

embraces the Colonies of South Australia, Victoria, New South Wales, and Queensland." With regard to New Zealand, on account of the greater expense of communication, the great range of latitude, and the consequent complicated phases of weather which occurred simultaneously in the different coastal areas, it was desirable that, instead of any definite observations or readings of instruments being transmitted, a daily synoptical report of the general conditions of the weather should be prepared at the head office in New Zealand and transmitted, together with immediate telegraphic notice of any important or exceptional phenomenon; and that the return communications to New Zealand should be comprised in a similar synoptical report of the state of the weather in the different coastal areas of Australia, to be prepared and transmitted from the Observatory in Sydney.

The resolution, after discussion, was agreed to.

Mr. Ellery moved, "That, in the opinion of this Conference, it is desirable that weather telegrams and forecasts shall in all cases depend upon the observations used for general meteorological and climatological statistics, and be under the direction of the head of the Meteorological Department in each colony."

Mr. Todd thought such a resolution was essential to prevent conflicting reports, and to insure public confidence.

The resolution, after discussion, was agreed to.

The Conference adjourned at 1 p.m., until Thursday, the 13th instant, at 10 a.m.

#### THURSDAY, 13TH NOVEMBER, 1879.

The Conference met at the Observatory at 10 a.m.

*Present*: Mr. Ellery, Dr. Hector, Mr. Russell (Chairman), and Mr. Todd.

The minutes of the previous meeting were read and confirmed.

The Conference resumed their consideration of the fourth proposition, affirming the desirableness of securing the co-operation of the New Zealand and Tasmanian Governments in the system of weather telegrams.

Mr. Todd moved, "(1.) That this Conference, having been informed that the Eastern Extension Telegraph Company will charge half rates for the transmission of weather reports through the cable connecting Australia and Tasmania, and probably also the cable to New Zealand, recommend that the cost of such reports be defrayed by the participating colonies in equal proportions; and that, in the opinion of this Conference, such cost need not exceed in the aggregate £350 per annum. (2.) That, in the opinion of the Conference, this expenditure is justified by the extreme importance to the shipping interest of early information of the approach of dangerous easterly and westerly gales." He said that, as these reports transmitted through the cable would be merely synoptical reports of the state of the weather in Australia on the one hand, and in New Zealand and Tasmania on the other, they need not be of great length. Messages comprising ten or twelve words would probably, by means of the code adopted, convey all the information that would be required. A message of ten words would cost—to or from New Zealand—at the reduced rate, about five shillings. The amount named in the resolution would therefore, in his opinion, be ample.

The Chairman said that, from the experience in reference to gales which he had obtained during a number of years, it was quite evident that from the observations taken in New Zealand and the southern colonies valuable warnings might be given. A short warning of the approach of a gale in many instances would be the means of saving a large amount of property, as the vessels could take refuge in the coast harbours. Warnings of dangerous gales might be given several days in advance, and considerable importance was attached to such information by the shipping interest. For instance, in the severe gale in which the "Dandenong" was wrecked, it had subsequently appeared that valuable information might have been given sufficiently in advance to prevent the great loss of property which took place if that information could have been furnished to the shipping interest at the different ports along the coast.

Mr. Todd entirely concurred with the Chairman as to the importance and value of this information, and especially of the reports from western stations. His observations tended to show a great regularity in the easterly march of disturbances from the westward; and the stations in South Australia, and especially in Western Australia, should be able to give the easterly colonies timely warning of approaching gales, because they would be able to report the effect of a gale which had already reached one of these stations. The information would therefore not be hypothetical, but an actual fact of which timely notice could be given.

Dr. Hector said that from a New Zealand point of view he thought it would be very advantageous that Queensland should join in this co-operation, as it would be from that quarter they would receive early notice of the origin and progress of the dangerous and suddenly-occurring cyclones that crossed the northern part of New Zealand. On the other hand, the southerly gales could not, of course, be directly predicted in Australia for New Zealand, but New Zealand could give early information to Australia of the occurrence of such gales, and probably Queensland would receive the greatest benefit from such predictions.

Mr. Ellery said that in that view of the case great advantage would be derived from the establishment of a station at Hobart Town, because if Hobart Town observations were discussed in connection with this movement on the western coast of Australia and the subsequent weather on the east coast, it would be found that those observations would often determine whether that easterly movement had become deflected by any other current. The observations at Hobart Town would indicate a considerable time beforehand whether the disturbance would become a serious one on the eastern coast of Australia. For instance, it was a fact that the gale in which the "Dandenong" was wrecked was indicated at Hobart Town thirty hours before it reached Sydney.

Mr. Todd called the attention of the Conference to the hurricane which struck the Lacipede Islands and the north-west coast of Australia on the 24th and 25th of December, 1878, as a case in point. The barometer fell to 29.50 and 28.94; at Alice Springs, in the centre of the continent, it began to fall on the 30th, reaching 29.6 on the morning of the 2nd January; at Eucla, the barometer