MONTHLY WEATHER REVIEW.

(GENERAL WEATHER SERVICE OF THE UNITED STATES.)

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WAR DEPARTMENT,

OFFICE OF THE CHIEF SIGNAL OFFICER,

DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

This REVIEW presents a general summary of the meteorological data collected by the Signal Service during the month of May, 1882.

In the preparation of this REVIEW have been used; viz.: the regular tri-daily weather charts, containing the data of simultaneous observations taken at one hundred and thirty-six Signal Service stations and thirteen Canadian stations, as telegraphed to this office; one hundred and eighty-three monthly journals and one hundred and seventy-four monthly means from the former, and thirteen monthly means from the latter; two hundred monthly registers from voluntary observers; fifty-three monthly registers from United States Army Post Surgeons; 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 reports from the local weather services of Kansas, Nebraska, and Missouri, and of the Central Pacific railway company; trustworthy newspaper extracts; special reports.

The more prominent meteorological conditions of the month have been:

1. The deficiency in temperature, which except in California, has been in all the other states and territories, below the mean for the month, averaging 5° below in New England, the middle Atlantic states, and Tennessee, 6° below in the lake region and the Ohio valley, and 7° below in the northwest.

2. The great excess of rainfall in the Ohio valley, amounting to more than four and five-tenths inches, and in Tennessee and the lower lakes, amounting to nearly three inches. In Arkansas the rainfall has been unusually heavy (especially in the vicinity of Little Rock, where the amount exceeded fifteen inches), but owing to lack of data from that section in previous years, comparison cannot be made. The excessive rainfall and continued cold has had a depressing effect, it is reported, on the cotton crop, but from all states the prospects are very encouraging for fruits and cereals.

A new feature of the WEATHER REVIEW is continued under the head of "Cotton Region Reports." The Chief Signal Officer began in April a system of daily telegraphic reports for the benefit of those interested in this staple, and the accompanying table gives the monthly mean of the maximum and minimum temperatures and the average rainfall for the month, in the various cotton districts throughout the south.

That part of the REVIEW referring to international meteorology presents the general weather conditions which prevailed over the northern hemisphere during the month of March, 1880, and the tracks of barometric minima for June, 1880, traced from simultaneous observations taken at 7:35 a. m., Washington mean time.

A large number of icebergs were encountered by vessels during the month. The comparison of chart vii. with that of April, shows that the limits within which ice was observed did not extend as far southward and westward during the present month, but it still suggests the advisibility of selecting the southern routes for vessels passing to and from Europe at this season of the year. Under the heading, "Ocean Ice" will be found special reports giving the latitude and longitude in which icebergs were observed.

BAROMETRIC PRESSURE.

The mean barometric pressure for the month over the United States and Canada is shown by the isobarometric lines, in black on chart ii. The area of lowest mean pressure is central in Arizona and New Mexico. An area of high pressure, belonging to the high barometer of the Atlantic ocean, extends over the middle Atlantic and south Atlantic states. The barometer is highest on the coast of Oregon, and Washington territory. A comparison of this chart shows an approach to the usual distribution of pressure in summer, a low area covering the interior of the continent. Compared also with the previous month the pressure is slightly higher in New England, Saint Lawrence valley, the Canadian maritime provinces, and in the north Pacific coast region, but is nearly one-tenth of an inch lower at stations in Montana, Dakota, and Minnesota, and thence to Arizona, New Mexico, and northern Texas.

DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

Compared with the means of previous years, the pressure over the country east of the Mississippi river below the forty-third parallel of latitude and in Maine, ranges from normal to nine-hundredths of an inch below the normal; in the upper lake region it is from three-hundredths to seven hundredths of an inch above the normal; in the extreme northwest and upper Missouri valley, it ranges from two-hundredths to eight-hundredths of an inch above the normal; in the west Gulf states and the north Pacific coast region it is about normal; at Rocky mountain stations, from two-hundredths to five-hundreths of an inch below the normal; and in southern California it is slightly above the normal.

BAROMETRIC RANGES

The range of pressure during the present month has varied from twenty-nine hundredths of an inch to one and seven hundreths inches. The least range being at Key West, and the greatest at New London, Connecticut. In the several districts the barometric ranges have been as follows: