

## NOTES ON HURRICANES OF 1918.

By C. A. DONNEL, Meteorologist.

[Dated: Weather Bureau, Washington, D. C., Jan. 28, 1919.]

As in the preceding year, storms of tropical origin (so-called West Indian hurricanes) were fewer in number during 1918 than usual. One storm only attained characteristics entitling it to classification as a hurricane of the first rank in intensity. The paths of five disturbances, however, have been traced on Chart X of this issue of the MONTHLY WEATHER REVIEW.

*Storm of August 1-6.*—This was the most important tropical disturbance of the year. Five days after having been first noted near the island of Barbadoes it had crossed the Caribbean Sea and the Gulf of Mexico, reaching on the 6th the Gulf Coast of the United States about 30 miles east of the mouth of the Sabine River. In the REVIEW for August, 1918 (p. 379), appears a detailed account of this storm.

*Storm of August 22-25.*—First coming under observation in the vicinity of the Windward Islands on August 22, this storm during the succeeding 72 hours traversed a path only slightly north of due west across the central Caribbean Sea. On the 25th the disturbance reached the coast of British Honduras, whence it passed inland and probably dissipated. Like its immediate predecessor, this storm moved with great velocity for a tropical storm, the rate exceeding 15 miles an hour. It is reported that the S. S. *Mohegan* of the U. S. Aluminum Co., encountered this storm in latitude 14° 18' north, longitude 66° 15' west.

*Storm of September 3-7.*—The earliest report of the existence of this storm came from the Swedish S. S. *Texas* on September 3, the vessel then being some distance southeast of Bermuda, in latitude 25° 42' north, longitude 59° 43' west. Thence the storm advanced northwestward, passing to the west of Bermuda on the night of the 4th-5th. The storm recurved some distance out to sea from the coast of the United States, but crossed Nova Scotia on the night of the 6-7th, much diminished in intensity. The lowest reported pressure for this storm was 28.88 inches, at Hamilton, Bermuda, on the 4th.

*Storm of September 9-14.*—So far as is known, this disturbance did not attain violent character. It was first noted on the 9th near Barbadoes Island, and thence a track toward the northwest, across the eastern end of the Caribbean Sea, was taken. After crossing Haiti on the 12th, the path inclined to a more nearly northerly direction, and the storm at last disappeared on the 14th near the Great Abaco Island. In connection with this disturbance the Danish S. S. *Jungshoved* encountered a gale in latitude 23° 9', longitude 27° 43'.

*Storm of September 26-28.*—The first evidences of this disturbance were present on September 26th in the extreme western portion of the Caribbean Sea, off the coast of British Honduras. On the morning of the 27th the storm was apparently in the Gulf of Mexico north of Yucatan. On the following day it had reached the northeastern Gulf, after having united with a disturbance from the interior of the United States. The storm did not progress farther than the Florida peninsula. In Pineallas County, Fla., and the near-by Gulf destructive winds occurred as a result of this storm, but no widespread damage was reported.

## TROPICAL CYCLONE OF SEPTEMBER 14-17, 1918, IN THE PACIFIC OCEAN JUST WEST OF MEXICO.

By F. G. TINGLEY.

[Dated: Weather Bureau, Washington, D. C., Jan. 20, 1919.]

During the period from about September 14 to 17, 1918, a severe tropical storm prevailed in the Pacific Ocean immediately to the westward of the Mexican mainland. As there is comparatively little shipping in this part of the ocean, only a few reports have reached the Weather Bureau from vessels which felt the influence of the storm, but from other sources it is known that considerable loss was sustained by shipping and also by various land interests at the extreme southern end of the Lower California Peninsula. Here the storm, having reached a land area, appears to have lost intensity.

According to a report which has reached the Bureau from Capt. E. Y. Hansen, of the Danish S. S. *Delagoa*, which encountered the storm, that vessel had an unusual experience. Running south in ballast along the west coast of Mexico, the influence of the storm was first felt on September 14, in about latitude 19° 00' N., longitude 106° 00' W. As the vessel and the storm center—the latter moving in a northwesterly direction—approached each other and the violence of the storm was felt more and more, the ship became increasingly difficult to steer and kept heading into the sea and practically toward the storm center. From 1 p. m. to 6 p. m. of September 15 it was necessary to keep the engine going astern to overcome the ship's tendency to follow the storm and not until the latter hour could the vessel be brought round and the course be resumed. The *Delagoa* is a ship of 3,541 gross tons. The report from Capt. Hansen is as follows:

*September 14, 1918.*—Increasing swell from ESE. During the afternoon reduced revolution, as propeller was jumping out of water. At midnight wind ENE., force 3; bar. 759 mm. (29.88 in.).

*September 15, 1918.*—Increasing strength of wind from NE. and high running sea from SE. At 4 a. m., bar. 753 mm. (29.65 in.); wind NNE., 10; sea SE., 10. Air very thick and rainy. Fog signal. On account of the different directions of wind and sea, the appearance of the air, and the ever falling glass, it was evident that a cyclone was approaching. At 5 a. m. endeavored to escape by steering SW., but as the ship was in ballast it proved impossible to steer her and she continued on a southerly course with the wind on the port quarter. (Latitude 19° 00' N., longitude 106° 00' W.) The wind blew from NNE. and at 6 a. m. reached the strength of a gale. The sea kept running high from the SE. At 8 a. m. the gale had increased to a violent hurricane accompanied by tremendous squalls and an exceptionally high and breaking sea. Bar. 736 mm. (28.98 in.), wind and sea 12. The ship was drifting southerly. She labored and was pitching and rolling fearfully and received terrific blows under the bottom.

The storm center passed close north and east of the ship at 10 a. m. The force of the gale was then at its highest. Bar. 732 mm. (28.82 in.). The wind now gradually shifted through N. and NW. to W. and, at about 1 p. m., to SW. The sea turned from SE. to E. and NE., at 5 p. m. first commencing to run with the gale from the SW. The hurricane continued with unabated strength till 4 p. m., then decreased to a strong gale from the SW. The ship kept heading the sea with the wind on the port quarter and by 11 a. m. was heading north. An attempt was made to get the stern through the wind by letting the engine go astern in order to come on a southeasterly course, and thus escape after the center had passed, but the ship refused to steer. From 1 p. m. the engine was kept going astern to enable us to increase the distance from the center, as the ship practically was heading right after it.

At 6 p. m. the ship came round and a south-southeasterly course was shaped.

The American S. S. *City of Para*, Capt. G. McKinnon, bound from Balboa to San Francisco, encountered the storm on September 16 while in latitude 22° 00' N., longitude 110° 02' W. The greatest force of the storm