

MONTHLY WEATHER REVIEW.

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FORECASTS AND WARNINGS.

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

account of heavy seas and high squally winds, and the vessel returned to Bridgetown where it was thrown by heavy seas on the pierhead and totally wrecked, with the loss by drowning of the captain and one of the crew. Advices were issued to West Indian ports regarding the character and probable course of this disturbance on the 6th and 7th. After the 7th it appeared to drift slowly westward over the Caribbean Sea as a shallow depression of considerable area in which no evidence of high winds has been furnished.

On the morning of the 6th a disturbance of apparent small diameter appeared to the eastward of Barbados, West Indies; during the afternoon of that day it passed to the westward of Barbados, and by the morning of the 7th had advanced into the eastern Caribbean Sea. The severity of this storm is indicated by the experience of a schooner that sailed from Bridgetown on the morning of the 6th bound for Surinam. When 40 to 50 miles from port the voyage was abandoned on

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Turks Island on the 6th. From the eastern Bahamas this disturbance moved northeastward and passed to the south and east of Bermuda during the afternoon of the 8th. A fresh east to northeast gale prevailed during the day and night of the 8th at Bermuda, and the barometer at Hamilton at 8 p. m. was 29.66 inches. To the east and southeast of Bermuda gales of hurricane force were reported. From the vicinity of Bermuda the center of the storm moved northeastward to the Banks of Newfoundland. The action of the storm was not severe until after recurving northeastward from the Bahamas, when the barometric pressure began to decline rapidly, with a corresponding increase in wind force. In about latitude 45° north and longitude 45° west the steamship *La Savoie*, at 4 p. m. of the 11th, reported a barometric reading of 27.92 inches; and a disastrous storm-wave, within its area, was encountered on the same day by the steamship *Campania*. Advices to West Indian, Gulf, and Atlantic coast interests regarding the storm were begun October 3 and continued daily until it recurved northeastward over the Atlantic. On the 6th advices to Bermuda and Halifax regarding its movement were begun and

The only West Indian disturbance of marked intensity appeared over the Caribbean Sea south of San Domingo on the 3d and 4th, recurved north near the Windward Passage on the 5th, and passed in a northerly course to the westward of

were continued until it passed Bermuda, and on the morning of the 9th Lloyds, London, was advised by cable that a tropical disturbance was moving northeastward from Bermuda.

In the United States twelve of the thirteen areas of low pressure of the month belong to two well-defined types. The greater number developed or first appeared over the southern Rocky Mountain and Plateau regions; five advanced from the extreme Northwest, and one from the Gulf of Mexico. The high areas also followed uniform tracks and advanced from the Northwest to the central valleys and thence eastward to the Atlantic coast districts.

The first important storm of the month moved from the Gulf of Mexico northeastward to the Canadian Maritime Provinces from the 9th to 12th attended throughout by heavy rain and high winds. On the 11th this disturbance was joined, over eastern New York, by an area of low pressure that appeared over the north Pacific coast district on the 7th, advanced in a general easterly direction to Ontario, and moved thence southeastward. From the 13th to the 16th, a disturbance moved from the middle Rocky Mountain region northeastward over Lake Superior and thence eastward toward the Gulf of St. Lawrence attended on the 15th by gales on the Great Lakes. Great damage to shipping was caused, especially on Lake Erie, by a storm, low area IX, that advanced from the middle Plateau over the lower Missouri Valley and thence northeastward from the 18th to 21st. Speaking of the action of the Weather Bureau in connection with this storm the Buffalo Courier says:

The accuracy of the forecasts regarding the terrific gale which recently swept the Lake region is well worthy of being noted. Wednesday morning warnings were issued that Lake vessels ought not to leave port unless they could reach their destinations before Thursday afternoon. Thursday morning storm signals were displayed and another special warning given. The storm, which at Buffalo attained a velocity of 78 miles an hour Friday morning, was precisely as predicted, and information of its coming had been given at all important points on its route. Vessels were wrecked and lives destroyed by the commotion of wind and wave. Probably they were beyond reach of the warnings, or neglected them. It is fully as probable that many vessels stayed safely in harbor because the Weather Bureau forecasts were heeded.

Under the combined influence of low area XI and high area X strong northeast winds prevailed off the Virginia and Carolina coasts on the 26th. A maximum velocity of 52 miles an hour was reported at Cape Henry, Va. On account of the wind and high sea many vessels sheltered in Hampton Roads.

Low barometric pressure over Arizona and New Mexico and the northeastward movement from the Gulf of Mexico of a barometric depression was followed by a sweep of high pressure from the Northwest that carried frost bearing temperatures to northern Arkansas by the 11th, and to the interior of the middle and east Gulf and South Atlantic States by the mornings of the 12th and 13th. Light frost occurred at Pensacola on the 12th and at Mobile on the 13th. High area VII following the passage of low area IX caused frost in the middle and northern portions of the Gulf States. Attending high area VIII light and heavy frost occurred on the 22d and 23d in the middle and east Gulf and South Atlantic States.

The first snow of the season was noted in the Lake region and Ohio Valley on the 11th, and in western Pennsylvania and interior of New York on the 12th. On the 28th snow fell in eastern Kansas, western Missouri, and the Northwest.

The Chief of Bureau is pleased to acknowledge the receipt of a communication from the Jacksonville Board of Trade, Jacksonville, Fla., appreciative of the great service of the U. S. Weather Bureau to the various industries of that State.