

WEATHER OF THE MONTH.

WEATHER OF NORTH AMERICA AND ADJACENT OCEANS.

GENERAL PRESSURE CONDITIONS.

By H. C. FRANKENFIELD, Supervising Forecaster.

[Washington, D. C., Aug. 24, 1920.]

North Pacific Ocean.—At Midway Island there were several slight depressions, but, as a whole, the pressure averaged somewhat above the normal. At Honolulu pressure was generally low until July 20, and moderately high thereafter. The lowest pressure (29.84 inches), occurred on July 11.

Alaska.—Over the Aleutian Islands and northwest Alaska low pressure continued generally throughout the month, with lowest readings of 29.44 inches at Dutch Harbor on July 9, and of 29.26 inches at Nome on July 21. Over southern and northeastern Alaska pressure ruled high, with a principal crest from July 3 to 8, inclusive.

United States.—There was a period of low pressure during the early days of the month, and another lesser one over the northeastern quarter of the country and eastern Canada on July 24 and 25. Otherwise pressure averaged above normal.

North Atlantic Ocean.—Stations of observations at Bermuda and Horta. High pressure prevailed throughout the month, except for a few days over the eastern Atlantic.

NORTH AMERICA.

By H. C. FRANKENFIELD.

Neither cyclones nor anticyclones were of pronounced character. Pressure was above normal, as a rule, and, as stated in the general discussion, there were only two depressions that were worthy of mention. Temperatures were moderate over the eastern half of the country, but rather high, as a rule, over the western half.

Precipitation was abundant from the Atlantic States westward through the Plains States, decreasing gradually to little, or none, west of the Rocky Mountains, except along the north Pacific coast.

NORTH ATLANTIC OCEAN.

By F. A. YOUNG.

The average pressure for the month was nearly normal or slightly above at land stations along the American Atlantic and Gulf coasts, as well as in the West Indies. In the Bermudas and the Azores there was a decided positive departure, while in the vicinity of the British Isles the pressure was slightly lower than usual.

According to reports received, the number of days on which gales were reported was somewhat below the normal, most of them occurring in the first and last decades of the month.

The number of days on which fog occurred was apparently not far from the normal on the Banks of Newfoundland, as well as over the eastern section of the steamer lanes and the American coast.

From July 1 to 11 the North Atlantic HIGH was unusually well developed, it being central during that period over the region between the Azores and Bermudas. No heavy winds were reported until the 5th, when a number

of vessels between the 40th and 50th parallels and the 55th and 65th meridians encountered moderate southwesterly gales.

From the 1st to the 5th fog occurred over widely scattered sections of the steamer lanes, as well as along the American and European coasts, while from the 6th to the 8th it was confined for the most part to mid-ocean, with the exception that on the 8th it was observed at land stations in Nova Scotia and Scotland. By the 9th the fog area had spread over the Banks of Newfoundland, while from the 10th to the 22d the ocean was comparatively free, with the exception of the 20th, when it occurred in mid-ocean.

From the 6th to the 19th practically no gales reports were received, and the pressure was generally high over the greater part of the ocean south of the 50th parallel. On the 20th two vessels near the 40th parallel and between the 62d and 67th meridians encountered southwesterly gales, although high pressure still prevailed. From the 23d to the 26th conditions had changed but little, with high pressure, moderate winds, and not much fog.

On the 27th moderate southwest gales prevailed over a limited region between the 35th and 40th parallels and the 55th and 60th meridians. The observer on the British S. S. *Idaho* reports as follows: "At 7 a. m. fresh southwesterly wind; freshened into SSW. gale with high southwesterly sea. At 3.30 p. m. heavy rain squalls. Wind shifted to west and back to SSW., force 8. At 10.30 p. m. wind shifted to west. Rain squalls cleared and weather moderated."

On the 28th one vessel about 300 miles north of Bermuda reported a strong gale from the WSW., and the British S. S. *Rossano* in northern European waters reports as follows: "Gale began on the 28th. Lowest barometer 28.83 inches at 2 p. m. July 31. Position, 59° 05' N., 13° 48' W. End of gale on the 31st; highest force, 10; shifts of wind near time of lowest barometer reading, WSW-NW." This disturbance remained nearly stationary during the last three days of the month, as shown by Charts IX, X, and XI.

From the 24th to the 28th, and also on the 30th and 31st, little fog was reported, but on the 29th it occurred in the region between the 45th and 50th parallels and the 10th and 35th meridians.

NORTH PACIFIC OCEAN.

By F. G. TINGLEY.

The weather of July on the North Pacific Ocean is usually pleasant, and, on the whole, that for the July just past was no exception to the general rule. At the present writing 133 reports have been received covering various periods of the month and representing a total of 1,143 daily observations made on board vessels plying trans-Pacific routes. In all these reports gales were recorded on only 26 days, as follows: Force seven, 14 times; force eight, 3 times; force nine, 6 times; force ten, 1 time; force eleven, 2 times. Fog was observed on 116 days, which appears to be slightly under the average.

There appears to have been, however, rather more than the ordinary typhoon activity in Asiatic waters. The records for a period of 26 years (1893-1918) which have

recently been published by the Zi-ka-wei Observatory¹ show that during that period a total of 90 typhoons occurred in the month of July. Thus, some three or four of these tropical storms may be expected each year in this month. As nearly as can be judged from reports that have been received, four distinct typhoons occurred in July of this year. This statement is made, however, subject to modification by later reports.

The first of these storms appears to have reached the China coast at a point about midway between Hongkong and Shanghai on the 15th or 16th. The American steamship *Columbia*, Capt. Geo. Dockstader, from Hongkong for Shanghai, was under its influence during the 14th, 15th, and 16th, though not near the center at any time. The *Columbia* left the former port at 4 p. m. on the 14th with a light SW. wind and falling barometer, the reading at that hour being 29.67 inches. The barometer continued to fall steadily, reaching 29.37 inches at midnight of the 15th, the wind, however, continuing light, WSW. During the early morning of the 16th the wind freshened and backed to SSW., force 6. Later, at 4 a. m., it increased to force 10, the barometer at that hour reading 29.20 inches, corrected. This was the lowest reading recorded. By 12 p. m. of the 16th the barometer had risen to 29.55 inches, though subsequently, during the early hours of the 17th, there was a further slight fall to 29.35 inches; this was at 4 a. m. The wind at that hour was ESE., force 5. At noon on the 17th the barometer read 29.64 inches, wind E., light, the *Columbia* at that time nearing Shanghai.

The British steamship *Tyndareus*, Capt. C. B. Francis, from Manila toward Kobe, via Hongkong and Keelung, was also under the influence of this storm during the 14th and 15th. On the 14th (noon position, G. M. T., latitude 27° 29' N., longitude 123° 12' E.) the *Tyndareus* experienced strong N. to NNE. winds with frequent hard squalls and a high, confused sea. The barometer at noon read 29.04 inches, corrected. These conditions continued through the 15th. The lowest barometer recorded was 28.96 inches at 4 p. m. of the 15th, local time, and the highest force of wind 11, from ESE.

¹ Atlas of the Tracks of 620 Typhoons, 1893-1918. Louis Proc. S. J., Shanghai, 1920. Reference to this valuable work will be made in a subsequent issue of the REVIEW.

NOTES ON WEATHER IN OTHER PARTS OF THE WORLD.

British Isles.—* * * The month was wet, cool, and cloudy, with a marked deficiency of sunshine. * * * The general rainfall expressed as a percentage of the average was: England and Wales, 161; Scotland, 104; Ireland, 153. * * *¹

Spain.—Madrid, July 27.—Latest reports from Barcelona indicate that the recent storm which swept northern and northwestern Spain caused damage estimated at millions of pesetas. Numbers of houses and stores collapsed and others were inundated as torrents of water rushed through the streets. Quantities of goods stored on the wharves, including large consignments of German dyes of great value, were washed to sea.—*Brooklyn Daily Eagle*, July 28, 1920.

Mediterranean Region.—In Italy and the eastern Mediterranean the weather throughout the month was fine and warm, temperatures frequently exceeding 90° F., while at Cairo on the 12th a temperature of 101° F. was reached.¹

Iceland.—On the 27th a deep depression approached and remained in the vicinity of Iceland * * * [causing]

Nothing is known as yet regarding the earlier history of this storm.

Information regarding three subsequent typhoons is only meager and is contained in a report received from the U. S. Army Transport *Great Northern*, Capt. L. R. M. Kerr, from San Francisco for Manila, via Honolulu. Capt. Kerr reports that from 5 a. m. of the 21st to 2 p. m. of the 24th the *Great Northern* was hove to at the south end of Paagan Island, Ladrone Group, waiting for three typhoons in the near vicinity to leave. The typhoons were as follows: One north of Guam, moving north; a second in or near the Balingtang Channel; and a third near Shanghai. It is assumed that Capt. Kerr received information respecting these typhoons by radio. Aside from the typhoons mentioned the only storm of consequence during the month appears to have been one that occurred near mid ocean on the 6th and 7th. The following report of this storm has been received from Mr. E. Turney, fourth officer and observer on the British R. M. S. *Empress of Asia*, Capt. A. J. Hailey, R. N. R., Vancouver for Yokohama.

On Tuesday, the 6th, at 7 a. m., the barometer commenced to fall fast, with a moderate wind and sea. This was in latitude 51° 30' N., longitude 171° 9' W. At noon the barometer was 30.02 inches with a fresh wind increasing. At 3 p. m., barometer 29.71 inches, moderate gale. At 8 p. m., gale continuing, with heavy swell from the SW., rough sea and dense fog. At 9 p. m. gale began to moderate; dense fog continued. Midnight, barometer 29.09 inches, light wind, dense fog. At 2.10 a. m., 8th, ship meanwhile having crossed 180th Meridian wind shifted to NW. and fog cleared; barometer, 29.09 inches. Four a. m. barometer 29.07 inches, moderate wind, SSE, swell. At 5.30 a. m. barometer started to rise; ship's position, latitude 50° 20' N., longitude 177° 58' E. At 6 a. m., barometer 29.05 inches, strong wind. Noon, barometer 29.24 inches, strong WNW. wind. Four p. m., barometer 29.31 inches, strong wind.

Reports from 16 vessels on coastwise voyages show no unusual weather conditions.

Observers on several vessels report having seen shooting stars or meteors. The most important of these appears to have been one observed on board the American S. S. *Olen*, Capt. C. A. Darling, Kobe for Portland. Mr. Wm. Wallace Flynn, third officer and observer on the *Olen*, reports that on July 16, at 10.45 p. m., a brilliant meteor was seen lasting 9 seconds. Ship's position at 9.20 p. m., latitude 36° 21' N., longitude 143° 15' E.

a continuation of unsettled weather in Northwest Europe up to the end of the month.¹

Korea.—Honolulu, July 21.—Considerable property damage has been done by floods in the Seoul and Fusan districts of Korea, said Tokyo cables received to-day by Nipu Jiji, a Japanese language newspaper here.—*Chicago Evening Post*, July 21, 1920.

Philippine Islands.—Manila, July 26.—Thousands were rendered homeless by a typhoon which, accompanied by torrential rains, swept the Island of Luzon during the past ten days or two weeks, causing tremendous damage.

A dike of the Turlac River, Central Luzon, was broken, flooding thousands of acres of rice and sugar lands and carrying off hundreds of small houses. Loss of life was reported small.—*N. Y. American*, July 27, 1920.

India.—A message from Simla states that the monsoon in India continues to blow steadily.¹

South Pacific Ocean.—Hit by the tail end of a terrific hurricane when three days out of Sydney and tossed about on a high sea for seventy-two hours, the Oceanic liner *Ventura* made port yesterday.

¹ The Meteorological Magazine, Aug., 1920, 154-155, 160.