

NORTH PACIFIC OCEAN

By WILLIS EDWIN HURD

For the third successive month the eastern North Pacific anticyclone well maintained its average position and strength. In May its crest lay generally between the 30th and 40th parallels, but fluctuated east and west between the 130th and 165th meridians of west longitude. No depressions entered its area from the south, but lows from the Aleutian center broke into its eastern slope and lay off the California coast, central in 35° to 40° N., 135° to 140° W., on the 11th to 13th and 15th to 19th, causing unsettled weather and variable winds, but without gales, although pressures descended as low as 29.40 inches on two or three days.

The Aleutian low was somewhat more energetic than in April. This condition was not apparent while it occupied the Gulf of Alaska during the first six or seven days of the month, although moderate to fresh gales occurred near the 50th parallel, 140th to 145th meridians, on the 4th to 7th, accompanied by snow and hail squalls. The two periods of greatest intensity were those of the 8th to 13th and the 21st to 24th.

The disturbance of the earlier period was apparently a progressive cyclone of the Aleutian type. It seems to have originated not far from 40° to 45° N., 160° E., on the 8th. Thence it moved east-northeast and arrived over the central Aleutians on the 11th, after which it lost greatly in force and drifted into the Gulf of Alaska, finally moving southeastward and dissipating on the 19th near 32° N., 135° W. The cyclone acquired full storm force on the 10th, on which date the British S. S. *Tacoma* encountered a southwest gale, force 11, in 43° 48' N., 165° 28' E. This was the strongest wind reported for the month. The lowest pressure observed in connection with the storm was 28.83 inches, read on board the American S. S. *West Carmona*, in 43° 22' N., 161° 06' E., on the 9th. It is also to be noted that fresh to strong gales occurred on the 8th to 11th along the northern steamer routes between 160° E. and the Japanese coast.

The second disturbed period, that of the 21st to 24th, was characterized by gales of much less intensity, no wind forces exceeding 8 being reported. The pressure, however, gave the low readings of the month, with the minimum, 28.56 inches, occurring at Dutch Harbor on the 22d.

The following table of pressure data is made from the records of the various island stations, as well as from a few American coast stations. Averages are for both 8 a. m. and 8 p. m. observations, 75th meridian time, except as noted:

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
Dutch Harbor.....	29.58	-0.34	30.10	3d.....	28.56	22d.
St. Paul.....	29.66	-0.20	30.26	3d.....	28.82	22d.
Kodiak <sup>1</sup> .....	29.72	-0.15	30.24	15th.....	29.28	5th.
Midway Island <sup>1</sup> .....	30.09	0.00	30.18	21st <sup>1</sup> .....	29.96	4th-5th.
Honolulu.....	30.07	+0.01	30.17	27th.....	29.89	3d.
Juneau.....	29.93	-0.06	30.33	3d.....	29.45	27th.
Tatoosh Island.....	30.00	-0.04	30.33	2d.....	29.75	10th.
San Francisco.....	29.95	-0.03	30.13	21st.....	28.73	25th.
San Diego.....	29.94	+0.01	30.06	27th.....	29.73	25th.

<sup>1</sup> P. m. observations only.

<sup>2</sup> For 30 days only.

<sup>3</sup> And other dates.

No tropical storms have been reported as occurring during May off the lower American coast or in the Far East. Low pressure, incident to the season, prevailed off the China coast.

In the Hawaiian area the weather was largely dominated by the great anticyclone to the northward. At Honolulu, the prevailing wind was east, with a maximum velocity at the rate of 32 miles an hour from the same direction, on the 7th. This was the second highest maximum velocity ever recorded in May. The average velocity was 10 miles an hour. The rainfall was less than the normal, though the skies were well clouded, as they were during May over a considerable part of the North Pacific.

A considerable amount of fog was encountered by vessels along the northern routes in west longitudes, and between the 30th and 50th parallels in east longitudes. In the latter region there was a considerable increase in the occurrence of fog over that of April. A report from the American S. S. *West Cajoot*, Hongkong to San Francisco says: "From May 1 to May 7, inclusive, in 38° N., 153° E. to 167° W., experienced approximately 75 per cent fog, mostly low and very wet." Little fog was noted on the Asiatic or American coasts, except that it was observed on six days outside of San Francisco Harbor.

DETAILS OF THE WEATHER IN THE UNITED STATES

GENERAL CONDITIONS

A shortage of precipitation was rather general in central and eastern districts and curiously enough there were very generous rains in California, sufficiently heavy to injure the crops locally in that State.

In eastern districts an outburst of summer temperatures was experienced on the 23d-24th. This outburst was suddenly brought to a close by a wave of cool weather that swept southward on the 25th-26th. On the whole the month was warm in the West and cool in the East, the Rocky Mountains being an approximate dividing line.—A. J. H.

CYCLONES AND ANTICYCLONES

By W. P. DAY

The number of low-pressure areas charted during the month was less than the normal and these lows were generally of little intensity. In contrast, the high-

pressure areas, though about normal in number, were important in their effects. They were also unusual in being in nearly every case of the type that pushes southward from the Canadian interior, masses of cool air of immediate polar origin. The migratory Pacific type of high, which is usually common at this season, was hardly noted. The effect of this succession of Canadian-interior highs was a series of marked depressions in temperature throughout the month, the greatest departure from the normal occurring in connection with the high of May 24-27.

FREE-AIR SUMMARY

By V. E. JAKL

Changes in free-air temperatures from day to day during the month at the various aerological stations were similar to those on the ground, except that the magnitude of these changes was as a rule less aloft than near the surface. Notwithstanding these changes, some of which