MONTHLY WEATHER REVIEW.

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INTRODUCTION.

The Monthly Weather Review for February, 1905, is based on data from about 3583 stations, classified as follows:

Weather Bureau stations, regular, telegraph, and mail, 176; West Indian Service, cable and mail, 4; River and Flood Service, regular 52, special river and rainfall, 363, special rainfall only, 98; voluntary observers, domestic and foreign, 2565; total Weather Bureau Service, 3258; Canadian Meteorological Service, by telegraph and mail, 33; Meteorological Service of the Azores, by cable, 2; Meteorological Office, London, by cable, 8; Mexican Telegraph Company, by cable, 3; Army Post Hospital reports, 18; United States Life-Saving Service, 9; Southern Pacific Company, 96; Hawaiian Meteorological Service, 1; Jamaica Weather Service, 130; Costa Rican Meteorological Service, 25.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; Lieut. Commander H. M. Hodges, Hydrographer, United States Navy; H. Pittier, Director of the Physico-Geographic Institute, San José, Costa Rica; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Secretary, Meteorological Office, London; H. H. Cousins, Chemist, in charge of the Jamaica Weather Office; and Señor Enrique A. Del Monte, Director of the Meteorological Service of the Republic of Cuba.

Attention is called to the fact that at regular Weather Bureau stations all data intended for the Central Office at Washington are recorded on seventy-fifth meridian or eastern standard time, except that hourly records of wind velocity and direction, temperature, and sunshine are entered on local standard time. As far as practicable, only the seventy-fifth meridian standard of time, which is exactly five hours behind Greenwich time, is used in the text of the Review. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is 157° 30′, or $10^h\ 30^m$ west of Greenwich. The Costa Rican standard meridian is that of San José, $5^h\ 36^m$ west of Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local standard is mentioned.

Barometric pressures, whether "station pressures" or "sea-level pressures," are now reduced to standard gravity, so that they express pressure in a standard system of absolute measures.

FORECASTS AND WARNINGS.

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

Over the British Isles the pressure was generally low from the 1st to the 3d, on the 9th, and from the 17th until the close of the month, and relatively high from the 4th to 8th, and 10th to 16th. The most important storm over the eastern Atlantic occurred on the 26th, 27th, and 28th, when gales with barometer readings below 29.00 inches were reported from several coast stations in Ireland and Scotland. Over southwestern Europe and the Azores high pressure prevailed throughout the month. In the higher latitudes of the western North Atlantic pressures were generally low, except from the 4th to 6th, and 19th to 22d. Between Bermuda and the south Atlantic coast pressures were relatively high, except on the 10th and from the 23d to 28th.

The storms that visited the Atlantic coast of the United States during the month were not remarkable, although one that traversed northern New England on the 13th, and another that moved from the North Carolina coast to Nova Scotia from the 25th to 27th caused winds of considerable strength. Ample warning of these storms was given.

A number of storm centers, attended by snow and high winds on the Great Lakes, passed through Canada near the boundary of the United States. A barometric depression of considerable energy, whose center passed between Hudson Bay and the lower Lakes during the 17th and 18th, caused high winds and heavy snow in the lower Lake region. Many railroads in that section were taxed to the utmost to clear away the drifts, and traffic was greatly delayed.

The Gulf and north Pacific coasts were unusully free from storms. On the evening of the 1st a storm center appeared off Eureka, Cal., moved inland, and for nearly a week pursued a very erratic course through Nevada, southern California, Arizona, and Utah until on the 7th it passed into Colorado, and thence eastward (Chart II, Ia). This storm was accompanied by heavy rains in the Southwest, a remarkable phenomenon for the season in that usually dry region.

The precipitation of the month was above normal in the southwest and southeast, and below normal in the northeastern, northwestern and central portions of the country.

From the Rocky Mountains to the Atlantic coast the month showed remarkable and at some points unprecedented departures from normal temperatures, and at points in the Mississippi and Ohio valleys and the Southwest the departures below the monthly averages exceeded 12°. The average temperature for the three winter months at Washington, D. C., was 29°, the lowest on record since 1855–56, the next lowest, 29.4°, being the mean of 1903–4. The harbors of the North Atlantic States were in many cases blockaded by ice, and where actual blockades did not exist floating ice caused considerable trouble. The first half of February was continuously cold, and several well-defined cold waves swept over the country. The most severe cold was generally experienced from the 11th to the 14th. The following are among the minimum temperatures that attended the cold wave of the dates named: St. Paul, Minn., —26°; Chicago, Ill., —18°; Kansas City, Mo., —22°; Pueblo, Colo., —26°; Santa Fe, N. Mex., —4°; Roswell, N. Mex., —26°; Dodge, Kans., —20°; Amarillo, Tex., —8°; Palestine, Tex., 6°; New Orleans, La., 18°; Memphis, Tenn., zero; St. Louis, Mo., —18°; Pittsburg, Pa., —6°; Albany, N. Y.,