

turbance. Thus a disturbance, which ranged from the Leuwin to Melbourne, might be so distorted as to be all existent within the small area of New Zealand. He thought, therefore, that it would be best to give the highest and lowest pressures in New Zealand. These islands lie right athwart of all the disturbances that pass over them, which, as a rule, follow the East Coast line, under its lee from south to north. If, therefore, the extremes of pressure each day were telegraphed when a well-defined centre of disturbance was shown passing any of the aspects (but only in those cases where the grade might be considered as a source of dangerous winds),—if, for instance, a depression was making off Foveaux Strait, *i.e.*, off Aspect D, and if the depression had a light grade for N W winds—that information might be of great use to Australia, since such depressions have frequently been observed to bring in a change to strong wind from the S.W., and this might be the beginning of a very large depression, whose diameter might exceed a thousand miles. Thus, if the grade was given, Australia might form some idea of the weather to be expected along its east coast. He did not see that in any other way the telegrams from New Zealand would as yet be of immediate use except for purposes of study. Another point to be mentioned was, that when these disturbances—which often form a consecutive series—had heavy N W grades, the series is inclined to the meridian at a different angle from those previously mentioned. These points were not yet completely settled, but he thought it would be necessary to indicate when a depression existed with a grade above 0.02 for every fifteen miles of horizontal distance.

120. The general weather and all remarks would be referred to aspects as decided at the last Conference. When in his report he said that these aspects were not satisfactory, he did not mean to imply that he had yet sufficient knowledge to say how they should be amended. As an instance, he mentioned Bealey, the central station in the South Island, which is considered to be in Aspect D, but experience has shown that it ought to be regarded as in the West Coast aspect, and not that of the East Coast, although it is upon the east side of the mountains. If at any time he had to change the definition of an aspect, he would give notice of it, and explain the reason.

121. He proposed to give the cyclonic weather for north or south winds, and what aspect they are in, and the anti-cyclonics, which are of great interest, since, for some unknown reason, in summer, when they should have low pressure, a high pressure occurred over the land.

122. Dr. Hector then submitted a double-entry code, prepared to exhibit the aspects of the New Zealand coast, and the cyclones, anti-cyclones, &c.

123. Mr. Russell considered that what was wanted was to give such information as would be useful to the public. It might not appear to be of much interest to the Sydney public to know the general weather in New Zealand, but in reality it was of interest to business men and all connected with shipping. Particulars would therefore be extremely valuable.

124. Mr. Ellery agreed with this view, and considered that a little extension of the cypher code for New Zealand would give all that was required.

125. Mr. Russell thought that the telegrams should show the general state of the weather, and the particular state, if such existed. He thought that the synoptical view of the weather in each colony should be compiled by the chief officer of that colony.

126. Further discussion ensued, after which the principle of the form for synoptical telegrams from New Zealand to Australia was adopted.

The Conference adjourned to to-morrow at 10 o'clock a.m.

TUESDAY, 26TH APRIL, 1881.

The Conference met at the Observatory at 10 o'clock a.m.

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

The minutes of the last meeting were read and confirmed.

Form of Telegrams from New Zealand to Australia, and vice versa.

The discussion on this subject was resumed.

127. Dr. Hector, in submitting a form of code, said that he had divided Australia into districts somewhat similar to those into which New Zealand had been divided.

128. He proposed that, under the column headed "Over the Land," Australia should be divided into the West Central and East Central Districts, the word "General" being used when the phenomena reported were common to the whole. He proposed that the name of each station should be only one word: thus, for "Alice Springs" the word "Alice" alone should be used. Reports should be sent from only one station in each district, unless some unusual phenomenon appeared at one of the others, in which case its importance would justify the cost of reporting it in full. The western section extended across the continent from Darwin to Adelaide, including as its principal stations Darwin, Alice, and Adelaide. He suggested that Alice should be the station selected for the Central District. The Eastern District he proposed should take a similar range in longitude, its stations being Ravenswood, Bourke, Deniliquin, and Melbourne. The section through Darwin and Adelaide he regarded as the plain country. That from Ravenswood to Melbourne would embrace the country westward from the foot of the mountain range.

129. Mr. Todd observed that Darwin would report the tropical rains.

130. Dr. Hector considered that that would be very valuable information, as the weather would probably be found to be to some extent controlled by these rains.

131. Mr. Todd remarked that the monsoon rains this year did not extend farther than twelve miles south of Tennent's Creek.

132. After some discussion, Gunnedah, Tamworth, Bathurst, and Melbourne were selected as the stations for the Eastern District, Bathurst to be the reporting station.

Dr. Hector proceeded further to explain the draft code, pointing out that the station selected to report was underlined, and proposed to be printed in italic letter.