

**Kansas.**—Westmoreland, 8th; Concordia, 7th, 8th.  
**Maine.**—Eastport and Bangor, 3d.  
**Massachusetts.**—Princeton, 3d; Rowe and Fall River, 3d, 4th; Amherst, 4th.  
**Michigan.**—Northport, 12th, 13th; Birmingham, 2d; Moores-town, 11th; Escanaba, 2d, 3d, 6th; Mackinaw City, 3d, 6th.  
**Minnesota.**—Saint Paul, 7th, 9th.  
**Missouri.**—Lamar, 8th.  
**Nebraska.**—Yutan, 7th to 0th; Stockham, 7th; Genoa, 2d, 7th.  
**Nevada.**—Winnemucca, 23d.  
**New Jersey.**—Somerville, 9th, 11th.  
**New York.**—Menand Station, (near Albany) 3d, 4th; Albany, 4th; Humphrey 3d, 11th.  
**Ohio.**—Garrettsville and Ruggles, 2d, 3d; North Lewisburg, 8th.  
**Pennsylvania.**—Fallsington, 12th; Catawissa, 13th.  
**Rhode Island.**—Point Judith, 3d, 4th.  
**Utah.**—Nephi, 16th, 24th.  
**Vermont.**—Strafford, 1st, 3d, 4th, 10th, 12th.  
**Wisconsin.**—La Crosse, 7th to 11th; Milwaukee and Embarras, 7th; Franklin, 11th.  
**Wyoming.**—Fort Bridger, 24th.

**PRECIPITATION.**

[Expressed in inches and hundredths.]

The distribution of rainfall over the United States and Canada, for the month of May, 1885, as determined from reports from more than eight hundred stations, is exhibited on chart iii.

In the following table are shown, for each of the several geographical districts, the normal May precipitation for a series of years, the average for May, 1885, and the excess or deficiency as compared with the normal:

Average precipitation for May, 1885.

Districts.	Average for May. Signal-Service observations.		Comparison of May, 1885, with the average for several years.
	For several years.	For 1885.	
	Inches.	Inches	Inches.
New England	3.70	3.51	-0.19
Middle Atlantic states	2.88	3.99	+1.11
South Atlantic states	3.52	6.34	+2.82
Florida peninsula	3.15	4.67	+1.52
Eastern Gulf states	4.45	5.05	+0.60
Western Gulf states	5.39	5.07	-0.32
Rio Grande valley	2.88	8.72	+5.84
Tennessee	3.80	4.93	+1.13
Ohio valley	3.90	3.70	-0.20
Lower lake region	3.25	3.96	+0.71
Upper lake region	3.57	2.40	-1.17
Extreme northwest	3.06	1.47	-1.59
Upper Mississippi valley	4.43	2.48	-1.95
Missouri valley	3.99	4.10	+0.11
Northern slope	2.43	1.40	-1.03
Middle slope	4.09	4.51	+0.42
Southern slope	3.12	3.19	+0.07
Southern plateau	0.40	0.55	+0.15
Middle plateau	1.52	1.76	+0.24
Northern plateau	1.50	2.67	+1.17
North Pacific coast region	2.23	3.48	+1.25
Middle Pacific coast region	0.92	0.32	-0.60
South Pacific coast region	0.35	0.22	-0.13
Mount Washington, N. H.	6.85	2.29	-4.56
Pike's Peak, Colo.	4.01	6.12	+2.11

The precipitation has been in excess of the May average in the lower lake region, upper Ohio valley, Tennessee, middle and south Atlantic, and east Gulf states, portions of Kansas and Nebraska, and over an area extending from the west Gulf coast to the north Pacific coast region.

The excess has been most marked on the Atlantic coast from Florida to Virginia, in the north Pacific coast region, and in the northern plateau, where the departures are from one and one-fourth to nearly three inches, and in the Rio Grande valley, where the excess amounts to 5.84 inches.

In the upper lake region, extreme northwest, northern slope, upper Mississippi and lower Ohio valleys, Missouri, Arkansas,

northeastern Texas, northern Louisiana, California, Arizona, and portions of New England and the middle Atlantic states, the precipitation has been below the average.

The most marked deficiencies occurred in the upper lake region, upper Mississippi valley, extreme northwest, and northern slope, where they varied from one to two inches.

At Milwaukee, Wisconsin, the monthly precipitation was 0.41, the May average for the last fourteen years being 3.65; at Des Moines, Iowa, there was a deficiency of 4.47, as compared with the average for the last six years.

The meteorological record forwarded by the post surgeon at Fort Ellis, Montana, shows the rainfall for May to have been remarkably heavy at that place; rain fell on eighteen days during the month, aggregating 12.26.

In the table of miscellaneous meteorological data are given the rainfalls at the various Signal Service stations with the departures from the respective normals.

**DEVIATIONS FROM AVERAGE PRECIPITATION.**

The departures exhibited by the reports from the regular Signal Service stations, are shown in the table of average precipitation for the several geographical districts, and also in the table of miscellaneous meteorological data. The following notes in connection with this subject are reported by voluntary observers:

**Arkansas.**—Lead Hill, Boone county: monthly precipitation, 3.73, is 4.48 below the May average for the three preceding years.

**Georgia.**—Milledgeville: monthly precipitation, 6.69, is 3.36 in excess of the May average.

**Illinois.**—Anna, Union county: monthly precipitation, 2.24, is 2.46 below the May average for the last ten years.

**Mattoon, Coles county:** monthly precipitation, 6.38, is 1.51 above the May average for the last five years.

**Sycamore, DeKalb county:** monthly precipitation, 1.65, is 3.11 below the May average for the four preceding years.

**Riley, McHenry county:** monthly precipitation, 1.72, is 1.70 below the May average for the last twenty-four years. The precipitation for the spring of 1885, is 5.98, or 2.72 below the spring average, and is the least for the above period.

**Collinsville, Madison county:** monthly precipitation, 2.56, is 2.16 below the May average.

**Swanwick, Perry county:** monthly precipitation, 4.26, is 0.04 below the May average for the last four years.

**Indiana.**—Vevay, Switzerland county: monthly precipitation, 2.47, is 1.06 below the May average for the last twenty-one years.

**Logansport, Cass county:** monthly precipitation, 5.02, is 0.80 in excess of the May average for the last twenty-six years.

**Wabash, Wabash county:** monthly precipitation, 4.56, is 0.28 above the May average for the last nine years.

**Spiceland, Henry county:** monthly precipitation, 3.73, is 0.14 above the May average for the last twenty-six years.

**Kansas.**—Independence, Montgomery county: monthly precipitation, 5.62, is 1.15 above the May average for the last thirteen years.

**Wellington, Sumner county:** monthly precipitation, 7.19, is 1.46 above the May average for the last seven years.

**Yates Centre, Woodson county:** monthly precipitation, 4.68, is 0.91 below the May average for the last five years. The precipitation for the spring season is 11.21, or 2.61 above the spring average.

**Emporia, Lyon county:** monthly precipitation, 4.18, is 0.43 below the May average.

**Lawrence, Douglas county:** monthly precipitation, 4.07, is 0.18 below the May average for the last eighteen years. The total precipitation for the first five months of 1885, is 13.44, or 1.38 in excess of the average for the corresponding months during the above period.

**Maine.**—Gardiner, Kennebec county: monthly precipitation, 3.41, (1.44 inches fell on the 31st,) is 0.50 below the May average for a period of forty-seven years.

Table of excessive, and greatest monthly precipitation—May, 1885.

Station.	Specially heavy.		Largest monthly Amount.	Station.	Specially heavy.		Largest monthly Amount.
	Date.	Amt.			Date.	Amt.	
<i>Alabama.</i>				<i>Missouri.</i>			
Greenville.....	6	2.80	14.45	Sherrill.....			6.14
Do.....	21, 22	3.58		<i>Montana.</i>			
Do.....	30	5.85		Fort Ellis.....	19 to 22	4.90	12.90
Bolling.....			12.96	Do.....	26, 27	2.90	
Montgomery.....	22, 23	2.22	8.92	<i>Nebraska.</i>			
Do.....	27	2.39		Nebraska City.....			8.29
Do.....	29, 30	2.14		De Witt.....			7.40
Mount Willing.....			8.61	Sargent.....	15	5.00	6.81
Lafayette.....			8.00	Harvard.....	15, 16	3.75	6.23
Scottsboroug.....	29	2.18	7.45	Tecumseh.....	27	2.00	
Green Springs.....	27, 28, 29	4.75	7.35	Omaha.....	15, 16	2.04	
Prattville.....			7.25	Yutan.....	27	2.56	
Opelika.....			7.13	<i>New Jersey.</i>			
Gadsden.....			6.95	Vineland.....	7	2.75	
Tuscaloosa.....			6.91	Salem.....	8	2.00	
Edwardsville.....			6.78	Cape May.....	6, 7	2.31	
Clauton.....			6.70	<i>New York.</i>			
Tuscumbia.....			6.61	Humphrey.....	30, 31	2.48	
Birmingham.....	22, 23	2.05	6.48	Fort Niagara.....	23, 24	2.10	
Wetumpka.....			6.47	<i>North Carolina.</i>			
Mount View.....			6.35	New-Berne.....	6, 7	2.10	10.86
Carrollton.....			6.28	Do.....	13	2.46	
Fort Deposit.....	30	3.00		Lenoir.....	22, 23	4.50	10.10
<i>Arkness.</i>				Lincolnton.....	27, 28	3.44	8.79
Malvern.....	26, 27, 28	5.39	6.11	Wilmingon.....	1	2.17	8.58
Monticello.....	26	3.10		Do.....	28, 29	2.27	
<i>Colorado.</i>				Weldon.....	21 to 24	3.32	8.53
Pike's Peak.....	1, 2	2.70	6.12	Fort Macon.....			7.90
<i>Florida.</i>				Cape Lookout.....	6, 7	2.85	7.37
Manatee.....	30	2.00	8.90	Scott's Hill.....			7.35
Mayport.....	25	3.84	8.53	Hatteras.....			7.04
Jacksonville.....	21	2.35	7.74	Kitty Hawk.....			6.78
Archer.....	19	2.77	6.63	Charlotte.....			6.47
Waldo.....	15	2.02	6.30	Lumberton.....			6.45
Do.....	20, 21, 22	4.06		Raleigh.....			6.40
Tallahassee.....	20	2.30		Salisbury.....			6.37
<i>Georgia.</i>				Smithville.....	1	2.23	6.10
Washington.....	24	2.25	8.43	<i>Pennsylvania.</i>			
Do.....	29, 30, 31	3.45		Germantown.....	7	2.16	
Fort Valley.....			8.10	West Chester.....	7	2.04	
Toccoa.....	22, 23	2.23	8.07	Havorford College.....	6, 7, 8	3.14	
Saint Mary's.....			7.50	Philadelphia.....	7, 8	2.01	
Sandersville.....			7.45	<i>Rhode Island.</i>			
Brunswick.....			7.29	Nyatt Point.....	14, 15	2.00	
Dalton.....			7.25	<i>South Carolina.</i>			
Athens.....			7.22	Columbia.....	6	2.10	9.21
Griffin.....			6.58	Do.....	22, 23, 24	5.23	
Newnan.....			6.78	Aiken.....	6	2.00	8.03
Milledgeville.....			6.60	Do.....	23, 24	2.45	
Forsyth.....			6.47	<i>Tennessee.</i>			
Mossy Creek.....			6.30	Beech Grove.....	22, 23	2.55	7.99
Gainesville.....			6.25	Knoxville.....			7.19
Atlanta.....	21, 22	2.29	6.12	Caryville.....			6.44
Cartersville.....	27, 28, 29	3.25	6.08	Andersonville.....			6.31
Camack.....			6.04	Fostoria.....	20	2.60	6.17
Columbus.....	29, 30	3.46		Howell.....	26, 27	2.69	6.11
Augusta.....	23, 24	2.43		Pulaski.....	27	3.20	6.07
West Point.....	29, 30	2.40		Trenton.....	26	2.30	
<i>Illinois.</i>				Greenville.....	6, 7	2.00	
Mattoon.....	28	3.71	6.38	<i>Texas.</i>			
<i>Indiana.</i>				Waco.....	25 to 28	8.46	12.44
Fort Wayne.....	5, 6	2.00	7.09	Weslmar.....	20	4.66	10.43
Do.....	29, 30	2.15		Rio Grande City.....	8	4.35	10.28
Logansport.....	5, 6	2.02		Hearne.....	17, 18	2.55	9.54
Wabash.....	5, 6	2.08		Do.....	25 to 28	5.64	
La Grange.....	29	2.00		Cleburne.....	24 to 27	5.07	9.02
Yocum.....	6	2.00		Huntsville.....	17, 18	2.42	8.29
Farmland.....	22	2.03		Do.....	27, 28	2.73	
Brookville.....	22	3.00		New Ulm.....	16, 17	3.14	8.01
<i>Indian Territory.</i>				Do.....	19	3.09	
Fort Reno.....	16, 17, 18	5.30	9.84	San Antonio.....	13	2.12	7.92
<i>Iowa.</i>				Weatherford.....	20	2.00	7.50
Logan.....	16, 17	3.20	6.00	Do.....	25, 26	3.00	
Do.....	27, 28	3.10		Fort Elliott.....	19, 20	3.66	7.23
Monticello.....	28, 29	2.00		Brownsville.....	8	2.30	7.17
Cedar Rapids.....	28, 29	2.63		Do.....	29	3.75	
<i>Kansas.</i>				Dallas.....	25, 26	3.27	6.99
Wellington.....	15, 16	2.70	7.19	Galveston.....	8, 9	3.14	6.41
West Leavenworth.....	26, 27	2.00	6.90	Comfort.....			6.14
Manhattan.....	16, 17	2.25		Palestine.....	27, 28	2.93	6.08
Clay Centre.....	16	2.66		Columbia.....	17	2.01	
Westmoreland.....	17	2.00		Belton.....	27, 28	2.22	
Yates Centre.....	16, 17	3.02		Honey Grove.....	20	2.60	
Independence.....	16	2.18		Indianola.....	17	2.33	
<i>Louisiana.</i>				Longview.....	28	2.00	
Grand Coteau.....	6	2.18	6.12	<i>Virginia.</i>			
Port Eads.....	5	3.05	6.11	Variety Mills.....	22, 23	3.19	7.90
La Fayette.....	6	3.19		Bird's Nest.....			7.85
Point Pleasant.....	21	2.02		Chincoteague.....	6, 7	2.63	7.22
Delta.....	21, 22	2.22		Wytheville.....	27, 28	2.68	7.04
<i>Maine.</i>				Norfolk.....			6.16
Eastport.....	2	2.05		Fort Monroe.....	27, 28	2.24	
<i>Maryland.</i>				<i>Wisconsin.</i>			
Ocean City.....	6, 7	2.54		Embarras.....	17, 18	2.60	
Fallston.....	7	2.50					
Fort McHenry.....	6, 7	2.00					
<i>Michigan.</i>							
Escanaba.....	17, 18	2.37					
Port Huron.....	6	2.21					
<i>Mississippi.</i>							
Macon.....	27, 28, 29	6.67	7.31				

tion. 5.28, is 2.30 in excess of the May average for the last fourteen years.

*Massachusetts.*—Worcester, Worcester county: monthly precipitation, 3.26, is 0.66 below the May average for the last forty-five years.

Somerset, Bristol county: monthly precipitation, 4.20, is 0.99 in excess of the May average.

*Nevada.*—Carson City: monthly precipitation, 0.07, is 0.22 below the average for May.

*New Hampshire.*—Contoocook, Merrimac county: monthly precipitation, 2.95, is about two-thirds of the May average.

*New Jersey.*—South Orange, Essex county: monthly precipitation, 1.18, is 1.64 below the May average for the last fifteen years. The rainfall for the spring season, 3.29, is 6.27 below the spring average and is the least recorded during the above period.

*New York.*—North Volney, Oswego county: monthly precipitation, 2.70, is 0.17 in excess of the May average for the last thirteen years. The total precipitation for the spring season is 6.20, or 1.43 below the average. The smallest spring precipitation (4.30) during the above period occurred in 1879; the largest (11.72) occurred in 1873.

Palermo, Oswego county: monthly precipitation, 2.29, is 0.51 below the May average for the last thirty-two years. The total precipitation for the spring season, 3.97, is the least recorded during the above period.

*Ohio.*—Wauseon, Fulton county: monthly precipitation, 5.61, is 1.63 in excess of the May average for the last thirteen years.

*Texas.*—New Ulm, Austin county: monthly precipitation, 8.01, is 1.71 in excess of the May average for the last thirteen years.

*Vermont.*—Woodstock, Windsor county: monthly precipitation, 2.04, is 0.74 below the May average for the last sixteen years.

*Virginia.*—Wytheville, Wythe county: monthly precipitation, 5.70, is 3.46 in excess of the May average for a period of twenty-two years.

Bird's Nest, Northampton county: monthly precipitation, 7.85, is larger than for any corresponding month in the last seventeen years.

Variety Mills, Nelson county: monthly precipitation, 7.90, is 5.35 above the May average for the last six years.

*West Virginia.*—Helvetia, Randolph county: monthly precipitation, 3.50, is 0.93 below the May average for the last nine years.

*Wisconsin.*—Beloit, Rock county: monthly precipitation, 1.54, is 2.10 below the May average for a period of thirty-five years.

Sussex, Waukesha county: monthly precipitation, 0.58, is the least recorded in May during the last ten years.

SNOW.

The dates on which snow fell in the various states and territories are as follows:

*California.*—Red Bluff, on mountains east of station, 18th. *Colorado.*—Pike's Peak, 1st to 5th, 9th, 10th, 19th, 25th, 27th; Denver, 6th, 7th, 8th, 11th; Braddock, 16th, 17th, 18th, 27th, 28th.

*Connecticut.*—Bethel, 4th. *Dakota.*—Fort Totten, 5th, 6th, 7th; Huron, Forts Buford, Bennett and Sully, 6th; Bismarck, Forts Yates, Randall and Pembina, 6th, 7th; Yankton, 7th; Deadwood, 6th, 7th, 10th; Fort Meade, 6th, 10th; Fort Sisseton, 6th, 7th, 8th.

*Illinois.*—Sycamore, 7th, 9th. *Indiana.*—Logansport, 8th. *Iowa.*—Dubuque, Cresco, Independence, Monticello and Muscatine, 7th; Maynard, 8th.

*Kansas.*—Dodge City, Maud, Salina, Oswego, Topeka, Wellington, and Yates Centre, 7th. Professor Snow of the University of Kansas at Lawrence reports that a few flakes of snow fell at that place on the 7th, which is the latest date on which snow has fallen there during a period of eighteen years.

*Maryland.*—Fallston, Harford county: monthly precipita-

**Maine.**—Eastport, Portland, Fort Preble, Cornish, Gardiner, Orono and Waterville, 2d.

**Massachusetts.**—Bowe, 1st, 2d, 11th; Worcester, 2d, 11th.

**Michigan.**—Escanaba, 3d, 7th to 10th; Grand Haven, 3d, 8th; Marquette, 7th to 10th; Alpena, 8th, 9th, 10th; Port Huron, 8th, 9th; Mackinaw City, 4th, 5th, 7th, 8th; Lansing, 7th, 8th, 9th; Northport, 7th, 8th; Mottville, 3d, 7th, 9th, 10th; Thornville, 10th.

**Minnesota.**—Duluth, 6th, 7th; Moorhead and Saint Paul, 6th, 7th, 8th; Saint Vincent, 5th to 8th; Northfield, 1st, 6th, 7th, 8th.

**Missouri.**—The report of the "Missouri Weather Service" states that snow fell in different parts of the state on the 6th and 7th.

**Montana.**—Forts Maginnis and Shaw, 6th; Poplar River, 6th, 7th; Helena, 7th; Fort Ellis, 7th, 21st, 22d, 23d.

**Nebraska.**—Fort Robinson, 10th; Yutan, 19th.

**Nevada.**—Winnemucca and Fort McDermitt, 13th, 22d; Carson City, 13th.

**New Hampshire.**—Mount Washington, 2d, 4th, 5th, 6th, 8th, 9th, 10th.

**New Jersey.**—Dover, 4th.

**New York.**—Albany, 1st; Oswego, 4th, 8th, 9th, 10th; Rochester, 8th, 10th; Buffalo, 9th; Madison Barracks, 5th, 9th; Humphrey, 4th; Ithaca, 10th.

**Ohio.**—Cleveland, Sandusky, Toledo and Garrettsville, 9th.

**Oregon.**—Fort Klamath, 20th, 21st.

**Pennsylvania.**—Pittsburg, 3d, 10th; Erie, 9th; Grampain Hills, 11th; Wysox, 4th.

**Vermont.**—Strafford, 7th.

**Wisconsin.**—La Crosse, 7th, 8th, 9th; Franklin, 9th; Prairie du Chien, 7th, 8th.

**Wyoming.**—Cheyenne, 6th, 7th; Fort Fred Steele, 8th; Fort Bridger, 8th, 14th, 15th, 18th.

#### MONTHLY SNOW-FALLS.

[Expressed in inches and tenths.]

Monthly snow-falls of one inch or more were reported from the various states and territories during the month as follows:

**California.**—Summit, 10; Cisco, 3; Emigrant Gap, 2.

**Colorado.**—Pike's Peak, 43.8; Braddock, 11.2.

**Dakota.**—Deadwood, 5; Richardton, 3; Webster, 1.8; Fort Yates, 1.5.

**Maine.**—Orono, 8; Gardiner, 5; Belfast, 3.

**Michigan.**—Escanaba, 1.1; Northport and Thornville, 1.

**Minnesota.**—Saint Vincent, 2.1; Moorhead, 2.

**Nevada.**—Otego, 2; Wells, 1.

**New Hampshire.**—Mount Washington, 6.1.

**New York.**—Humphrey, 6.2; Factoryville, 1.

**Ohio.**—Garrettsville, 2; Cleveland, 1.1.

**Pennsylvania.**—Troy, 1.2; Wellsborough, 1.1.

**Vermont.**—Dorset, 1.

**Wisconsin.**—Neillsville, 5.2.

#### DEPTH OF UNMELTED SNOW ON GROUND AT END OF THE MONTH.

[Expressed in inches and tenths.]

**Colorado.**—Pike's Peak, 18.

**New Hampshire.**—Mount Washington, trace.

**New Mexico.**—Santa Fé, none in valleys, 24 on mountains.

#### HAIL.

Petersburg, Virginia: during the afternoon of the 1st a hail-storm occurred in this vicinity, causing great damage to growing cotton, corn, and vegetables.

Hickory, Catawba county, North Carolina: a severe hail-storm occurred on the 1st; a large number of trees were blown down and other damage caused.

Bruntington, King and Queen county, Virginia: during the afternoon of the 1st two hail-storms, separated by an interval of one hour, occurred at this place. The first lasted about ten minutes, the second being of shorter duration. Some of the

hail-stones were more than one inch in diameter. But little damage was done.

Wellington, Sumner county, Kansas: a hail-storm occurred on the 5th, the hail-stones measuring one and one-half inches in diameter; considerable damage was done to fruit trees.

Fort Laramie, Wyoming: at 6.05 p. m. on the 17th, a thunder storm, accompanied by heavy hail, passed over this place. The hail-stones varied from one-fourth inch to one inch in diameter. During the fall of hail only about one-tenth of the sky (overhead) was covered with cloud.

Brownsville, Texas: reports from Point Isabel, about twenty-five miles north of this place, state that a severe hail-storm occurred there between 4 and 5.30 p. m. on the 17th. The storm was accompanied by high wind, the velocity being estimated at fifty miles per hour; the hail-stones were unusually large and covered the ground to a depth of three inches. The crops in the vicinity of Point Isabel were completely destroyed and several trees and temporary buildings were blown down. Many windows were broken and the roofs of buildings damaged.

La Cygne, Linn county, Kansas: a severe hail-storm occurred at this place during the early morning of the 24th, causing damage estimated at from \$2,000 to \$3,000.

Abilene, Dickinson county, Kansas: a severe hail-storm occurred here during the early morning of the 27th. Many windows were broken by the hail-stones.

North Lewisburg, Champaign county, Ohio: a fall of hail occurred at 5.40 p. m. on the 31st, causing considerable damage. Some of the hail-stones were one inch in diameter.

Hail-storms of less severity, and which caused no serious injury, were reported from the various states and territories, as follows:

**Arizona.**—Fort Apache, 2d; Fort Verde and Wickenburg, 3d; Prescott, 8th.

**California.**—Red Bluff and Princeton, 12th.

**Colorado.**—Pueblo, 17th; West Las Animas, 19th; Colorado Springs, 26th; Pike's Peak, 27th, 30th.

**Connecticut.**—North Colebrook, 10th, 11th.

**Dakota.**—Fort Bennett, 14th, 15th; Webster, 20th; Huron, 20th, 31st.

**Florida.**—Archer, 1st; Jacksonville, 15th.

**Idaho.**—Boisé City, 4th; Cœur d'Alene, 20th; Albion, 30th, 31st.

**Illinois.**—Charleston, 24th; South Evanston, 29th.

**Indiana.**—Logansport and Wabash, 5th; Lafayette, 6th; Sunman and Fort Wayne, 24th.

**Iowa.**—Independence, 4th, 6th; Cresco, 6th, 8th; Keokuk, 17th.

**Kansas.**—Yates Centre, 7th, 24th; Concordia, 15th; Wellington and Maud, 15th, 16th; Westmoreland, 15th, 23d; Clay Centre, 16th; Allison, 16th, 23d; Independence and Oswego, 24th; Emporia, 24th, 26th, 27th, 30th; Fort Scott and Leavenworth, 27th.

**Kentucky.**—Richmond, 30th.

**Louisiana.**—Luling, 14th; New Orleans, 30th.

**Massachusetts.**—Worcester, 2d, 11th; Williamstown, 10th, 31st.

**Michigan.**—Hudson, 9th; Detroit, 9th, 31st; Kalamazoo and Birmingham, 31st.

**Minnesota.**—Moorhead, 23d.

**Missouri.**—Lamar, 24th.

**Montana.**—Fort Maginnis, 4th; Fort Shaw, 21st.

**Nebraska.**—North Platte, 4th; Fremont, 6th; De Soto and Crete, 15th.

**Nevada.**—Winnemucca, 20th.

**New Mexico.**—Gallinas Spring, 4th.

**New York.**—Factoryville, 10th, 11th; Ithaca, 31st.

**North Carolina.**—Charlotte and Weldou, 1st; Wilmington and Blackwell, 25th.

**Ohio.**—Toledo, 4th; Tiffin, 4th, 9th; Cleveland and Sandusky, 9th; Westerville, 19th; Warren, 24th; Columbus, Portsmouth and Yellow Springs, 31st.

**Oregon.**—Roseburg, 13th, 22d; Ashland, 21st.

*Pennsylvania.*—Wysox, 10th, 11th; Pittsburg, 19th.  
*South Carolina.*—Stateburg, 1st.  
*Tennessee.*—Ashwood, 6th; Nashville, 23d; Austin, 30th.  
*Texas.*—Fort Davis, 3d; Cleburne, 5th, 27th; El Paso and Rio Grande City, 8th; Brownsville, 8th, 20th; San Antonio, 13th; New Ulm, 19th; Fort Concho, 24th.  
*Utah.*—Salt Lake City, 4th, 13th, 31st; Nephi, 9th, 17th.  
*Vermont.*—Charlotte, 10th.  
*Virginia.*—Wytheville, 1st; Variety Mills, 25th.  
*Wisconsin.*—Prairie du Chien, 6th; Embarras, 8th.  
*Wyoming.*—Fort Bridger, 15th, 20th.

SLEET.

Pike's Peak, Colorado, 1st, 2d, 6th, 7th, 10th, 12th, 13th, 15th, 16th, 17th.  
 Fort Buford, Dakota, 7th.  
 Boise City, Idaho, 22d.  
 Anna, Illinois, 7th.  
 Cresco, Iowa, 7th.  
 Fort Scott and Dodge City, Kansas, 7th.  
 Eastport, Maine, 2d.  
 Alpena, Michigan, 7th.  
 Escanaba, Michigan, 8th.  
 Saint Vincent and Saint Paul, Minnesota, 8th.  
 Lamar, Missouri, 7th.  
 Mount Washington, New Hampshire, 8th.  
 Garrettsville, Ohio, 9th.  
 Cleveland, Ohio, 9th, 10th.

PRECIPITATION FROM A CLOUDLESS SKY.

Humphrey, New York: snow fell from a cloudless sky at 9.30 p. m. of the 10th.  
 El Paso, Texas: light rain fell from 8.45 to 8.53 p. m. on the 7th, when the sky overhead was perfectly clear, and no clouds were observed within 45° of the zenith.

COTTON REGION REPORTS.

A system of temperature and rainfall observations was begun in the spring of 1882 in the cotton-growing districts of the South. These observations have been continued since in each year from April to October, inclusive, and were resumed May 1, 1885, one month later than in the preceding years.

In the following table are given the average rainfall and the means of the maximum and minimum temperatures for the several districts as shown on the chart issued with the REVIEW for April, 1882. For the purpose of comparison the averages for these districts during the three preceding years are also given. In the districts of Little Rock, New Orleans, Memphis, and Vicksburg, large deficiencies in the rainfall are shown, while a marked excess occurs in the districts of Wilmington, Atlanta, Augusta, and Montgomery. The mean of the maximum and minimum temperatures differs but slightly from the average for the previous years.

Temperature and rainfall data for the cotton districts. May, 1885.

Districts.	Rainfall.			Temperature.						Extremes for May, 1885.	
	Average for May of three preceding years.	Average for May, 1885.	Departures.	Maximum.			Minimum.				
				Mean for May of three preceding years.	Mean for May, 1885.	Departures.	Mean for May of three preceding years.	Mean for May, 1885.	Departures.		
New Orleans	6.24	3.12	- 3.12	85.9	85.9	- 0	63.0	61.4	- 1.6	105	57.0
Savannah	2.89	3.85	+ 0.96	85.0	84.0	- 1.0	61.9	62.1	+ 0.2	99	57.9
Charleston	3.43	3.55	+ 0.12	83.5	82.4	- 1.1	59.6	59.8	+ 0.2	95	49.0
Atlanta	2.18	5.55	+ 3.37	81.2	79.9	- 1.3	59.4	58.0	- 1.4	96	37.0
Wilmington	2.70	6.75	+ 4.05	81.3	79.9	- 1.4	58.1	56.2	- 1.9	94	41.7
Memphis	5.31	2.82	- 2.49	79.5	78.5	- 1.0	56.6	55.9	- 0.7	97	54.7
Galveston	6.54	6.49	- 0.05	84.4	82.1	- 2.3	62.5	61.1	- 1.4	96	57.3
Vicksburg	6.14	4.75	- 1.39	82.2	81.2	- 1.0	60.7	62.5	+ 1.8	96	54.5
Montgomery	2.31	5.99	+ 3.68	84.1	81.8	- 2.3	58.2	60.4	+ 2.2	96	54.3
Augusta	2.45	5.32	+ 2.87	83.7	82.3	- 1.4	58.9	58.4	- 0.5	95	54.3
Little Rock	6.95	2.51	- 4.45	79.7	80.0	+ 0.3	55.5	54.5	- 1.0	97	47.8
Mobile	3.83	4.35	+ 0.52	82.9	84.7	+ 1.8	59.4	62.2	+ 2.8	97	58.5

WINDS.

The most frequent directions of the wind during May, 1885, are shown on chart ii. by arrows flying with the wind; they are also given in the table of miscellaneous data. In the extreme northwest, upper Mississippi and Missouri valleys, the prevailing winds were from north to northwest; along the south Atlantic and east Gulf coasts they were from southeast to southwest; on the middle Atlantic coast they were from east to northeast; in other districts they were variable.

HIGH WINDS.

(In miles per hour.)

Wind-velocities of fifty miles, or more, per hour were reported as follows:

Mount Washington, New Hampshire, 98 nw., 2d; 85 nw., 3d; 53 s., 7th; 70 s., 8th; 63 nw., 15th; 57 w., 16th; 50 nw., 19th; 57 nw., 20th; 70 nw., 26th; 62 nw., 27th; 60 se., 31st. Pike's Peak, Colorado, 74 sw., 15th; 64 sw., 18th; 72 sw., 22d; 56 nw., 28th.

Block Island, Rhode Island, 52 ne., 14th.

Dodge City, Kansas, 58 se., 15th.

Indianola, Texas, 50 n., 8th; 50 ne., 17th.

Sandy Hook, New Jersey, 50 e., 1st.

LOCAL STORMS AND TORNADES.

Ogreeta, Cherokee county, North Carolina: a tornado occurred three miles south of this place at 11.45 a. m. on the 1st. The tornado-cloud was funnel-shaped and was accompanied by rain and hail. Considerable damage was done.

Portsmouth, North Carolina: a violent thunder-storm, accompanied by high wind and heavy rain, prevailed from 7.45 to 8.35 p. m. on the 1st. A number of houses were slightly damaged.

The "New York Herald," of May 8, 1885, contained the following:

LITTLE ROCK, ARK., May 7, 1885.—Reports from Indian Territory state that one of the most fearful storms ever known in that section occurred near Mount Scott on the 5th. It began in the evening with a southerly wind with a force of eighty miles an hour, and increased through the night, with terrific thunder and lightning and a driving rain. The forest for miles was swept away by the wind, and the destruction of everything in its broad path is complete. In localities further north the destruction of cabins and dug-outs, occupied by cattle herders, is reported, and several lives are said to have been lost.

New Market, Madison county, Alabama: a tornado occurred at this place at 6.30 p. m. on the 6th. The tornado-cloud was funnel-shaped and moved in a path N. 45° E. for a distance of nine miles; it was but a few seconds in passing a given point. The masonic temple, a church, and some other buildings were destroyed, entailing a loss aggregating \$20,000.

Buchanan, Haralson county, Georgia: a tornado occurred six miles east of this place at 9 p. m. on the 9th. It moved N. 45° E., and was most destructive in a track about five hundred feet wide. Hail preceded the tornado and rain fell both before and after it. Three houses were destroyed and others damaged; several persons were injured.

Warren, Lincoln county, Nebraska: at 2.30 p. m. on the 15th a tornado occurred. The cloud was funnel-shaped and moved N. 30° E. for a distance of two miles. Two houses were destroyed.

Kingman, Kingman county, Kansas: a tornado occurred west of this place at 5 p. m. on the 15th. The cloud was funnel-shaped and moved in a northeasterly direction for a distance of one and one-half miles, the width of the tornado's path being about three hundred and thirty feet. Several buildings were destroyed. The tornado was followed by heavy rain. Another tornado occurred at Kingman on the 16th, at 6 p. m., causing but slight damage.

At 4 p. m. on the 15th, a tornado occurred in the eastern part of Rooks county, Kansas. It moved in a north-northeasterly direction for a distance of eighteen miles, at a velocity of about forty miles per hour. The width of destructive path was from 1,320 to 2,640 feet. Rain and hail fell both before