

REPORT OF THE DIRECTOR OF FORESTS.

TEMPORARY TIMBER RESERVES.

The area temporarily reserved at the end of the year was 2,998,851 acres, this being a decrease of 77,308 acres on the figures for the previous year. The total area excised for settlement and other purposes amounted to 31,091 acres, while new reserves containing 21,644 acres were gazetted. Recomputation of areas and the more definite location of boundaries are responsible for an increase in area of 12,977 acres, while the apparent discrepancy of 80,838 acres is due to reserves containing that area having been transferred from the temporary to the permanent list.

Of the area excised, 7,580 acres in the Bundaberg district carried a very poor class of stunted hardwood, about 13,000 acres in the Maryborough district comprised chiefly rough mountainous grass country, and 5,000 acres in the Nanango district contained sparsely timbered pine scrub and poor forest.

The most important of the new reservations are 2,200 acres of heavily timbered pine scrub on the headwaters of the Brisbane River in the Ipswich district, and hardwood areas to the extent of 9,720, 4,335, and 1,564 acres in the Maryborough, Dalby, and Brisbane districts respectively. The value of the new areas from a Forestry standpoint is far greater than that of the excised areas, but except in one instance they are too far removed from railway communication to admit of being worked to advantage under existing conditions.

STATE FORESTS AND NATIONAL PARKS.

The total area permanently reserved—viz., 1,077,484 acres—shows an increase of 88,176 acres over the figures for the previous year; new areas to the extent of 41,176 acres having been proclaimed State forests, while one area of 47,000 acres was reserved as a National Park. The new Park, which is by far the most extensive in the State, is situated in the southernmost part of the Brisbane district, and comprises the old timber reserves on the so-called Roberts and Lamington Plateaux, which rise to an altitude of 3,500 feet and embrace the sources of the numerous streams flowing into the Albert and Logan rivers. It is distant from Brisbane not more than 60 miles, and, when rendered easily accessible by train and road, will provide a health resort and pleasure ground which will be the delight of future generations, if not of the present. The permanent reservation of this area had been under consideration for several years, and had aroused considerable opposition. It remained for Mr. R. Lahey, of Canungra, who had enthusiastically and consistently championed the proposal, to deliver a series of illustrated lectures in the district, and, after enlisting the sympathy of the local residents, to forward a petition asking for the park to be proclaimed.

The fifteen new State forests are distributed through the districts of Atherton, Brisbane, Bundaberg, Gladstone, Maryborough, Nanango, and Rockhampton. Four, containing in all 16,600 acres, were proclaimed on account of the growth of hoop pine, two on the Urah Range and Dawes Range being somewhat difficult of access, while two in the Nanango district are served by the Brisbane Valley line, and command good values. In the Atherton district one small area of 475 acres is required for the growth of red cedar and other cabinet timbers, while another containing about 1,000 acres carries good kauri pine and miscellaneous northern scrub woods. The remainder are hardwood forests, and of these the most important are six in the Brisbane district, containing about 12,000 acres in all, and situated, except in one instance, within easy haulage distance of railway lines; the most valuable is one of 6,600 acres near Yandina on the eastern slopes of the Blackall Range.

FOREST INSPECTIONS AND FEATURE SURVEYS.

The work under this head was subjected to interruptions during the year and, moreover, was confined largely to rough country not within easy reach of railway communication; consequently the total area examined was considerably below that reported on in the preceding year. Plans of reserves containing 52,700 acres were received from the Surveyor-General, while lands containing 47,250 acres were examined by the forestry inspection camp. The total stand of overgirth pine estimated to exist on the 21,000 acres of pine-bearing scribs was 79,000,000 feet; about 15,000 acres contained young growing hardwood of very fair quality, while the remainder consisted of grass lands or poorly timbered forest with dense undergrowth. In the pine-bearing areas the stand of undersized pine was above the average of the coastal reserves, in places being particularly good.

FOREST OFFENCES.

Proceedings on account of breaches of the Regulations or of those sections of the Land Act relating to the removal of timber, were instituted in ten cases, in all of which the offenders were convicted. Fines totalling £31, exclusive of costs, were collected, but in one instance only was the theft of timber considered to be an offence of sufficient importance to warrant a fine being imposed greater than the minimum required by the Act. Though the small number of prosecutions is not to be taken as an indication that timber stealing is comparatively rare, yet there is reason to believe that in the districts closely patrolled by forest officers thieving has been reduced considerably. The necessity for effective control has been strongly emphasized by a further investigation into the thefts of kauri pine in the parish of Como, Gympie district, where in recent years timber thieves had been particularly active.

REVENUE AND EXPENDITURE.

The collections on account of the sales of timber and issue of licences during the year amounted to £69,778 2s. 4d. and £912 12s. 3d. respectively, or a total of £70,690 14s. 7d., this being £4,627 5s. 2d. less than the total for the preceding year (vide Table No. 1 appended). Refunds of guarantee deposits and excess payments made on previous sales amounted to £397 8s. 8d., leaving a total revenue from timber alone of £69,793 5s. 11d.

Though minor reasons may be adduced in various districts to account for local decreases, the decrease for the whole State is due in large measure to the severe drought which lasted throughout the year. The lack of rain had a particularly marked effect in the Nanango district, where the collections fell by £4,437, from £23,547 to £19,110, this decrease being offset, however, by an increase of £4,340, from £10,635 to £14,975, in the Gympie district, where, weather conditions having been less unfavourable, the sales of pine on Brooloo State Forest, consequent on the opening of the second section of the Mary Valley railway line, realised satisfactory prices. Ipswich showed a satisfactory increase of £1,349, due chiefly to the better prices obtained for pine timber, while the only other increases of note were £360 for Atherton, £341 for Inglewood, and £203 for Cloncurry. The principal decreases, other than that for Nanango, were £1,210 for Brisbane, £967 for Toowoomba, £833 for Bundaberg, £798 for Herberton, £536 for Dalby, £493 for Maryborough, £487 for Gladstone, and £358 for Roma.

An examination of Table No. 1 appended shows that over £50,000, or 71 per cent. of the total timber revenue derived in the State, was collected in the districts of Brisbane, Ipswich, Gympie, Maryborough, and Nanango, these districts being still by far the most productive, in spite of the fact that they have yielded the bulk of the timber consumed by the sawmilling trade since the development of the State commenced. It was for that reason that it was deemed advisable at first to concentrate the attention of the small staff of forest officers mainly on the south-eastern districts of the State, rather than attempt to deal with districts too extended and lightly timbered to allow of any effective work being done. The abovementioned districts yielded 55 per cent. of the total collections in 1912, as compared with 71 per cent. in 1915, while in 1907 they yielded £9,300, as compared with £50,000 in 1915.

The expenditure for the year amounted to £7,416 2s. 1d., as compared with £7,653 13s. 4d. for the previous year. Salaries absorbed £3,925 19s. 1d. (£3,676 7s. 5d.), forest surveys and sylvicultural operations £1,746 8s. 3d. (£1,694 1s. 6d.), allowances and incidental expenses £1,743 14s. 9d. (£2,283 4s. 5d.). (Figures in parentheses are the corresponding amounts for 1914).

It should be noted that neither the revenue nor the expenditure shown is that which correctly should be attributed to Forestry. Numerous timber reserves, or parts thereof, are held under lease or license, but the rents derived therefrom are not credited to Forestry revenue as is done in other States of the Commonwealth. Also in many places the prices received for railway and bridge timber are only a fraction—varying from one-half to one-eighth—of the amounts which would be obtained if the trees felled were disposed of for other purposes. On the other hand, the expenditure quoted does not take into account the cost of advertising sales of timber, or any proportion of the salaries of land agents and other officers of the Department engaged on land and timber work combined.

OUTPUT OF CROWN TIMBER.

The output of Crown timber was in most instances considerably below that of the previous year, this being due, not so much to the depression in trade caused by the drought, as to the scarcity of grass and water rendering haulage by teams difficult. Except in a very few favoured localities it was necessary to grant almost all purchasers exemptions from those conditions in their agreements which required the removal of minimum quantities monthly, and in some instances work was completely held up for six months of the year. The consequent decrease in cutting was specially noticeable in Nanango and some of the western districts, while the hardwood trade on the coast suffered considerably. There was also a marked decrease in the quantities of railway sleepers, bridge timbers, and house blocks cut, but, as the waste involved in cutting of railway timber and house blocks is deplorable, this decrease is not regretted from a Forestry standpoint. The northern cedar market was very depressed, so much so that the reserves placed on most of the cedar trees offered at auction were not realised, and the trees were passed in. As regards other northern timbers, the quantity of kauri sold slightly exceeded that of last year, while miscellaneous timbers showed a decrease; but as the bulk of the readily accessible supplies of cabinet timbers are on land which has been alienated or selected, the removals from Crown land must of necessity be small, and are of little importance in the trade. As nearly as can be ascertained from the figures supplied by the district land agents, the quantity of Crown timber cut on which royalty was payable was approximately as follows:—(Figures in parentheses denote the quantities cut in the preceding year.) Kauri pine, 1,652,000 superficial feet (1,632,000); cypress pine, 1,623,000 superficial feet (3,278,000); hoop and bunya pine, 41,500,000 superficial feet (44,681,000); milling hardwood, 11,050,000 superficial feet (14,858,000); red cedar, 167,000 superficial feet (335,000); other milling timber, 750,000 superficial feet (980,000); sleepers and transoms, 863,000 pieces (951,500); piles, girders, &c., 287,570 lineal feet (387,550); telegraph poles and house blocks, 407,400 lineal feet (236,340); posts, rails and palings, 98,300 pieces (150,900); fuel, 40,000 tons (52,000); mining timber and miscellaneous, 1,159,900 lineal feet (941,700); sandalwood, 550 tons (523); and mangrove bark, 156 tons. As usual the principal districts producing hoop and bunya pine were Nanango with 13,740,000 feet (16,570,000), Gympie with 12,460,000 feet (10,100,000), and Ipswich with 9,870,000 feet (9,200,000), while the quantities cut in Maryborough, Gladstone, Brisbane, Toowoomba, and Bundaberg showed decreases varying from three hundred thousand to one million feet. The bulk of the hardwood logs milled in the State was obtained on private lands; and consequently in three districts only did the quantity of Crown hardwood removed exceed one million feet—viz., Maryborough, 3,680,000 feet (5,160,000); Dalby, 1,605,000 feet (1,235,000); and Brisbane, 1,245,000 feet (1,790,000). Mining timber was disposed of mainly in Rockhampton and Charters Towers, the



Waterfall, Lamington National Park—Brisbane District.

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only other districts contributing in quantity being Cloncurry and Gladstone. Under the heading "other milling timbers" are included such excellent and highly esteemed woods as silkwood and red beech (maple), white beech, crow's ash, yellowwood, and the various silky oaks, and it is worthy of note that the total quantity of timber of all these species extracted was not more than would be yielded by seven hundred and fifty well-grown trees. Interest in red beech has been stimulated by the decision of the Commonwealth Defence Authorities that it is the most suitable Australian timber for rifle stocks, and samples have been forwarded to the Agent-General in London to be tested by the French Government for the same purpose. There has been an increased demand of late for yellowwood, but, unfortunately, the natural distribution of this tree is very scattered and the available quantity is comparatively small.

ROYALTY RATES RECEIVED.

The prices of standing timber in most instances were fairly well maintained in comparison with those of recent years, but the necessity for district officers exercising great care in arriving at upset prices recommended was very noticeable, arrangements amongst buyers being only too common. Competition was almost absent in all districts except Nanango and Brisbane, though on one or two occasions bidding was keen in Maryborough and Gympie. Sale by tender instead of auction was resorted to on several occasions, but with no appreciable advantage to the Department, perhaps owing to the depressed state of trade at the time.

The highest price per 100 superficial feet realised for hoop and bunya pine was 5s. 9d., which was offered for one lot on Brooloo State Forest, Gympie District. This and other satisfactory prices in the immediate neighbourhood were due to the extension of the Mary Valley line to Brooloo, and indicate the advantage which would accrue to the State from the construction of a light line from Goomeri into the virgin pine scrubs on the Brisbane range. In Nanango prices for pine fell somewhat, 4s. 3d. being the highest rate offered at auction, while in the Brisbane and Ipswich districts as high as 3s. 7d. and 3s. 6d. respectively were obtained. Elsewhere pine prices varied generally from one to two shillings.

Except in special cases rates for milling hardwood in most districts remained generally at the usual low level, viz., from 6d. to 1s. 3d., but more satisfactory prices—ranging from 1s. to 2s. 7d.—were obtained in the Brisbane district; at one small sale in Nanango the maximum for the year, viz., 2s. 8d., was obtained, while in Gympie one small sale was effected at 2s. 6d. On Fraser Island 2s. 7d. was offered in respect of a long term sale, and, as a result the revenue obtained per acre from the area over which cutting rights were sold should be sufficient to cover the cost of regeneration and leave a substantial net revenue—a very unusual but satisfactory position.

Kauri pine realised a maximum of 2s. 6d. in the Atherton district, where the construction by the Department of a new bridge over the Barron River rendered accessible and more valuable a limited number of kauri trees of great age. In the Cairns district, where 50 per cent. of the kauri sold was cut, the highest price realised was 1s. 6d.

Prices for red cedar dropped considerably in the North, the highest realised being 20s. in Cairns, as compared with 28s. in Atherton two years earlier. In the Brisbane district rates were relatively more satisfactory, 10s. per 100 superficial feet being obtained for trees in difficult localities distant 30 miles from railway communication.

A maximum of 2s. 6d. was obtained for Crow's Ash and Yellowwood in the Gympie district, but the rates obtained for the northern cabinet woods remained disappointingly low, compared with the prices at which the sawn timber is retailed. For northern silky oak not more than 1s. was received, while the maximum for red beech (maple) was 1s. 6d.

SYLVICULTURE.

The year was a most unfavourable one from a silvicultural point of view, and though preparations had been made for further experimental work, nothing of importance could be effected. At Atherton the drought was exceptionally severe, the wet season having failed entirely, and only five inches of rain having been recorded between the 1st March and the 30th November. As a result moist evergreen scrubs were rendered leafless, while the underwood and much of the overwood was killed, thus allowing fires to spread in reserves which are usually considered quite safe from fire danger. Successful planting on new trial areas was impossible under such dry conditions, and after one or two abortive attempts operations were suspended. On Reserve 191 the trial red cedar plantation of the previous year was subjected to a very severe test, for the drought, besides weakening the transplants considerably, apparently caused the twig borers to multiply greatly; the young trees, though badly cut back, proved sufficiently hardy, however, to remain alive. Owing to the previous destruction of teak, red beech, and kauri pine by wallabies, 220 acres of the reserve were netted and the vermin thus enclosed exterminated in time for the proposed planting, but owing to the arid conditions the nursery stock had to be held over for the following year.

The development of seedlings in the nursery was on the whole good, red beech especially having made excellent growth, but teak suffered very much from the lack of atmospheric moisture. The drought prevented most species from bearing seed during the year, but nevertheless the nursery now contains, besides the more important species, a fair number of indigenous species of less importance, together with a few exotics, all of which are to be used in the formation of a small arboretum for educational purposes.

On Reserve 418, which, not being readily accessible, still contains a supply of overgirth cedar, and is consequently capable of being managed with a view to encouraging natural reproduction, a seedling felling was made over 30 acres, in readiness for the shedding of the biennial seed crop. Red

cedar bore a heavy crop, the greater part of which was, unfortunately, destroyed in the green state by an insect which has not yet been isolated and identified. Enough seed ripened, however, to stock the area sufficiently, but the tender seedlings, although able in large numbers to withstand the first six months of the drought, finally succumbed except on two acres of a low-lying flat. The remainder of the area will have to be rebrushed in readiness for the next seed year.

The financial aspect of the regeneration of northern reserves is not as favourable as is desired, the main difficulty being that peculiar to the mixed forests of the tropics, viz., the abundance of tree growth which has no marketable value, and the scarcity of the valuable trees. The cost of the initial felling operations varies from 35s. to 50s. per acre, according to the nature of the clearing required, none of the timber felled being saleable, as the quality is not such as to command a sufficient price in export markets. Attempts were made during the year to find a purchaser engaged in local trade, but with no success, as it was not possible even to give the standing trees away. No doubt in the course of a few years the scarcity and increased prices of the highly-valued species will remedy this defect to a certain degree.

On Fraser Island similar dry conditions prevailed, and consequently no new work of importance could be undertaken outside of the temporary nursery. The progress made by the young trees transplanted or raised direct from seed on the small areas cleared in the previous year was, however, of considerable interest. The continued rapid growth made by blackbutt and tallowwood in spite of the unfavourable conditions is particularly gratifying, and establishes beyond doubt that, provided a good burn is obtained and the time for sowing is well chosen, there is no danger of these species being badly suppressed by the luxuriant weed growth which follows the clearing of the scrub. In two years from the time of sowing the young trees reached a maximum height of thirty feet, with a girth at breast height of 14 inches, while the average height of the crop exceeded twenty feet. On another small area which was sown with seed of red stringybark, tallowwood, and blackbutt, early in 1915 equally fast height growth was shown, though, owing to the dry season, full density of the crop was not obtained; one-year-old seedlings on this area reached a height of fifteen feet, red stringybark predominating. Given favourable seasons the problem of converting that part of the island which is covered with a dense growth of miscellaneous species into a valuable hardwood area is now reduced to the economic one of finding a sale for this miscellaneous growth, and thus eliminating or reducing the excessive cost of clearing. Local buyers hold strong views against the possibility of utilising the inferior species, but a proposal to operate on a comparatively large scale has been received from another State, and is still under review.

The growth of even the best of the conifers which were sown or planted at the same time as the hardwoods is naturally far below that of the latter. Almost all of the seedlings of *pinus palustris* succumbed to the drought of the previous year, and, as the few that remain show as slow growth as is recorded in their natural home, it does not seem probable that even if they should be adapted to the locality their cultivation would be satisfactory from a financial standpoint. *Pinus taeda*, whose behaviour in the first year was also unsatisfactory, improved considerably in the second, and having given greater promise, is worthy of further attention. *Pinus longifolia* failed under transplanting, but on one area those raised from seed in situ are healthy, and have developed about equally with bunya pine, both of these species being suppressed, however, by weeds which have flourished in spite of cleanings. The native cypress pine still shows the best development and the greatest hardiness of all the conifers tried, having reached an average height of 5 feet, with a maximum of eight feet, in 22 months from germination; the losses of this species from drought were not such as to impair the density of the stand. In the nursery hoop pine germinated freely and developed sturdily though slowly, providing a supply of strong plants for use in the following year. A heavy crop of hoop pine seed was shed over a small area in the north of the island, and resulted in good reproduction, the soil forming an ideal seed bed.

Owing to the cessation of felling operations near Bogimbah Creek and the sale of a new area on Woonoolver Creek, it was necessary to abandon the temporary nursery and select a fresh site in close proximity to the new tramline. Towards the end of the year the erection of a ranger's cottage and the laying out of a permanent station were commenced.

In the south-eastern districts of the mainland no seed year for hoop pine was recorded, and consequently further observations to strengthen or weaken the general conclusions reached in previous years regarding natural reproduction could not be made. Owing to the drought the fire danger, which usually is not great in the unworked evergreen pine scrubs, was increased, and fires were reported over several hundred acres; but the total damage caused was very small considering the extreme dryness which prevailed almost throughout the year. In the hardwood areas, in order to render possible economical regeneration, attention was concentrated on the problem of securing a closer utilisation of the different species contained in the forests of mixed eucalypts and allied genera; blackbutt was disposed of with somewhat less difficulty than has been experienced in recent years, and occasional very small sales of turpentine were made, but very much remains to be achieved in this direction. The results observed in two mills which sawed small lots of turpentine were considerably better than popular opinion led one to expect. Further cleaning operations could not be carried out owing to lack of staff.

GENERAL.

In view of the national importance of Forestry, the necessity for progressive action and the general misunderstanding of the subject which exists, I am including in this report a statement dealing with the timber trade and Forestry generally.

It is stated not uncommonly both inside and outside of the Department that Forestry is hindering land settlement greatly, and that timber reserves, if they are of sufficient importance to be retained at all, should be confined to the poorest, roughest, and most inaccessible country. This idea seems to



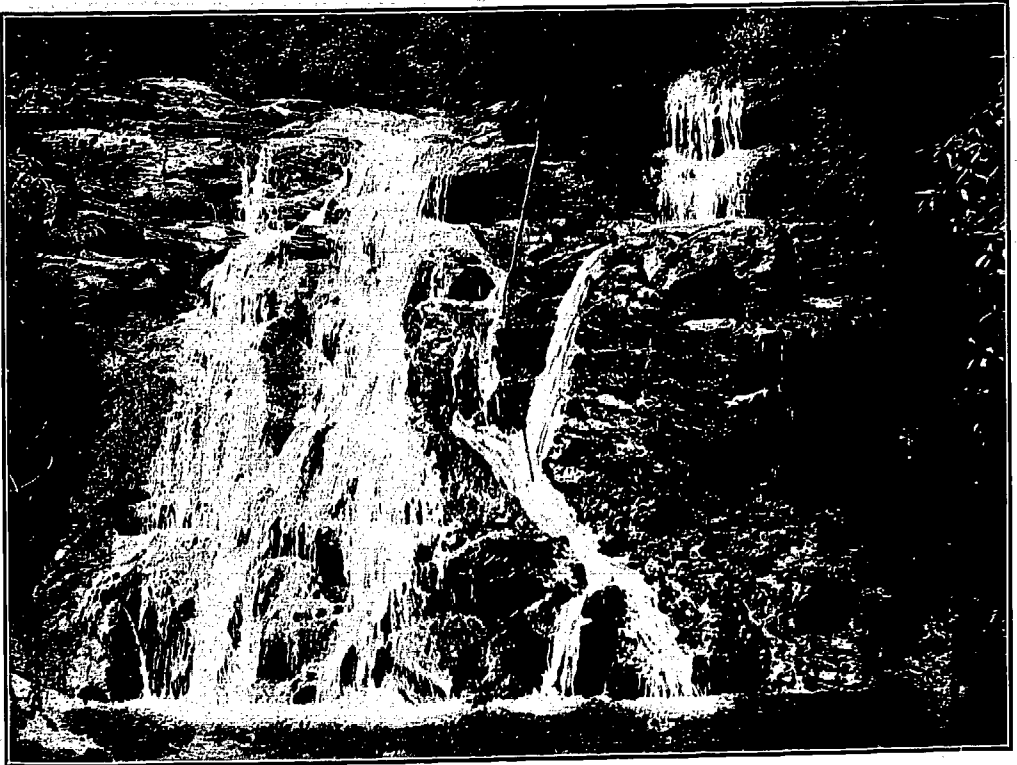
Natural Reproduction of Red Cedar on clearing round standing trees. Age, 3 years. Height of dominant trees, 10 feet—Atherton District.



Artificial Regeneration of Red Cedar. Seed broadcasted, February, 1913. Age, 3 years. Height of dominant trees, 12 feet. Propagated out back by tree layers. Atherton District.



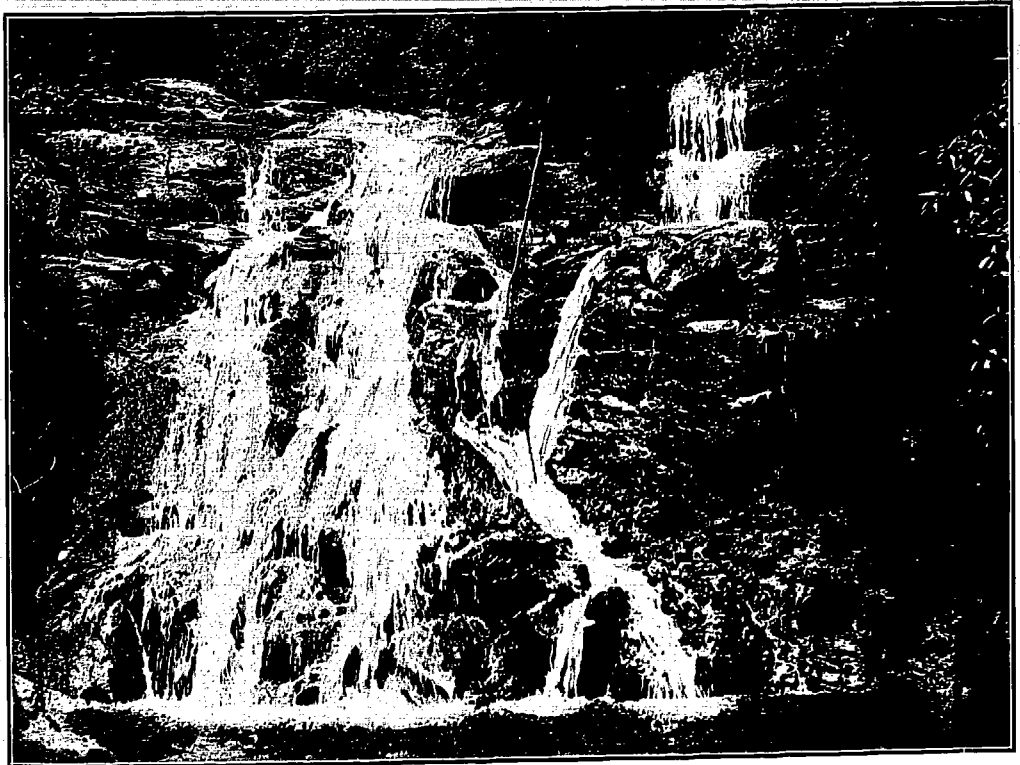
A Glen in Lamington National Park—Brisbane District.



Casade, Lamington National Park—Brisbane District.



A Glen in Lamington National Park—Brisbane District.



Casende, Lamington National Park—Brisbane District.

have been acted upon in earlier years to the great advantage of the land and timber selectors, who secured at a low price a very large proportion of the most heavily-timbered lands in the State. Now that the construction of new railway lines has made readily accessible reserves which previously were too remote to be considered worth dealing with for selection, the cancellation and opening for selection of these reserves in turn is desired. The end to which such a course of action would lead is, of course, obvious.

An enquiry into the extent to which land settlement at present is hindered by Forestry brings out the following points. Queensland, with an area of about 429,000,000 acres, has in timber reserves, State forests, and National parks, an area of slightly over 4,000,000 acres, of which about 1,260,000 acres are situated west of the Dividing Range or are in localities where the soil, rainfall, and general conditions are such that close settlement is out of the question at present. In addition 440,000 acres are contained in the sandy islands Fraser and Stradbroke, and in the rugged islands Whitsunday and Hinchinbrook, while about 73,750 acres contained in National parks may be excluded from any discussion concerning the reservation of lands for the growth of timber. This leaves in the whole of the moist coastal belt only about 2,300,000 acres of timber reserves and State Forests which might be said to interfere with close settlement; but a close examination of the position discloses that even the bulk of this last area may be disregarded at present in any discussion between Forestry and settlement. Over 800,000 acres are confined to the rough mountainous parts of Cooktown, Port Douglas, Bowen, and Mackay, and when account is taken also of the very rough and the poor sandy reserves in all the remaining coastal districts, it is found that in all over 1,500,000 acres may be disregarded in this connection, part of this area being well timbered; while a large proportion was reserved apparently only because it was considered useless for any other purpose. Consequently there are not more than 800,000 acres in the coastal belt which can be said to stand in the way of close settlement, and even the greater proportion of this area, though it would be readily selected for speculative purposes or for conversion into pasture, cannot be classed as arable land. Naturally in any particular locality the existence of reserves prevents a certain amount of close settlement, but, if the State be considered as a whole, it seems incredible that with a population of less than 800,000 the country should be deemed to be hampered in its development by the retention of these 800,000 acres of timbered reserves. In reality if the land already selected were utilised to its full capacity the effective reserves would be found to be far too small to supply the needs of the population which would be in existence.

In any case it is not by any means self-evident that land settlement should take precedence over Forestry, for timber is an extremely important national necessity, and should not be treated as a product of minor value. Recent developments in naval warfare have emphasized the importance of every nation being independent of the imports of national necessities, and it is worthy of note that in England the price of imported softwoods for 1915 was almost 50 per cent. greater than for 1913, while there has been considerable danger of supplies being seriously curtailed. Also the prevailing idea that timber reserves should be relegated to the back blocks requires to be reviewed, for Forestry is a business which should not be foredoomed to failure. Timber, generally speaking, is less valuable bulk for bulk than most agricultural produce, and more expensive to handle, so that standing trees decrease in value, as the distance from market increases, much more quickly than other crops; this fact, together with other financial considerations dependent on the length of time taken for the forest crop to mature, has led to the generally accepted practice in France and other European countries of having a large proportion of the forests surrounding or adjacent to towns and villages. Thus the growth of timber has become a remunerative proposition, while, in addition, the aesthetic and health-giving effects of forests in the midst of dense populations are not to be underestimated. Certainly, if the Forestry question be looked at from the popular present day point of view, it must be admitted that the returns from virgin forests compare unfavourably with those obtained from the same land under cultivation or even under grass; but this is not a fair criterion, as the virgin forests of Queensland do not yield on an average more than 20 per cent. of the yield to be expected when correct forest management has made the land fully productive. It is remarkable that, while European countries with their huge populations require and are able to keep from 18 to 32 per cent. of the total area under forest, in Queensland the reservation of one per cent. of the total area of the State is deemed to be excessive.

Apart altogether from the national importance of a State producing its own timber supplies the comparative magnitude and importance of the local timber industry do not appear to be realised. This may be because the trade, being so largely local, does not figure in the export statistics and consequently is not brought under general notice; but the following figures taken from the Commonwealth Year Book No. 8 1914 are worthy of perusal:—

In 1913 the number of sawmills, joinery mills, and furniture and cabinet-making factories in the State was 370; the total number of employes was 6,516; wages paid amounted to £643,388, and the total value of the manufactured output was £2,016,861. For the same period the butter, cheese, and condensed milk factories numbered 88, employing 835 hands, and paying £91,213 in wages, with an output valued at £1,813,706. Just as the total value of the dairying industry cannot be said to be represented by the factory output given above, so the figures mentioned do not by any means indicate the full value of the industries dependent on local timber. The output of coach and wagon building factories is valued at £179,833, while the construction of rolling stock for the railways is another important item; in addition a considerable trade with the southern states is carried on in log timber, while there is a large trade in hewn and round timber, viz., sleepers, piles, girders, and other bridge timber, mining timber, houseblocks, fencing timber, and firewood, which is not represented in the above figures.

Another indication of the importance of the trade in comparison with other industries is obtained from the report of the Commissioner for Railways for the year ending June 30th, 1915, which gives, under various headings, the amount of produce carried on railway lines and the freight paid thereon. For the year 1914-1915 general merchandise and live stock are, of course, easily the most

important; other items include, wool 76,754 tons, with revenue of £272,020; sugar cane 320,390 tons, £28,030; agricultural produce other than sugar cane 556,231 tons, £236,006; timber (log and sawn) 529,479 tons, £217,998; firewood 250,798 tons, £31,543; coal and coke 779,386 tons, £149,530; other minerals 727,292 tons, £119,686. When it is realised that the quantities of timber imported are comparatively small, and that consequently the trade represented in the above figures is done very largely in local timbers, it is seen that Forestry is concerned with a local trade of more than ordinary importance.

At present the trade is only partly dependent on the Crown's resources, and for many years privately owned timber will probably supply a large proportion of the demand, but the future of the industry must depend ultimately on the forest policy adopted by the Government. From what is known of the resources available, it is certain that the existing reserves, unaided by Forestry operations, not only cannot possibly supply the future needs of this growing State, but also are insufficient to supply permanently an annual demand equal only to that existing at present. The difficulty as regards the shortage in area is not easy to overcome, as land selection has resulted in the alienation of large areas in those localities which bore good timber naturally, and offers to resell to the Crown are generally made at impossible prices. What can be done with the waste lands of the coast in the way of afforestation can be determined only after experiments lasting over years, but in view of the difficulties of climate and drainage too much reliance should not be placed on these areas at present.

On the other hand, the increase in the yield of timber per acre, which, after the lapse of the necessary time, follows forest management is the most important factor bearing on the future supplies; and may be relied upon to go far in the direction of making up the shortage in area; but to undertake the work necessary to produce this increase is entirely out of the question while the service is so understaffed and trained officers are not available even if the large sums necessary annually be voted. At the present time the energies of the staff are devoted almost entirely to the general supervision of operations under timber sales and the carrying out of inspections, many of the latter being in response to petty requests from persons or associations antagonistic to the aims of Forestry. A large increase in staff will be necessary, but in this connection it has to be realised that applicants for employment are, almost without exception, totally unacquainted with the practice of Forestry, while there is no training centre from which to obtain suitable officers. Forest management is not easy under any conditions, and, since the economic difficulties become greater as the intensity of utilisation decreases, local conditions demand a well-trained staff to cope with the problems requiring solution. This necessitates the establishment of a Forest school, which is the paramount need of Forestry at the present time, and with this object in view negotiations have been opened up with the Forestry Department of New South Wales in the hope that joint action in this matter will be possible.

In conclusion I wish to record my appreciation of the work of the staff throughout the year, and to emphasize the desirability of recognising the value of the services rendered at their true worth.

N. W. JOLLY,
Director of Forests.

TABLE No. 1.

PROGRESS OF THE SAWMILLING INDUSTRY FROM 1910 TO 1915.†

	1910.	1911.	1912.	1913.	1914.	1915.
Number of sawmills in operation ...	181	218	258	247	252	247
Number of hands employed... ..	3,178	3,872	4,753	4,621	4,359	4,311
Value of machinery, plant, land, &c. £	412,347	482,723	551,811	565,474	601,119	568,458
Soft woods cut ... { Super. feet	71,228,722	83,954,514	107,780,777	98,620,209	101,112,427	89,726,215
... { Value, £	493,805	645,822	829,617	778,084	838,713	769,164
Cedar cut ... { Super. feet	650,325	685,027	885,791	882,092	668,997	438,536
... { Value, £	10,477	14,154	19,850	15,964	14,329	11,085
Hardwood cut ... { Super. feet	44,558,510	51,255,941	55,180,900	57,131,221	66,874,215	54,790,162
... { Value, £	354,529	438,197	478,015	510,967	614,853	531,981
Planing, Moulding, &c. ... £	56,412	68,425	148,506	154,778	33,766	40,682
Value per 100 sup. feet*—	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Soft woods	13 10	15 5	15 5	15 8	16 7	17 2
Cedar	32 0	41 4	44 10	36 5	42 10	51 3
Hardwood	15 11	16 2	17 4	17 11	18 5	19 5

* The prices are the average local prices for all classes of the timber referred to.

† These figures, supplied by the State Government Statistician, refer to timbers cut in the State, both on Crown and private lands.

TABLE No. 2.

FORESTRY.

RETURN OF TIMBER RESERVES IN THE STATE ON 31ST DECEMBER, 1915.

Land Agent's District.	Number of Reserves.	Area.	New Area Proclaimed, 1915, Included in Previous Column.
		Acres.	Acres.
Atherton	9	26,637	...
Bowen	6	87,153	...
Brisbane	44	173,324	1,564
Bundaberg	15	61,062	...
Cairns	3	74,600	...
Charters Towers	1	125,000	...
Clermont	2	174,400	...
Cooktown	4	411,080	...
Dalby	18	404,555	4,335
Gayndah	5	21,840	720
Gladstone	14	145,988	1,950
Gympie	38	269,677	...
Herberton	1	9,330	...
Ingham	4	101,578	...
Inglewood	10	98,108	...
Innisfail	1	18,000	...
Ipswich	23	98,112	2,260
Mackay	12	196,876	...
Maryborough	28	124,847	10,720
Nanango	14	56,685	95
Port Douglas	5	211,036	...
Rockhampton	5	36,537	...
Roma	1	4,165	...
Springersure	1	3,240	...
Toowoomba	8	26,285	...
Warwick	12	88,496	...
Windorah	1	240	...
Totals	285	2,998,851	21,644

TABLE No. 3.

FORESTRY.

RETURN OF STATE FORESTS AND NATIONAL PARKS IN THE STATE ON 31ST DECEMBER, 1915.

Land Agent's District.	State Forests.		National Parks.	
	No. of Reserves.	Area.	No. of Reserves.	Area.
Atherton	3	Acres. 2,814	...	...
Brisbane	12	33,610	2	47,324
Bundaberg	5	64,516	...	...
Dalby	3	338,980	...	...
Dalby and Nanango ... ..	...	...	1	22,500
Gladstone	4	35,927	...	...
Gympie	8	59,457	1	106
Herberton ... ..	...	...	1	270
Ipswich	3	31,767	...	...
Maryborough	3	249,300	1	100
Nanango	7	42,642	...	...
Rockhampton	2	48,320	1	216
Springersure	1	69,000	...	...
Warwick	1	27,400	2	3,235
Totals	52	1,003,733	9	73,751

TABLE No. 4.

COLLECTIONS UNDER THE TIMBER AND QUARRY REGULATIONS FROM 1908 TO 1915.

LAND AGENTS' DISTRICTS.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Aramac	33 2 9							
Atherton	3,218 12 10	1,660 0 1	2,297 16 5	3,105 6 11	2,444 15 3	1,252 2 3	867 1 2	1,227 18 0
Banamu	17 18 4	36 2 0	0 5 0	2 0 0	1 15 0	6 9 4	8 1 9	0 15 0
Barcardine		34 16 5	22 1 3	33 19 6	76 2 8	62 9 0	63 1 8	42 1 11
Blackall	27 5 5	3 17 6	7 3 4	32 4 6	26 15 6	17 12 11	24 1 0	18 1 4
Boulia	6 3 0	11 16 0	12 0 0	7 2 0	2 14 0	6 17 6	5 16 9	7 8 4
Bowen	19 1 2	382 10 8	156 8 4	424 1 10	470 6 9	97 12 11	183 1 6	156 0 11
Brisbane	2,083 13 0	3,823 13 0	3,664 7 6	5,101 9 0	6,748 1 2	6,026 4 5	3,908 15 11	2,698 16 1
Bundaberg	1 656 8 7	1,413 12 6	1,402 3 7	2,297 13 7	2,444 14 0	2,358 9 2	2,988 11 4	2,155 11 1
Burketown	4 14 2	3 2 0	8 13 3	130 14 9	23 5 0	2 5 1	4 5 0	2 10 0
Cairns	1,358 16 6	1,369 10 5	1,312 4 7	842 14 5	1,402 0 4	1,190 6 7	1,586 12 8	1,036 18 4
Charleville	42 18 7	49 14 3	30 17 8	72 15 1	43 6 3	46 11 0	25 19 5	26 14 9
Charters Towers	1,153 6 9	1,351 1 7	1,139 13 7	1,250 10 3	1,650 12 11	982 3 4	1,263 6 8	1,103 16 8
Clermont	59 7 5	229 12 9	555 4 11	488 17 7	1,150 6 6	901 13 8	1,276 12 7	1,185 10 0
Cloncurry	58 1 0	264 15 8	97 8 10	176 7 0	124 5 5	520 7 2	424 10 11	627 2 9
Cooktown	122 14 9	68 18 10	335 6 3	80 19 11	87 1 7	67 13 4	118 8 6	180 7 0
Cunnamulla	4 11 3	7 2 0	10 16 11	30 2 0	51 7 6	50 6 0	42 16 2	4 12 6
Dalby	623 13 10	1,065 14 0	1,128 3 8	3,651 12 7	3,569 9 0	3,040 0 8	2,639 8 7	2,103 18 2
Gayndah	16 4 2	11 0 5	56 18 4	71 2 5	221 17 4	260 16 9	79 10 5	74 13 2
Georgetown	32 13 0	38 15 11	37 2 9	32 8 8	240 7 0	6 11 0	3 2 0	6 12 7
Gladstone	644 11 8	1,243 8 10	1,704 0 1	2,057 6 10	1,569 13 9	1,410 0 11	1,627 11 7	1,040 17 9
Goondiwindi	89 16 7	117 9 10	89 6 1	88 9 5	37 5 0	186 18 2	94 16 1	19 2 5
Gympie	3,816 9 5	4,965 10 1	4,971 19 10	6,882 4 3	9,570 15 1	8,451 18 5	10,635 4 11	14,975 7 2
Herberton	49 4 1	134 11 0	300 5 3	319 18 1	1,612 3 0	858 11 4	1,285 0 4	447 0 5
Hughenden	173 17 0	43 18 8	118 0 4	189 5 2	383 7 1	310 11 2	488 6 0	480 17 6
Ingham	851 5 6	340 13 7	487 4 0	396 13 10	337 6 7	525 0 3	634 10 4	574 18 11
Inglewood	225 7 5	506 15 0	1,605 10 9	998 2 8	1,469 6 1	1,616 15 11	917 8 10	1,268 2 4
Innisfail	255 8 1	559 16 5	422 5 2	583 7 11	387 19 3	276 19 4	238 1 1	271 1 11
Ipswich	1,053 5 7	1,588 5 6	2,172 16 1	4,386 8 5	3,122 15 9	5,234 15 9	9,073 11 11	10,422 12 9
Isiaford	1 12 0	7 9 0	2 8 6	3 14 6	7 16 8	6 18 6	7 1 0	4 15 6
Jandah	0 16 0		1 8 6	4 5 6	58 12 8	8 4 0	7 17 9	6 17 0
Longreach		21 12 6	30 8 4	107 18 3	67 11 10	78 18 10	51 9 8	42 6 6
Mackay	204 8 10	448 16 4	282 4 9	596 2 10	739 9 1	586 7 6	597 13 0	609 19 3
Maryborough	1,175 6 3	2,136 3 0	1,936 15 4	1,996 3 8	2,957 14 4	2,918 0 2	3,438 14 9	2,940 9 7
Nannago	3,657 1 8	5,183 10 5	6,687 10 4	11,323 3 0	12,676 15 7	17,692 8 10	23,547 12 10	19,110 10 0
Normanton	13 13 9	10 16 1	10 17 11	4 2 0	40 19 0	31 2 7	16 10 2	49 11 9
Port Douglas	41 17 8	66 10 6	217 7 5	137 13 4	37 11 6	194 17 8	174 0 2	115 2 2
Ravenswood	117 14 10	54 5 1	33 4 9	191 8 5	199 15 2	86 4 5	212 16 11	200 3 4
Rockhampton	1,656 12 7	2,182 19 11	1,451 5 1	1,290 5 7	1,669 2 6	2,070 2 1	2,947 15 7	2,918 12 8
Roma	111 14 7	198 18 4	242 12 11	697 14 3	944 13 3	881 17 8	708 4 6	345 19 10
St. George	85 6 1	74 13 10	120 14 0	115 10 2	139 16 3	240 19 8	317 16 11	105 5 11
St. Lawrence		1 13 9			2 0 0	12 15 6	2 5 6	1 15 7
Springure	186 5 9	155 0 2	180 5 8	202 6 10	387 11 9	424 13 11	467 5 9	357 13 10
Stanthorpe	28 11 9	39 18 8	11 8 3	18 5 7	0 11 6	14 14 7	20 8 8	24 4 1
Surat	5 13 4	8 0 11	10 19 1	3 5 0	10 15 9	7 12 6	12 19 8	20 8 2
Tambo	30 0 0	4 11 1	11 19 11	17 18 0	21 15 4	32 2 4	18 12 8	17 11 9
Taroom	4 10 9	20 11 1	17 1 9	16 16 2	22 17 9	47 2 5	35 9 4	38 1 9
Thargomindah	1 9 6	1 5 0	2 3 6	1 7 0	223 10 6	3 0 0	1 9 0	0 18 0
Torres	53 18 5	146 19 7	183 4 1	122 10 3	73 14 10	127 1 4	167 1 4	281 0 8
Toowoomba	2,104 2 0	2,505 5 7	3,350 13 8	2,239 5 9	1,637 16 7	771 10 3	1,609 2 5	642 13 1
Townsville	67 1 5	80 5 11	28 17 6	170 19 0	340 15 10	264 12 8	457 11 6	419 1 3
Warwick	665 15 2	458 5 5	687 0 8	903 14 2	1,859 4 7	1,263 17 1	344 14 3	253 6 8
Windsor	0 9 0	0 19 0	16 2 4		0 2 0	5 1 7		
Winton	16 14 6	38 12 6	19 17 6	30 2 2	35 7 8	39 13 3	30 16 9	14 1 6
Totals	27,979 6 6	35,200 8 10	39,645 4 3	53,840 8 0	63,446 16 8	62,973 4 3	75,317 19 9	70,690 14 7

* Now Barcardine and Longreach.



Photo., E. H. F. Scain.]

Complete Utilisation of Hoop Pine—Benarkin.
Five logs, including two "Tops." Total length, 117 ft.

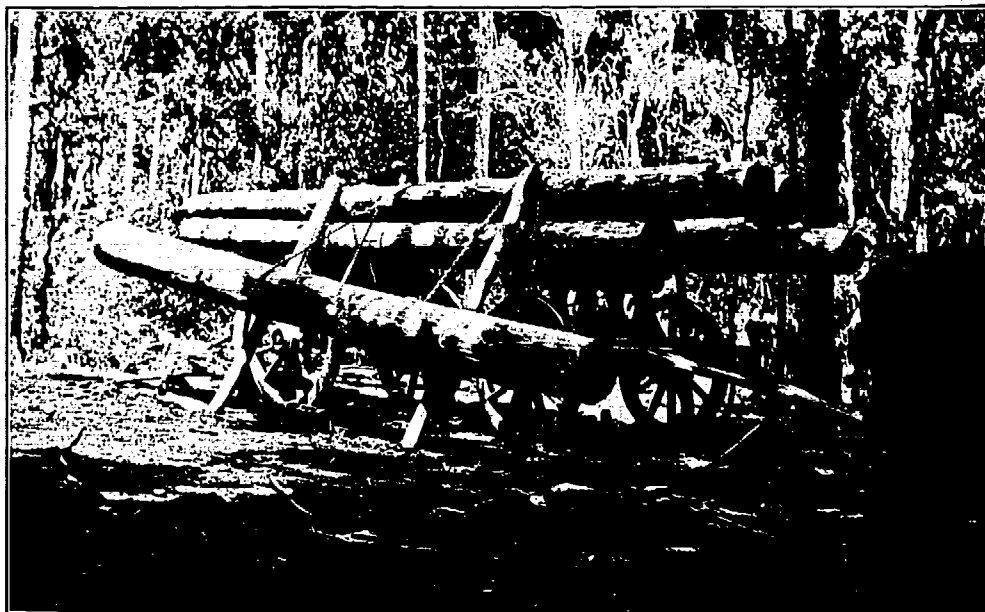


Photo., E. H. F. Scain.]

Extraction of Pine "Tops" at Benarkin for Case Timber.