

## METEOROLOGY.

The meteorological observations now taken for statistical purposes are limited to stations at Auckland, Wellington, Lincoln, and Dunedin, but observation of rainfall, temperature, and wind-direction are received from the following third-class stations, twenty in number, viz., at Petone, Makara, Upper Hutt, Summit Station, Wellington, Masterton, Feilding, New Plymouth, Wanganui, Palmerston North, Christchurch, Puysegur Point, Cape Campbell, Oamaru, Timaru, the Brothers, Farewell Spit, Leefield, Marlborough, Brighton, Otago, Taupo, and Invercargill. The results are published in most cases every month either in the *Gazette* or in the local newspapers, and are collected into the annual volume of the statistics of the colony published by the Registrar-General.

The system of intercolonial weather exchange has now been in operation for two years, and the expense has proved to be much under the estimate formed at the Conference. The diagram of the weather for each day over the south part of Australia, Tasmania, and New Zealand is published the same afternoon in Sydney, Melbourne, Adelaide, and Hobart, and by a system of numbered blocks, which have been supplied by this department, a diagram of the weather of each day is published in the morning newspapers in Auckland, Wellington, Christchurch, and Dunedin, and the information without diagrams is published by most of the other papers in the colony, being distributed by the Press Agency. The local weather warnings for the benefit of the shipping round the coast continue to be supplied as heretofore by Captain Edwin, R.N., and are very generally appreciated.

## OBSERVATORY.

The time-ball is still dismantled, but hourly signals are given by galvanometer to the Telegraph Department and at the Museum. No change has been made in the Observatory during the year, except that Mr. T. King kindly undertook the meridian observations at a time when both Archdeacon Stock and myself were absent from Wellington. The principal work of the year was the observation of the transit of Venus on the 7th December, 1882, for which purpose I established a temporary observatory at Clyde, in Otago, at the request of Colonel Tupman, R.E., the officer in charge of the British Expedition. The account of my observations has been already published ("New Zealand Journal of Science," January, 1883, page 326).

## LABORATORY.

The total number of analyses made in the Colonial Laboratory during the past year for general purposes is 293. Besides this, a number of analyses have been made under the Adulteration Act of 1880, and a few in aid of criminal procedures. The Laboratory number now arrived at is 3,511. The ordinary analyses are divisible as follows: Coals, 26; rock and minerals, 64; metals and ores, 52; examinations for gold or silver, 50; water, 37; and miscellaneous, 64: making up a total of 293.

The heaviest labour of the year has been expended upon analyzing the Taupo mineral waters—a work which has long been urgently required. Twenty-two of these, representing the principal mineral waters of this district, and well certified as to locality, &c., have been fully analyzed.

Those results which have a general interest are given in full in the annual Laboratory report, herewith appended.

20th July, 1883.

JAMES HECTOR,  
Director.