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# FIFTH PROGRESS REPORT

OF THE

ROYAL COMMISSION ON STATE FORESTS AND  
TIMBER RESERVES.

## THE OTWAY FOREST:

ITS RESOURCES, MANAGEMENT, AND CONTROL.

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PRESENTED TO BOTH HOUSES OF PARLIAMENT BY HIS EXCELLENCY'S COMMAND.

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# THE OTWAY FOREST.

## PROGRESS REPORT.

*To His Excellency the RIGHT HONORABLE THOMAS, BARON BRASSEY,  
Knight Commander of the Most Honorable Order of the Bath;  
Governor and Commander-in-Chief in and over the Colony of  
Victoria and its Dependencies, &c., &c., &c.*

MAY IT PLEASE YOUR EXCELLENCY—

We, the members of the Royal Commission appointed to investigate the general question of forestry and forest control and management in Victoria, have the honour to present the following Progress Report :—

### THE OTWAY FOREST.

#### I.—AREA AND BOUNDARIES.

The territory in the county of Polwarth, originally known as the Otway State Forest, embraced an area of about 193,000 acres. Its south-western boundary was the River Aire, which falls into the Southern Ocean about 5 miles to the north-west of Cape Otway, the southern and eastern boundary being (with the exception of a small deviation which excluded the settlements at Apollo Bay) the coast line from the mouth of the Aire to the outlet of Jamieson's Creek, a small stream which falls into Bass Strait about 4 miles south of Lorne. From this creek the north-east boundary receded from the coast, the northern part of the reserve being a narrow strip of land in the parish of Lorne, while the western boundary (with the exception of a triangular deviation north-west of Mount Sabine, which brought into the reserve part of the watershed of the River Gellibrand, in the parish of Barramunga) ran parallel to the coast as far as the south-eastern part of the parish of Weeaprounah, where it joined the River Aire. Though termed a State Forest, it was never permanently reserved as such, and the comparatively small area in the parish of Otway at the extremity of the peninsula, which was strictly protected from alienation up to the year 1893, remains a temporary reservation to this day.

In defining on the departmental plans the limits of this reserve, extensive tracts of valuable timber land were excluded. Among these may be mentioned the south-western part of the county of Polwarth, extending to the lower course of the River Gellibrand and the Latrobe range; the central part of the county southward of the Upper Gellibrand, known as the Beech Forest; the tract north of the Upper Gellibrand, in the parishes of Natta Murrang, Irrewillipe, Barongarook, Geranganete, and Yaughar, known as the Messmate Forest; and the greater part of the Barwon watershed to the north-east of Mount Sabine.

The phases of reservation and non-reservation to which the forest area has been subject are indicated by the following facts. In the year 1879, the temporary reservation of the eastern area of 193,000 acres was cancelled, with the object of making certain lands in the Apollo Bay district available for selection, about 36,000 acres only of the southern portion being retained. In 1885, the Barwon watershed was made a temporary reserve. In 1886, the Beech Forest was thrown open for selection. In 1890, such portions of this extensive tract as were unoccupied by the *bonâ fide* selector or the speculator were withdrawn from further selection on account of the value of the timber, but were again made available for settlement in April, 1893. In December of the same year, and in 1895, the western part of the

\* Original order reserving, *Gazette*, 16th May, 1873, page 829; cancelled, *Gazette*, 2nd May, 1879, page 991. New order reserving 36,000 acres, *Gazette*, 16th May, 1879, page 1117.

area (35,990 acres) at the extremity of the peninsula, known of late years as the "Otway State Forest," and containing 17,900 acres, was thrown open for selection. The remainder of this area (18,090 acres) in the parish of Otway, together with an adjacent timber reserve of 1,330 acres in the parishes of Krambruk and Wyelangta, and a tract of 16,133 acres in the north-eastern part of the forest, in the parishes of Wensleydale, Angahook, Boonah, and Bambra, or 35,553 acres in all, are the only portions which, at the present time, are formally reserved for the growth of timber.

In 1895 the present Minister of Lands, after a visit to the district, ordered the withdrawal from selection of certain areas bearing valuable timber in the eastern and southern parts of the Beech Forest. These lands were subsequently included in the areas scheduled by the late Surveyor-General and the Inspector of Forests for permanent reservation in the county of Polwarth, which are as follow:—

		Acres (Estimated).
Block 1.—Parishes of	Wensleydale, Angahook, Boonah, and Bambra	28,000
" 2.—"	Barongarook, Gerangamete, and Yeo	7,700
" 3.—"	Irrewillipe, Nette Murrang, Yaughar, and Barongarook	33,000
" 4.—"	Kaanglang, Wongarra, and Krambruk	15,000
" 5.—"	Olangolah, Krambruk, Otway, and Wyelangta	67,000
" 6.—"	Bambra, Lorne, Murroon, Barwon Downs, Kaanglang, Barramunga, Yaughar, and Gerangamete (Barwon Water Reserve)	36,000
Total		186,700 acres

## II.—TIMBER SUPPLIES.

It is doubtful whether in any other part of the colony there is to be found such a variety of valuable timber trees as in the Otway peninsula. Among those of the eucalyptus family are the bluegum, grey or spotted gum, mountain ash or blackbutt, messmate, two kinds of stringybark, and whitegum, all of which are widely distributed, and in the north-eastern part the red ironbark. In addition to these there are interspersed among the higher forest trees valuable beds of blackwood, evergreen beech, olive, sycamore, satin box, and pencil wood.

The bluegum, which has for many years been cut in the Apollo Bay district and shipped to Melbourne, is of the finest quality, being exceedingly dense and hard in the grain. It is said by the merchants who deal in it to be fully equal to the best Tasmanian timber of the same kind. The greygum, also a heavy and close-grained wood, is now largely cut by the mills established in the Barramunga district, and, in addition to being employed in building and construction, is used in coachbuilders' and wheelwrights' work as a substitute for bluegum. The mountain ash, of which there are still immense supplies, is being utilized in the neighbourhood of the Forrest railway for palings and laths, as well as for sawmill timber, while the messmate, which extends in belts along the eastern side of the Main Dividing Range, and over an extensive tract northward of the Upper Gellibrand, furnishes an exceedingly durable and useful timber, in great request in the western district for building and fencing material.

Of the furniture and veneering woods for which the forest is noted, the blackwood was reported on by the Railway Timber Board so far back as the year 1884 as of the finest quality for carriage-building. Owing to the inaccessibility of the region where it grows and the difficulties of transport, but little comes to Melbourne by land. Supplies have occasionally been shipped from Apollo Bay, and the timber has been found to be of good quality for furniture, billiard tables, and office fittings. In the opinion of a skilful English wood-carver, with long experience of the best European and American timbers, it is quite equal for art work to the American walnut sold at 7d. to 9d. a foot. The beech also, though but little used yet in this colony, in comparison with blackwood, is held in high repute for certain kinds of furniture, veneers, parquetry, and carving. The satin box, a beautiful fine-grained timber of a yellow colour, is also said to be valuable for similar kinds of work.\*

As to the size of the largest timber, nowhere in the colony save, perhaps, near the Black Spur above Healesville, at the head of the River Yea, and in the Neerim district, are trees of such great height and girth found as in the gorges and sheltered valleys of this forest. There may still be seen on the Apollo Bay track, a short

\* Plain blackwood is sold by the trade in Melbourne at from 3d. to 6d. per super. foot, according to quality; figured ditto at about 1s. per foot; and colonial beech at 6d. per foot.

distance eastward of Ditchley Park, the shell of a dead mountain ash, the branches and upper trunk of which have long been consumed by fire, which at a height of 5 feet from the ground measured 73ft. 6in. in girth. Another hollow tree—a messmate—on the south-western ridge, between Ditchley Park and Wattle Hill, which was for some time used by a selector as a stable for several horses, had a girth of 65 feet at the same height from the ground, clear of all buttress roots. A mountain ash in the parish of Olangolah, measured by the engineer of the Shire of Colac, was found to be 64ft. 6in. in girth at a height of 8 feet. In the same parish he took the measurements of a fine symmetrical mountain ash which was lying prostrate; the length was 329 feet to a point at which the top was broken off by the fall, the diameter 4 feet at 16 feet from the base end, the girth 3ft. 6in. at a height of 255 feet, and 2ft. 5in. at 328 feet. A good illustration of the symmetrical proportions of the younger mountain ash is seen in the measurements of a tree taken by Mr. C. Forrest, M.L.A. It was felled at a height of 5 feet from the ground, its base diameter at that point being 6ft. 6in., while at 201 feet its diameter was 4ft. 6in., the first branch being 3 feet higher.

As regards blackwood, it is in the heart of the Otway Forest that this valuable tree appears to attain its greatest development, although the beds are not so extensive as those found in Western and Southern Gippsland. On the River Aire, about 4 miles south of Ditchley Park, the valuer of the shire of Colac measured a blackwood which was 19ft. 6in. in girth at a height of 5 feet. It had a perfectly straight stem, and was apparently sound. Another tree in the same parish (Olangolah), which was felled some years ago for the purpose of sending the timber to an exhibition at Ballarat, measured 4ft. 6in. in diameter at a height of 18 feet from the ground, the stem running to a height of 80 feet without a branch and tapering in that length only 6 inches. It contained 12,000 superficial feet of timber.

The timber in the north-eastern part of the forest (southward of Wensleydale) is to a large extent of inferior quality, but from the parish of Boonah, in a south-westerly direction along the Main Dividing Range, it gradually improves. Some of the finest belts of mountain ash and greygum in the colony are found in the parishes of Barramunga and Kaanglang, in the area of 36,000 acres known as the Barwon Water Reserve. From this reserve, extending across the range into the parish of Wongarra in a south-easterly direction, there is a large area of very fine timber, chiefly blue and greygum, messmate, and mountain ash. Westward of Wongarra, in the parish of Olangolah, is a block of 2,800 acres reserved for the purposes of "Agricultural education." The main south-western ridge, extending from Mount Sabine to Moonlight Head, runs through this area, and, as a whole, it consists of hilly and rugged land, utterly unsuitable as a site for a dairy school, for which it is said to have been originally set aside. Up to January, 1898, it bore a magnificent growth of young mountain ash, 100 feet to 200 feet high, but the destructive fire which traversed the south-western ridges at that time swept over a great part of it, and killed nearly the whole of the ash trees in its course. Further southward, in Olangolah and the neighbouring parish of Wyelangta, immense quantities of young timber were destroyed or badly damaged by this fire, which it is admitted in the forest was due to the carelessness of selectors in burning off scrub and litter while a northerly wind was blowing. The mountain ash, blackwood, beech, and similar thin-barked trees, are peculiarly sensitive to fire, and it is among these kinds of timber that the destruction has been greatest. In Wyelangta, especially in the north and west, there are still some good beds of undamaged beech and blackwood, while mountain ash, messmate, and greygum prevail in the southern part. Messmate, again, extends southward into the parish of Otway, until at last, between the Elliott and Calder Rivers, are found some of the finest belts of timber in the whole forest, principally bluegum, interspersed with greygum, and in the ravines beech and blackwood. Still further south, on both sides of the lower course of the River Parker, the timber gradually becomes inferior, until within a few miles of the coast line, on a tract swept by strong sea winds, the vegetation changes to heath and grass tree, the land bearing also a scrubby growth of stunted and misshapen eucalypts.

### III.—SETTLEMENT IN THE FOREST AREA.

From the north-eastern boundary of the forest in the parish of Wensleydale the main range runs south-westward fairly parallel with the coast-line to a point south of Mount Sabine, where it divides, one ridge running towards Apollo Bay, and

the other through the heart of the forest area in a more south-westerly direction to the coast near Moonlight Head. From the eastern ridge a number of small streams, such as the Erskine, Wye, Kennet, Barham, and Elliott rivers, and Nettle, Smythe's, and Skene's creeks, flow into Bass Strait, while from the spurs in the southern part of the peninsula flow the Parker, Calder, and Aire. The western branch of the Barwon and the Gellibrand rise a short distance from each other on the western side of the main range, near Mount Sabine. Nearly all the small streams which join the former on its eastern side have their source in the forest, and the river, after a N. and N.E. course, falls into Bass Strait, to the south-east of Geelong, while the Gellibrand, flowing N.W. and S.W., after a course which describes a rough semi-circle, flows into the Southern Ocean, near Point Ronald.

The number of streams and springs found at short intervals throughout the Otway peninsula make it an exceptionally well-watered region. Indeed, the forest is a vast condensing ground for the rains brought by westerly and south-westerly winds. A table furnished by the Government Astronomer, which is published as an Appendix to this Report, shows not only that this tract of country is one of the wettest places in Victoria, but that in the heart of the forest the precipitation is much greater than on the surrounding coast—a notable illustration of the influence of vast masses of live timber on rainfall. Taking Ditchley Park as the central recording station, the greatest annual rainfall registered there was 89.02 inches in the year 1889. At Barramunga, in the Barwon watershed, the greatest fall registered was 68.52 inches in 1894, while at the coastal stations of Port Campbell, Cape Otway, and Lorne, the highest records were only 42, 50.33, and 38.66 inches respectively.

The average annual fall recorded at Ditchley Park for the past ten years is 71.24 inches, while for the whole period of record it is 70.29 inches. Taking the wettest regions in Gippsland, and comparing them with the heart of the Otway Forest, the table shows that the highest average rainfall is at Blackwarry (67.73 inches), the next being at Neerim North, 59.45 inches.

In addition to the main dividing range, there are a number of smaller ridges and spurs running chiefly in a northerly or southerly direction from it, and the configuration of the forest region as a whole is very rugged and broken. The short streams flowing into Bass Strait have a rapid course, and run in deep gorges, the valleys containing alluvial soil being as a rule narrow strips of land. The Gellibrand being a larger stream, and having a much longer course, its valley as a whole contains by far the best soil in the forest, it being a rich alluvium on the flats, with a vegetable mould lying on a subsoil of decomposed sandstone or clay on the slopes. Along portion of the lower course of this river there are belts of poor sandy soil, covered with stunted timber, heath, and grass tree. On the main ridges there are belts of fairly good soil, but as a whole the land is of inferior quality to that on the river flats. Next to the latter, as regards quality and extent of arable land, are some of the spurs with a northerly aspect, and the deep valleys lying between the numerous ridges which intersect the forest. The depth of soil in this class of land varies from a few inches on the crests and slopes to several feet in the deep valleys. Taking the forest as a whole, the arable land is patchy and unequal, though very rich in parts. The geological formation throughout the area is a sandstone, the outcrop of rock being frequent on the ridges and steep slopes.—Such is a short description of the area on which the Crown Lands Department permitted indiscriminate selection in 1886, a rugged and broken tract of country traversed by hill ridges, with deep gorges or creek valleys lying between, the whole clothed with a magnificent mixed forest of valuable timber trees. If ever the public interest required the exercise of discretion and judgment in planning the conditions of settlement it was here. Yet beyond fixing the areas which might be occupied in the Beech Forest at from 200 to 320 acres, nothing was done. No care was taken to confine selection to the best soil only, while preserving under timber cover the steep hill ridges and watersheds. As a consequence, there may be seen to-day groups of selections scattered all over this territory with belts of forest between them. Many of these holdings are still thickly covered with immense dead trees, around which a heavy undergrowth of scrub has sprung up in parts, the more open clearing being limited to a few acres about the homesteads. The forest tracks are impassable for heavy traffic throughout the winter and early spring, and without roads or proper means of transport the selector can only put a small area under oats or root crops for his own use. He found magnificent timber on his land, but in order to get artificial grass for a few head of cattle he has had to destroy it, and, having

done so, finds that without constant attention a new growth of scrub soon makes headway, and if neglected, covers the land with more impenetrable thickets than before.

The extent of the destruction of timber caused by selectors on their holdings in the tract known as the Beech Forest, within the bounds of the shire of Colac, is estimated at 60,000 acres, or nearly half the total area occupied there. The destruction of mountain ash and spotted gum in some parts is simply appalling. On scores of selections immense numbers of young trees, the growth of the past fifty years, which for height and proportion could not be surpassed elsewhere in the colony, running as they do without a branch from 120 to 200 feet, have been ringed in the face. Nearly the whole of this extensive area was taken up (in many cases by people who had never seen the land) under the 32nd section of the Land Acts 1884-90, at an annual rental of 2d. an acre, one of the provisions of the permits being that the occupiers should only destroy crooked or useless timber and scrub, a condition which has apparently been interpreted by the Crown Lands Department and its bailiffs to mean *all timber*, even if, as in the case of the Barramunga forest, £80 to £100 an acre has been fixed as a fair estimate of the value of the milling and splitting trees on some of the holdings.\*

In examining the results of settlement in the forest, a good deal of light is thrown on the subject by the municipal returns of the shire of Colac for the past year. From these we learn that, taking the area within the shire known as the Beech Forest, bounded by the River Gellibrand on the north and west, the sea on the south, and the shire of Winchelsea on the east, there are 126,000 acres under occupation, but on one-tenth, or 12,600 acres, no improvements whatever have been effected, the land being apparently only nominally held from the Crown. The number of occupiers assessed for rates was 550, of these 387 being resident, and 163 non-resident. The area under cultivation is stated to be very small—inappreciable in comparison with the extent of the territory occupied; but the use to which the land is chiefly put (dairying and the fattening of cattle) is shown by the fact that 45,000 acres have been sown with artificial grasses. The total amount of municipal revenue received for the year was only £250; the rates in most cases are only a few shillings per holding, the basis on unimproved land being 5 per cent. on the annual rent of 2d. an acre paid to the Crown for grazing areas. On the other hand, the total amount expended by the Council on roads and bridges to serve the forest has been £18,000, this sum including special Treasury grants of nearly £8,000. About half of the latter amount was expended in the Beech Forest, and the remainder on the area north of the Gellibrand River.

Regarded from every point of view, the manner in which settlement in this forest has been not only permitted but encouraged has been a great administrative blunder. The State has allowed a large number of people (many of them with insufficient capital) to enter upon an immense virgin forest, the cost of roughly clearing which is simply ruinous to them. In the absence of a railway and proper roads, they cannot grow crops at a profit; they therefore simply kill the trees and sow grass for the pasturage of cattle. The destruction committed by them in making homes for themselves has been put in a very emphatic, if exaggerated, way by saw-millers in the district, who say that the value of the timber so destroyed "would have paid the national debt." In any case, its worth to the State would be a very large sum indeed. It has been pointed out to us that one of the inducements held out to selectors to take up land in the forest in 1886 was the issue of plans showing the route of a projected railway from Colac to Ditchley Park. That was over thirteen years ago, and although last session Parliament authorized, on certain conditions, the building of a narrow-gauge line along this route to serve the settlers, it is worthy of note that the bulk of the estimated revenue is not from cereals, root crops, or live stock, but from timber, a considerable quantity of which has been preserved by the more careful selectors on their holdings.† In other words, even in the present condition of this territory, with thousands of acres of dead forest in the area to be served, the transport of timber is in the opinion of the Railway Department and the Standing Committee the most profitable freight for the line, and the one which must be looked upon as likely to furnish the largest item of revenue in its working.

\* Ringing in this forest is valued by the Department, as an improvement, at 3s. an acre.

† The total annual freight is estimated at 17,120 tons, 13,146 tons being timber.

## IV.—MANAGEMENT AND CONTROL.

*Supervision.*

The forest has for a considerable time been nominally supervised by the Crown lands bailiff stationed at Colac. His district, it is said, extends from the neighbourhood of Warrnambool to Geelong, and he has to undertake occasional visits to the county of Grenville, on the north. It cannot be expected that any one man can properly carry out the multifarious duties of a bailiff in such an extensive district, and at the same time supervise timber cutting and licences in the Otway reserves. Accordingly, the ring-barker, judging by results, has had a free hand; the splitter has been, to a large extent, unchecked; and the selector, in burning dry undergrowth and scrub throughout the summer season, has done so in happy unconsciousness of any law framed to prevent damage to public or private lands by the careless use of fire. We have already dealt with the ringing of valuable timber; but, in regard to splitting timber without licences, may cite the evidence given before us at Barramunga by the holder of a 32nd section grazing lease in the parish of Yaugher (Q. 3708), who said that he had heard there was such a person as the Conservator of Forests, but he had never seen any forest officer in the district; that he held 308 acres (annual rent, 2d. an acre); that he had been cutting and selling without a licence the timber on this land for eight or nine years; that he had received perhaps £400 for the timber thus cut, and was not aware that he had no right to it under the provisions of his lease. Perhaps nothing proves more clearly the unwisdom of permitting scattered settlement in this district than the immense destruction due to the incautious use of fire by selectors in the endeavour to roughly clear their holdings. No one can travel through the forest without observing the enormous damage done, especially to the young mountain ash, blackwood, and beech by this scourge. The great fires of 1898, which burned for nearly a fortnight, and in that time killed valuable timber on some thousands of acres, were caused, we were informed during our visit to the Otway district, by several settlers burning dead scrub and undergrowth while a strong northerly wind was blowing. Indeed, it is said that they prefer to wait for weather of the kind, as, owing to the excessive moisture, the undergrowth does not readily burn, except in the hottest and driest season. When the fire does get away from their holdings to the adjacent forest, the matter gives them no concern.

*Transport.*

The only railway which serves the forest at present is the Birregurra-Forrest line, on the eastern side. Three mills are established near the terminus, two near Barwon Downs, one in the north-eastern part of the forest in the parish of Boonah, two southward of Colac, near the Gellibrand, and one near Apollo Bay. Of these nine mills, eight have sent in returns, from which it appears that their total output of sawn timber this year is expected to be 3,680,000 feet, while the number of men employed is 112. The fixed licence system is in force here for all kinds of timber. The value which selectors at Barramunga put on the timber on their holdings when there is any one to buy it is shown by the usual royalty which a local miller pays for the right to cut—£1 per acre. For free-grained trees fit for palings the charge is 5s. per 1,000 palings, or sometimes 5s. per tree. These charges are made for ordinary forest land, of which the freehold has been obtainable from the Crown for £1 an acre, or twenty instalments of 1s. per acre per annum on the progress payment system under the *Land Act* 1890.

Owing to the steepness of the fall from the crest of the Dividing Range to Bass Strait, it is probable that the cheapest method of transporting timber in the future from the eastern slopes will be by means of tramways laid along the short river valleys to the coast. The old settlement of Apollo Bay has for a long period been a shipping place for the valuable bluegum, as well as blackwood staves, cut in the neighbourhood. A great drawback is the absence of safe anchorage, there being an open roadstead only. The jetty has lately been extended, and now affords a depth for vessels of 12ft. 6in. at low water, but it is only safe during moderate west and south-west winds for either steam or sailing vessels. There is generally a swell, especially during east and south winds, which prevents vessels from going alongside it. Two new jetties have recently been authorized—one of these is merely for boats, and will be south of the River Wye and north of Point Sturt, it will give a depth of 4½ feet at low water; the other, between the River Kennet and Point Hawdon, will give a depth of 8 feet at low water. In both cases the anchorage is fair, but exposed to easterly winds.



### Recommendations.

In order to secure better protection of the reserves in future, we recommend the immediate appointment of an active and experienced forest officer, who should be stationed at Forrest, in the district surrounding which timber-cutting is largely carried on.

With the view of preserving from wanton destruction and waste the supplies of blackwood, beech, olive, sycamore, satin box, and pencil wood, in the forest, we are of opinion that these trees should be protected by proclamation, with stringent penalties for any breach of its provisions, and that the cutting or removal of the timber obtained from them should be under special permit only, at royalty rates. At present, blackwood is frequently used for fencing rails, light posts, corduroy logs in the tracks, or for ordinary firewood, its quick combustion and heating power making it a favorite fuel for cooking purposes. The question of royalty for ordinary milling and splitting timbers will be dealt with in our special report on the subject.

Finally, with the object of securing reasonable precautions by settlers and others in the use of fire in the dry season, especially when scrub and waste timber is being burnt on the holdings, we are of opinion that copies of sections 22 and 23 of the Police Offences Statute No. 1126 (*vide* Appendix II.), should be kept posted on the main forest roads and tracks, and that the Act should be enforced by the resident forest officer and the mounted constables in the district in all cases where they are satisfied that no reasonable care is taken by settlers, timber getters, or other persons to prevent fires from spreading into the forest reserves, or to other lands in the neighbourhood of the reserves. The necessity of special fire legislation for this district is dealt with at the end of our report.

### V.—RESERVATION OF FOREST AREAS.

In dealing with the future control of this forest we have decided to recommend (subject to certain modifications to be settled hereafter) the permanent reservation of the eastern areas extending on both sides of the Dividing Range from the N.E. boundary of the county to Cape Otway. The western boundary of this tract of country presents but little difficulty, most of the good land in the valleys being already alienated, and what remains being in isolated patches in the heart of the forest. The proposed eastern boundary, however, as shown on the new plan of Polwarth, running between the Dividing Range and Bass Strait, is of a peculiar kind, leased and freehold allotments cutting deep into the reserve. The general character of the country in the parishes of Lorne, Kaanglang, and Wongarra is very rugged and broken, and while it may be desirable, on the one hand, to exclude isolated belts of forest containing fair soil when surrounded by occupied land, and, on the other, to include steep hill ridges and gorges bearing good timber, this can only be done after careful examination of the country.\* We, therefore, recommend that at the earliest possible date an experienced staff surveyor of the Lands Department and the Conservator of Forests, acting in conjunction, shall visit the district, examine the character of the country and furnish us with a plan and report showing what modifications, if any, should be made in the proposed boundary on the new county plan, and whether it is desirable to include in the permanent reserve any unoccupied Crown lands lying eastward of this boundary. In the parish of Wyelangta, again, in the south-western part of the forest, there is a considerable proportion of arable land, some of good and some of medium quality; on the other hand, the land bears excellent timber, but, from a forest point of view, the retention of the western part may not be desirable, owing to the fact that a number of allotments have been selected in the north and centre of the parish, thus cutting off that portion from the main reserve. Here also, the boundary can only be decided upon after careful examination of the adjacent lands, and the staff surveyor and Conservator of Forests should also include in their report all necessary information as to the best boundary to be adopted in this parish.

At the southern extremity of the county, in the parish of Otway, there is a narrow strip of poor territory partly covered with heath and grass tree, which in the new county plan is shown in purple colour as third class grazing land. As it is desirable, wherever possible, to adopt natural boundaries, we are of opinion that this land should be included in the forest reserve, thus making the coast line the southern boundary.

\* *Vide* Appendix III.



On the western side of the Main Dividing Range, the Barwon watershed, containing about 26,000 acres, has within its limits some of the best timber in the forest. It is at present temporarily reserved only, for water supply purposes, and it being a very valuable timber area we recommend that it be now formally included in the forest limits and permanently reserved.

Blocks No. 2 (7,700 acres) and No. 3 (33,000 acres) southward of Colac, consist chiefly of poor land, and are covered with large supplies of messmate and stringybark. Two sawmills are at present obtaining their logs from these areas, and for many years past enormous quantities of sawn timber, railway sleepers, and fencing material have been cut there. In the western block, in the parish of Natte Murrang, there is a long ridge of loamy clay running in a south-westerly direction towards the Gellibrand river, and it has been represented to us by some of the local residents that this portion should be excluded from the reserve and subdivided into grazing blocks. This would lead to the denudation of a considerable area now under timber. The reserve is very useful for supplies of sawn timber and fencing material to the plain country lying on the north and west. We cannot see that any advantage will be gained by alienating it for grazing purposes, and therefore advise that both these areas be retained as timber reserves, but that every reasonable facility be afforded to local residents to obtain licences or grazing permits to depasture stock on them.

Several applications have recently been brought under our notice, chiefly from settlers near the existing eastern and south-eastern boundary of the proposed reserves, who wish either to select blocks of land themselves within the forest area or to obtain allotments there for members of their families. The question of excising any blocks of fairly level or undulating country containing good agricultural soil will be finally dealt with immediately we receive the staff surveyor's plan, showing the demarcated east and south-west boundaries. In the meantime, we may point out that an examination of the new county plan of Polwarth discloses a large number of unoccupied allotments, particularly in the Beech Forest area, outside the tract scheduled for permanent reserves, which are distinguished in green as "first-class agricultural and grazing land." Again, from sworn evidence given before the Railways Standing Committee in November, 1898, and from independent inquiry made by ourselves, we learn that there are a considerable number of allotments in the settled areas held by absentees—speculators and others—on which no improvements in the shape of fencing, clearing, or the erection of a dwelling, have been made, but which are retained under section 32 of the *Land Act* 1890 on account of the value of the timber growing on them, in the expectation of a railway being constructed from Colac to the forest. Such people cannot be regarded as *bona fide* settlers, and it would be very questionable policy on the part of this Commission to advise the excision of any considerable areas from the proposed permanent reserves, scheduled after due inquiry by the late Surveyor-General and the Inspector of Forests, if the privilege of selection on neighbouring timber lands is being abused in this way. In order that it may be clearly ascertained to what extent this nominal occupation of land prevails, we are of opinion that a competent officer should be sent to the district without delay to investigate the matter, and to report to the Minister, after careful examination, on what allotments held as grazing areas no reasonable improvements, such as fencing and the clearing of a portion for grass or tillage, have been effected and maintained by the lessees. There are some blocks, it is stated, which, after being partly fenced and roughly cleared to the extent of a few acres, have been allowed to revert to their original condition of thick undergrowth and scrub.

#### VI.—SUMMARY OF RECOMMENDATIONS.

The following is a summary of the recommendations made in this Report:—

1. The immediate appointment or transfer of an active and experienced forest officer to supervise the reserves, who should be stationed at Forrest, in the neighbourhood of which timber-cutting is now largely carried on.
2. The protection by special proclamation of blackwood, beech, olive, sycamore, satin box, and pencil wood in the reserves, the cutting of such trees to be by permit only at royalty rates.

3. The permanent reservation for forest purposes of the areas in the eastern part of Polwarth, distinguished by vertical and diagonal lines in red on the new county plan issued under the *Land Act* 1898, subject to such modifications of the eastern boundary and of the south-western boundary in the parish of Wyelangta as may be decided upon by the Commission after receipt of the report and plan hereinafter specified.

4. The early delimitation, on the ground, after careful examination by an experienced staff surveyor of the Lands Department, acting in conjunction with the Conservator of Forests, of—

(a) The eastern boundary of the forest, such boundary to follow, as far as is practicable, having regard to the configuration of the land, value of timber thereon, and its unfitness for agricultural settlement, the eastern limits of the areas shown as forest and water reserves on the new county plan, in the parishes of Krambruk, Wongarra, Kaanglang, and Barwon Downs, and to include in the parishes of Wongarra, Kaanglang, and Lorne such other well-timbered Crown lands as from the precipitous and broken nature of the country it may be deemed advisable to reserve.

(b) The south-western boundary in the parish of Wyelangta, due regard being paid to the configuration, timber, and soil referred to in clause (a).

5. The adoption of the coast line as a natural boundary of the forest at the extremity of the peninsula in the parish of Otway, by the inclusion in the reserve of the area (third class grazing land) shown in purple colour on the new county plan.

6. The retention as timber reserves of forest block No. 2 (about 7,700 acres) in the parishes of Barongarook, Gerangamete, and Yeo, and of block 3 (about 33,000 acres) in the parishes of Irrewillipe, Natte Murrang, Yaughner, and Barongarook, with the proviso that all reasonable facilities be given to persons desirous of renting areas suitable for grazing.

7. The early inspection by a competent officer of all allotments in the forest area held under section 32 of the *Land Act*, on which no reasonable improvements, such as fencing and the clearing of a portion for grass or tillage, have been effected and maintained, and the transmission by him of a report thereon to the Minister of Lands.

8. The strict enforcement of the provisions of the *Police Offences Statute* (sections 22 and 23, 54 Vict. No. 1126), in regard to the careless use of fire by selectors and others when burning undergrowth scrub and waste timber generally during the summer season, and the issue of instructions to the forest officer in charge and mounted constables in the district accordingly.

## VII.—CONCLUSION.

Although in the short period of fifteen years, as described in this report, immense tracts of one of the finest forests in Australia have been devastated by axe and fire in the course of settlement, the areas which still remain to the State are unquestionably of great value, and as a source of timber supply, as well as for climatic reasons, should be carefully preserved from alienation. The extensive supplies of milling timber in some of the best parts of the forest may be illustrated by the fact that half-a-million feet have been obtained on 12 acres of land at Barramunga, and the mill-owner estimates that the standing trees on his own allotment of 250 acres, together with the stock on another selection in the neighbourhood, on which he has purchased the right to cut, will last him for about ten years. Again, in the south-western part of the forest, towards the Latrobe Range, the quantity of marketable timber standing on an area selected as a site for a saw-mill has been stated in evidence by the licensee to be about 100,000 feet to the acre. In order, however, to properly utilize the timber in the State reserves, as well as the considerable quantities which remain on the settled lands of the Beech Forest, better means of transport than at present exist will be necessary. Sawn timber and laths are already largely consigned to the mines in the Ballarat district, while regular supplies of building and fencing material are sent to Geelong and the Western District generally.

A large proportion of the timber for the important mining centre of Pitfield, lying to the south-west of Ballarat, is, when the roads are fit for heavy traffic, carted across the plains from Beac Railway Station, a distance of about 25 miles, the remainder being sent by railway over a very circuitous route, *vid* Geelong and Ballarat, to Newtown.

We feel compelled to again refer to the great error committed in permitting indiscriminate selection in this forest. Were it not for the financial aspect of the question, we should feel strongly inclined to recommend the resumption by the Crown of such isolated allotments as are scattered through the forest to the imminent danger of the reserves. This course, however, appears to be impracticable, and we can only make the best of the present disastrous situation. The danger of fire spreading over miles of valuable timber country, and the immense destruction which may be caused thereby, in the future, as in the past, renders it imperatively necessary that an immediate amendment should be made in the existing law relating to fire protection in the country districts. One provision should prohibit the clearing of timber, scrub, or undergrowth by means of fire on 32nd section holdings in the Otway Forest district. In the leases of such holdings the right to destroy scrub and useless timber may now be obtained from the Lands Department after report and inspection, the evident intention being to safeguard trees of commercial value. But in burning off scrub and useless timber it is next to impossible to save such trees, which are frequently of a value of £100 an acre. We therefore consider that no holders of 32nd section leases in this district should be permitted to clear, by means of fire, any portion of the areas occupied by them (for which the State receives a rental of Twopence an acre only).

In concluding this Report, we desire to call special attention to our recommendations for the early appointment of a forest officer to supervise the reserves, and for the issue of a proclamation protecting the blackwood, beech, olive, sycamore, satin box, and pencil-wood trees growing therein.

A. L. TUCKER, President.  
 ALF. S. BAILES.  
 THOS. BAKER.  
 J. BALFOUR BURTON.  
 D. J. DUGGAN.  
 DAVID HAM.  
 DAVID KERR.  
 A. R. OUTTRIM.  
 CHAS. SARGEANT.  
 G. J. TURNER.

Parliament House,  
 Melbourne, 23rd August, 1899.

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- I.—Table of Rainfall, South-east Gippsland and Otway Forest district.
- II.—Sections 22 and 23 of the Police Offences Act (54 Vict., 1126).
- III.—Extracts from Report of Inspector of Forests on timber lands in parishes of Lorne, Kaanglang, and Wongarra.
- IV.—Plan of County of Polwarth, showing, *inter alia*, proposed forest reserves by vertical and diagonal lines in red.—(400 copies only.)

## APPENDIX I.

TABLES SHOWING RAINFALL AT VARIOUS PLACES IN THE OTWAY FOREST DISTRICT, AND IN GIPPSLAND.

## RAINFALL AT PLACES IN GIPPSLAND (WETTEST).

	Blackwarry, Bulga.	Foster.	Kardella.	Outtrim.	Pooowong.	Wilson's Promontory.	Nearin North.	Thorpdale.
Average yearly rainfall ...	Inches. 67·73	Inches. 47·67	Inches. 50·74	Inches. 49·89	Inches. 49·42	Inches. 43·16	Inches. 59·45	Inches. 49·98

## RAINFALL AT PLACES IN THE OTWAY FOREST DISTRICT.

Year.	Ditchley Park (Gardiner's).	Cape Otway.	Lorne.	Barranunga.	Bengwarrin.	Port Campbell.	Pennyroyal.	Murroon.
1889 ... ..	Inches. 89·02	Inches. 39·33	Inches. 38·66	Inches. ...	Inches. 55·36	Inches. 42·00	Inches. 30·64	Inches. 37·18
1890 ... ..	72·87	31·52	38·22	...	57·52	36·09	28·78	31·87
1891 ... ..	61·96	36·80	31·21	...	49·90	34·78	25·60	26·99
1892 ... ..	77·91	33·11	35·51	63·72	59·50	35·06	33·67	37·98
1893 ... ..	68·97	33·88	35·12	67·42	57·98	38·50	32·19	34·81
1894 ... ..	75·83	36·57	35·17	68·52	61·62	37·40	33·45	36·18
1895 ... ..	70·15	31·29	35·54	58·60	48·74	33·25	27·55	32·81
1896 ... ..	66·78	32·71	35·57	53·27	50·80	30·25	26·49	29·96
1897 ... ..	67·79	25·68	33·47	51·07	49·46	28·20	28·52	30·59
1898 ... ..	62·17	26·20	29·15	49·72	46·25	27·08	25·35	28·29
Average for the last 10 years	71·24	32·71	34·76	58·90	53·71	34·26	29·22	32·67
Average based on all past years of record	70·29	34·49	33·67	58·90	53·71	34·44	27·68	32·67
Heaviest rainfall recorded in any year	89·02 in 1889	50·33 in 1863	38·66 in 1888-9	68·52 in 1894	61·62 in 1894	42·00 in 1889	33·67 in 1892	37·98 in 1892

P. BARACCHI,  
Government Astronomer.

The Observatory, Melbourne, 5th August, 1899.

## APPENDIX II.

SECTIONS 22 AND 23 OF THE POLICE OFFENCES ACT 1890, 54 VICT., 1126,  
AS AMENDED BY SECTION 6 OF ACT 1241.

22. If any person shall (except as hereinafter mentioned) ignite or use or carry when ignited any inflammable material and thereby the property of any other person shall be injured or destroyed or endangered, or if any person shall leave any fire which he may have lighted or used in the open air before the same be thoroughly extinguished, he shall forfeit and pay for every such offence any sum not exceeding One hundred pounds or be imprisoned with or without hard labour for any period not exceeding six months. Provided that it shall be lawful for the occupier of any land to burn any straw stubble grass or herbage or to ignite any wood or other inflammable material on such land, after he shall have cleared of inflammable substance a space of land around the straw stubble grass or herbage intended to be burnt, or wood or other inflammable material intended to be ignited of not less than 15 feet in breadth, and after he shall have given to the occupiers of all land contiguous to the land from or on which the straw, stubble, grass, or herbage is intended to be burnt or inflammable material to be ignited notice in writing at least 24 hours before burning or igniting as aforesaid of the time at which it is his intention so to burn or ignite. Provided further that it shall be lawful for the occupier of any grass lands between the hours of two of the clock in the afternoon and nine of the clock in the afternoon to burn off any grass or herbage from any such land in his occupation, after giving the like notice in writing as hereinbefore directed of his intention so to do to the occupiers of all land contiguous to the land from which the grass or herbage is intended to be burnt, and after having drawn plough furrows for a width not less than 3 feet on either side of such grass or herbage.

23. If any person who shall camp or halt on any land with any vehicle and shall light or use a fire on such land shall not have the owner's name and place of abode painted in a legible and permanent manner on the right or off side of such vehicle in letters of at least 1 inch in length, he shall forfeit and pay for every such offence a sum not exceeding £20. Provided that nothing in this or the last preceding section shall take away or interfere with or be construed to take away or interfere with the right of any person to sue for and recover at common law or otherwise compensation for or in respect of any damage occasioned by the reckless or negligent use of fire.

## APPENDIX III.

## EXTRACTS FROM REPORT BY INSPECTOR OF FORESTS ON CROWN TIMBER LANDS IN THE PARISHES OF LORNE, KAANGLANG, AND WONGARRA.

Forest Branch, 12th April, 1899.

I have during the last fortnight made, as far as practicable, a thorough examination of the Crown lands in the parishes of Lorne, Kaanglang, and Wongarra, an exceedingly difficult country to traverse, owing to its mountainous nature and scarcity of roads or tracks of any kind.

In answer to the attached list of questions submitted by the Secretary of the Forests Commission with regard to this territory and its timber resources, I may state—

1. The timber in these parishes between the proposed permanent forest boundary and the sea-coast, consisting of messmate, mountain ash, spotted and blue gum, is of fair quality generally, except near the shore line, where (unless in sheltered gullies) it is stunted and inferior.

2. On some of the 32nd-section holdings in these parishes, the improvements are of a substantial character, and indicate *bonâ fide* occupancy. Unfortunately, however, when I inspected, several of the selectors were away from home, and no definite information could be gained as to the extent and value of their improvements. . . . A goodly proportion of the land in the parish of Kaanglang was taken up years ago under section 19. One or two blocks that I have indicated are reported to be abandoned, and may, if available, be added to the permanent State Forest. In the parish of Wongarra most of the selectors appear to be of the right class. I noticed, however, that very little had been done on some of the blocks. . . . It would take a longer time than I had at my disposal to look over every block separately. In the parish of Lorne the land selected years ago was also taken up under section 19, and was of such poor quality and so heavily timbered that the people generally failed to make a living. Many holdings could now be purchased *with improvements* in this parish for 20s. an acre, or less; yet in the face of this the Department has put the residue, *i.e.*, the steep rocky hillsides and deep inaccessible gullies, in the 1st class under the new Land Act. I do not imagine that it will be taken up, but if the timber is ring-barked and destroyed the small amount of soil on these steep slopes will soon be washed away, and the country rendered desolate and useless. The timber—bluegum, spotted gum, and messmate—is not so good as in the parishes to the south-west, but the land should be reserved for forest purposes undoubtedly, although at present there is no outlet for the timber growing between the Dividing Range and the sea-coast. The other portion of the forest is near to railway communication, and can be worked easily.

3 and 4. The River Wye is not a navigable stream, and can never be used for the conveyance of timber to the sea-board by water. For most of its course it runs through Crown lands (proposed permanent forest).

5. Though there is no likelihood *at present* of any timber being transported from these parishes by sea, at some future date tramways may be laid down the valleys of the Wye, Kennet, and other rivers, if a jetty is erected and a safe anchorage secured. From the higher tablelands and spurs, however, timber can be transported without much difficulty to the Forrest railway line, especially if an extension is made to Mount Sabine, *via* Barramunga.

Many of the 32nd-section lessees in these parishes, especially those who have taken up land near the coast, have already invested a considerable amount of capital on their holdings, and if the land were now resumed by the State it would be impossible for many years to come to make any use of the timber. You will of course understand that I am not admitting that the Lands Department did a wise thing in allowing these people to settle *all over* a splendid forest. My opinion is entirely the other way.

Any 32nd or 19th section blocks abutting upon or within the boundaries of the proposed permanent State Forest (as laid down by Mr. Lardner any myself) which may or have become abandoned or forfeited, should be added to the proposed forest, and this matter should be referred to the Surveyor-General and myself for prompt attention.

Any isolated blocks of available Crown lands should be proclaimed ordinary Timber reserves, which may be dealt with at any time under the provisions of the new Land Act.

An officer of the Forest Branch should be stationed at Forrest as soon as possible. At present there is practically no supervision over this very important district.

It may be asked, why did not Mr. Lardner and myself deal with the Lorne parish when we inspected the county of Polwarth and suggested certain areas for permanent forest reserves. We were both under the impression that nearly all the Crown lands in the parish (or a radius of 5 miles from the Lorne post-office) were already included in a permanent reservation (1890).

This course was suggested by the Conservator of Forests, and sanctioned by Mr. Morrah when Secretary for Lands, but although shown on our plans as a proposed reserve, the reservation was apparently never gazetted.

I have the honour to be, Sir,  
Your most obedient servant,

J. BLACKBURNE.

The Conservator of Forests, Melbourne.