

## GEOLOGICAL SURVEY BRANCH.

## TWENTY-FIFTH ANNUAL REPORT (NEW SERIES).

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## DIRECTOR'S REPORT.

DURING the 1930–31 field season, which ended on the 31st May last, Mr. H. T. Ferrar carried out topographical and geological mapping in the Te Kuiti Subdivision, Mr. M. Ongley and Mr. J. H. Williamson in the Eketahuna Subdivision, and Mr. H. E. Fyfe, for a time assisted by Dr. Marwick, in the Amuri Subdivision. Messrs. L. I. Grange and N. H. Taylor investigated the distribution and thickness of the volcanic-ash showers of the Mamaku, Putaruru, Cambridge, Ngaroma, Te Kuiti, Taumarunui, and adjoining districts. These ash showers, which are derived from several centres, cover large areas in the North Island, and the soils of the areas they cover are altogether or largely derived from them.

The Director (Dr. J. Henderson) made official visits to Waimana, Okoroire, Great Barrier Island, and Pahi, in the North Island, and to the Greymouth and Owen coalfields, in the South. He also visited Arapuni on several occasions, and, with Messrs. Ongley and Grange, spent a fortnight in the Napier district immediately after the earthquake. Mr. Ongley later was occupied for a month in exploring the same district. He, with Mr. Williamson, also examined the copper-bearing area near Maharahara.

During the season approximately 869 square miles were geologically surveyed in detail. Of this area, 335 square miles was in the Te Kuiti district, 328 square miles in the Eketahuna district, and 206 square miles in the Amuri district. Owing to shortage of funds, work in all the subdivisions was restricted, and Mr. Ongley's absence from his regular work still further reduced the area mapped in the Eketahuna Subdivision. Messrs. Grange and Taylor examined the soils of a large area in the Hauraki district and in the King-country, but did no detailed geological mapping.

The manuscript of the Dargaville–Rodney Subdivision is being typed; those describing the Motueka, Kaitangata–Green Island, and Rotorua–Taupo subdivisions should be ready before next field season, and those on the Murchison, Tongariro, and St. Bathans subdivisions well forward.

Shortage of money delayed for many months the printing of Dr. Marwick's bulletin on the molluscs of the Gisborne district. This report is now printed and shortly will be issued. Dr. R. S. Allan has furnished an account of the fauna of the Reefton beds, which are of Devonian age, and this will be published as soon as money is available. The members of the staff have contributed several papers to the *New Zealand Journal of Science and Technology*. These are "Wattle-growing in Natal" and "Gold in New Zealand," by J. Henderson; "Maori Terraces," by M. Ongley; "Diatomite—Principal New Zealand Occurrences and Uses," "Volcanic Rock at Lake Rotoiti," and "Volcanic-ash Showers," by L. I. Grange; and "The Relation of Geology to Sheep Sickness in the Mairua District," by N. H. Taylor.

A great deal of correspondence has been attended to, many requests more or less connected with the work of the Geological Survey have been answered, and samples of rocks, minerals, and ores examined. This part of the work of the Geological Survey was heavier than usual owing to the increasing interest taken in prospecting.

During the year Mr. G. E. Harris, Draughtsman, drew for photographic reproduction seven maps to accompany different bulletins. He also prepared twenty-five block drawings, twenty-eight field sheets for Te Kuiti, Eketahuna, and Amuri Subdivisions, a number of tracings, and other miscellaneous work.

This year very few books were purchased for the library. Many valuable exchanges were received, and the estate of the late Lady Hector donated a valuable collection of early official reports relating to the geology of New Zealand and the discovery of the goldfields. Last year's report omitted to state that the beneficiaries of the late Dr. J. Allan Thomson had presented a considerable number of scientific works, chiefly dealing with petrology and allied subjects.