

OCEAN GALES AND STORMS, JULY, 1929—Continued

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Highest force of wind and direction	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
SOUTH PACIFIC OCEAN													
James McGee, Am. S. S.	Bahia Blanca	Talara	35 38 S	78 12 W	15	Mdt, 15	16	Inches 29.17	NE	NNE, 7	SW	WSW, 9	
SOUTH ATLANTIC OCEAN													
Helena, Du. S. S.	Montevideo	Cape Town	38 47 S	26 00 W	12	4 p, 14	15	29.46	N	NW, 10	W	NNW, 12	N-NW-W.
Do	do	do	39 10 S	13 00 W	17	4 p, 17	18	29.58	E	ESE, 11	NW	SSW, 11	E-SSW.
Do	do	do	35 40 S	13 00 E	23	—, 24	25	29.58	N	N, 8	S	SSW, 10	N-SW-S.

551.506 (265.2)

NORTH PACIFIC OCEAN

By WILLIS E. HURD

The general pressure conditions over the North Pacific Ocean during July, 1929, were more stable than in any previous month of the year. The Aleutian cyclone was shallow for most of the period, with sporadic centers of activity fluctuating east and west over northern waters. On a few days of the month, while centers were in the Gulf of Alaska, they made unimportant incursions southward off the Canadian coast. The Pacific-California anticyclone was abnormally well developed throughout July and extended along the central latitudes of the ocean from the middle American coast westward practically to Japan, remaining unbroken by cyclones of tropical or extratropical origin.

Pressure data for several island and coast stations in west longitudes are given in the following table:

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level at indicated hours, North Pacific Ocean and adjacent waters, July, 1929

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
Point Barrow ¹	Inches 30.00	Inch —	Inches 30.28	16th	Inches 29.58	19th.7
Dutch Harbor ¹	29.82	-0.20	30.16	28th	29.42	3d.
St. Paul ¹	29.89	+0.04	30.30	22d.	29.46	20th.
Kodiak ¹	29.89	-0.05	30.18	5th.	29.50	20th.
Midway Island ¹	30.11	+0.03	30.20	25th.	30.04	7th.7
Honolulu ²	30.02	0.00	30.09	24th.	29.89	10th.
Juneau ³	30.00	-0.05	30.42	6th.	29.71	22d.
Tatoosh Island ⁴	30.08	+0.01	30.32	2d.	29.83	31st.
San Francisco ⁴	29.96	+0.01	30.16	13th.	29.71	4th.
San Diego ⁴	29.92	+0.03	30.03	1st.	29.79	4th.

¹ P. m. observations only.

² For 30 days.

³ For 20 days.

⁴ For 29 days.

⁵ A. m. and p. m. observations.

⁶ Corrected to 24-hour mean.

⁷ And on other dates.

Gales were few and widely scattered so far as can be ascertained from the considerable number of observations at hand, although vessel weather data are scanty for the typhoon region of the Far East. At this writing only six steamships on the North Pacific have reported gales of force 8 and upward, these occurring on about 8 days. In June, the ordinarily quiet month, there were about 13 days with gales of approximately the same force. In some instance the higher winds of July were anticyclonic in character, especially those of the 6th, 7th, and 26th off the upper California coast. A few of cyclonic character occurred in the Gulf of Alaska and south of the Aleutians, and two were encountered by steamships traversing Asiatic waters in connection with tropical storms.

As noted in the subjoined report by the Rev. José Coronas, S. J., of the Philippine Weather Bureau, five

typhoons occurred in July. Most of them operated off the southwestern periphery of the great high pressure area which covered much of the ocean this month. On July 1 the American steamship *Ensley City*, Shanghai to Honolulu, became involved in the western quadrant of the typhoon which, forming in June, was now central south-west of Kyushu Island, Japan. The vessel experienced northerly gales of force 10, the highest reported by marine observers of the bureau for the month. This typhoon, which is mentioned as lost to observation by the Manila Observatory on the 2d, went north over Japan Sea and died out west of Sakhalin on July 4. The British steamship *Wray Castle*, Panama to Manila, ran into the third typhoon of the month, catching up with it on its eastern side on the 15th and encountering moderate to fresh southerly gales on the two following days, pressure being lowest, 29.65 inches, on the 17th.

No gales were reported from the Mexican Tropics.

The prevailing wind direction at Honolulu was from the east, the trades blowing 99 per cent of the time. The maximum velocity was at the rate of 21 miles an hour from the east on the 21st. The temperature at this station was next to the highest on record for July.

While storm conditions were reduced almost to a minimum along the upper steamship routes, thick weather was increasingly prevalent, especially south of the Aleutian Islands and thence west to the northern islands of Japan. Over a good part of the region lying between the fortieth and fiftieth parallels, in east longitudes, fog occurred on at least 40 to 50 per cent of the days. Going southeastward from the eastern Aleutians to the coast of the United States, fog decreased rapidly to 10 per cent or less until within 50 or more miles of land, when it increased to 20 or 25 per cent. South of San Francisco occasional fog was experienced to and below Cape San Lucas, and was reported on one day, the 30th, below Acapulco, Mexico. In the eastern part of the Bering Sea fog was frequent and heavy, and was reported on 18 days in the neighborhood of St. Paul Island.

NOTES BY OBSERVERS

Phosphorescence.—American steamship *Torres*, Capt. George A. Ring; observer, D. Corcoran, second officer, Long Beach, Calif., northward:

July 29, 1929, 8 p. m. to midnight. Around Farallon Islands and Point Reyes sea was brilliantly phosphorescent. It was light enough at times to read a newspaper.

Monsoon in the Arabian Sea.—British steamship *Westbury*, Capt. James Scott; observer, E. Catterson, third officer, Aden toward Chittagong:

Encountered strong monsoon from the 6th to the 10th, the worst weather being between latitudes 12° and 13° N., longitudes 52° and 61° 30' E. Winds of gale force varied between SSW. and SW., and the sea was greatly confused.