NORTH PACIFIC OCEAN, JULY 1937

By WILLIS E. HURD

Atmospheric pressure.—The Aleutian LOW was unusually well developed for July 1937, the average pressures at St. Paul, 29.72 inches, and Dutch Harbor, 29.79 inches, being, respectively, 0.12 and 0.15 inch below the normals of the month.

The greater part of the eastern two-thirds of the ocean was covered by an almost unbroken expanse of high pressure, with readings above normal at Tatoosh Island and Midway Island.

Low pressure prevailed in the southwestern tropics.

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

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	*Inch*	*Inches*		*Inches*	
Point Barrow	29.89	−0.03	30.32	29	29.36	1
Dutch Harbor	29.79	−.15	30.32	2	29.20	5
St. Paul	29.72	−.12	30.30	2	29.10	5
Kodiak	29.87	−.07	30.18	2	29.30	23
Juneau	30.05	.00	30.25	11	29.73	3
Tatoosh Island	30.13	+.08	30.32	6	29.88	17
San Francisco	29.93	−.02	30.09	1	29.66	3
Mazatlan	29.88	+.02	29.96	29	29.74	4
Honolulu	30.02	.00	30.10	3	29.91	27
Midway Island	30.14	+.03	30.22	28	30.06	30
Guam	29.80	−.04	29.89	24	29.74	15
Manila	29.72	−.02	29.86	4	29.56	2
Hong Kong	29.63	−.02	29.84	8	29.41	29
Naha	29.71	−.01	29.92	7,8	29.41	22,31
Chichishima	29.88	+.03	30.03	6,7	29.71	23
Nemuro	29.84	-------	30.09	15,17	29.56	11

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.

Cyclones and gales.—No cyclones of importance occurred on middle and upper waters of the North Pacific in July 1937, although several LOWS traversed middle latitudes of the Far East and in higher latitudes of the ocean, resulting in the unusually deep Aleutian LOW this month. Over most of the eastern half of the sea area, except the extreme northern part, there were no disturbances of a cyclonic nature reported.

Indicative of the generally quiet nature of the weather in the Pacific extratropics is the fact that only two gales of moment are contained in the July ships' reports received. One is a south-southeast gale of force 9, with small depression of the barometer, experienced by the American steamer *General Sherman* near 48° N., 178° W., which occurred on the 1st; the other is a southerly gale of force 10, barometer 30.01, encountered by the American steamer *Golden Mountain*, near 37° N., 149° E., on the 13th.

Tropical cyclones.—Two tropical cyclones sufficiently energetic to be termed typhoons occurred in the Far East this month. The earlier, that of June 30–July 5, was mentioned in our report of last month as having caused hurricane velocities on the 30th between Luzon and the Marianas. The two storms are described in the subjoined report by Rev. Bernard F. Doucette, S. J., of the Philippine Weather Bureau. In further connection with the earlier typhoon, it may be added that on July 1, when the disturbance was east of northern Luzon, the Norwegian motorship *Skramstad* reported an east-southeast gale of force 8, barometer 29.42, near 18° N., 128° E., and on the 3d the French motorship *Pierre L. D.* had a west-northwest gale of force 9, barometer 29.47, near 18° N., 119° E.

In the American tropics a gale of force 8 from the north was experienced by the American steamer *Birmingham City* on the 22d on the lower waters of the Gulf of Tehuantepec. As there were no evidences of a cyclonic disturbance in the vicinity on that and on the following days, while an anticyclone over the United States was pressing into the Gulf of Mexico, the gale may undoubtedly be classed as one of the rare summer Tehuantepecers.

Fog.—Frequent fog was observed over the western half of the northern steamer routes on from a quarter to a third or more of the month. Some ships in upper east longitudes observed fog for 3 or more days in succession with only brief intermissions. The Norwegian motorship *Bonneville* reported being in fog for about 90 percent of the time from the 4th to 9th of July, between 41°30′ N., 151°20′ E., and 48°40′ N., 176°10′ E. The Dutch motorship *Djambi* had fog for most of the time from the 25th to the 31st, between 43°15′ N., 171°20′ E., and 43°23′ N., 147°10′ W. In upper west longitudes fog was less frequent and extensive, but occurred on from 1 to 5 or more days from the 180 meridian to the American coast. Cruisers in the Bering Sea reported fog from the 12th to 18th. Ships off the Oregon coast noted fog on 2 days, off the California coast on 4 days, and off the Lower California coast on 3 days.

SMALL TROPICAL DISTURBANCE OF LATE JULY, 1937

By WILLIS E. HURD

July 29–August 2.—During July 29 radio reports from the eastern part of the Gulf of Mexico, off the Florida coast, indicated the existence of a minor tropical disturbance with gentle cyclonic circulation and slight barometric depression. A special report, however, later received by mail from the American steamer *Mariana*, going from Tampa toward New Orleans, showed that some storm development had occurred during the morning of the 29th. The ship reported a southeast gale of force 8, barometer 29.86, at 6:30 a. m., E. S. T., in latitude 27°41′ N., longitude 83°18′ W.; and at 8:30 a. m., a southwest wind of force 7, barometer 29.82, in 27°46′ N., 83°37′ W. At 9 a. m. the wind had changed to northwest, force 5, with lowest barometer, 29.80.

As the disturbance moved toward the coast, an estimated wind velocity of 40 to 45 miles an hour occurred at Egmont Key, at the entrance to Tampa Bay, at about 3 p. m., barometer 29.85. At that time the American steamship *Mundixie*, about 30 miles northwest of Egmont Key, as later reported by telephone, encountered a 60-mile gale from the southwest, barometer 29.62. The observed wind shifts on the vessel were from east through southeast and south to southwest. All evidence at hand shows that the strong winds of the disturbance on this day occupied only a very small area.

The disturbance crossed the west Florida coast north of Tampa late in the afternoon, moving northeastward. At Tampa the lowest barometer, 29.80, occurred at 6:25 p. m., and the maximum 5-minute wind velocity, 51 miles per hour from the southeast, at 6:34 p. m. At this station wind velocities exceeding 30 miles per hour lasted from 5 to 7 p. m. The heaviest rainfall, 8.88 inches in 24 hours, was reported at Clearwater.

In crossing Florida, according to Gordon E. Dunn, forecaster on duty at the Weather Bureau office at Jacksonville, "the storm speedily lost intensity in wind and rainfall and passed into the Atlantic near Daytona Beach about 4 a. m. (of the 30th) attended by about a 20-mile wind and very little rain." At 7 a. m., E. S. T., of the 30th the disturbance, then of mild force, was centered near 30° N. 80½° W. No gales were reported during the day, but at 1 a. m. (local time) of the 31st, the northbound Honduran