

SECTION III.—FORECASTS.

STORMS AND WARNINGS FOR JULY.

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NORTHERN HEMISPHERE PRESSURE.

Alaska.—Over the Aleutian Islands pressure averaged above normal while other Alaskan stations showed pressure averages decidedly below, particularly Valdez and Sitka. The first half of the month was characterized by generally low pressure. Lows occurred about the 1-2, 3-4, 8, 12, 14-15, 21-22, 24 and 30, and highs about the 5-6, 15-16, 18, and 26th. During the latter half of the month pressure at Dutch Harbor was continuously above normal, pressure reaching a maximum on the 19th and 24th of 30.42 inches.

Honolulu.—Pressure averaged slightly below normal. During the first half of the month pressure was slightly above the seasonal average with little fluctuation. During the latter half, however, pressure was below normal generally. Lows occurred on the 16, 20-22, 25-26, and 30-31. The principal high of the month occurred on the 10-11.

Iceland.—Pressure averaged slightly above normal, being almost continuously above from the 4 to 18 and from the 22 to the end of the month. Lows occurred on the 1, 3, 7-8, and 19-21; and highs on the 5, 9-16, 22-23, and 26-28.

Azores.—Changes over this region were not marked and pressure was generally above normal except from the 7 to 13 and on the last day of the month. The most important low of the month occurred from the 7 to 13, there being two centers apparently, one on the 8-9 and the other on the 10. The only other depression of any consequence occurred on the last day of the month. High crests occurred on the 5-6, 16-17, and 27th with several minor crests during the last half of the month.

Siberia.—Pressure oscillations were slight but of frequent occurrence. The most important storms being those of the 7th, 10-11, and 14-15. Pressure for the month as a whole averaged about normal.

Severe storms visited the Asiatic east coast about the 24th and again on the 27-29. Pressure was low over northern Japan on the 24th, a pressure of 29.29 inches (744 mm.) being reported at Nemuro on that date. The other storm referred to was probably of subtropical origin, being first indicated at Shanghai on the 27th with a pressure reading of 29.21 inches (742 mm.) and later at Vladivostock on the 29th with pressure reading 29.06 inches (738 mm.).

PRESSURE OVER THE UNITED STATES.

The month opened with an elongated area of high pressure extending from Maine southward to Bermuda and another over the western Plains States, a low of slight intensity being over the Upper Lakes attended by showers through the middle Mississippi Valley and Upper Lake Region.

The Lake Region disturbance moved eastward to the St. Lawrence Valley by the morning of the 2d with decreased intensity and a secondary disturbance was over Rhode Island, which during the next 24 hours passed to the ocean. In connection with these disturbances showers and thunderstorms occurred from the Mississippi Valley eastward.

The high area over the western Plains States moved southeastward to Missouri, thence northeastward to the Lower Lakes and thence southeastward to the Middle Atlantic coast. During the passage of this high across the Lower Lakes afternoon thunderstorms occurred quite generally throughout the middle and eastern Gulf States.

On the evening of the 4th the wind circulation over Georgia indicated the development of a disturbance over that region. On the morning of the 6th vessel reports indicated the presence of this disturbance off the south Atlantic coast 200 or 300 miles southeast of Cape Hatteras. By the morning of the 7th it was over Long Island with increased energy, high winds being reported at Nantucket and Block Island. It passed to the Grand Banks during the 48 hours following.

Another high area of very slight intensity followed much the same course as the preceding high. This high developed over the Rocky Mountain region during the 2d and 3d.

A low area that appeared over British Columbia on the evening of the 4th passed to Manitoba by the 6th and thence east-northeastward into Canada, little precipitation attending it.

An offshoot from the more or less permanent Pacific high area was central over northwestern Wyoming on the morning of the 6th and passed thence eastward across the Lake region during the next four days.

A disturbance that made its appearance over Alberta on the 9th moved east-southeastward and on the morning of the 11th was over North Dakota, thence moving eastward to Lake Michigan by the 13th and to the Ohio Valley by the 15th. During the next 24 hours it disappeared. It caused showers and thunderstorms over the northern Rocky Mountain region and Plains States and from the Mississippi Valley eastward except in the North Atlantic States.

The low which followed it was over Alberta on the morning of the 14th, and during the next two days passed to western Ontario and by the 19th was over the Canadian Maritime Provinces, having caused showers and thunderstorms from the Mississippi Valley eastward.

A high-pressure area that appeared on the north Pacific coast on the 15th, during the next two days threw off an offshoot which was central on the 17th over the western Plains States. It passed thence to the middle Mississippi Valley by the 19th and to the Atlantic seaboard by the evening of the 20th, a portion of it persisting over the South Atlantic States for the two days following.

On the evening of the 19th a low-pressure area made its appearance over Alberta and during the next 48 hours moved to Nebraska. It passed thence northeastward to

the Lake region, causing showers and thunderstorms over northern districts from the Plains States eastward.

From the 20th to the 25th pressure was high over the East Gulf and South Atlantic States.

An offshoot from the subpermanent Pacific high-pressure area was central on the morning of the 21st over the North Pacific States and by the following morning it had passed to the western Plains States. It passed thence to the Upper Lakes by the evening of the 23d, and was not thereafter traceable on the weather charts.

During the 23d and 24th conditions remained unsettled over a belt of territory extending from the Lake region to Oklahoma.

During the night of the 26th-27th a low developed over the Middle Atlantic States and on the morning of the 28th was near Norfolk, Va. In the 24 hours following it passed off the coast, and during the next several days

proceeded slowly north-northeastward until at the end of the month it was southeast of Nantucket.

On the morning of the 27th pressure was above normal in the neighborhood of Hudson Bay and during the next 24 hours increased, a reading of 30.38 inches being reported at White River, Ontario. The high remained practically stationary over this region until the 29th, after which date it moved very slowly southeastward with decreasing intensity, giving record low temperatures for the month of July over portions of Virginia and temperatures decidedly below the seasonal average over the Atlantic States generally. Another high center had in the meantime appeared over the upper St. Lawrence Valley, which at the end of the month was over the ocean.

Conditions over the West during the last few days of the month were stagnant.