

SEVERE LOCAL STORMS.

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau.]

Place.	Date.	Time.	Width of path (yards).	Loss of life.	Value of property destroyed.	Character of storms.	Remarks.	Authority.
Webb City, Mo.....	1	A. m.....		1	\$75,000	Tornado.....	Houses demolished; 15 hurt.....	Evening Star (Washington, D. C.); Star (Oneonta, N. Y.).
Belleville, Ill.....	1	10 a. m.....			30,000	Wind.....	Smokestack, 60 feet high, blown down, wrecking factory building; 6 persons injured.	Official, U. S. Weather Bureau; Globe Democrat (St. Louis, Mo.).
Eastern Colorado.....	4	A. m.....	100-1,760	5	130,000	Two tornadoes.....	Heavy damage to buildings, household goods, livestock; many injured.	Official, U. S. Weather Bureau; Star Journal (Peublo, Colo.).
Southern and north-central Kansas.	4	P. m.....		1		Tornadoes and wind.....	Buildings and wire lines blown down; tornadoes in Clark and Mitchell Counties; man killed in Butler County.	Official, U. S. Weather Bureau; Wichita Eagle (Kans.).
Creek County, Okla.....	4	P. m.....	100-380	6	500,000	Tornado.....	Houses and oil rigs wrecked.....	Tulsa Daily World (Okla.); Wichita Beacon (Kans.); Washington Herald, (D. C.).
Rapid City, S Dak., and vicinity.	4-5					Wind and snow.....	Railway and highway traffic impeded.....	Official, U. S. Weather Bureau.
New York State.....	23-24			2		Wind.....	Eight barges, carrying 130,000 bushels of wheat, wrecked on Lake Oneida.	Do.
Eastern and southern Minnesota.	30	P. m.....		1		do.....	Buildings, trees, windows, etc., damaged.....	Official, U. S. Weather Bureau; Pioneer Press (St. Paul).

STORMS AND WEATHER WARNINGS.

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The weather and storm conditions were not in any way unusual during the month of November. It was noted, however, that there was a tendency for all areas of high barometer east of the Rocky Mountains to move well to the south of east before passing into the Atlantic after leaving the continent and that few of these were attended by temperatures much below the normal. For a considerable part of the month the pressure remained high over the northern Rocky Mountain and northern Plateau regions, a condition which is not infrequently observed in these regions after the first general fall of snow over the mountains of these regions. Moreover, the Lows, or cyclones, of the month showed a marked inclination for those of the Alberta type to move eastward in high latitudes and for those which developed over the Plateau and southern Rocky Mountain regions to move northeastward toward the upper Lake region and thence along but north of the northern border to the Canadian Maritime Provinces and Newfoundland. As a matter of fact, it was not until near the end of the month that the tendency for cyclones to follow the northern border eastward from the Great Lakes to Newfoundland was departed from, or, to be specific, on the 26th a cyclone of the Alberta type moved rapidly southeastward to the South Atlantic coast and thence quite rapidly northeastward to the Grand Banks, where it became a disturbance of marked intensity with a central pressure below 29 inches.

It is also notable that during the last decade of the month the distribution of pressure underwent a marked change over the Alaskan area and the North Pacific Ocean, when there was a reversal of the pressure gradient that normally is found to be the order over these regions, i. e., high barometer off the California coast and low barometer to the northward. On and about the 21st and 22d a LOW of great magnitude covered the ocean south of Alaska and the Aleutian Islands, and at the same time the pressure rose to above normal over the continent and the Bering Sea. This change in pressure distribution was of such a nature that it was confidently expected that following shortly thereafter the tracks and types of cyclones of the United States could not

but change to meet the newly developed pressure distribution. Hence on the 23d statement was issued for the press to the effect that relief from the drouth of several months duration in the middle Atlantic States might be expected in the near future. A cursory examination of the weather charts of the United States for the two weeks following the day on which this prediction was made will disclose a very marked shift southward of the storm tracks and, further, will disclose the fact that all of the cyclones that followed were attended by rains in considerable quantities not only in the middle Atlantic States but generally east of the Rocky Mountains. Another notable phenomenon was the persistence of high barometer during the greater part of the month over the British Isles and southwestern Europe.

WASHINGTON FORECAST DISTRICT.

Few warnings, other than those for frosts in the southern and occasionally freezing temperatures in the middle and northern States of the Washington Forecast District, were required; but storm warnings were displayed on the 23d, 27th, 28th, and 30th for the Middle Atlantic or New England coasts, in connection with disturbances that crossed the continent. No storms of tropical origin occurred during the month in West Indian waters.

CHICAGO FORECAST DISTRICT.

The month was for the most part mild and uneventful throughout the Chicago Forecast District.

Strong winds prevailed on the Great Lakes on only two or three days, and, as a consequence, navigation continued under most favorable circumstances. Several disturbances in the West, as they approached the Great Lakes, seemed to justify storm warnings, but as they reached the Lake region their force was often very quickly dissipated.

The storm-warning service, for this reason, was not as effective as it should ordinarily be expected to be, as warnings were ordered for a few days for some portions of the Lakes when they were not justified.

The storm of November 1, which centered in eastern Kansas with lowest barometer of 29.50 inches at Iola, is a case in point. Warnings were ordered during the day