

1917.

QUEENSLAND.

DEPARTMENT OF PUBLIC LANDS.

ANNUAL REPORT

OF THE

DIRECTOR OF FORESTS

FOR THE

YEAR 1916.



Photo., E. H. F. Swain.]

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

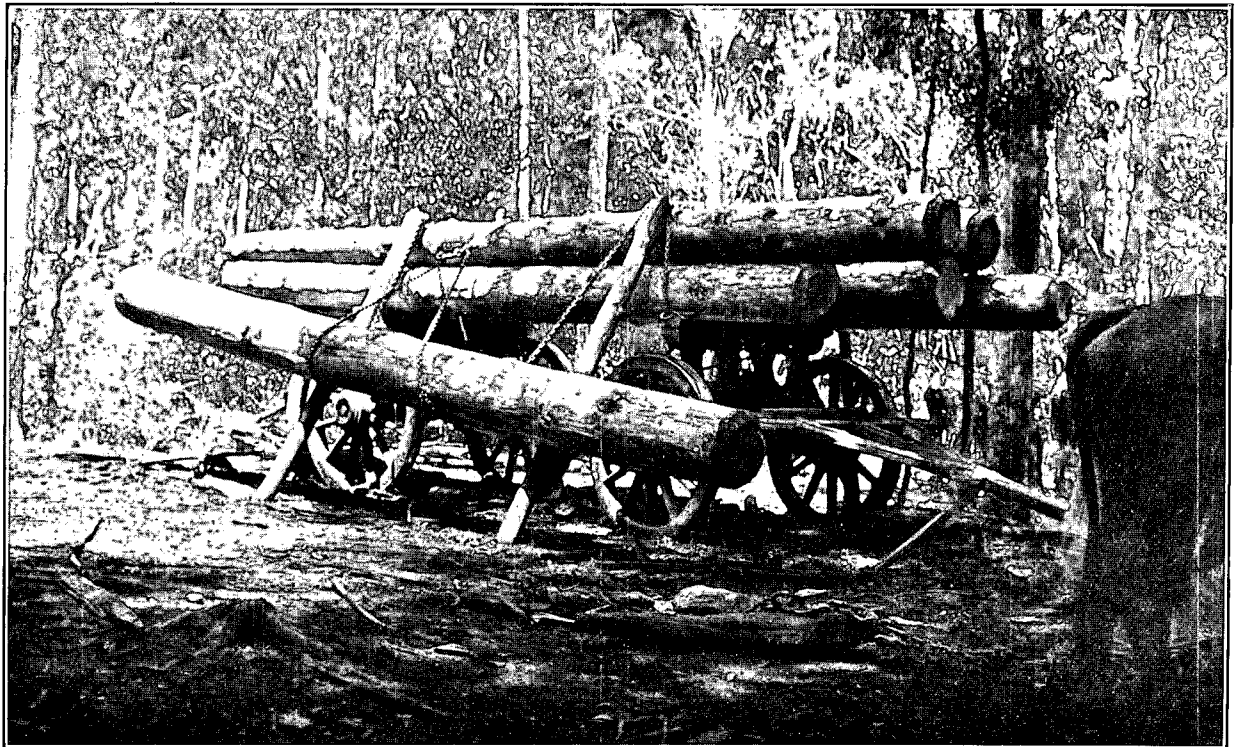


Photo., E. H. F. Swain.]

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

REPORT OF THE DIRECTOR OF FORESTS.

TEMPORARY TIMBER RESERVES.

The area temporarily reserved at the end of the year was 2,887,646 acres, this being a decrease of 111,205 acres on the figures for the previous year. This decrease was caused by the excision of 102,187 acres for the purpose of land settlement and the transference of one area of 2,500 acres from the temporary to the permanent list, while a total of 16,954 acres was lost as a result of the more definite location of boundaries by forest and land surveys. On the other hand, new reserves to the extent of 10,436 acres were proclaimed.

The areas released for alienation, though containing an undesirably high percentage of the total reserved area, are of far less importance than would be inferred from their extent, for the yield capacity of most of the land in question was decidedly low. The largest alienation, in the county of Auburn, district of Dalby, comprised 72,200 acres of inferior forest which seemed likely to produce a healthy crop of prickly-pear instead of timber.

The area of new temporary reserves proclaimed was disappointingly low, very little new forest which I could recommend for reservation having been brought to light by the land and forest surveys undertaken during the year. The two most important areas were 6,800 acres of hardwood (chiefly spotted gum and ironbark), resumed from a pastoral lease in the Dalby district, and 2,870 acres of virgin hoop pine from another resumption in the Bundaberg district, both being at present too far removed from railway communication to admit of profitable working.

STATE FORESTS AND NATIONAL PARKS.

The total area of permanent reserves—viz., 1,080,580 acres—shows an increase of 3,096 acres on the figures for the preceding year, only two small State forests having been proclaimed in the meantime, but Executive authority has since been obtained for the permanent reservation of eight new State forests containing about 55,700 acres. Of the first two, one containing 2,500 acres of hardwood forest is in the Gladstone district, while the other is a small area of country in the Herberton district, carrying maple, cedar, and kauri pine, the remnant, in fact, of the old Evelyn Scrub, which was once famous in the district for its stand of rare cabinet timbers. Of the remainder the most important is the Benarkin State forest in the Ipswich district, containing about 33,000 acres, with 35,000,000 superficial feet of overgirth pine and large quantities of undergirth, together with fair supplies of hardwood, which is mostly immature. Two other important areas in the Nanango district contain 7,900 and 3,000 acres respectively, with 20,000,000 feet of mature pine and a large proportion of undersized. One reserve in the Toowoomba district containing 8,250 acres, and two in the Maryborough district containing 2,850 acres, have been operated on for many years, and contain mostly undersized pine, together with about 12,000,000 feet of mature pine still to cut. The remaining two State forests, containing 2,670 acres, are in the Brisbane district, within easy distance of the capital. They are devoid of mature timber, but are well stocked with young hardwoods, of which spotted gum and red ironbark predominate.

The forestry inspections which have been carried on steadily show more clearly every year how limited is the extent of the natural timber resources still left to the Crown. One point which impresses itself upon me more firmly every year is that there should not longer be any compromise between land settlement and forestry. Compromise is, of course, essential in any new country, but the disregard of forestry in the earlier days of settlement was so great that, if Queensland is now to retain as State forests even 4,000,000 acres of good natural forest lands, every acre of forest of present or prospective value should be withheld from alienation, no matter whether it be suitable for settlement or not. In this connection the figures quoted in my report for 1915 relative to the importance of the timber industry and the comparatively small retarding influence of existing reserves on land settlement show that, though to the superficial observer forestry may appear a menace, its claims from a national standpoint are very strong.

FOREST INSPECTIONS AND FEATURE SURVEYS.

One survey camp, acting under the Surveyor-General, and one forest valuation camp were engaged on this work more or less continuously throughout the year, while during the last quarter, as a result of the increased vote for the financial year 1916-1917, two new survey camps were started in the Atherton district, where, although the existing population appears to be quite unable to develop thoroughly the land already settled, or rather selected, the demands for the alienation of the small remaining areas of timber reserves are unceasing. The first-mentioned camp was engaged chiefly on the large National Park proclaimed in the previous year, but owing to the illness of the surveyor and the extreme difficulty of securing assistants willing to continue at the arduous work involved, operations had to be suspended. The inspections carried out disclosed that the rare species of *Fagus Moorei*, occurring on the higher altitudes, is much more plentiful than was originally supposed, but its development is not such as to render it of more than botanical interest.

The work of the valuation camp was subjected to several interruptions, owing to the necessity for transferring the officers temporarily to other urgent work, and this fact, together with the rough nature of the country examined, led to the small total of 60,000 acres being dealt with. A proportion of this was contained in grazing selections which were inspected in order that action might be taken immediately on the expiry of the leases to have the portions suitable for forestry purposes retained as

reserves. On the whole, the quality of hardwood forest examined was poor, while most of the pine-bearing country, having been operated upon for many years, was deficient in the overgirth class, though well up to the average as regards the undergirth classes. About 15,000 acres were considered unsuitable for retention, the remainder, containing a stand of approximately 50,000,000 superficial feet of overgirth pine, being recommended for permanent reservation.

FOREST OFFENCES.

Proceedings on account of breaches of the Regulations or of the Acts were instituted in thirteen cases, in eleven of which the offenders were convicted and fined, while the remaining two were dismissed on a technical point, although the offenders were caught in the act. As usual, not one of the fines inflicted exceeded the minimum of £5 specified by the Land Act, the theft of Crown timber being apparently considered an offence for which the lowest possible penalty is to be inflicted. The result is that a thief can pay his fine and still have a profit left on his transaction; this in itself is bad, quite apart from the fact that there appears to be no reason why the theft of timber should be less reprehensible than the theft of any other produce.

REVENUE AND EXPENDITURE.

The collections on account of sales of timber and licenses issued during the year amounted to £60,022 11s. 9d. and £814 18s. 7d. respectively, or a total of £60,864 10s. 4d. Refunds of guarantee deposits and excess payments made on previous sales amounted to £462 14s. 3d., leaving a total revenue from timber alone of £60,401 16s. 1d., this being less than the revenue for the previous year by £9,391 9s. 10d. Of the total collections the Southern division yielded £50,691 18s. 10d., or 83.3 per cent.; the Central division, £3,596 17s. 10d., or 5.9 per cent.; and the Northern division £6,575 13s. 8d., or 10.8 per cent. The most important forest districts of the State—viz., Brisbane, Ipswich, Gympie, Nanango, and Maryborough—together yielded £46,962 16s. 7d., i.e., 93 per cent. of the total for the Southern division, or 77 per cent. of the collections for the whole of the State, as against 88 per cent. and 71 per cent. respectively for the preceding year.

The large decrease shown above was due, firstly, to the effects of the severe drought which extended into the early part of the year; and, secondly, to the trade depression which affected the State throughout the year, notwithstanding the complete breaking up of the drought. The position could have been relieved somewhat by the supply of sawn timber to the Southern markets, but the lack of shipping space prevented full advantage being taken of the Southern situation. Also, the requirements for railway construction purposes and for mining purposes in the Central division fell off very considerably.

District increases were recorded in only five cases, the most important of which were Gympie and Maryborough, which showed increases of £1,653 and £614 respectively, the former being due to increased value of standing pine caused by the opening of the Mary-Valley line, and the latter to the renewal of operations on a large scale on Fraser Island. The principal decreases were:—Nanango, £3,146; Ipswich, £1,630; Dalby, £1,265; Rockhampton, £1,250; Bundaberg, £1,029; Brisbane, £646; Clermont, £560; and Inglewood, £524.

The expenditure for the year amounted to £9,473 1s. 6d., as compared with £7,416 2s. 1d. for the previous year. Salaries absorbed £3,815 7s. 8d. (£3,925 19s. 1d.), forest surveys and silvicultural operations £2,157 14s. 2d. (£1,746 8s. 3d.), travelling allowances and incidental expenses £1,778 14s. 5d. (£1,743 14s. 9d.), opening and construction of roads £1,299 15s. 3d., buildings £421 10s. (Figures in parentheses are the corresponding amounts for 1915.) The expenditure on roads was controlled by the Roads Branch and the Public Estate Improvement Branch.

OUTPUT OF CROWN TIMBER.

The cutting returns show a marked decrease in almost every class of timber dealt with, this being particularly noticeable in the case of milling pine and hardwood, and in timber for railway construction. A very slight increase was recorded for cabinet timbers other than cedar, but the Crown trade in these timbers is extremely small, most of the accessible supplies having been alienated.

As nearly as can be ascertained from the figures supplied by the district land agents, the Crown timber cut on which royalty was payable was as follows (figures in parentheses denote the quantities cut in the preceding year):—Kauri pine, 1,420,000 superficial feet (1,652,000); cypress pine, 840,000 superficial feet (1,623,000); hoop and bunya pine, 34,200,000 superficial feet (41,500,000); milling hardwood, 8,250,000 superficial feet (11,050,000); red cedar, 90,400 superficial feet (167,000); other milling timbers, 780,000 superficial feet (750,000); sleepers and transoms, 564,130 pieces (863,000); piles, girders, &c., 226,640 lineal feet (287,570); telegraph poles and house blocks, 158,200 lineal feet (407,400); posts, rails, and palings, 74,000 pieces (98,000); fuel, 32,000 tons (40,000); mining timber and miscellaneous, 1,067,000 lineal feet (1,159,900); sandalwood, 396 tons (550); and mangrove bark, 166 tons (156). The principal districts yielding hoop and bunya pine were Gympie with 11,480,000 superficial feet (12,460,000), Nanango with 11,260,000 superficial feet (13,740,000), and Ipswich with 7,550,000 superficial feet (9,870,000), while the quantities cut in each of Brisbane, Maryborough, and Bundaberg decreased by from 500,000 to 700,000 superficial feet. As in the previous year the trade in milling hardwood on Crown lands was so small that the sales exceeded 1,000,000 superficial feet in three districts only—viz., Maryborough, 3,300,000 superficial feet (3,680,000); Dalby, 1,200,000 superficial feet (1,605,000); and Brisbane, 1,060,000 superficial feet (1,250,000). Sixty per cent. of the mining timber was disposed of in Charters Towers and Cloncurry, most of the remainder having been cut in Rockhampton, Maryborough, Gladstone, and Toowoomba, while the output from Rockhampton decreased by 75 per cent.

ROYALTY RATES RECEIVED.

The prices received for standing timber were generally well maintained, though, owing to the low log rates prevailing in some areas for medium-sized pine logs, difficulty was experienced in disposing of pine in rough localities far removed from railway communication. This applies more particularly to forests drawn upon solely by Maryborough mills, whose requirements and prices are such that under the conditions stated logs under 70 inches mid girth cannot be handled by teamsters without loss, unless the department is prepared to dispose of them for almost nothing.

The highest price per 100 superficial feet realised for hoop and bunya was 5s. 11d., which was offered for one lot in the neighbourhood of Blackbutt, Nanango district, where prices generally were satisfactory. Prices in Gympie varied from 9d. to 5s. 9d., the latter price being obtained for one lot on Brooloo State Forest, in close proximity to the Mary Valley line. As high as 4s. was realised in the Brisbane and Toowoomba districts and 3s. 6d. in Ipswich, while elsewhere the rates ranged from 1s. to 2s. 6d.

Hardwood sales were very restricted, and prices generally ranged from 9d. to 1s. 6d. per 100 superficial feet, though 3s. 6d. in Ipswich and 3s. in Brisbane were obtained for a few trees especially favourably situated, while 2s. 3d. and 2s. 6d. were offered at Gympie and on Fraser Island respectively.

There were very few sales of the rare Southern woods, and then only in small quantities. The best prices realised were 17s. 6d. for red cedar, 4s. for white beech, 4s. for yellowwood, and 3s. 6d. for white cedar and crow's ash, all in the Gympie district on the Mary Valley line, and 2s. for cypress pine in the Roma district. In North Queensland the best price obtained for red cedar was 20s. 6d. in the Atherton district, where, also, 4s. 6d. was realised for one small lot of kauri pine, for which, however, prices generally varied between 1s. and 2s. Maple (red beech and silkwood) brought 2s. in the Innisfail district, while an odd lot at Atherton was sold for 4s. Silky oak was unsaleable at Atherton, but brought a maximum price of 2s. at Innisfail.

Criticisms have been made recently purporting to show that the allegedly absurd increases in royalty rates "imposed" by the Government are ruining the timber industry. Similar statements have been made at intervals for many years past, and ordinarily would not call for special comment, but in view of the fact that representations by the timber merchants of Queensland to the Federal Minister for Customs in favour of an increased tariff on imported timber have been met with the reply that, on the merchants' own showing, the remedy lies primarily with the State Government, attention is now directed to the incorrectness of the statements.

The sale of Crown timber at auction has been the recognised policy of the Department since its introduction in 1904, and under such a policy it should not need to be emphasized that it is not the Government, but the buyers themselves, that fix the value of standing timber. Naturally the Department's officers have to fix the upset or reserve prices, but these are controlled by the ruling prices offered for log timber and by the prices realised at auction under similar conditions. Anyone who follows the Crown sales must be fully aware that, whenever there is free and genuine competition, prices considerably above the Crown upsets are freely offered, and the very small number of sales which have to be cancelled for non-fulfilment of conditions shows that these prices are not so absurd after all.

Exception is taken to the fact that, while in some cases the Queensland Government receives 5s., or even more, for standing pine timber, the New South Wales Government sells pine over the border for 3d. The objectors do not appear to realise that, quite apart from the business aspect of the question, selling timber at a fixed rate regardless of position, &c., places those people who are obliged to work the less accessible timber in a most unfair position, and renders it impossible for them to compete on even terms with others in the trade. The anomaly, of course, is one for the New South Wales Government to remove. In any case, the objectors do not prove that standing timber in New South Wales at 9d. is really cheaper than Queensland timber at 3s. or 5s. Everything depends, of course, on the cost of getting the timber to market, and there are localities in Queensland where the value of standing timber is nil or even negative. There are also numerous cases where we are selling pine at the low rates of from 9d. to 1s. 6d., and those rates have remained at approximately the same level for many years, simply because the means of communication have not improved, and there has been no competition to affect the prevailing low log values on-trucks. There are other cases where the value of standing timber has increased from 1s. 6d. to 5s., or even more occasionally, but, as all connected with the trade know full well, these increases have been due primarily to the construction of railway lines into the heart of the timbered country, and it is surely extraordinarily unreasonable to deny to the Crown the right to receive the increased value put on its property by its sound policy of constructing railways.

As stated above, the position is so obvious that there should be no need to labour the points involved, and it is greatly to be regretted that a decision on the merits of the appeal for a higher tariff should be prejudiced by misrepresentations as to the position of the State Government in the matter.

SYLVICULTURE.

The year was somewhat less unfavourable than that preceding, but, as the drought did not break until the planting season had passed, conditions were still unsatisfactory.

In the Atherton district the unprecedented thinning out of the undergrowth, caused by the extreme dryness and consequent fires, was followed by the intrusion of a prolific growth of hardy weeds, such as inkweed and stinging tree, which will probably render the work of future years considerably more expensive and difficult. The spread of stinging tree is particularly undesirable as it is impossible for men to work amongst it when the growth is very dense.

The trial cedar plantations previously established show diverse results. The one and two chain strips on Timber Reserve R. 191, parish of Barron, have suffered still more severely from the cedar twig borer, the dry seasons having prevented the young plants from recovering from the damage and making headway. On the 5-acre clean felling on Timber Reserve R. 418, parish of Danbulla, where the pest might have been expected to have free play, the damage done is not nearly so great, three-year-old plants being now up to 18 feet in height. The spacing on this area was 18 feet by 18 feet, and it is satisfactory to note from Inspector Mocatta's reports that complete cover has now been established by the natural reproduction of other species, particularly candlenut, which is an extremely useful species for this purpose, though liable to outgrow the more valuable species. The successful planting of red cedar is dependent almost entirely on the control of the twig borer, and with this in view it seems probable that the percentage of cedar in a plantation will have to be reduced considerably. The year 1916 was not a seed year for cedar, and natural reproduction was therefore absent. On the other hand, silky oak and red beech (maple) seeded abundantly, and, in consequence of the favourable rains in the latter half of the year, a good show of natural reproduction was obtained, particularly on Timber Reserve R. 310, parish of Gadgarra, where cleaning operations will be undertaken as soon as advisable. Observation of the natural reproduction following fellings, and of the more abundant growth of trees in the pole stage, has shown up to the present that the indigenous species which give the best natural regeneration are candlenut, northern bally gum, crow's foot elm, and black bean, the success of the first three being in some instances such as to result in the formation of almost pure forests. Species such as these will probably form the foundation of the future forest crops to be raised, and will be mixed with a lower percentage of the more valuable kinds.

Adjoining the nursery a small area inside the wire netted portion of the reserve was felled for conversion into an arboretum. The Barron River, which had been relied upon to form a natural barrier to wallabies, fell to such a low level, however, that the vermin were able to cross on the exposed rocks, and devoured the bulk of the transplants before they could be destroyed. The arboretum will be restocked at the first favourable opportunity. Outside the arboretum the new trial planting was limited to red cedar, kauri pine, and maple, the first two species having successfully established themselves in spite of the drought. The growth of kauri in the first year was particularly good, transplants from 12 inches to 18 inches in height having increased to from 3 to 6 feet, notwithstanding the fact that the growth of inkweed was extremely dense. Maple, on the other hand, failed badly, this species appearing to require in its early stages much more favourable conditions than the others. The results to date point clearly to the necessity for limiting expenditure on plantations, at least until further information has been collected, and assisting the natural reproduction as much as possible. More important than anything else, of course, is the problem of securing a closer utilisation of the virgin stand, but unfortunately the development of the district is not such as to create a strong local demand. Attempts have been made to interest Southern firms in the use of the miscellaneous woods for the manufacture of plywood and veneers, and the results are awaited with interest.

On Fraser Island the temporary nursery was abandoned, and a station established near the terminus of the new tramline, which was opened in March. A house was erected for Ranger Petrie, a horse paddock fenced and cleared, and ground prepared for a nursery and arboretum. No time was lost by the ranger, who at the end of the year had a healthy stock of plants in readiness for planting in the arboretum. On the new blackbutt and tallowwood area, over which cutting rights have been sold, regeneration fellings were commenced and are being continued steadily, while similar work was undertaken in the scattered cypress pine areas on the coast. Owing to the absence of any market for all the waste timber which is felled, and the profuse growth of the inferior species, the cost of this work is higher than could be desired—viz., up to 22s. per acre—but efforts are being made to reduce the cost if possible. In the meantime, in the hope that a market will ultimately be found for the fine forests of turpentine and scrub box, land carrying a heavy stand of these species is not being dealt with.

The development of the young plants in the trial areas of the previous two years is worthy of comment. After three years from the date of sowing, blackbutt seedlings have attained an average height of 30 feet, with a maximum of 40 feet, while cypress pine also made excellent progress with an average of 8 and a maximum of 11 feet. An excellent photograph of the blackbutt, taken by Mr. le Soeuf of the Melbourne Zoological Gardens, is reproduced in this report. The growth of red stringybark seedlings is also very fine, a maximum height of 20 feet 6 inches having been attained in two years from seed, while tallowwood reaches 15 feet 6 inches in the same period. Of the conifers—except cypress—*Pinus taeda* shows the best average height of 3 feet 6 inches in three years, bunya pine next with 2 feet, and *Pinus longifolia* with 1 foot 8 inches. A photograph by Mr. le Soeuf of the best specimen of *P. longifolia* is also reproduced in this report.

Operations on Fraser Island have now reached such a stage that permanence is assured, if only for the sake of developing thoroughly the hardwood possibilities of the central strip of the island, and the provision of a motor boat for the use of the officer in charge is very necessary. Ranger Petrie is to be highly commended for the energy and enthusiasm which he has put into his work and the cheerfulness with which he has borne the unavoidable discomforts. A motor boat would greatly lessen the latter, besides being of very great value in facilitating the inspections at places removed from headquarters.

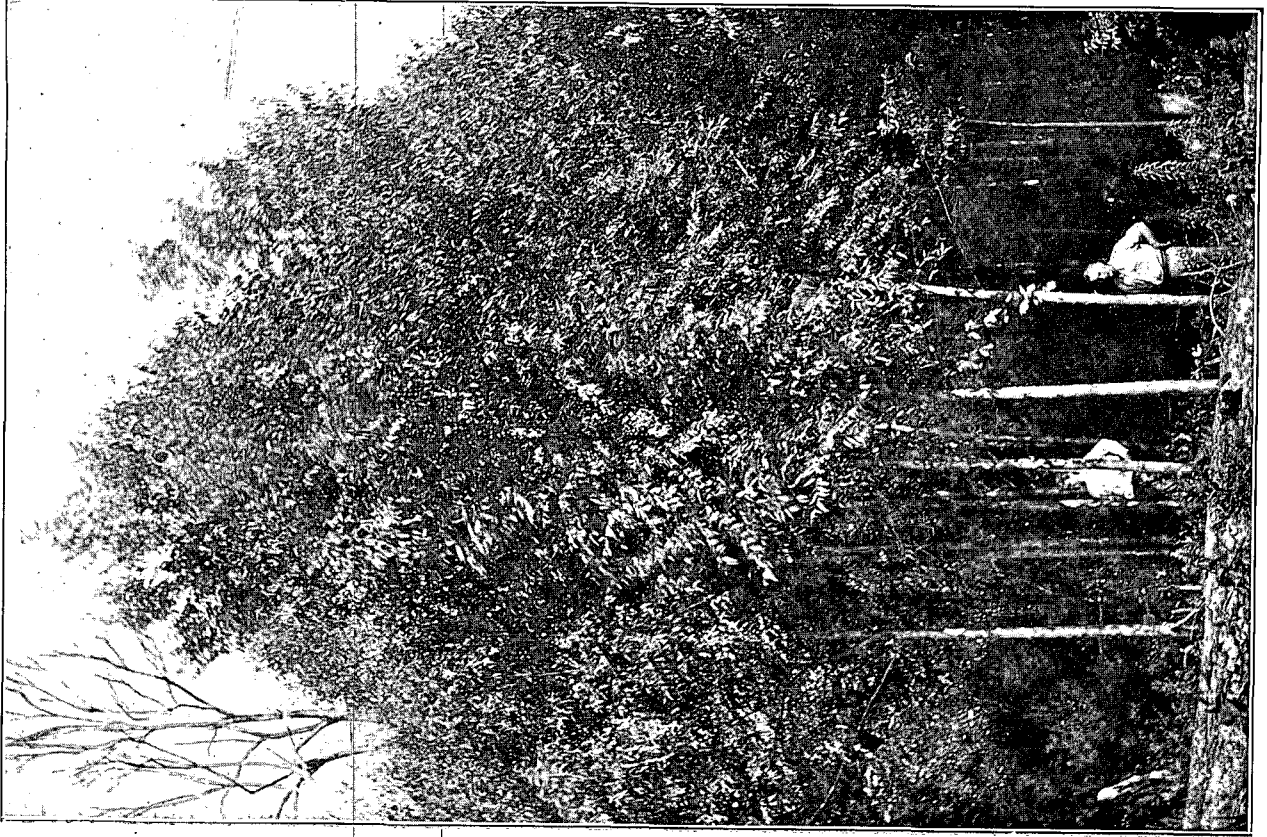
On the mainland good seed years were not recorded for any species, but a fair supply of hoop pine seed was shed. This, however, was mostly infertile and unsuitable for nursery work, though in the Goodnight Scrub, Bundaberg district, the good seed was plentiful enough to produce a fair showing of natural reproduction. In this area a contract had been let for the eradication of prickly-pear, and in the renewal of the contract provision was made for all necessary cleanings to be made with the object of encouraging the development of the young pine. By continual attention the pear has been kept under control, but the work is rendered more difficult than should be the case, owing to the spread of the pest from adjacent lands on which those responsible have not fulfilled their obligations.

Very fair progress of the natural reproduction of hardwoods already established on State Forest R. 318, parish of Maroochy, Brisbane district, was recorded, while on Timber Reserve R. 283, parish of Taromeo, Nanango district, on part of the area denuded of timber by railway operations, the young



Photo, D. le Souëf.]

Pinus longifolia—Fraser Island.
Three years after sowing. Height, 4 ft. 4 in.



Photo, D. le Souëf.]

Eucalyptus pilularis—Fraser Island.
Three years after sowing. Maximum height, 40 ft.



Dense Pole Growth of Northern Bally Gum—*Blepharocarya involucrigera*—
Atherton District.



Timber Hauling, Ravenshoe Scrub—Herberton District.

growth is now in a very satisfactory condition, having for the most part grown clear of the wattles and other weeds without cleaning operations having been necessary. Lack of demand for the bulk of the natural growth species still prevents the economical management of the forests of mixed hardwoods in the wetter coastal areas, but with the growing scarcity of the more valuable species in accessible localities an improvement in this respect may be expected in a year or two.

Near Imbil, on the Brooloo State Forest, Gympie district, a small area was enclosed for the purpose of raising nursery stock for trial plantations, the object being primarily to obtain data on which to base a comparison between the natural and artificial regeneration of hoop pine forests. The seed produced having been mostly infertile, and the wet season having failed, natural reproduction was not in evidence during 1916, but fortunately by the end of the year the 1917 crop, which was early, began to fall in abundance, and gave promise of valuable information being collected, this being the first occasion, since an active forestry staff was established in 1913, on which a good fertile seed year has been experienced. Plans for the establishment of a permanent forest station have been approved, and the erection of quarters and offices, and the formation of a nursery and arboretum near Imbil, are now being carried out.

UTILISATION.

During the past three years specimens of barks of various trees collected by the field officers have been forwarded to the Agricultural Chemist for analysis as to their tanning properties. In all, slightly over sixty species have been reported upon, with results varying from fair to bad, but one or two have been sufficiently promising to justify their being persevered with. The bark of *Acacia flavescens*, the Fraser Island red wattle, gave from 14 to 26 per cent. of tannin, the lower percentage being from the larger trees, and it has been arranged for a bulk sample to be tested by Mr. Gibson in his tannery at Kedron. From 15 to 30 per cent. tannin was yielded by a portion of the bark of *Callitris arenosa*, the Fraser Island cypress, but further tests are to be made before a bulk sample is procured. A third interesting result was, that the inner bark of Gympie messmate—*Eucalyptus Cloeziana*—yielded 23½ per cent. tannin, and further specimens of this species are to be procured.

The year showed a distinct improvement in the utilisation of pine tops, and a number of buyers are now removing a percentage of knotty logs regularly. This has been caused largely by the demand from the Southern States for case timber, due to the shortage of supplies of Baltic deals, while the fact that tops are disposed of at a nominal royalty only has also been a contributing factor. The condition of the agreement with the Queensland Pine Company, Limited, regarding the removal of tops formed the subject of a dispute between the company and the Government. A compromise was effected under which it was agreed that in consideration of the Government not requiring the compulsory removal of tops the company should pay an increase of 1s. 9½d. per 100 superficial feet on the milling pine, but, if the pulp mill should be worked, the price will revert to that payable under the original agreement so long as the pulp mill is being operated satisfactorily.

Considerable supplies of log pine have been sent to Melbourne for use in the match factory and in the manufacture of plywood, taking the place, it is said, of Siberian aspen. With a view to encouraging the use for these purposes of other Queensland timbers not now in general demand, buyers have been allowed to remove trial lots at a nominal royalty or for nothing, but no reports on the matter have yet been received. North Queensland candlenut and bally gum are well worthy of trial in this connection, while there are several useful cabinet timbers, particularly satinwood, which might be cut into veneers.

A large area—10,000 acres—of miscellaneous timbers on Fraser Island was offered at auction at Maryborough, but no bids were received. The offer is well worthy of consideration by those interested in the utilisation of turpentine and scrub box, and additional interest is now lent to it by the demand for case timbers, for which some of the miscellaneous timbers are known to be suitable. Security of tenure is offered for ten years, with protection of improvements if a second sale at auction is made on the expiration of the agreement, while the Crown has set limits of 3d. and 6d. to the increases in royalty which it may ask biennially after the lapse of the first five years. With a view to facilitating the seasoning of turpentine, which is alleged to be the fault which debars its use as a milling timber in smaller sizes, sample trees have been ringbarked and allowed to stand for twelve months before being cut. The result is awaited with interest.

GENERAL.

During the year the Department lost the services of two officers whose work during the early life of the Forestry Branch was of much greater value than was generally realised. Mr. Forest Inspector G. Burnett, who retired owing to having reached the age limit, was the first field officer appointed when the Forestry Branch was formed in 1900. He was deputed to make flying inspections of almost the whole of the Southern half of coastal Queensland, and to make recommendations for the reservation of any areas considered suitable for forestry purposes. How necessary that was if the sacrifice of the remaining Crown forests was to be prevented is well known to those who are conversant with the history of land settlement on timbered areas, and Mr. Burnett is to be congratulated on the fact that the existing Southern reserves have been derived largely from the areas first recommended by him. At the same time it is fitting to record the meritorious services in North Queensland, and also in the South, of Mr. F. W. Lade, who, as the first colleague of Mr. Burnett, did similar valuable but unrecognised work. Mr. District Forest Inspector Lawrence, who resigned during the year, was appointed on Mr. Lade's retirement, in 1906, and did most valuable work in examining much more closely the forest resources of the south-eastern districts. To his work is due the fact that it has been possible to state definitely that the Crown resources of hoop pine have been tremendously over-estimated by that part of the general public interested, and to take steps to limit the excessive rate of cutting of the marketable supplies.

The appointment of Mr. E. H. F. Swain to take control of the Gympie and Nanango districts was sanctioned towards the end of the year, and the Department has been fortunate in securing the zealous and enthusiastic services of one who was the most capable officer in the New South Wales forestry service, and who had just returned from an educational tour of the western part of the United States of America. It is hoped that the Department will be able to publish an interesting and valuable report by Mr. Swain on his American experiences.

During the year two interstate forestry conferences were held at Melbourne and Adelaide, at the first only of which this State was represented. The most important subject dealt with at both conferences was the training of forest officers, but it is lamentable that no arrangement for concerted action by all the States in the establishment of one sound forest school was arrived at. The future progress of forestry obviously depends, apart from political considerations, almost entirely upon the supply of capable, well-trained forest officers, and the most economical and efficient method of providing the necessary training is for all States to co-operate in establishing the training centre in a locality where the types of forest conditions—not necessarily species—of all the States can be readily studied. For the present it seems, however, that a united effort is more than can be hoped for. With a view chiefly to providing instructive reading matter for the present staff and the future students of forestry in Queensland, and thus filling to a small extent the need for better training, the preparation of forestry bulletins is being undertaken, and it is proposed shortly to seek authority for publication of the first of the series. In addition, it has been approved to make the Imbil Forest Station the headquarters of the local training school for foresters, and the appointment of an instructor, to commence duties when the necessary arrangements have been completed, has been approved. It is also proposed to bring forward the question of having the forestry service rendered more attractive and placed on the footing which the national importance of the subject deserves.

In conclusion, I wish to record my high appreciation of the devotion of the members of the staff to duty in the face of the odds which are always against them, and to reiterate the hope that they will be accorded the long-deferred recognition which is their due.

N. W. JOLLY, Director of Forests.

TABLE No. 1.

PROGRESS OF THE SAWMILLING INDUSTRY FROM 1911 TO 1916.†

	1911.	1912.	1913.	1914.	1915.	1916.
Number of sawmills in operation ...	218	258	247	252	247	230
Number of hands employed... ..	3,872	4,753	4,621	4,359	4,311	3,734
Value of machinery, plant, land, &c. £	482,723	551,811	565,474	601,119	568,458	567,356
Soft woods cut ... { Super. feet	83,954,514	107,780,777	98,620,299	101,112,427	89,726,215	75,231,339
... { Value, £	645,822	829,617	778,084	838,713	769,164	657,289
Cedar cut ... { Super. feet	685,027	885,791	882,092	668,997	433,536	290,738
... { Value, £	14,154	19,850	15,964	14,329	11,085	6,343
Hardwood cut ... { Super. feet	54,255,941	55,160,910	57,131,224	66,674,215	54,790,162	46,328,581
... { Value, £	438,197	478,015	510,967	614,853	531,981	491,903
Planing, Moulding, &c. ... £	68,425	148,506	154,778	33,786	49,682	35,748
Value per 100 sup. feet*—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Soft woods	15 5	15 5	15 8	16 7	17 2	17 6
Cedar	41 4	44 10	36 5	42 10	51 3	43 8
Hardwood	16 2	17 4	17 11	18 5	19 5	21 3

* 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, 1916.

Land Agent's District.	Number of Reserves.	Area in Acres.	New Area Proclaimed, 1916, included in Previous Column.
			Acres.
Atherton	8	25,596	...
Bowen	6	75,383	...
Brisbane	48	212,758	607
Bundaberg	16	68,020	2,870
Cairns	3	72,340	...
Charters Towers... ..	1	125,000	...
Clermont	2	174,400	...
Cooktown	4	411,080	...
Dalby	18	321,874	6,799
Gayndah	5	21,840	...
Gladstone	13	142,888	...
Gympie	34	224,300	160
Herberton	1	9,100	...
Ingham	4	101,578	...
Inglewood	10	98,108	...
Innisfail	1	18,000	...
Ipswich	23	98,031	...
Mackay	12	196,186	...
Maryborough	26	119,466	...
Nanango	14	54,925	...
Port Douglas	5	209,876	...
Rockhampton	5	36,307	...
Roma	1	4,165	...
Springsure... ..	1	3,240	...
Toowoomba	8	25,739	...
Warwick	11	37,706	...
Windorah	1	240	...
Totals	281	2,887,646	10,436

TABLE No. 3.
FORESTRY.

RETURN OF STATE FORESTS AND NATIONAL PARKS IN THE STATE ON 31ST DECEMBER, 1916.

Land Agent's District.	State Forests.		National Parks.	
	No. of Reserves.	Area in Acres.	No. of Reserves.	Area in Acres.
Atherton	3	Acres. 2,814	...	Acres. ...
Brisbane	12	33,610	2	47,324
Bundaberg	5	64,516	...	...
Dalby	3	338,980	...	...
Dalby and Nanango ... ..	...	...	1	22,500
Gladstone	5	38,427	...	...
Gympie	8	59,457	1	106
Herberton	1	596	1	270
Ipswich	3	31,767	...	...
Maryborough	3	249,300	1	100
Nanango	7	42,642	...	...
Rockhampton	2	48,320	1	216
Springsure	1	69,000	...	...
Warwick	1	27,400	2	3,235
Totals	54	1,006,829	9	73,751

TABLE No. 4.

COLLECTIONS UNDER THE TIMBER AND QUARRY REGULATIONS FROM 1909 TO 1916.

LAND AGENTS' DISTRICTS.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Atherton	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 13 0	941 13 6
Banana	36 2 0	0 5 0	2 0 0	1 15 0	6 9 4	8 1 9	0 15 0	...
Barcaldine	34 16 5	22 1 3	33 19 6	76 2 8	62 9 0	63 1 8	42 1 11	21 19 1
Blackall	3 17 6	7 3 4	32 4 6	26 15 6	17 12 11	24 1 0	18 1 4	11 12 5
Boulia	11 16 0	12 0 0	7 2 0	2 14 0	6 17 6	5 16 9	7 8 4	6 4 9
Bowen	382 10 8	156 8 4	424 1 10	479 6 9	97 12 11	183 1 6	156 0 11	190 6 4
Brisbane	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	2,052 10 10
Bundaberg	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	1,126 11 0
Burketown	3 2 0	8 13 3	130 14 9	23 5 0	2 5 1	4 5 0	2 10 0	4 12 2
Cairns	1,369 10 5	1,312 4 7	842 14 5	1,402 0 4	1,190 6 7	1,286 12 8	1,036 18 4	895 10 5
Charleville	48 14 3	30 17 8	72 15 1	43 6 3	46 11 10	25 19 5	26 14 9	19 3 8
Charters Towers	1,351 1 7	1,139 13 7	1,252 10 3	1,650 12 11	982 3 4	1,263 6 8	1,108 16 8	916 5 0
Cloncurry	229 12 9	555 4 11	488 17 7	1,150 6 6	901 13 8	1,276 12 7	1,185 10 0	628 16 9
Cooktown	264 15 8	97 8 10	176 7 0	124 5 5	520 7 2	424 10 11	627 2 9	760 7 3
Cunnamulla	68 18 10	335 6 3	80 19 11	87 1 7	67 13 4	143 8 6	190 7 0	88 16 8
Dalby	7 2 0	10 16 11	30 0 2	51 7 6	50 6 0	42 16 2	4 12 6	19 8 9
Gayndah	1,065 14 0	1,128 3 8	3,561 12 7	3,569 9 0	3,040 0 8	2,639 8 7	2,103 18 2	838 1 10
Georgetown	11 0 5	56 18 4	71 2 5	221 17 4	260 16 9	79 10 5	74 13 2	93 8 1
Gladstone	38 15 11	37 2 9	32 8 6	246 7 0	6 11 6	3 2 0	6 12 7	6 0 6
Goondiwindi	1,243 8 10	1,704 0 1	2,057 6 10	1,569 13 9	1,410 0 11	1,527 11 7	1,040 17 9	772 13 11
Gympie	117 9 10	89 6 1	88 9 5	37 5 0	136 18 2	94 16 1	19 2 5	14 14 0
Herberton	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	16,628 5 11
Hughenden	134 11 0	300 5 3	319 18 1	1,612 3 0	858 11 4	1,285 0 4	487 0 5	358 3 9
Ingham	43 18 8	118 0 4	189 5 2	383 7 1	310 11 2	488 6 0	446 17 6	375 11 10
Inglewood	340 12 7	487 4 0	396 13 10	337 6 7	525 0 3	634 10 4	574 18 11	283 10 11
Innisfail	506 15 0	1,605 10 9	998 2 8	1,469 6 1	1,616 15 11	917 8 10	1,258 2 4	734 2 2
Ipswich	559 16 5	422 5 2	583 7 11	387 19 3	276 19 4	238 1 1	271 1 11	378 17 8
Isisford	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	8,792 5 6
Jundah	7 9 0	2 8 6	3 14 6	7 16 8	6 18 6	7 1 0	4 15 6	8 16 4
Longreach	1 3 6	4 5 6	4 5 6	58 12 8	8 4 0	7 17 9	6 17 0	4 2 0
Mackay	21 12 6	30 8 4	107 18 3	67 11 10	73 18 10	51 9 8	42 6 6	26 5 10
Maryborough	448 16 4	282 4 9	596 2 10	739 9 1	536 7 6	597 13 0	609 19 3	441 12 8
Nanango	2,136 3 0	1,936 15 4	1,996 3 8	2,957 14 4	2,918 0 2	3,433 14 9	2,940 9 7	3,554 15 3
Normanton	5,183 10 5	6,637 10 4	11,323 3 0	12,676 15 7	17,692 8 10	23,547 12 10	19,110 10 0	15,934 19 1
Port Douglas	10 16 1	10 17 11	4 2 0	40 19 0	31 2 7	16 10 2	49 11 9	96 13 6
Ravenswood	66 10 6	217 7 5	137 13 4	37 11 6	194 17 8	174 0 2	115 2 2	163 5 0
Rockhampton	54 5 1	33 4 9	191 8 5	199 15 2	86 4 5	212 16 11	200 3 4	188 5 1
Roma	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	1,668 16 7
St. George	193 18 4	242 12 11	697 14 3	944 13 3	381 17 8	703 4 6	345 19 10	190 16 3
St. Lawrence	74 13 10	120 14 0	115 10 2	139 16 3	240 19 8	317 16 11	105 5 11	49 15 2
Springsure	1 13 9	1 13 9	...	2 0 0	12 15 6	2 5 6	1 15 7	30 19 5
Stanthorpe	155 0 2	186 5 8	202 6 10	337 11 9	424 13 11	467 5 9	357 13 10	388 2 4
Surat	39 13 8	11 8 3	18 5 7	0 11 6	14 14 7	20 3 8	24 4 1	14 6 2
Tambo	8 0 11	10 19 1	3 5 0	10 15 9	7 12 6	12 19 3	20 8 2	5 9 0
Taroom	4 11 1	11 19 11	17 18 0	21 15 4	32 2 7	18 12 8	17 11 9	8 16 1
Thargomindah	20 11 1	17 1 9	16 16 2	22 17 9	47 2 5	35 9 4	38 1 9	53 5 7
Torres	1 5 0	2 3 6	1 7 0	229 10 6	3 0 0	1 9 0	0 18 0	0 12 0
Toowoomba	146 19 7	188 4 1	122 10 3	73 14 10	127 1 4	167 1 4	281 0 8	277 5 11
Townsville	2,505 5 7	3,350 13 8	2,289 5 9	1,637 16 7	771 10 3	1,609 2 5	642 13 1	351 8 11
Warwick	80 5 11	28 17 6	170 19 0	340 15 10	264 12 8	457 11 6	419 1 3	208 5 10
Windorah	458 5 5	687 0 8	903 14 2	1,859 4 7	1,263 17 1	344 14 3	253 6 8	215 4 5
Winton	0 19 0	16 2 4	...	0 2 0	5 1 7	...	...	2 5 3
Totals	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	60,864 10 4