

# MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE. Assistant Editor: CLEVELAND ABBE, jr.

VOL. XXXVII.

FEBRUARY, 1909.

No. 2

The MONTHLY WEATHER REVIEW summarizes the current manuscript data received from about 3,500 land stations in the United States and about 1,250 ocean vessels; it also gives the general results of the study of daily weather maps based on telegrams or cablegrams from about 200 North American and 40 European, Asiatic, and oceanic stations.

The hearty interest shown by all observers and correspondents is gratefully recognized.

Acknowledgment is also made of the specific cooperation of the following chiefs of independent, local, or governmental services: R. F. Stupart, Esq., Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Señor Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S. I. Kimball, General Superintendent of the United States Life-Saving Service; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; Dr. W. N. Shaw, Director of the Meteorological Office, London; Maxwell

Hall, Esq., Government Meteorologist, Kingston, Jamaica; Rev. L. Gangoiti, Director of the Meteorological Observatory of Belen College, Havana, Cuba; Señor Luis G. y Carbonell, Director, Meteorological Service of Cuba, Havana, Cuba; Rev. José Algué, S. J., Director of the Philippine Weather Bureau, Manila; Maj. Gen. M. A. Rykachev, Director of the Physical Central Observatory, St. Petersburg, Russia; Carl Ryder, Director, Danish Meteorological Institute, Copenhagen, Denmark.

As far as practicable the time of the seventy-fifth meridian is used in the text of the MONTHLY WEATHER REVIEW.

Barometric pressures, both at land stations and on ocean vessels, whether station pressures or sea-level pressures, are reduced, or assumed to be reduced, to standard gravity, as well as corrected for all instrumental peculiarities, so that they express pressure in the standard international system of measures, namely, by the height of an equivalent column of mercury at 32° Fahrenheit, under the standard force, i. e., apparent gravity at sea-level and latitude 45°.

## FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

There was a remarkably uniform progression of high and low barometer areas over the Northern Hemisphere during February, 1909. In the United States the interval between centers of areas of low barometer, or general storms, averaged about four days. The Asiatic area showed crests above 31.00 inches in the first and third decades of the month, with comparatively low pressure from the 12th to 17th, and a gradual decrease of pressure after the 20th to a minimum for the month below 30.00 inches on the 27th and 28th. Variations in pressure over this great continental area are associated with general weather changes that occur over the United States one to two weeks later. It will be observed in the present instance that following the prevailing high pressure of the first two decades of the month over Siberia temperature averaged unusually high in the United States, and that the depression over that region at the close of February was followed by a period of unseasonably cold and stormy weather over the United States during the second week in March.

High barometric pressure over the Asiatic area is usually attended by abnormally low pressure over extreme northwestern Europe, and during the opening days of February the barometer in the Iceland area fell to a reported minimum of about 28.60 inches on the 2d. During this period heavy rains in the river districts of Germany caused enormous flood damage. The barometer again fell below 29.00 inches over Iceland on the 9th, and at the close of the month, when the barometer was low over Siberia, pressure was abnormally high over Iceland and severe winter weather was experienced generally in Europe.

In the United States the month opened with high barometric pressure east of the Rocky Mountains, and decreasing pressure on the Pacific coast. From the 2d to 6th a disturbance of marked strength crossed the country, attended by general precipitation and followed by a cold wave. The following special forecast was issued on Saturday, the 6th, in connection with a storm that advanced from the Pacific to the Atlantic coast from the 6th to the 10th:

A storm that now occupies the north Pacific coast will move southward over the Rocky Mountains Sunday, and then eastward over the Plains States Monday and Tuesday, and reach the Atlantic coast about Wednesday, attended by snow in middle and northern districts, and followed by a cold wave that will appear over the Northwestern States Sunday or Monday, advance over the central valleys and Lake region Monday and Tuesday, and reach the Atlantic States about the middle of next week.

The following are among the press comments that have been made regarding this forecast:

Fort Smith, Ark., Times, February 8, 1909:

On Saturday there was sent out from the Washington Weather Bureau headquarters a general forecast reporting a storm disturbance on the northern Pacific coast that would advance southeast, followed by a cold wave. They made good. The Monday morning chart indicated that the storm advanced over the Rocky Mountain region accompanied by snow or rain which covered the whole Mississippi Basin. Following it an area of high barometer is sweeping down from the north, which is accompanied by a fall of as much as 36° in temperature. \* \* \*

Courier-Post, Hannibal, Mo., February 9, 1909:

\* \* \* The storm is the one predicted from the Washington Weather Bureau as early as last Saturday, and the prediction has proven remarkably accurate for such a long time ahead. It is central to-day over Iowa, where it is very pronounced. Heavy snows are predicted for the northwestern part of the State, and strong gales. The zero line has been pushed down into northern Kansas. \* \* \*

Commercial Tribune, Cincinnati, Ohio, February 11, 1909:

Within a few days the Weather Bureau has come up to all expectations. As early as last Monday the signs indicated rain and snow, and Tuesday morning we were told to look out for rain, snow, and much colder weather on Wednesday. Everything came to pass. The reason for calling attention to this fulfillment of prophesies grows out of the fact that there are countless thousands who find fault whenever there is a little slip up. As a rule the predictions are quite accurate and there has been a distinct improvement over other years. In short, the business is beginning to rest more nearly upon a scientific basis, and improvements and observations which are to be expected in the future will make this branch of the Government one of the most important, not to the few, but to many millions. \* \* \*

Another depression from the 7th to the 10th, and from the 11th to the 16th a severe storm, attended by heavy precipitation and by heavy sleet and snow, moved northeastward over