

DETAILS OF THE WEATHER OF THE MONTH IN THE UNITED STATES.

CYCLONES AND ANTICYCLONES.

By E. H. BOWIE, Supervising Forecaster.

In respect to the movements of systems of low pressure across the North American Continent, the first of these made its appearance in the vicinity of southeastern Alaska July 31 and was 8 days in reaching the Atlantic coast; the 2d appeared in the same region on the 4th and reached the Atlantic States on the 11th to 13th; the 3d was from the 10th to the 16th in crossing; the 4th was from the 16th to 23d in crossing; and the 5th was from the 26th to August 1 in crossing. These systems of low pressure referred to are general depressions of the barometer of considerable geographic areas within which cyclonic storms usually have their origin. One of these low pressure systems may cross the Continent without any well-defined cyclonic development, or one may cross the Continent and have one or more distinct cyclones from within it. Moreover, the system of low pressure may be traced over a longer period of time than the average cyclone.

LOWS.

	Alberta.	North Pacific.	South Pacific.	Northern Rocky Mountains.	Colorado.	Texas.	East Gulf.	South Atlantic.	Central.	Total.
August, 1920.....	7.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0	11.0
Average number, 1892-1912.....	4.2	0.6	0.3	0.9	1.0	0.2	0.0	0.1	1.0	8.3

*Anticyclones.*—The number of HIGHS was slightly above the average. The table shows the number of HIGHS by types.

HIGHS.

	North Pacific.	South Pacific.	Alberta.	Plateau and Rocky Mountain region.	Hudson Bay.	Total.
August, 1920.....	3.0	0.0	4.0	0.0	1.0	8.0
Average number, 1892-1912.....	1.9	0.2	3.0	0.9	0.8	6.8

THE WEATHER ELEMENTS.

By P. C. DAY, Climatologist and Chief of Division.

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PRESSURE AND WINDS.

Barometric pressure during August, 1920, exhibited no marked fluctuations, and the movements of the high and low areas, usually but poorly defined during this month, were frequently uncertain. In fact, no well-

defined storm areas showed continuous movements over extended tracks, and high-pressure areas remained stagnant for long periods without material change.

Despite almost continuous precipitation over much of the country east of the Mississippi Valley during long periods, the average pressure for the month was well above the normal, and it was above in practically all other portions of the country as well as over most districts of Canada. The highest pressures were, as usual, observed along the Atlantic and Pacific coasts, but the departures from normal were generally no greater than over the interior districts. As compared with the normal, pressure was highest over the Canadian Maritime Provinces and lowest along the immediate Pacific coast and over the Canadian Northwest.

Thunderstorms were of frequent occurrence and some local high winds attended their development and movement, but otherwise the winds were light, and velocities of 50 miles or more per hour were reported mainly from coast districts. As usual for a summer month, the winds were from southerly points over the Plains region and thence eastward, except in portions of the Lake region and upper Mississippi Valley, where they were locally from northerly points. In the Plateau and Pacific Coast States, winds were mostly from westerly points, although frequently modified by local topography

TEMPERATURE.

Over the territory from the Rocky Mountains eastward the month was notably free from sharp changes in temperature, and periods of decided warmth, usually experienced in August, were the exception. In fact, from the standpoint of temperature the month was almost wholly pleasant over all eastern and central districts. To westward of the Rocky Mountains temperature changes were more pronounced, particularly so in the Great Valley of California, where the first half of the month was markedly warm, the maximum temperatures at certain points rising to 100° or more daily. At Sacramento excessive heat continued from July 29 to August 18, a period not equaled in the previous history of the station. The latter part of the month, however, had more moderate temperatures, and in some localities, notably at Fresno, Calif., and in portions of Arizona, the temperatures were unusually low for August.

For the month as a whole the average temperature was below normal over all interior portions of the country and over the greater part of the South as well. Along portions of the middle Atlantic coast the temperatures were almost continuously below the normal throughout the month. At Atlantic City, N. J., only the last three days of the month were warmer than the normal. This condition was probably due largely to the low temperature of the adjacent ocean waters, referred to in the July REVIEW.<sup>1</sup> The temperature of the ocean water at this

<sup>1</sup> P. 424.