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1920.

WESTERN AUSTRALIA.

# REPORT

OF

## THE FORESTS DEPARTMENT

FOR THE

### YEAR ENDED 30TH JUNE, 1920.

*Presented to both Houses of Parliament by His Excellency's Command.*

[FOURTH SESSION OF THE TENTH PARLIAMENT.]

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Forests Department,

Perth, 22nd September, 1920.

*The Hon. Minister for Forests.*

Sir,

I have the honour to transmit herewith my Report on the operations of this Department for the Year ended 30th June last.

I have the honour to be,

Sir,

Your obedient servant,

C. E. LANE-POOLE,

Conservator of Forests.

## REPORT OF THE FORESTS DEPARTMENT FOR THE YEAR ENDED 30th JUNE, 1920.

### CLASSIFICATION OF FORESTS.

The classification of the forest land within the main timber belt was continued. It was hoped to complete the work in the jarrah country, but, owing to the urgent need of obtaining reliable data as to the nature of the forests in the karri country, this was not possible, and only one camp was left in the jarrah belt, and two others were started in the karri country lying between Pemberton and the Nornalup Road. The classification of the jarrah country has, however, progressed so far that three months' work next year should see it finished. The total area covered in these forests this year amounted to 950,000 acres. In regard to the karri country, there has for many years existed a misconception that the whole of the land from the Warren to Nornalup was covered with prime karri forests and that the soil was of a rich nature suitable for agricultural purposes. The classifiers have now covered a fairly large area—300,000 acres—and the results from a forestry standpoint have not come up to the generally accepted estimates of the country in question. The forests are by no means of large extent and they are not in a continuous or uninterrupted belt, but are, on the contrary, intersected with ridges of jarrah and belts of mixed karri and marri.

From an agricultural standpoint it has now been generally recognised that the soil on which the forests of pure karri grow is disappointing, and will not give the returns which may be obtained from soil on which karri and marri\* grow mixed. The extent of the mixed country is comparatively large, and the extent of the pure karri country is small. In addition, there are areas of land carrying little or no timber where the soil is considered by those who have practical knowledge of the district suitable for agricultural purposes. The smallness of the area of pure karri forests make it very necessary that steps be taken, as soon as the classification is completed, to reserve as much of such land as is possible. The matter came under the consideration of the Government and it was decided that all the pure karri forests should be dedicated as State Forests. In view, however, of the urgency of developing the land in this portion of the South-West, and particularly in order to find land for immediate settlement for returned soldiers and immigrants from the Home land, it was also decided to permit the alienation of the mixed karri forests carrying a preponderance of marri for settlement purposes, with the proviso, however, that a settler taking up such country is debarred from destroying marketable karri trees, but these are to remain the property of the Crown, to be marketed when practicable. This decision will have a far-reaching and

\* Following the decision of the Forestry Conference, in order to avoid confusion with Murray River redgum (*Euc. rostrata*), Western Australian redgum will in future be called "marri" in all official publications. Marri is the aboriginal name.

very beneficial effect. In the first place, it will permit of the demarcation of our karri forests, then it will enable the Lands Department to open up areas of land for settlement which hitherto have been locked up on the grounds that they were covered with timber; finally, it will assure a better understanding than has hitherto existed between the two departments concerned.

Owing to the very dense undergrowth in the karri forests it was found necessary to reduce the distance between the traverses to 15 chains and, instead of recording data over the whole area between the traverses, as has been done throughout the jarrah forests, a strip two chains wide was taken to represent the forest between the traverses. The total area covered by the classification to date amounts to 3,550,000 acres, and it is expected that the work will be completed by June, 1921.

To arrive at an estimate of the average increment in cubic feet per acre per year in the jarrah forests, an examination of the data collected from the 18 sample jarrah plots of five acres each that have been measured and re-measured was made, and this showed that the forests are growing at the rate of only five cubic feet per acre per year. The total increment for the whole of the jarrah forests in their present uncared for condition may be estimated at 270,000 loads a year. This is the amount we should be cutting, instead of which we are cutting 806,000 loads; or, in other words, we are going to leeward by over half a million loads a year. Desperate as the position appears, it is not irremediable. The obvious method would be to immediately restrict the cutting of jarrah to that quantity that the forests are growing annually. This would mean halving the output of every mill working in virgin country. The rights of sawmilling companies operating in these forests are, however, amply protected so that this course is not open to the department.

The other method is to set to work at once to increase the annual increment of the forests. This will not save the present day large sawmiller from extinction as would the other method, but it will enable generations to come to reap a larger and better harvest than can be obtained from the untended cut-over remnants of our once magnificent forest heritage. An increment per acre per year of five cubic feet is so low as to be almost negligible. It is so low because the forests have been worked without system. The sawmiller, not the forester, has been the man to choose the areas he desired to cut, and he has cut them in such a manner as to reduce them to a state in which practically no growth is taking place. A virgin forest always carries a superabundance of over-mature and faulty timber and only a small amount of mature sound trees. When a sawmiller has operated unrestrictedly in such a forest and, to use his

doesn't  
fit with  
data in  
appendices

own term, "cut it out" the forest is left with a still greater superabundance of over-mature timber; the young trees have been greatly damaged by the fellings, and the heavy fires that sweep through the crown-littered forest have killed a still greater number. Such a forest, if left to itself, grows hardly at all. The over-mature trees cover the ground and dominate the younger growth, and repeated fires reduce the number of sound trees per acre, so that the forest is less than a quarter stocked, and these fires also, by scorching the trees that escape actual destruction, reduce the annual growth very appreciably. Under sound sylvicultural management the stocking of the forests would gradually be increased, the fires would be controlled, and thus it would be possible to increase the increment per acre considerably and so increase the quantity of timber annually available for sale to the sawmiller. If, at the same time, steps are also taken to find a market for what has up to now been regarded as unmarketable logs, then a larger percentage of the present standing crop will be utilised and the cut of the old stand will be lengthened. In the direction of better utilisation there is no doubt that much improvement is to be made in the matter of sleepers. Instead of first grade timber being put to this use, only third grade wood useless for any better purpose should be utilised. There is no valid argument for the retention of the square-cut sleeper when wane-edged sleepers, which could be cut from tops and crowns, would answer sufficiently well for all practical purposes. Such sleepers are in use in Europe and have given every satisfaction.

#### RESERVATIONS.

The area of State forests has only been very slightly increased. The tuart country purchased last year, together with four small blocks in the same locality, will be added to the State Forest as soon as negotiations are completed. It is hoped to effect the dedication of the classified portion of the jarrah forests, but though all data were compiled and plotted, certain small adjustments were desired by the Lands Department which prevented the completion of the matter.

#### FOREST WORK.

A start was made with two preliminary working plans. Working plan No. 1 covers the country lying between Chidlow's Well on the north and Millars' Jarrahdale Concession on the south. The whole of this area is well within the radius of the Perth fuel market, thus enabling the forester to market a great deal of dead and unsound wood. The immediate need is a better system of roads to open up the forests. As a beginning, the area around Mundaring reservoir is being taken in hand and a track has been constructed round the lake, and this should be ready for wood-cart traffic as soon as the weather enables certain gravelling operations to be completed. No. 1 and No. 2 Pumping Stations of the Goldfields Water Supply require 5,957 cords of wood a year, and of late there has been some difficulty in getting supplies, mainly owing to the lack of means of extraction. In addition, there is the Perth market, which absorbs 70,000 cords a year. Owing to the ringbarking of 20,000 acres, effected when the reservoir was first made, there is a very large amount of immediately available dead wood which requires to be removed. In addition, there is a heavy stocking in places of regrowth which requires sylvicultural treatment and

protection from fire. Owing to lack of trained foresters it was not possible to do any sylvicultural work, and the whole work was concentrated on the road making. This was done by returned soldiers, who proved efficient, the cost per mile working out at £335.

In addition, the organisation of the fuel removal to Sawyers' Valley station was initiated. A permit was granted to a firm to lay a tramline into the ring-barked area and remove dead wood and such green wood as is marked by a forester. At Pickering Brook and at Chidlow's Well the firewood getters, who up to recently had worked on a license system, were organised into co-operative societies and permits granted to them also to obtain dead firewood and marked green wood. In all 2,368 acres were marked for felling.

Working Plan No. 2.—This plan covers the tuart forests between the Capel and Sabina Rivers, which are in urgent need of organisation. For many years past the Railway Department has been drawing its supplies of wagon scantling, etc., from this source and has railed the logs to Midland Junction to be sawn up. This practice has led to much waste of valuable timber, since only first-class logs were taken and, until recently, certain lengths and dimensions were insisted on, the logs being subjected to an inspection prior to loading. The result of this system is that the tuart forests are littered with fine timber, which presumably it did not pay to rail 150 miles, but which might well have been utilised had a mill been established on the spot. The area of prime Tuart forest is so small, 7,000 acres, that it is necessary to exercise the greatest care in the utilisation of this timber. Add to this the fact that it is probably the finest timber for wagon scantling, turnery and similar work, and it will be conceded that remedial measures are very necessary. In order to arrive at better utilisation, all licenses for cutting this timber were refused and steps were taken to erect a mill near Wonnerup station. This mill will deal with all the heavy, over-mature logs left by the Railway Department and convert them into sawn timber of all sizes for general sale, and particularly for the supply of turnery wood to handle factories.

From a sylvicultural point of view the tuart country presents some difficulty, as regeneration does not follow in so prolific a way as in the jarrah or karri forests. As a first step, however, it is essential to control the grazing in the forests, and to that end steps were taken to fence the State Forests. The absence of jarrah in the neighbourhood necessitated obtaining posts from the Nannup and Donnybrook districts.

The question of providing water for the limited number of stock which will be permitted to graze in certain parts of the forests was looked into, and a well sunk. The present prohibitive price of fencing wire made it impossible to complete the work during the year under report.

The work undertaken in connection with both No. 1 and No. 2 Working Plans is of a preliminary nature. The Forests Act provides that working plans when drawn up shall be assented to by the Governor, but it has not been possible to draw up the definite plans yet, owing to the difficulty in obtaining the services of a qualified Working Plans Officer. Under Section 41 of the Forests Act a certain amount of revenue is now earmarked for forestry purposes, but without the necessary trained staff it is not possible

to carry out the work economically and satisfactorily. It is hoped that in the near future an officer will be found to take charge of the Working Plans. In the meantime the preliminary plans are under the charge of the Assistant Working Plans Officer and Forestry Instructor.

#### FOREST RANGING AND TIMBER INSPECTION.

There is little to report under this head. The District Rangers have carried out their duties in a satisfactory manner though handicapped through lack of staff. In the matter of timber inspection their work has run smoothly. The increase in export business, due to the somewhat better shipping facilities, has resulted in a general increase in inspection work. The importance of preventing any confusion between karri and jarrah is well recognised by all, and yet there is still some mixing of these timbers in the Eastern States. It was found necessary on more than one occasion to warn sawmillers operating in karri country that the branding of sawn timber with a K was of first importance. Should these sawmillers persist in disregarding this matter it will be necessary to make stringent regulations. The demand for sleepers in the United Kingdom is very great, and it would be possible to market a very large quantity of untreated karri in this size. The effect, however, on the jarrah sleeper trade—the two timbers are most difficult to distinguish one from the other—would be disastrous.

It is pleasing to be able to report that the first step towards lowering the severity of the specification of sleepers has been made. A standard Western Australian Government specification has been established, and this has been accepted by a number of the countries which purchase jarrah sleepers. The specifications drawn up by the buyer were so rigid and severe as to cause a very great deal of waste. It is hoped that, when the Railway Engineers of South Africa, Egypt, etc., discover that the sleepers inspected on the standard specification are as serviceable as those they have been in the habit of insisting on, they will accept a still lower specification. Some criticism has been levelled at the timber inspectors on the ground that they condemned too much sound timber. While no one with a knowledge of the matter can doubt that the bulk of the condemned sleepers were quite good enough, it is not the timber inspector's fault that these are thrown out. It must not be forgotten that the inspector is acting purely as an agent for the buyers, and he passes or rejects the sleepers, following the written instructions and specification of the buyer; and from these he cannot depart.

#### PLANTATIONS AND NURSERY WORK.

*Ludlow Plantation.*—The summer proved so excessively dry that a very large number of the cluster pine seedlings planted out last year died. On the other hand, the seedlings of the same age derived from "in situ" sowings have come through satisfactorily. The best of the Monterey pines cleared from this plantation in the process of conversion found their way to Perth for case making and brush stock work.

*Plantation North of Perth.*—Owing to the want of clarity in the financial provisions of the Forests Act,

it was not possible to obtain funds for this work. The question of allocation of funds is dealt with below. Suffice it to say here that the formation of plantations of exotics is clearly a loan estimate item.

*Hamel State Nursery.*—In Appendix 5 will be found a list of the trees raised and distributed, and in Appendix 1A the revenue derived from the sale of the trees. The work of cutting out the Monterey pines where they are failing was continued, and the timber was sold to the same firm of case makers as in previous years. The cases made from this quick grown pine are very suitable for fruit, and are particularly appreciated by the raisin grower of the Upper Swan district. The wood is also used for small containers for confectionery and similar goods.

#### TIMBER INDUSTRY.

During the past year the timber industry could not be said to have recovered from the disabilities inflicted upon it by the great war. There was certainly a better demand for timber, and inquiries were not confined to the Australasian markets, but many came from overseas. The shipping situation, however, showed but little improvement throughout 1919, and the sawmillers were not able to do much to recover their old volume of trade. Freights remained exceedingly high, and only such purchases were made for shipment as were absolutely essential for public and pressing private requirements. Labour continued scarce despite the more attractive wages that were being paid, and expert workmen were not readily found for the multifarious needs of the industry. Many of the mills that were closed down in the early days of the war continued idle, and to add to the handicap of the sawmillers in the early part of the present year three large-sized plants were burned down. The Australian trade was fairly buoyant, and might have assumed something like its old condition had sufficient shipping been provided to cope with the orders. Since the beginning of 1920 the shipping situation has gradually improved, though freights continue to be high, with little prospect of any material reduction in the immediate future. One or two of the closed-down mills have been re-opened, and another or two may get into operation again before the close of the year. Shipments are beginning to be made again to oversea ports, and there is some improvement to report in shipments to the Eastern States and New Zealand. Industrially, the industry continues to suffer from a lack of labour, and in many departments cannot be manned as efficiently as desired. In common with the rest of the world wages in this industry have gradually risen, and, with the constantly rising cost of living, do not yet appear to have reached their limit.

The total out-turn of sawn jarrah and karri for the year under review was 174,420 loads from Crown lands, and 31,894 loads of hewn sleepers were cut. Private property produced 2,759 loads of sawn timber. In addition 967 loads of Western Australian minor timbers were secured from Crown lands (*vide* Appendix 2D).

The gross value of exports, including sandalwood, for the financial year amounted to £743,373, being an increase of £263,307 over the previous year's figures.

The value of timber has increased considerably, contracts for sleepers closed at the end of the year at over £8 per load, f.o.b

The negotiations for the sale of the State sawmills to a French syndicate were continued. Representatives of the syndicate visited the State and investigated for themselves the assets that had been offered for sale. As a result, an offer of £427,000 was made by the syndicate. The price was considered satisfactory and it was accordingly arranged to submit the sale to Parliament, in accordance with the provisions of the Trading Concerns Act. Through what appears to have been a misunderstanding, through which the syndicate deposited as a guarantee of good faith a substantial sum in French war bonds instead of, as was stipulated, in pounds sterling, the matter was not submitted to Parliament, and the sale was not effected. It is still to be hoped that negotiations will be re-opened and the matter brought to a successful conclusion. If the cut of our present visible supplies is to be extended, then it is essential to open markets which will absorb the timber which at present is regarded as unmarketable. France offers probably the best market for our timbers, but every attempt that has been made during the past 20 years by the largest sawmilling firm here to open it has failed. It is only by interesting a French firm in the business that the object can be attained. A good deal of uninformed criticism was levelled at the proposed sale of the State mills. It was suggested that it was selling the people's heritage. It was not a question of disposing of the forests in fee simple, but merely that the cutting rights over the permit areas for the remainder of the period of the permits, viz., four and a half years, be sold to the French syndicate. The whole of the forests of the State are the people's heritage, and it is the duty of this generation to see that the sawmillers to whom cutting rights are granted exercise their privileges in the best interests of the State as a whole, so that future generations may enjoy the benefit of a sustained yield of good timber.

Without wishing to unduly disparage the management of the State sawmills, there is no doubt that, under existing conditions, the particular portion of the people's heritage covered by the State sawmilling permit areas is being exploited with a maximum of waste and without any view to the future. The same may be said of other large private firms operating in the jarrah country. The only remedy is to find new markets and so sell wood which to-day is either being burnt at the mill fire or is left standing in the forest to rot; and for this purpose the advent of a French sawmilling company would be of special value.

#### Industrial.

In my report for the year ending 31st December, 1917, I gave some details as to the classification of benches and the rates of wages paid to certain classes of workers in the bush sawmills. Since the date named, some alterations have taken place in the latter. On the 5th May last the Federal Arbitration Court fixed the *minimum* rate of wages to be paid at Western Australian bush sawmills at 11s. 6d. per day, and at the same time the daily wage rate ceased to be the standard and wages are now calculated on a weekly basis and men are engaged by the week. The Arbitration rates work out at £3 12s. a week. Although subsequent to the period this report covers, another phase of the bush workers' case has been dealt with, and, as it is intimately connected with the above, I mention it here. On the 1st August last the companies operating in the Western Australian bush voluntarily

raised the minimum wage by 6d. a day, thus making the weekly wage £3 15s. The conditions of employment remained as under the 1917 award. The Federal Arbitration Court at the date this report is made is sitting in Melbourne dealing with the question of hours only. Underneath I give in parallel the rates for 1917 and those current at date:—

	1917.			1920.		
	£	s.	d.	£	s.	d.
<i>Milling (Day Work):</i>						
No. 1 Bench—						
Benchman, per shift ..	0	13	7	0	16	6
Assistants do. ..	0	10	1	0	13	0
No. 2 Bench—						
Benchman do. ..	0	12	7	0	15	6
Assistants do. ..	0	9	10	0	12	9
No. 3 Bench—						
Benchman do. ..	0	11	7	0	14	6
Assistants do. ..	0	9	7	0	12	6
No. 4 Bench—						
Benchman do. ..	0	10	7	0	13	6
Assistants do. ..	0	9	7	0	12	6
<i>Hewing (Piece Work):</i>						
Sleepers up to 7ft. x 9in.						
x 4½in. per load . . . .	1	16	0	2	5	0
Sleepers over that size,						
per load . . . . .	1	14	0	2	3	0
<i>Falling (Piece Work):</i>						
Maiden Bush, per load ..	0	1	4	0	1	10
Old Bush, per load . . .	0	1	6	0	2	0

#### FIREWOOD.

The 1st of January, 1920, saw the whole of the firewood industry for the metropolitan district brought under the permit system. This is a forward step in forest management, and is in line with the policy of the Department. Under it the old method of the contractor taking out a license and carting the dead wood from any place in the forest that suited his convenience, without any obligation or restriction as to the method of operating, has been done away with, and in its place there has been substituted the permit system, which gives to the successful tenderer the right to operate over a given area of country, thus enabling the Department to improve the forests systematically in sections.

Sylvicultural work has also been carried out on some of these areas: 2,368 acres were gone over, and all useless green trees and suckers marked for felling. Some hundreds of tons of this wood have been felled and stacked to dry by the permit holders. It will be readily seen that, as this policy develops, each year will witness large sections of the forest brought under better forest conditions.

From time to time the Department has issued warnings as to the dangers and disasters that are brought about through fire. These can only be averted by an adequate system of firebreaks, and the latter, to be effective, must have the constant supervision of trained guards.

During the year 11 firewood permits were granted over 42,975 acres. Of these 40,891 acres were jarrah and 2,084 acres banksia. The latter is becoming very scarce, and competition is keen for every block made available under permit conditions. There are 200 men employed in the forest portion of the industry. The total amount of firewood used during the year was 138,834 tons.

### KILN DRYING.

The future of kiln drying of jarrah being assured, both by the results obtained by this Department and by local firms in their commercial driers, the timber kiln erected in the University grounds at Crawley has been operated throughout the year, with a view to overcoming some of the difficulties encountered. It is hoped that, as soon as the superiority of this method of seasoning has become established in this State, there will be ready all the information necessary to make the successful operation of such kilns merely a matter of simple application.

Unfortunately, owing to the limited nature of the experiments, the work has been more or less confined to the application of the results obtained in the more advanced countries, to local timber and conditions.

In addition to the jarrah put through the kiln, one charge of karri was dried. The results were so good as to invite further investigation; but, again, owing to the fact that the Department has but the one large kiln, further charges could not be seasoned.

However, when the Forest Products Branch of the Bureau of Science and Industry is ready to commence on kiln drying investigations, its progress will be greatly facilitated by the fact that all the preliminary work has already been carried out by this Department.

Evidence of the awakening of this State to the possibilities of kiln drying is apparent in the increasing number of inquiries regarding the experimental kiln received by this Department.

### MINING TIMBER.

Timber supplies on the older coal mining fields are becoming more inaccessible and costly. Mining lessees in the past have been accorded the privilege of utilising the timber on their mining leases practically without restriction, with the result that the destructive and wasteful utilisation of accessible timber has now placed certain companies in a serious position. Even the right of nominal control by the Forests Department has been questioned, and timber regulations have been openly disregarded.

At the suggestion of the Mines Department, the timber on coal mining leases at Collie has been placed under the direct control of the Forests Department, and coal mining lessees are to be granted timber permits over land held by them as coal mining leases. In future royalty at ruling rates will be paid on all timber used, and the cutting of timber will be regulated by a properly constituted Working Plan. A preliminary scheme has been laid down, and the necessary data for a Working Plan are being gathered by a system of strip surveys. A small experimental plot of *Pinus pinaster*, which should show rapid development on the sandy flats, has been sown.

At Greenbushes strong endeavours have been made to obviate any necessity for cutting immature timber on mining leases for fuel purposes, and it is hoped that arrangements will soon be finalised for the cheap delivery in Greenbushes township of mill waste suitable for firewood. The economic importance of preventing 11,935 tons of fuel going over the fire chute each year at a mill within four miles of boilers where jarrah saplings are being used for fuel is of more than local importance.

On the goldfields the rapidly diminishing supply of accessible fuel and mining timber is a matter of very

grave concern to mine managers in the older centres which still continue to produce gold, and pressure is constantly being brought to bear on the Department to throw open the State forests, small and large, which have been declared from time to time for the requirements of mines in the locality. To permit the exploitation of the timber on these areas would serve to relieve the situation for only a short time, when the question of extending the timber tramways further afield would have to be faced.

The firewood companies find difficulty in obtaining sufficient labour to enable them to keep up the necessary supplies for the mines, which were, at one period, obliged to cease operations owing to a prolonged strike of firewood cutters, and since then it has been found difficult to build up stocks, the available deliveries merely coping with the monthly consumption.

At present there are 252½ miles of main line timber tramways in existence on the goldfields. During the year 83 miles of lines were surrendered, and 9 miles of new lines authorised.

In Appendix 2c will be found particulars of the mining timber and fuel used on the Eastern Goldfields.

### REVENUE AND EXPENDITURE.

Section 41 of the Forests Act reads, as follows:—

41. "(1.) All revenue of the department shall be paid into the Treasury.

(2.) Three-fifths of the net revenue of the department, to be certified by the Under Treasurer, shall in every financial year be placed to the credit of a special account at the Treasury, and shall form a fund for the improvement and reforestation of State forests and the development of forestry, and such fund may be expended by the Conservator with the approval of the Minister without any other authority than this Act.

Provided that a scheme for such expenditure shall be submitted annually to and shall be subject to the approval of Parliament.

(3.) The balance of the revenue of the department shall be paid into the Consolidated Revenue Fund.

(4.) All moneys appropriated annually by Parliament for the purposes of this Act shall be expended under the control and management of the Conservator, with the approval of the Minister.

(5.) The revenue of the department shall include all royalties and proceeds of the sale of forest produce, license fees, rents, and damages awarded for offences against this Act, and all rents and royalties payable under leases, licenses, and permits granted under any Act hereby repealed, or payable under any other existing timber leases or concessions."

In its original form the section read "half the gross revenue." The reason that actuated the legislators in amending this to three-fifths of the net revenue was doubtless the desire to obtain efficient and economical administration of the Forests Department. The word "net," however, was unfortunately not defined, and considerable doubt existed as to how the net revenue was to be arrived at. It was finally decided that net revenue should be the balance left after deducting the cost of collecting that revenue and interest and sinking fund on loan moneys expended by the Forests Department since its inception, and also the cost of printing, lithography, and other inter-departmental charges. This decision appears to be the only one possible, though it is not altogether satisfactory, seeing that much of the loan money expended in the past and debited to the department was not in reality used for forest work. As an instance, the ringbarking of forests to give work to

unemployed is hardly forest work. The scheme of expenditure submitted to Parliament was approved, and read as follows:—

*Funds available.*

Funds under Section 41 of the Act accumulated since the 3rd January, 1919, the date on which the Forests Act was assented to—£14,000.

	£	£
Estimated Revenue, 1919-1920 ..	47,000	14,000
Estimated Expenditure, 1919-1920 ..	12,000	
Net Revenue .. .. .	35,000	
Proportion under the Act .. .. .		21,000
Total Funds available, 1919-1920 ..	£35,000	

*Allocation of Funds.*

	£
Working Plan No. 1 .. .. .	18,800
Working Plan No. 2 .. .. .	6,000
Forests Products Laboratory .. .. .	5,000
Research Work .. .. .	5,000
Publicity .. .. .	200
	£35,000

The question of net revenue had not then been decided, and substantial deductions had later to be made by the Under Treasurer, who finally certified the net revenue for the first half year under the Forests Act as £13,056 18s. 3d.

The scheme of expenditure for next year, which will be submitted to Parliament at an early date, is as follows:—

*Funds available.*

Amount standing to the credit of the Reforestation Fund as at the 30th June, 1920—£22,876.

	£	£
Special appropriation for the purpose of liquidating Land Improvement Loan Fund .. .. .	22,876	
	15,448	7,428
Estimated Revenue, 1920-21 .. .. .	62,400	
Estimated Expenditure, 1920-21 (including interest and Sinking Fund) .. .. .	15,371	
Approximate Net Revenue .. .. .	47,029	
Approximate amount available for Forest Improvement and Reforestation Fund .. .. .		28,217
Total .. .. .	£35,645	

*Allocation of Funds.*

	£
Working Plan No. 1 .. .. .	6,865
Working Plan No. 2 .. .. .	10,292
Working Plan No. 3 .. .. .	1,716
Sandalwood and Mallet bark propagation .. .. .	1,000
Classification .. .. .	2,860
Forests Products Laboratory .. .. .	4,977
Salaries and Travelling .. .. .	1,716
Research and Investigation .. .. .	2,787
Advertising and Exhibits .. .. .	1,631
School for Apprentices .. .. .	572
Publicity .. .. .	620
Commonwealth Forest School .. .. .	314
Arboreta .. .. .	286
	£35,645

**BOTANICAL.**

Owing to the increased activity in the timber trade, the officer hitherto engaged in botanical work was detailed for timber inspector's duties, and the number of specimens added to the forest herbarium was

therefore small (see Appendix 4). It was not until the end of the year that another collector was engaged.

**ENTOMOLOGICAL.**

Through the co-operation of the Agricultural Department an arrangement was made under which half the services of the Assistant Entomologist were made available to the Forests Department. Inquiry has been started into the twig cutting pest of tuart, and into the various wood borers. The nucleus to a collection of insects of economic importance to the forest has been added to the departmental museum (see Appendix 7).

**TAN BARKS.**

The value of mallet bark exported amounted to £22,121, an increase of £3,246 over that for last year. The bulk of the mallet country has been alienated, and it is to be hoped that the owners will cultivate this valuable tannin yielding eucalyptus. The land on which it grows is generally quite useless for farming purposes, while the revenue to be derived from the bark should be a welcome assistance to the farmer whose only crop in this part of the State is wheat.

Mangrove bark has come prominently before the public, analysis having shown that the black mangrove (*Bruguiera gymnorhiza*) contains 46 per cent. and the red mangrove (*Ceriops candolleana*) 44 per cent. of tannin. A permit to remove the bark of these species was granted over the strip of coastline lying between Cape Leveque in the north and Cape Bertholet in the south. This part of the seaboard is the subject of the Broome pearling industry, and the pearlers use the wood of the red mangrove for cooking purposes on the luggers. The wood has the advantage of being easily cut up into short lengths, and, what is more important, since the cooking pot is situated close to the intake of the divers' pump, it burns with a minimum of smoke. The bark up to now has gone to waste being stripped off from the wood in the swamps prior to being put on board the luggers. The utilisation of this bark is therefore of economic importance, for not only should it mean the beginning of a small industry, but it should result in lowering the price of wood to the pearling fleet.

The tanneries of Western Australia are still dependent on imported Natal wattle bark for their supplies, and every attempt should be made to find local substitutes to reduce this importation. The State possesses in its trees and shrubs a wealth of tannin-bearing materials which only await the careful research of a fully trained and qualified leather chemist to make them available, not only for the local tanneries, but also for export.

Marri kino tannage continues to be used for light hides, but no advance has been made in its utilisation for sole and harness leather. The search for a leather chemist is being continued, and there is every hope that in the near future a satisfactory appointment will be made, when this important problem can be investigated.

A permit for the removal of certain tannin-bearing shrubs growing in the Coolgardie district was granted. The discoverer of the materials claims that they are of special value for tanning purposes. Analysis shows that the actual content of tannin in the shrubs is very low, and the quantity available per square mile is small. On the other hand, there is no



doubt that the light skins tanned with these materials are regarded by leather merchants with favour. A condition of the permit is the expenditure by the holder of an adequate sum of money in the erection of a tannery and extract works.

#### COMMONWEALTH FOREST PRODUCTS LABORATORY.

The establishment of this laboratory still awaits the passage of the Science and Industry Bill. In the meantime Mr. I. H. Boas has completed a tour of investigation through America, Canada, England, France, Norway and India, and has returned with the requisite information and plans for the immediate organisation of the undertaking. Mr. Boas' expenses were defrayed by both Federal and State Governments on a £ for £ basis, but on his return he was definitely appointed a Commonwealth officer, with the title of Officer in Charge of Forest Products Investigations.

#### SANDALWOOD.

The over-cutting of the sandalwood supplies of the State reached frenzied proportions (see Appendix 2K). The average quantity of sandalwood absorbed by China during the past 70 years is 4,500 tons per annum. During the year under report the cut amounted to 17,269 tons. It is difficult to ascribe the exact cause of this very large increase. It is probably due to a number of factors, of which the very high rate of exchange which followed the rise in the price of silver, and consequently of the Chinese dollar, is the main reason. The dollar in 1916 was worth 1s. 11d., and in May, 1920, its value was 5s. 7d. The alarming rate of cutting made it necessary to attempt to regulate the industry. In the past, the slumps that have followed boom years have been so disastrous as to cause a general cessation of the industry. The trade is a purely Chinese one and is mainly carried out by the Chinese through agents in Perth or Fremantle working on letters of credit. The Chinese thus entirely control the industry, and, as is only natural, the bulk of the profits, instead of coming to Western Australia, go to China, while the Western Australian Government only obtains a royalty of 5s. per ton. It was decided to try and curtail the cutting to 5,000 tons per annum as a maximum, and to effect this tenders were called on a royalty basis for the exclusive right to remove this quantity of sandalwood from the major portion of the sandalwood country. The proposal met with so much criticism that the tenders were cancelled, and instead the royalty on the wood was raised from 5s. to £2 per ton. Whilst this will certainly give the Government a considerable increase of revenue, it will not effect the main object of regulating the supply of wood to that quantity which China can absorb, and so assuring a continuous trade at a maximum price. The matter cannot be left as it is, and steps should be taken to remedy it. Since China now has between three and four years' supply on hand, the problem of regulating the industry and at the same time doing as little hurt to the cutters as possible is one which presents some difficulty.

#### Sandalwood Oil.

During the year under review 5,572lbs. of sandalwood oil were reported as extracted locally, this being an increase of 1,852lbs. over last year's output.

#### KINGIA GRASS TREE FIBRE INDUSTRY.

This new industry is gradually growing, and the excellence of the fibre for broom making and other purposes has been proved by the repeat orders of those who are using the product. During the year, the "Dibinya" fibre works shipped 27 tons to the Eastern States and a second factory has just started operations. In all 17 hands are employed in these factories. So far only the fibre of this tree is being used, the outside is stripped in the bush and the inside core also goes to waste. Last February the "Dibinya" Company gave away 60,000 of their cores for firewood to clear up their yard. This is a matter that calls for the immediate attention of the Forest Products Laboratory, for at the present time we are only making use of and turning into money about 20 per cent. of the crop.

#### REGULATIONS.

As set out in the last annual report, "The Forests Act, 1918," was assented to on the 3rd January, 1919, and no amendments to that Act have been made during the year under review.

The timber regulations which were drawn up prior to the passing of the Forests Act were adopted as regulations under that Act and have been amended from time to time as necessity arose, pending the making of forest regulations which will more accurately conform with the intentions of the Forests Act. Such regulations have been drawn up but have not yet been promulgated.

Licenses authorising the licensee to take firewood were previously issued at 1s. per month per man. These are now issued on a quarterly basis of 5s. per quarter per man, in order to save the time of issuing officers and to increase the revenue obtained. These licenses are only issued where it is not practicable to issue permits for the taking of this class of forest produce. The regulations dealing with sandalwood licenses were repealed and, instead of issuing monthly licenses at 1s. per man with a royalty of 5s. per ton on all cleaned sandalwood, the Department has provided for the issue of free sandalwood licenses on a quarterly basis to *bona fide* sandalwood cutters, but has increased the royalty to £2 per ton cleaned. It is now necessary also for all persons engaged in the sandalwood industry as pullers, carters or cleaners to hold sandalwood licenses. Previously sandalwood could be obtained legally from Crown lands only when it was at least 15 inches in circumference when measured at three feet from the ground. This regulation was not strictly enforced, with the result that much smaller sandalwood found a ready market and all areas adjacent to centres of population were promptly denuded of sandalwood. A new regulation has now been promulgated prohibiting the taking of sandalwood unless it is at least 14 inches in circumference measured at 16 inches from the ground, provided that cleaned sandalwood 12 inches in circumference is deemed to have been 14 inches in circumference when pulled. Without this proviso it would have been difficult to obtain a conviction unless the person taking sandalwood which was less than the authorised size were caught in the act. Owing to the long distances over which the sandalwood cutters

bring their produce to the railway, their operations do not come under the eye of the forest ranger until the wood is at the railway siding ready for despatch to the coast. By enforcing these regulations it is hoped that the smaller sandalwood will be preserved.

The only other amendment to the regulations of any interest is that regarding the cutting of immature timber. For many years there has been a regulation prohibiting the felling of trees under certain sizes, differing with the various species to be found in this State, except with the permission of a forest officer. In order to avoid the waste which occurs when trees are felled at several feet from the ground, a regulation has now been made providing that all undersized trees which may be felled after permission has been obtained must be cut within six inches from the ground. There is no reason why several feet of the butt of a sound pile or pole tree should be left in the bush. One beneficial effect of cutting the young trees close to the ground will be the formation of a strong coppice growth, instead of the weak suckers which grow from a long butt and which so often are blown off the stem, to which they have only an insecure hold. When sprouting from a low-cut stem, however, the suckers soon develop roots of their own, and these have a secure footing which will enable them to become useful trees with a marketable value.

#### INTERSTATE FORESTRY CONFERENCE.

The conference was held at Hobart in April, and the following resolutions were carried:—

##### *Imperial Conference on Forestry.*

That this Conference recommends that two delegates be sent from Australia to the forthcoming Imperial Conference on Forestry, and suggests the appointment of C. E. Lane-Poole, Esquire, Conservator of Forests, Western Australia, and H. R. Mackay, Esquire, Commissioner, Forests Commission, Victoria, as gentlemen having a wide and thorough knowledge of the forestry resources of Australia; and, in view of the fact that this is a matter of National and Imperial concern, rather than one affecting the States individually, the Conference recommends that the Commonwealth Government be asked to bear the cost of such representation.

##### *Australian School of Forestry.*

That this Conference emphasises the urgent need for the establishment of an Australian Forestry School for the training of higher-grade foresters.

That a delegation should wait upon the forthcoming Premiers' Conference, consisting of Messrs. Owen Jones, Chairman, Forests Commission, Victoria, and N. W. Jolly, Commissioner, Forestry Commission, New South Wales, with a view to submitting a scheme for the establishment of an Australian School of Forestry.

1. That there shall be established an Australian School of Forestry for the training of officers in the profession of forestry.

2. That the Australian School of Forestry be established in New South Wales.

3. That such school shall provide for the issue of a diploma, and the qualification for entrance shall be a two years' science course in an Australian university or its equivalent, as laid down by the governing body; except in the case of any Australian Forest Officer or employee selected by the forest authority of a State for a course of training owing to special ability and qualifications.

4. That the cost of establishment and maintenance be met by contributions from the States on a proportional basis, and a subsidy from the Commonwealth on the basis of one-sixth of the gross total contributions by the States.

5. That the cost of providing for a teaching staff, to include an experienced principal and associate lecturers, should not be more than £6,000 per annum, and the cost of the establishment should not exceed £12,000.

6. That no charge should be made for training and instruction at the school.

7. That the control of the school should be vested in a council, constituted by the appointment of an equal number of representatives of each State and the Commonwealth.

##### *Forest Products Laboratory.*

That the cordial support of this Conference be given to the early establishment of a Forest Products Laboratory in Perth, Western Australia, as set forth in the paper read to the Conference by Mr. Boas, M.Sc., and that it be intimated to the Right Honourable the Prime Minister that, in the opinion of the Conference, early steps should be taken to ensure the formation of this much-needed institution.

##### *National Forest Area for Commonwealth.*

That this Conference endorses the figures as prepared by each State for allotment of a National forest area of 24,500,000 acres of indigenous forest for the Commonwealth of Australia; and that the delegates appointed by the Conference to present details of the proposed Forestry School be asked to urge the consideration of this resolution at the forthcoming Premiers' Conference.

##### *Commonwealth Subsidy for Forestry.*

That this Conference urge upon the Commonwealth Government the advisability of subsidising the forestry operations of the States, and of guaranteeing, in addition, adequate loan funds for the purpose.

##### *Next Conference to be held in Queensland.*

That the next Interstate Conference on Forestry be held in Queensland.

That unanimity has been reached between the foresters of Australia in regard to the establishment of one forest school for the whole of Australia is very satisfactory.

In the matter of the Forest Products Laboratory, the delegates were also unanimous as to the claims of Perth as the site for this institution.

The Premiers' Conference was held in May and endorsed the two resolutions regarding the forestry school and the area of land to be reserved for forestry for the needs of the Commonwealth.

#### PUBLICITY.

During the year under review the work of publicity and educating the public in forestry matters has been carried on steadily in the Press in Australia, England and America, and by means of departmental publications. During the period reported on the writer prepared for the British Empire Forestry Conference held in London a full statement of the forestry resources of the State and the outlook. This publication, which reviews the whole situation with some detail, has also been distributed to those interested in our forests and to forestry schools and departments throughout the Commonwealth and Great Britain. Most of the pamphlets mentioned in the report for the year ending 30th June, 1919, have been republished as the demand for them is continuous. In addition a larger pamphlet entitled "Notes on the Forests and Forest Products and Industries of Western Australia" has been published and circulated. During the year an Interstate Peace Exhibition was held in Adelaide, at which this Department showed specimens of the State's principal timbers and some samples of high-class furniture made from them. These attracted much attention from the visitors at Adelaide. At the Empire Forestry Exhibition held in London at the same time as the British Empire Forestry Conference sat, a large collection of Western Australian exhibits was made by this Department, some of them being sent direct from here and others being contributed from those held by the Agent General

in London. Our exhibit proved particularly attractive and was awarded second place among all the Dominions, India coming first. These exhibitions do much to make our fine timbers better known outside the State.

#### STAFF.

The organisation of the Department has been delayed through the impossibility of obtaining the necessary staff. In the matter of professional officers, there is little hope of obtaining an adequate recruitment until the Australian Forestry School is established. In the meantime, there are two West Australians taking the Adelaide forestry course, and the Department was fortunate in obtaining the services of Mr. S. L. Kessell, who has not only graduated from Adelaide, taking the forestry course, but subsequently obtained the Oxford diploma of Forestry with distinction. He was appointed Assistant Working Plans Officer and Forestry Instructor. In the matter of general field staff, a course of lectures was started by correspondence, so as to enable the rangers, classifiers and apprentices to qualify for appointment or promotion. The Forestry Instructor has now taken up the duty of giving the necessary training to the field staff.

In regard to the clerical staff, the position has been far from satisfactory. The activities of the Department have grown considerably and this made it essential to appoint permanent officers to undertake the various branches of work, viz., Accounts, Registration, Draughting, and Records. Owing, however, to the fact that all soldiers had not returned to the State, the appointments were in most cases postponed so as to enable returned men to apply. In the meantime, the Mines Department has kindly continued to assist in the work of accounting, registration, and draughting. A Clerk in Charge of Accounts, and a Registrar have now, however, been appointed, and the work of transferring the books from the Mines Department is under way.

Another difficulty arose through the lack of adequate accommodation for the clerical staff. This unsatisfactory condition will probably not be rectified until the present post office building is vacated by the Commonwealth authorities and altered so as to provide additional accommodation for the State Government officers. It is anticipated that the new post office will be available for occupation by the Postal Department before the end of next financial year.

On the 3rd June I proceeded to England to attend the Empire Forestry Conference, and Mr. C. M. F. Hill was appointed Deputy Conservator of Forests during my absence.

C. E. LANE-POOLE,  
Conservator of Forests.

## LIST OF APPENDICES.

	PAGE No.
No. 1.—REVENUE AND EXPENDITURE—	
A.—Statement of Revenue and Revenue Expenditure for Year ended 30th June, 1920	13
B.—Land Improvement Loan Fund Expenditure	13
C.—Forests Improvement and Reforestation Fund	13
D.—Revenue and Expenditure	14
E.—Statement of Timber inspected by the Inspection Branch of the Forests Department during the Year ended 30th June, 1920	14
No. 2A.—Production of Mill Timber for Year ended 30th June, 1920	15
B.—Sawn Timber obtained from Private Property for Year ended 30th June, 1920	15
C.—Hewn Jarrah Sleepers obtained during Year ended 30th June, 1920	15
D.—Timber (other than Jarrah and Karri) and other Forest Produce obtained from Crown Lands for Year ended 30th June, 1920	15
E.—Total Timber production for Year ended 30th June, 1920	16
F.—Heart-In Beams and Round Piles and Poles	16
G.—Mining Timber and Firewood consumed during Year ended 30th June, 1920	16
H.—Exports for Year ended 30th June, 1920	16
I.—Imports for Year ended 30th June, 1920	17
J.—Quantity of Timber treated by Forest Saw Mill, etc., Exported during Year ended 31st December, 1919	17
K.—Summary of Exports since 1836	18
No. 3A.—List of Concessions, Leases, Sawmill Permits, Hewing Permits, Firewood Permits, Sawmilling Permits, and Miscellaneous Permits	18-21
B.—List of Saw Mills	22-24
C.—Return of Timber Workers Registered during Year ended 30th June, 1920	25
D.—Return of Licenses issued during Year ended 30th June, 1920	25
No. 4.—List of Herbarium Specimens collected and identified during the Year ended 30th June, 1920	25
No. 5.—List of Trees raised at Hamel State Nursery during the year ended 31st March, 1920	26-27
No. 6.—List of Trees Planted in the Hamel State Nursery Arboretum	28-29
No. 7.—List of Forest Insects in the Departmental Collection	30
No. 8.—List of prosecutions during Year ended 30th June, 1920	30

## APPENDIX 1A.

Statement of Revenue and Revenue Expenditure for Year ended 30th June, 1920.

## TO SUNDRY RECEIPTS.

	£	s.	d.	£	s.	d.
<i>Licenses—</i>						
Firewood ... ..	552	3	11			
Sandalwood ... ..	80	13	0			
Mining Timber ... ..	27	5	6			
Mallet Bark ... ..	18	10	0			
Fence Posts ... ..	0	5	0			
				678	17	5
<i>Log Royalty—</i>						
Jarrah ... ..	26,509	3	1			
Karri ... ..	2,416	2	4			
Tuart ... ..	30	13	9			
Banksia ... ..	44	4	0			
Sheoak ... ..	37	0	6			
Pine Thinnings ... ..	85	0	2			
				29,122	3	10
<i>Royalty on Hewn Sleepers—</i>						
At 8/- per load ... ..	16	2	1			
" 5/2 " ... ..	30	9	5			
" 5/1 " ... ..	13	0	8			
" 5/- " ... ..	55	14	8			
" 4/2 " ... ..	0	19	1			
" 4/1 " ... ..	14	1	5			
" 4/- " ... ..	1,844	12	10			
" 3/9 " ... ..	70	13	1			
" 3/7 " ... ..	24	9	9			
" 3/6 " ... ..	3	17	6			
" 3/3 " ... ..	1	19	1			
" 3/- " ... ..	29	18	0			
" 2/7 " ... ..	0	14	7			
" 2/6 " ... ..	41	13	0			
				2,148	5	2
<i>Other Royalty—</i>						
Piles and Poles ... ..	1,814	11	2			
Beams ... ..	60	8	1			
Sandalwood ... ..	10,720	19	1			
Firewood ... ..	179	17	2			
Charcoal ... ..	0	16	11			
Blackboy ... ..	8	9	6			
Shingles ... ..	6	8	5			
Kiln Dried Jarrah ... ..	45	19	7			
Bark ... ..	2	9	6			
Confiscated Timber ... ..	27	18	9			
Fencing Posts ... ..	16	15	8			
				12,884	13	10
<i>Inspection Fees—</i>						
Hewn Sleepers from Crown Lands ... ..	724	12	5			
Sawn Sleepers from Crown Lands ... ..	921	4	6			
Sawn Timber from Crown Lands ... ..	78	18	5			
Hewn Sleepers, Private Property ... ..	1,176	5	5			
Sawn Sleepers, Private Property ... ..	504	8	11			
Sawn Timber, Private Property ... ..	21	9	7			
Piles and Poles ... ..	111	7	4			
Beams ... ..	20	9	7			
Tuart Logs ... ..	3	17	0			
Reinspected Sleepers ... ..	45	15	9			
				3,608	8	11
<i>Sales—</i>						
Branding Hammers ... ..	48	15	6			
Trees ... ..	338	5	1			
Publications ... ..	9	1	3			
				396	1	10
<i>Miscellaneous Revenue—</i>						
Freights and Postage ... ..	26	11	2			
Brand Registration ... ..	50	7	0			
Timber Workers Registration ... ..	218	12	0			
Seeds ... ..	1	15	4			
Other ... ..	178	1	11			
				475	7	5
<i>Rents—</i>						
Timber Leases ... ..	7,980	0	0			
Timber Concessions ... ..	697	0	0			
Timber Tramway Permits ... ..	1,142	13	4			
Saw Mill Sites ... ..	20	12	6			
Forest Leases ... ..	59	0	0			
Hamel Cottage ... ..	7	0	0			
				9,906	5	10
				£59,220	4	3

## APPENDIX 1A—continued.

## BY SUNDRY EXPENSES.

Subdivision 1—	£	s.	d.	£	s.	d.
Salaries ... ..	4,443	6	8			
Wages ... ..	4,059	0	0			
Forage Allowance ... ..	2,442	0	0			
				10,944	6	8
<i>Subdivision 2—</i>						
Maintaining State Nurseries ... ..	154	0	0			
Incidentals ... ..	1,818	0	0			
Workers' Compensation ... ..	39	7	4			
Furniture ... ..	7	2	0			
				2,018	9	4
Balance ... ..				46,257	8	3
				£59,220	4	3

## APPENDIX 1B.

## OTHER EXPENDITURE, 1919-1920.

## Land Improvement Loan Fund Expenditure.

Classification—	£	£
Wages ... ..	2,847	
Travelling Allowance ... ..	17	
Camp Allowance ... ..	196	
Subsistence ... ..	124	
Equipment ... ..	522	
Freights and Fares ... ..	297	
Miscellaneous ... ..	88	
		4,091
<i>Pine Planting (Ludlow)—</i>		
Wages, etc. ... ..	696	
Travelling Allowance ... ..	40	
Equipment ... ..	30	
Freights and Fares ... ..	2	
		768
<i>Proposed Pine Plantation, Gnanagara—</i>		
Contracts ... ..	55	
Wages ... ..	25	
Equipment ... ..	9	
Freights and Fares ... ..	1	
		90
<i>Advertising Generally—</i>		
Exhibits ... ..	1,092	
Timber Samples ... ..	55	
Printing ... ..	108	
Miscellaneous ... ..	107	
		1,362
<i>Resumption of Land</i> ... ..		54
<i>Purchase of Land</i> ... ..		1,064
		£7,429

## APPENDIX 1c.

## Forests Improvement and Reforestation Fund.

## REFORESTATION WORK.

## Working Plan No. 1.

General Expenses—	£	£
Wages ... ..	196	
Freights and Fares ... ..	3	
Equipment ... ..	1	
Miscellaneous ... ..	11	
		211

APPENDIX 1c—continued.

Working Plan No. 1.—continued.

<i>Mundaring Reservoir Track—</i>			
Surveys ... ..	158		
Contracts—Clearing ... ..	1,277		
Contracts—Formation ... ..	2,600		
Culverts ... ..	174		
Firewood ... ..	195		
Wages ... ..	594		
Allowances ... ..	56		
Equipment ... ..	376		
Freights and Fares ... ..	15		
Miscellaneous ... ..	123		
		5,568	
<i>Working Plan No. 2—</i>			
Wages ... ..	132		
Equipment ... ..	174		
Fencing ... ..	50		
Freights and Fares ... ..	9		
Miscellaneous ... ..	8		
		373	
<i>Sandalwood Industry—</i>			
Allowances ... ..	11		
Equipment ... ..	2		
Freights and Fares ... ..	51		
		64	
<i>Forest Instruction—</i>			
Equipment, etc. ... ..	104		
Travelling Allowance ... ..	21		
Freights and Fares ... ..	14		
Miscellaneous ... ..	23		
		162	
		£6,378	
RESEARCH WORK.			
<i>Kiln Drying—</i>	£		
Wages ... ..	276		
Equipment, etc. ... ..	321		
Timber ... ..	61		
Fuel ... ..	33		
Miscellaneous ... ..	1		
		692	
<i>Sylviculture</i> ... ..		40	
<i>The Powell Process</i> ... ..		28	
<i>Tan Barks</i> ... ..		27	
<i>Museum</i> ... ..		21	
<i>Timber Tests</i> ... ..		16	
<i>Herbarium</i> ... ..		7	
<i>Forest Products Laboratory</i> ... ..		31	
		862	
Grand Total ... ..		£7,240	

APPENDIX 1d.

Revenue and Expenditure.

The following statement shows the Revenue and Expenditure of the Department since its inception in 1895 :—

Year.	Revenue.		Expenditure.	
	£	s. d.	£	s. d.
1st Jan. to 31st Dec., 1895	3,175	5 2	1,108	5 5
1st Jan. to 31st Dec., 1896	4,838	11 2	2,020	11 5
1st Jan. to 31st Dec., 1897	12,320	6 4	3,489	14 4
1st Jan. to 31st Dec., 1898	30,150	6 3	3,356	5 7
1st Jan. to 31st Dec., 1899	16,999	11 3	2,438	7 5
1st Jan. to 31st Dec., 1900	15,525	19 2	2,648	11 10
1st Jan. to 31st Dec., 1901	18,477	16 2	2,747	6 3
1st Jan. to 31st Dec., 1902	18,752	11 7	4,301	6 1
1st Jan. to 31st Dec., 1903	20,478	9 1	3,789	3 4
1st Jan. to 31st Dec., 1904	20,018	19 4	4,192	16 9
1st Jan. to 31st Dec., 1905	18,479	18 6	5,089	18 6
6 months, 1st Jan. to 30th June, 1906	10,973	18 4	3,385	1 9
1st July, 1906, to 30th June, 1907	22,783	1 5	6,207	15 2
1st July, 1907, to 30th June, 1908	23,498	13 3	8,801	14 3
1st July, 1908, to 30th June, 1909	29,484	3 8	9,030	12 6
1st July, 1909, to 30th June, 1910	31,549	6 11	8,531	0 9
1st July, 1910, to 30th June, 1911	37,477	3 5	8,862	16 8
1st July, 1911, to 30th June, 1912	44,560	10 10	10,469	4 10
1st July, 1912, to 30th June, 1913	48,236	14 0	11,463	2 11
1st July, 1913, to 30th June, 1914	53,038	16 0	12,092	15 3
6 months, 30th June, to 31st Dec., 1914	22,906	0 0	5,468	14 0
1st Jan. to 31st Dec., 1915	45,725	13 9	8,869	15 11
1st Jan. to 31st Dec., 1916	29,820	12 10	9,575	3 2
1st Jan. to 31st Dec., 1917	36,128	17 11	10,263	2 5
6 months, 1st Jan. to 30th June, 1918	22,113	1 8	6,199	1 11
1st July, 1918, to 30th June, 1919	42,050	12 4	10,872	18 3
1st July, 1919, to 30th June, 1920	59,220	4 3	12,737	15 8
	£ 738,785	4 7	£178,013	2 4

It will be seen from the above statement that to the 30th June, 1920, the revenue exceeded the expenditure by the large sum of £560,772 2s. 3d.

APPENDIX 1E.

Statement of timber inspected by the Inspection Branch of The Forests Department during the year ended 30th June, 1920.

REVENUE.

	Inspection Fees.		
	Loads.	Rate.	Amount.
Sawn Jarrah, Heart Out .. ..	43,720	£ s. d. 0 0 9	£ s. d. 1,639 13 0
Hewn Jarrah, Heart Out .. ..	36,008	0 1 0	1,800 8 0
Tuart Logs .. ..	255	0 1 0	12 15 0
Jarrah Beams, Heart In .. ..	3,981	0 0 1	16 11 9
Jarrah Piles .. ..	8,340	0 0 0½	23 3 4
Do. do. .. ..	840	0 0 1	3 10 0
Do. do. .. ..	270	0 0 1½	1 10 0
Do. do. .. ..	3,046	0 0 2	25 7 8
Do. do. .. ..	3,682	0 0 2½	40 18 2
Do. do. .. ..	3,452	0 0 3½	47 18 10
Do. Poles .. ..	1,440	0 0 0½	3 0 0
Do. do. .. ..	2,260	0 0 1	9 8 4
Do. do. .. ..	252	0 0 2	2 2 0
Total .. ..			£3,626 6 1

## APPENDIX 2A.

Production of Mill Timber for Year ended 30th June, 1920.

	Jarrah.		Karri.		Total.	
	Loads.	Cub. ft.	Loads.	Cub. ft.	Loads.	Cub. ft.
Concessions ... ..	45,588	2,279,400	...	...	45,588	2,279,400
Leases ... ..	71,469	3,573,450	...	...	71,469	3,573,450
Permits ... ..	230,367	11,518,350	51,656	2,582,800	282,023	14,101,150
Total ... ..	347,424	17,371,200	51,656	2,582,800	399,080	19,954,000

NOTE.—The logs are measured on the quarter girth system, and the recovery by the mills for jarrah is 45 per cent. and karri 35 per cent., so that the above total represents, in sawn timber, 174,420 loads, or 8,721,000 cubic feet.

Mill Logs.—This statement includes all timber from Crown Lands, Sawmill Permits, Timber Leases and Timber Concessions, but does not include timber cut on Private Property.

## APPENDIX 2B.

Sawn Timber obtained from Private Property for Year ended 30th June, 1920.

	Number.	Loads.
Sawn Timber ... ..	...	2,616
Dump Fruit Cases ... ..	5,929	28
Half Dump Fruit Cases ... ..	700	2
Flat Fruit Cases ... ..	3,356	12
Tuart Logs ... ..	...	83
Banksia ... ..	...	18
Total ... ..	9,985	2,759

## APPENDIX 2c.

Hewn Jarrah Sleepers obtained during Year ended 30th June, 1920.

	Loads.	Cub. ft.
From Crown Lands, Sawmill Permits, etc., inspected and uninspected, on which royalty has been paid ... ..	10,796	539,800
From Private Property, Leases and Concessions, inspected ... ..	21,098	1,054,900
Total ... ..	31,894	1,594,700

NOTE.—The average recovery by the hewer is 25 per cent. of the log, the latter being measured by the quarter girth system. The above total represents 124,576 loads, or 6,378,800 cubic feet in the round.

## APPENDIX 2D.

Timbers (other than Jarrah and Karri) and other Forest Produce obtained from Crown Lands, for Year ended 30th June, 1920.

Name of Timber or other Forest Produce.	Loads.	Tons.
Tuart ... ..	80	...
Banksia ... ..	145	...
Sheoak ... ..	77	...
Blackbutt ... ..	23	...
Marri ... ..	231	...
Wandoo ... ..	3	...
Bullich ... ..	77	...
Pine Thinnings ... ..	20	...
Round Back Sleepers ... ..	311	...
Charcoal * ... ..	...	309
Firewood * ... ..	...	19,589
Total ... ..	967	19,898

\* Brought under Permit System 1-1-1920.

APPENDIX 2E.

Total Timber Production for Year ended 30th June, 1920.

	In the Log.		In the Square.	
	Loads.	Cub. ft.	Loads.	Cub. ft.
Total Milling Timber (Appendix 2A) ... ..	399,080	19,954,000	174,420	8,721,000
Total Sawn Timber from Private Property (Appendix 2B) ... ..	6,131	306,550	2,759	137,950
Total Hewing Timber (Appendix 2c) ... ..	127,576	6,378,800	31,894	1,594,700
Total Miscellaneous Timbers (Appendix 2D) ... ..	2,149	107,450	967	48,350
Total ... ..	534,936	26,746,800	210,040	10,502,000

APPENDIX 2F.

Round Piles and Poles ... .. 144,554 running feet  
Heart-in Beams ... .. 6,222 " "

APPENDIX 2G.

Mining Timber and Firewood Consumed during Year ended 30th June, 1920.

Locality.	Wood Fuel Consumed.	Mining Timber Consumed.	Sleepers.	Total.
	tons.	tons.	No.	tons.
Greenbushes Mining Fields ... ..	9,000	...	...	9,000
Collie Coal Fields ... ..	...	4,664	...	4,664
Metropolitan Area ... ..	138,834	...	...	138,834
Golden Mile, Coolgardie, Norseman, Kunanalling, Golden Ridge and Kanowna ... ..	314,643	7,398	...	322,041
Northern Goldfields, Ora Banda, Comet Vale, Menzies, Kookynie, Laverton, Mt. Morgans Districts ... ..	74,941	2,186	...	77,127
Southern Cross, Marvel Loch, Mt. Rankin, Burbridge, Westonia, Golden Valley, and Bulfinch Districts ... ..	32,985	17,138	...	50,123
Goldfields Water Supply Pumping Stations, Nos. 5, 6, 7, and 8, plus other small pumping plants ... ..	9,762	...	...	9,762
Eastern Goldfields Districts (Household) ... ..	38,107	...	...	38,107
Eastern Goldfields (Bakers) ... ..	15,180	...	...	15,180
Batteries (State and Private) and Factories outside Golden Mile ... ..	8,764	...	...	8,764
Eastern Goldfields Tramways ... ..	13,866	...	...	13,866
Eastern Goldfields Electric Power and Light ... ..	51,064	...	...	51,064
Eastern Goldfields Producer Plants and Blacksmiths (as charcoal) ... ..	1,000	...	...	1,000
Sleepers for tram lines (6ft. 6in. to 7ft. x 7in. x 4in. to 7ft. x 4½in.) ... ..	...	...	2,986	...
	* 708,146	31,386	† 2,986	739,532

\* Exclusive of Mining Timber and Firewood consumed on the Murchison and other Distant Goldfields not mentioned above. † Not included in total.

APPENDIX 2H.

Export of Timber, Tanning Barks, and Sandalwood for Year ended 30th June, 1920.

	Quantity, super. feet.	Value. £
<i>Timber, Undressed (other)—</i>		
Commonwealth of Australia ..	19,100,614	175,086
United Kingdom ..	223,600	1,491
Hong Kong ..	182,900	1,334
Ceylon ..	1,567,000	10,448
New Zealand ..	4,002,400	26,955
India ..	467,000	3,500
South African Union ..	31,843,900	223,041
Egypt ..	2,170,700	14,472
China ..	759,600	5,994
Mauritius ..	458,200	3,342
	60,775,914	465,663
<i>Logs not Sawn—</i>		
South African Union ..	8,200	68
<i>Spokes, Rims (Undressed)—</i>		
Commonwealth of Australia ..	Quantity not recorded	485
<i>Casks and Shooks—</i>		
Commonwealth of Australia ..	do.	18,022

	Quantity not recorded	Value. £
<i>Wood Manufactures, N.E.I.—</i>		
Commonwealth of Australia ..	2,417	
United Kingdom ..	do.	50
United States of America ..	do.	2
		2,469
<i>Laths—</i>	Number only.	
Commonwealth of Australia ..	355,810	959
Total Timber ..		487,666
<i>Sandalwood—</i>	Cwts.	
United Kingdom ..	400	385
Hong Kong ..	173,300	144,871
India ..	1,950	1,860
Straits Settlements ..	81,629	71,522
Java ..	100	115
Japan ..	100	100
China ..	21,416	14,733
		233,586
<i>Tanning Bark—</i>		
Commonwealth of Australia ..	38,673	19,560
United Kingdom ..	3,694	2,561
		22,121
Total Value ..		£743,373



## APPENDIX 2 I.

Timber Imports for Year ended 30th June, 1920.		
Timber and Country of origin.	Quantity, super feet.	Value. £
<i>Dressed, N.E.I.—</i>		
Commonwealth of Australia ..	56,009	1,537
<i>Cut into shape for making boxes and doors—</i>		
Commonwealth of Australia ..	Quantity not recorded	864
<i>New Zealand Pine—</i>		
Commonwealth of Australia ..	111,252	3,199
<i>Logs not Sawn—</i>		
United Kingdom .. .. .	700	4
Java .. .. .	7,100	41
	7,800	45
<i>Timber, Undressed—</i>		
Commonwealth of Australia ..	1,098,924	33,162
New Zealand .. .. .	4,400	153
Straits Settlements .. .. .	406,900	5,277
Japan .. .. .	419,400	4,786
Java .. .. .	9,400	31
United States of America ..	104,300	1,506
	2,043,324	44,965
<i>Veneers, Three-ply—</i>		
Commonwealth of Australia ..	Quantity not recorded	6,319
Japan .. .. .	14,700	373
Russia .. .. .	900	115
	15,600	6,807
<i>Architraves, Mouldings, etc.—</i>		
Commonwealth of Australia ..	Quantity not recorded	1,821
<i>Bent or Cut into Shape—</i>		
Commonwealth of Australia ..	do.	26
United States of America ..	do.	101
		127
<i>Hubs, Other than Elm—</i>		
Commonwealth of Australia ..	Number 268	172
<i>Laths for Blinds—</i>		
Commonwealth of Australia ..	Quantity not recorded	397
<i>Picture and Room Moulding—</i>		
Commonwealth of Australia ..	do.	456
United States of America ..	do.	1,033
		1,489

*Timber Rims, N.E.I.—*

	Quantity, super. feet.	Value. £
Commonwealth of Australia ..	6,421	1,903
<i>Shafts, Poles, and Bars—</i>		
Commonwealth of Australia ..	Quantity not recorded	942
United States of America ..	do.	249
		1,191
<i>Spokes, Dressed or Prepared (not being Hickory)—</i>		
Commonwealth of Australia ..	Number 78,980	1,945
<i>Wood Shooks, N.E.I.—</i>		
Commonwealth of Australia ..	Quantity not recorded	1,229
<i>Wood Doors—</i>		
Commonwealth of Australia ..	Number 2,321	3,168
<i>Empty Barrels and Casks—</i>		
Commonwealth of Australia ..	Quantity not recorded	1,007
United Kingdom .. .. .	do.	3
Spain .. .. .	do.	10
United States of America ..	do.	10
		1,030
<i>Wood Tool Handles—</i>		
Commonwealth of Australia ..	do.	2,207
United Kingdom .. .. .	do.	257
United States of America ..	do.	5,794
		8,258
<i>Oars and Sculls—</i>		
Commonwealth of Australia ..	do.	250
United Kingdom .. .. .	do.	239
Japan .. .. .	do.	65
United States of America ..	do.	298
		852
<i>All Articles (Wood, N.E.I.)—</i>		
Commonwealth of Australia ..	do.	10,236
United Kingdom .. .. .	do.	1,640
Canada .. .. .	do.	37
Palestine .. .. .	do.	7
Straits Settlements .. .. .	do.	50
China .. .. .	do.	29
Holland .. .. .	do.	3
France .. .. .	do.	70
Japan .. .. .	do.	178
United States of America ..	do.	2,181
		14,431
Total Value .. .. .		£95,430

## APPENDIX 2 J.

Quantity of Timber treated by Forest Saw Mills, etc., Exported during the year ended 31st December, 1919.

Timber Undressed.	Karri.	Jarrah.	Inter-State.	New Zealand.	South Africa.	India.	United Kingdom.
	loads.	loads.	loads.	loads.	loads.	loads.	loads.
Logs and Spars in the rough ...	...	75	40	...	35	...	...
Piles Hewn ... .. .	...	466	292	...	174	...	...
Undressed 7½in. x 2½in. to 12in. x 6in.	6,252	41,013	36,467	2,276	7,818	26	678
Undressed, 12in. x 6in. and over							
Undressed, various sizes ...	...	...	...	...	...	...	...
Laths ... .. .	...	...	...	...	...	...	...
Pickets and Palings ... .. .	...	108	108	...	...	...	...
Flooring Boards ... .. .	...	3,330	3,330	...	...	...	...
Paving Blocks ... .. .	...	342	342	...	...	...	...
Sleepers ... .. .	...	9,139	1,588	1,026	6,525	...	...
Sleepers Powellised ... .. .	...	...	...	...	...	...	...
Telegraph Arms ... .. .	333	...	...	...	...	...	333
Total, Undressed ... .. .	6,585	54,473	42,167	3,302	14,552	26	1,011
Timbers Dressed ... .. .	...	...	Nil	...	...	...	...
GRAND TOTAL ... .. .	6,585	54,473	42,167	3,302	14,552	26	1,011

## APPENDIX 2K.

Summary of Exports of Forest Produce since 1836.

Year.	Timber.		Sandalwood.		Mallet Bark.	Year.	Timber.		Sandalwood.		Mallet Bark.				
	Loads.	Value.	Tons.	Value.	Value.		Loads.	Value.	Tons.	Value.	Value.				
1836a...	200	£ 2,500	...	...	£ ...	1882 ...	18,730	93,650	9,605	96,050	...				
1837 ...	...	...	...	...	...	1883 ...	19,940	79,760	7,031	56,250	...				
1838 ...	...	...	...	...	...	1884 ...	17,234	68,936	2,620	20,960	...				
1839 ...	...	...	...	...	...	1885 ...	16,963	67,850	4,527	36,216	...				
1840 ...	...	...	...	...	...	1886 ...	12,523	50,092	3,431	27,450	...				
1841 ...	...	...	...	...	...	1887 ...	7,096	28,384	4,317	34,533	...				
1842 ...	...	...	...	...	...	1888 ...	10,515	42,060	4,470	33,525	...				
1843 ...	...	...	...	...	...	1889 ...	15,770	63,080	6,385	57,465	...				
1844 ...	b	163	...	...	...	1890 ...	23,444	82,052	5,136	51,355	...				
1845 ...	...	...	4	40	...	1891 ...	25,479	89,179	3,760	37,600	...				
1846 ...	51	255	32	320	...	1892 ...	21,653	78,419	5,716	42,870	...				
1847 ...	244	1,120	370	4,444	...	1893 ...	10,259	33,888	3,893	32,160	...				
1848 ...	67	333	1,335	13,353	...	1894 ...	21,274	74,804	2,784	23,430	...				
1849 ...	...	...	...	...	...	1895 ...	25,105	88,146	3,851	30,863	...				
1850 ...	210	1,048	...	...	...	1896 ...	30,912	116,420	6,848	65,800	...				
1851 ...	25	268	219	1,593	...	1897 ...	47,866	192,451	5,852	49,480	...				
1852 ...	141	806	...	...	...	1898 ...	81,723	326,195	4,349	31,812	...				
1853 ...	1,044	5,220	...	...	...	1899 ...	138,271	553,198	4,084	29,719	...				
1854 ...	1,170	7,023	...	...	...	1900 ...	114,508	458,461	5,095	39,038	...				
1855 ...	1,538	12,076	...	...	...	1901 ...	143,012	572,354	8,864	73,931	...				
1856 ...	1,410	9,671	...	...	...	1902 ...	125,135	500,533	7,995	61,771	...				
1857 ...	1,384	9,449	280	2,524	...	1903 ...	154,969	619,705	4,406	37,913	859				
1858 ...	585	2,340	745	7,455	...	1904 ...	161,446	654,949	4,510	25,417	32,876				
1859 ...	1,345	6,051	1,278	17,259	...	1905 ...	174,190	689,943	5,521	38,817	154,087				
1860 ...	1,096	4,932	1,687	16,360	...	1906 ...	c 176,614	708,993	8,848	70,958	140,720				
1861 ...	555	2,497	2,558	24,945	...	1907 ...	c 128,091	511,923	9,212	65,999	98,773				
1862 ...	1,376	7,151	2,393	21,541	...	1908 ...	c 197,390	813,591	9,564	77,668	79,934				
1863 ...	658	2,963	2,807	25,265	...	1909 ...	c 216,609	867,419	4,805	37,456	59,633				
1864 ...	1,166	5,508	2,724	24,520	...	1910 ...	c 241,482	972,698	8,228	70,775	93,733				
1865 ...	3,679	15,693	1,686	13,490	...	1911 ...	c 248,990	986,341	6,907	65,506	83,470				
1866 ...	1,713	6,849	2,965	23,722	...	1912 ...	c 225,942	903,396	3,154	27,533	49,094				
1867 ...	1,135	4,541	2,305	18,442	...	1913 ...	c 272,397	1,089,481	6,260	47,589	47,377				
1868 ...	160	638	3,256	26,045	...	1914d ...	c 125,595	502,153	4,702	39,800	18,197				
1869 ...	3,598	14,273	4,124	32,998	...	1915e ...	c 190,370	808,392	8,375	78,926	6,127				
1870 ...	3,144	17,551	6,112	48,890	...	1916 e ...	108,642	441,991	6,271	61,381	10,208				
1871 ...	4,370	15,304	3,366	26,926	...	1917e ...	77,813	310,893	7,230	72,669	18,959				
1872 ...	740	2,590	3,942	31,536	...	1918e ...	68,725	274,141	6,494	81,834	16,886				
1873 ...	1,363	4,771	6,292	62,916	...	1919e ...	82,715	344,119	8,998	117,072	18,875				
1874 ...	6,912	24,192	7,057	70,572	...	1920 e ...	101,306	487,666	13,945	233,586	22,121				
1875 ...	6,847	23,965	6,646	66,465	...	Total ...	3,992,997	16,199,342	331,205	3,061,661	973,812				
1876 ...	4,381	23,743	6,577	65,772	...	<p>a The exports up to the year 1834 consisted only of supplies to shipping of which no record is kept.</p> <p>b Not available.</p> <p>c Approximate figures only.</p> <p>d Six months ended 30th June.</p> <p>e Year ended 30th June.</p>									
1877 ...	6,723	36,979	4,247	31,851	...										
1878 ...	11,618	63,902	4,675	35,064	...										
1879 ...	12,545	69,742	4,667	35,001	...										
1880 ...	13,251	66,252	5,097	51,970	...										
1881 ...	15,855	79,277	7,716	77,165	...										

## APPENDIX 3A.

Concessions, Leases, Sawmill Permits, Hewing Permits, Firewood Permits, Sawmilling Permits, and Miscellaneous Permits.

The following Return shows the Concessions, Leases, Sawmill Permits, Hewing Permits, Firewood Permits, Sawmilling Permits, and Miscellaneous Permits in existence up to the 30th June, 1920.

## CONCESSIONS.

Concessionaire.	No.	Locality.	Term.	Original Area.	Present Area.
Millar's T. & T. Co., Ltd. ...	12/0	Cockburn Sound ...	1-1-1889 to 31-12-1901 1-1-1902 to 31-12-1915 1-1-1916 to 31-12-1929	250,000	250,000
Millar's T. & T. Co., Ltd. ...	12/1	Canning ...	1-1-1883 to 31-12-1924	100,000	82,750
Millar's T. & T. Co., Ltd. ...	12/2	Sussex ...	15-1-1883 to 14-1-1925	46,000	45,389
Total ...				396,000	378,139

3

## APPENDIX 3A—continued.

## LEASES.

Lessee.	No.	Locality.	Term.	Original Area.	Present Area.
				acres.	acres.
Ainslie, James	145/113	Nelson	1-1-1899 to 31-12-1923	4,480	4,389
Ainslie, James...	149/113	Nelson	1-1-1899 to 31-12-1923	4,480	4,092
Ainslie, James...	150/113	Nelson	1-1-1899 to 31-12-1923	4,480	3,522
Millar's T. & T. Co., Ltd.	186/113	Wellington	1-1-1899 to 31-12-1923	27,000	16,012
Millar's T. & T. Co., Ltd.	227/113	Wellington	1-1-1901 to 31-12-1925	4,480	2,743
Millar's T. & T. Co., Ltd.	228/113	Wellington	1-1-1901 to 31-12-1925	4,480	4,130
Millar's T. & T. Co., Ltd.	229/113	Wellington	1-1-1901 to 31-12-1925	4,480	3,962
Millar's T. & T. Co., Ltd.	230/113	Wellington	1-1-1901 to 31-12-1925	4,480	4,480
Good, Frederick Daniel	244/113	Murray	1-7-1899 to 30-6-1924	17,280	13,259
Good, Frederick Daniel	257/113	Nelson	1-10-1899 to 30-9-1924	33,280	28,876
Millar's T. & T. Co., Ltd.	261/113	Murray	1-10-1899 to 30-9-1924	58,270	22,937
The Timber Corporation, Ltd.	268/113	Nelson	1-10-1899 to 30-9-1924	49,920	33,938
Wittenoom, Edward Horne	269/113	Wellington	1-10-1899 to 30-9-1924	5,000	2,080
Macmurtrie, Wm.	288/113	Wellington	1-7-1900 to 30-6-1925	36,960	12,637
Ainslee, James	291/113	Wellington	1-1-1901 to 31-12-1925	17,920	17,308
Millar's T. & T. Co., Ltd.	296/113	Wellington	1-1-1900 to 31-12-1924	11,520	4,146
Millar's T. & T. Co., Ltd.	297/113	Wellington	1-1-1900 to 31-12-1924	13,440	12,771
Ainslie, James...	299/113	Murray	1-7-1900 to 30-6-1925	19,840	18,795
McNeil, Alexander James	309/113	Wellington	1-4-1901 to 31-3-1926	21,310	793
Wittenoom, Edward Horne	322/113	Murray and Wellington	1-4-1902 to 31-3-1927	44,800	20,000
Wittenoom, Edward Horne	325/113	Wellington	1-4-1902 to 31-3-1927	1,280	1,202
Smith, Henry Teesdale	330/113	Murray	1-7-1902 to 30-6-1927	10,240	7,781
Smith, Henry Teesdale	331/113	Murray	1-1-1903 to 31-12-1927	9,600	7,194
			Total	409,020	247,047

## SAW MILL PERMITS.

Permit Holder.	Original No.	Regranted as No.	Locality.	Term.	Original Area.	Present Area.
					acres.	acres.
Whittaker Bros.	1/11	76/11	North Dandalup	1-7-1915 to 30-6-1925	20,000	20,000
Bunning, Robert	8/11	93/11	Near Donnybrook	1-10-1916 to 30-9-1926	4,700	4,700
Bunning Bros., Ltd.	9/11	94/11	Collie	1-10-1916 to 30-9-1926	10,000	10,123
Preston Valley Saw Mills, Ltd.	10/11	95/11	Noggerup	1-1-1917 to 31-12-1926	19,800	19,732
Swan Saw Mills, Ltd.	14/11	92/11	Preston	1-4-1917 to 31-3-1927	19,000	6,700
Bunning, Robert	15/11	96/11	Near Donnybrook	1-4-1917 to 31-3-1927	5,300	5,300
Swan Saw Mills, Ltd.	19/11	98/11	Noggerup	1-7-1918 to 30-6-1928	1,000	1,000
Bunning Bros., Ltd.	25/11	99/11	Collie	1-7-1918 to 30-6-1928	10,000	10,000
State Saw Mills	27/11		Near Dwellingup	1-1-1909 to 31-12-1920	20,001	18,934
Port & Co., Ltd.	34/11		Waroona	1-7-1910 to 30-6-1921	28,510	28,510
Timber Corporation, Ltd.	35/11		Greenbushes	1-10-1909 to 30-9-1920	6,800	6,800
Bunning Bros., Ltd.	36/11	97/11	Preston	1-4-1917 to 31-3-1927	10,000	10,000
Lewis, Francis Jas.; Reid, F. W. S.	37/11	inc. 51/11	West Collie	1-1-1910 to 31-12-1920	6,000	19,730
Wilgarrup Karri & Jarrah Co., Ltd.	42/11		Bridgetown	1-4-1910 to 31-3-1921	23,000	21,805
Buckingham Bros.	44/11		Muja	1-7-1910 to 30-6-1920	17,960	17,931
State Saw Mills	60/11		Yourdanning	1-4-1912 to 31-3-1922	38,000	38,000
The Kauri Timber Co., Ltd.	61/11	late 12/11	Nannup	1-1-1912 to 31-12-1921	58,000	57,595
Trees, Ltd.	71/11		Collie	1-4-1914 to 31-12-1928	20,028	20,028
Steere, F. W.	72/11		Near Brookhampton	1-7-1914 to 30-6-1924	1,500	1,500
Minister for Works and Trading Concerns	73/11		Bridgetown	1-1-1915 to 31-12-1924	7,000	7,000
Commissioner of Railways	78/11		Near Dwellingup	1-7-1915 to 30-6-1925	81,500	81,235
Minister for Works and Industries	79/11		Wuraming	1-10-1915 to 30-9-1925	38,690	38,550
Do.	80/11		Bingham River	1-10-1915 to 30-9-1925	25,740	20,510
Do.	81/11		Wuraming Hill	1-10-1915 to 30-9-1925	25,878	25,878
Do.	82/11		Near Worsley	1-10-1915 to 30-9-1925	4,750	8,000
Buckingham Bros.	83/11		Near Bingham River	1-7-1916 to 30-6-1926	25,000	20,210
Whittaker Bros.	84/11		North Dandalup	1-1-1916 to 31-12-1925	15,350	15,430
Minister for Works and Industries	85/11		Bridgetown	1-7-1916 to 30-6-1926	79,000	78,520
Do.	86/11		do.	1-7-1916 to 30-6-1926	143,000	142,635
Wandoo Timber Co., Ltd.	89/11		Muja	1-10-1916 to 30-9-1922	37,000	37,000
			Total		802,507	793,356

## APPENDIX 3A—continued.

Permits granted under Timber Regulation No. 14 and in force during the year ended 30th June, 1920.

## HEWING PERMITS.

Permit Holder.	No.	Locality.	Term.		Area.	Area as at 30-6-20.
			From	To		
Johnson, A. M.	1	Noggerup	26-2-17	25-2-21	acres	acres
Tidy, R.	26	Yornup	2-2-18	1-8-19	2,200	2,200
Plavin, C.	27	Dardanup	8-2-18	7-5-21	560	...
Plavin, C.	34	Worsley	10-4-18	9-4-21	3,000	3,000
Plavin, C.	45	Worsley	20-7-18	19-7-19	4,700	4,683
Plavin, C.	48	Worsley	28-8-18	27-8-20	640	...
Forbes, J. A.	51	Hester	10-10-18	20-3-19	940	940
Lewis & Reid	55	Brookhampton	21-10-18	1-2-19	240	...
Plavin, C.	56	Muja	1-11-18	31-10-19	148	...
Plavin, C.	60	Collie	22-2-19	20-2-20	1,250	...
Savage, J.	63	Quilergup Siding	29-3-19	28-3-20	400	...
Bunney, A. R.	65	Kelmscott	14-4-19	13-4-21	1,200	...
Parsons, C. E.	71	Brookhampton	23-5-19	24-11-20	1,000	900
Swan Saw Mills, Ltd.	74	Preston	21-5-19	20-5-20	148	148
Kendall, J. H.	76	Sawyers' Valley	21-5-19	20-5-20	1,050	...
Plavin, C.	85	Muja	18-7-19	30-6-20	201	...
Plavin, C.	92	Quilergup	19-8-19	18-8-20	1,000	1,000
Plavin, C.	102	Noggerup	1-10-19	1-10-20	4,375	4,375
Swan Saw Mills, Ltd.	109	Preston	16-12-19	18-6-20	750	750
Connell, R. C.	124	Bowelling	11-6-20	10-6-21	691	...
Kendall, J. H.	128	Sawyers' Valley	16-5-20	15-5-21	488	488
Plavin, C.	137	Yornup	17-5-20	16-5-21	100	100
					200	200
			Total ...		25,281	18,784

## FIREWOOD PERMITS.

Permit Holder.	No.	Locality.	Term.		Area.	Area as at 30-6-20.
			From	To		
Fleming, D.	16a	Wundowie	12-7-17	30-3-20	acres.	acres.
Lewis & Reid, Ltd.	23	Worsley	14-1-18	13-1-20	236	...
Stubberfield, R. W.	31	Balcatta	20-3-19	19-3-20	1,150	...
Ablett & Barber	36	Jandakot	24-4-18	30-6-20	300	...
Piggott, A.	52	Ravensthorpe	1-10-18	30-9-20	209	209
Fleming, D.	61	Wundowie	31-3-19	30-3-20	110	110
Luisini, T.	62	Marbelup	25-3-19	24-3-21	190	...
Lloyd, J.	64	Marbelup	16-4-19	4-3-20	185	185
Morris, C. G.	66	Albany	30-4-19	29-4-21	1,000	...
Ferguson, J. H.	69	Woorloo	30-10-18	31-12-20	340	340
Georgeff, M.	70	Balcatta	28-4-19	27-4-21	3,900	3,900
Fisher, J. J.	72	Albany	7-5-19	13-3-20	1,200	1,200
Forte, N. G.	73	Redmond	31-5-19	30-5-20	1,900	...
Keighley, J.	77	Albany	12-7-19	24-3-20	1,304	...
Brady & Clancy	78	Albany	9-9-19	8-9-20	770	...
Gabliesh, A. N.	83	Albany	18-7-19	17-7-20	1,290	1,290
Powell, G. S.	84	Albany	18-7-19	17-7-20	450	450
Brown, W.	86	Albany	18-7-19	17-7-20	950	950
Galloway, W.	88	Redmond	18-7-19	22-9-19	827	...
The Perth Firewood Supply Co., Ltd.	89	Redmond	31-8-19	18-5-20	563	...
Bryant & Waters	103	Mundaring	24-9-19	23-9-29	15,841	15,841
Smith & Smith	113	Mahogany Creek	1-10-19	31-3-20	...	...
Kent, G. and others	115	Kalamunda	18-2-20	17-2-21	395	395
Morton, A., and others	116	Sawyers' Valley	1-1-20	31-12-20	4,200	4,200
Weston, F. J., and others	117	Lion Mill	1-1-20	31-12-20	1,300	1,300
Martyr, W., and others	121	Pickering Brook	1-1-20	31-12-20	25,000	25,000
Georgeff, M.	130	Chidlow's Well	1-1-20	31-12-20	4,700	4,700
Rieger, W. H.	131	Balcatta	17-5-20	16-5-21	1,180	1,180
Nicholls, J. H.	135	Kalamunda	27-5-20	26-5-21	300	300
Blamire & Newton	138	Kalamunda	9-6-20	8-6-21	1,500	1,500
			1-6-20	1-6-21	4,400	4,400
			Total ...		75,690	67,450

## APPENDIX 3A—continued.

## SAWMILLING PERMITS.

Permit Holder.	No.	Locality.	Term.		Area.	Area as at 30-6-20.
			From	To		
Bunning Bros., Ltd. ... ..	28	Sawyers' Valley ... ..	8-2-18	7-2-20	1,570	...
Firms, G. C. & F. (3) ... ..	32	Serpentine ... ..	20-3-18	19-3-20	560	...
Payne Bros. ... ..	33	Capel ... ..	27-3-18	4-7-19	176	...
Bunning Bros., Ltd. ... ..	38	Preston Line ... ..	22-5-18	21-11-19	717	...
Plavin, C. ... ..	39	Collie ... ..	24-5-18	23-5-21	780	780
Millars' Timber & Trading Co., Ltd.	40	Mt. Lennard ... ..	15-5-18	14-9-19	6,400	...
Wilson, E. ... ..	44	Woorloo ... ..	16-7-18	27-11-19	707 sq.	miles.*
Bunning Bros., Ltd. ... ..	47	Argyle ... ..	31-7-18	30-7-19	1,740	...
Harper, A. J. ... ..	49	Albany ... ..	16-9-18	15-9-20	1,282	1,282
Connell, W. R. ... ..	50	Hester ... ..	16-9-18	21-6-20	240	...
Plavin, C. ... ..	54	Inglehope ... ..	15-10-18	14-10-28	6,320	7,600
Adelaide Timber Co., Ltd. ... ..	57	Wilga ... ..	28-11-18	30-9-22	15,775	15,775
Foster, A., & Payne, A. W. ... ..	59	Capel ... ..	28-2-19	23-7-19	1,440	...
Bunney, A. R. ... ..	65	Keimscott ... ..	14-4-19	13-4-21	1,000	900
Griffith, E. A. ... ..	75	Bussell Brook ... ..	15-5-19	14-5-22	3,900	3,900
Mitchell & Ryan ... ..	79	Hester ... ..	27-6-19	26-6-20	1,720	1,720
Connell, W. R. ... ..	90	Bridgetown ... ..	19-8-19	18-8-20	1,100	1,100
Swan Saw Mills, Ltd. ... ..	91	Quilergup ... ..	22-8-19	21-8-29	15,800	15,800
Bennett, Stokes, & McSwain ... ..	94	Gledhow ... ..	31-8-19	31-8-20	1,583	1,583
Ryan, J. P. ... ..	95	Hester ... ..	2-9-19	1-9-20	480	480
Smith, A. ... ..	97	Collie ... ..	2-9-19	1-9-22	3,150	3,150
Farley, D. V. C. ... ..	98	Capel ... ..	30-9-19	29-9-22	550	550
Bunning Bros., Ltd. ... ..	99	Collie ... ..	30-9-19	24-3-20	580	...
Keith, A. E. ... ..	100	Hay River ... ..	20-9-19	19-9-20	1,600	1,600
Plavin, C. ... ..	101	Wuraming ... ..	20-11-19	19-11-24	5,000	3,100
Buckingham, Bros. ... ..	106	Muja ... ..	25-11-19	24-11-24	5,200	5,200
Heppingstone, C. R. ... ..	107	Collie ... ..	29-11-19	28-11-24	8,870	8,870
Millars' Timber & Trading Co., Ltd.	108	Dardanup ... ..	18-12-19	17-12-20	12,637	12,637
McSweeney, J. ... ..	110	Boyanup ... ..	8-1-20	7-1-21	480	480
Bunning Bros., Ltd. ... ..	111	Chidlow's Well ... ..	21-1-20	20-1-21	1,450	1,450
Millars' Timber & Trading Co., Ltd.	112	Marrinup ... ..	21-1-20	20-1-21	317	317
Holmes, T. H. ... ..	114	Dwellingup ... ..	25-2-20	24-2-22	2,800	2,800
Mann, A. S. ... ..	118	Pinjarra ... ..	29-3-20	28-3-21	7,724	7,724
Smith, J. F. ... ..	120	Barrabup ... ..	24-3-20	24-3-21	4,850	4,850
Millars' Timber & Trading Co., Ltd.	122	Cookernup ... ..	12-4-20	12-4-21	900	900
Lewis & Reid, Ltd. ... ..	123	Mullalyup ... ..	30-4-20	29-4-21	880	880
Hampel, J. F. W. ... ..	126	Wilgarup River ... ..	31-5-20	30-5-21	1,225	1,225
				Total ...	120,796	106,653

\* 707 square miles not included in total area.

## MISCELLANEOUS PERMITS.

Permit Holder.	No.	Locality.	Term.		Area.	Area as at 30-6-20.
			From	To		
Flay, G. A. ... ..	43	Parry Inlet ... ..	1-7-18	30-6-23	4,500	4,500
Robinson, F. W. ... ..	53	Keysbrook ... ..	1-10-18	30-9-19	3,300	...
Groth, H. A. ... ..	58	Keysbrook ... ..	2-1-19	1-1-20	2,240	...
Ereney, M. R. ... ..	67	West Kimberley ... ..	1-5-19	30-4-22	...	...
The Federal Trading and Engineering Co., Ltd.	80	Pinjarra ... ..	6-6-19	5-6-20	5,000	...
Strevens, J. L. ... ..	81	Various S.W. Districts ... ..	16-6-19	15-6-29	...	...
Keenan, L. H. ... ..	93	Jarrahwood ... ..	18-8-19	22-9-19	2,400	...
Savage, J. ... ..	96	Nannup ... ..	6-9-19	16-1-20	6,745	...
Hall, W. R. ... ..	104	Along Eastern Railway ... ..	1-10-19	30-9-22	500,000	500,000
Banfield, E. B. ... ..	105	Hamel ... ..	14-11-19	30-6-21	26	26
Lyon, D. ... ..	132	Bickley ... ..	25-5-20	24-5-21	200	200
				Total ...	524,411	504,726

## SUMMARY.

	Total Areas.	
	Original.	Present.
	acres.	acres.
Concessions ... ..	396,000	378,139
Leases ... ..	409,020	247,047
Saw Mill Permits ... ..	802,507	793,356
Hewing Permits ... ..	25,281	18,784
Sawmilling Permits ... ..	120,796	106,653
Firewood Permits ... ..	75,690	67,450
Miscellaneous Permits ... ..	524,411	504,726
Grand Total ... ..	2,353,705	2,116,155

APPENDIX 3B.  
LIST OF SAWMILLS.

Name of Sawmill and District.	Type of Mill.	Horse Power of Mill.	Average distance from Stump to Landing.		Average distance from Landing to Mill.		Distance from Mill to Main Line Siding.		Distance from Siding to nearest Port.	Output in loads per day.	Per cent. recovery.	Rate per ton on Sawm Timber to Port of shipment.		Remarks.	
			M.	Ch.	M.	Ch.	M.	Ch.				M.	Ch.		s.
Lewis & Reid, Ltd., Collie	Twin saws	32	0	60	2	40	6	60	38	0	14.4	42.25	6	0	Bunbury.
Bunning Bros., Ltd., Lyall's Mill, Collie	Twin saws	75	0	40	3	0	6	1½	50	0	20	50	9	10	
Adelaide Timber Co., Ltd., Wilga	Twin saws	16	3 to Mill		No bush landing		0	2	58	0	7.5	47	10	10	Recommended operations 1/6/20.
Kauri Timber Co., Ltd., Barabup	Vertical and Twin Traveller	90	0	60	5	0	6	40	25	0	50	50	5	11	
Kauri Timber Co., Ltd., Ellis Creek	Band saw	70	0	60	6	0	13	0	45	0	40	48	6	10	Working on private property, also permit areas.
Wilgarup Karri and Jarrah Co., Ltd., Jarnadup	Vertical saw	75	0	20	5	0	0	10	93	0	30.65	40.02	11	10	
Bunning Bros., Ltd., Argyle	Twin saws and Band saw	50	1	0	7	0	0	12	21	0	14	48	6	4	Closed down.
Preston Valley Sawmills, Ltd., Noggerup	Twin saws	40	1	0	4	0	0	15	49	0	25	50	9	8	
Buckingham Bros., Muja	Twin saws	25	1	0	4	0	0	53	53	0	7½	55	9	11	Working on private property, also permit areas.
Perth Jarrah Sawmills, Ltd., Lion Mill	Band saw	..	1	40	7	0	0	20	37	0	20	..	5	10	
Whittaker Bros., North Dandalup	Twin saws	60	0	70	9	0	3	60	46	0	31	53	6	8	Shipments furnished monthly.
J. H. Patterson, Amphion	Twin saws	30	1	0	2	0	0	40	90	0	12	45	11	6	
State Mill, Waraming	Twin saws	30	1	0	3	25	1	0	92	0	19.5	47	11	10	No. 2 Mill destroyed by fire 12/4/20. Only one working. Working intermittently on private property.
Railway Department Mill, No. 2, Dwellingup	Twin saws	100	1	0	4	0	5	0	70	0	49	47	9	11	
Port & Co., Ltd., Pindalup	Horizontal	30	1	0	2	0	Alongside main line		90	0	13	51	11	8	State Sawmill No. 5 as from 15/4/20. Does not export Jarrah. Cutting for fruit cases and local orders. Worked intermittently during past year.
No. 1 State Mill, Manjimup	Vertical and Twin	80	0	60	6	0	3	60	90	0	31	38.68	11	8	
State Mill, Pemberton, No. 2	Vertical	300	0	40	6	0	17	0	93	0	50	38	9	10	State Sawmill No. 5 as from 15/4/20. Does not export Jarrah. Cutting for fruit cases and local orders. Worked intermittently during past year.
State Mill, Pemberton, No. 3	Twin saws	80	0	40	6	0	17	0	93	0	45	38	11	10	
Smith's Mill, Winnigup Road	Circular saw	10	0	40	..	..	3	40	62	0	20 (per month)	70	7	11	State Sawmill No. 5 as from 15/4/20. Does not export Jarrah. Cutting for fruit cases and local orders. Worked intermittently during past year.
Mitchell & Ryan's Mill, Hester	Circular saw	12	0	60	No landing		2	0	62	0	30 (per month)	45	9	11	
State Sawmills Dept., No. 5, Holyoake	Twin saws	60	0	40	7	0	On main line		78	0	40	48	9	0	
Denmark Timber Co., Denmark	Twin saws	16	3	0	Landing at Mill		2	40	30	0	10	50	..	..	
C. Firns, Serpentine	Twin saws	13	..	..	..	..	5	0	..	..	4	..	..	..	
Timber Corporation, Ltd., Greenbushes	Vertical saw	60	0	40	12	0	2	0	52	0	25	40	9	1	Bunbury. One Mill destroyed by fire about 5/5/1920.
Millar's Timber and Trading Co., Ltd., Jarrahdale	Twin saws—2 mills	700	0	40	20	0	7	0	41	0	80	45	9	9	
Millar's Timber and Trading Co., Ltd., Marrinup	Twin saws	250	0	40	4	0	On main line		68	0	26	45	9	11	Bunbury. Destroyed by fire 5/3/1920. Rebuilding. Expect to restart Sept., 1920.

Millar's Timber and Trading Co., Ltd., No. 1 Spot Mill, Wellington Mills	Spot Mill and Band saw	16	1 to Mill	..	15 0	10 0	5	60	4 9	Bunbury.
Millar's Timber and Trading Co., Ltd., Yarloop	Vertical and Twin saw combined	350	0 40	9 0	9 0	37 0	50	45	8 4	Bunbury.
Millar's Timber and Trading Co., Ltd., Nanga Brook	Twin saws	400	0 40	8 0	28 0	37 0	60	45	10 10	Fremantle. Closed down. Resumed cutting during March, 1920.
Millar's Timber and Trading Co., Ltd., Mornington	Vertical saw and Twin saws	500	0 40	15 0	6 0	26 0	80	45	6 11	Bunbury.
Millar's Timber and Trading Co., Ltd., Kirup, East	Vertical and Twin saws	500	0 40	5 0	13 0	37 0	70	45	8 4	Bunbury. Closed down. Resumed cutting during May, 1920.
Millar's Timber and Trading Co., Ltd., Jarrahwood	Twin saws	40	0 40	8 0	On main line	28 0	20	45	5 1	Busselton. Closed down.
Railway Department, Midland Junction	Band saws	80-100	..	..	..	..	10	50-60	..	Cutting Tuart and Wandoo.
Railway Department, No. 1 Mill, Dwellingup (rented to T. Holmes)	Twin saws	35	0 60	4 40	0 2	70 0	12	48	8 7	Closed down. Resumed cutting about 1/5/1920.
Cooltip Milling Co., Coolup	Circular saw	14	0 60	..	4 0	53 0	3.5	60	7 2	Closed down. Destroyed by fire.
Bethell's Mill, Donnelly River	Twin saws	18	0 50	Landing at Mill	12 40	76 0	10	52	9 11	Closed down.
Bunning Bros., Ltd., Muja	Twin saws	90	1 0	4 0	0 60	51 0	12	50	8 5	
Lewis & Reid, Ltd., Harris River	Twin saws	62	0 60	3 0	7 0	38 0	19	42	..	
Bowman, J. H., Charlie's Creek	Two Circular saws	4	..	..	..	..	a	..	..	
Jones, Thos. B., Mumballup	Circular saw	10	..	..	..	..	c	60	..	
Davers, J. T., Lowden	Circular saw	10	..	..	..	..	d	..	..	
Smith, F. S., Boyanup	Circular saw	12	..	..	..	..	e	50	..	
Martin, R. M., Upper Preston	Circular saw	8	..	..	..	..	1	75	..	
Slattery, B., Ferguson River	Circular saw	4	..	..	..	..	.25	85	..	
Patróni, J., Upper Capel	Circular saw	8	..	..	..	..	1	80	..	
Kirkpatrick, J. K., Charlie's Creek	Circular saw	4	..	..	..	..	g	50	..	
CConnell, W. R., Jayes Road	Spot Mill (1 bench)	8	1 0	Landing at Mill	2 0	67 0	20 (per month)	50	10 4	Cutting fruit cases and general.
Machin, J., Bridgetown	Spot Mill	12	0 40	..	12 0	67 0	4	..	8 4	Cutting fruit cases on private property.
Hill, E. E., Bridgetown	Spot Mill	6	0 40	..	4 0	67 0	2	..	8 4	Cutting fruit cases on private property.
Young, J., Balbarrup	Spot Mill	10	0 30	..	5 0	90 0	1	..	10 8	Cutting fruit cases on private property. Closed down.
Johnston, J., Balbarrup	Spot Mill	12	a	..	No particulars obtainable	..	..	..	..	Cutting fruit cases on private property.
Plavin C., Collie	Spot Mill, Traveller	16	1 0	50ft.	2 40	0 45	1.5	53	8 10	Bunbury.
Lewis & Reid, Ltd., Arklow Mill	Spot Mill	30	1 40	..	0 20	0 38	3	40	8 5	Cutting Sleepers and Scantling on private property.
Star Sawmilling Co., Marrinup	Spot Mill	12	0 60	No bush landing	2 40	68 0	4	50	9 11	Cutting Sleepers and Scantling on private property.
Plavin, C., Inglehope	Twin saws	20	1 40	..	..	78 0	15	48-50	10 0	Fremantle.
Buckingham, J. A., Kelmescott	Twin saws	10	4 1/2 to Mill	..	..	23 0	2 1/2	60	6 7	Cutting building timber and fruit cases on private property.
Bennett, Stokes, & McSwain, Albany	Spot Mill	20	1 10	4 0	2 0	..	1 to 2	..	..	

APPENDIX 3B. (continued).

Name of Sawmill and District.	Type of Mill.	Horse Power of Mill.	Average distance from Stump to Landing.	Average distance from Landing to Mill.	Distance from Mill to Main Line Siding.	Distance from Siding to nearest Port.	Output in loads per day.	Per cent. recovery.	Rate per ton on Sawm Timber to Port of shipment.	Remarks.
			M. Ch.	M. Ch.	M. Ch.	M. Ch.			s. d.	
Day & Co., Sunnyhurst, Nelson	Spot Mill	6	1 to Mill				1			Works intermittently cutting fruit cases on private property.
Harper, A. J., Albany	Spot Mill	12	4 40	4 40						
Miller, T., Thomson's Brook	Spot Mill	6		0 20	4 0	30 0	1	90		Cutting fruit cases on private property.
Port & Co., Ltd., Boardmill, Pindalup	Twin Circular saws	12	1 0		2 0	90 0	4	60	11 8	Fremantle.
Preston Valley Sawmills, Ltd., Lowden	Spot Mill	18	2 0	2 0	1 0	36 0		50	8 1	Cutting Sleepers and Scantling on private property.
Reilly, W., Greenbushes	Circular saw	10	0 40	0 40	3 0	50 0	2	40		Cutting fruit cases on private property for own use.
Hutton, T. G., "Palm Hill," Capel	Spot Mill	6½	0 10		5 0		f	80		Cutting fruit cases on private property for own use.
Stinton, H. S., Roleystone	Spot Mill	10	1 to Mill		2 0	46 0	1	55	9 1	Fremantle.
Rosenhall, A. H., Pinjarra	Spot Mill	5½			0 20	61 0			9 11	Fremantle. Cutting fruit cases. Railway Saw Mills supplies Billets.
Edgeworth & Ferguson, Pinjarra	Spot Mill	10			1 0	55 0			9 11	Fremantle. Cutting fruit cases. Railway Saw Mills supplies Billets.
Federal Trading & Engineering Co., Armadale	Spot Mill	14	2 to Mill		4 40	20 0			6 2	Cutting fruit cases and scantling.
Mann, A. S., Wundowie	Spot Mill	6	1 to Mill			53 0			No timber shipped	Cutting shingles and fruit cases.
Anderson, David, Barton's Mill	Spot Mill	14								
Anderson, David, "Sunshine Mill"	Spot Mill	16	1 to Mill			1 60	6	50	8 5	Fremantle.
McSweeney, J., Boyanup	Spot Mill	14	0 40		4 0	16 0	5	50		Bunbury.
Farley, D. V. C., Goodwood		25	20 <sup>a</sup> to Mill		10 0	16 0	¾	85	5 6	Bunbury.
Ryan, J. P., Hester	Spot Mill	12	0 60	Landing at Mill	1 0	62 0	30 (per month)	50	9 11	

† Stump to Mill. a. 84 fruit cases. b. 100 fruit cases. c. 180 dump cases. d. 300 dump cases. e. 100 dump cases. f. 120 fruit cases. g. 50 fruit cases.



## APPENDIX 3C.

Table showing number of various Timber Worker's Registration Certificates issued, from 1st July, 1919, to 30th June, 1920.

Hewers ... ..	412
Fallers ... ..	301
Haulers ... ..	153
Carters ... ..	40
Managers and Bush Foremen ... ..	36
Teamsters ... ..	8
Swampers ... ..	88
*Firewood ... ..	304
†Charcoal ... ..	5
†Timber Getters ... ..	17
Beam Squarers ... ..	5
Hookmen ... ..	4
Winchmen ... ..	1
Total ... ..	1,374

\* This includes cutters and carters.

† This includes burners and carters.

† Working on Coal Mining Leases, at Colliery

## APPENDIX 3D.

Return of Licenses issued from 1st July, 1919, to 30th June, 1920.

*Managers and Bush Foremen ... ..	9
Firewood ... ..	7,682
Mining Timber ... ..	206
†Sandalwood ... ..	1,496
Timber ... ..	6
Bark Strippers ... ..	64
Fence Post ... ..	4
† Total ... ..	9,467

\* These figures allude to Goldfields only.

† Issue of Sandalwood Licenses ceased on 4th March, 1920.

† The figures for this year show an increase of 2,925 licenses issued, which is partly due to the inclusion of licenses issued outside the Kalgoorlie District.

## APPENDIX No. 4.

List of Herbarium Specimens collected from 1st July, 1919, to 30th June, 1920, and identified by the Government Botanist.

Botanical Name.	Local Name.
<i>Abrus precatorius</i> , Linn. ... ..	Creeper
<i>Acacia aneura</i> , F. v. M. ... ..	Mulga
<i>Acacia cyanophylla</i> ... ..	Black wattle
<i>Acacia heteroclita</i> ... ..	Wattle
<i>Acacia saligna</i> ... ..	Saligna wattle
<i>Aegericas majus</i> , Gaertn. ... ..	Mangrove
<i>Atriplex semibaccata</i> , R. Br. ... ..	Salt bush
<i>Banksia sphaerocarpa</i> , R. Br. ... ..	Banksia
<i>Bauhinia Cunninghamii</i> , Benth. ... ..	Tree
<i>Beaufortia squarrosa</i> , Schau. ... ..	Shrub
<i>Bruguiera gymnorhiza</i> , Lam. ... ..	Black mangrove
<i>Casurina distyla</i> , Vent. ... ..	Sheoak
<i>Ceriops Candolleana</i> , Arn. ... ..	Red mangrove
<i>Crotalaria Cunninghamii</i> , R. Br. ... ..	Bird bush
<i>Eucalyptus decipiens</i> , Endl. ... ..	
<i>Eucalyptus Flocktoniae</i> , Maid. ... ..	White gum
" <i>Lane-Poolei</i> , Maid. ... ..	White gum
" <i>Le Soueffii</i> , Maid. ... ..	Goldfields blackbutt
" <i>occidentalis</i> var. <i>astringens</i> , Maid. ... ..	Mallet
" <i>occidentalis</i> Endl. var. <i>eremophila</i> , Diels. ... ..	Mallee
" <i>Oldfieldii</i> , F. v. M. ... ..	Mallee
" <i>Oldfieldii</i> var. <i>Drummondii</i> , Maid. ... ..	Flooded gum
" <i>Stricklandii</i> ... ..	Tree
" <i>terminalis</i> ... ..	Bloodwood
<i>Ficus, scabra</i> Forst. ... ..	Kared
<i>Grevillea diversifolia</i> , Meissn. ... ..	Shrub
<i>Hakea linearis</i> ... ..	Hakea
<i>Jacksonia furcellata</i> ... ..	Spearwood
<i>Maba humilis</i> , R. Br. ... ..	Ebony
<i>Melaleuca Leucadendron</i> , Linn. ... ..	Cadjuput
<i>Olearia axillaris</i> , F. v. M. ... ..	Shrub
<i>Sesbania grandiflora</i> , Pers. ... ..	Shrub
<i>Solanum simile</i> ... ..	Shrub
<i>Tinospora smilacina</i> , Benth. ... ..	Vine

APPENDIX 5.

Trees raised at and distributed from Hamel State Nursery during the year ended 31st March, 1920.

Botanical Name.	Vernacular Name.	No. of Trees on hand Mar. 31st, 1919.	No. of Trees raised year ending Mar. 31st, 1920.	No. of Trees distributed, Season 1919.					No. of Trees on hand Mar. 31st, 1920.
				Sold to Public.	Distributed Free.	Raised for Plantations.	Otherwise disposed of.	Total.	
Acacia acola			61						61
" acuminata	Raspberry Jam Tree	182	1,392	44			38	82	1,492
" Baileyana	Cootamundra Wattle	1,030	672	832	63		135	1,030	672
" buxifolia			18						18
" dealbata	Silver Wattle	700	320	569	28		103	700	320
" decurrens	Sydney Wattle	477	110	273	80		124	477	110
" elata	Cedar Wattle	272	240	187	36		49	272	240
" leprosa	Seville Wattle		19						19
" longifolia	Long-leaved Golden Wattle		94						94
" melanoxylon	Blackwood	192	40	89			103	192	40
" montana	Mountain Acacia		42						42
" normalis	(syn.) Acacia decurrens	153			50		103	153	
" podalyriacifolia	Mount Morgan Silver Wattle	345	204	154	134		57	345	204
" pruinosa	Frosty Wattle	67			50		17	67	
" pycnantha	Golden Wattle	689	573	548	41		100	689	573
" saligna	West Australian Coastal Wattle	150		26			124	150	
" spectabilis	Mudgee Wattle		18						18
Agathis australis	New Zealand Kauri Pine	7							7
Agonis flexuosa	West Australian Peppermint	1,309	592	672	122		515	1,309	592
Araucaria Bidwilli	Bunya Bunya	472		35	30			65	407
" excelsa	Norfolk Island Pine	851	12	158	25		4	187	676
Callitris robusta	Cypress Pine	313		123	2			125	188
Castanospermum australe	Moreton Bay Chestnut	25					1	1	24
Casuarina stricta	Drooping Sheoak	72		10	26			36	72
Ceratonia siliqua	Carob Bean	1,780	371	488	50		940	1,478	673
Cinnamomum camphora	Camphor Laurel	1,170	439	529	84			613	996
Cupressus Benthani	Bentham's Cypress	280		250	26		4	280	
" Knighti	Knight's Cypress	177	428	165	11			177	428
" lusitanica	Busaco Cedar	1,206	976	1,130	73		3	1,206	976
" macrocarpa	Monterey Cypress	11,914	13,442	11,213	674		27	11,914	13,442
" sempervirens	Mediterranean Cypress	957	861	894	44		6	944	874
" torulosa	Nepal Cypress	850	533	793	12		17	822	561
Cytisus prolifer	Tree Lucerne	110			92		18	110	
Dracaena Draco	Dragon's Blood Tree	62		5	31			36	26
Erythrina indica	Coral Tree	74					34	34	40
Eucalyptus alba	Ridge Gum		142						142
" Bosistoana	Gippsland Grey Box	56			50		6	56	
" botryoides	False Mahogany	266	304	151	22		93	266	304
" citriodora	Lemon Scented Gum	626	541	399	12		215	626	541
" cladocalyx	Sugar Gum	5,875	5,240	5,603	111		161	5,875	5,240
" ficifolia	Red Flowering Gum	2,058	3,030	1,834	87		137	2,058	3,030
" Globulus	Tasmanian Blue Gum	856	738	805	21		30	856	738
" gomphocephala	Tuart		25						25
" leucoxydon	White Ironbark	56			50		6	56	
" longifolia	Woolly Butt	53			50		3	53	
" macrocarpa	Sand Plain Gum	751		224	81		174	479	272
" maculata	Spotted Gum	58		26	28		4	58	
" melliodora	Yellow Box	126		23	2		60	85	41
" obliqua	Messmate	54			50		4	54	
" paniculata	Queensland Ironbark		60						60

" polyanthemus	Red Box	51	..	..	50	..	1	51	..	43
" Preissiana	Preiss's Gum	..	43	..	..	..	..	..	..	11
" pyriformis (red)	Pear-shaped-fruited Gum	110	..	19	24	..	56	99	..	10
" pyriformis (yellow)	" "	130	..	9	8	..	103	120	..	16
" regnans	Giant Gum	26	..	..	24	..	2	26	..	..
" resinifera	Kino Gum Tree	..	16	..	..	..	..	..	..	..
" robusta	Swamp Mahogany	56	..	..	52	..	4	56	..	..
" rostrata	Murray River Red Gum	56	..	..	50	..	6	56	..	..
" tereticornis	Forest Red Gum	56	..	..	50	..	6	56	..	36
" tetragona	Four-angle-fruited Gum	..	36	..	..	..	..	..	..	248
" tetraptera	Broad-leaved Mallee	130	248	109	13	..	8	130	..	..
" torquata	Coolgardie Gum	162	..	20	24	..	118	162	..	..
" sideroxylon	Black Ironbark	48	..	..	48	..	..	48	..	..
Ficus australis	Port Macquarie Fig	1,856	..	266	24	..	50	340	1,516	..
" macrophylla	Moreton Bay Fig	2,455	..	200	4	..	11	215	2,240	..
Grevillea robusta	Silky Oak	455	..	190	18	..	6	214	241	..
Hakea eucalyptoides	Flowering Hakea	310	410	240	53	..	7	300	420	..
" laurina	Emu Tree	59	..	30	4	..	25	59	..	120
Jacaranda mimosifolia	Palixander Tree	136	61	61	16	..	..	77	..	..
Juglans nigra	Black Walnut	166	..	..	..	..	166	166	..	114
Juniperus Bermudiana	Bermuda Pencil Cedar	118	..	4	..	..	2	2	..	82
" Cedrus	Pencil Cedar	84	..	87	2	..	..	89	..	733
Lagunaria Patersoni	Pyramid Tree	822	..	..	..	..	..	..	..	11
Leucadendron argenteum	Silver Tree of South Africa	11	..	..	..	..	15	671	2,005	..
Melia umbraeculiformis	Pride of India	1,676	1,000	589	67	..	25	53	..	17
Passiflora edulis	Passion Fruit	70	..	12	16	..	2	2	..	..
" quadrangularis	Granadilla Fruit	2	..	..	..	..	2	2	..	..
Pinus Canariensis	Canary Island Pine	729	570	443	30	51	205	729	570	..
" Pinaster	Cluster Pine	17,260	18,238	1,330	24	15,500	406	17,260	18,238	..
" insignis	Monterey Pine	15,100	16,190	12,842	858	..	1,400	15,100	16,190	..
" halepensis	Aleppo Pine	5,030	3,840	4,133	42	..	855	5,030	3,840	..
Pittosporum eugenoides	..	12	..	..	..	..	2	2	..	10
" undulatum	Victorian Native Laurel	1,873	960	1,211	34	..	36	1,281	1,552	..
Platanus occidentalis	Western Plane	5,750	..	488	4	..	14	506	5,244	..
Populus alba	Silver Poplar	126	..	39	20	..	67	126	..	211
Prosopis juliflora	Algaroba Bean	430	..	2	216	..	1	219	..	214
Quercus Aegilops	Valonio Oak	..	214	..	..	..	..	..	..	419
" lusitanica	Portuguese Oak	870	..	85	..	..	366	451	..	..
" Suber	Cork Oak	60	..	60	..	..	..	60	..	1,089
Robinia pseudo acacia	False Acacia	2,000	600	352	51	..	1,108	1,511	..	..
Hibiscus Sabdariffa	Rosella Fruit	2	..	..	..	..	2	2	..	32
Salix alba	Huntingdon Willow	..	32	..	..	..	..	..	..	30
Salix alba huntingdon	" "	..	30	..	..	..	..	..	..	18
" coerulea	" "	..	18	..	..	..	..	..	..	23
" purpurea	Bitter Willow	23	..	..	..	..	..	..	..	20
" nigra	Black Willow	20	..	..	..	..	..	..	..	43
" viminalis	Common Osier of Europe	43	..	..	..	..	..	..	..	992
Schinus Molle	Pepper Tree	1,432	963	1,325	44	..	34	1,403	2,692	..
Sterculia heterophylla	Kurrajong	2,625	1,400	881	9	..	443	1,333	394	..
" acerifolia	Flame Tree	350	183	131	..	..	8	139	67	..
Syncarpia laurifolia	Turpentine Tree	70	..	2	..	..	1	3	12	..
Telopea speciosissima	New South Wales Waratah	13	..	..	1	..	..	1	435	..
Thuya occidentalis	Arbor Vitae	462	..	8	14	..	5	27	192	..
" orientalis	" "	193	..	..	..	..	1	1	529	..
Tristania conferta	Brush Box	877	..	316	..	..	24	348	149	..
Xylomelum angustifolium	W.A. Native Pear	..	149	..	..	..	..	..	..	..
		101,116	76,738	53,736	4,242	15,551	9,043	82,580	95,274	

## APPENDIX 6.

List of Trees planted in the Hamel State Nursery Arboretum.

Botanical Name.	Vernacular Name.	Native Habitat.
Acacia Acinacea		Victoria and South Australia
" Acola		
" acuminata	Raspberry Jam	Western Australia
" aspera		New South Wales and Victoria
" Baileyana	Cootamundra Wattle	New South Wales
" cusifolia		
" dealbata	Victorian Silver Wattle	South-Eastern Australia and Tasmania
" decurrens		
" elata	Sydney Green Wattle	New South Wales
" horvistri	Cedar Wattle	New South Wales
" leprosa		
" longifolia		Victoria and New South Wales
" melanoxylon	Blackwood	Eastern Australia
" microbotrya, Benth.	Manna Wattle	Victoria and Tasmania
" Montana	Mountain Wattle	Western Australia
" normalis		South Australia and New South Wales
" podalyriaefolia	Normal Sydney Green Wattle	New South Wales and Queensland
" pruinosa	Mount Morgan Silver Wattle	Queensland
" pycnantha		Eastern Australia
" saligna	Golden Wattle	Victoria and South Australia
" spectabilis	Coastal or Weeping Wattle	Western Australia
Agonis flexuosa	Peppermint	New South Wales and Queensland
Araucaria Bidwilli	Bunya Bunya Pine	Western Australia
Callitris robusta	Cypress Pine	Queensland
Castanospermum australe	Black Bean, Moreton Bay Chestnut	Australia
Casuarina stricta	Drooping Sheoak	Queensland
Ceratonia siliqua	Carob Bean	South-Eastern Australia
Cinnamomum camphora	Camphor Laurel	Mediterranean
Cupressus Benthami	Bentham's Cypress	China and Japan
" Knighti	Knight's Cypress	Mexico
" lusitanica	Busaco Cedar	United States of America
" macrocarpa	Monterey Cypress	Mexico
" sempervirens (horizontalis)	Mediterranean Cedar	United States of America
" torulosa	Nepal Cypress	Mediterranean
Erythrina indica	Coral Tree	India
Eucalyptus alba, Reinw.	Ridge Gum	New South Wales
" bosistoiana	Gippsland Grey Box	Western Australia
" calycogona, Turcz.	Mallee	South-Eastern Victoria
" calycogona, Turcz. var. gracilis, colletiodes, A. Cunn.	Snap and Rattle	Western Australia
" Campaspe, S. le M. Moore	Gimlet Wood	Western Australia
" citriodora	Lemon-scented Gum	Queensland
" cladocalyx	Sugar Gum	South Australia and Victoria
" clelandi, Maiden	Goldfields Blackbutt	Western Australia
" coccifera		Tasmania
" cornuta	Yate	Western Australia
" ficifolia	Red Flowering Gum	Western Australia
" fœcunda, Schau.	Mallee	Western Australia
" fœcunda, var. loxophleba (Benth.), Maiden	York Gum or Mallee	Western Australia
" globulus	Blue Gum	Tasmania and Victoria
" gomphocephala	Tuart	Western Australia
" leucoxyton	White Ironbark	Victoria, South Australia, and New South Wales
" longifolia	Woolly Butt	Eastern Australia
" macrocarpa	Sand Plain Gum	Western Australia
" maculata	Spotted Gum	New South Wales and Queensland
" megacarpa	Western Australian Blue Gum	Western Australia
" melliodora	Yellow Box	New South Wales and Victoria
" obliqua	Messmate	South-Eastern Australia and Tasmania
" occidentalis	Brown Mallet	Western Australia
" oleosa, F. v. M. var. longicornis, F. v. M.	Morrell	Western Australia
" paniculata	Red Iron Bark	New South Wales
" polyanthemous	Red Box	South-Eastern Australia
" Priessiana		Western Australia
" pyriformis (red)	Flowering Mallee	Western Australia
" " (yellow)	Flowering Mallee	Western Australia
" redunda	Wandoo	Western Australia

## APPENDIX 6.—List of Trees planted in the Hamel State Nursery Arboretum—continued.

Botanical Names.	Vernacular Names.	Native Habitat.
<i>Eucalyptus redunca</i> , Schau (Affin) var. <i>elata</i> , Benth.	White Gum or Wandoo .. ..	Western Australia
" <i>regnans</i> .. ..	Blackbutt and Mountain Ash .. ..	South-Eastern Australia
" <i>resinifera</i> .. ..	Red Mahogany .. ..	New South Wales and South Queensland
" <i>rostrata</i> .. ..	Southern Australian Redgum .. ..	Southern Australia
" <i>salubris</i> , F. v. M. .. ..	Gimletwood .. ..	Western Australia
" <i>sideroxylon</i> .. ..	Red Ironbark .. ..	South-Eastern Australia
" <i>tereticornis</i> .. ..	False Mahogany .. ..	Eastern Australia
" <i>tetragona</i> .. ..	.. ..	Western Australia
" <i>tetraptera</i> .. ..	Broad-leafed Mallee .. ..	Western Australia
" <i>torquata</i> .. ..	Goldfields Red Flowering Gum .. ..	Western Australia
" <i>torquata</i> , Leuhn. .. ..	Goldfields Red Flowering Gum .. ..	Western Australia
" <i>viminialis</i> .. ..	Manna Gum .. ..	South-Eastern Australia
<i>Ficus australis</i> .. ..	Port Macquarie Fig .. ..	New South Wales and Queensland
<i>Ficus macrophylla</i> .. ..	Moreton Bay Fig .. ..	New South Wales and Queensland
<i>Grevillea robusta</i> .. ..	Silky Oak .. ..	Queensland
<i>Hakea eucalyptoides</i> .. ..	Flowering Hakea .. ..	South-Eastern Australia
<i>Hakea laurina</i> .. ..	Emu Tree .. ..	Western Australia
<i>Jacaranda mimosifolia</i> .. ..	Palixander Tree .. ..	India
<i>Juniperus Bermudiana</i> .. ..	Pencil Cedar .. ..	Bermuda Island
" <i>cedrus</i> .. ..	Pencil Cedar .. ..	Canary Islands
<i>Langunaria Patersoni</i> .. ..	Pyramid Tree .. ..	New Zealand
<i>Leucadendron argenteum</i> .. ..	Silver Tree .. ..	South Africa
<i>Pinus canariensis</i> .. ..	Canary Island Pine .. ..	Canary Islands
<i>Pittosperum eugenioides</i> .. ..	.. ..	New Zealand
<i>Pittosperum undulatum</i> .. ..	Victorian Native Laurel .. ..	South-Eastern Australia
<i>Prosopis juliflora</i> .. ..	Algaroba or Mesquite Tree .. ..	Western United States of America
<i>Sterculia acerifolia</i> .. ..	Flame Tree .. ..	Queensland
<i>Syncarpia laurifolia</i> .. ..	Turpentine Tree .. ..	Queensland and New South Wales
<i>Thuja occidentalis</i> .. ..	Arbor Vitæ .. ..	North America
<i>Thuja orientalis</i> .. ..	Arbor Vitæ .. ..	China and Japan
<i>Tristania conferta</i> .. ..	Brush Box .. ..	New South Wales and Queensland

## APPENDIX 7.

The Assistant Entomologist to the Department of Agriculture (Mr. J. Clark) has prepared the nucleus of a departmental collection of forest insects, especially those of economic importance.

The majority of the following insects have been donated by Mr. Clark from his private collection:

## COLEOPTERA.

## BOSTRYCHIDÆ—

Bostrychopsis jesuita ... ..	Fab.
Xylothrips religiosa ... ..	Boisd.
Xylopsocus gibbicollis ... ..	Macl.
Xylobosea bispinosa ... ..	Macl.
Xylion collaris ... ..	Erich.
Rhizopertha dominica ... ..	Fab.

## SCOLYTIDÆ—

Platypus australis ... ..	Chp.
Xyleborus hirsutus ... ..	Lea.
Tomicus solidus ... ..	Erich.

## CROIDÆ—

Lycetus brunneus ... ..	Steph.
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## CERAMBYCIDÆ—PRIONIDÆ—

Eurynassa australis ... ..	Boisd.
Diocleides prionides ... ..	Thoms.

## CERAMBYCIDÆ—

Xystrocera virescens ... ..	Newm.
Pachydissus boops ... ..	Blackb.
Pachydissus sericus ... ..	Newm.
Phoracantha semipuncta ... ..	Fab.
Tryphocaria superans ... ..	Pasc.
Epithora undulata ... ..	Hope.
Epithora dorsalis ... ..	Macl.
Atesta angasi ... ..	Pasc.
Colecoptus senio ... ..	Newm.
Coptocercus politus ... ..	Pasc.
Bethelium signiferum ... ..	Newm.
Adrium artifex ... ..	Newm.
Bardistus cibarius ... ..	Newm.
Piesarthrus laminosus ... ..	Newm.
Uracanthus triangularis ... ..	Hope.
Stenoderus suturalis ... ..	Ol.
Trichomesia newmani ... ..	Pasc.
Hesthesis cingulata ... ..	Kirby.
Eroschema poweri ... ..	Pasc.

## LAMIIDÆ—

Symphyletes lateralis ... ..	Pasc.
Symphyletes pedicornis ... ..	Fab.
Ancita sparsus ... ..	Pasc.
Ancita didyma ... ..	Blackb.
Ancita varicornis ... ..	Germ.

## CURCULIONIDÆ—

## BRACHYDERIDÆ:

Evas acuminata ... ..	Pasc.
Rhadinosomus lacordairei ... ..	Pasc.

## LEPTOSIDES—

Catasarcus rufipes ... ..	Fahs.
Catasarcus griseus ... ..	Pasc.
Polyphrades laticollis ... ..	Fahs.
Leptops colossus ... ..	Pasc.
Leptops squalidus ... ..	Bohem.

## GONIPTERIDÆ—

Oxyops fasciata ... ..	Boisd.
Syarbis porcatus ... ..	Lea.

## DIABATHRARIIDÆ—

Strongylorrhimus ochraceus ... ..	Schon.
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## HYLOBIIDÆ—

Orthorrhinus cylindrirostris ... ..	Fab.
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## ERIRHINIDÆ—

Nemestra incerta ... ..	Pasc.
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## BELLIDÆ—

Belus suturalis ... ..	Boisd.
Belus acaciæ ... ..	Lea.
Rhinotia hæmoptera ... ..	Kirby.

## AMALACTIDÆ—

Trans vigorsi ... ..	Bohem.
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## AMYCTERIDÆ—

Acantholophus suturalis ... ..	Bohem.
Acantholophus amycteroides ... ..	Macl.
Acantholophus maximus ... ..	Macl.

## TERMITES (WHITE ANTS)—

Coptotermes lacteus ... ..	Frogg.
Coptotermes michaelsoni ... ..	Silv.
Eutermes occasus ... ..	Silv.
Eutermes apiocephalus ... ..	Silv.
Eutermes fimipennis ... ..	Frogg.
Hamitermes obeuntes ... ..	Silv.
Leucotermes ferox ... ..	Silv.

## APPENDIX No. 8.

## Particulars of Prosecutions.

Nature of Offence.	Fines.	Remarks.
	£ s. d.	
Unlawfully cutting under-sized timber ... ..	5 0 0	And costs.
Unlawfully cutting sleepers from under-sized trees ... ..	5 0 0	And costs.
Unlawfully cutting timber on Crown Lands ... ..	1 0 0	And costs.
Unlawfully removing firewood from State Forest ... ..	...	Withdrawn; defendant to pay costs.
Unlawfully cutting firewood on State Forest ... ..	5 0 0	And costs; in default one month.
Unlawfully cutting firewood on State Forest ... ..	5 0 0	And costs; in default one month.
Unlawfully removing young green trees from State Forest ... ..	...	Case dismissed without costs.
Unlawfully removing young green trees from State Forest ... ..	5 0 0	And costs.
Unlawfully cutting Tuart logs in No. 2 State Forest ... ..	5 0 0	And costs.
Unlawfully cutting wood without a license, at No. 7 Pumping Station ... ..	5 0 0	And costs; in default 14 days.
Unlawfully cutting under-sized timber ... ..	5 0 0	And costs.
Unlawfully cutting green wood on Broad Arrow State Forest ... ..	5 0 0	And costs; in default 14 days.
Unlawfully felling under-sized Jarrah on Timber Lease ... ..	5 0 0	And costs.