Victorian Year-Book, 1931-32.

INTRODUCTION.

GEOGRAPHICAL POSITION, AREA, AND CLIMATE.

Victoria is situated at the south-eastern extremity of the Australian continent, of which it occupies about a thirty-fourth part, and it contains about 87,884 square miles, or 56,245,760 acres. It 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. On the west it is bounded by South Australia, the dividing line being about 242 geographical miles in length, approximating to the position of the 141st meridian of east longitude, and extending from the River Murray to the sea. On the south and southeast its shores are washed by the Southern Ocean, Bass Strait, and the Pacific Ocean. It lies between the 34th and 39th parallels of south latitude and the 141st and 150th meridians of east longitude. Its extreme length from east to west is about 420, its greatest breadth about 250, and its extent of coast-line is 980 geographical miles, including the length around Port Phillip Bay 164 miles, Western Port 90 miles, and Corner Inlet 50 miles. Great Britain, exclusive of the islands in the British Seas, contains 88,756 square miles, and is therefore slightly larger than Victoria.

The southernmost point in Victoria, and in the whole of the Australian continent, is Wilson's Promontory, which lies in latitude 39 deg. 8 min. S., longitude 146 deg. 26 min. E.; the northernmost point is the place 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 most westerly point is the line of the whole western frontier, which 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 242 geographical miles.

From its geographical position, Victoria enjoys a climate more suitable to the European constitution than any other State upon the Continent of Australia. In the seventy-six years ended with 1931 the maximum temperature in the shade recorded at the Melbourne Observatory and the Weather Bureau was 111.2 deg. Fahr. on the 14th January, 1862; the minimum was 27 deg., on the 21st July, 1869; and the mean was 58.5 deg. Upon the average, on only four days during the year does the thermometer rise above 100 deg. in the shade, and on twenty days the temperature reaches 90 deg. or over; generally, on about two nights during the year it falls below freezing point. Sultry nights are of rare occurrence. It is only occasionally that a high minimum is recorded. The minimum reading approximates to 70 deg. on an average on only two nights in any one The maximum temperature in the sun ever recorded (i.e., since 1859) was 178.5 deg., on the 14th January, 1862. The mean atmospheric pressure noted, first at the Observatory 91 feet above the sea level, and later at the Weather Bureau 115 feet above sea level, was, during the seventy-four years ended with 1931, 30.012 inches; the average number of days on which rain fell each year was 139, and the average yearly rainfall was 25.53 inches. mean relative humidity of the atmosphere is 65 per cent.; on very warm days it is often 12 per cent., and it has been as low as 2 per cent. The severity of the heat is not felt so much as it would be if there were a relatively high wet bulb, as the temperature by such bulb seldom exceeds 75 deg. The average number of hours of sunshine daily is 6.2, and fogs occur, on an average, on only 20 days in the year.

MOUNTAINS AND HILLS, RIVERS AND LAKES.

The highest mountain in Victoria is Mount Bogong,*
situated in the county of the same name, 6,509 feet
above the sea-level; the next highest peaks are—
Mount Feathertop, 6,306 feet; Mount Nelson, 6,170 feet; Mount
Fainter, 6,160 feet; Mount Hotham, 6,100 feet; Mount McKay,
6,030 feet; and Mount Cope, 6,027 feet; all situated in the same
county; also the Cobboras, 6,030 feet, situated between the
counties of Benambra and Tambo. These, so far as is known, are
the only peaks which exceed 6,000 feet in height; but, according
to a list which appears in the Year-Book for 1915-16, there
are 39 peaks between 5,000 and 6,000 feet high, and 40 between 4,000
and 5,000 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.

^{*} The highest mountain on the Australian Continent is Mount Kosciusko, in New South Wales, one peak of which is 7,328 feet high.

With the exception of the Yarra, on the banks of which the metropolis is situated; the Murray; the Goulburn, which empties itself into the Murray about eight miles to the eastward of Echuca; and the La Trobe and the Mitchell, with, perhaps, a few other of the Gippsland streams, the rivers of Victoria are not navigable. They, however, drain the watershed of large areas of country, and many of the streams are used as feeders to permanent reservoirs for irrigation and water supply purposes. The Murray, which forms the northern boundary of the State, is the largest river in Australia. Its total length is 1,520 miles, for 1,200 of which it flows along the Victorian border. Several of the rivers in the northwestern portion of the State have no outlet, but are gradually lost in the absorbent tertiary flat country through which they pass.

Victoria contains numerous salt and fresh-water lakes and lagoons; but many of these are nothing more than swamps during dry seasons. Some of them are craters of extinct volcanoes. Lake Corangamite, the largest inland lake in Victoria, covers 90 square miles, and is quite salt, notwithstanding that it receives the flood waters of several fresh-water streams. It has no visible outlet. Lake Colac, only a few miles distant from Lake Corangamite, is a beautiful sheet of water, 10½ square miles in extent, and quite fresh. The Gippsland lakes—Victoria, King, and Reeve—are situated close to the coast, and are separated from the sea by only a narrow belt of sand. Lake Wellington, the largest of the Gippsland lakes, lies to the westward of Lakes Victoria and King, and is united to the first-named by a narrow channel. South-east of Geelong is Lake Connewarre, which is connected with the sea at Point Flinders.

A list of mountains and hills, rivers and lakes in Victoria appears in the *Victorian Year-Book* for 1915-16. This was revised by the late Surveyor-General, Mr. A. B. Lang, and contains information in regard to heights, lengths, and areas respectively.

FLORA OF VICTORIA.

An article on the "Flora of Victoria," by Mr. J. W. Audas, F.L.S., F.R.M.S. (National Herbarium, Melbourne), appeared in the *Year-Book*, 1927-28, on pages 3 to 19, and addenda thereto appeared in the *Year-Books* of 1928-29 and 1929-30.

FURTHER ADDENDUM TO THE ABOVE ARTICLE.

The following species were added to the list of the Victorian Flora during the year 1931-32:—

Stipa oligostachys Hughes, "Few Spiked Spear Grass" (Gramineae). Stipa nobilis Pilger, "Elated Spear Grass" (Gramineae).

Stipa variabilis Hughes, "Variable Spear Grass" (Gramineae).

Stipa platychaeta Hughes, "Flat Awned Spear Grass" (Gramineae).

Stipa incurva Hughes, "Curved Spear Grass" (Gramineae).

Stipa aphanoneura Hughes, "Compact Spear Grass" (Gramineae).

Stipa Blackii C. E. Hubbard, "Black's Spear Grass" (Gramineae).

Stipa scelerata Behr, "Ribbed Spear Grass" (Gramineae).

Danthonia geniculata J. M. Black, "Kneed Wallaby Grass" (Gramineae).

Danthonia setacea R. Br., "Mulga Wallaby Grass" (Gramineae).

Danthonia pallida J. M. Black, "Pale Wallaby Grass" (Gramineae). Danthonia semiannularis R. Br., "Wallaby Grass" (Gramineae).

" South Forsuthii Ham. Twisted Sedge " Levidosverma (Cyperaceae).

Carex rara Boott, "Needle Sedge" (Cyperaceae).

Prasophyllum Hartii Rogers, "Small Flowered Maroon Orchid" (Orchidaceae).

Calochilus Rogers, " Pale Beard Orchid" saprophyticus (Orchidaceae).

"Spiral-leaf Sun Orchid" Thelymitra D'AltoniiRogers, (Orchidaceae).

Thelymitra truncata Rogers, "Blunt Sun Orchid" (Orchidaceae). Corusanthes dilatata Rupp & Nicholls, "Stately Helmet Orchid"

(Orchidaceae).

Corysanthes aconitifolius Salish, "Aconite Helmet Orchid" (Orchidaceae).

Caladenia tutelata Rogers, "Sentinal Orchid" (Orchidaceae).

Microtis orbicularis Rogers, "Hooded Leek Orchid" (Orchidaceae).

Pterostylis Woollsii Fitz, "Long-tailed Greenhood" (Orchidaceae).

Atriplex campanulatum Bth., "Bell Saltbush" (Chenopodiaceae).

microphyllum F.v.M., "Small-leaf Goosefoot" Chenopodium (Chenopodiaceae).

Saltbush " F.v.M., "Tangled Bassiadivaricata (R.Br.) (Chenopodiaceae).

(R.Br.) F.v.M.. " Twin-flower Saltbush " Bassiabiflora (Chenopodiaceae).

acroptera F.v.M. & Tate, "Small Babbagia" Babbagia (Chenopodiaceae).

"Opposite-leaf Kochia oppositifolia F.v.M., Bluebush " (Chenopodiaceae).

J. M. Black, " Creeping Bluebush " Kochia excavata(Chenopodiaceae).

Pultenaea densiflora F.v.M., "Dense-leaf Pea Bush" (Leguminosae). " Curl-leaf procumbens A. Cunn, Pea Pultenaea (Leguminosae).

Daviesia buxifolia Bth., "Box-leaf Bitter Pea" (Leguminosae).

Acacia phlebophylla F.v.M., "Buffalo Sally" (Leguminosae).

Desmodium brachypodium A. Gray, "Short Pod Tic-Trefoil" (Leguminosae).

Goodia medicaginea F.v.M., "Small Golden-Tip" (Leguminosae).

Correa glabra Lindl., "Smooth Correa" (Rutaceae).

Boronia dentigera F.v.M., "Toothed Boronia" (Rutaceae).

Boronia hispida Cheel, "Bristly Boronia" (Rutaceae).

Boronia rigens Cheel, "Stiff Boronia" (Ruthaceae).

Pomaderris cinerea Bth., "Ashy Pomaderris" (Rhamnaceae).

Sida intricata F.v.M., "Tangled Sida" (Malvaceae).

Frankenia sessilis Summerhayes, "Small-leaf Sea Heath" (Frankeniaceae).

Frankenia foliosa J. M. Black, "Pink Sea Heath" (Frankeniaceae).

Frankenia angustipetala Summerhayes, "Thyme Sea Heath" (Frankeniaceae).

Eucalyptus Robertsoni Blakely, "Messmate Peppermint" (Myrtaceae).

Eucalyptus laevopinea Baker & Sm., "Silver-top Stringybark" (Myrtaceae).

Eucalyptus Dawsoni Baker, "Slaty Gum" (Myrtaceae).

Eucalyptus St. Johnii Baker, "Minor Blue Gum" (Myrtaceae).

Eucalyptus Baxteri Bth., "Brown Stringybark" (Myrtaceae,.

Eucalyptus glaucescens Maiden & Blakely, "Alpine Mallee" (Myrtaceae).

Eucalyptus oviformis Maiden & Blakely, "Rare Red Gum" (Myrtaceae).

Eucalyptus paradoxa Maiden & Blakely, "Puzzling Blue Gum" (Myrtaceae).

Eucalyptus novae-anglica Maiden & Blakely, "New England Peppermint" (Myrtaceae).

Eucalyptus bicostata Maiden & Blakely, "Victorian Blue Gum" (Myrtaceae).

Eucalyptus Wilksoniana Baker, "Mallee Stringybark" (Myrtaceae).

Eucalyptus pseudo-globulus (Hort) Nandin, "False Blue Gum" (Myrtaceae).

Astrotricha linearis A. Cunn, "Narrow-leaf Star Hair" (Araliaceae).

Rapania Howittiana (F.v.M.) Mey., "Turnip Wood" (Myrsinaceae). Plagiobotyrys elechanthus (F.v.M.), Johnston (Boraginaceae).

Scutellaria mollis R.Br., "Hairy Skullcap" (Labiatae).

Asperula minima Hook.f., "Small Woodruff" (Rubiaceae).

Asperula charophyton Shaw & Thurril, "Chara Woodruff" (Rubiaceae).

Asperula wimmeriana Shaw & Thurril, "Wimmera Woodruff" (Rubiaceae).

Coprosma nivalis Oliver, "Snow Coprosma" (Rubiaceae).

Coprosma Tadgellii Oliver, "Mountain Coprosma" (Rubiaceae).

Goodenia primulacea Schlecht, "Primrose Goodenia" (Goodeniaceae).

Brachycome lissocarpa J. M. Black, "Creeping Daisy" (Compositae).

Cassinia complanata J. M. Black, "Smooth Cassinia" (Compositae).

Vittadinia tenuissima (Bth.) J. M. Black, "Slender Daisy" (Compositae).

Vittadinia megacephala (F.v.M.) J. M. Black, "Large-headed Daisy" (Compositae).

 $\it Vittadinia\ pterochaeta\ (F.v.M.)\ J.\ M.\ Black,\ "Winged-seed\ Daisy" (Compositae).$

Leptorhynchus panaetioides Bth., (Compositae).

Leptorhynchus medius A. Cunn, "Medium Buttons" (Compositae).

Helichrysum retusum Sond. & F.v.M., "Blunt-leaf Everlasting" (Compositae).

Helipterum Stuartianum Sond., "Flowery Sunray" (Compositae). Senecio hypoleucus F.v.M., "Downy Groundsel" (Compositae).

PHYSICAL GEOGRAPHY AND GEOLOGY OF VICTORIA.

An article on the "Physical Geography and Geology of Victoria," by Mr. W. Baragwanath, Director of Victorian Geological Survey, appeared in the Year-Book for 1927-28 on pages 20 to 30, and an addendum thereto appears in each subsequent issue of the Year-Book.

FURTHER ADDENDUM TO THE ABOVE ARTICLE.

Boring in the search for oil in Gippsland has proved that in the vicinity of Lakes Entrance the quantity of oil was limited. In an endeavour to increase the flow, the bores were put down into the

artesian water-bearing beds. Results not proving satisfactory in this district, other bores are being put down to the west and south-west where the tertiary strata are of greater thickness. Traces of oil and gas have been reported from these bores.

An interesting summary of the tertiary geology of East Gippsland has been prepared by the Commonwealth Palaeontologist, Mr. F. Chapman, A.L.S., and published by the Department of Home Affairs. In this work the correlation of the strata passed through in the various bores has been made and this work will serve as a guide for future boring in the district.

THE FAUNA OF VICTORIA.

An article on the "Fauna of Victoria," by the late T. S. Hall, M.A., D.Sc. (University of Melbourne), and Mr. J. A. Kershaw, F.Z.S., Curator of the National Museum, Melbourne, appeared in the Year-Book for 1916-17, and addenda thereto by Mr. Kershaw in the Year-Books for 1918-19 and 1920-21.

The following additional notes on this subject have been contributed by Mr. D. Mahony, M.Sc., Director of the National Museum, Melbourne:—

The space allotted for this article is sufficient only for the addition of a few notes to the Summary that appeared in the *Victorian Year-Book* for 1916-1917, pp. 68-78.

It is indeed a tragedy that many of our most interesting mammals and birds seem doomed to extinction. But for the laws enacted for their protection and the establishment of national parks and sanctuaries, the Platypus, the Koala and the Lyre Bird among others would probably be extinct. Bush fires and land settlement, with the attendant destruction of forests and scrub, have destroyed many of our native creatures, but more destructive still are introduced animals such as foxes, rabbits, cats, rats, and mice which have established themselves widely, and either kill native animals directly or successfully compete for their food supplies.

Among the Kangaroos, the Grey (Macropus giganteus) is still comparatively common, but the Red (M. rufous) and the Black-faced (M. melanops) have almost disappeared. The Black-tailed Wallaby

(M. ualabatus) exists in some numbers, but the other Wallabies have quite gone, with the possible exception of the Rock Wallaby (Petrogale penicillata).

Some forty years ago the Native Cat (Dasyurus viverrinus) was extremely common, but it was suddenly almost annihilated, probably by disease. Now, however, it seems to be re-establishing itself, and specimens have been seen even in the neighbourhood of Melbourne. The Tiger Cat (D. maculatus) is holding its own in the Cape Otway district.

The Common Pouched Mouse (Sminthopsis murina) is no longer common, though probably not extinct, but the allied form (S. crassicaudata) is moderately abundant in some localities.

The Allied Rat (Rattus assimilis) persists in numbers, and the Swamp Rat (R. lutreola) also survives, though it has a limited range; but a grey form of the European rat, known as the Alexandrine Rat (R. rattus alexandrinus), has largely replaced the native rats.

There is little to add concerning reptiles. Among the lizards probably the most common is Quoy's Water Lizard (*Hinula quoyi*). The Death Adder is found only near the Murray River. The generic name of the Brown Snakes has been altered from Diamenia to Demansia.

It is now known that the only bird peculiar to Victoria is the Helmeted Honeyeater (*Meliphaga cassidix*), which is confined to parts of Gippsland. The majority of native birds are protected throughout the year.

A few fish known already in adjoining States have been added to the list of species recorded in Victoria, but no new species have been described.

Since 1917 numerous new forms of Scorpions, Spiders, Butterflies, Moths, Beetles, Termites, Ants, and Bees have been described, and many of the minor groups of insects have also been investigated.

THE HISTORY OF VICTORIA.

An article on this subject contributed by Professor Ernest Scott, Professor of History in the University of Melbourne, appeared in the Year-Book for 1916-17, pages 1 to 31.

CHRONOLOGICAL TABLE OF LEADING EVENTS.

The Year-Book for 1916-17 contained, on pages 31 to 50, a chronological table of leading events in Victorian history for the years 1770 to 1900 inclusive, and of leading events in Victoria and other history for the years 1901 to 1916 inclusive. The leading events in the fourteen years 1917 to 1930 were given in the volumes relating to those years.

Some of the principal events in Victorian and Australian history during 1931 were as follows:—

	_		
1931-	-22nd January	••	The Right Hon. Sir Isaac Alfred Isaacs, P.C., K.C.M.G., sworn in as Governor-General of the Commonwealth of Australia.
	4th February	••	Hon. Sir Frank Gavan Duffy, K.C.M.G., sworn in as Chief Justice of the High Court of Australia.
	23rd February		Death of Dame Nellie Melba in Sydney.
	17th March	••	The World Chief Scout (Lord Baden Powell) arrived in Australia.
	21st March	••	Australian National Airways liner, Southern Cloud, conveying two pilots and six passengers disappeared in a storm while flying from Sydney to Melbourne.
	23rd March		Death of Senator Major-General H. E. Elliott.
	6th June	••	Triennial Elections of the Legislative Council of Victoria held.
	23rd June	••	Departure of Lord Somers from Melbourne on completion of term of office as Governor of Victoria.
	29th July	•••	Assent given to Debt Conversion Agreement Act 1931, which provided for the conversion, at reduced
			rates of interest, of the Victorian portion of the internal debt of the Commonwealth and States
	0041 C		existing at 31st July, 1931.
	28th September	• •,	Financial Emergency Act 1931, proclaimed in which provision was made for carrying out a Plan agreed on by the Commonwealth and the States for meeting the grave financial emergency
			existing in Australia.
	8th October	. •	Death of General Sir John Mcnash, Leader of the A.I.F.
	25th November	• •	Scullin Ministry defeated on a vote of the House of Representatives.
	19th December	••	Senate and House of Representatives Elections held.

PROGRESS OF STATE SINCE 1850.

The following table has been prepared to illustrate the advance made by the State since 1850—the year immediately preceding the separation of the Colony from New South Wales. The subsequent years are census years except the last:—

	and the second								
	1850.	1861.	1871.	1881.	1891.	1901.	1911.	1921.	1931.
pulation, 31st December	76,162	541,800	747.412	879,886	1,157,678	1,209,900	1,339,893	1,550,686	1,801,29
evenue £	259,433	2,592,101	3,734,422	5,186,011	8,343,588	7,712,099	9,372,637	19,054,475	25,575,50
penditure from Revenue £	196,440	3,092,021	3,659,534	5,108,642	9,128,699	7,672,780	9,362,291	18,941,698	28,029,70
blic Debt £		6,835,060	12,134,800	22,944,602	43,610,265	53,072,275	57,983,764	97,317,831	167,016,5
d produced gross oz.		1,967,458	1,355,477	858,850	576,400	789,562	542,074	114.602	47,6
ol produced lbs.	16,345,468	22,640,745	37,177,646	45,970,560	76,503,635	73,235,138	101.803.644	90,250,571	133,511,4
the management			0.,,010		16,703,786	46,857,572	86,500,474	64,938,458	110,006,6
iculture —	•••	••	••	••	10,100,100	10,001,012	00,000,111	04,500.200	110,000,0
and in cultivation acres	52,341	427,241	793,918	1,582,998	2,512,598	3,647,459	5,386,247	6,425,250	9,306,2
Th 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	556,167	3.607.727	4,500,795	8,714,377	13,679,268	12,127,382	34.813.019	39,468,625	53,814,3
n to	99,535	2,136,430	3,299,889	3,612,111	4.455.551	6,724,900	9,699,127	10.907.191	6,898,8
Vine gallons	4,621	2,130,430 47.5 6 8	713.589	539.191	1,554,130	1.981.475	1,362,420	2,222,305	1,254,6
e Stock—Horses No.	21,219	84,057		278,195	440.696	392,237	472.080	487.503	379.8
Onthin			181,643					1.575.159	1,429,8
	378,806	628,092	799,509	1,286,677	1,812,104	1,602,384	1,547,569		
" Sheep "	6,032,783	6,239,258	10,002,381	10,267,265	12,928,148	10,841,790	12,882,665	12,171,084	16,477,9
,, Pigs ,,	9,260	43,480	177,447	239,926	286,780	850,370	333,281	175,275	281,2
ports, Oversea—Value £	••	10,991,377	9,201,942	11,481,567	13,802,598	12,686,880	21,850,963	57,608,777	20,305,2
ports ,, ,, £		12,209,794	12,843,451	12,318,128	11,403,922	13,075,259	18,915,716	34,871,961	25,857,8
pping tonnage	195,117	1,090,002	1,355,025	2,411,902	4,715,109	6,715,491	9,907,046	9,314,944	12,400,0
ways—Receipts £		291,382	401,389	1,665,209	3,298,567	3,337,797	4,909,062	9,851,908	10,089,8
ings Banks—Accounts) No.	1,426	12,001	15,819	107,282	300,781	393,026	595,424	1,072,554	1,620,5
open j	1 1			107,204	,	•			
" Deposits £	52,697	582,796	1,117,761	2,569,438	5,715,687	9,662,006	17,274,423	48,970,989	63,242,5
ctories—		·							
umber of		531	1,740	2,488	3,141	3,249	4,873	6,532	8,1
lands employed		4,395	19,468	43,209	52,225	66,529	102,176	140,743	126,0
alue of machinery, plant,					•				,
land, and buildings £			4,725,125	8.044.296	16.472.859	12.298.500	16.613.348	35,492,735	70,990,0
alue of articles produced £			.,	13,370,836	22,390,251	19,478,780	36,660,854	106,098,294	93,425,7
te Education				,,	,,	,,		,,	
umber of Primary schools	61	671	988	1,757	2,233	1,967	2,059	2,334	2,5
expenditure on Education £		162,547	274,384	546,285	726,711	701,034	1,052,418	2,117,151	8,014,6
al value of rateable property		102,011	2,1,001	010,200	,	102,002	2,002,110	-,,	-,,-
municipalities . £		29,638,091	50,166,078	87,642,459	203,351,360	185,101,993	265.083.727	399,502,745	629,896,3
endly Societies—		20,000,001	00,230,010	0.,014,100	200,001,000	200,201,000	-00,000,121	000,000.120	
verage number of members		7,166	35,706	47,908	89,269	101,045	145,439	143,421	163,1
	••		213,004	475,954	961,933	1,370,604	2,246,396	3,375,050	5,291,2
rotai rungs £	• •	• • •	#10,00g	210,004	801,800	1,010,004	₩,₩ŦU,UZU	. 0,010,000	

Note.—In a few instances in the earlier years, where it is not possible to give figures for the exact date or period shown, those for the nearest dates or periods are given. Gold was discovered in 1851, in which year the return was 145,137 oz. Butter figures were not collected prior to 1891.

^{*} Excluding interest paid by the State on loans for educational purposes, particulars of which are not available.