

No extensive severe storms were reported during the month of August in the North Atlantic Ocean. The numerous small areas of low pressure that have passed eastward from the North American continent have either filled up or passed to the north of the region covered by our reports. The low pressure of the southern Caribbean Sea has also failed to develop any extensive disturbance. The individual low pressures are enumerated as follows:

A. This was a continuation of *F* from the series for July and was central on the 1st, noon, at N. 58°, W. 15°; 2d, noon, N. 61°, W. 8°; its northeastward motion now changed to southeast and the low pressure was central on the 3d, noon, at N. 56°, E. 5°, and the 4th, noon, N. 55°, E. 8°, after which it disappeared. On the 3d and 4th pressure was low over Scandinavia and northern Europe in connection with the very general depression extending from Hudson Bay eastward to Norway.

B. This was a continuation of No. XIII of the U. S. series for July which was central on the 1st near Lake Superior, and on the 2d over Lake Huron. During the 3d and 4th this passed over Labrador; on the 5th it was central near the Straits of Belle Isle, and on the 6th, noon, at N. 56°, W. 36°; 7th, noon, N. 57°, W. 26°; 8th, noon, N. 59°, W. 11°; 9th, noon, N. 60°, E. 4°; 10th, noon, N. 60°, E. 10°; 11th, noon, N. 66°, E. 18°; 12th, noon, N. 60°, longitude 0°. At this time pressure was steadily diminishing to the eastward as far as the eastern portion of Russia, and so continued until the 15th, while *B* moved northeastward and disappeared.

C. Between the 11th and 12th pressure fell rapidly west of Great Britain, and a depression appeared on the 12th, noon, central at N. 60°, W. 3°; it moved southeast, and on the 13th, noon, was at N. 57°, E. 8°, and the 14th, noon, N. 57°, E. 15°, after which it disappeared.

D. On the 9th a long trough extended from New England to the Straits of Belle Isle, and on the 11th, noon, a moderate depression was central in southern Newfoundland. By the 12th it was approximately at N. 57°, W. 47°; 13th, N. 58°, W. 29°; 14th, noon, N. 60°, W. 10°; 15th, noon, N. 57°, W. 5°; 16th, noon, N. 60°, E. 5°; 17th, noon, N. 65°, E. 15°; 18th, noon, N. 57°, E. 23°; 19th, noon, N. 63°, E. 20°. On the latter date this depression seems to have disappeared in the presence of others that were approaching Norway or developing over the North Sea.

E. This was a continuation of U. S. series No. VIII, which was central on the 14th, noon, in the upper Lake region; 15th, noon, in the St. Lawrence Valley; 16th, noon, near the west coast of Newfoundland, and on the 17th, noon, it extended as a trough from Nova Scotia northeastward, having two special depressions central, respectively, near Cape Breton and about N. 54°, W. 42°. The latter moved northeast beyond our reports. The former depression developed slowly south and east of Newfoundland and had disappeared by the 19th.

F. This appeared on the 20th as an indefinite depression off the middle Atlantic coast, and was a continuation of U. S. series No. XII. It was central on the 21st, noon, in the Gulf of St. Lawrence, and on the 22d, noon, on the coast of Labrador, at about N. 55°, W. 53°. It then apparently moved

northeastward, but beyond the northern limits of our reports, while an area of high pressure, unusual for that region, prevailed on its southeastern border as far north as Iceland and the Faroe Islands. By the 25th, noon, the northern portion of this area of high pressure began to recede southward, but on the 28th, noon, pressure still continued high from the Shetlands westward. Meanwhile an extensive area of low pressure had apparently traveled eastward from Greenland to northern Scandinavia and Russia, where it prevailed from the 26th to the 29th.

G. This appeared on the 28th, noon, as a slight depression at about N. 40°, W. 60°. At noon on the 29th it was central at N. 42°, W. 58°, as a small hurricane, although the highest winds reported were of force 10 only; on the 30th, noon, N. 48°, W. 49°; on the 31st, noon, N. 53°, W. 42°. By this date the cyclonic whirl seems to have been generally broken up.

OCEAN FOG FOR AUGUST, 1894.

The limits of fog belts west of the fortieth meridian, as reported by shipmasters, are shown on Chart I by dotted shading. Near the Banks of Newfoundland fog was reported on 26 dates; between the fifty-fifth and sixty-fifth meridians on 16 dates; and west of the sixty-fifth meridian on 8 dates. Compared with the corresponding month of the last six years, the dates of occurrence of fog near the Grand Banks numbered 5 more than the average; between the fifty-fifth and sixty-fifth meridians, 4 more than the average; and west of the sixty-fifth meridian, 2 less than the average.

OCEAN ICE IN AUGUST, 1894.

The following table shows the southern and eastern limits of the regions within which icebergs or field ice were reported for August during the last thirteen years:

Southern limit.			Eastern limit.		
Month.	Lat. N.	Long. W.	Month.	Lat. N.	Long. W.
August, 1882.....	46 50	46 00	August, 1882.....	46 50	46 00
August, 1883.....	43 26	51 41	August, 1883.....	48 00	44 00
August, 1884.....	43 24	48 44	August, 1884.....	47 50	43 50
August, 1885.....	43 48	52 04	August, 1885.....	48 03	42 45
August, 1886.....	48 35	48 46	August, 1886.....	50 00	48 00
August, 1887.....	42 21	49 51	August, 1887.....	48 06	40 00
August, 1888.....	Straits of Belle Isle		August, 1888.....	51 33	55 00
August, 1889.....	43 34	48 38	August, 1889*.....	53 00	45 00
August, 1890.....	42 30	50 21	August, 1890.....	50 13	39 10
August, 1891.....	44 07	52 05	August, 1891.....	47 32	42 45
August, 1892.....	46 45	53 00	August, 1892.....	48 43	44 49
August, 1893.....	44 53	49 21	August, 1893.....	46 28	46 02
August, 1894.....	40 43	47 00	August, 1894.....	49 26	44 47
Mean.....	44 15	50 12	Mean.....	48 54	44 47

\* Isolated field ice in N. 58°, W. 40°.

The above table shows that during August, 1894, ice was reported on the 19th, about 2½° south of the southern limit of ice for the corresponding month of the last twelve years. The position of easternmost ice for the current month was reported on the 8th, and was about the average eastern limit for August.

The limits of the region within which icebergs or field ice were reported for August, 1894, are shown on Chart I by crosses.

TEMPERATURE OF THE AIR.

[In degrees Fahrenheit.]

The distribution of the monthly mean temperature of the air over the United States and Canada is shown by the dotted isotherms on Chart II; the lines are drawn over the high irregular surface of the Rocky Mountain plateau, although

the temperatures have not been reduced to sea level, and the isotherms, therefore, relate to the average surface of the country occupied by our observers; such isotherms are controlled largely by the local topography, and should be drawn and studied in connection with a contour map.

**NORMAL TEMPERATURE.**

In Table II, for voluntary observers, the mean temperature is given for each station, but in Table I, for the regular stations of the Weather Bureau, both the mean temperatures and the departures from the normal are given for the current month. In the latter table the stations are grouped by geographical districts, for each of which is given the average temperature and departure from the normal; the normal for any district or station may be found by adding the departures to the current average when the latter is below the normal and by subtracting when it is above.

**MONTHLY MEAN TEMPERATURE.**

For the regular stations of the Weather Bureau the monthly mean temperature is the simple mean of all the daily maxima and minima; for voluntary stations a variety of methods of computation is necessarily allowed, as shown by the notes appended to Table II.

During August, 1894, the highest mean temperatures at regular Weather Bureau stations were: Key West, 83.6; Jacksonville, 82.2; Savannah, 81.2; Yuma, 80.9. The lowest mean temperatures were: Tatoosh Island, 57.0; Point Reyes Light, 54.4; San Diego, 67.0; Eastport, 59.2; Portland, Me., 64.6; Sault Ste. Marie, 59.8; Duluth, 64.9; Marquette and Northfield, 61.2.

**YEARS OF HIGHEST MEAN TEMPERATURE FOR AUGUST.**

The mean temperature for August, 1894, was the highest on record at regular Weather Bureau stations, as shown in the following table, which also gives the highest previous record:

Stations.	August, 1894.		Highest previous.	
	Mean temperature.	Departure from normal.	Temperature.	Year.
Tatoosh Island, Wash	57.0	+1.0	56.0	1888
Pyshht, Wash	60.0	+1.0	59.4	1886
Port Angeles, Wash	59.3	+2.5	59.3	1891
Astoria, Ore.	65.2	-3.6	65.2	1891
Spokane, Wash	71.4	-1.1	71.4	1888
Walla Walla, Wash	76.8	-2.4	76.6	1888
Williston, N. Dak	70.8	-3.3	70.8	1882
Bismarck, N. Dak	71.7	-3.8	71.3	1878
Rapid City, S. Dak	73.4	-3.2	73.4	1881
Valentine, N. br	71.6	-5.6	73.0	1889
Huron, S. Dak	72.8	-3.8	71.7	1881
Columbia, Kans	78.4	-1.4	75.9	1886
Wichita, Kans	79.2	-1.4	77.5	1892
Topeka, Kans	78.6	-1.9	75.0	1892
Kansas City, Mo	78.3	-3.6	76.6	1892
Springfield, Mo	75.9	-0.6	75.8	1892
Escanaba, Mich	68.0	-1.6	67.9	1892
Lexington, Ky	76.0	-3.1	75.1	1874
Parkersburg, W. Va.	73.8	+1.1	73.3	1892

**YEARS OF LOWEST MEAN TEMPERATURE FOR AUGUST.**

The mean temperature for August, 1894, was the lowest on record at regular Weather Bureau stations, as shown in the following table:

Stations.	August, 1894.		Lowest previous.	
	Mean temperature.	Departure from normal.	Temperature.	Year.
Abilene, Tex	76.4	-4.3	78.7	1892
Shreveport, La	78.8	-3.4	78.9	1892
Galveston, Tex.	80.2	-2.6	81.2	1879
Narragansett Pier, R. I	66.7	-1.7	67.2	1885
Vineyard Haven, Mass.	69.0	-2.0	70.0	1889
Nantucket, Mass	66.4	-1.0	67.4	1889
Block Island, R. I.	57.1	-1.0	67.2	*

\* Frequently.

**MAXIMUM TEMPERATURE.**

The maximum temperatures of the month at regular stations of the Weather Bureau are given in Table I, from which it appears that the highest maxima were: Columbia, S. C., Fort Sill, St. Louis, Keokuk, Hannibal, Dubuque, Des Moines, Wichita, Bismarck, Miles City, and Tucson, 100; La Crosse,

101; Sioux City, Columbia, Kans., and Topeka, 102; Nashville, 103; Roseburg and Fort Smith, 104; Columbia, Mo., 105; Sacramento and Walla Walla, 108; Fresno City, 109; Yuma and Red Bluff, 110.

The lowest maxima were: Tatoosh Island, 80; Eureka, 79; San Diego and Corpus Christi, 90; Key West and Jupiter, 91; Hatteras, 86; Block Island and Narragansett, 77; Eastport, 84; Sault Ste. Marie, 82.

**YEARS OF HIGHEST MAXIMUM TEMPERATURE FOR AUGUST.**

The maximum temperatures for August were the highest on record at regular Weather Bureau stations, as shown in the following table:

Stations.	August, 1894.		Highest previous.	
	Maximum.	Excess above previous record.	Temperature.	Year.
Tatoosh Island, Wash	80	+ 6	74	1893
Neah Bay, Wash	82	+ 6	76	1893
Astoria, Ore.	88	+ 5	83	1890
Walla Walla, Wash	108	+ 3	105	1891
Roseburg, Ore.	104	+ 5	99	1891
Eureka, Cal.	79	+ 7	72	1891
Sacramento, Cal	108	0	108	1888
Helena, Mont.	95	0	95	*
Concordia, Kans	102	0	102	1888
Kansas City, Kans	100	+ 1	99	1892
Springfield, Mo.	97	0	97	1888
Fort Smith, Ark	104	0	104	1886
La Crosse, Wis.	101	+ 4	97	1891
Dubuque, Iowa	100	+ 1	99	*
Davenport, Iowa	98	0	98	1887
Raleigh, N. C.	96	0	96	1888
Columbia, S. C.	100	+ 1	99	1888
Charleston, S. C.	99	+ 1	98	*

\* Frequently.

**MINIMUM TEMPERATURE.**

The minimum temperatures of the month at regular stations of the Weather Bureau are given in Table I, from which it appears that the lowest minima were:

St. Vincent, 38; Northfield, 33; Portland, Me., 46; Sault Ste. Marie, Marquette, Laramie, and Idaho Falls, 42; Moorhead, 41; Bismarck, Williston, Havre, Port Huron, and Colorado Springs, 43; Huron, Cheyenne, La Crosse, Alpena, Winnemucca, Olympia, and Neah Bay, 44; Carson City, 37.

Among the highest minima were: Jupiter, 72; New Orleans, 71; Galveston and Corpus Christi, 70; Tampa, Pensacola, and Mobile, 69; Key West, Port Eads, Jupiter, and Jacksonville, 68.

**YEARS OF LOWEST MINIMUM TEMPERATURE FOR AUGUST.**

The minimum temperatures for August were the lowest on record at regular Weather Bureau stations, as shown in the following table:

Stations.	August, 1894.		Lowest previous.	
	Minimum.	Deficit below previous record.	Temperature.	Year.
Carson City, Nev	37	0	37	1891
Oswego, N. Y.	50	- 1	50	*
Northfield, Vt	33	- 3	36	*
Portland, Me	46	0	46	1892
Boston, Mass	47	0	47	*
Narragansett Pier, R. I.	43	- 2	45	*
Vineyard Haven, Mass.	54	- 1	55	*
New London, Conn	47	- 1	48	*
Key West, Fla	68	- 2	70	*

\* Frequently.

**DEPARTURES FROM NORMAL TEMPERATURE FOR AUGUST, 1894.**

As compared with the normal for August the mean temperatures for the current month were decidedly in excess in Alberta, Assiniboia, Manitoba, and southeastward to Kentucky. The ridge of greatest excess includes the following: Edmonton, 4.0; Qu'Appelle, 5.1; Bismarck, Huron, and La Crosse, 3.8; Valentine, 5.6; Omaha, 5.3; Des Moines,

4.0; Topeka, 4.9; Louisville and Lexington, 3.1. The line of no departure extends from Chesapeake Bay northwest over Lake Superior and again southwestward to southern Arkansas and thence northward to northern California. The region of deficit in temperature covers the southern portion of the country from California to Florida and the greater part of the Atlantic coast. The principal deficits were: Montreal, 4.5; Quebec, 4.4; Abilene, 4.3; Galveston, 2.6; San Diego, 2.7.

Considered by districts, the mean temperatures for the current month show the following departures from normal temperatures:

Positive departures: Ohio Valley and Tennessee, 1.8; lower Lakes, 0.1; upper Lake region, 0.3; North Dakota (extreme northwest), 3.3; upper Mississippi valley, 3.1; Missouri Valley, 4.0; northern slope, 2.7; middle slope, 1.0; middle plateau, 0.8; northern plateau, 2.8; north Pacific, 2.5; middle Pacific, 0.6.

Negative departures: New England, 1.0; middle Atlantic, 0.6; south Atlantic, 0.1; Key West, 0.5; east Gulf, 0.8; west Gulf, 1.7; southern slope (Abilene), 4.3; southern plateau, 1.9; southern Pacific, 1.5.

For certain voluntary stations of rather long periods of observation the normal and extreme mean temperatures and the departures are shown in detail in Table Xa, which is now placed among the meteorological tables instead of being inserted in the text as heretofore.

THE DAILY AND MONTHLY RANGES OF TEMPERATURE.

The greatest daily range of temperature is given for each of the regular Weather Bureau stations in Table I, which also gives data from which may be computed the extreme monthly ranges for each station.

*Greatest daily ranges.*—Large values: Havre, 49; St. Vincent and Huron, 45; Idaho Falls, 48; Laramie, 44; Miles City, Bismarck, Winnemucca, and Sacramento, 43; Roseburg, 44. Small values: Hatteras, 14; Block Island, 15; Nantucket, Jupiter, Pensacola, Galveston, and Corpus Christi, 16; New Orleans, 17; Key West, 18.

*Extreme monthly ranges.*—Large values: Huron, 55; Bismarck and La Crosse, 57; Havre, 56; Walla Walla, 60; Sacramento, 58. Small values: Hatteras and Jupiter, 19; Corpus Christi, 20; New Orleans and Pensacola, 21; Galveston, Block Island, and Mobile, 22; Port Eads, Tampa, and Key West, 23.

ACCUMULATED TEMPERATURES.

From January 1 to the end of the current month the average temperature for each geographical district was above or below the normal by an amount that is given in the last column of the following table. The accumulated monthly departures from normal temperatures, as given in the second column, may be used for comparison with the departures of current conditions of vegetation from the normal conditions.

Districts.	Accumulated departures.		Districts.	Accumulated departures.	
	Total.	Average.		Total.	Average.
New England	+ 8.1	+ 1.0	Key West	- 4.0	- 0.5
Middle Atlantic	+ 12.0	+ 1.5	East Gulf	- 0.9	- 0.1
South Atlantic	+ 5.1	+ 0.6	West Gulf	- 1.1	- 0.1
Ohio Valley and Tennessee	+ 11.3	+ 1.4	Southern slope (Abilene)	- 0.4	- 0.0
Lower Lake	+ 18.7	+ 2.3	Southern plateau	- 16.3	- 2.0
Upper Lake	+ 23.6	+ 3.0	Middle plateau	- 8.3	- 1.0
North Dakota (Ex. NW.)	+ 22.5	+ 2.8	Northern plateau	- 2.0	- 0.2
Upper Mississippi	+ 21.8	+ 2.7	Northern Pacific	- 7.3	- 0.9
Missouri Valley	+ 17.8	+ 2.2	Middle Pacific	- 13.2	- 1.6
Northern slope	+ 5.0	+ 0.6	Southern Pacific	- 20.3	- 2.5
Middle slope	+ 3.8	+ 0.5			

DIURNAL PERIODICITY.

The regular diurnal period in temperature is shown by the

hourly means given in Table V for all stations having self-registers.

LIMITS OF FREEZING TEMPERATURE.

The region within which the air has had a freezing temperature at some time during the month is bounded by the minimum isotherm of 32°. During August this minimum does not occur at regular Weather Bureau stations, except at the summits of Mt. Washington and Pikes Peak; its occasional occurrence at voluntary stations is shown in Table II.

PERIODS OF HIGH TEMPERATURE.

The maximum temperatures of August, like those of July, generally occurred in connection with areas of high pressure and clear sky, but during the current month they were considerably affected by the clouds of smoke that covered the interior of the continent. The principal periods of high temperature were as follows:

(A) On the 8th the maximum temperatures of the month occurred in southern Minnesota and the adjacent portions of Wisconsin, southern Michigan, northern Ohio, New York, Pennsylvania, Maryland, and northern Illinois. On the 9th this area of maximum temperature had pushed southward over the greater part of Virginia, North Carolina, West Virginia, Ohio, Indiana, and Iowa. On the 10th it had covered South Carolina and Kentucky, and on the 11th, Kansas, Missouri, and the coast of Georgia. During the 13th and 14th the maximum temperatures of the month occurred in the central portion of the Gulf States.

(B) The maximum temperatures of the Pacific coast generally occurred at the close of the month, beginning on the 25th in Nevada, and extending on the 26th along the immediate coast of California, reaching San Diego on the 27th, and on the same date throughout northern California and western Oregon, and ending on the 28th in the northwestern corner of Washington.

(C) On the 23d the maximum temperatures occurred at Marquette and Sault Ste. Marie; this warm area moved southeastward and, on the 24th, prevailed from Buffalo to Eastport.

PERIODS OF LOW TEMPERATURE.

The minimum temperatures occurred principally in the following groups:

(A) On the 3d in Minnesota, South Dakota, Iowa, southern Wisconsin, and northern Illinois. On the 4th this cold area had moved southward over Kansas, Missouri, Illinois, Indiana, Kentucky, western Ohio, and southern Michigan; on the 5th over Indian Territory, portions of Arkansas, Missouri, Tennessee, and by the 6th, over Virginia, North and South Carolina, northern Georgia, Alabama, central Mississippi, Louisiana, and Texas.

(B) On the 21st the minima of the month occurred at Duluth and Marquette, and by the 22d this area of monthly minima had extended southeastward over the lower Lakes, the Middle States, and New England.

AREAS OF 20° RISE IN TWENTY-FOUR HOURS.

The daily weather charts show by heavy dotted lines the regions over which the temperature has risen 20° in the preceding twenty-four hours.

Such rapid rises occur less frequently in summer than in winter; they are largely due to the rapid descent and rapid warming by compression of layers of air that are, by reason of their dryness, rather denser than the surrounding air; they are also frequently due to the rapid descent of air flowing toward the regions of low pressure near the center of a cyclone.

The only area of 20 rise in twenty-four hours during the current month seems to have been that of the 26th, a. m., in Manitoba, having an area of 100 by 150. This was on the

south side of low pressure area No. XV, which was then central in Manitoba.

AREAS OF 20° FALL IN TWENTY-FOUR HOURS.

A fall of temperature of 20°, or more, in twenty-four hours is not called a cold wave by the Weather Bureau unless the temperature falls below 40°, and is, therefore, likely to cause a frost injurious to vegetation, but all falls of 20° are indicated on the Daily Weather Map by inclosing the areas within which they occur by heavy dotted lines, and the following list enumerates those regions for the month of August (the dimensions of the principal axes of the areas are stated in miles):

- (A) 1st, 8 p. m., 100 by 100, eastern North Dakota.
- (B) 9th, 8 p. m., 200 by 100, southern portion of Lake Michigan.
- (C) 13th, 8 p. m., 500 by 300, Manitoba, Assiniboia, and North Dakota. 14th, 8 p. m., 300 by 150, Lake Superior and Upper Michigan.
- (D) 20th, 8 p. m. 200 by 100, Upper Michigan. 27th, 8 a. m., 200 by 100, Manitoba. This small area may be considered as largely a simple return to normal conditions following the unusual rise of temperature on the preceding day.
- (E) 27th, 8 p. m., 500 by 300, Alberta and Saskatchewan. This area of falling temperature represented the advancing front of an extensive area of high pressure. 28th, 8 p. m., 400 by 200, Idaho and western Montana.

FROSTS.

Notwithstanding the high temperatures of August, a few reports of frosts have been received. During the spring months a minimum temperature of 40° in the shelters of the Weather Bureau is likely to be accompanied by frost on the ground in the open air, but it has been noticed on several occasions that this temperature limit is rather low; thus, Mr. A. E. Ackworth, of Mardela Springs, Md., writes that the records at his station, as kept by himself and Dr. Ker, show that "out of 74 frosts 33 occurred when the temperature was above 40° in April, and 1 when the minimum temperature was as high as 52°, and that ice and snow occurred in several of these instances, and 24 are marked as heavy frosts; the frost limit should therefore be raised to at least 44.5°."

During the 3d and 4th of the current August frost was quite general in Colorado, Minnesota, Iowa, Wisconsin, Michigan, Indiana, and Ohio, although the minimum temperatures on those dates in Weather Bureau shelters were as high as 48° and 50° in northern Indiana, Ohio, and southern Michigan.

On the 27th at Saratoga, Wyo., and on the 22d, near Leeds, Mass., frost occurred, although in both cases the minimum air temperatures were as high as 47°.

The following table shows the dates of the occurrence of the first light and first heavy frost of the season at the respective stations:

Dates of first light and heavy frosts, August, 1894.

State and station.	First frost.		State and station.	First frost.	
	Light.	Heavy.		Light.	Heavy.
<i>California.</i>			<i>New Hampshire—Continued.</i>		
Greenville.....	17		Peterboro.....	22	
<i>Colorado.</i>			Stratford.....	27	
Downing.....	3		West Milan.....	11	27
Gold Hill.....	3		<i>New York.</i>		
<i>Connecticut.</i>			Angelica.....	11	
Thompson.....	22		Hyndsville.....	27	
Voluntown.....	11		Malone.....	21	
<i>Indiana.</i>			South Canisteo.....	11	
Angola.....	4		<i>North Dakota.</i>		
Cambridge City.....	4		McKinney.....	3	
Columbia City.....	3		Woodbridge.....	2	
Delphi.....	4		<i>Ohio.</i>		
Huntington.....	4		Annapolis.....	4	
Kokomo.....	4		Clifton.....	4	
Logansport.....	4	4	Hedges.....	4	
<i>Iowa.</i>			Kenton.....	22	
Audubon.....	4		Leipsic.....	4	
Cresco.....	3		Montpelier.....	4	4
Fayette.....	3		Northwood.....	4	
Forest City.....	3		Orangeville.....	5	
Logan.....	24		Warren.....	17	
<i>Maine.</i>			Wauseon.....	4	
Belfast.....	10		Weymouth.....	17	
Calais.....	10		<i>Pennsylvania.</i>		
<i>Massachusetts.</i>			Cassandra.....	5	
Adams.....	17		Dyberry.....	10	
Amherst.....	22		Lock Haven.....	12	
Brockton.....	20		Shinglehouse.....	11	
Concord.....	22		Somerset.....	4	
East Templeton.....	11		Wellsboro.....	6	
Groton.....	22		Wilkesbarre.....	21	
Hadley.....	22		<i>Rhode Island.</i>		
Leeds.....	22		Kingston.....	22	
Middleboro.....	22		Pawtucket.....	21	
North Billerica.....	22		<i>South Dakota.</i>		
Taunton.....	11		De Smet.....	2	
<i>Michigan.</i>			<i>Vermont.</i>		
Alma.....	17		Cornwall.....	26	
Arbela.....	3		Harland.....	22	
Bronson.....	4		Northfield.....	27	
Howell.....	5		Norwich.....	22	
Lansing.....	3		Stratford.....	10	
Lathrop.....	21		Vernon.....	22	
Lodi.....	4		Wells.....	22	
Thornville.....	16		<i>West Virginia.</i>		
<i>Minnesota.</i>			Pleasant Hill.....	5	
Alexandria.....	3		<i>Wisconsin.</i>		
Fergus Falls.....	3		Antigo.....	21	
Granite Falls.....	3		Black River Falls.....	5	
Maple Plain.....	3		Grandon.....	3	20
Medford.....	3		Florence.....	20	
Rolling Green.....	3		Gruitsburg.....	2	
Rush City.....	3		Hillsboro.....	3	
St. Charles.....	3		Keepenic.....	30	
St. Peter.....	3		Milwaukee.....	3	
Sunrise City.....	3		Neillsville.....	3	
<i>New Hampshire.</i>			Osceola.....	4	
Alstead.....	22		Reedsburg.....	3	
Berlin Mills.....	17		Vally Junction.....	3	3
Berliehem.....	11		Wroqua.....	3	
Brookline.....	22		Weston.....	3	
Concord.....	22		West Salem.....	3	
Grafton.....	22		<i>Wyoming.</i>		
Lancaster.....	22		Saratoga.....		27
Littleton.....	22				

PRECIPITATION.

[In inches and hundredths.]

The distribution of precipitation for the month of August, 1894, as determined by reports from about 2,000 stations, is exhibited on Chart III. The numerical details are given in Tables I, II, and III; the first of these also gives the average departures from the normal for each district, whereas the average departure for each State is given in Table XII.

NORMAL PRECIPITATION FOR AUGUST.

The normal precipitation for the month of August is less than 1 inch in the middle and northern plateau, middle and south Pacific regions; it is between 1 and 2 inches in the north Pacific and northern and southern slopes; from 2 to 3 inches usually falls over the southern plateau, middle slope,

North Dakota, and the lower and upper Lake regions; from 3 to 4 inches in the upper Mississippi and the Missouri valleys, the Ohio Valley and Tennessee, and the west Gulf States; from 4 to 6 inches throughout the Atlantic and east Gulf States.

PRECIPITATION FOR CURRENT MONTH.

The precipitation for the current August was heaviest in the south Atlantic States, where it ranged from 3 inches in the interior mountainous regions up to 12 inches on the coast of South Carolina and 11 in southern Georgia. A number of cases of extreme local rainfalls, exceeding 13 inches, are reported. A region of heavy precipitation, viz, above 8 inches,