

551.506 (265.2)

NORTH PACIFIC OCEAN

By WILLIS EDWIN HURD

The Aleutian LOW, as in March, was centered over the archipelago southwest of Alaska. The pressure over the region had risen greatly, but remained much below the normal. Along the American coast east of the 140th meridian it diminished somewhat. In consequence of these two pressure changes, the intensity of the gradient noted for the previous month between Dutch Harbor and Juneau had now given place to a more usual condition. The anticyclone, normally central northeast of Hawaii, now extended in an elongated formation from the coast of California to the low latitudes west of the 180th meridian, with the crest overlying Midway Island. During the first decade of April the eastern part of the area occupied by this average HIGH was dominated by a cyclone, but after the latter's disappearance, the HIGH resumed its position, and continued there until the end of the month. The Asiatic HIGH showed distinct signs of weakening, and during more than half of the month pressure was low along the China coast.

The table herewith shows pressure values at several inland and coast stations:

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level at indicated hours, North Pacific Ocean, April, 1926

Station	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	<i>Inches</i>	<i>Inch</i>	<i>Inches</i>		<i>Inches</i>	
Dutch Harbor ¹	29.50	-0.33	30.16	1st.....	28.86	17th.
St. Paul ¹	29.74	-0.06	30.26	2d.....	29.22	17th.
Kodiak ¹	29.63	-0.17	30.26	1st.....	28.88	18th.
Midway Island ¹	30.13	+0.03	30.28	3d.....	29.82	9th.
Honolulu ²	30.06	0.00	30.15	5th.....	29.84	1st.
Juneau ²	29.88	-0.08	30.32	23d.....	29.45	8th.
Tatoosh Island ²	29.98	-0.06	30.47	23d.....	29.36	7th.
San Francisco ²	29.96	-0.08	30.22	19th.....	29.44	7th.
San Diego ²	29.96	0.00	30.09	19th.....	29.74	5th.

¹ P. m. observations only.

² A. m. and p. m. observations.

³ Corrected to 24-hour mean.

The disturbance which lay over the California-Hawaiian routes from the 1st to the 8th was meteorologically the most important development during April. This cyclone, which originated on the 26th of March, northeast of Hawaii as a secondary to the Aleutian LOW dwindled, and lay dormant somewhat south of its point of origin until April 3, when it acquired new energy, and on that day caused moderate northwest gales 200 miles or so northeast of Hawaii. On the 4th to 7th gales of

force 8 to 10 were more or less widespread over all but the extreme eastern and western portions of the area between the islands and the coast, and on the 8th the coast region was stormy as the LOW entered the continent. The highest wind of the period was a west-northwest gale of force 11 which blew from 2 p. m. until midnight of the 7th near 39° N., 134° W. Extraordinarily heavy rains over central and southern California accompanied this disturbance. At San Diego the precipitation was the greatest on record for April.

On the 16th and 17th another secondary of the Aleutian cyclone formed off the Washington and Oregon coasts. Pressures fell only moderately, but during the forenoon of the 17th hurricane squalls were experienced near 39° N., 139° W. Other occurrences of moderate to strong winds were reported in west longitudes on several days and are noted in the table of gales.

West of the 180th meridian gales occurred along the routes north of the 30th parallel on at least 19 days. Of the several storms, some of which entered the ocean by way of Japan, that of the 4th to the 6th in higher latitudes was the severest. The American steamer *Wheatland Montana* was the most heavily involved in this cyclone, experiencing a whole SE. gale on the night of the 4th-5th, near 47° N., 170° E., and a SW. hurricane 24 hours later, near 47° N., 172° E., lowest pressure 28.86 inches. The storm was accompanied by squalls of sleet and snow, interspersed with banks of passing fog. Rain, hail, snow, and sleet occurred in connection with stormy conditions west of midocean until the end of the month.

No gales thus far have been reported for April from the tropics.

At Honolulu the prevailing wind was northeast, the first change from east in many months. The maximum velocity was 29 miles from the east, on the 13th. Precipitation was slight, totaling 0.74 inch, of which 0.64 fell during a kona on the 11th. Thus, as noted by the observer, "unprecedented drouth continued."

No snow fell at Juneau during the month, which is unusual. Along the California coast abnormally warm weather prevailed, San Francisco and San Diego reporting the highest average April temperatures of record.

Fog showed a general and considerable increase over that of March, especially in the region between 165° east longitude and Japan. It was observed on several days off the China coast, and off most of the American coast south of the 52d parallel. On the 2d it occurred west of Costa Rica, and on the 10th in the Bay of Panama. On the 4th and 5th dense fog was encountered less than a degree south of the Equator near 90° west longitude.

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DETAILS OF THE WEATHER IN THE UNITED STATES

GENERAL CONDITIONS

The single outstanding feature of the month's weather was the pronounced depression of the barometer over the northeast Pacific. In the region usually occupied by the statistical anticyclone of the eastern Pacific mean pressure was but 30.01 inches. Probably as a direct result of this disturbance of the normal pressure distribution over the Pacific, and incidentally over the western fringe of the United States, unprecedented rains for April fell in southern California and also in the Great Valley as far north as Red Bluff.

The month was exceptionally warm west of the Rocky Mountains and cool to the eastward (see Chart III of this REVIEW).

Precipitation was generally deficient as shown by the inset on Chart IV.

CYCLONES AND ANTICYCLONES

By W. P. DAY

Seventeen well-defined disturbances were charted during April, but only one or possibly two were important as storms. Ten of these LOWS were of the Alberta type, often dipping down over the Lake region as they moved eastward.

Eight of the 10 HIGHS plotted were of the Alberta or Canadian interior type. These caused frequent alternations in temperature, and considerable cool weather over eastern and southern sections, but individually the HIGHS were of only slight or moderate proportions, and with the exception of the HIGH central over Kentucky on the morning of the 20th, did not produce any unusually low temperatures.