

Observations made at subsequent periods in the same district gave a much better insight into the nature of this change.

Throughout the year meteorological observations were taken with great care and regularity. The barometer, the wet and dry bulb thermometer in air, the temperature of the sea-surface, the direction and force of the wind, and the proportion of cloud and the general state of the weather, were registered not less than once in two hours by the officers of the watch. Whenever there was any marked peculiarity in atmospheric condition or in the temperature of the sea, or any suspicion that there might be cause for such, observations were made hourly, and often half-hourly.

It must be remembered, however, that, owing to the ship constantly changing her position, and passing into different latitudes, and being subjected to different local conditions, these observations have not the kind of value of a series of observations taken at a single spot, but must be regarded as isolated observations, each good only for the position and date at which it was taken. As such, however, their importance can scarcely be overrated, in their bearings upon the discussion of the questions regarding the movement of air and water, and the conditions of climate affecting the maintenance and distribution of living beings, which it was our mission to attempt to solve. This, of course, does not apply to series of observations extending over a considerable time at one place, such as those taken in harbor at Bermudas, Halifax, etc.

The number of separate observations was so great—amounting during the twelve months from the 1st of December, 1872, to the corresponding date in 1873 to upward of 50,000—and would have occupied so much space in a tabular form, that it has been thought preferable, in this preliminary sketch, to reduce some of the general results to diagrams. In a series of twelve plates, accordingly, the results are given for the several months. The darker vertical lines on the plates indicate the hour of 4