Yankton, Dakota: the prairie in the vicinity of this place was burning from the 14th to the 24th, inclusive.

Prairie fires have also been reported at—
Fort Sill, Indian Territory, 15th and 19th.
Valentine, Nebraska, 16th, 17th, and 18th.
Fort Assinaboine, Montana, 11th to 14th.
Poplar River, Montana, 5th, 8th, 11th, 12th, and 13th.
Saint Vincent, Minnesota, 13th, 16th, 17th, 18th, 24th.
Fort Supply, Indian Territory, 7th, 14th, and 15th.
Concordia, Kansas, 15th.
Fort Elliott, Texas, 1st and 2d.
Ninnescah, Kansas, 20th.
Fort Stockton, Texas, 3d.
Midland, Texas, 24th.

SAND STORMS.

Fort McDowell, Arizona, 11th.
El Paso, Texas, 3d, 8th, 12th, 13th.
Yuma, Arizona, 11th, 13th, 19th, 27th.

WATER-SPOUTS.

Schooner "Emily Shepard," E. Coggins, commanding, reports: "Water-spout passed to north of vessel from northeast to southwest at 3 p. m. on the 8th, in N. 32°, W. 73° 30′."

Captain A. M. Shaw, of the brigantine "Achsah," observed a large water-spout within a quarter of a mile of the vessel at 5 p. m. April 22d, in N. 28° 30′, W. 70° 15′.

S. S. Craigendoran, April 22d, at 11 a. m., in N. 28° 10′, W. 79° 38′, observed a large water-spout trending in a northerly direction; a moderate northeast breeze and fair weather prevailed at the time. The diameter of the water-spout was about sixty feet.

ERRATA.

In the REVIEW for February, 1886, page 55, table of "Meteorological record of voluntary observers and Army post surgeons," Strafford, Vermont, minimum temperature 24°, should read —24°.

In the December, 1885, REVIEW, page 306, table of "Temperature of water," Boston, Massachusetts, "Observations interrupted by ice from 7th to 31st," this note should refer to Sandusky, Ohio, Boston record being unbroken during the month.

Meteorological record of voluntary observers and Army post surgeons, April, 1886.

The maximum and minimum temperatures at stations marked thus (*) are from readings of other than standard instruments.

Stations.	Temperature. Maximum.	Minimum.	Mean.	Rainfall.
	°	°	°	Inches
Alabama.				
Birmingham *	83	31	61.8	5.19
Greensborough	82	37	63.6	6.97
Mount Vernon B'ks.	88	34	65.4	7.11
Prattville	84	32	61.5	5.34
Arizona.				
Huachuca, Fort	79	34	56.5	trace.
Lowell, Fort	91	33	65.3	0.14
McDowell, Fort	91	33	63.9	0.20
Tucson	.....	.....	.....	0.06
Verde, Fort	81	33	58.9	trace.
Arkansas.				
Lead Hill *	91	29	60.0	5.44
California.				
Alcatraz Island	72	45	53.2	4.20
Angel Island	78	40	55.4	5.43
Benicia Barracks	73	43	55.2	4.76
Bidwell, Fort	72	25	44.6	2.20
Cahuenga	.....	.....	.....	3.00
Gaston, Fort	89	34	53.1	9.23
Hydesville	.....	.....	.....	9.15
Mason, Fort	70	50	58.7	5.08
Murietta *	78	34	54.1	3.79
Nicolaus *	74	47	56.6	4.93
Oakland	77	39	54.4	5.11
Oroville *	82	44	60.3	5.48
Poway *	78	45	56.2	2.67
Presidio of San F	80	38	53.9	4.86
Princeton *	82	35	56.2	3.53
Sacramento*	83	36	58.4	4.12
Salinas	75	38	51.7	3.83
California—Cont'd.				
San Rafael	83	32	53.3	8.30
Santa Barbara	74	38	55.7	3.40
Susanville	71	32	43.9	1.15
Colorado.				
Colorado Springs	75	20	44.7	4.82
Lewis, Fort	65	16	39.6	2.74
Pueblo	79	21	49.6	1.71
Salida	70	15	42.3	3.74
Connecticut.				
Bethel	.....	.....	.....	2.02
Hartford	84	27	49.1	3.35
North Colebrook *	77	25	45.7	1.50
Voluntown	82	30	.....	2.52
Dakota.				
Abr. Lincoln, Fort	83	9	45.9	1.44
Meade, Fort	78	12	43.7	2.17
Pembina, Fort	82	— 2	43.8	2.85
Randall, Fort	84	4	49.5	3.39
Richardton	75	12	43.9	2.40
Sisseton, Fort	79	4	46.1	3.06
Sully, Fort	82	13	48.4	2.32
Totten, Fort	83	0	43.3	1.03
Vermillion	.....	.....	.....	3.60
Webster	81	0	49.5	7.72
Yates, Fort	81	10	46.8	2.80
District of Columbia.				
Distributing Res'r*	86	37	58.5	5.43
Kendall Green	84	35	54.4	5.38
Receiving Res'v'r*	85	36	57.7	4.45
Rock Creek Bridge*	92	37	60.2	.....

Meteorological record of voluntary observers, etc.—Continued.

Stations.	Temperature. Maximum.	Minimum.	Mean.	Rainfall.
	°	°	°	Inches
Florida.				
Archer *	90	37	63.3	4.19
Gatlin, Fort	88	45	.....	.....
Limona *	93	47	70.6	3.28
Manatee *	90	51	75.0	.....
Meade, Fort	.....	.....	.....	4.10
Merritt's Island	85	49	67.0	8.90
St. Augustine, Fort	85	45	64.8	3.79
Tallahassee *	83	38	67.2	2.15
Georgia.				
Athens	80	31	61.8	4.59
Dahlonega*	84	28	61.3	4.66
Forsyth *	86	36	64.1	1.88
Milledgeville	86	31	63.8	1.29
Quitman*	84	40	63.5	2.50
Idaho.				
Boise Barracks	76	29	49.6	1.59
Cœur d'Alene, Fort	70	28	45.9	1.50
Illinois.				
Anna *	84	27	58.2	3.45
Bloomington	81	20	.....	1.87
Collinsville	84	26	56.6	1.71
Charleston*	84	25	55.6	2.73
Geneseo *	80	10	52.4	2.17
Mattoon *	84	25	57.0	2.30
Pekin *	83	18	56.5	2.71
Peoria	88	23	57.7	2.75
Riley	78	8	47.4	3.76
Rockford*	77	4	48.5	4.36
South Evanston	83	12	43.5	2.16
Sycamore	76	3	48.3	5.14
Windsor	83	22	54.5	2.17
Indian Territory.				
Reno, Fort	84	22	58 5	2.80
Supply, Fort	83	21	55.6	1.73
Indiana.				
Fort Wayne*	85	26	55.0	2.82
Jeffersonville	84	30	57.5	2.83
Knightstown	86	23	52.8	1.77
Laconia	92	26	57.4	3.99
Lafayette	82	19	53.9	1.80
LaGrange	80	18	51.7	2.13
Logansport*	85	26	57.7	2.20
Mauzy	79	15	50.7	3 35
Spiceland	81	22	53.3	2.20
Sunman*	84	21	55.5	4.14
Terre Haute*	81	29	.....	2.44
Vevay	85	28	55.9	2.55
Iowa.				
Bancroft	84	12	49.0	3.01
Cedar Rapids *a* *	82	20	51.5	2.16
Cedar Rapids *b* *	81	11	51.0	.....
Clinton *	82	4	51.3	1.93
Cresco	80	15	48.1	2.37
Des Moines	82	17	52.0	.....
Independence *	76	21	50.4	1.78
Logan	84	18	52.5	2.10
Fort Madison	80	25	.....	1.40
Manchester	81	17	52.0	2.01
Monticello *	82	14	50.9	1.80
Mount Vernon*	88	20	55.0	.....
Muscatine	86	15	50.3	2.62
Oskaloosa *a* *	87	20	52.6	2.25
Oskaloosa *b* *	82	21	.....	.....
Kansas.				
Allison	83	20	49.1	4.84
Atchison *	84	22	53.4	2.22
El Dorado	83	22	56.8	.....
Elk Falls	.....	.....	.....	1.73
Emporia*	81	18	.....	2.48
Fort Scott	87	28	56.8	.....
Hays, Fort	83	13	49.6	3.16
Independence *	89	24	55.3	4.98
Manhattan *a*	86	18	54.8	4.34
Manhattan *b* *	88	18	53.7	4.76
Ninnescah	85	23	57.2	1.22
Riley, Fort	87	19	55.6	2.68
Salina	86	18	50.8	1.09
Sterling	82	20	53.7	4.50
Topeka *b* *	85	16	53.5	1.59
Topeka *a*	88	19	58.7	1.74
Wakefield *	91	21	53.9	4.31
Wellington	85	19	54.3	3.25
W. Leavenworth *	85	26	.....	1.01
Westmoreland*	82	11	.....	5.75
Wyandotte	80	19	49.5	1.80
Yates Centre	82	24	53.7	1.70
Kentucky.				
Frankfort	85	28	56.4	5.44
Penrod*	88	28	.....	.....
Richmond	80	28	55.3	3.98
Louisiana.				
Grand Coteau	84	40	67.8	8.64
Liberty Hill*	79	50	70.5	3.77
Luling *	85	38	.....	0.41
Maine.				
Bar Harbor	76	25	.....	1.07
Buckfield *	80	25	.....	1.12
Cornish *	77	21	46.1	3.08
Gardiner	74	22	44.5	1.43
Kent's Hill	79	23	42.5	1.70
Orono *	76	19	43.6	1.80
Maryland.				
Cumberland	80	30	54.8	2.18
Fallston*	84	32	52.1	2.53
Great Falls*	88	33	55.7	4.21
McDonogh	83	30	59.4	2.11
McHenry, Fort	84	33	54.1	2.68
Woodstock	84	28	53.5	2.17
Massachusetts.				
Amherst *a* *	83	31	50.8	2.06
Amherst *b*	83	21	50.4	1.73
Blue Hill Obs'y	79	24	45.8	2.16
Deerfield	83	24	49.9	3.62
Dudley	78	25	50.4	1.64
Fall River	75	26	47.7	2.10
Mendon *	80	30	49.6	.....
Milton	78	31	47.5	3.56
New Bedford	74	27	46.9	2.11
Princeton	78	21	46.1	2.85
Somerset *	84	28	50.2	2.08
Taunton	84	29	49.1	2.14
Worcester *	70	28	47.4	2.20
Westborough*	83	27	51.5	2.40
Williamstown	76	23	48.2	1.56
Michigan.				
Birmingham	80	17	.....	1.96
Brady, Fort	76	0	41.9	2.04
Harrisville*	78	5	.....	3.22
Hudson	83	12	.....	1.19
Kalamazoo	80	19	.....	1.13
Lansing	80	16	50.2	1.51
Mottville*	83	18	.....	2.06
Pentwater	79	3	45.8	1.89
Thornville	83	18	49.8	2.84
Traverse City *	82	4	.....	2.48
Minnesota.				
Minneapolis	81	14	49.2	3.62
Northfield	79	14	49.0	7.31
Preston *	83	19	.....	.....
Snelling, Fort	82	14	49.8	4.80
Missouri.				
Carthage	87	26	58.7	1.54
Central College*	84	24	55.9	3.57
Centreville	84	19	.....	4.26
Conception *	80	18	49.7	2.70
Springfield *	81	21	53.4	2.90
Warrenton *	83	25	56.7	.....
Montana.				
Assinaboine, Fort	79	0	47.7	1.83
Ellis, Fort	74	20	40.8	3.78
Keogh, Fort	77	16	51.2	0.26
Missoula, Fort	66	26	45.4	1.04
Shaw, Fort	74	19	44.9	2.30
Nebraska.				
Crete	82	17	50.1	4.20
De Soto *	85	17	51.0	2.23
Fairbury	.....	.....	.....	3.88
Fremont *	78	16	49.2	3.89
Genoa	82	15	48.3	2.21
Hay Springs *	78	5	40.6	1.83
Marquette	.....	.....	.....	2.44
Niobrara, Fort	90	15	46.0	2.21
Robinson, Fort	76	12	46.6	0.47
Sidney, Fort	77	11	42.6	0.64
Stockham	.....	.....	.....	1.60
Nevada.				
Carson City	74	20	47.5	0.25
Halleck, Fort	69	20	42.8	1.18
McDermit, Fort	69	20	42.5	2.02
New Hampshire.				
Antrim	.....	.....	.....	1.70
Ashland	.....	.....	.....	1.43
Belmont	.....	.....	.....	1.41
Berlin Mills	79	22	.....	1.20
Bristol	.....	.....	.....	1.61
Lake Village	.....	.....	.....	2.19
Nashua	84	23	48.8	1.62
Wier's Bridge	.....	.....	.....	1.54
Wolfborough	.....	.....	.....	2.20
Woodstock	.....	.....	.....	1.55
New Jersey.				
Beverly *	85	30	50.6	5.48
Clayton *	86	31	51.8	2.66
Dover *	84	27	48.8	3.39
Egg Harbor City	90	3	52.0	9.20
Moorestown	84	28	50.9	3.16
Paterson *	85	33	49.8	3.83
Princeton	82	29	52.0	2.99
Readington*	88	32	55.3	.....
South Orange *	82	32	51.4	3.00
Vineland	73	32	53.9	2.52
New Mexico.				
Bayard, Fort	82	23	54.7	.....
Gallinas Spring	79	30	.....	1.75
Puerto de Luna	78	32	54.1	0.39
Selden, Fort	91	33	62.9	.....
Union, Fort	74	12	46.2	3.22
Wingate, Fort	74	21	45.6	1.08
New York.				
Auburn	77	33	49.3	3.69
Columbus, Fort	82	29	49.7	3.48
Cooperstown *	75	24	46.0	1.86
David's Island	86	29	49.2	1.75
Factoryville*	80	24	48.5	2.68

Meteorological record of voluntary observers, etc.—Continued.

Stations.	Temperature. Maximum.	Minimum.	Mean.	Rainfall.
New York—Cont'd.	°	°	°	*Inches*
Humphrey *	74	20	46.0	2.28
Ithaca	79	22	49.4	1.97
LeRoy	80	21	48.4	4.22
Madison Barracks	74	20	46.2	1.84
Menand Station	81	26	50.2	2.88
Mountainville	83	26	49.7	4.61
Niagara, Fort	78	20	44.1	1.56
North Volney *	78	24	47.0	2.15
Palermo*	77	25	46.4	2.13
Palmyra*	78	31	49.2	.....
Penn Yan	.....	.....	.....	3.64
Plattsburg B'ks	73	20	45.3	2.05
Setauket	79	29	48.3	4.21
Syracuse	80	26	.....	.....
West Point	86	22	50.9	3.70
White Plains	76	35	50.9	3.64
North Carolina.				
Chapel Hill	93	33	59.6	5.99
Flat Rock	.....	.....	.....	5.21
Lenoir	83	32	.....	3.50
Lincolnton	.....	34	55.8	5.14
Raleigh	89	40	60.0	4.80
Reidsville *	92	27	52.8	1.62
Statesville*	86	34	58.9	4.10
Wake Forest*	88	32	60.1	3.28
Weldon *	89	41	59.3	2.06
Ohio.				
Cleveland	82	24	54.5	2.49
College Hill*	92	27	59.3	3.62
Fostoria *	86	25	52.1	1.50
Garrettsville	81	16	49.5	2.12
Hiram	80	25	50.4	1.52
Jacksonborough*	86	26	53.3	5.30
Napoleon	80	20	52.9	3.29
North Lewisburg	83	20	55.2	2.25
Ruggles*	80	12	55.8	2.20
Tiffin *	84	15	50.3	2.32
Wauseon	84	14	50.8	3.19
Westerville	80	13	52.7	1.91
Yellow Springs	83	19	53.8	3.98
West Milton	86	22	53.5	4.00
Oregon.				
Albany*	73	39	52.1	2.95
Bandon*	67	34	.....	4.65
East Portland*	70	38	.....	3.04
Eola *	69	35	48.9	2.74
Gardiner *	72	37	.....	.....
Klamath, Fort	69	17	41.1	2.03
Pendleton *	71	35	52.1	0.63
Pennsylvania.				
Altoona	.....	.....	.....	3.16
Bethlehem *	85	32	.....	2.98
Blooming Grove *	83	26	50.2	3.60
Catawissa *	82	26	54.2	2.37
Drifton	82	23	49.3	4.11
Dyberry	79	23	46.5	1.89
Easton	.....	.....	.....	3.37
Fallsington	81	29	51.2	4.09
Franklin*	78	18	45.4	4.24
Germantown*	84	31	.....	.....
Grampian Hills*	82	24	51.0	3.44
Philipsburg *	76	25	50.7	0.76
Quakertown*	77	29	50.3	2.64
Troy *	77	25	48.7	2.12
Wellsborough *	82	30	52.0	10.77
West Chester	83	27	51.5	3.80
Wysox	79	28	53.5	2.88
Zionsville	86	30	54.4	1.13

Stations.	Temperature. Maximum.	Minimum.	Mean.	Rainfall.
South Carolina.	°	°	°	*Inches*
Aiken *	84	35	65.3	3.10
Kirkwood *	81	37	60.8	2.01
Pacolet	.....	.....	.....	3.78
Spartanburg	80	51	61.0	4.20
Stateburg*	86	35	62.6	1.41
Tennessee.				
Ashwood	83	32	59.0	2.86
Milan	85	32	58.9	4.68
Paris *	80	32	56.2	.....
Texas.				
Austin *	86	36	68.7	5.04
Clark, Fort	92	34	69.9	0.45
Comfort	.....	.....	.....	1.77
Concho, Fort	93	30	69.0	0.48
Corsicana	.....	.....	.....	3.95
McIntosh, Fort	94	40	75.0	1.50
Midland	86	29	64.0	0.29
Ringgold, Fort	108	55	78.0	trace.
New Ulm	84	38	66.6	2.01
Silver Falls	84	23	68.7	1.87
Vermont.				
Brattleborough	83	24	51.7	3.29
Burlington	80	21	48.4	1.68
Charlotte*	82	22	54.8	2.90
Dorset	79	17	46.4	2.06
Lunenburg	72	28	44.1	0.75
Newport*	79	20	45.4	2.35
Post Mills Village*	81	20	44.5	.....
Poultney	84	18	43.5	2.33
Strafford *	78	20	48.3	2.60
Stowe	.....	.....	.....	3.11
Virginia.				
Accotink	87	36	55.8	1.99
Bird's Nest*	89	40	57.9	2.05
Bruington	.....	.....	.....	2.50
Dale Enterprise*	88	29	59.1	3.90
Marion	80	28	54.2	3.40
Monroe, Fort*	85	35	56.0	2.22
Snowville*	80	25	.....	3.90
Summit	87	32	54.9	.....
University of Va	78	39	58.5	3.11
Variety Mills	86	26	54.8	3.15
Wytheville	80	27	54.0	5.15
Washington Territory.				
Bainbridge Island *	70	36	50.0	2.37
Pleasant Grove*	79	24	.....	0.98
Spokane, Fort	75	29	49.0	0.08
Tacoma *	64	32	47.4	3.67
Townsend, Fort	63	33	50.2	1.62
Walla Walla, Fort	76	28	54.2	0.92
West Virginia.				
Helvetia*	84	28	51.5	3.44
Clarksburg	90	30	.....	2.17
Parkersburg	84	31	55.2	2.86
Wisconsin.				
Embarras *	80	10	48.4	2.55
Fond du Lac *	78	— 5	44.4	1.56
Madison	77	8	47.0	2.48
Manitowoc	76	9	43.8	2.00
Neillsville *	75	— 1	39.6	0.90
Prairie-du-Chien	83	19	52.1	2.10
Wyoming.				
Bridger, Fort	65	15	38.5	1.34
Fred Steele, Fort	71	10	40.1	1.08
Laramie, Fort	77	11	44.8	0.47
Washakie, Fort	66	11	41.9	3.13

NOTES AND EXTRACTS.

The following is an extract from the April, 1886, report of the "Alabama Weather Service," under direction of Prof. P. H. Mell, jr., of the Agricultural and Mechanical College, Auburn:

The month presented few features calling for special notice, and but little can be added to the data so carefully collected by the observers and given in the published tables.

The mean temperature of the state was only 0°.6 above the normal.

There was a heavy rainfall on the 28th that was evidently produced by the storm-centre reported on the Texas coast on the 27th. This low depression passed over the state during the 28th, and disappeared off the Carolina coast on the morning of the 29th. During the first week of the month as much as 4.00 inches of snow (unmelted) fell in the northern portions of the state.

The average precipitation was 1.42 inches below the normal.

State summary.

Temperature.—Mean temperature, 62°; highest temperature, 92°, at Selma, on the 23d; lowest temperature, 25°, at Valley Head, on the 8th; range of temperature, 67°; greatest monthly range of temperature, 58°, at Valley Head; least monthly range of temperature, 38°, at Springfield; mean daily range, 16°; greatest daily range of temperature, 39°, at Gadsden, on the 2d; least daily range of temperature, 0°, at Grove Hill, on the 27th.

Precipitation (inches).—Mean depth of rainfall, 4.67; mean daily rainfall, 0.16; greatest depth of monthly rainfall, 10.30, at Evergreen; least depth of monthly rainfall 1.68, at Lafayette; greatest daily rainfall average for state, 1.33, on the 28th; greatest daily local rainfall, 4.52, at Evergreen, on the 17th.

Average number of days on which rain fell, 8; average number of cloudy days, 10; average number of fair days, 9; average number of clear days, 11.

Warmest days, 22d, 23d, 24th; coldest days, 5th, 6th, 8th.

Prevailing direction of wind, southeast.

The following is an extract from the "Bulletin of the Colorado Meteorological Association" for April, 1886, prepared under direction of Prof. F. H. Loud, Colorado Springs, Colorado:

At a meeting of the Colorado Meteorological Association held at Denver March 23, 1886, action was taken for the organization of a state weather service for Colorado, and it was deemed best to begin forthwith to issue periodical summaries of weather records from the state at large, drawn from the observations of a few gentlemen, mostly members of the association, who were known to be ready to contribute their assistance. In this way it was believed the notice of other persons interested in the same subject would be secured and observers found in every part of the state to join the association or to aid in its work for the public welfare. It has been determined accordingly to contribute during the coming summer to newspapers of the state a weekly record of the weather and to begin a series of monthly bulletins to be issued to observers and to members of the association. The present is the first number of the proposed series. The weekly publications in the newspapers were begun April 13th. A number of new observers have already volunteered and the United States Signal Service has directed that full reports be sent from all its stations in the state and vicinity, and has also promised such arrangements as will enable all observers of the association to forward their notes of observations free of postage.

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Weather of April, 1886.

During the month there have been, as is usual at this season, frequent light falls of rain and snow. Cloudy weather has been interrupted by short periods during which clear skies have prevailed. One such interruption occurred on the 5th and 6th (following close after the monthly minimum temperatures), and another on the 10th—in each case with a high barometer. A third and longer one occurred from the 14th to the 18th, during which the atmospheric pressure, beginning at a low point, reached a maximum and again declined. This decline was accompanied by a high temperature, the highest, at most stations, for the entire month. Upon the ensuing rise of the barometer a heavy fall of rain, snow, and hail set in, including the 19th, 20th, and 21st of the month. So large was the rainfall on these three days that the situation of a station as more or less central in respect to their precipitation appears to go far towards determining whether the total rainfall for the month there is or is not much in excess of the usual amount. At Colorado Springs the wind was north during the first thirty hours of the rain, while on Pike's Peak it blew from the east and southeast on the 19th and 20th. During the following week the weather throughout the state was rainy, while the 29th and 30th were pleasant, introducing a period of sunshine which extended far into May.

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The following meteorological summary for April, 1886, has been forwarded by Hon. J. T. Henderson, Commissioner of Agriculture for Georgia:

Districts.	Temperature. Highest.	Lowest.	Mean.	Precipitation.
	°	°	°	*Inches.*
Northern Georgia	86.0	29.0	59.6	4.51
Middle Georgia	86.0	30.0	60.7	1.89
Eastern Georgia	83.0	33.0	63.0	1.87
Southeastern Georgia	82.0	44.0	67.0	1.15
State	86.0	29.0	62.6	2.36

The month of April has been unusually dry in the middle and southern portions of the state, and the moisture with some lands has not been sufficient for the germination of seeds. The rainfall, except in north Georgia, is less than half the usual amount for April, and most of this fell about the beginning and at the end of the month.

The following is an extract from the April, 1886, "Monthly Weather Review" of the Illinois Weather Service, under direction of Mr. Charles F. Mills, of the Illinois Department of Agriculture, Springfield:

This "Review" contains a general summary of the conditions which prevailed over Illinois during the month of April, 1886, based upon the reports received from the Signal Service and voluntary observers reporting to the Illinois Department of Agriculture.

The state covers such an extended area from north to south (385 miles) that it has been found advisable to divide the same and follow the judicial divisions, which include the following territory, viz.: the northern division extends from

42° 30′ to about 40° 31′; the central division, from about 40° 31′ to about 39°; the southern division, from about 39° to 36° 51′.

Atmospheric pressure.—Of the twenty-three stations reporting, the highest pressure occurred on the 19th, at twenty; on the 20th, at two; and on the 9th, at one. At Vandalia, Fayette county, the highest point marked was the same on the 19th and 20th. The lowest pressure was on the 1st, at six stations; on the 26th, at twelve; on the 28th, at two; and on the 2d, 3d, and 5th, at one station each.

The highest pressure reported in April during the the past five years, was as follows: 1882, 30.348 inches; 1883, 30.450; 1884, 30.450; 1885, 30.390; 1886, 30.600. The lowest barometer in April for the same period was as follows: 1882, 28.810 inches; 1883, 29.007; 1884, 28.830; 1885, 29.287; 1886, 28.560. The mean barometer for the same months was: 1882, 29.723 inches; 1883, 29.894; 1884, 29.898; 1885, 29.965; 1886, 29.821.

It will be seen that the extremes of the barometer in April, 1886, exceeded those of any of the preceding four years.

Temperature.—The month of April was warmer than usual, its mean temperature being above the average at all but three of the stations from which reports have been received for a number of years.

The mean temperature was above the normal at the following stations, viz.: Marengo, McHenry county, 3°.20 above; Sycamore, DeKalb county, 2°.21; Aurora, Kane county, 3°.57; Prairieville, Lee county, 7°.50; Oneida, Knox county, 1°.81; Oquawka, Henderson county, 3°.54; Keokuk, Iowa, 2°.19; Philo, Champaign county, 2°.07; Springfield, Sangamon county, 2°.86; Mattoon, Coles county, 3°.43; Whitehall, Green county, 2°; Collinsville, Madison county, 3°.30; Centralia, Marion county, 7°.06; Saint Louis, Missouri, 3°.42; Fairfield, Wayne county, 2°.50; McLeansborough, Hamilton county, 0°.22, and Anna, Union county, 0°.52.

The three stations where the mean temperature was below the average, were: Pana, Christian county, 1°.45 below; Vandalia, Fayette county, 1°.69; Cairo, Alexander county, 0.52.

The mean temperature of April for twelve years past was 51°.35, which was 3°.27 below the mean temperature of April, 1886. April, 1886, was the warmest month of the twelve, excepting April, 1878, whose mean temperature was 56°.09. The lowest mean temperature of any April during the past twelve years was 45°.31, in April, 1881.

The highest temperature of the month was reported on the 23d at thirty-five stations, on the 22d at fifteen, on the 24th at seven, on the 21st at four, on the 20th at two, on the 14th and 19th at two each, and on the 18th and 25th at one station each.

In the northern division of the state the highest temperature occurred on the 23d at thirteen stations, on the 22d at six, and on the 21st at three.

In the central division the highest temperature was on the 24th at two stations, the 23d at eight stations, on the 22d at eight, on the 20th at two, and on the 14th, 19th, 21st, and 23d at one station each.

The highest temperatures reported from the southern division were on the 24th at five stations, on the 23d at fourteen, on the 22d at two, on the 20th, 19th, 18th, and 14th at one station each.

The lowest temperature in April, 1886, was reported on the 5th at twenty-seven stations, on the 2d at twenty-two, on the 3d at seven, on 1st and 4th at four stations each, and the 6th at two stations.

In the northern division of the state the lowest temperature was reported on the 1st at three stations, on the 2d at sixteen, on the 3d at one, and on the 4th at one station.

In the central division the lowest temperature was on the 1st at one station, on the 2d at three, on the 3d at four, on the 4th at two, on the 5th at twelve, and on the 6th at one station.

The lowest temperature in the southern division occurred on the 2d at three stations, on the 3d at two, on the 4th at one, on the 5th at fifteen stations, and on the 6th at one.

Precipitation.—The rainfall in April, 1886, averaged 3.20 inches for the fifty-two stations reporting. This was 0.05 inch less than the average April precipitation of twelve years past. The April, 1886, rainfall was less than that of the corresponding month in 1876, 1877, 1878, 1880, 1882, 1883, and 1885, and greater than that of April, 1875, 1879, 1881, and 1884.

The greatest precipitation at any station in April was 6.80 inches, at Mascoutah, Saint Clair county. The least precipitation was 1.29 inches, at Chicago, Cook county.

A much larger amount of snow fell in April, 1886, than in April, 1885, the average for the state being 4.38 inches. This was distributed as follows: Northern division, 1.18 inches; central division, 2.99 inches; southern division, 7.50 inches. Most of the snow fell from the 1st to the 3d, and melted rapidly.

Wind.—The prevailing directions of the wind were south and southeast.

The following summary for April, 1886, is taken from the report of the "Minnesota Weather Service," under direction of Prof. Wm. W. Payne, Carleton College, Northfield:

Temperature.—The average mean temperature of Minnesota for April, deduced from reports received from the stations of the Minnesota Weather Service, is 47°.5. This is 20°.7 warmer than the preceding month of March, 4°.9 warmer than April, 1885, and much warmer than the average for the month throughout the state, except in the immediate vicinity of Lake Superior, where the weather remained cool throughout the month. The following averages above the normal are given: La Crosse, 5°.0; Saint Paul, 4°.1; Moorhead, 6°.0; Saint Vincent, 8°.2. Duluth was 1°.3 colder than the average of the last sixteen years. The cold weather of the last days of March was continued during the first four days of the month, with clear weather and generally prevailing northerly winds. During the 5th the wind generally shifted to a southerly direction, the temperature rose rapidly, and a long season of warm, balmy, spring-like weather prevailed, during which vegetation of all kinds made such rapid progress that by the 20th the season was fully three weeks earlier than usual. After the 24th the weather became much cooler, but not unseasonably so, and many stations reported no frost after the 8th of the month.

Precipitation.—The precipitation has in general been copious in amount, though somewhat unequally distributed, some stations having a large excess, notably so: Northfield, 7.31; Moorhead, 5.49; and Albert Lea, 5.08 inches. The long drought in the central-western portion of the state was generally ended during the month. During the first part of the month the precipitation was small and unimportant in amount. On the 13th and 14th the state came within the influence of an area of low pressure, which produced violent thunder-storms, hail storms, and tornadoes, accounts of which will be found in another part of this report. Heavy rains were at Dodge Center, 2.10 inches; Albert Lea, 1.54 inches; Red Wing, 2.71 inches; Duluth, 2.43 inches; and Northfield, 4.04 inches. From the 21st to end of month the weather was in general cloudy and cool, with much rain, especially in northwestern districts, where there was a large excess of precipitation, thoroughly wetting the land and temporarily suspending farming operations.

Tornadoes.—The most important meteorological feature of the month was the tornado which on the 14th devastated the towns of Saint Cloud, Sauk Rapids, and the adjacent country. This phenomenon, aside from its normal characteristics, was remarkable from the unusual fact that it occurred very near the northern limit of tornadoes, but one well-defined tornado having been known to occur north of the main line of the Northern Pacific Railway. Also for its occurrence so early in the year, July and August being the season when they are most likely, if at all, to occur in this latitude, and the fact that this was the most northerly point at which a destructive tornado has been known to occur within the limits of the United States. Perhaps an adequate explanation of the cause of this tornado can be traced to the abnormal conditions of the weather which immediately preceeded its occurrence. From April 4 continuous south winds had prevailed over that part of the country between the ninetieth and one hundredth and fifth meridians and from the Gulf of Mexico far north into British America, thus giving rise to the conditions of heat and moisture in Minnesota which normally belong at that season to the latitude of Tennessee. These features on the 13th and 14th were accentuated by the approach of an area of low pressure which first made its appearance in central California on the morning of the 11th, there producing heavy rains from San Diego northward. On the morning of the 12th this low area was central at Salt Lake City, after which the movement of translation, instead of taking the usual path to the northeast over the Lake region, during the succeeding three days took a slow, erratic, and unusual course over eastern Montana, northwestern Dakota, and passed beyond the limits of observation in the direction of Hudson's Bay on the 15th. It was during the afternoon of the 14th, when this low area was central in northwestern Dakota, and Minnesota was brought into the proper relation to the storm-centre for the occurrence of tornadoes, that the violent and destructive tornado, which did so much damage and caused the loss of over seventy lives, occurred at Saint Cloud and Sauk Rapids, full and accurate accounts of which have been given through the medium of the daily press. On the same date severe local storms occurred throughout the state, notably near Park Rapids in Hubbard county, near Alexandria in Douglas county, at Arlington, Sibley county, where a strong southerly gale and heavy rain prevailed about 3 p. m., and in Dakota county, twelve miles south of Hastings, where a storm, supposed to be of a tornadic nature, destroyed a number of dwellings and barns, but without loss of life so far as learned.

As regards the frequency of occurrence of tornadoes in Minnesota, an examination of the records of known tornadoes shows that the greatest number observed is in northeast Kansas, with sixty-two, the region of greatest frequency. Minnesota, south of latitude 43° 50′, twenty-five; Minnesota, south of latitude 44° 30′, twenty; Minnesota, south of latitude 45°, fifteen; and then diminishing rapidly in number to latitude 46° 30′ where the number is reduced to one only. Thus it is seen that that part of the state north of the 46° 30′ is practically exempt from tornadoes, but with a rapid increase in number from latitude 46° to the southern boundary of the state, where, however, they are much less frequent than in Kansas, Iowa, Illinois, Missouri, and New York.

The following meteorological summary and accompanying remarks are from the April, 1886, report of the "Indiana Weather Service," under direction of Prof. W. H. Ragan, of De Pauw University, Greencastle:

Districts.	Temperature.			Average precipitation.
	Highest.	Lowest.	Monthly means.	
	°	°	°	Inches.
Northern counties	89.0	18.0	54.9	2.31
Central counties	85.0	15.0	53.9	2.67
Southern counties	88.0	21.0	56.5	3.19
State	89.0	15.0	55.1	2.73

Temperature.—The warmest days were the 23d, 24th, and 25th; and the

coldest the 2d, 3d, 4th, 5th, and 8th. At La Grange temperature was below 32° on eight days and above 70° on eleven; at Indianapolis, eight and fourteen, respectively; at Degonia, one and fifteen, respectively. The mean for the month was above normal 5°.1 at Logansport; 3°.4 at Spiceland; 1°.9 at Indianapolis; 3°.2 at Connersville; 1°.0 at Mauzy; 3°.0 at Sunman; 3°.3 at Worthington; 1°.1 at Vevay; 1°.5 at Blue Lick; and for the state the mean was higher 3°.0 than in 1883; 5°.1 than in 1884; 4°.4 than in 1885; and 3°.1 than the four-year normal. State range, 75°; average station, 58°.0; greatest, 64°, at Mauzy and Guilford; least, 46°, at Fillmore. Highest station mean, 59°.9, at Salem; lowest, 50°.7, at Mauzy. The mean at La Grange was 5°.8 lower than at Degonia: the mean for the centre is 1°.0 lower than for the north and 2°.6 lower than for the south. Highest reading, 83°, at Miami; lowest, 15°, at Mauzy; average of highest, 83°.2; of lowest, 25°.2.

Precipitation (inches).—The precipitation was generally below normal, with, however, a slight excess in south-centre, and was well distributed through the month and over the state, ranging from an aggregate of 14.87 (at twenty-eight stations) on the 11th to 0.01 or less on the 8th, 9th, 18th, 22d, 25th, 28th, and from 4.20 at Marengo to 1.20 at Miami, as reported. The snowfall was greatly in excess of normal, and ranged from 14.0 at Farmland to 0.4 at Degonia. The days of greatest precipitation were the 6th (aggregate 12.44), 11th (14.87), 15th (9.36), 26th (8.41), 29th (11.74). Precipitation below normal 2.15 at Logansport; 0.99 at Spiceland; 0.54 at Indianapolis; 0.99 at Worthington; 0.94 at Vevay; 0.69 at Blue Lick; for state, 0.65; above, 0.44 at Connersville; 0.13 at Mauzy; 0.60 at Sunman. Greatest reported in one day, 1.79, at Salem, on the 11th.

Weather.—At ten stations, averaged, nine days were clear, ten fair, eleven cloudy, and 0.01 or more precipitation fell on thirteen. The first third of the month was cold, with snow on the 1st, 2d, 3d, 4th, 5th, 6th (very heavy and general), 7th, frost at one or more stations every day; the remainder of the month warm, with thunder-storms on the 12th (north), 13th, 15th (general), 16th, 17th, 20th, 23d (north), 24th (centre), 26th (general), 27th (south), 29th (centre and south). Solar halos are reported on the 10th, 20th, 22d, 23d, 24th; lunar on the 8th, 9th, 17th, 18th, 22d, 24th, and a rainbow at Jeffersonville on the 13th.

The following summary and remarks are taken from the April, 1886, report of the "Indiana Weather Service," under direction of Prof. H. A. Huston, of Purdue University, Lafayette:

Districts.	Temperature.			Average precipitation.
	Highest.	Lowest.	Monthly means.	
	°	°	°	Inches.
Northern counties	89.0	23.0	55.6	2.03
Central counties	85.0	15.0	5[illegible].7	2.67
Southern counties	88.0	27.0	55.8	3.14
State	89.0	15.0	55.0	2.61

The mean temperature of the state for April was 3°.1 above the mean of April for the past four years; 2.6 above the mean of fifteen years at Indianapolis; 2°.0 above the mean of thirty-one years at Logansport; 0°.2 above the mean of twenty-one years at Vevay; 5°.5 above the mean of six years at Mauzy; 5°.1 above the mean of thirty-two years at Spiceland; 0°.5 above the mean of eight years at Blue Lick; 0°.9 above the mean of four years at Worthington; 4°.3 above the mean of seven years at Connersville; 5°.1 above the mean of seven years at Lafayette and about 2°.5 above the normal. The mean temperature at all stations was above the normal, the amounts ranging from 0°.6 to 4°.7.

The mean precipitation for the state was 0.71 inch below the mean for April in the past four years: 1.02 inches below the mean of fifteen years at Indianapolis; 0.57 inch below the mean of thirty-one years at Logansport; 0.88 inch below the mean of twenty-one years at Vevay; 1.21 inches below the mean of twenty-seven years at Spiceland; 1.07 inches below the mean of four years at Blue Lick; 0.85 inch below the mean of four years at Worthington; 0.81 inch below the mean of four years at Connersville; 0.72 inch below the mean of seven years at Lafayette and about 1.00 inch below the normal amount for April. The precipitation was unevenly distributed over the state, being greatest in the southern counties; but all stations show a deficiency, the amounts ranging from 0.50 to 1.62 inches.

The snowfall was abnormal in both amount and distribution, being heaviest in central and southern counties.

Nine solar halos were reported on seven dates, seven lunar halos on six dates, and two lunar coronæ on different dates.

The following is an extract from the April, 1886, report of the "Missouri Weather Service," under direction of Prof. Francis E. Nipher, Washington University, Saint Louis:

April, 1886, has had a temperature of 58°.3 at the central station, which is two degrees above the normal temperature. The extremes were 28°.1, on the 5th, and 82°.4, on the 24th. The temperature fell to or below the freezing point four times, the last being on the 5th. After the 8th the temperature did not fall below 45°. In former years the temperature has fallen to 32° as late as April 30th (in 1877).

The rainfall, 2.50 inches, is 1.2 inches below the normal rainfall.

In the state the lowest temperature observed was 19°, at Oregon; the highest was 88°, at Greenfield and Miami. The least rainfall reported was 0.98, at Kirksville; the greatest, 6.64, at Cairo, Illinois.

The most marked event of the month was the tornado in Holt and Nodaway counties on the 14th. The storm began about 19.30 (7.30 p. m.) doing its first damage at the farm of H. W. Bissett (whose house was destroyed last year, but who escaped with slight damage), in the northeast corner of section 7, township 62, range 38° west. It passed on through the extreme southeast corner of Atchison county into Nodaway county and did its last serious damage at the farm of A. Barber near the northeast corner of section 35, township 64, range 38° west. The length of this track is over ten miles. The storm, however, passed on passing between Skidmore and Quitmann. According to information furnished by Wm. Kaucher and R. Van Buskirk, five persons were killed, four probably injured fatally, and five were otherwise wounded. Fifteen houses were destroyed. As is usual, many wonderful escapes occurred, many whole families having been saved from destruction by the "tornado cave."

Mr. R. Van Buskirk further reports a heavy hail storm on the 15th, five miles west of Savannah, the hail lying six inches deep on the ground. He reports a very favorable outlook for wheat, corn, and fruit of all kinds.

Glasgow reports a fine prospect for fruit excepting peaches which are all killed. Wheat and pasture excellent. Corn being planted.

The following is an extract from the April, 1886, report of the "Nebraska Weather Service," under direction of Prof. Goodwin D. Swezey, of Doane College, Crete:

Like the month of March, April was chiefly noteworthy for its unusual fall of snow. Temperature, precipitation, and nearly every other feature of the weather were nearly normal.

Comparison of past Aprils.

The table shows the mean temperature, the noon temperature, and the number of days below 32° for the past nine Aprils in southeastern Nebraska; they are found by averaging the numbers reported at the different stations. It also shows the highest temperature and the lowest recorded anywhere in the state by standard self-registering thermometers:

April.	Mean temperature.	Noon temperature.	Average No. of days below 32°.	Highest temperature.	Lowest temperature.
	°	°		°	°
1878	53.0	64.3	4.4	82.0	34.0
1879	52.0	61.1	5.5	80.0	13.0
1880	51.3	64.4	5.2	91.0	20.0
1881	45.1	54.0	9.8	81.0	6.0
1882	51.4	59.4	3.9	87.0	25.0
1883	52.3	60.4	3.2	95.0	29.0
1884	49.4	53.5	10.2	80.6	22.0
1885	49.2	58.2	4.8	84.0	19.8
1886	50.4	59.5	6.7	84.6	16.2

The following table shows the precipitation or depth in inches of rain and melted snow or hail, the number of days on which it fell, and the number of cloudy and clear days. Days are counted cloudy when the sky is four-fifths overcast; clear when less than one-third. The last column shows the number of thunder-storms:

April.	Precipitation.	Days of precipitation.	Cloudy days.	Clear days.	Thunder.
	Inches.				
1878	2.42	6.2	6.4	5.2	3.6
1879	3.11	7.4	5.4	12.6	1.9
1880	0.82	2.3	2.6	17.0	1.6
1881	2.91	7.4	6.8	9.1	3.5
1882	4.80	7.3	9.2	8.7	3.9
1883	2.43	8.0	5.2	9.8	2.3
1884	2.91	7.4	10.0	7.5	2.8
1885	4.29	10.1	7.8	9.0	3.6
1886	2.78	9.7	7.7	9.7	3.5

The average rain for the different sections of the state for April, 1886, is as follows:

Northeast section (one station), 2.40 inches; north-middle (one station), 3.25 inches; west (one station), 1.83 inches; south-middle (two stations), 2.56 inches; southeast (covering essentially what has heretofore been the "whole state" as far as reporting), 2.78 inches; state average by sections, 2.59 inches.

The "New England Meteorological Society," under direction of Prof. Winslow Upton, furnishes the following summary for April, 1886:

Reports for the month were received from one hundred and forty-three observers:

General conditions.—The month was warm and pleasant, with an unusual number of fair days, an absence of severe frosts, and with but few high winds. Beginning with rain, as the depression which caused the heavy rains of March 31st moved north of the district, it was followed by partly cloudy weather and local rains until the 6th, when a cyclonic storm approached from the southeast, attended by high winds and heavy rain or snow on the 6th and 7th. This was the only important barometric depression of the month. After the 8th a suc-

cession of fair days followed until the end of the month, interrupted by local showers on the 13th and 24–28th. The pressure remained above the average from the 9th to the 23d, and was especially high from the 11th to the 20th. The temperature rose after the 17th, and on the 24th values above 80° were recorded at many stations. The rest of the month was cooler. The average temperature of the month was about 4° above the average. The precipitation was small in the Northern States; but normal or a little above the average in the Southern. This difference was due to the irregularity in the distribution of the rain and snow on the 6–7th.

Special features.—The following deserve mention:

1. *The freshets on the 1st:* These occurred in the rivers of New Hampshire and Vermont especially, and resulted from the heavy rains of the closing days of March. More damage was done in some instances than in any other freshet since 1869.

2. *The storm of the 5–7th:* A depression from the Gulf, with pressure at the centre 29.4 inches, reached Delaware on the morning of the 6th. Very heavy rains and high winds accompanied it, and it gave promise of being a destructive storm; but on the 7th it greatly diminished in intensity as it passed northerly over Massachusetts and Vermont. Nearly all the rain and snow of the month fell in connection with this depression, the amount varying from 4 inches in New York, 2 to 3 inches in Connecticut and Rhode Island, 1.5 to 2.5 inches in Massachusetts, southern Vermont, New Hampshire, and Maine, to 0.5 inch in the extreme north. Considerable hail fell, and the trees were loaded with ice in high regions, as at Princeton and Norfolk, making the fourth destructive ice storm of the season.

3. *Thunder-storms:* These were three in number: First, 13th, 5 to 6 p. m., occurring at Albany, New York, Long Island, and at many stations in Connecticut. Second, 19th, in western Massachusetts, Vermont, New Hampshire, and Maine, the times of the thunder varying from 2.40 p. m. at Strafford, 4 p. m. at Amherst, to 5 p. m. at Bridgeton; but little rain fell. Third, 24th, 3–5 p. m., at a few stations in Connecticut, Rhode Island, and Massachusetts. Light rains were numerously reported. None of these storms were sufficiently well marked to be traced in detail.

Advance of the season.—The forwardness of the season, indicated in March by the early arrival of spring birds, is still further shown by the state of vegetation at the close of April. At Bridgeton grass was two weeks earlier than usual; at Charlotte the trees leafed thirteen days before the average date for nineteen years, and from every part of New England come similar reports.

Miscellaneous.—Auroras were generally observed on the 14th and 30th; also on the 1st at Gardiner, Chelsea, Amherst (10.30 p. m.), Provincetown (9.20 p. m.), New Haven; 2d, Mayfield; 4th, Parker's Ridge; 11th, Eastport, Gardiner, Mayfield; 12th, Chelsea (10 p. m.); 20th, Bar Harbor, Eastport, Gardiner, Kent's Hill, Mayfield; 29th, Eastport, Kent's Hill, Walpool.

The verification of weather signals at New Haven was 70 for temperature and 83 for weather, and at seventeen other stations, 90.2 for temperature and 78.8 for weather.

Solar halos of marked brilliancy were noted on various dates, especially at Brattleborough on the 5th.

The following summary is made from reports for April, 1886, furnished by Prof. B. F. Thomas, of the Ohio State University, Columbus, director of the "Ohio Meteorological Bureau," in advance of the regular monthly report:

State summary.

Temperature.—Mean, 53°.2; highest, 86°.0, at the Ohio State University, Columbus, on the 16th, 19th, 22d, 23d; lowest, 11°.0, at the same place, on the 8th; mean monthly range, 63°.4; greatest daily range, 44°.2, at Wauseon, on the 8th; least daily range, 2°.6, at Sandusky.

Precipitation.—Average monthly precipitation, 2.59 inches; greatest rainfall, 4.47 inches, at New Alexandria; least rainfall, 0.60 inch, at Salem.

Average number of days on which rain fell, 10.6; clear days, 11.2; fair days, 8.8; cloudy days, 10.0.

Prevailing direction of wind, south.

The following is an extract from the "Tennessee State Board of Health Bulletin," for April, 1886, prepared under the direction of J. D. Plunkett, M. D., President of the State Board of Health. The summary is prepared by Major H. C. Bate, in charge of the State Meteorological Service:

There were no very notable features during the month of April. The snowfall about the 4–6th was the chief departure from the normal conditions.

The mean temperature for the month was 58°.3, about one degree below the mean for April, 1885, and 2°.6 above the corresponding period in 1884. The highest temperature, recorded on the 23d, was 89°, the same and about the same date as on the preceeding year, and 3° above the maximum for April, 1884. The lowest temperature, recorded on the 6th, was 20°, 1° below the minimum of April, 1885, and 5° below that for the corresponding period in 1884. The mean of maximum temperatures was 83°4, respectively 0°.8 and 3°.8 above the means of April, 1885 and 1884. The mean of minimum temperatures was 29°.6, respectively 0°.6 and 2°.5 below the means of April, 1885 and 1884.

The mean precipitation was 3.61 inches, 0.86 inch more than for the corresponding month of last year, 1.34 inches less than the mean for April, 1884. Of this the eastern division received nearly four inches, the middle division received nearly three inches, and the western division received about four inches. The greatest rainfall occurred on the 5th, and was accompanied by snow. This fall was heaviest in the eastern and middle divisions. Most of the rains during the month were light showers. The greatest local daily rainfall was 2.76 inches on the 5th, reported from Knoxville. There were six days on which no rain was reported, viz., 1st, 8th, 19th, 22d, 23d, 24th.

Snow fell on the 4th, 5th, 6th, and 7th; that of the 5th was the heaviest. The greatest depth for month was 6.20 inches, reported from Austin.

Frosts were reported at different places on the 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th. Those of the 5th, 6th, 8th were killing frosts; the others generally light.

The almost unprecedented floods which prevailed during the first decade of the month, resulting from the excessive rainfall of the last days in March and the first days of April, did immense damage to farms along the rivers and smaller streams.

State summary.

Mean temperature, 58°.3; highest temperature, 89°.0, on the 22d, at Grief; lowest temperature, 20°.0, on the 6th, at Beach Grove and Riddleton; range of temperature, 69°.0; mean monthly range of temperature, 53°.8; greatest monthly range of temperature, 64°.0, at Beech Grove and Riddleton; least monthly range of temperature, 46°.0, at Covington; mean daily range of temperature, 16°.9; greatest daily range of temperature, 44°.0, on the 8th, at Hohenwald; least daily range of temperature, 2°.0, on the 5th, at Manchester, Riddleton, Florence Station, and Howell; on the 7th, at Careyville; on the 14th, at Trenton; on the 29th, at Jonesborough and Rogersville; mean of maximum temperature, 83°.4; mean of minimum temperature, 29°6.

Mean depth of rainfall, 3.61 inches; mean daily rainfall, 0.12 inch; greatest rainfall, 6.25 inches, at Greeneville; least rainfall, 1.30 inches, at Fostoria; greatest local daily rainfall, 2.76 inches, on the 5th, at Knoxville; days of greatest rainfall, 4th, 5th, 27th, 28th; day of greatest rainfall, 5th.

Average number of days on which rain or snow fell, 11; average number of clear days, 9.8; average number of fair days, 9.8; average number of cloudy days, 10.4.

Mean depth of snowfall, 1.98 inches; greatest depth of snowfall, 6.20 inches, at Austin; days without precipitation (rain or snow), 8th, 19th, 22d, 23d, 24th.

Warmest days, 23d, 24th; coldest day, 6th.

Prevailing winds, south and southwest.

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