

Meteorological record of voluntary observers and army post surgeons—April, 1885.

Table with 4 columns of weather data (Mean, Maximum, Minimum, Rainfall) for 120 different stations across various states and territories. Stations include locations like Fort Preble, Me., Orono, Me., and many others.

NOTES AND EXTRACTS.

The following extract is from the April, 1885, report of the "Alabama Weather Service," under direction of Prof. P. H. Mell, jr., Auburn:

The season is at least two or three weeks later than usual, but April has been all that the agricultural and fruit interests could desire. Crops are in fine condition, the fields are clean and well prepared, corn has been ploughed and is growing rapidly, cotton is up, and in south Alabama much of it has been chopped out. The prospect is now excellent for an abundant yield of fruit.

The temperature for the month was about the normal. The precipitation was two inches below the normal, and there were ten rainless days.

State summary.

Mean temperature, 64°; highest temperature, 92° at Eufaula on the 27th; lowest temperature, 26° at Gadsden on the 14th; range of temperature, 66°; greatest monthly range of temperature, 58° at Gadsden; least monthly range of temperature, 38° at Clintonville; mean daily range, 17°.2; greatest daily range of temperature, 42° at Eufaula on the 5th; least daily range of temperature, 1° at Mount View on the 30th, Marion and Carrollton on the 7th.

Mean depth of rainfall, 3.83 inches; mean daily rainfall, 0.127; greatest depth of monthly rainfall, 9.78 inches at Tuscaloosa; least depth of monthly rainfall, 1.25 inches at Clanton; greatest daily rainfall, average for the state, 0.77 of an inch, on the 7th; greatest local daily rainfall, 5.25 inches at Tuscaloosa on the 30th, in about three hours; days of general rainfall, 3d, 7th, 8th, 17th, 30th.

Average number of days on which rain fell, 7; average number of cloudy days, 8; average number of fair days, 12; average number of clear days, 10; warmest days, 25th to 30th; coldest days, 4th, 14th.

Prevailing direction of wind, southeast.

Thunder-storms were general on the 7th, 17th, and 30th; hail is reported by Birmingham, Roanoke, and Mount View on the 17th, and by Greenville and Gadsden on the 18th.

The frosts of the month occurred on the 4th, 5th, 9th, 10th, 11th, 13th, and 14th. That of the 13th was quite severe, killing in some sections the young Irish potatoes, even though the plants were partly protected by mulching. A few stations report ice on the 3d, and also on the 14th in the low lands.

The following meteorological summary for April, 1885, has been forwarded by Mr. R. J. Redding, state meteorologist for Georgia:

Table with 4 columns: Districts, Temperature (Highest, Lowest, Mean), and Precipitation. Rows include Northern counties, Central counties, Southern counties, and State.

The following summary of meteorological data for a period of thirty-three years (from 1852 to 1884), at Sandwich, DeKalb county, Illinois, has been forwarded by voluntary observer Nahum E. Ballou, M. D., Ph. D., F. R. Met. Society:

Large table with multiple columns: Year, Annual mean, Maximum, Minimum, Annual precipitation, No. of days during year on which... (Rain fell, Snow fell, etc.), Frosts, Data relating to wind, and State of weather.

The following extracts are from the Weather Review, Illinois Department of Agriculture, April, 1885:

The summary of meteorological observations contained in this review has been compiled from the weather reports received from the Signal Service and voluntary observers reporting to the Illinois Department of Agriculture.

Temperature.—The mean temperature of the state the past month was nearly one and one half degrees above the mean of the past five Aprils.

Precipitation.—The average rainfall for the state in April, 1885, was 4.11 inches, or 0.70 inch more than the mean for the past eight Aprils. The average monthly rainfall for the state for the month of April for a term of years has been as follows: 1878, 4.15 inches; 1879, 2.02; 1880, 3.79; 1881, 2.49; 1882, 3.75; 1883, 4.17; 1884, 2.81; 1885, 4.11.

The average precipitation during the past month was 3.77 inches, in the northern division, and 3.87 inches in the southern division, which is much less than the rainfall, 4.98 inches, in the central division. There was no

precipitation in any portion of the state on the 5th, 19th, and 27th of April, and only slight local showers on the 1st, 3d, 4th, 8th, 11th, 12th, 13th, 18th, 21st, 24th, 26th, and 29th. The rains were quite general in all portions of the state on the 7th, 14th, 15th, 16th, 17th, 22d, 23d, 25th, 28th, and 30th.

The greatest precipitation for April was 7.45 inches at Centralia, Marion county. The least precipitation reported for the month at any station was 1.43 inches at Cairo.

The precipitation for April, 1885, exceeds the average for the month during a term of years as noted at the following stations: Marengo, 2.32 inches; Chicago, 0.38; Aurora, 0.27; Sycamore, 0.16; Peoria, 0.53; Keokuk, 0.22; Springfield, 2.64; Griggsville, 1.74; Mattoon, 1.94; Litchfield, 1.88; Palestine, 0.97; Greenville, 1.74; St. Louis, 1.32; Mascoutah, 1.93; and Swanwick, 0.05.

The only stations reporting the April, 1885, precipitation, less than the average for the month during the period for which records have been made, are as follows: Davenport, 0.49 less; McLeansboro, 0.59; Anna, 1.41; and Cairo, 2.72.

The total precipitation during the past eight years for the months of January, February, March, and April, is given in the following table:

| Month. | Year. | | | | | | | |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 1878. | 1879. | 1880. | 1881. | 1882. | 1883. | 1884. | 1885. |
| January | 1.45 | 1.61 | 3.85 | 1.49 | 2.41 | 1.87 | 1.21 | 2.81 |
| February | 2.31 | 1.64 | 2.71 | 4.68 | 4.80 | 6.55 | 4.03 | 1.29 |
| March | 2.69 | 2.26 | 2.78 | 3.99 | 4.47 | 1.03 | 2.81 | 0.51 |
| April | 4.75 | 2.02 | 3.79 | 2.49 | 3.75 | 4.17 | 2.81 | 4.11 |
| Total | 10.61 | 7.53 | 12.64 | 12.55 | 15.43 | 14.22 | 10.86 | 8.72 |

The precipitation, the past eight years, in January, February, March, and April has averaged 11.57 inches. The precipitation during the first four months of the current year is twenty-five per cent. less than the precipitation for the corresponding months in the years included in the above table.

Meteorology—The science of meteorology is deservedly receiving more attention each succeeding year, especially at the hands of the more intelligent farmers who realize the great practical value of information of this character to all engaged in agricultural pursuits.

New observers.—The department desires to secure the assistance of an observer for each county in the state. There are doubtless parties in the counties not represented in this report by observers, that are giving attention to the science of meteorology. The attention of all interested in having the meteorological history of each county in the state preserved in the Monthly Weather Review of the Department, is invited to the importance of this work and an earnest invitation is extended to all to aid in completing the meteorological records of the state.

CHARLES F. MILLS, *Secretary.*

The following meteorological summary and accompanying remarks are from the April, 1885, report of the "Indiana Volunteer Weather Service," under direction of Professor W. H. Ragan, of De Pauw University, Greencastle:

| Districts. | Temperature. | | | Precipitation. |
|------------------------|--------------|---------|---------------|----------------|
| | Highest. | Lowest. | Monthly mean. | |
| Northern counties..... | 83 | 20 | 47.6 | 3.64 |
| Central counties..... | 81 | 20 | 50.2 | 4.46 |
| Southern counties..... | 85 | 24 | 54.2 | 4.14 |
| State..... | 85 | 20 | 50.7 | 4.09 |

Roughly speaking, and as shown by the 7 a. m. Signal Service Weather Map, the weather conditions of the state were dominated by a high barometer on the 1st, 4th, 9th, 13th, 14th, 19th, 20th, 21st, 24th, 26th, 29th, and by a low on the 7th, 11th, 15th, 16th, 17th, 27th, 28th, 30th. On the 2d, 3d, 5th, 6th, 8th, 10th, 12th, 18th, 22d, 23d, 25th, the barometer was near the normal height, and neither cyclonic or anti-cyclonic forces were present in important degree. Rains occurred in all sections on the 2d, 3d, 7th, 8th, 10th, 11th, 12th, 14th, 15th, 16th, 17th, 18th, 23d, 24th, 25th, 28th, 30th, and at one or more stations on the 1st, 4th, 5th, 6th, 19th, 22d, 26th, mostly very light. Snow occurred in all sections on the 12th, 13th, 14th, and at one or more stations on the 3d, 6th, 8th, 9th, 11th, 15th, 28th. Thunder-storms occurred in all sections on the 17th, 25th, 30th, and at one or more stations on the 2d, 5th, 7th, 8th, 15th, 16th, 28th. Frost occurred in all sections on the 4th, 29th, and at one or more stations on the 1st, 3d, 9th, 10th, 12th, 13th, 14th, 25th, 27th, 28th. The heaviest and most general rains fell on the 14th, 15th, 16th, 30th, attending the cyclones of the 15th, 30th. The first of these storms originated on the 14th, in Colorado, moved slowly eastward, and apparently disappeared in Illinois on the 17th; the last originated on the 29th, in Colorado, and was central in Missouri on the 30th. The rains and thunder-storms of the 25th attended a low barometer, central in Minnesota that morning.

The lowest temperatures of the month occurred at most stations on the 4th, in connection with a high barometer, central that morning in Arkansas and eastward, and the highest on the 22d in connection with a low barometer central that morning west of Lake Superior. The highest barometer, the morning of the 22d, was over the South Atlantic States. This arrangement of cyclonic and anti-cyclonic forces would seem favorable for forcing bodies of warm air from the south over this section.

There was a slight predominance of high barometer weather and a slight deficiency in temperature to agree with it.

No cyclone of great force affected the weather during the month, but storms of no great energy or persistence were quite numerous, which will account for the excess of about one inch in the average rainfall. The rainfall was remarkably evenly distributed. Our comparative table is arranged to show at a glance the relation of this month's temperature and precipitation to the same for past years, and to the averages for many years at some stations. Compared with this year, the temperature for 1883 was 1° 4 higher; 1884, 0° 7 lower; normal at Indianapolis, 1° 8 higher; at Logansport, 2° 5 higher; at Spiceland, 0° 5 higher; at Vevay, 4° 2 higher.

Vegetation is from two weeks to a month behind time, as a result of the

persistent deficiency in temperature. Total wind velocity: Greencastle, 6,949 miles; Indianapolis, 5,209 miles; Lafayette, 7,168 miles.

The following meteorological summary and accompanying notes are from the April, 1885, report of the "Indiana Weather Service," under direction of Prof. H. A. Huston, of Purdue University, Lafayette:

| Districts. | Temperature. | | | Precipitation. |
|------------------------|--------------|---------|-------|----------------|
| | Highest. | Lowest. | Mean. | |
| Northern counties..... | 83.0 | 24.0 | 48.26 | 3.49 |
| Central counties..... | 81.0 | 20.0 | 50.36 | 4.22 |
| Southern counties..... | 85.0 | 28.0 | 54.33 | 4.52 |
| State..... | 85.0 | 20.0 | 50.98 | 4.08 |

The mean temperature for the state, 50° 98, is about 1° 5 below the normal and 2° above that for April, 1884; the highest temperature, 85°, is reported from Vevay, on the 22d; the lowest, 20°, is reported from Knights-town, on the 13th.

The mean rainfall for the state, 4.08 inches, is 1.37 above the average for April, 1884, and is about 0.50 above the April normal.

A severe thunder storm accompanied by heavy rain, and in some places hail, passed over the central and southern counties on the 17th. At Vevay, 0.85 inches of rain fell in forty minutes, and the rapid rise in the streams did considerable damage to mill property. At Spiceland two houses were damaged.

A severe frost is reported from all parts of the state on the 29th.

The following is an extract from the April, 1885, report of the "Minnesota Weather Service," under direction of Prof. W. W. Payne, of Carleton College, Northfield:

Temperature.—The temperature of the month of April in Minnesota has varied but slightly from the normal in the central and southern parts of the state. Duluth reports a monthly mean of 36° 8, 1° 3 below the average of fifteen years, while Moorhead reports the monthly mean as 40° 7, 2° 3 above the average for the last five years.

The temperature, with the exception of the 4th and 5th, remained rather low from the 1st to the 14th, and vegetation previous to that date had made but little progress. After the 14th there was a marked increase of temperature, which, with the exception of the 27th, continued until the end of the month.

Precipitation.—There was a decided excess of rainfall in the Red River valley in the northwestern and also in the southeastern part of the state; 3.43 inches was measured at Moorhead, an excess of 1.68 inches; 3.19 inches at Saint Paul, an excess of 1.18 inches; and 0.89 inches at Duluth, a large deficiency. The central, western, and southwestern parts of the state had about an average precipitation, Park Rapids reporting 2.32; Wadena, 1.75; Bird Island, 2.60; and Albert Lea, 2.56 inches.

The 6th, 7th, 10th, 11th, 19th, 20th, 21st, 25th, and 27th, were the dates of greatest rainfall, and the principal amount occurred during the last half of the month. An exception to this is Moorhead, where 1.55 inches was measured on the 6th.

Precipitations of over .50 inch in one day were observed at the following points: Moorhead, 1.55 on the 6th, .59 on the 19th, .83 on the 20th; Park Rapids, 1.06 on the 20th; Wadena, 1.33 on the 20th; Saint Paul, .68 on the 21st, and 1.36 on the 26th; Bird Island, .51 on the 20th, .78 on the 21st, and .92 on the 27th; Red Wing, 1.57 on the 27th; Albert Lea, .50 on the 6th, and .53 on the 21st; Northfield, .72 on the 21st, and 1.30 on the 27th.

The following is the April, 1885, report of the "Missouri Weather Service," under the direction of Prof. Francis E. Nipher, Saint Louis:

The mean temperature of the past month has been half a degree above the normal for April. The coldest temperature reached was 32° 8, on the 8th. The average minimum was 49°, so that the month has been unusually free from cool weather. In forty-eight years the minimum in April has at some time fallen to or below 32° on every day of the month up to the 20th, and also on the 22d, 23d, and 30th. The maximum temperature was 78°. In the last forty-eight years the April temperature has been above 80° on every day of the month, the highest maximum ever observed in April being 99° on April 18, 1855. In the state the lowest minimum observed was 23°, at Savannah, and 24° at Kirksville. The highest maximum was 84°, at Sedalia.

The rainfall at the central station was 4.28 inches, which is 0.58 in excess of the normal rainfall, but which is often exceeded. The April rainfall in 1854 was 7.60 at Saint Louis. In the state the fall has varied greatly, being less than 1.5 inches in the southeast part of the state and rising to 10 inches in the central western parts.

On the night of the 29th and 30th high winds, probably a tornado, occurred five miles southwest of Pleasant Hill; cars were blown off the track, houses unroofed, and great damage was done to property.

Spring work has been delayed somewhat in the western part of the state by the heavy rains.

Reports of the wheat crop are no more encouraging than last month.

In the extreme southern part of the state the prospect for a peach crop is reported as excellent.

The following is an extract from the April, 1885, report of the "Nebraska Weather Service" under direction of Professor Goodwin D. Swezey, of Doane College, Crete:

The month of April, 1885, has not been a marked month. The mean temperature has been $49^{\circ}.2$, which is $1^{\circ}.3$ below normal April temperature for the state, which is $50^{\circ}.5$.

The noon temperature for the state, $58^{\circ}.2$, is in like manner slightly less, viz., $1^{\circ}.2$ below the normal noon temperature for April, which is $59^{\circ}.4$.

The number of rainy days throughout the state has averaged about ten, the usual number for April being seven; and the amount of precipitation has been in about the same proportion, viz., 4.29 inches instead of the normal, 3.08. The proportion of cloudy days, however, has been less instead of more.

The wind record for the month has been less than any preceding April for several years. No severe storms have occurred. The month opened with a storm central in northern Texas on the night of the 1st, but this passed eastward, causing severe gales on the Atlantic coast on the 4th. In Nebraska the storm was not severe and the rain mostly inappreciable, although accompanied by thunder and lightning.

A second storm swept the country a week later, bringing rain in Nebraska on the 6th, together with a rise of temperature to the highest for the month, passing as a severe storm north of the lake region and causing general rains to the east of us on the 7th and 8th.

This was followed by a cold wave which gave the lowest temperature of the month at the central station, $17^{\circ}.8$, on the 8th; this wave passing eastward caused frosts even in the south Atlantic and Gulf states.

The heaviest rainfall of the month came on the 20th and 21st, accompanied by another rise of temperature to nearly the same point as on the 6th; this was the wave which, passing eastward, gave the highest temperature of the month in the states farther east. At the central station the greatest velocity of wind for the month came with this storm.

Rain fell generally in eastern Nebraska on the 24th and 25th, and again on the closing days of the month; both these storms were followed by gales on the lakes and Atlantic coast, where wind velocities ranged from 59 to 64 miles an hour on the 29th.

This record of the progress of our storms, as traced by the observers of our own weather service and those of the Signal Service in other parts of the country, is instructive as showing how generally our storms originate in the western states and territories and progress steadily eastward.

The average of rain and melted snow, chiefly the former, for the different sections of the state for April, 1885, is as follows: N. E. section, 4.54 inches; S. E. section, 4.37; N. W. section, 3.63; S. W. section, 5.05.

The following is an extract from the April, 1885, bulletin of the "New England Meteorological Society," under direction of Prof. Winslow Upton, Providence, R. I.:

The general discussion of the meteorological conditions for the month is based upon reports from one hundred and eight observers, a summary of whose observations is given in Table II, and upon the current publications of the United States Signal Service.

General Conditions.—The first half of month was characterized by usual April conditions, fair weather alternated by light rains, or by snows in the northern portion. The extreme cold of February and March was followed by mild temperature, though still below the average for the early part of April. After the 15th, a period of dry, very warm weather prevailed for ten days, broken at a few places in New Hampshire and Vermont by slight showers. In the last five days two storms of severity closed this period of drought. The frost of the winter had penetrated into the ground to an unusual depth, and at the close of the month was not wholly out of the ground. Thus, at Woonsocket, Rhode Island, on the 14th, the ground was free from frost for a depth of three feet, below which was two feet of unusually hard frozen earth. On the 28th frost two feet thick was found beginning at a depth eighteen inches below the surface.

Precipitation.—As shown in Table I, the amount for the month shows a deficiency, if we average the records at the several stations. The deficiency was greatest at the southern stations, except at Mount Washington, where the maximum deficiency is noted, while at northern stations an excess occurred. In the extreme eastern portion the excess was large, due especially to the great rainfall in the storm of the 29th. The form was almost wholly rain, the amount of snow recorded having been much less than the average for April.

Temperature.—The mean temperature for the month was above the average at nearly all the stations, as shown by Table I. But this does not express the real character of the month; for the first half was cold, and the excess in the final average is due to the exceptionally high temperature which prevailed from the 20th to the 25th. It will be seen by reference to Table II that temperatures above 80° were noted at a majority of stations. The range of temperature was large, as shown by the map.

Storms.—The precipitation of the month occurred in connection with the movements of the five barometric depressions, which may be briefly traced

as follows: the first from the southwest to Maine, 4th and 5th, developing into a violent storm as it passed beyond the country; the second and third, from the lakes down the Saint Lawrence, 7-9th and 11-13th, respectively—both light storms; the fourth, from the southwest to Maine, 26-28th; the fifth, from the lower lakes eastward over southern New England, 28-30th. The last-named storm increased in energy very rapidly, the pressure falling to 29.2, and the winds attaining great velocity, as noted below. The passage of the fourth and fifth depressions was marked by thunder and lightning. The times of the beginning of these thunder-storms at those stations for which they have been reported are of interest. They are: 26th. Pawtucket and Providence, Rhode Island, 4.45 p. m.; Taunton, Massachusetts, 5.08 p. m.; Provincetown, Massachusetts, 5.30 p. m. 28th. Setauket, New York, 4.45 p. m.; Fitchburg, Massachusetts, 6 p. m.; Manchester, New Hampshire, 10 p. m.; Taunton, Massachusetts, 11 p. m.

Wind.—The wind velocities in connection with the fifth depression were great; among those reported are: Block Island, Rhode Island, forty-four miles per hour; New York City, forty-six; Boston, Massachusetts, fifty; Blue Hill, Massachusetts, fifty-seven. At Eastport, Maine, a velocity of forty-eight miles per hour was recorded on the 4th. The highest velocity reached at the summit of Mount Washington was ninety-six miles, on the 27th. The total wind movement of the month was, at Mount Washington, 25,070; Blue Hill, 15,163; Boston, 9,323 miles.

Advance of Spring.—With the month of April spring fairly opened. The severity of the winter may be shown from the record, at Gardiner, Maine, that the Kennebec river was closed to navigation one hundred and twenty-three days (the largest record is one hundred and forty-two days); sleighing was good on ninety-five days, and the snowfall, eighty-eight inches, is slightly above the average. At the close of April, the season is estimated to be from one to three weeks later than usual.

The following meteorological summary for April, 1885, is compiled from the advance report of the "Ohio Meteorological Bureau," under direction of Professor T. C. Mendenhall:

Temperature.

Mean for state (determined from observations at thirty-four stations), $48^{\circ}.4$; highest monthly mean, $53^{\circ}.9$, at Ironton, Lawrence county; lowest monthly mean, $42^{\circ}.8$, at Jefferson, Ashtabula county; maximum for state, 92° , at Portsmouth, Scioto county, on the 23d; minimum for state, 10° , at Jefferson, on the 14th; range for the state, 82° ; station reporting greatest monthly range, Jefferson, 74° ; stations reporting least monthly range, Lebanon, Warren county, and Wapakoneta, Auglaize county, 54° ; station reporting greatest daily range, Portsmouth, 50° , on the 2d; station reporting least daily range, McConnellsville, Morgan county, 3° , on the 13th.

Precipitation.

Average (determined from observations at forty-four stations), 3.12 inches; station reporting largest monthly, Oberlin, Lorain county, 5.26; station reporting least monthly, Warren, Trumbull county, 1.53 inches; largest daily precipitation is reported from Oberlin on the 16th, 3.00 inches.

Average number of clear days, 7.2; fair days, 11.4; cloudy days, 11.2; rainy days, 13.

Of thirty-two stations reporting prevailing winds, nine show the prevailing direction from northwest; six from south and west; five from northwest and southeast; one from north, while none were reported from northeast or east.

The following is an extract from the April, 1885, report of the "Tennessee Weather Service," under direction of Hon. A. J. McWhirter, Nashville:

The small amount of precipitation, the low temperature during the first half of the month, and high winds were some of the special characteristics of April.

The mean temperature was $59^{\circ}.34$, $3^{\circ}.77$ above the April mean of last year, and $16^{\circ}.77$ above the mean of last March. The mean of maximum temperatures was $82^{\circ}.63$, and the mean of minimum temperatures was $30^{\circ}.16$, respectively 3° above, and $1^{\circ}.91$ below those of April, 1884. The highest temperature was recorded about the 22d and 23d, and the lowest about the 4th and 14th.

The average precipitation was 2.75 inches, 2.20 inches less than that for April of last year, and only .41 inch greater than that for March, which was remarkably small. The fall was pretty evenly distributed, the Eastern division receiving an average of 2.29 inches, the Middle division 3.03 inches, and the Western division 2.94 inches. The greatest rainfall was 6.15 inches, reported at Dyersburg, which station reports also the greatest daily rainfall, 3.82 inches, on the 17th. The days of the greatest rainfalls were the 3d, 7th, 8th, 16th, 17th, 24th, 25th, 28th, and 30th. The first named five were general rains, the 17th showing the greatest amount for one day. There were only three days entirely free from precipitation, the 19th, 20th, and 21st. There was a very slight fall of snow reported, on the 13th, at three stations in the Eastern division.

Frosts were reported as follows: Greeneville, 9th; Andersonville, 5th, 9th, 24th; Careyville, 12th; Sweetwater, 14th (with ice); Parksville, 14th; Grief, 13th, 14th, latter damaging peaches; Sunbright, 5th, 9th, 10th, 14th; Farmingdale, 5th, 10th, 14th; Chattanooga, 5th, 9th, 10th, 13th, 14th; Cookville, 5th, 9th, 10th, 12th, 14th; Manchester, 1st, 5th, 9th, 10th, 14th; Beech Grove, 5th, 10th (with ice); Riddleton, 4th, 5th, 10th; Austin, 5th, 9th, 13th, 14th

(last with ice); Florence Station, 13th; Howell, 5th, 10th, 14th; Nashville, 5th, 9th; Hardison's Mills, 1st, 9th, 10th, 12th, 14th; Ashwood, 5th, 9th, 10th, 13th; Hurricane Switch, 5th, 9th, 10th, 14th; Pulaski, 14th; Hohenwald, 5th, 9th, 10th, 12th; McKenzie, 4th, 5th, 10th; Milan, 10th; Trenton, 5th, 10th; Bolivar, 4th, 11th, 12th, 13th; Dyersburg, 4th, 5th, 10th; Somerville, 4th, 10th; Covington, 4th, 5th; Woodstock, 4th (with ice), 10th.

State summary.

Mean temperature, 59°.34; highest temperature, 89°, on the 24th, at Flat Creek; lowest temperature, 21°, on the 14th, at Fostoria; range of temperature, 68°; mean monthly range of temperature, 49°.92; greatest monthly range of temperature, 60° at Andersonville; least monthly range of temperature, 42° at Paris; mean daily range of temperature, 17°.27; greatest daily range of temperature, 49°, on the 5th, at Kingston Springs; least daily range of temperature, 2°, on the 3d, at Greeneville and McKenzie, on the 5th at Waynesboro, on the 16th at Maryville, on the 17th at Andersonville, on the 24th at Florence Station, and on the 25th at Manchester; mean of maximum temperatures, 82°.63; mean of minimum temperatures, 30°.16.

Mean depth of rainfall, 2.75 inches; mean daily rainfall, .092 inch; greatest rainfall, 6.15 inches at Dyersburg; least rainfall, 1.60 inches at Chattanooga; greatest local daily rainfall, 3.82 inches, on the 17th, at Dyersburg; days of greatest rainfall, 3d, 7th, 8th, 16th, 17th, 24th, 25th, 28th, 30th; day of greatest rainfall, 17th.

Average number of days on which rain or snow fell, 8.9; average number of clear days, 10; average number of fair days, 10.4; average number of cloudy days, 9.6; rainless days, 19th, 20th, 21st; coldest days, 4th, 14th; warmest day, 23d.

Prevailing direction of wind, south.

ERRATUM.

In the March REVIEW, page 64, under "deviations from mean temperature," Moorestown, Burlington county, New Jersey, should read: mean temperature 29°.7, is 8°.5 below the March average, etc.