

Ocean gales and storms, March, 1925

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									
<i>North Atlantic Ocean</i>													
Eldena, Am. S. S.	Galveston	Bremen	35 05 N.	74 22 W.	1st	3 p., 1st.	1st	29.65	ESE	S, 11	WSW	S, 11	S.-W.
Dio, Am. S. S.	Tampa	Barcelona	38 10 N.	62 30 W.	2d	Midt., 2d.	4th	29.67	SSW	S, 7	SSW	SW, 11	S.-SW.
Lackawanna, Br. S. S.	New York	Birkenhead	46 35 N.	38 19 W.	1st	7 p., 1st.	3d	29.34	NW	NW, 8	SE	NNW, 11	NW.-N. SE.
Cripple Creek, Am. S. S.	Galveston	Genoa	39 36 N.	25 46 W.	3d	2 p., 3d.	6th	30.01	SE	SE, 7	E	E, 9	SE.-E.
Carlton, Am. S. S.	do.	Gibraltar	35 30 N.	72 15 W.	5th	7 p., 5th.	7th	29.82	SSE	SSE, 7	E	E, 10	Steady.
Nubian, Br. S. S.	do.	Liverpool	32 53 N.	73 56 W.	5th	3 p., 5th.	6th	29.60	N	N, 6	NE	N, 12	NNW.-N.
Wellfield, Br. S. S.	London	New Orleans	31 51 N.	53 50 W.	10th	Midt., 10th.	11th	29.50	SW	SW, 3	NNE	NNE, 8	Steady.
Hellig Olav, Br. S. S.	Oslo	Halifax	55 32 N.	30 10 W.	16th	6 p., 11th.	12th	29.50	S	SSW, 9	W	SSW, 9	S.-SW.-W.
El Kantara, Fr. S. S.	Marseille	Colon	35 50 N.	6 05 W.	13th	13th.	13th	29.71	E	E, 10	SE	E, 10	Steady.
Bolton Castle, Br. S. S.	Algiers	New York	34 08 N.	18 30 W.	12th	3 a., 13th.	13th	29.71	NE	NE, 9	N	NE, 9	NE.-N.
Am. Trader, Am. S. S.	New York	London	42 07 N.	61 00 W.	14th	7 a., 15th.	15th	29.75	SSW	WSW, 7	NW	SSW, 9	SW.-W.
Hera, Am. S. S.	Baton Rouge	Marseille	33 32 N.	56 18 W.	16th	6 p., 16th.	17th	30.35	NE	NE, 7	NE	NNW, 9	NE.-E.
El Kantara, Fr. S. S.	Marseille	Colon	30 37 N.	23 05 W.	15th	17th.	16th	30.47	SSE	S, 9	W	SW, 10	Steady.
Bolton Castle, Br. S. S.	Algiers	New York	32 58 N.	42 00 W.	17th	9 p., 17th.	19th	30.12	NE	NE, 9	NNE	NNE, 9	Steady.
Minnewaska, Br. S. S.	New York	London	45 04 N.	35 41 W.	18th	10 p., 18th.	19th	30.13	NE	NE, 9	E	NE, 9	NE.-ENE.
Andania, Br. S. S.	do.	Plymouth	42 50 N.	41 40 W.	18th	6 a., 18th.	21st	30.23	NW	NNE	ENE	N, 10	NE.-N.-NE.
Howick Hall, Br. S. S.	Norfolk	Liverpool	43 17 N.	41 36 W.	19th	4 p., 21st.	23d	30.07	NNE	E, 7	ESE	E, 9	E.-ESE.
Barendrecht, Du. S. S.	New Orleans	Barcelona	38 56 N.	32 06 W.	23d	4 a., 23d.	24th	29.82	E	E, 7	S	E, 8	F.-SE.
Antinous, Am. S. S.	Liverpool	Mobile	35 54 N.	35 06 W.	23d	4 a., 24th.	24th	29.90	SE	SE, 8	NNE	N, 9	Steady.
Clan Malcolm, Br. S. S.	Fremantle	Dunkirk	37 04 N.	9 00 W.	24th	6 a., 24th.	24th	29.64	NNE	N, 8	NNE	N, 9	Steady.
Cynthia, Br. S. S.	Philadelphia	Lisbon	40 00 N.	57 00 W.	24th	8 a., 25th.	27th	29.41	SW	SW, 9	W	SW, 9	S.-W.-WSW.W.
West Gotonska, Am. S. S.	Copenhagen	Baltimore	37 10 N.	42 33 W.	26th	9 a., 27th.	27th	29.42	SE	SE, 9	SSW	SE, 9	SE.-S.-SSW.
Maine, Dan. S. S.	Newcastle	Havana	42 24 N.	38 46 W.	26th	8 a., 27th.	28th	29.77	NW	NW, 10	NW	NW, 10	Steady.
Gulfoast, Am. S. S.	Port Arthur	Savannah	30 30 N.	79 40 W.	27th	9 p., 27th.	28th	29.61	SSE	SSW	W	SSW, 10	Steady.
Madonna, Fr. S. S.	Lisbon	Providence	38 30 N.	61 20 W.	29th	2 p., 29th.	29th	29.61	SSE	SSE, 8	S	SSE, 9	Steady.
Wellfield, Br. M. S.	New Orleans	France	34 10 N.	62 26 W.	30th	5 a., 31st.	31st	29.70	SSE	SSE, 8	S	SSE, 9	Steady.
<i>Mediterranean Sea</i>													
Silverlarch, Br. S. S.	Penang	New York	37 15 N.	4 30 E.	25th	4 p., 25th.	26th	29.33	NW	WSW, 7	WNW	NW, 8	NW.-W.-WNW
<i>Indian Ocean</i>													
Clan Mackellar, Br. S. S.	Mauritius	Bunbury, Australia	27 30 S	89 22 E.	4th	4 p., 5th.	5th	29.87	S	S, 8	SSE	S, 8	Steady S.
<i>North Pacific Ocean</i>													
West Niger, Am. S. S.	Japan	Astoria, Ore.	43 03 N.	177 57 W.	Feb. 28	8 a., 28th.	1st	28.90	SE	SE, 9	WSW	WSW, 10	SE.-SW.
Iyo Maru, Jap. S. S.	Victoria	Yokohama	51 12 N.	153 22 W.	Feb. 28	10 p., 2d.	2d	28.61	S	SSW, 9	SW	SW, 10	S.-SE.-S.-SW.
Ayaha Maru, Jap. S. S.	Japan	Willapa, Wash.	48 28 N.	175 45 W.	3d	10 a., 4th.	4th	28.40	S	S, 9	SSW	S, 11	Steady.
Havre Maru, Jap. S. S.	Otaru, Japan	San Francisco	47 50 N.	171 45 E.	3d	6 p., 3d.	5th	28.54	SW	SE, 8	SE	SE, 11	SE.-SW.
Woyo Maru, Jap. S. S.	Karatsu, Japan	Grays Harbor	39 43 N.	168 33 W.	4th	Noon, 8th.	10th	28.86	SW	SW	SW	SW, 10	W.-NW.
West Chopaka, Am. S. S.	Kobe, Japan	San Francisco	46 36 N.	169 52 E.	5th	6 p., 6th.	6th	29.50	SSE	SSE, 11	S	SSE, 11	SSE, steady.
Pres. Garfield, Am. S. S.	San Francisco	Kobe	31 43 N.	142 31 E.	5th	Noon, 5th.	6th	29.72	S	S, 9	NW	WNW, 10	S.-WNW.
Eldridge, Am. S. S.	Tsingtau, China	Seattle	40 42 N.	153 30 E.	5th	11 p., 6th.	8th	29.15	NNW	NE, 10	WNW	N, 12	E.-NW.
M. S. Dollar, Can. S. S.	San Francisco	Kobe	32 44 N.	149 55 E.	5th	7 p., 5th.	8th	29.66	S	SSW, 8	NW	WNW, 8	WNW, 10 pts.
West Sequana, Am. S. S.	do.	Yokohama	31 14 N.	174 30 W.	6th	2 a., 7th.	7th	29.99	S	WNW, 8	N	WNW, 8	WNW, 10 pts.
Tokiwa Maru, Jap. S. S.	Yokohama	Victoria	48 12 N.	177 E.	7th	8 a., 7th.	7th	28.21	SE	SE, 4	SE	SE, 9	Steady.
Ayaha Maru, Jap. S. S.	Meike, Japan	Willapa, Wash.	48 56 N.	166 W.	6th	Midt., 6th.	7th	29.71	S	S, 9	SSE	S, 9	Steady.
Capsa, Am. S. S.	Yokohama	San Francisco	42 N.	167 E.	8th	2 a., 9th.	9th	28.78	ESE	W, 10	NW	W, 12	Steady W.
Oridono Maru, Jap. S. S.	Nagasaki	Coos Bay	41 25 N.	166 45 E.	8th	11 p., 8th.	10th	28.74	S	W, 9	NW	W, 9	Steady W.-WNW.
Arizona Maru, Jap. S. S.	Yokohama	Victoria	41 22 N.	153 49 E.	11th	8 p., 13th.	15th	28.91	WSW	NNE, 9	W	NNW, 10	NE.-NW.
Eldridge, Am. S. S.	Tsingtau	Seattle	45 47 N.	164 47 E.	11th	11 p., 11th.	12th	29.10	W	W, 10	SW	W, 12	Steady.
Tahchee, Br. S. S.	Manila	San Francisco	34 45 N.	150 E.	12th	5 p., 12th.	13th	29.22	S	WSW	NNW	NNW, 10	WSW.-NW.
Pres. Madison, Am. S. S.	Seattle	Yokohama	45 07 N.	159 25 E.	14th	1 a., 14th.	14th	29.10	ENE	N, 7	NW	NNW, 10	ENE.-N.-NW.
Manoa, Am. S. S.	San Francisco	Honolulu	27 35 N.	148 W.	13th	3 p., 13th.	15th	29.84	ESE	ESE, 6	SE	SE, 8	Steady.
Yokohama Maru, Jap. S. S.	Yokohama	Victoria	49 40 N.	169 W.	21st	4 a., 21st.	22d	29.29	SSE	SSW, 8	SW	SSW, 8	Steady.
Java Arrow, Am. S. S.	Swatow, China	San Francisco	38 20 N.	157 32 E.	25th	11 p., 25th.	26th	29.44	SSE	SSW, 7	WSW	S, 10	S.-SW.-W.
Meton, Am. S. S.	Cebu, P. I.	Portland	46 55 N.	174 33 E.	26th	2 p., 27th.	27th	29.39	SE	S, 7	S	S, 10	Steady.
Akagisan Maru, Jap. S. S.	Yokohama	San Francisco	45 05 N.	166 56 E.	26th	7 a., 27th.	27th	28.64	SE	SSW, 10	WSW	SSW, 10	SE.-S.-SW.
Mauna Ala, Am. S. S.	Port Allen, T. I.	do.	34 N.	134 W.	28th	4 a., 26th.	29th	30.06	WNW	NW, 8	W	NW, 8	NW.-W.
Meton, Am. S. S.	Cebu	Portland	49 31 N.	169 W.	29th	Noon, 29th.	30th	29.22	SSE	S, 10	W	SE, 11	SSE.-SSW.
Java Arrow, Am. S. S.	Swatow	San Francisco	38 11 N.	177 18 E.	29th	Midt., 29th.	30th	29.59	S	SW, 8	NW	SW, 8	SW.-W.
Kongosan Maru, Jap. S. S.	Otaru, Japan	do.	45 N.	139 05 W.	29th	Noon, 29th.	30th	29.81	NW	NW, 8	N	NW, 10	NW.-N.
Akagisan Maru, Jap. S. S.	Yokohama	do.	47 21 N.	175 54 W.	29th	6 a., 29th.	31st	28.87	SE	SW, 8	WNW	SE, 9	S.-WSW

NORTH PACIFIC OCEAN

By WILLIS EDWIN HURD

Following upon the abnormal pressure distribution over the eastern half of the North Pacific Ocean during February, March saw the anticyclone lying between the Hawaiian Islands and the California coast occupying its usual position practically throughout. In consequence, few cyclonic gales occurred in this region except along its boundaries. About the 13th low pressure developed near Hawaii, deflecting the trades for three or four days in this neighborhood and to the northward, and causing isolated moderate gales before it died out or passed into

the Aleutian Low on the 17th. During the last few days of the month a development of low pressure along the American coast disturbed the eastern area traversed by the California-Honolulu steamer routes, where it caused similar moderate gales along this periphery of the HIGH.

Owing largely to the great strength of the anticyclone, Honolulu experienced the windiest March on record. The average hourly velocity was 11.3 miles, and the highest velocity was at the rate of 36 miles an hour, from the east, on the 29th. Here, during the last twelve days of the month, especially strong east winds blew almost continuously in connection with the HIGH.

In the Aleutian region the center of low pressure lay nearly over or slightly to the westward of Dutch Harbor, and on several days during the first third of the month was sufficiently active to occasion storm to hurricane winds over an area roughly embraced between the 45th and 50th parallels, and from the 180th meridian eastward to longitude 165° W. The Low had decreased greatly in activity during the last half of March. A secondary low occurred intermittently over the Gulf of Alaska, and from it cyclones entered the continent on the 1st, 4th, 7th, 14th, 19th, 21st, 23d, and 26th. Few gales were reported from this area, however. In fact, comparatively little stormy weather occurred east of the 160th meridian of west longitude. West of it, in addition to the area of violent storm already alluded to, the square roughly bounded by the 35th and 50th parallels, 150th and 170th meridians of east longitude, was the scene of an equally violent storm from the 8th to the 11th. The following report from the American tank steamer *Cypsa*, Yokohama to San Francisco, T. N. McLeod, master, G. Watts, navigating officer and observer, will serve as an index to the roughness of the weather of this period:

*March 8, 1925.*—8 hours, ESE. 5, 29.74. Moderate westerly swell, overcast sky, sleet, visibility moderate. Noon, position by D. R., 42° 10' N., 167° E. SSE. 9, 29.32. Moderate to heavy sea, overcast, moderate visibility. 13 hours, SE. 10, 29.20. Weather conditions indicating cyclone in vicinity. Reduced to half speed and hove to, starboard tack, heading ESE. 14 hours, SE. 11, 29.15. 15 hours, SE. 11, 29.10. 16 hours, SSW. 11, 29.00. Mountainous sea, very heavy rain with severe squalls. 17 hours, SW. 10, 29.00. Vessel heading SSE. 18 hours, SW. 8, 29.03. 19 hours, SW. 7, 29.00. 20 hours, SW. by W. 7 to 6, 28.97. Vessel hove to heading S. by E., labouring heavily to mountainous sea, violent rain squalls. 21 hours, WSW. 8, 28.98. Vessel heading S. by E. 22 hours, W. by S. 7, 29.00. Vessel heading south. 23 hours, W. 8, 28.98. Vessel heading south. Midnight, W. 8, 28.91. Vessel heading south, labouring and straining heavily to mountainous confused sea, violent squalls.

*March 9.*—1 hour, W. 8, 28.87. Hove to heading south, riding to mountainous sea; 1.20, engines eased to slow ahead. 2 hours, W. 9, 28.78. 3 hours, W. 10, 28.78. Vessel heading SW. 3.30 hours, W. 12. Very fierce squalls, with heavy rain and hail. Centre passed vessel's stern, traveling NE. by N. 3.45 hours, W.

by N. 11. Barometer rising. 4 hours, WNW. 12, 29.03. Vessel hove to heading SW. by W., mountainous sea, fierce squalls. 5 hours, NW. by W. 11, 29.15. 6 hours, NW. 10, 29.40. 7 hours, NW. 9, 29.43. 8 hours, NW. 8, 29.50. Vessel hove to heading SW. by W., very heavy sea, cloudy sky, clear weather.

The various reports indicate more frequent and heavier snow squalls over the western half of the northern sailing routes than during any previous month of the season.

No information is at hand indicative of storms of a tropical nature in the Far East.

Along the western coast of Mexico and Central America conditions were quiet, no vessel reporting a single gale in these waters.

Except over the central Aleutians, pressure was practically normal at the island stations usually considered in connection with this meteorological element. At Dutch Harbor the average 8 p. m. pressure was 29.63 inches, or 0.11 inch less than the normal. The extremes were 30.42, on the 26th, and 28.56, on the 20th. To the eastward, at Kodiak, the average pressure was 29.76, or 0.01 inch above the normal. Here the extremes were 30.28, on the 11th, and 28.80, on the 3d. At Midway Island the 8 p. m. average was 30.09, or also plus 0.01 inch. The extremes were 30.34, on the 30th, and 29.82, on the 13th. A similar plus departure of 0.01 inch occurred at Honolulu, the average being 30.03, and the extremes, 30.17, on the 30th, and 29.75, on the 13th, these dates coinciding with those of similar data at Midway Island.

Fog was observed over nearly all parts of the ocean north of the 30th parallel, though most frequently east of the 170th meridian west. Here, especially between the 45th and 52d parallels, eastward to the 140th meridian, fog was entered by vessels on nearly every day from the 4th to the 20th. Along the American coast less fog was reported than in February—none from southern waters, and little north of San Francisco. Between San Francisco and the 30th parallel fog was noted by steamers on nine days.

## DETAILS OF THE WEATHER IN THE UNITED STATES

### GENERAL CONDITIONS

ALFRED J. HENRY

March, 1925, like February, its immediate predecessor, was characterized by above-normal temperature in all parts of the country save the extreme southern tip of Florida. It was the second month of above-normal temperature in all parts of the country—a rare occurrence. The drought continued and was especially severe in the Gulf States and the Southwest.

A characteristic of both February and March, 1925, was the lack of intensity in the cyclones which gave character to those months. In March, 90 per cent of the cyclones decreased in energy with movement toward the Atlantic seaboard and a relatively large percentage did not reach the coast line. The usual details follow.

### CYCLONES AND ANTICYCLONES

By W. P. DAY

The rapid fluctuations in pressure and temperature which characterized February continued in lessening degree during March. The number of lows charted was about the same as in January and February, but there was a falling off in the number of highs. Two important

storms affected interior districts, one which developed over the Southwest on the 12th and moved northeastward to Eastport, Me., by the night of the 14th, and another, originating over the Pacific, but of little importance until it had swung southeastward across the Rocky Mountains, which developed considerable intensity during the evening of the 18th as it passed over southern Illinois and southern Indiana. It was at this time that several very severe tornadoes occurred, their tracks paralleling that of the major disturbance. A typical Spring high developed and spread southward over the Lake region between the 20th and the 1st of April.

### FREE-AIR SUMMARY

By V. E. JAKL

It will be seen from Tables 1 and 2 that free-air conditions in March corresponded quite closely with the normal. This applies to the averages for all elements, for while there was a general excess in temperature at all stations for all levels, the departures were unimportant, being in no case more than two whole degrees above normal. The averages of relative humidity and vapor pressure for the upper air also show that while the month was drier than usual, the departures were unimportant.