

NORTH PACIFIC OCEAN

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Atmospheric pressure in June filled in considerably over that of May throughout the Aleutian region and the western part of the Gulf of Alaska. The barometer, however, continued abnormally low, although the departures from the average were much less than in the preceding month. The Aleutian Low, at no time very deep except about the middle of the month, when an active cyclone from the western Pacific entered its area, was central on the average over the Bering Sea and the closely adjacent waters to the southward in middle longitudes.

The North Pacific anticyclone on the average occupied a large area in middle latitudes, where it extended practically across the ocean, or to about the one-hundred-and-fiftieth meridian of east longitude westward from the American coast. In the Far East frequent small depressions disturbed the coastal region.

The following table gives barometric data for several island and coast stations in and bordering on the ocean in west longitudes:

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, at indicated hours, North Pacific Ocean, June, 1930

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Dutch Harbor ¹	29.77	-0.22	30.24	13th.....	29.20	1st.
St. Paul ¹	29.77	-0.12	30.24	13th.....	29.24	26th.
Kodiak ¹	29.88	-0.06	30.34	18th.....	29.06	9th.
Midway Island ¹	30.14	+0.07	30.26	5th ²	29.98	18th. ³
Honolulu ⁴	30.03	-0.01	30.13	1st.....	29.91	24th.
Juneau ⁴	29.96	-0.05	30.38	18th.....	29.18	9th.
Tatoosh Island ⁴	30.06	+0.01	30.30	16th.....	29.65	15th.
San Francisco ⁴	29.62	-0.04	30.12	26th.....	29.67	11th.
San Diego ⁴	29.90	+0.01	30.04	26th.....	29.72	11th.

¹ P. m. observations only.
² For 29 days.
³ And on other dates.

⁴ A. m. and p. m. observations.
⁵ Corrected to 24-hour mean.

For the most part typical June weather prevailed over all parts of the ocean, and gales were comparatively infrequent and of moderate character, very few exceeding 8 or 9 in force. Along the upper steamship routes vessels reported gales in and near the Aleutian region on ten or twelve days. Those of the 13th to 15th and the 24th to 25th were the more severe, with local maximum winds forces of 10 on the 14th and 9 on the other dates, these occurring south of the central Aleutians. Gales were most widespread on the 14th, on which date they were encountered between the thirty-eighth and fifty-first parallels in midocean. Off the central and upper California coast, and thence as far westward as the meridian of 130° W., gale periods occurred on the 11th-12th and the 18th-19th, the highest winds reported being of force 9. On the 19th fresh gales were encountered as far north as Tatoosh Island at about 200 miles offshore. Elsewhere in middle and upper waters such few gales as occurred were local and unimportant.

A severe local thunderstorm, accompanied by a fresh southeast gale and torrential rain, was experienced during the early morning of the 22d, in 11° 17' N., 89° 11' W., by the American steamer *F. H. Hillman*.

In the Asiatic tropics a typhoon which originated during May terminated its existence west of Japan on June 1. Gales occurred in the lower China Sea on the 29th and 30th, becoming strong on the latter date, and continuing of force 9 on July 1. Pressure in the disturbed region, as reported by the American steamer *President Hayes*, dropped to 29.51 inches. Little further is known at this writing of the disturbance that occasioned the gales beyond the fact that a general depression covered the Philippines and adjacent waters on the 30th.

The prevailing wind direction at Honolulu was from the east, with the average hourly wind velocity, 9.4 miles, practically normal for the month. The highest velocity recorded was at the rate of 24 miles an hour from the east on the 27th.

There were two principal fog regions of considerable extent over the ocean. The larger and more important, with 25 to 40 per cent of days with fog, extended from the Kuril Islands to a distance of approximately 800 miles southeastward. The other, with 10 to 15 or 20 per cent of days with fog, lay south of the Gulf of Alaska along the northern trans-Pacific routes. Scattered local fogs, occurring on one to four days in a given small area, were observed in various other parts of the ocean north of the thirtieth parallel. About 20 per cent of the days had fog along the California coast, and thick local fogs were experienced on three days off the southern part of Lower California.

Mexican west coast hurricane.—In the tropics there occurred at least one cyclone of consequence. This was the hurricane of June 4-11 which originated well to the southward of the Gulf of Tehuantepec, ran at some distance off the west Mexican coast, and finally went inland after crossing the mouth of the Gulf of California.

During the early stages of this storm, such vessels as were caught within the region of its gales (as indicated in the table of Ocean Gales and Storms) experienced little more than easterly and southeasterly winds with slightly depressed barometer. While the data from seamen's reports showed the progress of the cyclone from near 12° N., 92° W., up to the mouth of the Gulf of California, not a vessel from the 4th to the 9th entered the storm area on its western side, except the American tanker *Nora*, which crossed the storm front on the 7th.

On the 10th, however, all vessels which passed Cape San Lucas were more or less involved on all sides, and three destroyers of the United States Battle Fleet—the *William B. Preston*, the *Hulbert*, and the *Noa*—passed through the center of the cyclone, which was now of hurricane force. The American steamers *Astral*, *Atlantic Sun*, *Lena Luckenbach*, *San Felipe*, and *Tamiahua*, and the Japanese steamer *Naples Maru*, experienced gales of force 10 to 11 near or at the entrance to the Gulf.

In passing through the storm center, the lowest pressure reading in which was 29.08 inches, made in 21° 13' N., 108° 53' W., at 5.30 p. m. of the 10th by the destroyer *Noa*, the clear eye of the storm was observed and sun sights were made. This is the first instance on record known to the writer of a clear central sky being observed in a cyclone of this coast.

On the 11th the storm went ashore north of Mazatlan and rapidly dissipated. Some damage was done in Mazatlan due to high winds and inundation, according to press reports.