

Fire Districts.

Since last report the boundaries of two existing fire districts were extended, and two new private districts were constituted. This brings the grand total to forty-one (of which eight are private districts), and the area covered now exceeds 2,250,000 acres.

8. WILD LIFE IN STATE FORESTS.

General.

To the limit of the funds available, the Service continued its campaign against those herbivorous animals in State forests which destroy forest-growth, and was responsible for the destruction of 27,260 wild pigs, 28,474 rabbits and hares, 6,880 deer, 386 goats, 951 bush-rats, 49 wild horses, and 32 wild cattle—a grand total of 64,032. Of the deer destroyed, 5,747 were shot in the indigenous forests and 1,133 in exotic plantations. For deer destroyed by private hunters in the South Island a State bonus of 2s. per tail was paid through the Department of Internal Affairs. Forest Officers counted and destroyed 12,267 tails under this heading. No payment, of course, was made in regard to the 6,880 deer first mentioned.

Utilization of Hides, &c.

As emphasized in previous reports, it is apparent that the ultimate solution of wild-life control lies in developing the economic exploitation of the animals' hides, &c., as the cost of equipping and maintaining organized shooting-parties in the field over long periods is too great to justify the results obtained, and poisoning has proved ineffective after many and varied methods were tried. For a time the prospects of a payable overseas trade in hides and venison seemed bright, until the general fall in prices affected the world's markets so seriously as to make the exploitation of these commodities quite unprofitable.

The Service has continued its efforts to seek out new uses for the hides of deer, pigs, and goats, and has succeeded in inducing certain local tanning firms to accept small regular consignments of deer and goat hides for leather-making. The High Commissioner's Office in London is continuing its investigations into the commercial utilization of wild-pig and deer hides.

Wild-pig Menace.

Wild pigs are still very numerous in parts of Taranaki, and are increasing in the bush country in the Bay of Plenty and in Nelson. A bonus of 1s. per snout was paid on the wild pigs destroyed, and the sum spent was £1,371, as against £1,327 for the preceding year.

Opossums.

Permits issued to take opossums in State forests numbered 548. The total catch for the year was 101,541, of which 36,623 were taken in State forests. Unfortunately, prices dropped 75 per cent. as compared with the previous year, and good superfine skins realized only from 5s. to 7s. 6d. each.

CHAPTER II.—RESEARCH AND EXPERIMENTS.

1. FOREST BIOLOGICAL RESEARCH.

In connection with the scheme for the establishment of the Forest Biological Research Station to deal with insect and fungal diseases of trees and timbers, under the direction of Dr. D. Miller, researches of considerable importance have been carried out during the year, especially in the case of insect pests, the mycological branch having been established only toward the close of last year. This station is the outcome of co-operation between the State Forest Service, Department of Scientific and Industrial Research, Department of Agriculture, Timber-growers' Association, and Cawthron Institute.

The entomological researches dealt with the completion of the survey of the insect conditions throughout the exotic-tree areas of the Dominion, and with such specific pests as the European bark-beetle (*Hylastes ater*), the spruce-aphis (*Neomyzaphis abietina*), the steel-blue horntail (*Sirex juvenicus*), tortrix moths, and eucalyptus pests. The major researches were confined to the European bark-beetle, spruce-aphis, and the parasitic control of the horntail. Experimental establishment was undertaken of two additional parasites for the control of the gum-tree scale (*Eriococcus coriaceus*); while it can now be definitely stated that the parasite (*Anaphoidea nitens*) imported from Australia for the control of the gum-tree weevil (*Goniapterus scutellatus*) is well established and has the weevil under control at several points.

At the mycological section of the station commencement was made, through the co-operation of the Plant Research Station of the Department of Agriculture, for the training of an assistant for the purpose of undertaking a survey of the forest diseases under field conditions, and a study of nursery methods in relation to origin of forest disease. Special researches will be taken up as this section develops, promising and profitable lines of study appearing to lie in the direction of (a) nursery infections, and (b) of mycorrhizal relationships of tree crops.