5. Parasite Biology.

The year under review witnessed no alarming new appearances of detrimental parasites. The work of the forest entomologist and the forest mycologist continued at their respective stations.

The nursery at Wairapukao gave some concern in late summer owing to an unusual attack of *Pestalozzia funerea* on a crop of line-sown *P. radiata* stock. The very wet summer already referred to undoubtedly set the stage for this unusual manifestation; but fortunately the actual losses were small, and the bulk of the crop recovered after the end of the period under review.

6. Thinning-work in Exotic Forests.

The planting gangs of the winter season were retained in most districts throughout the year by the assistance of subventions from the Unemployment Fund. In all older exotic forests underscrubbing of coniferous stands emerging from the thicket stage was the principal work, with a certain amount of pruning of selected trees in pole stands, and management road formation in anticipation of more intensified thinning-work in the future. A total area of 1,507 acres was underscrubbed and 889 acres thinned, while 115 acres were thinned for a second time. In this matter, a new and possibly heterodox development deserves record. In South Otago, certain stands of *P. radiata* still in the thicket stage suffered fairly severely from snowfall in the previous year. The long and pliant branches of this species bend readily under a load of snow; but do not recover when the snow has melted. Even the main trunks of weaker saplings bend completely over and retain this bent form. After a few months had elapsed it became evident that this deformation was permanent, and that remedial measures were essential if the stands were to be saved. Green pruning of stands still in the thicket stage was therefore introduced, and will probably become a routine operation for this heavily branched species in districts where snowfall is a menace. Twenty-four acres of Blue Mountains State Forest were green-pruned in this fashion, and will serve as an observation ground to illustrate the consequences of such work.

The following produce was sold or utilized from exotic forests: Firewood, 3,761 cords; pitprops, 71,750 pieces; poles, 520; rails, 2,750; posts, 2,600; sawn timber, 98,000 cubic feet. The total cash return was £2,066 (exclusive of the value of that portion of the above list which was used for Forest Service purposes).

CHAPTER III.—UTILIZATION.

1. General.

Owing to the absence of one of the utilization staff on overseas leave, field investigations during the year have been strictly limited to the servicing of kilns, to the inspection of test lines of creosoted fence-posts, poles, &c., and to the examination of projected utilization developments under the programme of national forest works for the period 1936–40. The perfection of this programme has been the major project for the period under review, and in respect to utilization this national forest plan has two important objectives—

(1) The refinement of manufacturing practices which will expand the uses of exotic timbers; and

(2) The integration of various forest industries which will ensure a more balanced scheme of utilization for all classes of forest products, ranging from mining-timbers to pulp-board.

2. Logging.

The adaptation of North American tractor and logging arch equipment to local forest conditions proceeds apace both in the North and South Islands. Motor road haulage of logs likewise continues to find an ever-increasing application due to substantial cost reductions made possible by the use of Diesel power units and of trailers equipped with extra low pressure tires. The tractive efficiency of such units has now been improved to a point where they can be used over soft ground previously impassable to anything but vehicles fitted with caterpillar tracks.