

Honshu and Hokushu Islands with great speed and lessened severity, and by the 24th had joined with a depression over the Sea of Okhotsk.

Fog.—There was little fog recorded on the open reaches of the Pacific this month, reports showing that it occurred only on the 1st and 9th, in upper east longitudes. In coastal waters of California there were 9 days with fog and in those of Washington, 8 days. Press reports from Vancouver state that shipping, owing to dense fog, was tied up at the water front from the 25th to 27th. Fog formed on the 9th near the Gulf of Tehuantepec.

TYPHOONS AND DEPRESSIONS OVER THE FAR EAST NOVEMBER 1936

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There were three typhoons and one depression over the ocean regions east of the Philippines during November 1936. In addition, during November 10 to 12, a mild depression formed over the eastern Caroline Islands, moved west-northwest, threatened to develop, but finally disappeared, apparently of minor importance.

Typhoon, November 1 to 8.—A depression moved from the eastern Caroline Islands westward to longitude 135° (Nov. 4), and then inclined to the northwest, intensifying at the same time. On November 6 it was central in latitude 13°30' N., longitude 127°30' E., strong enough to be classified as a typhoon, from which position it moved westward and entered the Philippines south of Virac, Cataduanes Islands, and Legaspi, Albay Province (Nov. 6 and 7). When it was close to the archipelago, it was found to be a small typhoon of moderate intensity, decreasing in strength as it passed over the northern Visayan Islands. It passed over the Verde Island Passage into the China Sea, where it disappeared on November 8.

The November 6, 4 p. m. observation at Atimonan, Tayabas Province, was north-northwest wind force 7 with barometer 752.8 mm (29.638 inches). At the same time, Odiongan, Romblon Province, reported southwest winds, force 5, and a pressure of 753.7 mm (29.673 inches). The estimated pressure at the center of the disturbance was about 750 mm (29.528 inches).

Typhoon, November 5 to 12.—On November 2, the steamship *Thistlebrae* encountered a small center near latitude 14° N., longitude 155° E., with winds of hurricane force veering from northeast (Nov. 2, 8 a. m.) to

south (Nov. 3, midnight), the minimum barometer being 735.4 mm (28.953 inches). After November 2 no reports were received from the neighborhood and the typhoon appearing in the regions represented by the weather map, November 5, is probably the same center reported by the steamship *Thistlebrae*. On this day, about 300 miles northeast of Guam, there was a definite center and apparently a typhoon, as far as the observations received from Guam and Saipan could indicate. It moved westward, November 5 to 8, then recurved to the northeast, moving from latitude 17°30' to 24° N., between the meridians 134° and 130° E. It inclined to the north-northeast on November 11 and passed beyond the region of observation, November 12. On November 11, the afternoon observation reported from the Bonin Islands was south-southwest winds, force 4, barometer 754.5 mm (29.705 inches).

Typhoon, November 18 to 23.—A depression formed over the eastern Caroline Islands and finally moved westward, intensified, and appeared as a typhoon about 250 miles south-southeast of Guam. Here it abruptly changed its course to the north, inclined slightly to the north-northwest as it passed about 50 miles east of Guam, moving quite rapidly. It then proceeded along a west-northwest course for one day (Nov. 20) and recurved to the north-northeast the afternoon of November 21. The next morning, it was central about 180 miles west-southwest of the Bonins. Its motion along a northeasterly course brought it beyond the region of observation on the afternoon of November 23.

Along the course of this typhoon, the observations which can be used to judge its intensity are as follows: The lowest barometer reading at Guam was 748.5 mm (29.468 inches) with south winds, force 4, 3 p. m. November 19. On November 22, 6 a. m. the Bonin Islands had a pressure of 746.0 mm (29.370 inches) with winds of force 8 from the south-southeast. At 2 p. m. of the same day, 743.0 mm (29.252 inches) with southwest winds of force 8 were reported from the same location. The typhoon apparently weakened November 21 and then quickly intensified the next day.

Depression, November 25 to 30.—A mild depression formed east of Mindanao, moved west-northwest to the Visayan Islands, where it changed its course to the southwest for a short time, bringing the center to the Sulu Sea. From here it proceeded across the northern part of Palawan Island to the China Sea where it disappeared.