

MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The REVIEW for December, 1895, is based on reports from 2,737 stations occupied by regular and voluntary observers, classified as follows: 149 from Weather Bureau stations; 35 from U. S. Army post surgeons; 2,395 from voluntary observers; 32 from Canadian stations; 96 received through the Southern Pacific Railway Company; 30 from U. S. Life-Saving stations; international simultaneous observations are received from a few stations and used together with trustworthy newspaper extracts and special reports.

The WEATHER REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe. Unless otherwise specifically noted, the text is written by the Editor, but the statistical tables are furnished by Mr. A. J. Henry, Chief of the Division of Records and Meteorological Data. A special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada.

CLIMATOLOGY OF THE MONTH.

GENERAL CHARACTERISTICS.

The current month has been characterized by a remarkable series of severe storms in the North Atlantic, affecting both the coasts of Europe and America. An equally remarkable series of storms prevailed in the North Pacific, affecting not only the coasts of Washington, British Columbia, and Alaska, but also the coast of Japan. A series of remarkable rains, with high winds and resulting floods in the rivers, occurred in Kansas, Missouri, and Texas. The average pressure was above normal on the Atlantic and Pacific coasts, but decidedly below normal in the Dakotas, Manitoba, and Alberta. Temperature was above normal in the latter region, but below in the Rocky Mountain Plateau and Pacific Slope and Gulf States. Precipitation was decidedly above normal on the coasts of Washington and Oregon, as also from Texas to the Lake Region, and was at several stations in this region the greatest on record.

ATMOSPHERIC PRESSURE.

[In inches and hundredths.]

The distribution of mean atmospheric pressure reduced to sea level, as shown by mercurial barometers, not reduced to standard gravity, and as determined from observations taken daily at 8 a. m. and 8 p. m. (seventy-fifth meridian time), is shown by isobars on Chart II. That portion of the reduction to standard gravity that depends on latitude is shown by the numbers printed on the right-hand border.

The mean pressures during the current month were highest in the Rocky Mountain Plateau Region and southeastward to southern Texas. A ridge of moderate high pressure extended from New Jersey and eastern New York southwestward to the Gulf of Mexico. The highest were: Salt Lake City, 30.36;

Idaho Falls, 30.33; Winnemucca, 30.31; Carson City, 30.27; Lander, 30.25. The lowest mean pressures were in the Canadian Provinces. The lowest were: Swift Current, 29.83; Calgary and Minnedosa, 29.85; Battleford, 29.87; Edmonston and Qu'Appelle, 29.88; Winnipeg, 29.89.

As compared with the normal for December, the mean pressure was in excess along the Atlantic, Pacific, and Gulf coasts and over the Rocky Mountain Plateau Region. The greatest excesses were: Philadelphia and Harrisburg, 0.16; Halifax, 0.15; Sydney, 0.14; Salt Lake City, 0.12. The greatest deficits were: Swift Current, 0.30; Calgary, 0.27; Minnedosa, 0.25; Qu'Appelle, 0.24; Winnipeg and Williston, 0.21.

As compared with the preceding month of November, the pressures, reduced to sea level, show a decided rise in California, Utah, and Arizona, and a decided fall in Manitoba, Saskatchewan, and Athabasca. The greatest rises were: Fresno, 0.17; Independence and Sacramento, 0.15; San Francisco, Red Bluff, and Salt Lake City, 0.14. The greatest falls were: Qu'Appelle, 0.18; St. John's, Edmonston, and Minnedosa, 0.17; Williston, 0.16.

AREAS OF HIGH AND LOW PRESSURE.

By Prof. H. A. HAZEN.

The month of December was remarkable for the fewness of the high areas which crossed the country and the very great number of low areas. Of the former, there were but three, with a total duration of twelve days, but of lows there were fourteen, with a duration of forty-seven days. The velocity of the highs was 20 miles per hour, that of the lows was nearly 32 miles per hour. The accompanying table exhibits some of the facts relating to the movement of each high and low, and Charts IV and I give the tracks of their centers. Chart I shows that the general tendency of the lows has been to take a rather high latitude, though there have been a few severe Gulf storms.