

METEOROLOGICAL BRANCH.

REPORT BY THE DIRECTOR.

NEW METEOROLOGICAL OFFICE AT KELBURN.

DURING the year quarters designed especially for the use of the Meteorological Office were constructed on the Observatory Reserve at Kelburn, thus fulfilling a long-standing requirement. Though of economical construction, the building has proved suitable and convenient. The office is near to the meteorological enclosure, so that it is possible to make more frequent observations and to give the instruments closer supervision without loss of time. Some of the instruments are recording actually in the office building, and it is of great assistance to the forecaster to watch them and also the changes taking place in the atmosphere. Better facilities are available for the storing of records, and working-conditions generally are more suitable.

The new building was occupied at the end of September, and was opened officially by the Hon. A. J. Stallworthy, Minister of Health, on the afternoon of the 29th October.

FORECASTING.

Amongst the retrenchments necessitated by the financial depression was the discontinuance of the despatch by telegraph of the midday forecast to a considerable number of the smaller towns. It was with great regret, also, that we were forced to abandon the evening broadcast by wireless from the Wellington Radio-station of weather reports for shipping. During the greater part of the year a special report and forecast has been issued from 2YA at 3.30 p.m. indicating existing conditions and the probable developments over as long a period in advance as the conditions of the day permitted. This issue was originally designed especially for the assistance of sheep-farmers at shearing-time, but its use has extended to many other agricultural activities. Numerous unsolicited tributes to the value of this forecast have been received. We are indebted to the Radio Broadcasting Co. of New Zealand, Ltd., for their co-operation in the issue of such reports.

Private demands for forecasts from aviators, farmers, shipping interests, and invalids desiring to avoid bad weather have very much increased.

OBSERVING-STATIONS.

One new climatological station was established during the year, at Waihopai Power-house, in Marlborough. Though no stations have been dropped, difficulty has been experienced in maintaining some of them. Fifteen new rainfall-stations have been established, and nine have lapsed. Owing to expenses connected with the transfer to the new building and to the reduced funds available, very little inspection was done during the year. It is pleasing to note that neither at Napier nor at Hastings did either observer or equipment suffer serious damage from the disastrous earthquake. At Hastings the observations were kept going continuously.

Again I wish to tender thanks to those observers who have continued to furnish us with satisfactory returns.

UPPER-AIR OBSERVATIONS.

Observations of winds in the upper air have been continued at Wellington, and the results of pilot balloon ascents have been telegraphed daily also from Christchurch. The Christchurch reports have been found very valuable for forecasting purposes, and our thanks are due to the Surveyor-General and Mr. H. F. Skey, Director of the Christchurch Observatory, for their co-operation. Observations were continued also throughout the year by Mr. F. H. Sagar at Auckland. Mr. Sagar's work was done with the aid of a Research grant. Visibility observations are made at a number of stations.

Owing to the absence of Messrs. Andrew Thomson and R. G. Simmers for the greater part of the year, it has not been possible to make any marked advance in the direction of the provision of meteorological data for aviators.

Mr. Chichester in planning his solo flight by seaplane to Australia was most anxious regarding the weather-conditions on his journey to Norfolk Island, and, to a less extent, to Lord Howe Island, owing to the smallness of his objective and the susceptibility of a light machine to damage in any seaway. It was possible to give him advice, which proved accurate, as to when to start and also while at Norfolk Island. It was unfortunate that unavoidable delay resulted in his encountering a storm while his seaplane was anchored at Lord Howe Island, serious damage resulting.

MISCELLANEOUS.

During the year two articles on the climate and weather of New Zealand have been called for. The first was for "The New Zealand Pilot," a British Admiralty publication. Hitherto the meteorological information had been prepared in England from New Zealand publications and from reports by shipmasters and others. The information called for includes very complete data regarding pressure, temperature, wind, and rainfall, according to a general plan, from a number of meteorological stations. It was obvious that much of the data previously published was defective. In some cases the observations themselves have been valueless owing to the use of defective instruments or unsatisfactory exposure, while in others no account has been taken of changes in the site of the station. As an example, it may be mentioned that the Wellington station has been in various sites, at which the rainfall has varied between 55 in. and less than 40 in. These changes of site have been disregarded when determining the average rainfall as given in previous publications. At another station pressure readings have been made regularly since 1862, giving a record which, if the observations were reliable,