

was unable to complete the photography of as large an area as was expected. Seven mosaic copies and 2,330 prints were added to the library, and 10 mosaic copies were obtained for use in conservancy offices. Forty-nine mosaics are now held in the Forest Service library of aerial photographs.

30. *Mapping*.—Owing to the continued shortage of draughting staff, work under this heading was again mainly confined to the preparation of plans and maps in connection with current operations. One new stock map was prepared and 3 stock maps and 1 indigenous forest record map were redrawn. Twenty-one forest atlas sheets were renewed and 47 new plans recorded.

31. *Forest Management Staff*.—A forest graduate was appointed to the forest management staff during the year and was later seconded to the Soil Conservation and Rivers Control Council. Another forest graduate returned from military service overseas, but resigned later in the year. Despite the fact that the professional staff directly concerned with forest management consists of only eight officers, whose present supplementary duties in connection with timber control, rehabilitation, recruitment, and training leave insufficient time for forest planning as expressed in working plans, fair progress has been made with assessment and the completion of some plans.

A working-plans refresher course held at the Rotorua Forest Training Centre was attended by fifteen foresters and assistant foresters and by three forest rangers engaged on assessment duties. Lectures were given on working-plan assessments, volume tables, yield tables, and working plans, including fundamental forest records, and the lectures were followed by questions and answers.

32. *Forest Working Plans*.—Two new working plans and two revisions of existing plans were completed during the year. One of the new plans, that for Hanmer Forest, has been approved by the Commissioner of State Forests, and the other, for Whakarewarewa Forest, has been submitted for approval. The five year revision of the plan for the kauri working circle has also been submitted for approval. Working plans for Herekino, Woodlaw, and Maramarua Forests are under preparation. General proposals for felling and silviculture have been prepared for the Tapanui forests and also for the Naseby, Maramarua, and Puhipuhi Forests. Resubdivision into compartments of manageable size has been completed for Marumaru, Waitapu, and Dusky Forests. An ecological survey and report was made on Woodlaw (silver beech) Forest.

Assessments of growing stock in 256 compartments covering 65,900 acres were completed during the year. The forests concerned are Kaingaroa, 45,500 acres; Rotohehu, 4,700 acres; Maramarua, 4,000 acres; Hanmer, 4,300 acres; Balmoral, 6,100 acres; Dusky, 1,000 acres; and Woodlaw, 300 acres. The strip-plot method was used over most of the forests, but line (rectangular) plots were experimented with on Maramarua, Dusky, and Woodlaw Forests. On Kaingaroa and Dusky Forests, volume tables were used instead of sample-tree measurements, and on the former forest the area assessed was double that of last year as a result of the saving in field-work.

CHAPTER V.—SILVICULTURE

33. *General*.—Owing not only to shortage of labour, but also to accommodation difficulties, particularly for married men, the programme of silvicultural operations fell short of that planned. There was, however, a little more labour available than the previous year, and the area thinned and pruned was slightly increased in consequence. There was also an increase from 553 acres to 834 acres in the new areas planted. Statistics appear in Appendix II.

34. *Natural Regeneration*.—Two extremely dry summers in succession have taken heavy toll of kauri regeneration that has been fully exposed to the sun. Elsewhere regeneration has been satisfactory in regard to both quantity and establishment. In Canterbury, where insignis-pine stands were wind-thrown in 1945, regeneration is now showing in some areas that have been salvaged and cleared.