

of its scope must be recognized, and to this end the Inspector in Charge of Research has recommended that a Forestry and Forest Products Research Advisory Committee be set up.

15. *Library*.—The Research Institute Library now consists of some 3,500 books and pamphlets covering a wide range of subjects related to forestry. The collection is being continually added to, and contributions of bulletins, leaflets, and pamphlets have been received from many overseas forestry organizations.

16. *Publications*.—The Institute will, in addition to the publication of completed research, make available for general circulation brief progress reports on current investigations, and the first of a series of *Forest Research Notes* has been prepared and is in process of publication.

Other publications by the Institute staff, either issued or in the printer's hands, are listed in Chapter VIII.

BOTANICAL AND SILVICULTURAL RESEARCH

17. *Herbarium*.—The herbarium at the Forest Research Institute has developed in quantity and quality during the year. Acquisitions have included flowering and fruiting material of species formerly represented only by sterile specimens. Two private collections of *Eucalyptus* species have been received as gifts. The collection, which now contains some 3,200 specimens, is well mounted, recorded, and indexed.

18. *Arboreta*.—The arboretum at the Forest Research Institute is being extended for research and training purposes, and also as a source of interest to visitors to Rotorua. Additional ground has been made available for extension of the Rotorua Arboretum, and mapping has been done in preparation for development and tree-stocks raised in readiness. Specimens of nine species of pine, two species of *Agathis*, and a few small native trees were planted out, and a number of defective and unwanted trees removed. The Northern Arboretum at Waipoua Forest has been further augmented and now contains over 3,000 trees. Almost half the arboretum is devoted to the genus *Agathis* of which the most important species is the kauri. The remainder of the collection comprises hoop pine, tanekaka, and toatoa.

19. *Forest Tree Genetics*.—Experimental grafting of *Pinus radiata* and Douglas fir has achieved sufficient success to indicate methods likely to be suitable for use on a larger scale in future. A number of type trees have been selected in Rotorua and Wellington Conservancies for collection of materials for future work. Plantings of *Pinus radiata* and Douglas fir have been made to provide stocks for grafting experiments. The rooted cuttings of *Pinus radiata* raised in the experiments described in last year's report were transplanted into the forest. A recent count shows 84 per cent. survival over all.

20. *Interplanting*.—The field-work for a review of the results of planting exotic conifers in native forest after felling and logging was completed and the report was submitted shortly after the close of the year.

21. *Sample Plots*.—The establishment of permanent sample plots in exotic forests to study the response to thinning and to obtain data regarding yields was continued. Practically all the important species had previously been included in the programme, and the feature of the year's work was the extension of the study over a wider territorial range. All conservancies have been visited, demonstrations of correct procedure given, and tentative sites for plots selected. The availability of technical staff and labour in conservancies has controlled the progress made in establishing plots. Twenty-five plots were established or remeasured during the year, twelve of which were in Canterbury Conservancy; the territorial distribution of this work is shown in Appendix XV.

22. Advantage was taken of the facilities kindly provided by Messrs. New Zealand Forest Products, Ltd., and Messrs. Afforestation Proprietary, Ltd., to establish a comprehensive set of sample plots in dense natural regeneration of exotic conifers after