

## CHAPTER IV.—GENERAL.

## 1. FOREST RECONNAISSANCE, DEMARCATION AND SURVEYS.

*Indigenous Forests.*

*Forest Reconnaissance.*—In obtaining data for the forest inventory, forest reconnaissance surveys were made at convenient intervals when the more urgent works of tree-planting and timber cruising were complete. This work involved cutting parallel lines at 40-chain intervals, from which physical features were fixed and standing trees measured. The area surveyed was 124,700 acres, on which it is estimated there is 367,318,000 ft. (b.m.) of timber.

*Demarcation.*—Forest reconnaissance, the survey of opossum-trapping blocks, and operations at Waipoua Silvicultural Research Station involved the cutting and surveying of 7,000 chains of forest boundary-lines.

*Opossum Blocks.*—An area of 29,000 acres of State forest in the vicinity of Mount Holdsworth (Wellington Region) was divided into twenty-nine opossum-trapping blocks.

*Timber Cruising.*—In State forests a total area of 5,016 acres was cruised, carrying approximately 35,400,000 ft. (b.m.) of milling-timber.

On 553 acres of land held privately and by other State Departments 2,900,000 super. ft. b.m. of milling-timber were measured. The cruise plans show general physical features and contour-lines.

*Tramway Traverses.*—Traverses of 1,100 chains of bush tramway were fixed by chain and prismatic compass.

*Afforestation Areas.*

*Topographical and Layout Surveys.*—The fixing of 50 ft. contours and physical features of land principally covered in manuka comprised an area of 107,600 acres. Of this area, 69,600 acres were subdivided into plantation compartments of approximately 300 acres, surrounded by firebreaks.

*Road-construction.*—Plantation-roads aggregating 125 miles in length were located and constructed, at an average cost of £32 10s. per mile.

*Acquisition and Exchange Surveys.*—Survey plans of twelve small areas comprising 1,000 acres were deposited and approved by the Lands and Survey Department.

*Species Surveys.*—A total area of 53,835 acres was planted during 1930. The location of the species was plotted on copies of the layout survey plans, and where compartments contained more than one species additional magnetic surveys were required.

## 2. FOREST ATLAS.

During the year eighty-two general plans and six atlas maps were completed and recorded. The atlas maps cover an area of 58,700 acres, making a total to date of 1,118,853 acres of State forests and plantations so covered, or 14.4 per cent. of the area under control. Topographical plans were prepared for portions of Maramarua, Tairua, and Kaingaroa Plantations, and plans of the layout of firebreaks, planting-blocks, and compartments for portions of Riverhead, Maramarua, Tairua, Kaingaroa, Golden Downs, Balmoral, and Eyrewell Plantations, while species plans of the areas subsequently planted are in course of preparation. New tracings, graphs, &c., totalled 1,124, in addition to 685 white prints and 119 photostat prints. Maps comprised seven atlas sheets and one of opossum-trapping blocks.

## 3. PHOTOGRAPHIC RECORDS.

A further 2,006 negatives were recorded, while 8,123 prints, 303 lantern slides, and nine enlargements were made.

## 4. PUBLICATIONS.

2,000 copies Circular No. 30: "Medium-class Rimu."

1,000 copies Circular No. 31: "Trees used in State Afforestation in New Zealand."

1,000 copies Leaflet No. 16: "The Properties and Uses of Kahikatea."

## 5. REFERENCE LIBRARY.

Over the past ten years the Service has built up a library containing over 6,000 volumes, pamphlets, &c., which is a complete source of reference on all matters pertaining to theoretical and practical forestry and its many cognate subjects, and which enables officers to keep abreast of modern forestry practice in other countries. An excellent and valuable system of reciprocal exchange of periodicals, leaflets, annual reports, &c., is maintained with forestry organizations in all civilized countries.

## 6. UNEMPLOYMENT RELIEF.

As has been customary in previous years, an extended planting programme was undertaken with a view to engaging as many unemployed seasonal workers as possible. For the season under review approximately 2,000 men were given employment for periods ranging from a few weeks to five months. During the period May to October the monthly average of relief workers was 700, in addition to a permanent labour complement of 400 men. The maximum number of men employed at any one time was 1,360. Upon the termination of the planting-season certain other works, such as plantation-thinning, underscrubbing, land-clearing, &c., were put in hand to alleviate unemployment. Regional reports indicate that, generally speaking, satisfactory results were obtained.

## 7. HONORARY FOREST RANGERS.

The valuable co-operation received from the honorary Forest Ranger staff in patrolling and protecting so many of our State forests has again been of material assistance to the Department. New appointments made during the year, less retirements, have brought the total number of honorary Rangers to 127.