

NORTH PACIFIC OCEAN, FEBRUARY 1933

By WILLIS E. HURD

*Atmospheric pressure.*—Pressure was one to nearly two tenths of an inch above the normal along most of the American coast from northern Alaska and the Aleutian Islands to central California. The Aleutian cyclone, which on the average stretched from the Gulf of Alaska far southwestward, was shallower than normal for February. The Pacific anticyclone, central off the California coast, was abnormally well developed locally for the month, but less extensive than usual.

The Asiatic anticyclone lacked the oceanward extent and development that characterized it in January. Pressure from Guam to the South China Sea was low, averaging 0.11 inch below normal at Manila.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, February 1933, at selected stations

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	<i>Inches</i>	<i>Inch</i>	<i>Inches</i>		<i>Inches</i>	
Point Barrow.....	30.26	+0.14	30.94	28	29.82	24
Dutch Harbor.....	29.76	+ .16	30.90	27	29.84	2
St. Paul.....	29.81	+ .16	30.90	26, 27	29.10	2, 9
Kodiak.....	29.79	+ .17	30.34	5	29.86	24
Juneau.....	29.93	+ .01	30.67	5	29.87	22
Tatoosh Island.....	30.12	+ .12	30.61	9	29.56	28
San Francisco.....	30.21	+ .11	30.44	19	29.95	6
Mazatlan.....	29.94	-.06	30.03	7	29.84	27
Honolulu.....	29.99	-.06	30.16	20	29.75	3
Midway Island.....	30.00	+ .01	30.24	20	29.54	6
Guam.....	29.86	-.05	29.90	1, 10	29.78	28
Manila.....	29.86	-.11	29.96	5	29.78	10
Naha.....	30.01	-.04	30.18	18	29.72	28
Chichishima.....	30.01	+ .03	30.22	5	29.66	28
Nemuro.....	29.89	.....	30.34	4, 5	29.34	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.

*Cyclones and gales.*—February, as a whole, was far less stormy than January, and subject to fewer wind velocities exceeding force 9 than any preceding month since August 1932. Only two gales of force 10 have been reported for the entire North Pacific for February 1933. One was experienced by the Dutch motorship *Skramstad* on the 6th,

at latitude 35°42' N., longitude 170°30' W., pressure 28.62 inches. At that time all the mid-Pacific was under the influence of cyclonic conditions, and had been since the 3d, with fresh to strong gales (forces 8–9) along portions of the central and southern steamship routes from longitude 140° W., latitude 37° N., southward nearly to the Hawaiian Islands and westward beyond Midway Island. During the 8th to 10th the gale field spread northward toward the Aleutians, with scattered high winds, few of which were in excess of force 8. The other whole gale (force 10) of the month was experienced by the Norwegian motorship *Ferndale* near 33° N., 152° E.

From the 23d to 25th a deep cyclone lay over the northeastern Pacific, and during its continuance rather widespread gales of force 9 occurred over the northern steamer tracks between 135° W. and the eastern Aleutians.

The American steamer *Grays Harbor* reported a persistent gale from the 25th to 28th near latitude 42° N., longitude 168°–169° W. "Wind," said the observer, Mr. Frank Mehan, third officer, "blew a steady strong gale throughout the 25th, 26th, and 27th, with the wind steady east, force 9, as a consequence of which ship was under reduced speed throughout the 26th and 27th." The weather was strongly anticyclonic, and for the entire period the ship's lowest corrected pressure was 30.23 inches.

No gales were reported near the coast of the United States, and fewer than the normal number occurred over the approaches to Japan.

In low latitudes easterly gales of force 8 were reported south of the Revillagigedo Islands on the 13th, and north of Palmyra Island on the 21st, the latter being an intensification of the trades.

*Northers.*—A Tehuantepecer of force 7 occurred on the 22d and one of force 8 on the 9th and 10th. The American steamer *Santa Elisa*, in the Gulf of Tehuantepec, reported a "full northerly gale, with heavy clouds over the mountains to the northeast", on the 11th.

*Fog.*—Fog was reported as occurring off the coast between Tatoosh Island and San Diego on only 4 days. A few scattered fogs were observed over the considerable area traversed in the eastern part of the ocean by steamers on the northern and middle routes.