

1962

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QUEENSLAND

**ANNUAL REPORT**

OF THE

**DEPARTMENT OF FORESTRY**

FOR THE

YEAR 1961-62

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**PRESENTED TO PARLIAMENT BY COMMAND**

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BRISBANE:  
BY AUTHORITY: S. G. REID, GOVERNMENT PRINTER

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**HOOP PINE PLANTATION—25 YEARS OLD—MARY VALLEY AREA.**

During the year 1961-62 the milestone of the first 100,000 acres of plantations was passed.  
Total area of plantations is now 102,008 acres.

# REPORT OF THE CONSERVATOR OF FORESTS

For the Year ended 30th June, 1962

## INTRODUCTION

As the data being secured from forest inventory surveys accumulates, and as more is learned of the Crown timber resources of the State, and the sustained yield that can be maintained from our forests, it becomes increasingly evident that Queensland, already a net importer of sawn timber, will remain an importer for many years to come. Without greatly increased forestry activity the position will gradually deteriorate. The State will be faced with a steadily increasing bill to pay for imported timber. At the present level of forestry work, and with the inadequate areas now permanently reserved for timber production, there is no prospect of sustained production of our needs in sawn timber, constructional timber and plywood.

A comprehensive forestry programme should also include the ultimate production of other forest products, such as paper, fibre board and particle board. Integrated forest industries can only be established when there is an assured and continuing supply of the right types of material in large quantities.

If Queensland is to move towards the production of its timber needs there should be immediate action to:—

1. Permanently reserve for the growth of wood all areas that find their best economic use in the production of timber. This applies particularly to North and Central Queensland.

2. Increase the funds available for—

- (a) the planting of softwoods, for the maintenance and protection of those plantations.
- (b) the protection, management and treatment of natural forests of hardwood, Cypress Pine and North Queensland species.

The necessity for assured funds to permit confident and efficient action in the growth of the long term tree crop has been repeatedly stressed in the Annual Reports of this Department, and is again reiterated in this Report.

The progress that has been made in the determination of sustained yields has permitted the adoption of fixed cuts for hardwood throughout most of South Eastern Queensland. This will certainly be advantageous to the forests, as over-cutting depletes the forest capital and in the long run greatly decreases the production from the forest. It should also be of advantage to the timber industry in making clear the position regarding the log supply that will be available from Crown sources. The possibility of freeholding of leasehold areas carrying substantial volumes of timber at present owned by the Crown complicates the definite determination of cut in some areas.

There was a marked reduction in the demand for timber during the past year with the result that cut of log timber from Crown lands fell to 186,627,739 super. feet, which was 16 per cent. below the average cut for the previous five years. However, the sale of Crown logs for the last two months of the financial year was the best for 18 months. The cut of hardwood logs for this period was also the best for 18 months, whilst the quantity of Cypress Pine sold during May and June was the highest ever recorded for any two months. It is hoped that this improvement at the end of the year will be maintained and is an indication of an increasing overall demand for sawn timber.

It is pleasing to report that the area of plantations of all species now exceeds 100,000 acres and that it is expected that the area planted with coniferous species, the major species being hoop pine and slash pine, will pass the 100,000 acre mark next summer.

A comprehensive mill study of North Queensland mills was undertaken during the year by the C.S.I.R.O. on behalf of both the North Queensland Sawmillers' Association and the Department. An analysis of the data from this study should provide a better basis for the pricing of Crown logs than has obtained previously. This type of investigation is necessary to elucidate the endless discussions on the price of Crown logs that have formerly occurred.

## MANAGEMENT

**General.**—The works programme for 1961-62 was larger in most respects than any previous year though the area of new softwoods plantations established was lower than was hoped for.

This was made possible by an additional grant of funds to assist in the relief of unemployed in the latter half of the year.

Since it is not possible to step up the planting rate on short notice, the additional men were partly allocated to the bringing of all planted areas to the desirable condition that techniques prescribe. Unfortunately merchantable thinnings in some areas are behind schedule otherwise complete satisfaction could be felt on all planted areas.

The balance of the extra employment was assigned to the natural forest areas and concentrated on silvicultural treatment with the result that the area so treated was the largest for many years. A vast amount of this work remains to be done.

State Forest reservation increased by 45,417 acres and it is hoped that following the report of the Land Classification Committee which dealt with North Queensland, the long awaited increase in permanent reservations in that region will eventuate in the coming year.

The work of forest inventory and yield calculations on State Forests has been slowed down in the past two years by the large amount of work necessitated in valuing timber stands on Grazing Selections for which applications for conversion to freeholding tenures have been received.

This has been very time consuming for assessment staff in the field and for office staff in preparing valuations and presenting at Land Court hearings.

It is gratifying to report that at 30th June, 1962, only 252,000 acres remained to be assessed in the field out of a total area applied for of 1,052,000 acres.

In spite of this it is pleasing to report that—

- (1) All plantations over 10 years of age are permanently sampled.
- (2) All inland State Forests carrying Cypress Pine-Hardwood have been permanently inventoried.
- (3) A large area of Coastal hardwood forest has been covered and in the case of State Forests in the Brisbane District is almost entirely completed.
- (4) Over 15,000 acres of rain forest on North Queensland State Forests have been assessed by permanent plots.

In all cases except (4) where the work is recent, cuts on a sustainable basis have been calculated and applied.

The total area covered by permanent plots at 30th June, 1962, stood at (figures in brackets are numbers of plots):—

	Acres	
Inland cypress pine-hardwood	1,530,000	(8,700)
Coastal hardwood	460,000	(4,000)
Rain forest (South Queensland)	20,000	(150)
Rain forest (North Queensland)	15,000	(300)
Softwood plantations	35,000	(2,650)
Total	2,060,000	(15,800)

Additionally an area of 490,000 acres of coastal hardwood has been sampled by random non-permanent plots, bringing the total acreage to 2,550,000 acres or approximately 50 per cent. of the total State Forest area.

Trials are being made to determine how the large mass of data can be handled by electronic computer in future.

In addition it has been possible to lay down a hardwood cut determination from all Crown areas that comprise the supply zone for Brisbane.

Further sales of plantation thinnings on a permanent basis conferring additional sawmilling capacity were made during the year raising the total amount under sale to 42,500,000 super. feet annually.

Removals for the year were 26,700,000 super. feet, bringing the total cut to date to 242,900,000 super. feet valued at £855,000. A further quantity of 4,750,000 super. feet per annum is scheduled for sale within a few months.

Negotiations were also in progress for the first sale of thinnings as pulpwood while the first particle board plant in the State should be in operation in the near future.

### Protection

The fire season proved to be generally one of low hazard, expenditure on firefighting, patrol and detention being only £21,700 compared with £72,583 for 1960-61 which was also a relatively easy though prolonged season.

Other items of major protection expenditure compared with 1960-61 in brackets were—

Firebreak and firebreak road construction .. .. .	£121,847 (£136,134)
Maintenance .. .. .	£127,311 (£99,332)

While some additional maintenance cost with increasing mileage must be expected, the pronounced rise for the year needs further examination.

Included in this figure is the cost of prescribed burning which is being practised more and more on the hardwood areas on selected sections. The area so burnt during the year was 30,800 acres. For 1960-61 the figure was 26,400 acres.

It may well be that extra costs have been associated with this burning which calls for great care particularly on areas receiving their first burn after years of complete protection. Subsequent burning should be less costly.

The total number of fires fought on, or threatening, reservations was 18.

The total reserved area reported as burnt over was 3,200 acres of low quality forest and wasteland. No plantation loss occurred.

The largest single cause (50 per cent.) was escape from fires lit by neighbours without a permit.

A full report furnished by the Communications Officer following discussion with Forest Services in other States and also leading manufacturers is under consideration and it is hoped to make a start next financial year on the replacement of the old radio equipment at present in use.

### Labour and Expenditure

The number of men engaged on reforestation works rose from 1,495 in July, 1961, to 1,802 in May but had fallen to 1,748 at 30th June, 1962.

Between January and May a net increase of 427 men was made possible by additional funds allocation. However, in order to achieve and maintain this increase over 1,000 men were engaged.

This is a surprising feature at a time when unemployment had reached its highest level for many years.

The average monthly employment of 1,523 was 89 greater than the previous year. The average cost (total) for a man year on reforestation was £1,184, which is identical with that of 1960-61 while the percentage of direct wages paid to total expenditure remained in the vicinity of 80 per cent.

Expenditure on reforestation works under major headings was—

	£
Plantations .. .. .	388,000
Natural regeneration .. .. .	115,000
Nursery expenses .. .. .	44,000
Research .. .. .	47,000
Protection .. .. .	298,000
Surveys .. .. .	19,000
Capital improvements .. .. .	89,000
Wet time, holidays and leave .. .. .	209,000
Supervision, tools, cartage of men, &c. .. .. .	383,000
Camping allowance .. .. .	113,000
Pay roll tax .. .. .	34,000
Workers' compensation .. .. .	41,000
Miscellaneous .. .. .	34,000
	<hr/>
	£1,814,000

Finance was provided from—

Loan funds .. .. .	£1,765,000
Trust .. .. .	£49,000

### Plant

The uneconomic maintenance in service of motor vehicles and plant continued.

Funds for replacement were insufficient and this was aggravated by a heavy demand for additional vehicles.

Expenditures on plant items for the year were—

Purchase .. .. .	£139,000
Maintenance .. .. .	£211,000
Plant hire charges debited .. .. .	£252,056

The maintenance cost was higher than usual but this included appreciable amounts for reclaiming tyres and crawler track equipment.

The new 55-ft. motor vessel "Korawinga" was put into service between Maryborough and Fraser Island in October.

This will remove the inconveniences of the previous launch and allow for a very desirable stepping up of operations on the Island.

Eighteen additional vehicles were purchased during the year and this included three large four-wheel drive chasses with six man cabins to be equipped as fire engines with large tank capacity and all necessary gear.

The appreciable deficiency in motor graders still exists and it was possible only to add two machines in the 40-80 h.p. class.

The replacement programme covered 40 motor vehicles and 8 tractors.

In spite of this there still exist in use 15 trucks and 11 tractors over 10 years of age.

A recent census of the length of roads and firebreaks that require regular mechanical maintenance shows the figure to exceed 9,000 miles, while 120-150 miles are being added each year. Add to this the indication that more clearing for planting will have to be done by Departmental plant and the necessity to maintain in good condition an appreciable quantity of plant becomes apparent if the Department is to do its job efficiently.

A census of plant as at 30th June, 1962, was—

Item	Disposals	Purchases	Balance 30th June, 1962
<b>Motor Vehicles—</b>			
Sedans .. .. .	2	3	10
Light Utilities and 4 wheel drive vehicles .. .. .	8	28	205
1 to 2 ton .. .. .	..	..	2
2 to 4 ton .. .. .	12	20	122
4 to 6 ton .. .. .	1	7	29
	<hr/>	<hr/>	<hr/>
Total .. .. .	23	58	368
<b>Tractors (D.B.H.P.)—</b>			
<i>(a) Track Type—</i>			
Up to 50 h.p. with blade .. .. .	6	8	26
50 h.p. without blade .. .. .	..	..	3
50-100 h.p. with blade .. .. .	2	..	27
Over 100 h.p. with blade .. .. .	..	..	3
<i>(b) Wheel type (End loaders and Rotary Hoes) .. .. .</i>			
	1	..	31
	<hr/>	<hr/>	<hr/>
	9	8	90
<hr/>			
Item	Disposals	Purchases	Balance 30th June, 1962
<b>Graders—</b>			
Drawn .. .. .	..	..	15
Powered to 40 h.p. .. .. .	..	..	0
40-80 h.p. .. .. .	..	2	14
80-100 h.p. .. .. .	..	..	9
100 h.p. Up .. .. .	..	..	4
	<hr/>	<hr/>	<hr/>
Total .. .. .	0	2	42
<hr/>			
Road Compressors .. .. .	..	..	12
Light Weight Rockdrill Compressors .. .. .	..	1	5
Rippers .. .. .	..	..	23
Rotary Hoes .. .. .	..	..	30
Firetanks slip on type .. .. .	..	..	82
Firetanks various type .. .. .	..	..	38
Road rollers .. .. .	..	..	6
Road Scoops .. .. .	..	..	18
Terracers .. .. .	..	..	10
Chain Saws .. .. .	..	14	63

### Acquisition of Land

During the year 1961-62 an amount of £9,979 5s. 0d. was expended on the acquisition of land for Forestry purposes as follows:—

	£	s.	d.
Purchase of Land .. .. .	7,224	3	0
Survey and Real Property Fees .. .. .	528	2	0
Compensation paid for improvements on—			
(a) School Reserve R. 626 .. .. .	300	0	0
(b) Special Lease 25611 .. .. .	1,800	0	0
(c) Byfield Holding No. 3 .. .. .	127	0	0
	<hr/>	<hr/>	<hr/>
	£9,979	5	0

The expenditure of £7,224 3s. 0d. represents the purchase of six properties, comprising a total of 1,987 acres, 3 roods, 2 perches, as additions to existing State Forests.

## Forest Surveys

Twenty-three camps operated during the year and carried out 930 miles of compass and chain traverse, 290 miles of re-opening of old lines, 3,160 miles of stripping, 210 miles of inspection and exploratory traverse, 63 miles of theodolite control lines and 7 miles of precise levelling for the establishment of permanent bench marks at Forest Stations. Field work involving aneroid barometer traverses for vertical control points was also undertaken, resulting in the contouring of 44,000 acres of reserve, from aerial photographs.

A survey training school was held at Beerburum in February for Overseers and Leading Hands.

Twelve camps, each consisting of two or three men, were engaged on general district surveys covering mostly reforestation projects. Eleven of these, using compass, chain and clinometer, carried out work associated with compartment, logging area and reserve boundaries, firebreaks, roads, species separation, soil classification and road investigation. The remaining camp was engaged on theodolite and dumpy level controls.

Eleven camps were engaged on Forest Inventory, Assessment and Freeholding Surveys, four of which operated in coastal hardwoods, four in western Cypress and hardwood, one in North Queensland rain forest, one in Central Queensland spotted gum areas and one in softwood plantations.

## REFORESTATION

**General.**—In contrast to the below average rainfalls of last year practically all stations recorded above average falls for 1961-62. Spring and early summer rains were good although December falls were below average at one or two centres, e.g. Kalpowar received only 86 points against an average for December of 354 points and for *Bowenia* comparable figures were 183 points and 494 points.

Good falls in April 1962 ensured sufficient soil moisture for the winter planting of exotic pines and reasonable falls for May and June ensured good survival.

Some yearly totals compared with averages are as follows:—

Hoop Pine areas—	
Yarraman, 3,815 points—average 3,153 points.	
Imbil, 4,654 points—average 4,576 points.	
Kalpowar, 3,888 points—average 3,671 points	
Exotic Pine areas—	
Beerwah, 6,544 points—average 6,114 points.	
Tuan, 5,604 points—average 5,347 points.	
<i>Bowenia</i> , 6,134 points—average 6,761 points.	

At *Bowenia* above average falls were recorded for four months only.

In the Hoop Pine areas conditions were favourable for the early burning of felled areas. Above average falls in October and November ensured good planting conditions, whilst areas burnt in October incurred heavy bunking costs.

Details of the year's work are as follows:—

	1960-61	1961-62
	Acres	Acres
Area of natural forest treated .. ..	40,849	57,605
Area of plantation established .. ..	4,533	4,624
Area covered in pruning .. ..	20,434	16,280
Area tended .. ..	81,511	75,100
Area thinned merchantably .. ..	4,430	4,216
Area thinned unmerchantably .. ..	8,565	5,089

The acreage of natural forest treated shows a considerable increase over that covered in 1960-61 and the acreage is more than twice that treated in 1959-60. Increased funds in the latter part of the year were largely responsible for the increase.

**Plantations.**—Appendix F shows by districts and species the area planted from the 1st April, 1961, to the 31st March, 1962. The area planted for the period is 4624.8 acres and represents an increase of 91 acres on the area planted in 1960-61. It is made up as follows:—

	Acres
Native Conifers (chiefly Hoop Pine) ..	2,043.1
Exotic Conifers ( <i>Pinus elliottii</i> , <i>caribaea</i> , <i>patula</i> and <i>radiata</i> ) .. ..	2,418.6
Broadleaved species .. ..	3.8
Eucalypts .. ..	159.3
	<hr/> 4,624.8

The year's plantings brings the total acreage of effective plantations to 102,008 acres comprised of—

	Acres
Native Conifers .. ..	50,311.7
Exotic Conifers .. ..	46,994.7
Broadleaved species .. ..	1,424.9
Eucalypts .. ..	3,277.0
	<hr/> 102,008.3

It is interesting to note that the plantings of native and exotic conifers will total over 100,000 acres on the completion of the 1962-63 Hoop Pine planting season.

A considerable amount of clearing in both rain forest and Eucalypt forest was again carried out by machine—over 900 acres of rain forest and 1,500 acres of Eucalypt forest being so handled. As mentioned previously, burning conditions for Hoop Pine areas were good up to the end of September, whereas those burnt during October generally called for heavy expenditure for stacking and burning of unburnt debris.

Planting conditions for Hoop Pine and for Exotic areas were generally good and very little refilling has been necessary.

Rainfalls in the Hoop Pine areas for the first four months of 1962 were good and as a result some heavy first year tending costs were incurred. The value of early clean burns has again been demonstrated—first year tending costs on such areas being considerably lower than those incurred on the later poorer burns.

The use of weedicides for the control of wattle and Eucalypt coppice on the exotic pine areas is now standard practice at the main planting centres. Such tends are usually carried out before planting.

Pruning at all centres is up to date and the total area covered was 16,280 acres—the annual acreage should now remain fairly constant at about this figure. Details are—

	1960-61	1961-62
	Acres	Acres
First operation .. ..	6,706	4,823.4
Second operation .. ..	6,600	6,020.6
Third operation .. ..	3,894	3,469.7
Fourth operation .. ..	3,234	1,967.0
	<hr/> 20,434	<hr/> 16,280.7

The renewal of paint marks on select stems was carried out over 351 acres.

Second stage unmerchantable thinning to 300 stems per acre is still suspended at the Beerburum, Beerwah and Toolara areas whilst it has been reintroduced at Tuan. The possibility of the establishment of an industry in the vicinity of Brisbane requiring large quantities of small sized material, referred to in last year's report, gives every promise of becoming a reality.

During the year areas were thinned as follows:—

District	Exotic Pine	Hoop Pine	Eucalypts
	Acres	Acres	Acres
Brisbane .. ..	675.8		
Gympie .. ..	535.5	378.0	574.7
Mackay .. ..	734.0		
Maryborough .. ..	886.6		
Monto .. ..		103.0	
Murgon .. ..		254.0	
North Queensland .. ..	34.0		
Warwick .. ..	227.0		
Yarraman .. ..	201.0	486.0	
	<hr/> 3,293.9	<hr/> 1,221.0	<hr/> 574.7

Merchantable thinnings were carried out over 4,216.9 acres.

Plantations generally were free of serious insect, animal or fungal trouble whilst the deterioration of a stand of *Pinus patula* referred to in the 1960-61 report proved not to be as serious as first feared. The advent of good rains changed the position completely and the number of trees which failed to recover was small—apparently drought was the major cause of the deterioration of the stand.

The appointment of a full time Forest Entomologist was made towards the end of the financial year.

**Regeneration of Natural Forest.**—As mentioned previously, the acreage of natural forest treated showed a substantial increase over the area treated last year. Details are:—

	1960-61	1961-62
	Acres	Acres
Eucalypt Forest .. .. .	21,761	27,635
Cypress Pine .. .. .	17,525	27,941
Tropical Rain Forest .. .. .	1,478	2,029
Natural Hoop Pine .. .. .	85	..
	40,849	57,605

**Nurseries.**—Twenty-three nurseries remained in production throughout the year and of these one Hoop Pine nursery will go out of production during the year.

Stock on hand at the 30th June, 1962, totalled 5,482,000, whilst the number produced totalled 3,082,000 plants.

**Sales of Trees.**—Sales to the public and to other Government Departments totalled 209,710, made up as follows:—

By Species	By Type of Planting
<i>Pinus elliotii</i> .. 152,324	Forest Plots .. 117,712
<i>Pinus patula</i> .. .. 558	Schools .. .. 7,130
<i>Pinus radiata</i> .. .. 543	Government Departmental .. .. 10,595
Hoop Pine .. .. 7,669	Departmental .. .. 2,000
Miscellaneous .. .. 48,616	Private Sales .. .. 72,273
	209,710

Sales of miscellaneous species ex the Rocklea nursery totalled 36,929 plants of a cash value of £2,905 6s. 6d.

The value of all sales amounted to £6,577 7s. 0d.

### SILVICULTURAL RESEARCH

**Staff.**—During the year the number of trained foresters engaged full time on Silvicultural research dropped by 1 to 14 but with the return of Dr. R. Florence after four years on a Scholarship with the C.S.I.R.O. the number has been restored to 15. Distribution of these officers is:—North Queensland (3), Mary Valley (1), Beerwah (6), Brisbane Valley (1), Dalby (1), Head Office (2).

Dr. B. Richards is at present at Yale University working under a C.S.I.R.O. post-doctorate scholarship on problems in the nutrition of *Pinus* closely allied to the work on which he engaged at Beerwah.

Treatment	Stocking per acre	Average Girth, Breast, Height		Basal Area per acre		Average Predominant Height	
		1962	Inc. 61-2	1962	Inc. 61-2	1962	Inc. 61-2
Runts and Useless removed .. .. .	478	Inch. 15.7	Inch. 3.04	Sq. Ft. 66.3	Sq. Ft. 23.3	Ft. 36	Ft. 7.5
Runts and Useless removed. To be thinned unmerchantably from above to favour select stems	465	15.5	3.12	63.5	22.6	37	8.0
Runts and Useless removed. Thinned to best 400 per acre .. .. .	400	15.8	3.07	56.6	20.5	35	7.5
Runts and Useless removed. Thinned to best 300 per acre .. .. .	300	16.5	3.20	46.1	17.3	35.5	7.5

At this stage there is no indication that any unmerchantable thinning beyond the removal of runts and useless stems is warranted.

The search for plus trees was extended and to date 14 trees have been located of quality adequate to warrant consideration for inclusion in a seed orchard. Field cleft grafting at Beerwah and Bowenia using together plastic and calico bags gave a 91 per cent. take from 195 grafts attempted.

Additional provenance trials have been initiated including seed from several centres in Guatemala as well as from the Bahamas, Cuba, and British Honduras.

Slash x *caribaea* hybrids continue to show to advantage in the field and there are in the nursery at Beerwah the first hybrids of the reciprocal (*caribaea* x slash) cross.

(v) *Monterey Pine (P. radiata)*.—Necessary treatments were applied to the thinning experiments initiated last year in the Passchendaele area. Excellent growth has been recorded in these plots but it is too early for any conclusions to be drawn.

**Field Work.** (i) *Hoop Pine (Araucaria cunninghamii)*.—Work was maintained on all long term thinning and pruning experiments and preliminary data collected on the mechanics and cost of high pruning selected trees on high quality sites. Growth rates have returned to normal following the poor figures recorded last year. Examination of the results indicate no apparent need to review routine prescriptions on intensity of thinning.

The acceptance of patch grafting on to stock which have been planted in the field for two years as the best means for establishment of clones of Hoop Pine plus trees has led to the selection of a suitable area adjacent to the nursery at Imbil as the site of the Department's first Hoop Pine seed orchard. Arrangements are complete for planting early in Summer 1962 and it is anticipated that the stock will be suitable for patch grafting early in 1964.

Research notes issued during the year were No. 16 dealing with underplantings of Hoop and Kauri Pines under Slash Pine on open forest types and No. 10 which dealt with the vegetative reproduction of Hoop Pine by patch grafting.

(ii) *Kauri Pine (Agathis robusta)*.—Thinning and tree breeding work with this species was continued but interest in this species has received a severe jolt from the attacks in the Mary Valley plantations of a coccid (*Conifericoccus agathidis*) which causes and maintains widespread defoliation. Studies conducted on the insect, a native species, have disclosed a short life cycle of 21 days, approximately 500 eggs per female, a sex ratio heavily favouring females and an absence of effective natural enemies. The possibilities of control by aerial spraying are being investigated.

(iii) *Slash Pine (P. elliotii)*.—Thinning and fertilizer Experiments and Progeny plots were maintained and extended. A number of intensive assessments of progenies of trees chosen as superior phenotypes were conducted. The best crosses have given 30 per cent. more volume than routine stock at age 10 years from planting and also show a substantial superiority in stem straightness. Grafting to complete seed orchard plantings gave 80 per cent. take in the spring and 75 per cent. in the late summer. Except for one difficult tree the planting of the second orchard is virtually complete. Small amounts of seed in excess of experimental requirements are being made available for routine sowings.

(iv) *Caribbean Pine (P. caribaea)*.—Work on thinning, fertilizing and tree breeding with this species continues to expand and to assist in its control a Technical Assistant has been appointed to Bowenia. Results from one of the early thinning experiments (Experiment 56 Bowenia) established at this centre are shown in the following table. Age at measure in 1962 was 5½ years. Each figure is the mean of five plots.

Assessments were made of open pollinated progeny from parents chosen for possible resistance to *Diplodia*. These disclosed substantial health differences between parents in the Pechey trials but not at Passchendaele. This would suggest that there can be far more tolerance in selection of plus trees for seed orchard establishment at Passchendaele than at Pechey.

Seed was received from the New Zealand Forest Service representative of controlled crosses between some of their outstanding parents and the resultant plants will go to the field in 1963 together with stock from our own controlled crossings of 1959.

(vi) *Cypress Pine (Callitris glauca)* and *Western Hardwoods*.—The scope of work in this field was restricted by the absence of the Officer in Charge who attended Oxford University as holder of the Russell Grimwade prize.

Existing experiments and detailed yield plots were maintained, and a series of new experiments dealing with control of unwanted trees established. While still incomplete, the

present indications are that application of 1 per cent. 2,4,5-T. amine in water to low stumps or frills will give satisfactory control of the most important species, and consideration is now being given to the use of this technique in routine treatment. A large scale experiment dealing with the economics of this type of treatment has been established in a Cypress Pine area carrying abundant Bull Oak (*Cas. leuhamnii*) and a similar experiment is listed for establishment in a Spotted Gum (*E. maculata*) stand. In the latter area, stem injections which show promise are to be tried also.

Research Note No. 12 dealing with the planting of shade and shelter trees under the difficult conditions that obtain in South Western Queensland and the Darling Downs was issued.

(vii) *Rain Forest Species, North Queensland*.—The principal work has been concerned with the maintenance and treatment of existing experiments designed to obtain a measure of the effects of various silvicultural treatments and at the present time the data accumulated of the past 13 years is being summarised by the officer in charge of the Atherton Research Station. Work has been extended on treatment around seed trees to secure regeneration of the most desirable species and to promote the growth of these seedlings. This work too will be summarised in the near future. Initial plantings of Hoop Pine under *P. caribaea* on the Danbulla grasslands have shown good survival and display a healthy colour. It is proposed to extend this work. On these degraded grasslands response has been obtained to additions of nitrogen to open plantings of Hoop Pine with all treatments being significantly superior to control. However there were no significant differences between treatments and the magnitude of responses would not suggest economic possibilities of fertilizing along these lines.

(viii) *Coastal Hardwoods*.—Existing experiments were maintained, and several new ones established, dealing with coppice control, seed spotting, and early development of *E. maculata*. A volume table for *E. grandis*, based on g.b.h. and predominant height, was prepared for use in experiments and thinning sales in plantations. Assessment of the large scale *E. pilularis* enrichment planting experiment established in 1959 has shown the value of this treatment in high quality areas deficient in seed trees and advance growth.

Research Note 13 dealing with prescribed burning *Experiments in the Spotted Gum—Red Ironbark forests of the Maryborough district* was issued.

(ix) *Plant Nutrition*.—The work consisted of the maintenance of all glasshouse and field nutritional trials and establishment of several glasshouse experiments. Evidence continues to mount on the importance of nitrogen in the growth of Hoop Pine on the poor coastal soils of the Beerwah district. A trial with legume cover crops after initial fertilizing indicates that repeat applications of nitrogenous fertilizers may be replaced by the introduction of the nitrogen fixing legume *Lotononis bainesii*. Similar results were obtained with Kauri pine and this line of research is being followed with further experiments.

With *P. taeda* additional experiments were commenced in the glasshouse on the form of phosphatic fertilizer used and the study of nitrogen x phosphorus interaction was continued. In the field early responses to nitrogen have failed to continue into the second and third season and this species has shown no early response to the legume cover crops which proved beneficial to Hoop and Kauri.

The Soils Laboratory functioned throughout the year concentrating on Soil and Plant analyses of samples collected chiefly in connection with nutrition work over the past four years. Examination is being made of the possibility of using the phosphorus content of the needles as an index to the need for fertilizer application.

(x) *General*.—Towards the end of the year, installation of the G.E. 225 electronic computer at the University of Queensland was completed, and the programmes needed for plantation volume table preparation have already been written by officers of this Department and run successfully. Ready access to a computer in Brisbane will greatly improve the efficiency of volume table and other tedious calculations, particularly when facilities for data preparation are available within the Department.

#### NATIONAL PARKS

The total area reserved as National Parks and Scenic Areas increased by 79,804 acres during the year. Twelve new areas were reserved, brief details of which are as follows:—

(a) National Park Reserve 133 in the parishes of Amy, Bloomfield, Spurgeon and Dagmar over an area of 73,000 acres covering the majestic scenic features of the upper Daintree and Adeline Creek

Gorges with their associated waterfalls. This is the fourth largest National Park in the State and the largest single National Park proclaimed since 1941.

- (b) National Park Reserve 164 in the parish of Alexandra over 5,760 acres, the main feature of which is Thornton's Peak with an altitude of 4,510 feet. Magnificent views may be obtained from this Peak, of the coast to the east and the ranges to the west, whilst on the summit rare high mountain flora and tree species of particular interest to botanists occur.
- (c) National Park Reserve 1951 in the parish of Stradbroke over 1,100 acres on Stradbroke Island in Moreton Bay, embracing the Blue Lake and Tortoise Lagoon as well as surrounding forest country.
- (d) Scenic Area 315 in the parish of Conway over 800 acres, 2 roods, 21 perches situated at the entrance to Conway National Park.
- (e) Scenic Area 862 in the parish of Tamborine over 12 acres, 2 roods, 33 perches of natural rain forest, formerly freehold land, fronting the North Tamborine to Eagle Heights road near the top end of Joalah Scenic Area.
- (f) An area of 165 acres, 2 roods, 24 perches of Vacant Crown Land comprising tropical scrub on a steep rocky spur, was added to Scenic Area 763 in the parish of Grafton.
- (g) An area of 45 acres of Vacant Crown Land was added to National Park Reserve R. 253, parishes of Beor, Abbotsford, and Rokeby. This land formed a re-entrant to the National Park and its inclusion therein will straighten out the Park boundary.
- (h) An area of 33 acres of Vacant Crown Land was added to Scenic Area 340, in the parish of Weyba (commonly known as Noosa "National Park"). This area formed a re-entrant to the Park. It connects up existing tracks within the Park.
- (i) An area of 26 acres, 3 roods, 3 perches embracing cliffs featuring unique geological sections, previously freehold, was acquired and added to Lamington National Park.
- (j) Two areas, totalling 13 acres, 36 perches, to be utilised in connection with a proposal to construct a circuit walking track around Scenic Area R. 793, in the parish of Tamborine were added to this reserve. One of these areas was handed over to the Department by the Beaudesert Shire Council and the other of 6 acres, 26 perches was generously donated by Mr. D. M. Fraser.
- (k) An area of 2 roods, 3 perches, formerly freehold land, was acquired to improve access to the graded tracks on Scenic Area 647 in the parish of Tamborine (MacDonald Park) and also to allow development of a picnic and parking area.

The Scenic area reservation over Hayman Island was revoked during the year.

Five Scenic Areas were cancelled during the year and added to adjoining National Parks.

The following table illustrates the present position as against that at 30th June, 1961:—

	National Parks		Scenic Areas		Total Reservations	
	No.	Acres	No.	Acres	No.	Acres
30-6-1961	60	813,694	171	34,502	231	848,196
30-6-1962	63	893,962	167	34,038	230	928,000

An amount of £49,996 was expended on National Parks during the year 1961-62, an increase of £2,412 on the previous year.



Of this expenditure £44,000 came from the National Parks Vote (Consolidated Revenue Funds) whilst the additional £5,996 was by way of a transfer, during the latter part of the year, from the Treasurer and Housing Vote. This extra grant made possible the employment of 12-15 more men on National Park work during the latter part of the year.

The total expenditure on National Parks to 30th June, 1962, was £700,043.

During the year a special drive was made to bring constructed tracks up to standard and this maintenance work absorbed a considerable part of the funds made available. It was possible, however, to commence track work on one further area, viz., Clump Mountain Scenic Area, situated on the coast in North Queensland about 10 miles from El Arish. Here the construction of a track from the beach front to Bicton Hill should prove very popular with visitors and tourists to the Mission Beach—Bingil Bay area, as apart from the jungle forest traversed, magnificent panoramic views of the coastline and offshore islands are obtainable.

Other new track construction work was carried out at Tamborine Mountain, Ravensbourne, Brampton and Lindeman Islands.

Total new track constructed for the year amounted to 4 miles 61 chains, bringing the total length on existing reservations to 254 miles 16 chains.

These tracks are located on Lamington (90 miles), Springbrook (16 miles), Bunya Mountains (15 miles), Cunningham's Gap (14 miles), Tamborine (12 miles), Mt. Glorious (10 miles), Burleigh Heads, Noosa, Ravensbourne, Numinbah, Montville, Jowarra, Killarney, Eungella, Finch Hatton, Brampton Island, Lindeman Island, Long Island, South Molle Island, Magnetic Island, Dunk Island, Clump Mountain, Palmerston, Tully Falls, The Crater, Millstream Falls, Little Millstream Falls, Lakes Eacham and Barrine reservations.

Apart from the tracks, other work carried out comprised, provision and maintenance of signs, tables, fireplaces, conveniences and shelter sheds. A new lookout was constructed at Eungella; camping areas provided at Broken River (Eungella) and Cunningham's Gap; power was laid on at Lakes Eacham and Barrine and repairs effected to landings at Lake Eacham; construction of a new footbridge was commenced

at the bottom of Kondalilla Falls; new accommodation is under way for the men employed at Noosa; the road access to Cedar Creek Falls was graded whilst a subsidy was granted to assist in the improvement of the road access to the Bunya Mountains.

In South Queensland the number of visitors to the National Parks and Scenic Areas was approximately 480,000 and in Central and North Queensland approximately 195,000.

The Government gave approval for the Secretary of the Department (Mr. W. Wilkes) to attend the First World Conference on National Parks which was held at Seattle, U.S.A., from 30th June to 7th July, 1962. The opportunity presented at the Conference for the collection of information on a world-wide basis and the establishment of contact with World Authorities on the subject will be of particular advantage in the administration of National Parks in Queensland.

## HARVESTING AND MARKETING

### General

The sawmilling industry in Queensland reduced log intake during the year owing to a continued slackness of demand for sawn timber. Removals of milling timber from Crown areas were proportionately reduced.

Sales of hewn and round timber for constructional purposes also declined.

The decline in sawn timber trade has been common to all of the Eastern States of Australia since the end of 1960. In this State the effect was least marked in sales of plantation thinnings and of Cypress Pine, while the rate of removal of milling timber in Central and North Queensland was maintained to a greater degree than in South East Queensland.

The rate of felling stepped up considerably in May and June, when a total of 38,000,000 super. feet of mill logs was cut.

Comparative figures of timber removals on an annual basis are set out below.

### Mill Logs Cut—Crown and Private Lands

This table shows logs cut by all mills in the State, annually, for the periods indicated:—

Year	Queensland Grown							Imported	Total	
	Hoop and Bunya Pine	Kauri Pine	Plantation Thinnings	Cypress Pine	Hardwood	Cabinet Woods	Miscellaneous			
(1,000 superficial feet)										
1956-57 .. .. .	44,395	3,643	20,029	51,772	269,226	32,500	48,245	13,993	483,803	
1957-58 .. .. .	49,517	3,030	19,460	56,744	257,472	26,678	44,785	14,396	472,082	
1958-59 .. .. .	43,729	1,897	19,931	54,072	252,500	26,631	48,458	17,365	464,583	
1959-60 .. .. .	37,614	2,081	26,420	55,738	264,069	24,644	49,595	19,944	480,105	
1960-61 .. .. .	35,027	2,223	25,959	50,473	252,482	27,389	48,558	17,091	459,202	
1961-62 Estimated ..	25,900	2,100	26,200	44,100	210,800	22,400	43,500	12,600	387,600	

### Mill Logs—Crown Lands

The following are the annual quantities of mill logs obtained from Crown Lands as from 1952-53:—

Year	Super. Feet
1952-53 .. .. .	206,000,000
1953-54 .. .. .	240,000,000
1954-55 .. .. .	224,000,000
1955-56 .. .. .	223,000,000
1956-57 .. .. .	221,000,000

1957-58 .. .. .	213,000,000
1958-59 .. .. .	228,000,000
1959-60 .. .. .	239,000,000
1960-61 .. .. .	219,000,000
1961-62 .. .. .	187,000,000

A comparison of quantities of the various species of log timber cut from Crown Forests during the past five years is illustrated hereunder:—

Year	Hoop and Bunya Pine	Kauri Pine	Cypress Pine	Forest Hardwoods	Scrub Hardwoods	Cabinet Woods	Miscellaneous	Plantation Timbers
(1,000 superficial feet)								
1957-58 .. .. .	43,124	2,730	24,433	68,456	9,142	20,964	25,234	18,917
1958-59 .. .. .	40,808	1,951	24,907	83,284	10,162	19,139	27,130	20,296
1959-60 .. .. .	34,998	2,139	26,835	88,245	12,761	17,894	28,284	27,565
1960-61 .. .. .	31,849	2,188	24,093	76,879	11,302	18,118	28,601	26,234
1961-62 .. .. .	22,324	2,171	23,731	62,722	9,695	15,726	23,599	26,660

## The Timber Business

(a) Mill Logs—	1960-61	1961-62
Hoop and Bunya Pine .. .. .	31,849,000 super. feet	22,324,000 super. feet
Forest Hardwoods .. .. .	76,879,000 super. feet	62,722,000 super. feet
Scrub Hardwoods .. .. .	11,302,000 super. feet	9,695,000 super. feet
Cypress Pine .. .. .	24,093,000 super. feet	23,731,000 super. feet
Kauri Pine .. .. .	2,188,000 super. feet	2,171,000 super. feet
Cabinet Woods .. .. .	17,963,000 super. feet	15,632,000 super. feet
Miscellaneous Species .. .. .	28,601,000 super. feet	23,599,000 super. feet
Plantation Timbers .. .. .	26,234,000 super. feet	26,660,000 super. feet
Limb Logs, Head Logs, Stumps and Flitches .. .. .	155,000 super. feet	94,000 super. feet
<b>Total Crown Mill Logs .. .. .</b>	<b>219,264,000 super. feet</b>	<b>186,628,000 super. feet</b>
(b) Construction Timbers—		
Headstocks, Transoms, Crossings, Braces, &c. .. .. .	449,221 super. feet	121,506 super. feet
Sleepers .. .. .	1,020,302 pieces	506,414 pieces
Girders, Corbels, Piles, Sills, and Girder Logs .. .. .	{ 101,324 lineal feet 661,381 super. feet	{ 76,434 lineal feet 598,781 super. feet
Poles .. .. .	345,206 lineal feet	271,770 lineal feet
House Blocks .. .. .	88,364 lineal feet	31,753 lineal feet
Mining Timbers .. .. .	492,061 lineal feet	221,554 lineal feet
Mining Timbers .. .. .	31,751 pieces	75,241 pieces
Gross Receipts from Timber Sales, &c. .. .. .	£2,278,042	£1,744,291
Net Revenue .. .. .	£1,355,999	£963,683

### Logging Roads—1961-62

The Department's road programme for the year constituted 72 miles of construction. Location and working surveys covering 68 miles were carried out.

Expenditure from Forestry Votes was as follows:—

	£
New Construction .. .. .	127,331
Maintenance .. .. .	65,697
Subsidies to Shire Councils .. .. .	25,723
Workers' Compensation .. .. .	6,141
Pay Roll Tax .. .. .	2,683
Surveys .. .. .	2,133
Fares and Freights .. .. .	5,370
Resumption for Access .. .. .	1,096
	£236,174

### Sawmills Licensing

The decrease in the number of mills in active operation continued for the first six months of 1961-62. The mills

ceasing to operate were mainly mills that had been sawing at a reduced rate, or spasmodically, and in addition were in the lower capacity brackets. There was an upward trend in the latter part of the year.

For the first quarter 614 mills were active, 612 in the second quarter and 621 during the third quarter.

The final quarter figures are incomplete but it is likely that the improvement shown in the third quarter will be maintained.

During the year a number of licenses were not renewed. These were for mills that had been inoperative for some years, and which had no concrete proposals for operation.

The Sawmills Licensing Board submitted recommendations to the Conservator of Forests on all matters pertaining to Sawmills Licensing, following meetings at regular intervals throughout the year.

The following table sets out the position with regard to Sawmill Licenses as at 30th June, 1962—

Number of Licenses as at 30-6-61	Classification	New Licenses Issued	Changes in Classification		Licenses not Renewed			Current Licenses as at 30-6-62	Total as at 30-6-62
			Plus	Minus	Refused	Relinquished	Under Consideration		
677	General mills .. .. .	3	..	..	8	16*	7	649	656
14	Case mills .. .. .	..	..	..	..	..	..	14	14
54	Sleeper mills .. .. .	4	..	..	2	2	..	54	54
20	Other restricted .. .. .	..	..	..	..	1	..	19	19
70	Resaw and dressing .. .. .	..	..	..	..	2	1	67	68
835		7	..	..	10	21*	8	803	811

\* Includes 5 licenses that were amalgamated with licenses now current.

### Offences

During the year ended 30th June, 1962, officers reported 217 breaches of the Acts and Regulations administered by the Department.

Proceedings were successfully instituted against eleven persons and fines totalling £213 imposed.

In 65 cases of unauthorised timber operations, where it was considered the offences did not warrant proceedings, the value of the timber was collected and warnings issued. In some instances part of the costs of investigations was charged. Appropriate action was taken in other cases.

As a result of action taken in all cases an amount of £5,113 12s. 0d. was recovered by the Crown in timber revenue.

## FOREST PRODUCTS RESEARCH BRANCH

The activities of the Forest Products Research Branch are summarised under the various sections.

Pleasing aspects mentioned here are—

(1) The year was marked by a change in preservative treatment of timber and a marked interest in the application of general purpose preservatives has been shown by all sections of the Timber Industry. Four vacuum pressure cylinder treatment plants are in operation—two in Brisbane, one in Toowoomba and one in Eidsvold.

(2) Increased efficiency in the use of plantation thinnings.

### I. Engineering and Economics

Extension services in sawmill engineering were again in demand and a design for a modified thinnings mill at Kalpowar was prepared.

Studies in sawmill economics were continued viz:—

(1) *Hoop Pine*.—The first studies since 1933, of natural Hoop and Bunya Pine were carried out at six mills. Overall recovery was practically identical but production rate increased. An alteration in sawing pattern resulted in the increase of A grade quality sawn material.

(2) Small sawing studies on pruned stems of Slash and Loblolly Pine and a study on plantation grown Maple were carried out at the Experimental Yard.

(3) Single studies were carried out at a Cypress mill, a Spotted Gum mill and also on large Radiata Pine logs.

(4) The field work on the study of North Queensland mills was completed by the Division of Forest Products, C.S.I.R.O. From preliminary analysis of data it would appear that the manufacturing margin is much higher than for other species and the final results are awaited with interest.

### II. Seasoning

The usual free service of moisture content tests was continued with an increase of some 900 samples to a total of over 2,500.

These showed some 12 per cent. of flooring and 1.3 per cent. of chamfers failed to reach the recommended percentages and although this was an improvement on previous years the figures show that insufficient care is being taken by suppliers.

Three flue gas heated seasoning units were designed for mills operating plantation thinnings and as a result better utilisation of plantation thinnings can be expected.

A direct heating unit using two small oil burners was designed and this has resulted in a low cost unit for both operation and construction.

It is considered that cheaper and more efficient seasoning is necessary to allow timber to stay in competition with its main competitors in house building.

### III. Timber Physics

(1) Work was continued on the investigation of physical properties of wood and the behaviour of sawn material from plantation grown trees. The major points from these investigations were—

*Hoop Pine*.—Physical properties in diametrical strips 6 inches above ground level, are independent of stem size (within the range 17-46 inches g.b.h.o.b.) in 25 to 30 year-old stems.

*P. patula*.—This species has a low density. Uniform wood suitable for most cabinet work.

*Klinkii Pine*.—Sawn timber from this species showed considerable twisting in seasoning.

*Slash Pine*.—Investigation of moisture content and basic density distributions within stems gave a clear indication of the extent of heartwood formation.

(2) *Wood quality in Parent Trees*.—During the year wood samples were taken from four potential parent trees of *P. elliotii* var. *elliotii* selected for inclusion in the Beerburum seed orchard.

Of these only one was found to be unsatisfactory due to excessive spiral grain, excessive micellar angle and low tracheid length.

A further seventeen trees of the same species represented in the Beerwah seed orchard were sampled and work on this material is proceeding. Indications to date are that, in some of the trees, spiral grain will be a factor affecting their suitability as parent trees.

A new method for obtaining true spiral angle in wood samples was developed and used in the abovementioned sampling.

### IV. Wood Anatomy and Utilisation

(1) During the year some 4,500 samples were identified and 1,100 queries answered. These concerned all aspects of utilisation.

The lecture programmes to P.M.G. trainees and wood working instructors were continued.

Co-operation with the Standards Association continued and it is evident that there is an urgent necessity for standard grading rules for all species.

Co-operation has been given in the collection of forest products for use in investigation—e.g., supply of bark for drug research and latex to the Navy for testing as a shark repellent.

(2) *Wood Anatomy*.—Investigation of anatomical structure of plantation species has continued with the object of ensuring that trees used in tree breeding have no undesirable characters. Main points of the year's work were—

(a) Continued study of the effect of growth rate on cell dimensions of *P. elliotii* indicates that taller plants may have greater average cell length but this may be due to the increased rate of radial multiplication rather than longer initial tracheids.

(b) A study of plus stems of *P. elliotii* indicates that basic density reached a maximum of 50 lb./cu.ft. at 12 per cent. M.C. in resin impregnated heartwood and the average air dry density is 42 lb./cu.ft.

Present indications are that this material may be more suitable for constructional material rather than as a cabinet wood.

Its weight per cubic foot combined with high fibre length and low percentage of latewood in the tops indicates the possibility of successful integration of pulping and sawmilling industries.

(c) The presence of pockets of included bark and callus tissue with associated resin impregnations has been found to be in some cases extensive. Whilst the causal agencies have not been determined the damage appears to be the effect of some injury.

(d) Resin filled shakes in third thinnings from Beerwah and Passchendaele have been noted—indications are that it is due to a combination of wind and growth stresses and is worst in the lowest third of the stem.

(e) Degrade in "Black Heart" of *Sloanea woollsii* during seasoning was investigated and microscopic examination showed no evidence of true collapse. It was concluded that degrade is relatable to the frequency and distribution of resin or gum "plugs" in the cells.

### V. Chemistry Preservation and Plywood

(1) *Chemistry*.—Completion of the Laboratory has increased sample tests and some 650 samples were tested for preservatives. Co-operation with all preservative treatment plants resulted in much testing and sampling in an endeavour to obtain sound economic treatments.

(2) *Preservation*. (a) *Against Lyctus*.—During the year approval was given for the use of dieldrin as a momentary dip for veneers. In co-operation with Shell Chemicals and the Plywood Board trials with 5 per cent. dieldrin emulsion revealed—

(i) The use of dieldrin was satisfactory.

(ii) No difficulty was experienced in gluing and seasoning treated veneers and there was no detrimental effect on the bond of the plywood assembly.

In the coming year Sodium Fluoride will be approved as a lycticide and thus the gluing difficulties associated with phenolic glues and boron treated material will be overcome.

It is stressed however that this is not the final solution as waterproof plywood should have all purpose preservative to ensure its use externally with no degrade.

(b) *General Purpose Preservative*.—Regulations were gazetted to include general preservative treatments under "The Timber Users' Protection Acts, 1949 to 1955."

Four plants are now in operation using Tanalith and Celcure—one plant having an 80-foot cylinder to provide treated poles of all lengths.

Several problems have been investigated and present indications are the lower the moisture content the more successful the treatment.

Operators must take care to ensure the recommended loadings are obtained. Any failures will result in prejudices being hard to overcome with resultant benefit to timber substitutes.

Investigation is continuing into the effect of the zone intermediate between true sapwood and heartwood. It has been found that dimethyl yellow delineates the heartwood boundary for treatment.

By co-operation with the C.S.I.R.O. and the Forestry Commission of New South Wales, it is hoped to get uniform loadings for the different species. Confusion can only result if different strengths are recommended in different States.

(3) *Plywood and Veneer*.—Testing for industry has continued and tests on the effect of high loadings of copper chrome on the gluability of veneers have been carried out.

(4) *Timber Users' Protection Acts*.—During the year several complaints were investigated and some 500 interviews made in giving advice under the Act.

Some 42 complaints under the Act were received and although the majority were satisfactorily resolved and warnings issued—nine complaints were lodged with the Court—eight convictions resulted.

There is still evidence that sawmillers are not giving correct advices when selling timber.

(5) *Hylotrupes (European House Borer)*.—Reinspection of houses previously treated was continued and to date 2,000 buildings have been checked and detailed examination of infested timber removed indicates that the fumigation treatment has been effective.

## VI. Biometrics

During the year punch cards totalling 86,635 were processed.

Ten sets of mill study data were processed and analysis of data for experiments in every phase of Forestry work was done.

During the year the Computer at the Queensland University became available and several programmes have been written and tested for use.

## VII. Experimental Yard

The sawmill section worked at full capacity mainly on plantation timbers but space is very cramped.

The new yard will be completed shortly and it is hoped that much more work can be done which will be of benefit to the Timber Industry.

## STAFF

At 30th June, 1962, there were 375 salaried officers on the staff, 10 more than at the same time in 1961. The number of wages staff employees increased from 1,865 to 2,138.

Eighteen salaried officers left the Department during the year, and four officers—Messrs. T. Ball, E. G. Brooks, D. B. Buckley and A. P. Dreghorn, retired.

It is with deep regret that the deaths are recorded of Mr. S. G. Jennings, Officer-in-Charge, Forest Products Research Branch, Brisbane, Mr. E. K. Miller, District Forester, Yarraman, and Mr. E. S. Wood, Clerk, Stores Section, Brisbane. The sympathy of all members of the Department is extended to the bereaved relatives.

Mr. D. I. Bevege was awarded the Schlich Medal, which is awarded to the graduate of the Australian Forestry School attaining the highest pass in the final year.

Mr. E. G. Mannion was awarded a Studentship to study at Yale University in the U.S.A.

## ACKNOWLEDGEMENT

I desire to record my appreciation of the loyal and efficient service of all members of the staff during the past year.

V. GRENNING,

Conservator of Forests.

# APPENDICES

## APPENDIX A

### Return of Timber, &c., Removed from Crown Lands during the Year ended 30th June, 1962

SPECIES	QUANTITY		
	Super. feet	Super. feet	
Milling Timber—			
(a) Native Forests—			
Hoop and Bunya Pine—			
Ply .. .. .	3,134,517		
Logs .. .. .	9,875,559		
Tops .. .. .	9,313,720		
			22,323,796
Kauri Pine .. .. .	2,170,765		
Cypress Pine .. .. .	23,730,929		
Forest Hardwoods .. .. .	62,722,210		
Scrub Hardwoods .. .. .	9,695,300		
Cabinet Woods .. .. .	15,631,999		
Miscellaneous Species .. .. .	23,598,619		
Limb Logs, Head Logs, Stumps and Flitches .. .. .	93,814		137,643,636
(b) Plantation—			
Hoop Pine .. .. .	19,160,223		
Bunya Pine .. .. .	11,199		
Kauri Pine .. .. .	312,452		
Slash Pine ( <i>Pinus Elliottii</i> ) .. .. .	3,350,578		
Loblolly Pine ( <i>Pinus taeda</i> ) .. .. .	1,779,205		
<i>Pinus patula</i> .. .. .	1,523,099		
Exotics (Miscellaneous) .. .. .	309,952		
Silky Oak .. .. .	98,677		
Hardwood .. .. .	114,922		
			26,660,307
			186,627,739
			Expressed as Superficial feet (Hoppus)
			Log Measure
Other Classes—			
Sleepers Hewn .. .. .	224,244 pieces	8,521,272	
Sleepers Sawn—5 ft. .. .. .	29,735 pieces	832,580	
Sleepers Sawn—7 ft. .. .. .	86,061 pieces	3,270,318	
Sleeper Blocks (as sleepers contained), Transoms, Crossings, Headstocks, Longitudinals .. .. .	121,506 superficial feet	194,410	
Girders, Corbels, Piles, Sills, Kerb Logs .. .. .	76,436 lineal feet	1,375,848	
Girder Logs .. .. .	598,781 superficial feet	598,781	
Poles .. .. .	271,770 lineal feet	1,902,390	
House Blocks, Round Posts .. .. .	31,753 lineal feet	190,518	
Fencing Material—Split .. .. .	189,088 pieces	1,701,792	
Fencing Material—Round .. .. .	83,501 lineal feet	208,753	
Mining Timber—Split .. .. .	75,241 pieces	300,964	
Mining Timber—Round .. .. .	221,554 lineal feet	443,108	
Stakes .. .. .	370 pieces	2,960	
Sleeper Edgings .. .. .	150 pieces	1,500	
			25,534,658

### Other Classes—continued—

Fuel .. .. .	18,940 tons
Charcoal .. .. .	9 bags
Trees and Plants (number) .. .. .	242,710
Sand, Gravel, Soil, Antbed, &c. .. .. .	173,862 cubic yards
Freestone .. .. .	2,539 cubic feet
Fibre, Bark and Dry Leaves .. .. .	106 bags
Duboisia .. .. .	1,350 pounds
Flora .. .. .	236 pieces
Peat .. .. .	222 bags
Lawyer Cane .. .. .	16 tons
Mulga Wood .. .. .	56 tons
Poling Timbers (Copper refining) .. .. .	1,315 tons
Bee Hives .. .. .	3 hives

## APPENDIX B

### Total Receipts, Department of Forestry, for the Year ended 30th June, 1962

DISTRICTS	TOTALS		
	£	s	d
Group 1—South Queensland (Beerburrum, Beerwah, Benarkin, Bundaberg, Gallangowan, Gaydah, Fraser Island, Gympie, Imbil, Kalpowar, Maryborough, Monto, Murgon, Pechey, Yarraman) .. .. .	929,551	3	6
Group 2—North Queensland (Atherton, Cairns, Cooktown, Charters Towers, Herberton, Hughenden, Ingham, Innisfail, Port Douglas, Ravenswood, Townsville) .. .. .	413,157	6	6
Group 3—Dalby, Roma, Taroom, Charleville, Mitchell, Quilpie .. .. .	92,704	11	3
Group 4—Warwick, Goondiwindi, Inglewood, St. George, Stanthorpe, Cunnamulla .. .. .	65,935	4	4
Group 5—Mackay, Rockhampton, Clermont, Bowen, Proserpine, Emerald, Springsure, Theodore .. .. .	50,695	6	2
Group 6—Barcaldine, Blackall, Jundah, Longreach, Muttaborra, Stonehenge, Winton, Aramac, Isisford, Jericho .. .. .	1,065	1	3
Group 7—Cloncurry, Boulia, Kynuna, Mackinlay, Richmond .. .. .	1,076	2	10
Group 8—Burketown, Coen, Croyden, Georgetown, Normanton, Thursday Island .. .. .	4	0	0
	£1,554,188	15	10
Receipts—Forestry and Lumbering .. .. .	154,927	9	3
Sale of Plants, Material, &c. .. .. .	21,782	18	7
Licenses* (See note after Appendix C) .. .. .	3,442	3	4
Rents and Grazing Dues .. .. .	9,950	2	1
	£1,744,291	9	1
Plant Hire—			
Charged Loan Fund Projects .. .. .	176,393	12	6
Trust Fund Projects .. .. .	74,621	1	5
Revenue Fund Projects .. .. .	1,054	11	5
Remitted to Treasury .. .. .	252,069	5	4
	£1,996,360	14	5

## APPENDIX C

## Proceeds of Sales of Timber, &amp;c., for the Period 1st July, 1958, to 30th June, 1962

Groups*	1958-59		1959-60		1960-61		1961-62	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Group 1 .. .. .	1,248,990	1 9	1,147,555	8 1	1,209,080	4 8	929,551	3 6
Group 2 .. .. .	502,281	17 9	396,262	12 4	468,668	16 4	413,157	6 6
Group 3 .. .. .	106,115	11 9	124,987	16 9	121,174	0 6	92,704	11 3
Group 4 .. .. .	87,464	11 6	78,919	14 5	79,615	12 9	65,935	4 4
Group 5 .. .. .	34,861	5 6	53,722	6 11	60,250	11 2	50,695	6 2
Group 6 .. .. .	1,390	19 5	1,451	13 6	1,410	10 9	1,065	1 3
Group 7 .. .. .	466	16 10	379	14 2	287	12 1	1,076	2 10
Group 8 .. .. .	1	15 0	7	0 0	1	10 0	4	0 0
Receipts—	1,981,572	19 6	1,803,286	6 2	1,940,488	18 3	1,554,188	15 10
Forestry and Lumbering .. .. .	188,742	1 0	347,525	11 1	299,108	3 8	154,927	9 3
Sale of Plants, Material, &c. .. .. .	17,981	0 4	15,253	14 11	26,209	5 4	21,782	18 7
Licenses† .. .. .	2,866	0 4	2,921	1 8	3,138	3 4	3,442	3 4
Rents and Grazing Dues .. .. .	8,515	15 10	9,716	3 11	9,677	11 1	9,950	2 1
	2,199,677	17 0	2,178,702	17 9	2,278,622	1 8	1,744,291	9 1

\* For Districts within the groups, see Appendix B.

† Includes the following license fees :—Fuel, Quarry, Royalty, Brand, Sawmill, Apiary, Forest Products, Sales Permits.

## APPENDIX E

## Comparative Statement of Expenditure for Years 1960-61 and 1961-62

## APPENDIX D

## Constructional Timber Supplied During Financial Year 1961-62 under Forestry and Lumbering Operations

Class of Timber	Quantity	Sales Value	
		£	s. d.
Hewn Crossings ..	8,778 superficial feet	434	10 4
Sawn Crossings ..	26,633 superficial feet	1,318	6 9
Headstocks and Braces ..	416 superficial feet	19	17 7
Hewn Transoms ..	12,964 superficial feet	706	10 9
Sawn Transoms ..	8,579 superficial feet	467	11 1
Piles .. .. .	8,265 lineal feet	3,323	18 5
Girders—Dressed ..	14,705 lineal feet	12,884	5 1
Hewn Sleepers ..	3,886 pieces	2,654	11 3
Sawn Sleepers ..	75,302 pieces	51,241	2 1
Sleeper Blocks (as sleepers contained) ..	166,374 pieces	67,211	18 0
Split Posts and Rails ..	16,470 pieces	2,830	1 9
Total .. .. .		£143,092	13 1

	1960-61	1961-62
	£	£
Revenue—		
Salaries .. .. .	443,943	479,291
Travelling Expenses and Incidentals ..	32,090	29,698
Fares, Printing, Stores, &c. .. .. .	6,214	4,990
Cash Equivalent of Long Service Leave ..	3,617	2,768
National Parks .. .. .	47,584	44,000
Loan—		
Reforestation .. .. .	1,669,176	1,765,446
Acquisition of Land for Forestry		
Purposes .. .. .	2,848	9,979
Access Roads .. .. .	169,677	143,433
Purchase of Plant .. .. .	119,731	138,781
Trust—		
Hardwood Supplies to Railway Department and Others ..	245,984	131,020
Harvesting and Marketing Timber ..	536,855	508,250
Access Roads—Maintenance and Subsidies .. .. .	95,981	92,741
Maintenance of Capital Improvements ..	43,222	48,598
Maintenance of Plant .. .. .	194,988	211,109
Interest and Redemption on Loans ..	1,098,062	963,683
Total .. .. .	£ 4,709,972	4,573,787

## APPENDIX F

## Net Area of Plantation Established 1st April, 1961 to 31st March, 1962

Species	Brisbane	Gympie	Mackay	Maryborough	Monto	Murgon	North Queensland	Warwick	Yarraman	Queensland Total
	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres
<i>Softwoods</i>										
A. Native Conifers—										
Hoop Pine .. .. .	68.1	436.0	..	..	216.6	479.1	74.0	..	746.8	2,020.6
Kauri Pine .. .. .	2.3	5.9	..	..	2.2	4.9	6.0	..	..	21.3
Other Native Conifers .. .. .	..	..	..	..	..	..	..	..	1.2	1.2
B. Exotic Conifers—										
<i>P. elliotii</i> .. .. .	399.4	461.4	9.0	607.2	..	..	..	27.0	..	1,504.0
<i>P. patula</i> .. .. .	..	2.4	..	..	..	..	..	..	85.6	88.0
<i>P. caribaea</i> .. .. .	10.0	45.6	612.0	34.0	..	..	7.0	..	..	708.6
<i>P. radiata</i> .. .. .	..	..	..	..	..	..	..	115.5	..	115.5
Other Exotic Conifers .. .. .	..	..	..	1.0	..	..	..	1.0	0.5	2.5
C. Broadleaved Softwoods—										
Maple .. .. .	..	0.9	..	..	..	2.9	..	..	..	3.8
Total—Softwoods .. .. .	479.8	952.2	621.0	642.2	218.8	486.9	87.0	143.5	834.1	4,465.5
<i>Eucalypts</i>										
<i>Euc. pilularis</i> .. .. .	..	60.8	..	..	..	..	..	..	..	60.8
<i>Euc. grandis</i> .. .. .	..	40.4	..	..	..	..	..	..	..	40.4
Other Eucalypts .. .. .	..	58.1	..	..	..	..	..	..	..	58.1
Total—Eucalypts .. .. .	..	159.3	..	..	..	..	..	..	..	159.3
Total—All Species .. .. .	479.8	1,111.5	621.0	642.2	218.8	486.9	87.0	143.5	834.1	4,624.8

## APPENDIX G

## Net Area of Effective Plantation Classified into Forestry Districts to 31st March, 1962

Species	Brisbane	Gympie	Mackay	Maryborough	Monto	Murgon	North Queensland	Warwick	Yarraman	Queensland Totals
	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres	Acres
<i>Softwoods</i>										
A. Native Conifers—										
Hoop Pine .. ..	518.8	15,891.6	15.4	137.6	3,004.3	9,121.3	955.5	..	18,172.4	47,816.9
Kauri Pine .. ..	4.5	1,559.9	0.7	69.7	2.2	4.9	296.1	..	7.1	1,945.1
Bunya Pine .. ..	1.5	381.1	1.7	4.7	1.2	37.6	0.9	..	58.0	486.7
Other Native Conifers	5.2	51.4	0.6	1.7	1.6	..	0.9	..	1.6	63.0
B. Exotic Conifers—										
<i>P. elliotii</i> .. ..	11,784.3	8,050.7	2,354.8	9,950.9	70.5	54.3	7.8	736.3	916.4	33,926.0
<i>P. taeda</i> .. ..	3,313.0	105.1	9.8	54.1	1.0	116.2	13.7	224.7	41.4	3,879.0
<i>P. patula</i> .. ..	18.7	24.6	7.6	8.1	25.2	123.9	43.6	669.8	3,174.5	4,096.0
<i>P. caribaea</i> .. ..	36.3	97.5	2,312.5	128.6	1.0	..	30.5	..	..	2,606.4
<i>P. radiata</i> .. ..	..	..	..	..	..	..	..	1,522.6	421.2	1,943.8
<i>P. palustris</i> .. ..	252.7	1.8	5.8	1.0	..	..	..	9.2	2.6	273.1
Other Exotic Conifers	83.2	20.8	73.7	17.2	8.5	1.8	10.1	30.4	24.7	270.4
C. Broadleaved Softwoods—										
Silky Oak .. ..	..	175.9	..	..	..	32.1	31.7	..	675.5	915.2
Maple .. ..	..	61.9	..	..	..	2.9	202.3	..	..	267.1
Red Cedar .. ..	..	12.5	..	..	..	..	29.2	..	..	41.7
Others .. ..	0.1	105.2	..	0.3	0.8	0.9	93.6	..	..	200.9
Total—Softwoods .. ..	16,018.3	26,540.0	4,782.6	10,373.9	3,116.3	9,495.9	1,715.9	3,193.0	23,495.4	98,731.3
<i>Eucalypts</i>										
<i>Euc. saligna</i> .. ..	42.2	900.2	..	..	..	33.7	0.7	..	215.7	1,192.5
<i>Euc. paniculata</i> .. ..	229.2	216.2	..	..	..	76.4	35.6	..	459.3	1,016.7
<i>Euc. microcorys</i> .. ..	215.4	17.5	..	..	..	..	27.7	..	28.7	289.3
<i>Euc. pilularis</i> .. ..	160.9	60.8	..	..	..	..	0.2	..	..	221.9
Other Eucalypts .. ..	25.3	501.8	..	..	..	12.8	4.0	..	12.7	556.6
Total—Eucalypts .. ..	673.0	1,696.5	..	..	..	122.9	68.2	..	716.4	3,277.0
Total—All Species .. ..	16,691.3	28,236.5	4,782.6	10,373.9	3,116.3	9,618.8	1,784.1	3,193.0	24,211.8	102,008.3

## APPENDIX H

## Areas of Natural Forest Treated

## A.—EUCALYPTS

Sub-District	Treated 1961-62	First Treatment 1961-62	Total as at 30th June, 1962
	Acres	Acres	Acres
Brisbane .. ..	1,455	703	25,747
Beerburum .. ..	1,190	362	20,123
Gympie .. ..	916	710	17,313
Imbil .. ..	..	..	159
Mackay .. ..	..	..	1,148
Emerald .. ..	..	..	33,875
Maryborough .. ..	12,662	4,846	93,295
Bundaberg .. ..	4,107	2,076	30,180
Fraser Island .. ..	1,125	890	19,535
Monto .. ..	1,028	276	16,157
Murgon .. ..	1,993	1,030	22,108
Atherton .. ..	410	250	3,689
Ingham .. ..	..	..	2,985
Warwick .. ..	809	..	9,977
Inglewood .. ..	..	..	16,507
Yarraman .. ..	124	4	6,391
Benarkin .. ..	..	..	2,051
Dalby .. ..	1,816	1,345	47,267
Total—Eucalypts	27,635	12,492	368,507

## APPENDIX H—continued

## B.—CYPRESS PINE

Sub-District	Treated 1961-62	First Treatment 1961-62	Total as at 30th June 1962
	Acres	Acres	Acres
Bundaberg .. ..	356	356	1,964
Fraser Island .. ..	..	..	4,424
Monto .. ..	..	..	2,496
Inglewood .. ..	10,816	1,875	81,254
Dalby .. ..	16,769	11,632	174,102
Total—Cypress Pine	27,941	13,863	264,240

## APPENDIX H.—continued.

## C.—RAIN FOREST

Sub-District	Second Treatment 1961-62	First Treated 1961-62				First Treatment Completed 1961-62	Total as at 30th June, 1962
		Brushed	Ringbarked and Thinned	Logged under Treemarking Conditions	Trees Interplanted		
	Acres	Acres	Acres	Acres	Number	Acres	Acres
Natural Hoop Pine—							
Maryborough .. .. .	..	..	..	..	..	..	65
Bundaberg .. .. .	..	..	..	..	..	..	9,922
Total—Natural Hoop Pine	..	..	..	..	..	..	9,987
Natural Rain Forest—							
Atherton .. .. .	901	896	816	1,059	3,867	816	3,599
Ingham .. .. .	..	315	312	480	..	312	403
Total—Natural Rain Forest	901	1,211	1,128	1,539	3,867	1,128	4,002
Total—Rain Forest.. ..	901	1,211	1,128	1,539	3,867	1,128	13,989
Grand Total—						Acres	
Eucalypts .. .. .	..	..	..	..	..	368,507	
Cypress Pine .. .. .	..	..	..	..	..	264,240	
Rain Forest .. .. .	..	..	..	..	..	13,989	
						646,736	

## APPENDIX I

## State Forests, Timber Reserves, National Parks and Scenic Areas, listed by Forestry Districts and Sub-Districts, at 30th June, 1962

District	Sub-District	State Forests			Timber Reserves			National Parks			Scenic Areas		
		No.	Area		No.	Area		No.	Area		No.	Area	
			A.	R. P.		A.	R. P.		A.	R. P.		A.	R. P.
North Q'land	Atherton ..	19	264,299	2 14	42	1,281,581	1 19	11	190,009	1 28	32	5,797	2 19
	Ingham ..	6	184,293	0 0	12	472,459	2 37	8	191,697	0 0	12	1,300	0 0
	Total ..	25	448,592	2 14	54	1,754,041	0 16	19	381,706	1 28	44	7,097	2 19
Mackay	Mackay ..	6	95,537	0 0	25	163,840	3 36.1	22	251,749	0 0	63	15,568	1 38
	Rockhampton ..	9	209,028	1 0	19	172,559	0 22	1	1,550	0 0	14	1,047	0 0
	Emerald ..	3	132,478	3 35	10	210,762	2 0	2	114,800	0 0	..	..	..
Total ..	18	437,044	0 35	54	547,162	2 18.1	25	368,099	0 0	77	16,615	1 38	
Monto	Monto ..	15	377,198	3 35	39	215,606	1 25	1	3,830	0 0	4	115	2 0
	Kalpowar ..	4	28,077	2 0	14	46,635	0 35	..	..	..	..	..	..
	Total ..	19	405,276	1 35	53	262,241	2 20	1	3,830	0 0	4	115	2 0
Maryborough	Maryborough ..	38	356,579	0 26	19	31,302	2 37	3	10,540	0 0	3	805	0 0
	Fraser Island ..	1	392,138	0 0	..	..	..	..	..	..	..	..	..
	Bundaberg ..	17	144,645	2 23	28	91,252	2 30	..	..	..	..	..	..
Total ..	56	893,362	3 9	47	122,555	1 27	3	10,540	0 0	3	805	0 0	
Dalby ..	Dalby ..	39	1,509,106	1 10	13	136,090	0 39	2	24,545	0 0	..	..	..
Gympie	Gympie ..	34	291,267	2 37	4	2,704	0 7	..	..	..	2	881	0 0
	Imbil ..	10	142,851	0 0	3	353	0 7	..	..	..	1	640	0 0
	Total ..	44	434,118	2 37	7	3,057	0 14	..	..	..	3	1,521	0 0
Murgon	Murgon ..	14	96,179	3 17	11	54,920	1 3	..	..	..	..	..	..
	Gallangowan ..	4	37,910	0 0	..	..	..	..	..	..	..	..	..
	Jimna ..	4	83,889	0 0	2	5,420	0 0	..	..	..	..	..	..
Total ..	22	217,978	3 17	13	60,340	1 3	..	..	..	..	..	..	
Yarraman	Yarraman ..	21	112,369	1 24	17	23,832	1 9	..	11,085	0 0	1	30	3 0
	Benarkin ..	3	54,362	0 0	5	6,537	2 26	..	..	..	..	..	..
	Total ..	24	166,731	1 24	22	30,369	3 35	..	11,085	0 0	1	30	3 0
Brisbane	Brisbane ..	47	176,096	3 38	28	40,879	2 39	9	77,163	2 0	21	5,112	2 1
	Beerburum ..	34	98,778	2 11	19	6,902	0 35	1	1,669	3 20	10	2,245	2 33
	Total ..	81	274,875	2 9	47	47,781	3 34	10	78,833	1 20	31	7,358	0 34
Warwick	Warwick ..	13	81,814	3 37	4	6,924	3 28	3	15,323	0 0	4	494	3 0
	Inglewood ..	12	300,734	3 35	13	62,694	2 28	..	..	..	..	..	..
	Total ..	25	382,549	3 32	17	69,619	2 16	3	15,323	0 0	4	494	3 0
Grand Total	353	5,169,636	3 22	327	3,033,259	3 22.1	63	893,961	3 8	167	34,038	1 11	

At 30th June, 1962—

Total area reserved for—

State Forests .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
Timber Reserves .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
National Parks .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..
Scenic Areas .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..

Total Reservations .. .. . 9,130,896 3 23.1

## APPENDIX J

## Reservations for the Year ended 30th June, 1962

1st July, 1961, to 30th June, 1962

STATE FORESTS				
	No.	A.	R.	P.
At 1st July, 1961	373	5,124,219	2	18
Proclaimed 1-7-61 to 30-6-62 (including 19,810 acres of converted Timber Reserves)	2	21,864	2	0
V.C.L. added to existing reserves	..	5,953	3	31
Timber Reserves amalgamated with State Forests	..	21,615	2	10
Recomputation of boundary	..	-16	0	22
Areas released	..	-4,000	2	15
Reserves amalgamated with existing reserves	-22	..	..	..
<b>Total at 30th June, 1962</b>	<b>353</b>	<b>5,169,636</b>	<b>3</b>	<b>22</b>

  

TIMBER RESERVES				
	No.	A.	R.	P.
At 1st July, 1961	334	3,048,338	3	23·1
Proclaimed 1-7-61 to 30-6-62	4	14,907	0	39
Recomputation of boundary	..	12,490	0	0
Areas released	..	-1,050	2	30
Reserves converted to State Forests	-11	-41,425	2	10
<b>Total at 30th June, 1962</b>	<b>327</b>	<b>3,033,259</b>	<b>3</b>	<b>22·1</b>

## APPENDIX J—continued

NATIONAL PARKS				
	No.	A.	R.	P.
At 1st July, 1961	60	813,694	1	8
Proclaimed 1-7-61 to 30-6-62	3	79,860	0	0
Scenic Areas converted to National Parks	..	529	2	0
V.C.L. added to existing Parks	..	71	3	3
Recomputation of boundary	..	-21	3	3
Areas released	..	-172	0	0
<b>Total at 30th June, 1962</b>	<b>63</b>	<b>893,961</b>	<b>3</b>	<b>8</b>

  

SCENIC AREAS				
	No.	A.	R.	P.
At 1st July, 1961	171	34,502	0	14
V.C.L. added to existing reserves	..	212	1	23
Proclaimed 1-7-61 to 30-6-62	2	813	1	14
Reserves amalgamated with National Parks	-5	-529	2	0
Reserves cancelled	-1	-960	0	0
<b>Total at 30th June, 1962</b>	<b>167</b>	<b>34,038</b>	<b>1</b>	<b>11</b>

## APPENDIX K

## Distribution of Personnel, 30th June, 1962

Salaried officers	..	..	..	..	..	375
Other employees	..	..	..	..	..	2,138
						<b>2,513</b>



# ERRATUM

(Amending Appendix A)

# APPENDICES

## APPENDIX A

### Return of Timber, &c., Removed from Crown Lands during the Year ended 30th June, 1962

SPECIES	QUANTITY	
	Super. feet	Super. feet
Milling Timber—		
(a) Native Forests—		
Hoop and Bunya Pine—		
Ply .. .. .	3,134,517	
Logs .. .. .	9,875,559	
Tops .. .. .	9,313,720	22,323,796
Kauri Pine .. .. .	2,170,765	
Cypress Pine .. .. .	23,730,929	
Forest Hardwoods .. .. .	62,722,210	
Scrub Hardwoods .. .. .	9,695,300	
Cabinet Woods .. .. .	15,631,999	
Miscellaneous Species .. .. .	23,598,619	
Limb Logs, Head Logs, Stumps and Fitches .. .. .	93,814	137,643,636
(b) Plantation—		
Hoop Pine .. .. .	19,160,223	
Bunya Pine .. .. .	11,199	
Kauri Pine .. .. .	312,452	
Slash Pine ( <i>Pinus elliotii</i> ) .. .. .	3,350,578	
Lebolloby Pine ( <i>Pinus taeda</i> ) .. .. .	1,779,205	
<i>Pinus patula</i> .. .. .	1,523,099	
<i>Pinus</i> (Miscellaneous) .. .. .	309,952	
Exotics .. .. .	98,677	
Silky Oak .. .. .	114,922	
Hardwood .. .. .	26,660,307	
	186,627,739	

Expressed as Superficial feet (Hoppus) Log Measure

Other Classes—	239,543 pieces	9,102,634
Sleepers Hewn	.. .. .	1,307,804
Sleepers Sawn—5 ft.	.. .. .	4,915,820
Sleepers Sawn—7 ft.	.. .. .	5,989,454
Sleeper Blocks (as sleepers contained) .. .. .		
Transoms, Crossings, Headstocks, Longitudinals	126,831 superficial feet	202,929
Girders, Corbels, Piles, Sills, Kerb Logs	103,809 lineal feet	1,864,537
Girders	598,781 superficial feet	598,781
Poles	381,679 lineal feet	2,671,753
House Blocks, Round Post	41,774 lineal feet	250,644
Fencing Material—Split	216,158 pieces	1,945,422
Fencing Material—Round	86,218 lineal feet	215,545
Mining Timber—Split	82,101 pieces	328,404
Mining Timber—Round	221,554 lineal feet	443,108
Stakes	370 pieces	2,960
Sleeper Edgings	1,500	94,434
Miscellaneous Round Timbers	15,739 lineal feet	
		29,935,749

## APPENDIX B

### Total Receipts, Department of Forestry, for the Year ended 30th June, 1962

DISTRICTS	£	s.	d.
Group 1—South Queensland (Beerburum, Beerwah, Benarkin, Bundaberg, Gallangowan, Gayndah, Fraser Island, Gympie, Imbil, Kalpowar, Maryborough, Monto, Murgoon, Pechey, Yarraman) .. .. .	929,551	3	6
Group 2—North Queensland (Atherton, Cairns, Cooktown, Charters Towers, Herberton, Hughenden, Ingham, Innisfail, Port Douglas, Ravenswood, Townsville) .. .. .	413,157	6	6
Group 3—Dalby, Roma, Taroom, Charleville, Mitchell, Quilpie	92,704	11	3
Group 4—Warwick, Goondiwindi, Inglewood, St. George, Santhorpe, Cunnamulla .. .. .	65,935	4	4
Group 5—Mackay, Rockhampton, Clermont, Bowen, Proserpine, Emerald, Springsure, Theodore .. .. .	50,695	6	2
Group 6—Bacaldine, Blackall, Jundah, Longreach, Mulla-burra, Stonehenge, Winton, Aramac, Isisford, Jericho	1,065	1	3
Group 7—Cloncurry, Boulia, Kynuna, Mackinlay, Richmond	1,076	2	10
Group 8—Burketown, Coen, Croyden, Georgetown, Normanton, Thursday Island .. .. .	4	0	0
Receipts—Forestry and Lumbering .. .. .	£1,554,188	15	10
Sale of Plants, Material, &c. .. .. .	154,927	9	3
Licenses* (See note after Appendix C) .. .. .	21,782	18	7
Rents and Grazing Dues .. .. .	3,442	3	4
	9,950	2	1
	£1,744,291	9	1
Plant Hire—			
Charged Loan Fund Projects .. .. .	176,393	12	6
Trust Fund Projects .. .. .	74,621	1	5
Revenue Fund Projects .. .. .	1,054	11	5
Remitted to Treasury .. .. .	252,069	5	4
	£1,996,360	14	5

Other Classes—continued—

Fuel .. .. .	38,329 tons
Charcoal .. .. .	9 bags
Trees and Plants (number) .. .. .	242,710
Sand, Gravel, Soil, Amber, &c. .. .. .	233,593 cubic yards
Freestone .. .. .	3,063 cubic feet
Fibre, Bark and Dry Leaves .. .. .	106 bags
Duboisia .. .. .	2,141 pounds
Flora .. .. .	1,073 pieces
Peat .. .. .	222 bags
Lawyer Cane .. .. .	16 tons
Bamboo .. .. .	10 tons
Mulga Wood .. .. .	124 tons
Poling Timbers (Copper refining) .. .. .	1,315 tons
Bee Hives .. .. .	3 hives

## ERRATUM

(Amending Table Headed "The Timber Business")

## The Timber Business

	1960-61	1961-62
(a) Mill Logs—		
Hoop and Bunya Pine .. .. .	31,849,000 super. feet	22,324,000 super. feet
Forest Hardwoods .. .. .	76,879,000 super. feet	62,722,000 super. feet
Scrub Hardwoods .. .. .	11,302,000 super. feet	9,695,000 super. feet
Cypress Pine .. .. .	24,093,000 super. feet	23,731,000 super. feet
Kauri Pine .. .. .	2,188,000 super. feet	2,171,000 super. feet
Cabinet Woods .. .. .	17,963,000 super. feet	15,832,000 super. feet
Miscellaneous Species .. .. .	28,601,000 super. feet	23,599,000 super. feet
Plantation Timbers .. .. .	26,234,000 super. feet	26,660,000 super. feet
Limb Logs, Head Logs, Stumps and Flitches .. .. .	155,000 super. feet	94,000 super. feet
Total Crown Mill Logs .. .. .	219,264,000 super. feet	186,628,000 super. feet
(b) Construction Timbers—		
Headstocks, Transoms, Crossings, Braces, &c. .. .. .	449,221 super. feet	126,831 super. feet
Sleepers .. .. .	1,020,302 pieces	607,950 pieces
Girders, Corbels, Piles, Sills, and Girder Logs .. .. .	{ 101,324 lineal feet 661,351 super. feet	{ 103,809 lineal feet 598,781 super. feet
Poles .. .. .	345,206 lineal feet	381,679 lineal feet
House Blocks .. .. .	88,364 lineal feet	41,774 lineal feet
Mining Timbers .. .. .	{ 492,061 lineal feet 31,751 pieces	{ 221,554 lineal feet 82,101 pieces
Miscellaneous Round Timbers .. .. .		15,739 lineal feet
Gross Receipts from Timber Sales, &c. .. .. .	\$2,278,042	\$1,744,291
Net Revenue .. .. .	\$1,355,999	\$963,683