

551,506 (261.1)

WEATHER OF THE MONTH.

WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month of January was considerably above the normal at land stations in the Azores; slightly above in the West Indies and on the shores of the Gulf of Mexico; nearly normal along the American coast from Nova Scotia to Florida, and considerably below at St. Johns, Newfoundland, and Lerwick, Scotland.

The number of days on which winds of gale force were reported, was as a whole, not far from the normal over the entire ocean, and the month was characterized by a succession of gales over different portions of the steamer lanes, with infrequent intervals of comparatively moderate weather.

There were few fog reports received from vessels, although it was recorded frequently by land stations in the British Isles.

On the 2d, there was a disturbance central near mid-ocean, and moderate gales covered a large area, which extended as far south as the 30th parallel. From the 3d to the 9th there was apparently an area of low pressure in the northeastern section of the ocean, although it was impossible to determine its center and extent accurately on account of lack of observations. A number of vessels in widely scattered localities experienced heavy weather during this period, as shown by the following storm logs:

British S. S. *Vasconia*:

Gale began on the 2d. Lowest barometer 29.43 inches at 2 a. m. on the 3d; position, latitude 50° 41' N., longitude, 20° 33' W. End of gale on the 3d. Highest force of wind 10; shifts near time of lowest barometer S.-SW.

American S. S. *West Chenow*:

Gale began on the 2d. Lowest barometer 29.22 inches at 2 p. m. on the 2d; position, latitude 50° 36' N., longitude 23° 06' W. End of gale on the 5th. Highest force of wind 9; shifts S.-SSW.-NW.

British S. S. *Cairndhu*:

Gale began on the 6th. Lowest barometer 29.22 inches at 6 p. m. on the 6th; position, latitude 57° N., longitude 25° W. End of gale at midnight on the 7th. Highest force of wind 10; shifts NW.-W.

British S. S. *Hartfield*:

Gale began at 7 a. m. on the 6th. Lowest barometer 29.66 inches at 5 a. m. on the 7th; position, latitude 35° 26' N. longitude 56° 50' W. End of gale on the 7th. Highest force of wind 10; shifts SW.-NW.

Japanese S. S. *Tomiura Maru*:

Gale began on the 7th. Lowest barometer 29.91 inches at 6 a. m. on the 8th; position, latitude 33° 10' N., longitude 42° 40' W. End of gale on the 8th. Highest force of wind 10; shifts SSE.-S.-W.-NW.

The observer on the British S. S. *West Hampton* states, that on the evening of the 6th Bell of Portland light was visible at 35 miles, and flare of Ushant was sighted at 63 miles.

Charts IX, X, and XI show the conditions on January 10, 11, and 12, respectively, during which period exceptionally severe weather was experienced over a large portion of the ocean. Storm logs follow:

British S. S. *Hartfield*:

Gale began on the 9th. Lowest barometer 29.75 inches at 7 a. m. on the 11th; position, latitude 36° 10' N., longitude 68° 06' W. End of gale at midnight on the 11th. Highest force of wind 9; shifts S.-SW.-NW.

British S. S. *Saturnia*:

Gale began on the 8th. Lowest barometer 29.60 inches at noon on the 8th, while in the Irish Channel. End of gale on the 11th. Highest force of wind 10; shifts SW.-W.

British S. S. *Cairndhu*:

Gale began on the 10th. Lowest barometer 29.34 inches at 4 p. m. on the 10th; position, latitude 50° 20' N., longitude 45° 02' W. End of gale on the 12th. Highest force of wind 12; shifts NNW.-NW.

American S. S. *West Alcoz*:

Gale began on the 9th. Lowest barometer 29.67 inches at 10 a. m. on the 10th; position, latitude 49° N., longitude 15° W. End of gale at 6 p. m. on the 10th. Highest force of wind 10; shifts SW.-WNW.

Belgian S. S. *Eglantier*:

Gale began on the 11th. Lowest barometer 29.80 inches at 4 a. m. on the 11th; position, latitude 35° 45' N., longitude 67° 20' W. End of gale on the 11th. Highest force of wind 11; steady from SW.

Dutch S. S. (tanker) *Rotterdam*:

Gale began on the 12th. Lowest barometer 29.79 inches at 5 a. m. on the 13th; position, latitude 47° 59' N., longitude 35° 40' W. End of gale on the 13th. Highest force of wind 11; shifts to SSW.-W.-WNW.

On the 13th a number of vessels in the vicinity of the Bermudas encountered northerly gales, and there was also a disturbance central about 400 miles east of St. Johns, N. F. Storm logs follow:

Japanese S. S. *Tomiura Maru*:

Gales began on the 12th. Lowest barometer 29.85 inches at 6 a. m. on the 13th; position, latitude 34° 24' N., longitude 60° 52' W. End of gale on the 13th. Highest force of wind 10; shifts of wind W.-WNW.-N.

British S. S. *Zeeland*:

Gale began on the 13th. Lowest barometer 28.80 inches at 11 p. m. on the 13th; position, latitude 44° 05' N., longitude 40° 34' W. End of gale at 8 a. m. on the 15th. Highest force of wind 12; shifts SW.-NW.

On the 14th there was an extensive storm area over the steamer lanes, between the 25th and 50th meridians. On the same day vessels in the western part of the Gulf of Mexico encountered a "norther" of a velocity of from 40 to 55 miles an hour. On the 15th vessels in the region between Charleston and the 75th meridian experienced severe gales, as shown by the daily journal of the American S. S. *Comus*:

7 a. m., January 15: Position, latitude 30° N., longitude 79° 35' W.; westerly gale with rain squalls, moderate sea and cloudy sky. 7 p. m.: Position, latitude 32° 20' N., longitude 77° 45' W.; moderate westerly gale, occasional rain squalls.

From the 16th to the 19th there was a severe disturbance between the 25th meridian and the coast of Scotland, as shown by the following storm log from the Norwegian S. S. *Ranenfjord*:

Gale began at 7 a. m. on the 16th. Lowest barometer 28.89 inches at 3 p. m. on the 17th; position, latitude 58° N., longitude 17° W. End of gale on the 20th. Highest force of wind 12; shifts not given.

On the 17th there were moderate westerly and south-westerly gales along the American coast between Nantucket and Hatteras. From the 21st to the 24th southerly gales prevailed over the middle and eastern sections of the steamer lanes. The storm log from the British S. S. *Maine* follows:

Gale began on the 21st. Lowest barometer 29.16 inches at 1 p. m. on the 23d; position, latitude 45° 34' N., longitude 35° 36' W. End of gale on the 24th. Highest force of wind 11; shifts SSE.-W.

On the 24th a low was central near Sydney, Nova Scotia, and the storm area extended as far south as the 35th meridian. Storm log from the American S. S. *The Angeles* follows:

Gale began on the 23d. Lowest barometer 29.80 inches on the 24th; position, latitude 35° 20' W., longitude 62° 40' W. End of gale on the 26th. Highest force of wind 10; shifts WSW.-WNW.

Charts XII and XIII show the conditions for January 25 and 26, respectively, and on the latter date heavy weather was the rule over the greater part of the ocean between the 35th and 50th parallels and the 30th and 65th meridians.

On the 28th moderate northeasterly gales were reported from a limited area in the vicinity of Hatteras, and on the 29th westerly winds of gale force were encountered by vessels near latitude 47°, longitude 33°. On both of these dates, with the exceptions stated, moderate weather prevailed. The conditions were similar on the 30th and 31st except for a small area between the 15th meridian and the French coast where a few vessels reported northwesterly gales. The storm log from the Danish S. S. *Pennsylvania* follows:

Gale began on the 30th. Lowest barometer 29.42 inches at 4 p. m. on the 30th; position, latitude 46° 25' N., longitude 13° 30' W. End of gale on the 31st. Highest force of wind 9; shifts WNW.-NW.

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NORTH PACIFIC OCEAN.

By F. G. TINGLEY.

The abnormally low pressure which prevailed at Midway Island during the last decade of December gave way to high pressure at the beginning of January and this continued throughout the month. During the middle decade readings above 30.40 inches were recorded on several days. A similar change in pressure occurred at Dutch Harbor. At Honolulu pressure was somewhat above normal during the first half of the month and slightly below, on an average, during the latter half.

As would be inferred from the general change in pressure distribution the weather of the month was not so persistently stormy as was that of December, especially along the northern steamer route, although gales prevailed there on several occasions. On the other hand, unusual northeast gales occurred in the lower latitudes, especially during the period of highest pressure at Midway Island, or from the 10th to 17th, inclusive.

The opening days of the month brought an abatement of the severe gales which had swept the western part of the North Pacific during the last decade of December, reference to which was made in the review of the weather for that month. Relative quiet then prevailed until about the 8th, when reports indicate the renewal of storm conditions. Thereafter for several days vessels on the northern steamer routes experienced moderate to strong gales. During the 8th and 9th these occurred over the eastern portion of the ocean and were occasioned by a depression over southwestern Alaska. During the same dates and continuing until the 12th they were due to a series of depressions which advanced over Japan and the Kurile Islands. Following is the storm log of the Japanese S. S. *Sumatra Maru*, Capt. J. Nishida, Yokohama (January 5) for San Francisco, covering the 11th and 12th:

Gale began on the 11th; lowest barometer, 29.47 inches at 8 a. m. of the 12th in latitude 43° 59' N., longitude 161° 17' E.; highest force of wind, 11, from SSE.; shifts of wind, SSE.-S.-SW.-WSW.

According to Observer K. Tsujimura, the *Sumatra Maru* also had heavy weather on the 8th and 9th, 15th and 16th, and 24th.

The northeast gales in the lower latitudes which accompanied the high pressure in mid-ocean, already referred to, were experienced by several vessels which furnish meteorological reports to the Weather Bureau. A special report has also been furnished by Capt. Albert Wilson of the American S. S. *West Neris*, as follows:

The S. S. *West Neris*, en route on the circle from Van Diemen Strait to Honolulu, encountered in latitude 25° 45' N., longitude 179° 30' W., a violent gale with heavy squalls and a big sea, beginning from NE., true, at 10 p. m. January 12, shifting to ENE. the following day and ending at E. on January 17, 2 a. m. (five consecutive days) in latitude 22° 20' N., longitude 169° 30' W.

The *West Neris* during the above-mentioned dates was driven 110 miles south of her position on the circle, being unable to bear up to her course, the vessel being light.

The barometer on the *West Neris* for the five days commencing with the 12th read as follows: 30.32, 30.36, 30.38, 30.32, 30.24 inches, at Greenwich mean noon.

The American S. S. *Columbia*, Capt. Thomas Blair, Yokohama for Honolulu, had a similar experience. Mr. Elb, the observer, states that the northeast gale which began on the 12th in longitude 177° 30' E. was still raging when the vessel came under the lee of the Hawaiian Islands on the 18th.

The American S. S. *West Hika*, Capt. H. Paulsen, Manila for Honolulu, also encountered these gales. Mr. H. C. Olsen, third officer and observer, states that they were caused by exceptionally strong trades.

These northeast gales were not confined to midocean. During the period from the 19th to the 26th the Norwegian M. S. *Theodore Roosevelt*, Capt. Eric Thomle, Caleta Buena (Chili) for Honolulu, had continuous fresh to strong NE. gales when between latitude 8° N., longitude 128° W. and latitude 20° N., longitude 153° W. During the whole time the barometer was very steady at about 30.16 inches.

On the 15th and 16th the Dutch S. S. *Eibergen*, Capt. W. H. de Forge, Portland (Oreg.) for Panama, at about latitude 14° N., 96° W., experienced a northeast storm, force 11, with high to phenomenal sea.

It is interesting to note that just previous to the commencement of these northeast gales in the North Pacific there had been a period of strong westerly winds in portions of the South Pacific, as reported by the Dutch S. S. *Rotti*, Capt. J. P. Scholtes, Macassar for Newcastle (N. S. W.). Mr. Cj. Mulder, observer on the *Rotti*, states that from January 4, when in latitude 9° 24' S., longitude 132° 14' E., until entering Torres Strait, on the 9th, a very strong SW. monsoon was experienced, the force varying generally from 5 to 7 and reaching 8 during squalls.

On the 28th and 29th several vessels off the northwest coast of the United States were involved in the disturbance, which, on the 29th, occasioned the record-breaking winds on the mainland. A velocity of 132 miles an hour was recorded at the North Head (Wash.) station before the instruments were carried away. The extreme velocity was estimated by the observer at 150 miles an hour.

The American M. S. *Sierra*, Capt. Olaf A. Janson, Bellingham for Callao, was proceeding down the coast at the time and felt the full force of the gale. Observer John Behrsin has furnished the following report:

At 9 a. m. on the 29th the wind, which previously had died down to force 3, increased to force 5, SSE.; by noon it had increased to force 12 and changed to S. and a little later to WSW., when it started to lose its force. A high and choppy sea was running and the vessel was rolling, pitching, and shipping heavy seas. For a while it seemed that we would lose our deck load of lumber and this would have happened had the wind not moderated when it did. When the wind was at its highest force, between 11 a. m. and 12 noon, the water of the sea was driven in the air in sheets just like heavy rain driven by a strong wind. It was not raining at the time although it was cloudy.

The barometer on board the *Sierra* read as follows: 9 a. m., 29.52 inches; 10:20 a. m., 29.45 inches; 12:55 p. m., 29.22 inches; 3 p. m., 29.50 inches; 8 p. m., 29.70 inches; midnight, 29.75 inches.

At North Head, 150 miles north of the position of the *Sierra*, the barograph trace shows a sharp fall in pressure to a minimum of 28.90 inches shortly after 3:30 p. m., followed by an equally rapid rise. At Tatoosh Island, 150 miles north of North Head, a similar fluctuation of pressure occurred, a minimum of 28.78 inches being recorded at 7 p. m. The observed conditions point to the northward movement of a small secondary depression, of imperfect formation, at a speed of about 50 miles an hour.