

ten thousand, resemble in their appearance and customs the Dyaks of Borneo. Many dwell in the provinces of the Camarines, where they have preserved their independence. They have traditions of great antiquity, and speak the Vicol dialect as well as their own. They were evidently here before the Mahometan Malays, by whom they have been driven to

The above-mentioned races are what the Spanish writers call the *infidels*, and may or may not be Igorrotes. SAMUEL KNEELAND.

THE WEATHER IN AUGUST, 1883.

THE monthly review of the U. S. signal-service shows that in August there were two



GADDAN OF LUZON.

the mountains. They are hostile to all foreigners. Their mode of life is patriarchal, the head of a family recognizing no superior authority. From the resemblance of the skulls of some of these wild tribes to those of the people of Sunda, Borneo, and Celebes, and the occurrence of similar ones in the long disused caverns, it seems undeniable that there is among them a considerable Dyak mixture, and that from a very remote period.

features of special note. These are, 1°, the low temperatures which prevailed over nearly the whole country; 2°, the small rainfall, which was below the average in nearly every district. Other important features were a few destructive storms, and the opening of the hurricane season, as will be referred to below.

The pressure has been above the normal, except on the Atlantic coast; the greatest excess, 0.08 inch. occurring in the upper Mis-

Mississippi and Missouri valleys, where, also, the lowest temperature departures were recorded. Six barometric depressions were charted in their progress, and a seventh begun, as the month closed. Of these, one only visited the southern states: this developed in Mississippi, passed off the Virginia coast, and across the Atlantic to the Irish coast, being a severe storm all along its passage. Of the other depressions,

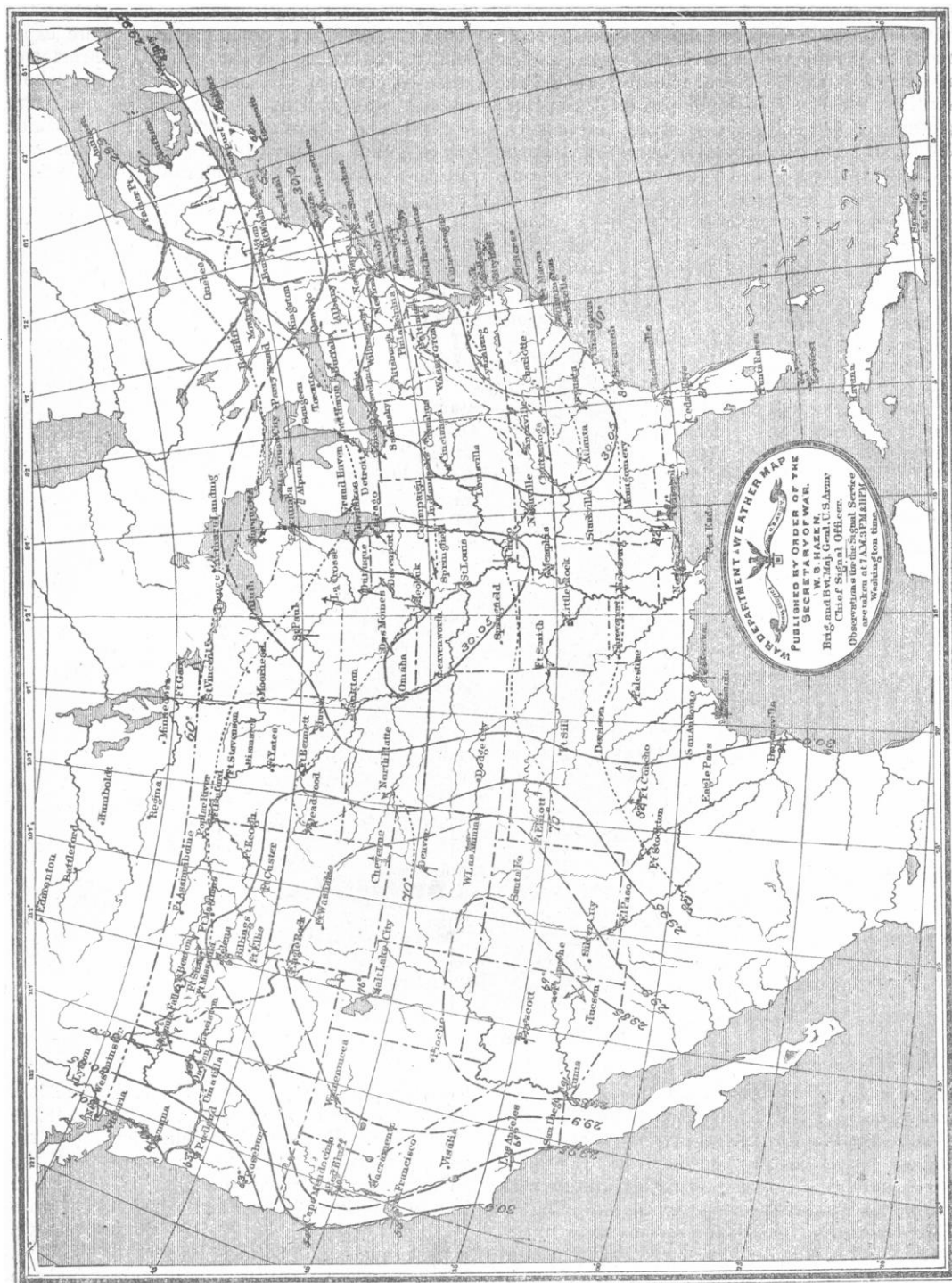
on the upper lakes on the 22d, and remarkably heavy rains on the North Carolina coast on the 16th. The storms on the Atlantic were especially prominent, and the general character of the weather on the ocean during the whole month was stormy. Five depressions were traced nearly across the Atlantic, two of which were genuine hurricanes. The first moved north-westward at a considerable distance from



GADDAN WOMAN.

one developed in the Rocky Mountains, and was traced to the British coast, and another entered the country in the extreme south-west, moved south-easterly to the North Carolina coast, and in the ocean probably united with a tropical hurricane which was then moving up the Atlantic. None of the storms were traced from the Pacific coast over the Rocky Mountains. The storms left no disastrous effects in the United States; but there were violent gales

the Atlantic coast, between the 19th and 24th, when it curved to the north-eastward near the Bermudas. Reaching the Banks on the 26th, it caused great damage to the fishing-fleet, the reports showing a loss of eighty lives and one hundred dories, while many fishing-vessels were swamped or disabled. Vessels on the Atlantic report severe gales during its further passage, but its severity decreased as it approached the Irish coast on the 29th. The lowest pressure



MONTHLY MEAN ISOBARS, ISOTHERMS, AND WIND-DIRECTIONS, AUGUST, 1883. REPRINTED IN REDUCED FORM BY PERMISSION OF THE CHIEF SIGNAL-OFFICER.

noted was 28.9 inches. The second hurricane came from the West Indies about the 24th, and reached the Banks on the 29th, only three days after the passage of the former hurricane, repeating the disasters to the fishing-vessels. Its violence was great as it continued across the Atlantic, and approached the British coasts early in September. As this storm passed up the Atlantic, very high tides were experienced on the coast, much damage being thereby inflicted on the New Jersey shore on the 29th. Very few icebergs were reported during the month.

The average temperatures were above the normal only in Florida, the Rio Grande valley, and in the middle and southern portions of the Rocky Mountain region, the departures being within a degree, except at Salt Lake City (2°). In other districts the departures ranged from $0^{\circ}.1$, in the eastern Gulf states, to $4^{\circ}.4$, in the upper Mississippi valley. Yuma, Arizona, reports a mean temperature of 91° , and a maximum of 111° . Frosts were reported from the northern states, especially at the end of the month.

Average precipitation for August, 1883.

Districts.	Average for August. Signal-service observa- tions.		Comparison of August, 1883, with the average for several years.
	For several years.	For 1883.	
	Inches.	Inches.	Inches.
New England	4.33	1.53	2.80 deficiency.
Middle Atlantic states	4.95	3.20	1.75 deficiency.
South Atlantic states	6.43	7.51	0.72 deficiency.
Florida peninsula	7.67	5.69	1.98 deficiency.
Eastern gulf	6.33	4.39	1.94 deficiency.
Western gulf	4.27	1.62	2.65 deficiency.
Tennessee	3.92	3.51	0.41 deficiency.
Ohio valley	3.70	1.94	1.76 deficiency.
Lower lakes	2.91	2.30	0.61 deficiency.
Upper lakes	3.12	1.25	1.87 deficiency.
Extreme north-west	2.50	2.70	0.20 excess.
Upper Mississippi valley,	3.40	1.87	1.53 deficiency.
Missouri valley	2.81	2.52	0.29 deficiency.
Northern slope	1.39	1.83	0.44 excess.
Middle slope	1.42	3.65	2.23 excess.
Southern slope	2.99	1.95	1.04 deficiency.
Southern plateau	3.16	2.26	0.90 deficiency.
North Pacific coast	0.78	0.08	0.70 deficiency.
Middle Pacific coast	0.02	0.00	0.02 deficiency.
South Pacific coast	0.22	0.07	0.15 deficiency.
Mt. Washington, N.H.	7.67	6.06	1.61 deficiency.
Pike's Peak, Col.	4.81	2.22	2.59 deficiency.
Salt Lake City, Utah	0.88	0.62	0.26 deficiency.
Brownsville, Tex.	5.94	1.97	3.97 deficiency.

The rainfall record can be best shown by the above table, which shows the unusual deficiency of the month in almost every section, which especially affected the crops in the south. Remarkably heavy rains were recorded in a few instances, — 10.38 inches at Griffin, Ga., in eight hours; and 8.14 inches at Kittyhawk, N.C., in four hours. In the cotton region the rainfall was much less than in August of last

year, the amount at New Orleans being 2.70 inches, against 8.38 inches a year ago.

Local storms were not numerous, but were quite severe, especially in Iowa, on the 7th and 8th. On the 21st there was a veritable tornado in Minnesota, which devastated the town of Rochester, causing a loss of over thirty lives, and much damage to property.

Seven auroral displays occurred, but none were of especial note. The following electrical phenomenon is reported from Pike's Peak: —

"The observer on the summit of Pike's Peak, Col., reported that during a sleet and thunder storm, on the evening of the 4th, the anemometer cups revolved in circles of electric light. After a flash of lightning, the light encircling the cups became dim, but would soon regain its former brilliancy. The observer states, that, by holding up his hands, electric sparks would form on the ends of his fingers, and that his hair and clothing were full of them. A peculiar crackling noise was heard about the anemometer cups; and at the corners of the office building there were continuous sparks of bright light."

Earthquake-shocks occurred at Oakland, Cal., Carson City, Nev., St. Thomas, W.I. At the last-named place a tidal wave occurred on the 27th, and at San Francisco on the 27th and 28th. Earthquake waves, whose height was one foot, and time between crests forty minutes, were recorded on the Saucelito tide-gauge. It is supposed they were caused by the earthquake in Java on the 27th.

A dense smoke, due to forest-fires in Oregon and Washington, Idaho and Montana territories, prevailed during a greater part of the month, and extended on the Pacific coast as far south as Cape Mendocino, and thence eastward to eastern Montana, Dakota, and Minnesota.

The accompanying chart exhibits the mean pressure, temperature, and wind-direction, for the month.

*THE INVENTION AND SPREAD OF
BRONZE.*

At the thirteenth session of the German anthropological congress, held at Trier early in August, Professor Rudolph Virchow, the president, gave an address, the substance of which we quote from the *Frankfurter zeitung* of Aug. 11.

In beginning the president remarked, that, in the choice of Trier as the place of assembly for this year's congress, it was considered that the city and its surroundings were especially suited by their situation for the solution of the often-broached question of celts. The speaker then reviewed in a general