region.

As a result of these findings, wheat farmers in the Mallee and Wimmera have modified their agricultural practices materially in the last few years. Whereas prior to 1950, the general appearance of the countryside was an alternation of crop, fallow, and rather sparse natural pasture, ten years later pastures sown to medic clovers and lucerne have replaced large areas of natural pasture and are a main feature of the landscape. In many districts, the area of lucerne and barrel medic is even greater than the area sown to wheat.

These changes are demonstrated by the statistical figures which have been collected in the various districts. For instance, the area recorded as sown to pasture other than lucerne in the Wimmera has risen from about 422,000 acres in 1948 to about 1,415,000 acres by 1958, and in the Mallee from about 89,000 acres in 1954 to 359,000 acres by 1959. This increase has been due largely to increased sowings of barrel and burr medics.

Although the total area sown to lucerne in these districts does not approach that sown to the medic clovers, there has been a major change, particularly in the Mallee, in the acreage sown to this pasture legume over the past six years. Thus while the lucerne acreage was only 4,300 acres in 1954, it had increased to 84,000 acres by 1960.

Fig. 12 shows the change in acreage sown to lucerne and to pasture other than lucerne for the years 1948 to 1960 for the three districts, the Mallee, the Wimmera and the Northern District. In all three districts there has been a material increase in the overall area sown to improved pastures containing a legume.

In the Wimmera and the Northern District, on the one hand, the increase has been mainly in the area sown to clovers and this has been proceeding rapidly and consistently since the end of the Second World War.

In the Mallee, on the other hand, the rapid change in the rate of increase in the use of legumes in pastures did not occur until 1954 when the importance of the new medic clovers began to be fully appreciated by farmers of this district. At the same time the particular value of the deep rooting, perennial lucerne in the sandy soils of the Mallee has resulted in an outstandingly rapid increase in the acreage sown for grazing in this region.

With the development of still better strains of clovers for the wheat belt of Victoria, the increase in areas sown to improved pastures can be expected to continue with beneficial results both in the numbers of stock that can be carried on the wheat farms and in the improvement that will follow in yield and quality of the wheat grown on those farms.

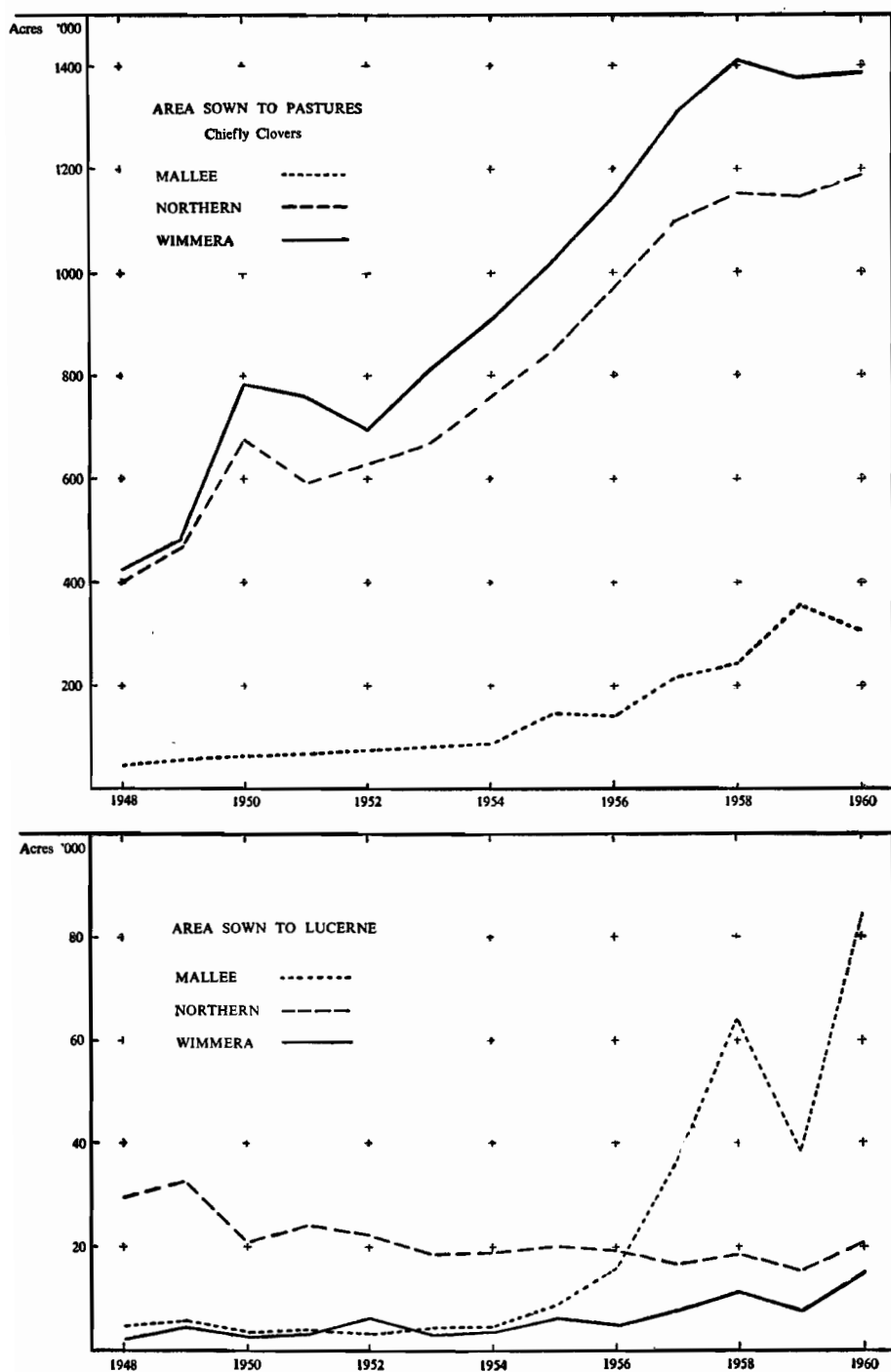


FIGURE 12.—Graph showing types of pastures sown in Wimmera and Mallee.

### *Grain Elevators Board*

In 1934, an Act was passed to provide for the handling of wheat in bulk in Victoria. The Act gave the Government power to constitute a Board of three members to implement the provisions of the Act. On submissions made by the Board to, and approved by, the Government, 187 country receiving elevators and a shipping terminal have been constructed, the necessary finance being obtained from loans totalling £3,806,015. Repayment of the principal and interest are guaranteed by the Victorian Government.

The Grain Elevators Board first received and shipped Victorian wheat in bulk for the 1939-40 season.

Prior to the introduction of bulk handling by the Grain Elevators Board, many wheat growers had opposed that method of handling their wheat. One season of operation of the Board's bulk handling system in any wheat producing area was sufficient to allay the fears of those growers and prove to them that the bulk handling system not only saved labor on the farms, but materially reduced the overall handling costs for wheat.

The Board's Geelong Terminal is the most modern and the largest single wheat shipping terminal in the world. Its operation is by push-button remote control with operational indicator lights appearing on a diagram panel of the whole terminal. Wheat can be received from rail trucks at the rate of 1,200 tons per hour and can be shipped from the terminal at the rate of 1,600 tons per hour, either direct from the terminal storage bins or by a combination of storage bins and rail receivals.

The Grain Elevators Board claims that wheat is taken off the farms by the Board in a shorter period and handled at a lower cost per bushel than is achieved by any other wheat bulk-handling system in Australia or anywhere throughout the world.

The use of the tractor as well as the introduction of more modern harvesting machinery now permits growers to harvest wheat with moisture considerably in excess of that which was possible when they had to rely on horses to haul their harvesting machines. Deterioration of wheat in store, because of high moisture content, has brought home to wheat growers the fact that, when they deliver their wheat, each matured grain contains a series of living organisms which need only the required percentage of moisture to enable them to begin their reproductive cycles.

It is now also appreciated that a smaller percentage of moisture than that which is required for germination of the grain will bring about deterioration of the matter in the grain and that too much moisture will, likewise, adversely affect the reproductive organisms within the grain. The percentage of moisture which has those varying effects upon the matter within the grain has made it necessary to find an easy means of determining the moisture present in a quantity of wheat at any time. Engineers have already produced the tractor and

the modern machinery which permit the harvesting of high-moisture-content wheat and have now produced a simple moisture meter which indicates when the sun and wind have reduced the moisture content in the wheat to the percentage that enables the wheat to be harvested and stored with safety.

In addition to erecting its own country receival facilities, the Board has leased from country flour millers specified quantities of the storage constructed by millers.

The Grain Elevators Board has under its control storage for 71½ million bushels of wheat. The largest quantity of wheat delivered to railway stations by Victorian growers in any one season prior to the 1960-61 season was 59,175,593 bushels in 1915-16. A new record was established during the 1960-61 season when 63,009,684 bushels were delivered.

The following statement shows the revenue and expenditure of the Grain Elevators Board in Victoria:—

**VICTORIA—GRAIN ELEVATORS BOARD : REVENUE,  
EXPENDITURE, ETC.**  
(£'000)

Particulars	Year Ended 31st October—				
	1956	1957	1958	1959	1960
<b>REVENUE</b>					
Australian Wheat Board—Operating and Maintenance Expenses ..	517	492	480	478	513
Australian Wheat Board—Capital Facilities Allowance .. ..	244	262	312	342	350
Interest on Investments .. ..	43	59	53	63	90
Other .. .. .	..	..	1	1	..
<b>Total Revenue .. ..</b>	<b>804</b>	<b>813</b>	<b>846</b>	<b>884</b>	<b>953</b>
<b>EXPENDITURE</b>					
Operating and Maintenance Expenses .. ..	348	310	268	281	291
Administration Expenses .. ..	93	99	119	101	107
Depreciation and Renewals .. ..	75	83	93	96	114
Interest on Loans .. .. .	137	167	177	178	188
Sinking Fund Charges .. .. .	27	31	31	32	34
Appropriations to Reserves .. ..	82	110	113	131	147
Other .. .. .	7	4	7	7	7
<b>Total Expenditure .. ..</b>	<b>769</b>	<b>804</b>	<b>808</b>	<b>826</b>	<b>888</b>
Net Surplus .. .. .	35	9	38	58	65
Fixed Assets (At 31st October) ..	3,283	3,860	4,064	4,229	4,425
Loan Indebtedness (At 31st October)—					
State Government .. .. .	972	965	955	946	935
Public .. .. .	2,321	2,808	2,774	2,838	3,195

*Australian Wheat Board*

With the inclusion of an additional member for Queensland, gazetted on 10th May, 1959, the Board now consists of the chairman and four other Commonwealth Government appointees, whilst the remaining ten members are representatives of wheat growers in the five main wheat growing States, each such State now being represented by two members.

The guaranteed price for wheat (which only applies to the volume of wheat used for human consumption in Australia plus 100 mill. bushels) of a particular season is an amount equal to the cost of production of wheat of that season as determined in accordance with the Commonwealth Stabilization Act. For the season 1959-60, it was fixed at 14s. 10d. per bushel and for season 1960-61 at 15s. 2d. per bushel. For each succeeding year of the Act, the cost of production will be determined by the Commonwealth Minister, after considering the report of the appropriate Committee on the variation in elements of costs and after consulting the appropriate Ministers of each State.

Total deliveries by wheat growers to the Australian Wheat Board during season 1959-60 were 37,098,828 bushels, including 1,592,340 bushels delivered to Victorian controlled receival points in southern New South Wales. Although the State yield was below average, it was a surprisingly good one in view of the dry autumn and winter which delayed sowing in the main wheat growing areas of the State, in some instances until mid August, and an unusually hot spell in November which adversely affected these late sown crops. The north-eastern sector of the State received sufficient autumn and winter rains and crops were normal in that area, but on the other hand the north-west Mallee had its driest winter in 46 years.

*Wheat Standard*

The fair average quality (f.a.q.) standard is fixed each season by a State Committee and is the basis for sales of each crop.

Samples of wheat from various districts are obtained each year and mixed to obtain a representative sample of the whole crop. The f.a.q. weight is then determined by use of the Schopper 1-litre scale chondrometer.

The f.a.q. standard method is peculiar to Australia, other countries selling according to sample or fixed grades.

The following table shows the standard determined in Victoria for each of the ten seasons, 1950-51 to 1959-60:—

VICTORIA—WHEAT STANDARD

Season			Weight of Bushel of Wheat, f.a.q.	Season			Weight of Bushel of Wheat, f.a.q.
			lb.				lb.
1950-51	..	..	62½	1955-56	..	..	63½
1951-52	..	..	64	1956-57	..	..	65½
1952-53	..	..	64½	1957-58	..	..	65½
1953-54	..	..	64½	1958-59	..	..	64
1954-55	..	..	62½	1959-60	..	..	64½

*Area Sown, Production, and Gross Value*

In the following table the area, production, average yield, and gross value of production of wheat for each of the seasons, 1955-56 to 1959-60 are shown:—

## VICTORIA—WHEAT STATISTICS

Season			Area	Production	Average Yield	Gross Value
			'000 acres	'000 bushels	bushels	£'000
1955-56	..	..	2,141	41,083	19·19	26,047
1956-57	..	..	1,565	35,282	22·54	24,041
1957-58	..	..	1,835	32,134	17·51	22,065
1958-59	..	..	1,810	42,697	23·59	28,274
1959-60	..	..	2,261	38,793	17·16	26,743

*Farmers Growing Wheat for Grain*

The following statement shows the number of farmers engaged in growing wheat for grain :—

## VICTORIA—NUMBER OF HOLDINGS WITH TWENTY OR MORE ACRES OF WHEAT FOR GRAIN

1955-56	1956-57	1957-58	1958-59	1959-60
9,683	7,674	8,856	9,074	11,641

*Wheat Breeding*

The breeding of improved varieties of wheat for cultivation by the Victorian wheat grower is a function of the Victorian Department of Agriculture. The overall objective of the breeding work is to provide the grower with new varieties which will increase yields, reduce losses due to disease and drought and improve the milling and baking quality of the grain which he produces. The increased yields resulting from the introduction of these varieties assist in offsetting increased production costs and assure the grower of a higher monetary return from his crop, while the improved quality of the grain produced ensures a better demand for Victorian wheat both in local and overseas markets.

The Victorian wheat improvement programme is an extremely comprehensive one, involving the co-operation of the wheat breeders with the cereal agronomists, chemists, and plant pathologists of the Department of Agriculture.

The breeding work is organized on a regional basis with the State Research Farm at Werribee representing the central plant breeding station for Victoria. This farm is particularly well suited for the purpose because of the facilities it provides for laboratory and

glasshouse work; for the rapid development of hybrid material under controlled lighting conditions; and for the growing and observation of an extensive collection of wheat varieties gathered from all over the world for possible use as parents in the breeding programme. All artificial hybridization work is carried out at the State Research Farm, Werribee. Each year a large number of matings of selected parents is made and the progeny of these is grown in the glasshouses and breeding cages under conditions which enable several generations of plants to be raised in one year, thus resulting in an appreciable saving in the time required to breed a new variety.

The central breeding station is supplemented by a series of regional selection nurseries located at the Mallee Research Station, Walpeup; Longerenong Agricultural College in the Wimmera, and Dookie Agricultural College in the North-Eastern District. Crossbred material in the second and later generations is distributed to these nurseries in order that selection work may be carried out in the environment in which the new varieties will eventually be grown. Each year between 40,000 and 50,000 rows of new crossbred wheats are sown in the central and regional nurseries. These are all sown and harvested by hand, and are selected on the basis of desirable agronomic characters, superior milling and baking quality, and increased resistance to disease. The most promising of these are tested for a number of years in Departmental plots on the research stations and on farmers' properties at appropriate centres in the wheat belt to determine their yielding ability. During this period the grain of each crossbred is also subjected to milling and baking tests in the cereal laboratories of the Department of Agriculture.

Those crossbreds which demonstrate their superiority over existing varieties after being tested for yielding ability, grain quality characteristics, and disease resistance, become eligible for naming and release as new varieties. Before release, however, the new variety must be approved by the Victorian Wheat Advisory Committee consisting of representatives of the Department of Agriculture, the wheat growers, and the trade.

The results over a number of years from these tests form the basis of variety recommendations for different regions embracing areas of similar climatic and soil conditions. These recommendations are made at the annual meeting of the Victorian Wheat Advisory Committee.

For the 1961 seeding the recommendations were:—

*Mallee:*

*Northern*

Insignia  
Olympic  
Beacon

*Southern*

Insignia  
Olympic  
Beacon

*Wimmera:*

*Black Soils*

Olympic  
Pinnacle  
Stockade

*Red and Fringe Soils*

Olympic  
Pinnacle  
Insignia  
Stockade

*Northern:*

*Mid-Northern*  
Olympic  
Insignia

*East-Northern*  
Olympic  
Sherpa

*Southern:*

*Western*  
Olympic  
Pinnacle  
Sherpa  
Insignia

*Central, North-Central, and Gippsland*  
Olympic  
Pinnacle  
Sherpa  
Insignia

*Rust-Resistant Variety* : All districts, for circumstances where a rust-resistant variety is desired—Stockade.

New wheat varieties bred by the Department of Agriculture occupy a very large percentage of the Victorian wheat area and have significantly increased local production. This represents an increased monetary return to the wheat grower. In addition, the introduction of these varieties has resulted in a substantial improvement in the quality of the grain produced with a corresponding improvement in the baking quality of the local flour.

Seven new varieties have been released for sowing since 1946:—

1946—Insignia	1953—Sherpa
1946—Pinnacle	1956—Olympic
1947—Diadem	1957—Beacon
	1960—Stockade

The following table shows the areas under the principal varieties of wheat, including wheat for hay, for the seasons, 1957–58, 1958–59, and 1959–60. Varieties are tabulated in order of popularity for the last-mentioned season.

## VICTORIA—PRINCIPAL VARIETIES OF WHEAT SOWN

Variety (In Order of Popularity) Season 1959-60	1957-58		1958-59		1959-60	
	Acres Sown	Percentage of Total Area Sown	Acres Sown	Percentage of Total Area Sown	Acres Sown	Percentage of Total Area Sown
Insignia ..	923,903	49.38	872,373	47.34	981,765	42.64
Pinnacle ..	437,067	23.36	418,237	22.70	574,979	24.97
Olympic ..	11,550	0.62	132,427	7.19	316,148	13.73
Sherpa ..	169,021	9.03	163,889	8.89	163,818	7.11
Quadrat ..	185,347	9.91	121,250	6.58	119,428	5.19
Insignia 49 ..	40,018	2.14	51,097	2.77	64,463	2.80
Baldmin ..	15,843	0.85	17,601	0.96	21,613	0.94
Magnet ..	18,321	0.98	10,009	0.54	10,472	0.45
Sabre ..	11,510	0.62	9,698	0.53	8,691	0.38
Beacon ..			920	0.05	8,452	0.37
Gabo ..	27,208	1.45	18,519	1.01	7,383	0.32
All Other Varieties ..	31,119	1.66	26,590	1.44	25,226	1.10
Total ..	1,870,907	100.00	1,842,610	100.00	2,302,438	100.00



*Wheat Growing in Conjunction with Livestock Grazed*

A table showing the number of holdings in Victoria growing wheat for grain, together with sheep, dairy cattle, and pigs as at 31st March, 1956, appears on page 492.

*Oats*

The area sown to oats in Victoria is about 1.1 mill. acres, of which about 60 per cent. is harvested for grain, 20 per cent. cut for hay, and 20 per cent. grazed completely. Some of the area harvested for grain is also grazed during the winter. The average annual grain production is about 12 mill. bushels (40 lb. per bushel) and the average hay production 325,000 tons. Average grain yield is 18 bushels per acre and average hay yield is 1½ tons per acre.

About 87 per cent. of the area sown for grain is in the Mallee, Wimmera, and Northern Districts. Oat grain is used on farms for stock feeding and is often held in large quantities for this purpose as an insurance against drought losses. Grain is sold on an open market through merchants or through the voluntary oat pool, and prices fluctuate widely according to seasonal conditions and supplies available. Better quality oats may be bought at a premium for milling purposes.

Oaten hay is grown for farm use in all districts and for sale in areas where chaff mills operate (i.e., near Melbourne and Ballarat). About 40 per cent. of the area sown to hay is in the Mallee, Wimmera, and Northern Districts, and 25 per cent. in the Western District.

Most of the oat area grazed completely is grazed by sheep in the winter, but in dairying districts oats are sometimes sown for autumn and winter grazing to supplement pasture growth. More than 40 per cent. of the completely grazed acreage is in the Mallee District. Most oat crops are grown on stubble land with very little preparation and with a smaller amount of superphosphate (if any), than is used on wheat crops. About 85 per cent. of the area sown to oats is sown to the varieties Algerian, Orient, and Algeribee.

The area harvested (season 1959-60) for hay was 207,351 acres, and for grain 673,002 acres, which produced 320,343 tons of hay, and 12,701,029 bushels of grain respectively. The area of oats sown for grazing purposes, amounted to 198,330 acres. The following table shows the area, yield, and gross value of oats for grain for each of the five seasons 1955-56 to 1959-60:—

## VICTORIA—OATS FOR GRAIN

Season			Area	Production	Yield per Acre	Gross Value
			'000 acres	'000 bushels	bushels	£'000
1955-56	..	..	871	14,858	17.06	4,671
1956-57	..	..	613	9,555	15.60	3,315
1957-58	..	..	622	9,528	15.31	5,313
1958-59	..	..	971	23,339*	24.04	6,820
1959-60	..	..	673	12,701	18.87	4,797

\* Record production

*Barley*

Barley is sown on about 300,000 acres in Victoria each year, from which about 6 mill. bushels (50 lb. per bushel) of grain are harvested. The average yield is about twenty bushels per acre. Most of the barley sown is two-row or malting type barley, only a very small acreage being sown to the six-row, feed type.

Barley production is centred in two main districts which have favourable soil and climatic conditions for growing good quality grain suitable for malting. The most important area is the south-western Mallee and the adjoining northern Wimmera, where barley is grown on sandy soils usually in association with wheat. In this district, barley is either sown on wheat stubble land or on ley land cultivated in the autumn just before sowing. The variety Prior is almost exclusively sown, usually with superphosphate. The average district yield is about fifteen bushels per acre.

The other important area is in southern Victoria between Geelong and Bacchus Marsh. In this district, barley is the main crop and is usually sown on fallowed land with superphosphate. The variety Research is grown here, and the average yield is about 30 bushels per acre. This area is close to the main shipping terminals and growers' freight costs are considerably lower than in the northern areas. Barley is grown less intensively in other districts and the quality is rarely up to malting standard.

Barley is marketed through the Australian Barley Board, which provides an orderly marketing system for the barley produced in Victoria and South Australia. The Board classifies growers' grain, on sample, into three grades—malting, milling, and feed—with a price differential between each grade.

Practically all of the malting grade barley is used in Australia, but most of the milling and feed grades are exported to Europe and Japan.

The following table shows the area, yield, and gross value of barley for each of the five seasons 1955-56 to 1959-60 :—

## VICTORIA—BARLEY PRODUCTION

Season	Area under Crop		Produce		Average per Acre			Gross Value
	Malting (2 row)	Other (6 row)	Malting (2 row)	Other (6 row)	Malting (2 row)	Other (6 row)	Total	
	'000 acres	'000 acres	'000 bushels	'000 bushels	bushels	bushels	bushels	£'000
1955-56 ..	291	18	6,488	389	22.32	21.15	22.25	3,459
1956-57 ..	325	20	7,164	385	22.04	18.97	21.86	3,838
1957-58 ..	334	18	5,201	246	15.57	13.91	15.49	3,280
1958-59 ..	343	19	8,174	407	23.80	20.97	23.65	4,165
1959-60 ..	264	14	5,318	274	20.17	19.79	20.15	2,643

*Maize*

Maize for grain is cultivated mainly in Gippsland. It is grown in Victoria both for grain and for green fodder. The area, yield, and gross value of maize for each of the five seasons, 1955-56 to 1959-60, are given in the following table :—

VICTORIA—MAIZE PRODUCTION

Season					For Green Fodder	For Grain			
						Area	Production	Yield per Acre	Gross Value
					acres	acres	bushels	bushels	£
1955-56	..	..	..	..	8,665	3,535	175,813	49·73	135,002
1956-57	..	..	..	..	6,429	2,727	80,798	29·63	66,930
1957-58	..	..	..	..	8,122	4,278	241,764	56·51	158,708
1958-59	..	..	..	..	7,619	3,881	203,366	52·40	136,876
1959-60	..	..	..	..	9,084	3,383	180,454	53·34	131,367

*Rye*

Cereal rye is a minor crop in Victoria, with about 22,000 acres sown to it annually. This acreage, however, is many times greater than the pre-war area of just over 1,000 acres. The average production is about 150,000 bushels (60 lb. per bushel) per year, and the average yield is about 6½ bushels per acre.

Rye is not a cash crop and it is sown mainly for control of sand drift on sandhills in the Mallee District and, to a much lesser extent, for winter grazing in the colder winter districts. Not all of the area sown is harvested, so that the average yield per acre is probably higher than that recorded. The variety sown is almost exclusively South Australian rye. Superphosphate is used as a fertilizer, with a portion of the Mallee area sown with a mixture of superphosphate and ammonium sulphate.

In recent years, European migrants to Australia have created a small demand for rye for human consumption.

The following table shows the area, yield, and gross value of rye for each of the five seasons 1955-56 to 1959-60:—

VICTORIA—RYE PRODUCTION

Season						Area	Production	Yield per Acre	Gross Value
						acres	bushels	bushels	£
1955-56	..	..	..	..	..	20,043	110,451	5·51	60,748
1956-57	..	..	..	..	..	19,419	129,729	6·68	94,054
1957-58	..	..	..	..	..	17,807	84,975	4·77	72,229
1958-59	..	..	..	..	..	27,458	226,320	8·24	114,104
1959-60	..	..	..	..	..	22,344	138,438	6·20	88,831

*Hay*

The pattern of hay production in Victoria has changed considerably in the post-war period. More complete mechanization and the virtual disappearance of the working horse have taken the emphasis from cereal hay. The harvesting of large areas of cereal crops, particularly oats, grown specifically for the production of hay for the maintenance of horse teams, is no longer necessary and there has been a marked decline in the amount of cereal hay produced.

On the other hand, there have been spectacular increases in the production of other forms of fodder. The annual production of meadow hay has increased from about 400,000 tons to over 1 mill. tons during this period. There has also been a substantial increase in the amount of lucerne hay conserved. Silage has become an important supplement to hay for stock feeding, and silage produced mainly from pasture growth has increased from about 25,000 tons annually to over 300,000 tons in the post-war period.

This increase in fodder conservation has resulted in more efficient utilization of the extra herbage grown as the result of pasture improvement in all districts. Record numbers of livestock are now being maintained with greater safety following the conservation of portion of the surplus spring growth for feeding out during periods of seasonal shortage or in drought.

As pastures have been improved and livestock production intensified, the provision of supplementary fodder has become an important factor in the Victorian grazing industry. The conservation of meadow hay fits in well with farm management routine and is a convenient method of ensuring continuity of fodder supplies.

Particulars of areas harvested and production of the several kinds of hay appear in the following table:—

VICTORIA—HAY PRODUCTION, 1959–60

Kind					Area	Production	Average Yield
					acres	tons	tons
Wheaten	..	..	..	..	41,708	55,956	1·34
Oaten	..	..	..	..	207,351	320,343	1·54
Lucerne	..	..	..	..	61,443	115,831	1·89
Barley, Rye, &c.	..	..	..	..	2,761	3,494	1·27
Grasses and Clovers	..	..	..	..	534,285	855,379	1·60
Total	..	..	..	..	847,548	1,351,003	1·59

The following table shows, in respect of each statistical district of the State, the quantity of ensilage made during the 1959-60 season, and the stocks of ensilage and hay held on rural holdings on the 31st March, 1960:—

**ENSILAGE MADE AND FARM STOCKS OF ENSILAGE  
AND HAY**  
(Tons)

District	Ensilage Made, 1959-60	Stocks at 31st March, 1960	
		Ensilage	Hay
Central .. .. .	87,012	50,769	249,262
North-Central .. .. .	5,804	5,171	93,019
Western .. .. .	19,475	28,140	360,906
Wimmera .. .. .	1,612	7,405	148,902
Mallee .. .. .	1,331	7,670	55,438
Northern .. .. .	10,588	16,517	359,635
North-Eastern .. .. .	24,931	24,548	201,571
Gippsland .. .. .	130,813	61,364	298,124
Total .. .. .	281,566	201,584	1,766,857

### Potatoes

Victoria is the largest producer of potatoes in the Commonwealth, contributing a little more than 40 per cent. of the total annual requirement. The bulk of the Victorian crop is used within the State for human consumption and seed purposes, while each year 40,000 to 50,000 tons are exported to other States to augment local supplies. Potatoes are generally used as a fresh vegetable, but there is increasing interest in processes developed overseas in which cooked potatoes are dried as flakes or granules. These may be stored for some months, and can be prepared for use in a few minutes.

With few exceptions, potatoes are grown in the better soils in higher rainfall areas on and south of the Central Dividing Range, the main districts being Koroit, Beech Forest, Bellarine Peninsula, Ballarat to Trentham, Kinglake, Gembrook, Koo-Wee-Rup swamp and the Gippsland hill country.

Over the past 20 years there has been a very substantial increase in the volume of potato production in Victoria. This is due, not to greater area, but to improvement in the average yield, which has nearly doubled. Higher yielding varieties now being grown, improved

cultural methods, availability of virus-free seed through the certification scheme, and wider use of irrigation have contributed to this improvement. Potato growing has become increasingly mechanized and this has precipitated the trend for production of this crop to pass to specialist growers having larger individual areas.

The following table shows the area, yield, and value of potatoes for each of the five seasons 1955-56 to 1959-60:—

#### VICTORIA—POTATO PRODUCTION

Season			Area	Production *	Average Yield	Gross Value
			acres	tons	tons	£'000
1955-56	..	..	37,020	163,239	4.41	12,486
1956-57	..	..	39,706	227,307	5.72	5,862
1957-58	..	..	49,846	251,159	5.04	3,326
1958-59	..	..	46,122	259,346	5.62	5,040
1959-60	..	..	48,506	242,548	5.00	5,808

\* Includes amounts held on farms for seed, stock feed, &c., as follows:—21,089 tons in 1955-56; 49,755 tons in 1956-57; 53,842 tons in 1957-58; 42,345 tons in 1958-59; and 31,951 tons in 1959-60.

#### Onions

The principal onion growing areas are in the Central and Western districts. In the season 1959-60 these areas were responsible for 97 per cent. of the total onion production of the State. The following table shows the area, yield, and gross value for each of the five seasons 1955-56 to 1959-60:—

#### VICTORIA—ONION PRODUCTION

Season			Area	Production	Average Yield	Gross Value
			acres	tons	tons	£'000
1955-56	..	..	3,337	16,955	5.08	940
1956-57	..	..	4,503	26,811	5.95	861
1957-58	..	..	5,368	40,678	7.58	638
1958-59	..	..	3,971	28,456	7.17	1,062
1959-60	..	..	3,994	27,808	6.96	1,012

*Linseed*

Linseed oil is one of the chief components of paints, varnishes, and linoleum, and has many other industrial uses. The presscake or meal, which remains after the oil has been extracted from the ground and partly cooked seed, is a valuable stock food.

The area sown to linseed in Victoria for the season 1959–60 was 24,850 acres, which produced 295,644 bushels valued at £283,498 (gross). Figures for 1958–59 were 8,817 acres, 11,779 bushels, and gross value £193,863.

*Tobacco*

Tobacco is grown mainly in the Ovens Valley in the North-East of Victoria.

During the decade ending in 1960, there was a marked expansion of the area planted to tobacco in Victoria and the State now produces one third of the Australian crop. The average yield per acre was substantially higher than that recorded in any previous decennial period; prices were maintained at a satisfactory level and practically all usable leaf was sold, although there was evidence of a weakening demand at the close of the 1960 selling season.

The disease Blue Mould still is the tobacco grower's most important hazard, but its incidence appears to have been limited by greater attention to field hygiene and more efficient management of tobacco seedling nurseries. Both of these factors have contributed to a more stable supply of disease-free seedlings at transplanting time. This is an important pre-requisite for the production of a satisfactory crop.

Adequate funds to support an extension programme and research work are available from a trust fund to which State and Commonwealth Governments, growers, and manufacturers contribute. Problems associated with the industry are being investigated at the Tobacco Research Station, Myrtleford, and in co-operation with private growers in all main tobacco producing districts of the State. Both the Department of Agriculture and the Victorian Tobacco Growers' Association provide an active advisory service to growers by instructors who operate on a farm to farm visiting basis.

The whole of the Victorian tobacco crop, together with that produced adjacent to, but on the New South Wales side of the Murray River, is sold by public auction in Melbourne. The selling season normally extends from early June to the end of September.

The following table furnishes details of the area, yield, and gross value in each of the five seasons 1955-56 to 1959-60 :—

### VICTORIA—TOBACCO PRODUCTION

Season			Area	Production	Yield per Acre	Gross Value
			acres	cwt. (dry)	cwt. (dry)	£'000
1955-56	..	..	2,876	10,134	3·52	571
1956-57	..	..	2,935	24,470	8·34	1,376
1957-58	..	..	3,252	32,884	10·11	1,862
1958-59	..	..	4,248	43,617	10·27	2,764
1959-60	..	..	6,424	66,080	10·29	4,146

### Fruit

Victoria produces one-third of Australia's tree-fruit production, three-quarters of the canned fruit production, and two-thirds of the Commonwealth's dried fruits. Approximately 100,000 acres are devoted to orchards and vineyards.

Fruit producing areas north of the Great Dividing Range have a rainfall which varies from 10 inches per annum in the Mallee to 20 inches per annum in the Goulburn Valley. All the fruit producing areas in this part of the State rely on irrigation. Distribution is mostly by gravity except for small areas of citrus under spray irrigation.

In the south of the State, where apples, pears, plums, cherries, dessert peaches, lemons, and berries are produced, rainfall varies from 20 inches to 40 inches per annum. Many orchards in southern Victoria are irrigated from dams, rivers, or town supplies.

The largest area under a single horticultural crop is the vineyard area at Mildura, Swan Hill, and the War Service Land Settlement area at Robinvale.

Most of the dried fruits production is exported, mainly to the United Kingdom. The pome fruits are next in importance, most of the apples being sold locally or interstate, while most of the pear production is exported to the United Kingdom.

Peaches, pears, and apricots for canning are produced in the Goulburn Valley, where large co-operative canneries are also located.

The total output of 3,878,000 cartons\* of canned fruits for the 1960 season comprised apricots, 433,000 cartons; peaches (including 145,000 cartons of mixed fruits), 1,290,000 cartons; and pears, 2,155,000 cartons. In addition to the fruits shown in the following table,

\* Basic export carton containing 24 cases of No. 2½ can size.



large quantities of melons, rhubarb, and tomatoes are produced in orchards. The gross value of all fruit grown in the season 1959-60 was £10,529,869.

## VICTORIA—FRUIT GROWING

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Growers .. ..	4,891	4,936	5,044	5,065	5,076
Area .. .. acres	65,214	63,319	66,221	66,746	68,657
Kind of Fruit—					
Apples .. .. bushels	2,648,892	2,621,487	3,125,088	2,969,521	3,005,669
Pears .. .. "	2,742,863	3,432,090	3,730,427	3,279,535	3,582,549
Quinces .. .. "	21,048	39,073	39,941	31,431	19,595
Apricots .. .. "	235,933	274,780	692,139	291,547	468,055
Cherries .. .. "	76,599	86,706	74,387	97,872	101,189
Nectarines .. .. "	18,340	15,289	19,875	18,770	18,896
Peaches .. .. "	1,162,447	878,560	1,287,011	1,033,712	1,210,021
Plums .. .. "	148,910	104,280	157,332	139,579	156,940
Prunes .. .. "	16,894	25,574	28,878	20,540	26,594
Lemons .. .. "	219,348	159,153	159,085	162,616	156,217
Oranges .. .. "	770,503	711,453	796,625	830,115	1,028,711
Mandarins .. .. "	17,032	14,275	15,773	24,180	20,081
Grapefruit .. .. "	56,421	53,917	55,900	66,894	67,214
Figs .. .. "	4,147	6,053	4,414	4,660	3,218
Passion-fruit .. .. "	6,772	5,026	5,609	4,800	2,197
Other Large Fruits .. ..	7,849	8,181	12,510	12,281	11,741
Gooseberries .. .. cwt.	1,114	1,382	1,250	953	1,172
Loganberries .. .. "	2,201	1,667	2,262	2,458	2,462
Raspberries .. .. "	2,148	1,733	2,150	2,486	2,862
Strawberries .. .. "	4,710	6,694	8,211	7,739	6,692
Youngberries .. .. "	(a)	1,342	1,823	3,383	3,833
Almonds .. .. lb.	87,650	85,919	121,937	92,838	115,444
Filberts .. .. "	6,271	7,283	7,827	6,615	6,590
Walnuts .. .. "	97,708	159,743	137,544	139,660	149,136

(a) Not collected.

The production of the principal kinds of dried tree-fruits for each of the last five seasons is shown in the following table. Particulars in respect of dried vine-fruits appear on pages 519-520.

### VICTORIA—DRIED TREE-FRUIT (lb.)

Year Ended 30th June—	Apricots	Peaches	Pears	Prunes	Other	Total
1956 .. .. .	22,682	21,228	4,015	257,341	2,022	307,288
1957 .. .. .	12,499	272	4,481	330,762	2,945	350,959
1958 .. .. .	24,841	2,105	744	401,108	3,686	432,484
1959 .. .. .	72,807	5,122	6,824	355,072	1,183	441,008
1960 .. .. .	38,067	5,417	3,505	460,806	2,429	510,224

### Orchards

The extent of cultivation of each important class of fruit and nuts on holdings of 1 acre and upwards during the seasons 1955-56 and 1958-59 is shown in the following table :—

### VICTORIA—FRUIT TREES, PLANTS, ETC. IN ORCHARDS AND GARDENS

Fruit and Nuts	Number of Trees, Plants, &c.					
	1955-56			1958-59		
	Bearing	Not Bearing	Total	Bearing	Not Bearing	Total
Apples .. .. .	1,529,208	420,365	1,949,573	1,498,638	511,163	2,009,801
Pears .. .. .	1,100,880	236,531	1,337,411	1,124,220	376,722	1,500,942
Quinces .. .. .	25,655	3,709	29,364	21,402	922	22,324
Plums .. .. .	171,634	31,463	203,097	146,136	38,127	184,263
Prunes .. .. .	29,046	9,302	38,348	25,332	6,385	31,717
Cherries .. .. .	121,477	56,480	177,957	117,292	48,813	166,105
Peaches .. .. .	835,511	189,500	1,025,011	540,124	607,039	1,147,163
Apricots .. .. .	376,994	73,458	450,452	312,979	89,970	402,949
Nectarines .. .. .	20,097	3,874	23,971	18,103	5,296	23,399
Oranges .. .. .	370,595	77,325	447,920	372,550	86,824	459,374
Mandarins .. .. .	6,140	5,604	11,744	9,252	9,676	18,928
Grapefruit .. .. .	22,386	2,979	25,365	22,917	1,541	24,458
Lemons .. .. .	106,644	25,608	132,252	89,869	14,704	104,573
Figs .. .. .	5,506	716	6,222	5,840	983	6,823
Raspberries .. .. .	209,451	46,010	255,461	247,970	60,001	307,971
Loganberries .. .. .	108,403	10,675	119,078	138,129	19,001	157,130
Strawberries .. .. .	4,507,904	603,608	5,111,512	6,972,270	405,759	7,378,029
Gooseberries .. .. .	45,302	6,646	51,948	51,762	8,480	60,242
Youngberries .. .. .	*	*	*	127,304	21,600	148,904
Olives .. .. .	17,191	100,952	118,143	60,351	56,568	116,919
Passion-fruit .. .. .	22,803	6,718	29,521	15,950	8,085	24,035
Almonds .. .. .	34,781	9,211	43,992	26,496	4,576	31,072
Walnuts .. .. .	7,702	2,799	10,501	6,549	2,094	8,643
Filberts .. .. .	3,511	1,388	4,899	3,725	458	4,183

\* Not collected.

The distribution of the fruit industry over the State is set out in the following table, where the number of trees of each kind in each statistical district are given for the season 1958-59 :—

**VICTORIA—NUMBER OF FRUIT TREES, PLANTS, ETC.,  
SEASON 1958-59**

Particulars	Statistical District							
	Central	North-Central	Western	Wimmera	Mallee	North-eastern	North-Eastern	Gippsland
Growers .. No. acres	2,031 24,116	172 2,483	125 683	150 4,153	1,238 6,272	1,057 27,131	201 1,538	91 370
Area ..								
Apples .. trees	1,445,277	185,390	57,446	18,637	12,546	187,477	73,030	29,998
Pears ..	277,673	60,727	1,533	9,407	3,284	1,145,284	1,064	1,970
Peaches ..	221,768	2,382	402	19,334	21,886	877,965	2,165	1,261
Apricots ..	73,072	760	1,354	19,967	51,286	254,741	983	786
Plums ..	93,477	6,203	1,184	3,649	12,346	63,024	3,456	924
Prunes ..	507	8	936	11,459	7,513	11,207	51	36
Cherries ..	138,786	3,581	57	4,614	259	10,442	7,799	567
Quinces ..	11,260	639	181	1,490	752	7,786	140	76
Nectarines ..	16,125	23	85	444	3,286	2,742	449	245
Figs ..	1,539	16	37	65	648	3,816	637	65
Olives ..	294	..	1	95,000	19,997	1,524	92	11
Oranges ..	443	5	75	161	321,492	133,343	3,704	151
Mandarins ..	13	..	..	6	16,398	2,441	64	6
Grapefruit ..	325	..	5	22	16,961	6,974	161	10
Lemons ..	76,413	81	14	250	8,796	17,959	959	101
Passion-fruit .. vines	5,220	4	111	6	5,645	11,331	570	24,035
Strawberries .. plants	7,327,292	100	..	..	25,630	21,252	3,755	..
Raspberries .. bushes	306,201	1,020	..	..	..	750	..	..
Loganberries ..	157,127	3	..	..	..	..	..	..
Gooseberries ..	58,431	1,507	4	..	..	..	..	..
Youngberries ..	148,901	1	..	..	2	..	..	..
Almonds .. trees	562	62	34	715	16,827	7,598	5,208	66
Walnuts ..	561	46	21	180	593	197	6,480	565
Filberts ..	307	..	1	..	499	1	3,362	13

### Vine Fruits

Most vine fruits grown in Victoria are marketed as dried fruits (currants, sultanas and raisins). Smaller quantities are sold as fresh fruit or are used for wine production. Some 40,000 acres of vines are grown in the irrigated districts of the Murray river at Mildura, Robinvale and Swan Hill. The climate at Mildura and Robinvale provides the high temperatures and clear sunny conditions during the growing season and drying period which are essential for the production of first quality dried fruit. The Swan Hill district with slightly lower temperatures and higher rainfall is less suitable than Robinvale and Mildura.

Dried fruits production in these districts for the season 1959-60 amounted to 38,652 tons of sultanas, 3,331 tons of currants, and 6,113 tons of raisins. After dipping and sun drying by the grower, the dried fruit is processed and packed in packing houses. Approximately 72 per cent. of Victorian produce for the season 1959-60 was exported to the United Kingdom, Canada, and New Zealand.

During recent years the growing of grapes for table use has expanded rapidly and with some growers has become a specialized industry. The main varieties are Waltham Cross, Purple Cornichon, Ohanez, Sultanas, and Muscats. Melbourne and Sydney are the main market outlets, but Indonesia, Colombo, and Singapore may grow in importance as export markets.

Grapes for wine production are grown at Rutherglen, Great Western, and Nagambie, mainly without supplementary irrigation. The acreage in these districts is tending to decrease. Increasing quantities of grapes for wine making are now being obtained from the irrigated districts of Mildura and Swan Hill.

A considerable portion of Victorian wine is marketed in Great Britain, New Zealand and Canada.

Particulars of vine production for the five seasons 1955-56 to 1959-60 are given in the following table :—

VICTORIA—VINE-FRUIT PRODUCTION

Season	Number of Growers	Area		Produce				
		Bearing	Not Bearing	Grapes Gathered	Wine Made	Dried Fruits		
						Raisins		Currants
						Lexias	Sultanas	
		acres	acres	'000 cwt.	'000 gall.	cwt.	cwt.	cwt.
1955-56 ..	2,474	42,295	2,522	3,087	1,312	57,933	530,414	102,992
1956-57 ..	2,428	41,741	3,153	4,702	2,369	81,875	919,825	79,070
1957-58 ..	2,467	42,089	2,678	5,188	2,582	122,628	1,012,220	83,063
1958-59 ..	2,494	42,482	2,319	5,041	2,354	116,252	937,878	95,517
1959-60 ..	2,505	42,244	1,885	4,229	2,147	122,258	773,035	66,615

### Vegetables

The climate of Victoria is such that practically every kind of vegetable can be grown in some part of the State during the favourable season in each area. Consequently, there is a plentiful supply of fresh vegetables on the market for the whole year in normal years.

These vegetables (excluding potatoes and onions) worth about £10 mill. each year to Victoria are harvested from about 35,000 acres.

Most of the vegetables are grown in southern Victoria close to Melbourne. These areas are fairly frost free and also have a well distributed rainfall of from 20 to 35 inches. Soils on which vegetables are grown in southern Victoria vary widely and include sands, sandy loams, clay loams, peat, alluvial peats, and volcanic types. In general, most of these soils require 5 to 12 cwt. of fertilizer per acre for each crop.

The northern portion of the State is warm in summer, but more subject to frost in winter. It contains many areas which are ideal for growing early spring crops and is the home of tomato production, particularly for processing. In this warmer climate, on soils which are mainly reddish sandy loams, vegetables can be planted earlier and mature earlier than in most of the southern districts.

Prior to the season 1942-43, statistics dealing with vegetable growing were collected only from those market gardeners who cropped an area of 1 acre or more. Only the surface area employed for vegetable growing was tabulated and, as a consequence, due to double cropping, the actual area utilized was understated. Furthermore, vegetables grown between trees and vines in orchards and vineyards were not recorded.

From the season 1942-43, however, particulars were obtained of all vegetables grown on areas of 1 acre and upwards, including those grown in orchards and vineyards, and allowance was made for double cropping. These changes in practice therefore invalidate any comparison with previous years.

Details of the area, production, and gross value of vegetables are given in the table below for all the more important types, except potatoes and onions which are shown under separate heading on pages 513-514.

### VICTORIA—VEGETABLES FOR HUMAN CONSUMPTION, 1959-60

Type	Area Sown	Production	Gross Value
	acres	tons	£'000
Carrots .. .. .	1,857	21,373	1,229
Parsnips .. .. .	789	7,736	577
Beetroot .. .. .	576	5,799	309
Tomatoes .. .. .	5,216	65,457	1,877
French Beans .. .. .	2,400	3,451	397
Green Peas—Sold in Pod .. .. .	6,891	8,095	729
" —Canning .. .. .	3,690	3,271	128
Cabbages .. .. .	1,963	22,369	472
Cauliflowers .. .. .	3,085	36,023	1,014
Brussels Sprouts .. .. .	779	2,397	293
Lettuce .. .. .	2,522	8,317	1,186
Pumpkins .. .. .	2,017	11,254	307
Other Vegetables .. .. .	3,426	14,163	824
Total .. .. .	35,211	209,705	9,342

#### Minor Crops

There are other crops cultivated in Victoria in addition to those enumerated on page 498. The most important of these are nursery products, cut flowers, mustard, sunflowers, agricultural seeds, and hops.

### Pastoral and Dairying

#### Progress of Stock Breeding in Victoria

The first great development in Victoria, or as it was then known, the district of Port Phillip, was the pastoral interest. Millions of acres of lightly timbered land lay at the feet of the newcomers, and the readiest way to wealth was evidently by the division of the land into runs and the depasturing of sheep and cattle. Settlers and stock, at first from Tasmania and eventually from New South Wales, came from the very first year of discovery.

According to early statistical records, there were 26,000 sheep, 100 cattle, and 57 horses in the colony on the 25th May, 1836. On the 1st January, 1841, as a result of five years of livestock importation and breeding, there were 782,283 sheep, 50,837 cattle and 2,372 horses. By 1st January, 1851, the livestock population had increased to 6,032,783 sheep, 378,806 cattle, 21,219 horses and 9,260 pigs.

The following table shows the number of livestock in Victoria at decennial intervals since 1861 and for each of the five years 1956 to 1960:—

**VICTORIA—LIVESTOCK**  
(’000)

Year	Horses (Including Foals)	Cattle *		Sheep	Pigs
		Dairy	Beef		
1861 at 1st March ..	77	722		5,781	61
1871 " " ..	167	721		10,762	131
1881 " " ..	276	1,286		10,360	242
1891 " " ..	436	1,783		12,693	282
1901 " " ..	392	1,602		10,842	350
1911 " " ..	472	1,548		12,883	333
1921 " " ..	488	1,575		12,171	175
1931 " " ..	380	1,430		16,478	281
1941 " " ..	318	1,922		20,412	398
1951 at 31st March ..	186	1,489	727	20,012	237
1956 " " ..	119	1,663	954	23,343	227
1957 " " ..	108	1,721	1,044	25,831	258
1958 " " ..	98	1,724	1,026	27,090	279
1959 " " ..	91	1,653	998	26,925	253
1960 " " ..	81	1,678	946	26,597	285

\* Separate figures for beef and dairy cattle are not available for years prior to 1942-43.

A table showing the sizes of holdings and the numbers of livestock thereon as at March, 1956, appears on page 492.

The following table contains particulars of livestock in each statistical district of the State at 31st March, 1960:—

**VICTORIA—DISTRIBUTION OF LIVESTOCK, 1960**  
(’000)

Particulars	Statistical District								Total
	Central	North-Central	West-ern	Wim-mera	Mallee	North-ern	North-East-ern	Gipps-land	
Horses .. ..	24	4	16	5	3	11	8	10	81
Dairy Cattle—									
Cows in Milk or Dry	195	23	252	19	17	192	95	305	1,098
Springing Heifers ..	13	3	23	2	2	17	15	23	98
Other Heifers for Dairying ..	30	5	43	3	3	35	13	44	176
Calves, under 1 Year—									
Heifer .. ..	37	6	50	5	4	51	23	65	241
Other .. ..	4	1	5	2	1	5	3	3	24
Bulls, 1 Year and over	7	1	10	2	1	7	3	10	41
Total Dairy Cattle	286	39	383	33	28	307	152	450	1,678

VICTORIA—DISTRIBUTION OF LIVESTOCK, 1960—*continued*  
(‘000)

Particulars	Statistical District								Total
	Central	North-Central	West-ern	Wim-mera	Mallee	North-ern	North-East-ern	Gipps-land	
Beef Cattle—									
Cows .. ..	74	25	132	9	5	40	87	78	450
Calves, under 1 Year	40	17	71	7	4	34	58	53	284
Bulls, 1 Year and over	3	1	6	1	1	2	4	3	21
Other .. ..	31	12	37	3	3	21	38	46	191
Total Beef Cattle ..	148	55	246	20	13	97	187	180	946
Total All Cattle ..	434	94	629	53	41	404	339	630	2,624
Pigs .. ..	55	8	31	9	13	81	33	54	284
Sheep .. ..	2,552	2,060	8,976	3,870	1,529	4,038	1,903	1,669	26,597

### *Dairying Industry*

Though faced with the long-term prospect of expanding local markets, both for liquid milk and for dairy products, as the population of this country increases, the Australian dairying industry at present experiences varying fortunes according to the demand in overseas markets and the supply from other countries. In Victoria, however, the demand for good dairying land remains keen.

There is some tendency to sustain competitive land prices by increasing the output of milk or butterfat. Until the middle of the 1930's, 30-cow hand-milked herds were common, and three milkers were usually needed to milk a herd of this size. In the next decade the introduction of milking machines made it possible for two people to milk 30 to 40 cows. In the late 1940's, dairy farmers in large numbers gave up hand-stripping, after machines and one man could then comfortably milk 40 to 45 cows. Doubling up of machine units also made the task easier. In the past three years the introduction of the herringbone-type milking shed has made it possible for one man to milk up to 60 cows and for two men to milk 80 or more.

Pasture improvement has been the basis of the increased carrying capacity of many farms. In some places potash fertilizers and trace elements have played their part; in others the use of more superphosphate and better management and grazing of the pastures have sufficed.

With this increase of production has come a greater need to produce or conserve feed to be used at times when pasture production is slack. This is especially true on farms which supply market milk, as they must fulfil a contract every day of the year. Silage making on dairy farms has increased eightfold in recent years, and is still being taken up by more farmers. More crops are grown to fill the summer and winter feed gaps, and some have resorted to water harvesting and spray irrigation to provide green pasture in summer.

Light tractors with hydraulic three-point linkage have brought with them the tendency to rely on machinery in preference to employing labour.

Advisory services given to dairy farmers by the Department of Agriculture through dairy supervisors, the bi-monthly "Dairyfarming Digest", and other media, have made them more conscious of their need to give thought to every side of farm management. More cows are under test than ever before in Victoria. Many artificial breeding groups have been formed, and a co-operative society formed to conduct the bull centre has been freely supported. There has been increased interest in milking methods, milking machine efficiency, and in the use of new and improved dairy detergents.

Refrigeration of milk on the farm and its collection from bulk vats by road tanker have been proved practicable in some districts, and these practices are now being adopted in other areas.

Local markets are changing. More and more country towns are being provided with supplies of pasteurized bottled milk, and the Milk Board has added the Latrobe Valley and Goulburn Valley to the area under its jurisdiction. In manufacturing, the trend is towards large versatile factories equipped to change from one type of product to another, according to market prospects. There is a growing local market for various types of cheeses hitherto little known in this country, and cheddar cheese is now exported in blocks wrapped in plastic film. These have several advantages over the traditional cylindrical bandaged cheeses.

The industry levy to establish a fund for research and promotion should benefit the dairying industry greatly in the coming years.

Victoria is the principal milk-producing State, and in 1959-60 the Victorian output (603 mill. gall.) represented 43 per cent. of the Australian production.

The following table shows the numbers of cow-keepers and cows, the estimated total production of milk and the gross value of dairy produce for each of the last five years :—

#### VICTORIA—DAIRYING

At 31st March—	Number of Cow-keepers	Number of Dairy Cows*	Estimated Total Production of Milk for All Purposes (Year Ended 30th June)	Gross Value of Dairy Produce†
		'000	'000 gall.	£'000
1956 .. ..	49,693	1,172	577,475	70,094
1957 .. ..	49,153	1,220	587,199	66,330
1958 .. ..	48,451	1,235	565,439	65,431
1959 .. ..	‡	1,204	582,948	65,264
1960 .. ..	44,124	1,098	603,127	70,471

\* Includes cows (in milk and dry) and springing heifers.

† Includes subsidy.

‡ Not available.



The quantities of butter, cheese, condensed and powdered full-cream milk and casein produced during the last five years were as follows :—

**VICTORIA—BUTTER, CHEESE, CONDENSED AND POWDERED MILK, AND CASEIN MADE**

(‘000 lb.)

Year Ended 30th June—			Butter*	Cheese*	Condensed Milk	Powdered Full-Cream Milk	Casein
1956	..	..	204,632	31,383	90,766	24,859	19,128
1957	..	..	200,080	46,068	100,178	24,476	16,345
1958	..	..	194,596	33,294	96,810	24,854	22,421
1959	..	..	198,652	39,140	87,288	24,585	23,528
1960	..	..	201,394	43,152	99,063	23,822	20,086

\* Including that made on farms.

The following table shows the number of dairy herds in Victoria, grouped, according to size for each of the four years, 1956 to 1958 and 1960.

Details for 1959 are not available.

**VICTORIA—DAIRY HERDS, CONTAINING FIVE COWS OR MORE, GROUPED ACCORDING TO SIZE**

At 31st March—	Number of Herds—							
	5 to 9 Cows	10 to 14 Cows	15 to 19 Cows	20 to 29 Cows	30 to 49 Cows	50 to 99 Cows	100 Cows and over	Total
1956.. ..	6,077	2,817	1,928	3,466	6,892	7,528	1,213	29,921
1957.. ..	6,183	2,916	1,953	3,448	6,893	8,042	1,310	30,745
1958 ..	5,889	2,801	1,860	3,215	6,402	8,406	1,464	30,037
1960.. ..	4,304	2,262	1,682	2,971	6,155	8,488	1,397	27,259

The numbers of farmers with less than five cows were:—19,772 in 1956, 18,408 in 1957, 18,414 in 1958, and 16,865 in 1960. These numbers were excluded from the above table as the groups were considered too small to be classed as dairy herds.

*Eradication of Tuberculosis*

Tuberculosis has been present in dairy cattle in Victoria since the dairy industry was first established. As long ago as 1884, it was recognized that the disease was a serious cause of loss to the cattle industry as well as being a likely source of spread of infection to the human population of the State.

Under the Milk and Dairy Supervision Act which was introduced in 1905, inspectors were empowered to take action where cattle were found suffering from this disease, and in 1924 a Compensation Fund was established through which owners of cattle which had been destroyed because of tuberculosis could be compensated for their loss. Regular inspection of herds and slaughter of cattle infected by tuberculosis, combined with tuberculin testing of herds, was carried out by the veterinary staff of the Department and considerably reduced the incidence of this disease in Victorian dairy herds.

Following the lead of progressive dairying countries such as Denmark and the United States of America, action was taken in 1937 to step up the amount of tuberculin testing being carried out in Victoria and all cattle supplying milk to the Metropolitan Area of Melbourne were thus tested. This did not of itself lead to the eradication of tuberculosis from any particular area, but it reduced considerably the number of infected herds in the State.

Meanwhile, in the United Kingdom, a tuberculosis eradication programme on an area basis had been developed and great progress was being made. In 1958, an area eradication plan based on that of the United Kingdom was put into effect in this State. Under this plan, all the dairy cattle in two proclaimed areas in Victoria will be subjected to tuberculin tests over a period of six years. At the end of that time it is expected that the disease will have been eradicated from the cattle in those areas and it will then be possible to proceed with testing in adjoining areas.

The actual testing is being carried out by veterinary practitioners resident in the areas and the cost of this testing is being borne by the Government. Before testing commenced in these areas, it was estimated that 1 per cent. of the cattle would give a positive reaction. To the end of April, 1961, 16,512 herds with 326,829 cattle have been tested with a reactor rate of 0.5 per cent., which is a little below the estimated figure. As well as paying the cost of testing, the Government makes a contribution of 40 per cent. of the compensation payable to the owners of cattle which are slaughtered because of tuberculosis. At the present time the annual cost to the State of the testing actually carried out is £25,000 and the contribution to the Compensation Fund for all cases of tuberculosis of cattle is £28,018.

### *Pig Industry*

Between 20,000 and 25,000 tons of pig carcasses are produced in Victoria in a year. Most of them are consumed here. Only a few are exported to other countries. About half the pig meat is used as fresh pork or for sausages and other meat products. The other half is made into bacon and ham, some of which is canned. Victoria is a net importer of pig meat.

Farmers sell pigs to meat works either directly or through public auction sales. There are adequate facilities for selling pigs in most districts. Pigs are sold for meat as porkers about 4 to 5 months old and yielding dressed carcasses of 60 lb. to 100 lb.; as baconers, 5 to 7 months old and with dressed carcasses of 120 lb. to 160 lb., or as backfatters yielding carcasses of 200 lb. to 500 lb. after having been discarded from the breeding herd.

Most of the pigs in Victoria are in small herds on dairy farms and mixed farms. The sizes of the herds are related to the quantities of separated milk and other food by-products of the farms. A food supply which is adequate in quality, quantity and cost is the basis of economic pig production. There are few specialized pig farms in Victoria. Their main food supplies are buttermilk and whey from dairy produce factories, and food refuse from eating places and food factories.

Pig prices vary and farmers have practically no control over them. Prices are usually higher in spring when there are fewer pigs in the market, than in autumn when there are more pigs. Seasonal fluctuation in the quantities of milk available for pig feeding is the usual cause of fluctuating supplies of pigs to markets.

Another cause of fluctuation in production and prices of pigs, not so regular but sometimes big enough to cancel the seasonal one, is due to big increases or decreases in pig breeding. As three-quarters of the pig breeders in Victoria have an average of less than three breeding sows each, an addition of one more sow when prices are favourable results in a substantial overall increase.

The number of pigs in Victoria at 31st March, 1960, was 284,505. About 78 per cent. of these are held in the Central, Western, Northern, and Gippsland districts which are so largely devoted to dairying. The following table shows classifications (in statistical districts) of pigs, together with the numbers of pig-keepers :—

#### VICTORIA—PIGS AND PIG-KEEPERS, 31ST MARCH, 1960

Statistical District	Boars	Breeding Sows	All Other	Total Pigs	Pig Owners
Central .. ..	1,009	7,965	46,159	55,133	1,435
North-Central ..	276	1,525	6,285	8,086	472
Western .. ..	805	4,967	24,721	30,493	1,398
Wimmera .. ..	317	1,715	7,418	9,450	885
Mallee .. ..	385	2,198	10,840	13,423	865
Northern .. ..	1,935	13,297	65,881	81,113	2,243
North-Eastern ..	949	5,507	26,326	32,782	1,258
Gippsland .. ..	1,441	8,942	43,642	54,025	1,918
Total .. ..	7,117	46,116	231,272	284,505	10,474*

\* Of this number 2,614 had herds of under 5 pigs, 1,514 herds of 5 and under 10, 1,991 herds of 10 and under 20, and 4,355 herds of 20 pigs and over.

The following table shows the number of dairy herds (in size groups) separated into those where pigs are held, and those where no pigs are held. The sizes of pig herds are also shown.

**VICTORIA—PIG-KEEPING IN CONJUNCTION WITH  
DAIRYING : NUMBER OF HOLDINGS AT MARCH, 1956**

Size of Dairy Cattle Herd (Numbers)	Size of Pig Herd (Numbers)								Holdings with Pigs	Holdings with No Pigs	Holdings with Dairy Cattle
	1-4	5-9	10-14	15-19	20-29	30-49	50-99	100 and over			
1-4 ..	529	76	54	34	26	40	30	26	815	14,111	14,926
5-9 ..	573	100	77	23	43	27	20	18	881	6,576	7,457
10-14 ..	349	112	49	27	40	20	9	13	619	2,934	3,553
15-19 ..	222	86	58	15	30	17	11	2	441	1,735	2,176
20-29 ..	363	198	110	62	57	29	16	7	842	2,523	3,365
30-49 ..	473	416	314	196	232	109	39	3	1,782	3,792	5,574
50-99 ..	357	529	580	430	723	617	208	36	3,480	6,541	10,021
100 and over ..	53	85	110	108	225	367	249	58	1,255	2,176	3,431
Total ..	2,919	1,602	1,352	895	1,376	1,226	582	163	10,115	40,388	50,503

### *Sheep Industry*

The world renowned Merino is the most common sheep breed in Victoria. In 1959, the sheep population of this State comprised Merinos 42·4 per cent., Corriedales 13·5 per cent., Polwarths 4·4 per cent., Comebacks 12·7 per cent., Crossbreds 22·2 per cent., and British breeds 4·8 per cent., consisting mainly of Border Leicesters, Dorset Horns, Romneys, and Southdowns.

The Merino is the main wool producing breed and it also plays an important role in the breeding of Comeback and Crossbred sheep. These are produced mainly by crossing the Merinos with Corriedales, Polwarths, and Border Leicesters.

The pure British breeds are mostly run in small stud flocks which produce rams for cross breeding in fat lamb production.

The two main sheep enterprises are wool production and fat lamb production.

Wool is produced mainly in the Western and Southern Wimmera districts where both rainfall and topography are ideal for the development of improved pastures. The majority of these flocks breed their own replacements and consist of about one-third breeding ewes and two-thirds wethers which are the best wool producing sheep.

Nearly half of Victoria's total wool production comes from these two areas and the wools are much sought after by oversea buyers because of their high yield, good colour, soft handling, and freedom from dust and seed.

On the other hand, most of the fat lambs are produced in the Wimmera, Mallee, and Northern districts where fat lamb production has become complementary to cereal production. These lambs are

produced mainly from strong crossbred ewes which graze on clover and medic pastures—an important part of the clover ley system of crop rotation. The lambs are usually dropped in the autumn and fattened on the late winter and early spring crop feed. The majority are cashed from August to November. Wool from these areas is poor in quality and contains more seed and vegetable fault than that produced in the higher rainfall districts.

Fat lamb production is also carried on in the South Western, Central and Gippsland districts, where rainfall and country favour the development of highly improved pastures which carry well into the summer.

These lambs are usually dropped later than in the cereal growing districts and after fattening on spring and summer pastures the majority are cashed in local markets from November to April.

The wools produced in these areas are mainly fine and strong crossbred types, which have good style and no dust or vegetable fault.

A description of the types and qualities of wool in the wool growing districts of the State appears on pages 534 to 536.

The numbers of sheep in Victoria in various years since 1861 are shown in table on page 522. The distribution of all live stock is shown in table on pages 522-523.

Factors such as seasonal conditions, prices of wool, mutton, and lamb and, to a less degree, wheat, affect the number of sheep in the State in any given year. In an adverse season flocks may be reduced by mortality due to lack of fodder or water, by the increase in the slaughtering of fat stock or by the decrease in lambing. Decreased imports from other States are another factor. In addition to the seasonal movements of sheep from New South Wales and South Australia for agistment, there is a regular importation of sheep from those States for slaughtering purposes.

### Lambing

Climatic conditions also play a large part in determining the proportion of lambs dropped to ewes mated, and thus the natural increase from season to season may vary considerably. The following table shows the numbers of ewes mated or intended to be mated and lambs dropped, in each of the five seasons 1956 to 1960:—

#### VICTORIA—LAMBING

Season				Ewes Intended for Mating	Ewes Actually Mated	Lambs Marked	Proportion of Lambs Marked to Ewes Mated*
				'000	'000	'000	%
1956	..	..	..	9,984	†	8,670	87
1957	..	..	..	11,204	†	9,496	85
1958	..	..	..	10,794	10,173	8,455	83
1959	..	..	..	11,403	11,232	9,357	83
1960	..	..	..	10,837	‡	‡	‡

\* Prior to 1958 this proportion was based on farmers' intentions at the beginning of the season.

† Not available.

‡ Not yet available.

*Sheep and Lambs in Statistical Districts*

The following tables set out the numbers of rams, ewes, wethers and lambs depastured in each Statistical District of the State at 31st March, 1960, and the numbers of ewes mated classified according to whether the progeny is intended for wool or for fat lamb production :—

**VICTORIA—RAMS, EWES, ETC., IN EACH STATISTICAL  
DISTRICT AT 31ST MARCH, 1960**  
(‘000)

Particulars	Statistical District								Total
	Central	North-Central	Western	Wimmera	Mallee	North-ern	North-Eastern	Gipps-land	
Rams ..	30	21	102	41	22	57	24	17	314
Breeding Ewes*	1,089	820	3,588	1,543	897	2,275	963	719	11,894
Other Ewes ..	122	71	543	203	19	85	58	72	1,173
Wethers ..	814	771	2,780	1,249	211	714	506	498	7,543
Lambs ..	497	377	1,963	834	380	907	352	363	5,673
Total Sheep and Lambs	2,552	2,060	8,976	3,870	1,529	4,038	1,903	1,669	26,597

\* Includes breeding ewes not mated (1,056,798 at 31st March, 1960).

**VICTORIA—LAMBING, 1959 SEASON**

Particulars	Statistical District								Total
	Central	North-Central	Western	Wimmera	Mallee	North-ern	North-Eastern	Gipps-land	
Ewes Mated '000 ..	1,021	785	3,150	1,491	956	2,263	934	632	11,232
Lambs Marked '000 ..	899	651	2,563	1,199	758	1,957	781	549	9,357
Percentage ..	88	83	81	80	79	86	84	87	83

**VICTORIA—LAMBING FORECAST, 1960 SEASON**  
(As Advised by Farmers at 31st March, 1960)  
(‘000)

Breed of Rams Used	Ewes Mated or Intended to be Mated (For Lambing during 1960 Season)								Total
	Statistical District								
	Central	North- Central	Western	Wim- mera	Mallee	North- ern	North- Eastern	Gipps- land	
Merino ..	144	247	1,445	806	136	291	187	175	3,431
Corriedale .. or Polwarth ..	198	111	903	173	88	222	121	79	1,895
Shortwool ..	557	288	453	194	343	1,122	429	296	3,682
Longwool ..	102	104	336	160	303	546	169	109	1,829
Breeds ..									
Total ..	1,001	750	3,137	1,333	870	2,181	906	659	10,837

*Breeds of Sheep*

The method of collecting particulars of breeds was changed considerably in 1950 and, apart from Merinos, all comparison with breeds of previous years is nullified. Merino Comebacks were

previously collected as a whole, irrespective of whether they were fine or coarse. The 1950 collection made provision for segregating those "finer than half-bred", while those not up to that standard were included with other crossbreds.

Similarly, it cannot be determined if any increase in the numbers of other Pure Breeds (British and Australasian) has occurred as another very important change in method was the substitution of the category "Other Recognized Breeds" in place of the former category "Other Pure Breeds". Other Pure Breeds in 1947 numbered 1,407,349, whereas in 1953 Other Recognized Breeds numbered 5,220,326. Crossbreds, which numbered 6,923,603 in 1947, dropped to 5,625,483 in 1953 notwithstanding the inclusion of half-bred and coarser Merino Comebacks.

Australasian breeds are the Polwarth and the Corriedale. The Polwarth is a Merino-Lincoln cross (approximately three-quarters Merino and one-quarter Lincoln). It was evolved to meet the conditions of light wool-growing localities found to be too wet and cold for the pure Merino. The Corriedale was evolved by heavily culling the progeny of Lincoln rams and Merino ewes and by judicious mating over several years. The Corriedale is a dual purpose sheep, being favoured by many breeders both for lamb raising and for wool production.

The following table shows the breeds of sheep and rams in Victoria (by statistical districts) at the 31st March, 1959 and 1960 respectively :—

**VICTORIA—BREEDS OF SHEEP, 31ST MARCH, 1959**  
(’000)

Statistical District	Merino	Other Recognized Breeds	Merino Comeback (Finer than Half-bred)	Crossbred (Including Half-bred and Coarser Comebacks)	Total
Central .. ..	527	787	306	877	2,497
North-Central .. ..	920	390	258	436	2,004
Western .. ..	4,130	2,747	1,158	813	8,848
Wimmera .. ..	3,052	505	211	416	4,184
Mallee .. ..	636	238	293	536	1,703
Northern .. ..	1,124	792	575	1,678	4,169
North-Eastern .. ..	524	392	311	698	1,925
Gippsland .. ..	496	268	311	520	1,595
Total .. ..	11,409	6,119	3,423	5,974	26,925

**VICTORIA—BREEDS OF RAMS, 31ST MARCH, 1960**

Statistical District	Merino	Corriedale	Polwarth	Border Leicester	Dorset Horn	South-down	Other	Total
Central .. ..	4,419	4,045	1,938	1,523	9,363	4,273	4,382	29,943
North-Central .. ..	7,366	2,738	383	1,871	4,348	2,205	2,147	21,058
Western .. ..	51,304	18,214	10,243	1,522	7,301	3,368	10,345	102,297
Wimmera .. ..	25,476	5,009	393	3,217	5,044	266	1,977	41,382
Mallee .. ..	3,984	2,188	129	6,962	7,112	94	845	21,314
Northern .. ..	8,827	5,427	677	12,702	21,787	4,371	3,469	57,260
North-Eastern .. ..	4,528	2,357	850	3,580	6,814	2,306	3,804	24,239
Gippsland .. ..	4,436	1,550	327	1,005	4,140	2,238	3,096	16,792
Total .. ..	110,340	41,528	14,940	32,382	65,909	19,121	30,065	314,285

*Production of Wool*

Statistics of wool production are obtained direct from the growers, from fellmongeries and, for wool exported on skins, from the Department of Customs and Excise.

## VICTORIA—SHEEP AND LAMBS SHORN, SEASON 1959–60

Statistical District	Shorn		Wool Clipped (Including Crutchings)		Average	
	Sheep	Lambs	Sheep's	Lamb's	Per Sheep	Per Lamb
	'000		'000 lb.		lb.	
Central ..	2,193	634	21,873	1,797	9·97	2·84
North-Central ..	1,996	476	20,244	1,248	10·14	2·62
Western ..	8,712	2,159	86,083	5,660	9·88	2·62
Wimmera ..	3,961	1,005	42,286	2,811	10·68	2·80
Mallee ..	1,372	458	14,596	1,289	10·63	2·81
Northern ..	3,863	1,169	39,053	3,373	10·11	2·89
North-Eastern ..	1,861	449	17,941	1,168	9·64	2·60
Gippsland ..	1,435	473	13,265	1,275	9·25	2·69
Total ..	25,393	6,823	255,341	18,621	10·06	2·73

## VICTORIA—SHEEP SHORN AND WOOL CLIPPED

Season	Shorn		Wool Clipped (Including Crutchings)		Average	
	Sheep	Lambs	Sheep's	Lamb's	Per Sheep	Per Lamb
	'000		'000 lb.		lb.	
1955–56 ..	21,498	5,329	223,736	14,811	10·41	2·78
1956–57 ..	22,674	6,556	249,945	20,421	11·02	3·12
1957–58 ..	24,832	7,182	240,510	19,487	9·69	2·71
1958–59 ..	25,553	5,821	241,872	15,703	9·47	2·70
1959–60 ..	25,393	6,823	255,341	18,621	10·06	2·73

## VICTORIA—WOOL PRODUCTION AND VALUE

Season	Clip	Stripped from and Exported on Skins, &c. (Greasy)	Total Quantity (Greasy)	Gross Value	Average Price Per lb.
	'000 lb.			£'000	d.
1955–56 ..	238,547	34,810	273,357	69,020	60·60
1956–57 ..	270,366	29,206	299,572	97,659	78·24
1957–58 ..	259,997	36,493	296,490	76,255	61·73
1958–59 ..	257,575	41,269	298,844	59,471	47·76
1959–60 ..	273,961	49,265	323,226	75,814	56·29



### *Wool Marketing System*

Samples of Australian wool, taken to England by McArthur and by Marsden early in the nineteenth century, aroused considerable interest and in 1808 the first commercial consignment of one bale was sold in London. The years following saw regular sales there, the wool being consigned by the grower himself or by speculative or general merchants. However, the round journey of the wool out and the cash home resulted in a long period of uncertainty.

The present system of wool marketing has been built up over more than a century by the efforts of many able and energetic leaders, notably Thomas Sutcliffe Mort who prompted the first Australian auctions held at Sydney in 1843, and Richard Goldsborough who started the sale of Victorian wool and produce in Melbourne in 1848. Geelong, the third Australian centre, was established in 1857.

On these foundations has been built a marketing system probably unique in world commerce, where a product is sold, in the presence of its grower, to the highest bidder amongst manufacturers and their agents from all over the world. Practically the whole of the Australian clip is sold under this system of local realization, which requires the provision of facilities for receiving, storing and showing the wool, and a closely integrated programme of orderly offering. Each year estimates are made of the quantity of wool available for auction, and the Australian total is divided between Northern, Southern, and Western centres, which each have their resident buyers.

The Commonwealth annual production of almost 5 mill. bales is marketed under the auction system. It is disposed of in the various selling centres of all State capitals and a number of provincial cities. The sales programme in all centres is arranged by the National Council of Wool Selling Brokers of Australia, after consultation with buyers. Later, State allocation committees attend to details such as individual sale dates and the quantities to be offered in each centre at the various sales.

Victorian buyers cover, as well as Melbourne, Geelong, and Ballarat, auctions at Albury, Adelaide, Hobart, and Launceston, and allowing for this, a sales programme for the complete season is prepared. This recognizes the buyer's problems of transport and accommodation and ensures that supplies are evenly spread, not only in quantity, but in type and quality, so that there is a representative selection to meet the varied demand. Thus, by controlling the amount of wool offered, an orderly marketing system is maintained.

### *Auction System*

Under the auction system wools are displayed on the show floors of woolbrokers' stores, equipped with sawtooth roofs, giving clear, even lighting. This presentation of the wool under conditions which promote the interest of the grower, and at the same time retain the confidence of the buyer is the responsibility of the selling broker, and involves strict and thorough attention to detail.

On arrival at the store, each bale is weighed by a sworn weigher, and the weight, brand, and description is marked on the head. The wool is stacked to await its turn of offering, which occurs in rotation according to date of arrival. When the wool is due for sale, a representative portion is taken to the show floor, and there the brokers' wool experts inspect it and arrange it into lots. It is also inspected and valued by buyers, who represent oversea and local wool users. Should any lot need additional attention, it is sent to the required department for treatment. The operation of reclassing, by which skilled classers grade a grower's consignment according to quality, length, colour, &c., and the bulk classing department, where large lots are made from various owners' wools, are important services which the broker provides.

The whole of the offering in each catalogue is valued by the brokers' experts, who keep in the closest touch with the market and its movements. When the auction begins, the auctioneer is accompanied by the wool expert who is able to protect the growers' interests. In this way, the grower exercises control up to the last moment, and may withdraw any lot if the bids do not conform to his ideas of value.

The Wool Exchanges are the hub on which the big business of wool revolves. Bidding is vocal, buyers advancing their prices by  $\frac{1}{4}$ d.,  $\frac{1}{2}$ d., or even more until limits are reached and the lot falls to the bid of the last caller. The sale is conducted with great rapidity, and in approximately two hours 850 lots will possibly have been sold, as on a normal market it takes on an average only eight seconds to dispose of an individual lot or line of wool. Although about 5 mill. bales are disposed of in the various centres of the Commonwealth during the course of a season, with proceeds representing millions of pounds, disputes are few. This is a remarkable and gratifying feature of the auctions, which it will be seen are based on the confidence, goodwill, and mutual trust of all parties.

At the fall of the auctioneer's hammer, the ownership of the lot passes from the woolgrower to the woolbuyer, but the woolbroker still performs some service by storing it in his warehouse until it is required by the buyer. If the wool is to go overseas it is dumped, or compressed tightly and held by metal bands. The broker then has it delivered to the ship, or the local mill, and at that point marketing ends, and wool enters the process of manufacture.

### *Wool-growing Districts*

In the following sections, the main wool-growing districts of the State are described with their main characteristics :—

#### *Mallee*

The country, being dry, is generally extremely dusty and this is reflected in the wools. Many types are grown. The wools, however, are usually in dry order, of serviceable staple and often yield better than appearance indicates. More often than not, the wools carry a considerable percentage of dust, particularly on the backs, while at times some trefoil burr is also noticeable. The small mixed consignments from these areas lend themselves particularly to the bulk classing system. Wools from the western side extending through

Murrayville to the South Australian Mallee show less dust and are normally deeper grown than those east and north, but as a rule are better nourished. Mallees are usually of good average and average standard, and are early offering consignments.

#### *Goulburn Valley*

Comebacks, fine to medium Crossbreds, principally of good and good average style, are produced in these divisions. The products carry a certain amount of extraneous matter in the shape of dust and trefoil burr, especially from the irrigation areas. On the rich river flats, fat-lamb raising is carried out extensively, and there is a multiplicity of types of wool (both sheep's and lamb's) seen from these areas on the Melbourne show floors throughout the course of a season. Early and mid season are the offering periods.

#### *Wimmera*

Wimmera pastures are extensive in nature, resulting in diversified types of wool, varying from good average style Merinos and Crossbreds (disclosing dust and burr) grown on the northern side to distinctly better class wools from the central and western divisions, which enter the good-to-super and occasionally the super range. Central Wimmera wools are lighter in dust and vegetable fault than those in the north, and are usually of serviceable staple, style, and bulk. The best wools, however, are drawn from the areas adjoining the Western District, to which in many respects they are allied so far as quality, cleanliness, and freedom from fault are concerned, although lacking perhaps quite their bloom and brilliance. Northern Wimmera wools are early offering, others mid and late season.

#### *Western District*

Some of the most attractive Merino, Comeback, and Crossbred wools in the world are produced from these renowned areas and, whether the flocks are large or small, comparatively high figures are obtained at auction for the product. A percentage is of super to extra-super standard, denoting breeding and perfect conditions, both in climate and pasture, for wool production. Associated with these wools is that particularly excellent bloom, rarely obtainable elsewhere. For style, depth of staple, high clean scoured yield and their practically free nature, these wools are supreme and bear a high reputation the world over. Other productions are of good to super and good standard. Offering periods are mid and late season.

#### *North-Central Victoria*

This embraces areas both north and south of the Dividing Range. In the southern section, the climate is rather cold and wet, and is, generally speaking, more suitable to Comebacks and Crossbreds, but it has been proved that both fine and medium wool Merino types can also be produced with success. The wools are attractive, free, and of super and good-to-super types, but generally are not so light in condition or as stylish as those produced in the Western District. Amongst the smaller growers in the colder areas, the Polwarth, with its deeper staple, is in demand, while the Corriedale is also favoured. Those from the northern section show light dust and fault. They are mid and late season offering.

*North-East Victoria*

These wool clips usually come to market in attractive order, the many Comebacks and Crossbreds produced—especially those on the tablelands and hill country to the east of the Hume Highway—being outstanding for their light condition and clean order. The wools are white, free, and mainly of good and good to super standard. They do not handle quite as well as Western District wools, but are of good staple and bulk and often hold advantages in yield owing to their water-washed condition. In certain seasons there could be some weather discolouration. They are mid season offering wools.

*Gippsland*

Merinos, Comebacks, and fine Crossbreds of good and good-to-super style are produced from Gippsland, the larger percentage being the two last-named. The greatest number of the sheep population is maintained in the area from Traralgon to Bairnsdale, extending to the Lake Country and Omeo Plateau. These wools are not so compact in arrangement as those from the west of the State, but are lofty and full handling. The great majority are free in nature with reasonably good bloom and sometimes distinguished by a slightly bluish tinge. Light trefoil, however, is apparent in the wools from the Tambo Valley area. Gippsland consignments are mid and late season offering.

*Central Victoria*

This division includes a rather comprehensive range of country, embracing a portion of Gippsland and the Mornington Peninsula on the east, to Geelong, Bacchus Marsh, Werribee, &c., on the west, and areas in and around Romsey to the north. Although some nice Merino clips come forward from Bacchus Marsh, supplies from the other districts consist mainly of Comebacks and Crossbreds of varying type. The majority, however, are in more or less free order, covering good average, good, and good-to-super types. They are mainly mid season offering.

*Wool Prices*

The following information about the average prices of wool per lb. which have prevailed during the last three seasons has been obtained from Victorian wool brokers. These prices are for wool auctioned in Victoria. Wool from the Riverina and the south-east of South Australia is included in Victorian sales.

## VICTORIA—PRICES OF WOOL

Class of Wool	Price Range per lb. in—		
	1957-58	1958-59	1959-60
<b>GREASY MERINO</b>			
Extra Super (Western District) ..	d. 100-160	d. 90-125	d. 100-330
Super .. .. .	80-145	65-115	80-180
Good .. .. .	70-105	55- 80	70-150
Average .. .. .	55- 85	45- 65	50- 70
Wasty and Inferior .. .. .	35- 75	25- 60	35- 60
Extra Super Lambs .. .. .	95-250	75-195	140-240
Super Lambs .. .. .	60-140	45-110	110-190
Good Lambs .. .. .	40-100	30- 90	50-125
Average Lambs .. .. .	30- 65	25- 50	40- 90
Inferior Lambs .. .. .	25- 45	20- 35	30- 45

VICTORIA—PRICES OF WOOL—*continued*

Class of Wool	Price Range per lb. in—		
	1957-58	1958-59	1959-60
<b>GREASY CROSSBRED</b>	<i>d.</i>	<i>d.</i>	<i>d.</i>
Extra Super Comebacks ..	85-100	65- 90	80-110
Super Comebacks .. ..	75- 90	60- 70	75- 85
Fine Crossbred .. ..	45- 85	35- 65	50- 80
Medium Crossbred .. ..	35- 70	25- 55	45- 75
Coarse Crossbred and Lincoln ..	30- 65	25- 50	35- 60
Super Fine Crossbred Lambs ..	50- 85	40- 65	70-120
Good Crossbred Lambs ..	40- 65	30- 50	50- 85
Coarse and Lincoln Lambs ..	35- 65	25- 50	35- 60
<b>RECORD PRICES FOR THE SEASON</b>			
Greasy Merino Fleece .. ..	195	225	350
„ Comeback Fleece .. ..	113½	92½	112
„ Merino Lambs .. ..	423	200	245
„ Comeback Lambs .. ..	122½	113	130

*Stock Slaughtered*

The following table shows the number of slaughtering establishments and details of the stock slaughtered in the State during each of the five years 1955-56 to 1959-60 :—

## VICTORIA—STOCK SLAUGHTERED

Particulars	Stock Slaughtered in Establishments and on Farms and Stations				
	Year Ended 30th June—				
	1956	1957	1958	1959	1960*
	'000				
Sheep .. ..	3,968	3,518	5,500	5,940	7,623
Lambs .. ..	3,892	3,521	4,123	4,573	4,888
Bulls and Bullocks .. ..	238	284	271	256	215
Cows .. ..	268	269	394	441	367
Young Cattle .. ..	135	141	180	173	199
Calves .. ..	383	445	559	527	497
Pigs .. ..	395	382	473	462	458
No.					
Number of Slaughter-houses .. ..	359	345	320	316	306

\* Average dressed weights per carcass during 1959-60 were : Sheep 44·41 lb. ; Lambs 33·17 lb. ; Bulls and Bullocks 611·28 lb. ; Cows 417·49 lb. ; Young Cattle 276·61 lb. ; Calves 50·98 lb. ; Pigs 114·32 lb.

*Frozen Mutton and Lamb Exported*

The importance of the mutton and lamb export trade to sheep owners is indicated by the export figures for the years 1955-56 to 1959-60 as shown in the table below :—

**FROZEN MUTTON AND LAMB EXPORTED FROM  
VICTORIAN PORTS**

Year Ended 30th June—	Mutton		Lamb	
	'000 lb.	£'000	'000 lb.	£'000
1956 .. .. .	21,434	1,293	50,450	4,756
1957 .. .. .	14,822	935	28,574	2,610
1958 .. .. .	24,694	1,335	35,193	3,227
1959 .. .. .	41,854	3,692	44,638	3,737
1960 .. .. .	47,512	3,203	29,440	2,036

**Honey Industry**

Victoria's hardwood forests each year provide an important contribution to the wealth of the State by virtue of timber production for various purposes. However, one little known facet of our forest productivity is the annual harvest of honey taken from many species of eucalyptus in all parts of the State. Today, Victoria ranks second among the States in its apicultural activities.

With an average registration of some 1,250 apiarists and some 300-400 large commercial operators, Victoria's honey production averages about 7 mill. lb. per annum. Colony yields are relatively good and range between 180 and 240 lb. per colony per annum.

Eucalyptus species provide the bulk of the honey crop—up to 95 per cent. of the total—with the balance made up of clover and one or two minor species of ground flora.

The industry is, of necessity, migratory, whole apiaries with the necessary plant being moved by road transport from one part of the State to another following the flowering of the eucalyptus species in the forests. Hives, trucks, and plant have been designed and modified to suit the requirements of mobility demanded by the industry.

Pollination of agricultural crops is a further aspect of the industry which has received considerable attention. Each year thousands of colonies are hired out to fruit and seed growers to ensure profitable sets of fruit and seed.

Marketing is the great problem of the industry. Violent fluctuations in the annual honey crop are, in the absence of any organized marketing arrangements, attended by similar fluctuations in the prices of produce and, in some cases, considerable carry-over from one season to the next.

Governmental interest in the industry is authorized by the *Bees Act* 1958 and extends to disease control, advisory services and research into problems of apiculture.

Prior to the season 1936, the statistics of honey and beeswax were based on returns received from apiarists who were permanent occupiers of holdings of 1 acre and upwards. As a consequence, production was understated because of the exclusion of (a) hives on areas of less than 1 acre, and (b) travelling beekeepers who were not occupiers of rural holdings. Commencing with the season 1935-36, all beekeepers were required to furnish returns. The collection was further revised in 1958 to exclude apiarists with less than five hives. Particulars relating to apiculture for the five years 1956-60 are given in the following table :—

### VICTORIA—BEE-HIVES, HONEY, AND BEESWAX

Season Ended 31st May—	Beekeepers*	Hives	Production		Gross Value	
			Honey	Beeswax	Honey	Beeswax
	No.	No.	lb.	lb.	£	£
1956 ..	1,268	104,122	7,010,387	78,482	438,149	25,507
1957 ..	1,341	101,736	8,215,350	89,749	590,478	28,888
1958 ..	1,086	104,265	5,884,381	67,431	429,069	20,721
1959 ..	1,145	100,953	7,624,037	85,743	532,094	24,383
1960 ..	1,217	104,767	9,660,937	113,526	599,480	29,091

\* Apiarists with 20 hives and over numbered 828 in 1956, 814 in 1957, 779 in 1958, 771 in 1959, and 818 in 1960.

## Non-Rural Industries

### Forestry

#### Forest Estate

The extent of Victoria's forest estate is shown in the section 'Alienation of Land' on page 472 of this volume and further information will be found on page 513 of the Victorian Year Book 1961.

#### Forests Output

The following table summarizes the total output of all species for the years under review :—

### VICTORIA—FORESTS OUTPUT ( '000 Cubic Feet)

Year Ended 30th June—				Sawn Timber*	Fuel Timber†	Pulpwood†	Miscel- laneous†
1957 .. .. .				23,905	15,223	7,024	4,823
1958 .. .. .				22,670	12,300	7,061	6,160
1959 .. .. .				23,843	10,790	7,410	4,430
1960 .. .. .				23,703	9,481	7,529	5,359

\* These figures are estimates of sawn timber obtained from the recorded volumes of logs cut.

† Volumes estimated from recorded quantities in various units (e.g., tons, cubits, lineal feet, &c.).

The continued steady decline in output of timber for fuel purposes indicates that this product, at least in the form in which it is being used at present, is losing ground in favour of substitutes. Having regard to this State's potential for power production from its enormous brown coal resources and the obviously increasing demand for wood for the cellulose and fibre industries, any expenditure on the sales promotion of wood as a fuel is of doubtful value.

The miscellaneous group in the preceding table includes such diverse items as telephone and electric supply poles, bridge piles and beams, fencing timbers, railway sleepers and mining timbers. So many factors, including temporary influences such as the recent introduction of full-length preservation of non-durable species of poles, fluctuations in market conditions for agricultural and pastoral produce, railway construction projects, &c., influence the demand for these items that output trends are obscured in the collective totals, but by and large the demand for wood products is being well sustained.

Traditionally, Victoria is not, and does not appear likely to be, an exporting State as far as wood products are concerned. It is more likely that the problem in the future will be meeting the ever-increasing home demand for all types of wood products except wood fuel.

#### *Softwood Output and Plantations*

The output of saw logs and pulpwood is summarized below :—

#### VICTORIA—OUTPUT OF SAW LOGS AND PULPWOOD (’000 Super. Ft.)

Year Ended 30th June—						Saw Logs and Peeling Logs (H.L.V.*)	Pulpwood (Equivalent H.L.V.*)
1956	..	..	..	..	..	20,092	9,892
1957	..	..	..	..	..	17,916	8,765
1958	..	..	..	..	..	17,736	6,627
1959	..	..	..	..	..	19,505	9,195
1960	..	..	..	..	..	22,319	10,763

\* Hoppus Log Volume. (See page 53 for definition.)

Continuous investigation is proceeding into the matter of accurate determinations of the maximum permissible annual cut from plantation areas.

Plantation areas were increased by the planting of 1,582 acres during the 1955–57 planting seasons. Following the liquidation of unproductive and burnt areas, total plantation acreages have been revised. The total net area of State softwood plantations at 30th June, 1960, was 49,798 acres, of which Monterey Pine (*Pinus radiata*) comprised 35,242 acres.



Privately owned softwood plantations continued to expand, the estimated total acreage at 30th June, 1960 being 55,600 acres.

The increased area has resulted mainly from the plantings of Australian Paper Manufacturers Limited which is endeavouring to meet an increasing demand for the long-fibred pulp produced from softwood timbers. At Dartmoor one of the largest sawmills in the State derives all its timber supply from private plantations which are managed on a sustained yield basis.

Private individuals continued to plant small areas of softwood as a long-term investment, and interest has been maintained by State schools in endowment plantations. Revenue from these latter areas, which now total some 1,800 acres, is available for the provision of school amenities.

### *Nurseries*

In addition to several small nurseries attached to plantations, the Forests Commission maintained four main distributing nurseries to provide trees for its own requirements, and for planting by State schools and farmers in the rural areas of the State.

During the years 1957 to 1959, the total number of trees distributed from these nurseries was 3,619,885, or an average of about 1.2 mill. trees per year.

### *Telecommunications*

The radio system consists of 33 fixed stations situated in major forest centres, 292 mobile and portable equipments in field use and a central station at Melbourne. Four automatic repeating stations and a mobile emergency station are provided to strengthen fire protection links during summer.

### *Fire Protection.*

Because of its climate, vegetation, and topography, Victoria is recognized as one of the most fire hazardous areas in the world. Many disastrous fires have occurred since the first were recorded in 1851; 71 lives were lost in fires in 1939 (see pages 494–495 of the Victorian Year Book 1938–39) and 51 in 1944.

The Forests Commission is responsible for the prevention and suppression of fires in all State Forests, National Parks, and all alienated lands within 1 mile of the boundaries of State Forests and National Parks (except in the Mallee, lands under control of the Melbourne and Metropolitan Board of Works, and some urban fire districts). This sphere of responsibility is designated the Fire Protected Area.

The territorial units for fire protection are the 53 forest districts in the State. During the summer, fires are detected by an interlocking system of fire towers and lookouts augmented by aerial patrols. Communication is by radio and telephone. Each forest district holds a supply of fire equipment and reserves are held in Melbourne and selected country centres. In the event of major fires, men and equipment are transferred between districts as required.

The Commission maintains communications and fire research sections, and operates a radio laboratory and an equipment workshop for the development of maintenance and repair of radios and fire equipment.

The main features of forest fire legislation are the prohibition of the lighting of fires in State Forests and National Parks except with the permission of the Authorities or in accordance with strict rules ; power for the Minister of Forests to prohibit the use of fire or to suspend forest operations in areas threatened with acute fire danger; and provision for the construction of dugouts, shelters and safety zones for the protection of human life within the fire protected area.

### Forest Fires

The causes of fires attended by Forests Commission personnel in the period 1956-57 to 1959-60 were as follows :—

#### VICTORIA—CAUSES OF FOREST FIRES

Cause	Number of Fires—			
	1956-57	1957-58	1958-59	1959-60
Grazing Interests .. ..	8	15	6	8
Landowners, Householders, &c. ..	158	139	103	141
Deliberate Lighting .. ..	66	76	62	91
Sportsmen, Campers, Tourists ..	36	76	33	58
Licencees and Forests Workers ..	15	25	18	19
Smokers .. ..	48	53	43	65
Lightning .. ..	24	29	59	100
Tractors, Cars, Trucks, Locomotives, Stationary Engines .. ..	56	42	39	33
Children .. ..	17	26	19	27
Sawmills .. ..	9	12	13	20
Miscellaneous Known Causes ..	40	80	39	107
Unknown Origin .. ..	87	54	31	59
Total .. ..	564	627	465	728

The areas of State forest burnt in the years 1956-57 to 1959-60 were—

1956-57 .. ..	115,268 acres
1957-58 .. ..	218,072* „
1958-59 .. ..	250,515* „
1959-60 .. ..	1,201,433* „

\* 1957-58 includes 156,644 acres of non-commercial forest area ; 1958-59 includes 106,624 acres of non-commercial forest area ; 1959-60 includes 1,065,850 acres of non-commercial forest area ; 27,850 acres of National Parks were burnt in 1960.

### Research

An outline of forestry research in Victoria is contained on pages 517-518 of the Victorian Year Book 1961.

## **Fisheries and Wildlife**

### *General*

Practical management of the fish and wildlife resources of Victoria is vested in the Department of Fisheries and Wildlife, which is responsible to the Chief Secretary for the administration of the Fisheries Act and the Game Acts, and for conservation, management, and research on native and introduced fishes, birds, and mammals.

The State Hatchery and Freshwater Fisheries Research Station is located at Snob's Creek, near Eildon. A wildlife research centre is in the process of being established at Lara, near Geelong. Fisheries and wildlife officers (enforcement staff) are stationed at sixteen country centres throughout the State, and three more country stations are proposed.

### *Marine Fisheries*

One role of the Department is the management of the marine fisheries and research into the biology and ecology of important species of marine fish. Fisheries and wildlife officers are stationed permanently at key points along the coast and patrol vessels are maintained at a number of centres.

Fish production in Victoria is low compared with that in other countries, but management and the development of new methods are directed to raising the catch. Specialized techniques, including the use of aerial spotting, echo sounders and radar for locating fish, and two-way radio have been introduced by the industry. A cannery has been established to utilize certain fish species for which the fresh fish market demand is limited.

The Department provides scientific advice on fisheries management, and technological information on the development of new gear and fishing methods.

The Commonwealth Fisheries Office and the Department of Primary Industry are associated with the Department in the management of the commercial fisheries through complementary legislation. The Commonwealth controls fishing in the extra-territorial waters, and certain State officers are empowered to police the Federal Act. There is close co-operation with the C.S.I.R.O. Division of Fisheries and Oceanography and there is an annual Interstate Federal Fisheries Conference.

### *Freshwater Fisheries*

Angling as a recreation is increasing in importance each year. Streams and lakes are stocked with trout from the State Hatchery, which is the largest in the southern hemisphere. The annual production of fish is rising. An advisory service is provided through the fisheries and wildlife officers located at inland stations, and a close liaison is maintained with the Victorian Piscatorial Council, the governing body of the angling clubs. An extensive programme of research is conducted by research officers stationed at the Freshwater Fisheries Research Station and at headquarters.

Attention is also given to important freshwater fish of the Murray River system, the Murray Cod and Golden Perch. The aim of this

research is to maintain the natural stocks of these fish and to develop hatchery rearing techniques to provide native fish for the stocking of farm dams and virgin public waters.

### *Fisheries Statistics*

The statistics of production shown below are in terms of recorded weight. In interpreting fisheries statistics, allowance should be made for the incomplete coverage. Returns are collected from licensed professional fishermen only, and as a result the published totals fall short of total fish production to the extent of the catch by amateur fishermen, the commercial catch by persons not licensed as professional fishermen, and unrecorded catch by professional fishermen.

The following table shows certain particulars about the fishing industry in Victoria for the years 1955-56 to 1959-60 :—

### VICTORIA—FISHERIES : MEN AND BOATS EMPLOYED : QUANTITY AND GROSS VALUE OF TAKE

Year Ended 30th June—	Number of Men	Boats Employed		Value of Nets and Other Plant	Recorded Production			
		Number	Value		Fish		Crayfish	
					Quantity*	Value	Quantity*	Value
			£'000	£'000	'000 lb.	£'000	'000 doz.	£'000
1956. . .	885	683	616	143	9,334	756	1,026	115
1957. . .	930	703	685	166	12,244	1,203	1,164	176
1958. . .	937	699	732	171	11,233	1,099	1,230	186
1959. . .	929	690	1,002	215	9,864	1,185	1,294	231
1960. . .	897	657	1,165	198	12,748	1,726	1,500	300

\* Includes catch by Victorian fishermen in Tasmanian waters.

### *Wildlife in Relation to Other Natural Resources*

#### *General*

Early contributions to wildlife conservation in Victoria were restricted to legal protection for individual species of birds and mammals. However, with continued economic development of the State, this alone is not enough and now adequate areas of natural habitat, where the animals can survive, are being reserved and protected.

The Fisheries and Wildlife Department, through its Wildlife Research Group, has the function of investigating problems involving the conservation and management of the wildlife resource in harmony with other natural resources. The proper solution of these problems requires measures which, whilst safeguarding wildlife, do not prejudice other resource activities.

As land is cleared for industry or agriculture, animals are forced to retreat into the remnants of their habitat; and in these restricted areas there is a build-up to excessive numbers which at times spill over onto settled land. Sometimes man's activities may provide these animals with suitable food or living space which is readily accepted, but in either case the animals may then cause damage or loss to property or economically valuable resources.

*Wildlife and Agriculture*

The development of agriculture in Victoria has led to the clearing and settlement of most of the rich plains country which formerly provided grazing for large mobs of Grey Kangaroos. Now the animals are restricted mainly to the country where denser forests provide a meagre food supply. During the winter the forests can no longer feed the kangaroos that bred there in the previous season and the animals once again come out onto the farms in search of food, damaging fences and eating and trampling the young crops and pastures.

Biological work by the Department aims to assess the damage and its dependence on various factors within the life pattern of the kangaroo.

If kangaroos move about only within a restricted "range" they may be most efficiently controlled on the farms where damage occurs. If, however, they move over long distances it will be necessary to extend control back into the forest areas. The range of kangaroos is traced by marking individuals with brightly coloured collars and mapping the observations of their movements.

Marking animals for re-identification also provides information on age and breeding habits and the way in which populations are likely to change in size.

Experiments are conducted to measure the food requirements of kangaroos. This helps to assess the damage which results from invasion of crops and pastures, as well as the numbers of animals which can be safely maintained in the forests.

Deaths occur in dense populations from starvation and disease and the effects of these are also studied in order to control and conserve kangaroos in Victoria.

Kangaroos have been protected by law for many years, but permits are issued for farmers to destroy limited numbers on their farms when the kangaroos are causing damage. The provisions on the permits control the numbers killed and these provisions are modified from time to time to intensify or moderate the control in particular areas.

Not only kangaroos, but most of our wildlife species are now restricted to forest areas many of which are permanent State Forests. In general, these animals are retiring by nature and attract little attention, but some cause serious damage to other natural resources and control of these pest species is essential.

*Wildlife and Forests*

Possums are numerous throughout much of the timbered country of the State and their presence can be very beneficial, as they help to keep in check the mistletoe, a parasitic plant common in Australian forests. Under full protection the possums also increase to excessive numbers over a period of years and their feeding results in serious defoliation of hardwoods in many parts of Victoria. Such a widespread problem can only be countered by an extensive control

method. A licensed hunting season achieves this and, at the same time, makes use of the commercially valuable possum skin, which is used in the fur and textile industries. Each year a State-wide assessment of the possum population and the forest damage is made before the introduction of a licensed season is considered, because licensed seasons are not held every year, but only when warranted. The taking of possums under licence is restricted to the winter months, so that the skins can be obtained in their best condition.

The softwood plantations that have been established in many parts of the State suffer a more seasonal attack, not only from possums, but from wallabies and native rodents as well. The damage in these forests consists of bark stripping which often results in complete girdling of the trees leading to death, with consequent great economic loss. The approach to this problem is control of the nuisance populations in the plantation by the use of poison. Before such a drastic method can be employed, a great deal of basic knowledge of the life histories and habits of the offending species must be obtained. A research programme is being conducted with the aim of gathering this information so that the control methods can be effective and, at the same time, of minimum risk to harmless wildlife co-existing with the pest species.

#### *Wildlife and Water Supply*

Wildlife in relation to water-supply can also present problems. The water-rat is a native rodent that has been protected in Victoria since 1943. This protection, probably combined with other factors, has brought about a great increase in water-rat numbers in the Murray and Goulburn Valley irrigation districts in northern Victoria. Here they cause damage to earth-works and irrigation installations by burrowing through and around them. The cost of repairing such damage is considerable.

Water-rat pelts are commercially valuable and several experimental licensed seasons have been proclaimed in past years. The aim is the management of the species as a fur-bearer, so that the removal of the surplus numbers provides a method of control, at the same time utilizing the rat as a valuable natural resource. Research has been carried out in order to obtain information on which to base control measures and this has involved a study of the life history and habits of the water-rat.

Many side effects must be considered in selecting any method of controlling excess populations and, where a valuable native species is involved, control must be related to a general State policy of wildlife conservation. Utilization combined with control is conservation and management at its best.

#### **Further References**

Department of Fisheries and Wildlife—			<i>Fisheries Contribution</i>
”	”	”	— <i>Fisheries Circular</i>
”	”	”	— <i>Fauna Contribution</i>
”	”	”	— <i>Wildlife Circular</i>
”	”	”	— <i>Miscellaneous Paper</i>
”	”	”	— <i>General Circular</i>
”	”	”	— <i>Newsletter (Monthly)</i>

## Mining

### *Mining Development in Victoria*

Mining has played a most important role in the history and development of Victoria. The discovery of gold in payable quantities was the event which had the greatest effect upon the history of the State. The search for gold first attracted migrants in large numbers and led to their permanent settlement. In September, 1851, a great alluvial goldfield was found at Ballarat and this discovery was followed by very rich gold strikes at Bendigo, Castlemaine, Stawell, Maryborough and other places. The revolutionary effect of this first gold rush was such that, from the start of the rush until 1858, the population rose from 70,000 to nearly 500,000. In the peak year of 1856, Victoria produced 3 mill. ounces and in the first gold decade it exported over 23 mill. ounces.

The gold mining industry was in large measure responsible for determining the pattern of the inland cities, towns, railways, and roads.

The emphasis today is, however, not on gold but on the fuel mineral—brown coal—from which is derived most of the energy indispensable to industrial expansion.

### *Coal*

The most important mining events in the past few years have been the increase in the brown coal production to 14,982,990 tons in 1960, and the proposal of the State Electricity Commission to extend its already huge developments. Yallourn and Morwell are now among the world's major coal developments for electricity generation and the manufacture of briquette fuel. The area deposits are undoubtedly amongst the largest in the world.

The most extensive of Victoria's deposits of tertiary brown coal exist in the Latrobe Valley, 90 miles east of Melbourne. Tests have proved that here exist reserves of over 17,000 mill. tons of brown coal suitable for open-cut exploitation. The deposits have shaped the destiny of the Victorian economy since the end of the First World War.

Private producers are making some contribution to the amount of coal won. Roughly, this production was 4 per cent. of the total produced (579,326 tons in 1960), but the proportion is likely to increase through the development of newly discovered brown coal fields on the western side of Port Phillip Bay. These deposits will complement the eastern side deposits and are of comparatively easy access to the main points of consumption. They will particularly benefit the fast growing city of Geelong and will supply power for the aluminium refining plant to be erected there.

Bituminous coal was mined during 1960 at Jumbunna, Kilcunda, Korumburra, Mirboo North, and Wonthaggi, and brown coal at Bacchus Marsh, Morwell, Thorpdale, Yan Yan Gurt (near Winchelsea), Yallourn, and Yallourn North.

*Mineral Production*

The mineral production of the State, as recorded by the Mines Department, from lands occupied under the Mines Act (excluding stone raised in quarries, and salt) for the year 1960, and the aggregate mineral production up to 31st December, 1960, are shown in the following table :—

## VICTORIA—MINERAL PRODUCTION

Minerals	During 1960		Total to 31st December, 1960	
	Quantity	Value	Quantity	Value
	fine oz.	£	fine oz.	£
Precious Metals—				
Gold .. .. .	28,566	446,259	73,677,967	336,604,002
Silver .. .. .	576	242	1,718,634	272,361
	tons	£	tons	£
Other Minerals—				
Antimony Ore .. .. .	2½	925	34	5,040
Bauxite .. .. .	4,231	16,678	70,304	157,341
Coal, Black .. .. .	77,995	417,660	22,022,550	24,728,705
Coal, Brown .. .. .	14,982,990	6,844,749	202,500,081	49,966,450
Diatomaceous Earth .. .. .	5,394	7,343	15,382	166,468
Fire Clay .. .. .	14,498	13,035	*	*
Fluorspar .. .. .	7	161	4,155	18,241
Gypsum .. .. .	100,386	98,075	1,119,039	880,048
Kaolin and Other White Clays	689,148	553,413	*	*
Limestone .. .. .	1,156,972	634,569	14,895,790	*
Limonite .. .. .	1,153	7,435	*	*
Tin Concentrates .. .. .	..	..	18,915	1,468,089

\* Not available.

The following table shows the average annual production and value of black and brown coal for each of the five year periods from 1921 to 1955 and the production and value for each of the years 1956 to 1960 :—

## VICTORIA—COAL PRODUCTION AND 'VALUE\*

Period	Black Coal		Brown Coal	
	Production	Value	Production	Value
	tons	£'000	tons	£'000
1921–1925 .. .. .	520,705	592	258,094	62
1926–1930 .. .. .	668,177	893	1,515,592	193
1931–1935 .. .. .	472,030	444	2,445,215	256
1936–1940 .. .. .	324,903	284	3,608,751	356
1941–1945 .. .. .	286,277	409	5,010,555	526
1946–1950 .. .. .	156,290	361	6,648,430	1,202
1951–1955 .. .. .	143,535	795	8,728,116	3,593
1956 .. .. .	118,827	668	10,559,801	4,644
1957 .. .. .	111,569	556	10,740,989	5,228
1958 .. .. .	108,359	528	11,643,629	5,418
1959 .. .. .	87,715	455	13,040,717	6,123
1960 .. .. .	77,995	418	14,982,990	6,845

\* Value of output at the mine.



*Quarrying*

Information in the following table has been obtained from "regular" quarries which are known to have a fixed plant and which are in permanent production. It is realized that there is considerable quarry production unrecorded due mainly to contractors who, requiring material from a source adjacent to the work for which they are suppliers, open up quarries for that purpose or exploit stone outcrops, mine tailings, &c. This work is usually only of a temporary nature.

## VICTORIA—QUARRYING CONSTRUCTION MATERIALS\*

Year Ended 31st December—	Number of Returns	Main Kinds of Stone Extracted—				Approximate Value of All Quarry Products†
		Bluestone	Sandstone	Granite	Limestone	
		cub. yds.	cub. yds.	tons	tons	£
1955 ..	141	2,644,392	117,082	179,964	27,464	3,931,657
1956 ..	142	3,240,699	113,241	215,609	39,826	4,738,013
1957 ..	133	3,416,132	191,232	204,590	61,495	4,952,773
1958 ..	132	3,852,012	146,016	173,096	63,230	5,202,993
1959 ..	121	4,529,601	462,109	215,227	35,129	5,841,988

\* Since 1952-53, limestone quarried for the manufacture of cement, lime, &c., has not been included in this table. It will be found in "Mineral Production" on page 548.

† Wholesale selling value of all quarry products (including sand and river gravel), exclusive of delivery charges.

*Value of Production***General**

The value of production as estimated in the following tables is based to a large extent on returns received annually from individual producers throughout the State. As a measure of total production it is incomplete, as it does not include the building and construction industry. It also omits factories employing less than four hands (unless power-driven machinery is used) and excludes agriculturists with holdings of less than 1 acre.

A detailed account of the period covered for individual rural industries is given on page 489. Except in the case of mining and quarrying, statistics for the non-rural industries refer to the year ended 30th June. Statistics for mining and quarrying relate to the year ended 31st December of the first year shown.

*Gross Value*

Gross value is defined as the value placed on recorded production at the wholesale price realized in the principal market. In cases where primary products are absorbed locally, or where they become raw material for secondary industry, these points are presumed to be the principal markets. Care is taken to prevent, as far as possible, all overlapping or double counting. The primary value of dairy production, in accordance with the above definition, is the price paid at the factory for milk or cream sold by the farmer; the value added by the process of manufacturing into butter, &c., is included in manufacturing production.

**VICTORIA—GROSS VALUE OF PRIMARY PRODUCTION**  
(£'000)

Industry	1955-56	1956-57	1957-58	1958-59	1959-60
Agriculture .. ..	88,902	86,141	88,198	101,058	92,411
Pastoral .. ..	123,757	149,880	137,854	134,015	160,138
Dairying* .. ..	70,094	66,330	65,431	65,264	70,471
Poultry and Bees ..	21,394	21,464	23,266	22,263	24,691
Trapping .. ..	3,422	3,588	3,621	3,862	3,749
Forestry .. ..	12,668	13,134	14,109	15,441	16,969
Fisheries .. ..	871	1,381	1,294	1,433	2,045
Mining .. ..	10,916	11,891	12,728	13,694	14,935
<b>Total Primary Industries</b>	<b>332,024</b>	<b>353,809</b>	<b>346,501</b>	<b>357,030</b>	<b>385,409</b>

\* Includes Subsidy—1955-56, £6,355,000 ; 1956-57, £6,286,000 ; 1957-58, £6,696,000 ; 1958-59, £6,223,000 ; 1959-60, £6,204,000.

*Local Value*

The gross value of production less costs of marketing (freight, cartage, brokerage, commission, insurance, and containers) represents the gross value of production at the place of production, that is, local value, details of which are shown in the following table :—

**VICTORIA—GROSS VALUE OF PRIMARY PRODUCTION AT  
THE PLACE OF PRODUCTION**  
(£'000)

Produce	1955-56	1956-57	1957-58	1958-59	1959-60
<b>Agriculture .. ..</b>	<b>75,580</b>	<b>72,947</b>	<b>74,933</b>	<b>85,451</b>	<b>79,130</b>
Barley .. ..	2,523	2,829	2,710	3,375	2,042
Maize .. ..	116	60	130	114	113
Oats .. ..	2,984	2,307	4,072	4,716	3,573
Wheat .. ..	21,361	19,778	18,460	23,567	22,421
Onions .. ..	810	685	425	894	842
Potatoes .. ..	11,662	4,797	2,222	3,874	4,966
Other Vegetables ..	9,845	9,954	9,219	8,217	8,703
Hay and Straw ..	13,287	14,358	16,331	17,789	13,836
Fruit—					
Orchards .. ..	6,517	8,364	9,422	7,884	7,914
Vineyards .. ..	3,895	6,498	8,106	8,342	6,188
Other Crops .. ..	2,580	3,317	3,836	6,679	8,532
<b>Pastoral .. ..</b>	<b>112,041</b>	<b>137,962</b>	<b>125,389</b>	<b>119,784</b>	<b>145,415</b>
Wool .. ..	61,917	89,652	68,520	51,786	67,758
Sheep, Slaughtered ..	20,490	17,341	20,865	22,375	27,766
Cattle, Slaughtered ..	29,634	30,969	36,004	45,623	49,891
<b>Dairying* .. ..</b>	<b>67,594</b>	<b>63,759</b>	<b>62,918</b>	<b>62,658</b>	<b>67,611</b>
Cream for Butter ..	35,152	29,481	29,027	28,522	30,829
Milk for Cheese ..	2,557	3,921	2,973	3,650	4,329
Milk for Condensing, Concentrating, &c.	6,229	6,085	6,520	5,979	6,667
Whole Milk Consumed	11,510	12,050	12,243	12,744	13,122
Pigs .. ..	5,791	5,936	5,459	5,540	6,460
<b>Poultry and Bees ..</b>	<b>19,771</b>	<b>19,787</b>	<b>21,373</b>	<b>20,486</b>	<b>22,686</b>
Eggs .. ..	14,877	14,349	15,516	13,545	15,493
Poultry .. ..	4,484	4,932	5,589	6,533	6,765
Honey and Beeswax ..	410	506	268	408	428

\* Inclusive of Subsidy—1955-56, £6,355,000 ; 1956-57, £6,286,000 ; 1957-58, £6,696,000 ; 1958-59, £6,223,000 ; 1959-60, £6,204,000.

VICTORIA—GROSS VALUE OF PRIMARY PRODUCTION AT THE  
PLACE OF PRODUCTION—*continued*

(£'000)

Produce	1955-56	1956-57	1957-58	1958-59	1959-60
<b>Trapping, &amp;c.</b> ..	<b>3,197</b>	<b>3,333</b>	<b>3,287</b>	<b>3,562</b>	<b>3,492</b>
Rabbits and Hares ..	1,883	2,387	2,501	2,717	2,560
Rabbit and Hare Skins, &c. ..	1,314	946	786	845	932
<b>Forestry</b> .. ..	<b>11,823</b>	<b>12,297</b>	<b>13,088</b>	<b>14,063</b>	<b>15,476</b>
Sawmills .. ..	7,621	7,828	7,617	7,468	8,015
Hewn Timber .. ..	926	1,007	1,300	998	1,426
Firewood .. ..	3,118	3,280	4,030	5,454	5,913
Bark for Tanning ..	158	163	120	128	86
Other .. ..	†	19	21	15	36
<b>Fisheries</b> .. ..	<b>733</b>	<b>1,178</b>	<b>1,104</b>	<b>1,265</b>	<b>1,771</b>
Fish .. ..	637	1,026	937	1,062	1,495
Crayfish .. ..	96	150	158	199	260
Oysters .. ..	..	2	6	1	1
Other .. ..	..	..	3	3	15
<b>Mining</b> .. ..	<b>10,916</b>	<b>11,891</b>	<b>12,728</b>	<b>13,694</b>	<b>14,935</b>
Gold .. ..	640	653	736	694	585
Coal—					
Black .. ..	815	668	556	528	455
Brown .. ..	4,382	4,644	5,227	5,418	6,123
Other Metals and Minerals .. ..	1,148	1,188	1,256	1,851	1,930
Quarrying .. ..	3,931	4,738	4,953	5,203	5,842
<b>Total Primary Industries</b>	<b>301,655</b>	<b>323,154</b>	<b>314,820</b>	<b>320,963</b>	<b>350,516</b>

† Not available.

### Net Value of Production

The ultimate aim of the valuation of production is to arrive at the sum available for distribution among those concerned in each class of industry. These include :—

- (1) Workers in all grades of industry ;
- (2) proprietors (including landlords) of any of the instruments of production concerned ; and
- (3) providers of capital including debenture holders and mortgagees.

This represents the net value of production which is calculated by the deduction of costs of production from the gross value of production at the place of production. Such costs comprise stock feed, seed costs, manures, spraying, animal dips, fuel, power, water, and all other materials consumed in the process of production.

**VICTORIA—NET VALUE OF PRODUCTION**  
(£'000)

Division of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
Rural—					
Agriculture ..	66,465	63,802	64,971	73,661	68,912
Pastoral .. ..	104,820	129,883	115,970	110,392	135,630
Dairying .. ..	54,301	47,933	46,153	44,382	47,469
Poultry .. ..	12,618	12,506	14,042	12,572	14,636
Bee-farming ..	410	506	268	408	428
Total Rural ..	238,614	254,630	241,404	241,415	267,075
Non-rural .. ..	24,621	26,265	27,423	29,877	32,840
Total Primary ..	263,235	280,895	268,827	271,292	299,915
Manufacturing ..	491,948	528,031	566,476	608,947	686,501
Total All Industries ..	755,183	808,926	835,303	880,239	986,416

## Part 8

### MANUFACTURING INDUSTRY

#### *Victoria's Industrial Development in the Post-war Period*

Victoria has been one of the fastest growing of the Australian States in the post-war period. Mean population increased from 2,015,197 persons for the financial year ended June, 1946, to 2,851,130 persons for year ended June, 1960—an increase of 41·48 per cent. compared with an increase for the whole of Australia of 38·39 per cent. in the same period.

The absorption of this high rate of population growth has been possible largely because of the extensive growth of manufacturing industry, and of the necessary tertiary industries, that has taken place in Victoria since the end of the Second World War.

The number of factories operating in Victoria has risen from 10,195 in 1945-46 to 16,979 in 1959-60. These extra 6,784 factories, together with the expansion of existing factories, have provided employment for an additional 125,265 workers, the total numbers increasing from 256,249 in 1945-46 to 381,514 in 1959-60. During this period the value of production from Victorian factories rose from £120 mill. to £687 mill.

Many notable new enterprises have been set up in Victoria since the end of the Second World War.

The automotive industry, which has grown from assembly of imported parts into manufacture of motor vehicles of substantially all-Australian content, has been one of the major post-war growth industries (see pages 591 to 594). Although the industry is represented in each State, most of the main chassis-manufacturing plants are located in Victoria. Employment recorded in manufacture, assembly and repair of motor vehicles in Australia grew from 39,706 in 1945-46 to 120,231 in 1959-60, and of these 14,304 in 1945-46 and 40,548 in 1959-60 were employed in Victorian establishments.

The growth of the motor vehicle manufacturing industry has also, naturally, stimulated production in other industries, e.g., petro-chemical and rubber, and the range of new products is still being extended.

The petroleum refining industry developed rapidly during the 1950's, increasing its capacity from about 800,000 tons of crude oil a year in 1953 to an annual crude oil capacity of 12 mill. tons in June, 1960. Two of the six Australian refineries are located in Victoria—one at Geelong, with a capacity of 2·4 mill. tons of crude oil a year, and one at Altona, with a capacity of 2·1 mill. tons of crude oil a year.

The growth of the petroleum refining industry, with its catalytic cracking and reforming units, has also made possible the development of the allied petro-chemicals industry. Production of carbon black, an essential commodity for the manufacture of tyres, has already commenced at Altona in Victoria. Five other inter-related projects, also located at Altona, are in hand to produce styrene monomer, polyethylene, synthetic rubber, polyvinyl chloride resins, &c. Total costs of these plants will be about £27·5 mill., which are to come into production during 1961. A £1 mill. plant to make detergent alkylate has been erected at Geelong.

The chemical industry proper has also grown remarkably in Victoria since the war. As well as expanding the production of established products to keep pace with the demands of industry and the growing population, many new products have been introduced. With the rapid growth of the plastics products industries and extension of the use of plastics to many new products, the chemical industry's production of plastic-moulding powders and resins has developed into a major activity. Other notable developments have included industrial gases, chemicals for the paper industry, chlorine, surface coating emulsions, polystyrene, tri-cresyl phosphate (a plasticiser and additive for petrol), polyester resins for bonding, phenothiazine (an anthelmintic for sheep), as well as an extensive range of new paints, resins and varnishes—to mention only a few. On the medicinal side, production of life-saving drugs such as penicillin (first made by the Commonwealth Serum Laboratories in 1944), A.C.T.H., Salk Vaccine, streptomycin and other antibiotics have been important recent developments.

The textile industries have always been an important part of Victoria's industrial structure, and many new projects have come into production in recent years.

The manufacture of man-made yarns and fabrics is almost an entirely new industry to Australia in the post-war period, and the majority of producers in this industry are located in Victoria. The only producer of nylon filament yarn in Australia commenced production at its factory at Bayswater, Victoria, in 1958. A majority of the Australian processors of filament yarns and producers of spun man-made fibre yarns are located in Victoria, which also leads in the production of pure man-made fibre piece goods.

Other sections of the textile industry have continued steady growth to keep pace with demands of the increasing population, but the emphasis has been more on modernization and extension of existing establishments rather than outstanding new developments. An exception has been the manufacture of carpets and carpeting which has grown largely in the post-war period, with several new factories being built in Victoria.

In all, employment in the Victorian textile and textile goods industries (excluding clothing), rose from 29,889 in 1945-46 to 41,073 in 1959-60, representing over 56 per cent. of total Australian employment in these industries.

The pulp, paper, and paper board industry has grown substantially since the war and the range of types of paper and board made has been extended considerably. Employment in this industry in Victoria increased from 2,039 in 1945-46 to 3,084 in 1959-60, which represented more than one-third of total employment in the industry in Australia. Big expansion plans continue to be implemented. One of the newest projects is a mill to make tissue paper (to date mainly imported) at Box Hill, Victoria.

These are some of the major developments that have taken place in Victorian manufacturing industries since the war. Many more, perhaps of a smaller scale but none the less important, could be enumerated.

The following table gives an indication of the growth of employment in the main industrial groups between 1945-46 and 1959-60:—

**VICTORIA—EMPLOYMENT IN MANUFACTURING :  
INDUSTRY GROUPS**

Class of Industry	1945-46	1959-60	Increase
			%
1. Treatment of Non-metalliferous Mine and Quarry Products .. .. .	2,659	6,564	+ 147
2. Bricks, Pottery, Glass, &c. .. .. .	3,574	6,460	+ 81
3. Chemicals, Dyes, Explosives, Paints, Oils, Grease .. .. .	11,961	16,231	+ 36
4. Industrial Metals, Machines, Conveyances .. .. .	88,421	150,843	+ 71
5. Precious Metals, Jewellery, Plate .. .. .	1,602	1,980	+ 24
6. Textiles and Textile Goods (Not Dress) .. .. .	29,889	41,073	+ 37
7. Skins and Leather (Not Clothing or Footwear) .. .. .	4,884	4,413	— 10
8. Clothing (Except Knitted) .. .. .	38,552	45,260	+ 17
9. Food, Drink, and Tobacco .. .. .	33,811	38,830	+ 15
10. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving .. .. .	10,139	15,759	+ 55
11. Furniture of Wood, Bedding, &c. .. .. .	3,724	6,531	+ 75
12. Paper Stationery, Printing, Bookbinding, &c. .. .. .	13,723	24,305	+ 77
13. Rubber .. .. .	3,644	7,282	+ 100
14. Musical Instruments .... .. .	83	233	+ 181
15. Miscellaneous Products .. .. .	6,570	10,767	+ 64
16. Heat, Light, and Power .. .. .	3,013	4,983	+ 65
Total .. .. .	256,249	381,514	+ 49

One notable major project, whose growth is a direct consequence of the increased demand from growing industry and population, is the development of the open cut brown coal deposits in the Latrobe Valley, at Yallourn and Morwell, and the manufacture of briquettes for industrial and commercial fuel, electricity generation, and town gas. The installed capacity of the Morwell generating plant is now 110,000 kilowatts and when completed in 1963 will be 170,000 kilowatts and for Yallourn 402,500 kilowatts. During the year ended June, 1960, Yallourn produced 655,788 tons of briquettes and Morwell 318,882 tons of briquettes. The capacity of the Morwell briquette works (now completed), is 1.3 mill. tons of briquettes a year.

Total installed electricity generating capacity in Victoria has increased from 509,285 kilowatts at June, 1946, to 1,509,133 kilowatts at 30th June, 1960. Included above are 25,000 kilowatts from the Hume Dam hydro-electric station and 93,000 kilowatts (Victoria's entitlement for June, 1960) from the Snowy Mountains hydro-electric scheme.

Demand for electric power is increasing at a compound rate of 8 per cent. a year—a large part of this increase is due to the growth of industry and increasing use of electric power per person employed as industry becomes more highly mechanized.

The pattern of development in recent years has been for industry to move towards the perimeter of the city. New industrial areas have grown up, for example, around Dandenong, Clayton, Altona, Broadmeadows, Preston and Bayswater.

The country areas, however, have not been overlooked. Important and well-based industries have been set up in numerous country centres. For example, twist drills are being made at Maryborough and Hamilton, rayon weaving mills are operating at Wangaratta and Ararat, hypodermic needles are made at Portland, chain-making at Benalla, hardboard at Bacchus Marsh, cotton fabrics, knitwear and nylon yarns at Bendigo, anti-biotics at Port Fairy, pumps at Castlemaine, general engineering at Eildon, forging at Wonthaggi, roller bearings at Echuca, paper treating, roller bearings and other precision engineering articles at Ballarat, petroleum refining, wire-drawing, automotive engine blocks, and carpets at Geelong, and cement in the Latrobe Valley.

In the post-war period direct overseas investment in Australian industry has made an important contribution to our industrial maturity and technological progress. Although the bulk of capital has been raised internally, the establishment of new industries or expansion of existing industries by overseas companies (alone or in partnership with local interests), the granting of manufacturing rights and patents, and the supply of techniques, &c., by overseas manufacturers have helped to fill in the gaps in our manufacturing structure and have enabled local industries to keep abreast of latest overseas methods and products. Victoria has attracted capital from the U.S.A., Canada, United Kingdom, Sweden, Germany, France, Holland, Belgium, Switzerland and Italy.

In a few cases, overseas companies dominate their particular industry. This occurs especially where the technical problems of the industry are complex, the capital needs especially large, or the product is associated with a particular brand name or tied up throughout the world with patents or other manufacturing rights—for example, petroleum refining, motor vehicles, nylon yarn. In most cases, however, overseas participation has taken the form of adding to the range and variety of products made and has provided healthy competition with local establishments. Products made cover a very wide range from shoes to tractors, from textile fabrics to industrial machines.



The growth of manufacturing has brought with it the expansion of service industries. It has created demand for more transport facilities, more gas and electricity, more technological education, banking, insurance, retail stores and wholesale merchandising facilities, and other services.

Victoria's industrial growth has made a valuable contribution to the remarkable development of the Australian economy in the post-war period. With its many natural resources, and the skill and enterprise of its work force, this growth should continue in the future.

The table below shows at intervals between 1901 and 1959-60 the development of manufacturing industry:—

### VICTORIA—SUMMARY OF FACTORY DEVELOPMENT

Year	Factories	Employment*	Salaries and Wages Paid†	Value of—			
				Materials and Fuel Used	Output	Production‡	Land, Buildings, Plant and Machinery
	No.	No.	£'000	£'000	£'000	£'000	£'000
1901 .. ..	3,249	66,529	£	£	£	£	12,298
1920-21 .. ..	6,532	140,743	21,377	67,585	106,008	38,423	35,493
1940-41 .. ..	9,121	237,636	52,295	120,348	209,349	89,001	92,050
1950-51 .. ..	13,504	316,792	163,207	399,373	675,033	275,660	207,587
1951-52 .. ..	14,758	324,143	202,586	499,607	833,967	334,360	248,399
1952-53 .. ..	15,154	310,759	210,878	502,113	860,146	358,033	282,690
1953-54 .. ..	15,533	331,277	236,036	577,190	985,505	408,315	339,268
1954-55 .. ..	15,861	346,648	262,750	648,433	1,100,656	452,223	412,671
1955-56 .. ..	16,053	355,185	286,944	709,444	1,201,392	491,948	473,216
1956-57 .. ..	16,232	355,204	296,608	748,110	1,276,141	528,031	542,809
1957-58 .. ..	16,426	357,143	310,540	811,221	1,377,697	566,476	591,086
1958-59 .. ..	16,527	362,979	324,336	822,094	1,431,041	608,947	660,659
1959-60 .. ..	16,979	381,514	370,181	923,113	1,609,614	686,501	730,827

\* Average employment over whole year, including working proprietors.

† Excludes drawings of working proprietors.

‡ Value of output less value of materials, &c.

§ Not available.

## Manufacturing Activity

### General

#### Factory and Wages Board Legislation

The first Factories Act in Victoria was passed in 1873. Since then many other Acts dealing with the subject have been placed upon the statute-book. They have been consolidated in the *Labour and Industry Act* 1958. Under the Act registration of factories is compulsory and certain conditions relating to lighting, ventilation, fire escape, and sanitation must be fulfilled before registration is granted. The Act requires that departmental approval of plans be obtained before the commencement of the building of any factory premises or alteration or addition to it.

The general provisions of factory legislation, including Wages Boards, are further referred to on pages 426 to 428, 438, and 445-446.

*Decentralization of Manufacturing Industries: Division of State Development*

Early in the Second World War, steps were taken by State Governments to encourage the establishment of new manufacturing industries in country towns in Victoria and to develop existing country secondary industries. Legislation was passed in 1944 to enable Crown lands to be made available to industries, both for the erection of new factories and for the provision of housing for their employees.

A Decentralization Fund was established from which advances have been made to finance new industries. Assistance was granted in meeting freight charges on raw materials and finished goods, as well as in other ways. In 1949, a war-time explosives factory at Ballarat was purchased and the buildings were either leased or sold to individual industries, some of which have since purchased additional Crown land in the area on which to extend their plants.

Prior to 1950, many of the plants established throughout the State were of the annexe type or branches of existing metropolitan industries. However, more recently, greater success has been achieved in the development of complete units in country centres based on suitable sites for permanent operation.

The promotion and assistance of this development is one of the functions of the Division of State Development of the Premier's Department, further reference to which is made on page 419.

In addition, the Rural Finance Corporation was constituted by Parliament in 1950, to make advances for the development of both primary and secondary industry in rural areas. Loans made by the Corporation to secondary industries as at 30th June, 1960, amounted to £3,084,733.

*Commonwealth Department of Trade*

The functions of this Department include the development of secondary industries, the protection of secondary industry (including tariff protection which is administered through the Tariff Board) and as part of its policy of promoting external trade, the promotion of exports of the products of secondary industry.

*Customs and Excise Tariffs and Bounties on Manufacture*

The Tariff Board, appointed by the Commonwealth Government, examines proposals for amending the tariff and makes recommendations relating to the necessity for new, increased, or reduced duties and, where necessary, advises regarding the necessity for granting bounties. It takes into consideration the effect of any changes on manufacturing industry in Australia.

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty

to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards.

### **Scientific Research and Standardization**

#### *Commonwealth Scientific and Industrial Research Organization*

The function of this Organization is to initiate and conduct research in connexion with industries in Australia, to train research workers, to establish industrial research studentships and fellowships, to make grants in aid of pure scientific research, to establish industrial research associations in various industries, to provide for testing and standardization of scientific equipment, to conduct an information service relating to scientific and industrial matters, and to act for Australia in liaison with other countries in matters of scientific research. (See also pages 184 to 189.)

#### *Standards Association of Australia*

This Association acts as the national standardizing organization of Australia and issues standard specifications for materials and codes of practice. Specifications and codes are prepared and revised periodically in accordance with the needs of industry and standards are evolved and accepted by general consent.

#### *National Association of Testing Authorities*

This Association organizes national testing facilities throughout Australia to serve private and governmental needs. Laboratories may register voluntarily for tests within their competence and the Association ensures the maintenance of their standards of testing. It is expected that there will be general acceptance of certificates of tests issued in the name of the Association by the registered laboratories.

### **Definitions in Factory Statistics**

The statistics dealing with factories have been compiled from returns supplied annually by manufacturers under the authority of the Commonwealth Census and Statistics Act and the Victorian Statistics Act. A return must be supplied for every factory, which is defined for this purpose as an establishment where four or more persons are employed or where power (other than manual) is used in any manufacturing process.

If a manufacturing business is conducted in conjunction with any other activity, particulars relating to the manufacturing section only are included in the statistics. Where two or more industries are conducted in the same establishment, a separate return is obtained for each industry, if practicable.

Manufacturers are requested to state in their returns particulars about the number, age, wages, &c., of their employees, the value of premises and equipment and of factory stocks, the horse-power of machinery, the value, and, in most cases, the quantities of raw materials and fuel used, and quantities and values of principal materials and articles produced. The returns obtained from manufacturers are not

intended to show a complete record of the income and expenditure of factories nor to show the profits or losses of factories collectively or individually.

The *average number of persons* employed is quoted on two different bases : the average during the period of operation and the average over the whole year. Of these, the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year). This average is used only for details dealing with the classification according to the number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

*Working proprietors* are included in all employment figures other than those dealing with monthly employment and age dissections, but salaries and wages paid in all cases exclude drawings by working proprietors.

The *value of factory output* is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer of the finished article.

The *value of production* is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of those items of cost specified on the factory statistical collection form, namely, materials used, containers and packing, power, fuel and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges) ; the remainder constitutes the value added to raw materials in the process of manufacture, and represents the fund available for the payment of wages, taxation, rent, interest, insurance, &c., and profit.

It is considered that, because of the duplication of materials used, (which means that the finished produce of one process of manufacture often forms the raw material for another) an inaccurate impression would be obtained by using the total value of output of manufacturing industries in year to year comparisons. Woollen manufactures might be cited as an example. Greasy wool forms the raw material for the woolscouring industry, the product of which is scoured wool. This is afterwards combed into wool tops which are used in the spinning mills for the manufacture of yarn. In due course the yarn is woven into cloth, the raw material for the clothing industry. If these processes are carried out separately in different factories, it is evident that the value of the wool would be counted five times by using value of output as the basis for annual comparisons of manufacturing production.

The concept of value added prevents this double counting, gives a truer picture of the relative economic importance of industries, and also provides a good basis for estimating and comparing productive efficiency in manufacturing.

## Classification of Factories

### General

In the compilation of statistical data dealing with factories in Australia, a standard classification of manufacturing industries, formulated at a conference of Australian statisticians in 1902 and revised from time to time, was used until the year 1929–30. A new classification based on that used in Great Britain for census purposes was introduced in 1930–31, and this, revised and extended to a minor degree in regard to sub-classes of industry in accordance with decisions of the Statisticians' Conference, 1945, still obtains.

It should be noted that where a factory, engaged in the production of such goods as would entitle it to classification in more than one sub-class of industry, is unable to give separate production costs, &c., for such sub-classes, it is classified to the predominant activity of such factory.

The classes and sub-classes in the current classification of factories are as follows :—

### CLASSIFICATION OF FACTORIES

#### CLASS I.—TREATMENT OF NON-METALLIFEROUS MINE AND QUARRY PRODUCTS

Coke Works  
Briquetting and Pulverized Coal  
Carbide  
Lime, Plaster of Paris, and Asphalt  
Fibrous Plaster and Products  
Marble, Slate, &c.  
Cement, Portland  
Asbestos Cement Sheets and Mouldings  
Other Cement Goods  
Other

#### CLASS II.—BRICKS, POTTERY, GLASS, ETC.

Bricks and Tiles  
Earthenware, China, Porcelain, and Terracotta  
Glass (Other than Bottles)  
Glass Bottles  
Other

#### CLASS III.—CHEMICALS, DYES, EXPLOSIVES, PAINTS, OILS, GREASE

Industrial and Heavy Chemicals and Acids  
Pharmaceutical and Toilet Preparations  
Explosives (Including Fireworks)  
White Lead, Paints, and Varnish  
Oils, Vegetable  
Oils, Mineral  
Oils, Animal  
Boiling-down, Tallow-refining  
Soap and Candles  
Chemical Fertilizers  
Inks, Polishes, &c.  
Matches  
Other

#### CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES

Smelting, Converting, Refining, Rolling of Iron and Steel  
Foundries (Ferrous)  
Plant, Equipment, and Machinery, &c.  
Other Engineering  
Extracting and Refining of Other Metals; Alloys  
Electrical Machinery, Cables, and Apparatus  
Construction and Repair of Vehicles (10 groups)  
Ship and Boat Building and Repairing, Marine Engineering (Government and Other)  
Cutlery and Small Hand Tools  
Agricultural Machines and Implements  
Non-Ferrous Metals—  
Rolling and Extrusion  
Founding, Casting, &c.  
Iron and Steel Sheets  
Sheet Metal Working, Pressing, and Stamping  
Pipes, Tubes, and Fittings—Ferrous  
Wire and Wire Netting (Including Nails)  
Stoves, Ovens, and Ranges  
Gas Fittings and Meters  
Lead Mills  
Sewing Machines  
Arms and Ammunition (Excluding Explosives)  
Wireless and Amplifying Apparatus  
Other Metal Works

#### CLASS V.—PRECIOUS METALS, JEWELLERY, PLATE

Jewellery  
Watches and Clocks (Including Repairs)  
Electroplating (Gold, Silver, Chromium, &c.)

CLASS VI.—TEXTILES AND TEXTILE  
GOODS (NOT DRESS)

Cotton Ginning  
Cotton Spinning and Weaving  
Wool—Carding, Spinning, Weaving  
Hosiery and Other Knitted Goods  
Silk, Natural  
Rayon, Nylon, and Other Synthetic  
Fibres.  
Flax Mills  
Rope and Cordage  
Canvas Goods, Tents, Tarpaulins, &c.  
Bags and Sacks  
Textile Dyeing, Printing, and Finishing  
Other

CLASS VII.—SKINS AND LEATHER (NOT  
CLOTHING OR FOOTWEAR)

Furriers and Fur-dressing  
Woolscouring and Fellmongery  
Tanning, Currying, and Leather-dressing  
Saddlery, Harness, and Whips  
Machine Belting (Leather or Other)  
Bags, Trunks, &c.

CLASS VIII.—CLOTHING (EXCEPT  
KNITTED)

Tailoring and Ready-made Clothing  
Waterproof and Oilskin Clothing  
Dressmaking, Hemstitching  
Millinery  
Shirts, Collars, and Underclothing  
Foundation Garments  
Handkerchiefs, Ties, and Scarves  
Hats and Caps  
Gloves  
Boots and Shoes (Not Rubber)  
Boot and Shoe Repairing  
Boot and Shoe Accessories  
Umbrellas and Walking Sticks  
Dyeworks and Cleaning, &c.  
Other

CLASS IX.—FOOD, DRINK, AND  
TOBACCO

Flour-milling  
Cereal Foods and Starch  
Animal and Bird Foods  
Chaffcutting and Corncrushing  
Bakeries (Including Cakes and Pastry)  
Biscuits  
Sugar-mills  
Sugar-refining  
Confectionery (Including Chocolate  
and Icing Sugar)  
Jam, Fruit, and Vegetable Canning  
Pickles, Sauces, and Vinegar  
Bacon Curing  
Butter Factories  
Cheese Factories  
Condensed and Dried Milk Factories  
Margarine  
Meat and Fish Preserving  
Condiments, Coffee, and Spices  
Ice and Refrigerating

CLASS IX.—FOOD, DRINK, AND  
TOBACCO—*continued*

Salt  
Aerated Waters, Cordials, &c.  
Breweries  
Distilleries  
Wine-making  
Cider and Perry  
Malting  
Bottling  
Tobacco, Cigars, Cigarettes, and Snuff  
Dehydrated Fruit and Vegetables  
Ice Cream  
Sausage Casings  
Arrowroot  
Other

CLASS X.—SAWMILLS, JOINERY, BOXES,  
ETC., WOOD TURNING AND CARVING

Sawmills  
Plywood Mills (Including Veneers)  
Bark Mills  
Joinery  
Cooperage  
Boxes and Cases  
Woodturning, Woodcarving, &c.  
Basketware and Wickerware (Including  
Sea-grass and Bamboo Furniture)  
Perambulators (Including Pushers and  
Strollers)  
Wall and Ceiling Boards (Not Plaster  
or Cement)  
Other

CLASS XI.—FURNITURE OF WOOD,  
BEDDING, ETC.

Cabinet and Furniture Making (Includ-  
ing Billiard Tables and Upholstery)  
Bedding and Mattresses (Not Wire)  
Furnishing Drapery  
Picture Frames  
Blinds

CLASS XII.—PAPER, STATIONERY,  
PRINTING, BOOKBINDING, ETC.

Newspapers and Periodicals  
Printing—  
Government  
General, Including Bookbinding  
Manufactured Stationery  
Stereotyping, Electrotyping  
Process and Photo Engraving  
Cardboard Boxes, Cartons, and Con-  
tainers  
Paper Bags  
Paper-making  
Pencils, Penholders, Chalks, and Crayons  
Other

## CLASS XIII.—RUBBER

Rubber Goods (Including Tyres Made)  
Tyre Retreading and Repairing

CLASS XIV.—MUSICAL INSTRUMENTS  
Gramophones and Gramophone Records  
Pianos, Piano-Players, and Organs  
Other

CLASS XV.—MISCELLANEOUS PRODUCTS  
Linoleum, Leather-cloth, Oil-cloth, &c.  
Bone, Horn, Ivory, and Shell  
Plastic Moulding and Products  
Brooms and Brushes  
Optical Instruments and Appliances  
Surgical and Other Scientific Instruments and Appliances

CLASS XV.—MISCELLANEOUS  
PRODUCTS—*continued*

Photographic Material (Including  
Developing and Printing)  
Toys, Games, and Sports Requisites  
Artificial Flowers  
Other

CLASS XVI.—HEAT, LIGHT, AND POWER  
Electric Light and Power  
Gas Works

### *Factories According to Class of Industry*

The following table contains a summary of factories by class of industry in Victoria during the year ended 30th June, 1960:—

#### VICTORIA—FACTORIES BY CLASSES, 1959–60

Class of Industry	Factories	Employment*	Rated Horse-power of Engines in Use	Salaries and Wages Paid†	Value of—	
					Production	Output
	No.	No.	h.p.	£'000	£'000	£'000
I. Treatment of Non-metalliciferous Mine and Quarry Products ..	449	6,564	122,823	7,332	15,674	34,055
II. Bricks, Pottery, Glass, &c. ..	176	6,460	37,346	6,746	11,879	21,149
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	367	16,231	139,220	18,366	58,467	170,424
IV. Industrial Metals, Machines, Conveyances ..	6,414	150,843	482,797	157,826	252,757	511,662
V. Precious Metals, Jewellery, Plate ..	248	1,980	4,105	1,840	3,127	5,268
VI. Textiles and Textile Goods (Not Dress) ..	811	41,073	104,543	34,836	60,602	146,274
VII. Skins and Leather (Not Clothing or Footwear)	272	4,413	22,187	3,944	6,425	18,971
VIII. Clothing (Except Knitted)	2,416	45,260	30,538	32,556	52,600	106,650
IX. Food, Drink, and Tobacco	2,104	38,830	213,013	36,064	81,612	282,559
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	1,404	15,759	133,245	14,486	24,995	57,492
XI. Furniture of Wood, Bedding, &c. ..	664	6,531	14,999	5,655	10,205	21,973
XII. Paper, Stationery, Printing, Bookbinding, &c. ..	948	24,305	131,092	26,087	52,767	112,965
XIII. Rubber ..	164	7,282	63,945	8,075	14,617	38,010
XIV. Musical Instruments ..	25	233	312	218	325	533
XV. Miscellaneous Products	446	10,767	31,275	10,143	18,665	42,699
Total, Classes I. to XV. ..	16,908	376,531	1,531,440	364,174	664,717	1,570,684
XVI. Heat, Light, and Power	71	4,983	1,848,980	6,007	21,784	38,930
GRAND TOTAL ..	16,979	381,514	3,380,420	370,181	686,501	1,609,614

\* Average employment over whole year, includes working proprietors.

† Excludes drawings of working proprietors.

“Industrial Metals, Machines, and Conveyances” with 150,843 or 39 per cent. of the total employment in factories during 1959–60, employed considerably more persons than any other class of industry. Next in order of employment was “Clothing” with 45,260 or 12 per cent., followed by “Textiles and Textile Goods” and “Food, Drink, and Tobacco” with 41,073 and 38,830 respectively or 11 and 10 per cent. of the total.

The total value of production (added value) in 1959-60 was £686,501,000. Of this amount the metals group contributed £252,757,000 which represented 37 per cent. of the total. The food group followed with £81,612,000 or 12 per cent., and next in order were textiles with £60,602,000 or 9 per cent., chemicals, dyes, &c., with £58,467,000 or 9 per cent., paper with £52,767,000 or 8 per cent., and clothing with £52,600,000 or 8 per cent.

The next table shows the number of factories in Victoria during the years 1955-56 to 1959-60 classified according to industry :—

### VICTORIA—NUMBER OF FACTORIES IN INDUSTRIAL CLASSES

Class of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products ..	447	445	442	450	449
II. Bricks, Pottery, Glass, &c. ..	151	161	159	160	176
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	344	345	350	361	367
IV. Industrial Metals, Machines, Conveyances ..	5,573	5,818	5,971	6,018	6,414
V. Precious Metals, Jewellery, Plate ..	255	273	266	265	248
VI. Textiles and Textile Goods (Not Dress) ..	738	740	748	754	811
VII. Skins and Leather (Not Clothing or Footwear) ..	293	297	289	275	272
VIII. Clothing (Except Knitted) ..	2,528	2,512	2,516	2,442	2,416
IX. Food, Drink, and Tobacco ..	2,043	1,999	2,022	2,178	2,104
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	1,431	1,387	1,407	1,382	1,404
XI. Furniture of Wood, Bedding, &c. ..	691	700	704	665	664
XII. Paper, Stationery, Printing, Book-binding, &c. ..	838	864	884	892	948
XIII. Rubber ..	146	146	151	158	164
XIV. Musical Instruments ..	31	30	28	25	25
XV. Miscellaneous Products ..	455	430	411	431	446
Total, Classes I. to XV. ..	15,964	16,147	16,348	16,456	16,908
XVI. Heat, Light, and Power ..	89	85	78	71	71
GRAND TOTAL	16,053	16,232	16,426	16,527	16,979

The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors). The following tables show the number of factories classified on this basis for each of the years 1950-51 to 1959-60 :—

### VICTORIA—FACTORIES CLASSIFIED ACCORDING TO NUMBER OF PERSONS EMPLOYED DURING PERIOD OF OPERATION

Year	Number of Factories Employing, on the Average, Persons Numbering—							
	Under 4	4	5 to 10	11 to 20	21 to 50	51 to 100	Over 100	Total
1950-51 .. ..	4,087	1,159	3,372	2,020	1,723	593	550	13,504
1951-52 .. ..	4,789	1,267	3,714	2,141	1,720	585	542	14,758
1952-53 .. ..	5,325	1,292	3,699	2,156	1,613	556	513	15,154
1953-54 .. ..	5,474	1,251	3,841	2,179	1,660	572	556	15,533
1954-55 .. ..	5,672	1,250	3,826	2,206	1,717	600	590	15,861
1955-56 .. ..	5,693	1,229	3,915	2,260	1,754	608	594	16,053
1956-57 .. ..	5,854	1,247	3,918	2,252	1,705	638	618	16,232
1957-58 .. ..	6,077	1,254	3,862	2,268	1,721	621	623	16,426
1958-59 .. ..	6,062	1,320	3,876	2,261	1,725	643	640	16,527
1959-60 .. ..	6,030	1,403	4,003	2,401	1,816	659	667	16,979



# VICTORIA—AVERAGE NUMBER OF PERSONS EMPLOYED ACCORDING TO SIZE OF FACTORY DURING PERIOD OF OPERATION

Year	Average Number Employed (Including Working Proprietors)—							
	Under 4	4	5 to 10	11 to 20	21 to 50	51 to 100	Over 100	Total
1950-51 .. ..	8,346	4,636	23,615	29,567	53,883	42,202	155,765	318,014
1951-52 .. ..	9,640	5,068	25,739	31,472	53,922	41,016	158,701	325,558
1952-53 .. ..	10,478	5,168	25,691	31,718	50,820	39,165	149,348	312,388
1953-54 .. ..	10,725	5,004	26,824	32,035	52,602	40,617	165,447	333,254
1954-55 .. ..	11,070	5,000	26,885	32,151	53,410	41,620	178,132	348,268
1955-56 .. ..	11,116	4,916	27,408	33,006	55,581	42,758	181,907	356,692
1956-57 .. ..	11,730	4,988	27,444	33,219	53,729	44,427	180,976	356,513
1957-58 .. ..	11,748	5,016	27,252	33,341	54,254	43,358	183,921	358,890
1958-59 .. ..	12,314	5,280	27,604	33,184	54,311	44,817	187,467	364,977
1959-60 .. ..	12,005	5,612	27,991	35,216	57,905	45,866	198,664	383,259

The relative importance of large and small factories is illustrated in the above table. In 1959-60, 7,433 factories employing four or less employees had a total employment of 17,617 persons. Expressed in terms of percentages, 44 per cent. of factories—those employing four or less persons—employed 5 per cent. of the persons engaged in factories. The most numerous of the factories with less than four persons were Motor Repair Workshops with 1,135 such Motor Repair Workshops and 2,396 persons out of a total of 2,313 establishments employing 16,545 persons; and Bakeries (including cakes and pastry) with 677 Bakeries, &c. employing 1,384 persons out of a total of 1,146 Bakeries with 6,032 persons. Other small factories worthy of note are classified under the "Other Engineering" sub-class—407 establishments with 796 persons out of a total of 902 "Other Engineering" establishments with 10,423 persons; and "Boot Repairing"—325 establishments employing 475 persons out of a total of 370 "Boot Repairing" establishments employing 852 persons.

A general indication of the geographical disposition of factories in the State is shown in the next table where secondary industry in Victoria for 1959-60 is classified according to statistical divisions :—

## VICTORIA—FACTORIES IN STATISTICAL DIVISIONS, 1959-60

Statistical Division	Factories	Employment*	Salaries and Wages Paid†	Value of—			
				Materials and Fuel Used	Output	Production	Land, Buildings, Plant and Machinery
	No.	No.	£'000	£'000	£'000	£'000	£'000
Metropolitan ..	12,068	306,236	300,494	696,629	1,240,522	543,893	484,484
Central ..	1,125	25,782	25,624	88,177	140,511	52,334	68,602
North-Central ..	380	5,111	4,171	7,578	15,636	8,058	10,218
Western ..	986	14,403	12,413	35,105	57,170	22,065	22,986
Wimmera ..	386	2,295	1,659	4,561	7,556	2,995	2,633
Mallee ..	294	2,295	1,739	3,565	6,348	2,783	5,807
Northern ..	751	10,345	8,974	39,050	54,730	15,680	20,743
North-Eastern ..	441	5,063	4,295	11,582	19,801	8,219	36,187
Gippsland ..	548	9,984	10,812	36,866	67,340	30,474	79,167
<b>Total ..</b>	<b>16,979</b>	<b>381,514</b>	<b>370,181</b>	<b>923,113</b>	<b>1,609,614</b>	<b>686,501</b>	<b>730,827</b>

\* Average employment over the whole year, includes working proprietors.

† Excludes drawings of working proprietors.

Factories in the Metropolitan Area constituted 71 per cent. of the total number in Victoria in 1959-60, 80 per cent. of the persons employed, and 79 per cent. of the value of production.

For information regarding the actual location of the statistical divisions named in the table, reference should be made to the map opposite page 120.

The number of factories and persons employed in these in each statistical division are shown in the following table :—

**VICTORIA—NUMBER OF FACTORIES AND PERSONS  
EMPLOYED IN EACH STATISTICAL DIVISION: CLASSIFIED  
ACCORDING TO SIZE OF FACTORY, 1959-60**

Size of Factory (Persons)	Statistical Division									
	Metro- politan	Central	North- Central	West- ern	Wim- mera	Mallee	North- ern	North- Eastern	Gipps- land	Total
NUMBER OF FACTORIES										
Under 5 ..	4,715	641	229	518	261	170	435	241	223	7,433
5-10 ..	2,860	236	72	263	84	73	160	99	156	4,003
11-20 ..	1,871	115	37	106	27	27	68	60	90	2,401
21-50 ..	1,497	72	30	53	10	17	54	31	52	1,816
51-100 ..	557	27	6	20	3	7	19	6	14	659
101-500 ..	496	24	5	22	1	..	13	3	10	574
501 and over	72	10	1	4	..	..	2	1	3	93
Total ..	12,068	1,125	380	986	386	294	751	441	548	16,979
NUMBER OF PERSONS EMPLOYED										
Under 5 ..	11,051	1,505	517	1,228	585	398	1,029	545	541	17,399
5-10 ..	20,069	1,623	491	1,774	562	479	1,028	689	1,065	27,780
11-20 ..	27,545	1,572	531	1,478	384	368	946	854	1,253	34,931
21-50 ..	47,622	2,342	917	1,644	286	588	1,702	952	1,487	57,540
51-100 ..	38,405	1,874	*	1,508	*	462	*	*	1,002	45,626
101-500 ..	95,554	5,530	1,683	4,260	*	..	2,864	*	2,120	113,094
501 and over	65,990	11,336	*	2,511	..	..	*	*	2,516	85,144
Total ..	306,236	25,782	5,111	14,403	2,295	2,295	10,345	5,063	9,984	381,514

\* Not available for publication.

The above table shows that in 1959-60 there were 667 factories each employing more than 101 persons with a total employment of 198,238 persons in Victoria. Of these 568 (161,544 persons) were located in the Metropolitan Area and 34 (16,866 persons) in the Central Statistical Division which includes Geelong and Berwick Shire. The balance, 65 factories (19,828 persons) were scattered over the remainder of the State, principally in the Western (26 factories and 6,771 persons) and Gippsland (13 factories and 4,636 persons) Statistical Divisions.

It should be noted that Castlemaine and Maryborough are included in the North-Central Statistical Division; Ballarat and Warrnambool in the Western Statistical Division; Bendigo and Shepparton in the

Northern Statistical Division; Wangaratta in the North-Eastern Statistical Division and Morwell and Yallourn in the Gippsland Statistical Division.

A map showing statistical divisions is shown opposite page 120.

### Employment in Factories

All persons employed in the manufacturing activities of a factory, including proprietors working in their own businesses and persons working regularly at home are counted as factory employees while those engaged in selling and distributing, such as salesmen, travellers, and carters employed on outward delivery of manufactured goods, are excluded. The grouping of occupations comprises (i) working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draftsmen, and other laboratory and research staff; (iv) foremen and overseers; (v) skilled and unskilled workers; and (vi) carters (excluding delivery), messengers, and persons working regularly at home.

The figures showing average employment in factories since 1928–29 represent the equivalent average number of persons employed, including working proprietors, over a full year of 52 weeks. This method is used for all purposes except where factories are classified according to size (see pages 564–565), where the average number of persons employed is the average over the period of operation.

The following table shows the average number of persons employed in factories in each industrial class in Victoria for the years 1955–56 to 1959–60 :—

#### VICTORIA—PERSONS EMPLOYED IN FACTORIES

Class of Industry	1955–56	1956–57	1957–58	1958–59	1959–60		
					Males	Females	Persons
I. Treatment of Non-metallic ferous Mine and Quarry Products .. .. .	6,492	6,398	6,341	6,522	6,247	317	6,564
II. Bricks, Pottery, Glass, &c. ..	5,893	5,652	5,660	5,846	5,761	699	6,460
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease .. .	16,577	16,653	16,996	17,392	17,698	3,533	16,231
IV. Industrial Metals, Machines, Conveyances .. .. .	132,270	131,299	134,221	139,115	131,515	19,328	150,843
V. Precious Metals, Jewellery, Plate .. .. .	2,562	2,605	2,469	2,150	1,628	352	1,980
VI. Textiles and Textile Goods (Not Dress) .. .. .	36,895	37,945	38,078	37,500	17,104	23,969	41,073
VII. Skins and Leather (Not Clothing or Footwear) ..	4,941	4,724	4,649	4,559	3,266	1,147	4,413
VIII. Clothing (Except Knitted)	46,889	47,093	45,764	45,783	13,504	31,756	45,260
IX. Food, Drink, and Tobacco	38,427	37,542	37,310	37,383	27,587	11,243	38,830
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving .. .. .	15,428	15,093	14,815	15,092	14,899	860	15,759
XI. Furniture of Wood, Bedding, &c. .. .. .	6,263	6,312	6,550	6,492	5,249	1,282	6,531
XII. Paper, Stationery, Printing, Bookbinding, &c. .. .	21,111	21,619	22,113	22,846	18,010	6,295	24,305
XIII. Rubber .. .. .	6,771	6,848	6,932	7,207	5,754	1,528	7,282
XIV. Musical Instruments ..	303	293	269	247	200	33	233
XV. Miscellaneous Products ..	9,827	10,313	10,357	9,863	6,952	3,815	10,767
Total, Classes I. to XV. .. .. .	350,649	350,389	352,524	357,997	270,374	106,157	376,531
XVI. Heat, Light, and Power ..	4,536	4,815	4,619	4,982	4,941	42	4,983
GRAND TOTAL .. .. .	355,185	355,204	357,143	362,979	275,315	106,199	381,514

The dominance of four classes, namely, Class IV.—Industrial Metals, Machines, and Conveyances; Class VI.—Textiles and Textile Goods (Not Dress); Class VIII.—Clothing (Except Knitted); and Class IX.—Food, Drink, and Tobacco with 72 per cent. of factory employment, should be noted.

27 per cent. of factory workers in 1959–60 were females. They exceeded males in Class VI.—Textiles and Textile Goods (Not Dress) with 58 per cent. and Class VIII.—Clothing (Except Knitted), with 70 per cent. of the Class total. Of the total females employed, 30 per cent. were in Class VIII.; 22 per cent. in Class VI.; 18 per cent. in Class IV.—Industrial Metals, Machines, and Conveyances; and 10 per cent. in Class IX.—Food, Drink, and Tobacco.

In the following table, the average number of persons employed in Victoria is classified according to the nature of their employment for the years 1950–51 to 1959–60 :—

#### VICTORIA—NATURE OF EMPLOYMENT IN FACTORIES

Year	Working Proprietors	Managerial and Clerical Staff	Chemists, Draftsmen, &c.	Foremen and Overseers	Workers in Factories (Skilled and Unskilled)	Carters (Excluding Delivery Only) and Messengers, &c.	Total
1950–51.. ..	11,526	31,089	3,745	13,343	254,555	2,534	316,792
1951–52.. ..	12,851	32,846	4,019	13,866	258,251	2,310	324,143
1952–53.. ..	13,392	32,722	4,098	13,639	244,866	2,042	310,759
1953–54.. ..	13,722	33,789	4,299	14,193	262,916	2,358	331,277
1954–55.. ..	14,053	36,262	4,590	14,862	274,741	2,140	346,648
1955–56.. ..	14,056	38,287	5,511	15,262	279,848	2,221	355,185
1956–57.. ..	13,967	40,279	5,585	15,498	277,507	2,368	355,204
1957–58.. ..	13,934	40,951	5,751	16,262	278,110	2,135	357,143
1958–59.. ..	13,704	42,960	6,152	17,264	280,772	2,127	362,979
1959–60.. ..	13,401	45,913	6,677	18,060	295,423	2,040	381,514

During the ten years reviewed in the previous table, the proportion of skilled and unskilled workers in factories declined from 80 per cent. to 77 per cent., managerial and clerical staffs increased from 10 per cent. to 12 per cent., chemists, draftsmen, &c., increased from 1 per cent. to 2 per cent., and foremen increased from 4 per cent. to 5 per cent.

In 1959–60 there was an average of 381,514 persons employed in factories and of these 3·5 per cent. were working proprietors; 13·8 per cent. comprised managerial, clerical, and professional staff; and the balance, 82·7 per cent., consisted of persons engaged as foremen, workers in the processes of manufacture, sorting, and packing.

The following table shows the nature of employment in factories in 1959-60, according to the class of industry:—

VICTORIA—NATURE OF EMPLOYMENT IN FACTORIES BY CLASSES OF INDUSTRY, 1959-60

Class of Industry	Working Proprietors	Managerial and Clerical Staff	Chemists, Draftsmen, &c.	Foremen and Overseers	Workers in Factories (Skilled and Unskilled)	Carters and Messengers	Total
I. Treatment of Non-metallic Mine and Quarry Products ..	280	747	98	392	5,024	23	6,564
II. Bricks, Pottery, Glass, &c. ..	82	548	42	249	5,532	7	6,460
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	112	2,679	1,153	810	11,321	156	16,231
IV. Industrial Metals, Machines, Conveyances ..	4,882	21,377	3,702	7,399	113,176	307	150,843
V. Precious Metals, Jewellery, Plate ..	227	198	7	98	1,449	1	1,980
VI. Textiles and Textile Goods (Not Dress) ..	594	3,595	250	1,941	34,559	134	41,073
VII. Skins and Leather (Not Clothing or Footwear) ..	265	398	22	230	3,476	22	4,413
VIII. Clothing (Except Knitted) ..	2,397	2,755	22	1,489	38,371	226	45,260
IX. Food, Drink, and Tobacco ..	1,908	4,920	499	1,956	28,709	838	38,830
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	1,039	1,687	36	772	12,113	112	15,759
XI. Furniture of Wood, Bedding, &c. ..	596	691	4	300	4,908	32	6,531
XII. Paper, Stationery, Printing, Bookbinding, &c. ..	659	3,397	236	1,087	18,821	105	24,305
XIII. Rubber ..	68	1,073	194	413	5,510	24	7,282
XIV. Musical Instruments ..	10	34	2	8	179	..	233
XV. Miscellaneous Products ..	266	1,490	268	611	8,095	37	10,767
Total, Classes I. to XV. ..	13,385	45,589	6,535	17,755	291,243	2,024	376,531
XVI. Heat, Light, and Power ..	16	324	142	305	4,180	16	4,983
GRAND TOTAL ..	13,401	45,913	6,677	18,060	295,423	2,040	381,514

It should be noted that while workers (skilled or unskilled) constitute 77 per cent. of the total numbers employed in factories, the percentage varies from 72 per cent. in Class III. to 86 per cent. in Class II. Class III. also has the highest percentage of managerial and clerical and research workers, 22 per cent., compared with the Victorian average of 14 per cent.

Where small factories predominate, there is usually a higher proportion of working proprietors than on the average and, as a working proprietor does much, or all, of the managerial and clerical work, a smaller than average managerial and clerical staff. This is particularly evident in Class V.—Precious Metals and Jewellery, where working proprietors comprise 12 per cent. of the total number employed; Class X.—Sawmills, Joinery, &c., 7 per cent.; and Class XI.—Furniture of Wood, Bedding, &c., 9 per cent. The average for Victoria is 4 per cent.

The following table shows the age distribution of male and female factory employees on the last pay day in June in each of the years 1951 to 1960:—

**VICTORIA—DISTRIBUTION OF EMPLOYEES ACCORDING  
TO AGE  
(Excluding Working Proprietors)**

Last Pay Day in June—	Males				Females			
	Under 16 Years	16 and under 21 Years	21 Years and over	Total	Under 16 Years	16 and under 21 Years	21 Years and over	Total
1951.. ..	2,790	16,274	198,053	217,117	2,139	14,550	75,508	92,197
1952.. ..	2,981	16,417	199,303	218,701	1,911	13,051	65,530	80,492
1953.. ..	2,972	17,890	200,533	221,395	2,432	13,546	67,056	83,034
1954.. ..	3,093	18,778	211,311	233,182	2,527	14,180	74,260	90,967
1955.. ..	2,908	19,417	220,582	242,907	2,381	14,316	76,863	93,560
1956.. ..	2,888	19,815	223,462	246,165	2,338	14,549	78,054	94,941
1957.. ..	2,966	20,446	222,402	245,814	2,480	14,571	77,282	94,333
1958.. ..	2,705	21,584	223,776	248,065	2,408	14,900	77,392	94,700
1959.. ..	2,595	22,203	229,285	254,083	2,535	15,774	79,213	97,522
1960.. ..	2,573	23,013	242,436	268,022	2,664	16,449	87,003	106,116

**VICTORIA—DISTRIBUTION OF EMPLOYEES ACCORDING  
TO AGE AT JUNE, 1960  
(Excluding Working Proprietors)**

Age Group				Males	Females	Persons
Under 16 Years	..	..	..	2,573	2,664	5,237
16 Years	..	..	..	3,833	3,089	6,922
17 Years	..	..	..	4,534	3,367	7,901
18 Years	..	..	..	5,083	3,417	8,500
19 Years	..	..	..	4,893	3,332	8,225
20 Years	..	..	..	4,670	3,244	7,914
21 Years and over	..	..	..	242,436	87,003	329,439
Total	..	..	..	268,022	106,116	374,138

The numbers of males and females employed in factories, and the proportions of the mean male and female population working in factories in 1959-60 and earlier years are shown in the following table :—

**VICTORIA—EMPLOYMENT OF MALES AND FEMALES IN  
FACTORIES**

Year Ended 30th June—	Males		Females		Total	
	Number	Average per 10,000 of Male Population	Number	Average per 10,000 of Female Population	Number	Average per 10,000 of Total Population
1919 ..	81,357	1,188	40,992	550	122,349	855
1929 ..	104,648	1,195	51,920	586	156,568	889
1939 ..	136,218	1,470	65,613	692	201,831	1,076
1949 ..	208,184	1,996	83,822	781	292,006	1,380
1955 ..	251,675	2,012	94,973	767	346,648	1,393
1956 ..	258,006	1,995	97,179	764	355,185	1,385
1957 ..	258,119	1,937	97,085	743	355,204	1,345
1958 ..	259,404	1,901	97,739	728	357,143	1,319
1959 ..	263,847	1,888	99,132	720	362,979	1,308
1960 ..	275,315	1,918	106,199	750	381,514	1,338

The numbers of females employed in each industrial class and in certain significant sub-classes, and the percentage that such female employment bears to total class or sub-class employment, are shown in the following table :—

## VICTORIA—FEMALE EMPLOYMENT IN FACTORIES

Class of Industry	Females Employed					
	Number			Percentage of Total Employment in Each Class of Industry		
	1957-58	1958-59	1959-60	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products ..	353	323	317	5.6	5.0	4.8
II. Bricks, Pottery, Glass, &c. ..	505	553	699	8.9	9.5	10.8
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	3,978	3,983	3,533	23.4	22.9	21.8
IV. Industrial Metals, Machines, Conveyances—	15,446	16,732	19,328	11.5	12.0	12.8
Plant Equipment and Machinery	2,609	2,548	3,107	10.7	10.3	11.2
Electrical Machinery, Cables, and Apparatus ..	3,055	3,499	3,878	25.5	25.5	25.8
Sheet Metal Working ..	1,737	2,069	2,290	20.4	20.5	21.2
Wireless and Amplifying Apparatus ..	1,400	1,459	1,545	40.9	40.2	40.3
V. Precious Metals, Jewellery, Plate ..	408	364	352	16.5	16.9	17.8
VI. Textiles and Textile Goods (Not Dress)—	21,289	21,314	23,969	55.9	56.8	58.4
Cotton Spinning and Weaving	1,958	2,021	2,053	50.5	51.9	52.7
Wool-Carding, Spinning, Weaving	6,430	5,916	6,399	53.3	53.8	54.7
Hosiery and Other Knitted Goods	10,483	10,790	12,411	69.7	70.6	73.3
VII. Skins and Leather (Not Clothing or Footwear) ..	1,055	1,090	1,147	22.7	23.9	26.0
VIII. Clothing (Except Knitted)—	31,780	31,755	31,756	69.4	69.4	70.2
Tailoring and Ready-Made Clothing ..	6,914	6,963	7,592	70.7	86.1	73.0
Dressmaking, Hemstitching ..	7,528	7,280	7,535	86.1	88.5	87.1
Boots and Shoes (Not Rubber)	5,721	5,769	5,896	51.6	51.4	53.4
Dyeworks and Cleaning, &c. ..	2,054	1,970	1,599	53.9	52.7	50.0
IX. Food, Drink, and Tobacco—	10,329	10,395	11,243	27.7	27.8	29.0
Bakeries (Including Cakes and Pastry) ..	1,287	1,458	1,510	23.5	24.1	25.1
Confectionery (Including Chocolate and Icing Sugar)	1,607	1,673	1,700	52.8	54.7	54.8
Jam, Fruit, and Vegetable Canning	1,817	1,549	1,723	43.1	40.7	42.0
Tobacco, Cigars, Cigarettes ..	959	943	976	49.2	49.2	47.4
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	759	823	860	5.1	5.5	5.5
XI. Furniture of Wood, Bedding, &c. ..	1,078	1,116	1,282	16.5	17.2	19.6
XII. Paper, Stationery, Printing, Book-binding, &c. ..	5,504	5,712	6,295	24.9	25.0	25.9
XIII. Rubber ..	1,409	1,469	1,528	20.3	20.4	21.0
XIV. Musical Instruments ..	41	38	33	15.2	15.4	14.2
XV. Miscellaneous Products ..	3,769	3,431	3,815	36.4	34.8	35.4
XVI. Heat, Light, and Power ..	36	34	42	0.8	0.7	0.8
Total Classes Only ..	97,739	99,132	106,199	27.4	27.3	27.8

In Class XVI.—Heat, Light and Power, the percentage of females to total persons employed is at its lowest, 0.8 per cent. In Class VIII.—Clothing (Except Knitted) females predominate and comprise 70 per cent. of the total number of persons employed. Within Class VIII., in the Dressmaking sub-class, nine out of every ten persons engaged are females. In Class IV.—Industrial Metals, Machines, and Conveyances, females constitute 13 per cent. of the persons employed. In 1938-39 only 6 per cent. of the persons employed in Class IV. were females.

*Child Labour in Factories*

The Labour and Industry Act of Victoria debarb the employment of female children under the age of fifteen years unless special permission is granted by the Chief Inspector of Factories on the grounds of poverty or hardship.

The Victorian Education Act makes daily attendance at school compulsory between the ages of six and fourteen years.

These provisos contribute to the very low incidence of child labour in this State.

**Salaries, Wages, and Other Costs***Salaries and Wages*

The next table gives comprehensive information regarding salaries and wages paid in the various classes of industry in Victoria in 1959-60. Amounts paid to managers, clerical staff, chemists, and draftsmen, &c., are shown separately from those paid to foremen, overseers, workers in the factory, &c. There is also a dissection within these categories of the amounts paid to male and female employees.

It should be noted that in all tables of salaries and wages paid the amounts drawn by working proprietors are excluded.

**VICTORIA—SALARIES AND WAGES PAID IN FACTORIES,  
1959-60**

(Excludes Drawings of Working Proprietors)  
(£'000)

Class of Industry	Managers, Clerical Staff, Chemists, Draftsmen, &c.		All Other Employees		Total		
	Males	Females	Males	Females	Males	Females	Persons
I. Treatment of Non-metalliferous Mine and Quarry Products ..	938	155	6,189	50	7,127	205	7,332
II. Bricks, Pottery, Glass, &c. ..	684	120	5,653	289	6,337	409	6,746
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	4,463	843	11,519	1,541	15,982	2,384	18,366
IV. Industrial Metals, Machines, Conveyances ..	26,788	5,030	118,504	7,504	145,292	12,534	157,826
V. Precious Metals, Jewellery, Plate ..	213	59	1,393	175	1,606	234	1,840
VI. Textiles and Textile Goods (Not Dress) ..	3,219	1,403	16,178	14,036	19,397	15,439	34,836
VII. Skins and Leather (Not Clothing or Footwear) ..	476	101	2,771	596	3,247	697	3,944
VIII. Clothing (Except Knitted) ..	2,254	1,162	10,530	18,610	12,784	19,772	32,556
IX. Food, Drink, and Tobacco ..	5,029	1,527	23,939	5,569	28,968	7,096	36,064
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	1,771	371	12,195	149	13,966	520	14,486
XI. Furniture of Wood, Bedding, &c. ..	650	211	4,254	540	4,904	751	5,655
XII. Paper, Stationery, Printing, Bookbinding, &c. ..	3,740	1,027	18,331	2,989	22,071	4,016	26,087



VICTORIA—SALARIES AND WAGES PAID IN FACTORIES  
1959-60—*continued*  
(Excludes Drawings of Working Proprietors)  
(£'000)

Class of Industry	Managers, Clerical Staff, Chemists, Draftsmen, &c.		All Other Employees		Total		
	Males	Females	Males	Females	Males	Females	Persons
XIII. Rubber .. ..	1,221	275	5,836	743	7,057	1,018	8,075
XIV. Musical Instruments ..	29	8	168	13	197	21	218
XV. Miscellaneous Products ..	1,659	516	6,110	1,858	7,769	2,374	10,143
Total, Classes I. to XV. ..	53,134	12,808	243,570	54,662	296,704	67,470	364,174
XVI. Heat, Light, and Power ..	659	20	5,315	13	5,974	33	6,007
GRAND TOTAL ..	53,793	12,828	248,885	54,675	302,678	67,503	370,181

Of the total amount of salaries and wages paid in Victoria in 1959-60—£370,181,000—the Industrial Metals, &c., group was responsible for £157,826,000 or 43 per cent., Food, Drink, &c., £36,064,000 or 10 per cent., and Clothing, &c., £32,556,000 or 9 per cent.

The total amount of salaries and wages paid in industry in Victoria in each of the years 1950-51 to 1959-60 is shown below under similar headings to those in the preceding table. The amount of salaries paid to each employee is also shown.

VICTORIA—SALARIES AND WAGES PAID IN FACTORIES  
(Excludes Drawings by Working Proprietors)

Year	Salaries and Wages Paid to—				Total Salaries and Wages Paid to—		
	Managers, Clerical Staff, Chemists, Draftsmen, &c.		All Other Employees				
	Males	Females	Males	Females	Males	Females	Persons
TOTAL AMOUNT PAID (£'000)							
1950-51 .. ..	18,505	4,559	112,418	27,725	130,923	32,284	163,207
1951-52 .. ..	23,286	5,833	140,402	33,065	163,688	38,898	202,586
1952-53 .. ..	25,725	6,343	146,172	32,638	171,897	38,981	210,878
1953-54 .. ..	27,875	6,877	162,698	38,586	190,573	45,463	236,036
1954-55 .. ..	31,735	7,836	181,642	41,537	213,377	49,373	262,750
1955-56 .. ..	37,312	8,946	197,472	43,214	234,784	52,160	286,944
1956-57 .. ..	40,159	9,963	201,428	45,058	241,587	55,021	296,608
1957-58 .. ..	43,363	10,347	209,979	46,851	253,342	57,198	310,540
1958-59 .. ..	46,587	11,190	219,028	47,531	265,615	58,721	324,336
1959-60 .. ..	53,793	12,828	248,885	54,675	302,678	67,503	370,181
AVERAGE PER EMPLOYEE (£)							
1950-51 .. ..	817	374	586	353	610	356	535
1951-52 .. ..	962	461	709	433	737	437	651
1952-53 .. ..	1,052	513	760	478	793	483	679
1953-54 .. ..	1,108	532	800	507	834	511	713
1954-55 .. ..	1,178	563	855	524	891	530	790
1955-56 .. ..	1,292	570	910	538	955	547	841
1956-57 .. ..	1,326	640	934	566	982	578	869
1957-58 .. ..	1,405	654	969	586	1,023	598	905
1958-59 .. ..	1,439	668	996	593	1,053	606	929
1959-60 .. ..	1,177	632	1,084	637	1,099	636	970

*Power, Fuel, and Light Used*

The following table shows the cost of power, fuel, and light used during the five years 1955-56 to 1959-60 :—

### VICTORIA—COST OF POWER, FUEL, AND LIGHT USED IN FACTORIES

(£'000)

Class of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	1,785	1,991	2,028	2,236	2,710
II. Bricks, Pottery, Glass, &c. .. ..	1,997	1,961	1,974	2,043	2,215
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease .. ..	3,530	6,196	6,355	6,384	6,642
IV. Industrial Metals, Machines, Conveyances .. ..	5,525	6,212	6,963	7,742	8,950
V. Precious Metals, Jewellery, Plate .. ..	112	136	142	143	146
VI. Textiles and Textile Goods (Not Dress) .. ..	1,848	2,158	2,367	2,424	2,668
VII. Skins and Leather (Not Clothing or Footwear) .. ..	411	469	469	495	457
VIII. Clothing (Except Knitted) .. ..	786	933	905	967	937
IX. Food, Drink, and Tobacco .. ..	5,208	5,651	5,747	5,951	6,126
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving .. ..	607	649	663	782	850
XI. Furniture of Wood, Bedding, &c. .. ..	93	111	121	133	136
XII. Paper, Stationery, Printing, Bookbinding, &c. .. ..	1,502	1,705	1,792	1,927	2,141
XIII. Rubber .. ..	888	983	1,088	1,166	1,265
XIV. Musical Instruments .. ..	12	13	11	11	9
XV. Miscellaneous Products .. ..	421	506	568	606	913
Total Classes I. to XV. .. ..	24,725	29,674	31,193	33,010	36,165
XVI. Heat, Light, and Power .. ..	9,873	10,707	11,569	10,368	10,975
GRAND TOTAL .. ..	34,598	40,381	42,762	43,378	47,140

The next table gives in detail for each of the years 1955-56 to 1959-60 information dealing with the cost of each type of fuel used. The cost of water and lubricating oil is also included.

### VICTORIA—COST OF ITEMS OF POWER, FUEL, AND LIGHT USED IN FACTORIES

(£'000)

Commodity	1955-56	1956-57	1957-58	1958-59	1959-60
Coal—					
Black .. ..	2,713	2,738	2,834	3,009	2,678
Brown .. ..	7,025	7,540	7,882	7,582	7,805
Brown Coal Briquettes .. ..	2,347	1,696	1,737	1,464	2,356
Coke .. ..	1,137	1,121	1,012	842	977
Wood .. ..	680	637	563	560	609
Fuel Oil .. ..	7,704	11,616	12,201	11,272	11,544
Tar (Fuel) .. ..	238	257	255	164	179
Electricity .. ..	9,122	10,841	11,970	13,910	15,827
Gas .. ..	911	986	1,082	1,120	1,848
Other (Charcoal, &c.) .. ..	789	833	878	1,061	648
Water .. ..	1,172	1,314	1,485	1,543	1,725
Lubricating Oils .. ..	760	802	863	851	944
Total .. ..	34,598	40,381	42,762	43,378	47,140

Over the five years shown in the above table, the cost of fuel oil, electricity, and gas, respectively, showed the largest proportionate increases in that order. In 1959-60 electricity, fuel oil, and brown coal represented 34, 24, and 17 per cent. respectively of the total cost of power, fuel, and light.

Particulars of the quantities of the various fuels used in factories over the five year period 1955-56 to 1959-60 are given below :—

### VICTORIA—COST OF MATERIALS USED IN FACTORIES

Commodity	Unit of Quantity	1955-56	1956-57	1957-58	1958-59	1959-60
Coal—						
Black .. ..	'000 tons	411	408	453	483	427
Brown .. ..	'000 tons	8,551	9,058	9,127	10,576	11,746
Brown Coal						
Briquettes ..	'000 tons	487	347	357	305	510
Coke .. ..	'000 tons	142	131	111	86	89
Wood .. ..	'000 tons	377	324	266	275	352
Fuel Oil ..	'000 gall.	132,901	212,291	222,813	204,068	218,670
Tar Fuel.. ..	'000 gall.	4,893	4,985	4,550	2,996	3,412

### Cost of Materials Used

The cost of materials used in factories is shown by classes for the last five years in the next table. "Materials Used" include the value of containers, &c., the cost of tools replaced, and repairs to plant.

### VICTORIA—COST OF MATERIALS USED IN FACTORIES (£'000)

Class of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products ..	10,984	11,639	12,370	13,800	15,671
II. Bricks, Pottery, Glass, &c. ..	5,216	5,054	5,102	5,254	7,055
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	77,018	90,825	98,261	100,164	105,314
IV. Industrial Metals, Machines, Conveyances ..	182,134	175,401	202,772	213,429	249,955
V. Precious Metals, Jewellery, Plate..	2,660	3,156	2,871	1,984	1,995
VI. Textiles and Textile Goods (Not Dress) ..	61,582	71,068	77,985	67,531	83,004
VII. Skins and Leather (Not Clothing or Footwear) ..	11,092	12,570	11,129	10,649	12,089
VIII. Clothing (Except Knitted) ..	47,467	47,648	48,160	49,765	53,113
IX. Food, Drink, and Tobacco ..	165,265	174,978	183,714	182,920	194,821
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	24,671	24,513	26,946	27,430	31,647
XI. Furniture of Wood, Bedding, &c. ..	8,634	8,974	10,123	10,133	11,632
XII. Paper, Stationery, Printing, Book-binding, &c. ..	38,803	42,933	46,425	51,225	58,057
XIII. Rubber ..	17,457	15,455	17,415	17,876	22,128
XIV. Musical Instruments ..	262	305	251	226	199
XV. Miscellaneous Products ..	15,378	16,815	18,556	19,930	23,121
Total, Classes I. to XV. ..	668,623	701,334	762,080	772,316	869,801
XVI. Heat, Light, and Power ..	6,223	6,395	6,379	6,400	6,172
GRAND TOTAL .. ..	674,846	707,729	768,459	778,716	875,973

### Value of Output and Production

Value of factory output by classes of industry in each of the years 1955-56 to 1959-60 is shown in the following table :—

#### VICTORIA—VALUE OF FACTORY OUTPUT (£'000)

Class of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products ..	23,176	24,734	26,220	29,341	34,055
II. Bricks, Pottery, Glass, &c. ..	15,075	14,750	15,844	16,946	21,149
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	120,507	144,750	153,180	161,712	170,424
IV. Industrial Metals, Machines, Conveyances ..	361,813	361,874	408,199	435,371	511,662
V. Precious Metals, Jewellery, Plate ..	6,148	6,314	6,436	5,290	5,268
VI. Textiles and Textile Goods (Not Dress) ..	108,719	123,493	130,872	123,508	146,274
VII. Skins and Leather (Not Clothing or Footwear) ..	17,942	19,007	17,607	17,344	18,971
VIII. Clothing (Except Knitted) ..	93,070	95,936	97,411	100,813	106,650
IX. Food, Drink, and Tobacco ..	230,694	245,863	260,893	259,773	282,559
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	45,143	45,216	49,640	50,860	57,492
XI. Furniture of Wood, Bedding, &c. ..	16,648	17,224	19,308	19,837	21,973
XII. Paper, Stationery, Printing, Book-binding, &c. ..	72,606	80,931	90,058	99,012	112,965
XIII. Rubber ..	29,771	29,035	31,959	34,582	38,010
XIV. Musical Instruments ..	651	651	699	596	533
XV. Miscellaneous Products ..	29,132	32,643	35,107	37,440	42,699
Total, Classes I. to XV. ..	1,171,095	1,242,421	1,343,433	1,392,425	1,570,684
XVI. Heat, Light, and Power ..	30,297	33,720	34,264	38,616	38,930
GRAND TOTAL ..	1,201,392	1,276,141	1,377,697	1,431,041	1,609,614

In the next table the value of production in Victoria is given according to the various classes of industry for each of the last five years :—

#### VICTORIA—VALUE OF PRODUCTION OF FACTORIES (£'000)

Class of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products ..	10,407	11,104	11,822	13,305	15,674
II. Bricks, Pottery, Glass, &c. ..	7,862	7,735	8,768	9,649	11,879
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	39,959	47,729	48,563	55,164	58,467
IV. Industrial Metals, Machines, Conveyances ..	174,154	180,261	198,464	214,200	252,757
V. Precious Metals, Jewellery, Plate ..	3,376	3,022	3,423	3,163	3,127
VI. Textiles and Textile Goods (Not Dress) ..	45,289	50,267	50,520	53,553	60,602
VII. Skins and Leather (Not Clothing or Footwear) ..	6,439	5,968	6,009	6,200	6,425
VIII. Clothing (Except Knitted) ..	44,817	47,355	48,347	50,081	52,600
IX. Food, Drink, and Tobacco ..	60,221	65,234	71,433	70,902	81,612
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	19,865	20,054	22,031	22,648	24,995
XI. Furniture of Wood, Bedding, &c. ..	7,921	8,139	9,063	9,571	10,205
XII. Paper, Stationery, Printing, Book-binding, &c. ..	32,301	36,293	41,841	45,860	52,767
XIII. Rubber ..	11,426	12,597	13,457	15,540	14,617
XIV. Musical Instruments ..	377	333	437	359	325
XV. Miscellaneous Products ..	13,333	15,322	15,983	16,904	18,665
Total, Classes I. to XV. ..	477,747	511,413	550,161	587,099	664,717
XVI. Heat, Light, and Power ..	14,201	16,618	16,315	21,848	21,784
GRAND TOTAL ..	491,948	528,031	566,476	608,947	686,501

Value of production—the value added to raw materials by the process of manufacture—and not the value of output, is used in measuring the relative importance of various industries or the value of the manufacturing industries as a whole. A definition of “value of production” will be found on page 549.

### Relation of Costs to Output and Production

Certain costs of production, the value of output, and the balance available for profit, interest, rent, taxation, and depreciation, &c., in each class of manufacturing industry during the year 1959–60 are given in the following tables :—

#### VICTORIA—FACTORY COSTS AND OUTPUT, 1959–60 (£'000)

Class of Industry	Costs of—			Balance between Value of Output and Specified Costs‡	Value of Output
	Materials Used*	Fuel, Light, and Power Used†	Salaries and Wages Paid		
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	15,671	2,710	7,332	8,342	34,055
II. Bricks, Pottery, Glass, &c. ..	7,055	2,215	6,746	5,133	21,149
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease .. ..	105,314	6,643	18,366	40,101	170,424
IV. Industrial Metals, Machines, Conveyances .. ..	249,955	8,950	157,826	94,931	511,662
V. Precious Metals, Jewellery, Plate ..	1,995	146	1,840	1,287	5,268
VI. Textile and Textile Goods (Not Dress)	83,004	2,668	34,836	25,766	146,274
VII. Skins and Leather (Not Clothing or Footwear) .. ..	12,089	457	3,944	2,481	18,971
VIII. Clothing (Except Knitted) ..	53,113	937	32,556	20,044	106,650
IX. Food, Drink, and Tobacco ..	194,821	6,126	36,064	45,548	282,559
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving .. ..	31,647	850	14,486	10,509	57,492
XI. Furniture of Wood, Bedding, &c. ..	11,632	136	5,655	4,550	21,973
XII. Paper, Stationery, Printing, Book-binding, &c. .. ..	58,057	2,141	26,087	26,680	112,965
XIII. Rubber .. ..	22,128	1,265	8,075	6,542	38,010
XIV. Musical Instruments .. ..	199	9	218	107	533
XV. Miscellaneous Products .. ..	23,121	913	10,143	8,522	42,699
Total, Classes I. to XV. ..	869,801	36,166	364,174	300,543	1,570,684
XVI. Heat, Light, and Power .. ..	6,172	10,974	6,007	15,777	38,930
GRAND TOTAL .. ..	875,973	47,140	370,181	316,320	1,609,614

\* Includes containers, tools replaced, and material used in repairs to plant.

† Includes cost of lubricants and water.

‡ Balance available to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation, &c., as well as drawings by working proprietors and profit.

# VICTORIA—PROPORTIONATE VALUE OF COSTS, ETC., TO PRODUCTION IN FACTORIES, 1959-60

(Per Cent.)

Class of Industry	Proportion of Costs, &c., to Total Value of Output				
	Materials Used*	Fuel, Light, and Power Used†	Salaries and Wages Paid	Balance between Value of Output and Specified Costs‡	Total
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	46·0	8·0	21·5	24·5	100·0
II. Bricks, Pottery, Glass, &c. ..	33·3	10·5	31·9	24·3	100·0
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease .. ..	61·8	3·9	10·8	23·5	100·0
IV. Industrial Metals, Machines, Conveyances .. ..	48·9	1·7	30·8	18·6	100·0
V. Precious Metals, Jewellery, Plate ..	37·9	2·8	34·9	24·4	100·0
VI. Textiles and Textile Goods (Not Dress) .. ..	56·8	1·8	23·8	17·6	100·0
VII. Skins and Leather (Not Clothing or Footwear) .. ..	63·7	2·4	20·8	13·1	100·0
VIII. Clothing (Except Knitted) ..	49·8	0·9	30·5	18·8	100·0
IX. Food, Drink, and Tobacco ..	68·9	2·2	12·8	16·1	100·0
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	55·0	1·5	25·2	18·3	100·0
XI. Furniture of Wood, Bedding, &c.	53·0	0·6	25·7	20·7	100·0
XII. Paper, Stationery, Printing, Book-binding, &c. .. ..	51·4	1·9	23·1	23·6	100·0
XIII. Rubber .. ..	58·2	3·3	21·3	17·2	100·0
XIV. Musical Instruments .. ..	37·3	1·7	40·9	20·1	100·0
XV. Miscellaneous Products .. ..	54·1	2·1	23·8	20·0	100·0
Total, Classes I. to XV. ..	55·4	2·3	23·2	19·1	100·0
XVI. Heat, Light, and Power .. ..	15·9	28·2	15·4	40·5	100·0
GRAND TOTAL .. ..	54·4	2·9	23·0	19·7	100·0

For footnotes see page 577.

There are considerable variations in the proportions which the cost of materials and the expenditure on wages bear to the value of the output in the different classes of industries. These are, of course, due to the difference in the treatment required to convert the materials to their final form. Thus, in Class II., the sum paid in wages represents 31·9 per cent. and the cost of raw materials 33·3 per cent. of the values of the finished articles, whilst, in Class IX., the expenditure on wages amounts to 12·8 per cent. and that on raw materials to 68·9 per cent. of the value of the output.

In the next table specified costs of production, the value of the output of factories, and the balance available for profit and miscellaneous expenses are compared for each of the years 1950-51 to 1959-60 :—

**VICTORIA—SPECIFIED COSTS OF PRODUCTION, ETC., AND  
VALUE OF OUTPUT OF FACTORIES**

(£'000)

Year Ended 30th June—	Specified Costs of Production			Balance between Value of Output and Specified Costs‡	Total Value of Output
	Materials Used*	Fuel, Light, and Power Used†	Salaries and Wages		
1951.. ..	382,002	17,371	163,207	112,453	675,033
1952.. ..	477,617	21,990	202,586	131,774	833,967
1953.. ..	476,487	25,626	210,878	147,155	860,146
1954.. ..	548,111	29,080	236,036	172,278	985,505
1955.. ..	616,665	31,768	262,750	189,473	1,100,656
1956.. ..	674,846	34,598	286,944	205,004	1,201,392
1957.. ..	707,729	40,381	296,608	231,423	1,276,141
1958.. ..	768,459	42,762	310,540	255,936	1,377,697
1959.. ..	778,716	43,378	324,336	284,611	1,431,041
1960.. ..	875,973	47,140	370,181	316,320	1,609,614

For footnotes see page 577.

In the following table these figures are converted to their respective percentages of the value of output :—

**VICTORIA—PERCENTAGE OF SPECIFIED COSTS OF  
PRODUCTION, ETC., TO VALUE OF OUTPUT OF FACTORIES**

(Per Cent.)

Year Ended 30th June—	Specified Costs of Production			Balance between Value of Output and Specified Costs‡	Total
	Materials Used*	Fuel, Light, and Power Used†	Salaries and Wages		
1951.. ..	56.6	2.6	24.2	16.6	100.0
1952.. ..	57.3	2.6	24.3	15.8	100.0
1953.. ..	55.4	3.0	24.5	17.1	100.0
1954.. ..	55.6	2.9	24.0	17.5	100.0
1955.. ..	56.0	2.9	23.9	17.2	100.0
1956.. ..	56.2	2.9	23.9	17.0	100.0
1957.. ..	55.5	3.2	23.2	18.1	100.0
1958.. ..	55.8	3.1	22.5	18.6	100.0
1959.. ..	54.4	3.0	22.7	19.9	100.0
1960.. ..	54.4	2.9	23.0	19.7	100.0

For footnotes see page 577.

### Land, Buildings, Plant, and Machinery

The following statement shows the value of land and buildings used in connexion with the various classes of manufacturing industries for the years 1955-56 to 1959-60 :—

#### VICTORIA—FACTORIES : VALUE OF LAND AND BUILDINGS (£'000)

Class of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products .. ..	3,309	3,937	4,365	5,212	9,743
II. Bricks, Pottery, Glass, &c. ..	2,624	3,401	3,603	4,051	5,018
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease .. ..	21,737	24,964	28,851	29,873	28,094
IV. Industrial Metals, Machines, Conveyances .. ..	70,716	85,848	95,603	106,642	126,411
V. Precious Metals, Jewellery, Plate ..	1,538	1,704	1,721	1,581	1 551
VI. Textiles and Textile Goods (Not Dress) .. ..	18,079	20,803	22,475	26,671	28,657
VII. Skins and Leather (Not Clothing or Footwear) .. ..	2,468	2,859	2,806	3,001	3,821
VIII. Clothing (Except Knitted) ..	13,239	15,329	16,516	18,609	20,391
IX. Food, Drink, and Tobacco ..	35,345	39,343	43,318	46,878	52,057
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving .. ..	6,154	6,976	7,590	8,379	10,482
XI. Furniture of Wood, Bedding, &c. ..	3,367	3,709	4,490	4,818	5,306
XII. Paper, Stationery, Printing, Book-binding, &c. .. ..	14,462	15,578	17,362	19,696	23,801
XIII. Rubber .. ..	3,570	3,927	4,680	4,979	5,171
XIV. Musical Instruments .. ..	166	150	183	229	283
XV. Miscellaneous Products .. ..	4,644	5,372	5,851	6,378	8,734
Total, Classes I. to XV. ..	201,418	233,900	259,414	286,997	329,520
XVI. Heat, Light, and Power .. ..	13,503	18,124	20,793	26,233	24,215
GRAND TOTAL .. ..	214,921	252,024	280,207	313,230	353,735

The values recorded in the above table and in the table which follows are generally the values shown in the books of the individual firms after allowance has been made for depreciation, but they include estimates of the capital value of premises and plant rented. The totals shown in the tables consequently do not represent the actual amount of capital invested in industry.

Where land and buildings, &c., and plant and machinery, &c., are rented by the occupiers of factories, their capital value has been computed by capitalizing the rent paid at fifteen years' and ten years' purchase respectively.



In the following table the depreciated book values of machinery and plant used in the various classes of manufacturing industries is shown for each of the years 1955-56 to 1959-60 :—

**VICTORIA—FACTORIES : VALUE OF PLANT AND MACHINERY**  
(£'000)

Class of Industry	1955-56	1956-57	1957-58	1958-59	1959-60
I. Treatment of Non-metalliferous Mine and Quarry Products ..	4,586	6,174	6,569	8,315	16,976
II. Bricks, Pottery, Glass, &c. ..	2,854	3,054	3,005	3,286	3,888
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	46,930	48,540	51,435	58,002	54,094
IV. Industrial Metals, Machines, Conveyances ..	53,270	62,505	69,561	83,490	89,797
V. Precious Metals, Jewellery, Plate ..	544	625	588	540	490
VI. Textiles and Textile Goods (Not Dress) ..	17,951	17,948	19,420	21,696	23,278
VII. Skins and Leather (Not Clothing or Footwear) ..	1,469	1,479	1,407	1,490	1,476
VIII. Clothing (Except Knitted) ..	6,165	7,234	6,850	7,501	7,840
IX. Food, Drink, and Tobacco ..	32,253	35,587	38,525	39,848	43,938
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	5,228	5,401	5,237	6,684	7,000
XI. Furniture of Wood, Bedding, &c. ..	1,056	1,129	1,189	1,271	1,276
XII. Paper, Stationery, Printing, Book-binding, &c. ..	20,581	21,124	20,925	22,064	25,146
XIII. Rubber ..	4,846	4,202	4,603	4,529	6,598
XIV. Musical Instruments ..	89	114	106	72	73
XV. Miscellaneous Products ..	4,045	4,510	5,246	5,064	6,973
Total, Classes I. to XV. ..	201,867	219,626	234,666	263,852	288,843
XVI. Heat, Light, and Power ..	56,428	71,159	76,213	83,577	88,249
GRAND TOTAL ..	258,295	290,785	310,879	347,429	377,092

Motive power classified in the tables which follow relates to the "rated horse-power" of engines used. Engines in reserve or idle are the subject of a separate table, but obsolete engines are completely excluded from any information shown.

**VICTORIA—TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE IN FACTORIES\*, 1959-60**

Class of Industry	Steam		Internal Combustion			Water	Motors Driven by Electricity		Total without Duplication
	Reciprocating	Turbine	Gas	Petrol or Other Light Oils	Heavy Oils		Purchased	Own Generation	
I. Treatment of Non-metalliferous Mine and Quarry Products	1,249	53,500	..	923	..	..	32,763	34,388	88,435
II. Bricks, Pottery, Glass, &c. ..	1,045	..	..	197	..	..	36,094	10	37,336
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease ..	7,204	14,045	1,680	2,002	..	50	104,288	9,951	129,269
IV. Industrial Metals, Machines, Conveyances ..	1,747	12	..	5,713	..	..	473,459	1,866	480,931
V. Precious Metals, Jewellery, Plate ..	30	..	..	..	..	..	4,075	..	4,105
VI. Textiles and Textile Goods (Not Dress) ..	103	15	..	391	..	..	104,034	..	104,543

For footnote see next page.

**VICTORIA—TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE IN FACTORIES\*, 1959-60—continued**

Class of Industry	Steam		Internal Combustion			Water	Motors Driven by Electricity		Total without Duplication
	Reciprocating	Turbine	Gas	Petrol or Other Light Oils	Heavy Oils		Purchased	Own Generation	
VII. Skins and Leather (Not Clothing or Footwear) ..	825	95	..	316	..	..	20,281	670	21,517
VIII. Clothing (Except Knitted) ..	132	..	..	434	..	..	29,972	..	30,538
IX. Food, Drink, and Tobacco ..	4,221	1,515	..	4,890	..	830	197,215	4,342	208,671
X. Sawmills, Joinery, Boxes, &c., Wood Turning and Carving ..	6,799	146	64	25,827	..	10	98,032	2,367	130,878
XI. Furniture of Wood, Bedding, &c. ..	..	..	..	40	..	..	14,959	..	14,999
XII. Paper, Stationery, Printing, Book-binding, &c. ..	650	23,500	..	313	..	..	81,787	24,842	106,250
XIII. Rubber ..	..	..	..	320	..	..	63,595	30	63,915
XIV. Musical Instruments ..	..	..	..	..	..	..	312	..	312
XV. Miscellaneous Products ..	225	..	..	128	..	..	30,922	..	31,275
Total, Classes I. to XV. ..	24,230	92,828	1,744	41,494	..	890	1,291,788	78,466	1,452,974
XVI. Gas Works ..	2,870	1,232	12	1,160	..	..	11,443	80	16,717
GRAND TOTAL	27,100	94,060	1,756	42,654	..	890	1,303,231	78,546	1,469,691

\* Includes gas works, but excludes central electric stations.

The total rated horse-power in reserve or idle during 1959-60 and not included above was 191,835.

Motors driven by purchased electricity comprised approximately 94 per cent. of the total horse-power used in factories other than central electric stations in 1959-60, while steam turbines were next in demand with 6 per cent.

A comparison over the ten year period 1950-51 to 1959-60 of the total rated horse-power used to drive engines and electric motors ordinarily in use in factories is given in the table which follows :—

**VICTORIA—TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE IN FACTORIES\***

Year	Steam		Internal Combustion			Water	Motors Driven by Electricity		Total without Duplication
	Reciprocating	Turbine	Gas	Petrol or Other Light Oils	Heavy Oils		Purchased	Own Generation	
1950-51 ..	23,210	39,442	1,959	13,661	17,096	1,508	835,755	34,541	932,631
1951-52 ..	24,929	41,149	1,642	17,544	20,922	1,261	891,480	39,184	998,927
1952-53 ..	23,626	41,224	1,616	18,807	22,318	1,269	933,703	38,616	1,042,563
1953-54 ..	24,516	42,467	1,680	23,950	19,629	1,317	976,138	75,070	1,089,697
1954-55 ..	23,983	49,397	2,084	24,849	17,985	1,241	1,045,472	46,739	1,165,011
1955-56 ..	24,757	57,185	1,864	27,650	18,428	1,288	1,122,883	54,145	1,254,055
1956-57 ..	22,905	67,270	1,764	27,750	14,330	1,079	1,190,000	60,433	1,325,098
1957-58 ..	21,749	60,317	3,508	30,453	12,721	1,118	1,195,521	67,246	1,325,387
1958-59 ..	21,332	71,394	2,857	31,677	9,627	919	1,251,303	53,810	1,389,109
1959-60 ..	27,100	94,060	1,756	42,654	..	890	1,303,231	78,546	1,469,691

\* Includes gas works, but excludes central electric stations

The following table shows the total rated horse-power for each year from 1950-51 to 1959-60 for engines and electric motors in reserve or idle. It includes engines which are used only occasionally, or during periods of breakdown to own engines or power supply.

**VICTORIA—TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS IN RESERVE OR IDLE IN FACTORIES\***

Year	Rated Horse-power of Engines, &c., in Reserve or Idle			Year	Rated Horse-power of Engines, &c., in Reserve or Idle		
	Purchased Electricity	All Other Types	Total		Purchased Electricity	All Other Types	Total
1950-51	73,667	46,220	119,887	1955-56	98,660	59,227	157,887
1951-52	84,760	57,480	142,240	1956-57	111,049	63,011	174,060
1952-53	86,488	62,723	149,211	1957-58	117,976	72,190	190,166
1953-54	90,317	64,998	155,315	1958-59	123,644	76,888	200,532
1954-55	96,493	67,787	164,280	1959-60	115,721	76,109	191,830

\* Includes gas works, but excludes central electric stations.

Particulars of the type and capacity of engines and generators installed in central electric stations in Victoria during 1959-60 are given in the following table :—

**VICTORIA—POWER EQUIPMENT INSTALLED IN CENTRAL ELECTRIC STATIONS, 1959-60**

Particulars		Capacity of Engines and Generators					
		Steam Turbine	Internal Combustion			Water	Total
			Gas	Petrol or Other Light Oils	Heavy Oils		
Engines Installed	Rated H.P.	1,403,429	236	19,584	41,984	366,950	1,832,183
Generators Installed—							
Kilowatt Capacity—							
Total Installed	.. kW.	1,054,725	155	13,279	29,681	268,515	1,366,355
Effective Capacity	.. kW.	1,025,600	135	12,085	28,106	254,515	1,320,441
Horse-power Equivalent—							
Total Installed	.. H.P.	1,413,332	207	17,794	39,773	359,810	1,830,916
Effective Capacity	.. H.P.	1,374,799	181	16,200	37,675	341,173	1,770,028

Similar information to that shown in the preceding table, but giving a comparison over the years 1955-56 to 1959-60 is shown below :—

**VICTORIA—POWER EQUIPMENT INSTALLED IN CENTRAL ELECTRIC STATIONS**

Particulars			1955-56	1956-57	1957-58	1958-59	1959-60
Central Electric Stations..	.. No.		57	53	51	44	44
Engines Installed	.. Rated H.P.		1,332,095	1,568,721	1,565,409	1,786,817	1,832,183
Generators Installed—							
Kilowatt Capacity—							
Total Installed	.. kW.		988,712	1,163,030	1,160,196	1,309,751	1,366,355
Effective Capacity	.. kW.		966,218	1,093,568	1,087,053	1,276,788	1,320,441
Horse-power Equivalent—							
Total Installed	.. H.P.		1,324,874	1,558,460	1,554,663	1,755,066	1,830,916
Effective Capacity	.. H.P.		1,294,732	1,465,381	1,456,651	1,710,896	1,770,028

## Principal Factory Products

## Annual Quantity and Value

The next table lists the principal articles of manufacture in Victoria during 1959-60, irrespective of the sub-class of industry in which production took place. Due to the limited number of producers it is not permissible under statute to publish particulars regarding some articles of manufacture which would otherwise appear below.

VICTORIA—PRINCIPAL ARTICLES MANUFACTURED,  
1959-60

Article	Unit of Quantity	Quantity	Value
			£'000
Acid—Sulphuric .. ..	ton	323,141	*
Aerated and Carbonated Waters	'000 gall.	19,321	5,265
Beer† (Excluding Waste) ..	'000 gall.	74,154	*
Biscuits .. ..	'000 lb.	57,199	6,018
Blankets .. ..	pair	498,731	3,098
Bolts and Nuts .. ..	..	..	3,612
Paperboard Boxes and Cartons†	..	..	15,213
Boxes and Cases—Wooden ..	..	..	1,722
Bread—2 lb. Loaves .. ..	'000	209,495	14,434
Bricks—Clay .. ..	'000	283,208	6,011
Briquettes—Brown Coal ..	ton	974,670	2,810
Butter .. ..	ton	89,388	36,539
Cakes, Pastry, Pies, &c. ..	..	..	9,788
Cans, Canisters, Containers—			
Metal .. ..	..	..	15,284
Plastic .. ..	..	..	886
Cheese .. ..	ton	19,217	4,577
Cigarettes .. ..	'000,000	6,883	16,014
Cloth Piece Goods Woven—			
Woollen or Predominantly			
Woollen .. ..	'000 sq. yd.	9,784	6,085
Worsted or Predominantly			
Worsted .. ..	'000 sq. yd.	7,096	*
Confectionery—			
Chocolate Base .. ..	'000 lb.	27,650	6,251
Other without Chocolate ..	'000 lb.	37,258	4,601
Electrical Appliances—			
Portable Tools .. ..	..	..	871
Regulating, Starting, and			
Controlling .. ..	..	..	4,733
Electricity Generated .. ..	mill. kWh.	6,142	*
Fibrous Plaster Sheets .. ..	'000 sq. yd.	8,199	2,632
Flour, Plain—Wheaten .. ..	short ton	419,079	*
Footwear : Boots, Shoes, and			
Sandals§—			
Men's and Youths' ..	'000 pair	3,195	7,419
Women's and Maids' ..	'000 pair	8,022	15,534
Children's .. ..	'000 pair	2,791	2,019
Slippers .. ..	'000 pair	7,072	3,536
Fruit : Preserved—			
Peaches .. ..	'000 lb.	54,398	3,158
Pears .. ..	'000 lb.	100,096	6,087
Furniture and Office Equipment—			
Metal .. ..	..	..	4,665
Wooden .. ..	..	..	11,436
Gas—Town .. ..	mill. cu. ft.	17,992	13,101
Ice .. ..	ton	99,298	381
Ice Cream .. ..	'000 gall.	3,689	1,995
Jams, Fruit Spreads, Fruit Butters,			
&c... ..	'000 lb.	39,584	2,700

For footnotes see page 585.

VICTORIA—PRINCIPAL ARTICLES MANUFACTURED,  
1959-60—*continued*

Article	Unit of Quantity	Quantity	Value
			£'000
Leather—			
Dressed and Upper from Hides	..	..	4,085
Sole and Belting .. ..	..	..	2,274
Machinery : Industrial—			
Conveyor (and Appliances)	..	..	3,006
Hoists, Cranes, Lifting ..	..	..	2,309
Food Processing and Canning	..	..	2,122
Metal Working .. ..	..	..	3,561
Mining .. ..	..	..	2,149
Pumping (Including Pumps) ..	..	..	3,473
Malt—Barley .. ..	'000 bushels.	5,790	6,014
Mattresses—All Types .. ..	No.	427,339	2,910
Meat—Canned .. ..	'000 lb.	83,518	10,038
Medicines, &c. (Proprietary) ..	..	..	4,677
Milk—			
Condensed .. ..	'000 lb.	100,512	6,860
Powdered : Full Cream ..	'000 lb.	23,823	*
Paints (Not Water) and Enamels	'000 gall.	3,605	6,485
Pipes—Concrete (Excluding Agriculture)	..	..	2,429
Pollard .. ..	short ton	88,488	*
Ropes and Cables (Excluding Wire)	cwt.	76,606	1,202
Sauce—Tomato .. ..	'000 pint	14,680	1,682
Sausage Casings—Sheep and Lamb	..	..	1,495
Shirts (Men's and Boys') ..	doz.	834,651	*
Sinks—Stainless Steel .. ..	No.	88,399	1,118
Soap and Detergents—			
Household and General			
Washing .. ..	cwt.	921,672	7,802
Personal Toilet .. ..	cwt.	78,479	1,090
Socks and Stockings—Men's and			
Children's .. ..	'000 doz. pair	2,104	*
Stockings—Women's .. ..	'000 doz. pair	1,999	7,530
Soup—Tomato .. ..	'000 pint	20,095	1,454
Steam, Gas, and Water Fittings,			
Valves, &c. (Non-Ferrous) ..	..	..	5,677
Steel : Structural—Fabricated ..	ton	83,773	11,358
Tiles : Roofing—			
Cement .. ..	'000	21,172	816
Terra Cotta .. ..	'000	16,010	767
Timber Produced from Logs—			
Australian .. ..	'000 sup. ft.	350,314	*
Trailers and Semi-trailers ..	No.	3,002	*
Transformers, Chokes, &c. ..	No.	276,337	2,451
Tyres Retreaded and Recapped ..	No.	672,717	*
Underwear : Knitted Garments—			
Men's and Boys' .. ..	'000 doz.	765	*
Women's and Girls' .. ..	'000 doz.	1,451	*
Vegetables Canned or Bottled† ..	'000 lb.	31,969	2,479
Window Frames—Metal .. ..	..	..	3,455
Wool—Scoured or Carbonized ..	'000 lb.	62,049	*
Wool Tops .. ..	'000 lb.	20,458	*

\* Quantity only available.

† As recorded by Department of Customs and Excise.

‡ Includes composite wood and paperboard butter boxes.

§ Excluding wholly of rubber.

|| Value of gas sold.

¶ Excludes pickles and pickled vegetables.

*Monthly Production Statistics*

Statistics of monthly production had their origin in the wartime controls of rationed goods when details of piece goods, footwear, and foodstuffs were collected by the Departments immediately concerned with the war effort. In 1948, the Commonwealth Bureau of Census and Statistics opened a permanent Branch Office in Victoria and transferred certain monthly collections taken over from other departments to the Victorian Branch. By arrangement, as collections were abandoned by wartime and building control authorities, they were modified and taken over by the Bureau to provide statistics of value to government as indicators of business activity. The process of taking over collections commenced by other governmental authorities is continuing. The most recent action was in July, 1960, when monthly collections previously undertaken by the Wheat Board and the Meat Board, respectively, were taken over by the Bureau's State branches. The various monthly production series derived from the collections were also found to be of value to the business community and requests were made for dissections of existing collections and the introduction of new items. The forms used are subject to annual review to keep abreast of technical developments and new demands.

At present, although the list of items published includes only a small proportion of all the items produced in factories, it nevertheless relates directly to items accounting for possibly up to 35 per cent. of the total value of factory output.

A service is provided to persons who complete monthly production returns and to others interested in monthly production. Australian totals of commodities which they produce are made available to them within a few weeks of the month to which they relate. A list of the subjects included in these "Production Summaries" follows :—

## AUSTRALIA—PRODUCTION SUMMARIES

Ref. No.	Subject	Ref. No.	Subject
2	Chemicals, &c.	22	Floor Coverings
3	Plastics and Synthetic Resins and Plastics	24	Men's, Youths', and Boys' Outer Clothing
4	Paints and Pigments	25	Foundation Garments
6	Soap, Detergents, and Glycerine	27	Gloves (Other than Rubber) and Felt Hats
7	Internal Combustion Engines	28	Footwear (Excluding Sandshoes, Goloshes, and Gum, &c., Boots of Rubber)
8	Lawn Mowers	29	Biscuits, Ice Cream, and Confectionery
8A	Storage Batteries	32	Perambulators (Including Pushers and Strollers)
9	Electric Motors, Electrical Appliances, Wireless, Television, &c.	34	Radios, Television, and Cabinets
10	Motor Bodies and Trailers	35	Mattresses
10A	Assembly of Motor Vehicle Chassis	36	Preserved Milk Products
11	Pedal Cycles	38	Preserved Fish
12	Meters	39	Jams and Preserved Fruit and Vegetables
13	Building Fittings	40	Cereal Breakfast Foods, Other Cereal Products, and Flour Milling
14	Cotton Goods	41	Margarine
15	Woolscouring, Carbonizing, and Felt-mongering	42	Malt and Beer
16	Woollen and Worsted Carding, Combing, and Spinning	43	Stock and Poultry Meals (Other than Cereal)
17	Wool Weaving	45	Gramophone Records
18	Hosiery	47	Aerated Waters, Cordials and Syrups, and Concentrated Cordial Extract
19	Men's and Youths', Boys', Women's and Maids', Girls', Infants' and Babies' Wear, Shirts, Cardigans, Pyjamas, Underclothing &c.	48	Sports Goods
20	Rayon and Synthetic Fibre Woven Fabrics	49	Building Materials
21	Paper and Paper Board	51	Hides and Skins Used in Tanneries
		54	Flour Milling
		55	Butter and Cheese
		56	Canned Meat

In addition, Australian totals for a greater range of commodities than that issued in the Production Summaries are published in the monthly Bulletin of Production Statistics. Victorian figures are published in the Victorian Monthly Production Bulletin.

## Individual Industries

### Introductory

Particulars on pages 564–565 give a general view of the size of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this book, to give a detailed account of each industry, particular industries dealt with are of special importance because of the employment they provide for labour and capital or for other features of special interest. Where there are only one or two establishments in a particular industry in the State, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.

### Details of Industries

The industrial and heavy chemical industry expanded considerably during the five year period 1955–56 to 1959–60 as the particulars below indicate :—

#### VICTORIA—INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS

Particulars	1955–56	1956–57	1957–58	1958–59	1959–60
Number of Factories .. ..	69	69	74	79	83
Number of Persons Employed ..	2,270	2,308	2,723	3,035	3,276
Salaries and Wages Paid £'000	2,370	2,754	3,171	3,554	4,105
Value of Power, Fuel, &c., Used £'000	463	640	706	826	949
Value of Materials Used £'000	7,514	9,408	10,104	10,115	11,119
Value of Production .. £'000	5,164	6,925	6,873	9,269	11,948
Value of Output .. £'000	13,141	16,973	17,683	20,210	24,016
Value of Land and Buildings £'000	1,954	2,127	4,333	4,679	4,848
Value of Plant and Machinery £'000	3,128	3,781	6,344	7,103	7,794
Horse-power of Engines Ordinarily in Use .. H.P.	18,274	19,296	22,531	26,834	26,596

Particulars of the pharmaceutical and toilet preparation industry are given below :—

### VICTORIA—PHARMACEUTICAL AND TOILET PREPARATIONS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	61	59	59	57	58
Number of Persons Employed ..	2,435	2,537	2,665	2,748	3,026
Salaries and Wages Paid £'000	1,937	2,202	2,376	2,577	3,058
Value of Power, Fuel, &c., Used £'000	145	192	241	601	606
Value of Materials Used £'000	4,936	6,006	6,499	6,591	7,912
Value of Production .. ..	4,229	5,468	5,945	6,786	7,722
Value of Output .. ..	9,310	11,666	12,685	13,978	16,240
Value of Land and Buildings £'000	3,476	3,881	5,224	4,780	5,457
Value of Plant and Machinery £'000	1,453	1,432	1,706	2,811	2,999
Horse-power of Engines Ordinarily in Use .. H.P.	8,981	9,234	8,738	9,504	9,863

Production in this sub-class of industry includes proprietary medicines, cosmetics, creams and lotions, hair preparations, &c.

Mineral oil treatment has now become a most important industry in Victoria particularly in relation to the refining of petroleum. Details of the industry for years 1955-56 to 1959-60 are shown below :—

### VICTORIA—MINERAL OILS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	17	19	18	18	17
Number of Persons Employed ..	1,734	1,485	1,443	1,459	1,476
Salaries and Wages Paid £'000	1,893	1,762	1,799	1,863	2,099
Value of Power, Fuel, &c., Used £'000	1,781	4,163	4,058	3,476	3,776
Value of Materials Used £'000	35,985	45,835	46,129	45,732	51,482
Value of Production .. ..	11,708	15,537	15,235	17,254	18,000
Value of Output .. ..	49,474	65,535	65,422	66,462	73,258
Value of Land and Buildings £'000	6,832	7,171	7,263	7,635	5,576
Value of Plant and Machinery £'000	30,311	30,310	28,999	32,691	31,717
Horse-power of Engines Ordinarily in Use .. H.P.	47,110	53,258	49,029	44,799	47,233

The growth of this industry can be appreciated from the fact that in 1938-39 it gave employment to only 164 persons and the total horse-power of engines used was 817, while 1,476 persons were employed in 1959-60 and the horse-power of engines used totalled 47,233.



Outstanding expansion has taken place in Industrial Metals, Machines, and Conveyances, &c., which is by far the largest of the sixteen classes into which secondary industry is divided. This development was accelerated by the necessity of meeting war requirements. Victoria now produces a very wide field of goods including motor vehicles, construction and earth-moving equipment, precision instruments, aircraft, &c., and many other types of manufactures which in earlier years were not attempted.

The relative importance of the principal sub-classes within this industry is shown in the following table :—

VICTORIA—CLASS IV : INDUSTRIAL METALS, MACHINES,  
AND CONVEYANCES: INDIVIDUAL INDUSTRIES, 1959-60  
(£'000)

Particulars	Number of Factories	Persons Employed	Salaries and Wages Paid	Value of—						Horse-power of Engines Ordinarily in Use
				Power, Fuel, and Light	Materials Used	Production	Output	Land and Buildings	Plant and Machinery	
Foundries (Ferrous) ..	165	2,951	3,337	472	3,370	5,005	8,847	2,344	1,802	12,153
Plant, Equipment and Machinery, &c. ..	758	27,645	30,597	1,342	51,529	51,908	104,779	22,265	16,003	98,477
Other Engineer- ing ..	902	10,370	10,711	466	13,355	18,086	31,907	8,014	6,359	34,898
Electrical Machinery, Cables, and Apparatus ..	430	15,027	15,303	862	31,113	23,761	55,736	13,232	10,892	37,456
Tramcars and Railway Rolling Stock	22	7,214	6,862	221	6,136	8,706	15,063	2,215	1,426	24,104
Motor Vehicle Construction and Assembly	16	13,332	16,335	1,181	18,455	29,210	48,846	13,882	11,073	43,120
Motor Repairs	2,313	16,472	13,597	436	13,644	20,969	35,049	20,877	3,904	16,571
Motor Bodies ..	481	7,561	8,271	295	8,165	11,339	19,799	5,349	2,151	13,782
Motor Accessories ..	89	3,183	3,042	183	4,428	5,552	10,163	2,038	1,665	8,463
Aircraft ..	18	6,640	7,828	289	4,176	9,289	13,754	5,553	2,639	17,231
Agricultural Machines and Implements ..	108	5,910	6,246	437	10,596	8,851	19,884	2,869	2,797	20,537
Non-ferrous Metals— Founding, &c.	178	3,989	4,054	309	7,343	6,778	14,430	2,582	1,687	10,927
Sheet Metal Working— Pressing and Stamping ..	427	10,802	10,887	705	24,964	20,108	45,777	9,791	6,466	32,414
Wire and Wire Working (In- cluding Nails)	70	2,678	2,809	214	10,006	6,519	16,739	2,700	1,824	8,417
Wireless and Amplifying Apparatus ..	68	3,835	3,529	122	10,363	4,847	15,332	1,864	1,341	2,883
Other Sub-classes	369	13,234	14,418	1,416	32,312	21,829	55,557	10,836	17,768	101,364
Total, Class IV.	6,414	150,843	157,826	8,950	249,955	252,757	511,662	126,411	89,797	482,797

Further particulars of certain of the industries listed in the table above are given on pages 590 and 594-595.

As production in some factories in this class is variable, their classification may vary from year to year, since each factory is classified according to the predominant item of production. Under these circumstances comparability may be disturbed.

The table which follows combines particulars appertaining to two sub-classes of manufacture: Electrical Machinery, Cables, &c., and Wireless and Amplifying Apparatus respectively :—

### VICTORIA—ELECTRICAL MACHINERY, CABLES, AND APPARATUS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	379	417	409	439	498
Number of Persons Employed ..	12,131	13,562	15,394	17,361	18,862
Salaries and Wages Paid £'000	10,237	11,357	13,639	16,239	18,832
Value of Power, Fuel, &c., Used £'000	385	504	672	903	984
Value of Materials Used £'000	20,198	22,255	31,765	37,696	41,476
Value of Production .. £'000	14,011	16,657	20,827	24,432	28,608
Value of Output .. £'000	34,594	39,416	53,264	63,031	71,068
Value of Land and Buildings £'000	5,795	8,856	10,084	12,543	15,096
Value of Plant and Machinery £'000	3,601	5,405	7,326	9,612	12,233
Horse-power of Engines Ordinarily in Use .. H.P.	20,050	24,743	30,993	40,213	40,339

The principal items of production in these industries were : electric and telephone cables, electric apparatus and equipment, and domestic appliances such as refrigerators, washing machines, wireless and television sets, and parts for these.

The next table represents the activities of government controlled railways and tramways workshops :—

### VICTORIA—TRAMCARS AND RAILWAY ROLLING STOCK

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	22	22	22	22	22
Number of Persons Employed ..	7,363	7,580	7,554	7,391	7,214
Salaries and Wages Paid £'000	6,581	6,554	6,487	6,429	6,862
Value of Power, Fuel, &c., Used £'000	207	204	229	222	221
Value of Materials Used £'000	4,946	5,417	5,168	5,479	6,136
Value of Production .. £'000	8,835	8,878	8,603	8,683	8,706
Value of Output .. £'000	13,988	14,499	14,000	14,384	15,063
Value of Land and Buildings £'000	1,883	1,918	2,064	2,138	2,215
Value of Plant and Machinery £'000	1,115	1,075	1,108	1,429	1,426
Horse-power of Engines Ordinarily in Use .. H.P.	21,391	23,005	23,416	22,881	24,104

The work performed in this sub-class of industry was for the most part in maintenance and replacement of rolling stock.

*Motor Vehicle Industry*

The first motor vehicles produced in Victoria were almost all imported in a completely "knocked-down" condition, and assembled by local motor firms. Manufacture of Australian-built motor bodies was first encouraged by an Act passed during the First World War stipulating that two out of every three cars were to be imported without bodies. Later, tariff action was taken to protect local production. In 1925, automotive assembly was undertaken in Victoria for the first time by a major overseas manufacturer, when Ford (Canada) established a primitive assembly line in a disused wool store at Geelong. The following year General Motors commenced operations at Melbourne. These pioneers of the Victorian automotive industry were assemblers of components imported from the parent companies overseas. However, by 1934, local body building facilities were such that designers and craftsmen at Geelong were able to produce the first coupé utility style body, subsequently copied throughout the world, and within the next three years, a steel body with a fabric top and the first Australian turret-top all-steel body.

The Second World War necessitated the adaptation of all automotive facilities to meet military commitments. After an initial period of recovery, post-war development of the motor trade, encouraged as a matter of government policy, has been very rapid and it is now one of the largest industries in the State. Great progress was made in 1948, when General Motors in association with the old-established firm of South Australian motor body builders, Holdens, began mass production of the first vehicle to be almost wholly Australian in content, and the only volume-produced vehicle to originate in this country. The General Motors-Holden's plant at Fishermen's Bend in Melbourne was re-constructed to manufacture Holden engines and assemble the complete vehicle. The venture has been a great success capturing a large part of the Australian market.

Development by the other overseas companies now operating has been on a step-by-step basis. Initially, only assembly of imported components was possible, using a few standardized Australian parts, e.g., tyres and batteries. Gradually, additional materials such as springs, shock absorbers, horns, wheels, radiators, &c., became available. Further progress made possible the use of locally assembled engines, with body panels pressed in Australia and embodying additional locally made parts. This has resulted in the substantial production in Victoria of models already proven overseas. Although many of these are now almost entirely Australian-built, they are practically identical with European and American models, with some modifications made necessary by conditions encountered in this country.

There are now sixteen manufacturing or assembling companies in Victoria and production for 1959-60 exceeded 125,000 vehicles. The General Motors plant at Fishermen's Bend occupies 50 acres and has

over 5,700 employees concerned with the manufacture, assembly, and testing of engines, transmissions and other parts. The engineering department occupies 100,000 square feet, where styling, mechanical design, and body styling originate. A mechanical foundry 147,000 square feet in area with a daily pouring capacity of 340 tons moulds all the grey-iron castings for cylinder blocks and heads and transmissions. Modern machine shops installed at a cost of £10 mill., cut, mill, bore, hone and finish the castings and forgings, accuracy being maintained by progressive inspection, while finished precision is checked by air-pressure gauging. Transmissions from clutch housing to differential are made here, but axle units bring together pressed metal parts from Adelaide.

Final assembly of components from Fishermen's Bend and body panels from Adelaide is carried out in a 12½ acre building at Dandenong, completed in 1956, and involving an initial expenditure of £4½ mill. It has an annual capacity of almost 50,000 units. Main departments in the plant are body welding, metal finishing, paint shop, trim and upholstery, body wiring, vehicle assembly and inspection. This is the headquarters of the company's national spare parts and accessories division, selling more than 22 million items annually. A proving ground near Lang Lang, 56 miles from Melbourne, has recently been constructed, covering 2,167 acres with 12·6 miles of test roads, and a 3 mile speed loop. Vehicles are driven continuously over various types of road surface, and "horror" sections of potholes, crushed rock, irregular concrete, &c., with the object of testing and improving durability and performance of current models.

The largest building under one roof in Australia houses the new Ford project at Broadmeadows, 10 miles from the Melbourne G.P.O. A single story, steel-framed structure covering 17½ acres, it can produce 50,000 vehicles a year. Two-mile assembly lines permit complete construction under the one roof, while a modern conveyor system automatically transfers units from one line to another. Noteworthy features include electrostatic filtering of air in the paint booths, the system employed being the most advanced known in the motor industry ; a five-stage fully automatic bonderite system which phosphatizes inner and outer body panels, improving the holding qualities of body enamels ; stock handling by trailer trains and fork lifts, equipped with two-way radio ; a specially equipped laboratory for checking and inspection of all components ; water testing to ensure effective body sealing against rain and dust ; and a test track for final proving of completed vehicles.

Materials are supplied by the company's headquarters at Geelong, where former body assembly facilities have been converted into an engine machining and assembly shop. Chassis machining, and stamping plant have been re-organized, with the construction of a new building, installation of 33 new presses, and the building of an underground conveyor system to remove scrap metals. Provision of new machinery in the toolroom, already one of the largest in Australia, increased its

capacity by 50 per cent. Australian manufacturers have supplied much of the capital equipment including grinders, assembly presses, industrial washing machines, gauges and power tools. This large-scale expansion will entail an expenditure of £9 mill. A works at Ballarat has been converted to enable engines to be re-built.

To consolidate and expand activities in Australia, Volkswagen Australia, have increased the assembly plant area, and erected a press shop on their Clayton property. The purchasing of an adjoining 30 acre lot has provided over 1,000,000 square feet of plant, warehouse, and administrative buildings. A new paint shop constructed to bake enamel with radiant heat is the second of its kind in the world. These innovations have resulted in production becoming, to an increasing degree, Australian in content, and with 1,800 employees, working on a single shift basis, the plant has a capacity of 150 vehicles per day.

International Harvester motor truck construction began at Geelong in 1939. The factory was adapted in 1948 for the manufacture of tractors, power units, engine blocks, and major castings, producing the first Australian-made truck two years later. Subsequently, this company completed another establishment at Dandenong for the assembly of over 100 varieties of 15 basic models, ranging from 12-15 cwt. pick-up units to 7-8 ton heavy duty trucks. Larger models are imported in part, and assembled at the works incorporating a large percentage of locally made materials. The growing demand for construction equipment led to the building of a works at Port Melbourne, and to-day the three International Harvester plants provide essential equipment for transportation, agriculture and industry.

Australian Motor Industries assembling imported components, operates a 33-acre plant at Fishermen's Bend. Unlike any of the other leading motor firms they are predominantly owned and operated by Australians, as 81 per cent. of the shareholding is held in this country. With a production potential of 25,000 vehicles annually, a broad range is distributed, from popular family sedans and commercial units to continental "prestige" cars, plus a number of tractors.

A subsidiary of the Rootes Group maintains a factory at Port Melbourne producing several thousand vehicles a year. Following the general trend, this organization is steadily increasing local content in its products.

Thus, from small beginnings the motor industry has developed into a major industrial activity. The demand for transportation has grown in Australia as a natural result of the high standard of living, the great increase in population during the past 40 years, and the necessity to transport men and materials for considerable distances in as short a time as possible. Apart from a few special types of vehicles, local industry is now able to meet the nation-wide demand, and exports an increasing number of its products, principally to New Zealand, South Africa, and Asia.

In the following table the particulars of the motor industry as a whole have been presented by aggregating the following sub-classes : Motor Vehicle Construction and Assembly, Motor Bodies, Motor Repairs, and Motor Accessories. It should be noted, however, that the manufacture of particular parts may be included in other sub-classes of industry.

## VICTORIA—MOTOR VEHICLES

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	2,476	2,656	2,751	2,756	2,899
Number of Persons Employed ..	35,176	36,406	37,080	38,212	40,548
Salaries and Wages Paid £'000	29,850	30,520	32,502	34,762	41,245
Value of Power, Fuel, &c., Used £'000	1,197	1,513	1,744	1,920	2,095
Value of Materials Used £'000	46,422	39,308	43,829	42,450	44,692
Value of Production .. £'000	41,462	45,270	52,454	59,182	67,070
Value of Output .. £'000	89,081	86,091	98,027	103,552	113,857
Value of Land and Buildings £'000	21,840	21,198	31,851	36,325	42,146
Value of Plant and Machinery £'000	11,530	16,539	17,222	17,311	18,793
Horse-power of Engines Ordinarily in Use .. H.P.	65,577	76,472	79,776	87,777	81,936

The relative importance of each sub-class of the motor vehicle industry is shown in the following table for 1959-60 :—

## VICTORIA—MOTOR VEHICLES : SUB-CLASSES, 1959-60

Particulars	Motor Vehicle Construction and Assembly	Motor Repairs	Motor Bodies	Motor Accessories	Total
Number of Factories .. ..	16	2,313	481	89	2,899
Number of Persons Employed ..	13,332	16,472	7,561	3,183	40,548
Salaries and Wages Paid £'000	16,335	13,597	8,271	3,042	41,245
Value of Power, Fuel, &c., Used £'000	1,181	436	295	183	2,095
Value of Materials Used £'000	18,455	13,644	8,165	4,428	44,692
Value of Production .. £'000	29,210	20,969	11,339	5,552	67,070
Value of Output .. £'000	48,846	35,049	19,799	10,163	113,857
Value of Land and Buildings £'000	13,882	20,877	5,349	2,038	42,146
Value of Plant and Machinery £'000	11,073	3,904	2,151	1,665	18,793
Horse-power of Engines Ordinarily in Use .. H.P.	43,120	16,571	13,782	8,463	81,936

The information in the above table indicates that while motor repair workshops accounted for 80 per cent. of the number of factories and 40 per cent. of the persons employed, in the case of horse-power in use, factories engaged in construction and assembly predominated with 53 per cent. of the total.

Agricultural Machinery and Implements are the subject of the next table :—

### VICTORIA—AGRICULTURAL MACHINES AND IMPLEMENTS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	84	97	100	91	108
Number of Persons Employed ..	6,338	5,060	5,299	5,761	5,910
Salaries and Wages Paid £'000	5,868	4,668	5,085	5,802	6,246
Value of Power, Fuel, &c., Used £'000	430	345	385	422	437
Value of Materials Used £'000	8,404	6,447	7,742	8,892	10,596
Value of Production .. £'000	8,280	7,622	8,672	8,992	8,851
Value of Output .. £'000	17,114	14,414	16,799	18,306	19,884
Value of Land and Buildings £'000	2,313	2,454	2,731	2,709	2,869
Value of Plant and Machinery £'000	2,689	2,726	2,649	2,525	2,797
Horse-power of Engines Ordinarily in Use .. H.P.	20,361	20,970	20,821	20,399	20,537

Particulars relating to founding and casting of non-ferrous metals are shown in the next table :—

### VICTORIA—NON-FERROUS METALS: FOUNDED, CASTING, ETC.

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	153	155	153	178	178
Number of Persons Employed ..	3,261	3,359	3,430	3,959	3,989
Salaries and Wages Paid £'000	2,768	2,895	3,113	3,661	4,054
Value of Power, Fuel, &c., Used £'000	197	222	249	290	309
Value of Materials Used £'000	4,706	4,378	4,816	6,171	7,343
Value of Production .. £'000	4,425	4,974	4,920	6,483	6,778
Value of Output .. £'000	9,328	9,574	9,985	12,944	14,430
Value of Land and Buildings £'000	1,797	2,005	2,187	2,142	2,582
Value of Plant and Machinery £'000	1,397	1,492	1,378	1,548	1,687
Horse-power of Engines Ordinarily in Use .. H.P.	8,696	9,449	9,372	10,789	10,927

Articles produced in this industry include steam, gas and water fittings, aluminium window frames, slide fasteners, and furniture fittings, &c.

Sheet metal working and allied manufacturing activities are the subject of the table which follows :—

### VICTORIA—SHEET METAL WORKING, PRESSING, AND STAMPING

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	332	359	363	396	427
Number of Persons Employed ..	7,663	8,022	8,493	10,098	10,802
Salaries and Wages Paid £'000	6,225	7,066	7,825	9,380	10,887
Value of Power, Fuel, &c., Used £'000	247	344	405	544	705
Value of Materials Used £'000	14,635	16,639	20,051	22,287	24,964
Value of Production .. £'000	10,991	12,413	12,931	15,828	20,108
Value of Output .. £'000	25,873	29,396	33,387	38,659	45,777
Value of Land and Buildings £'000	4,372	5,744	5,916	8,018	9,791
Value of Plant and Machinery £'000	3,203	3,945	5,062	5,673	6,466
Horse-power of Engines Ordinarily in Use .. H.P.	16,486	20,420	23,700	30,688	32,414

Packers' cans, canisters and containers, building fittings, namely, baths, sinks, hot water services, and refrigeration and air-conditioning equipment are amongst the items produced in this sub-class of industry.

Wool carding, spinning, and weaving is the subject of the next table :—

### VICTORIA—WOOL CARDING, SPINNING, AND WEAVING

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	81	84	88	87	81
Number of Persons Employed ..	11,273	12,013	12,055	10,995	11,691
Salaries and Wages Paid £'000	7,634	8,925	9,065	8,475	9,604
Value of Power, Fuel, &c., Used £'000	716	812	811	798	858
Value of Materials Used £'000	20,364	24,716	25,218	20,295	25,506
Value of Production .. £'000	12,643	14,674	13,432	14,047	14,508
Value of Output .. £'000	33,723	40,202	39,461	35,140	40,872
Value of Land and Buildings £'000	4,363	5,533	5,543	6,579	6,509
Value of Plant and Machinery £'000	6,287	6,264	6,583	6,386	6,679
Horse-power of Engines Ordinarily in Use .. H.P.	42,123	42,803	41,081	43,084	42,117

Victorian woollen mills are responsible for more than half the total Australian woollen mill production. The full range of activities in these factories is covered from the scouring of greasy wool to the weaving of cloth.

Particulars of the hosiery, &c., industry for the last five years are given below :—

### VICTORIA—HOSIERY AND OTHER KNITTED GOODS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	429	429	427	438	482
Number of Persons Employed ..	15,105	15,224	15,039	15,285	16,938
Salaries and Wages Paid £'000	9,883	10,521	10,658	10,979	13,146
Value of Power, Fuel, &c., Used £'000	452	491	514	549	573
Value of Materials Used £'000	19,680	22,112	24,541	21,820	27,695
Value of Production .. £'000	17,695	18,997	17,969	20,846	23,798
Value of Output .. £'000	37,827	41,600	43,024	43,215	52,066
Value of Land and Buildings £'000	6,257	6,666	7,320	8,240	9,486
Value of Plant and Machinery £'000	5,612	5,504	5,766	6,529	6,581
Horse-power of Engines Ordinarily in Use .. H.P.	13,272	13,555	14,227	15,560	15,643

Factories in Victoria contribute more than two-thirds of the total production of knitted goods in Australia. Amongst the more important articles produced are socks and stockings, knitted underwear, cardigans and pullovers.



Information in the next table deals with industries associated with the manufacture of clothing, except waterproof clothing, knitted goods, and boots and shoes. The figures shown represent for each of the past five years the sum of the statistical sub-classes of industry mentioned below—tailoring and ready-made clothing, dressmaking, millinery, shirts, underclothing, foundation garments, handkerchiefs, ties, scarves, hats and caps, and gloves.

**VICTORIA—CLOTHING (DRESS), EXCLUDING WATERPROOF CLOTHING, KNITTED GOODS, AND BOOTS AND SHOES**

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	1,591	1,565	1,569	1,481	1,455
Number of Persons Employed ..	29,828	29,358	28,496	28,310	28,456
Salaries and Wages Paid £'000	17,255	17,946	18,002	18,127	19,664
Value of Power, Fuel, &c., Used £'000	326	358	362	389	392
Value of Materials Used £'000	32,173	31,918	32,084	31,257	32,712
Value of Production .. £'000	27,715	28,606	29,058	29,472	31,416
Value of Output .. £'000	60,214	60,882	61,504	61,118	64,520
Value of Land and Buildings £'000	8,554	9,651	10,515	11,769	13,072
Value of Plant and Machinery £'000	2,594	2,725	2,791	2,906	2,752
Horse-power of Engines Ordinarily in Use .. H.P.	11,217	10,840	11,008	11,599	10,629

In the following table the industries combined in the preceding table are shown in detail for 1959-60 :—

**VICTORIA—CLOTHING (DRESS), EXCLUDING WATERPROOF CLOTHING, KNITTED GOODS, AND BOOTS AND SHOES :  
SUB-CLASSES, 1959-60**

Particulars	Tailoring and Ready-made Clothing	Dress-making	Millinery Hats and Caps	Shirts, Underclothing	Foundation Garments	Handkerchiefs, Ties, and Gloves	Total
Number of Factories .. ..	584	549	94	154	33	41	1,455
Number of Persons Employed ..	10,401	8,649	1,122	5,798	1,848	638	28,456
Salaries and Wages Paid £'000	7,587	5,671	838	3,915	1,243	410	19,664
Value of Power, Fuel, &c., Used £'000	169	109	20	61	25	8	392
Value of Materials Used £'000	15,009	6,880	1,328	6,529	2,084	882	32,712
Value of Production .. £'000	11,759	8,940	1,384	6,782	1,810	741	31,416
Value of Output .. £'000	26,937	15,929	2,732	13,372	3,919	1,631	64,520
Value of Land and Buildings £'000	4,649	4,412	783	1,875	1,035	318	13,072
Value of Plant and Machinery £'000	1,204	703	106	494	195	50	2,752
Horse-power of Engines Ordinarily in Use H.P.	3,688	2,969	389	2,513	858	212	10,629

Tailoring and ready-made clothing, and dressmaking together represented 78 per cent. of the factories, 67 per cent. of employment, and 63 per cent. of the horse-power in use; shirts and underclothing contributed 11 per cent., 20 per cent., and 24 per cent. respectively.

Boots and shoes (not rubber) manufacture is the subject of the next table :—

### VICTORIA—BOOTS AND SHOES (NOT RUBBER)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	226	222	221	215	196
Number of Persons Employed ..	10,939	11,136	11,092	11,231	11,040
Salaries and Wages Paid £'000	7,270	7,974	8,005	8,328	8,911
Value of Power, Fuel, &c., Used					
£'000	114	134	143	156	167
Value of Materials Used £'000	12,055	12,028	12,641	14,786	16,385
Value of Production .. £'000	10,291	11,170	11,935	12,731	13,691
Value of Output .. £'000	22,460	23,332	24,719	27,673	30,243
Value of Land and Buildings £'000	1,818	2,023	2,276	2,915	3,035
Value of Plant and Machinery £'000	2,033	2,081	2,281	2,684	2,914
Horse-power of Engines Ordinarily in Use .. H.P.	9,508	9,265	9,202	10,153	10,603

A feature of this industry is the large proportion of females it employs. Numbering 5,896, they represented 53 per cent. of the total employed in 1959-60.

The details shown above relate generally to footwear made of leather. They are exclusive of the operation of boot repairers. Footwear is also produced in the rubber and plastic moulding industries respectively.

Bakeries which make bread, pastry, and cakes, &c., are the subject of the table which follows :—

### VICTORIA—BAKERIES (INCLUDING CAKES AND PASTRY)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	1,075	1,052	1,075	1,253	1,146
Number of Persons Employed ..	5,553	5,694	5,472	6,043	6,006
Salaries and Wages Paid £'000	3,294	3,618	3,605	3,820	4,238
Value of Power, Fuel, &c., Used					
£'000	589	661	668	745	779
Value of Materials Used £'000	10,007	10,682	10,884	12,081	12,919
Value of Production .. £'000	7,476	8,824	7,845	9,032	10,110
Value of Output .. £'000	18,072	20,167	19,397	21,858	23,808
Value of Land and Buildings £'000	4,767	5,728	5,923	7,041	7,706
Value of Plant and Machinery £'000	2,975	3,325	3,470	3,753	4,189
Horse-power of Engines Ordinarily in Use .. H.P.	7,018	7,493	8,001	8,030	8,677

The details shown above for 1958-59 and 1959-60 include the operations of a number of smaller bakehouses which had not been included previously in the statistical collection.

In the following table two sub-classes of industry are combined, namely, jam, fruit, and vegetable canning; and pickles, sauces, and vinegar :—

**VICTORIA—JAM, FRUIT, AND VEGETABLE CANNING;  
PICKLES, SAUCES, AND VINEGAR**

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	60	60	63	60	56
Number of Persons Employed ..	4,475	4,965	4,903	4,425	4,748
Salaries and Wages Paid £'000	3,621	4,321	4,462	4,002	4,609
Value of Power, Fuel, &c., Used £'000	371	481	472	468	485
Value of Materials Used £'000	14,533	20,747	22,054	19,829	21,270
Value of Production .. £'000	7,220	9,229	10,407	8,440	10,069
Value of Output .. £'000	22,124	30,457	32,933	28,737	31,824
Value of Land and Buildings £'000	5,091	5,633	6,085	6,858	7,249
Value of Plant and Machinery £'000	4,696	5,297	5,617	5,451	6,025
Horse-power of Engines Ordinarily in Use .. H.P.	20,239	27,465	29,012	28,565	20,513

Female employment is strongly represented in the canning industry which, to a great extent, operates in country areas near the orchards and gardens from which fruit and vegetables used for processing are gathered. Seasonal conditions influence greatly the quantity of goods produced.

Three sub-classes of industry, namely, butter, cheese, condensed and processed milk have been combined in the figures shown below, as some factories producing butter are also engaged in the production of cheese and condensed products and are unable to render separate returns in respect of these activities :—

**VICTORIA—BUTTER, CHEESE, CONDENSED AND  
PROCESSED MILK FACTORIES**

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	130	131	131	127	131
Number of Persons Employed ..	5,443	5,620	5,417	5,452	5,677
Salaries and Wages Paid £'000	5,035	5,381	5,345	5,465	5,906
Value of Power, Fuel, &c., Used £'000	1,521	1,598	1,532	1,528	1,604
Value of Materials Used £'000	50,252	51,561	50,558	51,382	55,757
Value of Production .. £'000	10,679	10,567	11,617	11,799	13,681
Value of Output .. £'000	62,452	63,726	63,707	64,709	71,042
Value of Land and Buildings £'000	5,161	5,836	6,233	6,763	7,185
Value of Plant and Machinery £'000	6,168	7,031	7,524	7,995	8,351
Horse-power of Engines Ordinarily in Use .. H.P.	38,204	41,094	42,537	39,310	43,287

Almost all of this industry is to be found in country areas. The particulars in the above table relate only to factory production. There is also a comparatively small amount of butter and cheese made on farms. Further reference to the Dairying Industry will be found on pages 523 to 526.

Details of the operation of the following sub-classes of industry are given below, namely, sawmills, joinery, boxes and cases, wood turning and carving, and cabinet and furniture making:—

### VICTORIA—SAWMILLS, WOODWORKING, FURNITURE, ETC.

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	1,883	1,840	1,874	1,816	1,843
Number of Persons Employed ..	19,332	19,028	18,819	18,991	19,558
Salaries and Wages Paid £'000	14,509	15,003	15,664	16,158	17,904
Value of Power, Fuel, &c., Used £'000	660	705	724	794	900
Value of Materials Used £'000	28,217	28,237	31,340	31,715	36,693
Value of Production .. £'000	24,173	24,658	27,339	28,170	30,644
Value of Output .. £'000	53,050	53,600	59,403	60,679	68,237
Value of Land and Buildings £'000	8,039	8,955	10,107	11,009	13,377
Value of Plant and Machinery £'000	5,770	5,942	5,782	5,892	6,121
Horse-power of Engines Ordinarily in Use .. H.P.	136,361	136,919	132,941	133,058	138,532

The following table indicates the relative particulars for 1959-60 of the individual industries combined in the preceding table:—

### VICTORIA—SAWMILLS, WOODWORKING, FURNITURE, ETC.: INDIVIDUAL INDUSTRIES

Particulars	Sawmills	Joinery	Boxes and Cases	Wood Turning and Wood Carving	Furniture Making, &c.	Total
Number of Factories .. ..	521	634	75	106	507	1,843
Number of Persons Employed ..	7,024	6,134	719	1,096	4,585	19,558
Salaries and Wages Paid .. £'000	6,637	5,597	626	987	4,057	17,904
Value of Power, Fuel, &c., Used £'000	596	144	23	36	101	900
Value of Materials Used .. £'000	16,730	10,491	1,565	1,175	6,732	36,693
Value of Production .. £'000	12,484	8,587	1,035	1,704	6,834	30,644
Value of Output .. £'000	29,810	19,222	2,623	2,915	13,667	68,237
Value of Land and Buildings .. £'000	4,001	4,368	452	735	3,821	13,377
Value of Plant and Machinery .. £'000	3,318	1,483	160	325	835	6,121
Horse-power of Engines Ordinarily in Use .. H.P.	86,438	27,263	6,689	5,468	12,674	138,532

The activities combined in the above table embrace general milling, re-sawing, moulding and planing, turning, the manufacture of floorboards, weatherboards, boxes and cases, tool handles, toys, &c.

The newspaper and periodicals industry is the subject of the following table:—

### VICTORIA—NEWSPAPERS AND PERIODICALS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	112	111	106	128	133
Number of Persons Employed ..	3,508	3,348	2,924	3,317	3,633
Salaries and Wages Paid £'000	3,393	3,300	2,951	3,471	4,063
Value of Power, Fuel, &c., Used £'000	118	119	115	135	144
Value of Materials Used £'000	7,048	7,563	7,268	8,660	9,549
Value of Production .. £'000	5,677	5,727	5,224	6,173	6,922
Value of Output .. £'000	12,843	13,409	12,607	14,968	16,615
Value of Land and Buildings £'000	1,372	1,616	1,517	2,350	2,955
Value of Plant and Machinery £'000	2,854	2,795	1,791	2,212	2,750
Horse-power of Engines Ordinarily in Use .. H.P.	10,456	10,484	9,862	10,020	11,171

Some "job" printing is included in this industry but where newspapers, periodicals, &c., are printed for the proprietor by an outside firm, such particulars are included under "Printing, General" below.

General printing (including bookbinding) is the subject of the following table :—

### VICTORIA—PRINTING, GENERAL (INCLUDING BOOKBINDING)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	513	537	549	539	563
Number of Persons Employed ..	7,602	7,964	8,381	8,515	8,619
Salaries and Wages Paid £'000	6,129	6,681	7,461	7,718	8,520
Value of Power, Fuel, &c., Used £'000	163	200	228	247	268
Value of Materials Used £'000	8,426	8,932	10,436	11,180	11,590
Value of Production .. £'000	10,335	11,888	13,304	14,217	15,445
Value of Output .. £'000	18,924	21,020	23,968	25,644	27,303
Value of Land and Buildings £'000	4,652	5,132	5,982	6,433	7,789
Value of Plant and Machinery £'000	5,174	5,587	6,109	6,155	6,653
Horse-power of Engines Ordinarily in Use .. H.P.	11,632	12,554	13,108	13,357	14,825

The above table does not include particulars of the operations of Government printing establishments.

Particulars relating to the manufacture of cardboard boxes, cartons, and containers are detailed in the next table :—

### VICTORIA—CARDBOARD BOXES, CARTONS, AND CONTAINERS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	56	49	52	51	57
Number of Persons Employed ..	2,053	2,007	2,125	2,297	2,820
Salaries and Wages Paid £'000	1,639	1,598	1,748	2,024	2,616
Value of Power, Fuel, &c., Used £'000	54	67	81	93	115
Value of Materials Used £'000	5,543	5,485	6,138	7,214	9,080
Value of Production .. £'000	3,558	3,542	4,318	4,660	6,131
Value of Output .. £'000	9,155	9,094	10,537	11,967	15,326
Value of Land and Buildings £'000	1,241	1,373	1,784	2,414	2,875
Value of Plant and Machinery £'000	1,377	1,505	1,676	1,744	2,250
Horse-power of Engines Ordinarily in Use .. H.P.	4,291	4,179	4,358	4,643	6,140

The following table gives particulars of rubber goods manufacture :—

### VICTORIA—RUBBER GOODS (INCLUDING TYRES MADE)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	54	54	54	56	52
Number of Persons Employed ..	6,122	6,182	6,254	6,529	6,566
Salaries and Wages Paid £'000	5,819	5,982	6,280	6,669	7,433
Value of Power, Fuel, &c., Used £'000	815	901	991	1,056	1,153
Value of Materials Used £'000	16,170	14,088	15,910	16,418	20,557
Value of Production .. £'000	10,268	11,327	12,001	14,066	12,974
Value of Output .. £'000	27,253	26,316	28,902	31,540	34,684
Value of Land and Buildings £'000	2,949	3,211	3,735	3,759	3,834
Value of Plant and Machinery £'000	4,405	3,757	4,028	3,855	5,966
Horse-power of Engines Ordinarily in Use .. H.P.	50,882	53,254	55,214	60,379	61,154

Tyres and tubes, shoes, soles and heels, hose, toys, belting, sponge and foam rubber are amongst the wide range of articles produced in the above-mentioned industry.

Plastic moulding and products are the subject of the next table :—

### VICTORIA—PLASTIC MOULDING AND PRODUCTS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	128	147	145	152	154
Number of Persons Employed ..	4,412	4,891	5,006	5,267	5,567
Salaries and Wages Paid £'000	3,331	3,918	4,342	4,934	5,726
Value of Power, Fuel, &c., Used £'000	228	304	353	440	492
Value of Materials Used £'000	7,737	9,613	10,876	13,797	16,310
Value of Production .. £'000	6,460	7,562	8,819	10,653	10,922
Value of Output .. £'000	14,425	17,479	20,048	24,890	27,724
Value of Land and Buildings £'000	2,014	2,718	2,958	3,261	4,388
Value of Plant and Machinery £'000	2,495	2,844	3,381	3,740	4,449
Horse-power of Engines Ordinarily in Use .. H.P.	14,440	19,136	20,694	20,781	22,412

Introduced as a new sub-class in 1945-46, plastic moulding now contributes substantially to the secondary production of the State. A wide variety of articles is produced, including plastic film and sheet, household accessories, garden house, piping and tubing, toys, &c.

The following table shows particulars of the operations of electricity generating stations :—

### VICTORIA—ELECTRIC LIGHT AND POWER

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	57	53	51	44	44
Number of Persons Employed ..	3,007	3,186	3,247	3,398	3,470
Salaries and Wages Paid £'000	3,315	3,534	3,599	3,851	4,218
Value of Power, Fuel, &c., Used £'000	9,737	10,513	11,153	9,971	10,472
Value of Materials Used £'000	524	605	677	600	700
Value of Production .. £'000	11,214	13,824	13,706	18,529	17,977
Value of Output .. £'000	21,475	24,942	25,536	29,100	29,149
Value of Land and Buildings £'000	12,844	15,114	17,444	22,949	21,184
Value of Plant and Machinery £'000	49,071	57,017	63,659	70,244	74,548
Total Installed Horse-power of Engines Used to Drive Generators* .. ..	H.P. 1,332,095	1,568,721	1,565,409	1,786,817	1,832,183

\* Excludes engines using electricity generated in own works.

Because of the extension of services by the State Electricity Commission to areas previously served by other authorities or individuals, the number of electric light and power factories has decreased considerably in recent years.

The above particulars refer only to electric light and power generation by central electric stations in Victoria and do not include details of distribution, &c. They are compiled from factory returns submitted in accordance with the Commonwealth Census and Statistics Act and the Victorian Statistics Act.

Included in the above figures are those of the State Electricity Commission of Victoria which supplies practically all of the electricity generated.

#### *State Electricity Commission of Victoria*

##### *Powers*

By the 1918 Act and subsequent amending Acts this authority—known since 1921 as the State Electricity Commission of Victoria—is vested with power to erect, own, and operate electrical undertakings ; acquire existing electricity undertakings ; supply electricity retail to individual consumers or in bulk to any corporation or public institution ; establish brown coal open cuts ; own and operate briquette works ; and develop the State's water-power resources for electricity generation. Incidental to its main operations, the Commission owns and operates the tramway systems in Ballarat and Bendigo.

The Commission is the controlling authority for all electricity undertakings in Victoria. It is responsible for the registration of electrical contractors, the licensing of electrical mechanics, the control of installation methods and material, and the testing and approval of electrical equipment and appliances.

*State Generating System*

Sources of power for the State system generate 99 per cent. of all the electricity produced in Victoria for public supply. The system serves about 96 per cent. of the population through a supply network covering more than three-quarters of the populated area of the State. Electricity generated in, and purchased for this system totalled 6,112 million kilowatt-hours in 1959-60, nearly three-quarters of Victoria's electricity being generated from brown coal used either in its raw state or in the form of briquettes. During 1959-60, hydro-stations produced nearly 11 per cent. of the State's electricity for public supply.

The following table shows the predominant part taken by the State Electricity Commission in the generation of electric power in Victoria, the amount of power generated by water power and other sources and the relative importance of the main power stations:—

**VICTORIA—ELECTRICITY GENERATED, POWER STATIONS, ETC., 1959-60**

Source	Type T = Thermal* H = Hydro	Output Million kWh.
State Electricity Commission—		
Yallourn Power Station and Briquette Factory ..	T	2,952
Morwell Power Station and Briquette Factory ..	T	497
Newport Power Station .. ..	T	1,182
Spencer-street Power Station (M.C.C.) .. ..	T	353
Richmond Power Station .. ..	T	180
Other Country Power Stations .. ..	T	282
Total S.E.C. Thermal Generation ..	T	5,446
Eildon—Rubicon .. ..	H	261
Kiewa .. ..	H	194
Total S.E.C. Hydro Generation ..	H	455
Snowy Mountain Scheme .. ..	H	56
Hume .. ..	H	83
Interchange with New South Wales .. ..	..	72
Total S.E.C. .. ..	T and H	6,112
Other Available for Public Supply .. ..	T	45
Total Available for Public Supply ..	T and H	6,157
Electricity Generated in Factories .. ..	T	196
Cumulative Total .. ..	T and H	6,353

\* Includes Internal Combustion.

Inclusive of generator capacity available to the Victorian system from outside the State, the total installed capacity of the State generating system at 30th June, 1960, was 1,484,000 kilowatts. Except for 24,550 kilowatts of plant in the Mildura sub-region, all power stations are interconnected. The largest power station in this interconnected system is Yallourn, which alone generates almost half Victoria's electricity. The transmission and distribution system at 30th June, 1960, comprised 32,331 miles of high and low voltage power lines, fifteen terminal stations and almost 24,000 distribution sub-stations.



*Snowy Mountains Hydro-power*

Victoria is entitled to one-third of the electricity from the Snowy Mountains scheme—after the Commonwealth has taken the power it needs for the Australian Capital Territory and within the Snowy Mountains area. Output from the Snowy scheme became available to Victoria from 10th November, 1959 via a new 330,000-volt transmission line connecting with the Victorian system at Dederang. Victoria also shares (with New South Wales) the electricity generated at Hume Power Station on the River Murray.

*Consumers Served*

At 30th June, 1960, the State system served 869,330 consumers in Victoria (679,973 retail and the remainder—189,357—through eleven metropolitan councils which buy electricity in bulk). In addition, bulk supply was given to several New South Wales municipalities and irrigation settlements bordering the River Murray. The State system supplies all the Melbourne Metropolitan Area and over 1,500 other centres of population. Rural electrification is now more than four-fifths completed and 44,079 farms were supplied with electricity during the year by the State Electricity Commission. Outside the State system there were 19,911 other consumers served by local country undertakings.

*New Construction*

Inclusive of the substantial output to which Victoria is entitled from the Snowy Mountains hydro-electric scheme, the capacity of Victoria's State generating system will be more than doubled between 1960 and 1969. At Yallourn a 240,000 kilowatt extension (Yallourn "E") is due for completion in 1962. Next to be commissioned after Yallourn "E" will be the new Hazelwood Power Station south of Morwell. It will burn brown coal from the Morwell open cut. Beginning with one turbo-generator (200,000 kilowatts) in 1964, the Commission plans to complete the power station to its ultimate capacity of 1,200,000 kilowatts in 1971.

The new brown coal burning power station built as part of the Morwell power and fuel project is now nearly complete. The installed capacity of the power station was 110,000 kilowatts at 30th June, 1960. An additional 60,000 kilowatt turbo-generator is due to be in service late in 1962. Briquette production in the new factories at Morwell began in December, 1959. Early in 1961 production was at the rate of about 100,000 tons a month.

At Kiewa another hydro-power station of 96,000 kilowatts capacity was completed late in 1960.

The main 220,000 volt transmission system has been greatly extended. Sections in service link Yallourn, Melbourne, and Kiewa; Melbourne, Geelong, and Colac; and Kiewa, Shepparton, Bendigo and Kerang. Completion of the final section (Geelong, Ballarat, Bendigo) in the 220,000 volt ring grid around Central Victoria is scheduled for the end of 1961. The line to Colac is scheduled to extend to Terang by the end of 1961. The line to Kerang will be continued to Red Cliffs (near Mildura) in 1962.

**VICTORIA—STATE ELECTRICITY COMMISSION : INCOME,  
EXPENDITURE, SURPLUS, ETC.  
(£'000)**

Particulars	1957-58	1958-59	1959-60
<b>INCOME</b>			
Electricity Sales—			
Domestic .. .. .	11,387	13,303	14,587
Commercial .. .. .	5,184	5,984	6,535
Industrial .. .. .	9,312	10,717	11,893
Bulk .. .. .	8,848	9,847	11,058
Traction .. .. .	1,997	2,052	1,980
Public Lighting and Miscellaneous .. .. .	427	493	551
Briquette Sales .. .. .	1,998	2,169	2,975
Brown Coal Sales .. .. .	782	721	747
Tramways Income .. .. .	105	101	100
Miscellaneous Income .. .. .	22	25	28
<b>Total Income .. .. .</b>	<b>40,062</b>	<b>45,412</b>	<b>50,454</b>
<b>EXPENDITURE</b>			
Operation and Maintenance (Including Fuel)	20,064	19,174	21,392
Administrative and General Expenses .. .. .	3,106	3,338	3,778
General Services, &c. .. .. .	1,666	1,823	2,217
Depreciation .. .. .	4,840	5,894	7,668
Interest .. .. .	9,633	10,769	11,854
Loan Flotation Expense .. .. .	260	365	400
Deferred Interest, &c., Written Off .. .. .	..	3,200	2,250
Miscellaneous Expenditure .. .. .	473	426	435
<b>Total Expenditure .. .. .</b>	<b>40,042</b>	<b>44,989</b>	<b>49,994</b>
Surplus .. .. .	20	423	460
Fixed Assets (Depreciated) at 30th June .. .. .	227,314	245,660	263,318
Capital Liabilities at 30th June .. .. .	230,297	245,486	265,001

*State Electricity Commission : Brown Coal Production*

*Occurrence of Brown Coal*

In contrast to the scarcity of black coal resources in Victoria, the State possesses one of the most important brown coal bearing regions of the world. This low grade brown coal, which originated comparatively recently in Tertiary geological times, is found in thick deposits at relatively shallow depth, the largest and most important deposit being located in the Latrobe Valley of Central Gippsland.

The coal in this region occurs in a number of distinct beds lying more or less horizontally with thicknesses ranging up to several hundred feet. There are large areas where two or more of these seams are present, usually separated by partings of clay and sand. Overburden covering the top coal consists of sands, clays and gravels less than 50 feet in depth in the most favourable areas.

These conditions are suitable for coal winning by open cut methods, using high capacity mechanical equipment, both for the removal of overburden and recovery of the underlying coal. Estimates based on drilling information to date indicate that there could be over 80,000

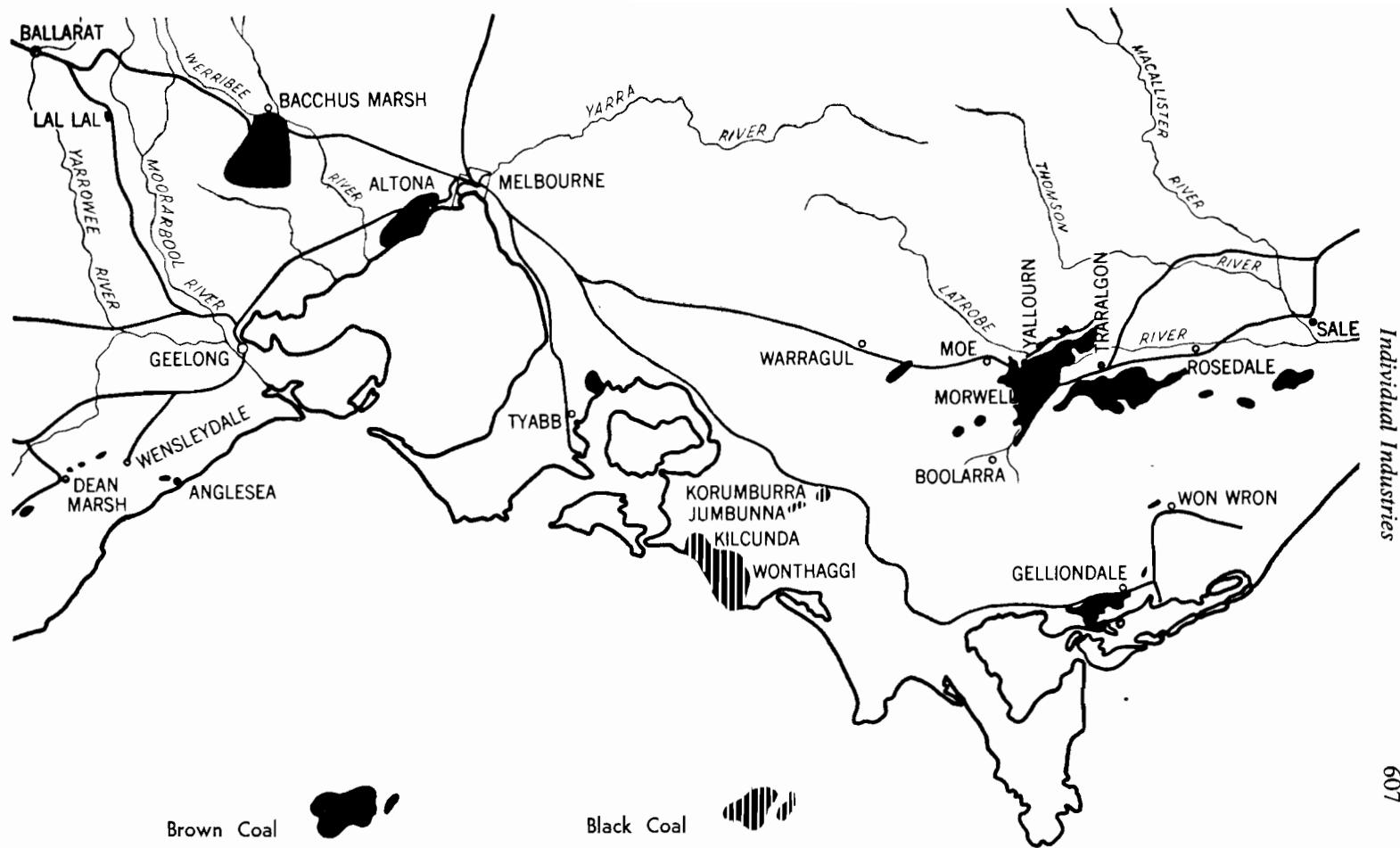


FIGURE 13.—Coal deposits located in Victoria.

million tons of brown coal in the Latrobe Valley, of which over 17,000 million tons could be won by open cut methods, at an economic cost, on present day standards.

Fig. 13 shows the location of the Latrobe Valley coal fields. The Yallourn-Morwell area and the Loy Yang area are separated by a trough of deep coal.

#### *Use of Latrobe Valley Coal*

The water content of Latrobe Valley coals is high, and when burnt, most of them yield only approximately one-quarter of the effective heat obtained from the same weight of a high grade black coal. However, this is far outweighed by cheapness of production when the coal is utilized for electricity generation in power stations adjacent to the coal field. In the 1920's the State Electricity Commission successfully established the Yallourn Power Station at a site on the bank of the Latrobe River, using brown coal from the Yallourn seam with approximately 66 per cent. water content. Progressive additions have made this power station the largest at present operating in Australia with an installed capacity scheduled to total 621,000 kilowatts in 1962 and an annual consumption by that date of approximately 10 mill. tons of brown coal.

A second power station has been established on the coal fields as part of the Morwell power and fuel undertaking, 6 miles from Yallourn; and south of Morwell a third power station, Hazelwood, will begin operating in 1964, for completion by stages to an ultimate capacity of 1.2 mill. kilowatts in 1971. It is the Commission's long-term aim to locate all base loads generating capacity in steam power stations on the coal fields in the Latrobe Valley. Taking into account all steam generation—in the Latrobe Valley and at other centres—more than two-thirds of Victoria's electricity to-day is derived from brown coal, used either in its raw state in the power stations close to the open cuts in the Latrobe Valley, or in the form of briquettes manufactured from brown coal in power stations at centres away from the coal fields.

Owing to transportation costs, it is necessary for fuel from the Latrobe Valley to have a higher heat value per ton in order to be economically attractive in the Metropolitan Area and beyond.

The State Electricity Commission therefore established the briquetting industry at the outset of the Yallourn scheme, following practices developed in Germany where the brown coal industry had been established for many years. This process converts raw brown coal into a hard, high grade fuel with 15 per cent. moisture content and a calorific value, weight for weight, that is over three times that of the raw coal and is comparable with that of black coal. Briquettes are readily transportable to point of use and can be stored. The pioneer briquette factory at Yallourn requires approximately 2.5 mill. tons of brown coal per annum to produce over 600,000 tons of briquettes.

The completion in 1960 of large new briquette factories at Morwell has increased the Commission's annual output of briquettes (Yallourn and Morwell combined) to about 2 mill. tons per annum. The briquette works at Yallourn and Morwell supply a large part of Victoria's industrial solid fuel, fuel for domestic use and fuel for electricity

generation in steam power stations in Melbourne and some provincial cities. In addition, briquettes from Morwell are supplied to the Gas and Fuel Corporation for gas making in the nearby Morwell gas works which pipe gas to Melbourne.

For approximately 15 years after the Second World War, briquette supplies to the Metropolitan Area and elsewhere were supplemented by deliveries of raw brown coal of higher grade won from a seam of limited extent north of the Latrobe River, over 15 mill. tons being produced in this period. But, in view of the greatly increased production of briquettes following the completion of the large new factories at Morwell, production from Yallourn North has now been reduced to less than 500,000 tons annually to supply local industry in the Latrobe Valley.

Fig. 14 shows growth in total annual production of brown coal by the State Electricity Commission since 1925:—

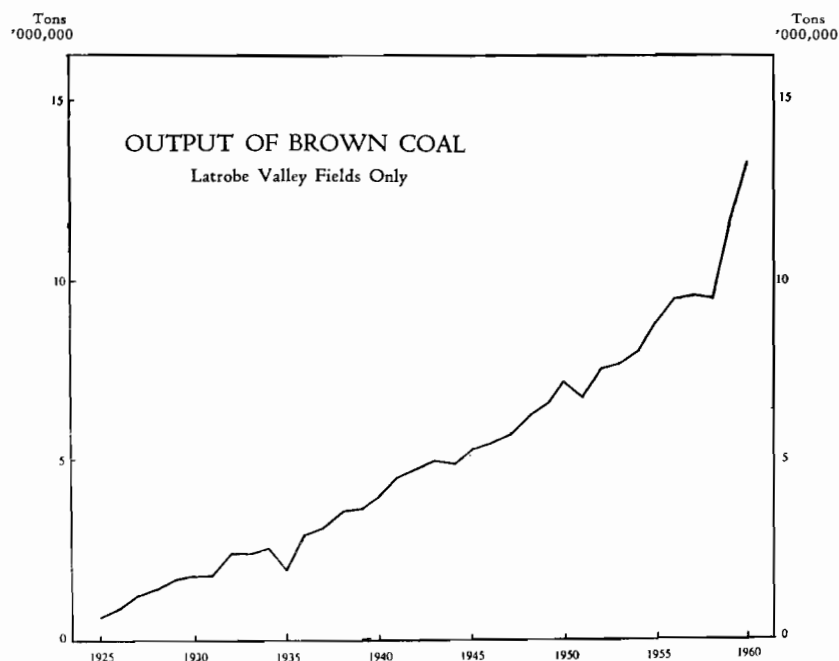


FIGURE 14.—Graph showing brown coal production in Victoria.

#### *Production Methods*

The main centres of coal production are now the two major open cuts at Yallourn and Morwell (Fig. 13).

At Yallourn Open Cut approximately 13 mill. tons per annum are being produced from a seam approximately 200 feet in depth, and overburden material, removed ahead of the advancing coal faces, is deposited on the worked-out floor of the open cut.

At Morwell Open Cut about 5 mill. tons per annum are scheduled to be won in 1962 from the higher levels of the Morwell No. 1 seam, which is over 400 feet thick at the site of present working, and underlain by a lower seam exceeding 100 feet in thickness. Development to full working depth will take many years and overburden disposal is effected outside the open cut boundaries. As plant is installed in Hazelwood Power Station, its fuel requirements from the Morwell Open Cut will progressively increase to about 12 mill. tons a year in 1971.

Owing to the essential nature of the industries based on it, and relatively small storages of coal practicable at points of consumption, open cuts must be planned to ensure continuity of production, with adequate reserves of accessible coal and excavating and handling plant.

Coal is excavated from working faces by high capacity electrically driven dredgers standing on benches developed at suitable levels within the coal seams. These machines employ buckets fitted with digging teeth and are of two types—known as bucket wheel and bucket chain dredgers. Hourly digging capacities range as high as 1,750 tons per hour. Photographs of a large bucket wheel dredger in operation in Yallourn Open Cut and a bucket chain machine are shown in the photographic section of this Year Book.

Overburden in the Latrobe Valley is relatively soft and, as with the coal, it can be readily excavated without preliminary breaking. Similar excavating machines and methods are employed for overburden excavation, although in the more restricted areas some overburden removal has been carried out with modern diesel powered earthmoving plant.

Both in the Yallourn and Morwell open cuts, electric rail haulage is used for overburden removal from the dredgers to the respective dumping areas, but the overburden railway at Yallourn will shortly be replaced by a modern belt conveyor installation to handle the material right from the excavation face to point of disposal.

In the Morwell Open Cut, lines of belt conveyors deliver the coal from the dredgers to the bunkers serving the Morwell undertaking. The conveyor lines extending along the working levels to the dredgers are of special construction to ensure ease of shifting from time to time as the working face recedes.

Electric railways are used at Yallourn for coal haulage, rail tracks of special construction along working faces connecting with the permanent railways for the delivery of coal to terminal bunkers. This railway system is connected with the railway layout at Morwell Open Cut, permitting transfer of coal between these areas as required.

In the Yallourn Open Cut and at Morwell, disposal of overburden is carried out by discharging the material on the face of a dump which advances progressively. High capacity mechanical spreaders perform this function.

A number of auxiliary services and operations are essential to open cut activities. Water spraying of exposed coal surfaces must be carried out as required for fire protection in the summer months and large pumping installations are required for this service and for dewatering purposes.

*Productivity and Costs*

As a result of trends to high capacity equipment, improved methods and increasing mechanization, productivity of operations tends to increase progressively. At Yallourn Open Cut, productivity of labour increased from 24 tons per manshift in 1949-50 to 50 tons per manshift in 1959-60, the manshifts being calculated from time worked by all wages personnel contributing to both overburden and coal operations, and including all maintenance activities.

Costs of production are affected by variations in ruling wage and price levels, but at the major open cuts brown coal can be produced and delivered to bunkers at works for approximately 8s. per ton including all overhead charges.

**Further References**

An outline of the history of the State Electricity Commission of Victoria will be found on pages 580 to 583 of the Victorian Year Book 1961.

In the next table particulars relating to gas works are shown :—

**VICTORIA—GAS WORKS**

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	32	32	27	27	27
Number of Persons Employed ..	1,529	1,626	1,372	1,584	1,513
Salaries and Wages Paid £'000	1,580	1,833	1,738	1,796	1,789
Value of Power, Fuel, &c., Used £'000	135	195	416	397	503
Value of Materials Used £'000	5,882	5,791	5,702	5,800	5,471
Value of Production .. £'000	2,805	2,792	2,609	3,319	3,807
Value of Output .. £'000	8,822	8,778	8,727	9,516	9,781
Value of Land and Buildings £'000	659	3,009	3,349	3,284	3,031
Value of Plant and Machinery £'000	7,357	14,142	12,554	13,332	13,701
Horse-power of Engines Ordinarily in Use .. H.P.	11,196	16,166	16,106	17,048	16,797

The particulars appearing in the above table are compiled from factory returns received under the authority of the Commonwealth Census and Statistics Act and the Victorian Statistics Act. They relate to production and are exclusive of particulars of distribution, &c.

Appropriate details relating to the Gas and Fuel Corporation of Victoria are included in the table. The following is a brief review of the activities of the Corporation.

*Gas and Fuel Corporation of Victoria**Formation*

The Gas and Fuel Corporation of Victoria came into being by Act of Parliament on 6th December, 1950. It was formed by the merger of the Metropolitan and Brighton Gas Companies, which supplied gas to adjoining areas. The privately held shares of the two companies were exchanged for fully paid up preference shares in the Gas and Fuel Corporation.

The State Government of Victoria invested £4 mill. which were held as ordinary shares in the Corporation. Three directors were appointed by the preference shareholders and the Chairman and three other directors were appointed by the Government. Capital requirements for expansions were to be raised by means of loans on which the Government guaranteed the interest payments.

### *Reasons for Formation*

The main reason for the formation of the Corporation was to provide finance to make possible the use of the vast indigenous resources of brown coal in the Latrobe Valley for town gas production. It was considered essential, both from an economic and national viewpoint, to change from the conventional method of producing gas from black coal, imported from New South Wales, to the new and revolutionary method of high pressure gasification of brown coal.

The Lurgi High Pressure Gasification Plant was erected between 1951 and 1956 on the brown coal field at Morwell and came into operation in the spring of 1956. It was officially opened by H.R.H. the Duke of Edinburgh on 5th December of that year. This plant was connected to the metropolitan reticulation by a 103 mile 18-in. welded steel pipe-line.

### *Expansion*

Since its inception, and particularly after the commencement of brown coal gasification, the Corporation's activities expanded rapidly. In 1956 the areas of Dandenong and Frankston were acquired from the Colonial Gas Association and connected to the main Morwell-Melbourne pipe-line for supply. This supply was then further extended to embrace the Mornington area. Subsequently the towns along the pipe-line route, Traralgon, Morwell, Trafalgar and Warragul were connected to brown coal gas supply.

In 1960 the rapidly expanding area of the Lower Dandenongs extending from Lower Fern Tree Gully to Lilydale was supplied with brown coal gas from the pipe-line at Dandenong.

The introduction of catalytic oil refining into Australia in 1954 has had a marked effect upon the gas industry and upon the fuel economy of the country generally. From these refineries end products are available to the gas industry. These include waste refinery gas, propane, and butane on the one hand, and heavy residual oil for gasification on the other. It is essential that these products be integrated into future gas production programmes and this can be achieved at comparatively low capital cost.

The gas production plan of the Corporation for the next five years envisages the doubling of the output of brown coal gas at Morwell. This is possible without appreciable capital expenditure if the existing plant is operated to full capacity without spare or idle reserve plant. All reserve plant would be situated at West Melbourne and would operate on refinery products. The West Melbourne works are already connected by pipe-line to the Vacuum Refining Company's plant at Altona.



The type of plant now being installed will be ready for the winter of 1962 and will gasify low priced residual oil and reform refinery gases and propane to town gas standards. These plants will not only cope with standby requirements but will also provide the necessary load to meet seasonal requirements, fluctuating loads and peak winter demands.

Within the next five years the Morwell works' output from brown coal will be increased from 15 mill. to 28 mill. cubic feet per day. At the same time the output from the West Melbourne works will be increased from 25 mill. cubic feet to 50 mill. cubic feet per day. These large increases in output will supply the greatly increasing gas demands in the rapidly expanding Melbourne Metropolitan Area and some of the country areas.

For certain specific industries and specially located areas, refinery gas, and the gas propane, will be supplied from the Corporation's storage at Altona. A new area, embracing Altona and Laverton, is now being reticulated to supply industry and homes with the neat rich gas propane.

### Summary

The aim of the Gas and Fuel Corporation is to render the best possible service in supplying a clean gaseous fuel to the homes and industries of Victoria, a service which every modern community demands. A gaseous fuel is most convenient. It is clean, easily controlled ; it requires no storage by the consumer ; and a pipe-line is the cheapest mode of transport. For the Corporation to attain its objective it is vital that fuels be gasified as cheaply as possible, so that gas may play its true part in the fuel economy of the State.

### VICTORIA—GAS AND FUEL CORPORATION : REVENUE, EXPENDITURE, ETC.

(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>REVENUE</b>					
Sales—					
Gas .. .. .	7,110	7,604	8,244	9,361	10,065
Residual Products and Other Items* .. .. .	1,611	1,574	1,206	1,166	989
Income from General Investments	3	3	3	1	†
<b>Total Revenue ..</b>	<b>8,724</b>	<b>9,181</b>	<b>9,453</b>	<b>10,528</b>	<b>11,054</b>

\* Excludes sales of appliances.

† Under £500.

**VICTORIA—GAS AND FUEL CORPORATION: REVENUE,  
EXPENDITURE, ETC.—continued**

(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>EXPENDITURE</b>					
Manufacture of Gas .. ..	5,512	6,080	6,256	6,534	6,444
Transmission Expenses .. ..	..	91	134	163	207
Distribution of Gas .. ..	1,743	2,344	2,515	2,792	3,148
Management Expenses .. ..	146	231	263	307	340
Research, Investigation, and Development .. ..	..	56	68	181	243
Superannuation Contributions, Retiring Allowances, &c. ..	88	94	96	129	184
Interest on Debentures, Overdraft, &c. .. ..	404	}	*	*	*
Depreciation and Amortization ..	567				
Long Service Leave .. ..	57	64	68	78	48
Contingency Reserve .. ..	25	25	..	25	25
Other .. ..	24	38	46	99	79
<b>Total Expenditure ..</b>	<b>8,566</b>	<b>9,023</b>	<b>9,446</b>	<b>10,308</b>	<b>10,718</b>
Net Surplus .. ..	158	158	7	220	336
Fixed Assets less Depreciation and Amortization at 30th June ..	24,331	27,877	30,213	31,537	33,146
Loan Indebtedness at 30th June—					
State Government .. ..	11,759	11,908	12,058	12,168	12,258
Other .. ..	13,227	16,928	19,955	22,569	25,132

\* Since 1955-56 interest charges and depreciation have been apportioned over the various expense accounts.

**Government Factories**

In 1938-39, Government factories numbered 127 and employed 12,958 persons. These factories expanded considerably as a result of war activities and reached their peak of employment in 1942-43 when 50,831 persons were working in 158 factories. In 1959-60, employment had decreased to 29,326 in 157 factories. Comparative particulars for the last five years are shown in the following table :—

**VICTORIA—GOVERNMENT FACTORIES AND WORKSHOPS**

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Number of Factories .. ..	154	150	143	147	157
Number of Persons Employed ..	30,788	29,448	28,482	28,988	29,326
Salaries and Wages Paid £'000	27,944	27,364	26,910	28,039	31,172
Value of Power, Fuel, &c., Used £'000	11,006	11,857	12,469	11,704	12,577
Value of Materials Used £'000	26,166	27,086	29,076	27,517	30,468
Value of Production .. £'000	42,104	44,681	44,176	51,466	51,528
Value of Output .. £'000	79,276	83,624	85,721	90,687	94,573
Value of Land and Buildings £'000	31,175	36,173	39,238	45,983	49,693
Value of Plant and Machinery £'000	75,662	91,135	93,831	107,209	121,011

The above table embraces establishments under the control of the Commonwealth Government in Victoria, State Government, and local government authorities. Such activities as railway and tramway workshops, electric light and gas works, dockyards, printing works and clothing, aircraft and munitions factories, &c., are included.

In relation to the whole of Victorian factories during 1959-60, Government factories absorbed 8 per cent. of employment; expended 8 per cent. of the salaries and wages paid; and accumulated 8 per cent. of the value of production.

# Part 9

## FINANCE

### *Public Finance*

#### **Economic Importance of Government Financial Activity**

##### *Financial Transactions*

During the last thirty or so years, governments have come to accept new and wider responsibilities for economic stability and growth and for the social welfare of their peoples. They are now in a position where a large proportion of their actions are undertaken to achieve economic and social ends. This applies not only to their regulatory activities but also to their financial transactions. These transactions may be classified in the following ways :—

##### *Purchases of Goods and Services*

Governments are important purchasers of goods and services which they require to provide current services, e.g., defence services, health and educational facilities ; and capital assets such as office buildings, power installations, and railway track and rolling stock. Expenditure of this kind generates income and, consequently, rises or falls in its level affect the purchasing power of the community. In addition, governmental requirements determine the allocation of national resources and the composition of national capital assets.

##### *Transfers of Income between Sections of the Community*

Governments are also agents for the redistribution of incomes throughout the community. Their role of tax-gatherers permits them to do this by compulsorily withdrawing purchasing power from one section of the community and transferring it to another in the form, for example, of social service benefits or subsidies to producers. The receipt and payment of interest is another way in which governments redistribute income.

##### *Production and Trading*

As well as providing a considerable volume of services free (or at nominal charges), governments also engage in trading activities in which they produce and sell goods and services at prices designed substantially to cover costs. These services are usually of the public utility type, e.g., the supply of gas and electricity, transport services, and water supply and sewerage, of which governments are usually the sole providers. Their distinguishing characteristic is that they are, to a certain extent, subject to market forces.

*Borrowing and Lending*

Governments acquire funds for their own purposes and for lending to others by borrowing the savings of those with surplus funds. They are also in a position to influence the amount of saving in the community by varying rates of taxation and their own expenditures.

*Victorian Governmental Activity*

Victorian governmental activity is carried out by :—

- (1) The legislative, executive, and judicial organs of the State ;
- (2) semi-governmental bodies being statutory authorities created to carry out specific activities, e.g., the provision of gas, electricity, water supply, and sewerage facilities on behalf of the State Government or bodies in which the State Government has a controlling interest ; and
- (3) local government bodies set up under the Local Government Act to carry out the functions of local government in defined areas (known as municipalities), and which are elected by the residents or property owners or both in the area. This category also includes authorities created or acquired by local government authorities.

Particulars of the activities of semi-governmental and local government authorities are to be found in Part 5 and other appropriate Parts of this Year Book. It is informative, however, in this Part, to summarize the public authority activity in the State.

Particulars of Commonwealth and State receipts and outlay classified so as to facilitate economic analysis are included in the "Estimates of National Income and Expenditure" presented annually to the Commonwealth Parliament by the Treasurer. The following summary of Victorian governmental transactions represents the Victorian component of Tables IX, X, and XI (Receipts, Outlay, and Net Increase in Indebtedness of Public Authorities) of that document. It is a consolidation (necessarily approximate) of the activities of the major public funds and authorities in the State.

Particulars in the table were compiled from financial statements published by the authorities concerned which, in some instances, did not contain all the information desired. For this reason, the figures shown in the table must be regarded as estimates only and subject to revision as further investigation proceeds. A large proportion of governmental financial transactions is in the nature of transfers between funds, e.g., transfers from the Consolidated Revenue Fund to the Hospitals and Charities Trust Fund, and between authorities, e.g., transfers from the Loan Fund to the State Electricity Commission. Where they could be identified, such transfers have been cancelled out. In some cases, different bases of classification from those used in succeeding sections of this Part were adopted for national income purposes.

# VICTORIA—STATE, LOCAL, AND SEMI-GOVERNMENTAL BODIES : RECEIPTS AND OUTLAY

(£ Million)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>RECEIPTS</b>					
Taxation—					
Indirect Taxes .. ..	40	47	52	57	66
Less Subsidies .. ..	— *	— 1	— *	— *	— *
Net Indirect Taxes .. ..	40	46	52	57	66
Estate and Gift Duties .. ..	7	7	8	8	9
Total Taxation .. ..	47	53	60	65	75
Surplus of Public Authority Business Undertakings .. ..	14	16	18	27	27
Allowances for Depreciation .. ..	4	4	7	8	10
Rent and Interest Received .. ..	7	7	9	9	11
Grants from the Commonwealth Government .. ..	48	56	63	67	77
Borrowing—					
Advances from the Commonwealth Government (Net of Repayments) .. ..	11	11	11	11	12
Commonwealth Bonds—Australia† .. ..	34	35	35	33	38
Commonwealth Loans—Overseas† .. ..	1	*	2	6	2
Local and Semi-Governmental Securities† .. ..	23	32	32	28	33
Less Increase in Holdings of Commonwealth Bonds and Local and Semi-Governmental Securities .. ..	— *	1	— 4	— 2	— 5
Other Funds Available (Including Errors and Omissions) .. ..	*	2	1	— 2	..
Total Receipts .. ..	189	217	234	250	280
<b>OUTLAY</b>					
Net Purchase of Goods and Services—					
Public Works—					
Railways .. ..	8	8	8	10	12
Roads .. ..	20	22	27	29	34
Other Transport .. ..	4	4	4	4	4
Fuel and Power .. ..	27	23	29	26	32
Water Supply, Sewerage, and Irrigation .. ..	13	15	14	18	17
Forestry, Land Development, &c. .. ..	5	4	4	4	5
Schools, &c. .. ..	7	7	8	9	11
Hospitals .. ..	6	6	6	6	6
All Other (Office Buildings, Plant and Equipment <i>n.e.i.</i> , Court Houses and Penal Establishments, Welfare Institutions, Rental Dwellings, &c.) .. ..	16	12	13	9	8
Total Public Works .. ..	106	101	113	115	129
Increase in Stocks .. ..	1	— 3	— 2	— 2	— 1
Law, Order, and Public Safety .. ..	8	9	10	11	12
Education .. ..	23	26	29	30	36
Health and Welfare .. ..	16	19	20	21	23
Development and Conservation of National Resources .. ..	3	4	4	5	6
All Other .. ..	13	14	15	16	14
Total Net Purchase of Goods and Services .. ..	170	170	189	196	219

\* Under £500,000.

† Net of redemption.

VICTORIA—STATE, LOCAL, AND SEMI-GOVERNMENTAL BODIES :  
RECEIPTS AND OUTLAY—*continued*

(£ Million)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Cash Social Service Benefits ..	1	1	1	1	1
Capital Transfers to Persons ..	*	*	*	1	1
Interest Paid .. ..	28	32	36	40	45
Lending, &c.—					
Net Purchases of Existing Real Assets .. ..	— 1	— *	*	— 3	— 5
Net Advances for Housing ..	3	7	6	11	12
Other Net Advances, &c. ..	1	*	—*	— 1	— 2
Increase in Cash and Bank Deposits .. ..	— 13	7	2	5	9
Total Outlay .. ..	189	217	234	250	280

\* Under £500,000.

### Financial Relations with the Commonwealth

#### *General*

The Federal Constitution enumerates the matters regarding which the Commonwealth Parliament has power to legislate. They include defence, external affairs, trade and commerce with other countries and between the States, customs and excise, posts and telegraphs, navigation, lighthouses, quarantine, census and statistics, currency and banking, insurance, copyright and trade marks, naturalization, immigration, invalid and old age pensions, social services, industrial relations where disputes extend beyond the boundaries of a State, taxation that does not discriminate between States or parts of States, the taking over by the Commonwealth of the public debts of the States, and the borrowing of money by the Commonwealth for the States. Some of these powers are given exclusively to the Commonwealth, e.g., defence, and customs and excise, but, in the majority of matters, the Commonwealth and State Governments have concurrent powers, Commonwealth law prevailing where there is conflict. Matters other than those enumerated in the Constitution, remain the concern of the States. Governmental activity at the State level embraces education, health and welfare services, the development of internal resources, e.g., irrigation and water supply, land settlement, soil conservation, maintenance of law and order, and the provision of public utility services, e.g., roads, electricity and gas, public transport, water supply and sewerage. These activities are carried out by State Departments and by statutory and local governing bodies created by the State Governments. The States have direct access to a small proportion only of moneys required for revenue and capital purposes. This has come about in three ways :—

- (1) Through the surrender, under the Constitution, of the right to levy customs and excise duties ;

- (2) through the Financial Agreement of 1927, between the Commonwealth and State Governments, under which the Commonwealth became the borrowing agent for the States ; and
- (3) through the Commonwealth exercising its right to impose taxation in the field of personal and company income.

The lack of balance between the spending functions and the sources of revenue available to the Commonwealth and the States respectively has given rise to a system of grants from the Federal Government to the States. These grants may be unconditional or may be earmarked for specific purposes such as roads and universities. Important examples of the former are the tax reimbursement grants payable under the uniform tax system and special grants payable under section 96 of the Constitution, which provide assistance to those States experiencing difficulty in raising revenue or providing services on a comparable level with the other States.

Commonwealth fiscal superiority is supported by present-day acceptance of the role of governments as agents of economic control and providers of social services on a large scale. In order to carry out these functions, the central government must have a substantial measure of control over taxation revenue and the level of public investment.

#### *Financial Agreement between the Commonwealth and the States*

The Financial Agreement of 12th December, 1927, between the Commonwealth and the States came into being because it was thought desirable to adopt a co-ordinated approach to the loan market instead of independent approaches by the several governments and because of the necessity of establishing sound sinking fund arrangements. It also provided for the sharing of State debt charges by the Commonwealth. The following is a summary of the main provisions :—

##### *(1) Consolidation of Public Debt*

On 1st July, 1929, the Commonwealth took over the existing public debts of the States and assumed responsibility for the payment of related interest. This interest is reimbursed by the States, less the sum of £7,584,912 per annum which the Commonwealth agreed to contribute for a period of 58 years. Of this amount, Victoria receives £2,127,159 annually. This payment is in compensation to the States for relinquishing, after Federation, the right to levy customs and excise duties.

##### *(2) Regulation of Government Borrowing*

The Australian Loan Council was set up to co-ordinate the public borrowings of the Commonwealth and the States. It consists of the Prime Minister (or his nominee) as Chairman, and the State Premiers (or their nominees). Each financial year, the Commonwealth and the several States submit to the Loan Council programmes setting out the amounts they desire to raise by loan during the ensuing year. Revenue deficits to be funded are included in the borrowing programmes, but borrowings for "temporary purposes" need not be included. Borrowing by the Commonwealth for defence purposes is outside the Agreement.

If the Loan Council considers that the total amount of the programmes cannot be borrowed at reasonable rates and conditions, it determines what amount shall be borrowed and may, by unanimous decision, allocate such amount between the Commonwealth and the States. In default of a unanimous decision, the allocation is determined by means of a formula written into the Agreement. Subject to the decisions of the Loan Council, the Commonwealth arranges all borrowings including those for conversions, renewals, and redemptions. However, the Commonwealth or a State may borrow for "temporary purposes" by way of overdraft or fixed deposit, subject to limits fixed by the Loan Council. In addition, the Commonwealth may borrow within the Commonwealth, or a State within its territory, from authorities, bodies, or institutions, or from the public by counter sales of securities, subject to Loan Council approval. Commonwealth securities are issued for moneys borrowed in this way, and amounts so borrowed are treated as part of the borrowing programme for the year.

### (3) *Sinking Fund Provisions*

The Financial Agreement also provided for the creation of sinking funds for debt existing at 30th June, 1927, and incurred subsequently. Contributions to these are made jointly by the Commonwealth and the States on bases laid down. The sinking funds established under the Agreement are under the control of the National Debt Commission, an Authority constituted under Commonwealth legislation and consisting of the Treasurer of the Commonwealth, the Chief Justice of the High Court, the Secretary to the Commonwealth Treasury, the Governor of the Commonwealth Bank, the Solicitor-General for the Commonwealth, and a representative of the States.

Sinking fund moneys are used to redeem unconverted securities at maturity, and to re-purchase securities on the stock market.

### (4) *Borrowing by Semi-Government Authorities*

Although they are not legally bound by the Agreement, it was realized at the outset that, in the interests of co-ordinated borrowing, the Loan Council should have some control over the loan raising activities of semi-governmental bodies. In May, 1936, all resolutions passed by the Loan Council in connexion with semi-governmental borrowings were consolidated into one set of rules. This "gentlemen's agreement" provided for the submission of annual loan programmes of semi-governmental (including local government) authorities proposing to raise £100,000 or more in a year; for the consideration of such programmes in conjunction with the loan programme of the Government concerned; and for the fixing of the terms of individual semi-governmental loans coming within the scope of the annual programme.

### (5) *Commonwealth Influence on Supply of Loan Moneys*

The Commonwealth is in a position to control the supply of local loan moneys through the influence of Commonwealth policy on the banking system, indirectly through alterations in rates of taxation (which affect personal savings), and through the money it is prepared to make available from its own trust funds. This last factor has assumed considerable importance in recent years because of the inability of the loan market to meet governmental capital expenditure



programmes and the consequent need for Commonwealth support. From 1st July, 1951, to 30th June, 1960, the Commonwealth has provided this support from the Australian currency proceeds of overseas loans and from budget surpluses to the extent of £785·3 mill. out of loan programmes amounting to £1,887·4 mill.

### Grants to the States

#### (1) General

The following table shows particulars of amounts paid to Victoria as grants for the several purposes referred to in subsequent paragraphs :—

#### VICTORIA—COMMONWEALTH PAYMENTS TO OR FOR THE STATE\* (£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Financial Agreement—					
Interest on State Debt ..	2,127	2,127	2,127	2,127	2,127
Sinking Fund on State Debt† ..	972	1,054	1,155	1,230	1,367
Tax Reimbursement Grant ..	36,044	40,228	43,996	46,475	60,625
Special Financial Assistance ..	3,399	5,826	6,405	8,104	..
Additional Financial Assistance ..	..	..	1,061	..	..
Commonwealth Aid Roads ..	4,660	5,495	6,264	6,543	8,660
Tuberculosis Act 1948—Reimbursement of Capital Expenditure ..	74	120	76	45	26
Mental Institutions — Contribution to Capital Expenditure ..	446	527	545	620	518
Coal Mining Industry Long Service Leave .. .. .	1	1	1	1	‡
Imported Houses—Grants ..	..	2	..	..	..
Grants to Universities ..	415	522	664	1,313	1,422
Tobacco Industry Assistance ..	2	5	3	3	..
Dairy Industry Extension Grant ..	60	60	60	80	60
Expansion of Agricultural Advisory Services .. .. .	51	61	69	60	50
Total .. .. .	48,251	56,028	62,426	66,601	74,855

\* Excludes subsidies and bounties to primary producers and payments for medical research, social services, &c., also payments under the provisions of the *Rail Standardization (New South Wales and Victoria) Agreement Act, 1958*.

† Paid to National Debt Sinking Fund.

‡ Under £500.

#### (2) Financial Agreement

Commonwealth contributions to interest and sinking fund charges on State debt have been dealt with above.

#### (3) Tax Reimbursement Grant

The States were supplanted by the Commonwealth as income taxing authorities during the Second World War when the Commonwealth needed to exploit this field of taxation to the full to meet its wartime obligations. Under the uniform taxation scheme, the Commonwealth became the sole authority levying taxes upon income. In return for vacating that field of taxation, the States received an annual payment from the Commonwealth as reimbursement for the loss of income tax revenue. A similar arrangement was made for entertainments tax, but this tax is no longer levied by the Commonwealth Government. Although challenged by the States, the system was continued after the war and is still in existence. In 1957, the High Court ruled that

while the Commonwealth could not prejudice the rights of the States to levy taxes on incomes, it could make grants to the States conditional on the non-levy of income taxes.

Full particulars of the *States Grants (Income Tax Reimbursement) Act* 1942 and the *States Grants (Tax Reimbursement) Act* 1946–48 may be found in the Official Year Book of the Commonwealth of Australia No. 37, pages 635 to 637, and No. 40, page 696. The allocation of moneys under the original Act was based on the State's own income tax collections prior to the introduction of uniform taxation. From 1946–47, grants under this Act were replaced by grants under the *States Grants (Tax Reimbursement) Act* 1946–48. This Act provided for reimbursement grants of certain specified amounts to be paid to the States during 1946–47 and 1947–48. For 1948–49 and subsequent years, the grants were assessed in accordance with a formula based on increases in population and average wages. Within a few years, heavy additions to the financial needs of the States made necessary the supplementing of the grant calculated on the basis of the formula by a series of special or additional assistance grants, the size of which was largely arbitrary.

The whole question of Commonwealth–State financial relations was reviewed in 1959 and this resulted in the enactment of the *States Grants Act* 1959 (operative until 1964–65). The amount of financial assistance payable to each State during 1959–60 was specified and a formula prescribed for calculating the grant payable in the subsequent years. Under the formula, the amount payable to each State is calculated by expressing the amount of the grant payable to that State in the preceding year on a per capita basis, varying it in a prescribed manner by the increase in average wages for Australia as a whole, and multiplying it by the population of the State in the year of review. Victoria's share for 1960–61 was £67,371,342. It was envisaged that Western Australia and Tasmania would, as a result of this legislation, be the only continuing claimant States under Section 96 of the Constitution, although Queensland and South Australia would have some right of access to the Grants Commission in special circumstances.

#### (4) *Grants for Road Construction*

The Commonwealth has made grants to the States for roads purposes for some considerable time. Particulars of Acts (commencing with the *Main Roads Development Act* 1923–25) under which these payments were made are given in the annual Commonwealth Finance Bulletin—Part 1, Public and Private Finance (issued by the Commonwealth Statistician).

The *Commonwealth Aid Roads Act* 1954 provided for payment to the States, for five years from 1st July, 1954, of an amount equivalent to 7d. a gallon on all petrol (except aviation spirit) entered for home consumption and which was subject to customs or excise duties as specified in certain Customs Tariff Items. Out of this amount, the following allocations were made to the States for construction and maintenance of roads and the purchase of roadmaking plant :—

- (a) 60 per cent. of the amount, less £900,000 per annum, for expenditure on roads, and

- (b) 40 per cent. of the amount for expenditure on roads in rural areas other than highways, trunk, or main roads.

The States were entitled to spend from the Commonwealth road grants up to £1 mill. per annum on works connected with transport by road or water. Five per cent. of the grants was payable to Tasmania and the remainder was divided among the other five States, three-fifths according to population and two-fifths according to area. In addition, the Commonwealth could spend each year £800,000 on strategic roads and £100,000 on the promotion of road safety practices. An amendment to the Act increased the allocation for road safety purposes to £150,000 a year from 1st July, 1955, and the allocation to the States from 7d. to 8d. a gallon from 1st July, 1956. The grant was further supplemented by the *Commonwealth Aid Roads (Special Assistance) Act 1957* under which an extra £3 mill. was appropriated for each of the years 1957–58 and 1958–59. Of this amount, £2,950,000 was made available to the States and £50,000 to the Commonwealth.

The *Commonwealth Aid Roads Act 1959* established a new scheme of Commonwealth assistance which superseded the Acts mentioned above. Under the new scheme which is to operate for a period of five years, the Commonwealth will make available to the States a total amount of up to £250 mill. for the construction, reconstruction, maintenance, and repair of roads. Of this amount, £220 mill. will be payable as basic grants, which will increase from £40 mill. in 1959–60 to £48 mill. in 1963–64, and which will be distributed each year among the States on the basis that Tasmania will receive 5 per cent. and that, of the remainder, one-third will be shared by the other States in proportion to their respective populations at the date of the last preceding census, one-third in proportion to their respective areas, and one-third in proportion to the number of motor vehicles registered in those States at 31st December preceding the year of payment.

The balance of £30 mill. takes the form of matching assistance. The amount available for this purpose will increase from £2 mill. in 1959–60 to £10 mill. in 1963–64. Each State may participate in the matching assistance for each year, up to the share of the assistance for which it is eligible. Its share is determined by allocating the amount of matching assistance available each year in the same proportions in which the basic grant for that year is distributed. Up to this limit, each State qualifies for £1 of matching assistance for every £1 by which the amount it allocates in that year from its own resources for roads is greater than the amount so allocated in 1958–59. In 1960–61, Victoria will receive about £9·2 mill. by way of basic grant and matching assistance.

#### (5) *Tuberculosis Hospitals — Reimbursement of Capital Expenditure*

Under the *Tuberculosis Act 1948* the Commonwealth undertook to reimburse the States for capital expenditure on buildings, furnishings, equipment, and plant for the diagnosis, treatment, and control of

tuberculosis. In addition to recouping capital expenditure, the Commonwealth also contributes from the National Welfare Fund to maintenance expenditure incurred by the States (the amount paid to Victoria for 1959-60 was £1,096,549), and reimburses administration expenses.

(6) *Mental Institutions—Contribution to Capital Expenditure*

The *States Grants (Mental Institutions) Act* 1955 provides for financial assistance to the States for capital expenditure on mental institutions to a maximum amount of £10 mill. Each State is entitled to recover one-third of its expenditure on buildings and equipment incurred on or after 1st July, 1955.

(7) *Coal Mining Industry—Long Service Leave*

In the States in which coal miners have been awarded long service leave by industrial tribunals, the State Governments concerned have agreed to reimburse employers for the costs they incur in granting this leave. The Commonwealth, in turn, has agreed to reimburse the States for the amounts paid and related administrative costs. In order to provide the funds required for these purposes, the Commonwealth imposed an excise duty on coal.

(8) *Imported Houses—Grants*

The Commonwealth pays a subsidy to the States for houses imported by a State or a housing authority of a State after 12th October, 1949. The amount of the subsidy is the amount by which the cost of imported houses exceeds the cost of building comparable houses from local materials, with a limit of £300 per house.

(9) *Grants to Universities*

Payments to the States for universities were first introduced in 1951-52 under the *States Grants (Universities) Act* 1951 and were continued under similar legislation passed in 1953, 1955, 1956, and 1957. Following on the Commonwealth's acceptance of the main recommendations of the Committee on Australian Universities, the provisions of the 1957 Act relating to financial assistance for 1958 were superseded by the *States Grants (Universities) Act* 1958, which operated from 1st January, 1958.

The new legislation authorized the Commonwealth to make payments of up to £21.4 mill. to the States for universities over the three calendar years 1958 to 1960, inclusive, where certain conditions are satisfied. These payments include increased contributions towards the current expenses of universities, new grants for capital works and equipment, and emergency grants.

As recommended by a Committee on Australian Universities, an Australian Universities Commission has been appointed, under the authority of the *Australian Universities Commission Act* 1959, to inquire into and make recommendations on the subject of Commonwealth assistance to the States for universities in 1961 and subsequent years.

(10) *Tobacco Industry Assistance*

The Commonwealth makes a grant for tobacco research of up to £15,000 per annum, paid to the tobacco producing States on a £1 for £1 basis.

(11) *Dairy Industry Extension Grant*

The Commonwealth provides financial assistance to promote improved farm practices in the dairy industry.

(12) *Expansion of Agricultural Advisory Services*

These payments were introduced in 1952–53 to encourage the expansion of agricultural advisory services by the State Departments of Agriculture and to promote increased farm efficiency.

In addition to the grants mentioned above, Victoria also benefits under the *Railway Standardization (New South Wales and Victoria) Agreement Act 1958*. Under this Act, the Commonwealth is financing the construction of a standard gauge rail link between Albury and Melbourne estimated to cost £10,726,000. Each State is to repay 15 per cent. of the total cost, by instalments, over a period of 50 years. Expenditure by the Commonwealth to 30th June, 1960, amounted to £5,769,000.

**Revenue and Expenditure***General*

The financial transactions of the State of Victoria are concerned with (a) Consolidated Revenue, (b) Trust Funds, and (c) Loan Fund. Payments from Consolidated Revenue are made either under the authority of an annual Appropriation Act or by a permanent appropriation under a special Act.

In the following tables, details of Consolidated Revenue and Expenditure are shown for each of the years 1955–56 to 1959–60. The figures are not comparable, in all cases, with those shown in issues of the Year Book prior to 1961 (No. 75), in which the Public Revenue and Expenditure of certain special funds were added to Consolidated Revenue and Expenditure, while recoups by the Treasury to the Victorian Railways for specified purposes were excluded from the tables.

*Consolidated Revenue Fund*

The following table shows, for each of the years 1955–56 to 1959–60, the Consolidated Revenue and Expenditure of Victoria, the surplus or deficit, and the accumulated deficit at the end of each year :—

**VICTORIA—CONSOLIDATED REVENUE FUND : REVENUE,  
EXPENDITURE, SURPLUS OR DEFICIT, ETC.  
(£'000)**

Year Ended 30th June—	Revenue	Expenditure	Surplus + or Deficit —	Accumulated Deficit to End of Each Year (i.e., 30th June)
1956 .. .. .	123,152	126,398	— 3,246	16,491
1957 .. .. .	133,254	137,565	— 4,311	20,802
1958 .. .. .	142,336	145,549	— 3,213	24,015
1959 .. .. .	151,248	153,796	— 2,548	26,563
1960 .. .. .	168,310	167,997	+ 313*	26,563†

\* Transferred to Surplus Revenue Account.

† Of this amount, £24,685,985 was provided from Loan Fund and £1,877,173 from the Public Account.

*Consolidated Revenue* :—Details of the principal sources of revenue are shown in the following table for each of the years 1955–56 to 1959–60 :—

**VICTORIA—CONSOLIDATED REVENUE FUND : REVENUE**  
(£'000)

Source of Revenue	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Taxation* .. .. .	22,904	25,433	28,387	30,332	37,829
Business Undertakings—					
Railways .. .. .	37,300	37,463	35,948	38,142	39,032
Harbours, Rivers, and Lights ..	571	503	543	575	613
Water Supply, Sewerage, Irriga- tion, and Drainage .. .. .	3,061	3,186	3,893	4,001	4,115
Electricity Supply (Interest and Recoups of Sinking Funds, &c.)	2,103	2,216	2,431	2,654	2,941
State Coal Mines .. .. .	684	500	476	414	367
Other .. .. .	441	525	484	472	450
Total .. .. .	44,160	44,393	43,775	46,258	47,518
Lands—					
Sales .. .. .	85	169	111	167	247
Rents .. .. .	294	334	393	422	520
Forestry .. .. .	2,166	2,294	2,227	2,033	2,342
Other .. .. .	85	130	122	179	170
Total .. .. .	2,630	2,927	2,853	2,801	3,279
Interest <i>n.e.i.</i>	4,108	4,571	5,075	5,585	6,236
Commonwealth Grants—					
Financial Agreement Act ..	2,127	2,127	2,127	2,127	2,127
Tax Reimbursement .. .. .	36,044	40,228	43,996	46,475	60,625
Special Financial Assistance ..	3,399	5,826	7,467†	8,104	..
Total .. .. .	41,570	48,181	53,590	56,706	62,752
Commonwealth National Welfare Fund Payments—					
Tuberculosis—					
Maintenance Expenditure ..	1,111	842	1,295	1,060	1,114
Pharmaceutical Benefits—					
Mental Institutions .. .. .	13	8	19	32	29
Total .. .. .	1,124	850	1,314	1,092	1,143
Fees and Fines .. .. .	947	1,302	1,764	1,895	2,043
All Other .. .. .	5,709	5,597	5,768	6,579	7,510
Grand Total .. .. .	123,152	133,254	142,336	151,248	168,310

\* For details of total taxation collections see page 628.

† Includes £1,061,169 additional financial assistance.

*Expenditure from Consolidated Revenue* :—The principal items of expenditure during each of the years 1955–56 to 1959–60 are shown in the following table. Public debt charges, pensions and gratuities, and pay-roll tax have not been allotted to the respective heads of expenditure and are shown as separate items.

**VICTORIA—CONSOLIDATED REVENUE FUND :  
EXPENDITURE  
(£'000)**

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>Public Debt Charges—</b>					
Interest .. .. .	15,125	16,789	19,157	20,844	23,469
Exchange .. .. .	492	480	492	597	715
Debt Redemption .. .. .	3,475	3,686	4,169	4,689	5,301
Other .. .. .	68	125	100	86	161
<b>Total .. .. .</b>	<b>19,160</b>	<b>21,080</b>	<b>23,918</b>	<b>26,216</b>	<b>29,646</b>
<b>Business Undertakings—</b>					
Railways .. .. .	36,199	37,154	35,932	35,908	37,098
Harbours, Rivers, and Lights .. .. .	442	494	568	464	510
Water Supply, Sewerage, Irrigation, and Drainage .. .. .	2,823	3,054	3,305	3,433	3,703
State Coal Mines .. .. .	708	753	724	607	560
Other .. .. .	309	364	262	255	259
<b>Total .. .. .</b>	<b>40,481</b>	<b>41,819</b>	<b>40,791</b>	<b>40,667</b>	<b>42,130</b>
<b>Social Expenditure—</b>					
<b>Education—</b>					
State Schools .. .. .	19,757	22,334	24,822	27,242	31,013
Technical Schools* .. .. .	1,708	1,670	1,708	1,778	1,998
Universities .. .. .	773	874	939	1,037	1,185
Libraries, Art Galleries, &c. .. .. .	505	551	608	651	679
Agricultural Education, Research, &c. .. .. .	478	519	547	580	637
Other .. .. .	55	59	55	57	57
Public Health and Recreation .. .. .	1,341	1,671	1,879	2,056	2,204
<b>Charitable—</b>					
<b>Hospitals—</b>					
General .. .. .	10,701	11,893	12,619	13,155	14,900
Mental .. .. .	4,745	5,046	5,474	6,114	6,665
Child Welfare .. .. .	643	758	970	1,123	1,309
Other .. .. .	141	223	185	404	411
<b>Law, Order, and Public Safety—</b>					
Justice .. .. .	1,315	1,566	1,745	1,901	2,135
Police .. .. .	5,102	5,899	6,426	6,742	7,232
Penal Establishments .. .. .	681	831	907	917	1,000
Public Safety .. .. .	7	7	8	7	8
<b>Total .. .. .</b>	<b>47,952</b>	<b>53,901</b>	<b>58,892</b>	<b>63,764</b>	<b>71,433</b>
<b>All Other Expenditure—</b>					
Public Works <i>n.e.i.</i> .. .. .	1,272	1,389	1,555	1,572	1,856
Lands and Survey .. .. .	973	1,152	1,250	1,363	1,519
Agriculture .. .. .	2,172	2,440	2,240	2,382	1,966
Forestry .. .. .	1,915	2,013	1,969	1,822	2,060
Legislature and General Administration .. .. .	3,574	4,342	4,591	4,794	5,005
Pensions and Superannuation .. .. .	3,466	3,602	3,823	4,116	4,463
Pay-roll Tax .. .. .	1,430	1,539	1,633	1,713	1,847
Miscellaneous† .. .. .	4,003	4,288	4,887	5,387	6,072
<b>Total .. .. .</b>	<b>18,805</b>	<b>20,765</b>	<b>21,948</b>	<b>23,149</b>	<b>24,788</b>
<b>Grand Total.. .. .</b>	<b>126,398</b>	<b>137,565</b>	<b>145,549</b>	<b>153,796</b>	<b>167,997</b>

\* Maintenance grants, &c.

† Includes interest and repayments of advances under the Commonwealth-State Housing Agreement. In the 1961 issue of the Year Book these amounts were included with "Social Expenditure—Other Charitable".

## Taxation

## General

In this section, some particulars are given of the principal taxes collected in Victoria by the State Government and the Commonwealth Government.

As mentioned on pages 618–619, the Commonwealth Government alone exercises the right to impose customs and excise duties and taxation on personal and company incomes. Sales and pay-roll taxes are other important sources of taxation revenue exploited by the Commonwealth exclusively. For the most part, the field now left to the States comprises motor taxation, stamp duties, liquor, land, lottery, racing, and entertainments taxes. Estate duties are shared between the two Governments.

In Victoria, taxation collections by the State Government are allocated by Statute either to Consolidated Revenue or to special funds. The principal item of Victorian taxation which finds its way to special funds is motor taxation which is credited to a number of funds as set out on page 629.

In the following table, particulars of taxation collected in Victoria by the State Government, also the total amounts paid to Consolidated Revenue and to special funds, are shown for each of the years 1955–56 to 1959–60 :—

**VICTORIA—TAXATION COLLECTIONS**  
(£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>Motor—</b>					
Registration Fees and Taxes ..	4,887	6,240	7,953	8,192	8,839
Drivers' Licences ..	400	416	439	570	904
Other ..	1,491	2,534	2,975	3,295	4,138
<b>Total Motor ..</b>	<b>6,778</b>	<b>9,190</b>	<b>11,367</b>	<b>12,057</b>	<b>13,881</b>
<b>Probate and Succession</b>					
Duties ..	7,102	7,005	8,065	7,839	9,413
Stamp Duties <i>n.e.i.</i> ..	4,380	5,249	6,253	8,485	12,471
Land ..	3,250	4,170	4,607	4,661	5,854
Income (Arrears) ..	24	9	4	3	*
Liquor ..	2,310	2,515	2,817	2,908	2,994
Tattersall Duty ..	2,793	2,979	2,835	2,849	2,966
Racing ..	2,084	2,175	2,405	2,320	2,630
Entertainments (Excl. Racing Admission Tax)	1,037	1,410	1,505	1,370	1,142
Licences <i>n.e.i.</i> ..	245	258	253	285	287
<b>Grand Total ..</b>	<b>30,003</b>	<b>34,960</b>	<b>40,111</b>	<b>42,777</b>	<b>51,638</b>
<b>Paid to Consolidated Revenue ..</b>	<b>22,904</b>	<b>25,433</b>	<b>28,387</b>	<b>30,332</b>	<b>37,829</b>
<b>Paid to Special Funds ..</b>	<b>7,099</b>	<b>9,527</b>	<b>11,724</b>	<b>12,445</b>	<b>13,809</b>
<b>Per Head of Population</b>	<b>£11/14/0</b>	<b>£13/4/10</b>	<b>£14/16/4</b>	<b>£15/8/3</b>	<b>£18/2/3</b>

\* Under £500.



*Motor Taxation*

The principal source of motor taxation is the amount collected by the Motor Registration Branch of the Police Department by way of fees for the registration of motor vehicles and for the issue of drivers' licences and owners' certificates. In addition, the Transport Regulation Board's charges for the issue of licences, &c., and the amount collected under the provisions of the Commercial Goods Vehicles Act, are included in motor taxation.

A further item of taxation, introduced as from 16th November, 1959, is the amount collected under the authority of the *Motor Car (Insurance Surcharge) Act 1959*, from a surcharge of £1 imposed on each third-party insurance premium. The tax collected is paid to Consolidated Revenue.

With the exception of amounts collected under the Motor Car (Insurance Surcharge) Act, fees collected by the Motor Registration Branch are not paid to Consolidated Revenue, but are credited to various funds as directed by the Motor Car Act and other Acts. Costs of collection are apportioned between the participating funds (other than Consolidated Revenue) with the exception that, in respect of amounts credited to the Level Crossings Fund, the relevant costs of collection are borne by the Country Roads Board Fund.

The amounts of motor taxation credited to the several accounts during the year 1959-60 were as follows :—

	£'000	£'000
Consolidated Revenue—		
Motor Car Third-Party Insurance Tax		490
Country Roads Board Fund—		
Motor Registration Fees .. ..	8,839	
Drivers' Licence Fees (half) ..	452	
Owners' Certificates (two-thirds) ..	605	
Road Charges — Commercial Goods Vehicles Act .. ..	2,117	12,013
Level Crossings Fund—		
Owners' Certificates (one-third) ..		302
Municipalities Assistance Fund—		
Drivers' Licence Fees (half) ..		452
Transport Regulation Fund—		
Motor Omnibus Registration Fees ..	6	
Licences, &c. .. ..	294	
Permits .. ..	324	624
Total Motor Taxation, 1959-60 ..		13,881

*Probate Duties*

The *Administration and Probate Acts 1958* fixed the rates of duty payable on the estates of deceased persons leaving property, whether real or personal, in the State of Victoria, and personal property

wherever situated if the deceased was domiciled in Victoria at the date of death. The Acts provide for discriminatory rates of duty in favour of estates passing to close relatives. Categories of beneficiaries are :—

- A. Widow, widower, children under 21 years of age, wholly dependent adult children, or wholly dependent widowed mother.
- B. Children over the age of 21 years not being wholly dependent, or grandchildren.
- C. Brothers, sisters, parents.
- D. Other beneficiaries.

The following is a brief summary of the rates applicable to estates passing to beneficiaries in the various categories. The rates were effective from 1st December, 1958. For rates prior to that date, see the Victorian Year Book 1952–53 and 1953–54 and previous issues.

On that part of the final balance which—					The rate of duty per £1 shall be where the final balance passes to—			
					A	B	C	D
		£			pence in £			
Exceeds	600	but does not exceed	600	..	Nil	Nil	Nil	Nil
"	1,500	" " " "	1,500	..	Nil	Nil	12	18
"	5,000	" " " "	5,000	..	Nil	Nil	24	24
"	6,500	" " " "	6,500	..	18	24	36	42
"	10,000	" " " "	10,000	..	30	36	36	48
"	15,000	" " " "	15,000	..	18	24	30	42
"	25,000	" " " "	25,000	..	24	30	42	48
"	30,000	" " " "	30,000	..	30	36	48	48
"	35,000	" " " "	35,000	..	42	48	48	48
"	45,000	" " " "	45,000	..	48	54	60	60
"	55,000	" " " "	55,000	..	54	66	72	90
"	60,000	" " " "	60,000	..	60	72	72	90
"	65,000	" " " "	65,000	..	72	72	78	90
"	75,000	" " " "	75,000	..	84	84	90	90
"	85,000	" " " "	85,000	..	90	90	96	102
"	85,000	" " " "	94,667 (a)	..	90	..	..	..
"	85,000	" " " "	97,166 (b)	..	..	96	..	..
"	85,000	" " " "	113,840 (c)	..	..	..	102	..
"	85,000	" " " "	116,625 (d)	..	..	..	..	108
When the final balance exceeds (a), (b), (c), or (d), then the whole of the final balance is subject to a duty of					£22 10s. per £100	£25 per £100	£30 per £100	£33 per £100

The amount of probate duty assessed in Victoria during each of the five years to 1959–60 was as follows :—1955–56, £7,624,745 ; 1956–57, £7,213,556 ; 1957–58, £8,143,299 ; 1958–59, £7,911,320 ; 1959–60, £9,872,406.

### Commonwealth Estate Duty

The Commonwealth Government also levies probate and succession duties. The amount of duty collected throughout Australia during each of the five years to 1959–60 was :—1955–56, £10,119,760 ; 1956–57, £12,712,152 ; 1957–58, £13,773,826 ; 1958–59, £13,308,744 ; 1959–60, £13,752,610.

### Land Tax

The *State Land Tax Act* 1928 provided for a tax on the unimproved value of land. For the purpose of this Act, unimproved value is the estimated selling value of the land assuming that improvements, if any,

had not been made. Thus tax is levied on land even if built on or otherwise improved, at a rate, for every £1 of unimproved value, declared for each year by Act of Parliament.

The *Land Tax (Exemptions and Rates) Act 1953* provided for a rate of tax of one penny in the pound on the unimproved value of land not exceeding £8,750, and for a graduated increase in the rate on unimproved values in excess of £8,750. This rate has remained unaltered since 1953.

Under the provisions of the *Land Tax (Exemptions and Rates) Act 1955*, land not used primarily for primary production was exempted from land tax if the unimproved value of such land was not more than £1,000. A partial exemption was allowed up to £1,200. The *Land Tax (Exemptions and Rates) Act 1958* extended the exemption to £1,250, and the partial exemption to £1,500. On land used primarily for primary production, the exemption is £3,000 with partial exemption up to £6,000.

The exemptions and rates prescribed in the 1958 Act remained unaltered for assessments issued until the end of 1961.

The following table shows particulars, in specified groups of unimproved values of holdings, of Land Tax assessments for 1959 :—

### VICTORIA—ANALYSIS OF STATE LAND TAX ASSESSMENTS, 1959

(Based on Unimproved Values at 31st December, 1958)

Unimproved Values of Holdings Ranging between—				Number of Taxpayers	Total Unimproved Values*	Tax Payable
£					£'000	
1,251 and	1,500	..	..	17,827	24,805	61
1,501 "	2,000	..	..	20,416	36,009	143
2,001 "	3,000	..	..	16,714	40,774	155
3,001 "	4,000	..	..	13,820	48,590	124
4,001 "	5,000	..	..	9,121	41,153	133
5,001 "	6,000	..	..	6,266	34,715	130
6,001 "	7,000	..	..	4,452	28,780	118
7,001 "	8,000	..	..	3,330	25,004	100
8,001 "	8,750	..	..	1,698	14,373	58
8,751 "	10,000	..	..	2,384	22,271	92
10,001 "	15,000	..	..	4,528	55,075	262
15,001 "	20,000	..	..	1,808	31,166	187
20,001 "	25,000	..	..	962	21,385	147
25,001 "	30,000	..	..	518	14,268	111
30,001 "	35,000	..	..	361	11,702	131
35,001 "	40,000	..	..	237	8,838	88
40,001 "	50,000	..	..	286	12,651	134
50,001 "	75,000	..	..	371	22,454	289
75,001 "	100,000	..	..	146	12,788	219
100,001 "	150,000	..	..	136	17,575	354
150,001 "	200,000	..	..	73	12,799	303
200,001 and over		..	..	152	78,054	2,104
Total		..	..	105,606	615,229	5,443

\* Of land not exempted from land tax.

In the following table details are shown of the assessments made during each of the years 1955 to 1959 :—

### VICTORIA—STATE LAND TAX ASSESSMENTS

Year	Number of Taxpayers	Total Tax Payable	Average Tax Payable per Taxpayer	Total Unimproved Values*
		£'000	£ s. d.	£'000
1955 .. ..	137,077	3,249	23 14 1	463,459
1956 .. ..	89,816	3,433	38 4 4	438,324
1957 .. ..	98,808	3,944	39 18 3	478,797
1958 .. ..	115,317	4,630	40 3 1	543,793
1959 .. ..	105,606	5,443	51 10 9	615,229

\* Of land not exempted from land tax.

### Stamp Duties

The *Stamps Act* 1958 imposes a stamp duty on a considerable number of legal and commercial documents. The rates of duty vary with the nature of the document or the type of transaction which such a document records. In certain instances, a document of a particular kind must be brought into existence for the purpose of stamping. Various exemptions are provided according to the nature of the individual document.

The rates of duty payable in 1960 on the principal dutiable classes were as follows :—

Document	Duty Payable
RECEIPTS .. ..	3d.
BILLS OF EXCHANGE—	
Payable on demand (cheque, &c.)	3d.
Others (including promissory notes)	not above £25 .. 6d.
	to £50 .. 1s.
	to £75 .. 1s. 6d.
	to £100 .. 2s.
	for extra £50 or part 1s.
SHARE TRANSFERS—On sale for full value—Based on consideration }	to £10 .. 9d.
	above £10 .. 3%
TRANSFER OF REAL PROPERTY—Based on consideration }	to £3,500—12s. 6d. for £50
	above £3,500—15s. for £50
LEASES AND ASSIGNMENTS OF LEASES ..	Variable scale according to nature
	%
GIFTS AND SETTLEMENTS .. ..	up to £1,000 .. 2
	over £1,000 to £5,000 3
	„ £5,000 „ £10,000 4
	„ £10,000 „ £25,000 5
	„ £25,000 „ £50,000 6
	„ £50,000 „ £100,000 8
	„ £100,000 .. 10
INSURANCE—Based on premium income	.. .. 5
INSTALMENT PURCHASE (Including hire purchase).. ..	Scale based on .. 2

In addition, stamp duty is also appropriated to funds for cattle and swine compensation (see Victorian Year Book 1928–29, page 80).

The Act also provides for the collection, by way of stamp duty, of certain imposts on betting, principally through a turnover tax on bookmakers' holdings and a tax on betting tickets. The duty collected in connexion with these taxes is included under the heading "Racing" in the table shown on page 628 of this Year Book.

### *Liquor Tax*

The Licensing Court controls the issue of liquor licences in Victoria. The principal sources of taxation are the fees received for liquor licences and club certificates. All receipts of the Licensing Court are paid into the Licensing Fund. After payments have been made to municipalities and the Police Superannuation Fund, and costs for compensation, administration, &c., have been met, the excess of receipts is transferred each year from the Licensing Fund to Consolidated Revenue.

The following table shows the amount of liquor tax paid into the Licensing Fund during each of the years 1955–56 to 1959–60 :—

### VICTORIA—LIQUOR TAX (£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Licences—					
Victuallers .. .. .	1,884	2,050	2,295	2,340	2,378
Spirit Merchants and Grocers ..	293	316	353	381	425
Australian Wine .. .. .	15	15	15	16	16
Others .. .. .	8	7	8	7	7
Club Certificates .. .. .	79	94	111	127	129
Permits—Extended Hours, &c. ..	31	33	35	37	39
 Total .. .. .	 2,310	 2,515	 2,817	 2,908	 2,994

### *Lottery (Tattersall) Duty*

With the object of providing additional finance for hospitals and other charitable institutions, the trustees of the will and estate of the late George Adams, founder of Tattersall's Consultations, were granted a licence to promote and conduct sweepstakes in Victoria in accordance with the provisions of the *Tattersall Consultations Act 1953*.

The Act provides that, within seven days after the drawing of each consultation, duty equivalent to 31 per cent. of the total amount of subscriptions to the consultation, shall be paid to Consolidated Revenue. Each year, an equivalent amount is paid out of Consolidated Revenue, in such proportions as the Treasurer determines, into the Hospitals and Charities Fund and the Mental Hospitals Fund.

In the following table, the amounts subscribed to consultations, the duty paid to Consolidated Revenue, and the allocations of this revenue between the Hospitals and Charities Fund and the Mental Hospitals Fund are shown for each of the years 1955-56 to 1959-60 :—

**VICTORIA—TATTERSALL LOTTERIES:  
SUBSCRIPTIONS, ETC.**

(£'000)

Year Ended 30th June—	Subscriptions to Consultations	Amount Paid to Consolidated Revenue	Allocated to—	
			Hospitals and Charities Fund	Mental Hospitals Fund
1956 .. ..	8,850	2,793	2,411	382
1957 .. ..	9,250	2,979	2,701	278
1958 .. ..	8,950	2,835	2,461	374
1959 .. ..	8,750	2,849	2,400	449
1960 .. ..	9,300	2,966	2,539	427

*Racing Taxation*

The principal sources of revenue from racing taxation are turnover tax on bookmakers' holdings, the percentage received from investments on the totalizator, stamp duty on betting tickets, and tax on admissions to race meetings.

In Victoria, a deduction of 12 per cent. is made from all investments on the totalizator at horse races (including trotting), and at dog races. In the case of city racing clubs, the percentage derived from doubles and quinella investments is divided—4 per cent. being paid to revenue and 8 per cent. to the club, while from win and place investments, 7 per cent. is paid to revenue and 5 per cent. to the club. In respect of country race meetings, 2 per cent. of the total investments is paid to revenue and 10 per cent. to the club.

Government receipts from the totalizator, including fractions and unclaimed dividends, are specially appropriated to the Hospital and Charities Fund. Receipts during 1959-60 amounted to £884,435.

### Entertainments Tax

A tax payable on admissions to entertainments was levied by the Victorian Government up to 31st August, 1943, when legislation was passed making the Commonwealth Government the sole authority for levying this tax. In 1953, the Commonwealth vacated this field of taxation and the Victorian Government reimposed a tax on entertainments as from 8th October, 1953, under the provisions of the *Entertainments Tax Act 1953*.

The *Entertainments Tax (Reduction) Act 1959*, reduced the rates of tax payable as from 9th November, 1959. The reduced rates were reflected in the overall tax payable for 1959-60 and, because the amended schedules completely exempted several of the lower categories, the number of taxable admissions was correspondingly reduced.

In the following table, the number of taxable admissions and the amount of tax payable, are shown for each of the years 1957-58 to 1959-60 according to the various classes of entertainments :—

#### VICTORIA—ENTERTAINMENTS TAX : NUMBER OF TAXABLE ADMISSIONS AND TAX PAYABLE

Class of Entertainment	1957-58		1958-59		1959-60	
	Number of Admissions	Tax Payable	Number of Admissions	Tax Payable	Number of Admissions	Tax Payable
	'000	£'000	'000	£'000	'000	£'000
Admissions Taxable at Reduced Rates—						
Theatres .. .. .	1,119	76	1,228	86	1,500	108
Sport .. .. .	604	27	731	29	513	23
Miscellaneous .. .. .	379	25	401	25	335	21
Periodical or Season Ticket .. .. .	4	*	3	*	3	*
Admissions Taxable at Full Rates—						
Motion Pictures .. .. .	28,591	1,192	21,507	1,000	16,672	845
Racing (Horse, Trotting, Dog) .. .. .	2,134	224	2,184	230	2,407	249
Dancing and Skating .. .. .	1,845	125	1,734	116	1,687	105
Miscellaneous .. .. .	402	44	299	32	368	34
Periodical or Season Ticket .. .. .	165	23	247	34	156	22
Total .. .. .	35,243	1,736	28,334	1,552	23,641	1,407

\* Under £500.

### Commonwealth Income Tax and Social Services Contribution

With the introduction of Social Services Contribution from 1st January, 1946, the levy of taxation on the incomes of individuals was divided into two separate taxes—Income Tax and Social Services Contribution. Both taxes were based upon the same definitions of assessable income and both were assessed and collected concurrently. Company income was not subject to Social Services Contribution except

with regard to the undistributed income of private companies. The two taxes have since been merged into a single levy known as "Income Tax and Social Services Contribution", and this title now refers to the tax imposed on the incomes of both individuals and companies. It first applied to the tax imposed on incomes derived by individuals during the year ended 30th June, 1951, and by companies during the year ended 30th June, 1950.

Certain types of income are exempt from tax in Australia. These include income from gold mining, uranium mining, war, invalid, age, and widows' pensions, child endowment, and unemployment and sickness benefits.

Expenses incurred in earning income and losses incurred in previous years are allowable deductions.

For the income year 1960-61, Income Tax and Social Services Contribution is payable on the incomes of individuals commencing at a taxable income of £105. However, certain limitations apply to the tax payable by aged persons, over 65 years of age in the case of a male and 60 years in the case of a female. Concessional deductions are allowed to taxpayers on account of dependants, certain medical and dental expenses, life insurance premiums, superannuation contributions, medical or hospital benefits fund payments, education expenses, &c., and are deductible from income to calculate taxable income. Dependants include spouse, parents, parents-in-law, children under sixteen years of age, student children under 21 years of age, invalid (child, brother, or sister) over sixteen years of age, or daughter-housekeeper for widow or widower. A concessional deduction may be allowed in respect of a housekeeper having the care of children under sixteen years of age or of an invalid relative where the taxpayer did not contribute to the maintenance of a spouse or daughter-housekeeper. The amount of a concessional deduction allowable in respect of each type of dependant and housekeeper is :—

	£	
Spouse .. .. .	143	
Parent or parent-in-law .. .. .	143	
Child under sixteen years of age—		
One child .. .. .	91	
Other children .. .. .	65	each dependant
Student child 16 to 21 years of age .. .. .	91	each dependant
Invalid relative not less than sixteen years of age .. .. .	91	each dependant
Housekeeper or daughter-housekeeper .. .. .	143	

The following table shows the rates of Income Tax and Social Services Contribution for individuals for the income year 1960-61.



# INDIVIDUALS : RATES OF INCOME TAX AND SOCIAL SERVICES CONTRIBUTION, 1960-61

The rates of tax and contribution payable, as set out in the *Income Tax and Social Services Contribution Act 1960* are as follows :—

## BASIC RATE OF TAX AND CONTRIBUTION

The rate of income tax and social services contribution for every £1 of each part of the taxable income specified in the first column of the following table is the rate set out in the second column of the table opposite to the reference to that part of the taxable income.

First Column						Second Column
Parts of Taxable Income						Rates
The part of the taxable income which—						pence in £
Does not exceed £100		..	..	..	..	1
	£		£			
Exceeds	100 but does not exceed	150	..	..	..	3
"	150 " " "	200	..	..	..	7
"	200 " " "	250	..	..	..	11
"	250 " " "	300	..	..	..	15
"	300 " " "	400	..	..	..	20
"	400 " " "	500	..	..	..	26
"	500 " " "	600	..	..	..	30
"	600 " " "	700	..	..	..	34
"	700 " " "	800	..	..	..	38
"	800 " " "	900	..	..	..	42
"	900 " " "	1,000	..	..	..	46
"	1,000 " " "	1,200	..	..	..	52
"	1,200 " " "	1,400	..	..	..	59
"	1,400 " " "	1,600	..	..	..	65
"	1,600 " " "	1,800	..	..	..	71
"	1,800 " " "	2,000	..	..	..	77
"	2,000 " " "	2,400	..	..	..	85
"	2,400 " " "	2,800	..	..	..	92
"	2,800 " " "	3,200	..	..	..	99
"	3,200 " " "	3,600	..	..	..	105
"	3,600 " " "	4,000	..	..	..	111
"	4,000 " " "	4,400	..	..	..	117
"	4,400 " " "	5,000	..	..	..	124
"	5,000 " " "	6,000	..	..	..	132
"	6,000 " " "	8,000	..	..	..	139
"	8,000 " " "	10,000	..	..	..	145
"	10,000 " " "	16,000	..	..	..	152
"	16,000 .. ..	.. ..	.. ..	.. ..	.. ..	160

Basic Tax and Contribution is payable on the whole of a person's taxable income, if that taxable income exceeds £104.

A deduction is available to individuals who reside in certain remote areas of the Commonwealth or its Territories. The areas are divided into two Zones—A and B. A resident of Zone A is allowed a deduction of £270 plus one-half of the deductions allowable for

dependants. A resident of Zone B is allowed a deduction of £45 plus one-twelfth of the deductions allowable for dependants. "Resident" for this purpose means a person who resides, whether continuously or not, in the relevant area for more than one-half of the year of income.

A deduction of £270 plus one-half of the deductions allowable for dependants, is allowable to members of the Defence Forces who serve in certain specified overseas localities for a period of more than half of the year of income. A proportionate deduction is allowed if the service is of less duration than one-half of the year.

A system is in operation to assist the majority of taxpayers in the payment of their taxes by means of regular deductions from salaries or wages. The amounts deducted are regulated so that the employee will have paid the approximate amount of his taxation by the end of the income year.

The following table shows the number of taxpayers, taxable income, and Income Tax and Social Services Contribution assessed during 1958-59 (based on incomes received during 1957-58). The particulars are classified according to grades of actual income and relate only to individuals resident in Victoria.

### VICTORIA—INCOME TAX AND SOCIAL SERVICES CONTRIBUTION, 1958-59\*

Grade of Actual Income†	Taxpayers	Taxable Income			Net Income Tax and Social Services Contribution Assessed
		Salaries and Wages	Other	Total	
£	No.		£'000		
105- 199	46,720	5,774	1,151	6,925	61
200- 299	52,808	9,938	2,434	12,372	235
300- 399	66,601	17,561	3,774	21,335	675
400- 499	73,703	24,001	5,677	29,678	1,281
500- 599	88,862	36,357	7,104	43,461	2,392
600- 699	86,939	40,656	8,310	48,966	3,147
700- 799	90,815	46,934	9,290	56,224	3,968
800- 899	112,167	64,817	9,895	74,712	5,519
900- 999	114,256	72,912	10,077	82,989	6,901
1,000- 1,099	98,843	68,169	10,075	78,244	7,041
1,100- 1,199	73,789	54,768	9,358	64,126	6,246
1,200- 1,299	52,487	40,219	8,898	49,117	5,091
1,300- 1,399	39,758	32,213	8,223	40,436	4,483
1,400- 1,499	28,323	23,506	7,515	31,021	3,650
1,500- 1,999	67,612	57,407	30,591	87,998	11,953
2,000- 2,999	33,700	28,575	36,415	64,990	11,913
3,000- 3,999	10,654	9,841	21,229	31,070	7,529
4,000- 4,999	5,003	5,698	13,775	19,473	5,650
5,000- 9,999	5,968	9,076	26,484	35,560	13,314
10,000- 14,999	881	2,211	7,463	9,674	4,603
15,000- 19,999	234	846	2,807	3,653	1,897
20,000- 29,999	138	594	2,304	2,898	1,614
30,000- 49,999	57	282	1,712	1,994	1,198
50,000 and over	25	126	1,771	1,897	1,202
Total	1,150,343	652,481	246,332	898,813	111,563

\* Includes 6,036 taxpayers, resident in Victoria, who derived income from more than one State.

† Actual Income is defined briefly as "Gross income, including exempt income, less expenses incurred in gaining that income".

*Company Tax*

The following table shows the rates of tax and contribution payable by companies on incomes derived during the year ended 30th June, 1961 :—

Type of Company	Rate per £1 of Taxable Income—	
	Up to £5,000	Balance
Private .. .. .	s. d. 5 0*	s. d. 7 0*
Non-private—		
Co-operative .. .. .	6 0	8 0
Life Assurance—		
Mutual .. .. .	5 0	7 0
Other Life Assurance—		
Resident—		
Mutual Income .. .. .	5 0	7 0
Other Income .. .. .	7 0†	8 0
Non-resident—		
Mutual Income .. .. .	5 0	7 0
Dividend Income .. .. .	6 0‡	8 0
Other Income .. .. .	7 0‡	8 0
Non-profit—		
Friendly Society Dispensary .. .. .	6 0	6 0
Other .. .. .	6 0	8 0
Other—		
Resident .. .. .	7 0	8 0
Non-resident—		
Dividend Income .. .. .	6 0	8 0
Other Income .. .. .	7 0§	8 0
All Companies—		
Interest   (Section 125) Rate per £ .. .. .	8s. 0d.	

\* Further tax at 10s. in the £ payable on undistributed amount.

† Maximum income subject to this rate is £5,000 less mutual income.

‡ Maximum income subject to this rate is £5,000 less the sum of mutual income and dividend income.

§ Maximum income subject to this rate is £5,000 less dividend income.

|| Interest paid to non-residents.

**Pensions and Gratuities***General*

During the year 1959–60, the State Government expended a sum of £4,552,880 on pensions, gratuities, &c. Of this amount, £6,308 was spent on pensions of a non-contributory nature.

The following table shows particulars of expenditure on pensions for each of the years 1955–56 to 1959–60 :—

VICTORIA—GOVERNMENT EXPENDITURE ON PENSIONS, GRATUITIES, ETC.  
(£)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Non-contributory Pensions, &c.—					
Railways .. .. .	7,643	6,224	3,511	2,367	1,708
Judges .. .. .	2,574	2,981	4,276	3,019	2,883
Civil Service .. .. .	128	..	..	..	..
Public Service .. .. .	6,706	4,296	2,470	1,955	1,094
Education Department .. .. .	..	..	..	..	..
Officers Transferred to Commonwealth Service .. .. .	521	194	..	..	..
Various Allowances, &c. .. .. .	613	571	705	642	623
Total Non-contributory Pensions, Gratuities, &c. .. .. .	18,185	14,266	10,962	7,983	6,308

VICTORIA—GOVERNMENT EXPENDITURE ON PENSIONS,  
GRATUITIES, ETC.—*continued*  
(£)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>Contributory Pensions—</b>					
Police Superannuation Fund—					
Government Subsidy .. .. .	6,045	2,000	2,000	2,000	2,000
Transferred from Licensing Fund ..	23,000	23,000	23,000	23,000	23,000
Fines .. .. .	52,694	53,640	61,019	70,998	67,111
<b>Total .. .. .</b>	<b>81,739</b>	<b>78,640</b>	<b>86,019</b>	<b>95,998</b>	<b>92,111</b>
Police Pensions Fund .. .. .	722,675	758,700	782,000	785,750	852,250
<b>Superannuation Fund—</b>					
Railways .. .. .	1,571,488	1,614,730	1,709,112	1,842,786	1,967,956
Other .. .. .	1,069,957	1,126,412	1,222,712	1,366,424	1,521,403
<b>Total .. .. .</b>	<b>2,641,445</b>	<b>2,741,142</b>	<b>2,931,824</b>	<b>3,209,210</b>	<b>3,489,359</b>
Coal Mine Workers Pensions Fund ..	62,329	67,625	66,640	70,339	71,228
Parliamentary Contributory Retirement Fund .. .. .	15,586	17,796	18,632	28,576	27,016
Married Women Teachers' Pensions Fund .. .. .	..	..	10,433	12,379	14,472
Public Service Act .. .. .	..	..	..	131	136
<b>Total Contributory Pensions ..</b>	<b>3,523,774</b>	<b>3,663,903</b>	<b>3,895,548</b>	<b>4,202,383</b>	<b>4,546,572</b>
<b>Grand Total .. .. .</b>	<b>3,541,959</b>	<b>3,678,169</b>	<b>3,906,510</b>	<b>4,210,366</b>	<b>4,552,880</b>

### *Police Superannuation Fund*

Pensions are payable out of this fund to those who joined the police force prior to 25th November, 1902.

The Fund is maintained by an annual subsidy of £2,000 from the Consolidated Revenue ; by a moiety of the fines inflicted by the Court of Petty Sessions ; by transfers from the Licensing Fund under the provisions of the Licensing Act and, should the foregoing sources prove insufficient, by a further grant in aid from Consolidated Revenue. Police contributions to the Fund ceased in 1940–41.

During the year 1959–60, the total receipts of the Fund from all sources amounted to £92,111, while pension payments totalled £28,713. There was a balance of £305,397 in the Fund at 30th June, 1960.

### *Police Pensions Fund*

This fund was established by the *Police Pensions Act* 1923 which came into operation on 1st January, 1924, and applied to all members who joined the police force on or after 25th November, 1902. The *Police Regulation Act* 1958, consolidating the law dealing with the police force in Victoria, was passed in September, 1958, and a further amending Act was passed in December, 1958.

Under the provisions of these Acts, the Fund provides pensions on retirement, either at maximum ages, which vary according to rank, or on account of ill health. Widows are entitled to proportionate pensions, and allowances are paid for children up to sixteen years of age.

Each year, the Government Actuary is required to certify what amount should be appropriated from Consolidated Revenue to ensure the solvency of the Fund.

The number of contributors to the Fund at 30th June, 1960, was 3,893 males and 56 females.

The receipts of the Police Pensions Fund during 1959–60 amounted to £1,456,972, comprising deductions from pay, £198,278 ; special appropriation from Consolidated Revenue, £852,250 ; interest on investments, £405,387 ; and other receipts, £1,057. During the year, £602,056 was paid in pensions, £15,211 in gratuities, and £12,430 represented deductions from pay returned. There was a balance of £10,090,225 in the Fund at 30th June, 1960.

### *State Superannuation Fund*

On 24th November, 1925, legislation was enacted by the State Parliament making provision, on a contributory basis, for superannuation benefits for public servants, teachers, and railway employees.

An Act consolidating the Superannuation Acts was passed in September, 1958, and further amending Acts passed in November, 1958, and November, 1959. The principal provisions of these Acts are as follows :—

- (1) The maximum age for retirement is 65 years for males, and 60 or 65 years for females, at their option.
- (2) The amount (units) of pension for which an officer may contribute is regulated by his salary and varies from two units (£104 pension) to 36 units (£1,638 pension).

Of the total pension payable, £13 per unit is charged to the contributions paid, on a fortnightly basis, by the officer during his service, and the remainder is paid from Consolidated Revenue from the date pension becomes payable.

The widow and children of a deceased contributor or pensioner are entitled to the following benefits :—

*Widow.*—Five-eighths of the rate of pension for which the officer was contributing or five-eighths of the rate of pension being drawn (as the case may be) at date of death, subject to a minimum of £65 per annum.

*Children.*—£52 per annum in respect of each child until the age of sixteen years, provided that, if both parents are deceased, this amount is increased to £104.

In the event of retirement on account of ill health of a normal contributor, a full pension is payable according to the number of units for which contributions were paid.

All officers are required to pay fortnightly contributions to the Superannuation Fund according to the age next birthday at which they become entitled to contribute for each unit of superannuation.

The number of contributors to the Fund at 30th June, 1960, was 37,173 males and 6,182 females.

During the year 1959-60, the receipts of the Superannuation Fund amounted to £7,913,766, consisting of contributions from officers, £2,845,214 ; from Consolidated Revenue, £3,597,850\* ; interest on investments, £1,463,465 ; and other receipts, £7,237. The total payments from the Fund during the year were £4,925,941, and comprised pensions, £4,650,233 ; refund of contributions, £272,431 ; and other expenditure, £3,277. The balance in the Fund at 30th June, 1960, was £32,548,454.

#### *Coal Mine Workers Pensions Fund*

This fund was established under the *Coal Mine Workers Pensions Act 1942*. The *Coal Mines Act 1958* consolidated the law relating to coal mines and coal mine workers, and, together with the amending Acts of December, 1958, and November, 1959, define contributions and benefits in connexion with the Coal Mine Workers Pensions Fund. The annual contribution to the Fund is fixed by the Government Actuary after an actuarial examination once in every three years. The Treasurer of Victoria is required to make a payment of three-sevenths of this amount. The mine workers and the mine owners pay one-seventh and three-sevenths respectively. A pension is payable to a mine worker on attaining the maximum age for retirement which, in most cases, is 60 years, provided certain conditions as to length of service in the mining industry are satisfied. A pension is also payable to those qualified mine workers who are totally or partially incapacitated by an injury arising out of, and in the course of, their employment as mine workers. A widow of a pensioner or a widow of a mine worker whose death was due to an injury as a mine worker is entitled to pension until death or remarriage. Allowances to children under age sixteen are also provided under the Act.

During 1959-60, the Government contributed £49,966 to the Fund and the State Coal Mine (as owners) £21,262.

#### *Parliamentary Contributory Retirement Fund*

This fund was established under authority of the *Parliamentary Contributory Retirement Fund Act 1946* to provide pensions for ex-members of the Victorian Parliament. Current legislation affecting this fund is embodied in the *Constitution Act Amendment Act 1958*. This Act is included in the Consolidated Statute Law of Victoria.

Members contribute to the Fund an amount of £6 per fortnight. Any further sums required to pay pensions, &c., are paid from Consolidated Revenue.

Every person who has ceased to be a member and has served as a member for at least fifteen years, or for at least three Parliaments, is entitled to be paid out of the Fund a pension, fortnightly, at the rate of the basic wage payable in Melbourne.

Provision is also made for payments of certain sums to ex-members who do not fulfil the conditions necessary for a pension, and the payment of a pension to the widow of a deceased member or ex-member at a rate equivalent to the amount that would have been paid or was being paid to the deceased.

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\* This figure does not agree with that shown on page 640 which includes Consolidated Revenue's share of pension accrued to 30th June.

All payments out of the Fund are subject to the approval of trustees appointed to administer the Fund.

During the year ended 30th June, 1960, receipts of the Fund amounted to £42,598, made up of contributions from members, £15,582, and Special Appropriations from Consolidated Revenue, £27,016. Pensions and lump sum payments from the Fund amounted to £42,598.

#### *Married Women Teachers' Pensions Fund*

This fund was established under the provisions of the *Teaching Service (Married Women) Act* 1956 and came into operation on 1st July, 1957. This Act was repealed in 1958 and included in the *Teaching Service Act* 1958 which consolidated all laws relating to the teaching service in the Education Department.

The Act provides, *inter alia*, for retirement benefits for married women who are permanently employed in the teaching service and not eligible to contribute to the Superannuation Fund. A deduction of 5 per cent. is made from the salary of each contributor and paid into the Fund together with a similar amount from Consolidated Revenue. On reaching the retiring age (60 or 65 at her option), a pension is payable according to the amount accumulated to her credit (including interest).

Receipts for 1959–60 amounted to £77,371, consisting of teachers' contributions, £14,659; contribution from Consolidated Revenue, £14,472; and interest on investments, £2,231. Refunds of contributions, &c. amounting to £1,292 were paid from the Fund during the year.

#### **Trust Funds and Special Accounts**

Under the provisions of the Constitution Act, revenues of the State are payable to Consolidated Revenue with the exception of certain revenues which have been set aside by various Acts of Parliament for specified purposes and are payable into special funds or accounts kept at the State Treasury. Numerous funds or accounts consisting of moneys collected for, or held for expenditure on behalf of the Commonwealth Government, moneys provided for specified purposes by outside bodies, and amounts held in trust for Government Departments and for other accounts are also included in trust funds. The balances of all funds or accounts are held by way of investment or on general account and the operations of many are regulated by statute.

The transactions recorded annually are numerous and of considerable magnitude. During 1959–60, the debits of all trust funds or accounts amounted to £109,363,659, while credits totalled £113,644,144.

At 30th June, 1960, the liability of the State on account of all trust funds or accounts amounted to £44,166,477. Of this total, £20,174,341 was invested in Commonwealth Stock or other securities, and cash advanced totalled £3,821,998. The balance—£20,170,138—was at the credit of the Public Account.

### Expenditure from Loan Fund

In addition to the ordinary expenditure from revenue, certain sums are disbursed annually for various purposes from loans and on account of Loan Fund. The figures in the following table represent all such expenditure whether the loans have been repaid or are still in existence. The table shows the details for each of the years 1956–57 to 1959–60 and the total to 30th June, 1960.

#### VICTORIA—EXPENDITURE FROM LOAN FUND AND ON ACCOUNT OF LOANS

(£'000)

Expenditure on—	Year Ended 30th June—				Total to 30th June, 1960
	1957	1958	1959	1960	
<b>Public Works—</b>					
Railways*—					
As Reduced	7,407	7,049	7,432	7,814	135,214†
Transferred .. ..	..	..	..	..	29,135
Country Roads .. ..	626	739	116	234	21,631
Bridges .. ..	107	845	1,265	1,092	3,806
Harbours and Rivers .. ..	299	290	295	298	4,500
Water Supply—					
Country .. ..	6,590	6,960	7,903	7,194	117,638‡
Metropolitan .. ..	..	..	..	..	3,143
Sewerage .. ..	1,008	500	482	636	3,817
Electricity Supply .. ..	3,400	3,200	3,500	6,500	60,689§
Gas and Fuel Corporation .. ..	130	150	110	90	12,239
Public Buildings—					
Schools .. ..	7,440	7,858	9,040	11,305	73,113
Hospitals .. ..	5,901	5,900	6,090	5,752	51,864
Other .. ..	1,345	1,584	1,643	1,636	14,007
Immigration .. ..	..	..	..	..	240
Municipal Endowment .. ..	..	..	..	..	698
Municipalities, Loans, Grants, &c. .. ..	164	283	369	490	3,644
Housing .. ..	320	330	517	610	11,843
Unemployment Relief .. ..	..	..	..	..	13,147
Other Public Works .. ..	371	299	361	364	4,398
<b>Primary Production—</b>					
Land Settlement .. ..	..	..	..	2,817	44,388
Soldier Settlement .. ..	3,580	3,599	3,646	634	58,511
Wire Netting Advances .. ..	..	3		2	1,047
Agriculture .. ..	..	..	..	..	211

\* Reduced under the authority of the Railways (Finances Adjustment) Act of 1936.

† Includes expenditure of £1,804,420 transferred to State Electricity Commission.

‡ Includes expenditure of £176,870 transferred to State Electricity Commission.

§ Excludes expenditure mentioned in the two preceding notes.

|| Under £500 (credit).



VICTORIA—EXPENDITURE FROM LOAN FUND AND ON ACCOUNT OF  
LOANS—*continued*

(£'000)

Expenditure on—	Year Ended 30th June—				Total to 30th June, 1960
	1957	1958	1959	1960	
Primary Production ( <i>continued</i> )—					
Settlers' Advances—					
Cultivation .. .. .	..	..	..	..	2,621
Other .. .. .	..	..	..	..	120
Bulk Handling of Wheat .. .. .	..	..	..	..	1,404
Forestry .. .. .	750	617	637	662	17,446
Mining <i>n.e.i.</i> .. .. .	143	22	75	67	818
Mining—State Coal Mine .. .. .	..	..	..	..	353
Primary Products—					
Advances to Companies .. .. .	..	..	..	..	331
Cool Stores—Advances to Companies .. .. .	..	..	..	..	658
Drought, Flood, &c., Relief .. .. .	50	121	113	30	1,338
Destruction of Vermin and Noxious Weeds .. .. .	69	80	57	610	1,414
Other Primary Production .. .. .	7	Cr. 2	77	127	377
Other Purposes .. .. .	1,243	911	693	527	13,480
Total Works Expenditure .. .. .	40,950	41,338	44,421	49,491	709,283
In Aid of Revenue .. .. .	3,246	4,315	3,000	2,546	28,562
Grand Total .. .. .	44,196	45,653	47,421	52,037	737,845

The figures in the table above do not include discounts and flotation expenses, nor have they been adjusted on account of premiums received. The net aggregate outlay on these items to 30th June, 1960, was £9,389,469.

## Public Debt

## General

In the tables in this section relating to the public debt of Victoria, loans raised in London are shown in sterling which has been converted to Australian currency at the mint par of exchange prevailing on 1st July, 1927, viz., £1A. = £1Stg., while loans raised in New York have been converted to Australian currency at \$4.8665 to £1. Repayment, when made, will be in sterling or dollars, as the case may be, at rates of exchange then current.

Advances made by the Commonwealth Government to Victoria, under the Commonwealth—State agreements relating to housing and soldier settlement, are not included in the public debt statements in this Year Book. The total of such advances owing at 30th June, 1960, was £126,811,450, of which £119,717,291 was for housing, and £7,094,159 for soldier settlement. These liabilities should be taken into account when considering the total debt position of Victoria.

*Public Debt Transactions*

The following table shows particulars of the loans raised and redeemed during, and the amount outstanding at the end of, each of the years 1955-56 to 1959-60. Separate particulars are shown for loans raised in Australia, London, and New York.

### VICTORIA—STATE PUBLIC DEBT: SUMMARY OF TRANSACTIONS

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>DEBT MATURING IN AUSTRALIA</b> (£A'000)					
Debt Outstanding at 1st July .. .. .	363,246	397,577	439,555	475,104	50 186
New Debt Incurred—					
Commonwealth Government Loan Flotations	55,641	83,941	107,911	64,485	67,899
Domestic Raisings .. .. .	3,396	805	700	745	1,099
Less Conversion and Redemption Loans ..	20,398	37,870	67,804	27,106	24,574
Total New Debt Incurred .. .. .	38,639	46,876	40,807	38,124	44,424
Repurchases and Redemptions from National Debt Sinking Fund .. .. .	4,308	4,898	5,258*	5,042	6,172
Net Increase in Debt .. .. .	34,331	41,978	35,549	33,082	38,252
Debt Outstanding at 30th June .. .. .	397,577	439,555	475,104	508,186	546,438
<b>DEBT MATURING IN LONDON</b> (£ Stg.'000)					
Debt Outstanding at 1st July .. .. .	44,777	44,705	38,760	38,572	41,253
New Debt Incurred—					
Commonwealth Government Loan Flotations	23,222			16,042	..
Less Conversion and Redemption Loans ..	23,222	5,801†	..	12,720	..
Total New Debt Incurred .. .. .	..	— 5,801	..	3,322	..
Repurchases and Redemptions from National Debt Sinking Fund .. .. .	72	144	188	641‡	30
Net Increase in Debt .. .. .	— 72	— 5,945	— 188	2,681	— 30
Debt Outstanding at 30th June .. .. .	44,705	38,760	38,572	41,253	41,223
<b>DEBT MATURING IN NEW YORK</b> (£'000)					
Debt Outstanding at 1st July .. .. .	3,176	3,431	3,504	4,537	5,573
New Debt Incurred—					
Commonwealth Government Loan Flotations	277	1,014	1,090	1,081	1,083
Less Conversion and Redemption Loans ..	..	890	..	..	..
Total New Debt Incurred .. .. .	277	124	1,090	1,081	1,083
Repurchases and Redemptions from National Debt Sinking Fund .. .. .	22	51	57	45	195
Net Increase in Debt .. .. .	255	73	1,033	1,036	888
Debt Outstanding at 30th June .. .. .	3,431	3,504	4,537	5,573	6,461
<b>TOTAL</b> (£'000)					
Debt Outstanding at 1st July .. .. .	411,199	445,713	481,819	518,213	555,012
New Debt Incurred—					
Commonwealth Government Loan Flotations	79,140	84,955	109,001	81,608	68,982
Domestic Raisings .. .. .	3,396	805	700	745	1,099
Less Conversion and Redemption Loans ..	43,620	44,561	67,804	39,826	24,574
Total New Debt Incurred .. .. .	38,916	41,199	41,897	42,527	45,507
Repurchases and Redemptions from National Debt Sinking Fund .. .. .	4,402	5,093	5,503*	5,728‡	6,397
Net Increase in Debt .. .. .	34,514	36,106	36,394	36,799	39,110
Debt Outstanding at 30th June .. .. .	445,713	481,819	518,213	555,012	594,122

\* Includes £330,870 discount expenses on conversion loans met from National Debt Sinking Fund.

† Debt repatriated to Australia.

‡ Includes £161,508 discount expenses on conversion loans met from National Debt Sinking Fund.

Particulars concerning the due dates of loans outstanding at 30th June, 1960, are given in the following table. Where the Government had the option of redemption during a specified period, the loans have been classified according to the latest date of maturity.

VICTORIA—DUE DATES OF LOANS AT 30TH JUNE, 1960  
(£'000)

Due Date (Financial Year)	Amount Maturing in—			Total
	Australia	London	New York	
1960-61 .. ..	58,840	638	..	59,478
1961-62 .. ..	34,416	..	657	35,073
1962-63 .. ..	59,412	..	..	59,412
1963-64 .. ..	23,530	..	..	23,530
1964-65 .. ..	65,420	..	..	65,420
1965-66 .. ..	46,580	1,859	..	48,439
1966-67 .. ..	40,344	5,691	851	46,886
1967-68 .. ..	42,734	8,358	..	51,092
1968-69 .. ..	55,277	..	..	55,277
1969-70 .. ..	11,579	8,650	562	20,791
1970-71 .. ..	10,154	..	252	10,406
1971-72 .. ..	131	..	955	1,086
1972-73 .. ..	19,547	6,441	1,071	27,059
1973-74 .. ..	143	..	..	143
1974-75 .. ..	13,125	..	..	13,125
1975-76 .. ..	20,715	..	..	20,715
1976-77 .. ..	163	..	..	163
1977-78 .. ..	171	..	..	171
1978-79 .. ..	179	9,586	1,029	10,794
1979-80 .. ..	25,694	..	1,084	26,778
1980-81 .. ..	195	..	..	195
1981-82 .. ..	14,822	..	..	14,822
1982-83 .. ..	154	..	..	154
Not Yet Fixed .. ..	3,113	..	..	3,113
Total .. ..	546,438	41,223	6,461	594,122

In the subsequent tables, "interest payable" does not include the cost of paying interest overseas. Particulars of exchange paid in each of the years 1955-56 to 1959-60 are shown on page 649.

The following table shows the amount of loans outstanding in Australia, London, and New York at the end of each of the years 1950-51 to 1959-60, and the annual interest payable thereon:—

VICTORIA—PUBLIC DEBT AND INTEREST PAYABLE IN  
AUSTRALIA, LONDON, AND NEW YORK  
(£'000)

At 30th June—	Amount of Loans Maturing in—			Annual Interest Payable in—		
	Australia	London	New York	Australia	London	New York
1951 .. ..	201,151	45,296	4,486	6,210	1,437	182
1952 .. ..	252,818	45,225	4,456	7,456	1,463	181
1953 .. ..	290,072	45,023	4,424	9,059	1,456	180
1954 .. ..	328,456	44,908	3,600	10,874	1,452	139
1955 .. ..	363,246	44,777	3,176	13,254	1,448	110
1956 .. ..	397,577	44,705	3,431	14,886	1,446	121
1957 .. ..	439,555	38,760	3,504	17,306	1,282	141
1958 .. ..	475,104	38,572	4,537	19,275	1,276	191
1959 .. ..	508,186	41,253	5,573	20,938	1,690	244
1960 .. ..	546,438	41,223	6,461	23,055	1,689	291

The following table shows the rates of interest which were payable on the public debt at 30th June, 1960, and the portions of the debt at each rate in Australia, London, and New York respectively :—

**VICTORIA—RATES OF INTEREST ON PUBLIC DEBT AT  
30TH JUNE, 1960  
(£'000)**

Rate of Interest per cent.	Amount Maturing in—			Total
	Australia	London	New York	
5.5 .. .. .	..	16,027	..	16,027
5.25 .. .. .	..	..	1,084	1,084
5.0 .. .. .	130,655	..	1,984	132,639
4.75 .. .. .	31,764	..	1,071	32,835
4.5 .. .. .	160,474	..	252	160,726
4.0 .. .. .	86,073	..	..	86,073
3.875 .. .. .	702	..	..	702
3.75 .. .. .	16,001	..	563	16,564
3.625 .. .. .	107	..	..	107
3.5 .. .. .	5	5,691	850	6,546
3.4875 .. .. .	*	..	..	*
3.375 .. .. .	..	..	657	657
3.25 .. .. .	15,808	9,287	..	25,095
3.125 .. .. .	99,599	..	..	99,599
3.1 .. .. .	277	..	..	277
3.0 .. .. .	1,107	10,218	..	11,325
2.7125 .. .. .	124	..	..	124
2.5 .. .. .	2	..	..	2
2.325 .. .. .	653	..	..	653
1.0 .. .. .	3,087	..	..	3,087
<b>Total .. ..</b>	<b>546,438</b>	<b>41,223</b>	<b>6,461</b>	<b>594,122</b>
<b>Average Rate of Interest %</b>	<b>4.22</b>	<b>4.10</b>	<b>4.51</b>	<b>4.21</b>

\* £500

The following table shows the public debt of Victoria at the end of each of the years 1955–56 to 1959–60. Also shown is the annual interest payable, the average rate per cent., and the amount of debt and interest payable per head of population.

**VICTORIA—PUBLIC DEBT AND INTEREST**

At 30th June—		Loans Outstanding—		Amount per Head of Population—				
		Amount	Annual Interest Payable—		Debt			
			Total	Average Rate Per Cent.				
		£'000	£'000	%	£ s. d.			£ s. d.
1956	.. ..	445,713	16,453	3.69	171	1	11	6 8 4
1957	.. ..	481,819	18,729	3.89	180	4	5	7 1 11
1958	.. ..	518,213	20,742	4.00	189	0	8	7 13 3
1959	.. ..	555,012	22,872	4.12	197	3	11	8 4 10
1960	.. ..	594,122	25,035	4.21	205	9	1	8 15 7

The following table shows the capital liability of the State at 30th June, 1960, in respect of its public works and services. The apportionment of the State's equity in the National Debt Sinking Fund is also shown.

**VICTORIA—SUMMARY OF CAPITAL LIABILITY UNDER THE VARIOUS WORKS AND SERVICES, TOGETHER WITH THE APPORTIONMENT OF THE STATE'S EQUITY IN THE NATIONAL DEBT SINKING FUND AT 30TH JUNE, 1960 (£'000)**

Works or Services	Liability	Deduction on Account of National Debt Sinking Fund	Net Liability
<b>Railways*</b>			
As Reduced .. .. .	134,368	15,090	119,278
Transferred .. .. .	30,836	7,668	23,168
Country Waterworks .. .. .	115,280	10,295	104,985
Electricity Supply .. .. .	63,854	6,137	57,717
Land Settlement .. .. .	25,536	8,255	17,281
Soldier Settlement .. .. .	40,363	2,359	38,004
Grain Elevators Board .. .. .	1,072	137	935
Housing Commission .. .. .	1,491	175	1,316
Country Roads .. .. .	17,429	3,241	14,188
Public Works, Buildings, &c. .. .. .	165,907	6,826	159,081
Gas and Fuel Corporation of Victoria (Including Shares) .. .. .	12,258	515	11,743
Forests .. .. .	14,283	949	13,334
Unemployment Relief .. .. .	11,964	2,478	9,486
Rural Finance Corporation .. .. .	8,092	257	7,835
In Aid of Revenue .. .. .	24,771	5,485	19,286
Unapportioned .. .. .	1,266	..	1,266
	668,770	69,867	598,903
Deduct—Exchange Premiums .. .. .	4,967	..	4,967
<b>Total .. .. .</b>	<b>663,803</b>	<b>69,867†</b>	<b>593,936</b>

\* The Railways (Finances Adjustment) Act provided for the reduction of railway loan liability by the sum of £30 mill. on 1st July, 1937, and for the transfer of that amount to the "Reduction of Railway Loan Liability Account".

† Includes cash at credit of National Debt Sinking Fund at 30th June, 1960, and discount expenses on conversion loans met from the Fund.

The interest and expenses associated with the public debt of Victoria during each of the years 1955–56 to 1959–60 are shown in the following table:—

**VICTORIA—INTEREST AND EXPENSES OF PUBLIC DEBT (£'000)**

Year Ended 30th June—	Interest Paid on Loans in—		Interest Paid on Temporary Loans	Commission on Payment of Interest in London. Expenses of Conversion Loans, &c.	Exchange on Payment of Interest in London†	Total‡
	London*	Melbourne				
1956 ..	1,558	13,567	16	52	492	15,685
1957 ..	1,447	15,342	14	111	480	17,394
1958 ..	1,424	17,733	21	79	492	19,749
1959 ..	1,587	19,257	13	73	597	21,527
1960 ..	1,936	21,533	11	150	715	24,345

\* Including interest paid on loans raised in New York—£109,832 for 1955–56; £121,795 for 1956–57; £141,740 for 1957–58; £218,499 for 1958–59; £245,294 for 1959–60.

† Includes exchange paid in respect of loans raised in New York—£129,964 for 1955–56; £142,865 for 1956–57; £163,830 for 1957–58; £254,002 for 1958–59; £283,563 for 1959–60.

‡ Includes £2,127,159 contributed each year by the Commonwealth in accordance with the provisions of the "Financial Agreement", see page 619.

*National Debt Sinking Fund*

Under the Financial Agreement of 1927 between the Commonwealth and the States, it was arranged that the Commonwealth assume responsibility for the public debt of the States. The securities covering these debts would be redeemed or repurchased by payments from the National Debt Sinking Fund (which had been in existence from 1923) and the Commonwealth and States were to make annual contributions to the Fund for this purpose. The intention was to extinguish, within a period of 58 or 53 years, debt incurred by the States for normal works and services. The longer period applies to the debt existing at 30th June, 1927, and to this the State contributes 5s. per £100 and the Commonwealth 2s. 6d. per £100 per annum, whilst the shorter period applies to loans raised after 30th June, 1927, the State and the Commonwealth each contributing 5s. per £100 per annum.

The first of the following tables gives a summary of Victorian transactions in the National Debt Sinking Fund for the years 1955-56 to 1959-60, and the remaining tables show details of receipts and expenditure together with particulars of face value of securities repurchased and redeemed during the same period :—

**VICTORIA—NATIONAL DEBT SINKING FUND : SUMMARY  
OF TRANSACTIONS**

(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Balance at 1st July .. ..	410	584	255	60	128
Receipts .. ..	4,463	4,751	5,333	5,933	6,669
Expenditure .. ..	4,289	5,080	5,528	5,865	6,611
Balance at 30th June .. ..	584	255	60	128	186

**VICTORIA—NATIONAL DEBT SINKING FUND : RECEIPTS**

(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Contributed under Financial Agreement—					
Victoria .. ..	3,469	3,681	4,164	4,647	5,247
Commonwealth .. ..	972	1,054	1,155	1,230	1,367
Interest from Victoria on Cancelled Securities .. ..	10	4	3	1	3
Total Contributions under Financial Agreement .. ..	4,451	4,739	5,322	5,878	6,617
Interest on Investments .. ..	7	7	6	13	1
Special Contributions by Victoria ..	5	5	5	42	53
Total .. ..	4,463	4,751	5,333	5,933	6,669
Total to Date .. ..	49,800	54,551	59,884	65,817	72,486

**VICTORIA—NATIONAL DEBT SINKING FUND : SECURITIES  
REPURCHASED AND REDEEMED**

(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>Australia—</b>					
Face Value £ (A.) .. ..	4,308	4,898	4,928	5,042	6,172
Net Cost £ (A.) .. ..	4,156	4,829	5,221	5,020	6,162
<b>London—</b>					
Face Value £ (stg.) .. ..	72	144	188	480	30
Net Cost £ (A.) .. ..	84	145	189	752	35
<b>New York—</b>					
Face Value £ (\$4.8665 = £1) ..	22	51	57	45	195
Net Cost £ (A.) .. ..	49	106	118	93	414
<b>Total—</b>					
Face Value £ .. ..	4,402	5,093	5,173	5,567	6,397
Net Cost £ (A.) .. ..	4,289	5,080	5,528	5,865	6,611
<b>Total to Date—</b>					
Face Value £ .. ..	46,993	52,086	57,259	62,826	69,223
Net Cost £ (A.) .. ..	49,216	54,296	59,824	65,689	72,300

*Private Finance*

**Commonwealth Banking Legislation**

*General*

Under section 51 of the Commonwealth Constitution, the Commonwealth Parliament has power to legislate with respect to "banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money". The principal Commonwealth Acts at present in force relating to banking are :—

- (a) the *Banking Act* 1959, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth ;
- (b) the *Reserve Bank Act* 1959, which provides for the constitution and management of the Reserve Bank of Australia, and the management of the Australian note issue ; and
- (c) the *Commonwealth Banks Act* 1959, which provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia, and Commonwealth Development Bank of Australia.

The *Banking Act* 1959, which replaced the *Banking Act* 1945-1953, was assented to on 23rd April, 1959, and came into operation on 14th January, 1960. It applies to all banks (except State

banks trading in their own State) operating in Australia or the Territories of the Commonwealth. Apart from the replacement of the Special Accounts provisions of the previous Act with a system of Statutory Reserve Deposits and a recasting of the relevant parts of the Act to make provision for the regulation of savings bank business, the provisions of the Act, which are summarized below, are essentially the same as those contained in the previous Act. The main provisions of the Act are as follows :—

- (1) *Authority to Carry on Banking Business.* Banking business can only be carried on by a body corporate in possession of an authority in writing granted by the Governor-General. A company which is not a bank, but which conducts some banking business, may be granted an exemption from some or all of the provisions of the Act.
- (2) *Protection of Depositors.* Provision is made for the banks to supply to the Reserve Bank such information relating to their financial position as required. If it appears that a bank may be unable to meet its obligations or is about to suspend payments, the Reserve Bank may assume control of and carry on the business of that bank.
- (3) *Statutory Reserve Deposits.* Each trading bank is required to maintain a Statutory Reserve Deposit Account with the Reserve Bank and to have on deposit in that account such percentage of its Australian deposits (known as the statutory reserve deposit ratio) as is determined from time to time by the Reserve Bank. On giving one day's notice, the Reserve Bank may vary this ratio provided it is not increased above 25 per cent. and, on giving 45 days' notice, the Reserve Bank may increase the ratio above 25 per cent. A ratio remains in force until it is replaced by another ratio, provided that any ratio above 25 per cent. cannot remain in force for longer than a period of six months and for succeeding periods of three months unless the Reserve Bank gives notice of an extension at least 45 days before the end of each period. The same ratio is to apply to all banks except certain prescribed banks. Interest is to be paid on Statutory Reserve Deposit Accounts at a rate determined from time to time by the Reserve Bank with the approval of the Treasurer. The Reserve Bank is required to inform the trading banks at least once in every quarter of its expected policy with respect to statutory reserve deposit ratios.
- (4) *Mobilization of Foreign Currency.* All banks may be required to transfer to the Reserve Bank a proportion (determined by the Reserve Bank) of their excess receipts of foreign currency in respect of their Australian business during any period.



- (5) *Advances.* The Reserve Bank may determine a general policy to be followed by banks in making advances.
- (6) *Special Provisions with respect to Savings Banks.* A savings bank shall at all times maintain in prescribed investments an amount that, together with cash on hand, in Australia is not less than the amount on deposit in Australia with the savings bank. The prescribed investments are : deposits with the Reserve Bank, deposits with or loans to other banks, Commonwealth or State securities, securities issued or guaranteed by a Commonwealth or State authority, loans guaranteed by the Commonwealth or a State, loans for housing or other purposes on the security of land, and loans to authorized dealers in the short-term money market on the security of securities issued by the Commonwealth. A savings bank must hold at least 70 per cent. of its depositors' funds in cash, deposits with the Reserve Bank, Commonwealth or State securities and securities issued by or guaranteed by a Commonwealth or State authority, and must hold at least 10 per cent. in deposits with the Reserve Bank, in Treasury Bills, and Seasonal Securities. A savings bank may not accept deposits from a profit-making body unless that body is acting in a trustee capacity for a non-profit-making beneficiary, nor allow cheques to be drawn on savings bank accounts other than by local government authorities, friendly societies, &c., and companies acting in the above capacity.
- (7) *Foreign Exchange.* The Governor-General may make regulations for the control of foreign exchange including the fixing of rates of exchange.
- (8) *Gold.* Provision is made for the mobilization and control of gold if it is necessary for the protection of the currency or the public credit of the Commonwealth.
- (9) *Interest Rates.* The Reserve Bank may, with the approval of the Treasurer, make regulations for the control of rates of interest payable to or by the banks or other persons in the course of banking business carried on by them.
- (10) *Other.* Other provisions of the Act relate to the supply of statistics and other information by banks, the settlement of clearing balances between banks, investigations of the accounts of banks by the Commonwealth Auditor-General, and restrictions on the use of the words "bank" or "savings bank" in relation to a business. Although a bank may be required to supply information relating to its financial stability and information needed for the determination of banking policy, it cannot be required to disclose details relating to the account of an individual customer.

## Banking in Victoria during 1960

### *General Conditions*

As part of the integrated banking system of the nation, Victorian banking was dominated in 1960 by factors influencing the whole Australian economy.

While the seasonal cycle normally causes Australian bank deposits to rise during the summer export season and to drain away in the June quarter of each year when government fiscal programmes have their most marked effect, 1960 was distinguished by influences affecting the normal seasonal pattern.

At the beginning of the year, costs and prices still crept upward, maintaining the threat of inflation which had faced the country since the war.

### *Relaxations of Import Restrictions*

The Federal Government announced in February that it would remove, almost entirely, import restrictions which had until that time protected London funds. Credit restraint was also to be maintained, particularly on less essential activities, and the August, 1960 Budget was to provide a surplus to help dampen spending, which was tending to strain available resources and force up prices.

It was thought that oversea funds, supported by a heavy capital inflow, would stand a considerable drain as imports increased temporarily, but that the restraining credit policy and budget surplus would eventually limit the community's demands for imports.

In June quarter, 1960 imports increased while bank deposits decreased as the export season finished less strongly than was expected. On the other hand, advances continued to rise, largely because of the previous phase of credit policy in 1959, when banks expanded advances at a time when there were signs of less than full employment. Industry had been slow to take advantage of this, but by 1960, numerous overdraft authorities were being used in accord with limits granted earlier. Thus, advances continued to rise after it had become necessary to reverse the upswing. Apart from the delayed effect of 1959 policy, advances increased also because importers continued to take advantage of import relaxation, and some required finance.

Weakness in exports and sustained imports caused bank deposits to rise less, and advances to rise more, than might have been expected. This showed in falling oversea funds and deteriorating liquidity ratios of the banks, some being forced to borrow at a higher rate from the Central Bank to maintain the ratio of liquid assets to deposits at the minimum level agreed between the trading banks and Central Bank.

### *August Budget*

In August, the Government reinforced its deflationary policy by budgeting for a surplus for 1960-61, and by slight rises in taxation. In the Budget Speech, it was explained that Australia was over-straining its resources and risking serious cost and price rises.

However, deposits did not rise until October when the export season was well under way, and the increase shown in deposits during December quarter, 1960, was only about one-third of the increase for the December quarter of the previous year. Wool prices still showed little improvement. Imports remained high and trade deficits continued until the end of the year.

### *November Policy*

Bank advances were not reduced until November, when the Government announced more drastic measures. These included a rise in the maximum allowed overdraft rate from 6 per cent. to 7 per cent. (maximum average was raised from  $5\frac{1}{2}$  per cent. to 6 per cent.), and a rise in interest rates on bank term deposits from the range of  $2\frac{1}{4}$ – $3\frac{1}{2}$  per cent. for terms of three to 24 months, to a range of  $4$ – $4\frac{1}{2}$  per cent. for terms of three to twelve months. Qualitative advance control was intensified by the Central Bank to discourage certain categories of less essential activity, and quantitative control was maintained with statutory reserve deposits held by the trading banks at the Central Bank of  $17\frac{1}{2}$  per cent. of their deposits and the Liquid Assets, Government Securities convention (whereby banks retained liquid funds and government securities equal to 16 per cent. of deposits).

The stock exchange reversed its strong uptrend in mid-September. No doubt, the psychological or "announcement" effects of the November policy were as strong as the measures themselves, and took effect before legislation could be implemented. Motor vehicle sales slowed down and some development projects were deferred. Bank term deposits became more competitive with other investments, and savings bank deposit rates were raised from 3 per cent. to  $3\frac{1}{4}$  per cent., both measures attracting funds to the banks. These rate differentials apparently caused some swing from savings to term deposits before 1960 ended.

### *Favourable Trends*

At the end of 1960, rising deposits, falling advances and signs of rising demand for wool indicated that the outlook for the economy had improved. The strain on ratios was still evident in borrowing by some banks from the Central Bank, and the advance/deposit ratio rising over the year. The advance/deposit ratio for Victorian business was substantially less than for Australia as a whole (although it rose over the year).

The Government announced measures to encourage exports. However, it was a long-term project to raise them to a level which would pay for current imports and 'invisibles'. It was hoped that the import bill would drop quickly early in 1961, thus reducing the drain on bank deposits and liquidity, for it was to be expected that some months would elapse before importers could reduce the actual flow in response to advance orders. The banking system was directed by the Central Bank to reduce advances by a further large amount during the March quarter of 1961, and this would involve severe credit restriction.

*Other Issues*

The experiences of 1960 raised again certain interesting questions especially those connected with non-bank financial intermediaries. Prices had been rising despite strict official direction of bank lending policies. It was evident, meanwhile, that velocity of circulation of money and credit had increased, as indicated by the facts that bank deposits declined in relation to national income during the 1950's and the ratio which debits to customers' accounts bore to deposits had risen. It was also becoming recognized that banks were no longer the sole source of credit, but that credit was being created or extended, in effect if not in fact, by other institutions and traders themselves in granting credit to customers in the ordinary course of business.

**Further References**

An outline of the history of banking in Victoria and a description of the currency will be found on pages 625 to 628 of the Victorian Year Book 1961.

**Cheque-Paying Banks**

The following tables show particulars of the averages of deposits and advances by trading banks (all of which are cheque-paying banks) in Victoria during the month of June, 1960 and for the months of June of the preceding four years. The monthly averages are obtained by recording the amounts of deposits and advances at the close of business on Wednesday of each week.

**VICTORIA—TRADING BANKS : AVERAGES OF DEPOSITS  
AND ADVANCES, MONTH OF JUNE, 1960**

(£'000)

Bank	Deposits			Loans, Advances, and Bills Discounted
	Not Bearing Interest	Bearing Interest	Total	
Commonwealth Trading Bank of Australia .. .. .	43,490	21,357	64,847	30,451
Private Trading Banks—				
Australia and New Zealand Bank Ltd. .. .. .	79,880	19,481	99,361	49,462
Bank of Adelaide .. .. .	1,702	588	2,290	2,054
Bank of New South Wales .. .. .	46,978	19,734	66,712	43,925
Commercial Bank of Australia Ltd. .. .. .	59,858	25,136	84,994	45,708
Commercial Banking Co. of Syd- ney Ltd. .. .. .	31,417	13,235	44,652	19,793
English, Scottish, and Australian Bank Ltd. .. .. .	57,626	17,654	75,280	38,548
National Bank of Australasia Ltd.	82,889	39,144	122,033	61,019
<b>Total ..</b>	<b>403,840</b>	<b>156,329</b>	<b>560,169</b>	<b>290,960</b>

**VICTORIA—TRADING BANKS : AVERAGES OF DEPOSITS  
AND ADVANCES, MONTH OF JUNE, 1956 TO 1960**  
(£'000)

Average— Month of June	Deposits			Loans, Advances, and Bills Discounted
	Not Bearing Interest	Bearing Interest	Total	
1956 .. ..	358,069	103,932	462,001	259,445
1957 .. ..	372,810	114,563	487,373	244,625
1958 .. ..	364,318	136,527	500,845	268,814
1959 .. ..	369,429	146,970	516,399	254,767
1960 .. ..	403,840	156,329	560,169	290,960

Particulars of persons and authorities in receipt of trading bank advances for the years 1956–57 to 1959–60 are given in the following table. Business advances are classified according to the main industry of borrower.

**VICTORIA—TRADING BANKS : CLASSIFICATION OF  
ADVANCES**  
(£'000)

Classification	At End of June—			
	1957	1958	1959	1960
Resident Borrowers—				
Business Advances—				
Agriculture, Grazing, and				
Dairying .. ..	38,801	43,701	43,804	44,342
Manufacturing .. ..	54,252	64,463	60,749	86,505
Transport, Storage, and				
Communication .. ..	4,523	4,915	5,064	4,805
Finance .. ..	20,347	26,901	21,291	26,425
Commerce .. ..	52,306	59,684	51,366	62,556
Building and Construction ..	6,263	7,510	7,886	8,981
Other Businesses .. ..	13,864	16,313	17,062	20,338
Unclassified .. ..	1,158	1,814	2,528	2,158
Total Business Advances ..	191,514	225,301	209,750	256,110
Advances to Public Authorities ..	10,353	5,086	4,045	2,991
Personal Advances .. ..	37,470	39,717	41,031	44,401
Advances to Non-Profit Organiza- tions .. ..	3,562	4,009	3,746	4,481
Total Advances to Resident Borrowers .. ..	242,899	274,113	258,572	307,983
Non-Resident Borrowers .. ..	104	80	87	67
Grand Total .. ..	243,003	274,193	258,659	308,050

The following table shows, for the years 1950–51 to 1959–60, the average weekly amounts debited by cheque-paying banks to customers' accounts. Particulars relate to the operations of trading banks transacting business in Victoria (as set out in the table on page

656) together with the Bank of New Zealand, and the Comptoir National d'Escompte de Paris (all of which are cheque-paying banks) and, in addition, the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank (prior to 14th January, 1960, Industrial Finance and Mortgage Bank Departments of the Commonwealth Bank). Debits to Australian Government accounts at city branches are excluded from the table.

**VICTORIA—CHEQUE PAYING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS, 1950-51 TO 1959-60 (£'000)**

Year Ended 30th June—			Average Weekly Debits	Year Ended 30th June—			Average Weekly Debits
1951	..	..	134,925	1956	..	..	185,369
1952	..	..	142,358	1957	..	..	195,455
1953	..	..	131,998	1958	..	..	207,059
1954	..	..	154,885	1959	..	..	224,728
1955	..	..	176,147	1960	..	..	263,919

**Reserve Bank of Australia**

The corporate identity of the Reserve Bank of Australia traces back through the name Commonwealth Bank of Australia, to the *Commonwealth Bank Act* 1911 of the Federal Parliament. Since 14th January, 1960, the legislation bearing on its constitution, powers and functions is the *Reserve Bank Act* 1959 and the *Banking Act* 1959.

It is the central bank of Australia and Territories of the Commonwealth and its principal responsibilities are the conduct of Government and other central bank accounts; bank credit policy supervision, exchange control and foreign exchange; the conduct of Commonwealth Government and Territorial inscribed stock registries; the Australian Note Issue; and seasonal advances through the Rural Credits Department to statutory authorities and co-operative associations for the marketing of primary produce.

Details of the Bank's net profits, for each of the years 1955-56 to 1959-60, after deducting amounts written off bank premises and amounts provided for contingencies, are shown in the following table:—

**AUSTRALIA—RESERVE BANK OF AUSTRALIA :  
NET PROFITS**

(Formerly Commonwealth Bank of Australia)  
(£'000)

Department	Commonwealth Bank*				Reserve Bank
	1955-56	1956-57	1957-58	1958-59	1959-60
Central Banking ..	6,561	8,741	10,103	4,200	5,381
Note Issue ..	8,366	10,053	12,593	10,935	10,516
Rural Credits ..	220	195	184	227	322
Total ..	15,147	18,989	22,880	15,362	16,219

\* Excluding net profits of Mortgage Bank Department and Industrial Finance Department. From 14th January, 1960, the functions of these departments were assumed by the Commonwealth Development Bank of Australia.

### Commonwealth Banking Corporation

The Commonwealth Banking Corporation was established under the *Commonwealth Banks Act* 1959 and came into being on 14th January, 1960. The Corporation is the controlling body for the Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia, and Commonwealth Development Bank of Australia. Each of the constituent banks has its own statutory functions and responsibilities, and its separate identity within the framework of the Corporation. Apart from controlling the operations of its three constituent banks, the Corporation also engages staff and makes them available as required by those banks.

The Commonwealth Banking Corporation Board consists of three *ex officio* members, viz., the Managing Director, the Deputy Managing Director, and the Secretary to the Commonwealth Treasury, plus eight members, who include the Chairman and Deputy Chairman, drawn from private enterprise other than the private banking industry.

The *Commonwealth Trading Bank of Australia* was established in 1953 when it took over the general banking division of the Commonwealth Bank of Australia (the Commonwealth Bank of Australia commenced general banking activities in July, 1913).

The Commonwealth Trading Bank carries out all types of general banking business and, at June, 1960, deposits totalled £271 mill. representing 15·7 per cent. of deposits with all major Australian trading banks. Total assets exceeded £354 mill., outstanding advances to customers totalled £147 mill., and customers' accounts numbered 680,000.

The *Commonwealth Savings Bank of Australia* was established in July, 1912. It is the largest savings bank in Australia, holding more than half of the nation's total savings bank deposits.

At the end of June, 1960, amounts on deposit with the Savings Bank totalled £807 mill. and it was conducting 5,370,000 active accounts, representing one for about every two persons in Australia. The Savings Bank's depositors' balances are widely invested in the development of Australia. Apart from advances, mainly for housing, of £136 mill. outstanding in June, 1960, investments in Commonwealth Government securities totalled approximately £500 mill. and local and semi-governmental securities amounted to approximately £90 mill.

Since 1946, £195 mill. has been provided for housing purposes, assistance having been provided for 110,000 homes, of which 100,000 were new dwellings.

The *Commonwealth Development Bank of Australia* commenced operations on 14th January, 1960, taking over the assets and liabilities of the Industrial Finance and Mortgage Bank Departments of the former Commonwealth Bank of Australia.

The main function of the Development Bank is to provide finance for purposes of primary production, and for the establishment or development of industrial undertakings, particularly small undertakings,

where, in the opinion of the Bank, the granting of assistance is desirable and finance would not otherwise be available on reasonable and suitable terms and conditions.

The primary role of the Development Bank is, therefore, to supplement, but not to replace, the sources of finance available to primary producers and industrial undertakings through other institutions.

The amount of deposits (averages for month of June), the amount of advances, and the number of accounts current at 30th June are shown in the following table for each of the years 1955-56 to 1959-60 :—

**AUSTRALIA—COMMONWEALTH TRADING BANK OF  
AUSTRALIA : DEPOSITS, ADVANCES, AND NUMBER  
OF ACCOUNTS**

At 30th June—	Deposits Repayable in Australia (Averages for Month of June)			Advances	Number of Accounts
	Bearing Interest	Not Bearing Interest	Total		
	£ mill.				'000
1956.. ..	43	136	179	105	515
1957.. ..	48	146	194	106	549
1958.. ..	63	152	215	118	591
1959.. ..	73	160	233	129	641
1960.. ..	80	191	271	147	680

In the following table, some particulars of the activities of the Commonwealth Savings Bank throughout Australia are shown for each of the years 1955-56 to 1959-60 :—

**AUSTRALIA—COMMONWEALTH SAVINGS BANK OF  
AUSTRALIA : NUMBER OF ACTIVE ACCOUNTS,  
AMOUNT AT CREDIT OF DEPOSITORS, LOANS  
AND ADVANCES OUTSTANDING, ETC.**

At 30th June—	Number of Active Accounts	Amount at Credit of Depositors	Loans and Advances Outstanding	Commonwealth and Other Securities Held
	'000	£ mill.		
1956 .. ..	5,045	712	103	548
1957 .. ..	5,049	721	111	549
1958 .. ..	5,141	734	119	551
1959 .. ..	5,265	765	127	555
1960 .. ..	5,370	807	136	586



Advances by the Commonwealth Development Bank to primary and secondary industries, outstanding in Australia at 30th June, 1960 were as follows :—

**AUSTRALIA—COMMONWEALTH DEVELOPMENT BANK  
OF AUSTRALIA : ADVANCES TO PRIMARY AND  
SECONDARY INDUSTRIES OUTSTANDING  
AT 30TH JUNE, 1960**

Primary Industries—		Secondary Industries—	
Type of Industry	Advances Outstanding	Type of Industry	Advances Outstanding
	£'000		£'000
Sheep .. .. .	4,123	Chemical Products ..	2,187
Cattle .. .. .	312	Electrical Manufacturing ..	440
Dairying .. .. .	1,567	Food Processing ..	430
Wheat and Other Grain		Engineering .. .. .	1,056
Crops .. .. .	431	Other Manufacturing ..	1,928
Fruit .. .. .	138	Transport .. .. .	1,510
Miscellaneous .. .. .	220	Miscellaneous .. .. .	1,289
Total .. .. .	6,791	Total .. .. .	8,840

**State Savings Bank of Victoria**

The Bank, an autonomous body constituted under Victorian statutes, operates within Victoria under direction of Commissioners appointed by the Government, which exercises control through a general manager. It has a Savings Bank Department which accepts interest-bearing savings deposits, invests those moneys in trustee securities and in short term mortgage loans, and provides some general banking services, e.g., separate non-interest bearing cheque accounts, fixed deposit, and safe deposit facilities. It also provides a Credit Foncier Department which, by issuing debentures, obtains funds to make long-term mortgage loans to finance the erection or purchase of homes and farms.

At 30th June, 1960, 2,350,006 State Savings Bank depositors' balances totalled £298,135,746, approximately 60 per cent. of all savings bank deposits in Victoria, and 35,383 Credit Foncier loans totalled £59,391,679.

The State Savings Bank operates nearly 400 branches and more than 600 agencies.

The total assets of the Bank at 30th June, 1960, were as follows :—

			£
Savings Bank Department	..	..	316,554,049
Credit Foncier Department	..	..	60,277,392
Total	..	..	376,831,441

Profits accruing from the activities of the Savings Bank Department were :—1955–56, £164,399 ; 1956–57, £69,811 ; 1957–58, £160,094 ; 1958–59, £389,304 and 1959–60, £343,696. Reserve Funds totalled £10,550,000 at 30th June, 1960.

The following table shows the number of accounts open and the amount remaining on deposit in specified years from 1900 :—

### VICTORIA—STATE SAVINGS BANK : ACCOUNTS OPEN AND DEPOSITS

At 30th June—	Number of Accounts Open—			Amount at Credit of Depositors—			
	Passbook and Cheque Accounts	School Bank Accounts*	Total	Passbook and Cheque Accounts	Deposit Stock Accounts	School Bank Accounts*	Total
	'000			£'000			
1900 ..	375	..	375	9,111	..	..	9,111
1905 ..	447	..	447	10,897	..	..	10,897
1910 ..	561	..	561	15,418	..	..	15,418
1915 ..	722	14	736	24,875	159	10	25,044
1920 ..	886	12	898	37,232	505	8	37,745
1925 ..	1,095	89	1,184	53,145	743	101	53,989
1930 ..	1,257	165	1,422	60,845	1,809	289	62,943
1935 ..	1,325	188	1,513	61,094	1,738	276	63,108
1940 ..	1,477	208	1,685	64,417	2,657	287	67,361
1945 ..	1,762	218	1,980	140,855	1,923	439	143,217
1950 ..	1,961	260	2,221	196,768	1,089	823	198,680
1955 ..	2,126	363	2,489	257,655	792	1,703	260,150
1956 ..	2,149	385	2,534	261,254	1,156	1,907	264,317
1957 ..	2,166	402	2,568	262,842	1,329	2,105	266,276
1958 ..	2,216	426	2,642	268,469	2,010	2,328	272,807
1959 ..	2,286	445	2,731	274,595	4,165	2,536	281,296
1960 ..	2,350	462	2,812	286,209	9,160	2,767	298,136

\* School Banks were established in November, 1912

The following table shows the transactions in connexion with all accounts for each year since 1950–51 inclusive :—

### VICTORIA—STATE SAVINGS BANK TRANSACTIONS

Year Ended 30th June—	Number of Accounts—			Deposits	Withdrawals	Interest Added	Amount at Credit of Depositors
	Opened	Closed	Remaining Open at End of Period				
		'000				£'000	
1951 ..	268	200	2,289	176,820	165,168	3,355	213,687
1952 ..	247	194	2,343	179,751	172,697	3,606	224,347
1953 ..	247	195	2,394	179,500	173,200	4,187	234,834
1954 ..	251	205	2,440	189,832	183,468	4,409	245,607
1955 ..	252	203	2,489	209,481	199,819	4,882	260,150
1956 ..	299	254	2,534	224,232	225,558	5,493	264,317
1957 ..	271	236	2,568	224,120	228,677	6,516	266,276
1958 ..	335	261	2,642	258,487	258,509	6,554	272,807
1959 ..	360	271	2,731	320,433	319,128	7,184	281,296
1960 ..	359	278	2,812	389,301	380,241	7,780	298,136

Details of transactions in the Credit Foncier Department are shown below :—

**VICTORIA—STATE SAVINGS BANK : CREDIT FONCIER  
TRANSACTIONS**

Particulars	Year Ended 30th June—				Total to 30th June, 1960
	1957	1958	1959	1960	
Stock and Debentures—					
Issued .. .. £'000	8,000	12,800	22,200	26,250	353,845*
Redeemed .. .. £'000	6,000	10,000	15,000	16,000	296,595
Outstanding at 30th June £'000	37,000	39,800	47,000	57,250	57,250
Pastoral or Agricultural Property—					
Amount Advanced .. £'000	51	78	60	78	12,860
„ Repaid .. £'000	70	68	64	69	12,388
„ Outstanding at 30th June .. £'000	457	467	463	472	472
No. of Loans Current, 30th June	589	560	515	481	481
Dwelling or Shop Property—					
Amount Advanced .. £'000	5,954	7,084	11,456	15,280	114,732
„ Repaid .. £'000	3,304	3,764	4,276	4,865	55,983
„ Outstanding at 30th June .. £'000	37,834	41,154	48,334	58,749	58,749
No. of Loans Current, 30th June .. ..	26,294	27,863	30,632	34,258	34,258
Housing Advances—					
Amount Advanced .. £'000	†	†	..	..	9,840
„ Repaid .. £'000	88	69	59	48	9,671
„ Outstanding at 30th June .. £'000	345	276	217	169	169
No. of Loans Current, 30th June .. ..	1,143	934	781	643	643
Country Industries—					
Amount Advanced .. £'000	..	..	..	..	195
„ Repaid .. £'000	1	1	1	..	193
„ Outstanding at 30th June .. £'000	4	3	2	2	2
No. of Loans Current, 30th June .. ..	2	2	2	1	1
Total Transactions—					
Total Amount Advanced .. £'000	6,005	7,162	11,516	15,358	137,627
„ „ Repaid .. £'000	3,463	3,902	4,400	4,982	78,235
„ „ Outstanding at 30th June .. £'000	38,640	41,900	49,016	59,392	59,392
No. of Loans Current, 30th June .. ..	28,028	29,359	31,930	35,383	35,383

\* Including conversion loans, and £2,637,300 stock inscribed in exchange for debentures.

† Under £500.

The net profit of the Credit Foncier Department for the year ended 30th June, 1960, after making provision for bad and doubtful debts, was £21,147. This sum was added to General Reserve, which amounted to £1,969,640 at 30th June, 1960. There are provisions for depreciation and long service leave amounting to £265,000.

#### Further References

An outline of the history of the State Savings Bank of Victoria will be found on pages 630 to 632 of the Victorian Year Book 1961.

### Commonwealth Savings Bank in Victoria

The Savings Bank Department of the Commonwealth Bank commenced business on 15th July, 1912. The following table shows the business transacted in Victoria during each of the years 1950–51 to 1959–60 :—

#### VICTORIA—COMMONWEALTH SAVINGS BANK

Year Ended 30th June—	Number of Accounts—			Deposits	Withdrawals	Interest Added	Amount at Credit of Depositors at 30th June
	Opened	Closed	Remaining Open at End of Period*				
	'000			£'000			
1951 ..	117	58	520	72,548	62,863	966	68,092
1952 ..	116	68	554	79,227	71,956	1,222	76,485
1953 ..	112	68	583	82,328	75,077	1,401	85,137
1954 ..	107	69	605	90,606	83,140	1,571	94,174
1955 ..	120	78	629	104,653	96,063	1,833	104,597
1956 ..	123	87	649	113,443	109,957	2,132	110,216
1957 ..	113	87	656	115,010	113,290	2,606	114,542
1958 ..	112	87	667	120,264	119,758	2,757	117,805
1959 ..	129	98	686	131,071	129,342	3,043	122,577
1960 ..	134	98	703	149,201	143,915	3,380	131,243

\* Inoperative accounts have been excluded, i.e., those with balances of £1 or over inoperative for seven years or more and those with balances under £1 inoperative for three years (two years since 30.6.1950), or more. At 30th June, in each of the undermentioned years the number of inoperative accounts was as follows :—1951, 209,501; 1952, 220,538; 1953, 231,681; 1954, 244,800; 1955, 259,584; 1956, 272,629; 1957, 285,222; 1958, 293,337; 1959, 303,722; 1960, 318,122.

### Total Deposits, &c., in Savings Banks

The next table shows, for each of the years 1950–51 to 1959–60, the aggregate amount on deposit in Victoria in the State Savings Bank, the Commonwealth Savings Bank, and the private savings banks. Also shown is the amount of deposits per head of population.

#### VICTORIA—SAVINGS BANKS : DEPOSITS

At 30th June—		Amount at Credit of Depositors—				Deposits per Head of Population
		State Savings Bank*	Commonwealth Savings Bank	Private Savings Banks	Total	
		£'000				£
1951 ..	..	213,687	68,092	..	281,779	123·8
1952 ..	..	224,347	76,485	..	300,832	128·3
1953 ..	..	234,834	85,137	..	319,971	133·6
1954 ..	..	245,607	94,174	..	339,781	138·6
1955 ..	..	260,151	104,597	..	364,748	144·6
1956 ..	..	264,317	110,216	11,644	386,177	148·2
1957 ..	..	266,276	114,542	30,751	411,569	153·9
1958 ..	..	272,807	117,805	43,019	433,631	158·2
1959 ..	..	281,296	122,577	54,581	458,454	162·9
1960 ..	..	298,136	131,243	70,242	499,621	172·8

\* Including School Bank and Deposit Stock Accounts.

### Royal Mint, Melbourne Branch

#### Present Functions

For many years, the major activity of the Melbourne Mint has been the production of coin for the Commonwealth Government. All the silver coin and a large part of the bronze is produced in Melbourne—Perth Mint supplying the balance of the bronze. The present silver alloy consists of 500 silver, 400 copper, 50 nickel, and 50 zinc parts per 1,000. The bronze consists of copper, tin, and zinc.

To meet the demands of a rising population and an expanding economy, an average of 58,707,000 pieces were minted in each of the five years to 31st December, 1960. The Melbourne Mint was originally designed for a production of 5 million sovereigns per annum.

The original functions of purchase and refining have continued, though their importance has been relatively reduced by the decrease in gold production. However, in 1960, 221,806 ounces of rough gold containing 115,491 ounces of fine gold were treated. Deposits are usually the product of Victoria, New South Wales, Queensland, South Australia, and Northern Territory, with a large and increasing number of small parcels from New Guinea.

Gold and silver, in various forms and alloys, are prepared and supplied to manufacturers and others. Medals of gold, silver, or bronze are struck for various bodies.

The following table shows, for each of the years 1956 to 1960, the quantity of gold received at the Mint; where the gold was produced; its mint coinage value; and the gold bullion issued during the same periods:—

#### VICTORIA—ROYAL MINT: GOLD RECEIVED AND ISSUED

Particulars	1956	1957	1958	1959	1960
<b>GOLD RECEIVED</b> (Gross Weight)					
Produced in Victoria .. .. oz.	47,170	56,441	50,691	43,882	32,465
" New South Wales .. ..	22,056	25,485	12,438	5,906	5,844
" Queensland .. ..	43,533	42,956	38,188	44,340	36,579
" South Australia and					
Northern Territory .. ..	68,978	71,581	62,572	59,386	59,939
" Western Australia .. ..		7	609		1
" Tasmania .. ..	229	214	211	119	316
" New Zealand .. ..		2,637	2,644	3,438	2,108
" Elsewhere .. ..	50,167	48,598	53,138	75,172	84,554
Total .. ..	232,133	247,919	220,491	232,243	221,806
Mint Coinage Value .. .. £	633,558	690,106	612,070	541,726	490,573
<b>GOLD ISSUED</b>					
Bullion—Quantity .. .. oz. std.	161,536	177,289	156,589	137,412	129,416
—Mint Value .. .. £	628,980	690,321	609,719	535,050	503,912

The number of deposits received during 1960 was 2,437. The average composition of these deposits was gold 520·7, silver 389·7, and base 89·6 in every 1,000 parts.

The value of gold shown in the above table is calculated on the normal mint price of £3 17s. 10½d. per ounce standard (22 carat), which is equivalent to approximately £4 4s. 11½d. per ounce fine (24 carat). By arrangement with the Commonwealth Bank, the Mint

also pays a premium on all gold lodged at the Mint for sale to the Bank. During 1960, depositors were paid a premium of 267·84377 per cent., thereby making the actual price of gold £15 12s. 6d. per ounce fine.

In the following table, particulars of the coinages and the issue of silver and bronze pieces for the requirements of the Commonwealth Treasury are given for each of the years 1956 to 1960 :—

**VICTORIA—ROYAL MINT : SILVER AND BRONZE COINS  
ISSUED, 1956 TO 1960  
(’000)**

Denomination of Coins	1956	1957	1958	1959	1960
<b>Silver Pieces—</b>					
2s. .. .. .	8,090	9,278	8,972	3,500	15,760
1s. .. .. .	6,588	12,668	7,412	10,876	14,512
6d. .. .. .	5,440	13,752	17,944	11,728	18,592
3d. .. .. .	11,792	26,704	11,248	19,888	19,600
<b>Total Silver Pieces ..</b>	<b>31,910</b>	<b>62,402</b>	<b>45,576</b>	<b>45,992</b>	<b>68,464</b>
<b>Bronze Pieces—</b>					
1d. .. .. .	15,862	..	10,013	1,618	507
½d. .. .. .	..	..	..	10,166	1,027
<b>Total Bronze Pieces ..</b>	<b>15,862</b>	<b>..</b>	<b>10,013</b>	<b>11,784</b>	<b>1,534</b>

### Further References

A historical outline of the Royal Mint is given on page 635 of the Victorian Year Book 1961.

### Life Assurance

#### General

The business of life assurance in Victoria, both ordinary and industrial, is regulated by the Commonwealth Life Insurance Act which came into operation in 1946. This Act replaced existing Commonwealth and State Acts and resulted in uniform life assurance legislation throughout Australia.

Some minor amendments to the original Act have become necessary over the years but, in general, it has proved to be very satisfactory. It deals, *inter alia*, with registration of companies, deposits which are required before they can be registered to carry on business, and statutory funds of the life companies.

The Life Insurance Act also deals with accounts and actuarial investigations, documents to be furnished to the Commissioner and investigations which he may make if he has any doubts concerning matters connected with a company's business. If his investigation satisfies him that it is necessary or proper for him to do so, he may apply to the Court for an order that the company be placed under judicial management or that its business be wound up. There is provision for an appeal to the High Court against such a decision.

Other sections of the Act deal with provisions relating to policies including surrender values and non-forfeiture conditions, payment of policy moneys and protection of policies, and contain the various schedules which the companies are required to submit to the Commissioner.

The Life Insurance Act permits investment of funds in such manner as the company thinks fit subject only to its own Memorandum or Articles of Association. However, in this connexion, it is appropriate to mention the circumstances under which amendments to the Income Tax and Social Services Contribution Assessment Act, assented to on 15th May, 1961, made certain concessions to life assurance companies in the assessment of income tax. These concessions were made dependent upon the investment by companies of not less than 30 per cent. of their funds in public authority securities, including not less than 20 per cent. in Commonwealth securities.

### *Trends in 1960*

The percentages of assets invested in mortgages (including home purchase mortgages), property, and company debentures and shares, have continued to increase because of the great demand by individuals and companies for financial assistance.

The volume of new assurances written in the ordinary department continued to grow although an increasing proportion has been in the form of temporary assurance—a trend not confined to Australia.

The allowance of life assurance premiums up to £400 per annum as a deduction from assessable income in tax assessments is, of course, of considerable value to taxpayers, and has assisted the growth of the life assurance business in Australia. On the other hand, the competition from other types of investment and saving, especially from those whose income is at present free from taxation continues with increasing intensity.

The influx of United Kingdom insurance companies has continued during the year under review but the great proportion of new business is still being written by Australian companies. Australian life offices' subsidiaries have continued in the general insurance field, and they and other subsidiaries, e.g., nominee and short term money market companies, are still operating satisfactorily.

Interest rates earned on policyholders' funds have again increased with the investment of accruing funds and re-investment of maturing investments at current high interest rates. Interest rates in Australia continued upwards during the year. Because of increasing interest rates and improving mortality, bonus additions to sums assured have continued their upward trend.

Under-writing practices are under continual review so that cover may be granted in the light of advances in medical science. The practice of charging lower premium rates for female lives than for males of the same actual age because of the proved greater longevity of females, is now accepted by most Australian offices.

The following table shows particulars for each of the years 1955 to 1959, of life assurance policies in force in both the ordinary and industrial departments of the companies :—

#### VICTORIA—LIFE ASSURANCE POLICIES IN FORCE

Particulars	1955	1956	1957	1958	1959
<b>Ordinary Business—</b>					
Number of Policies ..	876,458	909,596	943,549	976,227	1,009,971
Sum Assured £'000	571,035	646,421	749,252	857,569	993,079
Annual Premiums ..	19,789	21,929	24,471	27,203	30,012
<b>Industrial Business—</b>					
Number of Policies ..	1,194,985	1,163,876	1,131,825	1,102,774	1,069,764
Sum Assured £'000	95,623	96,990	98,744	100,390	101,424
Annual Premiums ..	4,683	4,694	4,727	4,759	4,757

In 1959, the average amount of policy held in the ordinary and in the industrial departments was £983 and £95 respectively.

The preceding table refers to policies in force. The succeeding table contains summarized information in relation to the new business written by all life assurance companies during each of the five years 1955 to 1959 :—

#### VICTORIA—LIFE ASSURANCE : NEW POLICIES ISSUED

Particulars	1955	1956	1957	1958	1959
<b>Ordinary Business—</b>					
Number of Policies ..	77,367	80,501	83,711	84,686	90,939
Sum Assured £'000	100,613	110,923	145,541	156,501	193,872
Annual Premiums ..	3,197	3,446	4,101	4,351	4,715
<b>Industrial Business—</b>					
Number of Policies ..	61,200	56,911	58,682	53,457	52,804
Sum Assured £'000	9,321	8,860	9,357	8,978	9,343
Annual Premiums ..	429	415	437	418	435

Sums assured under new policies issued during 1959 averaged £2,132 in the Ordinary Department and £177 in the Industrial Department.



The following table gives particulars of the policies which were discontinued during each of the years 1957 to 1959 :—

### VICTORIA—LIFE ASSURANCE : POLICIES DISCONTINUED

Cause of Discontinuance	1957		1958		1959	
	Number of Policies	Sum Assured	Number of Policies	Sum Assured	Number of Policies	Sum Assured
ORDINARY BUSINESS						
		£'000		£'000		£'000
Death .. ..	4,823	2,884	5,002	3,157	4,989	3,483
Maturity or Expiry	12,677	7,473	13,018	7,878	13,799	8,743
Surrender .. ..	20,529	20,305	22,294	22,074	25,906	24,337
Lapse .. ..	9,414	9,178	9,858	11,531	10,536	15,020
Other * .. ..	2,315	2,871	1,836	3,544	1,965	6,779
Total .. ..	49,758	42,711	52,008	48,184	57,195	58,362
INDUSTRIAL BUSINESS						
		£'000		£'000		£'000
Death .. ..	4,773	264	4,532	271	4,515	280
Maturity .. ..	52,321	2,556	44,286	2,199	45,472	2,369
Surrender .. ..	18,982	2,422	19,802	2,585	21,367	2,980
Lapse .. ..	13,940	2,295	13,978	2,286	14,085	2,661
Other * .. ..	717	66	90	9	375	19
Total .. ..	90,733	7,603	82,508	7,332	85,814	8,309

\* Includes net loss or gain resulting from transfers, cancellations of, and alterations to, policies, &c.

### Fire, Marine, and General Insurance

The growth of insurance is closely linked with the development of the whole economy. More people, increased trade, a greater number of houses, factories, shops, and office buildings, all lead to a higher demand for insurance facilities. Diversification in industrial and economic development and the application of new technical discoveries extend the range and increase the complexity of insurance protection required. At the same time, by enlarging its services to meet these requirements, insurance provides a framework of security without which many kinds of economic development would not be possible.

The following tables of insurance statistics, therefore, provide a general appreciation of the development of the Victorian economy, especially when comparisons are made of premium income over a number of years. The figures also present a picture of the operations of the insurance industry itself.

Selected statistics relating to all classes of insurance, other than life, are collected annually from insurers licensed to operate in Victoria. They refer to all policies issued in this State on Australian risks wherever situated, but do not include data for policies issued in other States to cover Victorian risks.

Returns are for the year ended 30th June or for the immediately preceding accounting periods of the insurers concerned. Since the accounting years of many insurers end on dates other than 30th June, the figures are not for a uniform time period.

The statistics have been compiled on the following basis :—

- (1) Premiums are the total amounts received and receivable during the year for policies issued and renewed and for facultative reinsurances accepted, after deduction of returns of premium and rebates and bonuses paid or credited to policy holders, and of payments for facultative reinsurance ceded to other insurers. Amounts received and paid for treaty reinsurance have been disregarded.
- (2) Claims consist of payments during the year plus the estimated amount of claims unsettled at the end of the year, less the estimated amount of claims unsettled at the beginning of the year. Liabilities arising through facultative reinsurance received have been included, and salvage and recoveries from facultative reinsurers and from other parties have been deducted.
- (3) Contributions to fire brigades, commission, and agents' charges, and expenses of management are charges paid during the year.
- (4) Taxation consists of payments during the year for all forms of taxation including stamp duty, licence fees, and pay-roll tax as well as income tax.

It should be noted that the figures shown for premiums are different from the premium income earned by insurers during the year, as no adjustment is made for premiums unearned at the beginning and end of the year. When, as in recent years, the premium volume is increasing, the figures in the tables are greater than the premiums earned by insurers and the amount of the difference is often substantial. For this reason, the relationship of claims and other charges to premiums should be used only as a basis of comparison with ratios calculated under similar headings in previous years.

Another feature which should also be taken into account is that contributions to fire brigades and income tax paid during the year are based on the revenue of earlier years, and are not applicable to the years covered by the tables in which they appear.

VICTORIA—FIRE, MARINE, AND GENERAL INSURANCE :  
TOTAL REVENUE : CLASS OF BUSINESS

(£'000)

Class of Business	Year Ended 30th June—				
	1956	1957	1958	1959	1960

PREMIUMS (LESS RETURNS, REBATES AND BONUSES)

Fire .. .. .	8,196	8,933	9,432	9,284	9,628
Householders' Comprehensive ..	2,000	2,251	2,564	2,935	3,315
Sprinkler Leakage .. .. .	19	38	23	28	26
Loss of Profits .. .. .	1,004	1,036	992	1,151	1,266
Hailstone .. .. .	175	166	177	301	254
Marine .. .. .	2,645	2,452	2,410	2,664	2,572
Motor Vehicles (Other than Motor Cycles) .. .. .	9,087	11,577	12,849	12,764	14,377
Motor Cycles .. .. .	58	45	40	52	59
Compulsory Third Party (Motor Vehicles) .. .. .	4,003	5,142	5,361	5,703	6,009
Employers' Liability and Workmen's Compensation * .. .. .	8,422	10,053	12,312	13,110	14,081
Personal Accident .. .. .	1,015	1,194	1,521	1,786	1,838
Public Risk, Third Party .. .. .	411	520	573	650	755
General Property .. .. .	63	72	102	120	113
Plate Glass .. .. .	141	159	207	218	232
Boiler .. .. .	13	17	22	22	36
Live Stock .. .. .	80	76	92	73	80
Burglary .. .. .	678	695	808	860	892
Guarantee .. .. .	74	69	78	96	143
Pluvius .. .. .	32	29	30	24	25
Aviation .. .. .	270	241	111	196	60
All Risks .. .. .	290	322	397	461	497
Television .. .. .	..	†	†	867	1,153
Others .. .. .	434	496	663	595	707
Total Premiums .. .. .	39,110	45,583	50,764	53,960	58,118

INTEREST, DIVIDENDS, RENTS., &C. (NET OF EXPENSES)

Investments .. .. .	1,136	1,161	1,399	1,725	2,420
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TOTAL REVENUE

Grand Total .. .. .	40,246	46,744	52,163	55,685	60,538
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\* See references pages 303 to 306.

† Included with "Others". This class of business was first transacted in 1956-57.

**VICTORIA—FIRE, MARINE, AND GENERAL INSURANCE:  
TOTAL EXPENDITURE: CLASS OF BUSINESS**

(£'000)

Class of Business	Year Ended 30th June—				
	1956	1957	1958	1959	1960

**GROSS CLAIMS (LESS AMOUNTS RECOVERABLE)**

Fire .. .. .	2,475	2,812	2,668	2,584	2,902
Householders' Comprehensive ..	343	383	470	539	669
Sprinkler Leakage .. .. .	15	9	17	3	17
Loss of Profits .. .. .	151	257	135	132	224
Hailstone .. .. .	627	92	155	291	139
Marine .. .. .	1,012	1,178	1,267	1,003	1,087
Motor Vehicles (Other than Motor Cycles) .. .. .	6,290	8,067	8,473	8,725	9,948
Motor Cycles .. .. .	35	23	21	22	28
Compulsory Third Party (Motor Vehicles) .. .. .	3,783	4,034	4,705	5,618	5,356
Employers' Liability and Workmen's Compensation .. .. .	6,891	8,021	8,676	9,366	9,639
Personal Accident .. .. .	353	449	538	623	787
Public Risk, Third Party .. .. .	223	201	343	308	368
General Property .. .. .	35	120	122	24	125
Plate Glass .. .. .	84	102	109	122	148
Boiler .. .. .	3	1	6	1	2
Live Stock .. .. .	35	40	41	39	35
Burglary .. .. .	222	369	383	432	524
Guarantee .. .. .	9	11	9	24	25
Pluvius .. .. .	23	21	12	8	16
Aviation .. .. .	220	44	31	72	31
All Risks .. .. .	144	152	188	231	299
Television .. .. .	..	*	*	431	694
Others .. .. .	108	156	234	257	354
<b>Total .. .. .</b>	<b>23,081</b>	<b>26,542</b>	<b>28,603</b>	<b>30,855</b>	<b>33,417</b>

**OTHER EXPENDITURE**

Contributions to Fire Brigades ..	860	1,020	1,069	1,169	1,291
Commission and Agents' Charges ..	4,141	4,913	5,373	5,549	5,937
Expenses of Management .. .. .	5,685	6,391	7,210	7,928	8,794
Taxation .. .. .	1,401	1,799	1,751	2,426	3,036
<b>Total .. .. .</b>	<b>12,087</b>	<b>14,123</b>	<b>15,403</b>	<b>17,072</b>	<b>19,058</b>

**TOTAL EXPENDITURE**

<b>Grand Total.. .. .</b>	<b>35,168</b>	<b>40,665</b>	<b>44,006</b>	<b>47,927</b>	<b>52,475</b>
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\* Included with "Others". This class of business was first transacted in 1956-57.

The percentage of claims to premium income for each of the years 1955-56 to 1959-60 in respect of the various classes of insurance was as follows :—

**VICTORIA—FIRE, MARINE, AND GENERAL INSURANCE :  
PERCENTAGE OF CLAIMS TO PREMIUM INCOME**

Class of Business	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Fire .. .. .	30·20	31·48	28·28	27·84	30·14
Householders' Comprehensive ..	17·16	17·01	18·35	18·38	20·19
Sprinkler Leakage .. .. .	79·59	23·65	70·67	9·42	63·39
Loss of Profits .. .. .	15·01	24·83	13·60	11·45	17·67
Hailstone .. .. .	357·54	55·40	87·45	96·45	54·74
Marine .. .. .	38·28	48·05	52·55	37·63	42·25
Motor Vehicles (Excl. Motor Cycles)	69·22	69·68	65·94	68·36	69·20
Motor Cycles .. .. .	61·00	51·57	53·71	41·60	47·65
Compulsory Third Party (Motor Vehicles) .. .. .	94·50	78·45	87·76	98·50	89·14
Employers' Liability and Workmen's Compensation .. .. .	81·82	79·79	70·47	71·44	68·45
Personal Accident .. .. .	34·81	37·61	35·36	34·86	42·80
Public Risk, Third Party .. .. .	54·19	38·61	59·88	47·40	48·78
General Property .. .. .	55·88	165·70	119·69	19·74	111·16
Plate Glass .. .. .	59·45	64·31	52·69	55·84	63·71
Boiler .. .. .	21·24	4·91	26·53	6·37	6·59
Live Stock .. .. .	43·67	52·44	45·06	53·74	43·73
Burglary .. .. .	32·77	53·18	47·13	50·29	58·79
Guarantee .. .. .	12·85	15·61	11·06	25·02	17·42
Pluvius .. .. .	71·67	72·75	39·67	34·97	63·74
Aviation .. .. .	81·46	18·44	28·33	36·77	51·59
All Risks .. .. .	49·68	47·05	47·42	50·04	60·01
Television .. .. .	..	*	*	49·72	60·19
Others .. .. .	24·89	31·39	35·25	43·15	50·03
All Classes .. .. .	59·02	58·23	56·34	57·18	57·50

\* Included with "others". This class of business was first transacted in 1956-57.

**Motor Vehicle Insurance**

*Motor Car (Third Party Insurance)*

The *Motor Car (Third Party Insurance) Act 1939* which came into force on 22nd January, 1941, made it compulsory for the owner of a motor vehicle to insure against any liability which may be incurred by him, or any person who drives such motor vehicle, in respect of the death or bodily injury of any person caused by, or arising out of, the use of such motor vehicle.

The number of vehicles insured during each of the years 1955-56 to 1959-60 is shown in the following table :—

**VICTORIA—MOTOR CAR (THIRD PARTY INSURANCE) :  
NUMBER OF MOTOR VEHICLES INSURED**

Class of Motor Vehicle	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>MOTOR VEHICLES USUALLY GARAGED WITHIN A RADIUS OF 20 MILES OF THE POST OFFICE, ELIZABETH-STREET, MELBOURNE</b>					
Private .. .. .	251,055	266,190	285,887	302,145	336,684
Business .. .. .	32,618	33,277	36,723	37,753	43,298
Light Goods .. .. .	37,066	37,881	39,751	40,068	42,112
Heavy Goods .. .. .	19,032	18,436	19,507	18,522	20,298
Miscellaneous .. .. .	7,935	8,130	8,365	8,812	9,633
Motor Cycles .. .. .	15,161	13,544	12,914	12,701	12,145
Visiting Motor Cars .. .. .	576	538	887	931	1,815
<b>Total .. .. .</b>	<b>363,443</b>	<b>377,996</b>	<b>404,034</b>	<b>420,932</b>	<b>465,985</b>

**MOTOR VEHICLES USUALLY GARAGED OUTSIDE A RADIUS OF 20 MILES OF THE POST OFFICE,  
ELIZABETH-STREET, MELBOURNE**

Private .. .. .	197,025	204,431	216,679	222,154	239,699
Business .. .. .	7,413	7,684	8,507	9,190	10,318
Light Goods .. .. .	51,060	51,025	51,504	50,368	52,589
Heavy Goods .. .. .	32,498	32,575	32,497	31,926	33,639
Miscellaneous .. .. .	26,178	29,418	33,208	34,728	37,729
Motor Cycles .. .. .	13,191	10,536	10,218	8,924	8,134
Visiting Motor Cars .. .. .	118	78	60	81	151
<b>Total .. .. .</b>	<b>327,483</b>	<b>335,747</b>	<b>352,673</b>	<b>357,371</b>	<b>382,259</b>
<b>Grand Total .. .. .</b>	<b>690,926</b>	<b>713,743</b>	<b>756,707</b>	<b>778,303</b>	<b>848,244</b>

*State Motor Car Insurance Office*

The State Motor Car Insurance Office was established under the *Motor Car (Third Party Insurance) Act 1939* (now embodied in the *Motor Car Act 1958*), for the purpose of enabling owners of motor cars to obtain from the State policies of Third Party Insurance required under that Act, and policies generally in relation to insurance of motor cars. Business commenced on 24th January, 1941. The Office is managed and controlled by the Insurance Commissioner, and the policies issued are guaranteed by the Government of Victoria.

The proportion of total Victorian motor insurance business underwritten by the Office for the year 1959-60 represented 4.3 per cent. of comprehensive and 25.4 per cent. of third party premiums received in Victoria.

The following table shows the trading results for each of the five years 1955-56 to 1959-60 :—

**VICTORIA—STATE MOTOR CAR INSURANCE OFFICE :  
PREMIUMS RECEIVED, CLAIMS PAID, ETC.  
(£'000)**

Year	Premiums Received Less Reinsurances, Rebates, &c.	Additional Unearned Premium Provision	Claims Paid and Outstanding	Expenses	Underwriting Profit
1955-56 ..	1,258	207	1,262	88	299*
1956-57 ..	1,541	103	1,222	109	107
1957-58 ..	1,812	135	1,365	122	190
1958-59 ..	1,967	54	1,751	134	28
1959-60 ..	2,153	102	2,018	145	112*

\* Loss

*State Accident Insurance Office*

The State Accident Insurance Office was constituted under the *Workers Compensation Act* 1914 for the purpose of enabling employers to obtain from the State policies of insurance indemnifying them against their liability under the Workers Compensation Act, or at common law, or otherwise. The Office is managed and controlled by the Insurance Commissioner, and the policies issued are guaranteed by the Government of Victoria.

The Office is conducted on a mutual basis so that all profits, after providing for the necessary reserves, are refunded as bonuses to policy holders.

The Office has made steady progress during 46 years of operation and for the year ended 30th June, 1960, its premium income represented 18·5 per cent. of the total premiums received by all insurance companies on account of Employers' Liability and Workmen's Compensation Insurance.

The following table shows the trading results for each of the five years 1955-56 to 1959-60 :—

**STATE ACCIDENT INSURANCE OFFICE : PREMIUMS  
RECEIVED, CLAIMS PAID, ETC.  
(£'000)**

Year	Premiums Received Less Reinsurances, Rebates, &c.	Additional Unearned Premium Provision	Claims Paid and Outstanding	Expenses	Underwriting Profit
1955-56 ..	1,913	129	1,563	128	93
1956-57 ..	2,011	234	2,078	148	449*
1957-58 ..	2,462	72	1,918	155	317
1958-59 ..	2,656	62	2,005	167	422
1959-60 ..	2,606	— 172	2,251	242	285

\* Loss

The accumulated funds at 30th June, 1960, were :—General Reserve, £1,160,000 ; Building and other Reserves, £30,547 ; and Bonus Equalization Reserve, £641,014.

### Building Societies

The provisions of the *Building Societies Act 1874* made it compulsory for building societies to effect registration. Up to 31st December, 1960, the number of societies that had been registered was 199. There were 24 societies operating during 1960.

Particulars are given in the following table of Permanent Societies and Starr-Bowkett Societies transacting business in Victoria during 1960 :—

#### VICTORIA—BUILDING SOCIETIES, 1960

Particulars	Permanent Societies	Starr-Bowkett Societies	Total All Societies
Number of Societies .. .. .	23	2	24*
„ „ Shareholders .. .. .	4,727	7,290	12,017
„ „ Borrowers .. .. .	15,586	1,059	16,645
Transactions during the Year—	£'000		
Income—			
Interest on Loans and Investments ..	1,131	49	1,180
Other .. .. .	65	2	67
Total .. .. .	1,196	51	1,247
Expenditure—			
Working Expenses .. .. .	166	21	187
Interest .. .. .	698	12	710
Taxation .. .. .	120	†	120
Total .. .. .	984	33	1,017
Loans Granted .. .. .	4,518	171	4,689
Repayments .. .. .	2,561	213	2,774
Deposits Received .. .. .	2,934	30	2,964
Assets—			
Loans on Mortgage .. .. .	18,286	970	19,256
Properties in Possession or Surrendered ..	713	..	713
Other Advances .. .. .	19	13	32
Cash in Hand, &c. .. .. .	75	†	75
Commonwealth Loans (Including Accrued Interest) .. .. .	248	..	248
Other .. .. .	159	3	162
Total .. .. .	19,500	986	20,486
Liabilities—			
To Shareholders .. .. .	4,183	559	4,742
„ Depositors .. .. .	4,794	276	5,070
Reserve Funds .. .. .	1,153	45	1,198
Bank Overdraft .. .. .	240	30	270
Profit and Loss Account .. .. .	24	21	45
Other .. .. .	9,106	55	9,161
Total .. .. .	19,500	986	20,486

\* One society has both a Permanent and a Starr-Bowkett branch.

† Under £500.



### Co-operative Organizations

Co-operative organizations operating in Victoria are registered under the provisions of the Companies Act, the Industrial and Provident Societies Act, and the Co-operation Act. They are mainly engaged in the production, marketing, and distribution of goods. A number of co-operative credit societies has been registered in recent years under the Co-operation Act but, because of the nature of their business, they have been excluded from the summary of co-operative organizations given below. References to societies registered under the Co-operation Act are to found on pages 308 to 310.

For statistical purposes, co-operative organizations have been defined as those producing, manufacturing, marketing, or distributing societies which substantially fulfil the following conditions :—

- (1) Dividend on share capital does not exceed 8 per cent.;
- (2) the greater portion of the business of the society is transacted with its own shareholders ;
- (3) any distribution of surplus, after payment of dividend on share capital, is amongst suppliers and customers, in proportion to the business done with the society ; and
- (4) voting powers are limited.

Societies have been divided into three classes, viz.: (1) Producers, (2) Consumers, and (3) Producers and Consumers. Included in the group of Consumers' Societies is a number of Community Advancement Societies registered under the Co-operation Act.

Particulars of co-operative organizations for the year 1959–60 are given in the following table :—

#### VICTORIA—CO-OPERATIVE ORGANIZATIONS, 1959–60

Particulars	Societies—			Total All Societies
	Producers'	Consumers'	Producers' and Consumers'	
Number of Societies .. ..	57	49	12	118
Membership .. ..	40,948	26,291	7,420	74,659
£'000				
Purchases .. ..	17,038	3,393	6,501	26,932
Working Expenses, &c. .. ..	5,164	580	1,008	6,752
Interest on—				
Loan Capital .. ..	100	27	14	141
Bank Overdraft .. ..				
Rebates and Bonuses .. ..	197	86	33	316
Total Expenditure .. ..	22,499	4,086	7,556	34,141
Sales .. ..	21,563	3,986	7,620	33,169
Other Income .. ..	1,431	104	36	1,571
Total Income .. ..	22,994	4,090	7,656	34,740
Dividend on Share Capital .. ..	241	20	35	296

VICTORIA—CO-OPERATIVE ORGANIZATIONS, 1959-60—*continued*

Particulars	Societies—			Total All Societies
	Producers'	Consumers'	Producers' and Consumers'	
Liabilities—	£'000			
Share Capital—Paid-up ..	3,450	641	562	4,653
Loan Capital .. ..	577	266	181	1,024
Bank Overdraft .. ..	1,871	283	40	2,194
Accumulated Profits .. ..	546	172	164	882
Reserve Funds .. ..	3,748	207	700	4,655
Sundry Creditors .. ..	2,977	318	624	3,919
Other .. ..	776	216	61	1,053
Total .. ..	13,945	2,103	2,332	18,380
Assets—				
Land and Buildings .. ..	7,488	978	1,369	9,835
Fittings, Plant, and Machinery } .. ..				
Stock .. ..	1,863	601	377	2,841
Sundry Debtors .. ..	3,687	372	432	4,491
Cash in Bank, in Hand, or on De- posit .. ..	315	40	61	416
Profit and Loss Account .. ..	37	39	6	82
Other .. ..	555	73	87	715
Total .. ..	13,945	2,103	2,332	18,380

**Public Trustee**

Under the provisions of the Public Trustee Acts, the Public Trustee is authorized to act as executor of wills, to administer intestate estates, or to act as an agent, attorney, or trustee. He is also authorized to act as custodian of assets under settlements and trusts.

The control of estates of certified patients in mental hospitals is vested in the Public Trustee who is also empowered to assume control of estates of persons who, by reason of mental or physical disability, are certified to be incapable of managing their affairs.

Consequent on the passing of the *Public Trustee Act* 1948, the Public Trustee Fund at the State Treasury was abolished and the proceeds of all estates, as from 1st October, 1948, were invested in a Common Fund under the control of the Public Trustee. In the following table, particulars of the Common Fund are shown for each of the years 1955-56 to 1959-60 :—

VICTORIA—PUBLIC TRUSTEE : COMMON FUND  
(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
Proceeds of Realizations, Rents, Interest, &c. .. ..	2,205	2,488	2,948	3,362	3,261
Investments, Distributions, Claims, &c. .. ..	1,971	2,129	2,505	2,815	3,093
Cash Variation .. ..	234	359	443	547	168
Common Fund .. ..	3,103	3,336	3,695	4,138	4,685
Balance at 30th June .. ..	3,337	3,695	4,138	4,685	4,853

The numbers of applications for probate and letters of administration (including election to administer), &c., made by the Public Trustee for each of the years 1950-51 to 1959-60 are shown in the following table :—

**VICTORIA—APPLICATIONS BY PUBLIC TRUSTEE FOR PROBATE, LETTERS OF ADMINISTRATION, ETC.**

Year	No.	Year	No.
1950-51	924	1955-56	1,089
1951-52	1,095	1956-57	1,135
1952-53	1,182	1957-58	1,130
1953-54	1,187	1958-59	1,066
1954-55	1,126	1959-60	919

The number of wills (under which the Public Trustee was appointed executor) lodged for safe custody during each of the years 1955-56 to 1959-60 was as follows :—1955-56, 2,518 ; 1956-57, 2,561 ; 1957-58, 2,878 ; 1958-59, 2,936 ; 1959-60, 2,938.

**Trustees, Executors, and Agency Companies**

There are eight trustee companies transacting business in Victoria. From their published balance-sheets the following particulars for the year 1960 have been abstracted :—Paid-up capital, £530,530 ; reserve funds, &c., £641,455 ; sundry creditors, £69,637 ; accumulated profits, £99,984 ; other liabilities, £812,620 ; total liabilities, £2,154,226. The assets were :—Land and buildings, £992,750 ; loans on mortgage, £109,084 ; government loans, £273,209 ; guarantee funds, £142,400 ; sundry debtors, £90,022 ; other assets, £546,761 ; total assets, £2,154,226. Total income amounted to £1,246,582 and expenditure to £1,161,222, while bonuses paid or proposed totalled £57,975.

**Probate Returns**

The accompanying table shows the number and value of estates of deceased persons of each sex in connexion with which probates or letters of administration, &c., were finally completed during each of the years 1956 to 1960. Particulars of estates administered by the Public Trustee are included.

**VICTORIA—PROBATES, LETTERS OF ADMINISTRATION, ETC.**

Year	Number of Estates	Gross Value of Estates—		Liabilities	Net Value of Estates	Average Net Value of Each Estate
		Real	Personal			
		£'000	£'000	£'000	£'000	£
<b>MALES</b>						
1956	7,887	19,409	30,710	2,953	47,166	5,980
1957	8,258	20,046	33,559	2,749	50,856	6,158
1958	8,659	22,599	38,091	2,894	57,796	6,675
1959	8,657	22,824	33,582	2,124	54,282	6,270
1960	8,860	23,428	42,024	3,108	62,344	7,037

VICTORIA—PROBATES, LETTERS OF ADMINISTRATION, ETC.—*continued*

Year	Number of Estates	Gross Value of Estates—		Liabilities	Net Value of Estates	Average Net Value of Each Estate
		Real	Personal			
		£'000	£'000	£'000	£'000	£
FEMALES						
1956 ..	5,802	10,140	14,391	1,054	23,477	4,046
1957 ..	6,465	10,688	16,640	1,032	26,296	4,067
1958 ..	6,359	11,194	17,641	1,201	27,634	4,346
1959 ..	6,510	12,319	18,759	1,292	29,786	4,575
1960 ..	6,277	11,844	21,772	1,064	32,552	5,186
TOTAL						
1956 ..	13,689	29,549	45,101	4,007	70,643	5,161
1957 ..	14,723	30,734	50,199	3,781	77,152	5,240
1958 ..	15,018	33,793	55,732	4,095	85,430	5,688
1959 ..	15,167	35,143	52,341	3,416	84,068	5,543
1960 ..	15,137	35,272	63,796	4,172	94,896	6,269

The number and value of estates dealt with in each of the years 1958 to 1960 grouped according to net value and, distinguishing the estates of males from those of females, were as follows :—

## VICTORIA—NUMBER AND NET VALUE OF ESTATES OF DECEASED PERSONS

Group	1958		1959		1960	
	Number	Net Value	Number	Net Value	Number	Net Value
		£'000		£'000		£'000
MALES						
Under £100 .. ..	405	18	448	19	431	18
£100 to £300 .. ..	779	147	759	142	762	139
£300 to £500 .. ..	533	212	506	198	480	187
£500 to £1,000 .. ..	1,014	731	962	698	995	729
£1,000 to £2,000 .. ..	1,300	1,869	1,280	1,861	1,264	1,823
£2,000 to £3,000 .. ..	958	2,372	905	2,248	907	2,235
£3,000 to £4,000 .. ..	711	2,472	816	2,806	810	2,796
£4,000 to £5,000 .. ..	496	2,220	551	2,476	590	2,621
£5,000 to £10,000 .. ..	1,073	7,518	1,080	7,620	1,152	8,215
£10,000 to £15,000 .. ..	464	5,660	460	5,633	475	5,816
£15,000 to £25,000 .. ..	454	8,689	414	7,972	454	8,627
£25,000 to £50,000 .. ..	321	11,000	350	11,827	383	12,735
£50,000 to £100,000 .. ..	110	7,467	92	6,065	112	7,938
Over £100,000 .. ..	41	7,421	34	4,717	45	8,465
Total Males .. ..	8,659	57,796	8,657	54,282	8,860	62,344

**VICTORIA—NUMBER AND NET VALUE OF ESTATES OF DECEASED  
PERSONS—continued**

Group	1958		1959		1960	
	Number	Net Value	Number	Net Value	Number	Net Value
		£'000		£'000		£'000
<b>FEMALES</b>						
Under £100 .. ..	258	13	293	13	243	12
£100 to £300 .. ..	592	110	621	120	628	116
£300 to £500 .. ..	419	165	432	170	408	159
£500 to £1,000 .. ..	769	567	744	542	690	502
£1,000 to £2,000 .. ..	1,099	1,599	1,054	1,550	954	1,392
£2,000 to £3,000 .. ..	793	1,954	805	1,975	797	1,968
£3,000 to £4,000 .. ..	585	2,010	635	2,198	624	2,159
£4,000 to £5,000 .. ..	392	1,745	439	1,952	426	1,889
£5,000 to £10,000 .. ..	787	5,561	811	5,666	791	5,578
£10,000 to £15,000 .. ..	303	3,695	305	3,719	275	3,363
£15,000 to £25,000 .. ..	220	4,231	219	4,231	228	4,348
£25,000 to £50,000 .. ..	117	3,824	112	3,761	150	5,022
£50,000 to £100,000 .. ..	22	1,509	30	2,064	45	2,981
Over £100,000 .. ..	3	651	10	1,825	18	3,063
<b>Total Females ..</b>	<b>6,359</b>	<b>27,634</b>	<b>6,510</b>	<b>29,786</b>	<b>6,277</b>	<b>32,552</b>
<b>Grand Total..</b>	<b>15,018</b>	<b>85,430</b>	<b>15,167</b>	<b>84,068</b>	<b>15,137</b>	<b>94,896</b>

**Transfer of Land**

*Torrens System*

The Torrens System of land dealings is embodied in the Transfer of Land Act. This system was conceived in South Australia by Robert Richard Torrens who, as Collector of Customs, was concerned with the complexity of even a simple land dealing of small value compared with the simplicity of transferring the ownership of a valuable ship. He was impressed by the method of recording in shipping registers, ownership of ships and shares.

In 1858, the South Australian Real Property Act was passed and, in the year 1862, Victoria adopted the Torrens System in its Real Property Act. All other States in Australia and various other countries have also copied this system.

Prior to 1862, Victoria had only one system of conveying land, known as general law conveyancing. This system is, in effect, a private arrangement between parties and no registration of any deeds is essential. Less than 2 mill. acres of land in Victoria remain subject to this somewhat complex and uncertain general law system.

The Torrens System aims at five principles—simplicity, certainty, indefeasibility, flexibility, and cheapness—none of which characterizes general law conveyancing. The fundamental principle of the Torrens System is that the title to land and to interests in land (such as interest of mortgagees, transferees, &c.) depends upon registration of written instruments signed by the parties to the respective transactions, not upon the written deeds themselves.

The document of title to land under the Transfer of Land Act (Torrens System) consists of a Certificate of Title setting out a description identifying the land and a statement certifying who is the registered proprietor. Such statement is conclusive evidence and is guaranteed by the Government. Every time the land is transferred and the transfer is registered, the like guarantee and certification operates for the entry of the name of the new proprietor.

Whenever a mortgage is registered, the land is charged with payment of moneys secured. Certain statutory powers, such as sale or foreclosure, are conferred on the mortgagee in the event of default under the mortgage.

Any Certificate of Title can be searched at the Titles Office for a small fee, and any person intending to deal with the registered proprietor of the land is not concerned to investigate any of the entries on the title such as the name of the registered proprietor, the encumbrances affecting, such as easements or mortgages. The certainty of these particulars can be assumed, as, in terms of the Act, they are conclusive.

#### *Separate Certificates of Title to Flats*

Individual ownership of flats was first introduced into Victoria shortly after the Second World War when the expression "own your own flat" appeared in real estate advertising.

In the first type of flat ownership, a person became the "owner" of a flat by acquiring shares in a proprietary company which became the registered proprietor on the title to the site of the block of flats, and was formed to control the management of the flats. Each flat "owner", as holder of a group of shares, became entitled to the exclusive occupation of a particular flat under an agreement with the company.

In 1953, a form of real ownership of a flat was introduced when the Office of Titles accepted a subdivision of a block of flats. This was an entirely new form of subdivision embodying a horizontal as well as a vertical division of a building. Separate Certificates of Title were issued for each lot on the subdivision representing a separate flat and these "stratum titles" show the heights from floor to ceiling level of each flat by reference to the datum for levels adopted by the Melbourne and Metropolitan Board of Works (the high water mark on Port Phillip Bay).

Under this form of ownership evidenced by the issue of a Certificate of Title to each flat, the title for the residual land in the subdivision generally issues in the name of a service company. This comprises the grounds, garden, common stairways, land under the building and above the building, fences, foundations, and outbuildings.

Under stratum title flat ownership, a purchaser of a flat becomes the registered proprietor and the absolute owner in fee-simple of his flat. He can borrow money on the security of mortgage on the title to his flat; he can sell or lease his flat whenever he wishes without any restrictions, or he can dispose of his flat by his will. The flat may be sold on extended terms. (Under the shares in a proprietary company scheme, money cannot be borrowed upon the security of a group of shares.)

The service company is responsible for the general maintenance of the block of flats and for the provision of common services. Its shareholders comprise flat owners exclusively.

Each flat owner pays to the service company a service charge and maintenance contribution to cover the services provided by it.

The form of Certificate of Title is simple and section 98 of the Transfer of Land Act confers a statutory right for each flat to enjoy all necessary easements such as support, supply of water, gas, &c., over other parts of the building.

#### *Land Transfers, Mortgages, Liens, &c.*

A summary of land transactions under the Transfer of Land Acts in the Titles Office for each of the years 1956 to 1960 is given in the following tables :—

#### VICTORIA—DEALINGS LODGED AT THE TITLES OFFICE UNDER THE TRANSFER OF LAND ACTS

Year	Number of Transfers	Mortgages*		Number of—			
		Number	Amount	Entries of Executor, Administrator, or Survivor	Plans of Sub-division	Other Dealings	Total Dealings
			£'000				
1956 .. ..	82,995	31,850	76,081	9,502	2,720	47,526	174,593
1957 .. ..	83,596	33,742	83,283	10,557	2,782	49,327	180,004
1958 .. ..	91,939	39,149	96,715	10,256	2,910	55,460	199,714
1959 .. ..	91,519	38,674	108,361	10,392	3,091	62,064	205,740
1960 .. ..	105,327	46,455	157,132	10,554	3,154	68,587	234,077

\* Excluding number and amount of mortgages given to secure overdrafts on current accounts.

## VICTORIA—TITLES OF LAND ISSUED

Year	Number of—			
	Certificates of Title	Crown Grants	Crown Leases	Total Titles
1956 .. ..	34,035	1,341	410	35,786
1957 .. ..	34,996	1,131	488	36,615
1958 .. ..	35,796	849	532	37,177
1959 .. ..	34,015	1,137	417	35,569
1960 .. ..	37,441	1,303	503	39,247

Mortgages, reconveyances, and conveyances registered under the *Property Law Act* 1928 are shown in the following table. The *Property Law Act* 1958 consolidated the 1928 Act and subsequent amending Acts.

## VICTORIA—DEALINGS UNDER THE PROPERTY LAW ACT

Year	Mortgages*		Reconveyances		Conveyances	
	No.	Amount	No.	Amount†	No.	Amount
		£ '000		£ '000		£ '000
1956 .. ..	868	3,842	948	349	3,054	7,939
1957 .. ..	907	3,719	964	1,123	3,079	7,459
1958 .. ..	858	2,454	979	649	3,088	10,783
1959 .. ..	886	2,600	996	576	3,074	9,446
1960 .. ..	966	3,254	1,127	624	3,381	11,752

\* Excluding number and amount of mortgages given to secure overdrafts on current accounts.

† Excluding repayments designated "Principal and Interest".

The number and amount of stock mortgages, liens on wool, and liens on crops registered during each of the years 1956 to 1960 are shown in the following table. Releases of liens are not required to be registered as, after the expiration of twelve months, the registration of all liens is automatically cancelled. Very few mortgagors of stock secure themselves by a registered release.



### VICTORIA—STOCK MORTGAGES AND LIENS ON WOOL AND CROPS

Security				1956	1957	1958	1959	1960
<b>Stock Mortgages—</b>								
Number	..	..	..	474	455	332	368	373
Amount	..	..	£'000	571	521	422	371	350
<b>Liens on Wool—</b>								
Number	..	..	..	253	260	338	366	321
Amount	..	..	£'000	415	538	692	785	697
<b>Liens on Crops—</b>								
Number	..	..	..	105	101	99	131	135
Amount	..	..	£'000	20	18	47	49	46
<b>Total—</b>								
Number	..	..	..	832	816	769	865	829
Amount	..	..	£'000	1,006	1,077	1,161	1,205	1,093

The following are the numbers and amounts of bills of sale which have been filed in each of the years 1956 to 1960 :—

### VICTORIA—BILLS OF SALE

Security				1956	1957	1958	1959	1960
<b>Bills of Sale—</b>								
Number	..	..	..	4,407	4,681	5,096	5,388	4,959
Amount	..	..	£'000	4,689	5,418	7,303	8,440	9,717

## Companies

### *General*

Registration and operation of companies are controlled by the *Companies Act 1958*, which was proclaimed on 1st April, 1959.

### *Types of Companies*

Companies may be incorporated either as unlimited companies, limited companies, or no liability companies. The most numerous are limited companies, namely, companies in which the liability of the members is limited to the amount (if any) unpaid on their shares, or (in the case of companies limited by guarantee) to a specified amount which the members undertake to pay in the event of the company being wound up. No liability companies, which may be formed only for mining purposes, are companies in which members take no liability for their shares.

Limited companies are divided into public and proprietary companies, the latter being required to have the word "proprietary" or the abbreviation "Pty." as part of their names. Public companies may be regarded as companies in which the public at large may hold shares; proprietary companies are companies whose membership is limited to 50. The transfer of shares in proprietary companies is restricted, and such companies may not invite the public to subscribe for shares or debentures or to deposit money with the company. Public companies are obliged to publish audited accounts; proprietary companies are exempt from this obligation.

### *Foreign Companies*

Companies incorporated outside Victoria which have an established place of business in Victoria are required to register as "foreign companies".

### *Registration Fees*

The *Companies (Fees) Act* 1960 provided for an increase in the amount of fees payable upon the registration of a company.

The following is a summary of the rates payable as from 1st July, 1960 :—

#### (1) Companies limited by shares and no liability companies—

	£	s.	d.
Where the nominal capital does not exceed £5,000 .. .. .	20	0	0
Where the nominal capital exceeds £5,000, the above fee of £20 plus for every £1,000 after the first £5,000, up to £100,000 .. .. .	1	0	0
For every £1,000 after the first £100,000, up to £500,000 .. .. .	0	10	0
For every £1,000 after the first £500,000 .. .. .	0	5	0

#### (2) Companies limited by guarantee—

Where the number of members does not exceed twenty .. .. .	5	0	0
Where the number of members exceeds twenty but does not exceed 100 .. .. .	10	0	0
Where the number of members exceeds 100 the above fee of £10 plus 10s. for every 50 members beyond the first 100—maximum fee .. .. .	60	0	0

#### (3) Foreign companies—

On registration of a foreign company the same fees as are payable on incorporation of a company limited by shares :			
Provided that where the prescribed fee is inapplicable the fee shall be .. .. .	50	0	0

The following table shows details of companies registered under Parts 1 and 2 of the *Companies Act* 1938. This Act and subsequent amending Acts were consolidated in the *Companies Act* 1958.

### VICTORIA—COMPANIES REGISTERED, ETC.

Particulars	1956	1957	1958	1959	1960
	No.				
New Companies Registered—					
Victorian Trading .. ..	2,081	2,410	2,882	3,647	4,409
Foreign .. ..	148	170	183	238	272
Mining .. ..	4	2	3	1	3
Total .. ..	2,233	2,582	3,068	3,886	4,684
	£'000				
Nominal Capital of New Companies—					
Victorian Trading .. ..	98,701	125,550	135,789	159,702	261,614
Foreign .. ..	99,876	63,921	120,912	129,264	148,064
Mining .. ..	110	21	85	500	..
Total .. ..	198,687	189,492	256,786	289,466	409,678
	No.				
Existing Companies*—					
Victorian Trading .. ..	18,537	20,487	22,976	26,381	30,579
Foreign .. ..	1,548	1,677	1,814	2,006	2,245
Total .. ..	20,085	22,164	24,790	28,387	32,824
	£'000				
Increase in Nominal Capital of Victorian Trading Companies during Year .. ..	77,163	117,685	114,437	138,333	193,662

\* Excluding mining companies.

### Stock Exchange of Melbourne

#### General

Expansion was the keynote of the activities of The Stock Exchange of Melbourne during the year ended 30th September, 1960. Sales of ordinary shares were 22 per cent. higher, the number of private investors greatly increased, and 35 new seats were created.

Public interest in securities was still widespread and the investment of vast sums in Australia's public and private enterprises was an indication of the nation's growth.

#### Official List

At 30th September, 1960, the number of listed securities (including options) totalled 2,366 with a nominal value of £4,645 mill. and a

market value of £6,783 mill. Details for 1960, with comparisons for earlier years, are shown in the following table :—

**MELBOURNE STOCK EXCHANGE—NUMBER OF LISTED SECURITIES, NOMINAL VALUE, ETC.**

Particulars	Year Ended 30th September—				
	1939	1945	1953	1959	1960
Number of Issues .. ..	870	915	1,365*	2,201*	2,366*
Nominal Value .. £ mill.	833	1,820	3,220	4,477	4,645
Market Value .. £ mill.	980	2,051	3,383	6,038	6,783
Number of Securities .. mill. units	851	1,848	3,551	5,498	6,085
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Average Nominal Value ..	19 7	19 8	18 2	16 3	15 3
Average Market Value ..	23 0	22 2	19 0	22 0	22 3

\* Includes options.

In the following table, the number of issues (excluding options) and their nominal value are classified according to type of security. Particulars are shown for each of the years ended 30th September, 1957 to 1960.

**MELBOURNE STOCK EXCHANGE—ISSUES LISTED\* AND NOMINAL VALUE**

Class of Security	Year Ended 30th September—							
	1957		1958		1959		1960	
	No. of Issues	Nominal Value	No. of Issues	Nominal Value	No. of Issues	Nominal Value	No. of Issues	Nominal Value
		£ mill.		£ mill.		£ mill.		£ mill.
Commonwealth Loans ..	28	2,980	31	2,970	28	2,956	31	2,964
Semi-Government Loans ..	392	273	484	302	539	334	603	339
Foreign Government Loans ..	5	3	7	4	9	5	9	5
Industrial Company Securities—								
Debentures .. ..	102	67	104	69	154	103	231	141
Unsecured Notes .. ..	104	31	148	54	187	76	247	112
Preference Shares .. ..	373	86	366	83	358	84	304	79
Ordinary Shares .. ..	718	708	726	769	754	835	792	966
Mining Company Securities ..	165	82	156	80	149	84	131	39
Total .. ..	1,887	4,230	2,022	4,331	2,178	4,477	2,348	4,645

\* Excludes options.

One of the most striking advances was made in debenture loans raised by public companies during the 1950's, and at the close of the year, these stood at £141 mill., whereas they amounted to only £57 mill. four years previously.

The introduction of unsecured notes in the early 1950's gained very rapid acceptance ; in 1953, there were fourteen issues for a total of £2 mill., whereas, in 1960, there were 247 issues totalling £112 mill.

Nominal value of ordinary share capital listed on the Stock Exchange has grown from £167 mill. in 1939 to £966 mill. in 1960.

During the twelve months to 30th September, 1960, 59 new companies were added to the Official List. At the close of the period, 709 commercial and industrial companies and 112 mining companies had their shares called, and a further twelve companies were listed for quotation of debentures or unsecured notes. The names of 289 new companies have been added to the List since 1955.

### Turnover

Turnover during each of the years ended 30th September, 1956 to 1960 is shown in the following table. It should be noted that transactions are recorded in units of one share, debenture, bond, &c., the nominal value of which is not necessarily £1. Money values at market price have not been calculated.

### MELBOURNE STOCK EXCHANGE—TURNOVER OF STOCKS AND SHARES (Mill. Units)

Class of Security	Year Ended 30th September—				
	1956	1957	1958	1959	1960
Commonwealth Loans .. ..	45.4	53.6	98.4	181.6	86.5
Semi-Government Loans .. ..	4.2	2.4	3.0	4.4	3.1
Company Debentures, Unsecured Notes .. ..	0.8	1.0	1.4	1.7	1.7
Total Loan Securities ..	50.4	57.0	102.8	187.7	91.3
Preference Shares .. ..	1.1	1.3	1.5	1.8	1.7
Ordinary Shares, Rights, and Options .. ..	29.2	34.3	43.1	71.0	86.6
Mining .. ..	16.0	12.6	8.5	12.4	12.8
Total Share Securities ..	46.3	48.2	53.1	85.2	101.1

### Underwriting Activities

Underwriting has been an important feature of Stock Exchange operations in recent years, and a number of member firms have developed widespread activities in this field throughout Australia, thus integrating the provision of new funds for industry with the business of broking.

In the year to 30th September, 1960, the record amount of £69.1 mill. was raised by debenture stock issues offered to the public by listed companies, and member firms were underwriters for seventeen

issues. Similarly, of the 23 public loans raised by Australian semi-government or public authorities, member firms underwrote seventeen. There were 81 separate issues of unsecured notes during the year, raising a total of £59 mill.; of these, member firms underwrote 46 issues.

### *Transfer Marking Service*

Australia's first Stock Exchange Transfer Marking Service was established in Melbourne late in 1959 and commenced full scale operation in January, 1960. It has proved a very valuable Stock Exchange function and gained prompt acceptance by public companies. This service is used by the members of recognized Stock Exchanges in Australia and New Zealand, trustee companies, solicitors, accountants, public companies, and unit trust organizations. Transfer marking by the department is effected on a "same-day" basis, the transfers being returned to the lodging party and the covering scrip certificate being forwarded to the companies concerned.

Thus a considerable contribution is made by this service toward prompt completion of Stock Exchange transactions, while public companies are assisted by the elimination of a large part of the marking function previously carried out by their share departments. Markings requested by interstate brokers which are for ultimate delivery to Melbourne members are delivered direct to the Melbourne broker by the department.

In the 187 business days from 4th January to 30th September, 44,335 marking request forms were received covering 130,361 separate transfer forms, and a total of almost 22 mill. shares. From 15 per cent. in January, transfer markings by the department had stabilized at almost 40 per cent. of recorded share turnover after four months' operation.

Recently, the department successfully undertook the marking of New Issue Renunciation Forms for a listed company and following experience gained, has arranged to mark renunciations for four forthcoming company issues involving a total of 4.6 mill. shares. It is expected that increased use of this facility will assist the handling of company issues in the future.

### *Membership of the Exchange*

Growing public interest in the Stock Exchange was evident throughout the 1950's.

In 1954, the number of members was increased from 129 (a number unchanged since before the year 1900) to 134, and in October, 1959, creation of a further ten seats enabled the membership to be increased to 144. The demand continued and was again recognized when in July, 1960, members authorized the creation of a further 25 seats which will permit the membership of the Association

to expand to 169 as candidates are elected to fill the vacancies. Present membership is 159 (April, 1961). The Stock Exchange of Melbourne already had the largest membership of the Australian Exchanges prior to each of the above expansion moves.

### Further References

Victorian Year Book 1961, pages 657 to 659.

Stock Exchange of Melbourne—Official Record.

Stock Exchange of Melbourne—Instalment Service.

Stock Exchange of Melbourne—Various Weekly Digests.

Stock Exchange of Melbourne—Annual Report (Published November).

G. R. Bruns—The Stock Exchange.

### Hire Purchase

The *Hire Purchase Act* 1959 is the Victorian legislation regulating the rights and duties of parties to hire purchase agreements.

Under this Act, the hirer is protected in that, before an agreement is signed, the owner must furnish an itemized list setting out the cash price of the goods and the payments to be made under the agreement, so that the hirer is aware of the difference between the cash price and the total amount he must pay. The Act also provides, among other things, that every hire purchase agreement is to show the date on which the hiring commences, the number of instalments, the amount and time of payment of each instalment, as well as particulars of charges for terms, insurance, maintenance, &c., to show the total amount to be paid according to the agreement. Provision is also made for the hirer to assign his rights under an agreement subject to the owner's consent. Any fraudulent sale or disposal of the goods by the hirer is an offence against the Act.

The owner may repossess if the hirer falls into arrears with his instalments, but he must first serve notice on the hirer of his intention to repossess. The hirer may regain possession of the goods within 21 days of repossession if he pays arrears of instalments plus certain expenses incurred by the owner when repossessing. If the goods are sold, the hirer is liable for the owner's loss unless the selling price of goods repossessed is sufficient to cover that liability. If the selling price of the goods is more than sufficient to cover the liability, the hirer is entitled to a refund of the balance.

The statistics shown in the following table relate to businesses which finance the sale of goods by retail *but do not, themselves, retail goods*. These comprise public and private companies, partnerships, banks, and other finance businesses. Those businesses which finance hire purchase exclusively for their own employees are not included. The figures relate to all hire purchase agreements made by these businesses in respect of goods sold by retail. All types of goods sold to final purchasers are included, whether producer goods (such as plant

and machinery) or consumer goods. The figures for 1956 to 1959 in the following table have been revised since the publication of the previous Year Book.

### VICTORIA—HIRE PURCHASE AGREEMENTS BY FINANCE COMPANIES

Class of Goods	Year Ended 30th June—				
	1956	1957	1958	1959	1960
NUMBER OF AGREEMENTS MADE					
Motor Vehicles, Tractors, &c. *	79,851	82,071	94,426	104,051	123,308
Plant and Machinery† ..	5,002	5,494	5,474	9,072	9,061
Household and Personal‡ ..	158,130	158,529	197,535	183,455	180,421
Total Agreements ..	242,983	246,094	297,435	296,578	312,790
VALUE OF GOODS PURCHASED§ £'000					
Motor Vehicles, Tractors, &c.* ..	58,326	59,214	69,120	78,358	96,346
Plant and Machinery† ..	3,028	3,611	3,826	5,521	6,793
Household and Personal‡ ..	13,019	15,048	26,341	22,902	20,085
Total Value ..	74,373	77,873	99,287	106,781	123,224
AMOUNT FINANCED UNDER AGREEMENTS   £'000					
Motor Vehicles, Tractors, &c.* ..	35,284	37,141	43,427	49,477	63,566
Plant and Machinery† ..	1,843	2,290	2,399	3,528	4,565
Household and Personal‡ ..	10,589	12,111	21,438	18,747	16,476
Total Amount Financed..	47,716	51,542	67,264	71,752	84,607
BALANCES OUTSTANDING AT END OF YEAR ¶ £'000					
All Class of Goods ..	56,369	64,255	84,652	100,193	118,493

\* Includes new and used motor cars, motor cycles, commercial vehicles, tractors, caravans, motor parts, and accessories.

† Includes farm machinery and implements, earth-moving equipment, aircraft, industrial plant and machinery, business machines and equipment (including commercial refrigeration equipment), &c.

‡ Includes furniture and furnishings, domestic refrigerators, electrical goods, television and accessories, radios, musical instruments, bicycles, and other household and personal goods.

§ Value at net cash or list price (excluding hiring charges and insurance).

|| Excludes hiring charges and insurance.

¶ Includes hiring charges and insurance.



# Part 10

## TRADE, TRANSPORT, AND COMMUNICATIONS

### *Retail Trade*

#### **Census of Retail Establishments**

##### *General*

Statistics of retail sales have been compiled for the years 1947-48, 1948-49, 1952-53, and 1956-57 from returns supplied by all retail establishments in Australia.

In general terms, these Censuses have covered the trading activities of establishments which normally sell goods at retail to the general public from shops, rooms, kiosks, and yards. They have been designed principally to cover sales which are for household or personal use. For this reason, sales of farm and industrial machinery and equipment, &c., have been excluded. However, sales of motor vehicles, both new and used, are included.

The latest Census of Retail Establishments referred to the year ended 30th June, 1957. Its scope and coverage were practically identical with those of the previous Census for the year ended 30th June, 1953. For this reason, it is possible to make a comparison of the results obtained from these Censuses. The first three tables below show this information.

The first table shows the number of establishments selling goods in each of 34 broad commodity groups, the total value of these sales, and the value of sales per head of population. The commodity groups shown are comparable between the two years with two exceptions. These are :—

- (1) The value of sales of all electrical goods was collected as one item in 1952-53, but in 1956-57 particulars were obtained for five separate items. Thus a comparison of the sales figures can be made only by an amalgamation of these items in 1956-57. However, no direct comparison can be made of the number of establishments selling these items.
- (2) In 1956-57, special queries were sent to all establishments which would normally be expected to sell tobacco, cigars, and cigarettes, but which did not report any sales of these items in their returns. As a result of these queries, 652 additional establishments reported sales of these items amounting to £860,000, or 2·9 per cent. of the total sales of tobacco. Most of these sales had originally been reported as sales of groceries or other foodstuff items. As no special queries were made in 1952-53, it is likely that a similar proportion of sales

of tobacco, cigars, and cigarettes was incorrectly reported in that year and consequently would be included in sales of groceries or other items instead of in sales of tobacco, cigars, and cigarettes.

### VICTORIA—CENSUSES OF RETAIL ESTABLISHMENTS : ESTABLISHMENTS AND SALES BY COMMODITY GROUPS\*

Commodity Group†	Number of Establishments‡		Value of Retail Sales			
			Total		Per Head of Population	
	1952-53	1956-57	1952-53	1956-57	1952-53	1956-57
			£'000		£	
Foodstuffs—						
Groceries .. .. .	7,181	8,134	64,727	90,034	27.3	34.1
Butchers' Meat .. .	2,120	2,589	36,663	50,264	15.5	19.0
Fresh Fruit and Vegetables .. .	3,113	3,683	15,854	22,863	6.7	8.7
Bread, Cakes, and Pastry .. .	4,665	6,127	16,940	21,826	7.1	8.3
Confectionery and Ice Cream .. .	7,246	8,634	20,289	27,903	8.5	10.6
Other Types of Food .. .	2,689	3,952	8,912	13,425	3.8	5.1
Beer, Tobacco—						
Beer, Wine, and Spirits .. .	2,191	2,119	45,612	63,496	19.2	24.0
Tobacco and Cigarettes .. .	10,080	13,450	19,967	29,230	8.4	11.1
Clothing, Drapery, Footwear—						
Clothing—Men's and Boys' .. .	2,188	2,303	25,964	33,436	10.9	12.7
Clothing—Women's, Girls', and Infants' .. .	3,484	3,589	42,914	55,293	18.1	20.9
Drapery, Piece Goods .. .	1,699	1,796	17,501	20,989	7.4	8.0
Footwear—Men's and Boys' .. .	1,399	1,509	4,779	6,259	2.0	2.4
Footwear—Women's, Girls', and Infants' .. .	1,258	1,306	9,058	11,176	3.8	4.2
Hardware, Electrical Goods, Furniture—						
Builders' Hardware and Supplies§	1,472	1,655	16,154	22,079	6.8	8.4
Domestic Hardware and Kitchenware .. .	2,428	2,714	14,172	18,217	6.0	6.9
Musical Instruments and Records .. .		539		2,768		1.0
Radios and Radiograms .. .		1,262		5,023		1.9
Television Receivers, &c. .. .	1,929	777	20,837	9,848	8.8	3.7
Domestic Refrigerators .. .		1,160		7,121		2.6
Other Electrical Goods .. .		2,142		10,488		4.0
Furniture (Incl. Mattresses) .. .	962	1,002	15,078	18,891	6.4	7.2
Floor Coverings .. .	666	738	7,734	9,453	3.3	3.6
Business Machines and Equipment .. .	80	92	3,751	5,988	1.6	2.3
Other Goods—						
Newspapers, Books, and Stationery .. .	2,667	3,026	16,497	21,501	6.9	8.1
Chemists' Goods (Incl. Cosmetics) .. .	2,394	2,871	14,374	21,281	6.1	8.1
Sporting Requisites and Travel Goods .. .	1,062	1,197	3,049	4,292	1.3	1.6
Jewellery, Clocks, &c. .. .	1,130	1,254	6,292	7,943	2.6	3.0
Grain, Feed, and Fertilizers .. .	1,066	1,197	11,413	13,682	4.8	5.2
Other Goods .. .	2,876	2,997	17,402	19,277	7.3	7.3
Total (Excluding Motor Vehicles) .. .			475,933¶	644,046¶	200.6	244.0
Motor Vehicles—**						
Tractors .. .	389	395	6,340	7,268	2.7	2.8
Motor Vehicles (Incl. Motor Cycles)—						
New .. .	848	847	44,635	68,245	18.8	25.8
Used .. .	824	1,068	18,112	37,099	7.6	14.1
Motor Parts and Accessories .. .	2,252	2,763	15,731	19,728	6.6	7.4
Petrol and Oils .. .	2,891	3,536	23,920	35,134	10.1	13.3
TOTAL MOTOR VEHICLES .. .			108,738	167,474	45.8	63.4
GRAND TOTAL .. .			584,671	811,520	246.4	307.4

\* Table refers to retail establishments with total retail sales of £500 or more.

† Only main commodities descriptive of the particular groupings are shown. For further details see Retail Census Bulletins.

‡ Number of establishments selling goods in each commodity group.

§ Excludes basic building materials, e.g., timber, tiles, joinery, cement.

¶ Establishments showing sales in more than one commodity group have been included more than once. The totals of these columns cannot therefore be taken as the number of retail establishments in Victoria. (See table on page 695.)

¶ See footnote || to table on page 695.

\*\* Excludes farm machinery and implements, earthmoving equipment, &c.

The second table shows the number of establishments, the value of retail sales and the value of stocks on hand at 30th June each year. In classifying establishments to type of business, the description given by the proprietor was used as a guide, but the classification was based mainly on the commodity group in which the largest item of turnover was recorded on the census form.

**VICTORIA—CENSUSES OF RETAIL ESTABLISHMENTS :  
ESTABLISHMENTS, SALES, AND STOCKS ACCORDING TO  
TYPE OF BUSINESS\***

Main Type of Business	Number of Establishments		Value of Retail Sales†		Value of Retail Stocks at 30th June—‡	
	1952-53	1956-57	1952-53	1956-57	1953	1957
					£'000	
Food Stores—						
Grocers .. .. .	5,284	5,202	79,717	109,119	9,863	12,406
Butchers .. .. .	1,938	2,242	36,728	50,126	201	523
Fruiters .. .. .	1,845	2,036	16,266	23,203	161	446
Bakers .. .. .	1,503	1,371	14,444	17,029	210	384
Confectioners and Milk Bars	2,802	3,128	20,065	31,768	962	1,712
Cafes .. .. .	345	693	1,222	3,542	67	211
Fishmongers and Poulterers	421	504	2,537	3,998	13	36
Other Food Stores .. .. .	521	467	5,023	6,104	148	273
Hotels, Tobacconists—						
Hotels and Wine Saloons .. .. .	1,855	1,844	46,050	65,878	1,560	2,042
Tobacconists .. .. .	490	373	4,490	3,738	390	360
Tobacconist and Hairdressers	1,126	1,133	5,368	5,244	255	509
Clothiers, Drapers—						
Clothiers and Drapers .. .. .	3,967	4,187	114,216	146,707	24,548	32,180
Footwear Stores .. .. .	621	710	9,679	12,302	2,636	4,272
Hardware, Electrical Goods,						
Furniture Stores—						
Domestic and Builders' Hardware	1,209	1,447	24,758	32,871	5,925	8,060
Electrical Goods, &c. .. .. .	854	1,000	16,273	27,326	3,149	4,816
Furniture and Floor Coverings	681	691	19,625	25,147	4,344	6,206
Business Machines .. .. .	47	47	3,646	5,731	923	1,168
Other Goods Stores—						
Newsagents and Booksellers	877	925	14,421	19,196	1,846	2,327
Chemists .. .. .	1,025	1,174	11,911	17,790	2,291	3,343
Sports Goods .. .. .	140	178	1,883	3,012	673	754
Watchmakers and Jewellers	509	560	5,130	6,538	2,392	3,199
Grain and Produce Merchants	267	251	11,693	14,272	1,172	1,406
Cycle Stores .. .. .	232	208	946	1,319	209	282
Florists and Nurserymen	371	384	1,979	2,295	110	153
Other Types of Business	1,218	1,145	8,586	10,612	1,450	2,325
Total (Excluding Motor Vehicle Dealers) .. .. .	30,148§	31,900§	476,656	644,867	65,498	89,393
Motor Vehicle Dealers—						
Tractor Dealers .. .. .	57	39	3,397	3,081	915	1,038
New Motor and Motor Cycle Dealers .. .. .	2,268	2,827	88,025	136,476	10,137	14,216
Garages and Service Stations	219	245	5,675	7,319	1,138	1,693
Motor Parts and Tyre Dealers	172	257	10,918	19,777	787	2,190
Used Motor Vehicle Dealers						
GRAND TOTAL .. .. .	32,864§	35,268§	584,671	811,520	78,475	108,530

\* Table refers to establishments with total retail sales of £500 or more.

† Total value of all commodities sold by retail.

‡ Total value of all goods held for retail sale (including stocks of materials for use in repairs to customers' goods and foodstuffs for the provision of meals and refreshments).

§ Figures represent total number of retail establishments (as defined) in Victoria. See also footnote || on page 694.

|| Figures differ from those contained in the table on page 694 in that they include retail sales of motor vehicles, etc., made by establishments whose main type of business is other than motor vehicles, and exclude retail sales of goods, other than motor vehicles, made by establishments whose main type of business is motor vehicles.

The third table shows a comparison of the number of retail establishments and the value of retail sales in Statistical Divisions in Victoria for the years 1952-53 and 1956-57 :—

**VICTORIA—CENSUSES OF RETAIL ESTABLISHMENTS :  
RETAIL SALES IN STATISTICAL DIVISIONS**

Statistical Division	No. of Establishments		Value of Retail Sales	
	1952-53	1956-57	1952-53	1956-57
			£'000	
Metropolitan .. .. .	20,620	22,189	383,214	541,362
Central .. .. .	2,572	2,854	38,796	54,938
North-Central .. .. .	984	1,021	12,013	15,166
Western .. .. .	2,528	2,599	43,764	58,561
Wimmera .. .. .	942	962	14,883	17,599
Mallee .. .. .	810	852	15,947	19,477
Northern .. .. .	2,093	2,204	32,779	43,780
North-Eastern .. .. .	945	994	14,785	20,320
Gippsland .. .. .	1,370	1,593	28,490	40,317
Total .. .. .	32,864	35,268	584,671	811,520

NOTE.—For boundaries of Statistical Divisions, see map opposite page 120.

The table which follows shows, for the year 1956-57, the number of retail establishments and the value of retail sales classified according to total retail sales size, in the Metropolitan Area and the remainder of the State :—

**VICTORIA—NUMBER OF RETAIL ESTABLISHMENTS AND  
VALUE OF RETAIL SALES CLASSIFIED ACCORDING TO  
TOTAL RETAIL SALES SIZE, 1956-57\***

Total Retail Sales Size	Number of Retail Establishments			Value of Retail Sales		
	Metropolitan Area	Remainder of State	Total State	Metropolitan Area	Remainder of State	Total State
					£'000	
Under £1,000 .. .. .	556	369	925	402	265	667
£1,000 and under £3,000 .. .. .	2,350	1,440	3,790	4,648	2,812	7,460
£3,000 and under £5,000 .. .. .	2,466	1,392	3,858	9,785	5,524	15,309
Under £5,000 .. .. .	5,372	3,201	8,573	14,835	8,601	23,436
£5,000 and under £10,000 .. .. .	5,447	2,843	8,290	39,873	20,867	60,740
Under £10,000 .. .. .	10,819	6,044	16,863	54,708	29,468	84,176
£10,000 and under £20,000 .. .. .	5,844	3,538	9,382	82,562	50,190	132,752
Under £20,000 .. .. .	16,663	9,582	26,245	137,270	79,658	216,928
£20,000 and under £50,000 .. .. .	3,892	2,521	6,413	117,213	75,096	192,309
Under £50,000 .. .. .	20,555	12,103	32,658	254,483	154,754	409,237
£50,000 and under £100,000 .. .. .	984	607	1,591	67,471	41,461	108,932
Under £100,000 .. .. .	21,539	12,710	34,249	321,954	196,215	518,169
£100,000 and under £250,000 .. .. .	478	294	772	71,574	42,021	113,595
Under £250,000 .. .. .	22,017	13,004	35,021	393,528	238,236	631,764
£250,000 and over .. .. .	172	75	247	147,834	31,922	179,756
Total .. .. .	22,189	13,079	35,268	541,362	270,158	811,520

\* Table refers to establishments with total retail sales of £500 or more.

Traders were also asked to supply details of the number of persons working at the establishment on the last pay day in June, 1957. They were requested to provide separate details of persons working mainly on retail activities and others engaged on wholesaling, manufacturing, &c. Persons who were normally working in the business but were absent through sickness or on holidays were included in the figures. The following table shows the number of males, females, and the total number of persons working mainly on retail activities on the last pay day in June, 1957, classified according to the main type of business and category of employment :—

**VICTORIA—NUMBER OF PERSONS WORKING MAINLY ON RETAIL ACTIVITIES ON THE LAST PAY DAY IN JUNE, 1957**

Main Type of Business	Category of Employment					
	Owners	Members of Family *	Paid Employees †	Total		
				Full Time	Part Time	Total
MALES						
Food Stores—						
Grocers .. ..	4,357	441	5,090	9,146	742	9,888
Butchers .. ..	2,419	148	4,399	6,742	224	6,966
Fruiters .. ..	2,136	196	684	2,746	270	3,016
Bakers .. ..	1,020	120	1,938	2,947	131	3,078
Confectioners and Milk Bars .. ..	2,364	389	649	2,556	846	3,402
All Other Food Stores ..	1,535	169	1,184	2,593	295	2,888
Hotels, &c.—						
Hotels, Wine Saloons, &c.	1,502	297	7,307	6,773	2,333	9,106
Clothiers, Drapers, &c.—						
Clothiers and Drapers ..	1,887	106	9,576	10,820	749	11,569
Footwear Stores ..	437	26	635	1,013	85	1,098
Hardware, Electrical Goods, &c.—						
Domestic and Builders' Hardware Stores ..	1,141	89	3,464	4,286	408	4,694
Electrical Goods, Radios and Musical Instrument Stores .. ..	784	41	1,920	2,592	153	2,745
Furniture and Floor Coverings Stores ..	473	22	2,172	2,591	76	2,667
Other Goods Stores—						
Newsagents and Book- sellers .. ..	846	86	794	1,471	255	1,726
Chemists .. ..	1,041	46	1,120	1,854	353	2,207
Other .. ..	3,703	192	4,615	7,968	542	8,510
Total (Excluding Motor Vehicle Dealers, Garages and Service Stations, &c.) .. ..	25,645	2,368	45,547	66,098	7,462	73,560
Total Motor Vehicle Dealers, Garages and Service Stations, &c. .. ..	3,286	251	13,414	15,962	989	16,951
Total .. ..	28,931	2,619	58,961	82,060	8,451	90,511

For footnotes see end of this table on page 699.

**VICTORIA—NUMBER OF PERSONS WORKING MAINLY ON RETAIL  
ACTIVITIES ON THE LAST PAY DAY IN JUNE, 1957—continued**

Main Type of Business	Category of Employment					
	Owners	Members of Family *	Paid Employees †	Total		
				Full Time	Part Time	Total
FEMALES						
Food Stores—						
Grocers .. ..	2,694	1,111	4,086	6,107	1,784	7,891
Butchers .. ..	298	225	781	953	351	1,304
Fruiters .. ..	1,014	742	1,506	2,004	1,258	3,262
Bakers .. ..	805	342	1,913	2,297	763	3,060
Confectioners and Milk Bars .. ..	2,325	853	2,460	3,701	1,937	5,638
All Other Food Stores ..	890	487	2,478	2,594	1,261	3,855
Hotels, &c.—						
Hotels, Wine Saloons, &c.	1,021	512	6,107	6,364	1,276	7,640
Clothiers, Drapers, &c.—						
Clothiers and Drapers ..	2,572	465	18,869	17,713	4,193	21,906
Footwear Stores ..	233	82	1,091	1,173	233	1,406
Hardware, Electrical Goods, &c.—						
Domestic and Builders' Hardware Stores ..	435	176	1,215	1,398	428	1,826
Electrical Goods, Radios and Musical Instrument Stores ..	183	137	805	895	230	1,125
Furniture and Floor Coverings Stores ..	129	55	793	855	122	977
Other Goods Stores—						
Newsagents and Book-sellers .. ..	561	232	1,411	1,754	450	2,204
Chemists .. ..	206	159	2,067	1,883	549	2,432
Other .. ..	1,021	498	2,673	3,317	875	4,192
Total (Excluding Motor Vehicle Dealers, Garages and Service Stations, &c.) .. ..	14,387	6,076	48,255	53,008	15,710	68,718
Total Motor Vehicle Dealers, Garages and Service Stations, &c. .. ..	425	332	2,095	2,357	495	2,852
Total .. ..	14,812	6,408	50,350	55,365	16,205	71,570
PERSONS						
Food Stores—						
Grocers .. ..	7,051	1,552	9,176	15,253	2,526	17,779
Butchers .. ..	2,717	373	5,180	7,695	575	8,270
Fruiters .. ..	3,150	938	2,190	4,750	1,528	6,278
Bakers .. ..	1,825	462	3,851	5,244	894	6,138
Confectioners and Milk Bars .. ..	4,689	1,242	3,109	6,257	2,783	9,040
All Other Food Stores ..	2,425	656	3,662	5,187	1,556	6,743
Hotels, &c.—						
Hotels, Wine Saloons, &c.	2,523	809	13,414	13,137	3,609	16,746
Clothiers, Drapers, &c.—						
Clothiers and Drapers ..	4,459	571	28,445	28,533	4,942	33,475
Footwear Stores ..	670	108	1,726	2,186	318	2,504
Hardware, Electrical Goods, &c.—						
Domestic and Builders' Hardware Stores ..	1,576	265	4,679	5,684	836	6,520
Electrical Goods, Radios and Musical Instrument Stores ..	967	178	2,725	3,487	383	3,870
Furniture and Floor Coverings Stores ..	602	77	2,965	3,446	198	3,644

For footnotes see end of this table on page 699.

**VICTORIA—NUMBER OF PERSONS WORKING MAINLY ON RETAIL ACTIVITIES ON THE LAST PAY DAY IN JUNE, 1957—continued**

Main Type of Business	Category of Employment					
	Owners	Members of Family *	Paid Employees †	Total		
				Full Time	Part Time	Total
	PERSONS—continued					
Other Goods Stores—						
Newsagents and Book-						
sellers .. ..	1,407	318	2,205	3,225	705	3,930
Chemists .. ..	1,247	205	3,187	3,737	902	4,639
Other .. ..	4,724	690	7,288	11,285	1,417	12,702
Total (Excluding Motor Vehicle Dealers, Garages and Service Stations, &c.) .. ..	40,032	8,444	93,802	119,106	23,172	142,278
Total Motor Vehicle Dealers, Garages and Service Stations, &c. .. ..	3,711	583	15,509	18,319	1,484	19,803
Grand Total ..	43,743	9,027	109,311	137,425	24,656	162,081

\* Includes members of owner's family and friends assisting in the business but not receiving a definite wage for their work.

† Includes friends and relatives who are paid a definite wage.

**Survey of Retail Establishments**

During the period between Censuses, estimates of the value of retail sales are made on the basis of returns received from a representative sample of retail establishments. Sample returns are supplied by retail businesses which account for approximately 40 per cent. of all retail sales in Australia. Estimated totals are calculated by methods appropriate to a stratified sample.

The following table shows the value of retail sales of goods in Victoria in each of the commodity groups specified for the years 1953-54 to 1959-60 :—

**VICTORIA—VALUE OF RETAIL SALES**  
(£ Mill.)

Commodity Group	Year Ended 30th June—						
	1954	1955	1956	1957	1958*	1959*	1960*
Groceries .. ..	67.0	79.4	86.3	90.0	92.2	101.8	109.6
Butchers' Meat .. ..	39.1	43.4	46.1	50.3	49.5	52.6	57.7
Other Food† .. ..	67.2	73.0	79.8	86.0	89.4	92.5	101.6
<b>Total Food and Groceries ..</b>	<b>173.3</b>	<b>195.8</b>	<b>212.2</b>	<b>226.3</b>	<b>231.1</b>	<b>246.9</b>	<b>268.9</b>
Beer, Wine, and Spirits .. ..	50.1	53.8	59.0	63.5	65.7	68.2	71.2
Clothing, Drapery, and Footwear .. ..	112.5	116.5	121.8	127.2	133.8	139.8	153.8
Hardware, China, and Glassware‡	33.1	37.0	39.1	40.3	41.4	45.6	47.2
Electrical Goods and Radios .. ..	23.9	26.8	30.0	35.2	43.1	50.5	52.0
Furniture and Floor Coverings .. ..	25.0	25.8	28.2	28.3	30.8	30.3	36.6
Other Goods§ .. ..	96.6	104.7	116.7	123.2	124.0	131.5	145.3
<b>Total (Excl. Motor Vehicles, &amp;c.)</b>	<b>514.5</b>	<b>560.4</b>	<b>607.0</b>	<b>644.0</b>	<b>669.9</b>	<b>712.8</b>	<b>775.0</b>
<b>Motor Vehicles, Parts, Petrol, &amp;c.   </b>	<b>124.5</b>	<b>146.2</b>	<b>164.6</b>	<b>167.5</b>	<b>188.4</b>	<b>197.4</b>	<b>243.4</b>
<b>Total .. ..</b>	<b>639.0</b>	<b>706.6</b>	<b>771.6</b>	<b>811.5</b>	<b>858.3</b>	<b>910.2</b>	<b>1,018.4</b>

\* Preliminary figures.

† Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, fish, &c., but excludes some delivered milk and bread.

‡ Excludes basic building materials (e.g., timber, building sheets, tiles, joinery, cement).

§ Includes tobacco, cigarettes, newspapers, books and stationery, chemists' goods, grain and produce, jewellery, &c.

|| Excludes farm machinery and implements, earth-moving equipment, &c.

The total value of retail sales in the Commonwealth in 1959–60 was £3,586 mill. Sales in Victoria represented 28 per cent. of this figure.

### **Retailing in Victoria**

Retailing is a service industry ; it exists to provide a distribution service to the public, and therefore it must be closely attuned to public requirements. Through no industry do the winds of change blow more steadily than retailing. The retail patterns of any country are determined by environment ; Victorian retailing particularly is a typical product of the economic, social, historical, demographic, and geographic factors peculiar to this State.

The early history of retailing in Victoria is deeply rooted in the colonial system ; some of the oldest retail stores in the State began as primitive trading posts, established not so much to give service as to exploit the opportunities offered by rapid shifts in population. The history of flourishing modern stores in towns like Geelong, Warrnambool, Horsham, and Sale is inextricably linked with the story of the development of the district, and it is not surprising that much of the civic life of the country towns in the early days centred around the local storekeeper. The discovery of gold brought a crop of mushroom traders to the goldfields, but some of these merchants were genuine retailers, and their stores remain to-day as monuments to the commercial skill of their founders. One large department store in Melbourne has its origins on the goldfields.

In the Metropolis, trade tended to concentrate in the famous thoroughfare of Bourke-street, which, with its curious mixture of theatres, hotels, bazaars, and stores, provided both shopping facilities and entertainment to the citizens, most of whom lived within easy distance of the city. Smith-street, Collingwood, was also a popular centre, while in the other streets of Melbourne were found the dignified linen drapers who catered for the carriage trade. These early retail stores had a character of their own, but in general were patterned on English traditions.

The concentration of population in the metropolitan areas tended to produce an urban type of retailing. The early retailers were specialists—drapers, grocers, ironmongers, furniture dealers, and so on ; but as the city grew, the larger stores took on the character of department stores. Large department stores in the U.S.A. began to attract the attention of Victorian retailers, and from the First World War onwards, retail patterns in the city tended to follow American trends rather than European.

By the middle of the 1930's, the department stores had reached a dominating position in the field of distribution. They provided all services and public transport was so cheap and efficient that the central city was easily accessible to all residents. Private motor transport was relatively unimportant.

In the suburbs food requirements were traditionally purchased at the local grocery store, but, generally speaking, the suburban shopping areas were regarded as places of convenience rather than as true



shopping centres. The central city was the hub. In the country the relative isolation of country towns resulted in the development of the country storekeeper who catered for all the normal requirements of the surrounding rural population. The country store was a department store in miniature with the addition of large grain and fodder sections.

Retail distribution fell into three clear-cut compartments: the city, dominated by the large department stores and providing the glamour of city shopping; the suburbs, catering for the daily needs of the housewife; and the country, supplying all the requirements of the local rural inhabitants. There was not much overlapping.

The sudden expansion of the variety chain store in the late 1920's and the early 1930's was the first step towards breaking down the isolation of these trading areas. The chain stores spread from the city to the suburbs, thence to the country. Chain store methods were not peculiar to the variety store, and by the late 1940's, the technique of the chain store had spread to food and groceries, furniture, drapery, footwear, and many other forms of retailing enterprise. The resultant economies in cost were passed on to the consumer, to his considerable benefit.

For reasons peculiar to Australia, and Victoria in particular, attempts have been made to keep the cost of retail distribution to a minimum. The depression years, followed by the rigid price controls of the war and immediate post-war years, left the country with the legacy of the cheapest distributive system in the western world. Labour shortages in the post-war period tended to push costs up, but this was partially off-set by a rapid trend to self-service in forms of retailing to which it was adapted.

Self-service was not, however, a product of labour shortages. It was a recognition that the habits of customers had changed. The rigours of wartime shopping and the lack of deliveries had engendered a taste for personal shopping, and the self-service grocery store provided the housewife with a place where she could select without being importuned to buy. The idea gained rapid acceptance, and by the early 1950's, self-service was the accepted pattern in food distribution. Indeed the principle rapidly spread to the department store where methods of open selling were freely adopted. This technique enabled the customer to inspect the merchandise at leisure; stock was displayed on the floor and not hidden away behind counters. The twin practices of self-service and self-selection effected quite a noticeable change in the pattern of retailing throughout Australia.

Associated with the trend to self-service was the development in packaging. Intelligent use of packaging design and the new plastic materials enabled manufacturers to present goods to the public in a way that was both hygienic, convenient, and attractive. It is safe to say that the self-service revolution would have been incomplete without a parallel development in the art of packaging. The development of packaging was accompanied by widespread national advertising in press and television which enabled the public to get visual impressions of the featured merchandise. This obviously facilitated self-service and self-selection.

Despite its geographical dispersion, the rural population in Victoria has never taken kindly to the practice of mail order selling. Many retail houses have repeatedly endeavoured to develop this business, but with very limited success. The present trend is towards personal shopping rather than shopping by catalogue. Reasonably good roads between towns have facilitated this process of personal shopping. Another development which illustrates that retailing follows the customer demand is a growing tendency for retail stores to send out travelling salesmen to sell in the home. These salesmen are equipped with the facilities to provide credit and ranges of merchandise which enable the householder to make an on-the-spot choice with finance provided.

A natural development of the large self-service store was the supermarket, in which the emphasis was primarily on food but with the inclusion of departments selling other merchandise that could be handled conveniently. Nor was this process of diversification confined to supermarkets and food stores; department stores abandoned their traditional ranges and branched out into many new fields. The larger stores developed the packaged deal, where the customer could furnish, and in some cases actually purchase, the entire home with financial assistance from the department store. At the same time all retailers began to provide credit facilities to enable consumers to purchase both large and small items on extended credit. The development of consumer credit has been a noteworthy feature of the 1950's in Victorian retailing.

The tendency to bring the shopper to the merchandise rather than the merchandise to the shopper received tremendous impetus from the development of private motoring. As the family car became an accepted convention, retailers found it necessary to cater not only for the shopper who wanted to make her own selection, but who also wanted to take the goods away in the family car. Convenient car parking became an essential element in retailing areas.

The stage of deference to the automobile had been reached much earlier in the U.S.A., so Australia had ample opportunity to study the methods adopted overseas to provide for the motor car shopper. Signs of traffic and pedestrian congestion in the central city area of Melbourne, combined with the physical spread of the Metropolitan Area and an enormous increase in population, accelerated the tendency to decentralized shopping. Trade flowed to areas where there was convenient parking. The next logical step was to construct new shopping centres complete with built-in parking facilities. Not much could be done with the old type suburban ribbon development but even in these areas local councils were forced to provide parking facilities wherever possible.

Smaller neighbourhood centres, consisting usually of a large supermarket surrounded by a compact group of 30 or 40 satellite shops, and with adequate parking, began to appear in Melbourne suburbs. In new planned housing developments, of which the satellite town of Elizabeth in South Australia is a typical example, the planners made provision for shopping centres and parking. With the opening of the Chadstone shopping centre near Melbourne in October, 1960, Australian

retailing took its first major step to decentralized shopping. Chadstone comprises a large department store surrounded by smaller retail branch stores carefully planned to give the maximum variety of merchandise without unnecessary duplication, thus creating a miniature city shopping centre in one of the suburban areas. Parking on site for nearly 2,500 cars completed the venture.

The development of home building and the consequent expansion of metropolitan boundaries gave an impetus to suburban trade. The important change is that future retail development will tend to be planned rather than haphazard. The need for adequate parking has been recognized in the city, suburbs, and country, and it is this factor of convenience which will determine the future retail pattern.

No reference to Victorian retailing would be complete without some comment on the aggregations of capital which have followed the original chain store enterprise. The last decade has seen a tremendous consolidation of retail strength in large companies which, by merger and acquisition, have established powerful retail groups throughout Australia.

The Victorian public has been conditioned to expect modern retail services, with the result that there has been a revolution in store architecture. Old shops must modernize or lose custom. New units which are being built must embody all the latest in store design. Victorian retailing, always very competitive, has now reached the stage where the customer dictates the pattern of development for the future.

## *Overseas Trade*

### **Legislation and Agreements**

#### *General*

Of the three components of Victoria's trade, namely, transactions within the State, those with other Australian States, and those with countries outside Australia, the first two are, in practice, free of control or restriction; trade with overseas countries is subject to the Customs laws of the Commonwealth Government.

By the Commonwealth of Australia Constitution Act, the power to make laws about trade and commerce with other countries was conferred on the Federal Parliament, and by the same Act, the collection and control of Customs and Excise duties passed to the Executive Government of the Commonwealth on the 1st January, 1901.

The first Commonwealth Customs Tariff was introduced by Resolution on the 8th October, 1901, from which date the uniform duties came into effect throughout Australia. The Tariff Act received assent on the 16th September, 1902. The tariff has been extensively altered since that date, and that at present in operation is the Customs Tariff 1933-60.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries, and of granting preferential treatment to imports from certain

countries of the British Commonwealth. Some goods, generally those of a luxury nature, are subject to duty for revenue purposes. Customs collections are a major source of revenue, and the protective character of the tariff has an important influence on the Australian economy.

Australia has three classes of tariff : the British Preferential Tariff, the Intermediate Tariff, and the General Tariff.

#### *British Preferential Tariff*

British Preferential Rates of duty apply to goods, the produce or manufacture of the United Kingdom, which comply with the conditions affecting the grant of preference, provided that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia. The British Preferential Tariff has been extended by trade agreements and by tariff legislation to cover all except a small number of commodities imported from Canada, New Zealand, the Territory of Papua, and the Trust Territory of New Guinea. In relation to specified goods, the British Preferential Tariff applies also to Ceylon, Ghana, the Federation of Malaya, Singapore, the Federation of the West Indies, and to most of the British non-self-governing colonies, protectorates, and trust territories.

#### *Intermediate Tariff*

The effective application of the Intermediate Tariff dates from the 1st January, 1937, and results from the conclusion of trade agreements with Belgium, Czechoslovakia, and France. Benefits from this tariff apply to countries with which Australia has trade agreements and to countries which accord Australia reciprocal most-favoured-nation tariff treatment as a result of agreements between those countries and the United Kingdom. The tariff has also been extended to countries to which Australia has no formal obligation to accord most-favoured-nation treatment.

The countries and the particular tariff items to which the tariff applies are specified by Customs Proclamation.

#### *General Tariff*

The General Tariff applies to all goods other than those to which the British Preferential Tariff, the Intermediate Tariff, or special rates under trade agreements apply.

#### *Primage Duty*

In addition to duties imposed by the Customs Tariff 1933-60, *ad valorem* duties at various rates are charged on some goods according to the type of goods and their origin. Goods, the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos Islands, Christmas Island (Indian Ocean), the Territory of Papua, and the Trust Territory of New Guinea, are exempt from primage duty.

#### *Tariff Board*

The Tariff Board is set up under the provisions of the Tariff Board Act to advise the Commonwealth Parliament on the formulation and implementation of tariff policy.

*Trade Agreements*

Australia has numerous trade agreements with overseas countries, the principal agreements being outlined below :—

Country	Main Features of Agreement
United Kingdom..	Dated 1957. Preservation of security for Australian exports in United Kingdom markets. Lowering of obligatory margins of preference which Australia extends to the United Kingdom.
Canada .. ..	Dated 1960. Mutual accord of British Preferential Tariff treatment with certain specified exceptions as for 1931 agreement plus concessions granted in 1932 and 1937.
New Zealand ..	Dated 1933. Mutual accord of British Preferential Tariff treatment with certain specified exceptions.
Federation of Rhodesia and Nyasaland	Dated 1955. Preference for Australian exports (mainly primary produce). British Preferential Tariff treatment on exports to Australia with exclusive special tariff on unmanufactured tobacco.
Federation of Malaya	Dated 1958. Exchange of British Preferential treatment with special protection for Australia's wheat and flour markets in Malaya, and for Malaya's rubber market in Australia.
Japan .. ..	Dated 1957. Mutual exchange of most-favoured-nation treatment. Japan to accord Australian wool, wheat, barley, and other primary exports a highly preferential treatment.
Federal Republic of Germany	Dated 1959. Import quotas for Australian products. Allows exports of German flour to certain Australian flour markets.
Indonesia ..	Dated 1959. Records desirability of expanding trade between Australia and Indonesia. Gives recognition to importance of flour trade from Australia to Indonesia.

In addition to the above trade agreements, Australia has entered into bilateral trade agreements with the Union of South Africa (now the Republic of South Africa), Brazil, Czechoslovakia, France, Greece, and Switzerland. Summaries of the texts of these agreements have been given in previous issues of the Victorian Year Book. Simple reciprocal most-favoured-nation trade agreements were concluded with Israel in 1951 and Iceland in 1952.

*General Agreement on Tariffs and Trade (G.A.T.T.)*

The General Agreement on Tariffs and Trade, to which Australia was one of the original contracting parties, is an international trade agreement which has been in operation since 1st January, 1948. There are now 38 contracting parties to the agreement. They comprise most of the world's larger trading nations.

Four series of tariff negotiations have been conducted, as a result of which Australia has obtained tariff concessions on almost all the principal products of which Australia is an actual or potential exporter to the individual countries concerned.

### *Excise Tariff*

The Excise Tariff applies to certain articles which can only be manufactured under licence and subject to certain conditions. The tariff relates to beer, spirits, amylic alcohol and fusel oil, saccharin, liqueurs, flavoured spirituous liquors, tobacco, cigars, cigarettes, snuff, coal, certain petroleum, shale or coal tar distillates, playing cards, cigarette papers, matches, wine (certain types), wireless valves, and cathode ray tubes (picture tubes) as used in television receiving sets.

### *Customs (Import Licensing) Regulations*

Import licensing, introduced at the beginning of the Second World War, was relaxed progressively after the war so that by March, 1952, goods from the non-dollar area (except Japan, to which special conditions applied until 1957) were virtually free from import licensing controls. A fall in the price of wool and a large increase in imports in the year 1951-52 so endangered Australia's external financial position that in March, 1952, the import restrictions were again intensified. The war time regulations were subsequently replaced by regulations made under the *Customs Act* 1901-54.

Since March, 1952, import restrictions have been varied broadly in line with Australia's balance of trade position, and as from February, 1960, only about 10 per cent. of imports have been subject to control.

### *Export Controls*

The Customs Act makes provision for the prohibition, either absolutely, or to a certain place, or unless specified conditions obtain, of the exportation from Australia of certain goods. The *Banking Act* 1945-53 makes provision to ensure that the full proceeds of exports are received, in a manner prescribed, into the Australian banking system.

### **Recorded Value of Imports and Exports**

The recorded value of goods imported is the actual money price paid plus any special deduction or the current domestic value of the goods, plus all charges ordinarily payable for placing the goods free on board (f.o.b.) at the port of export. When the invoiced value of the imported goods is in a currency other than Australian, the equivalent value in Australian currency is recorded. The telegraphic transfer selling rate for £100, Australia on London, was stabilized at £125 10s. in 1931 and since then it has remained unchanged. The recorded value of exports, if sold before export, is equivalent to the f.o.b. value of the goods. If shipped on consignment, the value recorded is the Australian f.o.b. equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods are consigned for sale. With regard to wool shipped on consignment, the f.o.b. equivalent of the current price ruling in Australia approximates sufficiently to the f.o.b. equivalent of the price ultimately received.

## Oversea Trade of Victoria

## General

Statistics of Australia's overseas trade passing through Victorian ports are compiled from documents obtained under the Customs Act, and are presented in the following series of tables.

The total values of the overseas trade of Victoria for each of the five years 1955-56 to 1959-60 are set out below. Exports do not include the value of stores shipped at Victorian ports on board overseas ships.

VICTORIA—OVERSEA TRADE : RECORDED VALUES OF  
IMPORTS INTO AND EXPORTS FROM VICTORIAN PORTS  
(£'000 f.o.b.)

Year Ended 30th June—	Imports	Exports			Excess of Imports
		Australian Produce	Re-exports	Total	
1956 ..	299,340	207,258	2,138	209,396	89,944
1957 ..	254,946	253,151	2,601	255,752	806*
1958 ..	282,713	215,106	3,267	218,373	64,340
1959 ..	291,297	216,224	3,327	219,551	71,746
1960 ..	339,349	240,299	3,771	244,070	95,279

\* Denotes excess of exports.

That portion of the value of Australian trade handled at Victorian ports for each of the five years 1955-56 to 1959-60 is shown in the following table :—

VALUE OF AUSTRALIAN TRADE, AND PORTION HANDLED  
AT VICTORIAN PORTS

Year Ended 30th June—	Australian Trade			Proportion of Australian Trade Handled at Victorian Ports		
	Imports	Exports	Total	Imports	Exports	Total
	£'000 f.o.b.				%	
1956 ..	821,088	781,864	1,602,952	36·5	26·8	31·7
1957 ..	718,991	992,906	1,711,897	35·5	25·8	29·8
1958 ..	791,940	817,946	1,609,886	35·7	26·7	31·1
1959 ..	796,599	811,463	1,608,062	36·6	27·1	31·8
1960 ..	926,393	937,681	1,864,074	36·6	26·0	31·3

*Classification of Oversea Imports and Exports*

The following table shows value of imports and exports for the years 1957-58 to 1959-60 grouped in 21 statistical classes :—

**VICTORIA—CLASSIFICATION OF OVERSEA IMPORTS AND EXPORTS**  
(£'000 f.o.b.)

Classification	Imports			Exports		
	1957-58	1958-59	1959-60	1957-58	1958-59	1959-60
I. Foodstuffs of Animal Origin	2,483	2,465	3,222	37,803	52,018	54,759
II. Foodstuffs of Vegetable Origin	9,483	9,965	10,152	33,917	39,972	34,935
III. Spirituous and Alcoholic Liquors	445	420	237	645	656	602
IV. Tobacco and Preparations thereof	6,263	6,059	4,314	324	189	32
V. Live Animals	158	103	134	103	32	64
VI. Animal Substances not Foodstuffs	2,446	2,307	3,100	112,461	94,591	118,099
VII. Vegetable Substances and Fibres	6,948	7,305	7,567	141	132	128
VIII. (a) Yarns and Manufactured Fibres	13,158	8,348	9,993	758	559	829
(b) Textiles	28,907	26,089	30,494	324	308	352
(c) Apparel	4,928	4,312	5,325	151	143	101
IX. Oils, Fats, and Waxes	35,223	36,587	38,119	7,795	8,810	9,390
X. Pigments, Paints, and Var-nishes	3,317	2,889	2,784	159	157	205
XI. Rocks and Minerals (Including Ores and Concentrates)	2,183	2,095	2,302	1,880	468	952
XII. (a) Metals and Metal Manu-factures (Except Electrical Appliances and Machinery)	53,562	69,310	78,576	6,104	5,993	7,393
(b) Dynamo Electrical Machinery and Appliances	9,569	8,373	11,402	565	868	734
(c) Machines and Machinery (Except Dynamo Electric)	37,624	35,979	47,449	4,188	2,968	3,842
XIII. (a) Rubber and Rubber Manu-factures	6,639	7,392	10,387	416	395	420
(b) Leather and Leather Manufactures	338	352	483	1,456	1,446	1,376
XIV. Wood and Wicker	4,124	3,700	4,215	180	210	214
XV. Earthenware, China, Glass, etc.	4,067	4,284	5,173	144	100	103
XVI. (a) Paper and Board (Includ-ing Pulp)	11,277	11,767	14,633	146	221	218
(b) Paper Manufactures and Stationery	4,403	4,609	4,729	756	462	540
XVII. Fancy Goods, Jewellery, and Timepieces	2,940	2,870	3,629	228	251	300
XVIII. Optical, Surgical, and Scientific Instruments	3,473	3,758	4,849	573	602	832
XIX. Drugs, Chemicals, and Fertil-izers	9,906	11,651	14,223	2,546	2,899	2,873
XX. Miscellaneous	18,707	18,211	21,739	4,604	5,094	4,774
Total Merchandise	282,571	291,200	339,230	218,367	219,544	244,067
XXI. Bullion and Specie	142	97	119	6	7	3
Grand Total	282,713	291,297	339,349	218,373	219,551	244,070

The percentages which the value of the more important classes bore to the total value of merchandise imported during 1959-60 were as follows :—Yarns and manufactured fibres, textiles, and apparel, 14 per cent.; metal manufactures and machinery, 41 per cent.; oils, fats, and waxes, 11 per cent.; paper, paper manufactures, and stationery, 6 per cent.

Victoria's export trade comprises largely agricultural, dairying, and pastoral products which in 1959-60 amounted to 85 per cent. of merchandise exports. Wool alone amounted to 40 per cent.



## Recorded Values of Principal Articles Imported

The following table shows the recorded values of the principal articles imported into Victorian ports for the years 1957-58 to 1959-60 :—

## VICTORIA—PRINCIPAL ARTICLES IMPORTED FROM OVERSEAS

Article and Unit of Quantity	Quantity			Value		
	1957-58	1958-59	1959-60	1957-58	1958-59	1959-60
	'000			£'000 f.o.b.		
Fish .. .. . lb.	15,972	15,530	20,852	1,868	1,934	2,500
Coffee, Raw and Kiln Dried .. lb.	10,006	13,529	14,690	1,722	2,011	1,862
Tea .. .. . lb.	20,669	23,005	23,129	4,507	5,450	4,919
Tobacco, Unmanufactured .. lb.	17,059	16,084	11,937	6,012	5,784	3,845
Cotton, Raw .. .. . lb.	13,362	13,825	13,407	1,743	1,725	1,588
Wool .. .. . lb.	4,853	5,208	4,963	1,379	1,088	1,306
Sisal Fibre .. .. . cwt.	172	259	346	749	1,217	1,138
Cotton Yarns—No. 50 Count and Finer .. .. . lb.	3,633	3,643	3,675	1,706	1,542	1,406
Sewing Threads .. .. . lb.	1,256	1,282	1,379	1,139	1,079	1,101
Nylon and Other Polyamides—						
Thrown or Plied Yarns .. lb.	2,726	124	240	3,179	136	212
Corn and Flour Sacks .. .. doz.	831	1,034	883	1,095	1,234	1,038
Cotton Piecegoods—						
Grey Unbleached .. .. sq. yd.	19,696	16,060	19,442	1,791	1,430	1,556
Bleached, Printed, Dyed, or Coloured .. .. sq. yd.	74,220	68,141	76,222	10,525	9,790	11,111
Carpets and Carpeting .. .. sq. yd.	1,611	1,388	1,737	2,217	1,892	2,288
Petroleum, Crude .. .. . gall.	911,504	950,402	1,069,857	25,651	26,227	27,756
Motor Spirit .. .. . gall.	49,827	73,852	38,965	2,806	4,055	3,306
Power Kerosene .. .. . gall.	18,691	15,902	19,004	1,012	903	1,006
Mineral Lubricating Oil .. .. gall.	12,695	15,487	16,958	1,810	2,065	2,245
Dyes, Including Organic Pigment Dyestuffs <i>n.e.i.</i> .. lb.	2,024	1,775	2,000	1,499	1,229	1,468
Iron and Steel—						
Bar and Rod .. .. . cwt.	106	112	95	1,181	1,099	1,250
Plate and Sheet—Plain .. cwt.	113	145	244	1,310	1,855	1,713
—Tinned .. .. . cwt.	865	829	478	4,534	4,099	2,105
Hand Tools .. .. .				1,151	1,045	1,300
Aeroplanes .. .. .				2,392	8,236	8,184
Aircraft Parts .. .. .				2,802	3,883	3,567
Motor Vehicles, Chassis, Bodies, and Parts .. ..				29,868	37,717	45,947
Wireless Equipment .. ..				1,278	690	1,884
Tractors—Crawler Type .. ..				1,169	1,148	1,498
—Wheeled Type .. ..				3,305	2,781	4,046
Tractor Parts .. .. .				1,491	2,025	2,401
Spinning, Twisting, and Throwing Machinery .. ..				1,019	590	441
Knitting Machines .. .. .				1,253	1,120	961
Bearings, Roller and Ball .. ..				2,264	2,226	2,543
Crude Rubber (Including Crepe) lb.	34,508	33,306	33,122	3,126	3,795	5,298
Synthetic Rubber (Including Latex) .. .. . lb.	12,669	12,647	18,525	1,434	1,393	2,089
Timber, Undressed—						
Douglas Fir .. .. . sup. ft.	26,829	26,526	32,299	1,089	1,005	1,477
Crockery .. .. .				1,082	1,165	1,108
Plate Glass, Polished and Patent .. .. . sq. ft.	4,463	5,312	6,935	823	1,071	1,359
Pulp for Paper-making .. .. ton	40	46	61	2,194	2,398	3,025
Newsprinting Paper, Not Glazed, etc. .. .. . ton	63	65	76	4,534	4,685	5,487
Transparent Cellulose .. .. lb.	4,109	4,501	6,426	1,077	1,209	1,717
Books, Magazines, etc. .. ..				2,782	3,072	2,158
Rock Phosphate .. .. . ton	474	498	472	1,105	1,399	1,305
Polyethylene (Polythene)						
Resin .. .. . lb.	9,996	3,237	5,936	1,843	619	979
Polyamide (Nylon, etc.) .. .. lb.	1,147	4,914	6,501	398	1,690	2,159
Resins .. .. .						
Army, Navy, and Air Force Stores and Equipment .. ..				2,484	2,363	2,320
Outside Packages .. .. .				5,244	5,380	6,503
All Other Articles .. .. .				126,071	120,748	152,874
Total Imports .. .. .				282,713	291,297	339,349

NOTE: In the above table, separate details are shown of articles for which the value of imports amounted to more than £1 mill. in any one of the three years.

## Recorded Values of Principal Exports

The following table shows the recorded values of the principal articles exported to oversea countries from Victorian ports during each of the years 1957-58 to 1959-60 :—

## VICTORIA—PRINCIPAL ARTICLES EXPORTED OVERSEAS

Article and Unit of Quantity	Quantity			Value		
	1957-58	1958-59	1959-60	1957-58	1958-59	1959-60
	'000			£'000 f.o.b.		
Meats Preserved by Cold Process—						
Beef and Veal .. .. lb.	17,545	54,600	63,081	1,760	7,295	8,799
Lamb .. .. lb.	35,193	44,638	29,440	3,227	3,737	2,036
Mutton .. .. lb.	24,694	41,854	47,512	1,335	3,692	3,203
Rabbits and Hares—Skinned lb.	22,486	21,598	17,934	2,136	2,261	2,067
Meats, Tinned—						
Beef or Veal .. .. lb.	42,449	42,110	30,387	4,247	4,420	3,269
Mutton .. .. lb.	9,399	6,200	17,079	884	621	1,845
Sausage Casings—Natural bundle	1,551	1,591	1,625	1,789	1,522	1,189
Milk and Cream—						
Preserved, Sweetened .. lb.	45,533	42,619	49,145	3,379	2,951	3,421
Dried or in Powdered Form—						
Full Cream .. .. lb.	6,930	7,503	7,791	1,035	1,010	1,075
Skim .. .. lb.	25,572	31,384	41,891	997	1,210	1,788
Butter .. .. lb.	72,556	106,397	104,898	10,547	15,653	17,872
Cheese .. .. lb.	13,330	16,648	20,933	1,391	2,446	2,839
Wheat .. .. ton	158	247	255	4,127	6,364	6,249
Barley .. .. ton	12	96	36	248	2,321	692
Oats .. .. ton	1	104	91	29	2,008	2,029
White Flour—Plain .. cental	4,241	3,559	3,497	6,640	5,346	4,867
Malt .. .. lb.	37,909	46,599	41,803	910	1,101	989
Fruit, Fresh—Pears .. bush.	1,008	747	916	1,988	1,269	1,467
Dried—Sultanas .. lb.	92,050	124,073	79,570	6,373	9,043	5,910
Tinned—Peaches .. lb.	34,555	33,545	35,174	2,670	2,368	2,180
—Pears .. lb.	69,318	73,228	81,146	5,169	4,996	5,354
Sheep and Lamb Skins with Wool on .. .. lb.	49,617	52,890	71,031	7,830	5,718	9,752
Wool—						
Greasy .. .. lb.	287,862	319,318	339,012	87,764	73,557	91,482
Washed and Scoured .. lb.	21,010	20,250	19,239	7,810	5,309	6,151
Carbonized .. .. lb.	5,930	7,048	5,992	2,198	1,880	1,883
Wastes .. .. lb.	3,404	5,460	4,074	773	1,061	849
Tallow, Inedible .. .. cwt.	369	430	752	1,566	1,713	2,243
Petroleum and Shale Spirit .. gall.	24,857	33,786	2,389	1,158	2,060	276
Gas Oil (Solar Oil) .. .. gall.	7,975	26,264	51,224	428	1,407	3,002
Residual Oil .. .. gall.	89,278	82,117	85,499	4,112	3,312	3,381
Scheelite Ores and Concentrates .. .. cwt.	23	3	4	1,457	51	88
Aircraft and Parts .. ..	..	..	..	1,205	1,338	1,078
Casein .. .. cwt.	141	165	138	1,365	1,440	1,223
Military, Naval, and Air Force Stores and Equipment ..	..	..	..	616	1,083	435
All Other Articles .. ..	..	..	..	39,210	37,988	43,087
Total Exports .. ..	..	..	..	218,373	219,551	244,070

NOTE: In the above table, separate details are shown of articles for which the value of export amounted to more than £1 mill. in any one of the three years.

*Trade with Countries*

The value of trade with overseas countries from 1957-58 to 1959-60 is shown in the following table :—

**VICTORIA—OVERSEA IMPORTS AND EXPORTS :  
COUNTRIES OF ORIGIN AND CONSIGNMENT**

(£'000 f.o.b.)

Country	Imports			Exports		
	1957-58	1958-59	1959-60	1957-58	1958-59	1959-60
<b>COMMONWEALTH COUNTRIES—</b>						
United Kingdom .. ..	116,401	115,854	126,017	64,041	74,360	65,967
Borneo (British) .. ..	6,023	3,445	4,879	678	610	757
Canada .. ..	7,632	6,569	10,350	3,459	4,380	4,267
Ceylon .. ..	3,071	3,781	4,081	1,824	1,822	2,382
Hong Kong .. ..	1,207	1,317	1,908	1,586	2,298	2,253
India .. ..	7,762	6,132	5,311	3,270	2,722	3,806
Malaya, Federation of .. ..	3,688	4,361	6,108	3,664	4,066	4,309
New Zealand .. ..	4,592	4,629	6,075	14,601	13,165	14,969
Pakistan .. ..	524	899	1,458	1,268	567	644
Singapore .. ..	54	131	230	5,086	3,342	3,887
South Africa, Union of .. ..	1,673	1,414	2,051	2,919	1,678	2,825
Other Commonwealth Countries ..	6,663	7,610	8,142	7,828	8,704	8,570
Total Commonwealth Countries ..	159,290	156,142	176,610	110,224	117,714	114,636
<b>FOREIGN COUNTRIES—</b>						
<b>Arabian States—</b>						
Kuwait .. ..	6,065	3,826	4,542	359	336	295
Saudi Arabia .. ..	3,670	3,166	4,488	302	482	359
Qatar .. ..	8,957	15,317	12,364	252	33	37
Other Arabian States .. ..		590	128		176	65
Belgium-Luxembourg .. ..	2,272	2,524	3,089	4,943	3,750	4,051
China, Republic of (Mainland) ..	1,120	1,152	1,381	1,772	1,373	2,501
Czechoslovakia .. ..	1,026	807	1,014	2,575	2,271	3,387
France .. ..	4,635	5,766	4,916	21,983	16,072	21,043
Germany, Federal Republic of ..	19,282	20,369	25,793	7,793	6,483	7,796
Indonesia .. ..	5,490	6,068	5,196	1,733	1,159	1,425
Iran .. ..	1,494	1,255	871	84	190	651
Italy .. ..	4,627	4,060	5,049	14,917	11,203	15,735
Japan .. ..	8,727	10,662	14,799	21,218	22,266	29,143
Mexico .. ..	587	773	772	1,451	1,818	1,316
Netherlands .. ..	3,933	5,038	9,321	1,105	2,526	1,355
Poland .. ..	181	115	96	3,849	2,947	2,555
Sweden .. ..	3,763	3,276	3,883	1,587	1,011	800
Switzerland .. ..	3,837	3,435	3,866	782	355	675
U.S.S.R. .. ..	363	373	391	5	47	4,566
United States of America .. ..	34,278	38,269	49,439	8,193	13,985	16,774
Yugoslavia .. ..	9	14	29	2,496	1,982	2,440
Other Foreign Countries .. ..	8,965	8,203	11,192	10,744	11,365	12,462
Total Foreign Countries .. ..	123,281	135,058	162,619	108,143	101,830	129,431
<b>All Countries (Transfers of Bullion and Specie)</b>						
	142	97	120	6	7	3
Grand Total .. ..	282,713	291,297	339,349	218,373	219,551	244,070

The relative importance of various countries as participants in the trade of Victoria is indicated in the following table. Figures given are exclusive of transfers of bullion and specie.

**VICTORIA—OVERSEA IMPORTS AND EXPORTS :  
COUNTRIES OF ORIGIN AND CONSIGNMENT**

(Per Cent.)

Country	Imports			Exports		
	1957-58	1958-59	1959-60	1957-58	1958-59	1959-60
<b>COMMONWEALTH COUNTRIES—</b>						
United Kingdom .. ..	41.19	39.79	37.15	29.33	33.87	27.03
Borneo (British) .. ..	2.13	1.18	1.44	0.31	0.28	0.31
Canada .. ..	2.70	2.26	3.05	1.58	2.00	1.75
Ceylon .. ..	1.09	1.28	1.20	0.84	0.83	0.98
Hong Kong .. ..	0.43	0.45	0.56	0.72	1.05	0.92
India .. ..	2.75	2.11	1.57	1.50	1.24	1.56
Malaya, Federation of .. ..	1.30	1.50	1.80	1.68	1.85	1.77
New Zealand .. ..	1.63	1.59	1.79	6.68	6.00	6.13
Pakistan .. ..	0.18	0.31	0.43	0.58	0.26	0.26
Singapore .. ..	0.02	0.05	0.07	2.33	1.52	1.59
South Africa, Union of .. ..	0.59	0.49	0.60	1.34	0.76	1.16
Other Commonwealth Countries ..	2.36	2.61	2.40	3.58	3.96	3.51
Total Commonwealth Countries ..	56.37	53.62	52.06	50.47	53.62	46.97
<b>FOREIGN COUNTRIES—</b>						
<b>Arabian States—</b>						
Kuwait .. ..	2.15	1.32	1.34	0.16	0.15	0.12
Saudi Arabia .. ..	1.30	1.09	1.32	0.14	0.22	0.15
Qatar .. ..	} 3.17 {	5.26	3.64	} 0.12 {	0.02	0.02
Other Arabian States .. ..		0.20	0.04		0.08	0.03
Belgium-Luxembourg .. ..	0.80	0.87	0.91	2.26	1.71	1.66
China, Republic of (Mainland) ..	0.40	0.40	0.41	0.81	0.63	1.02
Czechoslovakia .. ..	0.36	0.28	0.30	1.18	1.04	1.39
France .. ..	1.64	1.98	1.45	10.07	7.32	8.62
Germany, Federal Republic of ..	6.82	6.99	7.60	3.57	2.95	3.19
Indonesia .. ..	1.94	2.09	1.53	0.79	0.53	0.58
Iran .. ..	0.53	0.43	0.26	0.04	0.09	0.27
Italy .. ..	1.64	1.39	1.49	6.83	5.10	6.45
Japan .. ..	3.09	3.66	4.36	9.72	10.14	11.94
Mexico .. ..	0.21	0.26	0.23	0.66	0.83	0.54
Netherlands .. ..	1.39	1.73	2.75	0.51	1.15	0.55
Poland .. ..	0.06	0.04	0.03	1.76	1.34	1.05
Sweden .. ..	1.33	1.12	1.14	0.73	0.46	0.33
Switzerland .. ..	1.36	1.18	1.14	0.36	0.16	0.28
U.S.S.R. .. ..	0.13	0.13	0.12	0.01	0.02	1.87
United States of America .. ..	12.13	13.14	14.57	3.75	6.37	6.87
Yugoslavia .. ..	0.01	0.01	0.01	1.14	0.90	1.00
Other Foreign Countries .. ..	3.17	2.81	3.30	4.92	5.17	5.10
Total Foreign Countries .. ..	43.63	46.38	47.94	49.53	46.38	53.03
Grand Total .. ..	100.00	100.00	100.00	100.00	100.00	100.00

**Customs and Excise Revenue**

The overseas trade and the gross revenue collected at Victorian ports during the year 1959-60 are shown in the following table :—

**VICTORIA—OVERSEA TRADE, AND GROSS REVENUE  
COLLECTED AT VICTORIAN PORTS, 1959-60  
(£'000)**

Particulars	Melbourne*	Geelong	Portland	Total
<b>Oversea Trade—</b>				
Imports .. .. .	306,170	31,837	1,342	339,349
Exports .. .. .	225,311	15,641	3,118	244,070
Total .. .. .	531,481	47,478	4,460	583,419
<b>Gross Revenue—</b>				
Customs .. .. .	30,141	721	856	31,718
Excise .. .. .	77,066	990	529	78,585
Total .. .. .	107,207	1,711	1,385	110,303

\* Includes Port of Melbourne, Essendon Airport, and Parcels Post

**Transport****Shipping****General**

Considerable change has taken place in coastal shipping in Australian waters since the Second World War as a result of competition with the newer, speedier motor and air transport systems which have developed rapidly.

Interstate passenger traffic has dwindled till it is now uneconomic to operate coastal passenger ships in Australian waters, and the few passengers wishing to travel interstate by sea are now carried on overseas passenger ships on their normal runs to and from Australian ports.

There has also been considerable falling off in the tonnage of general cargo carried interstate by sea, but, with the introduction of "container" packaging, the fitting out of ships to carry these containers, and mechanical handling facilities at wharves, it is probable that this method of transport will regain a larger share of the transport of general cargo in and around Australia. Altered patterns in Australian industrial development, including the big increase in oil refined in Australia and the development and re-location of other heavy industries have assisted the development of bulk carrier ships built in Australian shipyards for Australian conditions. Modern, fast ships of increased capacity and bulk handling terminals have ensured cheap shipment of ores, grains, and similar cargoes and reduced the costly time spent in port.

Shipping statistics, as presented in the following tables, refer to overseas and interstate vessels using Victorian ports, and include the intra-state activities of these vessels except in the table "Shipping with Various Countries".

*Vessels Entered and Cleared*

The number of vessels entered and cleared, and their total tonnage in each of the five years 1955-56 to 1959-60 were as follows :—

## VICTORIA—OVERSEA AND INTERSTATE SHIPPING

Particulars				Year Ended 30th June—				
				1956	1957	1958	1959	1960
Entrances	..	..	No.	2,978	2,956	3,075	3,210	3,355
			'000 net tons	11,343	10,814	11,283	12,224	13,277
Clearances	..	..	No.	2,995	2,956	3,049	3,208	3,351
			'000 net tons	11,373	10,827	11,184	12,195	13,269

*Shipping with Various Countries*

The principal countries having shipping communication with Victoria are set out in the following table. The table does not include the intra-state activities of overseas or interstate vessels.

Voyages and tonnages of vessels arriving from or departing to particular countries are recorded against the country of origin or destination, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Victoria from or to several countries. Thus, vessels calling at New Zealand on voyages to and from United States of America or Canada are not shown in shipping communication with New Zealand, and likewise, vessels calling at ports *en route* to and from the United Kingdom are credited to the United Kingdom only.

VICTORIA—SHIPPING WITH VARIOUS COUNTRIES  
(‘000 Net Tons)

Country	Year Ended 30th June—				
	1956	1957	1958	1959	1960

## VESSELS ENTERED

COMMONWEALTH COUNTRIES—							
Australian States	..	..	4,519	4,239	4,397	4,848	4,878
United Kingdom	..	..	1,637	1,498	1,668	1,548	1,747
Nauru	..	..	333	348	343	403	421
Borneo (British)	..	..	169	329	265	78	241
Canada	..	..	264	260	268	252	340
India, Pakistan, and Ceylon	..	..	144	185	141	223	186
Singapore, and the Federation of Malaya	..	..	271	317	202	273	237
New Zealand	..	..	179	197	290	301	275
Other Commonwealth Countries			191	131	164	263	274
Total Commonwealth Countries			7,707	7,504	7,738	8,189	8,599

VICTORIA—SHIPPING WITH VARIOUS COUNTRIES—*continued*  
(’000 Net Tons)

Country	Year Ended 30th June—				
	1956	1957	1958	1959	1960
VESSELS ENTERED— <i>continued</i>					
FOREIGN COUNTRIES—					
Arabian States .. .. .	745	701	1,179	1,378	1,508
Germany, Federal Republic of ..	245	201	192	385	386
Indonesia .. .. .	204	238	253	202	271
Iran .. .. .	472	324	143	77	56
Italy .. .. .	223	232	217	235	247
Japan .. .. .	276	306	364	379	512
Netherlands .. .. .	118	85	103	146	212
United States of America ..	450	445	397	473	526
Other Foreign Countries ..	439	347	409	380	525
Total Foreign Countries ..	3,172	2,879	3,257	3,655	4,243
Grand Total .. .. .	10,879	10,383	10,995	11,844	12,842

VESSELS CLEARED					
COMMONWEALTH COUNTRIES—					
Australian States .. .. .	5,709	5,197	5,067	5,300	5,892
United Kingdom .. .. .	1,470	1,326	1,569	1,556	1,508
Nauru .. .. .	185	181	230	232	205
Canada .. .. .	156	145	149	206	308
India, Pakistan, and Ceylon..	230	269	244	195	200
Singapore, and the Federation of Malaya .. .. .	344	302	240	306	289
New Zealand .. .. .	238	253	310	302	354
Hong Kong .. .. .	78	46	94	98	113
Other Commonwealth Countries	282	272	162	196	167
Total Commonwealth Countries	8,692	7,991	8,065	8,391	9,036
FOREIGN COUNTRIES—					
Arabian States .. .. .	494	592	986	1,114	1,356
Germany, Federal Republic of ..	110	96	137	185	240
Indonesia .. .. .	169	165	187	105	99
Iran .. .. .	169	155	89	112	134
Italy .. .. .	218	281	241	321	313
Japan .. .. .	317	339	417	495	584
Netherlands .. .. .	20	40	75	152	58
Poland .. .. .	18	31	14	78	142
United States of America ..	198	238	273	260	308
Other Foreign Countries ..	348	424	389	523	463
Total Foreign Countries ..	2,061	2,361	2,808	3,345	3,697
Grand Total .. .. .	10,753	10,352	10,873	11,736	12,733

The nationalities of vessels which entered or were cleared at Victorian ports during the years 1958-59 and 1959-60 were as follows :—

### VICTORIA—NATIONALITY OF SHIPPING

Nationality	Vessels Entered		Vessels Cleared	
	1958-59	1959-60	1958-59	1959-60
(‘000 net tons)				
Commonwealth—				
Australian .. ..	2,142	1,987	2,131	2,003
United Kingdom .. ..	5,278	5,978	5,298	5,982
New Zealand .. ..	138	156	139	162
Hong Kong .. ..	107	160	112	161
Other Commonwealth ..	192	196	210	187
Total Commonwealth ..	7,857	8,477	7,890	8,495
Foreign—				
Danish .. ..	170	248	180	259
French .. ..	93	117	86	126
Dutch .. ..	721	781	699	766
German (Federal Republic) ..	161	200	148	203
Italian .. ..	564	586	543	592
Japanese .. ..	398	371	398	369
Liberian .. ..	271	370	265	370
Norwegian .. ..	1,068	1,085	1,074	1,058
Swedish .. ..	265	308	272	314
United States of America ..	262	261	245	252
Panamanian .. ..	273	345	282	351
Other Foreign .. ..	121	128	113	114
Total Foreign .. ..	4,367	4,800	4,305	4,774
Grand Total .. ..	12,224	13,277	12,195	13,269

### Shipping Entered at Victorian Ports

Particulars of shipping which entered each principal port of Victoria are given in the following table for the years 1958-59 and 1959-60 :—

### VICTORIA—VESSELS ENTERED AT EACH PORT

Class of Vessel	Melbourne		Geelong		Portland	
	1958-59	1959-60	1958-59	1959-60	1958-59	1959-60
Number						
Oversea—						
Direct .. ..	260	267	163	170	1	2
Other .. ..	1,230	1,348	204	258	42	52
Interstate .. ..	1,187	1,128	119	121	4	9
Total .. ..	2,677	2,743	486	549	47	63
‘000 net tons						
Oversea—						
Direct .. ..	1,426	1,674	1,168	1,270	7	11
Other .. ..	6,261	6,746	1,025	1,350	224	295
Interstate .. ..	1,907	1,740	195	179	11	12
Total .. ..	9,594	10,160	2,388	2,799	242	318



*Cargoes Discharged and Shipped*

The following tables show the tonnage of oversea and interstate cargoes discharged and shipped in Victorian ports during 1958-59 and 1959-60 also the tonnage of oversea cargoes discharged and shipped during the years 1957-58 to 1959-60 according to the nationalities of the vessels in which the cargoes were carried :—

**VICTORIA—CARGOES DISCHARGED AND SHIPPED AT EACH PORT**  
( '000 Tons )

Particulars	Melbourne		Geelong		Portland	
	1958-59	1959-60	1958-59	1959-60	1958-59	1959-60
<b>DISCHARGED</b>						
Interstate—						
Weight .. ..	2,281	1,914	449	584	10	21
Measure .. ..	342	490	*	1	..	..
Oversea—						
Weight .. ..	2,519	2,762	2,349	2,571	56	59
Measure .. ..	923	1,152	58	76	..	..
<b>SHIPPED</b>						
Interstate—						
Weight .. ..	436	513	675	858	..	*
Measure .. ..	381	536	*	1	..	..
Oversea—						
Weight .. ..	723	734	883	753	14	16
Measure .. ..	528	531	..	1	..	..

NOTE.—1 Ton Measurement = 40 Cubic Feet.

\* Less than 500 tons

**VICTORIA—OVERSEA CARGOES DISCHARGED AND SHIPPED ACCORDING TO NATIONALITIES OF VESSELS**  
( '000 Tons )

Vessels Registered at Ports in—	1957-58		1958-59		1959-60	
	Dis-charged	Shipped	Dis-charged	Shipped	Dis-charged	Shipped
<b>COMMONWEALTH COUNTRIES—</b>						
Australia .. ..	40	21	24	35	78	9
United Kingdom ..	2,204	829	2,162	1,029	2,595	969
New Zealand .. ..	78	133	78	83	89	91
Other Commonwealth	159	103	42	99	72	87
<b>Total Commonwealth Countries</b>	<b>2,481</b>	<b>1,086</b>	<b>2,306</b>	<b>1,246</b>	<b>2,834</b>	<b>1,156</b>

**VICTORIA—OVERSEA CARGOES DISCHARGED AND SHIPPED ACCORDING  
TO NATIONALITIES OF VESSELS—continued**  
(\*000 Tons)

Vessels Registered at Ports in—	1957-58		1958-59		1959-60	
	Dis- charged	Shipped	Dis- charged	Shipped	Dis- charged	Shipped
<b>FOREIGN COUNTRIES—</b>						
Denmark .. ..	246	25	97	48	308	69
France* .. ..	100	5	98	3	136	12
Germany, Federal						
Republic of ..	133	9	129	19	155	22
Italy .. ..	171	26	221	50	258	14
Japan .. ..	333	65	239	89	178	52
Liberia .. ..	197	..	550	14	698	70
Netherlands ..	197	186	226	204	165	159
Norway .. ..	1,107	186	1,272	254	1,107	278
Panama .. ..	533	3	411	71	458	97
Sweden .. ..	226	16	259	49	251	37
United States of America	78	25	62	39	58	21
Other Foreign ..	40	2	35	61	14	48
<b>Total Foreign Countries</b>	<b>3,361</b>	<b>548</b>	<b>3,599</b>	<b>901</b>	<b>3,786</b>	<b>879</b>
<b>Grand Total ..</b>	<b>5,842</b>	<b>1,634</b>	<b>5,905</b>	<b>2,147</b>	<b>6,620</b>	<b>2,035</b>

NOTE.—In this table tons measurement have been added to tons weight.

\* Includes New Caledonia in 1957-58.

### Principal Ports of Victoria

#### Melbourne

The Port of Melbourne is controlled and administered by the Melbourne Harbor Trust Commissioners, a corporate body constituted in 1877 to manage and improve the port. The present Board comprises a full-time Chairman, and five part-time Commissioners, each individually identified with the various port operations such as shipping, primary production, importing, exporting, and labour.

The port is principally a river port, with its wharves and facilities along the banks of the lower reaches of the Yarra, but the port area extends into Port Phillip where facilities have been provided at Williamstown and Port Melbourne for deeper draughted ships unable to navigate the limited draught channels in the river. Entry of ships to the Port of Melbourne is limited to ships capable of navigating the entrance to Port Phillip which is outside the control of the Melbourne Harbor Trust Commissioners.

In addition to its floating plant comprising five dredges, eleven self propelled and dumb hopper barges, five tugs, and numerous pile barges and motor launches, the Trust owns and operates a fleet of 139 units of land based mechanical cargo handling equipment, including fork lift trucks of 2,000 lb. to 18,000 lb. capacity, overloaders, straddle trucks, dump trucks, and mobile cranes of 2 to 10 ton capacity.

As a means of increasing the capacity of the port, and the turn-round of ships, a new large transit shed was opened at "B" Berth, Appleton Dock, with a total cargo stacking capacity of 17,000 tons within its 600 ft. by 150 ft. area. A similar shed at "C" Berth, Appleton Dock, has been completed and work on another is progressing to give a total of three new large transit sheds in the port

area. In line with port policy, increased mechanical cargo handling facilities were also provided to speed the flow of cargo through the port.

In recent years, various wharf areas have been allocated to the mechanized handling of specific cargoes, and, in addition to steel and iron, coal, phosphatic rock, gypsum, bulk petroleum, and timber facilities, a bulk terminal for petro-chemicals, molasses and lubricating oils was provided in the Coode Island area, which has been set aside for future expansion projects of the port.

The following table shows the particulars of the financial operations of the Melbourne Harbor Trust for the years 1956 to 1960 :—

**VICTORIA—MELBOURNE HARBOR TRUST : REVENUE,  
EXPENDITURE, ETC.**  
(£'000)

Particulars	1956	1957	1958	1959	1960
<b>REVENUE</b>					
Wharfage and Tonnage Rates ..	1,841	1,883	2,044	2,101	2,492
Rent of Sheds .. ..	78	79	88	94	105
Special Berth Charges .. ..	70	71	94	126	152
Rent of Lands .. ..	127	131	168	195	221
Crane Fees .. ..	352	372	419	536	680
Other .. ..	209	211	208	240	298
<b>Total Revenue .. ..</b>	<b>2,677</b>	<b>2,747</b>	<b>3,021</b>	<b>3,292</b>	<b>3,948</b>
<b>EXPENDITURE</b>					
Administration and General Expenses	175	189	124	211	217
Port Operating Expenses .. ..	554	541	635	694	792
Maintenance—					
Dredging .. ..	394	419	136	272	469
Harbour .. ..	18	21	23	24	32
Wharves .. ..	369	215	196	227	241
Approaches .. ..	17	42	29	25	29
Railways .. ..	15	20	39	34	25
Cranes .. ..	79	76	82	109	124
Other Properties .. ..	21	28	38	30	25
Interest .. ..	389	445	474	535	586
Depreciation and Renewals ..	116	219	349	341	502
Insurance .. ..	30	32	283	35	139
Sinking Fund .. ..	95	75	130	232	181
Payments to Consolidated Revenue and Geelong Harbor Trust ..	383	389	413	424	502
Other .. ..	7	8	8	9	8
<b>Total Expenditure .. ..</b>	<b>2,662</b>	<b>2,719</b>	<b>2,959</b>	<b>3,202</b>	<b>3,872</b>
<b>Net Surplus .. ..</b>	<b>15</b>	<b>28</b>	<b>62</b>	<b>90</b>	<b>76</b>
<b>CAPITAL OUTLAY</b>					
Land and Property .. ..	..	21	67	27	65
Reclamation .. ..	2	1	26	14	15
Deepening Waterways .. ..	141	137	440	370	115
Wharves and Sheds Construction ..	968	554	567	727	770
Wharf Cranes, &c. .. ..	145	189	196	65	131
Approaches Construction .. ..	219	62	64	35	10
Floating Plant .. ..	29	38	182	175	90
Other Works, &c. .. ..	106	52	117	45	72
<b>Total Capital Outlay .. ..</b>	<b>1,610</b>	<b>1,054</b>	<b>1,659</b>	<b>1,458</b>	<b>1,268</b>
<b>Loan Indebtedness at 31st December</b>	<b>11,297</b>	<b>12,175</b>	<b>12,907</b>	<b>13,833</b>	<b>14,199</b>

*Geelong*

The Port of Geelong is under the control of the Geelong Harbor Trust which was constituted under an Act of 1905. The Trust consists of three Commissioners appointed by the Governor in Council.

Entrance to the port is by 15 miles of channel dredged to a depth of 36 feet and a width of 300 feet. Seventeen berths spread over a distance of approximately 5 miles provide the port's wharf facilities. Minimum water depths are 29 feet at two berths, 32 feet at eleven berths and 36 feet at four berths. Special berths are provided for the handling of steel, coal, grain, phosphatic rock and sulphur, and oil. Coal is discharged from bulk carrying vessels directly to railway trucks. The bulk grain terminal has a 22.5 mill. bushel storage capacity, and is capable of loading ships at the rate of 1,600 tons per hour. The oil wharf is able to accommodate vessels of the supertanker class carrying up to 30,000 tons of oil. The Harbor Trust coal stores have a storage capacity of 900,000 cubic feet. Adequate open coal storage is available. The port has good clearance facilities, there being direct rail loading at six berths and road clearance at all berths.

The Harbor Trust has floating plant which includes six tugs, five hopper barges, one diesel-powered floating crane and several small launches.

Particulars of the financial operations of the Geelong Harbor Trust for the years 1956 to 1960 are shown in the following table :—

**VICTORIA—GEELONG HARBOR TRUST : REVENUE,  
EXPENDITURE, ETC.**

(£'000)

Particulars	1956	1957	1958	1959	1960
<b>REVENUE</b>					
Wharfage, Tonnage, and Special					
Berth Rates .. .. .	718	686	764	770	898
Rents, Fees, and Licences .. .. .	13	13	15	16	16
Freezing Works and Abattoirs .. .. .	32	33	25	16	17
Contribution by Melbourne Harbor					
Trust .. .. .	15	14	..	..	..
Other .. .. .	159	159	193	191	219
<b>Total Revenue .. .. .</b>	<b>937</b>	<b>905</b>	<b>997</b>	<b>993</b>	<b>1,150</b>
<b>EXPENDITURE</b>					
Management Expenses .. .. .	68	77	87	95	124
Maintenance—					
Wharves and Approaches .. .. .	11	9	10	16	19
Harbour .. .. .	28	27	26	33	41
Floating Plant .. .. .	10	13	11	6	6
Other .. .. .	7	5	2	6	6
Interest on Loans .. .. .	136	157	164	149	141
Sinking Fund .. .. .	15	14	29	29	29
Freezing Works and Abattoirs .. .. .	28	24	9	..	..
Depreciation Provision .. .. .	75	84	128	146	158
Other .. .. .	148	157	162	175	208
<b>Total Expenditure .. .. .</b>	<b>526</b>	<b>567</b>	<b>628</b>	<b>655</b>	<b>732</b>
<b>Net Surplus .. .. .</b>	<b>411</b>	<b>338</b>	<b>369</b>	<b>338</b>	<b>418</b>

VICTORIA—GEELONG HARBOR TRUST : REVENUE, EXPENDITURE,  
ETC.—*continued*  
(£'000)

Particulars	1956	1957	1958	1959	1960
<b>CAPITAL OUTLAY (NET)</b>					
Floating Plant .. .. .	230	8	7	..	28
Land and Property .. .. .	8	160	313	42	34
Deepening Waterways .. .. .	797	937	68	24	..
Wharves and Approaches .. .. .	158	352	318	296	206
Other .. .. .	20	27	18	11	14
<b>Total Capital Outlay ..</b>	<b>1,213</b>	<b>1,484</b>	<b>724</b>	<b>373</b>	<b>282</b>
<b>LOAN INDEBTEDNESS AT 31ST DECEMBER</b>					
State Government .. .. .	239	214	211	164	150
Public .. .. .	2,751	2,675	2,675	2,775	2,745
<b>Total Loan Indebtedness ..</b>	<b>2,990</b>	<b>2,889</b>	<b>2,886</b>	<b>2,939</b>	<b>2,895</b>

### Portland

The Port of Portland, about 200 miles west of Melbourne and 300 miles south-east of Adelaide, has been administered by the Portland Harbor Trust Commissioners since 1951. The port serves an area of about 40,000 square miles in western Victoria and south-east of South Australia.

The harbor, an area of 250 acres of sheltered water, has been developed from a single open sea berth since the inauguration of the Trust. About one-third of the harbor area has been dredged to a depth of 36 feet, enabling ships of 40,000 tons to use the harbor. The harbor is protected by two breakwaters, one 4,200 feet and the other 3,800 feet in length. These leave an entrance about 600 feet wide between their outer extremities.

At the present stage of development there are two wharves providing berths for three vessels. The three berths are for tankers (the Ocean Pier) and for bulk handling and general cargo at the newly constructed wharf. Water depth alongside each berth is 36 feet : future development will include the dredging of some areas to 40 feet. Covered storage at the general cargo berth is provided by a transit shed of 60,000 square feet floor area. Oil discharged at the Ocean Pier is pumped to the storage installations at North Portland.

Access to the new wharves is by rail and road. A railway line has been constructed from North Portland to the new wharf, and three tracks have been laid at the bulk handling berth. The Ocean Pier has rail connexions to the Portland railway station. Good road clearance facilities exist at all berths.

The construction of the first stage of the harbor was completed in 1960, at a cost of £6,500,000. A new tanker berth is planned to be completed by 1963. During the year 1959–60, 63 vessels (318,216 net tons) entered the port, and 183,765 tons of cargo were handled.

Particulars of the financial operations of the Portland Harbor Trust for the years 1955-56 to 1959-60 are set out in the following table :—

**VICTORIA—PORTLAND HARBOR TRUST : REVENUE,  
EXPENDITURE, ETC.**

(£'000)

Particulars	1955-56	1956-57	1957-58	1958-59	1959-60
<b>REVENUE</b>					
Wharfage Rates .. .. .	15	20	26	29	36
Tonnage Rates .. .. .	2	3	4	4	5
Shipping Services .. .. .	1	2	3	3	4
State Government Grant .. .. .	57	88	129	144	193
Other .. .. .	8	10	12	10	9
<b>Total Revenue .. .. .</b>	<b>83</b>	<b>123</b>	<b>174</b>	<b>190</b>	<b>247</b>
<b>EXPENDITURE</b>					
Administration .. .. .	8	10	10	12	12
Maintenance .. .. .	24	17	22	20	15
Shipping Services .. .. .	1	5	3	3	3
Depreciation .. .. .	1	1	1	1	1
Interest on Loans .. .. .	41	71	113	158	202
Sinking Fund .. .. .	6	8	13	17	21
Other .. .. .	3	1	5	5	4
<b>Total Expenditure .. .. .</b>	<b>84</b>	<b>113</b>	<b>167</b>	<b>216</b>	<b>258</b>
<b>Net Surplus .. .. .</b>	<b>- 1</b>	<b>10</b>	<b>7</b>	<b>- 26</b>	<b>- 11</b>
<b>Fixed Assets at 30th June .. .. .</b>	<b>1,575</b>	<b>2,437</b>	<b>3,500</b>	<b>4,559</b>	<b>5,605</b>
<b>Loan Indebtedness at 30th June—</b>					
State Government .. .. .	598	849	1,101	1,354	1,605
Public .. .. .	1,002	1,702	2,552	3,402	4,201
<b>Total Loan Indebtedness .. .. .</b>	<b>1,600</b>	<b>2,551</b>	<b>3,653</b>	<b>4,756</b>	<b>5,806</b>

### Railways

#### *Post-war Planning*

The Victorian Railways' post-war rehabilitation plan is one of the biggest undertaken in Australia. Work on the plan has been retarded at times because of limited loan funds, but appreciable progress has been, and is being made towards raising the standard of the Victorian Railways to that of the world's best railway systems. The most noticeable change has been that obsolete steam locomotives have been replaced by diesel and electric locomotives.

#### *" Operation Phoenix "*

During the 1930's, very little money was available for improvements, and very little rolling stock was built. During the war, transport demands on the service were heavy and much of the rolling stock had exhausted its economic life by 1945. Maintenance of tracks was also in arrears, and immediate action was necessary to enable services to be continued.

In 1949, the State Government invited a British Railways expert to report on the Victorian Railways. His report approved the re-equipment plans: they were " sound and sufficiently far reaching

to serve the main purpose for which they were designed". Following this report, "Operation Phoenix", providing for the expenditure of £80 mill. over ten years, was launched to carry out the rehabilitation of the railways, thus increasing their technical efficiency and their goodwill with the public. Staff and material shortages were such that the plan could be implemented only by obtaining urgently needed locomotives and rolling stock from private manufacturers. Initial orders included 26 main-line diesel-electric, 10 diesel-electric shunting, and 170 steam locomotives, 39 diesel rail cars, 15 diesel rail car trailers, and 3,000 open goods wagons. Rail services were steadily restored and improved as these were delivered.

The introduction of diesel rail cars on country lines was the first major improvement. They practically eliminated mixed trains and provided faster and more comfortable branch line services. Express running with better time-keeping reduced travelling time on important country lines. Sunday excursion trains with low fares and special trains for charter and other such purposes were progressively restored.

"The Overland", running on the Melbourne-Adelaide line was given modern sleeping and seating accommodation; the "Daylight" express service was started between Melbourne and Sydney; the "Gippslander" was equipped with air-conditioned carriages and a buffet car; and the "Sunlight", with the latest saloon-type seating carriages, provided high standard facilities on the Melbourne-Mildura line.

Substantial improvements were also made in other phases of railway operation. Much faster journeys were made by the Adelaide and Mildura fast freight trains; steel containers became available for freight carriage between Melbourne, Sydney, and Brisbane; and additional modern goods handling equipment was installed in the Metropolitan Area and at some busy country centres. Dynon goods terminal was established to handle increased goods traffic at Melbourne. These works, track duplication, improved signalling, and modern rolling stock have all helped to increase railway capacity and to raise the standard of the services.

The first major step to improve suburban electric services was the acquisition of 30 new seven-carriage "Harris" trains. The all-steel carriages with improved bogies and better acceleration and braking, were an immediate success, and an additional 30 trains were ordered, the first of which commenced operations about mid-1961.

High priority projects commenced early in the rehabilitation programme included the extensive work to equip the Gippsland line to handle the brown coal and briquette traffic from the Latrobe Valley; the duplication of those suburban lines which were "traffic saturated"; the construction of new station buildings and platforms in the Metropolitan Area; the installation of power signalling on the Gippsland line and on a section of the suburban network; the conversion of the suburban electrified system from 25 cycle to 50 cycle operation; the re-laying of country and suburban lines; and grade separation for the elimination of level crossings.

The use of diesel motive power has been accelerated in more recent years. During 1960–61, nine 900 h.p. diesel and twelve 650 h.p. diesel-hydraulic locomotives were purchased; thirteen diesel-hydraulics are yet to be delivered under the existing contract; and 25 more 650 h.p. diesels have been ordered.

Ultimately, 44 diesel-electric locomotives of 1,500–1,800 h.p. will be in use; eleven will be used on the Melbourne–Albury standard gauge line.

Each longer distance train now generally includes at least one first and one second class air-conditioned carriage. Much business, formerly handled by road transport, has been gained for the railways by the use of special wagons, including those for complete motor cars and bodies.

The Melbourne–Albury standard gauge project, comprising 189 miles of line with 195 bridges and 411 culverts was finished by the end of 1961 at an estimated cost of £12 mill.

### Further References

An historical outline of the Victorian Railways will be found on pages 682 to 685 of the Victorian Year Book 1961.

The succeeding tables relate to the State railways and road motor services under the control of the Victorian Railways Commissioners. Certain border railways in New South Wales are, by agreement between the Victorian and New South Wales Governments, under the control of the Victorian Railways Commissioners. Particulars of these have been included with those of the State railways being operated within the State. Details of the operations of the road motor services are shown on page 728.

### Total Capital Cost of Railways and Equipment

The total capital cost of all lines constructed and in course of construction, and of all works, rolling stock and equipment of the Railways Department as at 30th June of each of the five years 1956 to 1960 is shown in the following table :—

#### VICTORIA—TOTAL CAPITAL COST OF RAILWAYS, ETC. EQUIPMENT AND ROLLING STOCK (£'000)

At 30th June—					Railways		Road Motor Services	Total Capital Cost*
					Lines Opened	Lines in Process of Construction		
1956	..	..	..	..	96,947	528	28	97,620
1957	..	..	..	..	102,176	530	55	102,876
1958	..	..	..	..	109,316	592	48	110,060
1959	..	..	..	..	115,623	769	38	116,713
1960	..	..	..	..	124,835	527	30	125,623

NOTE.—Total capital cost includes cost of electric tramway equipment, &c. At 30th June, 1960, this amounted to £231,699.

\* Written down in accordance with *Railways (Finances Adjustment) Act 1936*. Particulars are exclusive of the cost of stores and materials on hand and in course of manufacture.



*Loan Liability*

The face value of stock and bonds allocated to the Railways Department, as reduced in accordance with the *Railways (Finances Adjustment) Act 1936*, amounted to £134,367,709 (including £48,059,340 non-interest bearing) at 30th June, 1960. After deducting the value of securities purchased by the National Debt Sinking Fund and cancelled (£15,090,103), the total liability on current loans outstanding at that date was £119,277,606. The annual interest payable, calculated at the average rate of 4·25 per cent., was £5,069,298.

Additional funds, which amounted to £13,165,157 at 30th June, 1960, have been provided for railway construction, equipment, stores, &c., out of Consolidated Revenue, the National Recovery Loan, and other funds. No interest is charged on these amounts.

*Railways Traffic*

The mileage and traffic of the railways (exclusive of road motor services) for each of the years 1955–56 to 1959–60 are given in the following table :—

**VICTORIA—RAILWAYS MILEAGE AND TRAFFIC**  
(Excluding Road Motor Services)

Particulars	At 30th June—				
	1956	1957	1958	1959	1960
LINES OPEN FOR TRAFFIC	(route miles)				
Single Track .. ..	4,102	4,051	4,036	3,963	3,911
Double Track .. ..	331	345	353	358	367
Other Multi-track .. ..	12	12	12	12	12
Total Route Mileage	4,445	4,408	4,401	4,333	4,290

During Year Ended 30th June—

Traffic Train Mileage '000	18,635	18,544	18,353	18,426	18,282
Passenger Journeys '000	166,709	167,405	167,662	163,484	158,294
Goods and Livestock Carried '000 Tons	9,607	9,381	8,892	9,295	9,687

*Railways Revenue and Expenditure*

The revenue and expenditure of the Railways Department during each of the five financial years 1955-56 to 1959-60 were as follows :—

**VICTORIA—RAILWAYS REVENUE AND EXPENDITURE**  
(£'000)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>REVENUE</b>					
Passenger, &c., Business—					
Passenger Fares .. .. .	10,930	11,496	11,203	12,057	12,156
Parcels, Mails, &c. .. ..	1,353	1,348	1,322	1,340	1,375
Other .. .. .	61	64	55	48	46
Goods, &c., Business—					
Goods .. .. .	21,053	20,592	19,134	20,546	21,159
Livestock .. .. .	1,346	1,269	1,521	1,337	1,397
Miscellaneous .. .. .	238	252	196	246	324
Miscellaneous—					
Dining Car and Refreshment Services .. .. .	1,368	1,481	1,494	1,508	1,514
Rentals .. .. .	436	510	549	589	685
Book Stalls .. .. .	263	309	351	385	400
Advertising .. .. .	69	75	82	82	93
Other .. .. .	65	102	159	109	91
<b>Total Revenue .. .. .</b>	<b>37,182</b>	<b>37,498</b>	<b>36,066</b>	<b>38,247</b>	<b>39,240</b>
<b>EXPENDITURE</b>					
Working Expenses—					
Way and Works .. .. .	7,799	8,243	8,009	7,766	8,081
Rolling Stock .. .. .	12,049	12,248	11,281	11,210	11,495
Transportation .. .. .	11,586	12,095	12,034	12,140	12,600
Electrical Engineering Branch ..	2,083	1,945	2,008	2,052	1,987
Stores Branch .. .. .	657	540	523	527	587
Pensions (Non-contributory), Payment to Superannuation Fund ..	1,579	1,621	1,713	1,845	1,970
Contributions to Railway Renewals and Replacement Fund ..	200	200	200	200	200
Contributions to Railway Accident and Fire Insurance Fund ..	337	336	371	434	489
Pay-roll Tax .. .. .	654	652	693	700	738
Long Service Leave .. .. .	580	592	579	628	607
Other .. .. .	744	885	941	766	862
<b>Total Working Expenses ..</b>	<b>38,268</b>	<b>39,357</b>	<b>38,352</b>	<b>38,268</b>	<b>39,616</b>
<b>Net Revenue .. .. .</b>	<b>—1,086</b>	<b>—1,859</b>	<b>—2,286</b>	<b>—21</b>	<b>—376</b>
Debt Charges—					
Interest Charges and Expenses* ..	2,879	3,027	3,286	3,472	3,636
Exchange on Interest Payments and Redemption .. .. .	128	124	123	147	174
Contribution to National Debt Sinking Fund .. .. .	178	183	187	197	208
<b>Net Result for Year .. ..</b>	<b>—4,271</b>	<b>—5,193</b>	<b>—5,882</b>	<b>—3,837</b>	<b>—4,394</b>
%					
Proportion of Working Expenses to Revenue .. .. .	102·9	105·0	106·3	100·1	101·0

\* Including Loan Conversion Expenses.

Revenue for 1959-60 increased by £993,512 compared with 1958-59. This was due to increases in passenger fares and freight rates and to an improvement in goods traffic. Total working expenses increased by £1,348,666 as compared with the previous year.

The earnings, expenses charged to railway revenue, and net revenue per average mile of railway worked for each of the five years 1955-56 to 1959-60 were as shown in the following table. This does not take account of the interest paid on railway loans and other debt charges which are shown in the previous table.

**VICTORIA—RAILWAYS REVENUE AND EXPENDITURE PER AVERAGE MILE OPEN (EXCLUDING ROAD MOTOR SERVICES)**

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Average Number of Miles Open for Traffic .. .. .	4,450	4,425	4,402	4,357	4,292
Gross Revenue* per Mile £	8,324	8,444	8,170	8,759	9,133
Working Expenses† per Mile £	8,545	8,840	8,672	8,749	9,213

\* Excluding recoups by Treasury to offset interest, &c. payments.

† Charged to Railway Revenue.

At 30th June, 1960, the capital cost of the broad-gauge rolling stock, after being written down in accordance with the *Railways (Finances Adjustment) Act 1936*, was £41,751,801; of the narrow-gauge, £5,430; and of the road motor coaches and trucks, £22,347.

**Railways Staff**

The number of officers and employees in the railways service (including casual labour and butt-gang workers), and the amount of salaries and wages (including travelling and incidental expenses) paid in each of the five financial years 1955-56 to 1959-60 are shown in the following table :—

**VICTORIA—RAILWAYS STAFF : NUMBERS, SALARIES, ETC.**

Year Ended 30th June—	Number of Employees at End of Year—			Salaries, Wages, and Travelling Expenses
	Permanent	Supernumerary and Casual	Total	
				£'000
1956 .. .. .	18,777	10,585	29,362	28,368
1957 .. .. .	19,201	11,591	30,792	29,105
1958 .. .. .	19,966	10,002	29,968	29,217
1959 .. .. .	20,391	9,921	30,312	29,657
1960 .. .. .	19,587	9,302	28,889	31,114

*Road Motor Services*

The following table gives, for each of the five years 1955-56 to 1959-60, particulars of the operations of the road motor services under the control of the Railways Commissioners :—

**VICTORIA—ROAD MOTOR SERVICES**  
(Under the Control of the Railways Commissioners)

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Car Mileage .. ..	344,667	406,609	413,914	408,179	371,621
Passenger Journeys ..	1,192,846	1,732,463	1,916,008	1,778,609	1,571,445
Gross Revenue £ ..	27,047	43,206	47,225	46,150	42,263
Working Expenses ..	70,398	87,963	77,262	74,647	74,674
Interest Charges and Exchange ..	906	1,325	1,325	211	213
Net Loss ..	44,257	46,082	31,362	28,708	32,624
Capital Expenditure at End of Year (Less Depreciation Written Off) .. £	28,325	55,090	48,384	37,625	29,819

NOTE.—The apparent discrepancy between the amount of working expenses and revenue was brought about by revenue not having received a proportion of combined rail and road services earnings while working expenses have been charged with road motor operating cost in full.

**Tramways***General*

Tramways in Melbourne, Ballarat, and Bendigo at 30th June, 1960, comprised 165 miles of electric lines, of which 143 miles were double and 22 miles single track.

The appended table contains particulars of all tramways in Victoria, other than those under the management of the Victorian Railways Commissioners, for each of the five years 1955-56 to 1959-60 :—

**VICTORIA—TRAMWAYS**

Year Ended 30th June—	Track Open at 30th June—		Tram Mileage	Passenger Journeys	Traffic Receipts	Operating Expenses	At 30th June—	
	Double	Single					Rolling Stock	Persons Em- ployed
	miles						'000	
1956..	143	22	23,467	217,625	6,182	6,552	863	5,182
1957..	143	22	23,088	209,601	6,482	7,395	840	5,315
1958..	143	22	21,649	201,489	6,214	7,184	838	4,997
1959..	143	22	21,158	190,006	7,057	7,239	836	4,950
1960..	143	22	20,585	184,069	7,379	7,531	830	4,664

*Melbourne Tramways*

The Melbourne and Metropolitan Tramways Act, passed in 1918, provided that the Melbourne and Metropolitan Tramways Board should control all tramways and could operate its own motor bus services in the Metropolitan Area. The latter power is subsidiary to the Board's main function, and may be exercised only with the express consent of the Governor in Council. The Board was also charged with the preparation of a scheme of tramway development for the benefit of the people of Melbourne. Information obtained from other tramway authorities in the United Kingdom, Canada, and the United States of America was used as a guide in preliminary planning. The general planning, which incorporated topographical survey, study of methods of amalgamating the existing tramway services and population study for the purpose of estimating loadings, was completed by February, 1923, and, after acceptance by the Minister of Public Works, the plan was adopted by the Board.

During the early 1920's, competition by outside bodies and persons became of importance to the Tramways Board. Fast electric trains running to a tight schedule replaced the former slow, infrequent, steam trains on all suburban railways. Running at about twice the speed of trams, these attracted many passengers from the trams. Private motor cars used in street transport increased rapidly in numbers; the habit of door to door transport was growing. At this time, temporary competition appeared in the form of a number of motor omnibus companies. These commenced operations in open competition with the tramways in 1923, and, until the passing of the Motor Omnibus Act in 1925, carried many who would normally have been tram travellers. The Motor Omnibus Act imposed a tax on these operators which effectively prevented any furtherance of their operations.

Tramway vehicles, both buses and trams, carried 194 mill. passengers in 1919-20 from which the number increased to 234 mill. in 1925-26. The number of passengers decreased to 162 mill. during 1931-32 and steadily rose to 355 mill. in 1944-45. Since that date, there has been a steady decline to 209 mill. during 1959-60.

The Melbourne and Metropolitan Tramways Act provides for a Board consisting of three members (chairman, deputy chairman and a Board member) appointed by the Governor in Council to control all tramways and the Board's motor bus services in the Metropolitan Area.

The Board is empowered to borrow up to £15 mill. by the issue of stock or debentures secured upon its revenues and undertakings; this is in addition to the transferred liabilities attaching to the tramways vested in it. At 30th June, 1960, the Board had unused borrowing powers available to the extent of £5,133,387. Power is given to have an overdraft not exceeding £1 mill.

Details of the revenue and expenditure of the Melbourne and Metropolitan Tramways Board for the years 1956–57 to 1959–60 are shown in the following table :—

**VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS  
BOARD : REVENUE, EXPENDITURE, ETC.**

(£'000)

Particulars	Year Ended 30th June—			
	1957	1958	1959	1960
<b>REVENUE</b>				
Traffic Receipts .. ..	7,563	7,265	8,277	8,679
Miscellaneous Operating Receipts ..	78	59	67	66
Non-operating Receipts ..	69	93	167	153
<b>Total Revenue ..</b>	<b>7,710</b>	<b>7,417</b>	<b>8,511</b>	<b>8,898</b>
<b>EXPENDITURE</b>				
Traffic Operation Costs ..	3,898	3,733	3,714	3,861
Maintenance of Permanent Way ..	382	360	384	408
Maintenance of Trams ..	977	929	983	1,071
Maintenance of Buses ..	327	326	315	325
Maintenance of Electrical Equipment of Lines and Sub-stations ..	176	179	173	168
Maintenance of Buildings and Grounds ..	73	90	87	85
Electric Traction Energy ..	495	472	508	503
Fuel Oil for Buses ..	82	113	119	112
Bus Licence and Road Tax Fees ..	26	25	17	10
General Administration and Stores Department Costs ..	399	438	439	455
Pay-roll Tax ..	145	138	139	146
Workers' Compensation Payments ..	159	151	156	193
Depreciation ..	637	667	683	686
Non-operating Expenses ..	23	19	22	24
Provisions—				
Fire Damage ..	11	10	19	..
Long Service Leave ..	137	128	112	120
Retiring Gratuities ..	232	219	231	216
Accrued Sick Leave ..	19	17	26	12
Public Risk Insurance ..	112	99	81	74
Employee Fidelity ..	1	1	..	..
Interest on Loans ..	357	398	439	479
Loan Repayment ..	119	135	*	*
<b>Total Expenditure ..</b>	<b>8,787</b>	<b>8,647</b>	<b>8,647</b>	<b>8,948</b>
Net Deficit .. ..	1,077	1,230	136	50
Capital Outlay .. ..	555	524	407	462
Loan Indebtedness at 30th June	8,289	9,356	9,776	9,867

\* As a result of a change in financial policy, now deemed part of the provision for depreciation and amortization.

Particulars relating to the tramways systems under the control of the Melbourne and Metropolitan Tramways Board are shown for each of the years 1955-56 to 1959-60 in the following table :—

**VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD : TRAMWAYS**

Year Ended 30th June—	Track Open at 30th June—		Tram Mileage	Passenger Journeys	Traffic Receipts	Operating Expenses	At 30th June—	
	Double	Single					Rolling Stock	Persons Em- ployed
	miles		'000		£'000		No.	
1956..	138	4	22,253	207,914	6,024	6,296	810	4,995
1957..	138	4	22,240	203,323	6,374	7,119	790	5,124
1958..	138	4	20,802	195,350	6,110	6,938	789	4,817
1959..	138	4	20,312	183,835	6,956	6,986	788	4,766
1960..	138	4	19,736	177,868	7,280	7,262	783	4,477

In the next table, the operations of the motor omnibus systems of the Melbourne and Metropolitan Tramways Board are shown for each of the years 1955-56 to 1959-60 :—

**VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD : MOTOR OMNIBUS SYSTEMS**

Year Ended 30th June—	Route Miles	Bus Mileage	Passenger Journeys	Traffic Receipts	Operating Expenses	At 30th June—	
						Rolling Stock	Persons Employed
			'000		£'000	No.	
1956 ..	63	5,859	37,209	1,131	1,520	292	890
1957 ..	99	5,907	34,640	1,188	1,645	269	943
1958 ..	99	5,940	34,577	1,154	1,690	269	869
1959 ..	82	5,920	32,242	1,321	1,639	215	849
1960 ..	84	5,836	31,286	1,399	1,662	210	869

The following tables give an analysis of traffic receipts, operating expenses, &c., for each of the five years 1955-56 to 1959-60 :—

**VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD : TRAMWAYS : TRAFFIC RECEIPTS, OPERATING EXPENSES, ETC., PER MILE, ETC.**

Year Ended 30th June—	Traffic Receipts			Ratio Operating Expenses to Operating Receipts	Operating Expenses per Vehicle Mile	Average Distance per Penny
	Per Vehicle Mile	Per Mile of Single Track Operated	Per Passenger			
	d.	£	d.	%	d.	miles
1956 ..	64·971	21,428	6·954	104·505	67·898	0·373
1957 ..	68·788	22,673	7·524	110·403	76·822	0·373
1958 ..	70·492	21,738	7·506	112·509	80·048	0·373
1959 ..	82·190	24,748	9·081	99·580	82·544	0·297
1960 ..	88·523	25,933	9·823	98·955	88·304	0·263

**VICTORIA—MELBOURNE AND METROPOLITAN TRAMWAYS BOARD : MOTOR OMNIBUS SYSTEMS : TRAFFIC RECEIPTS, OPERATING EXPENSES, ETC., PER MILE, ETC.**

Year Ended 30th June—	Traffic Receipts		Ratio Operating Expenses to Operating Receipts	Operating Expenses per Vehicle Mile	Average Distance per Penny
	Per Vehicle Mile	Per Passenger			
	d.	d.	%	d.	miles
1956 .. ..	46·350	7·298	134·323	49·609	0·402
1957 .. ..	48·285	8·233	137·908	66·825	0·402
1958 .. ..	46·647	8·013	146·067	68·283	0·402
1959 .. ..	53·559	9·834	123·374	66·452	0·302
1960 .. ..	57·541	10·733	118·154	68·334	0·273

*Tramways in Extra-Metropolitan Cities*

The cities, other than the Metropolis, having electric tramway systems are :—Ballarat, with 13·84 miles of lines (2·33 double and 11·51 single track) and Bendigo, with 8·64 miles of lines (2·43 double and 6·21 single track). Both of these systems are operated by the State Electricity Commission of Victoria.



The traffic particulars of these lines for each of the five years 1955-56 to 1959-60 are summarized in the following table :—

### VICTORIA—TRAMWAYS IN EXTRA-METROPOLITAN CITIES

Year Ended 30th June—	Track Open		Tram Mileage	Passenger Journeys	Traffic Receipts	Operating Expenses	Rolling Stock	Persons Employed
	Double	Single						
	miles		'000		£'000		No.	
1956*	5	18	1,213	9,710	158	256	53	187
1957..	5	18	847	6,278	108	276	50	191
1958..	5	18	847	6,139	104	246	49	180
1959..	5	18	846	6,171	101	253	48	184
1960..	5	18	848	6,201	100	269	48	187

\* Geelong tramway system ceased operations on 25th March, 1956.

### Further References

A brief history of the early development of the Melbourne Tramways is set out on pages 690 to 691 of the Victorian Year Book 1961.

### Motor Vehicles

#### *Registrations, Licences, &c.*

Every motor car and motor cycle must be registered with the Chief Commissioner of Police if used on Victorian roads. Trailers, fore-cars, and sidecars drawn by or attached to motor cars or motor cycles must also be registered.

The following is a brief summary of the annual fees payable, at 30th June, 1960, for registration of the various types of motor vehicles and for the licensing of drivers and riders :—

Type of Registration or Licence	Annual Rate
Motor Cycle (without trailer, &c.) ..	£1 10 0
Motor Cycle (with trailer, &c. attached)	£2 5 0
Motor Car (private use) .. ..	4s. 6d. for each power-weight unit*
Trailer (attached to motor car) ..	£1 10s. to £6 each, according to the unladen weight and the type of tyres
Motor Car (Omnibus) (operating on specified routes in the Metropolitan Area)	£7 10 0
Motor Car (used for carrying passengers or goods for hire or in the course of trade)	From 5s. 6d. to 13s. 3d. for each power-weight unit* according to the unladen weight and the type of tyres
Motor Car (constructed for the carriage of goods owned by primary producers and used solely in connexion with their business)	From 3s. 9d. to 8s. for each power-weight unit* according to the number of wheels and the type of tyres. (When more than one motor car is so owned, the rate shall apply to one motor car only.)
Mobile Crane, self-propelled (used otherwise than for lifting and towing vehicles)	£10 (unless a lower fee would otherwise have been payable.)
Driver or Rider Licence .. ..	10s.

\* The number of power-weight units is that number which is equal to the sum of the horse-power and the weight in hundredweights of a motor car unladen and ready for use.

NOTE—The minimum annual fee for the registration of any motor vehicle other than a motor cycle is £4 10 0.

The following table shows, for each of the years 1955-56 to 1959-60, the number of motor vehicles registered, the number of drivers' and other licences issued, and the total revenue received at the Motor Registration Branch of the Police Department :—

**VICTORIA—VEHICLES ON THE REGISTER, DRIVERS'  
LICENCES IN FORCE, AND REVENUE RECEIVED  
(Excluding Commonwealth-owned Vehicles)**

Particulars	At 30th June—				
	1956	1957	1958	1959	1960
<b>VEHICLES ON REGISTER</b>					
Class of Registration—					
Private Vehicles .. ..	493,002	522,100	556,550	593,471	646,387
Commercial Vehicles .. ..	93,127	93,735	96,511	99,029	102,982
Hire Cars .. ..	5,106	5,297	5,328	5,302	5,338
Omnibuses* .. ..	736	748	770	813	766
Primary Producers .. ..	35,296	35,480	35,980	36,372	36,762
Tractors† .. ..	19,570	22,145	24,671	27,157	28,819
Motor Cycles .. ..	27,632	25,585	24,308	23,435	21,968
Total Motor Vehicles ..	674,469	705,090	744,118	785,579	843,022
Traction Engines .. ..	4	4	3	3	2
Trailers .. ..	12,010	11,203	11,820	12,312	13,120
<b>LICENCES IN FORCE</b>					
Drivers' and Riders' Licences ..	801,852	831,847	879,779	908,343	967,952
Dealers' Licences .. ..	1,280	1,229	1,259	1,315	1,328
<b>REVENUE</b>					
Total Revenue Received during Year Ended 30th June £'000	6,027	7,401	9,226	9,667	11,049

\* Operating within 8 miles of the G.P.O. Melbourne; all other omnibuses are included with hire cars.

† This heading includes only those tractors registered at the Primary Producer concession rate. Other tractors registered are included under Private Vehicles.

The following table gives details of new registrations, re-registrations, and renewals of registration of motor vehicles for the years 1955-56 to 1959-60 :—

**VICTORIA—NEW REGISTRATIONS AND RENEWALS OF  
REGISTRATION OF MOTOR VEHICLES  
(Excluding Commonwealth-owned Vehicles)**

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>NEW VEHICLES REGISTERED</b>					
Private .. ..	52,860	47,029	53,530	55,584	73,225
Commercial and Hire .. ..	11,898	9,680	10,904	11,187	12,435
Primary Producer .. ..	4,567	3,858	4,403	3,752	4,043
Motor Cycles .. ..	2,356	1,983	2,296	2,216	2,219
<b>RE-REGISTRATION OF USED VEHICLES</b>					
Private .. ..	19,628	20,502	20,142	19,188	20,072
Commercial and Hire .. ..	4,594	4,973	4,566	4,592	4,455
Primary Producer .. ..	3,375	3,832	4,295	4,656	3,952
Motor Cycles .. ..	5,342	4,822	3,839	3,545	2,989
<b>RENEWALS OF REGISTRATION</b>					
Private .. ..	420,523	454,067	482,878	518,699	553,090
Commercial and Hire .. ..	81,741	84,379	86,369	88,552	92,196
Primary Producer .. ..	45,563	49,935	51,953	55,121	57,586
Motor Cycles .. ..	19,934	18,780	18,173	17,674	16,760

The following tables, giving new vehicle registrations by types and makes of vehicles, include details of Commonwealth-owned vehicles (other than those of the defence services), and are based on the year ended 31st December. They are not comparable with the previous table.

### VICTORIA—REGISTRATIONS OF NEW MOTOR VEHICLES ACCORDING TO TYPE

(Includes Commonwealth-owned Vehicles Other than Those of the Defence Services)

Year	Motor Vehicles (Excluding Motor Cycles)							Motor Cycles
	Motor Cars	Station Wagons	Utilities	Panel Vans	Trucks	Other	Total	
1956..	44,347	1,020	7,849	3,599	4,427	371	61,613	2,133
1957..	43,722	2,037	7,565	3,133	3,584	240	60,381	1,969
1958..	45,903	6,220	7,354	4,488	3,927	301	68,193	2,312
1959..	51,081	10,317	7,320	5,868	4,366	314	79,266	2,145
1960..	60,497	14,817	6,637	3,975	5,213	530	91,669	1,986

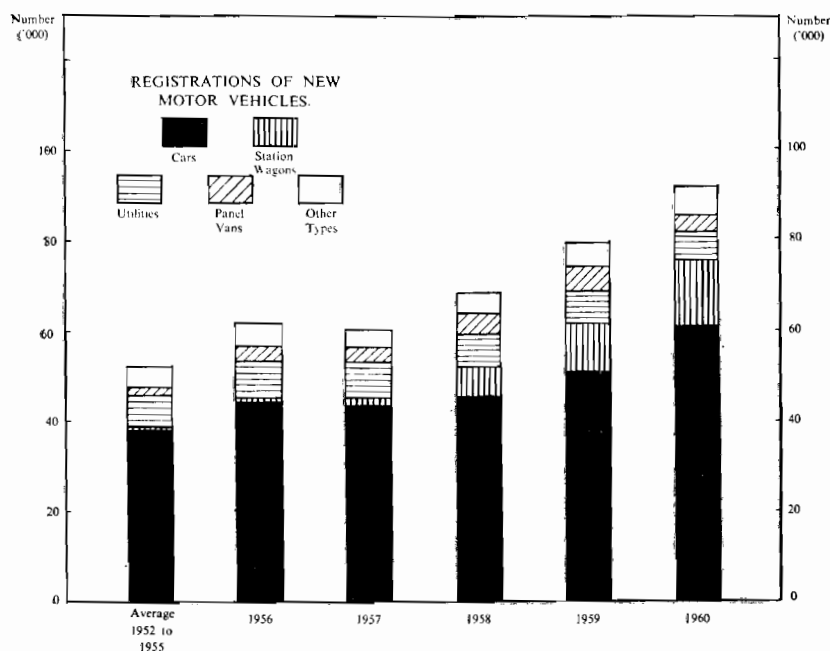


FIGURE 15.—Graph showing new motor vehicle registrations, 1952 to 1960.

### VICTORIA—REGISTRATIONS OF NEW MOTOR CARS ACCORDING TO MAKE AND TYPE

(Includes Commonwealth-owned Vehicles Other than Those of the  
Defence Services)

Make	Motor Cars			Station Wagons		
	1958	1959	1960	1958	1959	1960
Austin .. ..	2,734	3,010	3,289	23	7	44
Chevrolet .. ..	461	609	619	..	..	..
Chrysler .. ..	497	704	671	31	38	5
Fiat .. ..	289	615	1,213	7	1	32
Ford .. ..	7,272	7,230	9,177	44	715	2,150
Hillman .. ..	1,196	1,477	2,178	403	212	1,111
Holden .. ..	19,823	18,735	19,953	5,081	8,766	10,405
Humber .. ..	322	524	499	3	1	4
Morris .. ..	2,755	3,368	3,914	24	9	32
Peugeot .. ..	315	469	620	156	148	157
Renault .. ..	299	333	522	5	..	1
Simca .. ..	777	1,429	2,126	..	..	..
Standard .. ..	1,113	1,210	640	186	90	486
Triumph .. ..	15	508	2,358	..	..	..
Vauxhall .. ..	1,796	1,792	1,885	3	..	..
Volkswagen .. ..	4,411	6,776	7,784	124	160	132
Wolseley .. ..	570	510	749	..	..	..
Other .. ..	1,258	1,782	2,300	130	170	258
Total .. ..	45,903	51,081	60,497	6,220	10,317	14,817

### VICTORIA—REGISTRATIONS OF NEW MOTOR VEHICLES OTHER THAN MOTOR CARS, STATION WAGONS, AND MOTOR CYCLES

(Includes Commonwealth-owned Vehicles Other than Those of the  
Defence Services)

Make	1959				1960			
	Utilities	Panel Vans	Other*	Total	Utilities	Panel Vans	Other*	Total
Austin ..	168	154	309	631	85	177	366	628
Bedford ..	16	105	1,465	1,586	13	113	1,887	2,013
Commer ..	1	50	233	284	..	88	298	386
Dodge ..	206	38	296	540	111	57	278	446
Ford ..	1,402	468	850	2,720	1,182	418	1,065	2,665
Hillman ..	..	1,304	..	1,304	..	25	..	25
Holden ..	4,021	1,920	5	5,946	3,656	1,853	4	5,513
International ..	192	32	908	1,132	271	35	1,215	1,521
Land Rover ..	350	..	..	350	412	..	..	412
Morris ..	139	276	147	562	110	239	165	514
Standard ..	507	724	..	1,231	361	103	..	464
Volkswagen ..	135	648	25	808	200	809	40	1,049
Other ..	183	149	442	774	236	58	425	719
Total ..	7,320	5,868	4,680	17,868	6,637	3,975	5,743	16,355

\* Other vehicles include trucks, omnibuses, ambulances, hearses, milk tankers, petrol tankers, &c.

### Transport Regulation Board

The Transport Regulation Board is a government authority charged with the task of regulating the operation of road transport in Victoria (see page 698 of the Victorian Year Book 1961). The Board derives its authority from the *Transport Regulation Act 1958* and the *Commercial Goods Vehicle Act 1958*.

Any person operating a vehicle for hire or reward, or in the course of any trade, must, in addition to registering the vehicle as a commercial vehicle, have it licensed by the Transport Regulation Board. Licences issued by the Board are designed to meet the requirements of road transport needs. They may be grouped into two broad categories :—

- (1) Those licences issued at the discretion of the Board ; and
- (2) those licences issued “ as of right ”.

All licences issued to owners of commercial passenger vehicles are issued at the discretion of the Board ; the bulk of licences issued to owners of commercial goods vehicles are issued “ as of right ”. The holder of a discretionary licence must operate the vehicle in a manner set down in the conditions of licence. These conditions of licence are set by the Board. The holder of an “ as of right ” licence must also operate under the terms of his licence, but here the terms of licence are written into the legislation.

During the year ended 30th June, 1960, there were no basic changes in the organization of road transport in Victoria. However, the number of licences issued by the Board increased considerably. This increase resulted from an expansion in the demand for transport and, more particularly, in the special drive undertaken by the Board to ensure that all owners of vehicles coming within the terms of the legislation did, in fact, hold licences.

Commercial passenger service operators experienced a difficult year. To help combat the effects of loss of patronage and increased costs, the Board gave them permission to increase fares. In the Board's Metropolitan Area, bus fares generally rose from a 6d. for one section, 8d. for two sections, 10d. for three sections schedule (set in 1956), to a 6d., 9d., 1s. schedule. Approximately half the services in the Area are now operating on this new schedule. Operators in other areas received comparable increases.

Metropolitan taxi and hire car rates were altered in August, 1960, to a uniform rate of 2s. flag fall plus 3d. for each one-sixth of a mile. To meet a changing demand for taxis and hire cars in the Metropolitan and Outer Metropolitan Areas, additional hire car licences were issued in some Outer Metropolitan Areas, and a number of hire car licences were converted to taxi-cab licences. Further conversions were made in 1961.

The number of permits (temporary authority to operate vehicles outside conditions of licence) issued during the year was 115,088. This was 6,754 permits more than in the previous year. All of the increase was attributable to additional movement of goods vehicles.

The following table shows the number of passenger vehicle licences and the discretionary goods vehicle licences issued during each year, the number of goods vehicle licences issued "as of right", and brief details of the financial activities of the Transport Regulation Board during the years 1955-56 to 1959-60 :—

**VICTORIA—TRANSPORT REGULATION BOARD : LICENCES  
ISSUED : SUMMARY OF FINANCIAL OPERATIONS**

Type of Licence	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Temporary Licences—			No.		
Commercial Passenger Vehicles .. ..	41	99	110	116	114
Commercial Goods Vehicles .. ..	1,034	1,276	308	586	786
Permanent "Discretionary" Licences—					
Commercial Passenger Vehicles .. ..	5,543	5,629	5,430	5,455	5,622
Commercial Goods Vehicles .. ..	3,015	3,699	3,873	4,605	5,861
Licences issued "As of Right"—					
To operate for hire or reward within 25 miles of the G.P.O. or P.O.—					
Melbourne .. ..	10,762	9,818	10,127	11,029	12,176
Ballarat .. ..	438	407	436	1,438	1,456
Bendigo .. ..	426	386	391		
Geelong .. ..	577	547	566		
Within 20 miles of place of business of the owner; generally outside the radius of 25 miles from the G.P.O. or P.O. Melbourne, Ballarat, Bendigo, and Geelong .. ..	8,390	7,823	7,453	7,392	7,991
Primary Producers (vehicles over 2 tons capacity) .. ..	10,920	11,089	11,466	12,695	14,359
Commercial Goods Vehicles owned by butter and cheese factories .. ..	765	748	683	731	759
Commercial Goods Vehicles authorised to carry goods in connexion with the owner's business (50 miles radius—vehicles up to 80 cwt. capacity) .. ..	25,095	24,172	24,313	28,078	35,690
Commercial Goods Vehicles being used as—					
Carriers of all "Third Schedule" goods ..	7,097	7,116	7,107	7,757	8,397
Racehorse floats .. ..					
Tank Waggon for carriage of petroleum products .. ..					
Commercial travellers' cars .. ..					
Additional Licences to Commercial Goods Vehicles to carry passengers .. ..	118	113	106	104	87
Total Licences Issued .. ..	74,221	72,922	72,369	79,986	93,298
Financial Transactions—			£'000		
Revenue .. ..	602	561	616	623	671
Expenditure (including payments to local authorities for road maintenance, comfort stations, and bus shelters) .. ..	394	558	543	534	585
Balance .. ..	208	3	73	89	86
Road charges collected and transferred direct to Country Roads Board .. ..	216	1,316	1,570	1,836	2,119

**Traffic Commission**

The Commission is charged with the improvement of traffic conditions and the control of traffic.

The Road Traffic Regulations, 1960, became effective on the 1st January, 1960. These Regulations were a consolidation of the 1958 Regulations with amendments and containing some new provisions. The principal effects of the new provisions were :—

- (1) To clarify the respective responsibilities of municipalities and the Country Roads Board on declared Country Roads Board roads ;
- (2) to permit motor cyclists to park at right-angle in special parking bays ;
- (3) to permit effective use of “ Give Way ” and “ No U Turn ” signs ;
- (4) to permit a driver to carry out a right-hand turn without giving a stop signal ; and
- (5) to give highway authorities the power to control persons soliciting contributions on a road or street.

In July, 1960, the new Regulations were amended to remove all dimensions from the definitions of school crossings, pedestrian crossings, speed limit signs and de-restriction signs. This was necessary, as a Court decision had shown that it was almost impossible to sustain certain charges if dimensions were shown in these definitions.

The Commission developed warrants setting out the conditions which justify the installation of all major traffic control devices except speed restriction signs (i.e., signals, pedestrian crossings, school crossings, stop signs, &c.). These warrants were all quantitative and allowed council engineers to assess the need for control at any particular location. This is the first time that such a comprehensive set of warrants has been published anywhere. They were circulated as tentative warrants to all highway authorities. Experience has shown that although they may eventually need some minor alteration, even in their present form they have greatly assisted the work of the Commission and municipalities.

During the year, the Commission consulted with similar authorities in other States. As a result, it was decided to establish a permanent national association to be known as the “ Conference of State Traffic Control Engineers ”. This Conference will work towards achieving national uniformity in all traffic engineering matters. It will also co-ordinate developmental and research work being undertaken by the States.

The Roads Signs Code was published by the Standards Association of Australia in 1960, and work is proceeding to produce national codes for road law and street lighting.

The Commission received £20,000 from the Government to assist municipalities improve existing traffic signals and install new pedestrian crossings. The total sum was allocated, the basis for allocation being a two-to-one subsidy for improvements to signals, and a one-to-two subsidy for new pedestrian crossings.

**Road Traffic Accidents**

The following tables contain particulars of road traffic accidents involving casualties which occurred only in the public thoroughfares of Victoria. Statistics of road traffic accidents are prepared from Police reports, and do not include figures of accidents on railway lines (except at level crossings), or on private property. For these and other reasons the total number of deaths shown in these tables is not comparable with those shown on pages 163-164.

**VICTORIA—ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES : NUMBER OF PERSONS KILLED OR INJURED**

Year Ended 30th June—				Accidents Involving Casualties	Persons Killed	Persons Injured
<b>METROPOLITAN AREA</b>						
1956	..	..	..	6,323	218	7,532
1957	..	..	..	6,472	230	7,908
1958	..	..	..	6,599	216	8,195
1959	..	..	..	7,988	281	10,028
1960	..	..	..	8,035	313	10,166
<b>REMAINDER OF STATE</b>						
1956	..	..	..	4,283	364	5,951
1957	..	..	..	4,332	359	6,212
1958	..	..	..	4,634	355	6,820
1959	..	..	..	4,474	380	6,756
1960	..	..	..	4,232	385	6,429
<b>VICTORIA</b>						
1956	..	..	..	10,606	582	13,483
1957	..	..	..	10,804	589	14,120
1958	..	..	..	11,233	571	15,015
1959	..	..	..	12,462	661	16,784
1960	..	..	..	12,267	698	16,595



The table which follows provides a description of types of road users killed or injured in road traffic accidents occurring during the years 1957-58 to 1959-60 :—

**VICTORIA—ROAD TRAFFIC ACCIDENTS INVOLVING  
CASUALTIES : DESCRIPTION OF PERSONS KILLED  
OR INJURED**

Description	1957-58		1958-59		1959-60	
	Killed	Injured	Killed	Injured	Killed	Injured
Pedestrian .. ..	182	2,385	203	2,614	198	2,642
Driver of Motor Vehicle Other than Motor Cycle	190	4,387	200	5,223	221	5,302
Motor Cyclist ..	40	955	35	925	31	881
Passenger (Any Type) ..	120	5,833	173	6,491	197	6,373
Pedal Cyclist .. ..	36	1,408	47	1,464	48	1,332
Other.. ..	3	47	3	67	3	65
Total ..	571	15,015	661	16,784	698	16,595

Particulars of victims of road traffic accidents during the years 1957-58 to 1959-60 are shown according to age in the following table :—

**VICTORIA—ROAD TRAFFIC ACCIDENTS INVOLVING  
CASUALTIES : AGE OF PERSONS KILLED OR INJURED**

Age Group (Years)	1957-58		1958-59		1959-60	
	Killed	Injured	Killed	Injured	Killed	Injured
Under 5 .. ..	15	473	17	553	34	580
5 and under 7 ..	8	383	8	372	10	401
7 and under 17 ..	34	1,865	49	2,148	57	2,260
17 and under 21 ..	46	2,149	71	2,397	77	2,652
21 and under 30 ..	100	3,334	87	3,656	111	3,579
30 and under 40 ..	74	2,375	81	2,648	90	2,481
40 and under 50 ..	66	1,744	74	1,881	76	1,822
50 and under 60 ..	66	1,168	84	1,386	74	1,257
60 and over .. ..	129	1,221	145	1,384	160	1,247
Not Stated .. ..	33	303	45	359	9	316
Total ..	571	15,015	661	16,784	698	16,595

### **Civil Aviation**

#### *Historical*

Civil flying in Victoria can be traced back to the balloonists Brown and Dean, who migrated to Australia after considerable experience in England. In 1858, Dean descended on Plenty-road, Preston, after two hours flying. Brown flew for 45 minutes a few days later. In 1879, L'Estrange also made a balloon flight from the vicinity of the Victoria Barracks, but, whilst this type of flight was taken seriously as a sport, it held no pretensions as a reliable means of transport.

In 1909, a number of flying enthusiasts formed the Aerial League of Australia, for the purpose of promoting aviation. With the pioneer Lawrence Hargrave as chairman, the League established a branch in Victoria. The League invited Harry Houdini, the great escapologist, to bring his French built Voisin biplane to fly in Australia, and a flight was attempted at Diggers Rest on 18th March, 1910. On this and subsequent days, successful, though brief flights were achieved; they were the first of their kind in Victoria.

In July, 1910, at Mia Mia, Victoria, John Duigan flew a home-made biplane (now displayed in the Melbourne Institute of Applied Science) several times, attaining only a few feet above the ground and covering a few hundred yards upon each flight. J. J. Hammond, a New Zealander interested in selling aircraft, flew over Melbourne at a height of 3,000 feet for 31 minutes, and also made a flight from Melbourne to Geelong in 55 minutes in February, 1911, using a Bristol Boxkite, and this achievement gave impetus to the idea of using aircraft as a reliable means of transport.

Many flights were made in Melbourne during 1912, including those by L. Marshall using an aircraft built by himself at Ivanhoe in that year. In 1914, H. G. Hawker, a Melbourne man who had been trained in England, flew a Sopwith Tabloid on organized joy flights from the Caulfield racecourse. Hawker became a distinguished airman and aviation pioneer.

The First World War accelerated aviation development. When the war began, aviation activities were generally confined to experiment and joy riding. The war years gave aviation an important and practical role and gave Australia hundreds of trained and enthusiastic pilots, many of whom returned to their country with war disposals aircraft. They had a firm belief in the future of the aeroplane, and in the contribution it could make to the development of the country.

Inspired by wartime experiences, various attempts were made to organize regular services, but these attempts frequently failed.

#### *Control of Civil Aviation*

In 1920, formal acceptance of responsibility for civil aviation was indicated by the passing of the Air Navigation Act by the Commonwealth Parliament. This pledged the Commonwealth to carry out the provisions of the International Convention on Air Navigation signed in Paris in 1919, and to apply the principles of the Convention to internal and international flying. Regulations were drawn up under this Act to provide for the registration and periodical inspection of

aircraft, licensing of aerodromes, examination and licensing of personnel engaged in flying and maintenance of aircraft, maintenance of safety, and rules of the air. A Civil Aviation Branch of the Department of Defence was formed and a Controller of Civil Aviation was appointed to administer the Act. In 1936, a Civil Aviation Board was formed, and three years later the present Department of Civil Aviation was created. Control of Aviation in this State is now exercised by the Department through its Regional Director in Victoria.

The *State Air Navigation Act* 1958, adopts as State law such of the Commonwealth Air Navigation Regulations as are valid for the territories of the Commonwealth; thus control of civil aviation which is a function of the State by virtue of being a residual power under the terms of the Constitution, is exercised by the Commonwealth.

Amongst the earliest activities of the Civil Aviation Branch in Victoria was the acquisition and preparation of landing grounds, the first being established over the approved routes of Melbourne–Hay, Melbourne–Charleville, Melbourne–Perth, and Melbourne–Launceston.

Melbourne Airport was acquired in 1921, its total area being then only 91 acres. Additional areas were annexed in 1935, and modern runways and hangars erected in 1938. In 1950, it was formally declared an International Airport and, presently, handles some 40,000 scheduled aircraft movements per year. The airport area is now 800 acres; there are two main runways, and modern navigation, meteorological, traffic control and communication facilities are provided.

#### *Regular Air Transport Operations*

Although air routes were approved as early as 1921, the first recognized air service in Victoria commenced in 1925 between Melbourne and Hay. It was an airmail service and was followed by services twice weekly between Melbourne and Sydney. However, these lasted only until 1930. In 1933, a service between Melbourne and Launceston was commenced. A Bass Strait air-mail service operated out of Melbourne in 1934 and, in 1936, a Melbourne–Hamilton service was commenced. Companies operating these services expanded steadily, and the Australian National Airlines Commission also commenced operations in the State in 1946. The companies thus formed the pattern for the network of regular air services which now operates from Melbourne, between Mildura, Hamilton, Swan Hill, Warracknabeal, and Melbourne, and all interstate capitals and important centres.

#### *International Activity*

Since its declaration as an International Airport in 1950, constant effort has been required to maintain Melbourne Airport to an appropriate standard. Runways have been enlarged and strengthened, holding bays, taxi-ways, aprons, and access roads added, and a new control tower and international terminal building erected. (See photographs between pages 242 and 243.) A modern fire station and comprehensive navigational aids have also been installed.

Total international movements at Melbourne are, currently, approximately 1,200 per year.

## Statistical Summary

## VICTORIA—CIVIL AVIATION

Particulars	1957	1958	1959	1960
Registered Aircraft Owners .. ..	80	95	101	109
Registered Aircraft .. ..	256	257	260	330
Private Pilot Licences .. ..	498	522	559	608
Commercial Pilot Licences .. ..	152	202	207	190
Student Pilot Licences .. ..	657	656	564	582
Airline Pilot Licences .. ..	290	307	300	305
Aircraft Maintenance Engineers .. ..	470	506	558	645

## VICTORIA—MELBOURNE AIRPORT : MOVEMENTS, ETC.

Particulars	1958-59	1959-60
Domestic Aircraft—		
No. of Movements .. ..	34,467	37,178
Passengers Embarked .. ..	474,849	578,158
Passengers Disembarked .. ..	472,573	586,998
International Aircraft—		
No. of Movements .. ..	2,042	1,128
Passengers Arriving/Departing .. ..	23,228	21,072

## Communications

## Posts, Telegraphs, Telephones, Radio, and Television

## General

Postal, telegraphic, and telephone services are under the control of the Postmaster-General of the Commonwealth of Australia. The Postmaster-General also makes available to the national broadcasting and television services transmitting and other technical facilities. The general supervision of broadcasting stations and television stations, however, is vested in the Australian Broadcasting Control Board under the *Broadcasting and Television Act 1942-1956* ; while, under the same Act, the Australian Broadcasting Commission controls the activities of the National Broadcasting Service and the National Television Service.

The Postmaster-General's Department has developed into the largest business organization in Australia, employing, in Victoria, a staff of about 28,000 persons who provide, operate, and maintain the speedy and intricate systems of communications. Post office facilities are available throughout Victoria at 320 official and 1,937 non-official post offices. In addition to normal postal services, many of these offices transact business on behalf of the Commonwealth Savings Bank and several Commonwealth Government Departments.

### *Mail Services*

Mails are conveyed by departmental transport from the General Post Office, Melbourne, to most of the post offices within the Metropolitan Area and by rail to country areas. Road motor services carry mail between districts not served by rail, and also provide facilities for the receipt and dispatch of mails by means of private bags and roadside mail boxes. In sparsely settled districts, a rural letter delivery is provided; this service also provides for the postage of mails and the purchase of stamps, postal notes, and money orders.

Other measures to expedite and facilitate the collection and posting of mails are provided. Private boxes at post offices permit collection of mails by the boxholder at any hour; private bag services with delivery by messenger provide a prompt service, while private posting receptacles may be located in privately owned buildings. These services are of particular value to business establishments.

The large increase in the number of postal articles handled (an increase of 85 per cent. over the last twenty years) necessitated the introduction of more efficient mail-handling processes. Modern mechanical sorting aids and conveyor systems were adopted, and developed where necessary, and were installed in the Melbourne Mail Exchange. These improvements eliminated many time-consuming functions of hand distribution, and reticulate sorted mail over an area of four floors. A further development during 1960 was the installation of a machine to cull, face, and edge letters for correct presentation to the postmarking machines.

Two recent major developments in the carriage of mails were the introduction of "Operation Post Haste" and the launching of the new vehicular ferry "Princess of Tasmania" on the Mainland-Tasmanian service. "Operation Post Haste", inaugurated on 1st November, 1959, provides for the carriage by air, free of airmail fees, of enveloped mail not exceeding 10 inches by 5 inches by 3/16 inch, posted in Australia for delivery within Australia. This reduces considerably transit times for mails between Melbourne and other capital cities, and between Melbourne and some provincial centres. The vehicular ferry "Princess of Tasmania" is designed to enable roll-on, roll-off units to be used for the carriage of freight. Two such units of over 2,000 cubic feet each, fitted with quick-release couplings, are used by the Post Office to convey second class and parcel mails between Melbourne and Devonport, Tasmania. This method eliminates mail handling at the ship's side, thus enabling later closing times of the mails to be adopted.

### *Telephone Services*

Under a Community Telephone Plan, the Postmaster-General's Department intends to provide, ultimately, a completely automatic telephone service having subscriber-to-subscriber calling throughout the Commonwealth. A number of developments have been undertaken in Victoria with this objective in view.

The last of the manual lines to the Central Exchange in Melbourne were converted to automatic service in 1958, and automatic exchanges have been opened, or increased in capacity, at many country

centres. By the end of 1960, the whole of the Melbourne Metropolitan Area and 40 per cent. of the remainder of the State had been given automatic telephone service.

"Extended Local Service Area" ("E.L.S.A."), an important interim stage in the realization of the Community Telephone Plan, was introduced in May, 1960. This substantially increased the area over which subscribers can make a call for the cost of a single call fee (see Fig. 16), and, by grouping telephone exchange areas into zones, permitted "unit fee" calls between subscribers served by exchanges located in adjacent zones. The effect of these changes was most marked in the metropolitan and sub-metropolitan areas of Melbourne, in that all metropolitan subscribers, and 80 per cent. of sub-metropolitan subscribers, can dial each other directly, for a single call fee.

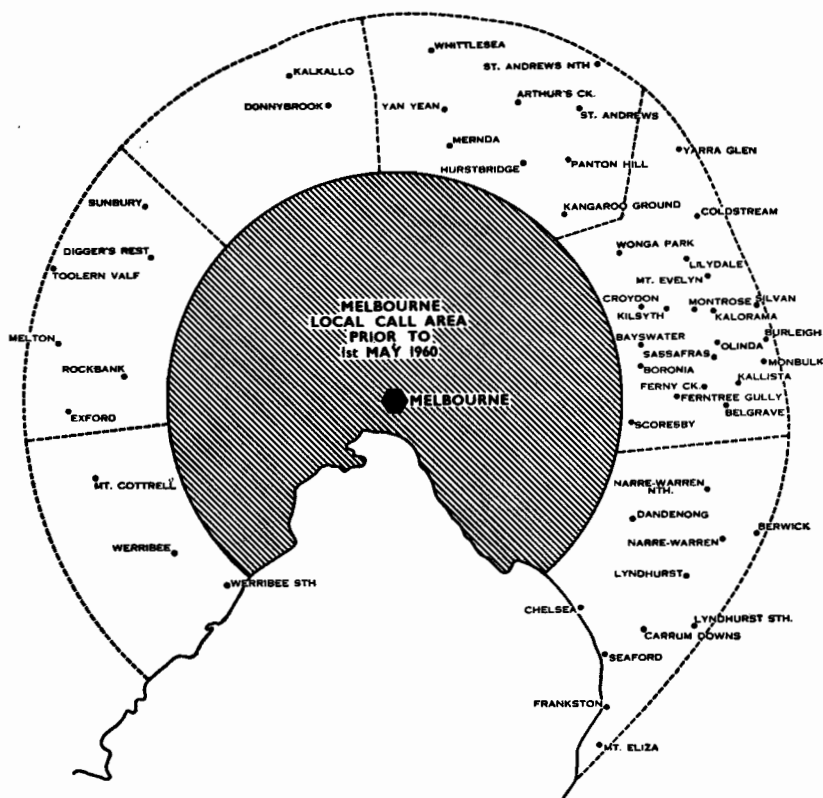


FIGURE 16.—The introduction of "ELSA" on 1st May, 1960, vastly increased the area over which a call could be made for a local fee charge.

The charging basis for trunk calls was varied by reducing the number of charging rates to eight timed rates in the trunk tariff structure, each rate being a multiple of the local call fee of 4d. This change

is designed to facilitate the introduction of further stages of the national telephone plan, including subscriber trunk dialling between distant automatic exchanges. The first step in this direction in Victoria was taken in December, 1960, with the introduction of subscriber trunk dialling from Bendigo and Geelong automatic exchanges to the Melbourne automatic network. With this system, the charges for trunk calls to Melbourne are recorded on the subscriber's meter in the same manner as for local calls. The meter registers at intervals according to the charge rate of the call; hence only one total charge for all automatically established calls, both local and subscriber trunk dialling, is shown on the subscriber's account.

A further phase of the plan is the ultimate elimination of letters from subscribers' telephone numbers, making them all-figure numbers. Achievement of this objective is an essential part of the eventual completion of the nation-wide direct dialling system.

Another major task undertaken during 1959-60 was the laying of a coaxial telephone cable, 96 miles long, between Melbourne and Morwell, via Dandenong and Warragul. This consisted of a six-tube cable between Melbourne and Dandenong and a four-tube cable from Dandenong to Morwell. Each pair of copper tubes in the cable is capable of carrying up to 1,260 simultaneous telephone conversations, or of carrying a television programme in each direction between stations along the route. In addition to the copper tubes, there is a number of paper insulated wires in the cable which will be used for control purposes, and to provide trunk lines to intermediate towns. Completion of work on this route will considerably improve telecommunication services to the heavily populated Latrobe Valley and beyond.

### *Radio Broadcasting*

The Wireless Telegraphy Act nominates the Postmaster-General to control radio services operated in the Commonwealth, and, in view of the extent to which radio communication is used, a "Frequency Allocation Sub-Committee" functions in an advisory capacity to the Director-General on all matters associated with frequency allocation. To ensure that transmitters operate within frequency tolerances prescribed by the International Radio Regulations, a protective measure has been the establishment, by the Department, of frequency measuring centres in Sydney, Melbourne, Brisbane, Adelaide, and Perth.

### *Television*

The Broadcasting Act, broadened in 1956 to cover television services, also gave the Post Office the responsibility for the installation and operation of technical equipment for the national transmitters, and studio to transmitter links. The studios are the responsibility of the Australian Broadcasting Commission, but the Post Office assisted initially in the procurement and installation of the studio technical equipment in Sydney and Melbourne.

*Radio Communications*

Over 7,000 radio communication stations have now been authorized for use in Victoria. These include Overseas Telecommunications Commission stations, aeronautical stations, networks of stations operated by taxi cab companies, newspaper organizations, police departments, forestry officers, and various other enterprises, and privately operated services conducted by fishermen, pleasure craft users, and others. In addition, more than 1,200 amateurs operate experimental stations.

**Further References**

A short history of the Post Office in Victoria will be found on pages 702 to 705 of the Victorian Year Book 1961.

**Post Office Statistics***Revenue and Expenditure*

Particulars concerning the revenue and expenditure of the Postmaster-General's Department in Victoria for each of the years 1955-56 to 1959-60 are contained in the following table :—

**VICTORIA—POSTMASTER-GENERAL'S DEPARTMENT :  
REVENUE AND EXPENDITURE  
(£'000)**

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
<b>REVENUE</b>					
Postage .. .. .	7,348	8,337	8,738	9,268	11,140
Money Order Commission .. .. }	242	239	246	255	294
Poundage on Postal Notes .. .. }					
Private Boxes and Bags .. .. .	42	54	57	59	63
Miscellaneous .. .. .	737	707	898	1,001	980
Total Postal .. .. .	8,369	9,337	9,939	10,583	12,477
Telegraphs .. .. .	1,306	1,508	1,471	1,539	1,688
Telephones .. .. .	13,235	15,214	16,240	17,540	21,111
Total Revenue .. .. .	22,910	26,059	27,650	29,662	35,276
<b>EXPENDITURE</b>					
Salaries and Contingencies—					
Salaries and Payments in the Nature of Salary	9,998	10,623	11,260	11,560	13,079
General Expenses .. .. .	1,030	1,119	1,236	1,311	1,501
Stores and Material .. .. .	432	481	573	654	651
Mail Services .. .. .	809	835	844	875	908
Engineering Services (Other than New Works)	7,546	8,481	9,002	9,625	10,973
Rents, Repairs, Maintenance, Fittings, &c. ..	307	351	440	427	445
Proportion of Audit Expenses .. .. .	10	11	12	14	16
New Works—					
Telegraphs, Telephones, and Wireless ..	6,848	7,515	8,440	9,620	10,604
New Buildings, &c. .. .. .	1,200	1,103	1,225	1,102	1,153
Total Expenditure .. .. .	28,180	30,519	33,032	35,188	39,330



*Postal Activities*

The number of post offices and the number of the persons employed in each of the five years 1955-56 to 1959-60 were as follows :—

**VICTORIA—POSTAL ACTIVITIES : POST OFFICES :  
PERSONS EMPLOYED**

At 30th June—	No. of Post Offices	No. of Telephone Offices	Persons Employed					Total
			Permanent	Temporary and Exempt	Semi- and Non-Official Postmasters and Staffs	Mail Contractors	Other*	
1956	2,344	181	12,806	8,325	2,532	1,041	925	25,629
1957	2,316	184	13,639	8,504	2,486	1,097	684	26,410
1958	2,298	185	14,923	7,888	2,425	1,147	682	27,065
1959	2,278	185	15,445	8,146	2,430	1,126	698	27,845
1960	2,257	184	15,805	7,700	2,211	1,164	708	27,588

\* Includes telephone office-keepers and part-time employees.

Particulars relating to the number of letters, &c., posted and received within Victoria during the years 1955-56 to 1959-60 are as follows :—

**VICTORIA—LETTERS, ETC., POSTED AND RECEIVED  
(’000)**

Year Ended 30th June—	Letters, Postcards, etc.	Registered Articles (Except Parcels)	Newspapers and Packets	Parcels (Including Those Registered)
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**POSTED FOR DELIVERY WITHIN THE COMMONWEALTH**

1956 .. ..	381,778	4,829	62,499	4,315
1957 .. ..	392,076	4,188	68,117	4,295
1958 .. ..	421,769	3,835	75,912	4,747
1959 .. ..	442,766	3,684	75,511	5,208
1960 .. ..	442,606	3,238	74,609	4,473

**DISPATCHED TO AND RECEIVED FROM PLACES BEYOND THE COMMONWEALTH**

1956 .. ..	19,120	454	12,484	315
1957 .. ..	21,748	411	13,192	334
1958 .. ..	23,716	417	14,406	378
1959 .. ..	27,633	436	13,655	393
1960 .. ..	31,220	421	13,081	453

**TOTAL**

1956 .. ..	400,898	5,283	74,983	4,630
1957 .. ..	413,824	4,599	81,309	4,629
1958 .. ..	445,485	4,252	90,318	5,125
1959 .. ..	470,399	4,120	89,166	5,601
1960 .. ..	473,826	3,659	87,690	4,926

The following table shows the total number and value of money orders and postal notes issued and paid in each of the five years 1955–56 to 1959–60 :—

### VICTORIA—MONEY ORDERS AND POSTAL NOTES

Year Ended 30th June—	Money Orders				Postal Notes			
	Issued		Paid		Issued		Paid	
	No.	Value	No.	Value	No.	Value	No.	Value
	'000	£'000	'000	£'000	'000	£'000	'000	£'000
1956.. ..	1,944	16,374	1,885	16,287	6,313	2,792	7,512	3,188
1957.. ..	2,113	17,591	2,050	17,534	5,316	2,400	6,655	2,834
1958.. ..	2,316	19,137	2,216	19,335	5,140	2,387	6,340	2,766
1959.. ..	2,606	20,254	2,471	20,671	4,845	2,277	6,133	2,727
1960.. ..	2,537	21,058	2,514	21,132	4,523	2,221	5,917	2,713

Of the money orders issued in 1959–60, 2,408,688 for £20,635,655 were payable in the Commonwealth of Australia, and 127,878 for £422,569 in other countries. The orders paid included 2,477,588 for £20,917,291 issued in the Commonwealth, and 36,819 for £214,571 in other countries.

### Telecommunications

The following table gives particulars relating to the telegraph business during each of the five years 1955–56 to 1959–60 :—

### VICTORIA—TELEGRAPH BUSINESS

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Number of Telegraph Offices (Including Railway Telegraph Offices) .. .. .	2,344	2,357	2,330	2,320	2,303
Telegrams—					
Within the Commonwealth—					
Paid and Collect Telegrams Dispatched—					
Ordinary, Urgent, and Press .. .. .	4,719	4,357	4,131	4,050	4,093
Lettergrams .. .. .	16	13	15	17	13
Radiograms .. .. .	7	7	6	6	6
Meteorological* .. .. .	..	107	124	127	140
Unpaid Telegrams Transmitted—					
Service and Meteorological* .. .. .	257	144	150	148	145
Total .. .. .	4,999	4,628	4,426	4,348	4,397
Beyond the Commonwealth—					
Dispatched .. .. .	461	466	452	465	499
Received .. .. .	519	522†	527†	427†	428†
Total .. .. .	980	988	979	892	927
Total Number of Telegrams Dispatched and Received .. .. .	5,979	5,616	5,405	5,240	5,324
Revenue—					
Telegrams within the Commonwealth .. .. .	812	895	913	919	922
Telegrams beyond the Commonwealth .. .. .	703	720	705	732	779
Total Revenue Received in State .. .. .	1,515	1,615	1,618	1,651	1,701

\* Meteorological telegrams have been charged since 1st July, 1956. In 1955–56 they have been included under Unpaid Telegrams Transmitted.

† Estimated figure.

Information relating to the telephone service is given below for the years 1955-56 to 1959-60 :—

### VICTORIA—TELEPHONE SERVICES

Particulars	Year Ended 30th June—				
	1956	1957	1958	1959	1960
Telephone Exchanges .. .. .	1,764	1,766	1,775	1,794	1,783
Public Telephones .. .. .	4,915	5,484	5,645	5,939	6,052
Lines Connected .. .. .	381,939	401,414	425,588	450,889	469,750
Instruments Connected .. .. .	543,674	574,565	609,973	646,966	677,468
Instruments per 1,000 of Population .. .. .	208·7	214·9	222·5	229·9	234·3

The number of radio communication stations authorized in Victoria at 30th June in each of the years 1957 to 1960 is shown in the following table. Figures relate to radio communication (radio-telegraph and radio-telephone) stations only.

### VICTORIA—RADIO COMMUNICATION STATIONS AUTHORIZED

Class of Station	At 30th June—			
	1957	1958	1959	1960
Transmitting and Receiving—				
Fixed Stations* —				
Aeronautical .. .. .	5	5	7	6
Services with Other Countries .. .. .	12	15	15	15
Other .. .. .	112	124	132	142
Land Stations†—				
Aeronautical .. .. .	7	8	10	9
Base Stations—				
Land Mobile Services .. .. .	411	475	588	690
Harbour Mobile Services .. .. .	11	11	10	15
Coast‡ .. .. .	7	7	10	10
Special Experimental .. .. .	29	30	35	48
Mobile Stations§—				
Land Mobile Services .. .. .	3,692	4,221	5,109	6,027
Harbour Mobile Services .. .. .	70	73	92	105
Amateur Stations .. .. .	1,091	1,140	1,217	1,258
Total Transmitting and Receiving .. .. .	5,447	6,109	7,225	8,325
Receiving Only—				
Fixed Stations* .. .. .	184	185	189	190
Mobile Stations§ .. .. .	34	34	34	34
Total Receiving Only .. .. .	218	219	223	224
Grand Total .. .. .	5,665	6,328	7,448	8,549

\* Stations established at fixed locations for communication with other stations similarly established.

† Stations established at fixed locations for communication with mobile stations.

‡ Land stations for communication with ocean-going vessels.

§ Equipment installed in motor vehicles and harbour vessels.

*Broadcast and Television Licences in Force*

The number of stations licensed for broadcasting and television and the number of holders of Broadcast Listeners' and Television Viewers' Licences in Victoria at the end of each of the years 1955-56 to 1959-60 are shown below.

Broadcast Listeners' and Television Viewers' Licences are issued at post offices in accordance with the provisions of the *Broadcasting and Television Act 1942-56*, which stipulates that a broadcast or television receiver may not be used unless there is in force a licence which applies to that receiver. A single licence covers any number of receivers operated by the holder or a member of his family, if the sets are ordinarily kept at the address specified on the licence. The fee for a broadcast listener's licence or its renewal is Zone I, £2 15s., Zone II, £1 8s. Zone II is in areas beyond 250 miles of specified broadcasting stations. A television viewer's licence costs £5.

**VICTORIA—NUMBER OF BROADCASTING AND TELEVISION LICENCES IN FORCE**

Class of Licence	At 30th June—				
	1956	1957	1958	1959	1960
Broadcasting Stations* ..	20	20	20	20	20
Television Stations* ..	..	2	2	2	2
Broadcast Listeners. . .	554,339	554,909	557,960	605,340	606,587
Television Viewers ..	..	44,986	147,721	270,073	353,091
Amateur .. ..	1,055	1,091	1,140	1,217	1,258

\* Exclusive of stations operated by the National Broadcasting Service (P.M.G.'s Department).

**Overseas Telecommunications***Historical*

Australia was first connected with the outside world by telegraph in 1872, when the overland telegraph line from Adelaide joined with the British cable, via Java, at Darwin.

The first office of the Eastern Extension Australasia and China Telegraph Co. Ltd. was opened in Melbourne in 1889, but this office was not open to the public. In 1902, the London to South Africa cable was extended via Mauritius, Rodriguez and Cocos Islands to Cottesloe, near Perth, and thence to Adelaide, so that, in 1903, Melbourne messages were forwarded to Adelaide for transmission either via the Indian Ocean cable or via the overland telegraph line to Darwin for onward transmission by cable via Singapore. From 1906 to 1910, the Eastern Extension Office closed down in Melbourne, and all business was handled by the Post Office. In 1916, a public office opened in Melbourne, and in December, 1929, the Pacific Cable Board amalgamated with Eastern Extension, thus bringing both organizations together.

The Pacific Cable was sponsored jointly by the Governments of Great Britain, Australia, and New Zealand, and had been in operation since 1902.

*Coastal Radio Wireless Service*

The first officially recorded communication between Australia and a ship at sea was on 18th May, 1901, when H.M.S. "St. George", in company with the Royal Yacht "Ophir" carrying H.R.H. the Duke of York, later King George V., exchanged messages over a distance of 37 miles with the Post Office Signal Station at Red Bluff (Point Ormond), Melbourne.

The Coastal Radio Service in Victoria commenced operation under the direction of the Postmaster-General's Department in 1912, when Melbourne radio (known as V-I-M) was built in the Domain Gardens and the 180-ft. wooden mast became a landmark for almost a quarter of a century. During the First World War, the Navy operated the Coastal Radio Service.

In 1921, operation of the Coastal Radio Service reverted to the Postmaster-General's Department, but, in 1922, under a series of agreements with the Australian Government, Amalgamated Wireless (A/asia) Ltd. assumed the responsibility for the service which it continued to operate until the nationalization, in 1946, of the Australian overseas telecommunication services under the terms of the Commonwealth Telegraphs Agreement.

V-I-M was transferred to Braybrook in 1932 and later to Wireless House, Melbourne, where improved techniques introduced remote control of the transmitting station at Fiskville, near Ballan, and the receiving station at Rockbank.

*Beam Wireless Service*

In 1927, the Beam Wireless Service was opened in Melbourne. The transmitting station was situated at Fiskville and the receiving station at Rockbank. Amalgamated Wireless (A/asia) Ltd. operated the service, with the Commonwealth Government holding a controlling interest. Under good conditions, operating speeds of 150 words per minute direct to London were commonly achieved, but radio operation was subject to highly variable conditions. Later, relay services via Barbados, Colombo, and Nairobi improved the reliability of the service.

*Overseas Photo-telegram Service*

Victoria saw the introduction of the Wireless Facsimile Service in 1934. The technique employed, both for transmission and reception, has been progressively improved over the intervening years; the two essential elements—transmission time and definition—have each been the subject of continuous study. With the present-day methods a picture 10 in. x 8 in. can be transmitted in almost fifteen minutes, with a definition of over 100 lines per inch, resulting in the reproduction at the receiving station of a high quality "facsimile" of the original.

Overseas pictures now being received in Melbourne may be simultaneously recorded by Post Office equipment at any one or all of the other capital cities. Pictures transmitted by interstate stations may be automatically relayed via Melbourne to any overseas facsimile terminal via the Beam Transmitting Station at Fiskville.

*Overseas Telecommunications Commission (Australia)*

The advent of radio, with its relatively low capital cost, threatened the economic viability of the world's cable networks, which were predominantly British owned. On the other hand, the radio services did not provide a complete substitute for the facilities offered by the cables, because of their liability to interruption due to atmospheric and ionospheric disturbances. Moreover, the cables provided secrecy of communication, which had vital strategic significance to the British Commonwealth in times of international crisis.

The first step in meeting this economic threat to the cable system was the Imperial Wireless and Cable Conference of 1928, as a result of which the United Kingdom's cable and radio interests were merged into one body, first known as Imperial and International Communications Limited and, from 1934, as Cable and Wireless Limited.

This was followed, in 1945, by the Commonwealth Telecommunications Conference out of which arose the Commonwealth Telegraphs Agreement. Under this agreement each British Commonwealth Government party to the agreement undertook to acquire ownership of the overseas telecommunications assets, both cable and radio, situated in its territory. The agreement also provided for the creation of a national body in each partner country to operate the services, for the co-ordination of the activities of the national bodies, and for the general co-ordination of policy through a central advisory body—the Commonwealth Telecommunications Board—comprising representatives of the partner Governments.

In Australia, the recommendations of the Commonwealth Telecommunications Conference were implemented in the *Overseas Telecommunications Act* 1946 under which the Beam Wireless Service assets of Amalgamated Wireless and Cable and Wireless Limited were nationalized, and the Overseas Telecommunications Commission established.

The Commission is a body corporate with perpetual succession and a Common Seal functioning under the Ministerial direction of the Postmaster-General, and responsible for the establishment, maintenance, operation, and development in Australia of cable and radio telecommunications services for public communication with other countries, ships at sea, commercial and private aircraft, and any territories under the authority of the Commonwealth and between the territories of the Commonwealth.

Service to the public is given in co-operation with the Australian Post Office, which accepts and delivers telegrams, provides connexion with the O.T.C. overseas teleprinter exchange (located in Sydney) and with the overseas photo-telegraph terminal (at 382 Lonsdale-street, Melbourne,) and operates the overseas terminal of the international telephone service.

The Victorian radio stations of the Commission at Fiskville (transmitting) and Rockbank (receiving) are connected to the operating room in Melbourne. The Melbourne stations operate direct services to London, Calcutta, and Montreal, while the Melbourne Operating Room is connected by landline with the Sydney Operating Room for connexion to other radio circuits operated from Sydney and Perth, and to the cables. With the integration of cable and radio services, telegrams are not delayed by failure of any circuit, as diversion to the other outlet is immediately available.

### *New Pacific Cable*

With limitations on the range of frequencies available for the long-distance radio circuit, and the original submarine cable network unsuitable for telephone and photo-telegraphy, the laying of the Atlantic cable in 1956 proved highly significant. Development of electronic components and techniques involving amplifiers or boosters in deep sea cables for the first time made possible the carrying of large blocks of simultaneous high-class telephone channels, any of which can be used to provide telegraph channels.

Of great importance to Australia will be the laying of the new £36 mill. Pacific cable, completing a link extending from Australia to New Zealand, Fiji, Hawaii, U.S.A., Canada, the United Kingdom, and Europe, and capable of carrying 80 simultaneous telephone conversations.

The cable is capable of carrying, in addition to voice transmissions, telegraph, video-tape, photo-telegraph, and teleprinter signals.

## Appendix A

### *Principal Events from 1st July, 1960—30th June, 1961*

1960

- July 3* : The Premier (Mr. Bolte) opened the Preston and Northcote Community Hospital. The hospital, built at a cost of £2,500,000 will not be completed for another two years.
- July 4* : State Cabinet approved a plan to build an international standard racing circuit at Flemington racecourse.
- July 4* : The Minister for Transport (Sir Arthur Warner) opened the new Railways Technical College at Newport workshops.
- July 6* : The Premier (Mr. Bolte) announced that for the financial year just ended, the budget would show a surplus of about £300,000. This is the first time a surplus has been achieved for five years.
- July 15* : Victoria, to meet record power demands, arranged with New South Wales to take more than the allotted one-third share of the Snowy Mountains electricity output.
- July 26* : Dr. Una Porter, senior psychiatrist at the Queen Victoria Hospital, and her brother, Mr. Alec Cato, have offered £100,000 to the University of Melbourne to endow a Chair of Psychiatry.
- July 26* : Announcement of a 10-year plan to spend £50 mill. to clear Melbourne of slums.
- July 29* : Announced that the late Mr. Harry Lyon, financier and investor, who died at Elwood on July 27th, aged 86, had left £1 mill. Trust Fund to the Royal Children's Hospital, Melbourne. The Trust will provide an annual income in excess of £40,000. It is believed to be one of the largest ever made to an Australian charitable institution.
- August 11* : Approval given by the City Council of a record programme of £148,000 planned by the City Council Parks and Gardens Committee.
- August 12* : Many of the world's greatest chemical scientists gathered in Melbourne for the first meeting of the International Union of Pure and Applied Chemistry ever to be held in Australia.
- August 13* : New Consumer Price Index issued by the Commonwealth Statistician.
- August 22* : The opening, at Melbourne University, of a Victorian Anti-Cancer Council Congress, which was attended by overseas cancer authorities and 500 Australian and New Zealand delegates.
- August 25* : Approval given by City Council of the final plans for a 13-storey hotel to be built on the Eastern Market site which will cost £5 mill.
- September 1* : The inaugural meeting of the Victorian division of the National Heart Campaign was held in the Melbourne Town Hall. The meeting pledged itself to raise at least £500,000 in Victoria towards the national target of £1½ mill.
- September 16* : Introducing the State Budget, the Premier (Mr. Bolte), announced that complete or partial relief from Entertainments Tax would be afforded to suburban and country motion picture theatres. Two-thirds of all theatres in country areas of Victoria would be completely exempted. Provision was also made for a big increase in the number of scholarships granted by the Education Department.



## APPENDIX A—continued

*September 20 :* The Victorian Attorney-General introduced the Crimes (Kidnapping) Bill, under which imprisonment for a maximum of twenty years is provided.

*October 3 :* The Premier of Victoria (Mr. Bolte) officially opened the new £6 mill. shopping centre at Chadstone. The new shopping centre, which has 83 tenants, is the biggest single retail merchandising centre ever planned in Australia. Among its features is free parking space for 2,500 cars.

*October 9 :* The Governor of Victoria (Sir Dallas Brooks) officially opened the Berchmans Daly Wing (240 beds) of St. Vincent's Hospital and the Mary Aikenhead Nurses Home (340 rooms).

*October 18 :* Compulsory and postal voting for the City Council elections was approved by the Council despite protests.

*October 26 :* Announced by the Minister for Transport (Sir Arthur Warner) that a new three-storey rail terminal would be built at Spencer-street Station.

*November 14 :* The City Council approved a £3 mill. development plan for the Western Market site. The plan provides for a 19-storey building with a forecourt of  $\frac{1}{4}$ -acre facing Collins-street, as well as shops and a car park.

*November 21 :* The Governor of Victoria (Sir Dallas Brooks) officially opened the new £6,500,000 all-weather, deep sea harbour at Portland (Victoria).

*December 18 :* The first balloon to be sent aloft anywhere in Australia to test the upper atmosphere for radio-active fall-out was successfully released at Mildura. The huge balloon, 48 feet in diameter, and loaded with 350 lb. of sampling equipment and instruments returned to earth by parachute after two hours.

*December 20 :* The official opening by the Governor of Victoria (Sir Dallas Brooks) of the new £18,000 Heliport (Australia's first) on the Yarra River adjacent to the inner City of Melbourne.

*December 22 :* Announced by the Premier (Mr. Bolte) that the Government would provide rental aid for some pensioners to meet hardships suffered as a result of the rent increase since 1st April.

## 1961

*January 2 :* Announced that a census of the Australian population, the first since June, 1954, when the population was 8,986,583, will be conducted throughout Australia at the end of June, 1961.

*February 2 :* Settlement reached in the Victorian Railways dispute which had caused cessation of Saturday afternoon country trains and all Sunday train services in Victoria for nearly a year. Dispute arose over service grants to railwaymen and followed rejection by the Arbitration Commission in November, 1959, of a claim by the Australian Railways Union. The terms of settlement, concluded by the Victorian Government and the Trades Hall Disputes Committee, entitle 26,500 railwaymen to service grants under certain conditions.

*February 3 :* Death occurred at Canberra of the Governor-General of Australia (Viscount Dunrossil). Viscount Dunrossil, who was sworn in as Governor-General of Australia on 3rd February, 1960, died in his sleep. He was the first Australian Governor-General to die during his term of office.

APPENDIX A—continued

- February 4:* The Governor of Victoria (Sir Dallas Brooks) sworn in as Administrator of the Government of the Commonwealth of Australia, with all the powers and privileges of a Governor-General, until the Queen appoints a successor to the late Governor-General (Viscount Dunrossil).
- February 22:* Announced that the building of Melbourne's £4 mill. Cultural Centre at Wirth's Park, on the south side of the Yarra River, will begin in August. The public is to be asked to contribute £1 mill. towards the costs. The structure will be dominated by a slender 415 foot copper spire and is scheduled to be completed in 1964.
- March 11:* Melbourne's new Monash University officially opened by the Premier of Victoria (Mr. Bolte). About 450 first year students in the faculties housed in the buildings so far completed (Science, Engineering, Medicine, Arts, and Economics) commenced courses on March 13th. Mr. Bolte predicted that about 12,000 students would be attending Monash by June, 1970.
- April 10:* Appointment officially announced of Viscount De L'Isle, V.C., former British Air Minister, as Governor-General of Australia.
- April 12:* The Premier of Victoria (Mr. Bolte) officially opened the new King's Bridge and Expressway across the Yarra River at King-street in the western part of the city. It is expected that more than 45,000 motor vehicles will use the low and high level sections of the bridge and expressway each day.
- April 17:* Opening of the quadrennial congress of the International Council of Nurses in Melbourne at the Exhibition Building by the Administrator of the Commonwealth (Sir Dallas Brooks). 2,500 nurses represented 44 countries present.
- April 20:* Minister for National Development (Mr. Spooner) announced that the Government had given approval for commencement of work soon on the second stage of the giant Snowy Mountains Hydro-Electric and Water Conservation Scheme. The second stage involves the Snowy-Murray Development—diverting Snowy River water through a series of tunnels, reservoirs, and power stations into the Murray Valley.
- April 28:* The Prime Minister (Mr. Menzies) on behalf of the National Heart Foundation of Australia, opened an appeal for £1,500,000 for heart diseases research and treatment, at a dinner in Canberra.
- May 10:* The Premier (Mr. Bolte) opened the Colonial Sugar Refining Co. Ltd.'s £2,230,000 new Timbrock hardboard mill at Bacchus Marsh.
- June 1:* The largest cut in electrical power experienced in Victoria occurred when stoppages of work took place at State Electricity Commission Power Stations. The employment of an estimated 125,000 persons was affected and only restricted transport facilities were available.
- June 15:* Announced that American and Australian interests will establish an Aluminium Smelter and Fabricating plant at Point Henry near Geelong (Victoria), as part of a huge programme involving ultimate expenditure of almost £45 mill.
- June 27:* "Canberra", the newest and largest ship of the P. & O. Orient Line's fleet, arrived in Melbourne on her maiden voyage and was greeted by the largest crowd ever seen on Station Pier.

## Appendix B

*Index of Special Articles in the Victorian Year Book 1961*

The following is a list of major articles which appeared in the Victorian Year Book 1961 and which have been extensively altered or omitted in the current edition to make room for new articles. This list will be revised each year to provide readers with an up-to-date *cumulative* index of special articles published in previous editions from 1961 onwards.

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Children's Welfare Department, History of .. .. .	266-268
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Walter and Eliza Hall Institute of Medical Research .. .. .	245-246
War Service Homes .. .. .	339-340

## Appendix C

*Select Bibliography of Books Published in Victoria*

The following list of books published in Victoria during 1960-61 is intended to be neither complete nor comprehensive. Its object rather is to illustrate the range and diversity of subject-matter contained in books published in this State. It has been compiled in collaboration with various publishers and the State Library of Victoria, which receives a copy of every item published in Victoria.

- ARMSTRONG, D. M.—*Berkeley's Theory of Vision*. Melbourne University Press, 1961, p. 106.
- AUSTIN, A. G.—*Australian Education, 1788-1900: Church, State and Public Education in Colonial Australia*. Pitman, 1961, p. 282.
- AUSTRALIAN COLLEGE OF EDUCATION, *ed.*—*Educational Values in a Democracy* by J. R. Darling and others; *Lectures Delivered at the 1st Annual Meeting of the College*. Sydney, May, 1960. Melbourne, F. W. Cheshire, p. 71.
- AUSTRALIAN PUBLICITY COUNCIL.—*Liquid Gold—Australia*. Melbourne, The Council, 1960, p. 160.
- BARNARD, A.—*Visions and Profits; Studies in the Business Career of Thomas Sutcliffe Mort*. Melbourne University Press, 1961, p. 234.
- BARNARD, M.—*Macquarie's World*. Melbourne University Press, 1961, p. 236. (2nd ed. as paperback.)
- BOYD, R.—*The Australian Ugliness*. Melbourne, F. W. Cheshire, 1960, p. 236.
- BROKEN HILL ASSOCIATED SMELTERS PTY. LTD.—*The Fabulous Hill*. Broken Hill Associated Smelters Pty. Ltd., 1960, p. 53.
- BROKEN HILL PROPRIETARY CO. LTD.—*B.H.P., 75 years*. Melbourne, 1960, p. 191.
- BROGDEN, S.—*History of Australian Aviation*. Melbourne, Hawthorn Press, 1960, p. 192.
- BUNBURY, A.—*Floral Art for Pleasure*. Melbourne, Georgian House, 1960, p. 80.
- CALDWELL, E. N.—*Last Witness for Robert Louis Stevenson*. Melbourne University Press, 1961, p. 384.
- CAVANAUGH, M.—*Cup Day: The Story of the Melbourne Cup, 1861-1960*, by Maurice Cavanaugh and Meurig Davies. Melbourne, F. W. Cheshire, 1960, p. 384.
- CORRIGAN, F. M.—*A Report on Victoria's Coastline and Foreshore*. Town and Country Planning Assn., 1960, p. 120.
- CRAWFORD, R. M.—*An Australian Perspective*. Melbourne University Press, 1960, p. 82.
- CRAWFORD, R. M.—*Ourselves and the Pacific*. Melbourne University Press, 1961, p. 278 (4th edition).
- CROSSLAND, R.—*Wainewright in Tasmania*. Melbourne University Press, 1960, p. 166. (Melbourne Paperbacks.)
- DUNLOP, E. W.—*Australia—Colony to Nation* by Eric W. Dunlop and W. Pike. Melbourne, Longmans Green, 1960, p. 250.
- DUTTON, G.—*Patrick White (Australian Writers and Their Work)*. Melbourne, Lansdowne Press, 1961, p. 40.
- EVANS, L.—*Ourselves in a Changing World*. Melbourne, F. W. Cheshire, 1961, p. 261.

APPENDIX C—*continued*

- FINEMORE, B.—Painting. Melbourne, Longmans Green, 1961. (The Arts in Australia.)
- FRENCH, E. L., *ed.*—Melbourne Studies in Education, 1958–1959. Melbourne University Press, 1960, p. 161.
- HEDDLE, E. M.—Story of a Vineyard : Chateau Tahbilk. Melbourne, F. W. Cheshire, 1960, p. 64.
- HETHERINGTON, J. A.—Australians : Nine Profiles. Melbourne, F. W. Cheshire, 1960, p. 181.
- HETHERINGTON, J. A.—Norman Lindsay (Australian Writers and Their Work). Melbourne, Lansdowne Press, 1961, p. 48.
- HILL, D., *joint ed.*—The Geology of Queensland by D. Hill and A. K. Denmead. Melbourne University Press, 1960, p. 474, 2 vols, maps.
- HOFF, U.—Charles Conder : His Australian Years. Melbourne, National Gallery Society, 1960, p. 47.
- HUTCHINSON, R. C.—Food for Longer Living. Melbourne University Press, 1960, p. 98. (Melbourne Paperbacks.)
- JAMES, A. V.—New General Science by Albert Victor James and G. E. P. Rowney. Melbourne, F. W. Cheshire, 1960, p. 408.
- JOHNSON, R. V.—Walter Pater : A Study of His Critical Outlook and Achievement. Melbourne University Press (Australian Humanities Research Council Monograph), 1961, p. 55.
- KIDDLE, M.—Men of Yesterday. Melbourne University Press, 1961, p. 573.
- MCARTHUR, N.—Introducing Population Statistics. Melbourne, Oxford University Press, 1961, p. 137.
- PALMER, H. G.—After the First Hundred Years by Helen G. Palmer and Jessie Macleod. Melbourne, Longmans, 1961, p. 203.
- PAPPE, H. O.—John Stuart Mill and the Harriet Taylor Myth. Melbourne University Press, 1960, p. 51.
- PARR, L.—Sculpture. Melbourne, Longmans, 1961, p. 32. (The Arts in Australia.)
- PATTON, R. T.—Know Your Own Trees. Melbourne University Press, 1961, p. 54. (Melbourne Paperbacks.)
- RONALD, R. B.—The Riverina : People and Properties. Melbourne, F. W. Cheshire, 1961, p. 82.
- SCHOLES, D. W.—Fly-fisher in Tasmania. Melbourne University Press, 1961, p. 208.
- STOLLER, A.—Growing Old : Problems of Old Age in the Australian Community. Melbourne, F. W. Cheshire, 1960, p. 199.
- STRIZIC, MARK.—Melbourne : A Portrait, by Mark Strizic and David Saunders. Melbourne, Georgian House, 1960, p. 126. Illustrations and Text.
- THIELE, C., *ed.*—Looking at Poetry. Melbourne, Longmans Green, 1960, p. 160.
- TOWNSEND, L.—Gynaecology for Students. Melbourne University Press, 1961, p. 31.
- WANNAN, W.—A Treasury of Australian Humour. Melbourne, Lansdowne Press, 1960, p. 320.
- ZUBRZCKI, J.—Immigrants in Australia : a Demographic Survey Based upon the 1954 Census. Melbourne University Press, 1960, p. 118.

## Appendix D

### *Publications Issued by the Victorian Office, Commonwealth Bureau of Census and Statistics*

#### **Printed Publications**

Victorian Year Book (Price 15s.; postage 3s. 4d.)  
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# 1961 CENSUS SUPPLEMENT

The information contained in this supplement represents early results of the Census of the Commonwealth of Australia, held on the night of 29th-30th June, 1961, which are subject to amendment on completion of tabulation.

Preliminary figures for the population of each State and Territory within Australia, together with "Field Count" figures for each capital city, are shown in the following table:—

## AUSTRALIA—CENSUS POPULATIONS OF AUSTRALIAN STATES, TERRITORIES, AND CAPITAL CITIES, 1961

State or Territory	State Population (Preliminary Figure)			Capital City Population ("Field Count")
	Males	Females	Persons	
New South Wales ..	1,972,936	1,943,971	3,916,907	2,181,211
Victoria .. ..	1,474,530	1,455,714	2,930,244	1,907,366
Queensland .. ..	774,448	744,411	1,518,859	620,121
South Australia ..	490,186	479,072	969,258	587,656
Western Australia ..	375,452	361,172	736,624	419,755
Tasmania .. ..	177,622	172,710	350,332	115,887
Northern Territory ..	16,252	10,887	27,139	12,480*
Australian Capital Territory	30,858	27,970	58,828	56,430
Total Australia ..	5,312,284	5,195,907	10,508,191	5,900,906

\* City of Darwin.

The following table shows "Field Count" figures for the population of each Local Government Area in Victoria, by Statistical Divisions, as revealed at the Census of 30th June, 1961. Since they exclude "migratory" population and the population of not-incorporated areas, and as they are subject to amendment on completion of tabulation, the totals of the populations of the Statistical Divisions do not add to the preliminary figure for Victoria, viz.—2,930,244.

## VICTORIA—CENSUS POPULATIONS OF LOCAL GOVERNMENT AREAS, 1961

Local Government Area	"Field Count" Population, 1961 Census	Local Government Area	"Field Count" Population, 1961 Census
MELBOURNE METROPOLITAN AREA		MELBOURNE METROPOLITAN AREA—continued	
Altona Shire .. ..	16,144	Coburg City .. ..	70,726
Berwick Shire (part) ..	10,882	Collingwood City ..	25,345
Box Hill City .. ..	50,390	Croydon Shire .. ..	15,656
Brighton City .. ..	41,244	Dandenong City .. ..	24,714
Broadmeadows City ..	66,167	Doncaster and Templestowe Shire .. ..	19,013
Brunswick City .. ..	52,817	Eltham Shire (part) ..	12,727
Bulla Shire (part) ..	581	Essendon City .. ..	58,928
Camberwell City .. ..	99,206	Fern Tree Gully Shire (part) .. ..	35,815
Caulfield City .. ..	74,725		
Chelsea City .. ..	22,262		

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VICTORIA—CENSUS POPULATIONS OF LOCAL GOVERNMENT AREAS, 1961—*continued*

Local Government Area	"Field Count" Population, 1961 Census	Local Government Area	"Field Count" Population, 1961 Census
<b>MELBOURNE METRO- POLITAN AREA—con- tinued</b>		<b>CENTRAL STATISTICAL DIVISION—continued</b>	
Fitzroy City .. ..	29,181	Healesville Shire ..	6,038
Footscray City .. ..	60,650	Kilmore Shire (part) ..	773
Frankston Shire .. ..	26,637	Korumburra Shire ..	7,798
Hawthorn City .. ..	36,595	Lillydale Shire (part) ..	5,390
Heidelberg City .. ..	86,292	Melton Shire .. ..	1,803
Keilor City .. ..	29,474	Mornington Shire ..	7,799
Kew City .. ..	33,132	Newtown and Chilwell City .. ..	11,766
Lillydale Shire (part) ..	12,869	Phillip Island Shire ..	1,243
Malvern City .. ..	47,829	Queenscliffe Borough ..	2,657
Melbourne City .. ..	76,483	Romsey Shire .. ..	2,640
Moorabbin City .. ..	95,642	South Barwon Shire ..	16,772
Mordialloc City .. ..	26,469	Upper Yarra Shire ..	5,681
Northcote City .. ..	44,663	Werribee Shire .. ..	13,665
Nunawading City .. ..	53,211	Whittlesea Shire (part) ..	2,573
Oakleigh City .. ..	47,937	Wonthaggi Borough ..	4,193
Port Melbourne City ..	12,302	Not Incorporated ..	n.a.*
Prahran City .. ..	52,375	<b>Total—Central Statistical Division .. ..</b>	<b>238,405</b>
Preston City .. ..	84,037		
Richmond City .. ..	33,789	<b>NORTH-CENTRAL STATISTICAL DIVISION</b>	
Ringwood City .. ..	24,317	Alexandra Shire .. ..	4,545
Sandringham City .. ..	36,977	Broadford Shire .. ..	2,074
South Melbourne City ..	32,253	Castlemaine Town ..	7,216
Springvale City .. ..	28,482	Clunes Borough .. ..	835
St. Kilda City .. ..	51,868	Creswick Shire .. ..	3,581
Sunshine City .. ..	62,227	Daylesford Borough ..	2,778
Waverley City .. ..	44,954	Glenlyon Shire .. ..	1,869
Whittlesea Shire (part) ..	8,883	Kilmore Shire (part) ..	1,946
Williamstown City .. ..	30,496	Kyneton Shire .. ..	5,978
<b>Total—Melbourne Metro- politan Area .. ..</b>	<b>1,907,366</b>	Maldon Shire .. ..	2,004
		Maryborough City ..	7,237
<b>CENTRAL STATISTICAL DIVISION</b>		McIvor Shire .. ..	2,140
Bacchus Marsh Shire ..	4,423	Metcalfe Shire .. ..	2,316
Ballan Shire .. ..	2,439	Newham and Woodend Shire .. ..	2,095
Bannockburn Shire ..	2,206	Newstead Shire .. ..	1,874
Barrabool Shire .. ..	2,342	Pyalong Shire .. ..	455
Bass Shire .. ..	3,851	Seymour Shire .. ..	9,258
Bellarine Shire .. ..	10,113	Talbot Shire .. ..	742
Berwick Shire (part) ..	10,818	Tullaroop Shire .. ..	1,376
Bulla Shire (part) .. ..	4,232	Yea Shire .. ..	2,685
Bungaree Shire .. ..	2,048	<b>Total—North - Central Statistical Division ..</b>	<b>63,004</b>
Buninyong Shire .. ..	4,313		
Corio Shire .. ..	29,397	<b>WESTERN STATISTICAL DIVISION</b>	
Cranbourne Shire .. ..	10,885	Ararat City .. ..	7,930
Eltham Shire (part) ..	3,811	Ararat Shire .. ..	4,598
Fern Tree Gully Shire (part) .. ..	1,617	Ballaarat City .. ..	41,068
Flinders Shire .. ..	10,430	Ballaarat Shire .. ..	10,110
Geelong City .. ..	18,017		
Geelong West City .. ..	17,660		
Gisborne Shire .. ..	2,136		
Hastings Shire .. ..	6,876		

\* n.a. Not available.



VICTORIA—CENSUS POPULATIONS OF LOCAL GOVERNMENT AREAS, 1961—*continued*

Local Government Area	"Field Count" Population, 1961 Census	Local Government Area	"Field Count" Population, 1961 Census
<b>NORTH - EASTERN STATISTICAL DIVISION— continued—</b>		<b>GIPPSLAND STATISTICAL DIVISION—continued—</b>	
Omeo Shire .. ..	2,150	Bairnsdale Shire ..	11,276
Oxley Shire .. ..	5,217	Buln Buln Shire ..	8,430
Rutherglen Shire ..	2,653	Maffra Shire .. ..	8,751
Towong Shire .. ..	4,212	Mirboo Shire .. ..	2,054
Upper Murray Shire ..	2,937	Moe Borough .. ..	15,454
Violet Town Shire ..	1,360	Morwell Shire .. ..	18,351
Wangaratta City .. ..	13,812	Narracan Shire .. ..	9,320
Wangaratta Shire .. ..	2,140	Orbost Shire .. ..	6,170
Wodonga Shire .. ..	12,998	Rosedale Shire .. ..	4,569
Yackandandah Shire ..	3,084	Sale City .. .. ..	7,898
		South Gippsland Shire ..	5,241
		Tambo Shire .. ..	5,433
		Traralgon Borough ..	12,298
		Traralgon Shire .. ..	1,229
		Warragul Shire .. ..	9,572
		Woorayl Shire .. ..	8,780
		Yallourn Works Area ..	5,010
<b>Total—North - Eastern Statistical Division ..</b>	<b>86,146</b>		
<b>GIPPSLAND STATISTICAL DIVISION</b>		<b>Total — Gippsland Statistical Division ..</b>	<b>148,982</b>
Alberton Shire .. ..	5,931		
Avon Shire .. .. ..	3,215		

Summary of Statistical Divisions							"Field Count" Population, 1961 Census
Metropolitan .. ..	..	..	..	..	..	..	1,907,366
Central .. .. ..	..	..	..	..	..	..	238,405
North-Central .. ..	..	..	..	..	..	..	63,004
Western .. .. ..	..	..	..	..	..	..	197,872
Wimmera .. .. ..	..	..	..	..	..	..	58,780
Mallee .. .. ..	..	..	..	..	..	..	62,908
Northern .. .. ..	..	..	..	..	..	..	156,463
North-Eastern .. ..	..	..	..	..	..	..	86,146
Gippsland .. .. ..	..	..	..	..	..	..	148,982

Principal Urban Areas	"Field Count" Population, 1961 Census	Principal Urban Areas	"Field Count" Population, 1961 Census
<b>GEE LONG URBAN AREA</b>		<b>BALLARAT URBAN AREA</b>	
Geelong City .. ..	18,017	Ballaarat City .. ..	41,068
Geelong West City ..	17,660	Sebastopol Borough ..	4,662
Newtown and Chilwell City .. .. ..	11,766	Ballaratt Shire (part) ..	8,351
Bellarine Shire (part) ..	4,347	Buninyong Shire (part)	832
Corio Shire (part) ..	25,676		
South Barwon Shire (part)	14,200		
<b>Total—Geelong Urban Area .. .. ..</b>	<b>91,666</b>	<b>Total—Ballarat Urban Area .. .. ..</b>	<b>54,913</b>



VICTORIA—CENSUS POPULATIONS OF LOCAL GOVERNMENT AREAS, 1961—*continued*

Principal Urban Areas	"Field Count" Population, 1961 Census	Principal Urban Areas	"Field Count" Population, 1961 Census
<b>BENDIGO URBAN AREA</b>		<b>LATROBE VALLEY URBAN AREA</b>	
Bendigo City .. ..	30,190	Yallourn Works Area ..	5,010
Eaglehawk Borough ..	4,930	Moe Borough ..	15,454
Marong Shire (part) ..	2,520	Traralgon Borough ..	12,298
Strathfieldsaye Shire (part)	2,669	Morwell (N.M.)* ..	14,827
		Yallourn North (N.M.)*	1,867
Total—Bendigo Urban Area .. ..	40,309	Total—Latrobe Valley Urban Area .. ..	49,456

\* N.M. Non-municipal town, see following table.

The following table shows "Field Count" populations of non-municipal towns with a population of 1,000 persons or more at the Census of 30th June, 1961. Non-municipal towns, as the name implies, are towns which are not separately incorporated for purposes of local government, and their boundaries were specifically determined for census purposes to embrace the urban area which could be regarded as the town.

## VICTORIA—CENSUS POPULATION OF NON-MUNICIPAL TOWNS, 1961

Non-Municipal Town	"Field Count" Population, 1961 Census	Non-Municipal Town	"Field Count" Population, 1961 Census
Alexandra .. ..	1,943	Mortlake .. ..	1,300
Bacchus Marsh .. ..	3,287	Morwell .. ..	14,827
Bairnsdale .. ..	7,418	Mount Beauty .. ..	1,508
Beaufort .. ..	1,239	Murtoa .. ..	1,136
Beechworth .. ..	3,508	Myrtleford .. ..	2,120
Broadford .. ..	1,675	Nathalia .. ..	1,276
Casterton .. ..	2,442	Nhill .. ..	2,231
Charlton .. ..	1,523	Numurkah .. ..	2,687
Cobram .. ..	2,540	Ocean Grove .. ..	1,597
Cohuna .. ..	1,811	Orbost .. ..	2,639
Coleraine .. ..	1,508	Ouyen .. ..	1,694
Corryong .. ..	1,128	Pakenham East .. ..	1,408
Creswick .. ..	1,725	Portarlington .. ..	1,007
Dimboola .. ..	1,922	Red Cliffs .. ..	2,440
Donald .. ..	1,517	Rochester .. ..	1,962
Dromana .. ..	1,127	Rosebud .. ..	3,681
Drouin .. ..	2,509	Rushworth .. ..	1,077
Euroa .. ..	3,039	Rutherglen .. ..	1,292
Healesville .. ..	2,376	Rye .. ..	1,335
Heathcote .. ..	1,289	Seymour .. ..	5,117
Heyfield .. ..	1,918	Sorrento .. ..	2,143
Irymple .. ..	1,134	Sunbury .. ..	3,122
Kerang .. ..	3,701	Tatura .. ..	2,161
Kilmore .. ..	1,355	Terang .. ..	2,381
Korumburra .. ..	3,234	Torquay .. ..	1,096
Kyneton .. ..	3,364	Trafalgar .. ..	1,773
Lakes Entrance .. ..	1,603	Warburton .. ..	1,624
Laverton .. ..	4,158	Warracknabeal .. ..	3,062
Leongatha .. ..	2,748	Warragul .. ..	6,399
Lorne .. ..	1,073	Werribee .. ..	5,395
Maffra .. ..	3,400	Wodonga .. ..	7,516
Maldon .. ..	1,071	Woodend .. ..	1,220
Mansfield .. ..	1,943	Yallourn North .. ..	1,867
Merbein .. ..	1,732	Yarram .. ..	2,053
Mooroopna .. ..	2,513	Yarrawonga .. ..	3,022
Mornington .. ..	4,881	Yea .. ..	1,111