

Victorian Year-Book, 1916-17.

INTRODUCTION.

THE HISTORY OF VICTORIA.

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DISCOVERY.

Dawn of History. The history of Victoria as a political community commenced in 1835, when the rival parties of John Batman and John Pascoe Fawkner, unauthorized by the Government in Sydney, settled upon the site of Melbourne. But we have to look back to a period before the dawn of the nineteenth century to reach the beginning of our knowledge of this part of Australia. The southern coasts of the continent were the last to be discovered and explored. The Dutch navigators who in the seventeenth century pieced together an outline of the west, north-west, and northern coasts, knew nothing of the south, because it lay outside the track of their vessels which made voyages between Europe and Java. Tasman in 1642 touched the south of Tasmania and sailed thence for New Zealand; but after this date we have to skip over a century and a quarter before we meet with a navigator who sailed even near the Victorian coast.

Cook. In 1770, James Cook, on his famous voyage in the *Endeavour*, was in the South Seas. His primary purpose was to convey a scientific party to Tahiti to observe a transit of Venus. His instructions left him free, after leaving that island, "to prosecute the design of making discoveries in the South Pacific Ocean," and to return to England by whatever route he thought proper. Cook knew of the western coasts of New Holland from Dutch charts, but the eastern coasts were unknown. He therefore resolved to sail till he fell in with the east of this continent, "and then to follow the direction of that coast to the northward or whatever direction it might take us." After exploring and charting New Zealand, he ran west toward New Holland. On 19th April, 1770 (by nautical reckoning; on 20th April by the almanac) at six o'clock in the morning, Lieutenant Hicks, who was on watch, sighted land. The *Endeavour* was then opposite the cape which on some maps is marked as Cape Everard. Cook wrote in his journal that "the southernmost point of land we had in sight" he named Cape Hicks, "because Lieutenant Hicks was the first who discovered this land." Unfortunately Cook recorded the latitude and longitude inaccurately, so that later navigators were unable to find the cape in the position where he "judged" the point to lie; but he added the words, "to the southward of this point we could see no land," and those words are sufficient, in view of Cook's situation at the time, to

identify Cape Everard as Point Hicks. This was the first part of the coast of Victoria to be seen by any European, as far as we know. After making the land thus, Cook sailed along it northward, discovering Botany Bay and the entire eastern coast of Australia.

Furneaux's error.

On his next voyage, in the *Resolution* 1772-74, Cook intended to ascertain whether Van Diemen's Land (Tasmania) was a separate island, as he believed it to be, or part of the mainland. But Furneaux, the commander of his second ship, the *Adventure*, had become separated from him by tempestuous weather during the voyage, and had sailed up the east coast of Van Diemen's Land until the land began to fall away into what Furneaux believed to be simply a deep bay. In fact, he was in the entrance to Bass Strait, near the Furneaux Islands, which are named after him. But he reported that he was sure that there was no strait there, and Cook, though he does not seem to have been convinced, allowed Furneaux's advice to weigh with him. The winds were contrary for sailing to New Holland from New Zealand, so that on the whole he judged it advisable to devote his attention to problems connected with the Pacific. It was the misleading advice of Furneaux, therefore, that diverted Cook from a piece of investigation which would have led to the discovery of the whole of the Victorian coast in 1773.

Phillip's Commission.

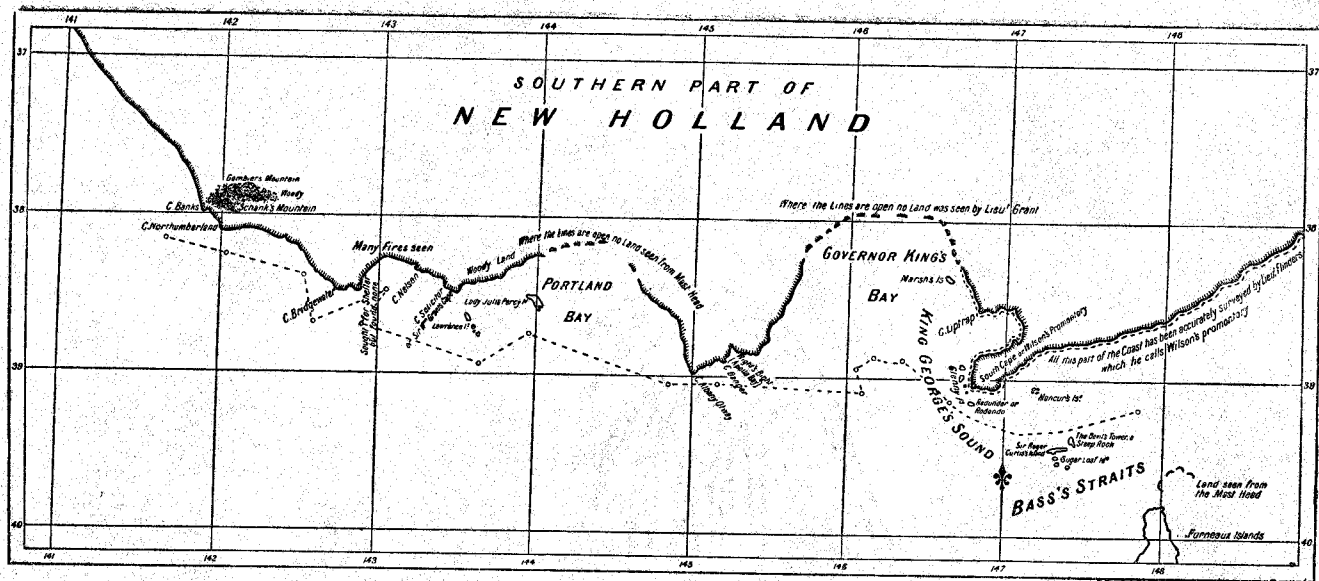
Nearly a quarter of a century passed. New South Wales was settled as a place of punishment for convicts in 1788, and the commission of the first governor, Arthur Phillip, gave him jurisdiction over the territory extending from Cape York to South Cape, and "all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude." That definition brought the whole of Victoria within the scope of the New South Wales governorship. As yet, however, the British had no use for more land than was easily available in the vicinity of Port Jackson. Not for ten years after the first settlement was there even energy to spare for making an investigation of the unknown southern coasts.

Early adventures.

The first Europeans to traverse any part of Victoria were the shipwrecked crew of the *Sydney Cove*, a vessel sailing from Bengal to Port Jackson in 1797. She was lost on one of the islands of the Furneaux Group. Seventeen of the crew, in the ship's longboat, in attempting to make their way to the settlement, were dashed ashore and again wrecked near Point Hicks. They endeavoured to traverse the coast, through the wilds of Gippsland, from that point to Port Jackson, but only three were saved. These were rescued in an exhausted condition, "scarcely alive," southward of Botany Bay. Their fourteen companions either perished by the way or were killed by aboriginals.

Bass.

In the year after this tragedy, the discovery of the Victorian coast-line commenced, and was rapidly completed. George Bass, the surgeon of H.M.S. *Reliance*, having some time on his hands and being desirous of making discoveries, in 1798 persuaded



Grant's Original Chart of his Discoveries on Victorian Coast (1800).

Governor Hunter to grant to him the use of a whaleboat and a crew of blue jackets, in order that he might make an examination of the unexplored coasts southward of Botany Bay. Thus furnished, Bass entered upon his highly adventurous voyage, which resulted in the discovery of the whole of the Gippsland coast, Wilson's Promontory, and Western Port, which Bass entered on 5th January. "I have named the place, from its relative situation to every other known harbor on the coast, Western Port," wrote Bass in his journal. He believed, too, from the strength and rapidity of the tide and the long swell which continually rolled in upon the coast from the west, that there was a strait dividing the continent from Van Diemen's Land; but this fact was not demonstrated till later in the same year, when Bass and his friend, Matthew Flinders, in the sloop *Norfolk*, sailed through it and circumnavigated Van Diemen's Land. The strait was named after Bass at the instance of Governor Hunter.

Grant. The first ship to sail through Bass Strait from the westward, was the *Lady Nelson*, under the command of Lieutenant James Grant, in 1800. Grant brought the vessel out from England, with instructions to traverse the strait, news of the discovery of which reached the Admiralty in 1799. In so doing, he discovered the coast-line of Victoria westward of Port Phillip, and gave names to the principal coastal features. Running across the southern Indian Ocean from the Cape of Good Hope, he made the Australian coast quite close to the present boundary of South Australia and Victoria, on 3rd December, 1800. He named Mount Gambier and Mount Schanck, Cape Banks, Cape Northumberland, Cape Bridgewater, Cape Nelson, Portland Bay, Cape Albany Otway, Cape Patton, Cape Schanck, Cape Liptrap, and Lady Julia Percy Island.

Port Phillip. By the beginning of the nineteenth century, therefore, the Victorian coast was known, between the New South Wales border and Western Port on the east, and between the South Australian border and Cape Otway on the west. The intervening gap, at the head of which lies Port Phillip, had not been examined by Grant, though he had called it Governor King's Bay on his chart. In 1801, Lieutenant John Murray, in command of the *Lady Nelson*, was despatched on an exploring expedition, with particular instructions to investigate this gap. At the end of January, 1802, in pursuit of this task, Murray lay in Western Port, whence he sent the launch in charge of the mate, Bowen, to find a channel into the opening which had previously been seen from the masthead, and which "had the appearance of a harbor." Bowen, who set out on 31st January, returned on 4th February, with the report that there was a good channel into "a most noble sheet of water, larger even than Western Port, with many fine coves and entrances in it, and the appearance and probability of rivers." On 15th February, Murray brought the *Lady Nelson* into this new harbor, which he named "in honour of Governor P. G. King, under whose orders I act"; but King afterwards

altered the name to Port Phillip, desiring thus to honour the first Governor of New South Wales. Murray named Arthur's Seat "from its resemblance to a mountain of that name a few miles from Edinburgh." On 8th March, "the united colours of the Kingdom of Great Britain and Ireland were hoisted on board," and possession was taken of the port "in the name of his sacred Majesty, George the Third."

But the discovery of Port Phillip did not at once conduce to the extension of permanent settlement there. Captain Flinders, who visited it in May, 1802, in H.M.S. *Investigator*, and, surveying it from the top of Station Peak, one of the You Yangs, realized the importance of it, did indeed report upon "the goodness of the soil and natural advantages." But there was not yet any real necessity to expand beyond the environs of Sydney; and it is not probable that any effort would have been made to occupy positions elsewhere on the mainland or in Van Diemen's Land, had there not been a fear that if the British did not take possession of desirable positions the French would. In 1802 two French discovery ships visited Australian waters under the command of Commodore Baudin. They spent some weeks in Port Jackson, where Governor King entertained the suspicion that, though their ostensible object was scientific research, their real purpose was to spy out the land with a view to French colonization. "This," he wrote to the Secretary of State, "I cannot help thinking, is a principal object of their researches."

It was to frustrate this supposed design that the British Government ordered the establishment of the first Port Phillip settlement. Suspicion of Napoleon Bonaparte was at that time deeply rooted in the minds of Englishmen, and Bonaparte, then First Consul of the French Republic, had authorized the despatch of Baudin's expedition. A few years later (1807), when an official history of the voyage was published in Paris, the whole coast of Victoria from Wilson's Promontory westward, formed part of the region which the French designated Terre Napoléon. That Bonaparte ever intended to form a French colony in Australia there is no evidence to show; but that it should have been believed that he did was quite natural.

THE FINDING OF VICTORIA.

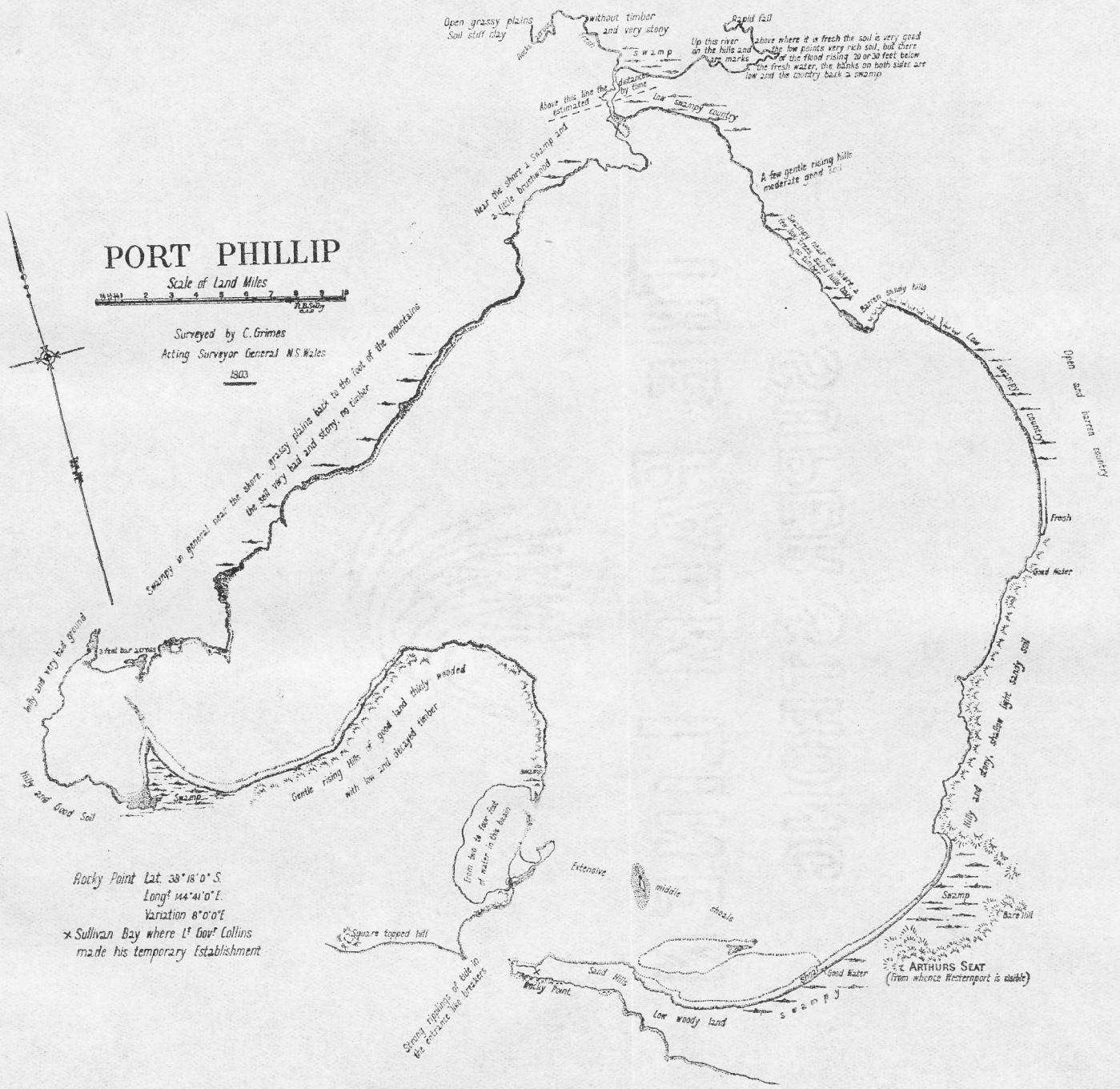
In 1803, a complete survey of Port Phillip had been made by Charles Grimes in the schooner *Cumberland*, under the command of Lieutenant Robbins. Grimes and his assistants discovered the River Yarra, which they ascended in a boat beyond the site of Melbourne. But their report and chart had not reached England by the time when the two ships which carried the first settlers set sail. These vessels, the *Calcutta* and the *Ocean*, conveyed nearly 400 persons, including 299 male convicts, the whole under the command of Lieutenant-Colonel David Collins.

PORT PHILLIP

Scale of Land Miles


Surveyed by C. Grimes
 Acting Surveyor General N.S. Wales

1803



Rocky Point Lat. $38^{\circ}18'0''$ S
 Longt $144^{\circ}41'0''$ E
 Variation $8^{\circ}0'0''$ E

× Sullivan Bay where Lt Govr Collins
 made his temporary Establishment

Open grassy plains
 Soil stiff clay

without timber
 and very stony

Rapid fall

Up this river
 on the hills and
 on the marks
 above where it is fresh the soil is very good
 the low points very rich soil, but there
 or the flood rising 20 or 30 feet below
 the fresh water, the ridges on both sides are
 low and the country back a swamp

Above this line the
 distance
 is estimated

low swampy country

Near the shore a swamp and
 a little brushwood

A few gentle rising hills
 moderate good soil

Stony hills

Swampy in general near the shore, grassy plains back to the foot of the mountains
 the soil very bad and stony, no timber

High and dry bad ground

Safe for arms

High and good soil

Gentle rising hills of good land thick wooded
 with low and decayed timber

from two to four feet
 of water in the basin

Extensive

middle
 shoals

Square topped hill

Strong rising of tide in
 the entrance like Brisbane

Rocky Point

Sand hills

Low woody land

Good Water

ARTHURS SEAT
 (from whence Westport is visible)

Open and barren country

Fresh

Good Water

lilly and stony shallow light sandy soil

Swamp

Barren hill

**Collins's
Settlement.**

They arrived in Port Phillip in the first week of October, and Collins chose to land them on the sandy Nepean peninsula, about half-a-mile to the east of Sorrento. There was no adequate supply of fresh water, sand and thick scrub were abundant, there was neither good timber for building nor grass for cattle. Collins, indeed, put no heart into the enterprise. He did not like his task, and seems to have been eager to justify an early abandonment of it by demonstrating that Port Phillip was not worth occupying. The bay, in his opinion, was "wholly unfit" for occupation; it was situated "in a deep and dangerous bight"; if he removed the settlement to the upper part of the harbor, the blacks were so numerous and so savage there that he would require four times the force he then had to act as a guard; and, in short, it was such an "unpromising and unproductive country" to which he had come that the sooner he got away from it the better he would be pleased. Governor King, in view of these pessimistic reports, authorized the abandonment of the settlement, and on 30th January, 1804, Collins took his people away to Hobart, after a disappointing and unenterprising experiment of less than four months.

**The
Westernport
Settlement.**

There was one other abortive settlement on Victorian soil before systematic occupation commenced. In 1826, the British Government became aware that a fresh French expedition of discovery was to visit the south seas, under the command of Dumont D'Urville, in the ship *Astrolabe*. Napoleon had died in 1821, and assuredly Great Britain had no fear of the restored Bourbon monarchy. But still it was considered advisable to be cautious, though the French professed that they had none but scientific ends in view. Governor Darling was therefore warned to take steps to establish posts on the south coast and the west of the continent. He at once ordered the despatch of a party to Western Port to occupy it. They consisted of two officers (Captain Wright and Lieutenant Burchell), eighteen soldiers of the Buffs, and twenty convicts. They were conveyed from Sydney in the *Fly* and the *Dragon*, and were provisioned for six months. The place where they established themselves was at Settlement Point (otherwise called Red Point), on the eastern side of the mainland (24th November, 1826). As a device for preventing the French from settling, if that had been the intention, the expedition of 1826 was a total failure, because in fact the *Astrolabe* had already called at Western Port, made such scientific investigations as the French captain desired, and departed. There was therefore no object in maintaining the settlement. Governor Darling consequently ordered its withdrawal, and Captain Wright and his party returned to Sydney in January, 1828, after an occupation of only a little over a year.

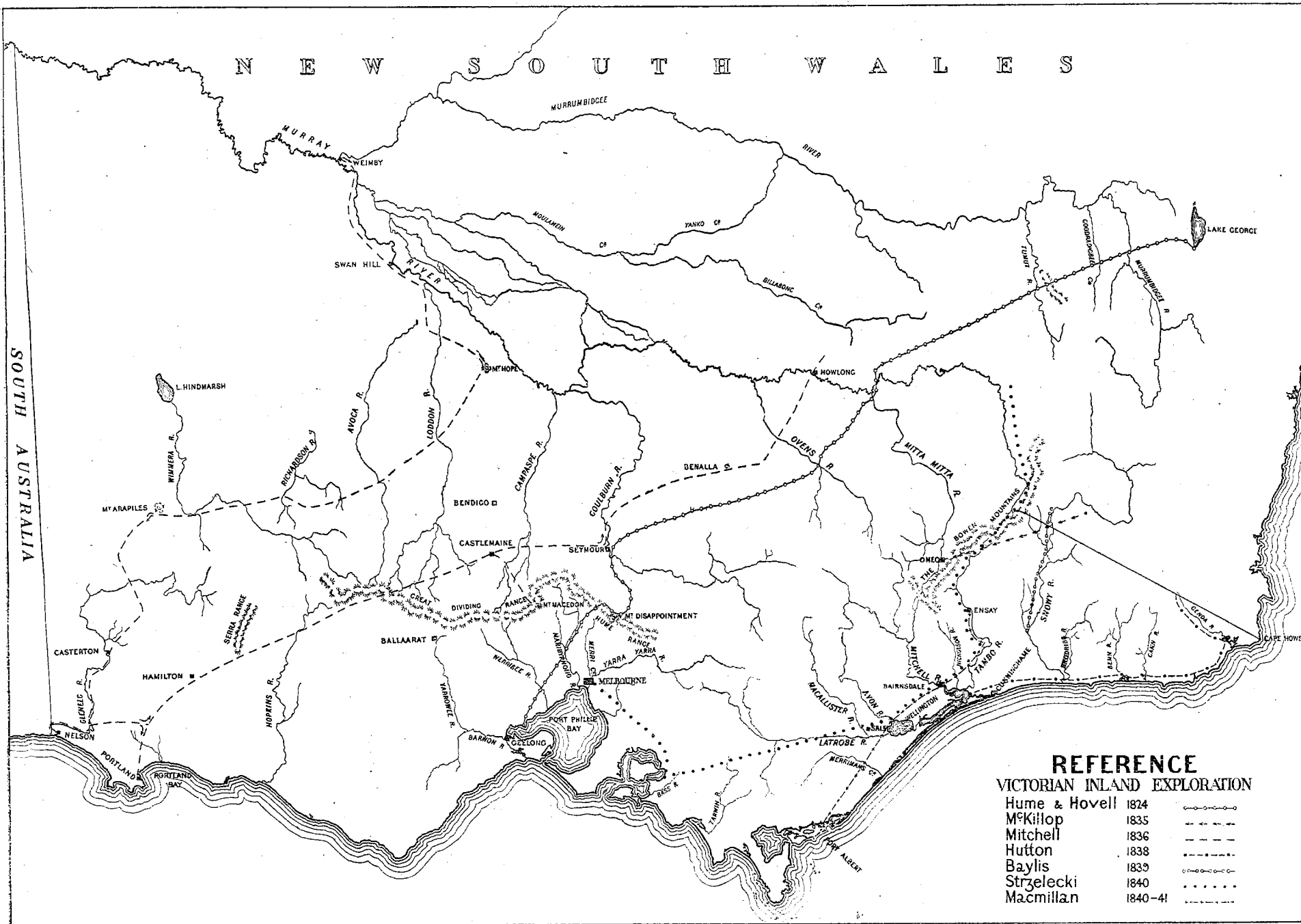
Attention must now be directed to the four principal land journeys by which the value of the province south of the Murray was made known.

Hume and Hovell. In 1824 Governor Brisbane, wishing to ascertain the nature of the country to the south of Sydney, conceived the strange idea of landing a party of convicts near Wilson's Promontory or Cape Howe, providing them with equipment for a long journey, and instructing them to make the best of their way to Sydney. If they arrived safely they were to receive "suitable rewards and indulgences." If they did not arrive safely, that would be their misfortune. The Governor mentioned the scheme to Alexander Berry, a Sydney merchant, who suggested that a better way of having the country explored would be to fit out an expedition and place it under the command of a friend of his, Hamilton Hume, an experienced bushman. Hume would have nothing to do with the Governor's Wilson's Promontory or Cape Howe project, but expressed his willingness to lead an expedition from his home at Lake George "to Western Port in Bass Strait."

The proposal fell through as a Government venture, but Hume determined to carry it out himself. Berry introduced him to a retired seaman, Captain Hovell, who wished to be associated with the enterprise, and the two agreed to find the men and equipment at their own expense. The expedition of Hume and Hovell, which left Lake George in October, 1824, was the first exploring party to traverse Victoria. On 16th December they reached the seashore, and both of them believed they were at Western Port. In fact, however, they had mistaken their whereabouts, and had reached the shores of Port Phillip Bay, within 10 miles of the site of Geelong. The journey, despite the mistake of the leaders, was of very great importance. They discovered the River Murray (which they named the Hume), the Mitta Mitta, the Ovens, and the Goulburn; and they named Mount Disappointment. It was from a word picked up by Hume and Hovell from the aboriginals that the town of Geelong derives its name. "Jillong" was the name of the bay upon which the town now stands.

Sturt. In 1829 the most famous of Australian inland explorers, Charles Sturt, traversed the whole course of the River Murray from its junction with the Murrumbidgee to the sea, and gave the great river the name it bears—which was that of Sir George Murray, the Colonial Secretary at the time. It should be insisted, however, that Hume and Hovell were the discoverers of the river, though they did no more than cross it.

Mitchell. The second important land journey across Victoria was that of Major Mitchell, in 1836. Mitchell, who was the Surveyor-General of New South Wales, was instructed to trace the course of the Darling till it joined the Murray, and then to examine the country to the south of the main stream. After completing the first part of his task, Mitchell traversed the course of the Murray up stream to a point a few miles beyond the inflow of the Murrumbidgee, and then crossed to the south side. He kept fairly close to the left bank till he reached the Loddon at Swan Hill, when he decided to



Map showing routes of Hume and Hovell and other Explorers.

The district between the Murrumbidgee and Murray Rivers represents the territory which was lost to Victoria by an Imperial Act passed in 1842.

follow the valley of that river inland. That course opened out upon the broad rich pastures watered by the southern tributaries of the Murray. Ascending Pyramid Hill, Mitchell saw on all sides far-spreading plains shining "fresh and green in the light of a fine morning." Travelling south-west and south through the extreme Western District of Victoria, the explorer at length came upon the Glenelg, and followed it to the sea. When he turned homeward, determining to take a more easterly route, he halted his party for a rest in a pleasant spot about 15 miles north of Portland, while he with a few companions rode down to have a look at that harbor. There, to his great surprise, he found the Henty brothers in occupation, with huts built, live stock prospering, land under cultivation, and a serviceable whaling schooner at anchor in the bay. On the return journey Mitchell ascended Mount Macedon, which he named, crossed the Campaspe, the Goulburn, and the Ovens, and negotiated the Murray about 20 miles west of Albury.

Mitchell called the country which he traversed "Australia Felix," but that name never became the geographical designation of Victoria; and in any case it could only have applied to the western region, which he traversed. The Rev. Dr. Lang, in 1847, called the Port Phillip District "Phillipsland," and published a book about it with that title.

Gippsland. The penetration of the difficult mountainous district of Gippsland was the work of a small group of explorers. In 1835 George McKillop, of Hobart, in search of pastures, crossed the Monaro tableland and the Snowy River, and got as far as Omeo. Andrew Hutton, in 1838, during a drought, brought 500 head of cattle along the coast of Gippsland as far as the Lakes Entrance. But the aboriginals were very troublesome, spearing the cattle and menacing the whites. At length Hutton and his companions, to save their lives, had to retire, leaving the blacks in possession of the stock. In 1839 Edward Bayliss followed the valley of the Snowy River as far south as Buchan, also in search of pastures. In 1839-40, Angus McMillan, an adventurous young highlander, engaged upon a Monaro cattle station, made three very courageous journeys along the Tambo valley, determined not only to open up pasture lands, but also to find a port whence cattle might be shipped. With severe labour he did at length cut his way through to Port Albert, where afterwards a township was founded. Gippsland received its name, however, from the Polish savant, Count Strzelecki, who, pursuing geological researches in 1839-40, followed McMillan's tracks down the Tambo, skirting Lake Wellington, where he struck off practically along the route of the present Gippsland Railway, and reached the infant town of Melbourne on foot on 28th May, 1840.

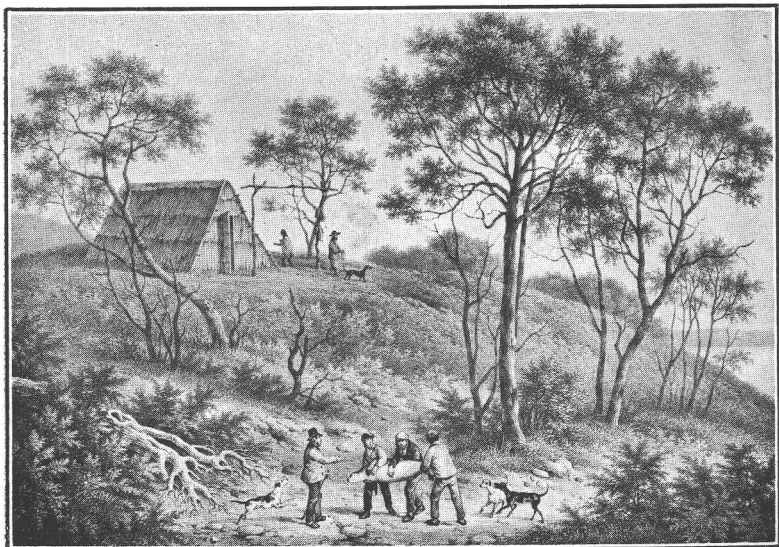
THE BEGINNINGS OF SETTLEMENT.

After the two abortive settlements at Port Phillip and Western Port, which have been described above, a very few faint premonitions of the dawn of colonization are on record. When the French

commander, Dumont D'Urville, was in Western Port in 1826, he found there a party of sealers, including five women. They had been left by a vessel ten months before to catch seals, but as they had not been called for as arranged, they begged the French captain to take them with him to Port Jackson, which he did. Captain Wright, later in the same year, also found sealers living near Settlement Point, where they had sown two acres of wheat and some maize. Both of these parties had built huts for themselves; and an engraving in the sumptuous atlas to D'Urville's *Voyage autour du Monde* (Paris, 1840-46) gives a view of one of these residences, and of the sealers engaged upon their work. Another man who was interested in sealing and whaling, William Dutton, in 1832, built a cottage for himself and huts for his men at Portland Bay; and a year later came to the same port a young man who intended not merely to use the place as a dépôt, but to settle there permanently.

Edward Henty was one of a family of seven stalwart sons who with their father, Thomas Henty, had emigrated from Sussex to the newly-founded Swan River colony. He brought £10,000 with him, but after two years' experience of Western Australia he decided to give up the attempt to establish a home there, and went to Launceston. Edward Henty, who went to examine the prospects in South Australia, put into Portland Bay in the *Thistle* on his way back to Launceston, and liked the place so much that he determined to settle there. His father, after paying a visit to Portland, approved of his choice; and in November, 1834, Edward Henty landed live stock and commenced farming before the Government in Sydney had an inkling that any persons were occupying land in the vicinity of Port Phillip.

Others, too, were soon inquiring about land in this unoccupied part of Australia. Many Launceston people knew about the quality of the country on the other side of Bass Strait from sealers and from the Henty family, not to speak of the published accounts of Hume and Hovell's expedition. Indeed, as early as 1827 two Launceston men, J. T. Gellibrand and John Batman, had applied to Governor Darling for grants of land at Western Port. They were refused. But Batman, in 1834, formed a syndicate of fifteen Launceston men—the Port Phillip Association—who fitted out an expedition to explore Port Phillip for pastoral purposes. In the schooner *Rebecca*, Batman set forth in May, 1835. He landed near Indented Head, and traversed country which filled him with astonishment. He had never seen anything to equal it. On several successive days he made excursions, and on one of these, at a place which the best analysis of the evidence identifies as being on the River Plenty, two or three miles above its junction with the Yarra, Batman went through the form of negotiating with seven alleged chiefs of the aboriginals the purchase of 600,000 acres of land, in return for a parcel of mirrors, knives, beads, and other cheap goods. Before returning to Launceston, Batman took a boat up the Yarra to get fresh water; and



First House in Victoria (1826).
(Sealers' Hut at Western Port).

there, when he saw the slope upon which Melbourne is built, he wrote in his diary, "This will be the place for a village."

Fawkner. Meanwhile, another Launceston group, under the leadership of John Pascoe Fawkner, had fitted out a rival expedition to explore Port Phillip. In the *Enterprise* the employees of this syndicate entered the bay in August, 1835, and decided to settle on the very spot which Batman had marked down as his "village." Other stock-owners quickly followed, as soon as the news about the valuable pasturages of Port Phillip gained currency in Launceston.

Official disapproval. In the eye of the Government in Sydney all of these unauthorized "squatters" on Port Phillip lands were trespassers, and neither Batman's "treaty" nor the claims of the Hentys and others were recognised as valid. But it was impossible to keep off "intruders" merely by issuing warnings. The Colonial Office in England was at this time sternly opposed to the extension of settlement. It already had enough Australian colonies on its hands, and they had been a source of expense and vexation. But the Governor in Sydney knew that it was impossible to stem the tide. Valuable pasture lands were unoccupied, and owners of flocks and herds were eager to avail themselves of them. The numbers of settlers increased, notwithstanding Sir Richard Bourke's solemn proclamation, with its threats. Disputes with natives occurred, and some blood was shed. A police magistrate was sent to report, and in June, 1836, he found nearly 180 white people residing on the banks of the Yarra, with sheep, cattle, horses, and farm implements to a total estimated value of £80,000. Since it was clearly impossible to prevent people from living there, it was necessary to provide for governing them, and that Governor Bourke did in September.

Lonsdale. He sent over from Sydney Captain William Lonsdale to act as magistrate, and to take "the general superintendence in the new settlement of all such matters as require the immediate exercise of the authority of the Government." Lonsdale arrived in Port Phillip in the *Rattlesnake* on 29th September. One of his first tasks was to determine whether the permanent settlement should be where Batman's and Fawkner's people had already built their huts. In some respects Lonsdale considered Gellibrand's Point (Williamstown) to be preferable; but the water supply there was inadequate. Finally, he "fixed upon the place already chosen as the settlement, where the greatest number of persons reside." Governor Bourke, who visited the settlement in March, 1837, confirmed the choice, and named the "village" Melbourne, after the **Melbourne.** Prime Minister. The surveyor, Hoddle, who came over from Sydney with the Governor, laid out the streets on a well-considered plan, and the first land sale was held on 1st June.

Latrobe. Lonsdale continued to administer the settlement till October, 1839, when C. J. Latrobe took charge as Superintendent or Lieutenant-Governor. Population increased rapidly.

Melbourne spread beyond the limits of Hoddle's survey and formed suburbs. The Port Phillip District, as the province south of the Murray was called, prospered greatly. In 1842 Melbourne was incorporated as a town, with a mayor and councillors. The first mayor was Henry Condell, brewer.

PUBLIC POLICY.

Convict labour. The first matter of public policy upon which there was strong feeling in the new province related to the admission of convicts. The Port Phillip District was, of course, a part of New South Wales, and that colony had been founded primarily as a place for the reception of persons transported for breaches of the law of England. The early land-owners had convicts "assigned" to them as servants. Indeed, there was scarcely any other labour available for country industries. But an antagonism to convict labour was growing in Australia, and especially in Port Phillip was there a decided feeling against it. In 1840 the British Government came to the conclusion that a change ought to be made in the system, and Orders in Council were issued which put an end to the introduction of transported persons to Australia, though still permitting them to be taken to Van Diemen's Land. This change had two effects. It glutted Van Diemen's Land with convict labour, and at the same time it dried up the source whence the squatters of the mainland had hitherto drawn their labour supply. Many Port Phillip pastoralists complained. They did not like convict labour, but they said they could get none other.

Conditional Pardon System. The British Government, in face of this situation, determined to reintroduce convictism in another form. The "conditional pardon system" purported to subject offenders to a course of discipline in an English prison, and then to land them in specified colonies, where they would be unrestrained, provided that they did not return to England during the currency of their sentences. Under this system a ship load of convicts was landed in Port Phillip in 1844. There was intense indignation in Melbourne, but the Government in England ignored the protests of the inhabitants. The conditional pardon system, however, was not a success, and in 1848 it was determined that convicts should be sent out with tickets of leave, the holders of which would have to report themselves to the police at stated intervals. Again Port Phillip was to be a receptacle for the offenders. But now the indignation of the Melbourne people blazed up angrily. Excited meetings of protest were held, and the newspapers and public men demanded that resort should be had to force to resist the landing of any more convicts. When the ship *Randolph* entered Port Phillip on 8th August, 1849, with a cargo of ticket-of-leave men on board, the menace of resistance on the part of the public was so serious that Latrobe took upon himself the responsibility of ordering the captain not to land his freight but to take them round to Sydney. The same was done when the *Hashmey*

arrived with a similar company in May. The strong feeling aroused on this subject, the formation and leadership of a solid body of public opinion on a crucial matter of public importance, did much to engender an independent political spirit among the Port Phillip people. Already there was a feeling that the connexion with New South Wales should be severed.

Since 1842 the Port Phillip District had had representation in the Legislative Council of New South Wales. **Government from Sydney.** In that year an Act of the Imperial Parliament set up a Council of 36 members, of whom 24 were to be elected and 12 nominated. Six of the elected members were allotted to the Port Phillip District, and one of these was to represent the town of Melbourne. There were two candidates for the Melbourne seat at the election in June, 1843—Edward Curr and the mayor, Condell. Sectarian bitterness was introduced to the contest, Curr being a prominent Roman Catholic, while Condell was put forward as the Protestant champion. When the poll was declared, and Condell won by 34 votes (295 to 261), there was some rioting, which had to be suppressed by the military.

Discontents. But representation in the Legislative Council of New South Wales was never a real thing to the Port Phillip people. Sydney was far away and difficult of access, and there were very few men with an aptitude for politics who could spare the time and afford the expense of detaching themselves from their business interests and residing in Sydney while the Council was in session. Consequently the representatives elected were generally Sydney men. Indeed, before the end of 1844, not a single Port Phillip resident was among the six representatives. Dissatisfaction with the system increased. The Port Phillip people felt more and more that their interests were different from those of persons who lived nearer to Sydney. They complained that a large part of the land and general revenue collected in their province was expended on the Sydney side, that their requirements were neglected, that the disposition of the Council was to thwart the development of Port Phillip. The nature of the feeling may be illustrated by the fact that at a "separation banquet" held in Melbourne in 1846, there was exhibited over the chairman's table a painting representing Prometheus chained to the rock and a vulture gnawing at his liver; and one of the contemporary newspapers observed that "a very forcible parallel exists between this famous supposition of ancient mythology and the treatment Port Phillip receives from Sydney." These discontents were more emphatically pronounced in 1848, when the electors of Melbourne chose Earl Grey, the Secretary of State for the Colonies, to represent them in the New South Wales Council; not, of course, that they expected that he would ever take his seat, but because they desired by means of a farcical election to express their sense of the futility of the existing system. Earl Grey continued to be the member for Melbourne

till 1850, when William Westgarth was elected. An attempt was also made to induce the electors of Port Phillip—apart from Melbourne—to elect the Duke of Wellington, Lord Palmerston, Lord Brougham, Lord John Russell, and Sir Robert Peel, but this failed.

Separation. The action which had been taken, however, sufficed to concentrate attention upon the dissatisfaction of the Port Phillip people. The result was that, by an Act passed by the Imperial Parliament in 1850, the Port Phillip District was separated from New South Wales. The Privy Council Committee of Trade and Plantations, which reported generally on the subject of Colonial Government in 1849, and which recommended that a new colony should be formed of Port Phillip, advised Queen Victoria to confer her name upon it, and the Queen signified her acquiescence.

Boundaries. A misunderstanding occurred with reference to the northern boundary, and many Victorians considered that their colony had been improperly deprived of a district which geographically belonged to it. The dispute occurred thus. The Act of 1842 which conferred representation upon the Port Phillip District, had defined the northern boundary to be “a straight line drawn from Cape Howe to the nearest source of the River Murray, and thence the course of that river to the eastern boundary of the province of South Australia.” But in 1840, land regulations issued by the New South Wales Government in accordance with instructions from England, had laid down the northern boundary of the Port Phillip District to run “by the Rivers Murrumbidgee and Murray to the eastern boundary of the province of South Australia.” The Act of 1842, therefore, which was confirmed by the Act of 1850, cut off the district between the Murrumbidgee and the Murray, generally known as Riverina. By a later Act (1855), “the whole watercourse of the River Murray to the eastern boundary of South Australia,” was declared to be “within the territory of New South Wales.” It was contended at the time, and has been urged since, that Victoria was thus deprived of territory and of rights through the exertion of secret influences at the Colonial Office; but, on the opinion of counsel being obtained, it was advised that the colony had no case for a restitution. In a later case, it was found that an error had been made by the surveyors when the boundary between Victoria and South Australia was delimited; Victoria having acquired 340,000 acres more than she was entitled to get. South Australia brought an action, which was determined by the Judicial Committee of the Privy Council in 1914. The error was admitted, but it was ruled that the boundary drawn by the surveyors was intended to be final, and should stand.

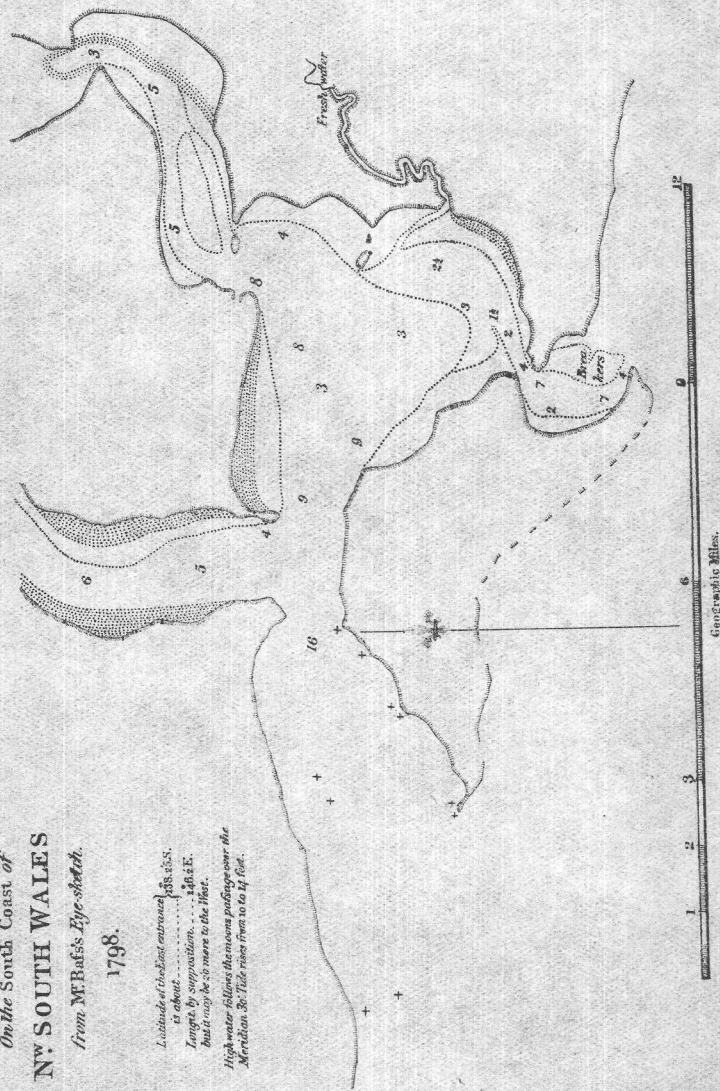
SELF GOVERNMENT.

The Act of 1850, which gave to Victoria separate political existence, at the same time conferred a constitution upon the colony. It came into operation on 13th January, 1851; but the Legislative Council of New South Wales,

Western Port
 On the South Coast of
N^o. SOUTH WALES
 from Mr. Bass's Eye-sketoh.

1798.

Latitude of the best entrance 38. 55 S.
 is about 38. 55 S.
 Longts. by suppositions 146. 4 E.
 but it may be 20 more to the West.
 High water within the bay and beyond the
 Meridian 20. Tide rise from 10 to 14 feet.



which was still the properly constituted legislative authority, had to make provision for dividing the colony into electoral districts before practical effect could be given to it. The Governor of the parent colony issued the necessary writs for the election of members of the new Victorian Council on 1st July, 1851, and that date has consequently always been celebrated as "Separation Day" in Victoria.

The constitution placed at the head of the Government of Victoria a Lieutenant-Governor, and to this office the former Superintendent, Latrobe, was appointed. There was one house of legislature—the Legislative Council—consisting of twenty elected and ten nominated members. The franchise was conferred upon owners of freehold property to the value of £100, householders whose dwellings were valued at £10 per annum and upwards, holders of pastoral licences, and leaseholders of property valued at more than £10 per annum. Of the ten nominated members, five were official, and formed the Executive of the colony. They were W. F. Stawell (afterwards Chief Justice), Attorney-General; Captain William Lonsdale, Colonial Secretary; Redmond Barry (afterwards Mr. Justice Barry), Solicitor-General; C. H. Ebdon, Auditor-General; and R. W. Pohlman (afterwards a County Court Judge), Master-in-Equity.

The new Government had scarcely got to work when the whole complexion of Victorian affairs was changed by the startling gold discoveries. A pastoral community suddenly found itself rushed by a motley population attracted from the ends of the earth, the quiet little port of Melbourne became crowded with shipping, and the rulers of the country were confronted with new and unexpected problems. Important gold discoveries had been made in the Bathurst district of New South Wales about a month before the first Executive Council was sworn in. People in Victoria now began to attach significance to finds of pieces of gold which had from time to time been made within a few miles of Melbourne. As early as 1847 a shepherd had picked up a nugget in the roots of a tree which the wind had blown down. Another shepherd had brought in 22 ounces from a gully at Mount Buninyong. Small parties went out and searched in the Plenty Ranges, the Pyrenees, and along the Upper Yarra. A committee of Melbourne citizens formed in 1851 under the chairmanship of the Mayor, William Nicholson, reported that there was undoubted evidence of the existence of gold-bearing rocks. A reward was offered to whomsoever should discover a payable gold mine within 200 miles of Melbourne. Very soon there was no need to offer the stimulus of rewards; the exciting hunt for gold and the exceeding great yields were an ample recompense to many thousands.

The great rush commenced after August, 1851, when sensational discoveries were made at the hamlet of Buninyong, close to what was soon to be known throughout the world as the wonderful Ballarat gold-field. In October of that year Latrobe reported that "a very considerable amount of gold"

**First
Executive.**

Gold.

**The
Great
Rushes.**

was coming from the Buninyong neighbourhood, and that eager searchers were "pouring into the district." In November the rich deposits of Mount Alexander were tapped; in the same month came startling tidings of the auriferous wealth of Bendigo. Before the end of 1851 nearly a million pounds' worth of pure gold had been taken out of these firstly discovered mines of Victoria. "I can contemplate no limit to the discoveries or the results of the opening of these fields," wrote Latrobe in a despatch at the end of the year; "meanwhile, the whole structure of society and the whole machinery of government is dislocated." It was so; and naturally. The machinery of government in this infant colony, which less than twenty years before had contained no white inhabitants, and which had only had an independent administration of its own a few months, had been constructed for the purposes of a country in which there was only one considerable town, where the settlement beyond the centre was sparse and scattered, where there were few roads, where the police force was small, and the revenue trifling. At the census taken in March, 1851, the total population was 77,000, of whom 46,000 resided outside the two towns of Melbourne and Geelong. Before the end of that year it had increased by 20,000, and by the end of 1852 it had risen to 168,000. The incursion of this sudden flood of eager, jostling, excited people, many of them foreigners, virtually swept the Government off its feet. Shepherds and farm hands fled to the diggings; tradesmen threw down their tools, bought picks and shovels, and hurried off to Bendigo, Clunes, or Ballarat; civil servants gave up their appointments to go digging; and after 1852 oversea immigration poured in from Great Britain and the continent. Thousands of Chinese soon swelled the total.

Diggers' Licences. A despatch from the Imperial Government informed Latrobe's Ministry that, as they were responsible for the maintenance of law and order, they were at liberty to make such regulations as they pleased for deriving revenue from gold mining; and it was but reasonable that the large extra expense thrown upon the Government by the opening of the diggings should be largely borne by the rich yields of the mines. Legally the gold belonged to the Crown, and the Government had a right to demand a proportion of it. But how to obtain a fair share, and not do injustice, did not seem to be easy to determine. In New South Wales the Government had adopted the expedient of issuing licences to diggers, charging a fee of 30s. a month for one. The Victorian Legislative Council adopted the same plan by an Act passed at the beginning of 1852. The collection of the licence-fees was entrusted to the police. The police were charged with being rough and overbearing in pursuit of their duty, and there is evidence that in many instances they were. But they had a very rough task. Among the diggers were ex-convicts as well as many eminently respectable men; and the licence system became so unpopular that it was almost inevitable that bitter feeling should arise between those who had to collect and those who had to pay.

Undoubtedly cases of injustice occurred; and the magistrates were prone to accept the word of the police whenever a digger was brought before them. But, apart from the angry disposition thus generated, the licence system was inherently unjust. The element of luck played a great part in gold mining, and those who had the good fortune to possess a good claim could pay 30s. per month easily. But those whose labour was not well rewarded, could ill afford the impost; and the cost of the necessaries of life on the diggings was very high. Latrobe recognised the force of this objection, and proposed to the Legislative Council a Bill for the imposition of an export duty on gold, which would have taken toll of the industry as a whole, and would have obviated the irritation caused by the constant demands of the police upon the diggers for the production of their licences. But the Council did not pass the Bill.

Political agitation. The agitation for the abolition or reduction of the licence-fee was intermingled with a demand for political reforms. The majority of the miners were not entitled to the franchise under the existing Victorian constitution, and they protested against the exclusion from direct representation in the legislature of a class whose industry furnished about one-half of the total revenue of the colony. So strong did the discontent become that placards were erected on the diggings declaring that any miner who paid the 30s. fee should be treated as a traitor, and be warned to quit the gold-fields. A Bill passed in 1853 reduced the amount of the fee to £1, but still left the collection of it in the hands of the police, and, therefore, only modified the ill-feeling to a trifling extent.

Eureka. Discontent arising from these and other causes culminated in 1854 in the famous incident of the Eureka Stockade. The immediate cause of the outbreak was a squalid crime; but mixed up with it were political agitation on the lines of the English Chartist programme, and the general disaffection of the mining population. Public feeling on the gold-fields was in a tense, excited condition, and it is quite probable, the relations between the miners and the Government being what they were, that if an outbreak had not occurred from one set of circumstances it would have done from another. At a Ballarat hotel of dubious repute, kept by a man named Bentley, a miner had been murdered. Bentley was charged with the crime, but though the evidence against him was strong, the magisterial bench, presided over by Dewes, a friend of Bentley, acquitted him. Strong indignation was expressed, excited public meetings were held, and, amidst riotous scenes, Bentley's hotel was burnt down. That the implication of Bentley, and of his friend, the police magistrate, was justified was proved when an investigation by a special board was held; for, as the result of the inquiry, Dewes was dismissed from office, Bentley and certain suspected accomplices were arrested, and he and two others were convicted and sentenced for manslaughter. But the police had previously arrested three men for participation in the burning of the hotel, and they were found guilty and imprisoned. To

the Ballarat diggers they were martyrs for the cause of all, and their immediate release was vociferously demanded. The miners naturally felt that their accusations against the governing authorities were amply confirmed by those proceedings, and the strength of the movement for political reform, together with that for the rectification of miners' grievances, was consequently intensified. The Ballarat Reform League pressed forward a programme of sweeping constitutional reconstruction; and its leaders, notably Peter Lalor, were regarded as the special champions of the industrial as well as the political interests of the diggers.

**The
Stockade.**

A new Lieutenant-Governor, Sir Charles Hotham, arrived in Victoria in June, 1854, in the midst of the storm and stress; Latrobe having resigned office in a depressed and disappointed condition of mind. Fearing that the police force at Ballarat was inadequate to maintain order, Hotham, in November, sent up 80 men of the 40th Regiment to reinforce them. The arrival of the advance guard aroused anger and suspicion, and a crowd of armed diggers set out to intercept the main body. An altercation with the officer in charge, Captain Wise, was followed by a sudden attack upon the contingent. The soldiers were overpowered, the ammunition waggon was captured, the baggage cart was overturned, and the troops, surprised and outnumbered, were driven in flight to their camp. After this violent rupture, further trouble was to be expected. Peter Lalor, foremost among the leaders of the diggers—for he was a man of commanding presence and convincing speech—urged that the miners should organize themselves to resist, and should solemnly pledge themselves to pay no more licence-fees. Companies of armed men drilled, and a rough kind of fort was built of logs and slabs under the direction of a German named Vern, on a piece of land known as the Eureka lead, flanking the main road from Geelong to Ballarat. Within this stockade, about an acre in extent, drilling proceeded and the forging of pikes for the fight which was believed to be imminent. But the commander of the troops, Captain Thomas, was kept well informed of what was occurring, for he had two of his own men, disguised, among the company within the stockade, and he knew precisely when it would be probably advantageous to make an attack in force. On the night of Saturday, 2nd December, there were about 200 men inside the stockade. A guard had been posted on the road from Melbourne to intercept reinforcements of troops, for it was believed that the commandant would not venture to assault the Eureka Stockade until he had a larger company under his hand. But Captain Thomas had resolved to force the issue forthwith. At 4 o'clock on the Sunday morning, his little company of 276 men—182 troops and 94 police—were quietly marched to the stockade. The alarm was given by a sentry when the assailants were about 300 yards away. When the soldiers and police had covered half the remaining distance, a volley from the stockade killed an officer (Wise) and two privates. An answering volley from the Government forces swept the logs, the order

to charge was given, and in the grey light of early dawn the rough defences of the stockade were rushed. In a few seconds the well-armed and disciplined company were in among the defenders, many of whom had nothing better than pikes to fight with. There was a smart struggle for about a quarter of an hour, when the garrison of the Eureka Stockade were completely defeated. Twenty-four are known to have been killed, and probably others died of wounds while in hiding. Four of the troops were killed, and a dozen wounded. The sympathy of the mass of the population of Victoria was with the insurrectionists; and, though thirteen men were put on their trial for participation in the rebellion, not one of them was convicted. It should be added that some of the most prominent rebels were foreigners. Peter Lalor, who was severely wounded in the fight, was hidden in a hole covered with slabs, and was afterwards helped to escape. He was held in high honour by the Ballarat miners, and was elected to Parliament by them. He was chosen Speaker of the Legislative Assembly in 1880. One result of this unfortunate quarrel was that the obnoxious licence-fee system was abolished, and there was substituted for it a miner's right, for which the digger paid £1 per annum, and which conferred upon the holder ownership of his claim and to the gold extracted from it. A miner's right was not subject to police inspection. A further redress of grievances took the form of direct representation of the gold-fields' population in the Victorian Legislative Council. The size of the Council had been extended first in 1853 by the addition of 24 seats, of which 16 were elective and eight nominee; and now again, after the Ballarat troubles in 1855, 12 new seats were created, eight of which were given to mining districts, whilst the franchise was extended to any man who had occupied or mined on Crown land for upwards of three months. These extensions brought the size of the first Victorian Legislative Council up to 66 members in 1855, the last year of its existence.

RESPONSIBLE GOVERNMENT.

Political changes. The time, indeed, was ripe for a complete change in the constitutional system of the country; and that change must be attributed, not to the events which have just been described, but to a general liberalizing process which affected the whole of the Australian colonies. The year 1855, indeed, is the year of the attainment of responsible government by the Australian people. As far as Victoria is concerned, the offer of responsible government was made from England, not conceded in response to a local demand. The constitution of 1850 had not given complete satisfaction in New South Wales, where Wentworth had powerfully advocated the substitution of a form of government on the British model—with two legislative houses, and a cabinet of ministers responsible to the popularly elective house—for government by Governor and appointed ministers in co-operation with a partly elective, partly nominee Council. New South Wales, through its Council, was invited

to construct a constitution for itself, taking the Canadian constitution for a model; and the Secretary of State for the Colonies, when conveying this intimation to New South Wales, at the same time sent a despatch to the Victorian Lieutenant-Governor, "offering to the colony of Victoria the same concession on the same terms." A committee of twelve members of the Legislative Council was appointed to prepare a draft constitution, which was produced in December, 1853. The scheme was considered by the whole Council in 1854, and was sent to England in the form of a Bill in March of that year. Lord John Russell, then Colonial Secretary, submitted to the House of Commons a Bill to enable the Queen to assent to a Bill "to establish a constitution in and for the colony of Victoria," and this measure received the Royal assent in July, 1855. Some alterations were, however, made in the measure by the Imperial Government and Parliament, principally because the Bill sent to England exceeded the powers conferred upon the Victorian Legislative Council by the constitution of 1850. It repealed certain Imperial statutes, and it handed over the disposal of Crown lands to the proposed new Victorian legislature. A point was afterwards raised as to the validity of the constitution, because it was not in all respects the measure which the Legislative Council had submitted; but the law officers gave it as their opinion that the efficacy of the measure was attributable to the fact that it was an Act of the Imperial Parliament, and had received the Queen's assent. The new constitution was brought into operation by proclamation in the *Government Gazette*, dated 23rd November, 1855. The first Premier (Colonial Secretary) was William Clark Haines.

The constitution thus brought into existence set up two houses of legislature, a Legislative Council and a Legislative Assembly. The Council consisted of 30 members, elected by six large provinces. A member was elected for ten years, and the Council as a whole could not be dissolved. One member for each district was to retire every two years. The elective principle for the Council was deliberately adopted, in contrast with the course followed under the New South Wales constitution of 1855, where the system of nomination was preferred. The qualification for election to the Council was the possession of freehold property to the value of £5,000, or worth £500 a year; a member had, also, to be 30 years of age. The Council could not amend a Bill for appropriating revenue or for imposing any duty or tax; but it was empowered to reject such a measure.

The Legislative Assembly under the 1855 constitution was composed of 60 members, and there were 37 constituencies. It was elected for five years. The qualification for membership was possession of freehold property to the value of £2,000, or worth £200 a year. The qualification of electors was possession of freehold property worth £50, or £5 per annum; or occupation of leasehold property worth £10 per annum; or the earning of a salary of £100 per annum; or the occupation of Crown lands for pastoral or mining purposes for the space of twelve

months. The Legislative Assembly was intrusted with the exclusive power of origination of all Bills appropriating revenue or imposing taxes, duties, and imposts.

Victoria in 1855. With this legislative machinery Victoria commenced at the end of 1855 to manage its own affairs under responsible government. It had at that time a population of nearly 320,000, and a public revenue of about £3,000,000. It was given complete control over an estate of 87,884 square miles—nearly the size of Great Britain—including some of the richest auriferous areas in the world, and lands of remarkable fertility. As yet few manufacturing industries had been established. Five years before the dawn of responsible government it had possessed little more than the pastoral industry and minor avocations consequent and dependent upon it. But the economic as well as the political character of the country had undergone rapid and sweeping changes. The enormous inrush of the gold-fields' population brought fresh ideas, additional requirements, and a powerful impetus to reconstruction almost before the new constitution had begun to work.

EARLY CONSTITUTIONAL CHANGES.

The Ballot. Even before responsible government came into being, Victoria had made one of those changes which, from time to time, have invested her legislative experiments with interest for students of politics in other parts of the world. When, during the last weeks of the existence of the old Legislative Council, an Electoral Bill was under consideration for the purpose of bringing the new Parliament into existence, William Nicholson, member for North Bourke, proposed that voting should be by ballot. Haines, who had only very recently been selected by the Governor to be the first head of a constitutional Government, not only opposed the motion, but chose to make it a vital matter of Ministerial policy. Nicholson did not wish to displace the Government, but he insisted on pressing his ballot motion, which was carried by 33 votes to 25. Thereupon Haines resigned (December, 1855). The Governor, following constitutional usage, sent for Nicholson, who, however, was unable to form a workable Ministry. Haines thereupon agreed to resume office, and accepted the ballot clauses in the Electoral Bill. At this time, the ballot had not been adopted in connexion with electoral machinery in any part of the British Empire. The English Chartists had demanded the ballot as one of their "points." But whenever in the Imperial Parliament the reform had been proposed it was defeated. Victoria was thus a pioneer with respect to this method of voting; and, subsequently, in England and America, when the ballot was proposed, it was generally referred to as the Victorian or Australian ballot. Indeed, the new system was a signal success. The disorder and personal recrimination which had made the exercise of the franchise under the open voting system somewhat of an ordeal, were seen no more, and the election of

1856, though the popular interest in it was intense, was the quietest event of the kind that any who took part in it had ever seen.

The Constitution gave power to the Victorian Parliament "to repeal alter or vary" the Act itself; provided that the second and third readings of amending Bills were passed by an absolute majority of the Council and Assembly. The Parliament very soon exercised its power of amendment. In 1857 the property qualification for membership of the Legislative Assembly was abolished, and manhood suffrage was adopted; and in 1859 the duration of Parliament was reduced from five years to three. The number of members of the Assembly was increased from 60 to 78 (1858). A further increase to 86 members was made in 1876, and to 95 members in 1888. The number of members was reduced in 1903 to 68, and in 1906 to 65.

Manhood Suffrage. The franchise was conferred upon women by the Adult Suffrage Act of 1908, which applied to both Houses of the Legislature. On 30th August, 1899, plural voting was abolished, it being provided that no person should on any one day vote in more than one electoral district at an election for the Assembly. Plural voting is still, however, permissible in elections for the Upper House, but owing to the large area of the provinces, it is improbable that the right is exercised to any extent.

Women's Suffrage and Plural Voting.

Land. In 1857 land legislation began to assume an importance which transcended interest in constitutional reform. When responsible government in Victoria commenced, only 4,000,000 acres of land had passed into private ownership out of 56,000,000 acres which the colony contained. There had never been, on the south side of the Murray, those enormous alienations of land, as free grants or on very cheap terms, which had characterized public administration in the early years of New South Wales. The fact that the possibilities of Victoria were not realized till so late as 1835, prevented the giving away of large areas of the public estate. The settlement of Victoria fell within the period of "systematic colonization," which was profoundly influenced by the theories of Edward Gibbon Wakefield. Indeed, when it is remembered that immense estates were conferred upon individuals and corporations in New South Wales by favour and influence, the treatment accorded to such pioneers as John Batman and the Hentys in Victoria seems niggardly in the extreme. Batman's widow was not even allowed to keep the little plot of ground upon which he had erected a modest wooden cottage in his "village," and the claims of the Henty family to the land which they occupied at Portland were rather haughtily scorned by the austere authorities. Ultimately, after persistent appeals, the Hentys were granted land and monetary compensation to a total of £1,750; but that concession was made with ill grace.

Special Surveys. The first colonists of Victoria, in fact, were subject to the Land Regulations of 1831, which ordered that public lands were not to be disposed of otherwise than by public sale. In 1836 a special committee on colonial lands recommended that

the proceeds of land sales in Australia should be devoted to promoting emigration ; this, indeed, being one of Wakefield's essential principles. In order to give effect to this plan, the Imperial Government, in 1840, appointed a Board, called the Colonial Land and Emigration Commissioners, who were charged with the duty of supervising land sales, and using the funds so obtained to assist emigrants to go to the colonies. Instructions issued by the Colonial Office, under the advice of these Commissioners, in 1840, directed that Port Phillip lands were to be sold at an uniform price of £1 per acre, except within established towns. The instructions did, however, apply to lands outside a 5-mile radius of towns. Investors who knew more about the position and prospects of the towns in this province than the Commissioners in London did, were quick to perceive that the purchase of suburban areas at £1 per acre would be highly remunerative. Henry Dendy, who paid in London £5,120 for 5,120 acres—8 square miles—of Port Phillip territory, in 1841, brought his land order out with him, and claimed the right to a "special survey" as near to the town of Melbourne as possible. He selected an area within the present town of Brighton. H. Elgar, who made a similar bargain with the Commissioners, selected eight square miles in what have since become populous suburbs east of Melbourne. Six other purchasers of land orders claimed to select eight square miles in other parts of Port Phillip, and the Superintendent, Latrobe, had to meet their demands, and cause "special surveys" to be made, because their land orders had the authority of the Imperial Government behind them. But it was obvious that if this policy were permitted to continue, the most valuable lands in the vicinity of Melbourne, Geelong, Williamstown, and other promising settlements would soon pass into the hands of private owners at absurdly low prices. Governor Gipps therefore intervened, and took the responsibility of refusing to permit a free choice to be exercised under any more land orders of the kind ; and the Colonial Secretary, perceiving by this time that a mistake had been made, ratified his action.

**The
Minimum
Price.**

Amended land regulations were issued in 1842, under the Crown Land Sales Act, directing that Port Phillip lands were to be sold by auction at a minimum price of £1 per acre. But land sales at this price did not meet the case of squatters who required large areas upon which to depasture their sheep ; and the squatting question became acute after 1842. After much agitation among interested persons, in England as well as in Australia, regulations were issued in 1847. These regulations applied to the whole of New South Wales, including the Port Phillip District, and they divided the whole of the lands into three categories—settled, intermediate, and unsettled. The "settled" areas of Port Phillip were lands within a radius of 25 miles of Melbourne, 15 of Geelong, and 10 of Portland. "Intermediate" areas were lands within the counties of Bourke, Grant, and Normanby, and within the squatting districts of Gippsland. The "unsettled" areas were all those not included within those just

mentioned. In "settled" areas pastoral runs might only be leased for one year; in "intermediate" areas for no longer than eight years; in "unsettled" areas for fourteen years. Not more than 600 square miles of Crown land in Port Phillip had been alienated before the separation of Victoria from New South Wales in 1850, and though the regulations of 1847 gave to the squatters the pre-emptive right to purchase parts of their runs in intermediate and unsettled areas, the right had, up to 1854, only been availed of to the extent of 300,000 acres, for all of which a minimum of £1 per acre had been paid. On the other hand, squatting licences had been availed of, up to 1855, to the extent of depasturing five million head of sheep and close upon half-a-million head of cattle on a thousand licensed runs.

When responsible government was conferred upon Victoria (1855), the Imperial Parliament repealed the Crown Land Acts, and thus threw upon the newly-erected Parliament of the colony the whole responsibility for land legislation. The list of Land Bills considered and Acts passed, from the time of the first Haines Ministry to very recent times, is very long; and the purposes which the various measures were intended to secure illustrate the phases of development through which Victoria has passed. Efforts to provide easy facilities for men of small means to settle on farms were made as early as the Land Act of 1860, introduced by James Service. The Duffy Land Act of 1862 opened ten million acres of land for settlement in agricultural areas, and permitted selectors to pay for their holdings on easy terms; but they were required to make substantial improvements. An amending Act of 1865 was designed to prevent settlers from selling their holdings, and it did not permit the fee-simple to be acquired till the settler had resided three years and effected improvements to the value of £1 per acre. A consolidating Land Act of 1869 reduced the size of agricultural areas from 640 to 320 square acres, and made improvements in details of administration, always with the object of promoting agricultural settlement and increasing the stability of the farming class. A new class of measure appeared in 1883, in the shape of the first Mallee Lands Act. The north-western area of Victoria, a light soil covered with mallee scrub, had been regarded in earlier years as useless country. But pastoralists were extending their operations, and discovered that the mallee contained valuable grazing land. A little later, large wheat-growing areas were opened up in the same part of the country. A large consolidating Lands Act, of 1890, classified the lands of the colony into eight divisions, according to their quality and capabilities. Another phase of land legislation commenced in 1898, when the first of a series of measures was introduced to enable privately-owned lands to be purchased by the Government for purposes of closer settlement. Thus, within a little over half a century, the country passed through a series of remarkably rapid changes in regard to its territory. First, there was the period of unauthorized occupation; next, the period of regulated occupation in large areas for pastoral

**Land
Legislation.**

purposes; thirdly, the period of the beginning of agricultural settlement; fourthly, the period of the rapid absorption of the most fertile lands by selectors and other purchasers; fifthly, the period when the demand for cultivable areas was in excess of the supply, and the attention of Governments had to be directed to schemes of repurchase.

THE CONSTITUTIONAL QUARRELS.

Protection. For about sixteen years, from 1864 to 1880, Victoria was in a condition of bitter political turmoil, arising out of disputes between the two Legislative Houses; and these disputes themselves afforded violent evidence of the emergence of new political forces which completely changed the policy of the country. A strong party had arisen, consisting largely of workers in town industries and miners, which advocated the imposition of Customs duties on goods which could be manufactured in Victoria. Its purpose was to protect local manufactures. This party was strong enough at a general election in 1864 to return to the Legislative Assembly a majority favorable to the Protective policy; and the Ministry of James McCulloch, which had come into office before the election, and was strengthened by the verdict of the country, determined to bring forward a Protective Tariff. The opposition to this policy was, however, very vigorous and influential, and McCulloch was aware that it was well represented in the Legislative Council. A measure which he introduced to reform that House by reducing the property qualification and shortening the ten years' period for which its members were elected to five, met with so swift a rejection from the Council that McCulloch was left in no doubt about the attitude of the House towards the policy of his Government. Calculating that the Tariff would meet with a similar fate, he determined to adopt the bold course of "tacking" it to the annual Appropriation Bill. There was no provision of the written Victorian Constitution which forbade this device, though "tacking" was repugnant to British constitutional practice. The Council was debarred from amending a Bill imposing taxation or appropriating revenue, though it might reject such a measure. The "tack" was, however, taken as a challenge to the Council's legislative powers, and the House refused to pass the Bill, on the ground that it was contrary to constitutional usage and to the practice of Parliament "to introduce any clause or clauses of aid or supply, or any foreign matter, into a Bill of appropriation" (May, 1865). Thus commenced one of the bitterest constitutional struggles in modern history, and one which has ever since been a subject of interest to writers on parliamentary government.

McCulloch's device of borrowing money from a bank to carry on the ordinary functions of government, and allowing the bank to sue for its recovery; the sending up of the Tariff apart from the Appropriation Bill, and its rejection because of its inclusion of clauses which the Council held to be foreign to its purpose; the appeal to the country at a general election (1866), and the return of a majority of the Assembly

favorable to McCulloch's policy; the rejection again of the Tariff by the Council; McCulloch's resignation, and the formal pledge of the Assembly that it would withhold support from any Ministry which did not press forward an Appropriation Bill containing the Tariff; and the final conference between the two Houses, which led to the elimination of the offending provisions from the Appropriation Bill, and the acceptance of the Tariff by the Council as a separate measure—these were the main features of a parliamentary conflict which was full of exciting incidents.

The Tariff struggle was immediately followed by another, not less intense in bitterness, with reference to a grant voted by the Assembly to Governor Darling. He had incurred the censure of the Colonial Office for his management of affairs during the Tariff quarrel, and the condemnation was conveyed in such terms as made it plain that he would not receive another appointment after his recall from Victoria. The proposed grant took the form of a sum of £20,000 to be paid to Lady Darling. But the Government included the item in the ordinary Appropriation Bill, whereas the Legislative Council held that it ought to have formed the subject of a separate measure. Thus another furious quarrel was precipitated, which, fortunately, the Imperial Government ended in 1868 by granting to Sir Charles Darling a pension of £1,000 per annum for life.

Darling Grant.

Immediately after these quarrels—in September, 1868—the Legislative Council passed a measure reforming its own constitution. The term of election was reduced to six years; the property qualification of members was lowered from £5,000 capital value, or £500 per annum value, to one-half those amounts; and the qualification of electors was reduced from £1,000 capital value, or £100 per annum, to an annual value of £50. This remained the standard till 1881, when the property qualification of Council members was again reduced, the requirement of the Act of that year being that a member should have possessed freehold estate in Victoria of a clear annual value of £100 for one year "previously to" his election; whilst the qualifications of electors were both lowered and broadened.

Reform of Constitution.

Another historical constitutional quarrel began in 1877, with reference to a proposal to make payment of members the permanent rule in Victoria. Two Acts had previously been passed (1870 and 1874) making provision for the payment of members temporarily, but the Council was not favorable to the principle, and had been reluctant to pass a permanent measure for the purpose. The Ministry of Graham Berry, which came into office in May, 1877, proposed to give permanence to the policy, and chose to do it by including the necessary money (£18,000) in the Appropriation Bill. The Council, maintaining its attitude of refusal to permit extraneous measures to be included amongst votes for ordinary annual services, laid aside the Bill. Again public feeling

Payment of Members.

was intense. The memorable feature of this struggle was the pressure put upon the Council by Berry through the dismissal from office of a large number of public servants, including County Court Judges, police magistrates, departmental secretaries, and others. The day on which these dismissals took place, 8th January, 1878, was called "Black Wednesday." Berry's professed reason was that it was necessary to reduce expenditure because of the refusal of the Council to pass the Appropriation Bill. It was not doubted, however, that his real purpose was to exercise pressure. The immediate effect of the wholesale dismissals was to reduce the value of property and securities and cause a mild commercial panic. In order to meet necessary and urgent demands upon the Treasury, Berry induced the Assembly to resolve that "all votes or grants passed in Committee of Supply become legally available for expenditure immediately the resolutions are agreed to by the Assembly." In accordance with this resolution, Governor Bowen signed "Treasury warrants," which enabled Berry to draw upon the revenue without the authority of an Appropriation Act. Shortly afterwards intermediaries arranged a means of settlement, and the Assembly withdrew the extraneous items from the Appropriation Bill, whilst the Council passed the Payment of Members Bill as a separate measure (March, 1878). Subsequently the legal advisers to the Imperial Government, who reviewed the facts of the case, laid down the principle that the Legislative Assembly was not justified in inserting a question of principle into an ordinary Appropriation Bill; and that public officials were not warranted in collecting taxes on the mere vote of the Legislative Assembly, nor in making payments which had not been authorized by Statute.

INDUSTRIAL LEGISLATION.

Factories. One of the reasons advanced for the Payment of Members Bill was that it would enable the industrial classes, miners, and farmers to secure direct representation by men of their own kind in the Legislature. The fact that such a demand was made, together with the achievement of the Protective policy, indicate that Victoria had passed far over the threshold of the grazing and agriculture stage of development, and that manufacturing interests were now prominent in the community. Five years after the inauguration of responsible government, there were only 4,000 factory hands in Victoria. In 1880 there were over 40,000. This development necessitated legislation for the proper conduct of factories and workshops. The Trade Union movement commenced in 1850 with the formation of a society of stonemasons, a considerable number of artisans following that calling having been introduced for work upon the granite arches of Prince's-bridge, Melbourne, which was formally opened by Governor Latrobe on 15th November, 1850.

**Eight
Hours
Day.**

It was a mason, James Stephens, who initiated the Eight Hours working day movement. Stephens, like so many more Australian colonists of the fifties, had been an English

Chartist, and though, it is true, the Eight Hours Day was not one of the "six points" of the Charter, it was an industrial demand which was generally made by English unionists at that period. Stephens commenced to agitate for an eight hours day shortly after he came to Victoria in 1851, and it was in connexion with the erection of the Melbourne University buildings in 1856 that he brought the demand to a head and secured the recognition of the principle. The original eight hours banner, made for the purpose of a demonstration by the masons and other building trade workers in 1856, is still in existence.

The first Victorian Factories Act was not passed till 1873. It was a very mild measure, prohibiting the employment of women in factories for more than eight hours, and its administration was intrusted to the local Boards of Health. A much more comprehensive Factories Act was passed in 1885, by which time there had been a marked expansion of industrial activities. The Act followed English legislation in making provision for Government inspection, insuring sanitary conditions and the general regulation of workshops. This was the foundation measure upon which several amendments were made in later years.

But the Victorian industrial legislation which has attracted most attention from students in other parts of the world is the Wages Board system. A Board of Inquiry appointed to inquire into the subject of "sweating" in certain industries revealed a condition of affairs so unsatisfactory that the Turner Government in 1895 considered that machinery was required for insuring humane conditions of employment. The Chief Secretary in that Administration, Alexander Peacock, devised the system of appointing Boards, consisting of equal numbers of employers and employees, presided over by independent chairmen, in particular trades. As an experiment in industrial politics the project evoked great interest, and the working of it has been carefully studied by many sociologists. In the Act of 1895, provision for the appointment of Wages Boards was made only in respect of the manufacture of women's blouses, men's shirts and slops, and women's underclothing; but the success of the experiment led to the extension of the method to about 130 industries.

POLITICAL.

The line of party cleavage in Victorian politics has shifted several times, and each change of the kind has naturally corresponded with the broadly marked periods of the country's development. In the early years of responsible government, land questions were of pre-eminent importance. The interests of squatters, who required land in large areas for grazing, clashed with those of farmers who desired land for cultivation purposes. "Unlock the lands" was the battle-cry in the fifties and early sixties. The very large size of the areas represented by the members of the Legislative

Council, naturally gave to that House the complexion of favouring the cause of the squatters. When alluvial gold mining declined in yields, and thousands of miners had to seek other avocations, the desire to extend the range and variety of the industries of Victoria presented itself in the form of a demand for Protection. The new cleavage lay between Free Traders and Protectionists, and this line determined the trend of politics more or less continually from 1864 till 1900, when Victoria became a State of the Commonwealth, and her Parliament ceased to exercise control over a local Tariff.

Labour Party. Payment of members did, as it was intended to do, enable the working classes to send their own representatives to Parliament; but the early Labour members, though acting together, were virtually an advanced wing of the Protectionist party, with a natural inclination to emphasize the interests of trade unionists. They were hardly a separate party in the sense of having aims distinct from those of the party with which they almost invariably worked and voted. Thus, W. A. Trenwith, who was President of the Melbourne Trades Hall Council in 1888, and afterwards member for Richmond in the Legislative Assembly, acted as leader of the Labour party in Parliament, but was not an advocate of independent Labour party action. The distinct cleavage between Labour politics and other parties and groups in Victoria occurred after the establishment of the Commonwealth. Numerically, however, the Labour party was strengthened after the great maritime strike of 1890, which commenced in Melbourne, and showed its effects so widely as to affect every industry and every colony in Australia. The Labour party, under the leadership of G. M. Prendergast, maintained itself according to circumstances as an independent opposition or an independent supporter of Ministries, after 1900; and in 1913, under the leadership of G. A. Elmslie, for the first time attained to office, though the Elmslie Administration was too short-lived to achieve any legislative or administrative work.

PUBLIC POLICY.

Burke and Wills. The public spirit of Victorian citizens led them, throughout the years under responsible government, to interest themselves in projects for the welfare of Australia as a whole. One of the most famous of Australian exploring expeditions, that associated with the names of Burke and Wills, was promoted and financed in Victoria (1860-1), though its chosen sphere of activity was far beyond Victorian territory.

Immigration Restriction. In view of the fact that since Federation public opinion has solidified in support of the policy of excluding undesirable immigrants from Australia, it is interesting to observe that the first colonial legislation on such lines was passed in Victoria. One of the burning questions which agitated the minds of the Port Phillip people, when the elections for the first Legislative Council took place in 1851, was that of imposing obstacles to the incursion of exprees from Van Diemen's Land, and many of the candidates in their election

addresses promised to support restrictive legislation. The Convicts Prevention Act debarred ticket-of-leave holders from entering the colony, and required immigrants from Van Diemen's Land to produce evidence of their absolute freedom, failing which they were to be treated as convicts, and placed under arrest. The Lieutenant-Governor, Latrobe, hesitated to give his assent to a measure which was without a precedent in any British colony, but public opinion was so strong, and the danger of allowing the gold-fields to be overrun by criminals was so great, that he signified the Royal assent. When, however, a copy of the Act reached the Colonial Office, the Secretary of State intervened; but, as he did not wish positively to disallow the Act, he suggested the introduction of an amending Bill, eliminating certain provisions to which he directed attention. So far, however, from the Legislative Council being inclined to weaken the original measure, they inserted in the amending Bill clauses making it much more stringent. The Council was strongly supported by a public meeting held in Melbourne, which protested that "the Sovereign of the British realms neither hath, nor ought to have, any right, prerogative, or power, warranting the letting loose in the colony of Victoria of the convicted criminals of other countries or colonies." The Council refused to modify its attitude at the dictation of the Secretary of State, and the Colonial Office did not persist in its antagonism. The Act, therefore, remained in operation.

After the responsible government era, the influx of Chinese created alarm. The gold-fields attracted over 25,000 Chinese immigrants within four years, and they continued to arrive by every ship. The first Legislative Council sought to stem the tide by imposing a poll tax of £10 per head on every Chinese immigrant. Further legislation was passed from time to time, but the poll tax was abolished in 1865. The agitation against the Chinese again became intense at the beginning of the eighties. By that time, the thousands who had in earlier years found a living on the gold-fields had, owing to the decline of alluvial diggings, drifted into other avocations, and several city industries, notably cabinet-making, felt the pinch of cheap labour competition. In 1881 the Victorian Parliament, acting in conjunction with that of New South Wales, not only reimposed the £10 poll tax, but prohibited ships from bringing in more than one Chinese passenger for every 100 tons of the vessel's burthen. The validity of this legislation was tested in the case of *Ah Toy* versus *Musgrave*. In 1888, Ah Toy, a Hong Kong merchant, was debarred from entering Victoria, and he brought an action against the Collector of Customs, Musgrave, who administered the exclusion Act. A majority of the Judges of the Supreme Court of Victoria decided in his favour; but the Government appealed to the Privy Council, which reversed the decision, and laid down the principle that British colonies were empowered to legislate to exclude aliens. After Federation, the control of immigration passed into the hands of the Commonwealth Government

Commercial Crises.

The rapid commercial expansion of Victoria has been checked temporarily, but never seriously set back, by a few financial crises. The first of these happened in 1841-3, and was a consequence of gambling in land values. The practice of putting up for sale by auction selected areas of land caused intense competition, and high prices were obtained. Such a sale—the last of the kind—took place in 1840. Immediately after came the order of the Colonial Office that colonial lands were to be sold at a fixed price of £1 per acre. At once there was a slump in values, and those who had borrowed money in order to buy land at high prices were pressed to pay. The bubble burst, ruin for many ensued, and for a while enterprise was crippled. The next crisis occurred during the flush of the gold discoveries. The sensational finds, and the overwhelming inrush of population, occasioned an enormous flow of imports to Victoria. Goods arrived faster, and in greater bulk, than they could be handled. The normal channels of trade were swollen and gorged with merchandise. Commodities deteriorated on the wharfs because they could not be conveyed to the distant places where they might have been sold. The goods which did get released were not always those which were useful. Merchants and traders lost heavily, and this in the very years—1853-4—when fortunes were being dug out of Ballarat and Bendigo. The imports in the years just mentioned totalled £79 and £70 per head of the population respectively. (For purposes of comparison it may be noted that the total Victorian imports in 1900 were valued at £15 per head of the population.) The losses were severe. It has been calculated that at least 20 per cent. of the imports were lost or destroyed, so that, notwithstanding the enormous gold exports, Victoria was left, during the years of glut, with a heavy trade balance against her.

The greatest period of commercial depression and financial paralysis sustained by Victoria occurred in 1892-3, following what was popularly known as the Land Boom. Extraordinary amounts of borrowed capital had poured into the colony during the seven or eight preceding years. The Government, municipalities, and public bodies borrowed millions from Great Britain. At the same time, millions of money were privately borrowed for investment. Land banks and building societies were created, with abundant money to lend, and extraordinary competition for suburban lands sent up values to unheard-of altitudes. When the regular banks became cautious and refused to advance more money on the security of real estate, the newly-created land banks readily obtained more millions from speculators in Great Britain; and more and more suburban lands were sold. A sharp financial crisis in London in 1890—due to the failure of the great house of Baring—suddenly restricted lendings to Victoria. The greater part of the money already lent had not been invested in remunerative industries, but had been used to inflate land values for speculative purposes. When one of the most active of the building societies, which had received hundreds of thousands of pounds from investors, suspended

payment, and it was found that its realizable assets were of trifling value, public confidence was shaken, and soon the whole edifice of credit was shattered. Bankruptcies were numerous, many of the so-called banks collapsed, and the shock of the failure was so severe that in 1893 most of the ordinary banks were forced into reconstruction. The blow to credit caused by the collapse was severe, and the efforts of legitimate industry were partially paralyzed. But Victoria showed herself in this as in other crises to be a country of remarkably rapid recuperative power. Her natural resources were so great and the energy of her people so adaptable that within a year or two the collapse of the land boom was an unpleasant memory of events which had impressed salutary lessons.

VICTORIA AND THE COMMONWEALTH.

The movement for the Federation of Australia received powerful support in Victoria. Indeed, the impetus which at length drove the movement to successful fruition, had its origin in this State. That this should have been so is remarkable, in view of the very strong insistence on the separation of the Port Phillip District from New South Wales just before the end of the first half of the nineteenth century. The two tendencies—one separatist, the other Federal—might at first glance seem to be inconsistent. But in reality they were not. In the forties, when communication between Sydney and Melbourne was slow, the interests of the two communities were different. Over 600 miles of territory lay between them. South of the Murrumbidgee, the natural "pull" of trade was towards Melbourne; north of the river, it was towards Sydney. But railways and improved sea carriage, in effect, cut down the distance. Moreover, the development of the industries of Victoria soon enabled manufacturers to meet the demands of the local market, whilst their capacity for production was in excess of local demands. They required the wider scope which Free Trade between the States—a necessary concomitant of Federation—would secure for them. The Australian Natives Association, too—an organization of Victorian origin—was eager for Federation. The early history of the Federal movement, and its several misfortunes, are connected principally with the politics of New South Wales; but it was a Victorian, John Quick, who in 1893 furnished the scheme upon which at length the cause advanced until the Commonwealth of Australia came into being in 1901. Quick propounded the plan of electing a Federal Convention, representative of the people of all the States, charged with the duty of preparing a Constitution; and this Constitution was to be submitted directly to the people for their acceptance or rejection. The plan worked, despite some delays and hindrances. New South Wales, after the Bill had passed the Convention, took exception to the provision in it which would have enabled the Federal Parliament to exercise a free choice in the selection of a Federal Capital. At the first referendum, in 1898, whilst in Victoria 100,520 votes were cast for the Bill and only

**Federal
Movement.**

22,099 against it, in New South Wales, 71,965 affirmative and 66,228 negative votes were cast. The New South Wales Parliament, however, had insisted that at least 80,000 affirmative votes should be recorded in order that the Commonwealth Bill might be accepted, and as this number was not recorded, the 1898 referendum simply brought matters to a stand-still.

It was again Victoria, through her Premier, Sir George Turner, which supplied the fresh impetus. It was clear that in New South Wales the real stumbling block was the Federal Capital clause. Many in that State feared that if the Federal Parliament were allowed to exercise a free choice, it would select a piece of territory in Victoria. In this State it was considered that the Federal cause was greater than any local matter of pride or jealousy; and at a conference of Premiers, held at Melbourne in January, 1899, Sir George Turner agreed to the amendment of the Federal Capital provision by the insertion of the condition that the capital must be in New South Wales, but not within 100 miles of Sydney. Pending the building of a capital, however, the Seat of Government was to be in Melbourne. Other alterations in the original Bill were made at the same time, but it was well understood that the insuring of the capital to New South Wales would make all the difference in the reception of the Federal project there. Such, indeed, proved to be the case, and at the second referendum in June, 1899, the Bill was carried in New South Wales by 107,420 votes to 82,741. In Victoria the affirmative majority was larger than before, there being 152,653 votes for the Bill and 9,805 against it.

Upon the achievement of Federation, the Parliament of Victoria offered its parliamentary buildings to the Federal Parliament, and the Government of the State offered Government House as a residence for the Governor-General of the Commonwealth. The use of these great buildings was accepted by the Federal Government, which, since the establishment of the Government, has been in occupation of them. The first meeting of the Federal Parliament, however, was held in the Melbourne Exhibition Building, where its proceedings were ceremoniously opened by H.R.H. the Duke of Cornwall and York, on behalf of King Edward VII., on 9th May, 1901.

CHRONOLOGICAL TABLE OF LEADING EVENTS IN VICTORIAN HISTORY.

The following are the dates of some of the principal events connected with the discovery and history of Victoria:—

Principal events.	1770. 19th April.—Victorian land first discovered by Capt. James Cook, R.N., in command of His Majesty's ship <i>Endeavour</i> .—("Point Hicks," believed to be the present Cape Everard in Gippsland.)
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1798. 4th June.—Western Port first entered by Surgeon George Bass, R.N.
- „ Nov. and Dec.—Discovery of Bass Strait, Midshipman Matthew Flinders, R.N., accompanied by Bass, having sailed round Tasmania in the sloop *Norfolk*.
1800. 4th to 9th Dec.—Lieutenant James Grant, R.N., in H.M.S. *Lady Nelson*, a gun brig of sixty tons burthen, bound from England to Port Jackson, first sailed through Bass Strait from the west. During the voyage Grant discovered and named Capes Bridgewater, Nelson, and Sir William Grant; Portland Bay; the Lawrence and Lady Julia Percy Islands; Capes Otway, Patton, Liptrap, &c.
1802. 5th January.—Port Phillip Bay discovered by Acting-Lieutenant John Murray, R.N., in the *Lady Nelson*. The launch (under Lieutenant John Bowen) entered the Heads on 2nd, and the ship on 15th February.
- „ 26th April.—Port Phillip Bay entered and examined by Flinders, who had been promoted to the rank of Commander. He was not aware that the Bay had been previously discovered by Murray.
1803. Jan. and Feb.—Port Phillip Bay surveyed, and the Yarra and Saltwater Rivers discovered, by Charles Grimes, Surveyor-General of New South Wales.
- „ 7th October.—Attempt made to colonize Port Phillip by Colonel David Collins, in charge of a party of convicts.
1804. 27th January.—Port Phillip abandoned by Collins as unfit for settlement.
1824. 16th December.—Hume and Hovell arrived at Corio Bay, having travelled overland from Sydney.
1826. 11th December.—An attempt to colonize Western Port, on its eastern side, near the site of the present township of Corinella, was made by Captain S. Wright, of H.M. 3rd Regiment, in charge of a party of convicts. The locality being sterile and scrubby, the establishment was withdrawn early in 1828.
1834. 19th November.—Permanent settlement founded at Portland Bay by Edward Henty.
1835. 29th May.—John Batman arrived in Port Phillip and made a treaty with the natives, by which they granted him 600,000 acres of land. The Imperial Government, however, refused to ratify the treaty.
- „ 28th August.—John Pascoe Fawkner's party sailed up the Yarra in the *Enterprise*, and settled on the site previously selected by Batman. (Fawkner followed shortly after, and landed on the 18th October.)
1835. 28th August.—Proclamation by Sir Richard Bourke, claiming Port Phillip as part of New South Wales.
1836. April to Oct.—Major (afterwards Lieutenant-Colonel Sir) Thomas Livingstone Mitchell made extensive explorations in the Port Phillip District, the western portion of which he named Australia Felix.
- „ 29th September.—Regular Government established under Captain William Lonsdale, who was sent from Sydney to act as Resident Magistrate of the Port Phillip District.
1837. First post office established in Melbourne.
- „ 2nd March.—Governor Sir Richard Bourke arrived from Sydney and gave the name, Melbourne, to the principal town in the new settlement.

1837. 1st June.—First sale of Crown lands in Melbourne. Average price of half-acre town lots, £35.
1838. First Presbyterian minister, Rev. J. Forbes, arrived at Melbourne.
- .. 1st January.—*The Melbourne Advertiser* first published.
- .. 12th September.—First census of the colony. Population enumerated, 3,511, viz., 3,080 males and 431 females.
1839. 6th May.—Death of John Batman, one of the founders of Melbourne, aged 36 years.
- .. 28th May.—Angus Macmillan's first journey into Gippsland.
- .. 30th September.—Mr. Charles Joseph La Trobe arrived from Sydney and took charge of the Port Phillip District under the title of Superintendent.
1840. Jan.-Feb.—Macmillan's journey through Gippsland (which he called Caledonia-Australis) to Lakes Entrance.
- .. 28th May.—Count Paul Strzelecki reached Melbourne after journey through Gippsland.
1841. January.—Dendy's special survey of Brighton, and other special surveys.
- .. 8th February.—The first resident Judge appointed for Port Phillip.
- .. 1st September.—Savings Banks established in Melbourne.
1842. 12th August.—Melbourne incorporated as a Town by Act of the Legislature of New South Wales 6 Vict. No. 7.
- .. 9th December.—Henry Condell elected first Mayor of Melbourne.
1843. 13th September.—Subdivision of Port Phillip into four squatting districts.
1844. 24th December.—Petition for separation sent from Port Phillip to England.
1846. 2nd June.—*Argus* newspaper founded.
1847. 26th June.—Royal Letters Patent, proclaiming Melbourne a City, were signed.
1848. 23rd January.—Dr. Perry, first Anglican Bishop of Melbourne, arrived in Port Phillip.
1849. 8th August.—The *Randolph* prevented from landing convicts in Melbourne.
- .. 12th October.—Geelong incorporated as a Town by Act of the Legislature of New South Wales 13 Vict. No. 40.
1850. 3rd July.—Construction of first Australian railway commenced at Sydney.
1850. 5th August.—Passing of the Separation Act.
1851. 6th February.—"Black Thursday."—A day of tremendous heat and destructive fire, whereby a large tract of country was devastated. Several lives were lost, numbers of sheep, cattle, and horses perished, and a vast amount of property was destroyed.
- .. 1st July.—Port Phillip separated from New South Wales and created an independent colony, named Victoria, in honour of the Queen.
- .. July and Aug.—Discovery of gold in Victoria.
1852. 10th February.—Supreme Court of Victoria established.
- Great rush of immigrants to Victoria.
1853. 3rd January.—Bank of Victoria opened.
- .. 8th February.—Road districts (the origin of the present shires) established by Act 16 Vict. No. 40.
1854. *Age* newspaper founded.
- .. 22nd June.—End of Governor Latrobe's administration; Sir Charles Hotham's Governorship commenced.

1854. 3rd July.—Foundation stone of Melbourne University laid.
 „ 12th September.—Melbourne and Hobson's Bay railway opened for traffic.
 „ Nov. and Dec.—Riots on Ballarat gold-field. (Eureka stockade taken on the 3rd December.)
 „ 29th December.—Municipal institutions established by Act 18 Vict. No. 15.
1855. 12th March.—Electric telegraph first used.
 „ 23rd November.—Constitution proclaimed in Victoria.
 „ 18th December.—Voting by ballot first proposed in Legislative Council.
1856. 11th February.—Opening of Melbourne Public Library.
 „ 19th March.—The ballot as a means of electing members of both Houses of Parliament prescribed by Act 19 Vict. No. 12.
 „ 21st April.—Inauguration of eight hours system in building trades of Melbourne.
 „ 21st November.—Meeting of first Parliament under responsible government.
 „ 26th December.—Sir Henry Barkly sworn in as Governor.
1857. 27th August.—Property qualification of members of the Legislative Assembly abolished by Act 21 Vict. No. 12.
 „ 24th November.—Universal manhood suffrage for electors of the Legislative Assembly made law by Act 21 Vict. No. 33.
1858. 17th December.—Number of members of the Legislative Assembly increased to 78, to be returned for 49 Electoral Districts.
1860. 20th August.—Burke and Wills started from Melbourne on their ill-starred expedition across Australia, to die at Cooper's Creek on their return journey in the following June.
1861. Burke and Wills perish at Cooper's Creek, near Innamincka, South Australia.
 „ Torrens Land Transfer Act introduced in Victoria.
1862. September.—Council of Education appointed.
 „ 20th October.—Bendigo railway opened.
1863. 11th September.—Sir Charles Darling sworn in as Governor.
1865. 28th May.—Death of Angus Macmillan, Gippsland explorer.
 „ 25th July.—Deadlock in Victorian Parliament, owing to the Legislative Assembly tacking a Tariff Bill to the Appropriation Bill, which was laid aside by the Legislative Council.
1866. Sir Charles Darling re-called.
 „ 15th August.—Sir J. H. Manners-Sutton (Viscount Canterbury) sworn in as Governor.
1867. 6th February.—Customs Tariff imposing import duties on a number of articles, with a view of affording protection to native industries, came into operation under Act 31 Vict. No. 306.
 „ 14th August.—Beginning of the Lady Darling grant deadlock. During the eleven months it continued, all Government accounts remained unpaid.
 „ 23rd November.—Duke of Edinburgh arrived in Melbourne.
1868. 10th June.—Transportation to Australasia ceased.
1869. 1st January.—Property qualification of members and electors of the Legislative Council reduced by Act 32 Vict. No. 334.
 „ 4th September.—Death of John Pascoe Fawkner, one of the founders of Melbourne, aged 77 years.

1870. 24th June.—Death of Adam Lindsay Gordon.
 „ Wilberforce Stephen's Education Act passed.
 „ June-July.—Federal Conference was held at Melbourne.
 „ 29th December.—Payment of members of Parliament provided for by temporary Act.
1871. 17th May.—Import duties on many articles increased, with the view of affording further protection to native industry.
1872. 12th June.—Branch of Royal Mint opened in Melbourne.
1873. 1st January.—A system of free, secular, and compulsory education introduced.
 „ 31st March.—Sir George Bowen sworn in as Governor.
1875. 31st December.—State aid to religion withdrawn in Victoria.
1876. 2nd November.—Number of members of the Legislative Assembly increased to 86, and boundaries of Electoral Districts altered so as to increase the number to 55, by Act 40 Vict. No. 548.
1877. 11th January.—Installation of Rev. Dr. Moorhouse as Anglican Bishop of Melbourne.
1878. 8th January.—“Black Wednesday.” Wholesale dismissal of public servants.
 „ 27th March.—Payment of Members Bill passed by Legislative Council, after a long conflict between the two Houses.
 „ 1st July.—Purchase of Melbourne and Hobson's Bay railway by Government.
1879. 27th February.—Marquis of Normanby sworn in as Governor.
1880. 6th February.—Fortnightly mail contract service between Victoria and England commenced.
 „ 22nd March.—Women admitted to Melbourne University under Act passed in 1879.
 „ 13th April.—Foundation stone of the new Anglican Cathedral laid.
 „ June.—Capture of the Kelly Gang.
 „ 1st October.—First Victorian International Exhibition opened in Melbourne.
 „ 23rd November.—Death of Sir Redmond Barry.
 „ Nov.-Dec.—Federal Conference, Melbourne, decided on Chinese restriction.
1881. 28th November.—Property qualification of members and electors of the Legislative Council further reduced, number of provinces increased to 14, of members to 42, and tenure of seats fixed at 6 instead of 10 years.
1883. 1st November.—Public Service Act passed.
 „ 14th June.—Railway, Melbourne to Sydney, completed.
1884. 1st February.—Victorian railways placed under the control and management of three Commissioners, under Act 47 Vict. No. 767.
 „ 15th July.—Sir Henry Loch sworn in as Governor.
1885. 9th December.—Imperial Act constituting a Federal Council of Australasia brought into operation in respect to Victoria by Act 49 Vict. No. 843.
1886. 25th January.—Federal Council initiated, first session being at Hobart.
1888. 1st February.—Weekly mail contract service between Australia and England commenced by vessels of the Peninsular and Oriental and Orient services running alternately.
 „ 1st August.—Second Victorian International Exhibition opened in Melbourne.

1888. 22nd December.—Number of members of the Legislative Council increased to 48, and number of members of the Legislative Assembly to 95; electoral districts altered from 55 to 84, nearly all of them being single electorates.
1889. 28th November.—Lord Hopetoun sworn in as Governor.
1890. 16th August.—Great maritime strike commenced in Melbourne.
1891. 2nd March.—Federal Conference at Sydney.
1892. 17th March.—Railway Commissioners suspended by the Government.
1893. April and May.—Financial panic. Four banks and a number of other financial institutions stopped payment.
1894. Central Federation League established in Melbourne.
1895. January.—Conference at Hobart of the Premiers of Australia, when it was decided to commit the duty of framing a Federal Constitution to a convention chosen by the electors.
- .. 25th October.—Lord Brassey sworn in as Governor.
- Wages Boards system established.
1896. March.—Federal Enabling Acts passed by all the States except Queensland.
1897. 2nd March.—Australian Federal Convention opened in Adelaide.
1898. 20th January to
.. 3rd June.—Federal Convention held its third session in Melbourne.
.. 3rd June.—Federal Referendum Bill submitted to the electors of Victoria, New South Wales, and Queensland. The reference to the other States was made at a subsequent date.
1899. 28th January.—Conference of Premiers of all the Australian Colonies and Tasmania held in Melbourne, to consider the amendments suggested in the Draft Commonwealth Bill by the Parliament of New South Wales, at which a compromise was arrived at.
- .. 27th July.—Amended Commonwealth Bill approved at referendum in Victoria by 152,653 votes against 9,805.
- .. 28th October.—First Victorian troops left for South African war.
1900. 9th July.—Queen assented to Commonwealth of Australia Constitution Act 1900.
- .. 25th December.—Mr. Barton formed first Federal Ministry.
- LEADING EVENTS IN VICTORIAN AND OTHER HISTORY.**
1901. 1st January.—Official proclamation of Commonwealth of Australia.
- .. 18th January.—Old-age pensions came into force in Victoria.
- .. 22nd January.—Death of Queen Victoria. Accession of King Edward VII. His Majesty's coronation took place on 9th August, 1902.
- .. 9th May.—Duke of Cornwall and York opened first Federal Parliament in Exhibition Building, Melbourne.
- .. 8th October.—Inter-State free-trade established by the introduction of a provisional Tariff by resolution of the Commonwealth House of Representatives.
- .. 10th December.—Sir George Clarke (Lord Sydenham) sworn in as Governor.
1902. 1st January.—Methodist churches formed into one united body.
- .. 1st June.—South African War; peace announced.
- Last year of severe drought in Australia, which had extended over several years.
1903. Break up of drought followed by a record harvest.
- .. 5th October.—Sir Samuel Griffith (Chief Justice), Sir E. Barton, and Mr. R. E. O'Connor appointed Judges of first High Court of Australia.

1904. 25th April.—Sir Reginald Talbot sworn in as Governor.
 „ 15th December.—Assent given to Commonwealth Conciliation and Arbitration Act.
1905. 25th April.—Royal Letters Patent for the Constitution of the Transvaal Colony issued.
 „ 29th August.—Peace arranged between Japan and Russia.
1906. 1st September.—Papua taken over by the Commonwealth of Australia.
 „ 12th October.—Messrs. I. A. Isaacs and H. B. Higgins appointed to the High Court Bench.
1907. 14th January.—Earthquake in Jamaica, with terrible loss of life.
 „ 8th August.—New Tariff introduced into the Federal Parliament, providing generally for large protective increases in Customs duties.
1908. 20th April.—Railway accident at Sunshine. Forty-four persons were killed and 412 injured.
 „ 22nd July.—Tercentenary of the foundation of Canada.
 „ 27th July.—Sir Thomas David Gibson Carmichael, Bart., sworn in as Governor.
 „ 29th August.—Visit of the American Fleet, consisting of sixteen battle ships, to Melbourne.
 „ 8th October.—Yass-Canberra selected as the site of Federal Capital.
 „ 6th November.—Selection of Federal Capital site confirmed by Senate.
 „ 28th December.—Disastrous earthquake in Sicily, the coasts of Calabria and Eastern Sicily being devastated, and the City of Messina and other towns almost obliterated. The deaths numbered 77,283 persons.
1909. 1st January.—Old-age Pensions Act came into force in the United Kingdom.
 „ 4th February.—South African Constitution, providing for the federation of the various South African colonies, drafted by the National Convention.
 „ 25th March.—The *Nimrod* returned to New Zealand from Antarctic regions. Sir Ernest Shackleton and three members of his party reached a point within 112 miles of the South Pole.
 „ 27th April.—Insurrection in Turkey. Deposition of the Sultan, Abdul Hamid, and appointment of his successor, Mahommed V.
 „ 13th August.—Financial agreement between the Commonwealth and States arrived at by Premiers, the principal clause providing that the States receive from the Customs revenue 25s. per head of population for ten years beginning 1st July, 1910, and thereafter until Parliament otherwise provides.
 „ 21st December.—Lord Kitchener arrived at Port Darwin to commence a tour of inspection of the Australian Military Forces.
1910. 27th January.—Conference between Premiers of Victoria and South Australia *re* border railways.
 „ 28th February.—Arrival in London of Right Hon. Sir G. H. Reid, P.C., K.C.M.G., to take up the position of High Commissioner for the Commonwealth.
 „ 14th March.—The Victorian Commission, appointed to inquire into the Murray waters question, presented its report, strongly expressing the view that navigation interests should be secondary to those of irrigation.
 „ 18th March.—First aeroplane flight in Victoria made by Mr. Harry Houdini, who reached a height of 100 feet.
 „ 6th May.—Death of King Edward VII.
 „ 9th May.—Proclamation of King George V.

1910. 20th May.—Funeral of the late King Edward VII. An imposing memorial service, attended by 100,000 people, was held in Melbourne.
- „ 30th May.—Opening of the Prahran-Malvern electric tramway.
- „ 31st May.—Commencement of the South African Union.
- „ 18th July.—Railway accident at the Richmond station. A train running express on the Brighton line crashed into the rear of a stationary train, telescoping two carriages, killing nine people, and injuring more than 400 other passengers.
- „ 9th August.—Nugget weighing 224 ozs., valued at about £900, found at the Poseidon gold-field.
- „ 14th August.—Death of Florence Nightingale, the famous organizer of army nursing, aged 90 years.
- „ 6th September.—Arrival of Admiral Sir Reginald F. H. Henderson, K.C.B., to advise on the naval defence of Australia.
- „ 24th September.—Gift of £10,000 made by the trustees of the Edward Wilson estate to the re-building fund of the Children's Hospital.
- „ 3rd October.—Revolution in Portugal, flight of King Manoel, and the establishment of a republican form of government.
- „ 12th October.—Arrival in Hobson's Bay of the *Terra Nova*, en route for the Antarctic regions.
- „ 18th October.—Printing of Commonwealth bank notes started.
- „ 4th November.—Opening of the first Parliament of the South African Union by H.R.H. the Duke of Connaught.
- „ 16th November.—The first vessels of the Australian Navy—H.M.A.S. *Yarra* and *Parramatta*—arrived in Australian waters.
1911. 3rd January.—Anarchist Club attacked by police and military in London. Desperate defence by besieged. Detective shot. Building accidentally fired. Two dead bodies found in ruins.
- „ 3rd March.—Commonwealth Naval Board appointed.
- „ 13th March.—Report on the naval defence of Australia by Admiral Sir Reginald F. H. Henderson, K.C.B., published, in which he recommended that the Australian Navy should consist of 52 vessels, to be constructed in 22 years. The total cost was estimated at £40,000,000.
- „ 24th March.—The steam-ship *Yongala* wrecked off the Queensland coast, with a loss of all on board, numbering 141 persons.
- „ 4th April.—The destroyer *Warrego* launched at New South Wales dock-yards.
- „ 1st May.—Penny postage came into force with other portions of the Commonwealth and with all other British Dominions.
- „ 22nd May.—Disputed boundary case, South Australia *v.* Victoria, decided by judgment of the Federal High Court. Victoria to retain territory in dispute.
- „ 23rd May.—Imperial Conference opened in London.
- „ 24th May.—Sir John M. Fleetwood Fuller sworn in as Governor.
- „ 22nd June.—The Commonwealth officially represented at the Coronation of King George V. by the Right Honorable the Prime Minister (Mr. A. Fisher).
- „ 1st July.—Compulsory military training of all boys between 14 and 18 years of age introduced throughout Australia.

1911. 31st July.—Arrival and swearing in of Lord Denman as Governor-General of the Commonwealth.
- „ 16th August.—Death of Cardinal Moran, at Sydney.
- „ 14th September.—M. Stolypin, Russian Premier, assassinated.
- „ 25th September.—Explosion on the French battle-ship *La Liberté*. 143 persons were killed or were missing, and 91 were seriously injured.
- „ 30th September.—Italy declared war against Turkey. Italian Fleet bombarded Tripoli.
- „ October.—Rising in China against the Manchu dynasty.
- „ 20th November.—The Mawson Antarctic expedition left Melbourne.
- „ 30th November.—Tariff Bill introduced in the Federal Parliament.
1912. 30th January.—Heat wave throughout large portion of Australia during end of January and beginning of February.
- „ 2nd February.—The estate of the late Mr. W. R. Hall, of Sydney, valued at £2,311,837.
- „ 9th February.—First wireless message sent from Melbourne (Domain Station).
- „ 10th February.—Death of Lord Lister, discoverer of antiseptic surgery.
- „ 12th February.—China declared a constitutional republic under the presidency of Yuan-Shih-Kai.
- „ 7th March.—Captain Amundsen reached Hobart in the *Fram* and announced that, on 14th December, 1911, he had reached the South Pole.
- „ 20th March.—Destructive typhoon on north-west coast of Western Australia—72 men lost their lives. The steamer *Koombana* wrecked with 50 souls aboard, who were all lost.
- „ 11th April.—Irish Home Rule Bill introduced in the House of Commons.
- „ 14th April.—Wreck of *Titanic*, with loss of 1,635 lives, by collision with an iceberg off Cape Race.
- „ 24th May.—First prize (£1,750) granted to Mr. W. B. Griffin, Chicago, U.S.A., for Federal Capital design.
- „ „ Mrs. W. R. Hall, Sydney, donated £1,000,000 to charity, and educational and religious advancement—half the income to be spent in New South Wales, one-fourth in Victoria, and one-fourth in Queensland—as a memorial to her late husband.
- „ 15th July.—Savings Bank branch of Commonwealth Government Bank began business in Victoria.
- „ 29th July.—Death of the Mikado of Japan.
- „ 4th September.—Railway collision at Dudley-street, West Melbourne. Two persons were killed and many injured.
- „ 14th September.—First sod turned of Transcontinental Railway Line to Western Australia (Port Augusta to Kalgoorlie).
- „ 8th October.—Declaration of War by Montenegro against Turkey. Beginning of Balkan War.
- „ 10th October.—Maternity allowance (of £5 for each birth) came into force throughout Australia.
- „ 12th October.—Disaster at North Lyell mine, Tasmania, owing to an outbreak of fire. Forty one miners were killed.
- „ 15th October.—Treaty of peace signed by Italy and Turkey.
- „ 22nd October.—Authorizing motion moved by Mr. Watt, in Assembly, for electrification of Victorian railways. Cost estimated at £2,349,437.
- „ 9th November.—Dr. Woodrow Wilson elected President of United States.

1912. 16th November.—Cable from Sydney to New Zealand laid by Pacific Cable Board.
1913. 7th January.—Congress of Australasian Association for the Advancement of Science met in Melbourne.
- „ 19th January.—Opening of the Commonwealth Bank of Australia (general banking department).
- „ 10th February.—The *Terra Nova* reached Oamaru, New Zealand, and announced that Captain Scott, Lieutenant Bower, and Dr. Wilson died on 21st March, 1912, and Captain Oates and Petty Officer Evans shortly before that date. The catastrophe occurred on the return journey from the South Pole, which was reached on 18th January, 1912.
- „ 12th February.—First sod of the Transcontinental Railway turned at Kalgoorlie.
- „ 25th February.—Deaths of Lieutenant Ninnis and Dr. Mertz reported by wireless telegraphy from Dr. Mawson's Antarctic Expedition. Lieutenant Ninnis died on 4th December, 1912, and Dr. Mertz on 17th January, 1913.
- „ 10th March.—H.M.A.S. *Melbourne*, of the Australian Navy, arrived at Fremantle.
- „ 12th March.—Foundation stone of Federal Capital laid by Lord Denman at Canberra.
- „ 1st May.—First Commonwealth bank note issued.
- „ 4th June.—King's Birthday honours announced. Mr. E. Carlile, ex-Parliamentary draftsman, received the honour of knighthood.
- „ 6th August.—Inter-State Commission appointed, consisting of Mr. A. B. Piddington, K.C. (chairman), Messrs. G. Swinburne, M.L.A., and N. C. Lockyer, Comptroller of Customs, members.
- „ 19th September.—The *Australia*, first Commonwealth flagship, and *Sydney*, second Commonwealth cruiser, reached Albany.
1914. 27th January.—Lord Denman, Governor-General of Australia, resigned position.
- „ 9th February.—The Right Hon. Ronald Craufurd Munro Ferguson, P.C., appointed Governor-General of the Commonwealth.
- „ 23rd February.—Sir Arthur Stanley sworn in as Governor.
- „ 13th March.—Railway accident at Exeter, New South Wales. Fourteen persons were killed and sixteen injured.
- „ 27th March.—French steamer *St. Paul*, bound from New Caledonia to Brisbane, wrecked on Smith's Rock, off Cape Morton, with a loss of twenty lives.
- „ 2nd May.—Fatal accident at the Great Extended Hustler's mine, Bendigo. Seven miners were killed.
- „ 29th May.—Wreck of the steamer *Empress of Ireland* in St. Lawrence River, Canada. The wreck was caused through a collision with a collier, and over 1,000 lives were lost.
- „ 16th June.—Sir Alexander Peacock, K.C.M.G., chosen as Premier, vice Hon. W. A. Watt resigned.
- „ 28th June.—Assassination in Sarajevo, capital of Bosnia, of Archduke Franz Ferdinand (heir presumptive of Austria-Hungary) and his wife.
- „ 26th July.—Encounter in Dublin streets between an armed civilian force and the military. Four persons were killed and a number wounded.
- „ 28th July.—Austria-Hungary declared war on Serbia.

1914. 1st August.—Germany declared war on Russia.
- „ 3rd August.—State of war exists between France and Germany.
- „ 4th August.—Great Britain declared war on Germany.
- „ „ „ Australian fleet placed under control of the British Admiralty, and a force of 20,000 soldiers offered by the Commonwealth Government for service in Europe.
- „ 5th August.—Siege of Liege (Belgium) by the German troops commenced.
- „ 6th August.—Austria-Hungary declared war on Russia.
- „ „ „ British cruiser *Amphion* struck a mine and sank with a loss of 130 lives.
- „ 9th August.—Germans occupied town of Liege.
- „ 10th August.—France declared war on Austria-Hungary.
- „ 12th August.—Great Britain declared war on Austria-Hungary.
- „ 13th–19th August.—Visit to Victoria of members of the British Association for the Advancement of Science.
- „ 15th August.—British Expeditionary Force landed at Boulogne, France.
- „ 17th August.—Japan issued an ultimatum to Germany, asking for the evacuation of Kaio Chao.
- „ 18th August.—First detachment of Australian Imperial Expeditionary Force left Sydney to take part in the war.
- „ 19th August.—Death of Pope Pius X.
- „ 20th August.—Germans occupied Brussels.
- „ 23rd August.—Japan declared war on Germany.
- „ 23rd–26th August.—British troops heavily engaged at Mons and Cambrai. They sustained heavy losses, but the enemy also suffered severely. They executed a masterly retreat in the face of overwhelming numbers.
- „ 27th August.—Austria-Hungary declared war on Japan.
- „ 28th August.—British naval victory over the German fleet at Heligoland Bight.
- „ 30th August.—It was announced by the Prime Minister (the Right Hon. Joseph Cook) that further contingents of Australian soldiers (in addition to original 20,000) were to be raised for service at the front.
- „ „ „ German Samoa taken by New Zealand troops and British warships.
- „ 1st September.—Great Austrian defeat by the Russians in Galicia.
- „ 2nd–4th September.—Battle of Tannenberg (or Osterode) won by the Germans against the Russians.
- „ 5th September.—British cruiser *Pathfinder* sunk by German submarine.
- „ „ „ Elections for the Federal Parliament. The Labour Party was returned to power.
- „ 7th September.—German army fell back from Paris.
- „ 8th September.—Pacific cable cut by a German cruiser at Fanning Island.
- „ 9th September.—The *Oceanic*, a converted cruiser, wrecked off the coast of Scotland.
- „ „ „ Battle of the Marne. Victory for the French and British arms.
- „ 10th September.—General retreat of the German army over the River Marne.
- „ 11th September.—Disastrous explosion at Ralph's Mine, Huntly, New Zealand. Forty-five men were killed.
- „ „ „ Herbertshohe (German New Guinea) captured and occupied by a landing force from H.M.A.S. *Australia*.
- „ 12th September.—Simpsonshafen (German New Guinea) occupied by the Australian forces.

1914. 13th September.—Rabaul (German New Guinea) captured and occupied by Australian troops.
- „ 15th September.—The retreat of the Germans ceased by their making a stand on the River Aisne, where they occupied strong defensive positions.
- „ 19th September.—Admiral Patey reported the loss of the Australian submarine *AEI* with 35 officers and men.
- „ 22nd September.—Three British cruisers—the *Aboukir*, *Hogue*, and *Cressy*—torpedoed and sunk by German submarines in the North Sea with great loss of life.
- „ 24th September.—Kaiser Wilhelm's Land occupied by the Australian Expeditionary Force.
- „ 29th September.—The Melbourne Stock Exchange, which had been closed at the beginning of the war, was re-opened.
- „ „ „ Indian troops reported to have arrived at Marseilles, France.
- „ 9th October.—The city of Antwerp captured by the German forces.
- „ 12th October.—The seat of government of Belgium removed from Ostend to Havre.
- „ 14th October.—The British cruiser *Hawke* sunk by a German submarine.
- „ „ „ Canadian Expeditionary Force arrived in England.
- „ 17th October.—British warships sank four German destroyers off the Dutch coast.
- „ 21st October.—The sale of alcohol forbidden in Russia until the end of the war.
- „ 22nd October.—Federal Parliament passed a grant of £100,000 in aid of the Government of Belgium.
- „ 26th October.—The Boer rebel Maritz defeated.
- „ 27th October.—Further rebellion in South Africa headed by Generals De Wet and Beyers.
- „ 28th October.—Rebel forces under General Beyers defeated in South Africa.
- „ 30th October.—Turkey takes part in war with Germany and Austria.
- „ „ „ British cruiser *Hermes* sunk by German submarine in the Strait of Dover.
- „ 1st November.—Naval encounter off Valparaiso between five German and three British cruisers. The British cruisers *Good Hope* and *Monmouth* were sunk, the whole of the crews of both vessels being lost.
- „ „ „ Australian Imperial Force (first convoy) and New Zealand Expeditionary Force sailed from Albany, Western Australia.
- „ 3rd November.—Russia declared war on Turkey.
- „ 5th November.—Great Britain and France declared war on Turkey.
- „ 7th November.—Tsing-tau fortress surrendered by the Germans to the Japanese and British forces.
- „ 9th November.—Destruction of the German raider *Emden* at North Cocos Island by H.M.A.S. *Sydney*.
- „ 13th November.—Great defence of Ypres in Belgium by the British and French troops terminated in favour of the Allies.
- „ 14th November.—Death of Field Marshal Lord Roberts, aged 82, in France, while on a visit to the Indian troops at the front.
- „ 16th November.—Germans defeated the Russians in East Prussia.
- „ 19th November.—Control of islands captured by the Japanese in the Pacific handed over to Australia.
- „ 26th November.—British battleship *Bulwark* blown up accidentally in Sheerness Harbor, with severe loss of life.

1914. 2nd December.—The capture of the South African rebel leader General De Wet announced.
- " " " Austrians captured Belgrade.
- " 5th December.—The Australian Imperial Force (first convoy) and the New Zealanders landed in Egypt for the defence of that country and to undergo war training in the vicinity of Cairo.
- " " " The German cruisers *Scharnhorst*, *Gneisenau*, *Nurnberg*, and *Leipzig* were sunk by a British squadron off Falkland Islands.
- " 8th December.—Great victory of the Serbians over the Austrians.
- " 15th December.—Serbians re-entered Belgrade.
- " 16th December.—Three English towns—Hartlepool, Whitby, and Scarborough—shelled by German cruisers. About 120 persons were killed and over 400 injured.
- " 17th December.—Protectorate established over Egypt by Great Britain.
- " 19th December.—Torpedo boat destroyer *Derwent* launched from ship-building yards, Sydney.
- " 24th December.—First German air raid on England.
- " — December.—Second convoy of Australian troops left for Egypt.
1915. 1st January.—Shooting outrage by two Turks at Broken Hill. A train of picnickers was attacked, with the result that four passengers were killed and six wounded. The Turks were pursued and shot dead.
- " " " H.M.S. *Formidable* (15,000 tons) torpedoed by a German submarine in the English Channel. The loss of life amounted to about 500 persons.
- " 7th January.—The sale of absinthe forbidden in France for the duration of the war.
- " 19th January.—A Zeppelin air raid occurred over the east coast of England.
- " 24th January.—A British squadron, under the command of Vice-Admiral Beatty, intercepted a strong German squadron making its way to the English coast. The Germans endeavoured to escape, but lost a battle cruiser, the *Blucher*, with great loss of life before getting clear. Three other German battle cruisers were seriously damaged.
- " 25th January.—The British and French defeated the Germans at La Bassee. The Germans lost 20,000 men in this attempt to break through to Calais.
- " 30th January.—The s.s. *Tokomaru* (6,084 tons), a New Zealand liner, was sunk without warning by a German submarine in the English Channel. The crew were saved by a trawler.
- " 2nd February.—Turkish troops, to the number of 12,000, made an attack on the Suez Canal, but were repulsed, their casualties numbering 2,400.
- " 8th February.—Archbishop Cerretti, Papal delegate, arrived in Sydney.
- " 18th February.—Germany declared a blockade of the British coast.
- " 19th February.—British and French warships bombarded the Turkish defences at the Dardanelles.
- " 24th February.—Riot at Singapore by the mutiny of a native regiment. Nineteen British soldiers and sailors, three native soldiers, and fourteen civilians were killed. French and Japanese marines were landed to assist the British troops. The riot was quelled.
- " 1st March.—Complete blockade of Germany declared by the Allies.

1915. 10th March.—The *Prince Eitel Friedrich*, a German converted cruiser, entered Newport News, United States, and was interned until the termination of the war. The *Kron Prinz Wilhelm*, an armed merchantman, the last of the German raiders up to that date, was also interned at Hampton Roads, Virginia.
- „ 11th March.—Death of T. A. Browne (Rolfe Boldrewood), famous Australian novelist, aged 88 years.
- „ 10th-13th March.—Great British attack at Neuve Chapelle. The Germans sustained 20,500 casualties.
- „ 14th March.—The German raider *Dresden* destroyed by the British steamers *Kent* and *Glasgow*, near the island of Juan Fernandez, off Chili.
- „ 18th March.—Three vessels of the Allied fleets—the *Irresistible*, the *Ocean*, and the *Bowvet*—sunk by mines in the Dardanelles.
- „ 19th March.—Russians captured Przemysl from the Austrians and took 100,000 prisoners.
- „ 28th March.—The s.s. *Falaba* (4,806 tons) sunk off the Welsh coast by a German submarine, with the loss of 100 persons.
- „ 9th April.—Battle of Les Esparges won by the French.
- „ „ „ Fine general rains throughout Victoria, signaling the break-up of the drought.
- „ 14th April.—Heavy fighting took place on the Euphrates River, Mesopotamia, where 15,000 Turks were defeated by the British.
- „ 25th April.—Australian, British, and French troops landed under circumstances of extraordinary difficulty at Gallipoli Peninsula.
- „ 27th April.—Loss of the French warship *Leon Gambetta* (12,352 tons), which was torpedoed by a submarine in the Adriatic. One hundred and thirty-six of the crew were rescued.
- „ 30th April.—Germans invaded the Baltic provinces of Russia.
- „ 2nd May.—Russians forced by the combined Germans and Austrians at the battle of the Dunajec to retire from their positions in the Carpathians.
- „ 7th May.—The great Cunard Atlantic liner *Lusitania* was torpedoed by a German submarine, with a loss of 1,134 lives. The vessel was sunk off Old Head, close to the fishing town and summer resort of Kinsale, near Cork, on a voyage from New York to Liverpool.
- „ 12th May.—H.M.S. *Goliath* (12,950 tons) torpedoed by a submarine at the Dardanelles, with a loss of 500 men.
- „ „ „ The Union troops under General Botha occupied Windhuk, the capital of German South-West Africa.
- „ 13th May.—The Australian submarine *AE2* lost in the Dardanelles. The crew were taken prisoners by the Turks.
- „ 19th May.—Major-General Sir William Bridges, commander of the Australian troops at the Dardanelles, succumbed to wounds sustained in action.
- „ 23rd May.—Italy declared war on Austria-Hungary.
- „ 26th May.—The British auxiliary cruiser *Princess Irene* (6,000 tons), which was engaged as a mine-layer, was blown up at Sheerness, with a loss of 270 lives.
- „ 27th May.—Italian army entered Austria.
- „ 28th May.—The British battleship *Triumph* (11,800 tons) torpedoed by a German submarine at the Dardanelles. Most of the crew were saved.

1915.	29th	May.—The British battleship <i>Majestic</i> sunk by a submarine at the Dardanelles.
"	3rd	June.—Przemsyl re-taken from the Russians by the Germans.
"	15th	June.—Italians invested Gorizia.
"	22nd	June.—Lemberg re-taken from the Russians by the Austrians.
"	5th	July.—A British submarine sank a German battleship in the Baltic Sea.
"	10th	July.—German South West Africa conquered by General Botha. A force of 3,400 Germans surrendered and was transferred to Union territory.
"	14th	July.—War Census Bill introduced in the House of Representatives by the Federal Attorney-General. The measure provided for the registration of the manhood and wealth of Australia.
"	21st	July.—The Italian armoured cruiser <i>Guiseppi Garibaldi</i> (7,234 tons) sunk by an Austrian submarine in the Adriatic. The majority of the crew were saved.
"	4th	August.—Warsaw captured from the Russians by the Germans.
"	7th	August.—The British landed a large force at Suvla Bay. The Turks were engaged, but the objective of the British was not attained.
"	"	" Battle of Hooge, in West Flanders, won by the British.
"	14th	August.—The British transport <i>Royal Edward</i> (11,117 tons) sunk by a submarine in the Ægean Sea. The persons lost numbered about 1,000.
"	15th	August.—Information received of atrocities on Armenians by Turks in Northern and Eastern Anatolia. Over 500,000 persons are believed to have been massacred.
"	17th	August.—The Russian fortified town of Kovno, on the Niemen River, in Northern Poland, captured by the Germans.
"	18th	August.—War Income Tax Bill introduced in the House of Representatives. The tax on incomes from personal exertion is payable on incomes exceeding £156, and the rate ranges from 3d. to 5s. in the £1, the last-mentioned rate being payable on incomes exceeding £7,600.
"	19th	August.—A British submarine, <i>E13</i> , was lost through running ashore on the Danish islands of Saltholm. German destroyers opened fire, and fifteen of the British crew were killed.
"	20th	August.—War declared by Italy on Turkey.
"	21st	August.—Naval battle in the Gulf of Riga. Germans suffered severe losses and evacuated the gulf.
"	22nd	August.—The White Star liner <i>Arabic</i> (15,801 tons) torpedoed by a German submarine off the Irish coast, on a voyage from Liverpool to New York. Thirty-three lives were lost.
"	1st	September.—First Commonwealth war loan of £5,000,000 over applied for, the tenders amounting to £13,380,000.
"	2nd	September.—The British transport <i>Southland</i> (11,899 tons) torpedoed in the Ægean Sea while conveying Australian troops from Alexandria to the Dardanelles. The vessel was beached in Mudros Bay, and out of 2,000 troops on board the casualties numbered only 33.
"	4th	September.—The British steamer <i>Hesperian</i> (10,920 tons) torpedoed off the south coast of Ireland, on a voyage from Liverpool to Montreal. Twenty-six persons were lost.
"	20th	September.—Vilna captured by the Germans from the Russians.
"	25th	September.—British defeated the Germans at Loos.
"	30th	September.—The <i>Brisbane</i> , the first Australian built cruiser, launched at Sydney. •

1915. 30th September.—The *Benedetto Brin* (13,215 tons), Italian battleship, blown up at Brindisi, with a loss of 333 persons.
- „ 4th October.—Russia broke off diplomatic relations with Bulgaria.
- „ 5th October.—Detachments of the Allied troops landed at Salonika at the invitation of the Greek Government.
- „ 6th October.—Austro-German invasion of Serbia began.
- „ 12th October.—German troops captured Belgrade from the Serbians.
- „ 13th October.—Miss Edith Cavell, a British nurse, shot in Brussels by the Germans.
- „ 14th October.—Great Britain declared war on Bulgaria.
- „ „ Bulgaria declared war on Serbia.
- „ 28th October.—The British transport *Marquette* torpedoed in the Ægean Sea. Ten New Zealand nurses lost their lives.
- „ 7th November.—Nish, temporary Serbian capital, captured by the Bulgarians.
- „ 8th November.—The *Ancona*, an Italian emigrant liner, sunk in the Mediterranean by an Austrian submarine. Two hundred and eight persons perished.
- „ 15th November.—Russians in Eastern Galicia inflicted great losses on Austro-Germans.
- „ 17th November.—The British hospital ship *Anglia* struck a mine in the English Channel. Those on board numbered 375, of whom 300 were saved.
- „ 26th November.—It was announced that no males of military age (18 to 45 years) would be allowed to leave Australia without passports.
- „ 30th November.—The Bulgarians captured Monastir from the Serbians.
- „ 2nd December.—Major-General Townshend, commander of the British forces, marching on Bagdad, compelled to retire in the face of superior numbers of Turkish troops.
- „ 21st December.—Anzac and Suvla Bay evacuated by the Allied troops, practically without casualties.
- „ 30th December.—P. and O. liner *Persia*, 7,974 tons, torpedoed without warning in the Mediterranean whilst on a voyage from London to Bombay with a number of passengers on board. The loss of life was as follows:—Passengers 119, European crew 50, Lascar crew 166.
1916. 5th January.—Death of Sir Edward Holroyd, formerly Senior Puisne Judge of Victorian Supreme Court.
- „ 6th January.—British pre-Dreadnought *King Edward VII.* encountered a mine and sank in the North Sea. All on board saved.
- „ 9th January.—Allied forces completely and successfully evacuated the Gallipoli peninsula.
- „ 11th January.—The Victorian State Governor (Sir A. Stanley) at Melbourne Mint, struck first shilling produced in Australia for circulation.
- „ 13th January.—Fall of Cetinje, capital of Montenegro.
- „ 15th January.—West African liner *Appam* (7,781 tons) captured by the German raider *Moeve* and sent under a prize crew to Newport News (U.S.A.).
- „ 20th January.—The Prime Minister, Mr. Hughes, left Sydney per s.s. *Makura* for London.
- „ 21st January.—Proclamation issued by Administrator of German (now British) New Guinea changing name of Herbertshohe (capital) to Kokopo (the original name of settlement).
- „ 24th January.—Military Service (Compulsion) Bill passed by House of Commons.
- „ 28th January.—Splendid rains over practically whole of Eastern Australia (especially Victoria, Queensland, and Tasmania).

1916. 1st February.—It was reported that the s.s. *Clan Mactavish*, with a cargo of frozen meat from Australia had been sunk by the German raider *Moewe* in the North Atlantic after a desperate resistance, during which fifteen of her crew were killed.
- “ “ “ Second Commonwealth War Loan (£10,000,000) subscription list closed. Splendid response; £21,655,580 applied for.
- “ 14th February.—“Shorter hours” riots at Liverpool (N.S.W.) Military Camp.
- “ 15th February.—Express train from Launceston to Hobart left the rails near Campania, 27 miles from Hobart. Seven persons were killed and about 30 injured.
- “ 18th February.—Cameroon (German colony) conquered.
- “ 19th February.—It was officially announced that the British light cruiser *Arethusa* (3,600 tons) had struck a mine off the east coast of England and become a total wreck. Ten lives were lost.
- “ 21st February.—Brilliant capture of Erzerum by the Russians.
- “ “ “ Battle of Verdun commenced.
- “ 27th February.—P. and O. liner *Maloja* (12,431 tons) struck a mine and sank off Dover whilst on a voyage to India. Over 100 lives, mostly Lascars, lost.
- “ 7th March.—Federal Ministry fixed the price of flour (£11 8s. per ton) and of bread over the counter (6½d. per 4-lb. loaf) throughout metropolitan areas of the Commonwealth.
- “ 10th March.—Germany declared war on Portugal.
- “ 24th March.—Channel steamer *Sussex* (1,353 tons) torpedoed without warning in the English Channel. Over 50 lives lost.
- “ 27th March.—Six o'clock closing of hotels came into force in South Australia.
- “ 3rd April.—Antarctic exploration ship *Aurora* reached Dunedin (N.Z.) under charge of Captain Stenhouse.
- “ 4th April.—It was announced that an Australian Zinc Proprietors' Association had been formed through which the whole of the products of the Australian companies would be marketed for 50 years.
- “ “ “ Zeppelin *L15* brought down in the Thames estuary whilst engaged in a raid on the eastern counties. The crew were taken prisoners.
- “ 7th April.—It was announced that the Allies had bought, through the Australian Wheat Board, 150,000 tons of Australian wheat for shipment during April, May, and June, bringing totals of such sales to date to nearly 1,000,000 tons.
- “ 14th April.—The Turkish town of Trebizond, on the Black Sea, captured by the Russians.
- “ 20th April.—Sir Roger Casement captured whilst attempting to land on the coast of Ireland from a German submarine.
- “ 23rd April.—Strong United States note to Germany on unrestrained submarine warfare, threatening to break off diplomatic relations unless Germany agreed to modify her submarine policy in accordance with international law.
- “ 24th April.—Serious rebellion in Dublin. The rebels gained control of the General Post Office and other parts of the city and made a desperate resistance. An unconditional surrender was signed by the rebel leaders on the 29th April after much bloodshed on both sides.
- “ 29th April.—After a resistance lasting 143 days Kut-el-Amara surrendered to the Turks. The forces surrendered included 2,970 British troops and 6,000 Indians.

1916. 30th April.—Pre-Dreadnought battleship *Russell* (14,000 tons) sunk in the Mediterranean; 124 men missing.
- „ 4th May.—Germany replied to the United States note in regard to submarines, undertaking to comply with the suggestion of President Wilson conditionally.
- „ „ „ The Hon. John Murray (ex-Premier of Victoria) died suddenly at Warnambool from heart failure, as the result of his horse bolting.
- „ 8th May.—“Day-baking” bakers’ strike commenced in Victoria.
- „ 16th May.—Great Austrian attack on the Italians in the Trentino.
- „ 22nd May.—Premiers’ Conference opened at Adelaide.
- „ 1st June.—Great naval action between the British and German naval forces in the North Sea off the coast of Jutland. Heavy losses on both sides; the German navy eventually retiring to its base under cover of darkness, leaving the British victors.
- „ 2nd June.—Victorian Grocery trade dispute closed (men to return to work on old terms; Arbitration Court to consider claims).
- „ „ „ It was announced that Sir Ernest Shackleton had arrived safely at the Falkland Islands, having left portion of his expedition at Elephant Island, owing to the loss of the *Endurance*.
- „ 5th June.—Lord Kitchener drowned at sea west of the Orkney Islands whilst *en route* to Russia on H.M.S. *Hampshire*. Only twelve of the crew saved.
- „ 10th June.—Referendum taken in New South Wales *re* hour of closing hotels during the war and for six months thereafter; resulted in a large majority for six o’clock.
- „ 16th June.—The Victorian political slander suit (for £5,000 damages), *Farthing v. Worrall*, ended in verdict for defendant.
- „ 18th June.—Czernowitz captured by the Russians.
- „ 28th June.—It was announced that the Prime Minister, Mr. Hughes, had purchased on behalf of the Commonwealth Government fifteen steamers, with an average carrying capacity of 8,000 tons, at a total cost of about £2,000,000, the line of vessels to be known as the Commonwealth Government Line.
- „ 30th June.—Melbourne Tramway and Omnibus Company ceased to exist (after a life of nearly 50 years); tramways handed over temporarily to a Board appointed by the Victorian Government.
- „ 1st July.—Victorian Day-baking strike ended in failure.
- „ „ „ Great British offensive on the West front commenced.
- „ 3rd July.—Trial of Sir Roger Casement on a charge of high treason concluded. A verdict of “guilty” was returned.
- „ 9th July.—Copious rains in Victoria (rivers in flood).
- „ „ „ German merchant submarine *Deutschland* arrived at Baltimore from Germany.
- „ 21st July.—Six o’clock closing of hotels suddenly enforced in Sydney.
- „ 25th July.—Pozieres captured by the Australian and New Zealand troops.
- „ 27th July.—Great fire in Sydney. Total damage estimated at £150,000.
- „ 3rd August.—It was announced that the Federal Cabinet had decided to issue five-shilling notes.
- „ „ „ Roger Casement hanged.
- „ 8th August.—The Prime Minister, Mr. Hughes, reached Melbourne on his return from London.
- „ 13th August.—Death of Sir George Turner, well known Victorian and Federal politician, at the age of 65 years. He was

- Premier of Victoria from September, 1894, to December, 1899, and from November, 1900, to February, 1901, and he was Treasurer in the first (Barton) Federal Ministry, 1901-3; in the Deakin Ministry, 1903-4, and in the Reid-McLean Ministry, 1904-5.
1916. 28th August.—Italy declared war on Germany.
 " " " Roumania declared war on Germany.
 " 14th September.—The Federal Minister for Customs, Mr. Tudor, resigned from Hughes Ministry, being opposed to its Con-
 scription policy.
 " 15th September.—The New South Wales Political Labour League expelled the Prime Minister, Mr. Hughes, from the Australian Labour movement.
 " 21st September.—Second reading of Referendum Bill (compulsory military service) passed by House of Representatives by 46 votes to 10.
 " " " Heavy and insistent rains set in over large part of Victoria; great floods, with loss of life and considerable amount of damage.
 " 23rd September.—Raid by police on Sydney head-quarters of organization known as the Industrial Workers of the World. Four men arrested on a charge of treason.
 " " " Referendum Bill (compulsory military service) passed by Senate by 17 votes to 9.
 " 24th September.—Two Zeppelins brought down whilst engaged in a raid on England.
 " 26th September.—Combles and Thiepval captured by the Allies.
 2nd October.—First group of men called up for compulsory military training under provisions of Defence Act.
 " 8th October.—Submarine campaign begun on Allied shipping off American coast.
 " 9th October.—Sir David Hennessy chosen as Lord Mayor of Melbourne for fifth year in succession.
 " 11th October.—Six o'clock closing of hotels came into force in Victoria.
 " 27th October.—Three Federal Ministers (Mr. Higgs, Treasurer; Senator Gardiner, Vice-President of Executive Council and Assistant Minister for Defence; and Senator Russell, Assistant Minister) resigned.
 " 28th October.—The Referendum for Compulsory Military Service abroad was defeated by a small majority.
 " 31st October.—Big general coal strike commenced in eastern States. Thirteen mines idle in Newcastle (N.S.W.) district.
 " " " Phenomenal downpour of hail and rain in Melbourne about 4 p.m. Low lying parts of city and suburbs submerged. Much damage resulted.
 " 6th November.—P. and O. Company's R.M.S. *Arabia* (7,933 tons) torpedoed and sunk without warning in the Mediterranean whilst on a voyage from Australia to London. All the mails were lost, but no passengers and only two of the crew were missing.
 " " " Melbourne Cup postponed for the second time in its history. Course waterlogged by heavy rains.
 " 9th November.—It was announced that President Wilson had been re-elected President of the United States.
 " 14th November.—Federal Labour Party split. The Prime Minister, Mr. W. M. Hughes, tendered his resignation, at the same time asking leave to form a new Ministry. This being granted, Mr. Hughes formed a new Ministry with himself as Prime Minister and Attorney-General. The old External Affairs Department was abolished and a Works Department created.

1916. 14th November.—New Cabinet formed on National lines in New South Wales, Mr. W. A. Holman being Premier and Treasurer.
- „ 16th November.—Compulsory conference of masters and men involved in the Newcastle coal strike was convened by the Prime Minister, Mr. Hughes.
- „ 19th November.—Monastir re-occupied by Allied troops.
- „ 21st November.—Death of Francis Joseph, Emperor of Austria and King of Hungary, aged 87 years.
- „ 22nd November.—Death of Mr. Thos. Prout Webb, K.C., Master-in-Equity and Commissioner of Taxes for Victoria.
- „ „ „ British hospital ship *Britannic* (48,158 tons) sunk by torpedo or mine in Aegean Sea. There were no wounded on board at the time, and of a complement of 1,156 about 50 were missing.
- „ „ „ Proclamation calling upon men to enlist for compulsory home service (issued prior to the Referendum) withdrawn, the men in camp to be released immediately.
- „ 24th November.—British hospital ship *Braemar Castle* (6,318 tons) sunk by enemy in Aegean Sea whilst on a voyage from Salonika to Malta with 400 cases of sickness on board. Only one life was lost.
- „ „ „ Owing to coal strike, every industry in Commonwealth, not defined as a national necessity, deprived of gas or electric motive power (except in certain cases of temporary exemption).
- „ „ „ Second coal strike conference convened by the Prime Minister, Mr. Hughes.
- „ 27th-28th Nov.—Zeppelin attack on east coast of England. Two Zeppelins brought down off the coast.
- „ 29th November.—Federal Parliament re-assembled.
- „ „ „ Special Tribunal under War Precautions Act to deal with coal strike met in Sydney.
- „ 1st December.—Allied troops treacherously attacked by Greeks in Athens. It was reported that the Allies lost 30 killed and had numerous other casualties.
- „ 2nd December.—Severe sentences, ranging from 5 to 15 years with hard labour, imposed on I.W.W. prisoners (convicted on charges of conspiracy) by Judge Pring (N.S.W.).
- „ 4th December.—Work resumed on coal mines on basis of eight hours bank to bank as claimed by miners.
- „ 5th December.—Mr. Asquith tendered his resignation as Prime Minister of Great Britain. New Ministry formed under Mr. Lloyd George.
- „ 6th December.—Bucharest captured by the Germans.
- „ 12th December.—Germany, Austria, Turkey, and Bulgaria, through neutral Powers, submitted a formal proposal of peace to the Allies.
- „ 22nd December.—El Arish captured by the British.
- „ 28th December.—Disastrous floods at the town of Clermont, Queensland. Over 60 lives lost and many buildings wrecked.

PROGRESS OF STATE SINCE 1842.

The following table has been prepared to illustrate the advance made by the State since 1842, the year of the introduction of representative government into New South Wales, which then included the Port Phillip district. The years 1850 and 1855 have been chosen—the former as being the year immediately preceding the separation of the Colony from New South Wales, and the latter as the date o

STATISTICS OF VICTORIAN PROGRESS, 1842 to 1916.

	1842.	1850.	1855.	1861.	1871.	1881.	1891.	1901.	1915-16.
Population, 31st December ..	23,799	76,162	864,324	541,800	747,412	879,886	1,157,678	1,210,882	1,397,977
Revenue .. £	87,296	259,483	2,728,656	2,592,101	3,734,422	5,186,011	8,343,588	7,712,099	11,470,875
Expenditure from Revenue .. £	124,681	196,440	2,612,807	3,092,021	3,659,534	5,108,642	9,128,699	7,672,780	11,683,367
Public Funded Debt .. £	..	..	480,000	6,345,060	11,994,800	22,426,502	43,638,897	49,546,275	76,604,562
Gold produced .. oz.	..	..	2,798,065	1,967,453	3,255,477	853,850	576,400	739,562	276,162
Wool produced .. lbs.	2,762,830	16,345,468	22,470,443	22,640,745	37,177,646	45,970,560	76,603,635	73,235,138	82,330,198
Butter produced .. "	..	..	..	..	..	..	16,703,786	46,867,572	42,345,113
Agriculture—									
Land in cultivation .. acres	8,124	52,341	115,060	427,241	793,918	1,582,998	2,512,593	3,647,459	7,069,608
Wheat .. bushels	55,860	556,167	1,148,011	3,607,727	4,500,795	8,714,377	13,679,268	12,127,332	58,521,706
Oats .. "	66,100	99,535	614,614	2,136,430	3,299,889	3,612,111	4,455,551	6,724,900	9,328,894
Wine .. gallons	..	4,621	9,372	47,568	713,589	539,191	1,554,130	1,981,475	1,380,367
Live Stock—Horses .. No.	4,065	21,219	33,430	84,057	181,643	278,195	440,696	392,237	493,779
" Cattle .. "	100,792	378,806	534,113	628,092	799,509	1,286,677	1,812,104	1,602,384	1,043,604
" Sheep .. "	1,404,333	6,032,783	4,577,372	6,239,253	10,002,381	10,267,265	12,928,148	10,841,790	10,545,632
" Pigs .. "	..	9,260	20,686	43,480	177,447	299,926	286,780	350,370	192,002
Total Imports—Value .. £	277,427	744,925	12,007,939	13,532,452	12,341,985	16,718,521	21,711,608	18,927,340	*
" Exports—Value .. £	198,783	1,041,796	13,493,338	13,823,606	14,557,820	16,252,103	16,006,743	12,646,097	26,782,893
Imports, Oversea—Value .. £	..	..	..	10,991,377	9,201,942	11,481,567	13,802,598	13,075,259	14,744,135
Exports .. £	..	..	..	12,209,794	12,843,451	12,316,128	11,403,922	13,075,259	14,744,135
Shipping .. tonnage	78,025	195,117	1,133,283	1,090,002	1,355,025	2,411,902	4,715,109	6,715,491	9,837,374
Railways open .. miles	..	..	..	214	276	1,247	2,764	3,238	4,105
Telegraph wire .. "	..	..	..	2,586	3,472	6,626	13,989	15,356	28,906
Postal business—Letters .. No.	97,490	381,651	2,990,992	6,109,929	11,716,166	26,303,347	62,526,448	83,973,499	191,427,078
" Newspapers .. "	147,160	381,158	2,349,656	4,277,179	5,172,970	11,440,732	22,729,005	27,104,344	40,246,088
Savings Bank Deposits .. £	..	52,697	173,090	582,796	1,117,761	2,569,438	5,715,637	9,662,006	26,402,071
Factories—									
Number of ..	..	..	278	531	1,740	2,488	3,141	3,249	5,413
Hands employed ..	..	..	..	4,395	19,468	43,209	52,225	66,529	113,834
Value of machinery, plant, land and buildings .. £	..	..	..	..	4,725,125	8,044,296	16,472,859	12,298,500	22,529,072
Value of articles produced .. £	..	..	..	..	..	13,370,836	22,390,251	19,478,780	51,466,093
State Education—									
Number of Primary schools ..	..	61	370	671	988	1,757	2,233	1,967	2,227
Expenditure on Education .. £	..	..	115,099	162,547	274,384	546,285	726,711	701,034	1,462,230
Total value of rateable property in municipalities .. £	..	..	..	29,638,091	59,166,078	87,642,459	203,351,360	185,101,993	318,960,116
Friendly Societies—									
Number of Members ..	..	..	1,698	7,166	35,706	47,908	89,269	101,045	158,746
Total funds .. £	..	..	..	..	213,004	475,954	961,933	1,870,604	2,775,787

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.

* Owing to the Commonwealth authorities having discontinued the keeping of records of inter-State trade, the value of the total imports and exports of the State are not available for a later year than 1909. For that year the imports were valued at £28,150,198 and the exports at £29,896,275.

The introduction of responsible Government for Victoria. The subsequent years are census years, except the last:—

Progress of Victoria.

The population of the State at the end of 1842 was 23,799; and at the end of 1916 it had increased to 1,397,977. During the period 1842-1916 the revenue steadily increased from £87,296 to £11,471,000. There was no public debt until after separation. In 1855 the State indebtedness was £480,000; in 1916 the funded debt had reached £75,504,562, which has been spent on revenue-yielding and other works of a permanent character. The land in cultivation in 1842 was slightly over 8,000 acres; it now amounts to 7,069,608 acres. In the number of horses, cattle, and pigs increases are generally shown. The value of imports in 1842 was £277,427; in 1909, the last year for which figures are available, it was over £28,000,000. Exports amounted to £198,783 in 1842; and in 1909 to nearly £30,000,000. No railways or telegraphs were in existence up to the end of 1855; in 1861 there were 214 miles of railway open and in 1916 there were 4,105 miles; 2,586 miles of telegraph wires had been erected up to 1861, and 28,906 miles up to the 30th June, 1916. Postal business in letters and newspapers has expanded rapidly during the period covered by the table, and there has also been a large increase in Savings Bank deposits, which rose from £52,697 in 1850 to £26,402,071 in 1916.

The expenditure on education amounted to £115,000 in 1855, and had increased to £1,462,230 in 1915-16. Members of friendly societies numbered 1,698 in 1856, and 158,746 in 1915—the funds amounting to £213,000 in 1871 and £2,775,787 in 1915. Hands employed in factories rose from 19,468 in 1871 to 113,834 in 1915. The total value of rateable property in municipalities, which was £29,600,000 in 1861, aggregated £318,960,116 in 1915-16.

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 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 Australia, 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., or 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 sixty years ended with 1916 the maximum temperature in the shade recorded at the Melbourne Observatory was 111·2 deg. Fahr., viz., on the 14th January, 1862; the minimum was 27 deg., viz., on the 21st July, 1869; and the mean was 57·4 deg. Upon the average, on four days during the year the thermometer rises above 100 deg. in the shade; and, generally, on about three nights during the year it falls below freezing point. The maximum temperature in the sun ever recorded (*i.e.*, since 1857) was 178·5 deg., viz., on the 4th January, 1862. The mean atmospheric pressure noted at an Observatory 91 feet above the sea level was, during the sixty years ended with 1916, 29·93 inches; the average number of days on which rain fell was 136, and the average yearly rainfall was 25·48 inches.

MOUNTAINS AND HILLS, RIVERS AND LAKES.

Mountains and Hills. 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.

Rivers. With the exception of the Yarra, on the banks of which the metropolis is situated; the Goulburn, which empties itself into the Murray about eight miles to the eastward of Echuca; the La Trobe and the Mitchell, with, perhaps, a few other of the Gippsland streams; and the Murray itself, the rivers of Victoria are not navigable except by boats. They, however, drain the watershed of

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

large areas of country, and many of the streams are used as feeders to permanent reservoirs for irrigation and water supply purposes for factories. 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. Lake Burrumbeet is also a fine sheet of fresh water, embracing 8 square miles. The Gippsland lakes—Victoria, King, and Reeve—are situated close to the coast, and are separated from the sea only by a narrow belt of sand. Lake Wellington, the largest of all 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, 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 Surveyor-General, Mr. A. B. Lang, and contains information in regard to heights, lengths, and areas respectively.

PHYSICAL GEOGRAPHY AND GEOLOGY OF VICTORIA.

By H. Herman, B.C.E., M.M.E., F.G.S., Director of Geological Survey.

Several new points of interest worth special mention have arisen during the past two or three years. The age of the trilobite-bearing beds at Heathcote and Dolodrook River has been fixed as Upper Cambrian, with an ascertained passage at the former locality upward into Lower Ordovician graptolite beds. At Limestone Creek, Upper Murray, Mr. F. C. Chapman has found that the limestone series shows both a Silurian (Yeringian) and a Devonian facies, thus accounting for apparent anomalies in the field relationships of certain beds. The Limestone Creek and Gibbo-Mitta corals show a distinct resemblance to those of Yass and Canberra in New South Wales. The Orbost-Bairnsdale limestone area has been correlated with the Miocene limestone of the Western District; fish remains are plentiful in the upper portion of the series in both regions, giving rise to local developments of phosphatic limestone, which may in places prove to be of economic value. Considerable progress has been made by the Geological Survey

in field mapping generally; important structural surveys have been completed in the Ballarat and Wood's Point districts.

About one-third of Victoria consists of rugged highlands, the remaining two-thirds mainly of plains less than 1,000 feet above sea-level. High-level plateaux reaching an elevation of 6,000 feet are represented by the basaltic areas of Cobungra, Dargo, and Bogong High Plains, in the east of the State, on or near the main divide; but their area aggregates only about 100 square miles. If the Eastern Australian highlands stretching north and south from Cape York to Victoria be regarded as a long leg, the Victorian extension is in the shape of a small foot running westerly for about 400 miles, and irregularly descending, principally in a succession of peneplains, from heights exceeding 6,000 feet on the east till it disappears under the Murray and coastal plains, a few hundred feet above sea-level, to the west of the Grampians, Serra, Victoria, and Black ranges, a detached group of meridional ridges of Lower Carboniferous sedimentaries, rising to a maximum height of nearly 4,000 feet.

The highlands consist almost entirely of Carboniferous, Devonian, Silurian, and Ordovician sedimentary rocks (with inter-stratified volcanic rocks in places highly developed), plutonic masses of granites, granodiorites, porphyries, and thick accumulations of dacite lavas and tuffs. Great physiographical changes can be partly demonstrated and partly conjectured to have taken place during Mesozoic and Palæozoic times; but there is clear evidence that the present physical features are mainly of Cainozoic development. Marine beds, probably Miocene, have been proved by boring at Portland at 2,265 feet below sea-level; fully 3,000 feet of Cainozoic vertical erosion and denudation can be clearly traced in the highlands; extensive faulting during the same period has been revealed by surface observations and boring operations.

VICTORIA IN EARLIER GEOLOGICAL TIMES.

Victoria's geological and physiographical history is traceable from times as early as the Cambrian, possibly even pre-Cambrian, to which age may belong schists and gneisses of the north-east and west.

Nothing of the distribution of land and sea at this time can be stated except that much of the present land area was under sea. So far surveys have not been detailed enough to show whether or where there are ancient shore lines of the pre-Cambrian period. There is more definite evidence of Cambrian seas in trilobite-bearing beds at Heathcote and Dolodrook River, the period being also represented by a volcanic series in the shape of lavas and tuffs, as well as by igneous intrusions.

The Ordovician and Silurian periods witnessed the accumulation of tens of thousands of feet of sedimentary material, now represented from east to west nearly throughout the State by slates, shales, and sandstones, with some grits, conglomerates, and occasional limestones. Apparently little land surface existed in these early Palæozoic times. Adjustments

of the earth's crust followed, perhaps accompanied, Ordovician sedimentation; and probably continued through the Silurian period, then becoming so intense as to crush and crumple aggregations of strata miles in thickness into sharp corrugations, more or less acute domes, and great geanticlines and geosynclines. The result of these movements was probably great fold mountains, and the conversion of the greater part of the prior sea surface into land surface. The magnitude of the adjustments was such that strata became elevated fully 30,000 feet above others previously on the same horizontal plane. No striking metamorphism resulted from the intense orogenic movements, although there is some evidence (near Tallangatta) that restricted areas may have developed high schistosity at this or even a much later stage.

The hollows formed by the folding and faulting probably had a nearly meridional trend; they were partly filled by sub-aerial or sub-aqueous Lower Devonian volcanic accumulations (as the Snowy River porphyries and the dacites of Dandenong and Macedon) thousands of feet thick; by the deposit of Middle Devonian limestones and shales in shallow seas at Buchan and Bindi; by Upper Devonian (or later) freshwater sandstones and conglomerates, with interbedded volcanic rocks, of great thickness, marking the site of an inland sea from Sale to Whitfield; and by thousands of feet thick of Lower Carboniferous sandstones (the present Grampian Ranges). The Carboniferous rocks at Mansfield show evidence of occasional shallow marine conditions as well as terrestrial. The strong tendency of all the Palæozoic rock systems, covering an enormous period of geological time, to group themselves in roughly meridional parallelism, is eloquent testimony to the intensity of the character of the surface lines left by the Lower Devonian and earlier orogenic folding.

Glacial conglomerate and boulder till with intercalated fern-bearing strata indicate Permo-Carboniferous intermittent glacial and temperate conditions; during this and the Triassic periods there may have been no marine surface within the State, Bass' Strait, and Tasmania. Fresh adjustments of the crust gave rise to a probable general subsidence of the surface and markedly to a depression or succession of depressions, running in a general east-west direction from Sale (or further east) through Geelong and Casterton well into South Australia. These depressions formed inland seas which became receptacles for the deposition of several thousand feet of freshwater mudstone and sandstone now forming the Jurassic coal measures of the State.

Late Mesozoic and early Cainozoic times found Victoria a land region, although the same period witnessed the transgression and retrogression of a vast sea covering east-central Australia, perhaps completely separating Western Australia from eastern Queensland, eastern New South Wales, Victoria, and Tasmania.

Next ensued a period of subsidence, indicated by a restricted development of marine Oligocene beds as far inland as Hamilton.

The intercalation of brown coal beds at Altona between marine Oligocene marls and clays demonstrates that during this period minor elevation was an occasional feature during general subsidence. Passing into Miocene times steady and long-continued downward movement enabled the Miocene seas to find their way over large portions of Gippsland, the Western District, and the Mallee.

The tilting and warping of the Jurassic strata and the marked common faulting of these beds and the Oligocene or Miocene volcanic and sedimentary rocks in Gippsland show that earth-surface adjustments of a somewhat violent character were proceeding well into the Pliocene period, thus explaining why Pliocene seas covered the greater part of the Mallee and portion of Gippsland while the peneplains of the eastern highlands were being dissected by the erosion of valleys eventually over 3,000 feet in depth. The separation of Tasmania from Victoria was one of the most striking effects of these various earth movements.

The outstanding features of Pliocene to Recent physiography were the extensive development of volcanoes and the ejection of the lavas and tuffs of western Victoria, together with oscillations of the land surface. Of these oscillations the latest phases are predominating uplift in western Victoria, evidenced by raised beaches and rejuvenated streams (such as the Hopkins and Glenelg); and general depression in eastern Victoria, resulting in submergence of the coastal plain and deep accumulations of river silt such as the flats of the lower Snowy River.

MOUNTAINS, RIVERS, AND LAKES.

From the foregoing it is evident that structurally the mountains of Victoria are in the main a complex of major and minor ridges and foothills arising from deep dissection and faulting of an early Cainozoic peneplain of ancient rocks. The trend of the ridges bears little relation to the strike or folding of these rocks. Folding, tilting, or warping may have played a strong part in the isolated ranges of the Grampians, Cape Otway, and South Gippsland, though dissection is still the most conspicuous agent that formed the present contours.

A straight line running west-north-west for about 112 miles from Cape Howe to Forest Hill marks the eastern portion of the boundary between Victoria and New South Wales. This line is in rugged country almost throughout, and crosses successively the Genoa, a short coastal river running south-easterly into Mallacoota Inlet, the Bendoc and Delegate rivers, minor streams that eventually join and run northerly into the Snowy River, and finally the Snowy itself, the largest coastal river in the State, which, after following a tortuous course amid the most elevated highlands of New South Wales, crosses the border line about 15 miles from Forest Hill, and thence runs nearly southerly through precipitous gorges for 50 or 60 miles until it enters near Orbost the fertile maize-growing flood plain that extends for 15 miles to its outlet to the sea at Marlo. From Forest Hill the main divide of the eastern Australian highlands extends northerly for about 1,500 miles

till it cuts the coast in the extreme north of Queensland. In the opposite direction it turns into Victoria, traversing the State in a nearly east-west direction at an average distance of about 100 miles from the coast. The elevation of the divide fluctuates considerably; its prominent saddles are at the head of Livingstone Creek (elevation 2,400 feet) near Omeo and near Seymour (elevation 1,200 feet). Westerly from Seymour the general elevation is much lower than to the east; the water-parting is for long distances over flat basaltic plateaux; nearing the South Australian border levelling is needed to locate its precise course between the drainage areas of the Glenelg and Wimmera on a coastal plain a few hundred feet above sea-level.

From immediately west of Forest Hill, close to the 148th meridian, the Murray River marks the northern boundary of the State, following a tortuous course of 1,200 miles in an average west-north-westerly direction until the South Australian boundary is crossed at the 141st meridian. For less than 300 miles the river is a rapid-falling mountain stream; thence it enters the Murray plains, which quickly develop, going westerly, into the fertile agricultural districts of the Goulburn and Wimmera on the Victorian side, and the Southern Riverina in New South Wales territory. Between the 144th meridian and the South Australian border the river runs almost wholly through Mallee country. Of the tributaries to the Murray, the Mitta Mitta and Kiewa, on the east, traverse deep valleys and gorges carved from the penepain of ancient rocks; while the Wimmera, on the west, rising in the Grampians, speedily enters the flat plains and loses itself in a chain of lakes a hundred miles south of the Murray, to which it is tributary in name only. Intermediate affluents to the Murray, going west, are the Ovens, Goulburn, Campaspe, Loddon, and Avoca, their characters successively changing from the extreme eastern to the extreme western type.

On the coastal side of the main divide, west of the Snowy, the Tambo and Mitchell are almost wholly mountain waterways, the Latrobe somewhat less so. All these, after emerging from the old rocks of the highlands, traverse a broad belt of Cainozoic foothills or plains before entering the sea *via* the Gippsland lakes. The Yarra is almost wholly a mountain stream, rising at an elevation of about 5,000 feet and entering Port Phillip Bay within the short distance, along its bends, of 150 miles. West of Melbourne the only watercourses requiring mention are the Barwon, Hopkins, and Glenelg, all rising at low elevations compared with their eastern brothers, the first two traversing a few hundred miles of basaltic plateaux and plains, the third a dissected coastal plain, before reaching sea-level.

More than 170 lakes are listed by the Surveyor-General. Of these, many are fresh and many salt; only eleven exceed in area 10 square miles. A great number, especially in the north-west, are nearly or completely dry, except during wet seasons. This applies even to lakes that look so imposing on the map as Albacutya and Tyrrell. It is not easy to understand why Lake Corangamite, 72 square miles in area, near Camperdown, is salt, while Lake Colac, a few miles distant, 10½

square miles in area, is fresh. Both are in depressions in the same volcanic plain. The Gippsland lakes, navigable for 50 miles, have been formed by wind-blown sand forming a lengthy barrier on the sea-side of the estuary of the Latrobe, Mitchell, and Tambo rivers. Here seashore action and river silting have long been striving to transform the lakes into dry land; but so far coastal subsidence has fought fairly successfully against the threatened encroachments.

THE COAST LINE.

Cainozoic marine beds, dune sands, and volcanic material constitute the coast line from the South Australian border to the Gellibrand River, covering more than two degrees of longitude. Portions of this section show cliffs a few hundred feet high, but the general elevation throughout is low for many miles inland. Herein are located the open roadsteads of Portland Bay and Warrnambool, the two main harbor sites of western Victoria. From the Gellibrand to the 144th meridian near Lorne the Jurassic rocks of the Otway Ranges form a rugged and picturesque coast, steep cliffs rising inland to an elevation, in places, of 2,000 feet in a few miles. Beyond Lorne Cainozoic rocks at a low elevation continue past Port Phillip heads and Western Port to the prominent though inextensive granite area of Cape Woolamai. Port Phillip and Western Port are both probably river estuaries formed by coastal subsidence. The former is the port of Melbourne, and one of the most extensive harbors in Australia; the latter has in recent years been chosen as an important naval base of the Commonwealth. Jurassic rocks fringe the coast for some miles beyond Cape Woolamai, thence receiving a thin Cainozoic capping till the Palæozoic sedimentaries of Cape Liptrap are reached. A few miles of these are succeeded by 15 miles of sandy beach bordering the dune-formed isthmus connecting the main land with the bold granite masses (over 2,000 feet high overlooking the coast) of Wilson's Promontory, the most southern Victorian remnant of the former Tasmanian-Victorian peneplain. From the Promontory granite to Cape Howe the low-lying Cainozoics and Recent sand dunes of the Ninety-Mile Beach are broken only by the shallow waters of Corner Inlet, the narrow break of the entrance to the Gippsland lakes, a few isolated granite headlands easterly from Orbost, and the beautiful drowned valley of Mallacoota Inlet.

STRATIGRAPHICAL SUCCESSION.

Cambrian and Older.—The regionally metamorphosed schists of the North-East and the Glenelg may, as already indicated, be pre-Cambrian. At Heathcote are trilobite beds of Upper Cambrian age; associated with these beds are cherts, diabases, porphyries, microgranites, and granophyres. The inter-relations of these rocks are not yet quite beyond doubt; the latest view is that the diabases are mostly volcanic, that some of the cherts are metasomatically altered tuffs, and that the cherts and diabases are interbedded, and conformably underlie the trilobite beds.

F. C. Chapman classes a trilobite limestone at Dolodrook River, North Gippsland, as Upper Cambrian; he also by recent research confirms his previous opinion of the Upper Cambrian age of the Heathcote series.

The Heathcote rocks may have furnished some of the rich alluvial gold of the old McIvor Creek diggings. Magnesite, steatite, and manganese are worked at Heathcote; corundum and chrome iron occur both at Heathcote and Dolodrook River.

Ordovician rocks are almost wholly sandstones and slates, with thin conglomerates and limestone rarely. The beds have been intensely folded.

The Lower Ordovician beds yield a rich graptolite fauna, on which they have been subdivided into several definite zones. Except for small areas near Mornington and Mansfield they are known only west of the meridian of Melbourne, where they cover wide areas, including most of the important gold-fields of the State. Upper Ordovician rocks cover large areas in the east; many productive lode and alluvial gold-fields occur therein, as well as unimportant ores of silver-lead, copper, iron, and manganese.

Silurian sandstones and mudstones with conglomerates and limestones, all much folded, cover a large part of Central Victoria. On a rich fauna they have been divided into three series, the lowest of which is typically represented at Melbourne.

The rich Walhalla-Wood's Point gold belt is in Silurian rocks. Gold-antimony lodes and limestone are also exploited. Platinum and copper have been found in small quantity.

Devonian.—Lower Devonian rocks are probably represented by the acidic tuffs, agglomerates, lavas, and porphyry masses of the Snowy River, as also by the dacite lavas and granodiorites of Macedon and the Dandenongs. Limestones and shales at Buchan and Bindi are Middle Devonian. The large area of freshwater sandstones and conglomerates, with interbedded volcanic rocks, of the Macallister-Wonnangatta area, may be Upper Devonian or Carboniferous.

The intrusive granites and granodiorites that figure so prominently throughout the State on the geological map are probably in general Lower Devonian.

Economically the Devonian rocks have not so far been very important. Gold, silver-lead, copper, baryta, felspar, and building stone have been the chief products. The bulk of the interior decoration of Commonwealth House, London, is being executed in *cafe-au-lait* marble from the Buchan limestone area.

Carboniferous.—Lower Carboniferous rocks are represented by the sandstones and shales of the Grampian Ranges in western Victoria, and in the Mansfield district by a thick series of red sandstones, mudstones, impure limestone and conglomerates. At Mt. William in the Grampians, there is evidence of a granodiorite-porphyrity intrusion into the Lower Carboniferous sandstones. Freestone for building purposes has so far been the main product.

Permo-Carboniferous.—Boulder till and glacial conglomerate occur at Bacchus Marsh, Heathcote, various north-eastern localities, Campbelltown, and Coleraine; they also underlie deep leads in some of the western gold-fields. At Bacchus Marsh a series of sandstones and shales containing *Gangamopteris* is interbedded with the glacial conglomerate and till. Freestone is so far the chief economic product.

Jurassic.—Felspathic sandstones and mudstones with occasional conglomerates occur in South Gippsland, the Otway Ranges, and the watershed of the Wannon. Seams of coal up to 10 feet thick have been worked in the South Gippsland area, but in the Wannon and Otway only small seams have been found. Much faulting and intrusions of dolerite dykes are characteristic of the South Gippsland Jurassic. Freestone from Barrabool Hills, near Geelong, has been quarried for building purposes. The dolerites offer a useful road-making material.

Oligocene.—Marine sands, clays, and limestones of Oligocene age are known at Mornington, Muddy Creek, Altona, and Sorrento (the last two at a depth). At Newport and Altona under the marine series there are seams of brown coal up to 140 feet thick.

Miocene.—The greatest thickness of known Cainozoic beds belongs to this period. Miocene marls and polyzoal rocks occur in numerous localities along the Victorian coast. In the Western District, Miocene appears in many places south of the divide. Extensive deposits of brown coal range from the Miocene to the Oligocene. Basaltic flows are associated with Miocene beds, perhaps marking the inception of Cainozoic volcanic activity. The main water-bearing strata of the Mallee-Riverina basin belong to this series. Limestone is so far the chief product.

Pliocene.—Lower Pliocene shell-marls and sands are represented at the Gippsland Lakes, portions of shores of Port Phillip Bay, Flemington, Hamilton, Shellford, Muddy Creek, and the Mallee. This period is generally characterized by coarse marine and freshwater sediments; large areas are probably overlain by volcanic rocks. In the fauna some gigantic mammals are included. Upper Pliocene sands and limestones are at Glenelg River, Moorabool River, and in the Mallee. The extensive volcanic plains of the Western District have been formed from the tuffs and lavas of numerous volcanoes, active from Pliocene to comparatively recent times. Many of the craters are of perfect shape and are a conspicuous feature of this region.

Recent.—Loam and sand deposits, dune sands, recent beaches, and lake sediments now forming, ferruginous and calcareous bands and concretions are included in deposits of Recent age.

Cainozoic formations have proved fabulously rich in alluvial gold. Stream tin, a little wolfram and monazite have also been worked. Clays have proved useful in the pottery industries, sands for glass-making, and some ferruginous material for pigment.

The vast deposits of brown coal (which may range from Oligocene to Miocene or younger) promise to play an important part in the future industrial development of the State.

THE FLORA OF VICTORIA.

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The early general accounts of the flora of Victoria by Baron Mueller have been, to some extent, superseded by the short but excellent accounts given by Mr. G. Weindorfer in the *Victorian Year-Book* for 1904, and by Mr. C. A. Topp, M.A., LL.B., in the Melbourne Handbook of the Australasian Association for the Advancement of Science, 1890. In several respects, however, these general views need amplification, especially as the progress of settlement, drainage, irrigation, and cultivation continues to affect the character and distribution of the native flora. The following remarks will serve to complete the accounts already given, as well as to draw attention to certain features which come prominently out in a general view of the flora, but have not previously been discussed.

The factors which influence a flora and determine its character are the result of the interaction of telluric, oceanic, and solar influences, and may be grouped under the following heads:—

1. The previous geological history of the country, and its relationship to other countries.
2. The present and past climate, in which the most important factors are—
 - (a) Average and annual temperature, and extremes of heat and cold.
 - (b) Average annual rainfall, and its distribution throughout the year.
 - (c) Character and depth of the soil.
 - (d) Prevailing winds and their intensity and direction, including the influence of drift sand, &c.

The two latter factors influence more the local than the general distribution through large areas, although the influence of wind on the flora of the coastal districts around Melbourne, and on that of large areas of the north and south-western districts, is very pronounced.

The previous geological history of Victoria is by no means certain, although evidences of elevation and subsidence are shown in many parts, and volcanic eruptions and lava outbursts in past ages have been responsible for the sudden destruction of the local flora over wide areas. In the same way, the existing evidence of glacial action points to the occurrence of a cold glacial age in the history of Victoria, when arctic conditions prevailed, and all the requirements were produced for the subsequent development of a homogeneous alpine flora on the tops of the lofty mountains as the cold receded and more favorable conditions prevailed, leaving arctic species stranded, as it were, on the top of every lofty mountain throughout the State. The alpine flora of Victoria is, however, apparently more modern and hence less striking than that of Europe, although many features of

similarity exist between the two. The more modern character of the Victorian alpine flora is, for instance, evidenced by the facts that the plain and alpine floras largely overlap, and that the latter shows less type differentiation than usual. Species which pass from alpine or sub-alpine regions to the plains are *Arabis perfoliata*, *Billardiera scandens*, *Correa Lawrenciana*, *Hypericum japonicum*, *Sagina procumbens*, and *Stellaria pungens*, although others are not wanting, such as *Drosera Archeri*, &c., which are exclusively restricted to high alpine elevations. Little doubt exists as to a land connexion with Tasmania in past ages by way of King Island, and this is borne out by the large number of species common to the two States, Tasmania and Victoria. New Zealand, on the other hand, is widely distinct in its flora from that of Victoria, so that, if New Zealand and Australia were ever connected, the separation must have occurred in very remote ages.

Present Climate.—The average annual rainfall of 26 inches approximates to that of England, and this, coupled with its warmer climate and continental connexions, makes the flora of Victoria somewhat more numerous and varied than that of Great Britain, in spite of the smaller area of the State. The idea that Victoria is much drier than Great Britain is hardly correct. The chief difference is that in Great Britain a few places are exceptionally wet (Ben Nevis, 151 inches per annum; one station in Lake district, 177 inches per annum), whereas in Victoria a few regions are exceptionally dry (the north-west portion of the Mallee). The Lake district in England, and the south-west coast of Scotland, with an annual rainfall of 40 inches, correspond exactly to the Otway Forest and South Gippsland, where the rainfall just exceeds 40 inches. Over a very large part of the east coast of England and Scotland the rainfall is below 25 inches. The average for London is, for instance, 24 inches—*i.e.*, below the average for Victoria; and in one drought year, when agriculture in Essex and neighbouring counties suffered greatly, it was as low as 16 inches. A point of great importance is that in all the wettest parts of Great Britain the flora is of a special character, and limited to a few bog, humus, or hygrophilous types, whereas it is in the drier regions that the flora is more abundant and varied—that agriculture is of most importance, and the land most valuable.

In Victoria, owing to its warmer climate, a higher rainfall is required to reach the limit at which it becomes detrimental to agriculture, and at which bog, humus, and hygrophilous floras prevail. Although this limit is reached in parts of South Gippsland, the Otways, and on some of the higher mountain ranges, it is only over limited areas, which represent a relatively small portion of the total surface of Victoria. The conditions are, therefore, very different to those prevailing on the west coasts of Ireland or Tasmania, where, owing to the high rainfall, enormous tracts of land are quite unsuited for the ordinary practice of agriculture, though, naturally, not entirely useless. Even in Victoria, however, if the curves for rainfall and temperature coincided instead of being opposed—*i.e.*, if the rains of the south fell on the

northern areas—the climate, flora, and agricultural possibilities of the State would be enormously improved, and irrigation would be largely unnecessary.

As it is, there are over 2,000 species of flowering plants and vascular cryptogams in Victoria; and when the lower cryptogams—Algæ, Musci, Fungi, &c.—are added, the species total fully 5,000. England possesses about 1,200 flowering plants and ferns; but, owing to its relatively large expanse of coast and its more uniformly moist climate, Algæ, Musci, and Fungi are better represented.

A very interesting feature in distribution is afforded by the fact that many almost subtropical species from New South Wales or even Queensland (*Hakea dactyloides*, *Livistona australis*, *Callitris calcarata*, &c.) extend down the coast into Victoria. The neighbourhood of the sea maintains a more equable temperature, and keeps the air more uniformly moist. Plants in general suffer more from cold dry air than from equally cold but moist air, so that under moist coastal conditions subtropical and even tropical plants can extend far to the south out of their proper geographical zones.

The climate of Victoria may be fairly compared with that of the south of France or Spain, but the flora is widely dissimilar as regards the species and genera, and even some of the orders (Proteaceæ) of which it is composed. A number of common British genera—*Hypericum*, *Stellaria*, *Cardamine*, *Drosera*, *Capsella*, &c.—are represented in Victoria, but mainly or entirely by distinct Australian species. A few cosmopolitans—*Spergularia rubra*, *Sagina procumbens*, *Myosurus minimus*, *Potentilla anserina*, *Oxalis corniculata*, *Portulaca oleracea*, *Polygonum hydropiper*, *Lemna minor*, *Potamogeton*, &c.—are, however, natives of Victoria, and they, with others, form a connecting link with the world's flora. Thus *Prunella vulgaris*, L., the "Self-Heal," and *Solanum nigrum*, the "Black Nightshade," are common English weeds, while native species of *Sida*, *Hibiscus*, *Anagallis*, *Heliotropium*, *Cyperus*, &c., also occur in Asia, Africa, and America. Such non-European plants as *Parietaria debilis*, *Dodonæa viscosa*, *Avicennia officinalis*, and *Tetragonia expansa* are especially interesting, since they connect our flora with that of the old and new worlds on the one hand and with that of New Zealand on the other.

The dominant general features of the Victorian flora are determined by the necessity of protection against periodic drought and intense sunlight. The latter affects, of course, exposed plants only, and is shown by the common presence of vertical leaves or phyllodia on so many of our forest trees, with the result that they yield relatively little shade, and at the same time transpire less actively than if horizontally expanded.

Various adaptations for surviving periods of drought are shown, such as the formation of reduced evaporating surfaces and fleshy leaves like those of the salt-bushes, by the transformation of branches which would bear leaves into thorns and prickles, such as *Acacia armata*, &c.

In addition, many herbaceous perennials in dry seasons or situations develop as annuals, surviving the dry period in the form of seed. The seeds of many Leguminosæ (*Acacias*, *Jacksonias*, *Viminaria denudata*, &c.) have impermeable cuticularized seed-coats when fully ripened, so that they may remain dormant in the soil for long periods of years, germinating when brought to the surface and the coats softened by heat, by the alkaline ash of bush fires, or by mechanical abrasion.

A few introduced trees, such as the Moreton Bay Fig, Maple, and Plane, shed a portion of their leaves in drought so that the remainder may have a chance of surviving, and the same may be shown to a limited extent by some of the native trees, although the latter are nearly all evergreen, the leaves being shed irregularly all the year round without ever leaving the tree entirely bare. The prevalence of evergreens in the native flora is the result of our mild winters, but introduced deciduous trees flourish admirably and are largely used for tree planting.

The erect, branchless, lower stems and thick fibrous bark of so many of our Eucalypti are probably protective adaptations against bush fires, and this peculiarity often causes them to be unaffected by a fire which would completely consume a European pine forest under similar conditions. The frequently delayed dehiscence of *Callistemon*, *Hakea*, *Banksia*, &c., especially under moist conditions, is probably also an adaptation to drought conditions or to recurrent bush-fires, for both causes clear the land of existent vegetation to a greater or less extent, and, at the same time, excite the escape by dehiscence of the seeds which are to replace it, and the germination of those dormant seeds whose coats have been softened by the heat and ashes.

The coast scrub of Tea-tree (*Leptospermum* and *Melaleuca*) protects itself against wind and sand-drift by growing close together, the leaves, which demand a fair exposure to light, being found at the upper surfaces and edges of the scrub only and giving its interior a peculiarly gloomy character. Where the scrub is dense, no plants grow beneath; but where it is less dense, a few mosses, grasses, and such orchids as *Caladenia*, *Pterostylis*, &c., may be found, and an introduced *Polygala*, *P. myrtifolia*, L., is sometimes abundant. The Mallee scrub of the north-west (shrubby Eucalypti) affords an instance of similar adaptation, but in this case to inland conditions.

In spite of its close connexion with the rest of Australia, the barriers to migration in the past have sufficed to enable Victoria to retain a fairly large number of endemic species, at least 46, although possibly some of the latest-described plants may prove to be merely varieties or hybrids of species with a wider range. This appears especially to be the case with the genus *Pultenaea*, of which no less than five new species have been recently recorded, one of them, *P. Weindorferi*, Reader, being found comparatively near Melbourne. In any case, the comparison with England, which, in spite of its isolation as an island and larger area, has hardly any true endemic species, is very striking.

The endemic species of Victoria include *Eucalyptus alpina*, *Acacia tenuifolia*, *Pultenaea* (9 species), *Grevillea* (4 species), *Olearia stricta*, *Goodenia Macmillani*, *Prostanthera* (3 species), *Leucopogon* (2 species), *Chiloglottis* (2 species), *Prasophyllum* (4 species), *Stipa* (4 species), *Glyceria dives*, *Lepidosperma tortuosum*, and many others. There is, however, a smaller percentage of endemic species in Victoria than in any other State of Australia, owing to the greater range of conditions within its boundaries and to the close connexion with neighbouring States, the northern and western boundaries of Victoria being political rather than geographical or botanical.

The genera with endemic species, and more especially *Pultenaea*, *Grevillea*, *Acacia*, *Eucalyptus*, *Thelymitra*, and *Prasophyllum*, may be regarded as especially adapted to Victorian conditions and as characteristic representatives of its flora.

The latter is, however, in a transitional condition, and is rapidly undergoing modification as the result of civilization.

The chief factors tending to the disadvantage of the native flora are—the progress of deforestation, the drainage of swamps and swampy localities, sheep pasturing and the spread of rabbits, the increase of the area under cultivation or irrigation, and the introduction of hordes of alien weeds and garden escapes, many of which are not merely more or less aggressive weeds of cultivation—*Senecio*, *Carduus*, *Centaurea*, *Anagallis arvensis* (Pimpernel), *Sonchus* (Sow Thistle), and *Tares* (*Vicia*), &c.—but also establish themselves on pastures and virgin ground, largely ousting the native flora. Such plants are the Gorse, *Ulex europæus*, Perennial Thistle, *Carduus arvensis*, Onion Grass, *Romulea cruciata*, Blackberry Bramble, *Rubus fruticosus*, Briar, *Rosa rubiginosa*, Ragwort, *Senecio Jacobæa*, St. John's Wort, *Hypericum perforatum*, Stinkwort, *Inula graveolens*, Boxthorn, *Lycium horridum*, Prickly Pear, *Opuntia monacantha*, and many others. The list of proclaimed plants of Victoria now includes no less than 47 species, of which only the Nut Grass, *Cyperus rotundus*, Cotton Fireweed, *Erechtites quadridentata*, D.C., Chinese Scrub, *Cassinia arcuata*, the Mistletoes, *Loranthus celastroides* and *L. pendulus*, and the Prickly Acacia, *Acacia armata*, are native plants.

During the period 1916-1917 ten foreign plants have succeeded in establishing themselves as naturalized aliens in Victoria. In addition seven other exotics have made their appearance for the first time, some of which may eventually establish themselves as aliens.

The following species have been added to the list of the native flora *Ceratogyne obionoides*, Turcz (Compositæ), previously recorded from Western Australia, South Australia, New South Wales, and Queensland; *Eremophila* (*Pholidia*) *crassifolia*, F.v.M. (*Myoporaceæ*), previously known from South Australia, and *Eremophila Sturtii*, R. Br. (*Myoporaceæ*), previously recorded from South Australia, New South Wales, and Queensland. In addition, a new species belonging to the natural order *Rutaceæ* has been recorded from this State

(*Phebalium bullatum*, J. M. Black), also a new species of orchid has been recorded (*Chiloglottis Pescottiana*, Rogers).

One striking peculiarity is to be noted—namely, that the introduced Pimpernel is ousting the two native Pimpernels, and the same applies in other cases also. Thus the native *Hypericum* is not particularly abundant, whereas the introduced *Hypericum*, or St. John's Wort, is spreading rapidly. The introduced Dodder, *Cuscuta epithymum*, L., seems to be more dangerous, especially to lucerne, than the native Dodders; while the parasite *Cassytha* (Lauraceæ), sometimes mistaken for Dodder, hitherto has confined its attacks to native vegetation and left cultivated plants untouched.

The unusual luxuriance and powers of spreading shown by many introduced weeds is in some cases possibly the result of the stimulating effect of a change of climate, but in others is merely due to the fact that the weeds are allowed to grow on land from which cultivation excludes them in their original home. It would be interesting to know whether the production of alkaloids in certain feebly poisonous alien weeds increases in their new home, or whether such weeds appear to be more poisonous because stock eat them more freely in Victoria. This applies, for instance, to the Pimpernel (*Anagallis arvensis*), which has spread rapidly in Victoria, and was responsible for a heavy mortality among sheep at Lilydale, but in England does not seem to be specially dangerous to stock, possibly because green fodder is more abundant.

One feature of the native flora is, as is usually the case, the small number of useful economic plants it contains. Many of the forest trees produce good timber, but the latter is, in some cases, too hard, heavy, and brittle when seasoned to be of much value, except for special purposes where durability is all-important and little working is required; while the softer woods are for the most part not very durable, or are very liable to warp and crack—at least under the methods of seasoning usually adopted here. It is for this reason that so much of the new forest planting has been confined to exotic trees; but, nevertheless, many native trees yield timber useful for beams, railway sleepers, piles, paving blocks, furniture, &c. With the improved methods of seasoning that have in many cases come into practical use, it has been found that many native timbers formerly little appreciated are really of great value. Unfortunately, most of our native forests have been despoiled of their most valuable timber trees without any forethought to the future before their value was fully realized, and without proper provision for artificial re-forestation. Natural re-forestation is too uncertain a process to be relied on in countries where population is fairly abundant and land is correspondingly valuable. The imports of timber into Victoria already reach a high figure, although a very large part is derived from timber trees which would grow equally well within the State. That there should be hardly any native fruits and no native cereal grains of any value as food for civilized man is hardly surprising when we consider that the commoner cereals and fruit trees are the result of ages of continual selection. Even the native

fodder grasses and fodder plants are, with some notable exceptions, inferior in quality or objectionable on account of their armed fruits, inferior fertility, deficient nutritive properties, &c., and are being driven out by more suitable and adaptable introduced grasses.

All the Leguminosæ used as fodder (Clover, Trefoil, Vetch, Lucerne, Sainfoin, Peas, &c.), are introduced, so that if we exclude the *Acacia*, with its wattle-bark, this important order contains hardly any native representatives of pronounced economic value. A large number of our native flowers would possibly be capable of great improvement under cultivation, and other native plants might be found to develop useful economic properties under selective treatment. The cultivated plants of the world are mainly the result of selective adaptations from the floras of Europe and Asia, and no one seeing the original wild mustard for the first time could have predicted, without long trial extending over generations, the series of useful cultivated plants (cabbage, cauliflower, rape, mustard, brocoli, Brussels sprouts, turnips, &c.) to which this one genus would give rise. If only such investigations are made before it is too late, although we may regret, on sentimental grounds, the shrinkage of the native flora and the probable ultimate extinction of many of its representatives, it can only be regarded as the inevitable result of the progress of settlement, while the spread of the different weeds of cultivation is the usual, though by no means an unavoidable, accompaniment of the same change.

The proper establishment of the National Park at Wilson's Promontory will render it possible to preserve many species which seem in danger of extinction—at least, until such time as their economic possibilities have been thoroughly ascertained; and it is sincerely to be trusted that none of our endemic species will be suffered to become absolutely extinct when a special harbor and sanctuary exists for them. A species once extinct cannot be revived by any means; and to allow plants to become extinct before all their economic possibilities have been thoroughly tested is a wanton wasting of the hidden treasures which Nature scatters lavishly around us.

The flora of the National Park now contains over 600 species of native plants, that is nearly one-third of the whole flora of Victoria, and this number includes several plants which are rare or absent from other parts of Victoria. Many native plants formerly absent from the Park have now been planted there, and in the course of time it will probably represent the only large area where the entire native flora will be seen in its primitive condition and natural relationship.

THE FAUNA OF VICTORIA.

By the late T. S. HALL, M.A., D.Sc. (University of Melbourne) and J. A. KERSHAW, Curator of the National Museum, Melbourne.

The peculiarity of the Australian mammalian fauna has often been remarked upon. Nowhere else in the world do we find representatives of the three great groups into which the class is divided, namely, the

Eutheria, the Marsupials, and the Monotremes. The last group, containing the spiny anteater (*Tachyglossus*) and the platypus (*Ornithorhynchus*), is confined to the continent and neighbouring islands, while the marsupials exist, nowadays, only in the Australian region and America.

Of the Eutheria, which comprises all mammals above the Marsupials, we have but a few terrestrial forms—the dingo (*Canis dingo*), a few bats, and rats and mice. The seas afford a few more, such as whales and dolphins, seals, and, in certain places, the dugong (*Halicore*).

Owing to the progress of settlement and the consequent disappearance of the natural cover and feeding grounds, many of the terrestrial forms are rapidly disappearing, while some have already gone.

With the establishment of the National Park at Wilson's Promontory as a permanent sanctuary for the native fauna and flora, it is now possible to preserve many species in their natural environment, which would otherwise soon become extinct. The small Wombat (*Phascolomys tasmaniensis*) which is restricted to Flinders Island, in Bass Straits, where it is doomed to early extinction, and the black opossum of Tasmania have been liberated there together with red and grey kangaroos, wallabies, wombats, emus, and lyre birds from the mainland. The echidna was already there, and no doubt the platypus will soon follow.

In Victoria we find the Australian fauna typically developed. The echidna ranges over the whole continent, while its ally, the platypus, is confined to the eastern side of Australia from Tasmania to the Tropics. Both are still common in certain parts of the State.

Among the marsupials the kangaroo family (*Macropodidae*) is well represented, though the larger forms are rapidly disappearing. These comprise the red, grey, and black-faced kangaroos. The larger wallabies are represented by the black-tailed wallaby (*Macropus ualabatus*), which is still common in many parts of the State, and ranges far to the north of our boundaries.

The smaller forms such as the rufous-bellied wallaby (*M. billardieri*), the brush-tailed rock wallaby (*Petrogale penicillata*), the hare wallaby (*Lagorchestes leporoides*), and the bridled nail-tailed wallaby (*Onychogale frenata*) are now rare, and very seldom seen in their wild state.

The rat-kangaroos frequent the thick scrub and are very rapid in their movements. One species, the brush-tailed (*Bettongia penicillata*), which is found in Southern New South Wales, builds a large nest of grass, using its long tail to carry the material. Three species are known to Victoria, viz., the rufous (*Aepyprymnus rufescens*), jerboa (*Bettongia cuniculus*), and the common rat-kangaroo (*Potorous tridactylus*). These have practically disappeared from this State.

The Australian opossum family (*Phalangeridae*) comprises our so-called opossums, flying squirrels, and the native bear—unfortunate names, but the only local ones in common use. The common opossum or phalanger and the Tasmanian brown are the same species (*Trichosurus vulpecula*), the island form being a little larger and of a darker

hue. The species ranges over practically the whole of Australia. They form their nests in hollow trees, or, where these are absent, as on some of the islands in Bass Strait and in Central Australia, on the ground. A closely-allied species, the short-eared (*T. caninus*) is found in the eastern part of the State. The ring-tailed opossum (*Pseudochirus peregrinus*) builds a round ball-like nest of small twigs and leaves in the dense scrub.

The flying opossums, or, as they are sometimes called, flying squirrels, are represented by several species, ranging from the size of a cat to that of a mouse, and are beautiful animals. Like the common opossums, they are nocturnal in habit and are herbivorous. They have not the power of true flight, but can glide through the air for a considerable distance from a greater to a less height. This is accomplished by the aid of a membranous parachute formed by a lateral extension of the skin of the body and supported by the fore and hind limbs, similar to that of the true flying squirrels.

On a still moonlight night they may be observed to project themselves from the topmost boughs of a tall tree and gliding at a gradually decreasing angle reach the trunk of another tree, often at a considerable distance.

The largest species (*Petauroides volans*) is distributed throughout the eastern part of the State. It varies in colour from black to almost wholly white. Three smaller species (*Petaurus breviceps*, *P. australis*, and *P. scuireus*), are also found in Victoria, though the two latter are rare.

The pigmy flying phalanger (*Acrobates pygmaeus*) is no larger than a mouse and has a remarkable, flattened, feather-like tail. It is frequently found coiled up in an abandoned birds' nest. The doormouse phalanger (*Dromicia nana*) is arboreal in habit and insectivorous, and, like the acrobates, is sometimes found in an old birds' nest.

The rarest of all this group is the small squirrel phalanger (*Gymnobelideus leadbeateri*). Only three specimens are known, all of which are in the National Museum and were obtained in South Gippsland.

The native bear or koala (*Phascolarctos cinereus*) has a very restricted range. It does not occur in South Australia or Tasmania, but extends north up the eastern coastal region. As shown by its occurrence in cave deposits in Western Australia it formerly had a much wider range. Despite its name it is a harmless and peaceable vegetable feeder, and, except in protected areas, is rapidly disappearing.

Of the wombat family (*Phascolomyidæ*) we have but one representative (*Phascolomys mitchelli*) which is still common in the eastern part of the State.

In the native cat family (*Dasyuridæ*) there were originally three of the spotted species in Victoria. The large tiger cat (*Dasyurus maculatus*), however, seems to have entirely disappeared, though still common in parts of Tasmania. The common native cat (*D. viverrinus*) is not uncommon near Melbourne, while the black-tailed species (*D. geoffroyi*) only occurs north of the Dividing Range.

The Tasmanian devil (*Sarcophilus ursinus*) is now confined to Tasmania, but that it existed at no very distant date in this State is shown by the well preserved and recent appearance of skulls which have been found. A living specimen captured in 1912 in a forest at Tooborac and sent to the National Museum suggested that it probably still existed, but in the absence of further evidence it must be regarded as an escaped specimen from confinement.

The pouched mice (*Phascogale* and *Sminthopsis*) are small animals ranging in size from that of a rat to a mouse. Some are arboreal, others terrestrial. The largest is the brush-tailed pouched mouse, (*Phascogale penicillata*), which lives in hollow logs and holes in trees, and feeds on young birds, eggs, and insects. They are also known to enter the fowl-house and kill chickens. It has a wide distribution, extending over the greater part of Australia. Two smaller species (*Phascogale flavipes* and *P. swainsoni*) are also found in Victoria.

The narrow-footed pouched mice (*Sminthopsis*) are terrestrial, being usually found under logs. They are fierce little cannibals, and a few years ago about 50 were sent alive in a case to the University. Two days after there were two living, while a few rags of fur represented the other four dozen. The survivors engaged in mortal combat in the glass jar in which they were put to be chloroformed.

The common pouched mouse (*S. murina*) and the thick-tailed (*S. crassicaudata*) are not uncommon here. Examples of these forms are desiderata in the National Museum.

The bandicoots (*Peramelidæ*) are represented in this State by five species. The rabbit-bandicoot, or bilbie (*Thalacomys lagotis*), constructs a large, open-mouthed burrow, and, like the pig-footed bandicoot (*Chæropus ecaudatus*), is a rare animal and occurs only in the north-west.

Gunn's bandicoot (*Perameles gunni*) is the commonest species, and the long-nosed (*Perameles nasuta*) and the short-nosed bandicoots (*Isodon obesulus*) are also found here.

In eutheria, the higher mammals, we are, as already stated, poorly represented. The dingo (*Canis dingo*) perhaps got here before man arrived, and its remains are found fossil. Bass Strait was a barrier to it, and it did not reach Tasmania.

Among bats the large fruit-bat, commonly known as the flying-fox (*Pteropus poliocephalus*), occasionally appears in great numbers in the northern and eastern parts of the State, where it inflicts great damage on fruit gardens. During such raids, long distances are often travelled, the animals returning each morning to their usual camps. It is widely spread up the eastern sea-board of the continent. Several species of the smaller insect-eating bats occur, among which are *Nyctinomus australis* and *Taphozous australis*, both widely distributed species.

The large, handsome, golden water-rat (*Hydromys chrysogaster*) is common in parts, and its range extends all over the Continent, as well as to Tasmania and New Guinea. There are also several species of bush-rats, while the jerboa rats, so called on account of their mode of

progression, are represented by *Notomys mitchelli*, found in the Mallee country in the north-western part of the State.

Of seals, the Australian sea-bear (*Otaria fosteri*) at one time very abundant on our shores, is now practically restricted to the Seal Rocks, off Western Port Bay, and to Julia Percy Island. Here there are still large numbers, and being protected they are unmolested.

The large earless leopard seal (*Ogmorhinus leptonyx*) is only an occasional visitor, while two species of the white crab-eating seal (*Lobodon carcinophaga*) have wandered here from the far south.

The yellow-sided dolphin (*Delphinus delphis*) is common, and whales of several species are occasional visitors along our coast.

As regards birds, we have only a few species practically confined to the State, the Victorian lyre-bird (*Menura victoriæ*) being the best known. The emu (*Dromaius novaehollandiæ*) is still common in the north-west, as well as in parts of South Gippsland.

Wild fowl are plentiful and occasionally great incursions are made from the north. The black swan (*Chenopsis atrata*) is abundant, especially in Gippsland, and is protected throughout the year. The Cape Barren goose (*Cereopsis novaehollandiæ*) and the pied goose (*Anseranus semipalmata*) are both rare. Among ducks, the common species are the black duck (*Anas superciliosa*), Australian teal (*Nettion castaneum*), and the grey teal (*N. gibberifrons*). Quail are common at times, and pigeons of various kinds occur. Our most striking birds are the lories and honey-eaters, which gather "the harvest of the honey-gums." The mound-building Lowan or Mallee hen (*Leipoa ocellata*), found only in the west and north-west, and the bower-birds (*Ptilonorhynchus violaceus* and *Chlamydotera maculata*) are remarkable for their habits, so often described, while the mutton-bird (*Puffinus brevicaudus*) is of great economic value for its eggs, which are gathered, together with its young, in countless numbers.

Field naturalists have investigated our birds more thoroughly than any other group of our fauna.

Turning to reptiles, we have two tortoises, the short-necked (*Emydura macquariæ*), found north of the Divide, and the long-necked (*Chelodina longicollis*), occurring both here and in Gippsland. The large leathery turtle (*Dermochelys coriacea*) is a rare visitor, and only three or four specimens have been captured.

As regards lizards, there are altogether about 50 species in the State, the most remarkable being the so-called legless forms of the family Pygopidæ. *Pygopus lepidopus*, *Delma fraseri*, *D. impar*, and *Lialis burtonii* are well-known examples. They have no front legs, while the hind ones are represented by two scaly flaps usually fitting into grooves on the side of the body, and so escaping casual examination. They are probably the main source of the stories of snakes with legs, which occasionally appear in the newspapers. The large lace lizard, or "goanna" (*Varanus varius*), derives its name from Iguana, a genus not found in Australia. It is common in the northern and eastern parts

of the State, and reaches a length of 5 or 6 feet. A rather smaller species (*Varanus gouldi*) is found throughout the dry north-west, where it replaces *Varanus varius*. The Gippsland water lizard (*Physignathus lesueurii*) is remarkable on account of its semi-aquatic habits, which has earned for it the local name of the Gippsland crocodile. It is usually found basking in the sun on rocks and fallen logs close to a stream, into which it immediately disappears on the least alarm. The Jew, or bearded, lizard (*Amphibolurus barbatus*) and the smaller so-called "bloodsucker" (*A. muricatus*) are common throughout the State.

Other well-known forms are the stump-tail (*Trachysaurus rugosus*) and the blue-tongues (*Tiliqua*), three species of which occur here.

Among the smaller kinds there are several species of skinks and six species of geckoes.

Among snakes, we have the non-venomous blind snake (*Typhlops polygrammicus*) with a body as smooth as glass, which enables it to bury itself in the sandy soil with great rapidity, and the carpet snake (*Python spilotes*), both of which are restricted to the northern parts of the State.

We have about a dozen venomous species, though some, from their small size, are not dangerous to man.

The tiger snake (*Notechis scutatus*), a handsomely-marked species, is one of the commonest, as well as the most active and dangerous. It is viviparous and very prolific, being known to produce from 30 to 40 young at a time.

The brown snakes (*Denisonia* and *Diemenia*) produce eggs, and are only found in the northern and western districts. The common brown snake (*Diemenia textilis*) grows to a length of 6 feet, and is of a uniform olive-brown in the adult, while the young are often prettily marked with a black blotch on the crown of the head and a series of narrow black cross-bars on the body.

Among others are the black snake (*Pseudechis porphyriacus*) and the copper-head (*Denisonia superba*), common in the southern districts. The death or deaf-adder (*Acanthophis antarcticus*), which is spread over practically the whole of Australia, is a short, thick-set reptile, and is greatly dreaded on account of its habit of lying still until nearly or quite stepped on, when it strikes without warning. The only sea snake is the yellow-bellied sea snake (*Hydruis platurus*), which is rare. It is usually black on the back and yellow on the sides and tail, the latter with black spots.

We have about eighteen species of Amphibians in Victoria, all of them being frogs and toads. Of the family Hylidæ, the largest is the handsome green and gold "bell-frog" (*Hyla aurea*), very common in Southern Victoria, and usually found in swampy ground. The brown tree frog (*H. ewingii*) is often found resting in the branches of small eucalypts or under logs. In the family Cystignathidæ we have several species, among the best known of which are *Limnodynastes tasmaniensis*, one of the commonest frogs around Melbourne, *L. dorsalis*, and *L.*

peronii. The small brown frog (*Crinia signifera*) is an active creature about an inch long, and is commonly met with under logs and stones.

All the frogs are great insect-eaters, and in their turn are a favorite food of the snakes.

In fresh-water fish we are not rich, owing mainly to our poor river development. There is a marked distinction between the forms found to the north of the Divide and those to the south. In the Murray basin we have the Murray cod (*Oligorus macquariensis*), which is known to attain a length of about 4 feet and reach the weight of 100 lbs. This species, which is one of the most important of our food fishes, has been introduced into some of our southern streams, much to the detriment of the smaller species.

The cat-fish (*Copidoglanis tandanus*), the bony bream (*Chatassus erebi*), the golden or Murray perch (*Ctenolates ambiguus*), and the silver perch (*Therapon bidyana*) are absent from the southern waters.

The black-fish (*Gadopsis marmoratus*) occurs throughout the Murray basin, even in Queensland head-waters, in Southern Victoria, and in Northern Tasmania. The Australian grayling (*Prototroctes macæna*), once very abundant in the Yarra and other southern streams, is now scarce and in danger of being completely exterminated. It also occurs in parts of Tasmania. The tupong, known to anglers as the fresh-water flathead (*Pseudaphritis urvillii*), is widely distributed throughout the State. The fresh-water eel (*Anguilla australis*) is common, and occurs only in the southern streams. Its mode of distribution and reproduction have long been a source of keen interest and discussion in the newspapers. Eel-fares have frequently been witnessed in several of the larger rivers. Lampreys are not uncommon in most of our streams, and are frequently caught in eel-traps.

The voracious little minnows (*Galaxias*) are numerous in most of our rivers and creeks, and are commonly known as trout. Five or six species are known to occur here, the largest of which is the spotted minnow, or mountain trout of anglers (*Galaxias truttaceus*), which attains a length of about 10 inches. It is also plentiful in Tasmania. *G. attenuatus* is even more abundant and has a very extensive range, being found not only in South Australia, Victoria, New South Wales, and Tasmania, but also in New Zealand and South America.

During heavy floods thousands of these fish have been observed and captured near the mouth of the Yarra.

With regard to the marine fish, which are very numerous and of considerable economic value, want of space will only permit of the mention of some of the better-known forms.

Among the more important of our food fishes is the schnapper (*Pagrosomus auratus*), which at times is very abundant. Medium-sized examples have the upper parts of the body beautifully ornamented with pale-blue spots, while very large specimens, known as "old-man schnapper," frequently develop a prominent bony protuberance on the top of the head and an enormously swelled and fleshy nose.

The golden bream (*Chrysophrys australis*) is equally valuable and abundant, and provides excellent sport for the angler. Its weight has been recorded up to 5 $\frac{3}{4}$ lbs.

The rock flathead (*Platycephalus levigatus*) and the Bass flathead (*P. bassensis*) are well-known Victorian species.

The barracouta (*Thyrsites atun*) appears in enormous numbers at certain times of the year, when great hauls are made. During their visit, great quantities are sold in the fish market and in the streets, and many are smoked. It is a good fighting fish, and to the angler it affords excellent sport. Besides being common along the south and eastern coasts and in Tasmania, its range extends to New Zealand, and the southern waters of Africa and South America. Both the spotted whiting (*Sillago punctata*) and the sand whiting (*S. ciliata*) are common, and are well worthy of their place among the finest of our table fish.

The trumpeter (*Latris hecateia*), though plentiful in Tasmanian waters, is not common here.

The salmon trout (*Arripis trutta*) is one of the commonest of our edible fishes, and at times appears in great shoals. The young differ from the adult by being beautifully spotted. We have three or four species of mullets, of which the sea mullet (*Mugil dobula*) and the flat-tailed mullet (*M. peronii*) need only be mentioned.

The garfish are represented by the sea and the river garfish (*Hemirhamphus intermedius* and *H. regularis*), and rank among our best table fish. Among others we have the flounder (*Rhombosolea flesoides*), rock ling (*Genypterus australis*), John Dory (*Zeus faber*), silver dory (*Cyttus australis*), rock cod (*Physiculus barbatus*), trevally (*Seriola brama*), ludrick (*Girella simplex*), and boar fish (*Maccullochya labiosa*).

The herring family (*Clupeidæ*) includes some of the most important of our economic fishes, among which may be mentioned the pilchard (*Clupanodon neopilchardus*) and the anchovy (*Engraulis antipodum*). Though small, these fish occur at times in enormous shoals, but up to the present little has been done to utilize them in a practical way.

The Australian king-fish or jew-fish (*Sciæna antarctica*) is a very large and handsome fish, considered by some authorities to be identical with the maigre (*S. aquila*) of Europe. It is valuable as a food fish, and is said to grow to a length of about 5 feet and weigh up to 60 lbs. A specimen in the National Museum which was captured at Western Port measures 4 ft. 6 in. It is very voracious and feeds on crustaceans and fishes of various kinds.

The yellow-tail (*Seriola lalandi*) grows to still larger dimensions than the king-fish, specimens of nearly 6 feet in length and weighing about 100 lbs. being on record. The largest Victorian specimen in the National Museum measures 4 feet. Like the former species, it is very voracious and feeds on other smaller fishes.

Several species of sharks occur here, chief of which are the white shark (*Carcharodon carcharias*), basking shark (*Cetorhinus maximus*), hammer-headed shark (*Sphyrna zygaena*), thresher (*Alopias vulpes*),

carpet shark (*Orectolobus barbatus*), seven-gilled shark (*Notorhynchus indicus*), and the harmless Port Jackson or bull-dog shark (*Heterodontus philippi*).

Among the rays may be mentioned the eagle ray (*Myliobatis australis*), fiddler (*Trygonorrhina fasciata*), common stingray (*Trygonoptera testacea*), and the dreaded thorn-tailed stingray (*Dasyatis thetidis*).

The treatment of our invertebrate fauna must be brief, and confined to land and fresh-water forms, though of some of the marine groups, as, for instance, the mollusca, we know a good deal. In land and fresh-water shells we are not very well represented; most of the species are small and attractive to the naturalist only. There are two species of black-shelled snails, about $\frac{3}{4}$ inch in diameter, namely, *Paryphanta atramentaria*, occurring in the fern gullies of Gippsland, and a rarer species (*P. compacta*) found in the Otway Forest. Another, and much larger, species (*Panda atomata*) is also found in Eastern Gippsland. The pretty and delicate little snail (*Helicarion cuvieri*), is one of the commonest species, and found under logs and stones in our fern gullies. Of the fresh-water snails, *Isidora tenuistriata*, which has its shell coiled in the opposite way to the ordinary—a left-handed screw—is believed to be the temporary host of the liver-fluke of the sheep, and this is the reason why wet ground is “fluky country.”

Scorpions are common, especially in the warmer parts, but all are small. Spiders are very abundant, both in individuals and species, and we have only one harmful species. This is the katipo (*Latrodectus hasseltii*), widely distributed in Australia, and identical with the New Zealand and Southern Asiatic form. It is black with a scarlet, or deep-orange, spot on the hinder end of the abdomen. The so-called “tarantula” (*Isopeda*), though hideous and terrifying to most people, is quite harmless. The death’s-head spider (*Celena excavata*) obtains its name from the peculiar ornamentation of the body, roughly resembling a human face. Its eggs are encased in four to six small, round, silken balls about the size of a small marble, over which it maintains a constant guard. It mimics its surroundings so closely that it is very difficult to detect, and, when disturbed, it simulates death.

Centipedes, of which there are several species, are carnivorous in their habits, and are distributed commonly throughout the State. They do little, if any, harm to human beings. Millipedes are perfectly innocent animals which feed chiefly upon decaying vegetable matter. *Peripatus* occurs in the moister regions, usually under logs and stones.

The insect fauna is very rich, and practically all the orders are represented here. Many species are peculiar to the State, while others are widely distributed over the Continent, and some beyond its boundaries. The groups upon which the most attention has been bestowed are the butterflies, moths, and beetles, though many of the less-known forms, as, for instance, the ants, diptera, dragon-flies, and coccids are receiving considerable attention both in Australia and elsewhere.

The butterflies and moths (*Lepidoptera*) have always been very popular with entomologists, on account of their beauty and size. Of

the former there are about 80 species in Victoria, many of which are very limited in their range.

To mention a few of the species, the swallow-tail (*Papilio macleayanus*) is found in the fern gullies of Eastern Victoria, the wanderer (*Danaida archippus*) is found all over Australia, as well as in parts of Asia, Africa, and Southern Europe. The caper white (*Anathæis teutonia*), always common, appears at times in immense swarms. Among the "browns" are *Heteronympha merope*, *H. philerope*, *H. banksii*, and others. The Australian admiral (*Pyrameis itea*) and the painted lady (*P. kershawi*) are abundant everywhere. Among the "blues" (*Lycænidæ*) are some of our most beautiful butterflies, the species of *Hypochrysops* with their wonderfully brilliant metallic tints being especially attractive.

Moths are abundant and many are of large size. Some in their larval stage are destructive to fruit and timber trees, as, for instance, the vine moth (*Phalænoides glycineæ*); the wood moths (*Hepialidæ* and *Zeuzeridæ*), which include several large species, the larvæ of which bore into and destroy the eucalypts and wattles; the cut-worm moths, which are known in their larval stage as "cut-worms" and "army-worms," and are very destructive to grass and growing crops; the cherry-stem borer (*Maroga unipunctana*), a pest to fruit trees of several kinds; and many others.

Among the beetles are many which both in the larval and perfect stages are very destructive to timber trees, grain, skins, and furs. The buprestids, longicorns, and cetonids are specially favoured by entomologists on account of their great beauty and wonderful forms. The weevils (*Curculionidæ*) comprise a large number of species of great variety of form. They are plant feeders, many being very destructive, and are characterized by the more or less produced snout.

The ladybirds (*Coccinellidæ*) are carnivorous both in the larval and adult stages, and are the natural enemies of the aphid and scale insects.

In the Orthoptera we have a few fine stick-insects (*Phasmidæ*), one of the largest (*Tropidoderus rhodomus*) measuring 9 inches across the expanded wings. Some of the wingless forms mimic dead twigs, for which they are frequently mistaken. Grasshoppers and locusts are numerous and some very destructive, and a few crickets, including the mole cricket (*Gryllotalpa coarctata*), occur here.

Of Neuroptera we have many dragon-flies, May-flies, and ant-lions. Wasps and ants (*Hymenoptera*) are abundant, while many of our native bees are being starved out by the imported bee, which is now widely spread. The shrill deafening song of the cicada in its countless thousands must be heard on a hot day to be appreciated. Both the black (*Psaltoda mærens*) and the green (*Cyclochila australasica*) are equally numerous.

Want of space will not permit of hosts of other forms being mentioned.

Of Crustacea, we may mention the fresh-water crayfishes, of which we have several kinds. The Murray crayfish (*Astacopsis serratus*) is a spiny form growing to the length of a foot, and frequently seen in the Melbourne market. A rare species (*A. kershawi*), nearly the size of the

Murray species, is found in Gippsland. The yabbie, or pond crayfish (*Parachærops bicarinatus*), is found in all suitable situations, and ranges widely over Australia. Though a small species about 5 or 6 inches long, it is eaten. The so-called land-crab (*Engæus*), of which there are several species, is really a crayfish, and is found in the damper parts of the State. It also occurs in Tasmania. One of the Anaspidæ (*Koonunga cursor*) has been found near Melbourne and Ballarat, and has thrown some light on the classification of the Crustacea.

We are rich in earthworms, though our native species are disappearing before the imported European ones, which are now found everywhere in the State. In the Gippsland giant earthworm (*Megascolides australis*) we have by far the largest species known. A living specimen measured at the University was 7 ft. 2 in. long. Gorgeously coloured planarian worms, a few inches in length, abound in the moister parts of the State, being generally found under logs.

The same localities are the home of two or three species of land-leech, which are blood-thirsty, though small. A fresh-water leech (*Limnoddella australis*), used surgically, is common enough in ponds.

Pond life generally is actively studied by our field naturalists, but an attempt to deal with it would require a volume in itself, and appeal to professed naturalists alone. Suffice it to say that it is rich and varied, and presents us with many interesting problems.

As to the origin of our fauna, much has been said and written. Briefly, the marsupials, and, perhaps, some birds, the tortoises, certain frogs, fresh-water fish, many insects, earthworms, and other animals, point definitely to a former land connexion with South America, where they find their nearest living relatives. The eutheria are of Malaysian origin, as also are most of our birds, some of our land mollusca, and the fresh-water crayfishes. This incursion is of later date than the Antarctic one. It may almost be said that the fauna and flora of the Queensland and New South Wales scrubs represent an invasion in force from the north.

In conclusion, one point may be noticed, and that is the popular names given to our animals and plants. The early settlers found themselves in a new world where nearly everything alive differed from what they had been accustomed to. In their difficulties about names they adopted a few—far too few—from the aborigines, but in the main applied the names they knew to the fresh forms they found. Some of the names came from Britain, others from America, and a small number from other countries. So we have the oaks and gum trees, box trees, and so on among plants. Among animals, we have bears, badgers, cats, bandicoots, opossums, squirrels, weasels, magpies, larks, wagtails, robins, turkeys, trout, cod, and a host of others, which are in no way related to their namesakes elsewhere. The result is often very confusing, but not nearly as much so as when scientific names, such as Iguana, are wrongly applied to animals of a very different character from their rightful owners.