

Kinkora, were taken over from the Ministry of Works, and were slightly modified to conform with our standards. In anticipation of a move of the headquarters building in the Balmoral State Forest, a new station has been set up to run concurrently with the present station, in order to provide an overlap of observations for a period. With the closing of the Waipapakauri Aerodrome, the meteorological instruments were transferred to Kaitia Aerodrome.

The total number of stations in operation at 31st March, 1949, was 114, including 12 in Pacific Islands administered by the New Zealand Government.

*Rainfall Stations.*—The collection of rainfall data in New Zealand depends almost entirely on the voluntary efforts of hundreds of observers who, in return for the extended loan of a gauge, agree to make daily readings and send in a monthly return. The country owes a debt of gratitude to these public-spirited people, many of whom have kept records for thirty, forty, or, in a few cases, fifty or more years.

To help in meeting the demand for more rainfall information, an additional 400 manual rain-gauges were ordered in 1946, and a campaign was launched to find additional voluntary observers who would be willing to keep rainfall records. With the co-operation of Catchment Boards and the Ministry of Works many new observers have been found, and during the past twelve months a further 79 gauges were installed. With the closing of eight stations, this brings the present total to 730. To this total must be added the rainfall records obtained from climatological stations and from a few observing stations maintained by the Ministry of Works at possible aerodrome sites.

Additional rainfall data are obtained from about a hundred private observers who are kind enough to provide us with a copy of their daily rainfall readings at the end of each year.

An order for 100 recording rain-gauges was also placed in 1946, but delivery did not commence until 1948. They are now being installed in suitable locations throughout the country, and sixteen new stations were brought into operation during the year. Records from these instruments will furnish much-needed information about high-intensity rainfalls, and about the detailed rainfall structure of storms.

*Reporting Stations.*—The main purpose of the network of reporting stations, which numbers about 100, is to supply synoptic reports several times a day for use in the preparation of weather forecasts. Such reports are received initially by the most rapid means of communication available, be it telephone, telegraph, teletype, or radio. The observations are also entered on record sheets which are sent in at the end of each month. Such returns provide a valuable source of data relating to cloud height and amount, visibility, &c. About twenty of the reporting stations combine the functions of a reporting and a climatological station. Most of these are located at branch offices of the Meteorological Service. From the latter, data are also obtained from the upper air by means of pilot-balloon observations. Temperature and humidity data from the free atmosphere are obtained by radiosonde ascents at Nadi (Fiji), Auckland, and Hokitika, and by aircraft ascents at Ohakea. High-level wind data under all weather conditions are available from radar equipment at Nadi, Whenuapai, and Ohakea.

*Publications.*—The Climatological Table continues to appear each month in the *New Zealand Gazette*. Reprints of this table are distributed to all climatological observers, and to some eighty other addressees.

The Annual Meteorological Observations for the years 1943 and 1944 were published, and the typing of the material for the 1945 and 1946 issues has been completed.

The paper by Dr. F. Bondy entitled "Droughts in New Zealand," which was read at the seventh Pacific Science Congress, has been submitted for publication in the *Journal of Science and Technology*.