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1914.

WESTERN AUSTRALIA.

ANNUAL REPORT

OF THE

WOODS AND FORESTS DEPARTMENT

FOR THE

YEAR ENDED 30TH JUNE, 1914,

BY

C. G. RICHARDSON.

ACTING INSPECTOR GENERAL OF FORESTS.

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

[SECOND SESSION OF 1914.]

PERTH:

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1914

WOODS AND FORESTS DEPARTMENT.

REPORT BY THE ACTING INSPECTOR GENERAL OF FORESTS.

Woods and Forests Department,
Perth, 8th December, 1914.

The Hon. the Minister for Mines.

Sir,

I have the honour to submit my fifteenth Annual Report upon the operations of the Woods and Forests Department for the financial year ended 30th June, 1914.

I have, etc.,

C. G. RICHARDSON,
Acting Inspector General of Forests.

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 January to 31st December, 1895	3,175	5	2	1,108	5	5
1st January to 31st December, 1896	4,838	11	2	2,020	11	5
1st January to 31st December, 1897	12,320	6	4	3,489	14	4
1st January to 31st December, 1898	30,150	6	3	3,356	5	7
1st January to 31st December, 1899	16,999	11	3	2,438	7	5
1st January to 31st December, 1900	15,525	19	2	2,648	11	10
1st January to 31st December, 1901	18,477	16	2	2,747	6	3
1st January to 31st December, 1902	18,752	11	7	4,301	6	1
1st January to 31st December, 1903	20,478	9	1	3,789	3	4
1st January to 31st December, 1904	20,018	19	4	4,192	16	9
1st January to 31st December, 1905	18,479	18	6	5,089	18	6
6 months, 1st January 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	29,434	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	63,038	16	0	12,092	15	3
	480,820	1	10	114,026	11	0

It will be seen from the above statement that to the 30th June, 1914, the revenue exceeded the expenditure by the large sum of £366,793 10s. 10d.

Revenue and Expenditure for the year ended 30th June, 1914.

The revenue derived from the forests of the State for the year under review amounted to the large sum of £53,038 16s., which is an increase of £4,802 2s. over that of the previous year, and is the highest revenue ever received from timber during the history of Western Australia.

The details of the revenue for the years ended 30th June, 1913 and 1914 respectively, are as follows:—

	1912-13			1913-14.		
	£	s.	d.	£	s.	d.
Rents on timber leases	11,542	5	0	9,196	14	9
Timber licenses, royalty on timber, and sandalwood	32,467	3	2	35,834	14	3
Timber inspection fees	4,227	5	10	8,007	7	0

The revenue from royalty, license fees, and inspection fees has been markedly increasing every month throughout the year under review, it having for the month of June reached the large amount of £10,737 15s. 2d., about £4,000 in advance of last year.

No doubt the payment of inspection fees in addition to royalty upon timber procured from Crown lands, which came into vogue in August, 1913, accounts for a large proportion of the increase.

The total expenditure of the Department for the year ended the 30th June last amounted to £12,092 15s. 3d., the details of which are as follows:—

	£	s.	d.
Salaries and allowances	9,545	9	4
Maintaining State Nursery, Pine, Wattle, and Sandalwood Plantations	223	19	1
Incidental expenses	2,190	16	5
Workers' compensation	60	0	0
Re-afforestation	72	10	5
	£12,092	15	3

PINE PLANTING.

The Government being anxious to continue the planting of softwoods so as to make the State independent of outside supplies, which are yearly rapidly increasing in price, approved of the further extension of the pine planting at Ludlow, in the Busselton district, during the past season.

About 80,000 pines were planted out over an area of 150 acres, and given a good season the young trees should establish themselves firmly before the hot weather comes on.

It is needless to say that this plantation will be viewed with much interest by the State at large, and, if successful, will no doubt encourage future administrations to form other large plantations throughout the South-West.

We know, of course, that certain kinds of pines will grow luxuriantly in various parts of the State, but our object is to prove that the large areas of poor sandy country throughout our coastal districts can be profitably utilised by growing softwoods of commercial value.

Mr. D. E. Hutchins, late Chief Conservator of Forests in South Africa, who was on a recent visit here, was most pleased with the results at the Hamel and Ludlow plantations, and astonished at the growth the pines had made there.

The expenditure in connection with pine planting for the year under review amounted to £1,920, or £12 16s. per acre for the 150 acres planted. This includes cost of clearing, ploughing, and planting.

As in the Eastern States as much as £250 per acre has been returned, after 20 years, from some of their plantations, pine planting here may be safely regarded as a most payable proposition.

STATE NURSERY.

The following list shows the various kinds and numbers of trees raised this season at the State Nursery, Hamel:—

List of Trees and Shrubs raised in the State Nursery.

Agonis flexuosa	Peppermint (W.A.)	889
Acacia Baileyana	Silver Weeping Wattle (N.S.W.)	3,273
Acacia decurrens	Black Wattle (N.S.W.)	3,274
Acacia dealbata	Silver Wattle (Queensland)	3,274
Acacia pycnantha	Golden Wattle	..
Araucaria Bidwilli	Queensland Pine	60
Araucaria excelsa	Norfolk Island Pine	2,618
Cerantonia siliqua	Carob Bean	2,416
Cupressus (of sorts)	Cypress	10,936
Eucalyptus citriodora	Lemon-scented Gum (Queensland)	1,044
Eucalyptus corynocalyx	Sugar Gum (S.A.)	6,676
Eucalyptus ficifolia	Red-flowering Gum	2,894
Ficus Australis	Pt. Macquarie Fig	869
Ficus macrophylla	Morton Bay Fig	904
Lagunaria Pattersonii	Pyramid Tree	100
Phoenix dactylifera	Date Palm	700
Schinus molle	Pepper Tree	9,430
Grevillea robusta	Silky Oak	760
Thuja occidentalis	Northern White Cedar (Arbor vitae)	880
Laurus Camphora	Camphor Laurel	2,106
Sterculia	Kurrajongs (of sorts)	5,149
Robenia Pseudo Acacia	False Acacia	4,680
Melia Azedarach	Pride of India	4,260
Platanus orientalis	Plane Tree	1,030
Pinus insignis	Remarkable Pine	118,090
Alberia Caffra	Kei Apple	1,800
Acacia Melanoxydon	Blackwood	462
Sterculia Acerifolia	Queensland Flame Tree	222
Eucalyptus Globulus	Blue Gum	4,011
Dracæna Draco	Dragon's Blood	116
Quercus Robur	English Oak	114
Agave rigida	Sisal Hemp	..
Eucalyptus macrocarpa	Sand Plain Gum	646

193,683

The cost of the maintenance of the Nursery for the year under review amounted to only £796 3s. 3d., and the value of the trees raised for distribution and planting out may, at a low estimate, be valued at £6,667.

The State Nursery is now a most attractive spot, reflecting great credit on Mr. McFarlane, the manager, and I desire to take this opportunity of placing on record my appreciation of the excellent work done by him.

DISTRIBUTION OF TREES.

During the season numerous applications were received for trees for planting in public parks, Government reserves, State school grounds, churches, cemeteries, municipalities, road boards, etc., etc., and from residents and settlers throughout the State.

The following list shows the number of trees and the various public bodies to which same were supplied during the planting season:—

Name.	Towns and Country.	Goldfields and Nor'-West.
Board of Health	1,709	..
Churches	1,217	150
Convents	466	..
Cemeteries	250	..
Government Institutions	347	118
King's Park	456	..
Municipalities	13,902	198
Progress Associations	5,290	248
Parliament House	539	..
Road Boards	23,670	90
Railways	3,171	205
Schools	4,606	278
Zoological Gardens	1,802	..
Settlers	35,691	1,409
Agricultural Department	1,434	..
Charitable Institutions	860	..
Recreation Reserves	963	..
"Dulhi Gonyah" Mission	25	..
Agricultural and Horticultural Societies	1,083	..
	97,481	2,696

From the above list it will be seen that during the season the total number of trees distributed throughout the State amounted to 100,177.

This is 7,008 in excess of those distributed last year, and shows that the public are each year becoming more interested in arboriculture.

TIMBER IMPORTS.

Through the courtesy of the Collector of Customs I am enabled to furnish the following figures

showing the timber imports for the years 1913 and 1914.

The value of the timber of various species and sizes imported into Western Australia during the year ended the 30th June, 1913, amounted to £119,970, and for the year ended the 30th June, 1914, the value of the imports came to £140,097, being an increase of £20,127 as compared with the previous year.

TIMBER EXPORTS.

The following returns show the quantity and value of the timber exported from Western Australia beyond the Commonwealth during the years ended the 30th June, 1913 and 1914, respectively, and the various countries to which same was exported:—

Year ended 30th June, 1913.			Year ended 30th June, 1914.		
Countries.	Quantity.	Value.	Countries.	Quantity.	Value.
TIMBER—(Undressed):			TIMBER—(Undressed):		
United Kingdom ..	super. ft. 11,297,082	£ 66,070	United Kingdom ..	super. ft. 18,596,502	£ 128,169
Ceylon	937,606	6,494	Ceylon	2,266,023	15,834
India	24,492,165	163,161	India	26,066,741	170,714
New Zealand ..	10,544,588	70,298	New Zealand ..	24,191,145	160,870
Egypt	49,851	333	Egypt	135,516	905
Mauritius	229,800	1,532	Mauritius	388,344	2,589
Natal	18,714,310	126,598	Natal	11,220,436	76,153
Italy	21,756	145	Uruguay	666,980	4,453
Uruguay	1,163,892	7,756	Belgium	2,553,631	17,067
Belgium	3,258,520	22,173	Portuguese East Africa	1,192,824	7,952
Germany	317,381	2,109	Cape Colony	25,921,768	175,683
Portuguese East Africa	2,006,472	13,376	Argentina	1,583,596	10,558
Cape Colony	20,910,203	141,293	Philippines	62,779	449
Java	720	5	Singapore	60,959	283
Straits Settlements	24,996	169	Germany	254,996	1,908
	93,969,342	621,512		115,162,240	773,587
Logs not sawn, and Spars (in the rough):			Logs not sawn, and Spars (in the rough):		
Natal	11,700	78	United Kingdom ..	3,330	22
India	2,376,008	2,009	Cape Colony	12,792	85
Egypt	47,035	314	Egypt	9,858	66
			Argentina	6,000	40
Total	2,434,743	2,401	Total	31,950	213
Grand Total	96,404,085	623,913	Grand Total	115,194,190	773,800

As no record is kept by the Customs Department of the timber shipped to the Eastern States, I am unable to give details of such exports for the years ended 30th June, 1913 and 1914.

I am able to give, however, the value of the exports for the above-mentioned periods, viz., £340,984 and £368,115 respectively. This brings the total value of the exports for the year ended the 30th June, 1913, up to £964,897, and that for the year

ended the 30th June, 1914, up to £1,141,915, making an increase of £177,018.

SANDALWOOD EXPORTS.

The following returns show the quantity and value of the sandalwood exported from Western Australia during the years ended the 30th June, 1913 and 1914, respectively:—

Return showing quantity and value of Sandalwood exported to Countries beyond the Commonwealth.

Countries to which Exported.	Year ended 30th June, 1913.		Year ended 30th June, 1914.	
	Quantity.	Value.	Quantity.	Value.
Singapore	cwt. 17,833	£ 5,934	cwt. 5,366	£ 2,601
China	24,340	11,653	18,689	7,214
India	9,490	4,184	9,500	4,111
Hong Kong	51,383	19,216	112,947	46,134
Total	103,046	40,987	146,502	60,060

From the above statements it will be seen that for the year ended the 30th June, 1913, the value of the sandalwood exported from the State amounted to £40,987, while the exports for the same period ended the 30th June, 1914, amounted to £60,060, being an excess of £19,073.

The revenue derived from royalty on sandalwood during the year under review amounted to £1,454 17s. 11d.

The local trade in this wood, until the last six months, has been dull and the price for wood low, but during the past half-year this wood has been in strong demand, and the price paid per ton f.o.r. Fremantle as high as £9 5s. There has been a large quantity despatched in the last three months from the Eastern Goldfields, but the majority was not of the best quality, being small and dry.

The Trans-Australian railway is now opening up new sandalwood country, and there are about 800 tons at present lying along the route waiting for the railway. When the railway is out another 100 miles there should be a big supply of wood coming forward, if there is any demand for same.

There are considerable numbers of men pulling sandalwood now, as prices are good, but a lot of them are working an old culled bush, and cannot expect

to get high prices for the wood they are pulling. Should the price keep up, I look forward to a very busy time for the trade during the ensuing year.

MALLET BARK EXPORTS.

The following returns show the quantity and value of the mallet bark exported during the years ended 30th June, 1913 and 1914, respectively:—

Return showing Quantity and Value of Mallet Bark exported to Countries beyond the Commonwealth.

Countries to which exported.	Year ended 30th June, 1913.		Year ended 30th June, 1914.	
	Quantity.	Value.	Quantity.	Value.
Germany	cwt. 65,059	£ 26,934	cwt. 33,100	£ 15,370
Belgium	42,930	16,424	23,900	11,581
New Zealand	205	52	123	53
Total	108,194	43,410	67,123	27,004

No record being kept by the Customs Department of the shipments to the Eastern States, I am unable to give details of such exports for the periods mentioned above.

I am able to give, however, the value of the exports to the Eastern States for the years ended 30th June, 1913 and 1914, viz., £10,642 and £9,771, respectively.

This brings the total value of the exports for the year ended the 30th June, 1913, up to £54,052, and for the year ended 30th June, 1914, up to £36,775, being a decrease of £17,277 as compared with the previous years.

INSPECTION OF TIMBER FOR EXPORT.

The following return shows the quantity of railway sleepers, scantling, etc., inspected and branded for export by the various timber inspectors during the year under review, and the different countries to which same were exported:—

Country to which exported.	Number of Sleepers.	Scantling, etc., in loads.
South Africa	1,265,740	483
India and Ceylon	724,456	3,710
London	6,505	409
New Zealand	496,206	1,261
South Australia	819,467	1,960
Commonwealth	93,843	..
South America	13,681	..
China	10,990	..
Western Australian Government	296,331	..
Victoria	196
	3,727,219	8,019

From the above return it will be seen that 3,727,219 sleepers and 8,019 loads of scantling, etc., were inspected.

TIMBER INDUSTRY ON THE EASTERN GOLDFIELDS.

The supply of firewood for the mines on the Golden Mile, viz., Kalgoorlie and Boulder, for the year ended the 30th June last, has been kept well up to the supply of previous years, the total supply for the year being, approximately, 483,500 tons, which includes mines, electric light, bakers, and household wood, giving employment to about 1,000 men, 98 per cent. of the wood being hauled over Government railways.

In the out-back country, with the exception of Comet Vale, Menzies, and Gwalia, the industry for the year has been dull. This is accountable through the fact that the Lancefield mine, near Laverton, has been closed down for about nine months of the year. This mine has again commenced operations, and will, during the next year, consume a large quantity of wood, thus giving employment to a large number of men. The total quantity of wood consumed at Comet Vale, Menzies, Gwalia, and Laverton during the year was approximately 33,500 tons, the North country, all told, consuming about 48,000 tons.

The Yilgarn field (Southern Cross), Marvel Loch, Bullfinch, etc., consumed about 25,000 tons, and Pump Stations about 6,300.

Firewood on the Murchison mines supplied from mulga areas was approximately 112,000 tons, consumed chiefly at Day Dawn, Cue, Meekatharra, Sandstone, and a small quantity at Mt. Magnet. The total quantity of firewood consumed on the W.A. Goldfields for the year is estimated at approximately 700,000 tons.

Mining Timber.

There was a large quantity of this timber used during the year, more especially on the Golden Mile. Apart from the Golden Mile, the chief consumers of mining timber now are the mines at Ora Banda, Comet Vale, Gwalia, Lancefield, Day Dawn, Meekatharra, and Sandstone, Bullfinch and Marvel Loch. The total quantity of mining timber consumed on the W.A. Goldfields last year is estimated at approximately 8,800 tons.

ADDITIONAL FOREST RANGERS.

During the year under review considerable changes were made in the field staff, the timber inspectors who were in the past employed in passing timber being replaced by forest rangers.

Ten additional assistant forest rangers were appointed, and in future all the timber inspection will be effected by them, in addition to the usual work of patrolling the forests.

Under this new arrangement a more efficient supervision of the bush should be possible, and the work of passing timber for export carried out more expeditiously and effectually.

A considerable saving will also be effected by the new arrangement, as the work of timber inspection has increased so much of late, under the new system of the fortnightly pass, that a staff of temporary inspectors, at a salary of 15s. per diem and 6s. allowance, would have been very costly.

An additional saving is also caused by the various district and assistant rangers now supplying their own equipment, instead of same being provided by the Government as in the past.

SAWMILL PERMITS.

The following return shows the sawmill permits in existence up to 30th June, 1914:—

Name.	No.	Area.	District.
		acres.	
Whittaker Bros.	1/11	20,000	Murray
Ferguson, J. M., Limited	3/11	2,370	Wellington
Bunning, Robert	8/11	4,700	do.
Bunning Brothers	9/11	10,000	do.
Preston Valley Saw Mills, Limited	10/11	19,800	Nelson
Swan Saw Mills, Limited	13/11	2,633	Preston.
Swan Saw Mills, Limited	14/11	9,000	do.
Bunning, Robert	15/11	5,300	Wellington
Adelaide Timber Company, Limited	16/11	15,775	do.
Swan Saw Mills, Limited	19/11	1,000	do.
Bunning Brothers, Limited	25/11	10,000	do.
South-West Timber Hewers' Co-Operative Society, Limited	27/11	20,001	Collie
Bethell, George Moore	30/11	10,000	Nelson
Port & Co., Limited	34/11	28,510	Murray
The Timber Corporation, Limited	35/11	6,800	Nelson
Bunning Brothers, Limited	36/11	10,000	Wellington
Lewis, J., and Reid, F. W. S.	37/11	19,730	do.
Wilgarrup Karri and Jarrah Co., Limited	42/11	23,000	Nelson
Buckingham Brothers	44/11	18,000	Wellington
South-West Timber Hewers' Co-Operative Society, Limited	60/11	38,000	do.
The Kauri Timber Company, Limited	61/11	58,000	Nelson
Bunning, Robert	63/11	8,000	Wellington
Gull, Hubert E. R.	66/11	75,000	Kimberley
Hon. Minister for Public Works	67/11	17,267	Nelson
Mann, Arthur S.	68/11	32,000	Collie
South-West Timber Hewers' Co-Operative Society, Limited	69/11	5,000	Murray
Trees, Limited	71/11	20,000	Wellington

PERMANENT FOREST RESERVES.

I must again strongly recommend the setting apart of large areas of forest country as permanent reserves.

Until this is done there is little use in contemplating forestry in Western Australia, as it would be obviously unwise for the Government to spend large sums of money in afforestation or re-afforestation on land only temporarily reserved, and which may be thrown open to selection at any time.

The usual difficulties will, of course, be raised, viz., that large areas of land in the South-West division cannot be locked up merely for the sake of the timber, and that if this is done the best land in the State will be closed to selection.

A large percentage, however, of the timber country, particularly that within the jarrah belt, is unsuitable for general farming, and the timber on it is the most valuable crop it could produce.

FOREST OFFENCES.

Prosecutions in connection with breaches of the Timber Regulations were instituted in 64 cases during the year under review, two of which were dismissed and 62 of which carried convictions and fines.

Great difficulty is experienced in securing sufficient evidence to warrant proceedings being taken, and the ridiculously small fines that have been inflicted in the past are not taken seriously by the cutters.

The only thing that will stop the illegal cutting and removal of timber is the infliction of substantial penalties, and it is to be hoped that in the future these offences will be regarded more seriously by the authorities and heavier penalties inflicted.

WATTLE CULTURE.

The cultivation of the wattle, particularly the kinds which are of the highest value for culture on commercial lines, viz., *Decurrens* and *Pycnantha*, does not occupy as prominent a part in our forest policy as it seems to warrant.

In South Africa, where the wattle was introduced by seed obtained from Australia, the cultivation of this tree has been the means of creating an important industry, the export of bark having grown enormously during the last twenty years; the yield of a few years ago from between 30,000 and 40,000 acres under cultivation in Natal being valued at £100,000 per annum.

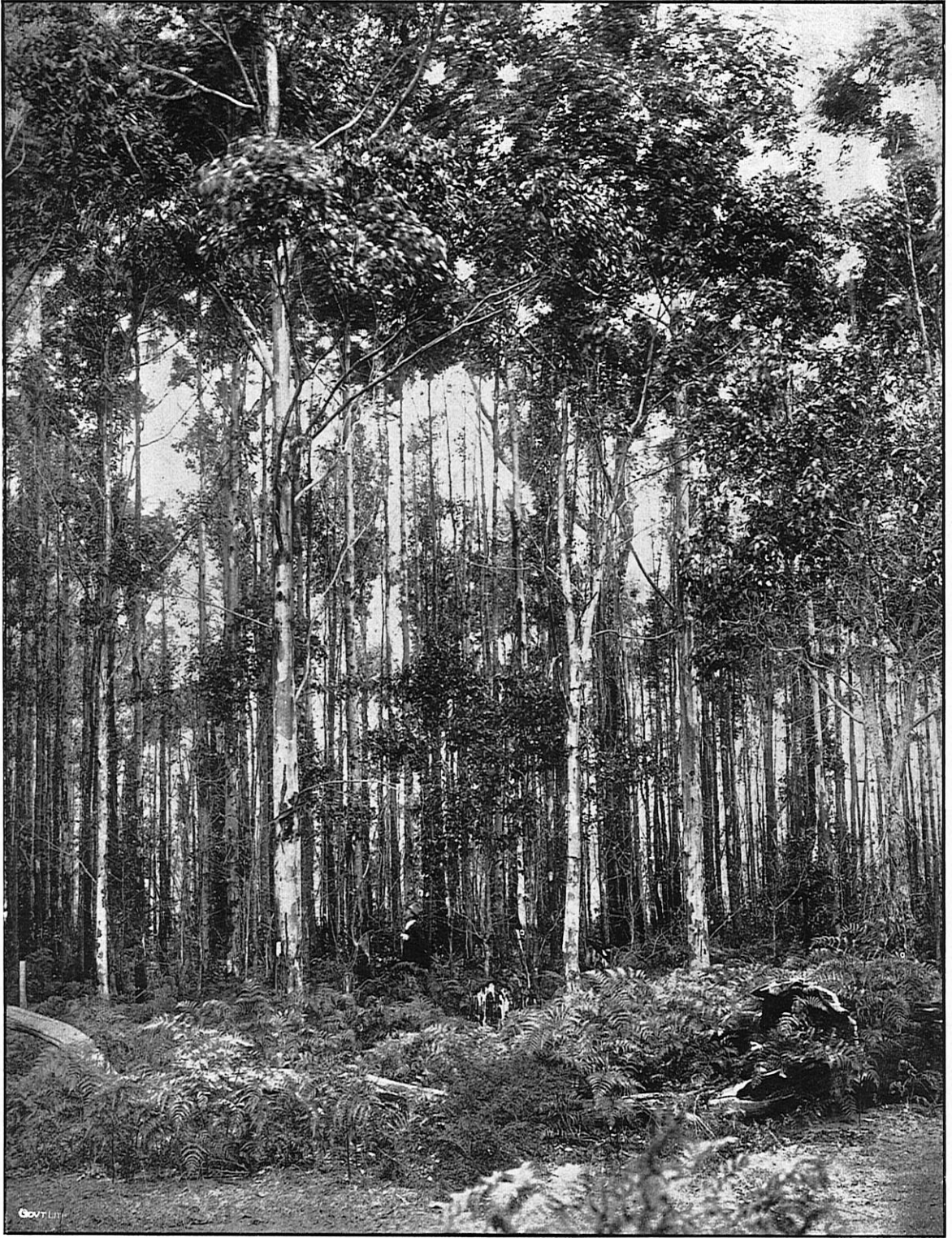


PLATE No. 1.
Natural re-afforestation of Karri; an old Karridale concession.



PLATE No. 2.

Natural re-forestation of Karri; an old Karridale concession.



PLATE No. 3.
Natural re-afforestation of Karri; an old Karridale concession.



PLATE No. 4.

So-called "cut-out" Jarrah Forest along Karridale Road.



PLATE No. 5.
So-called "cut-out" Jarrah Forest along Karridale Road.

From the report of the Chief Conservator of Forests, South Africa, for the period ending the 31st March last year, the exports of wattle bark during the last seven years are as follows:—

Year.	Lbs.	Value. £
1906	33,215,466	89,374
1907	54,478,492	139,397
1908	55,661,949	134,563
1909	80,127,399	194,699
1910	92,610,026	219,433
1911	111,205,265	289,557
1912	118,219,023	283,060

The following return shows the countries to which the bark was exported during the year 1912:—

From.	Country.	Quantity.	Value.
		lbs.	£
Natal	Europe	100,213,684	243,287
	Australia	16,072,668	35,890
	New Zealand	1,475,306	2,975
	Other Countries	99,112	270
Cape	Europe	353,773	623
	New Zealand	4,480	15
		118,219,023	283,060

South Africa has, of course, a great advantage over Western Australia in forming plantations, inasmuch as that she has plenty of cheap native and coloured labour and large areas of "brush" lands which are comparatively easy to clear.

In this State, however, even granting that the conditions are not so favourable, there should be a considerable market for wattle bark; and, as once a plantation is established, lavish reproduction of the species takes place by natural regeneration, there would not be much expense after the first outlay.

In order to illustrate the advantages of the systematic cultivation of the wattle in this State, a plantation of about 30 acres has been formed at Ludlow, in the Busselton district.

The area is now covered with a fine crop of healthy vigorous young wattles, some of which are already 12 feet high.

The wattle is a rapid grower, content with almost any kind of soil, and the bark is so rich in tannic acid that it readily sells in European markets. It is said to be fifty per cent. richer in tannin than the bark of the oak or larch, and realises fully one-half more per ton than anything grown in Europe.

The period of maturity may be put down at from seven to ten years, but the bark contains most tannin when the trees are between five and eight years old. An acre of land planted with wattles will yield five tons of bark in the seventh year.

CLASSIFICATION OF OUR FORESTS.

During the year under review, the work of classifying our forests has been proceeded with, and various surveyors accompanied by forest rangers have been engaged in making surveys and estimating the quantity of standing timber on the areas reserved for alienation.

Approximately 143,840 acres have been classified and carefully examined by the rangers, and the areas containing valuable timber set apart for forest reserves.

I must again emphasise the fact, however, that if any good is to result from this classification the areas set apart must be permanently reserved, and dedicated to forestry for all time.

SLEEPER HEWING IN VIRGIN FORESTS.

The year under review has been marked by the most important step yet taken in the history of forestry in this State, the present Government having decided to prohibit the hewing of sleepers in virgin forest, and restricted the hewers to what is called cut-out bush.

In the past the waste and destruction of valuable timber by sleeper hewers in virgin forest was enormous, and in spite of my repeated protests it was allowed to continue, as it was alleged that the requirements of the Railway and Public Works Departments necessitated the cutting of large quantities of hewn sleepers.

As I have often pointed out, the most economic way of working our forests is by milling, not by hewing, and all the mill logs, beams, piles, and poles should be cut before the hewer is allowed into the bush.

The erection of small spot or portable mills throughout our forests would result in much more timber being obtained, and would greatly minimise the waste as compared with hewing.

The present Government has now, I am glad to say, decided to adopt this policy, and there is no doubt that if it is adhered to by subsequent Administrations it will add many years on to the life of the forests of Western Australia.

NATURAL RE-AFFORESTATION OF KARRI.

In my last year's report mention was made of the wonderful reproductive powers of the karri and of the many striking instances of its regeneration by natural means.

Nowhere is this more apparent than upon the old Karridale Concession, where large areas of karri were cut over some thirty years ago.

At all the old log landings and wherever the forest has been heavily cut out, the young karris have sprung up and now form fine young forests in the pile and pole stage.

Plates No. 1, 2, and 3 illustrate the natural reproduction of karri in various places over the area referred to and show how lavishly Nature will reproduce the species as soon as sufficient clearance is made.

SO-CALLED CUT-OUT JARRAH FOREST.

Plates Nos. 4 and 5 illustrate some so-called "cut-out" jarrah forest in the Margaret River district.

From this it will be seen that the country in question, which embraces many thousands of acres, still carries a lot of marketable timber, and is not cut-out in the true sense of the term.

Hundreds of thousands of sleepers will yet be obtained from this bush; and I feel confident that as soon as the district is linked up by railway line with Busselton, a number of small mills will spring up.

The man in the street when he hears of "cut-out" country, thinks that the land has been denuded of timber and that there is none left; but in many in-

stances the forest has only been cut over; the cream of the timber taken, and a very large percentage left behind.

The bush is cut over again and again, and in many districts mills have been erected on so-called "cut-out" country, and are obtaining hundreds of thousands of loads of timber from areas abandoned by the original holders.