

IDENTIFICATION AND ADVICE

This work continues to serve Government Departments, public bodies, educational organizations, and the general public. Over two thousand specimens have been identified and reported on. Advice on numerous botanical matters has also been afforded. Increasing assistance has been asked for and given in the examination of vegetable material, especially seeds, in the stomach contents of game birds from departmental and other sources. The seed herbarium has been augmented to assist this work and now contains some three thousand five hundred packets of specimens.

HERBARIUM

Many valuable accessions have been added, mainly by the efforts of members of the staff, and the herbarium has been reorganized as far as possible under the present conditions. As an adequate herbarium, suitably housed and arranged, forms the essential basis of much of the work of the Division, the disabilities of the present quarters are severely felt.

VEGETATION SURVEYS

Three weeks were spent studying the vegetation of the southern fiords from Preservation Inlet to Doubtful Sound, and the results are being prepared for publication. It is a pleasure to record how willingly all members of the exploratory party helped the botanical section. A preliminary survey was made of an area at Whangaroa for the Nelson District Committee, with a view to suggesting lines of work in reafforesting the area with native trees. Further survey work was done in the neighbourhood of Tarndale and Lake Tennyson. Work was also continued for the Wairarapa Catchment Board.

WEED INVESTIGATIONS

A survey of nassella areas in Marlborough revealed a serious increase in the areas densely covered with nassella since the 1941 survey. Scattered infestation now covers 60,000 acres, as compared with under 5,000 acres in 1941.

Weed surveys have been made as follows: Upper Hutt to the Summit Station, an area treated by the experimental weed train; Ahuriri lagoon, in connection with renovation proposals; Southland, especially the phormium areas; Napier to Hastings; Hauraki Plains, with special reference to the incidence and control of reed sweetgrass (*Glyceria aquatica*); Bay of Plenty, with special reference to the honey-producing flora. Throughout these surveys special watch is kept for potentially serious weeds.

LINEN-FLAX INVESTIGATIONS

These were undertaken in co-operation with the Soil Bureau, and a full report is in the press. Six varieties, of which Norfolk Earl was the best, showed a moderately good fibre picture. Top-dressing with ammonium and potassium sulphates gave a small but significant increase in fibre diameter. A tentative grouping of soil types in relation to fibre quality was made as a result of the examination of crops in the Geraldine and Fairlie districts.

PEAT AND POLLEN STUDIES

Work has been done on the Mungaroa and the Hauraki Plains peat deposits. A paper has been prepared on a particular peat profile at Waitakaruru in an area under pasture showing copper deficiency. Keys to material found in New Zealand peat deposits have been prepared to facilitate the investigations, and are being tested.

To enable work to be done on economic problems needing a knowledge of pollen, a large reference collection of pollen slides has been built up. Slides exposed daily on the roof of the Wellington Hospital have been received for identification, and a full record of the species found, and their seasonal abundance, kept. Results indicate that three pollen seasons occur, dominated by tree, grass, and herb pollens respectively. A number of pollens definitely associated with hay-fever have been found in the slides, including pollen of the indigenous species of *Coprosma*.