

MONTHLY WEATHER REVIEW,

AUGUST, 1874.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE

INTRODUCTION.

In the preparation of this Review, besides the regular reports from the Signal Service Stations, U. S. Army, and the Canadian Stations, monthly meteorological registers, from many volunteer observers, and from Post Surgeons, forwarded by the Surgeon General, U. S. Army, and other data, have been examined. The accompanying charts illustrate, approximately, the courses of low barometers, the curves of mean atmospheric pressure and temperature, the prevailing direction of the wind and the distribution of rain.

The month has been characterized by an absence, comparatively, of destructive storms; by a deficiency of barometric pressure and continued high temperatures from southern Dakota to the Ohio valley and southward over the Gulf States; by extraordinary rain-falls over the southern New England coast and Long Island; by cooler weather than usual over the Atlantic States, Lake region and St. Lawrence valley; and by droughts in the Lower Lake region, Ohio valley, Gulf States and from Nebraska and Iowa southward, destroying crops in the two last sections.

MONTHLY WEATHER REVIEW,

SEPTEMBER, 1874.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

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TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTORY.

The Monthly Weather Review for September is based upon reports from 442 stations, classified principally as follows:

Canadian Meteorological Service	14
United States Army Signal Service	92
United States Army Surgeons	45
United States Naval Hospitals	5
Volunteer Observers	286

together with numerous extracts from logs of vessels. Destructive storms have not been numerous, the single prominent exception was No. XIII, which was only destructive in its passage from Florida to North Carolina.

The weather, in general, for the month, has been marked only by the not unusual features of droughts in some portions of the country, while other portions have experienced unusually heavy rains. These latter regions are well shown by the heavily-shaded spots on Map No. III, in Texas, the Missouri and Mississippi valleys and the Middle Atlantic States. Portions of Ohio, Indiana and Illinois, still continue to report a deficiency of rain-fall, thus prolonging the dry season in that region, to the great detriment of agriculture.

BAROMETRIC PRESSURE.

(1.) *In general.*—The general distribution of barometric pressure is seen from the isobars on Map No. II, where it appears that the highest average, 30.10, pertains to the Middle Atlantic, between Capes Hatteras and Cod, whence the pressure steadily diminished to 29.90 in Dakota. The mean 29.90 for the southern end of California seems low for that region.

(2.) *Areas of low barometer.*—The tracks pursued by the areas of low pressure are given on Map No. I, further details are found in the following paragraphs. It will be seen that these have, as in previous years, been frequently pushed far to the west and north, but that the better developed severe cyclones Nos. I, III, IV, V and XIII have pursued tracks differing but little from their normal courses.

Storm No. I. This small but well-marked cyclonic depression became first apparent on the 1st, near Nova Scotia, but kept to the eastward of that province and passed

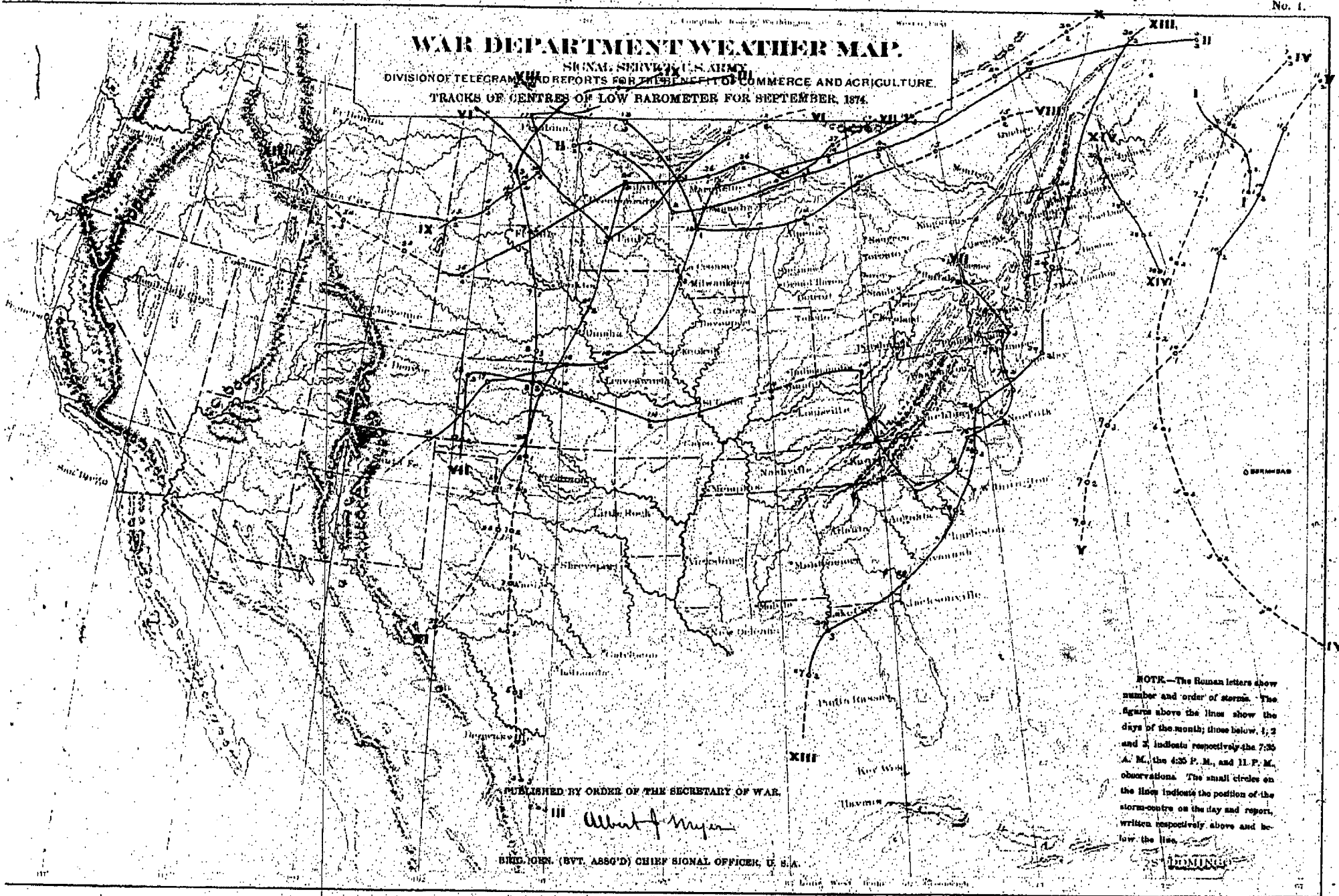
the Gulf of St. Lawrence on the 3d, a belt of notable contrasts of temperature extended from Iowa to New England, and severe gales were reported in eastern Massachusetts, followed by rapidly falling temperatures.

No. III. The brisk and high northeast winds that prevailed on the 3d on the western coast of Texas, appear to have been connected with the presence of a barometric depression in northern Mexico and which may originally have entered that country from the Pacific coast, as the barometer was below the average in southern California during the preceding day. If a definite central area of depression existed on the 2d and 3d in Mexico and Texas, its location must have been, approximately, as given on the chart. The cyclonic character of the disturbance on the 4th is not well shown by our observations, but may reasonably be inferred from the severity of the gale which raged on the 4th and 5th from Galveston southward, and which resulted in a large destruction of property along that coast. The barometric disturbance undoubtedly spent itself in great part in central Texas, where however the depression continued during the 7th, and on the 8th the existence of a storm-centre in the interior of Kansas became evident. This depression then continued its course northward to Manitoba, which it passed on the 10th.

No. IV. While the severe storm mentioned in the previous paragraph was moving northward into Texas, a similar and better developed cyclone was pursuing an almost parallel course about 1,500 miles to the eastward. The published weather maps of the morning of the 7th show the existence of this storm a short distance southeast of Nova Scotia. Its previous history has been traced by means of the published logs of ocean vessels, from which it appears that during the 5th the storm-centre passed a short distance southwest of the Bermudas, where the gale was quite severe; and on the 6th recurved on its northward track, and that as early as the 2d inst., its force was felt by a vessel in latitude $28^{\circ} 10'$ and longitude $55^{\circ} 38'$. The track given on Chart No. I may be regarded as a first approximate determination of its course, which, on the afternoon of the 7th, passed over Cape Breton Island. The lowest depression observed at Cape Breton was 28.75, which corresponds with the figures reported from ocean vessels, by many of which the hurricane wind was described as being one of the most severe ever experienced.

WAR DEPARTMENT WEATHER MAP.

SIGNAL SERVICE, U. S. ARMY.
DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.
TRACKS OF CENTRES OF LOW BAROMETER FOR SEPTEMBER, 1874.



NOTE.—The Roman letters show number and order of storms. The figures above the lines show the days of the month; those below, 1, 2 and 3, indicate respectively the 7.35 A. M., the 4.35 P. M., and 11 P. M. observations. The small circles on the lines indicate the position of the storm-centre on the day and report, written respectively above and below the line.

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