

experienced the retreating southerly winds, force 7, of this storm, and checked speed to avoid possible trouble. But two days later, while en route toward China, in 33° 06' N., 136° 30' E., she ran into an easterly gale, force 10, of another typhoon, in which she hove to from 7 a. m. of the 20th until 5.30 p. m. of the 21st.

Further discussion of the storms of this region is found in the article by the Rev. José Coronas, S. J., at the end of this section.

In Mexican coast waters an apparently small and only moderately intense tropical cyclone occurred on the 16th. On that date the American steamer *Maricos H. Whittier* experienced a SE. wind, force 7, in 17° 15' N., 106° 02' W., at 6 a. m. At 5 p. m. the Canadian steamer *Vancolite*, northward bound, ran into a moderate gale, "wind increasing in squalls to force 9, ESE., barometer 29.79, heavy sea, vessel pitching and straining heavily, and shipping heavy water." This was in 18° 51' N., 105° 27' W.

The American steamer *West Calera*, Sydney, N. S. W., to San Francisco, reports a gale which, on account of its position and its attendant barometric depression, is of interest. The following is the account by the observer, Mr. A. Skjellerup.

On July 31, 1925, in latitude 15° 20' N., longitude 152° 12' W., encountered severe gale commencing at 2 p. m. with showers, squalls, and heavy swell from NE. The wind remained steady in direction and gradually increased till 7 a. m., August 1, when it reached force 9. Overcast and raining. At 11 a. m. wind veered to east, easing gradually from then to force 5 at 7 p. m. At 2 p. m., 31st, the barometer was 29.88, falling gradually till 6 a. m., 1st, when it was 29.74, from then commencing to rise slowly, reading 29.92 at 7 p. m.

Except as noted above, few and inconsequential gales seem to have occurred along the great northern steamship routes.

Fog, as in July, was frequent and heavy in upper latitudes, and several vessels en route there reported a continuance of it for days at a time. It also was observed on several dates along practically the entire American coast from northern Alaska to near Cape San Lucas.

American S. S. "Mexican," Canal to Los Angeles.—August 14, 12 noon, in 16° 12' N., 99° 15' W., passed a very large waterspout about 2 miles off. Two smaller ones near by had either just broken up, or were just about to form. Gentle E. breeze, cloudy (A.-Cu. and Cu.-Nb.), barometer 29.89, temperature of air 84°, of sea 78°.

INDIAN OCEAN

Observations covering a considerable part of August indicate that the southwest monsoon was especially strong in the Arabian Sea, being of force 8 on several days. The American steamer *Ensley City*, Shanghai to Calcutta, from August 2 to 16, reported "SW. monsoon winds very regular in south China Sea and Bay of Bengal, especially strong in latter."—*W. E. H.*

TWO JAPAN AND ONE FORMOSA TYPHOONS, IN AUGUST, 1925

By Rev. JOSÉ CORONAS, S. J.

[Weather Bureau, Manila, P. I.]

Although the rainfall in the Philippines during the past month of August has been quite above the normal, yet there was no real typhoon over the Philippine Archipelago in the whole month but only a low-pressure area covering the northern part of Luzon on the 29th. Three severe typhoons, however, were shown by our Weather Maps over the Far East, two over or near Japan and

one close to north Formosa, although only that of Formosa influenced the weather in the Philippines. There was another typhoon near Guam at the end of the month, but its track belongs rather to the month of September. The low-pressure area of Luzon of the 29th moved on the 30th to the China Sea, where it developed into a depression or typhoon near the Paracels and probably filled up on September 2 near the Indo-China coast.

The first Pacific typhoon was probably formed on the 9th to 11th near 140° longitude E. and 15° latitude N. It moved first to NNW. and N. by W. and was met by the Japanese transport *Ondo* on her way from Tokio to Borneo, when she was in 134° 40' longitude E. and 24° 30' latitude N., her barometric minimum being 732 mm. (28.82 inches) at 8 a. m. of the 14th, and the winds blowing with hurricane force (11 Beaufort scale) from N. by E. While the barometer was rising after 8 a. m., the winds backed rapidly to NW., WNW., W., and WSW.

The typhoon moved practically to the north on the 16th and the morning of the 17th. After noon of the 17th it moved northeastward across the Sea of Japan. At 6 a. m. of the 17th the typhoon was over southwestern Japan. The approximate positions of the center at 6 a. m. of the 14th to 18th were as follows:

	Latitude	Longitude
Aug. 14, 6 a. m.-----	24 05 N.	135 00 E.
Aug. 15, 6 a. m.-----	26 30 N.	134 20 E.
Aug. 16, 8 a. m.-----	29 10 N.	133 50 E.
Aug. 17, 6 a. m.-----	35 00 N.	133 10 E.
Aug. 18, 6 a. m.-----	44 40 N.	133 35 E.

The second Pacific typhoon appeared on our Weather Maps of the 17th to the ENE. of Guam, near 150° longitude E. and 17° latitude N. It moved W. by N. until the 23d, when it recurved to NNE. near 138° longitude and 19° latitude, increasing considerably its rate of progress after two days of a very slow movement. At 6 a. m. of the 24th its center was shown in our Weather Map about 115 or 120 miles to the west of the Bonins, where the barometer had fallen to 740 mm. (29.13 inches), with southeasterly winds, force 6. During the 24th and 25th the typhoon moved to NNW. and NW.; on the 26th it took again a NNE. direction and in the morning of the 27th it traversed central Japan, probably as only a depression and moving N., although in the afternoon of the same day it recurved to ENE., entering again the Pacific on the 28th.

The Formosa typhoon was probably formed on the 22d to 23d about 350 or 400 miles to the east of north Luzon. After remaining almost stationary or moving very slowly to WNW., NW., and N. on the 23d, the 24th, and the morning of the 25th, it increased its rate of progress in the afternoon of the 25th while moving NNE. about 300 miles to the east of Bashi Channel. But in the afternoon of the 26th it took almost suddenly a WNW. direction toward Meiacosima group of Islands and north Formosa. Its center passed over Meiacosima in the early morning of the 27th and very close to north Formosa in the afternoon of the same day. Two steamers were much involved in this typhoon near Formosa in the northern part of Formosa Channel—the Japanese steamer *Mayebashi Maru*, with barometric minimum 737.09 mm. (29.06 inches), wind NW. 10, at 3 p. m. of the 27th, in 120 34' longitude E. and 25 24' latitude N., and the American steamer *President Jefferson*, with a barometric minimum 743.75 mm. (29.28 inches), wind