

20th.—The s. s. "Thingvalla," in N. 44° 45', W. 48° 10', passed an iceberg. The ship "Ferdinand," in N. 46°, W. 46°, passed two large icebergs and several small ones.

22d.—The s. s. "Nant Gwynant," in N. 43° 30', W. 50° 10', passed a large iceberg. The steamers "Carmona" and "Concordia" arrived at Montreal this date, and were the first vessels to pass through the Straits of Belle Isle this season. The "Carmona" reported fields of small broken ice east of Belle Isle, and saw many icebergs. The "Concordia" met a considerable quantity of detached ice, much broken up, one hundred and ten miles east of Belle Isle; also a great number of very large icebergs ninety miles off Belle Isle, and about ten miles south of the track; between Belle Isle and Labrador coast counted ten large bergs. The brig "Eugenia," at Saint John's, Newfoundland, reported some thirty icebergs bearing from sw. to se., off Cape Race.

23d.—The s. s. "Wodam," in N. 40° 44', W. 53°, passed three large icebergs.

24th.—The s. s. "La Bourgogne," in N. 43° 14', W. 48° 29', at 9.25 a. m., passed a large iceberg.

26th.—The bark "Bristol," in N. 46° 25', W. 53° 30', passed three large icebergs.

28th.—The s. s. "Corean," in N. 46° 39', W. 47° 08', passed a large iceberg and a number of small ones.

29th.—The ship "Ferdinand," in N. 47° 41', W. 49° 45', passed an iceberg; also passed two icebergs in N. 47° 49', W. 49° 24', and one large berg in N. 48° 19', W. 47° 46'. The s. s. "Lydian Monarch," in N. 48° 20' and from W. 48° to 49°, passed four icebergs.

30th.—The s. s. "Egypt," in N. 44° 24', W. 49° 12', at 12.30 a. m., passed two large icebergs. The s. s. "Adriatic," in N. 43° 30', W. 49° 45', passed an iceberg at 10 p. m. The s. s. "Ferdinand," in N. 44° 24', W. 49° 12', passed two icebergs.

SIGNAL SERVICE AGENCIES.

Signal Service agencies have been established in the Maritime Exchange buildings at New York City and Philadelphia, and in the Custom-House, Boston, where the necessary blanks and other information will be furnished to ship-masters.

In pursuance of arrangements made with the Meteorological Office of London, England, there were cabled to that office from New York during June, 1886, three reports concerning storms and icebergs encountered by vessels in the Atlantic west of the forty-fifth meridian; two messages were sent from Boston.

TEMPERATURE OF THE AIR.

[Expressed in degrees, Fahrenheit.]

The distribution of mean temperature over the United States and Canada for June, 1886, is exhibited on chart ii by the dotted isothermal lines; and in the tables of miscellaneous data are given the monthly mean temperatures, with the departures from the normal, for the various stations of the Signal Service. On chart iv the departures from the normal temperature are illustrated by lines connecting stations of normal or equal abnormal values.

The following are some of the most marked departures from the normal temperature at Signal Service stations:

Above normal.	Below normal.
Red Bluff, California..... 3.3	Phoenix, Arizona..... 4.8
Fort Benton, Montana..... 2.6	Nashville, Tennessee..... 4.6
Fort Apache, Arizona..... 2.5	New Haven, Connecticut..... 4.4
Fort Buford, Dakota..... 2.2	Norfolk, Virginia..... 4.2
Fort Assinaboine, Montana..... 1.9	Cincinnati, Ohio..... 4.2
Bismarck, Dakota..... 1.7	Baltimore, Maryland..... 4.0
Fort Maginnis, Montana..... 1.5	Lynchburg, Virginia..... 3.9
Fort Shaw, Montana..... 1.5	Charlotte, North Carolina..... 3.7

During June, the mean temperature in Arizona and the whole of the large area of country extending from the Atlantic Ocean westward to the Rocky Mountains, with the exception of Montana, Dakota, eastern Iowa, northern Illinois, and Florida, was below the normal, the most marked departures occurring in the

middle Atlantic states and Ohio Valley, these districts being about 3°.5 colder than the average June. In the Rocky Mountain regions, the Pacific slope, Montana, Dakota, and Florida the temperature for the month has been above the normal, but the excess has nowhere been very great.

DEVIATIONS FROM NORMAL TEMPERATURES.

In the table below are given, for certain stations, as reported by voluntary observers, the normal temperatures for June for a series of years, the mean temperature for June, 1886, and the departures from the normal:

Station.	County.	Normal temperature for June.	Number of years.	Mean temperature for June, 1886.	Departure.
<i>Arkansas.</i>					
Lead Hill.....	Boone.....	77.3	4	75.4	- 1.9
<i>California.</i>					
Sacramento.....	Sacramento.....	70.5	20	72.3	+ 1.8
<i>Connecticut.</i>					
Middletown.....	Middlesex.....	66.1	28	63.4	- 2.7
New Haven.....	New Haven.....	67.0	100	63.1	- 3.9
Thompson.....	Windham.....	65.0	30	63.4	- 1.6
<i>Dakota.</i>					
Webster.....	Day.....	71.4	4	68.9	- 2.5
<i>Illinois.</i>					
Anna.....	Union.....	74.4	11	73.7	- 0.7
Mattoon.....	Cass.....	72.4	6	73.0	+ 0.6
Peoria.....	Peoria.....	73.3	30	74.2	+ 0.9
Riley.....	McHenry.....	66.4	25	65.5	- 0.9
Sycamore.....	De Kalb.....	66.9	5	66.2	- 0.7
<i>Indiana.</i>					
Lafayette.....	Tippecanoe.....	69.8	7	68.9	- 0.9
Logansport.....	Cass.....	73.9	31	72.2	- 1.7
Manly.....	Rush.....	68.8	7	66.9	- 1.9
Spiceland.....	Henry.....	70.5	32	67.5	- 3.0
Vevay.....	Switzerland.....	74.1	21	70.5	- 3.6
<i>Iowa.</i>					
Monticello.....	Jones.....	68.3	33	68.9	+ 0.6
<i>Kansas.</i>					
Independence.....	Montgomery.....	74.7	15	72.9	- 1.8
Lawrence.....	Douglas.....	73.1	18	71.8	- 1.3
Wellington.....	Sumner.....	73.6	8	71.2	- 2.4
Yates Centre.....	Woodson.....	73.1	6	70.4	- 2.7
<i>Maine.</i>					
Belfast.....	Waldo.....	61.3	27	60.1	- 1.2
Bridgeton.....	Cumberland.....	62.8	11	61.3	- 1.5
Cornish.....	York.....	64.9	29	62.9	- 2.0
Gardiner.....	Kennebec.....	63.4	50	61.1	- 2.3
Orono.....	Penobscot.....	62.3	18	61.6	- 0.7
<i>Maryland.</i>					
Falblton.....	Harford.....	70.4	15	66.8	- 3.6
<i>Massachusetts.</i>					
Amherst.....	Hampshire.....	66.0	40	64.4	- 1.6
Cambridge.....	Middlesex.....	66.7	64	63.7	- 3.0
Fitchburg.....	Worcester.....	65.6	30	63.5	- 2.1
New Bedford.....	Bristol.....	64.1	74	62.8	- 1.3
Somerset.....	Bristol.....	69.2	16	67.6	- 1.6
Springfield.....	Hampden.....	68.6	19	66.4	- 2.2
Taunton.....	Bristol.....	68.7	16	64.0	- 4.7
Williamstown.....	Berkshire.....	65.9	34	62.3	- 3.6
Worcester.....	Worcester.....	66.1	47	61.4	- 4.7
<i>Nevada.</i>					
Carson City.....	Ormsby.....	64.8	7	67.3	+ 2.5
<i>New Brunswick.</i>					
Saint John.....	Saint John.....	55.2	26	57.3	+ 2.1
<i>New Hampshire.</i>					
Concord.....	Merrimac.....	64.7	18	62.1	- 2.6
Hanover.....	Grafton.....	65.5	26	63.4	- 2.1
<i>New Jersey.</i>					
South Orange.....	Essex.....	69.4	16	65.4	- 4.0
<i>New York.</i>					
Factoryville.....	Tioga.....	65.1	4	65.1	0.0
North Volney.....	Oswego.....	64.9	18	63.3	- 1.6
Palermo.....	Oswego.....	65.6	33	61.7	- 3.9
Plattsburg Barracks.....	Clinton.....	65.4	17	63.2	- 2.2
<i>Ohio.</i>					
Wanseeon.....	Fulton.....	68.4	16	67.4	- 1.0
Westerville.....	Franklin.....	67.8	11	66.4	- 1.4
<i>Pennsylvania.</i>					
Dyberry.....	Wayne.....	64.5	20	62.4	- 2.1
<i>South Carolina.</i>					
Stateburg.....	Sumter.....	76.3	6	75.0	- 1.3
<i>Texas.</i>					
New Uim.....	Austin.....	80.6	14	81.7	+ 1.1
<i>Vermont.</i>					
Lunenburg.....	Essex.....	64.2	38	59.9	- 4.3
Newport.....	Orleans.....	65.2	12	62.9	- 2.3
Stafford.....	Orange.....	65.2	12	63.9	- 1.3
<i>Virginia.</i>					
Bird's Nest.....	Northampton.....	74.4	18	74.4	0.0
Dale Enterprise.....	Rockingham.....	70.4	6	72.3	+ 1.9
Variety Mills.....	Nelson.....	71.1	9	69.5	- 1.6
Wytheville.....	Wythe.....	68.1	23	67.4	- 0.7
<i>West Virginia.</i>					
Helvetia.....	Randolph.....	66.2	10	65.1	- 1.1

* From the "Bulletin of the New England Meteorological Society."

In connection with this subject, the following notes are furnished by voluntary observers:

Illinois.—Riley, McHenry county: during the past thirty years the warmest

June occurred in 1873, mean temperature, 79°.0; the coldest June in 1869, mean temperature, 68°.8; the maximum June temperature during that period, 100°.0, occurred in 1856; minimum, 41°.0, in 1860.

Indiana.—Vevay, Switzerland county: the highest temperature that has occurred in any June during the past twenty-one years was 99°.0, in 1866 and 1867; and the lowest, 46°.0, in 1878.

Lafayette, Tippecanoe county: the maximum temperature for June, 1886, 92°.8, is 1°.4 above the average of the past seven years; the minimum, 39°.0, is 6°.4 below the average June minimum.

Iowa.—Monticello, Jones county: the highest temperature that has occurred in any June during the past thirty-three years was 102°.0, in 1856 and 1870; the lowest, 36°.0, in 1855; the warmest June during the same period occurred in 1856, mean temperature, 74°.0; the coldest in 1863, mean temperature, 64°.1.

Kansas.—Wellington, Sumner county: the mean temperature of June, 1886, was lower than the mean for any June during the past eight years; the warmest June during this time was 78°.4, in 1881; the highest temperature occurred in 1879, 99°.0; the lowest, also in 1879, 37°.0.

Independence, Montgomery county: the mean temperature of the first six months of this year, 49°.1, is 2°.0 below the average of similar periods during the past fifteen years.

Maine.—Cornish, York county: the mean temperature of June, 1864, 69°.3, is higher than any June mean temperature during the past twenty-nine years; the mean temperature of June, 1857, 59°.1, is the lowest.

Maryland.—Fallston, Harford county: the highest mean temperature for June during the past fifteen years was 72°.6, in 1874; the lowest, 66°.8, in 1886.

Massachusetts.—Taunton, Bristol county: the mean temperature of the present June, 64°.0, is lower than the mean of any June during the past sixteen years.

New York.—Palermo, Oswego county: the highest mean temperature for June during the past thirty-three years was 71°.6, in 1870; the lowest, 59°.4, in 1855.

North Volney, Oswego county: the highest mean temperature for June during the past eighteen years was 71°.6, in 1870; the lowest, 58°.7, in 1881.

Ohio.—Westerville, Franklin county: the highest mean temperature for June during the past eleven years occurred in 1880 and 1884, 69°.9; the lowest, in 1878, 64°.4.

Wauseon, Fulton county: the warmest June during the past sixteen years was in 1873, mean temperature, 72°.4; the coldest was in 1881, mean, 65°.5; the maximum June temperature during the same period occurred in 1874, 99°.0; the minimum, in 1883, 34°.5.

Texas.—New Elm, Austin county: the highest mean temperature for June during the past fourteen years was 85°.0, in 1881, the lowest, 72°.3, in 1877; the maximum June temperature during the same period occurred in 1881, 102°.0; the minimum in 1877, 55°.0.

Virginia.—Variety Mills, Nelson county: during the past nine years the warmest June occurred in 1877, mean temperature, 73°.3; the coldest in 1878, mean, 67°.5.

Dale Enterprise, Rockingham county: during the past six years the warmest June occurred in 1881, mean temperature, 76°.6; the coldest in 1883, mean, 63°.8.

In the following table are given the mean temperatures for the several geographical districts, with the normals and departures, as deduced from Signal Service observations:

Average temperatures for June.

Districts.	Average for June Signal-Service observations.		Comparison of June, 1886, with the average for several years.
	For several years.	For 1886.	
New England	64.3	61.7	- 2.6
Middle Atlantic States	71.3	66.3	- 5.0
South Atlantic States	70.9	75.3	+ 4.4
Florida Peninsula	80.8	81.3	+ 0.5
Eastern Gulf States	78.8	79.4	+ 0.6
Western Gulf States	80.1	77.6	- 2.5
Rio Grande Valley	84.1	82.0	- 2.1
Tennessee	75.9	72.7	- 3.2
Ohio Valley	72.5	69.2	- 3.3
Lower Lake region	66.3	64.5	- 1.8
Upper Lake region	61.3	60.1	- 1.2
Extreme Northwest	61.8	62.8	+ 1.0
Upper Mississippi Valley	71.3	70.6	- 0.7
Missouri Valley	70.0	68.6	- 1.4
Northern slope	61.8	62.5	+ 0.7
Middle slope	70.4	69.6	- 0.8
Southern slope	70.1	75.2	+ 5.1
Southern plateau	75.4	74.1	- 1.3
Middle plateau	65.4	66.4	+ 1.0
Northern plateau			
North Pacific coast region	66.6	61.4	- 5.2
Middle Pacific coast region	67.6	68.7	+ 1.1
South Pacific coast region	71.8	71.1	- 0.7

RANGES OF TEMPERATURE.

The monthly, and the greatest and least daily, ranges of temperature are given in the table of miscellaneous meteorological data.

The following are some of the greatest and least monthly ranges at Signal Service stations:

Greatest.	Least.
Fort McDowell, Arizona..... 68.0	Cape Mendocino, California..... 18.4
Poplar River, Montana..... 64.7	San Diego, California..... 20.5
Fort Apache, Arizona..... 60.6	New Orleans, Louisiana..... 22.0
Winnemucca, Nevada..... 59.6	Astoria, Oregon..... 22.0
Wilcox, Arizona..... 57.5	Galveston, Texas..... 22.8
Fort Buford, Dakota..... 57.5	Charleston, South Carolina..... 22.8
Saint Vincent, Minnesota..... 57.2	Fort Macon, North Carolina..... 23.5
Fort Shaw, Montana..... 57.1	Cedar Key, Florida..... 23.7

Table of comparative maximum and minimum temperatures for June.

State or Territory.	Station.	For 1886.		Since establishment of station.			
		Max.	Min.	Max.	Year.	Min.	Year.
Alabama	Mobile	93.6	65.4	100.0	1877, 1882	61.0	1879
Do	Montgomery	95.0	63.9	105.5	1881	58.0	1877, 1879
Arizona	Prescott	93.1	42.0	102.0	1878	32.0	1880
Do	Fort Apache	100.0	40.0	101.0	1883	33.3	1885
Arkansas	Fort Smith	98.9	59.2	101.0	1882	50.0	1882
Do	Little Rock	95.2	60.2	98.0	1882	55.0	1882
California	San Francisco	82.8	48.3	95.2	1883	48.0	1871, 1874
Do	San Diego	74.8	54.3	94.0	1877	50.0	1884
Colorado	Denver	92.7	46.8	99.0	1873	37.0	1883
Do	Pike's Peak	52.1	24.0	63.0	1861	2.0	1882
Connecticut	New Haven	86.5	46.4	92.0	1880, 1884	41.4	1884
Do	New London	77.7	46.7	89.0	1880	43.0	1876, 1884
Dakota	Fort Buford	93.7	36.2	107.0	1883	30.0	1883
Do	Yankton	90.5	44.2	97.0	1876	38.0	1876, 77, 79
Delaware	Del. Breakwater			89.0	1880	50.0	1882
District of Columbia	Washington City	88.8	50.2	102.5	1874	46.5	1873
Florida	Jacksonville	94.3	66.9	100.5	1881	61.7	1884
Do	Key West	99.8	73.6	95.5	1881	71.2	1882
Georgia	Atlanta	89.7	60.0	94.8	1881	54.0	1879
Do	Savannah	93.2	66.5	100.0	1880	54.0	1885
Idaho	Boise City	95.8	39.5	98.6	1885	36.0	1882
Illinois	Chicago	88.4	55.5	96.0	1872	50.0	1877
Do	Chicago	87.3	49.0	98.0	1872	40.0	1875
Indiana	Indianapolis	89.0	49.9	96.0	1874	41.0	1885
Indian Territory	Fort Sill	103.0	51.7	105.0	1881	47.0	1879
Iowa	Dubuque			98.0	1874	40.0	1877
Do	Keokuk	88.8	46.1	96.0	1873	45.0	1877
Kansas	Dodge City	95.2	47.2	102.0	1880	40.0	1879
Do	Leavenworth	92.0	54.2	99.0	1875	45.0	1877, 1882
Kentucky	Louisville	89.3	52.1	100.0	1874	50.0	1882
Louisiana	New Orleans	92.0	70.0	97.0	1881	65.0	1879
Do	Shreveport	100.7	63.9	104.0	1875	55.0	1877
Maine	Bangor	75.9	41.3	82.0	1874	30.0	1875
Do	Portland	82.1	47.0	94.0	1878	42.0	1875
Maryland	Baltimore	89.0	51.8	97.5	1874	49.0	1873
Massachusetts	Boston	81.7	50.1	98.0	1874	42.0	1884
Michigan	Detroit	89.2	49.0	93.0	1874	38.0	1875
Do	Alpena	84.3	41.1	97.0	1874	33.5	1881
Minnesota	Duluth	87.5	38.9	92.2	1883	33.3	1885
Do	Saint Paul	90.7	42.8	94.0	1874	36.0	1885
Mississippi	Vicksburg	93.1	65.8	101.0	1881	53.0	1879
Missouri	Saint Louis	90.8	57.0	99.0	1881	48.0	1877
Montana	Fort Benton	95.7	38.6	101.0	1881	27.0	1881
Do	Helena	88.3	40.0	95.0	1880	31.0	1880
Nebraska	North Platte	90.0	50.3	101.0	1876	33.0	1876
Do	Omaha	92.4	47.1	98.0	1881	42.0	1877
Nevada	Winnemucca	94.9	35.3	95.0	1881	30.8	1885
New Hampshire	Mount Washington	58.2	24.1	71.0	1878	15.0	1878, 1879
New Jersey	Atlantic City	82.0	50.3	93.0	74, '80, '81	45.0	1878
Do	Sandy Hook	82.0	52.9	97.0	1874	49.0	1874
New Mexico	Santa Fe	85.9	43.8	92.0	1881	33.0	1877, 1880
New York	Buffalo	84.6	46.2	92.0	1878	40.5	1879
Do	New York City	83.0	53.0	95.0	1875	47.0	1878, 1879
North Carolina	Charlotte	89.7	56.6	97.0	1881	51.5	1884
Do	Wilmington	92.2	56.3	100.0	1880	51.0	1884
Ohio	Cincinnati	85.5	50.7	98.5	1874	48.1	1885
Do	Cleveland	90.2	44.2	96.0	1874	40.0	1879
Oregon	Portland	95.0	46.5	99.0	1876	39.0	1875
Do	Roseburg	86.8	44.3	96.5	1878	37.5	1880
Pennsylvania	Pittsburg	92.5	45.2	98.0	1874	39.0	1879
Do	Philadelphia	86.0	53.0	97.0	1874	47.2	1884
Rhode Island	Block Island	74.1	47.6	82.6	1884	46.2	1884
South Carolina	Charleston	89.5	60.7	100.0	1877, 1880	58.2	1884
Tennessee	Knoxville	91.2	55.0	96.0	1880	47.0	1878
Do	Nashville	91.1	55.6	99.0	1874	49.0	1877
Texas	Fort Davis	99.5	49.5	111.0	1881	49.0	1881
Do	Galveston	90.0	67.2	97.0	1875	64.0	1877, 1879
Utah	Salt Lake City	95.2	42.2	100.0	1883	37.0	1875
Virginia	Lynchburg	88.3	52.4	97.0	1874	49.0	1880
Do	Norfolk	93.2	56.5	102.0	1874	53.0	1876, 1884
Washington Ter.	Spokane Falls			94.5	1882	39.0	1882
Do	Olympia	91.9	36.2	95.0	1878	36.0	1880
Wisconsin	La Crosse	94.0	47.3	98.0	1874	40.0	1876
Do	Milwaukee	86.0	42.4	94.0	1872, 1874	39.8	1885
Wyoming	Cheyenne	88.8	39.9	97.0	1880, 1881	28.0	1876

FROSTS.

Frosts occurred in the various states and territories during the month on the following dates:

- Colorado.—Pike's Peak, 1st, 5th, 17th.
- Connecticut.—New Haven, 1st.
- Dakota.—Fort Buford, 2d; Fort Pembina, 5th; Fort Totten, 7th.
- Idaho.—Boisé City, 11th.
- Illinois.—Sycamore, 3d; Chicago, 8th.
- Iowa.—Monticello, Manchester, Cedar Rapids, West Union, and Corydon, 3d.
- Michigan.—Escanaba, 3d, 5th to 8th, 18th; Hudson, 4th; Mackinaw City, 4th, 6th, 8th; Alpena, 6th; Pentwater, 8th; Grand Haven, 18th; Port Huron, 19th; Marquette, 28th.
- Minnesota.—Moorhead, 2d, 3d, 5th, 6th; Saint Vincent, 4th, 5th, 7th; Duluth, 8th.
- Montana.—Fort Shaw and Poplar River, 2d.
- Nevada.—Winnemucca, 14th, 15th.
- New Hampshire.—Mount Washington, 4th, 5th, 6th, 20th, 30th.
- New York.—North Volney, 1st, 19th; Factoryville, 4th; Humphrey, 4th, 8th, 19th.
- Ohio.—Westerville, Wauseon, and Garrettsville, 4th; Napoleon, 4th, 18th.
- Pennsylvania.—Pisgah Mountain, near Troy, 1st, 3d; East Brook and Pittsburg, 4th; Wellsborough, 4th, 5th, 19th, 28th; Grampian Hills, 4th, 19th; Erie, 8th; Dyberry and Philipsburg, 19th.
- Vermont.—Strafford, 2d, 4th, 19th, 20th.
- Wisconsin.—Fond du Lac, 2d; Neillsville, 3d; Milwaukee, 8th.
- Wyoming.—Fort Bridger, 14th.

The following reports of injury to vegetation by frosts have been reported:

Poplar River, Montana: vegetation was seriously injured by a heavy frost on the morning of the 2d.

Saint Vincent, Kittson county, Minnesota: a heavy frost occurred during the night of the 4-5th, which cut down most of the wheat in this county and in the northwestern townships of Pembina county, Dakota. Reports from farmers in this vicinity and along the line of the Saint Paul, Minneapolis, and Manitoba Railroad state that wheat had turned red and was lying on the ground, having been wilted by the frost. Market gardeners also suffered considerable damage.

Contoocook, Merrimac county, New Hampshire: the crops in the lowlands were killed by a heavy frost on the morning of the 19th.

PRECIPITATION.

[Expressed in inches and hundredths.]

The distribution of rainfall over the United States and Canada for June, 1886, as determined from the reports of about seven hundred stations, is exhibited on chart iii.

The precipitation for the month has been very unequally distributed over the country, the excess of rainfall being very large in some districts, and the deficiency in other districts being correspondingly great. In the Atlantic States south of Pennsylvania, the Gulf States, including only the extreme eastern portion of Texas, the Alleghany Mountain region, Tennessee, and in the Ohio Valley the rainfall was largely in excess of the normal. The excess was especially great in South Carolina, Georgia, northern Florida, Alabama, Mississippi, Louisiana, and Tennessee, averaging one hundred per cent. above the normal rainfall of those states. In New England, New York, Pennsylvania, the Lake regions, upper Mississippi valley, southern Florida, and over the large area of country extending westward from the ninety-fifth meridian to the Pacific Ocean the rainfall was below the normal, very large deficiencies and severe drought occurring in the Missouri and upper Mississippi valleys, the extreme northwest, and Texas.

In the following table are shown, for the several geographical districts, the normal precipitation for June; the average

for June, 1886, and the excess or deficiency as compared with the normal:

Districts.	Average precipitation for June.		Comparison of June, 1886, with the average for several years.
	Average for June, Signal-Service observations.	For several years.	
	Inches.	Inches.	Inches.
New England.....	3.60	1.97	-1.63
Middle Atlantic States.....	3.93	4.41	+0.78
South Atlantic States.....	4.99	7.79	+2.80
Florida Peninsula.....	6.19	6.54	+0.35
Eastern Gulf States.....	4.89	8.24	+3.35
Western Gulf States.....	4.11	5.95	+1.84
Rio Grande Valley.....	1.46	4.93	+3.47
Tennessee.....	4.54	7.05	+2.51
Ohio Valley.....	4.42	4.68	+0.26
Lower lake region.....	3.88	2.18	-1.70
Upper lake region.....	4.18	2.69	-1.49
Extreme northwest.....	3.41	2.50	-0.91
Upper Mississippi Valley.....	5.60	3.71	-1.97
Missouri Valley.....	5.42	2.85	-2.57
Northern slope.....	2.54	1.52	-1.02
Middle slope.....	3.87	3.53	-0.53
Southern slope.....	3.83	1.63	-2.20
Southern plateau.....	0.46	0.31	-0.15
Middle plateau.....	0.92	0.89	-0.03
Northern plateau.....	1.34	0.69	-0.65
North Pacific coast region.....	0.34	0.00	-0.34
Middle Pacific coast region.....	0.99	0.06	-0.93

The following are some of the most marked departures from the normal precipitation at Signal Service stations:

Above normal.		Below normal.	
Station.	Inches.	Station.	Inches.
Charlotte, North Carolina.....	6.93	Des Moines, Iowa.....	6.70
Brownsville, Texas.....	6.06	Palestine, Texas.....	6.07
Little Rock, Arkansas.....	5.98	Omaha, Nebraska.....	4.96
Vicksburg, Mississippi.....	5.89	Fort Sill, Indian Territory.....	4.33
Augusta, Georgia.....	5.59	Fort Reno, Indian Territory.....	4.33
Charleston, South Carolina.....	5.45	Cleveland, Ohio.....	3.44
Lynchburg, Virginia.....	5.03	Chicago, Illinois.....	3.40
Atlanta, Georgia.....	4.35	Port Huron, Michigan.....	2.99
Kitty Hawk, North Carolina.....	4.30	La Crosse, Wisconsin.....	2.85

DEVIATIONS FROM AVERAGE PRECIPITATION.

The following table shows, for certain stations, as reported by voluntary observers, the average precipitation for the month of June for a series of years; the precipitation for June, 1886; and the departures from the average:

Station.	County.	Average precipitation for June.	Number of years.	Precipitation for June, 1886.	Departure.
<i>Arkansas.</i>					
Lead Hill.....	Benton.....	5.16	4	5.42	+ 0.26
<i>California.</i>					
Sacramento.....	Sacramento.....	0.35	12	trace	- 0.35
<i>Connecticut.</i>					
Canton.....	Hartford.....	4.77	25	2.72	- 2.05
Hartford.....	Hartford.....	3.02	14	1.97	- 1.05
Middletown.....	Middlesex.....	3.96	23	3.17	- 0.49
New Haven.....	New Haven.....	3.19	14	2.84	- 0.35
Wallingford.....	New Haven.....	3.72	29	3.78	+ 0.06
<i>Dakota.</i>					
Webster.....	Duy.....	6.82	4	8.91	+ 2.09
<i>Illinois.</i>					
Anna.....	Union.....	6.24	11	3.84	- 2.40
Mattoon.....	Coles.....	5.32	6	3.67	- 1.65
Peoria.....	Peoria.....	4.03	30	3.07	- 0.36
Riley.....	McHenry.....	4.18	25	1.89	- 2.29
Sycamore.....	De Kalb.....	7.36	5	2.27	- 5.09
<i>Indiana.</i>					
Lafayette.....	Tipppecanoe.....	5.66	7	2.60	- 3.06
Logansport.....	Cass.....	3.93	31	4.45	+ 0.52
Mauzy.....	Elkhart.....	5.42	6	8.34	+ 2.92
Spiceland.....	Henry.....	4.74	28	6.01	+ 1.27
Vevey.....	Switzerland.....	4.88	21	7.39	+ 2.51
<i>Iowa.</i>					
Monticello.....	Jones.....	4.43	33	1.41	- 3.02
<i>Kansas.</i>					
Independence.....	Montgomery.....	4.58	14	2.23	- 2.35
Lawrence.....	Douglas.....	4.89	18	3.71	- 1.18
Wellington.....	Sumner.....	4.71	8	7.71	+ 3.00
Vates Centre.....	Woodson.....	4.43	6	3.11	- 1.32
<i>Maine.</i>					
Cornish.....	York.....	3.29	29	2.19	- 1.10
Guednet.....	Kennebec.....	3.26	48	1.84	- 1.42
Orono.....	Penobscot.....	3.29	18	2.74	- 0.55
<i>Maryland.</i>					
Fallston.....	Harford.....	4.19	15	5.25	+ 1.06