

## NORTH PACIFIC OCEAN, OCTOBER 1939

By WILLIS E. HURD

**Atmospheric pressure.**—Over most of the North Pacific Ocean, as indicated by reports from island and coastal stations, the average barometer was close to normal. Only in the Aleutian region were pressures abnormal to a marked degree. At St. Paul Island, in the Bering Sea, the average barometer, 1,011.6 millibars (29.87 inches), was +8.2 millibars (+0.24 inches) above the normal of October. The Aleutian low this month lay over the Gulf of Alaska, with Kodiak having an average barometer of 1,003.1 millibars (29.62 inches) and a departure from normal of only +1.1 millibars (+0.03 inch).

The average North Pacific anticyclone this month extended as a belt from the west coast of the United States southwestward across Midway Island.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, October 1939, at selected stations

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Millibars	Millibars	Millibars		Millibars	
Point Barrow.....	1,013.7	+0.2	1,032	12, 14	989	26
Dutch Harbor.....	1,010.0	+5.9	1,033	22	971	26
St. Paul.....	1,011.6	+8.2	1,029	21	991	29
Kodiak.....	1,003.1	+1.1	1,030	23	982	17
Juneau.....	1,009.6	-1.9	1,028	28	972	16
Tatoosh Island.....	1,016.2	-0.1	1,036	11	1,001	26
San Francisco.....	1,016.6	+0.3	1,027	27	1,006	24
Mazatlan.....	1,010.4	+0.2	1,012	18-20, 26, 27	1,006	1
Honolulu.....	1,015.3	-0.6	1,018	31	1,010	22
Midway Island.....	1,018.5	+1.5	1,028	29	1,006	2, 3
Guam.....	1,009.5	-1.0	1,012	12	1,007	10, 14
Manila.....	1,009.6	+0.5	1,012	1-3	1,003	8
Hong Kong.....	1,012.0	-1.7	1,019.3	31	1,002.0	9
Naha.....	1,012.7	+0.2	1,020	31	987	15
Pititjima.....	1,013.7	+0.8	1,019	31	996	22
Petropavlovsk.....	1,007.7	-1.4	1,028	29	990	21

<sup>1</sup> And on other dates.

NOTE.—Data based on 1 daily observation only, except those for Juneau, Tatoosh Island, San Francisco, and Honolulu which are based on 2 observations. Departures are computed from best available normals related to time of observation.

**Extratropical cyclones and gales.**—Ship reports do not indicate October 1939 to have been appreciably stormier than the preceding month in middle and higher latitudes of the North Pacific. In fact, for the great stretch of the ocean lying between 130° and 155° west longitudes, no high winds were reported. Along the immediate coast of the United States, during the prevalence of cyclonic disturbances, the Swiftsure Bank Lightship, in 48°33' N., 125°00' W., had southeasterly gales of force 8 to 9 on the 1st, 16th, 18th, and 25th.

In east longitudes few gales due to extratropical causes occurred to the westward of the 170th meridian. These were of force 8 only, occurring on the 3d near 39° N., 157° E.; on the 12th near 44° N., 166° E.; and on the 13th near 30° N., 159° E. The greatest concentration of storminess along the middle and upper steamer routes occurred between about 170° E. and 155° W., scattered as to dates and localities between the 4th and 26th. The heaviest early gale in this region was of force 10, lowest barometer 984.1 millibars (29.06 inches), reported on the 4th by the American steamship *W. H. Berg*, near 50° N., 176° E. The most intense local development noted in connection with any of these storms occurred during the night of the 15th-16th near latitude 41° N., longitude 176° E. Here the Japanese steamship *Norway Maru*, in the center of the cyclone, had a low barometer of 976.0 millibars (28.82 inches) with a light southeasterly wind at 10 p. m. of the 15th, followed at midnight by a west wind

of hurricane velocity. No further gales exceeding force 8 or 9 were reported until the 18th, when a westerly gale of force 10, with moderate depression of the barometer, occurred near 41° N., 166° W.

During the 21st to 23d a disturbance of moderate depth lay to the eastward of Midway Island. Local north to northeast gales of force 8 to 9 accompanied it, between latitudes 28°-32° N., longitudes 165°-172° W.

One of the deepest cyclones of the month lay over the Aleutian Islands on the 25th and 26th and crossed into the Gulf of Alaska on the 27th. At Dutch Harbor, on the 26th, pressure fell to 971 millibars (28.67 inches). The highest wind reported on the 26th, in connection with the cyclone, was of force 9 from the northwest, near 55° N., 169° W.

**Tropical cyclones and gales.**—Elsewhere in this issue of the REVIEW is a report, by the Reverend Bernard F. Doucette, S. J., Weather Bureau, Manila, P. I., of four typhoons which occurred in the Far East during October 1939. The only data that may be added to the report are with reference to the final storm described, that of October 20-23. This typhoon was noted as passing close to the eastward of the Bonin (Ogasawara) Islands on the 23d and then inclining "to the northeast as it moved across the 150th meridian." According to a report received at this office from the Japanese motorship *Arimasan Maru*, the ship was evidently in this typhoon on the 24th. At 11 a. m., local time, she encountered a south-southeast gale of hurricane force, lowest barometer 979.9 millibars (28.94 inches), in 36°00' N., 151°18' E. At 2 p. m. the wind on ship was southwest, force 12. The typhoon's identity was lost after the 24th.

In the southeastern Pacific Tropics one cyclone occurred. It appears to have originated not far from 15° N., 106° W., on the afternoon of the 23d and to have moved about due north until it entered the Mexican coast at Cape Corrientes on the 25th. Two ships close to the coast south of the cape, one late on the 24th and the other early on the 25th, had southeast winds of force 7, with little depression of the barometer. Press reports from Mexico, however, indicate the storm to have wrought much damage to several coastal towns, to crops, and to communication lines, with some disruption to shipping. The American steamer *Nevadan* was reported severely battered by the storm off Manzanillo.

**Tehuantepecers.**—The first Tehuantepecer of the season occurred in the Gulf of Tehuantepec on the 16th with a north-northeast gale of force 8. On the 30th a force 7 wind was experienced, and on the 31st a northeaster of force 9.

**Fog.**—There was much less fog reported for the open Pacific than during the previous September, and most of the occurrences were observed during the early part of the month. In American coastal waters, ships reported 12 days each with fog off Washington and Oregon; 18 days, off California; and 2 days, off Lower California.

## TYPHOONS AND DEPRESSIONS OVER THE FAR EAST, OCTOBER 1939

By BERNARD F. DOUCETTE, S. J.

[Weather Bureau, Manila, P. I.]

**Typhoon, October 3-12, 1939.**—As a depression, which very likely formed over the Eastern Caroline Islands, this storm first manifested itself about 500 miles south-southeast of Guam, October 3, and moved west-northwest across the Pacific. It gradually increased to typhoon