

Victorian Year-Book, 1929-30.

INTRODUCTION.

GEOGRAPHICAL POSITION, AREA, AND CLIMATE.

Area of Victoria. 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 south-east 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 nearly 600 geographical 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, according to the latest correction, 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.

Climate. 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-four years ended with 1929 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 58·4 deg. Upon the average, on only four days during the year does the thermometer rise above 100 deg. in the shade, and on 19·5 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 year. 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-two years ended with 1929, 30·012 inches; the average number of days on which rain fell each year was 138, and the average yearly rainfall was 25·49 inches. The mean relative humidity of the atmosphere is 68 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,*
Mountains and Hills. 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.

Rivers. 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

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

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 north-western portion of the State have no outlet, but are gradually lost in the absorbent tertiary flat country through which they pass.

Lakes. 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 Connearre, 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 J. W. Audas, Esq., F.L.S., F.R.M.S. (National Herbarium, Melbourne), appeared in the *Year-Book*, 1927–28, on pages 3 to 19, and an addendum thereto in the *Year-Book*, 1928–29, on pages 3 to 5. A further addendum has been furnished by Mr. Audas and is given below:—

FURTHER ADDENDUM TO THE ABOVE ARTICLE.

Supplied by Mr. Audas in April, 1930.

The following species new to science were added to the list of the flora during the year 1929–30:—

Prasophyllum Morganii W. H. Nicholls, "Mountain Leek Orchid" (Orchidaceae).

Thelymitra Merranae W. H. Nicholls, "Graceful Sun Orchid" (Orchidaceae).

Helipterum Stuartianum Sond., "Flowery Sunray" (Compositae).

Leptorrhynchus panaetioides Benth., "Beaked Buttons" (Compositae).

Casuarina Muelleriana Miq., "Slatey Sheoke" (Casuarinaceae).

Casuarina pusilla E. D. Macklin, "Dwarf Sheoke" (Casuarinaceae).

Boronia subulifolia E. Cheel, "Awl-shaped Boronia" (Rutaceae).

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

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

Erythraea Centaurium Pers., "Common Centaury" (Gentianaceae).

ALTERATIONS.

The following alterations have been made in the census of Victorian plants to conform with the rules of Vienna Conference:—

Lagenophora stipitata (Labill.) Druce for *Lagenophora Billardieri* Cass.

Lagenophora Gunnii (Hook f.) Comb. nov. for *Lagenophora emphysoptus* Hook f.

Brachycome perpusilla (Steetz.) Comb. nov. for *Brachycome collina* Benth.

Helipterum albicans D.C. for *Helipterum incanum* D.C.

Helipterum variable (Sond.) Ostenf. for *Helipterum hyalospermum* F.v.M.

Helipterum demissum (A. Gray) Druce for *Helipterum exiguum* F.v.M.

Vittadinia triloba D.C. for *Vittadinia australis* A. Rich.

Podolepis arachnoidea (Hook f.) Druce for *Podolepis Rhytidochlamys* Benth.

Helichrysum bracteatum Andr. for *Helichrysum lucidum* Benth.

Helichrysum retusum F.v.M. for *Helichrysum adnatum* Benth.

Rutidosia multiflora (Nees) B. L. Robinson for *Rutidosia Pumila* Benth.

Craspedia uniflora Forst. f. for *Craspedia Richea* Cass.

Centipeda minima A. Br. for *Centipeda orbicularis* Lour.

Acrotriche prostrata F.v.M. for *Acrotriche ventricosa* Luehm.

Elatine gratioloides A. Cunn. for *Elatine americana* Arn.

Suaeda australis (R. Br.) Moq. for *Suaeda maritima* Dum.

EXOTICS.

NEW PLANTS RECORDED DURING 1929-30.

Anchusa capensis Thunb., "Cape Forget-me-not" (Borraginaceae).
A native to South Africa. It has no economic value.

Herniaria hirsuta L., "Rupture Wort" (Illecebraceae). Native to Southern Europe, Western Asia and North-west India. This plant is supposed to have the effect of curing rupture.

Dolichos lignosus L., "Common Horse-eye Bean" (Leguminosae). Native to India. An escape from cultivation.

Ambrosia polystachya D.C., "Ragweed" (Compositae). Native to South America. It has no economic value.

Hexaglottis virgata Sweet (Iridaceae). Native to South Africa. It has no economic value.

Lythrum flexuosum Lag., "Twisted Loosestrife" (Lythrariceae). Native to Southern Europe. It has no economic value.

Avena strigosa Schrad., "Striated Oat Grass" (Gramineae). Native to Europe. It has slight fodder value.

Rosa Canina L., "Dog Rose" (Rosaceae). Native to Europe. An escape from cultivation.

Muraltia Hiesteria D.C., "African Furze" (Polygaleae). Native to South Africa. A garden escape.

Trisetum pumilum Kunth., "Small Bristle Grass" (Gramineae). Native to Southern Europe and Asia. It has slight fodder value.

Erica baccans L., "Berried Heath" (Ericaceae). Native to South Africa. An ornamental plant, and an escape from cultivation.

Trifolium cernuum Brot., "Drooping Clover" (Leguminosae). Native to Southern Europe. A fine winter growing pasture plant.

Chloris virgata Sw., "Twiggy Star Grass" (Gramineae). Native to Tropical America. It has fodder value, but is aggressive wherever established.

PHYSICAL GEOGRAPHY AND GEOLOGY OF VICTORIA.

An article on the "Physical Geography and Geology of Victoria," by W. Baragwanath, Esq., Director of Victorian Geological Survey, appeared in the *Year-Book* for 1927-28 on pages 20 to 30.

ADDENDUM TO THE ABOVE ARTICLE.

Boring operations in the vicinity of Lakes Entrance, Gippsland, have revealed small quantities of mineral oil associated with artesian water in a glauconite bed of Tertiary age immediately overlying the bedrock. Three bores, ranging from 1,150 to 1,400 feet in depth, over a distance of 5 miles, have proved the bed to dip towards the west. The amount of oil is small (approximately 1 pint daily), but is of interest as affording the first evidence of the presence of crude mineral oil in the State. Further boring in search of oil in the vicinity of

Lakes Entrance, Gippsland, has been carried out and a quantity of oil is now being obtained at the base of the Tertiary series. As the bed is bored into, the yield is increasing, and it is interesting to note the absence of artesian water in the No. 2 bore of the South Australian Oil Wells some 60 chains north-west of No. 2 bore of the Lakes Entrance Company, where the artesian flow was 1,500 gallons of water per day containing a pint of oil. In the No. 2 bore of the South Australian Oil Wells the oil has risen over 100 feet above the level where struck and the yield is estimated at 200 gallons per day. This is the first instance in the continent of Australia of free mineral oil being struck in any quantity and adds additional interest to the problem of oil production.

The glauconite bed has been determined on fossil evidence by Mr. F. Chapman, A.L.S., Federal Palaeontologist, to be of Oligocene age.

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 J. A. Kershaw, Esq., 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-Book* for 1918-19 and 1920-21.

THE HISTORY OF VICTORIA.

An article on this subject contributed by 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 twelve years 1917 to 1928 were given in the volumes relating to those years.

Some of the principal events in Victorian and other history during 1929 are given in the table which follows :—

1929. 17th February .. Interstate Steamship *Kanowna* sank some hours after striking the rocks off Cleft Island, near Wilson's Promontory. All the passengers (141) and the crew were rescued by the Captain and crew of the Steamer *Mackarra*.

| | | |
|----------------|----|--|
| 29th March | .. | Norwegian Steamship <i>Selje</i> , loaded with 114,000 bags of wheat, foundered off Cape Otway, within 25 minutes after a collision with the Steamship <i>Kaituna</i> . No lives were lost. |
| 25th April | .. | The appointment of Mr. Herbert Brookes as the Representative of Australia in the United States of America announced. |
| 26th May | .. | Flight-Lieutenant Moir, and Flying Officer Owen who had been missing since 18th May when on the last stage of their flight from England to Australia were found at Cape Don, 105 miles north-east of Darwin. |
| 10th September | .. | The Bruce-Page Ministry defeated by one vote on an amendment moved by Hon. W. M. Hughes to the Maritime Industries (Arbitration Abolition) Bill. The amendment was designed to delay the operation of the provisions of the Bill until the people had been consulted at a referendum or at a general election. |
| 16th September | .. | Proclamation dissolving House of Representatives issued. |
| 12th October | .. | General Election of House of Representatives held. The Bruce-Page Ministry defeated. The voting disclosed a remarkable swing to Labour Party. |
| 22nd October | .. | Labour Ministry, with Hon. J. H. Scullin as Prime Minister, sworn in. |
| 23rd October | .. | Adverse vote recorded against the McPherson Ministry in the Legislative Assembly. |
| 1st November | .. | Proclamation issued dissolving the Legislative Assembly. |
| 30th November | .. | General Election of members of Legislative Assembly held. |
| 11th December | .. | New Parliament opened and the McPherson Ministry defeated on an amendment moved by the Hon. E. J. Hogan to the Address-in-Reply expressing want of confidence in the Ministry. |
| 12th December | .. | Labour Ministry, with the Hon. E. J. Hogan as Premier, assumed Office. |

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 :—

STATISTICS OF VICTORIAN PROGRESS, 1850 TO 1929.

8

| | 1850. | 1861. | 1871. | 1881. | 1891. | 1901. | 1911. | 1921. | 1929. |
|---|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| Population, 31st December .. | 76,162 | 541,800 | 747,412 | 879,886 | 1,157,678 | 1,209,900 | 1,339,893 | 1,560,686 | 1,777,065 |
| Revenue .. £ | 259,433 | 2,592,101 | 3,734,422 | 5,186,011 | 8,343,588 | 7,712,099 | 9,372,637 | 19,054,476 | 28,156,034 |
| Expenditure 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 | 28,104,947 |
| Public Debt .. £ | .. | 6,835,060 | 12,134,800 | 22,944,802 | 43,610,265 | 53,072,275 | 57,983,764 | 97,317,831 | 159,552,653 |
| Gold produced .. oz. | .. | 1,967,453 | 1,855,477 | 858,850 | 576,400 | 789,562 | 542,074 | 26,275 | 26,275 |
| Wool 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 | 149,878,588 |
| Butter produced .. " | .. | .. | .. | .. | 16,703,786 | 46,857,572 | 86,500,474 | 64,938,458 | 93,728,516 |
| Agriculture— | | | | | | | | | |
| Land in cultivation .. acres | 52,341 | 427,241 | 793,918 | 1,582,998 | 2,512,593 | 3,647,459 | 5,386,247 | 6,425,250 | 8,189,113 |
| Wheat .. bushels | 556,167 | 3,607,727 | 4,500,795 | 8,714,377 | 13,679,268 | 12,127,382 | 34,813,019 | 39,468,625 | 46,818,833 |
| Oats .. " | 99,535 | 2,136,430 | 3,299,889 | 3,612,111 | 4,455,551 | 6,724,900 | 9,699,127 | 10,907,191 | 5,602,409 |
| Wine .. gallons | 4,621 | 47,568 | 713,589 | 539,191 | 1,554,130 | 1,981,475 | 1,362,420 | 2,222,305 | 1,942,701 |
| Live Stock—Horses .. No. | 21,219 | 84,057 | 181,643 | 278,195 | 440,696 | 392,237 | 472,080 | 487,503 | 412,877 |
| " Cattle .. " | 378,806 | 628,092 | 799,509 | 1,286,677 | 1,812,104 | 1,602,384 | 1,547,569 | 1,575,159 | 1,304,426 |
| " Sheep .. " | 6,032,788 | 6,239,258 | 10,002,381 | 10,267,265 | 12,928,148 | 10,841,790 | 12,882,665 | 12,171,084 | 16,498,222 |
| " Pigs .. " | 9,260 | 43,180 | 177,447 | 239,926 | 286,780 | 350,370 | 333,281 | 175,275 | 222,084 |
| Imports, Oversea—Value .. £ | .. | 10,991,377 | 9,201,942 | 11,481,567 | 13,802,598 | 12,686,880 | 21,850,963 | 57,608,777 | 46,005,650 |
| Exports .. £ | .. | 12,209,794 | 12,843,451 | 12,318,128 | 11,403,922 | 13,075,259 | 18,915,716 | 34,871,961 | 39,437,225 |
| Shipping .. " tonnage | 195,117 | 1,090,002 | 1,355,025 | 2,411,902 | 4,715,491 | 9,907,046 | 9,314,944 | 9,313,397 | 13,613,397 |
| Railways open .. miles | .. | 214 | 276 | 1,247 | 2,764 | 3,238 | 3,496 | 4,274 | 4,708 |
| Postal business—Letters .. No. | 381,651 | 6,109,929 | 11,716,166 | 26,308,347 | 62,526,448 | 83,973,499 | 159,092,011 | 180,797,030 | .. |
| " Newspapers .. " | 381,158 | 4,277,179 | 5,172,792 | 11,440,732 | 22,729,005 | 27,104,344 | 36,125,728 | 31,660,611 | .. |
| Savings Bank Deposits† .. £ | 52,697 | 582,796 | 1,117,761 | 2,569,438 | 5,715,687 | 9,662,006 | 18,213,040 | 48,959,331 | 72,444,000 |
| Factories— | | | | | | | | | |
| Number of .. | .. | 531 | 1,740 | 2,488 | 3,141 | 3,249 | 4,873 | 6,532 | 8,197 |
| Hands employed .. | .. | 4,395 | 19,468 | 43,209 | 52,225 | 66,529 | 102,176 | 140,743 | 156,568 |
| Value of machinery, plant, land, and buildings .. £ | .. | .. | 4,725,125 | 8,044,296 | 16,472,859 | 12,298,500 | 16,613,348 | 35,492,735 | 69,909,370 |
| Value of articles produced .. £ | .. | .. | .. | 13,370,836 | 22,390,251 | 19,478,780 | 36,660,854 | 106,098,294 | 127,897,463 |
| State Education— | | | | | | | | | |
| Number of Primary schools .. | 61 | 671 | 988 | 1,757 | 2,233 | 1,967 | 2,059 | 2,334 | 2,566 |
| Expenditure on Education .. | .. | 162,547 | 274,384 | 546,285 | 726,711 | 701,034 | 1,052,418 | 2,117,151 | 3,296,983† |
| Total value of rateable property in municipalities .. £ | .. | 29,638,091 | 50,166,078 | 87,642,459 | 203,351,360 | 185,101,993 | 265,083,727 | 399,502,745 | 680,300,903 |
| Friendly Societies— | | | | | | | | | |
| Average number of members .. | .. | 7,166 | 35,706 | 47,908 | 89,269 | 101,045 | 145,439 | 143,421 | 163,079 |
| Total funds .. £ | .. | .. | 213,004 | 475,954 | 961,933 | 1,370,604 | 2,246,396 | 3,375,050 | 4,934,000 |

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.

* Information not available.

† Excluding School Bank accounts, but including deposits in Commonwealth Savings Bank which commenced business on 15th July, 1912.

‡ Excluding interest paid by the State on loans for educational purposes, particulars of which are not available.

§ This quantity relates to the year 1928.