

February, 1944, February, 1947, and March, 1950—show that there has been no appreciable increase in the area occupied by native tussocks. Six years' observations at Molesworth demonstrate clearly that here tussock once lost does not regenerate freely even under reduced grazing. This emphasizes the importance of doing everything possible to preserve all remaining areas of tussock in this type of country.

The different strains of *A. scrubrum* are being studied in various tussock areas with a view to selecting suitable ones for more extended use.

Experimental sowings were extended to a part of the Fruit Research Substation at Earnseleugh.

*Beech*.—Regeneration following the 1949 seeding has been examined in several parts of New Zealand, and records obtained from a number of observers. It appears that regeneration does not necessarily follow heavy flowering, as the weather at this time may affect the subsequent development of seed. In one forest the 1950 fall of seed was measured and proved to be approximately 1 per cent. of the 1949 fall in numbers of seed.

*Fiordlands*.—An account of the vegetation of the area covered by the Fiordland Expedition and of the effect of the deer population in this area is complete.

*Surveys*.—Maps showing different features of the vegetation of the Ruahine Mountains have been completed.

#### PEATS AND POLLEN INVESTIGATIONS

*Hay-fever and Honey*.—Honey samples showing peculiar characters have been examined from time to time for their pollen content.

Atmospheric pollen surveys in connection with hay-fever have been carried out at Wellington, Napier, Rotorua, Hamilton, and Auckland, and reports supplied to medical officers concerned at these places.

*Ecology and Peat Classification*.—Vegetation surveys in swamps and lakes of the Auckland Province have been carried out in connection with a study undertaken by the Marine Department for the stocking of the lakes. Further reconnaissance work of peat areas in Canterbury and Westland was undertaken.

*Pollen Analysis, Peats and Lignites*.—Pollens from Wanganui lignites provide additional evidence, and support geological findings, that these beds are younger than was previously supposed.

#### ECONOMIC BOTANY

*Plant Introduction*.—The plant introduction service has expanded rapidly, and 620 introductions—of which 249 were handled by the Division staff—were recorded in the Central Register. A seed list for overseas exchange was compiled and circulated, and the response showed a keen interest in New Zealand crops seeds by research institutions.

*Peat Survey*.—The peat areas adjacent to Paraparaumu were surveyed at the request of the District Planning Officer, and the results have proved useful in the land-utilization planning of this difficult area.

*Washdyke Lagoon*.—In connection with the use of this lagoon and its surrounds for game, a report has been made of the vegetation, more particularly the water-plants.

*Forest Dendrology*.—Study has been confined mainly to *Pinus radiata* in the Nelson region, and attention has been paid to the development of seedlings and trees up to four years old, with special regard to the origin and growth of lateral shoots. A preliminary progeny trial has been commenced.