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INTRODUCTION.

This REVIEW treats generally the meteorological conditions of the United States and Canada for March, 1887, and is based upon reports of regular and voluntary observers of both countries.

Descriptions of the storms which occurred over the north Atlantic Ocean during the month are also given, and their approximate paths shown on chart i. In tracing the centres of the paths of these storms, data from the reports of two hundred and thirty-eight vessels have been used. The general character of the weather over the north Atlantic Ocean was particularly severe during the second, and early portion of the third, decade of the month.

The southward movement of Arctic ice was unusually large for the season, and heavy ice jammed in on the coast of Newfoundland, in the vicinity of Saint John's, at intervals from the 11th to 23d.

On chart i for this month are traced the paths of eleven areas of low pressure; this is one less than the average number for March during the past thirteen years. No storm of unusual severity occurred, although low area number ix exhibited considerable energy during its presence in the Lake region and Ohio Valley on the 24th, it being attended by high winds, heavy rain or snow, and in Ohio by thunder-storms.

The mean pressure of the month was very nearly normal in all parts of the country; in Maine and the Canadian Maritime Provinces it was slightly below, and in the upper lake region and Mississippi valley slightly above, the normal.

The temperature has been below the normal in all states bordering on the Lakes and Atlantic Ocean, along the east

Gulf coast, and in southern Texas; in all other districts the month has been warmer than the average March. The extremely low temperatures that prevailed in the Southern States on the 18-19th and 29-30th were accompanied by frosts which were destructive to vegetables and blossoms of fruit trees.

The precipitation was generally below the normal in all parts of the country, except Washington Territory, Oregon, Idaho, and extreme southern Texas; at the end of the month the remainder of the state was still suffering from the long drought.

In the preparation of this REVIEW the following data, received up to April 20, 1887, have been used, viz., the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and thirty-three Signal Service stations and twenty-three Canadian stations, as telegraphed to this office; one hundred and fifty-seven monthly journals; one hundred and fifty-eight monthly means from Signal Service stations; twenty-three monthly means from Canadian stations; two hundred and eighty monthly registers from voluntary observers; fifty-eight monthly registers from United States Army post sergeants; marine records; international simultaneous observations; marine reports through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs furnished by the publishers of "The New York Maritime Register;" monthly weather reports from the local weather services of Alabama, Arkansas, Illinois, Indiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New England, New Jersey, North Carolina, Ohio, Oregon, South Carolina, and Tennessee; and of the Central Pacific Railway Company; trustworthy newspaper extracts, and special reports.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean pressure for March, 1887, determined from the tri-daily telegraphic observations of the Signal Service, is shown by isobarometric lines on chart ii.

On this chart are shown two areas of high pressure, the first extends over Minnesota, Dakota, and northward beyond the limit of observation, and is enclosed by the isobar of 30.15; at two stations within this line, Saint Vincent, Minn., and Fort Garry, Manitoba, the highest mean pressure of the month, 30.18, is attained. From this region eastward the pressure decreases rapidly until in New England the isobar of 29.80, and in Nova Scotia 29.75, is reached; within the latter line the lowest mean pressure of the month, 29.71, at Sydney, Cape Breton Island, occurs. The second area of high pressure, also bounded by the isobar of 30.15, is situated in Oregon and northern California, from this region northeastward to central Montana and southeastward to Arizona the pressure decreases, attaining a mean of 29.98 at Fort Maginnis, Mont., and 29.97 at Yuma, Ariz. The position of the areas of highest and lowest pressure for the present month and for March, 1886, nearly coincide.

The departures from the normal pressure are given in the table of miscellaneous meteorological data, and are also shown on chart iv by lines connecting stations of equal departure.

The mean pressure of the month is normal, or nearly so, in all parts of the country, except Maine and the Canadian Maritime Provinces, where departures below the normal, ranging from .06 at Portland, Me., to .19 at Sydney, Cape Breton Island, occur. In New England, the middle Atlantic states, south Atlantic states, Florida, and the east Gulf states, the pressure of the month is from .01 to .08 below the normal pressure for March. From the districts named westward to the Pacific Ocean the pressure is slightly above the normal, the largest departures occurring in the upper lake region and upper Mississippi valley, where they range from .06 at several stations to .11 at Escanaba, Mich., and .13 at La Crosse, Wis., in excess of the normal; in Nevada and northern California it is about .07.

When compared with the pressure of the preceding month, February, 1887, very large differences, both above and below, occur. Along the Pacific coast and in the Rocky Mountain regions the pressure for March is from .03 to .18 in excess of that of February; in Washington Territory, Oregon, and northern California the excess averages about .13. From the Rocky Mountain region eastward to the Atlantic Ocean the pressure is below that of the preceding month, the deficiencies becoming very large in the eastern part of the country, averaging along the Atlantic about .25.