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DETAILS OF THE WEATHER IN THE UNITED STATES.

GENERAL CONDITIONS.

By ALFRED J. HENRY, Meteorologist.

Monthly mean pressure was higher than normal along the northern boundary from North Dakota eastward; it was below normal in the North Pacific Coast States, the northern Plateau and Rocky Mountain region, and in the Ohio Valley. This pressure distribution was reflected in the mean temperature of the month and in the distribution of precipitation. The temperature along the northern boundary was lower than normal from the St. Lawrence Valley westward to Montana; positive departures obtained quite generally south of the fortieth parallel, the greatest being the Gulf States. Thus the change from almost continuous positive temperature departures having begun in the North, it may be expected that the change will progressively overspread the South. Precipitation was in excess of normal in Washington, Oregon, Idaho, and Montana in the West and in the Ohio Valley in the East; it was also in excess, although to a less extent, in the Lake region, the Middle Atlantic, and New England States. Deficient precipitation was recorded in the lower Mississippi Valley and from the Central Plains States westward and southwestward to California.

The first general storm of the winter type passed from the Pacific onto the continent on the 19th. This storm was characterized by heavy snow, sleet, and rain in North Pacific Coast States, with the usual interruption to transportation and traffic in general. The heavy snowfall in Washington and Oregon provided a much-needed supply of soil moisture. During the closing days of the month a severe snow, sleet, and rainstorm visited New England, the details of which appear elsewhere in this REVIEW, p. 612. The storm movement of the month as a whole was close to that of a normal November. Further details follow:

CYCLONES AND ANTICYCLONES.

By W. P. DAY, Observer.

Migratory high and low pressure areas showed great activity during November and many important ones were charted. Energetic storms from the North Pacific passed inland at lower latitudes than during the preceding month and the point of ingress of the Pacific HIGHS was also shifted southward. The more important HIGHS were of the Alberta type and nine pulses or invasions were noted, which is more than the average number of all types for this month. The winter Plateau HIGHS also began to make their appearance.

Tables showing the number of HIGHS and LOWS by types follow:

LOWS.	Alberta.	North Pacific.	South Pacific.	Northern Rocky Mountain.	Colorado.	Texas.	East Gulf.	South Atlantic.	Central.	Total.
November, 1921	6.0	9.0	.....	2.0	1.0	2.0	1.0	2.0	2.0	25.0
Average number, 1892-1912, inclusive	4.0	2.3	0.6	0.1	1.1	1.0	0.4	0.8	1.0	11.6

HIGHS.	North Pacific.	South Pacific.	Alberta.	Plateau and Rocky Mountain Region.	Hudson Bay.	Total.
November, 1921	2.0	3.0	9.0	.....	.....	14.0
Average number, 1892-1912, inclusive	2.0	0.9	4.0	1.1	0.2	8.2

THE WEATHER ELEMENTS.

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

PRESSURE AND WINDS.

In the United States November as a rule shows only a slight increase in the number of cyclones and anticyclones over those occurring in October. During November, 1921, however, both these atmospheric disturbances were greatly augmented over those for October, and more than twice the usual number for November was observed. However, few of these disturbances attained great importance, or maintained their maximum intensity over extensive paths.

The most severe storm of the month from the standpoint of property loss was that of the 27th to 29th, over the Atlantic coast districts. (See page 612 of this REVIEW.) This storm was attended by widespread precipitation over the more eastern districts of the United States, and by high winds along the middle Atlantic and southern New England coasts. Over northern districts precipitation was in the form of snow, but in portions of southern New England the temperature was sufficiently low to cause the rain to freeze as it fell, and all exposed objects were covered with ice. The accumulation of this ice was so great that overhead wire systems of all description were practically destroyed, and communication, light, and power operations were greatly interrupted. Orchards and forests, however, suffered the greatest permanent injury, the extent of which is indicated in the following extracts from the official report of the Weather Bureau observer at Hartford, Conn.:

> It is estimated that more damage was done by this storm than has been done by all the storms of the preceding 50 years. At any rate, the storm may be favorably compared with the now famous, so-called "Portland" storm in 1898. Conditions in the sections of the State mentioned were most distressing, because everywhere there were evidences of many acres of forest that were ruined, while shade and ornamental trees and shrubs, together with apple orchards, are almost totally destroyed. Stands of oak, maple, and ash have been leveled to the ground, while birches have been bent over and held down so long they can not straighten up. A tangle of broken branches covers the forest floor, and when it dries it will make a serious fire menace. Numerous light and power plants and wires were destroyed, resulting in dark towns and villages. Telephone and telegraph poles were leveled by the hundreds, and thousands of miles of wires were broken and tangled. These, however, are relatively easy to replace and repair, but the farmers and orchardists received a blow from which it is hard to recover. In many cases orchards were just beginning to bring profits and are now helpless for a period of at least 15 years. Because of the crippled condition of high-tension wires, factories were compelled to suspend operations. Public-service corporations in Hartford had practically normal service, but the service rendered by outside points was severely hit. It is impossible to estimate the money value of the various losses, though it must run into many millions in the aggregate.

The most important anticyclones of the month dominated the northern and eastern districts from the Rocky Mountains to the Atlantic coast from the 18th to 23d, during which period the lowest temperatures of the month generally occurred in the region affected.

The average pressure for the month was above normal along the northern border from the Missouri Valley eastward, in the far Southwest, and over the Canadian Provinces as far north as indicated by observations. Pressure was below normal over most central and southern districts from the Great Plains eastward and in the Rocky Mountains and far northwestern districts.

The general trend of the winds was from northerly points over the Missouri and upper Mississippi Valleys, the Great Lakes region, Atlantic coast, and east Gulf sections. They were mainly from the south in the lower