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VICTORIA.

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TWELFTH PROGRESS REPORT

OF THE

ROYAL COMMISSION ON STATE FORESTS AND  
TIMBER RESERVES.

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THE PYRENEES AND MINOR KARA KARA  
RESERVES, NORTH-WESTERN DISTRICT,

AND

TAMBO RESERVES, EAST GIPPSLAND;

WITH

A SHORT REVIEW OF THE WORK COMPLETED BY THE COMMISSION.

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

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# PYRENEES, MINOR KARA KARA, AND TAMBO RESERVES;

WITH REVIEW OF WORK COMPLETED BY COMMISSION.

## PROGRESS REPORT.

*To His Excellency the Lieutenant-Governor of Victoria.*

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:—

### PART I.—PYRENEES RESERVES.

The mountain system known in this colony as the Pyrenees consists of that part of the Main Dividing Range which runs in a S.E. direction from the neighbourhood of Great Western to Buangor, thence in an easterly direction to Amphitheatre, and thence by means of a long northerly spur, which forms the watershed between the Avoca and Wimmera rivers, to St. Arnaud, where it sinks down to the great northern plain.

#### MOUNT COLE.

This forest is situated in the counties of Kara Kara, Ripon, and Gladstone, and extends along both sides of the Dividing Range, the greater portion being on the northern or Kara Kara watershed. The highest peaks within the reserve, which is a proclaimed State forest, are Mount Buangor, 3,247 feet above sea level, and Mount Ben Nevis, 2,875 feet. Together with the adjacent reserves of Raglan and Langikal-kal, which extend eastward along the Divide towards Lexton, it embraces a total area of about 59,400 acres. The grazing rights are let under annual licences, the revenue received on account of the present year from this source being £92 from nearly 39,000 acres. The greater part of this forest area is of silurian formation, but the higher peaks and ridges, such as Mounts Buangor, Cole, and Ben Nevis, are granitic. The ranges within the reserves are the source of the River Wimmera, with several small tributaries on the northern, and of Middle, Fiery, and Trawalla creeks on the southern watershed. With the exception of some very narrow strips of detritus in the gorges and gullies near the heads of the watercourses, there is no land of any extent which can be classed as arable, and owing to the rugged and broken nature of the country, and the thickness of the forest growth, the reserves afford only inferior grazing for sheep.

#### *Timber.*

For a long period Mount Cole forest was the main source of supply of an extensive tract of country in the north-western district for sawn and split timber for general building and construction, as well as for fencing material. Like Bullarook, it yielded immense stores of excellent messmate, which is said to have fully equalled, if it did not surpass in hardness and durability, the messmate of that valuable reserve, while, in addition, it had numerous belts of the finest bluegum, a tree rarely seen in the western part of the colony, although fairly common in the mountainous parts of West Gippsland, Delatite, and the Otway district. Continual over-cutting for many years has almost exhausted the mature trees, the total area of milling timber now

available being estimated at about 1,000 acres. It is, moreover, very much scattered, the largest being a strip of some 500 acres on a part of the main range, known as the Sugar Loaf, the outlet being by way of Raglan to Beaufort, while another belt of about 300 acres is on the northern watershed, on Baranga Creek, and the timber, if utilized, would have to be carted over a very difficult mountain track to Buangor station, on the Ballarat-Ararat railway. Last year there were three mills at work in the forest, one being on Hickman's Creek on the Elmhurst side of the range, and the other two on the Beaufort side, their united output being estimated at 1,300,000 super. feet; owing to the fast dwindling supplies the number is now reduced to one, which is situated in the Sugar Loaf belt just mentioned, about 15 miles from Beaufort, and has an output of 15,000 super. feet a week, but owing to the bad condition of the tracks can only cut for eight months in the year.

Taking the distribution of the timber as a whole, the dominant trees are messmate and stringybark, interspersed with bluegum along the ridges and in the higher gullies. Along the foot-hills, and on the undulating land on both sides of the range, there are, in addition to stringybark, considerable tracts covered with yellow and red box, with white gum and a little feather-leaved wattle on the alluvial flats.

The most valuable young timber, consisting of bluegum and messmate, flourishes in the sheltered gullies and on the watersheds of the numerous creeks which have their source in the ranges. The trees, which are of a straight and symmetrical habit, run from 20 to 60 feet in height, and have a diameter of about 6 to 15 inches. The finest tracts are the Long Gully belt, running from the head of Fiery Creek to the summit of the range, the Sugar Loaf, the Glut, Middle Creek, and Graveyard belts, all on the Beaufort side, and the Baranga, Ben Nevis, and several others on the northern watershed. All these areas require to be carefully preserved, for milling purposes, and if this protection is insured there is every reason to expect that within a period of ten to fifteen years the forest will again yield large supplies of mature timber.

#### LANGI-GHIRAN.

To the north-west of Mount Cole, from which it is separated by a narrow strip of flat country, rises a double-peaked mountain chain, known locally as Mount Mistake, but named Langi-Ghiran on the survey plans, whose highest point is 3,123 feet above sea level. This range, forming part of the western chain of the Pyrenees, is situated in the parishes of Colvinsby and Warrak, is a timber reserve, and contains about 5,100 acres. The main range is granitic, but where it sinks down to the lower slopes and foot-hills the formation consists chiefly of silurian schists and rock clays, with stretches of poor sandy loam on the flats at the base. As a whole the grazing value of the reserve is very poor, all the land of fair quality in the immediate neighbourhood being alienated from the Crown. The timber, which consists chiefly of young and over-mature trees, is stringy bark, messmate, white gum, and a little bluegum on the range, with large quantities of yellow and bastard box on the flat country extending from the foot of the mountain to the railway line between Buangor and Ararat. Owing to the inferiority of the timber in comparison with Mount Cole, no mills have cut in this reserve for a considerable period, and the output is now restricted to hewn sleepers and firewood, which are obtained on the box areas.

#### *Wattle Bark.*

In past years the creek valleys of the Mount Cole and Langi-Ghiran reserves were covered with large quantities of the feather-leaved black wattle, while on the higher levels the silver wattle flourished. Owing to the progress of settlement on the lower country near the base of the ranges, and the great demand for the bark of the black wattle, the supplies of this valuable tannage in the district have greatly decreased. In 1899, after several years' careful protection of the young trees, the sale of the stripping rights yielded £106, while this season it is estimated that about £40 only will be obtained. The only belt of wattle of good quality now fit for stripping is on Mount Mistake, within the area fenced in for the protection of the reservoir which supplies Ararat with water.

Towards the end of last year, when the vegetation was dry and inflammable, a fair quantity of mature wattle in these reserves was destroyed by fire. Owing to the scarcity of first-class tanning bark, and the liability of this tree to destruction by

fire, we consider that every effort should be made by the conservator and his staff to have the stripping of all suitable wattle in the drier districts carried out early in the season. By taking this course the bark would be saved for commercial use, while the State would gain the royalty, which, from the cause mentioned, is often lost at present. During the fires of 1898 and of last year the value of the wattle destroyed in the Grampians and the Pyrenees would be represented by a considerable sum of money.

#### *Supervision.*

The forest area known for the purpose of supervision as the Mount Cole district extends along both sides of the Dividing Range from the neighbourhood of Lexton to the parish of Bulgana, eastward of Ararat. The reserves embrace a total area of about 70,000 acres, and, in addition, there are about 18,000 acres of Crown lands bearing timber in the parishes of Beaufort, Trawalla, Eurambeen, and Glenlogie, or 88,000 acres in all. This tract of country is supervised by one forester, who is stationed at Beaufort. Owing to the rugged character of the mountain reserves, and the fact also that beam and sleeper hewing is carried on on both sides of the range, while piles and laths are now obtained in almost inaccessible gullies, it is a very difficult district to effectively supervise. The revenue obtained from timber cutting in 1899, allowing £70 for mill licences, and including £10 for penalties, was under £240. The largest sum received was £106 from wattle bark—a very fluctuating item. This year it is doubtful whether the revenue will much exceed £200, one of the mills having been removed to the neighbouring Tchirree reserves. On the other hand, the receipts from mining timber and railway sleepers will probably be larger than they were last year, there being an increasing demand for the former, owing to the revival of mining at Raglan. The expenditure, including pay of forester, forage allowance, and travelling expenses, is about £180 per annum.

With the exhaustion of the mature timber, the revenue from mills must be expected to dwindle; but while the fine belts of young trees should be strictly protected for several years to come, millers should be encouraged to cut out all the patches of old timber still standing. Next to the area now being cut over on the Sugar Loaf, the most important of these is along the valley of Baranga Creek, the outlet being by way of what is known as the Rocky road to Buangor. The area of mill timber available there is roughly estimated at 300 acres. Part of the flow of this creek is diverted to supplement the supply of the Ararat reservoir on Mount Mistake, but if proper precautions are taken by the Forests staff to select a mill site in a position which will prevent any drainage therefrom from reaching the creek above the offtake, and ordinary sanitary rules are enforced, there need be no valid objection to the timber being utilized.\* We may reiterate here, what we have already stated in dealing with other water supply areas which form part of forest reserves, that the Crown should in every instance where the storage or diversion of water is authorized retain full control of the timber, wattle bark, and other forest produce found thereon.

#### TCHIRREE.

Tchirree forest is situated between Avoca and Navarre, and forms the southern portion of the long chain of hills which run northward from the Main Divide through the county of Kara Kara, and form the eastern range of the Pyrenees. The highest elevation is Avoca Hill, 2,464 feet above sea level. The area of the reserve is estimated at about 52,000 acres. The fall of the range is very steep on the eastern or Moonambel side, but on the western the descent is more gradual towards the head of the Wimmera, and here several small tributaries of that stream have their source. The valleys of these creeks have been selected, and are occupied for tillage and grazing, in some parts far into the heart of the range, so that there is but little forest land which, even if the timber were ringed and roughly cleared, would afford fair grazing. The formation of the mountain chain as a whole is silurian—schists and rock clays, hardening at intervals into clay slate, and with outcrop of quartz in many of the gullies. The higher levels, where bush fires have swept through, are covered with a dense growth of silver wattle scrub, and the grazing value of the reserve is indicated by the rents received at present from neighbouring landholders, over 35,600 acres being let for £24 per annum, the largest block of 21,725 acres yielding £10 1s. 2d., or  $\frac{1}{4}$ d. per acre.

\* The offtake is just below the junction of Spring and Baranga Creeks.

### *Timber.*

The timber consists of messmate, stringybark, and bluegum, with white gum, grey and yellow box, white ironbark (known locally as spotted box), and a little red ironbark on the foot-hills and low-lying land. On the eastern side, towards the Avoca-St. Arnaud road, the timber along the ranges is of very inferior quality, the best having been long since cut out by mills. On the western, or Wimmera side, the milling timber is of excellent quality, and large quantities have been cut for the surrounding districts since the supplies on Mount Cole began to fail. The trees are, however, very scattered, and do not appear to attain the same height and girth as on Mount Cole. The bluegum especially, now obtainable on the schistose ridges in Tchirree, though very hard and dense in the grain, is generally of medium height and girth, and evidently of very slow growth. In the working of this reserve the ordinary diameter felling limit (2 feet) could not be rigidly enforced with advantage, and the forester in charge should have full discretion to allow suitable stunted timber under that size to be taken out. At the time of our inspection in May last two small spot-mills were at work, their united output being about 75,000 super. feet a month. Since then another small mill, with an average cut of 40,000 super. feet per month, has been removed from Mount Cole to the same neighbourhood. The revenue from these mills for the current year under the licence system would be at the rate of about £38 each. The other classes of timber cut in the reserve and on adjacent Crown lands are hewn beams and sleepers, piles, poppet legs, posts and rails, and, near Avoca, mining props.

### *Wattle Bark.*

In this part of the Pyrenees there are large areas covered with a dense growth of young silver wattle, a great deal of which has been destroyed by fire during the last two summers. The bark obtained from this variety, though greatly inferior in the strength and quality of its tannin to the black wattle, is readily purchased by the local dealers and tanners for mixing with the latter. In its present condition of growth in scrub belts the silver wattle, if it escapes the danger of annual fires, will not attain any large size; and, in our opinion, steps should be taken this season to let at a reasonable rate the stripping rights to approved persons, who will thin out and strip the areas under the supervision of the forester in charge. At the same time, all the black wattle in the reserve which has attained a fair size could be stripped at a fixed royalty per ton.

### *Supervision.*

The reserve, together with large areas of auriferous Crown lands stretching eastward from the range towards the Avoca River, and southward in the county of Gladstone, is in charge of one forester, who is stationed at Avoca. The receipts from timber cutting this year are estimated at about £290 and the expenditure at about £200.

### NORTHERN PYRENEES.

As the name denotes, this reserve, situated chiefly in the parishes of Boola Boloke, Carapooee West, and Moolerr, comprises the most northerly part of the Pyrenees, and extends from the vicinity of Barkly and Moonambel on the south to St. Arnaud on the north. The chain of hills in this forest gradually dips down to the northern plain, and the elevation throughout is inconsiderable. The formation is similar to Tchirree, being silurian schists and clay slate, with outcrop of ironstone and quartz along the lower slopes and gullies. The timber consists of red and white ironbark, bluegum, grey, yellow, and red box, white gum, a little messmate and stringybark, and some useless bastard box. Golden and silver wattle is also found among the larger trees, but the former valuable tannage tree does not in this dry inland district attain any useful size. The timber trees range from 4 inches to 4 feet in diameter. Supplies of excellent sleepers are still obtainable from the ironbark and box, and piles up to 60 feet in length from the bluegum. The northern boundary of this reserve should be extended to the Maryborough-St. Arnaud railway line, so as to take in a small tract of auriferous land, and the St. Arnaud water reserve of 153 acres should be included in the permanent forest area, by which it is surrounded. Both these pieces of land bear young timber of good quality, the ironbark and box on the water reserve being straight, sound, and of considerable value, if protected. The grazing rights of over 17,500 acres of this forest are let in small areas to 22 persons, at a total annual rental of £61.

*Addition to Reserve.*

On the east and south-east of the township of Stuartmill, in the parish of Boola Boloke, is an area of about 4,000 acres, classed as auriferous land on the new county plan, which should be added to the Northern Pyrenees reserve. This tract of country consists of low rocky ridges, with gullies of poor sandy loam, and sand barrens covered with prickly heath. The formation is silurian, with outcrop of ironstone and quartz pebbles on the ridges. The timber, which is of inferior quality on part of the western side, greatly improves to the east and south, and consists of red ironbark up to 16 inches in diameter, with a fair number of mature sleeper trees of the same kind, white ironbark, stringybark, and grey, yellow, and red box. The grazing quality of this land is very poor, and the ironbark and box on it is the best yield it is ever likely to give.

*Supervision.*

The Northern Pyrenees forest, with smaller reserves and Crown lands in the counties of Kara Kara and Gladstone, amounting in all to about 160,000 acres, is in charge of one forester, who is stationed at Emu, near Bealiba. The greater portion of these lands consists of open brush forest, and while no milling is carried on, the ironbark and box furnish large supplies of railway and mining timber of the finest quality. Large quantities of firewood are also cut in the neighbourhood of St. Arnaud and Bealiba. The receipts last year from timber cutting were £650, and the working expenses about £330.

*MINOR RESERVES.*

Dalyenong timber reserve has an area of 6,742 acres, is situated north-west of Archdale, and extends westward from the Avoca River to the Dalyenong pre-emptive purchase on Tarpaulin Creek. The formation is chiefly silurian, with outcrop of ironstone and quartz and barren sand ridges, but there are belts of granite at intervals. The timber consists of red and white ironbark, grey, yellow, and red box, and bullock, with a little golden wattle. The sleeper timber is nearly cut out, but the reserve will produce large quantities of fencing material and mining props, in addition to first-class firewood, the latter being now extensively obtained around Bealiba for the Carisbrook mines.

The eastern part of this reserve, being the two allotments having a frontage to the Avoca River, should be excised, as it contains fair grazing land and inferior timber. The area is about 750 acres.

Sandy Creek timber reserve has an area of 1,100 acres, and stretches eastward from the Tottington pre-emptive purchase to Sandy Creek. Nearly the whole of this land consists of poor barren ridges, with outcrop of ironstone and quartz gravel, and a small strip of loam along the creek frontages. The timber consists chiefly of grey and yellow box, and ironbark, patchy in quality; but there is a fair quantity of sleeper trees, and large stores of props. If protected, this reserve, in conjunction with the neighbouring one on the west of Tottington homestead, will be of great value for supplies of railway and mining timber.

Tottington timber reserve contains 4,810 acres, and extends westward from the Tottington-St. Arnaud road to John Bull Creek. The formation is similar to that of the reserve last mentioned, with narrow strips of loamy flat land of fair grazing quality along the creek. The timber as a whole, consisting of grey box and red ironbark, with some yellow and red box, white ironbark, and stringybark, is of excellent quality, and in a few years will furnish large supplies of sleepers, beams, and bridge piles. Thousands of sleepers were cut a few years ago for the mallee railways, and even now there are a good many mature trees fit for this line material, and also ample supplies of prop timber. The nearest loading station is St. Arnaud, 16 miles away.

Warngar timber reserve (7,070 acres) comprises the Bolangum range of hills, in the parish of Warngar, westward of St. Arnaud. The timber consists of ironbark, grey box, and stringybark. Almost all the land of fair quality to the foot of the hills is occupied by selectors. This reserve will furnish good supplies of railway, mining, and fencing timber. It is estimated that about 20,000 sleepers can be obtained there at the present time.

Morri Morri timber reserve (4,588 acres) lies southward of the last-mentioned area. It consists of poor silurian rises and gullies, and bears chiefly ironbark and grey box timber of fair quality. This area also will be useful for supplies of sleepers, piles, and mining timber. Other small reserves in this district, such as Glynwylin (1,584 acres), Navarre (330 acres), Darkbonee (800 acres), and Gre Gre (640 acres), will be dealt with by us after the soil and timber have been examined.

#### RESERVATIONS.

We recommend that the following reservations be made :—

*To be permanent Forest Reserves.*—The following areas, distinguished by vertical red lines on the new county plans :—

	Estimated area in acres.
Mount Cole reserves, in Ripon, Kara Kara, and Gladstone ... ..	33,200
Raglan and Langi-kal-kal reserves, in Ripon, Talbot, and Kara Kara ...	23,700
Langi-Ghiran reserve, including water supply areas, in Ripon and Kara Kara ... ..	5,150
Tehirree reserves, in Kara Kara (subject to the excision of about 1,000 acres, for occupation, in parish of Tehirree) ... ..	52,000
Northern Pyrenees reserve, in Kara Kara (with about 4,000 acres now classed as auriferous, lying south-east of Stuartmill, in parish of Boola Boloke) ... ..	62,000

*To be retained as Timber Reserves.*—The following areas in Kara Kara, distinguished by horizontal red lines on the new county plan :—

	Estimated area in acres.
Dalyenong reserve (subject to excision of about 750 acres, being the eastern frontage to River Avoca) ... ..	6,742
Sandy Creek reserve ... ..	1,100
Tottington reserve ... ..	4,810
Warngar reserve ... ..	7,070
Morri Morri reserve ... ..	4,588

#### PART II.—TAMBO RESERVES, EAST GIPPSLAND.

These reserves are situated in the counties of Tambo and Dargo, in East Gippsland, and extend from the River Nicholson, on the west, to the parishes of Nowa Nowa and Nowa Nowa South on the east, and from the parish of Colquhoun, near the Lakes' Entrance, on the south, to Timbarra Creek on the north, in the parish of Gillingall, and westward of the township of Buchan. They contain a total area of about 257,000 acres.

In the southern area the country consists partly of undulating land and partly of low hill ridges, with deep valleys between, down which a number of water-courses find their way to the River Tambo and Lake Tyers. In the northern portion the configuration is more broken and abrupt, the ridges running up to the Omeo Divide, which is the source of the Tambo and other fine streams.

The geological formation towards the coast is chiefly tertiary, consisting of a poor loamy and sandy soil, covered with inferior stringybark and scrub. On the north-east of Bruthen and northward of Nowa Nowa, trap and sandstone rocks are met with, but the greater part of the northern area is silurian, with the exception of a strip of granitic country on the Tambo. The land, as a whole, affords very poor pasture, grazing rights for two blocks of 85,000 and 25,000 acres being let under an annual licence for £5 10s. and £4 respectively. The timber in this forest includes stringybark, interspersed with valuable grey box and red ironbark, messmate, silver-top ironbark, and spotted gum. Towards the eastern boundary there is some yellow stringybark and mahogany. The finest timber is unquestionably the Bairnsdale variety of the grey box, which here attains a large size, and furnishes some of the best and most durable hardwood now obtainable in the colony. The portion known as the Colquhoun forest, eastward of the Lower Tambo, is now cut out as regards mill timber, but large quantities of hewn



beams and sleepers have during recent years been obtained there, and in the parishes stretching eastward towards Lake Tyers. Only one sawmill is now at work in the reserves, and this is situated on the south-eastern shore of the lake mentioned. The mill logs, grey box and ironbark, are obtained from the eastern side of the northern or Nowa Nowa arm, and have to be hauled to the shore by bullock teams from the cutting areas, and thence transported in barges. Some of the largest box logs now cut run from 30 to 50 feet in length, with a mean girth of 7 to 10 feet, and so excellent is the quality of the timber that it is readily sold in Melbourne for railway carriage and truck building, as well as for Harbor Trust work, at high prices. On the same northern arm of the lake there is a very fine belt of grey box pile timber, extending from allotment 24 on the south to allotment 31 on the north. The trees have a diameter at the butt ranging from 4 to 12 inches, and are of a straight symmetrical habit. The barrels of the smaller trees are in many instances 50 feet in length, and from the larger ones piles of the most durable quality, from 50 to 60 feet in length, will be obtainable within a short period. The Lake Tyers district has been noted for many years for the exceptional quality of its pile timber, and, now that first-class logs for this purpose are so difficult to procure in most parts of the colony, this belt of box should, we consider, be strictly preserved for jetty and bridge work.

In many parts of the reserve the white ant has made great ravages among the older timber, the box especially being attacked, and scores of trees within a small radius being mere shells. The box, too, both on the Lower Tambo and around Lake Tyers is being gradually crowded out by a younger growth of comparatively worthless stringybark. After fires, the young stringybark scrub comes up very thickly, and under present conditions there is very little natural reproduction of box. On some areas, where the younger growth of the latter tree is fairly promising, it is worthy of consideration, whether the stringybark should not be destroyed to insure the better growth and reproduction of the more valuable tree. Northward and north-westward of Bruthen there are considerable areas covered with red ironbark, some of good quality and others in a state of premature decay. Here again, the valuable hardwood is overcrowded by stringybark and other inferior trees. Nothing is to be gained by allowing good sleeper timber to be gradually destroyed by the white ant, and we consider that when the area now being cut over by beam and sleeper hewers between the Tambo and Lake Tyers is exhausted of suitable timber, they should be allowed to enter on these northern areas, under proper supervision, and take the older trees which are suitable for their purpose.

#### SUPERVISION.

The reserves are supervised by two officers, the one in charge being stationed at Bairnsdale, and an assistant at Cunninghame, who superintend the operations of the sleeper and beam hewers and pile-cutters. In the past enormous quantities of sleepers, beams, and bridge or jetty piles were cut in the Colquhoun, Lake Tyers, and Wy-Yung district, and the receipts from this source are still fairly good. The revenue last year from timber was, approximately, £513, and the expenditure £396.

#### RESERVATIONS.

In addition to the main forest area in Dargo and Tambo, an additional tract of 28,500 acres stretching towards the Snowy River, and situated between Lake Tyers and Hartland Creek, has been scheduled for permanent reservation. This land consists almost wholly of poor sandy rises and gullies, intersected by small creeks, and covered with a growth of common stringybark and scrub. It is said, however, that in the eastern part, and northward of the projected reserve in the parish of Bete Bolong South, there are some belts of the true yellow stringybark. As the available supplies of this valuable pile timber are very limited, we propose to take steps to have the whole area carefully examined before dealing with the question of reservation of this portion, which, in view of the inferior character of the forest growth generally, it appears desirable to confine to any small areas which may be found bearing the more valuable timber.

During our visit to the district a request was made to us by local residents that about 6,000 acres in the south-west part of the reserve should be excised for selection. The soil of this area is a poor sandy loam, and its grazing quality may be

judged by the fact that it forms part of the block of 25,000 acres which is let for £4 per annum. Had the land been covered with stringybark only, we should have advised the granting of the excision asked for, but it forms part of the limited tract which bears grey box, and although the mature trees are cut out, we cannot recommend the sacrifice of any area likely to reproduce this fine timber.

We recommend that the areas known as the Tambo reserves, distinguished by vertical red lines on the new county plans of Dargo and Tambo, be permanently reserved for forest purposes, the boundaries to be subject, however, to the following modification:—

The south-eastern boundary to be extended into the parish of Tildesley West, in order to include the grey-box areas on the eastern shores of Lake Tyers, the line to be the eastern boundary of allotments 24, 26, 28, 29, 31, and of the unnumbered allotment lying to the north of block 31, thence by the Orbost-Nowa Nowa-road to the existing boundary of the reserve (about 7,550 acres).

### PART III.—REVIEW OF WORK COMPLETED BY COMMISSION.

Now that we have examined and reported on most of the important reserves of the colony in which timber-cutting is carried on, the time seems opportune to briefly review the progress of the inquiry, and the work which we have completed. The Commission, composed of Members of both Houses of Parliament, was created in June, 1897, its appointment being considered necessary owing to the chaotic condition into which forestry and forest interests had fallen, in the absence of any proper law to secure the protection and maintenance of the reserves. In addition to matters affecting the management and working of the forests, we were intrusted with the duty of advising the Crown and Parliament what State forests and other timber areas should be (a) permanently reserved, (b) temporarily reserved, (c) added to temporary or permanent reserves, and (d) excised from existing reserves for the purpose of settlement. The principal data furnished to us at the outset consisted of a schedule of proposed reserves, prepared by the late Surveyor-General (Mr. S. K. Vickery) and Mr. Blackburne, Inspector of Forests, together with a set of county plans, showing the situation of the various areas. It is scarcely necessary to say that, in view of the somewhat vague and indefinite information available from official records and plans, we could not have undertaken an investigation of this kind, and furnished trustworthy reports dealing with the reservation from settlement of large tracts of country, without making a personal examination of the timber and soil of the principal areas of land affected. This duty has necessarily protracted what in any case would have been a laborious investigation, as the reserves are scattered all over the colony, and a large number of them, being in mountainous territory, are in the roughest and most inaccessible districts.

In the original schedule prepared by Messrs. Vickery and Blackburne, the total area of the proposed reserves amounted to 4,237,000 acres, and in a supplementary schedule prepared in October, 1898, there were additional areas amounting to 118,000 acres, or 4,355,000 acres in all. Of these, the approximate areas in each class were set out as follows:—

	Acres.
1st class, or "agricultural lands" ... ..	76,000
2nd class, or "agricultural and grazing lands" ... ..	199,000
3rd class, or "grazing lands" ... ..	4,080,000
	4,355,000

It must not be understood that the above estimates of "agricultural" land refer to large or continuous belts of good soil, fit for tillage after the clearing of the timber and undergrowth. In most instances the arable tracts are made up of narrow alluvial flats and creek valleys on the watersheds, slopes of mountain and hill ridges, and irregular strips of volcanic soil or decomposed sandstone on table lands. Even

along the Murray, in the redgum reserves, where the clay flats between the ana-branches and lagoons are fairly extensive, there are considerable areas of barren sand ridges breaking the continuity of the fertile soil; and, in addition to this drawback, the many depressions and swamps filled by the heavy inundations which flood this riverside tract of country for several months every year afford ample reason for the classification in the late Surveyor-General's schedule, which places 122,000 acres of Barmah Reserve in the 3rd, and only 3,000 in the 1st class, while in the case of Gunbower Reserve 65,000 acres are put in the 3rd class, and only 5,000 in the 1st class.

Up to the present, out of the total area of 4,355,000 acres in the schedules, we have examined and reported on or otherwise dealt with 2,045,000 acres. Of the remaining areas about 600,000 acres are situated on mountain ridges in the most remote and inaccessible parts of North Gippsland, Benambra, and Bogong, and are naturally protected by their situation, while areas in Croajingolong, Central and West Gippsland, the Western District, and that part of the Northern District which extends from the Pyrenees to the River Goulburn, all of which are fairly accessible, make up a million and a quarter acres, part of which has been inspected. The balance, roughly 460,000 acres, consists of minor reserves in various parts of the colony.

Since the commencement of the inquiry, the following areas have been excised by us from scheduled reserves, for the purpose of agricultural or pastoral settlement:—

County.	Reserve.	Class of Land.	Estimated Areas Excised, in Acres.
Anglesey	East Anglesey	Grazing	27,200
Benambra	Benambra	"	10,000
Bogong	Stanley and Chiltern	"	3,000
Croajingolong	Genoa River	"	89,800
Delatite	Winteriga	"	5,000
"	Libra	"	880
"	Toorour	"	800
"	Lands in Merrigig, Dueran East, Whitfield and Boro-dominion	"	1,150
"	Tehiroe and Delyenong	"	1,750
Kara Kara	Black Range	"	17,500
Lowan	Barmah	Agricultural and grazing	10,000
Meira	Upper Tambo	Grazing	6,000
Tambo	Tambo	"	1,100
"	"	"	173,680
Total			

NOTE.—In addition to the above areas our report on the Delatite reserves provided for the excision of various blocks amounting to over 9,200 acres, after the removal of the timber thereon of commercial value; while the demarcation of the boundaries of Otway Forest will set free for settlement about 10,000 acres.

The following reports have been issued in the course of the investigation:—

1. Sleeper-hewing in forest reserves and on Crown lands.
2. Management and control of Victoria forest, Upper Yarra district (291,000 acres).
3. " " " Barmah and Gunbower forests, Murray district (195,000 acres).
4. " " " Wombat forest, Central district, (133,000 acres).
5. " " " Otway district reserves (186,700 acres).
6. " " " Chiltern and Stanley district reserves (154,000 acres).
7. The forests of the county of Delatite (232,000 acres).
8. Pastoral lands in the Genoa River district (90,000 acres).
9. Pastoral lands in county of Lowan (Black Range reserve, 73,000 acres).
10. Forest royalties, and the royalty system.
11. Fire protection in country districts.
12. Pyrenees, minor Kara Kara, and Tambo reserves, East Gippsland (470,000 acres).

The following reports are in the press:—

13. Proposed diversion of water from Upper Acheron, Victoria Forest, for supply of metropolis.
14. The forest reserves of the Ballarat district.

In addition to the ordinary duties which pertain to the inquiry under the terms of the commission issued to us, we have frequently been called upon from time to time to deal with questions relating to the management and working of the forest reserves. Some of these questions have been of a very troublesome nature, involving journeys to the country, as well as the taking of evidence to enable us to arrive at a decision.

## CONCLUSION.

Early next session we expect to be in a position to issue a general report on the management and working of the reserves, plantations, and nurseries, which will include a rough draft of a Bill to place the question of forest conservancy on a substantial and permanent basis. "Our investigations, and the inspections made by us in most districts of the colony, have forced us to the conclusion that there should be no return to the weak and ineffective administration of the past. That administration has led to the grossest spoliation and waste of forest material, which in any intelligent appreciation of the subject would have been recognised as a source of national wealth. With the single exception of redgum, which flourishes best on alluvial flats and river frontages subject to inundation, our most durable and useful hardwoods are found on the poorest lands of the colony, in rugged mountainous country, or on the ironstones and gravels of the silurian areas, stretching from the Grampians eastward to the Goulburn. There should, therefore, be no conflict between the interests of settlement and forestry. What has to be guarded against is the alienation of poor rangy or auriferous lands under the grazing-area sections of the Land Act, such as the ironbark or box forests of the Northern district, and the milling areas of Gippsland, the North-eastern district, and Otway. The facility with which selectors were permitted in past years to secure grazing blocks up to 1,000 acres in poor stony country, fit for nothing but to carry a few head of sheep in good seasons, is responsible for the destruction of large areas of first-class timber, now urgently required for railway and mining purposes. The time taken to reproduce red ironbark to the point of maturity has been estimated by competent observers at from 70 to 120 years, and the slow growth of grey box in similar country is almost equally marked. When it is borne in mind that the desire of a few persons living in the neighbourhood of a reserve for its curtailment or abolition, conveyed to the Government in the form of a petition, is frequently merely to increase the extent of existing holdings for the grazing of sheep, and that such grazing could often be obtained by them at a low rental from the State without the alienation of the land, we think it is time that the interest of the general community in this matter should receive some consideration."

Despite the mistakes of the past, it is not too late to set aside in perpetuity a forest domain which, embracing the mountain and hill ranges of the colony, as well as some of the poorest soil on the plains, will, under proper management, yield unending supplies of timber for State requirements as well as for many industries dependent upon the cheapness of this material, maintain the flow of streams and springs, and modify extremes of climate in the districts in which they are situated.

The areas submitted to us for examination and report, taking into account what has been already excised for settlement, are less than one-thirteenth, or nearly 7.7 per cent. of the total area of the colony. France maintains under forest 17.92 per cent., Germany 25.70 per cent., Austria 32.58 per cent., Canada 37.66 per cent., and British India 25 per cent. It is surely not too much to expect that in a country like this, subject to an irregular rainfall, to devastating droughts with failure of water supplies, and in many districts to extremes of heat and cold, there should be an intelligent recognition of the climatic and industrial benefits arising from forest conservancy, and of the absolute necessity at this stage of settlement of adopting a firm and definite policy in the matter.

A. L. TUCKER, President.

ALF. S. BAILES.

J. BALFOUR BURTON.

D. J. DUGGAN.

DAVID HAM.

DAVID KERR.

CHAS. SARGEANT.

G. J. TURNER.

Forests Commission, Parliament House,  
Melbourne, 18th September, 1900.