TABLE 1.—*Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, September 1937, at selected stations*

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	*Inch*	*Inches*		*Inches*	
Point Barrow	29.82	−0.08	30.38	29	29.20	16
Dutch Harbor	29.73	−.03	30.44	26	28.72	15
St. Paul	29.78	+.07	30.48	26, 28	28.82	15
Kodiak	29.81	+.10	30.44	27	28.96	10
Juneau	30.03	+.11	30.33	27	29.64	29
Tatoosh Island	30.06	+.06	30.51	24	29.48	30
San Francisco	29.94	.00	30.12	24	29.80	20
Mazatlan	29.85	+.03	29.92	23	29.74	17
Honolulu	30.02	+.02	30.11	1	29.91	26
Midway Island	30.02	+.01	30.18	7	29.84	26
Guam	29.86	+.03	29.92	8, 10	29.82	6
Manila	29.80	+.03	29.86	12, 13, 18, 19	29.62	10
Hong Kong	29.83	+.06	29.96	29	28.30	2
Naha	29.86	+.10	30.00	19, 20, 28, 29	29.32	9
Chichishima	29.96	+.10	30.18	3, 15	29.71	24

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.—Several cyclonic disturbances occurred in high latitudes of the north Pacific during September. Barometer readings below 29 inches were recorded at Kodiak on the 10th; on board the Japanese motorship *Hikawa Maru*, near latitude 50° N., longitude 173½° W., on the 14th; and at Dutch Harbor and other nearby points on the 15th. The highest local winds reported in the vicinity of the storm areas on these dates, however, did not exceed force 8. The strongest winds experienced by reporting ships in northern waters were of force 10. One was reported by the American steamer *President Jackson*, on the 2d, a short distance south of the central Aleutians; the other, by the British steamer *Talthybius* on the 12th, near 52° N., 144° W.; both were accompanied by barometric minima of about 29.50 inches.

Gales of forces 8 to 10 were local in connection with all high latitude disturbances, and, so far as indicated by ships' mail and radio observations, occurred in scattered localities on only 10 or 12 days.

Most of the cyclones were irregular in movement. One, however, can be traced from a position east of northern Japan on the 17th, until it entered Alaska on the 24th. It appeared to have little intensity; the only gales worthy of mention within its field occurred on the 19th, of force 9, to the southwestward of the western Aleutians.

The only gale reported in coastal waters of the United States was of force 8, from north-northeast, experienced by the American steamer *Texas*, near Point Arena, Calif., on the 20th.

On the 29th and 30th a storm area of moderate intensity lay off the coasts of Washington and British Columbia. In connection with it, a gale of force 8 was reported by radio north of Queen Charlotte Island on the 29th. Similar reports on the 30th showed that winds of like force were blowing at a considerable distance to the southward, one being as far south as 45½° N., 132° W.

Tropical cyclones—Typhoons.—A very mild disturbance west of Mexico appeared near 15° N., 102° W. on September 1 and, moving northwest, disappeared on the 3d near the Revillagigedo Islands. No high winds were reported in connection with this disturbance.

During the 9th to 11th a cyclone of considerable intensity moved from a location about west of Acapulco northwestward past the mouth of the Gulf of California, and disintegrated at some distance west of southern Lower California. The earliest gale in connection with the disturbance was from the east, force 8, barometer 29.76, met by the American steamer *Kekoskee*, near 18° N., 104° W., on the 9th. At 4 a. m. of the 10th, in 19°48′ N., 106° W., the American steamer *Steel Engineer* had a southeast gale of force 9, barometer 29.76. Later in the day, a short distance south of Cape San Lucas, the American steamer *San Lucas* encountered the strongest wind, from the east of force 10, and the lowest barometer, 29.52, observed in connection with the storm. The highest wind reported on the 11th was of force 8, from the east-southeast, experienced at 2 p. m. on the Japanese steamer *Bengal Maru*, in 24°12′ N., 112°13′ W.

Disturbed conditions lay over and in the vicinity of the Gulf of California on the 16th to 20th, but cyclonic development was immature. The highest wind reported during the period was of force 7, from south-southeast, near 20° N., 107° W., met by the Dutch steamer *Delftdyk* barometer 29.64.

In the Far East much more serious cyclonic storms occurred, in particular the intense typhoons that ravaged Hong Kong on September 2 and southern Japan on September 11. These and other tropical cyclones of the month are described elsewhere in this issue of the REVIEW by the Rev. Bernard F. Doucette, S. J., of the Manila Observatory, Philippine Weather Bureau. The only note that may be added in connection with the Japanese typhoon is that one of our observing vessels, the Japanese motorship *San Pedro Maru*, while near 38° N., 144° E., on the 12th, experienced a south gale of force 9, barometer 29.49, as the storm entered the open Pacific from northern Honshu.

Fog.—There was a considerable decrease in the September occurrence of fog over that of the preceding month along the northern steamer routes. Between the Aleutian Islands and Japan practically all the fog reported was observed, rather scattered, on the 5th to 9th. From northern midocean eastward to longitude 130° W., there were 12 days reported with fog, scattered along the route, and occurring on not more than 5 days in any one 5-degree square. No fog was reported by ships along the Washington and Oregon coasts, but along the California coast it occurred on at least 12 days, and off Lower California on 2 days. Fog was observed on the 2d southwest of the Revillagigedo Islands.

TYPHOONS AND DEFRESSIONS OVER THE FAR EAST, SEPTEMBER 1937

Rev. BERNARD F. DOUCETTE, S. J.

[Weather Bureau, Manila, P. I.]

Typhoon August 24–September 3, 1937.—From August 24 to 30, as this storm moved west-northwest across the Pacific from a position about 200 miles south of Guam, there was little evidence of its potentialities. During the afternoon of August 28, the U. S. S. *Ramapo* experienced a shifting of winds that indicated the passage of the center a short distance south of the ship's position. It is possible that for some hours the center did shift its course in that way, but the next day found it moving along a west-northwest course. The lowest barometer reading on board the U. S. S. *Ramapo* was 29.61 inches at 4 p. m. August 28 (Manila time). The wind was coming from the north-northwest, velocity 33 knots, the ship being near latitude 13°4′ N., longitude 131°7′ E. (the position