

## CHAPTER IV.—GENERAL.

## 1. FOREST RECONNAISSANCE, DEMARCATION, AND SURVEYS.

*Indigenous Forests.*

*Forest Inventory.*—The assembling of the quantities of timber resources of the indigenous forests in Auckland Region was completed by the regional staff. The areas include State forests, provisional State forest, Native land, Crown land, and freehold land. A re-estimate of the timber in Waipoua Kauri Forest was also completed by the Silviculturist.

*Forest Reconnaissance.*—Field operations have of necessity been curtailed owing to the prevailing financial stringency, but field officers have been fully occupied in attending to overdue office-work, plotting of plans, preparing reports, and calculating timber quantities, &c.

In Wellington, Westland, Canterbury, and Southland Regions areas totalling 26,000 acres and containing 195,500,000 super. ft. of timber were surveyed.

With a view to further reconnaissance surveys, areas were explored in Nelson and Southland Regions.

*Demarcation.*—A total of 4,500 chains of State-forest boundary-lines were surveyed through indigenous forests.

*Bush-tramways Surveys.*—Chain and prismatic-compass surveys were made in fixing the position of 2,700 chains of bush tramways.

*Timber Cruising.*—In State and provisional State forests 3,500 acres were cruised. The total quantity of timber on these areas was estimated to be 28,700,000 ft. b.m.

On areas where the timber quantities were evenly distributed approximately 10 per cent. of the timber was appraised by using the system of cruise-lines, cut parallel 10 chains apart through the forest, but on areas where the timber was very patchy 100-per-cent. cruises were generally carried out.

*Afforestation Areas.*

*Topographical and Layout Surveys.*—Topographical surveys were made over an area of 73,700 acres, of which 61,100 acres were subdivided into compartments. A total of six plane-table parties operated in Auckland, Rotorua, and Nelson Regions.

The cost of maintaining many of the internal fire-breaks has proved to be too high, and it has therefore been decided to eliminate many of the fire-breaks by planting them up with suitable trees.

Subject to conforming with topographical features, the maximum area of compartments was raised from 240 acres to about 800 acres.

Efficient fire-breaks will, as heretofore, be kept on boundaries and along formed public roads, from which the main fire danger is likely to arise.

*Road and Track Construction.*—Plantation roads aggregating 70 miles in length and 7 miles of access tracks were located, constructed, and surveyed.

## 2. FOREST ATLAS.

During the year ninety-one general-purpose plans and three atlas maps were recorded under the permanent forest atlas. The maps prepared pursuant to section 25 of the Forests Act, 1921–22, now cover an area of 1,173,672 acres, or 14·8 per cent. of the area under control.

In connection with the plantations five topographical plans and eighteen species plans were completed, and additions made to existing plans, while sixty-five white prints were coloured to indicate the species planted. Six plans showing cleaning and thinning operations were also prepared.

Seven hundred and twenty-five helio prints and 241 photostat prints were prepared by other Departments for the Service, and of these 269 and 155 respectively were for use by the Regions. One map of opossum blocks was lithographed and 500 copies printed.

## 3. PHOTOGRAPHIC RECORD.

New negatives totalling 609 were added to the existing records, and include 199 taken by the Hon. Botanist, Dr. Cockayne, at various times during the past thirty-one years. This is a very valuable collection, and the thanks of the Service are extended to the eminent ecologist for his gift.

Photographic work involved the taking of 114 photographs, developing 114 plates, 6 spools, and 3 film-packs, and printing 99 prints and 2 enlargements.

## 4. PUBLICATIONS.

Leaflet No. 17, "The Properties and Uses of Rimu": 1,000 copies.

Circular No. 32, "Insects infesting *P. radiata* in New Zealand": 1,000 copies.