

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.
CHARLES F. MARVIN, Chief.

CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU

CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, JANUARY, 1927 No. 1

GENERAL SUMMARY

January, 1927, would be considered a mild winter month. The mean temperature for the State averaged 3.2° above the normal, due to two abnormally warm periods, the first beginning at the first of the month and lasting twelve days over the western portion of the State and nine over the central and eastern portions; the other period embraced the last six days of the month. During the rest of the month wintry weather prevailed with the temperature below zero on several days but alternating with mild days that mitigated the cold. The temperature excess was quite uniform over each division, but there was a decided contrast between the eastern and western portions, the western portion being much warmer, which was the case most of 1926. Much lower temperatures were recorded in the extreme east and southeast portions than in any other portion of the State.

There were no severe storms but several days were rather windy. The snow that occurred on the 12th was accompanied by considerable wind, and while it caused some discomfort there was not sufficient snow to produce drifts that interfered with traffic. Light mist occurred on several days with the temperature below freezing, causing a thin coat of ice to form on all objects, that seriously interfered with automobile travel temporarily and resulted in considerable damage to cars. Precipitation was unusually light except at a few points in the extreme eastern portion. Only two stations reported more than an inch and only one station reported a slight excess over the normal. The average for the State was within .05 inch of the low January record and a less amount has been recorded only three times in the last 55 years. The precipitation was practically all snow.

During the coldest weather the ground was generally snow covered, but during the mild weather at the beginning and end of the month it was mostly bare with considerable alternate freezing and thawing which caused much damage to winter grains and grasses in the southern and central portions of the State. Most of the snow that remained at the end of the month was reduced to ice. Roads were in unusually good condition except for brief muddy periods at the beginning of the month; during the last week many roads in the central and southern portions were dusty. The cold weather at the middle of the month

produced a good crop of ice from 12 to 16 inches thick which was mostly harvested before the mild weather set in at the end of the month.

F. L. D.

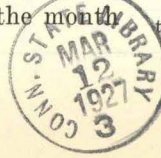
TEMPERATURE

The mean temperature for the State, as shown by the records of 103 stations, was 21.7°, or 3.2° higher than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 18.3°, or 2.9° higher than the normal; Central, 22.3°, or 3.5° higher than the normal; Southern, 24.6°, or 3.2° higher than the normal. The highest monthly mean was 26.9°, at Thurman, and the lowest was 14.4°, at Northwood. The highest temperature reported was 59°, at Lamoni on the 5th, and the lowest was -27°, at Stockport, on the 15th. The temperature range for the State was 86°.

COMPARATIVE DATA FOR THE STATE—JANUARY

YEAR	Temperature				Precipitation					Number of Days			
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. of more in. or more	Clear	Partly cloudy	Cloudy
1873	12.0	- 6.5	55	-38	2.53	+ 1.45	3.56	0.50					
1874	19.6	+ 1.1	64	-24	1.67	+ 0.59	4.72	0.22					
1875	4.9	-13.6	48	-30	0.82	+ 0.26	1.61	0.38					
1876	23.5	+ 5.0	62	-16	1.49	+ 0.41	3.96	0.00					
1877	13.7	- 4.8	58	-31	1.09	+ 0.01	3.04	0.37					
1878	25.4	+ 6.9	55	-13	0.48	+ 0.60	5.00	0.00					
1879	16.1	- 2.4	54	-30	0.48	+ 0.60	4.48	0.00					
1880	32.0	+13.5	68	- 6	1.36	+ 0.28	4.52	0.20					
1881	9.6	- 8.9	48	-40	0.94	+ 0.14	3.10	0.04					
1882	23.4	+ 4.9	60	-17	0.65	+ 0.43	1.80	0.09					
1883	8.0	-10.5	46	-38	1.31	+ 0.23	2.85	0.35					
1884	13.3	- 5.2	52	-38	0.52	+ 0.56	1.50	0.02					
1885	9.4	- 9.1	51	-42	1.28	+ 0.20	3.72	0.18					
1886	8.1	-10.4	52	-33	2.59	+ 1.51	4.85	0.68					
1887	8.8	- 9.7	55	-34	1.13	+ 0.05	2.92	0.04					
1888	5.4	-13.1	58	-43	1.30	+ 0.22	4.00	0.40					
1889	21.6	+ 3.1	62	-25	1.22	+ 0.14	2.30	0.50					
1890	18.0	- 0.5	64	-27	1.79	+ 0.71	3.46	0.35					
1891	26.0	+ 7.5	58	- 4	1.75	+ 0.67	3.99	0.61		4	13	7	11
1892	15.3	- 3.2	76	-38	1.09	+ 0.01	3.13	0.10	6.9	5	16	9	6
1893	9.3	- 9.2	54	-34	0.74	+ 0.34	3.20	0.13	6.9	6	11	9	11
1894	19.3	+ 0.8	69	-37	1.09	+ 0.01	2.24	0.31	6.0	5	14	9	8
1895	13.6	- 4.9	68	-31	0.85	+ 0.23	2.65	0.09	8.7	4	15	7	9
1896	23.4	+ 4.9	68	-20	0.48	+ 0.60	2.10	T.	2.8	3	10	10	11
1897	17.2	- 1.3	66	-30	2.01	+ 0.93	6.16	0.15	8.2	7	12	7	12
1898	23.4	+ 4.9	52	-11	1.60	+ 0.52	5.32	T.	12.6	5	15	6	10
1899	19.8	+ 1.3	68	-34	0.28	+ 0.80	1.15	T.	1.5	3	15	10	6
1900	25.6	+ 7.1	66	-20	0.53	+ 0.55	2.47	T.	2.3	3	16	7	8
1901	23.7	+ 5.2	60	-21	0.74	+ 0.34	2.34	0.04	6.2	4	14	9	8
1902	22.4	+ 3.9	63	-31	0.88	+ 0.20	2.83	0.19	9.4	4	17	8	6
1903	23.0	+ 4.5	60	-12	0.28	+ 0.80	1.46	T.	2.0	4	13	7	11
1904	14.0	- 4.5	57	-32	1.18	+ 0.10	3.68	0.02	6.1	6	12	8	11
1905	11.2	- 7.3	56	-30	0.91	+ 0.17	1.82	0.12	11.1	7	14	7	10
1906	24.6	+ 6.1	69	-19	1.52	+ 0.44	4.71	0.28	11.3	5	14	6	11
1907	18.8	+ 0.3	68	-22	1.52	+ 0.44	5.30	0.10	6.0	7	8	7	16
1908	24.9	+ 6.4	60	-18	0.44	+ 0.64	1.50	0.06	4.8	2	17	8	6
1909	21.2	+ 2.7	72	-25	1.66	+ 0.58	3.74	0.41	7.8	6	9	6	16
1910	18.1	- 0.4	56	-35	1.57	+ 0.49	3.15	0.55	12.6	6	13	7	11
1911	20.2	+ 1.7	66	-35	0.97	+ 0.11	3.73	0.11	7.3	5	9	8	14
1912	4.2	-14.3	49	-47	0.53	+ 0.51	1.90	T.	5.5	5	14	7	10
1913	20.9	+ 2.4	62	-25	0.77	+ 0.31	2.05	0.04	7.2	5	14	9	8
1914	27.3	+ 9.3	64	-10	0.88	+ 0.20	2.34	0.27	5.1	5	11	8	12
1915	17.5	- 1.0	59	-32	1.63	+ 0.55	3.15	0.10	7.3	8	13	8	10
1916	17.8	- 0.7	63	-34	2.62	+ 1.54	6.07	0.85	7.2	10	12	6	13
1917	17.0	- 1.5	60	-28	0.83	+ 0.25	2.07	0.17	7.2	4	17	8	6
1918	8.6	- 9.9	53	-35	1.02	+ 0.06	2.79	0.26	11.2	7	13	8	10
1919	26.8	+ 8.3	64	-32	0.24	+ 0.84	0.89	T.	2.8	2	20	5	6
1920	16.7	- 1.3	58	-26	0.42	+ 0.66	1.05	T.	4.6	4	12	8	11
1921	28.4	+ 9.9	67	- 9	0.51	+ 0.37	1.92	0.10	4.1	4	11	7	13
1922	19.8	+ 1.3	57	-29	0.89	+ 0.19	2.30	0.32	5.3	4	17	6	8
1923	26.7	+ 8.2	58	-10	0.85	+ 0.23	2.34	T.	6.5	6	10	7	14
1924	13.9	- 4.6	59	-36	0.89	+ 0.19	2.47	0.06	5.5	5	17	7	7
1925	19.4	+ 0.9	55	-24	0.40	+ 0.68	1.23	0.05	4.2	3	17	7	7
1926	22.7	+ 4.2	58	-22	1.09	+ 0.01	2.83	0.31	5.0	7	11	8	12
1927	21.7	+ 3.2	59	-27	0.29	+ 0.79	1.10	T.	3.0	4	14	8	9

T. indicates an amount too small to measure, or less than .005 inch precipitation and less than .05 inch snowfall.



Climatological Data for January, 1927

Table with columns: Stations, COUNTIES, Elevation, Length of record, Temperature (Mean, Departure from normal, Hightest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall, etc.), Number of Days (Clear, Partly cloudy, Cloudy), Prevailing direction of wind, Observers. The table is organized into Northern Division, Means and extremes, Central Division, and Means and extremes sections.

Climatology Data for January, 1927—Continued

Main climatology data table with columns for Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall), Number of Days (Precipitation .01 in. or more, Clear, Partly cloudy, Cloudy), Prevailing direction of wind, and Observers.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Table with columns for Stations, Barometric Pressure (Mean, Highest, Date, Lowest), Relative Humidity (Mean, 7 a. m., 12 noon, 7 p. m., Lowest), Wind (Total movement, Average hourly velocity, Miles, From, Date), and Sunshine (Per cent of possible, Departure from normal).

inch less than the normal. The greatest amount, 1.10 inch occurred at Keokuk, and the least, a trace, occurred at Cumberland. The greatest amount in any 24 consecutive hours, 0.97 inch, occurred at Keokuk, on the 12th-13th.

SNOWFALL

The average snowfall for the State was 3.0 inches, or 3.7 inches less than the normal. The greatest amount reported was 12.6 inches, at Keokuk, and the least was a trace at Carroll and Cumberland. Wescott, the nearest station to Keokuk, was the only other station that had as much as ten inches of snow. The snowfall was quite uniform in each division, but there was a decided contrast in the eastern and western portions, the heavy amounts being confined to the eastern portion. The ground was snow covered over most of the northern division the entire month, but there were many bare areas at the end of the month. Over the rest of the State there was a snow cover after the storm of the 12th-13th that lasted for a period ranging from one to two weeks. About two-thirds of the State was bare at the end of the month.

RIVERS

Rather high and remarkably uniform stages prevailed on the Mississippi River. The river was frozen the entire month, the ice varying from 12.0 to 16.0 inches. Nearly stationary stages prevailed on the Missouri River at Sioux City, but at Omaha there was a gradual rise from the first until the middle of the 4th week.

§Sioux City. §Dubuque. *Omaha. †Local mean time. ‡And other dates.

PRECIPITATION

The average precipitation for the State, as shown by the records of 109 stations, was 0.29 inch, or 0.79 inch less than the normal. By divisions, the averages were as follows: Northern, 0.25 inch, or 0.69 inch less than the normal, Central, 0.28 inch, or 0.84 inch less than the normal, Southern, 0.35 inch, or 0.82

Daily Precipitation for January, 1927—Continued

Stations	Drainage Basin	Day of Month																														Totals	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
<i>Southern Division</i>																																	
Afton	Grand												.08																				
Albia	Des Moines			T								T	.31							.02	.07												
Atlantic	Nishnabotna			.05								T	.10							T	T												
Bonaparte (near)	Des Moines			T								T	.35							T	T												
Burlington	Mississippi			.02								T	.57							.10													
Centerville	Charlton			T									.01	.29						.09	T	T		.01									
Chariton (near)	Charlton												T	.21						T	T												
Clarinda	Nodaway												T	.24						.08													
Columbus Jet	Iowa			.02									.04	.33						.05	.07			.01									
Corning (near)	Nodaway												.16																				
Corydon	Charlton												T	.12							.01												
Creston	Missouri			T									T	.05																			
Cumberland (near)	Nodaway			T									T	.16							T												
Earlham (near)	Des Moines												T	.16						T													
Fairfield	Skunk			T									.07	.50						.10	.02	T	T										
Glenwood	Missouri												T	.02																			
Indianola	Des Moines			T									T	.25						T													
Keokuk***	Mississippi			T									.40	.60						T													
Keosauqua	Des Moines												.40	.10						T													
Knoxville	Des Moines												T	.20						.05	.05												
Lacona	Des Moines			.01									.02	.10	.20					.10	.10	.10											
Lamoni	Grand												T	.16						.02	.04	T		.01									
Lenox	Missouri			T									.15							.03													
Mt. Ayr	Grand			T									.09							.03	.01												
Mt. Pleasant	Skunk			T									.16	.27						.03	T			.01									
Oakland	Nishnabotna												T	.05							T												
Oskaloosa	Des Moines												.03	.21						T	.01	T		.02									
Ottumwa	Des Moines			T									.22							.01	.08												
Red Oak (near)	Missouri												.20							T													
Riverton (near)	Nishnabotna												.18							.02													
Sigourney (near)	Skunk			.03									T	.30						.05	.10			T									
Stockport	Skunk			T									.08	.35						.06													
Thurman	Missouri												.09							.03													
Tingley	Platt			T									.28							T													
Washington	Skunk			.06									T	.30						.15	.30			T									
Wescott (near)	Mississippi			T									.16	.64																			
Winterset	Des Moines			T									.24							T													
Omaha, Neb.***	Missouri			T									.09							T	.01	T		.01	T								

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.
 |||Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
 ***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.
 **Incomplete.
 *Precipitation included in the next following measurement.
 T. Precipitation is less than .01 inch rain or melted snow.

Moderate stages with very little fluctuation prevailed on all interior rivers. They were frozen most of the month, but the warm weather during the last week caused the ice to become soft and there was considerable floating ice in the southern portion of the State.

MISCELLANEOUS PHENOMENA

- Aurora: 14th, 25th.
- Fog: 7th, 17th, 24th, 25th, 28th, 29th, 31st.
- Halos (lunar and solar): 11th, 13th, 14th, 15th, 17th, 19th, 20th, 21st, 22d, 23d, 24th, 25th.
- Haze: 25th.
- Meteor: 2d. See special article, page 7.
- Parhelio: 14th, 15th.
- Rainbow: 12th.
- Sleet: 8th, 19th, 20th, 21st, 22d, 23d, 27th, 28th.
- Winds (strong): 9th, 12th, 14th, 15th, 16th, 17th, 26th.

ERRATA

Report for January, 1926. Page 1. Comparison Data for the State, 1926. Snowfall published 6.0 inches, should be 5.0 inches; clear days published 10, should be 11; partly cloudy days published 9, should be 8. Page 2. Webster City snowfall published blank, should be 4.0 inches.
 Report for October, 1926. Page 74. Britt, snowfall recorded 0, should be T.
 Report for December, 1926. Page 91. Keosauqua, mean temperature published 26.1°, should be 26.0°; departure published -1.6°, should be -1.7°. Page 93. Afton, a trace should be entered on the 4th.
 Annual Summary, 1926. Page 99. Webster City snowfall published blank, should be 26.6 inches.

THE METEOR OF JANUARY 2, 1927

Theodore Grefe Mehlin

Des Moines, Iowa, February 22, 1927

On the evening of January 2, 1927, an extremely large and brilliant meteor passed over central and eastern Iowa, and was commented upon by several of the papers over the State. President Morehouse of Drake University suggested that I make a study of this meteor for publication. In this connection I wish to express my sincere thanks to the Des Moines Register, to Mr. C. D. Reed of the United States Weather Bureau, to the Co-operative Observers and Weekly Crop Reporters, to the various papers over the State, and to all those who wrote directly to Drake, giving me the data upon which this study is based. The replies have numbered into the hundreds and after reading, interpreting and classifying these letters I venture to state some conclusions and give a few excerpts.

The most northern report I received was from St. Ansgar, Iowa, about twelve miles from the Minnesota State line. A few observations were made in Minnesota, but of these I have no definite record. Reports came from as far west as Harlan and Sac City, Iowa. A very careful study of these data indicates that the path of the meteor was in the general direction of south, thirty degrees east, over eastern Iowa. It is my theory that the meteor burst at some point a little south of Iowa City, at quite a high altitude. Many people described this bursting as "just like a skyrocket, giving off sparks of every color of the rainbow." At Milton, Iowa, it seemed to break into three or four pieces; and at Oskaloosa "the bursting was not pronounced, rather a dividing." It is probable that after the bursting a few of the larger pieces continued on paths of their own, one dropping at quite a steep angle in the vicinity of Muscatine, a second passing some thirty-five miles west of Keokuk, and possibly a third going into the region of Burlington. Of these three, the reports concerning the Muscatine fragment seem to be the most definite. From the very wide area over which the general path of the meteor was seen, one might conclude that its flight was at some considerable height. The evening was partly cloudy, and if the meteor had been low, this would have decreased its visibility quite appreciably. The fact that some of the residents of Muscatine reported that the meteor fell in the northwest, and others saw it in the south-east would indicate that a piece of the meteor fell between them, or in the city. However the data is insufficient to state this as a positive conclusion.

The exact time of the flight showed a good deal of variance with different observers, but the mean of the more exact observations is about 6:04 p. m.

This stranger to the earth must have been a very brilliant and beautiful sight to all who were fortunate enough to witness it. I believe the best way to represent the impressions of the observers is to quote descriptive phrases directly from their letters. Because of the large number used credit cannot be given to each individual. It was described at various places as "brighter than any shooting star. It seemed to light up the whole eastern sky, and wasted itself with a seeming burst of bright colors." Another said that "a ball of fire flashed through the heavens, but it

was all over before a person realized what had happened;" and again "it was like lightning or the flicker of an unusually bright auto light," or yet "like a photographer's flashlight," or "like a bright flash, for an instant nearly as bright as day," and "brilliant with many colors." Another saw a "flash of light, of a greenish cast," and still another called it "one of the brightest lights I remember seeing," or "a long, red streak of fire." Several people spoke of its being "bright enough to cast a shadow," and others, "so brilliant as to light up the sky—a tint of rainbow colors." It was "light enough for a second to read by," and the "most wonderful thing I ever saw," for "all the air seemed to be lighted with the colors of the rainbow." To some it was "like a flash of green lightning," or "it resembled very much a huge diamond" with a "blue color changing to yellow."

Its apparent size was reported as from "six or seven minutes of arc," to "half the size of the moon." It was seen as a "very luminous purple-white fire," or as a "yellow and green light approaching daylight." Another observer said, "It was by far the most brilliant spectacle I ever witnessed," for "it was at first a brilliant orange-red, (a fine example of the calcium spectrum) and then turned to a bluish green."

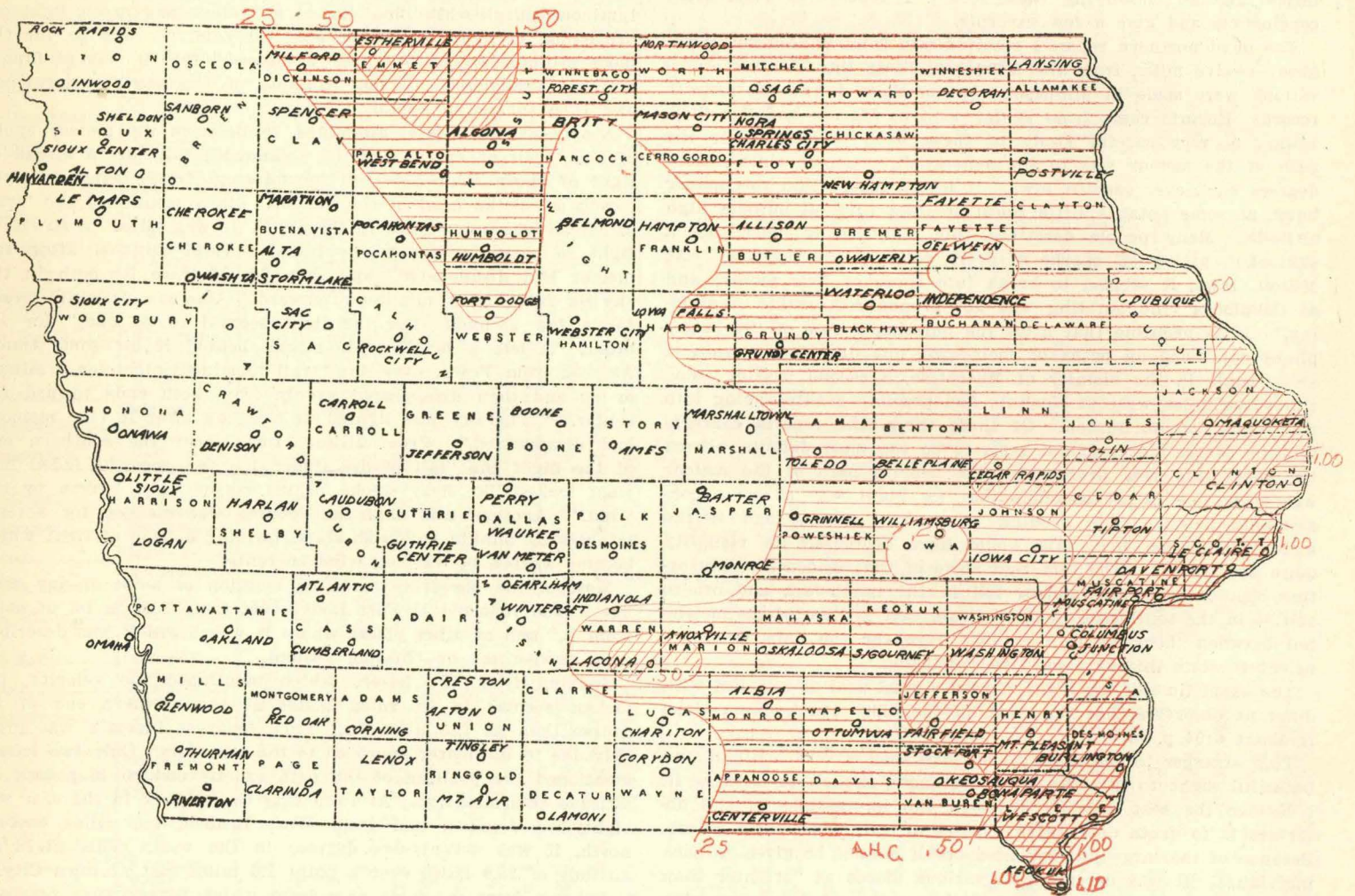
Nearly everyone who attempted to describe the meteor spoke of the "trail of sparks" or the "mammoth tail" or "a streak of light of many colors" or "an incandescent trail" which followed closely after the head of the meteor. Many mentioned the "trail of smoke which remained in the sky." It was called "a streak of light of many colors which lasted several minutes after the meteor had disappeared" and they "could trace its path in the sky for fully thirty minutes afterward." One saw "a white streak for a few seconds after the light seemed to go out;" for another, "it left a bright wide streak behind it for some time." As seen from Traer, Iowa, the "trail remained intact for a minute or so and then disappeared evenly from both ends toward the center." "The sky was lighted in a streak after it (the meteor) had disappeared." From Milton, Iowa, near the southern end of the flight the "tail of fire lingered a few seconds, faded into what looked like hazy smoke, which stayed until broken by the wind." Another said that the "course was marked for several minutes by minute yellowish stars, forming a band of light which became warped by varying wind currents."

Most of the observers made no mention of noise of any sort, but it was reported at Fort Dodge that there was "a lot of noise from it," and at other places where it was heard it was described as a "swishing" or "hissing" sound.


Judging from the letters which mentioned the velocity, the meteor seemed to be going faster at the southern end of its course than at the northern. This apparent increase was probably due to its nearer approach to the observers. Only two letters mentioned the position of the path exactly enough to permit an altitude determination. At Iowa City the altitude in the east was eighty-five degrees, and from West Branch, ten miles east-by-north, it was seventy-five degrees in the west. This gives an altitude of 28.9 miles over a point 2.6 miles east of Iowa City.

Judging from the wide area from which letters were received, and from the enthusiasm with which they were written, this must have been a very unusual meteor.


TOTAL PRECIPITATION, JANUARY, 1927




SCALE OF SHADES IN INCHES


 Less than .25


 .25 to .50


 .50 to 1.00


 More than 1.00

CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, FEBRUARY, 1927 No. 2

GENERAL SUMMARY

February was characterized by unusually mild weather. The month was similar to February, 1926, in regard to temperature, but last February was slightly warmer. There was a difference however in that this year the eastern half of the State was the warmer and last year the reverse condition obtained. At Dubuque the mean temperature was the highest since 1882. There was a decided excess in temperature during the first week and another very warm period from the 20th to 25th, inclusive. There were no periods of wintry weather. The longest time that the temperature remained below normal was three days and the average total number for the State was six. Zero weather occurred in about two-thirds of the State, embracing practically all the northern division except a small area in the northeast portion along the Mississippi River. The greatest number of days, at any station, with the temperature below zero was three.

The warm weather during the first week caused a rapid thawing and in connection with the heavy rains on the 4th-5th rather serious ice gorges developed on a number of interior streams. It was necessary to break up several gorges with dynamite and damage of a serious nature was averted except at Delhi, on the Maquoketa River. At this point a power dam is under construction, and a coffer dam extending across the river washed out with considerable destruction of construction equipment. The damage was estimated at about \$25,000. At Avoca a gorge threatened a bridge that was washed away last year but the ice moved out with very little damage. Several gorges developed in the vicinity of Des Moines but they were broken up and about the only damage was from back water that caused some residents of low lying districts to vacate.

Precipitation averaged nearly normal, being least in the northern division and greatest in the southern division. A small area in the southeastern portion had a marked excess. The precipitation occurred in three well defined periods and about two-thirds was rain. The first period which was all rain occurred on the 4th-5th and during this period more than half of the monthly total occurred; the 2d period entirely snow, occurred on the 13th-14th, and the last, mostly rain, occurred on the 24th-25th. During the rest of the month only light scattered amounts occurred. There were no damaging storms and the wind movement was less than the normal. The snowfall was accompanied by very little wind and consequently very little drifting. Sleet was reported on several days but the amounts were too light to injure trees or wires, and streets and roads were affected very little. The weather was favorable for all out-door occupations. Where building operations were in progress the work was not interrupted and stock in general wintered well, though feed was scarce in many localities.

The mild weather caused the frost to leave the ground rapidly during the first week, but it froze again during the middle of the 3d week and there was another thaw from the 20th to 25th. Dirt roads and some gravel roads were particularly bad following the general precipitation periods. After the rain on the 4th-5th some dirt roads in the southern portion were impassable for several days and similar conditions prevailed during the last week.

F. L. D.

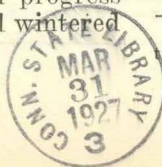
TEMPERATURE

The mean temperature for the State, as shown by the records of 102 stations, was 30.6°, or 8.0° higher than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 27.0°, or 8.6° higher than the

COMPARATIVE DATA FOR THE STATE—FEBRUARY

YEAR	Temperature				Precipitation					Number of Days			
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre-.01 in. or more	Clear	Partly cloudy	Cloudy
1873	19.2	-3.4	49	-25	1.17	-0.03	2.52	0.30					
1874	21.2	-1.4	59	-20	1.28	-0.08	2.88	0.16					
1875	6.4	-16.2	48	-31	1.72	+0.52	6.75	0.82					
1876	25.5	+2.9	68	-16	1.11	-0.09	3.63	0.15					
1877	34.0	+11.4	68	-5	0.21	-0.99	0.65	0.00					
1878	34.4	+11.8	60	-8	0.59	-0.61	2.95	0.00					
1879	21.6	-1.0	57	-20	0.68	-0.52	1.90	0.10					
1880	27.4	+4.8	68	-12	0.64	-0.56	2.15	0.02					
1881	17.0	-5.6	57	-24	3.10	+1.90	6.35	0.97					
1882	33.5	+10.9	72	-12	0.91	-0.29	1.85	0.10					
1883	17.7	-4.9	62	-33	1.89	+0.69	6.13	0.06					
1884	18.3	-4.3	56	-23	1.32	+0.12	3.50	0.30					
1885	12.5	-10.1	54	-32	0.82	-0.88	2.50	0.10					
1886	21.2	-1.4	56	-34	0.59	-0.61	1.96	0.24					
1887	17.1	-5.5	60	-25	2.14	+0.94	5.64	0.12					
1888	20.2	-2.4	64	-34	1.01	-0.19	3.10	0.15					
1889	17.8	-4.8	62	-28	0.47	-0.73	1.70	0.00					
1890	25.1	+2.5	68	-24	0.88	-0.37	2.18	0.25					
1891	19.4	-3.2	70	-31	1.16	-0.04	2.41	0.55		3	13	7	8
1892	28.1	+5.5	68	-20	1.20	0.00	2.18	0.12	5.0	6	6	7	16
1893	16.0	-6.6	60	-28	1.39	+0.19	2.91	0.06	8.1	6	10	8	10
1894	19.7	-2.9	60	-19	0.89	-0.31	2.41	T.	8.4	3	16	8	4
1895	16.4	-6.2	73	-33	0.49	-0.71	1.34	0.02	3.3	4	13	9	8
1896	27.4	+4.8	78	-13	0.71	-0.49	2.40	0.04	5.4	4	12	9	8
1897	24.7	+2.1	61	-24	0.89	-0.31	1.81	0.22	8.0	5	6	10	12
1898	24.2	+1.6	62	-18	1.20	0.00	3.65	0.10	7.8	5	6	10	9
1899	12.2	-10.4	75	-40	0.89	-0.31	4.32	0.12	7.1	5	11	10	7
1900	14.8	-7.8	60	-27	1.30	+0.10	4.57	0.18	9.9	6	10	8	10
1901	17.5	-5.1	49	-21	1.01	-0.19	3.00	0.12	9.7	4	15	7	6
1902	17.6	-5.0	62	-21	0.73	-0.47	2.39	0.02	2.6	4	13	8	7
1903	19.8	-2.8	56	-21	1.18	-0.02	3.25	0.30	7.9	4	13	7	8
1904	14.8	-7.8	70	-26	0.41	-0.79	1.99	T.	4.5	4	10	9	10
1905	12.8	-9.8	69	-41	1.57	+0.37	2.97	0.44	15.5	7	14	6	8
1906	23.6	+1.0	66	-32	1.29	+0.09	2.91	0.20	6.1	5	14	7	7
1907	25.0	+2.4	65	-31	0.71	-0.49	1.95	0.06	4.6	4	14	6	8
1908	24.3	+1.7	59	-16	1.69	+0.49	3.95	0.23	8.9	6	12	6	11
1909	26.2	+3.6	62	-26	1.54	+0.34	4.72	0.30	7.7	5	11	6	11
1910	17.8	-4.8	58	-21	0.46	-0.74	2.09	T.	4.0	3	14	8	6
1911	27.3	+4.7	71	-13	2.76	+1.56	5.46	0.50	7.0	6	12	6	10
1912	18.1	-4.5	57	-30	1.21	+0.01	3.25	0.04	11.2	5	10	9	10
1913	20.2	-2.4	70	-24	0.82	-0.38	2.39	0.07	7.3	4	14	7	7
1914	16.8	-5.8	59	-29	0.87	-0.33	1.99	0.32	9.2	6	10	9	9
1915	29.1	+6.5	62	-8	2.93	+1.73	5.39	0.43	9.4	9	9	5	14
1916	19.0	-3.6	62	-32	0.55	-0.65	1.38	0.05	6.0	4	14	8	7
1917	15.2	-7.4	68	-37	0.96	-0.84	1.19	T.	3.5	3	14	8	6
1918	23.0	+0.4	70	-36	0.95	-0.25	2.10	0.09	6.0	5	14	7	7
1919	24.9	+2.3	65	-16	2.42	+1.22	4.12	1.32	9.9	8	11	5	12
1920	24.0	+1.4	59	-22	0.56	-0.64	1.75	0.04	4.1	5	9	6	14
1921	31.0	+8.4	76	-5	0.77	-0.43	2.00	T.	6.5	5	13	7	8
1922	23.7	+1.1	70	-20	1.59	+0.39	4.56	0.40	1.3	4	14	7	7
1923	20.1	-2.5	61	-23	0.40	-0.80	1.71	0.00	3.2	3	13	8	7
1924	25.8	+3.2	70	-15	1.27	+0.07	4.00	0.30	11.2	7	15	5	9
1925	25.1	+5.8	66	-16	0.82	-0.38	3.69	T.	2.6	4	11	7	10
1926	31.2	+8.6	67	-2	0.76	-0.44	2.13	0.04	3.3	4	10	7	11
1927	30.6	+8.0	65	-17	1.15	-0.05	3.60	0.13	4.4	5	13	6	9

T. indicates an amount too small to measure, or less than .005 inch precipitation and less than .05 inch snowfall.



Climatological Data for February, 1927

Table with columns: Stations, COUNTIES, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall), Number of Days (Precipitation, Clear, Partly cloudy, Cloudy), Prevailing direction of wind, and Observers. Rows are categorized into Northern Division and Central Division.

Daily Precipitation for February, 1927—Continued

Stations	Drainage Basin	Day of Month																												Totals	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
<i>Southern Division</i>																															
Afton	Grand				.45	.07								.22	.04																0.75
Albia	Des Moines				1.35	.65								.12	.35										.01	.19	T.	T.		2.67	
Atlantic	Nishnabotna	T.	.01	.23	.02									.35	.25										.38		T.	T.	T.	1.24	
Bonaparte (near)	Des Moines				.36	.26								.19	.10									T.	.52	T.	T.			1.43	
Burlington	Mississippi				.72	.41								.18				.11						.08	.02	.67	T.	T.		2.19	
Centerville	Chariton				.85	.09				.01				.03	.29				.03						T.	.15	T.	T.		1.45	
Chariton (near)	Chariton				1.05	.78								.14	.62											.29		T.		2.79	
Clarinda	Nodaway				.34	.05								.03		.25										.06		T.		0.73	
Columbus Jct.	Iowa			T.	.86	.89								.02	.22		T.								.01	.30	T.	T.		2.30	
Corning (near)	Nodaway				.45									.16	.08													T.		0.69	
Corydon	Chariton				1.33	.19								**	.38												.11			2.01	
Creston	Missouri				.42									.18																0.60	
Cumberland (near)	Nodaway				.26	T.								.19	.12										T.	.01	T.	T.		0.53	
Earlham (near)	Des Moines				.15	.22								.32	.08										T.	.09	T.	T.		0.86	
Fairfield	Skunk				1.90	.25								.50	T.										T.	.18	.40	T.	T.	3.23	
Glenwood	Missouri				.22	.08								.40	.15														T.	0.85	
Indianola	Des Moines			T.	.18	.04								.41	.21											.08	.02	T.		0.94	
Keokuk**	Mississippi				.54	T.			.11	T.				.26	T.				.27					T.	.16	.04	T.	T.		1.33	
Keosauqua	Des Moines				.41	.11								.15	.25				T.							.05	.48	T.	T.	1.45	
Knoxville	Des Moines				.30	.46		T.						.20	.30											.06	T.	T.	T.	1.32	
Lacona	Des Moines				.42	.23								.40	.40											.12	.18			1.80	
Lamoni	Grand		T.		1.41	.03	T.	T.						.30	.12				T.						.01	T.			T.	1.87	
Lenox	Missouri				.58	.02								.20	.10											T.	.10			T.	1.00
Mount Ayr	Grand				.49	.08								.11	.23															0.96	
Mt. Pleasant	Skunk				.70	.36			.06					.19	.05											.02	.55	T.		1.95	
Oakland	Nishnabotna				.15									.53												.10				.20	0.93
Oskaloosa	Des Moines				.06	.98			.02	T.				.03	.51			T.	T.							.02	.22	T.	T.	1.84	
Ottumwa	Des Moines				.80	.59				T.				.09	.37										T.	.02	.35	T.	T.	2.22	
Red Oak (near)	Missouri					.43								.53																0.96	
Riverton (near)	Nishnabotna				.27	T.								.28	.30														T.	0.85	
Sigourney (near)	Skunk				.86	.71				T.				.03	.60										T.	T.	.29	T.	T.	2.49	
Stockport	Skunk				.67	.35								.32	.10					T.						.17	.05	.42		2.08	
Thurman	Missouri			T.	.18	T.								.39	.14					T.										T.	0.71
Tingley	Platt				.52	.13		T.						.20	.21					T.						T.	.07		T.	1.13	
Washington	Skunk				1.27	1.08	.01							.32	.40											.04	.48	T.	T.	3.60	
Wescott (near)	Mississippi																														0.87
Winterset	Des Moines				.42	.05								.30	.10											T.	.10				0.87
Omaha, Neb.***	Missouri		T.	T.	.21	T.				T.	T.			.05	.53	.05				T.						T.		T.	T.	.07	0.91

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.
 |||Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
 ***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.
 **Incomplete.
 *Precipitation included in the next following measurement.
 T. Precipitation is less than .01 inch rain or melted snow.

Haze: 16th.
 Parhelia: 8th, 12th.
 Sleet: 4th, 5th, 13th, 24th, 25th.
 Thunderstorms: 4th, 13th, 15th, 23d, 24th.
 Winds (strong): 1st, 8th, 17th.
 Birds (migration of): Boone, blue birds, 25th; Des Moines, robins, 21st; blue birds, 24th; Oskaloosa, robins and blue birds 24th; Rock Rapids, robins, 3d.

RIVERS

Rather high stages prevailed on the Mississippi River. There was a rapid rise following the heavy rains on the 4th-5th and a falling tendency the rest of the month. At Dubuque the average stage was 2.0 feet above the February normal, and the first ice movement began on the 6th south of the bridge but it held north of the bridge till the 22d and the channel was clear on the 23d, except there was a small amount of floating ice till the end of the month. The general break-up occurred this year two weeks earlier than normal. On interior rivers there was a marked rise following the rains on the 4th-5th, when most of the ice went out. During the rest of the month falling stages prevailed most of the time but there were a few unimportant rises. Moderate stages prevailed on the Missouri River. There were numerous fluctuations at Sioux City due to ice conditions but at Omaha remarkably uniform stages prevailed with a slight rising tendency till the 12th and a gradual fall during the rest of the month.

THE WINTER OF 1926-1927

The mean temperature for the three winter months was 24.7°, which is 3.0° higher than the normal for the State, and 0.3° lower than the mean of 1925-1926. The winter was very similar to last year, December being moderately cold, January rather mild and February unusually mild. The highest temperature reported was 65°, at Ottumwa on February 23d, and the lowest was -27°, at Stockport, on January 15th.

The average monthly precipitation for the State was 0.33 inch, and the average total was 2.50 inches, or 0.92 inch less than the normal. All months were deficient in precipitation, January being decidedly so and within 0.05 inch of the January record. The average snowfall was 13.1 inches, or 6.6 inches less than the normal.

The average number of days with 0.01 inch or more of precipitation was 13, or 3 less than the winter of 1925-1926. The average number of clear days was 37, partly cloudy 21, and cloudy 32, as compared with 32 clear days, 24 partly cloudy and 34 cloudy days during the winter of 1925-1926.

ERRATA

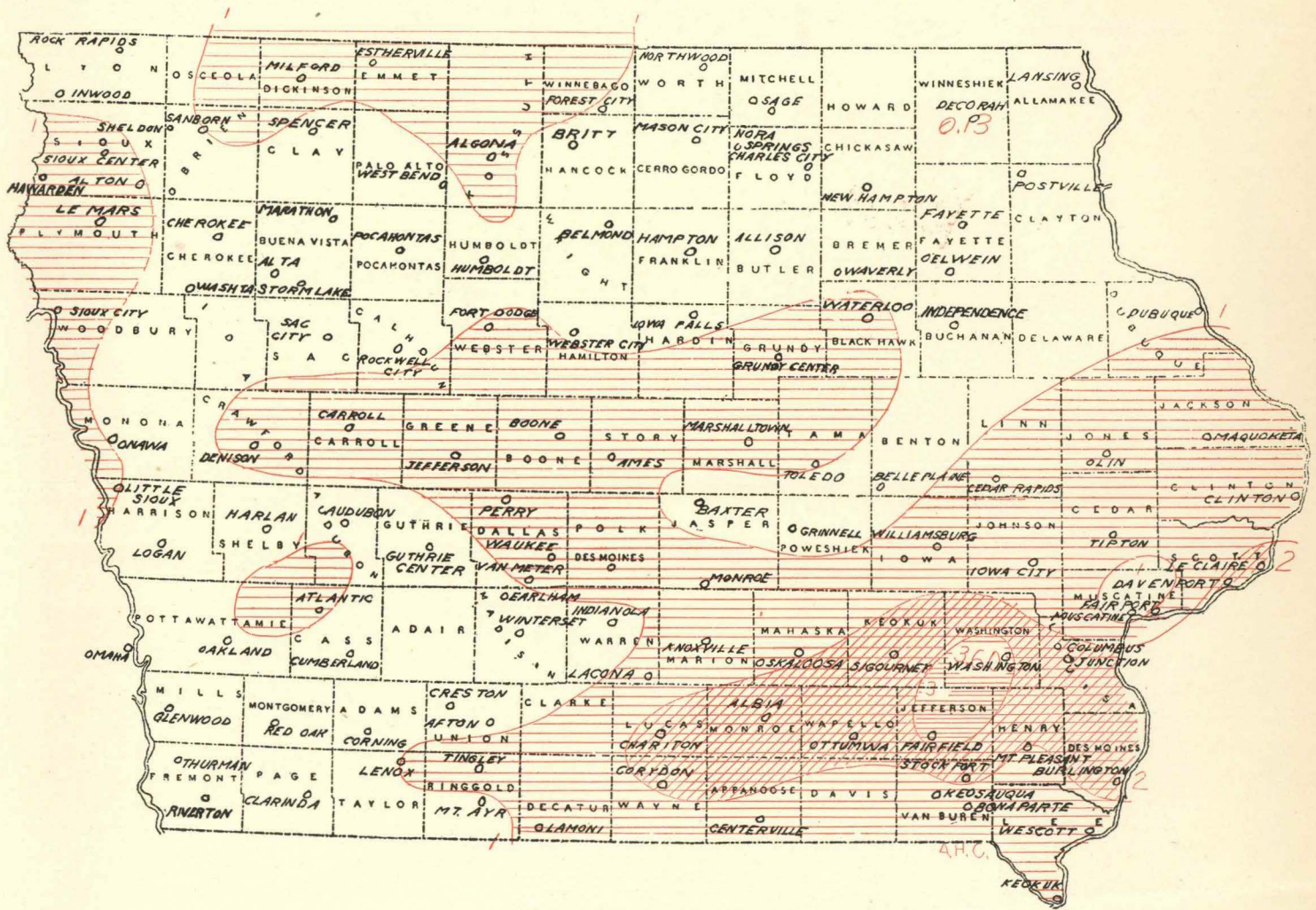
Report for January, 1927. Page 3. Corydon, precipitation published 0.13 inch, departure -1.14 inches, should be 0.49 inch, departure, -0.73 inch; snowfall published 3.0 inches, should be 4.0 inches. Lenox, date of highest temperature published 57 on 5th, should be 59 on 8th. Page 5. Corydon, precipitation on 13th, published 0.12 inch, should be 0.42 inch, on the 19th, published 0.01 inch should be 0.07 inch; total published 0.13 inch, should be 0.49 inch.

Daily Maximum and Minimum Temperature for the Month of February, 1927


Table with columns for Stations, days 1-28, and Mean. Rows are categorized into Northern Division, Central Division, and Southern Division, listing various Iowa cities and their daily temperature ranges.

a, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

TOTAL PRECIPITATION, FEBRUARY, 1927



SCALE OF SHADES IN INCHES


 Less than 1


 1 to 2


 2 to 3


 More than 3

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.
CHARLES F. MARVIN, Chief.

CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, MARCH, 1927 No. 3

GENERAL SUMMARY

Mild weather prevailed during most of March and the usual main characteristics were lacking. The month opened moderately cold the first two days and over most of the State this was the coldest of the month, but on the 3d a protracted period of warm weather set in that continued till the 18th, averaging more than 10° above normal daily and more than 25° above normal on the 15th. A rather cool period prevailed from the 19th to 27th but with an occasional day above normal; the last 4 days were above normal. Most of the frost left the ground during February and the freezing weather during the first three days of March affected only a few inches of the soil. The mild weather that followed caused all frost to leave the ground by the middle of the month.

Precipitation was slightly above normal and rather uniform in all portions of the State. The number of rainy days was within one of the March record and the several periods occurred at frequent intervals throughout the State which resulted in no period of protracted fair weather. There were no severe storms though several marked barometric disturbances passed directly through the State. There were several windy days but no damage of consequence from this source. The principal storm from which damage resulted began on the 18th as rain and terminated over most of the State on the 20th as an ice storm. There was considerable deposit of ice throughout the State, except the northwest portion, but the severe damage was confined to the east-central portion and portions of the area surrounding. The damage was principally to overhead wires and poles. The damage to telephone lines was so extensive that a number of places were completely shut out from outside communication for more than 24 hours. Thousands of poles were broken and many miles of wire were out of service, causing an estimated loss of about \$90,000. Many fruit and shade trees were destroyed or badly damaged. Another heavy economic loss, for which no reliable estimate can be made, was due to the especially bad road situation. The frequent rains following the rapidly thawing condition soon produced the worst situation in years. Not only mud roads were affected but many of the better class of the main traveled highways were absolutely impassable for long periods. Many farmers along these roads did a thriving business towing stranded automobiles while in some cases automobiles were abandoned.

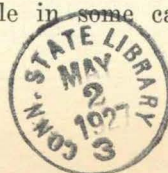
The weather was mostly unfavorable from an agricultural standpoint as the soil was too wet generally for plowing and very little oat seeding had been accomplished at a few widely scattered points at the end of the month. The warm weather caused all trees to make rapid advancement, and many fruit trees, particularly in the eastern portion of the State, were almost ready to bloom and were in danger of damage from severe freezing weather. Winter grains and grasses had made good growth and winter wheat was in excellent condition. Stock in general were in good condition, but in much of the State feed was scarce and it will be necessary to resort to pastures as soon as possible.

F. L. D.

COMPARATIVE DATA FOR THE STATE—MARCH

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre-.01 in. or more	Clear	Partly cloudy	Cloudy
1873	34.0	-0.7	72	-18	1.42	-0.33	3.70	0.33					
1874	31.7	-3.0	68	-4	1.43	-0.32	2.80	0.17					
1875	26.9	-7.8	80	-10	1.62	-0.13	3.80	0.45					
1876	27.2	-7.5	75	-6	3.24	+1.49	5.78	1.16					
1877	27.3	-7.4	72	-14	2.28	+0.53	6.54	0.20					
1878	45.6	+10.9	80	-20	3.36	+1.61	6.70	0.35					
1879	37.2	+2.5	80	-3	1.18	-0.57	4.50	0.20					
1880	33.6	-1.1	80	-21	1.26	-0.49	3.90	0.15					
1881	27.1	-7.6	56	0	1.91	+0.16	4.50	0.75					
1882	36.3	+1.6	78	4	1.82	+0.07	4.52	0.50					
1883	30.6	-4.1	72	-13	0.55	-1.20	1.40	0.00					
1884	32.0	-2.7	72	-16	2.57	+0.82	5.90	0.70					
1885	31.3	-3.4	65	-16	0.24	-1.51	1.25	0.00					
1886	30.6	-4.1	74	-9	1.72	-0.03	4.47	0.40					
1887	33.5	-1.2	76	-8	0.93	-0.82	3.50	0.00					
1888	26.4	-8.3	78	-12	3.04	+1.29	6.20	0.29					
1889	39.7	+5.0	80	8	0.47	-1.28	2.40	0.00					
1890	28.1	-6.6	75	-24	1.49	-0.26	3.67	0.32					
1891	26.8	-7.9	66	-19	2.60	+0.85	4.58	1.33					
1892	31.9	-2.8	84	-6	2.22	+0.47	4.58	0.57	3.9	6	11	8	12
1893	31.8	-2.9	84	-8	2.14	+0.39	4.40	0.64	4.0	8	9	11	11
1894	41.0	+6.3	84	-5	2.03	+0.28	4.52	0.26	2.7	6	13	10	8
1895	34.4	-0.3	94	-11	0.83	-0.92	2.60	0.22	2.9	4	16	8	7
1896	30.9	-3.8	81	-12	1.10	-0.65	3.99	0.16	5.4	5	12	9	10
1897	32.0	-2.7	72	-22	2.39	+0.64	6.16	0.29	5.5	8	9	8	14
1898	37.5	+2.8	72	-2	1.94	+0.19	6.21	0.33	3.7	6	12	9	10
1899	23.0	-11.7	75	-16	1.62	-0.13	5.90	0.37	8.0	6	7	12	12
1900	30.7	-4.0	81	-13	2.06	+0.31	5.15	0.45	6.6	5	12	9	10
1901	34.2	-0.5	76	-8	2.64	+0.89	5.25	0.70	12.6	7	10	8	13
1902	39.1	+4.4	79	-12	1.45	-0.30	4.33	0.13	1.3	7	9	11	11
1903	38.8	+4.1	82	6	1.38	-0.57	3.90	0.16	3.9	7	11	7	13
1904	34.8	+0.1	78	3	2.18	+0.43	4.57	0.50	4.4	7	8	8	15
1905	41.5	+6.8	84	1	2.04	+0.29	3.70	0.89	4.1	7	8	8	15
1906	27.1	-7.6	65	-14	2.34	+0.59	4.55	0.58	8.9	10	8	7	16
1907	40.6	+5.9	92	-7	1.35	-0.40	5.05	0.23	4.1	6	14	7	10
1908	37.9	+3.2	85	-8	1.58	-0.17	3.74	0.45	1.1	6	13	7	11
1909	32.5	-2.2	71	-15	1.53	-0.22	5.00	0.28	9.8	6	12	10	9
1910	48.9	+14.2	92	-10	0.17	-1.58	1.37	0.00	T.	1	23	6	2
1911	39.4	+4.7	83	2	0.93	-0.82	4.84	T.	1.9	5	16	9	6
1912	24.9	-9.8	70	-19	2.01	+0.26	5.25	0.60	19.1	7	15	6	10
1913	31.9	-2.8	78	-23	2.48	+0.73	5.88	0.74	5.3	9	11	10	10
1914	34.7	0.0	78	-5	1.69	-0.06	3.84	0.28	1.8	7	12	8	11
1915	29.3	-5.4	61	-5	0.96	-0.79	2.12	0.17	8.8	5	8	9	14
1916	35.2	+0.5	80	-18	1.57	-0.38	5.00	0.23	2.9	6	11	9	11
1917	34.6	-0.1	85	-12	1.84	+0.09	4.35	0.57	6.2	6	14	8	9
1918	42.9	+8.2	85	0	0.63	-1.12	2.12	0.03	2.6	3	19	7	5
1919	37.5	+2.8	78	-11	2.33	+0.58	5.40	0.81	1.1	6	15	8	8
1920	38.0	+3.3	80	-21	3.02	+1.27	5.70	0.47	2.4	7	16	7	9
1921	42.8	+8.1	86	4	1.57	-0.18	6.62	0.17	0.2	7	14	8	9
1922	38.3	+3.6	74	-5	1.97	+0.22	3.73	0.76	3.4	7	12	6	13
1923	29.4	-5.3	78	-22	2.87	+1.12	5.08	0.71	18.5	7	13	9	9
1924	31.9	-2.8	72	3	2.65	+0.90	4.76	1.26	10.5	8	8	8	15
1925	40.1	+5.4	82	-6	0.93	-0.82	2.34	1.10	2.9	4	17	9	5
1926	32.1	-2.6	78	-4	1.06	-0.69	2.62	0.20	8.1	6	12	9	10
1927	39.6	+4.9	75	0	1.92	+0.17	3.64	0.62	2.9	9	11	7	13

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.
CHARLES F. MARVIN, Chief.

CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, MARCH, 1927 No. 3

GENERAL SUMMARY

Mild weather prevailed during most of March and the usual main characteristics were lacking. The month opened moderately cold the first two days and over most of the State this was the coldest of the month, but on the 3d a protracted period of warm weather set in that continued till the 18th, averaging more than 10° above normal daily and more than 25° above normal on the 15th. A rather cool period prevailed from the 19th to 27th but with an occasional day above normal; the last 4 days were above normal. Most of the frost left the ground during February and the freezing weather during the first three days of March affected only a few inches of the soil. The mild weather that followed caused all frost to leave the ground by the middle of the month.

Precipitation was slightly above normal and rather uniform in all portions of the State. The number of rainy days was within one of the March record and the several periods occurred at frequent intervals throughout the State which resulted in no period of protracted fair weather. There were no severe storms though several marked barometric disturbances passed directly through the State. There were several windy days but no damage of consequence from this source. The principal storm from which damage resulted began on the 18th as rain and terminated over most of the State on the 20th as an ice storm. There was considerable deposit of ice throughout the State, except the northwest portion, but the severe damage was confined to the east-central portion and portions of the area surrounding. The damage was principally to overhead wires and poles. The damage to telephone lines was so extensive that a number of places were completely shut out from outside communication for more than 24 hours. Thousands of poles were broken and many miles of wire were out of service, causing an estimated loss of about \$90,000. Many fruit and shade trees were destroyed or badly damaged. Another heavy economic loss, for which no reliable estimate can be made, was due to the especially bad road situation. The frequent rains following the rapidly thawing condition soon produced the worst situation in years. Not only mud roads were affected but many of the better class of the main traveled highways were absolutely impassable for long periods. Many farmers along these roads did a thriving business towing stranded automobiles while in some cases automobiles were abandoned.

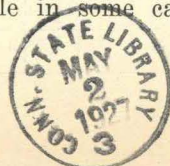
The weather was mostly unfavorable from an agricultural standpoint as the soil was too wet generally for plowing and very little oat seeding had been accomplished at a few widely scattered points at the end of the month. The warm weather caused all trees to make rapid advancement, and many fruit trees, particularly in the eastern portion of the State, were almost ready to bloom and were in danger of damage from severe freezing weather. Winter grains and grasses had made good growth and winter wheat was in excellent condition. Stock in general were in good condition, but in much of the State feed was scarce and it will be necessary to resort to pastures as soon as possible.

F. L. D.

COMPARATIVE DATA FOR THE STATE—MARCH

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. .01 in. or more	Clear	Partly cloudy	Cloudy
1873.....	34.0	-0.7	72	-13	1.42	-0.33	3.70	0.33					
1874.....	31.7	-3.0	68	-4	1.43	-0.32	2.80	0.17					
1875.....	26.9	-7.8	80	-10	1.62	-0.13	3.80	0.45					
1876.....	27.2	-7.5	75	-6	3.24	+1.49	5.78	1.16					
1877.....	27.3	-7.4	72	-14	2.28	+0.53	6.54	0.20					
1878.....	45.6	+10.9	80	-20	3.96	+1.61	6.70	0.35					
1879.....	37.2	+2.5	80	-3	1.18	-0.57	4.50	0.20					
1880.....	33.6	+1.1	80	-21	1.26	-0.49	3.90	0.15					
1881.....	27.1	-7.6	56	0	1.91	+0.16	4.50	0.75					
1882.....	36.3	+1.6	78	4	1.82	+0.07	4.52	0.50					
1883.....	30.6	-4.1	72	-13	0.55	-1.20	1.40	0.00					
1884.....	32.0	-2.7	72	-16	2.57	+0.82	5.90	0.70					
1885.....	31.3	-3.4	65	-16	0.24	-1.51	1.25	0.00					
1886.....	30.6	-4.1	74	-9	1.72	-0.03	4.47	0.40					
1887.....	33.5	-1.2	76	-8	0.93	-0.82	3.50	0.00					
1888.....	26.4	-8.3	78	-12	3.04	+1.29	6.20	0.29					
1889.....	39.7	+5.0	80	8	0.47	-1.28	2.40	0.00					
1890.....	28.1	-6.6	75	-24	1.49	-0.26	3.67	0.32					
1891.....	26.8	-7.9	66	-19	2.60	+0.85	4.58	1.33		10	6	8	17
1892.....	31.9	-2.8	84	-6	2.22	+0.47	4.58	0.57		3.9	6	11	8
1893.....	31.8	-2.9	84	-8	2.14	+0.39	4.40	0.64		4.0	8	9	11
1894.....	41.0	+6.3	84	-5	2.03	+0.28	4.52	0.26		2.7	6	13	10
1895.....	34.4	-0.3	94	-11	0.83	-0.92	2.60	0.22		2.9	4	16	8
1896.....	30.9	-3.8	81	-12	1.10	-0.65	3.99	0.16		5.4	5	12	9
1897.....	32.0	-2.7	72	-22	2.39	+0.64	6.16	0.29		5.5	8	9	8
1898.....	37.5	+2.8	72	-2	1.94	+0.19	6.21	0.33		3.7	6	12	9
1899.....	23.0	-11.7	75	-16	1.62	-0.13	5.90	0.87		8.0	6	7	12
1900.....	30.7	-4.0	81	-13	2.06	+0.31	5.15	0.45		6.6	5	12	9
1901.....	34.2	-0.5	76	-8	2.64	+0.89	5.25	0.70		12.6	7	10	8
1902.....	39.1	+4.4	79	-12	1.45	-0.30	4.33	0.13		1.3	7	9	11
1903.....	38.8	+4.1	82	-6	1.88	-0.37	3.90	0.15		3.9	7	11	7
1904.....	34.8	+0.1	78	3	2.18	+0.43	4.57	0.50		4.4	7	8	8
1905.....	41.5	+6.8	84	1	2.04	+0.29	3.70	0.89		4.1	7	8	8
1906.....	27.1	-7.6	65	-14	2.34	+0.59	4.55	0.58		8.9	10	8	7
1907.....	40.6	+5.9	92	-7	1.35	-0.40	5.05	0.23		4.1	6	14	7
1908.....	37.9	+3.2	85	-8	1.58	-0.17	3.74	0.45		1.1	6	13	7
1909.....	32.5	-2.2	71	-15	1.53	-0.22	5.00	0.28		9.8	6	12	10
1910.....	48.9	+14.2	92	-10	0.17	-1.58	1.37	0.00		T.	1	23	6
1911.....	39.4	+4.7	83	-2	0.93	-0.82	4.84	T.		1.9	5	16	9
1912.....	24.9	-9.8	70	-19	2.01	+0.26	5.25	0.60		19.1	7	15	6
1913.....	31.9	-2.8	78	-23	2.48	+0.73	5.88	0.74		5.3	9	11	10
1914.....	34.7	0.0	78	-5	1.60	-0.06	3.84	0.28		1.8	7	12	8
1915.....	29.3	-5.4	61	-5	0.96	-0.79	2.12	0.17		3.8	5	8	9
1916.....	35.2	+0.5	80	-18	1.57	-0.18	5.80	0.23		2.9	6	11	9
1917.....	34.6	-0.1	85	-12	1.84	+0.09	4.35	0.57		6.2	6	14	8
1918.....	42.9	+8.2	85	0	0.63	-1.12	2.12	0.03		2.6	3	19	7
1919.....	37.5	+2.8	78	-11	2.33	+0.58	5.40	0.81		1.1	6	15	8
1920.....	38.0	+3.3	80	-21	3.02	+1.27	5.70	0.47		2.4	7	15	7
1921.....	42.8	+8.1	86	4	1.57	-0.18	6.62	0.17		0.2	7	14	8
1922.....	38.3	+3.6	74	-5	1.97	+0.22	3.73	0.76		3.4	7	12	6
1923.....	29.4	-5.3	78	-22	2.87	+1.12	5.08	0.71		18.5	7	13	9
1924.....	31.9	-2.8	72	-3	2.65	+0.90	4.76	1.26		10.5	8	8	8
1925.....	40.1	+5.4	82	-6	0.93	-0.82	2.34	0.10		2.9	4	17	9
1926.....	32.1	-2.6	78	-4	1.06	-0.69	2.62	0.20		8.1	6	12	9
1927.....	39.6	+4.9	75	0	1.92	+0.17	3.64	0.62		2.9	9	11	7

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



Climatological Data for March, 1927

Stations	COUNTIES	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit					Precipitation, in inches				Number of Days			Prevaling direction of wind	Observers			
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more			Clear	Partly cloudy	Cloudy
Northern Division																				
Akron	Plymouth	1,390	1							1.72		0.69	5.5	10	13	10	8	nw.	Orlan C. Moore	
Algona	Kossuth	1,213	54	37.3	+ 5.8	69	15	11	2	30	1.16	-0.26	0.32	4.5	5	11	6	14	nw.	W. E. Laird
Allison (near)	Butler	1,044	15	37.8	+ 5.7	69	15	12	3	35	1.68	-0.12	0.35	5.0	10	12	8	11	sw.	J. A. Bell
Alta	Buena Vista	1,513	36	36.8	+ 3.8	69	15	8	2	34	1.57	+0.02	0.30	4.5	15	12	4	15	sw.	D. E. Hadden
Alton	Sioux	1,305	22	36.4	+ 4.4	67	15	7	2	32	1.75	+0.65	0.40	6.7	13	7	10	14	se.	W. S. Slagle
Belmond	Wright	1,181	17	38.0	+ 6.7	70	15	12	2†	32	1.06	-0.27	0.30	1.2	13	7	6	18	se.	H. F. Luick
Britt	Hancock	1,236	40	37.8	+ 7.3	70	15	13	2	31	0.90	-0.35	0.24	3.0	8	11	8	12	sw.	Jan. S. Ross
Charles City	Floyd	1,015	36	38.0	+ 7.3	69	15	13	3	31	1.83	-0.01	0.69	7.0	12	9	11	11	sw.	U. S. Weather Bureau
Cherokee	Cherokee	1,196	5	35.8		70	15	4	2	35	1.04		0.36	4.1	9	13	4	14	s.	J. E. Wirth
Decorah	Winneschiek	872	34	37.6	+ 6.3	68	16	10	3	33	2.33	+0.53	0.58	8.0	10	10	8	13	se.	M. D. Whitney
Dubuque	Dubuque	700	54	40.1	+ 6.1	71	16	17	2	29	2.18	-0.01	0.66	2.7	12	10	7	14	s.	U. S. Weather Bureau
Estherville	Emmet	1,298	32	36.3	+ 4.7	65	15	8	2	31	1.53	+0.26	0.55	4.0	9	14	12	5	nw.	A. O. Peterson
Fayette	Fayette	1,003	39	39.8	+ 8.5	71	16	7	3	41	2.26	+0.15	0.42	7.5	11	11	8	12	sw.	R. Z. Latimer
Forest City	Winnebago	1,420	35	37.5	+ 5.7	70	15	10	2	33	1.78	+0.35	0.45	10.5	9	8	3	20	sw.	Dr. M. B. Neil
Hampton	Franklin	1,145	2	37.9	+ 5.4	70	15	11	3	34	1.25	-0.50	0.51	1.7	9	15	7	9	se.	L. H. Davis
Hawarden	Sioux	1,181	1								1.14		0.31	6.0	9	13	4	14	s.	Earl V. Slife
Humboldt	Humboldt	1,005	39	38.4	+ 5.2	71	15	8	2	34	0.92	-0.52	0.29	2.0	6	12	7	12	nw.	H. O. Smitkey
Independence	Buchanan	921	63	40.0	+ 5.9	70	16	14	2†	35	1.18	-0.54	0.26	2.6	8	14	0	17	se.	Dr. Geo. Boody
Inwood	Lyon	1,474	23	35.0	+ 2.3	68	15	0	21	37	1.74	+0.54	0.56	4.6	11	12	7	12	nw.	A. C. Hanson
Lansing	Allamakee	632	20								2.63	+0.59	0.58	3.2	14				nw.	Mrs. Mary Spinner
Le Mars	Plymouth	1,224	31	37.8	+ 4.5	69	15	2	2	36	1.80	+0.55	0.61	6.7	12	13	1	17	nw.	Henry Newell
Marathon	Buena Vista	1									1.90		0.92	10.6	9	9	4	18	sw.	E. G. Smith
Mason City	Cerro Gordo	1,148	30	37.6	+ 6.7	68	15	9	3	34	1.17	-0.20	0.40	6.7	13	8	13	10	se.	Amer. Beet Sugar Co.
Milford (near)	Dickinson	1,430	7	34.8		67	15	6	2	34	1.30		0.41	3.4	10	11	7	13	nw.	Dr. F. J. Smith
New Hampton	Chickasaw	1,169	30	37.8	+ 6.5	68	15	12	3	34						9	10	12	sw.	D. W. Dawson
Northwood	Worth	1,222	31	36.0	+ 6.8	67	15	12	2	33	1.43	-0.42	0.40	9.0	10	8	9	14	nw.	Chas. Dwelle
Oelwein	Fayette	1,036	3	39.7		70	16	14	3	31	0.70		0.30	3.0	5	10	5	16	s.	John T. Ridler
Osage	Mitchell	1,163	2																sw.	Prof. D. A. Larson
Pocahontas	Pocahontas	1,248	23	36.7	+ 4.4	69	15	7	2	31	0.87	-0.50	0.18	4.0	11	9	5	17	s.	F. E. Hronek
Postville	Clayton	1,192	29	38.2	+ 7.6	65	15	13	22	31	1.92	0.00	0.50	2.0	12	9	9	13	sw.	F. L. Williams
Rock Rapids	Lyon	1,349	28	35.9	+ 4.4	66	15	4	2	32	1.79	+0.47	0.48	8.0	12	11	8	12	ne.	J. W. Medberry
Sanborn	O'Brien	1,553	13	35.6	+ 4.0	67	15	5	2†	33	1.16	+0.24	0.42	4.0	6	13	4	14	ne.	J. K. Dow
Sheldon	O'Brien	1,418	2	36.1		67	15	8	2†	32	1.51		0.46	5.6	14	10	8	13	s.	Ross E. Forward
Sioux Center	Sioux	1,426	28	35.0	+ 3.5	67	15	1	2	33	2.28	+1.02	0.62	4.3	10	8	7	16	ne.	J. de Ruyter
Spencer	Clay	1,319	13	36.4	+ 4.0	67	15	4	2	35	1.70	+0.38	0.45	4.5	9	11	7	13	ne.	E. W. Little
Storm Lake	Buena Vista	1,440	38	36.8	+ 4.2	67	15	6	2	29	1.27	-0.03	0.27	3.0	12	10	5	16	se.	Geo. H. Fracker
Washita	Cherokee	1,157	29	37.3	+ 4.0	71	15	5	2	37	1.25	+0.24	0.30	4.5	11	13	3	15	s.	H. L. Feiter
Waterloo	Black Hawk	354	44	40.0	+ 6.7	71	15	12	3	35	1.50	-0.37	0.32	3.5	12	15	3	13	se.	R. B. Slippy
Waverly	Bremer	936	31	38.8	+ 5.9	70	15	11	3	34	1.78	0.00	0.74	4.8	14	17	7	7	n.	D. H. Murphy
West Bend	Palo Alto	1,197	34	36.6	+ 4.0	69	15	6	2	31	0.62	-0.94	0.16	3.0	10	12	8	11	ne.	Jos. Dorweiler
Means and extremes.				37.4	+ 5.3	71	15†	0	21	41	1.51	-0.05	0.92	4.9	10	11	7	13	se.	
Central Division																				
Ames	Story	926	50	40.0	+ 5.0	72	15	15	2	36	1.11	-0.31	0.35	1.5	10	16	5	10	s.	Iowa State College
Audubon (near)	Audubon	1,297	32	37.6	+ 3.8	68	15	6	2	32	1.53	+0.08	0.35	4.4	9	9	12	10	sw.	Geo. Kibby
Baxter	Jasper	998	27	39.8	+ 4.8	71	15	13	2	35	1.21	-0.63	0.44	2.8	5	7	13	11	sw.	Otto Sanderman
Belle Plaine	Benton	866	37	40.5	+ 5.6	72	15	13	2	35	1.49	-0.79	0.64	4.3	7	13	6	12	s.	O. C. Burrows
Boone (near)	Boone	1,134	22	39.8	+ 3.8	73	15	10	3	39	1.03	-0.41	0.38	1.5	7	13	6	12	s.	C. F. Henning
Carroll	Carroll	1,265	37	38.2	+ 2.2	70	15	8	2	32	1.16	-0.53	0.40	3.5	7	13	5	13	nw.	Mrs. Jos. J. Wolfe
Cedar Rapids	Linn	737	45	39.8	+ 4.1	71	16	12	3	36	2.31	+0.04	0.81	0.4	9	11	5	15	sw.	J. T. Wurster
Clinton	Clinton	595	54	41.8	+ 6.0	73	16	13	3	36	3.39	+0.48	1.56	1.5	12	10	5	16	s.	Dr. A. P. Bryant
Davenport	Scott	580	56	42.4	+ 6.3	72	16	18	2	27	3.13	+0.82	1.60	0.5	12	8	7	16	s.	U. S. Weather Bureau
Davenport (No. 2)	Scott	690	2	42.8		74	16	17	2†	34	3.03		1.13	T.	12				sw.	Rex Shriver
Denison	Crawford	1,171	33	38.2	+ 3.2	70	15	7	2	42	0.90	-0.63	0.21	3.0	8	11	6	14	s.	V. L. Byers
Des Moines	Polk	861	49	41.1	+ 5.2	73	15	18	2	31	2.55	+0.85	1.28	0.9	11	9	8	14	sw.	U. S. Weather Bureau
Fairport	Muscataine	567	6	43.3		72	16	15	2	34	2.39		0.93	0.3	10	14	2	15	sw.	Bureau of Fisheries
Fort Dodge	Webster	1,114	27	38.1	+ 3.8	72	15	7	2	40	2.03	+0.43	0.84	7.0	11	14	3	14	sw.	Samuel Sampson
Grinnell	Poweshiek	1,031	33	41.6	+ 6.3	71	15	16	2	32	1.56	-0.27	0.62	0.9	11	13	10	8	nw.	Paul P. Meyers
Grundy Center	Grundy	976	36	39.4†	+ 4.7	69†	15	14†	3	33†	1.23	-0.57	0.30	5.0	8	10	9	12	sw.	M. G. Heiberger
Guthrie Center	Guthrie	1,077	32	39.9	+ 4.7	70	15	8	2	34	1.40	-0.10	0.53	5.0	8	13	4	14	sw.	E. L. Nesselroad
Harlan	Shelby	1,192	28	38.3	+ 3.0	69	15	10	2	32	1.12	-0.21	0.46	1.6	8	11	7	13	s.	Walter Bell
Iowa City	Johnson	733	67	41.4	+ 5.8	73	16	14	3	34	3.47	+1.07	1.03	T.	12	10	7	14	se.	Prof. J. F. Reilly
Iowa Falls	Hardin	1,107	34	39.2	+ 5.1	70	15	13	3	34	1.63	-0.24	0.52	2.5	11	13	7	11	nw.	O. H. Gilbert
Jefferson	Greene	1,052	28	38.5	+ 2.7	72	15	10	2	36	0.89	-0.57	0.34	1.0	7	9	6	16	sw.	W. I. Lyon
Le Claire	Scott	576	27								3.15	+0.79	1.62	0.7	11				sw.	Margaret T. Disney
Little Sioux	Harrison	1,040	22	39.7	+ 3.6	72	15	9	21	37	1.95	+0.63	0.43	5.2	11	8	11	12	nw.	H. W. Kerr
Logan	Harrison	1,035	60	40.7	+ 3.5	72	15	14	2	38	1.44	-0.22	0.60	2.0	4	10	12	9	sw.	M

Climatological Data for March, 1927—Continued

Stations	COUNTIES	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days			Prevailing direction of wind	Observers		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear			Partly cloudy	Cloudy
<i>Southern Division</i>																				
Afton	Union	1,212	33	40.8	+ 4.3	72	15	10	2	36	2.40	+0.51	0.74	3.0	7	16	4	11	sw.	S. R. Brown
Albia	Monroe	949	29	42.6	+ 6.4	72	15†	11	2	35	2.27	+0.31	0.71	2.1	6	13	1	17	sw.	O. E. McBride
Atlantic	Cass	1,164	36	39.8	+ 3.8	71	15	10	2	34	1.40	-0.19	0.38	2.0	11	7	6	18	ne.	T. H. Whitney
Bonaparte (near)	Van Buren	563	36	42.6	+ 5.3	72	16	14	2	31	2.33	+0.08	0.50	0.6	8	15	2	11	s.	B. R. Vale
Burlington	Des Moines	544	31	44.6	+ 5.7	74	16	18	2	29	3.24	+0.73	1.50	T.	11	11	5	15	sw.	John T. Donnelly
Centerville	Appanoose	1,013	22	41.4	+ 3.5	70	15†	9	2	37	3.05	+1.12	1.06	1.2	11	12	5	14	sw.	Thomas Wood
Chariton (near)	Lucas	1,042	32	40.8	+ 4.8	70	15	11	2	34	1.44	-0.30	0.48	2.0	4	10	9	12	sw.	O. C. Burr
Clarinda	Cass	1,000	37	40.6	+ 2.5	72	15	12	2†	38	3.50	+1.78	0.85	0.2	10	12	13	6	s.	Dr. H. C. Hawley
Columbus Jet	Louisa	595	26	42.6	+ 5.6	73	16	16	2	34	3.24	+1.20	1.18	0.7	12	8	13	10	se.	Miss Musa Todd
Corning (near)	Adams	1,117	35	40.2	+ 4.3	73	15	11	3	33	3.48	+1.58	1.11	1.0	6	16	2	13	sw.	W. A. Seybold
Corydon	Wayne	1,101	34	40.7	+ 4.1	67	16	8	2	31	2.48	+0.47	0.82	2.5	8	9	13	9	sw.	A. T. Gallagher
Creston	Union	1,312	22	39.6	+ 4.0	71	15	9	2	35	2.17	+0.71	0.65	2.0	9	16	3	12	sw.	J. W. Goodsell
Cumberland (near)	Cass	1,225	28	40.6	+ 4.0	73	15	11	2	38	1.05	-0.49	0.35	1.5	7	11	5	15	nw.	Carl E. Pollock
Earlham (near)	Madison	1,126	25	40.0	+ 5.0	71	15	9	3	37	1.26	-0.45	0.45	1.0	8	14	7	10	sw.	Geo. Phillips
Fairfield	Jefferson	780	43	41.6	+ 4.9	73	16	10	2	38	3.64	+1.31	1.11	0.5	10	13	2	16	nw.	Prof. R. M. McKenzie
Glenwood	Mills	1,100	29	40.8	+ 2.9	74	15	14	2†	36	1.94	+0.60	1.10	1.9	7	9	11	11	se.	Geo. Mogridge
Indianola	Warren	972	36	40.8	+ 4.5	73	15	14	2	37	1.27	-0.36	0.41	2.5	8	12	8	11	se.	Seth P. Shenton
Keokuk	Lee	614	56	44.4	+ 5.5	73	16	19	2	29	3.48	+1.19	1.30	0.9	10	8	11	12	se.	U. S. Weather Bureau
Keosauqua	Van Buren	644	35	42.8	+ 4.9	73	16	13	2†	35	2.48	+0.21	0.76	1.5	7	11	8	12	se.	J. H. Landes
Knoxville	Marion	920	32	41.6	+ 5.0	72	15	15	2†	34	1.72	-0.08	0.62	T.	7	12	8	11	sw.	W. J. Casey
Lacona	Warren	824	28	40.6	+ 3.7	72	15	7	2	34	2.00	-0.30	0.60	3.0	10	13	7	11	sw.	J. B. Alter
Lamon	Decatur	1,123	20	40.6	+ 3.4	72	15	11	2	36	2.90	+1.03	1.34	2.6	9	13	5	13	sw.	F. S. Parks
Lamoni	Wayne	1,250	32	40.0	+ 3.4	72	15	11	2	36	3.13	+1.59	1.05	1.5	7	8	13	10	s.	J. L. Hurley
Leno	Ringgold	1,245	34	40.2	+ 3.2	71	15	9	2	35	2.37	+0.47	1.10	2.5	7	13	8	10	nw.	Owen Hamersly
Mt. Pleasant	Henry	730	46	43.8	+ 6.2	73	16	17	2	32	2.62	+0.42	1.10	0	8	7	12	12	se.	J. H. Jericho
Oakland	Pottawattamie	1,105	8	41.1	+ 4.9	72	15†	13	2	40	1.23	-	0.55	1.0	4	15	2	14	s.	W. S. Matthews
Oskaloosa	Mahaska	835	51	40.9	+ 5.1	72	16	15	2†	35	2.48	+0.57	0.73	1.5	11	13	6	12	se.	Roy R. Robinson
Ottumwa	Wapello	649	32	40.6	+ 4.0	73	15	11	2	38	2.78	+0.81	0.81	0.4	8	15	6	10	se.	O. L. Mikesh
Red Oak (near)	Montgomery	1,039	2	40.6	+ 4.0	73	15	11	2	38	1.17	-	0.90	0	10	10	11	s.	B. R. Bridge	
Riverton (near)	Fremont	920	1	40.6	+ 4.0	73	15	11	2	38	3.22	-	1.93	1.2	7	10	3	18	s.	Geo. C. Rader
Sigourney (near)	Keokuk	790	31	42.2	+ 6.1	71	16	15	2	36	2.66	+0.65	0.75	1.6	12	10	10	11	sw.	W. E. Utterback
Stockport	Van Buren	747	25	42.2	+ 5.8	72	16	14	2	35	2.60	+0.43	0.80	0.5	9	17	5	9	s.	C. L. Beswick
Thurman	Fremont	960	30	41.7	+ 4.4	73	15	15	3	35	1.36	-0.12	0.64	1.2	6	10	6	15	s.	H. H. Askev
Tingley	Ringgold	1,275	2	39.6	-	71	15	8	2	36	3.34	-	1.89	1.6	6	10	8	13	nw.	James A. Verploegh
Washington	Washington	757	45	43.1	+ 6.6	74	16	15	2	36	3.24	+1.05	1.00	1.0	14	8	7	16	se.	D. D. Sherman
Wescott (near)	Lee	523	5	40.6	+ 4.0	73	15	11	2	38	1.89	+0.14	0.54	2.5	9	14	6	11	sw.	Lester J. Larson
Winterset	Madison	1,118	36	40.9	+ 4.7	72	15	11	2	32	1.88	+0.49	0.97	4.0	10	11	8	12	s.	H. S. Ely
Omaha, Nebr.		1,105	56	41.0	+ 4.0	75	15	17	2	30	1.88	+0.49	0.97	4.0	10	11	8	12	s.	U. S. Weather Bureau
Means and extremes				41.4	+ 4.6	75	15	7	2	40	2.40	+0.52	1.93	1.4	8	12	7	12	sw.	
State means and extremes				39.6	+ 4.9	75	15†	0	21	42	1.92	+0.17	1.93	2.9	9	11	7	13	sw.	

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc. †Also other dates. ‡Received too late to be included in means and summaries. T. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %				Wind				Sunshine				
	Mean	Highest	Date	Lowest	Mean		Lowest	Date	Total movement	Average hourly velocity	Maximum		Per cent of possible	Departure from normal			
					7 a. m.	12 noon					Miles	From			Date		
Charles City	30.03	30.64	2	29.60	12	88	58	70	19	2	5,624	7.6	26	s.	15	53	-3
Davenport	30.07	30.57	3	29.68	31	85	71	74	36	2	5,755	7.7	33	e.	31	40	-6
Des Moines	30.04	30.61	2	29.51	31	80	57	64	27	12	6,044	8.1	35	sw.	15	51	-9
Dubuque	30.04	30.59	2	29.67	12	81	56	64	17	12	5,271	7.1	24	s.	16	48	-5
Keokuk	30.07	31.59	3	29.51	31	81	55	59	22	3	6,317	9.5	35	s.	12	55	-5
Sioux City	30.06	30.73	2	29.57	9	85	65	71	31	30	10,120	13.6	48	nw.	2	45	-13
Omaha, Neb.	30.04	30.66	2	29.42	31	74	62	65	20	17	6,954	9.3	36	ne.	10	52	-5
Means and extremes	30.05											8.8				49	-8
		30.73	2	29.42								48	sw.		25		
Normals and records	30.04		29th		29th	80		67				9.6			16th	57	
		30.82	1921		28.79	1924									*5	1918	

§Sioux City. *Des Moines. †Local mean time.

TEMPERATURE

The mean temperature for the State, as shown by the records of 104 stations, was 39.6°, or 4.9° higher than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 37.4°, or 5.3° higher than the

normal; Central, 39.9°, or 4.8° higher than the normal; Southern, 41.4°, or 4.6° higher than the normal. The highest monthly mean was 44.6°, at Burlington, and the lowest was 34.8°, at Milford. The highest temperature reported was 75°, at Tipton on the 16th, and the lowest was 0°, at Inwood on the 21st. The temperature range for the State was 75°.

PRECIPITATION

The average precipitation for the State, as shown by the records of 115 stations, was 1.92 inches, or 0.17 inch greater than the normal. By divisions, the averages were as follows: Northern, 1.51 inches, or 0.05 inch less than the normal; Central, 1.84 inches, or 0.02 inch greater than the normal; Southern, 2.40 inches, or 0.52 inch greater than the normal. The greatest amount, 3.64 inches, occurred at Fairfield, and the least, 0.62 inch occurred at West Bend. The greatest amount in 24 consecutive hours, 1.93 inches, occurred at Riverton on the 31st.

SNOWFALL

The average snowfall for the State was 2.9 inches, or 2.5 inches less than the normal. The greatest amount, 10.6 inches, occurred at Marathon. Mt. Pleasant and Red Oak reported none. These stations in the central division and two in the southern division reported only traces. As a rule the snowfall was rather moist and there was very little drifting and the ground was snow covered over most of the State less than one week.

Daily Precipitation for March, 1927

Stations	Drainage Basin	Day of Month																														Totals														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31													
Northern Division																																														
Akron-----	Big Sioux	.03			.14					T.	.69	.43	.04				.03			T.	.30												.03	.01			.02	1.72								
Algona-----	Des Moines										.24	.32									.11	.28							.21										.35					1.16		
Allison (near)-----	Cedar				.07	.14					.35	.04					T.	.18			.10	.15	.15	.15					.35									.08					1.68			
Alta-----	Raccoon	.10			.20	.05					.30	.06	.12				.08	.07	.08	.10						.04	.08	.05	.04								.20			.20					1.57	
Alton-----	Floyd	.04			.21	.05					.33	.25	.04				.07		T.		.40	.20	T.		.03	.02		.11	.03	.02					T.			.03	.02				1.75			
Belmond-----	Iowa	.05			.04						.17	.10	.06					.08			.05	.12	.03	.01			.30		T.	.04	.01						.01					1.06				
Britt-----	Iowa				.02		T.				.19	.07	.08					T.			T.	.24	.06	T.			.20		.20		.04	.01						.04					0.90			
Charles City***-----	Cedar				.01	T.					.36	.04	.06				.09				.15	.25	.04	.68	.03		.69		T.	.03								.03					1.83			
Cherokee-----	Little Sioux	.03			T.	T.					.36	.21	.11				.04	T.	T.	.05	.19	T.	.02		T.		.03		T.										.03					1.54		
Decorah-----	Mississippi				.12						.40	.20					.15				.22	.11	.40	.04		.58										.11			.11					2.33		
Dubuque***-----	Mississippi	T.			.29	.22					.66	.18	T.				.11	T.			.20	.31	.02	.02	.02	T.	.10	T.		T.	.05	T.						.05					2.18			
Estherville-----	Des Moines	.05			.15					.05	.30	.55					.10				.24	.08					.40	.07			.20					.10			.10					1.53		
Fayette-----	Mississippi				.07	.25					.42	.15	.27				.28				.05	.20	.30	.10		.40	.10			.20									.11					2.26		
Forest City-----	Cedar				T.						.10	.45	.08				T.				.05	.20	.30	.10		.40	.10												.02					1.78		
Hampton-----	Cedar				.06	.03					.34	.17									.06	.12	T.	.10		T.		.35									.02			.02					1.25	
Hawarden-----	Big Sioux	.2			.11						.31	.25	.10				.03			T.	T.	.25	T.	T.		T.		T.		T.	.04					.03			.03					1.14		
Imb. ldt.-----	Des Moines	T.			.18		T.				.21	.08	T.				T.				.02	.17	T.			.26		T.		T.									.02					0.92		
Independence-----	Wapsipicon				.17						.16	.18							T.		.26	.07			.08	.18	T.									.08								1.18		
In ood.-----	Big Sioux	.02			.09	T.					.43	.56	.08				.06				.43	.15	.11	.03	.11		.01		.02	.03	.01								.01					1.74		
Langhill-----	Mississippi				.01						.02	.46	.30	.07					.47		.15	.11	.03	.11		.01	.37		.02	.03	.01				.30				.30					2.63		
Le Mars-----	Floyd	.04	.01		.18	T.					.51	.23	.04				.06				.01	.61	T.			T.		.02		.07	.02					T.			.02					1.80		
Marathon-----	Raccoon				.18	T.					.20	.13	T.				T.	T.	T.		.15	.12	T.			.08		T.		T.	.06					.92			.92					1.90		
Mason City-----	Cedar	.02			.04		.02				.03	.35	.02				T.	.02			.05	.10	.03	.07	T.		.40	T.		T.						.02			.02					1.17		
Milford (near)-----	Little Sioux	.05			.11	T.					.41	.10	.02	.05						.34			T.	T.		.09		T.		T.						.06			.06					1.30		
New Hampton-----	Wapsipicon				T.						.30	.18	.08									.18	.02		.48												.25			.25					**	
Northwood-----	Cedar				.15	T.					.10	.15	.05				T.	.05			.10	.20	.20	T.	.03	.40				T.														1.43		
Oelwein-----	Wapsipicon					T.					.20	T.	.10								.20	.10				.10																			0.70	
Osage-----	Cedar				.47						.10												.05	.10		.20																		**		
Pocahontas-----	Des Moines	.10			.17		.02				.18	.06	.04					.02	T.		.07	.10	.09	T.		.09					T.	.02							.02					0.87		
Postville-----	Mississippi				T.						.15	.35	.15	T.					.33		T.	.18	.05	T.	.05	.33	.01									.22			.22					1.92		
Rock Rapids-----	Big Sioux	.05			.10						.03	.36	.31	.17					.10			.48		T.			.05		.03	.01	.10								.10					1.79		
Sanborn-----	Floyd	T.			.42		.03				.03	.30					.06				.32		T.	T.					T.															1.16		
Sheldon-----	Floyd	.04			.12	T.	T.				.06	.46	.17	.15						T.	.36	.01	T.		.02	.03										.02	.01	.02			.02					1.51
Sioux Center-----	Floyd	.05			.62	T.					.03	.45	.46								.05	.28	.25		.10											.18			.18					2.23		
Spencer-----	Little Sioux	.18			.18						.28	.45							.08			.20	.25			.05													.03					1.70		
Storm Lake-----	Raccoon	.10			.15	.06	T.				.25	.27	.06				T.	.03			.25	T.		.02	.02	.02		.04																1.27		
Washta-----	Little Sioux	.07			.20						.22	.03	.10				.05				.05	.30	T.	.10																				1.25		
Waterloo-----	Cedar				T.	.03					.32	.30	.05						.04		.02	.25	.05			.04	.08										.02			.02					1.30	
Waverly-----	Cedar				.08		.12				.74	.06	.01								.28	.12	.05	.03	.05	.03	.18									.01	.02			.02					1.78	
West Bend-----	Des Moines	.04			.05	.13					.05	.04	.03						T.		.04	.16														.05	.03			.03					0.62	
Central Division																																														
Ames-----	Skunk	T.			.28		.02				.35	.04	.07					.04			.15	.08				.05											.03			.03					1.11	
Audubon (near)-----	Nishnabotna	.18			.33						.35	.09	.09								.25	.10		T.	.04		.05											.10			.10					1.53
Baxter-----	Skunk				.20						.44	T.	.05								.12	.40	T.	T.																					1.21	
Belle Plaine-----	Iowa				.14		T.				.58	T.									.16	.48	.04	T.	T.		T.													.02					1.49	
Boone (near)-----	Des Moines	T.			.38						.22	.04	.08						.05		.14	.12		T.	T.		T.																		1.03	
Carroll-----	Raccoon	.12			.40	.03					.21	.05	T.						T.		.25	.10	T.	T.																					1.16	
Cedar Rapids-----	Cedar				.01	T.					.81	.11					.02	.25			.18	.55	T.	.38		.03																			2.34	
Clinton-----	Mississippi	.15			.15	.06					* .56	.06					.12				.06	.70	.09	.16	T.	.08													.08					3.30		
Davenport***-----	Mississippi	T.			.17	.04					1.59	.03	T.				.09	.03			.65	.07	T.	.05	.11		.11										.29			.29					3.13	
Davenport No. 2-----	Mississippi																																													

Daily Precipitation for March, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Southern Division</i>																																		
Afton	Grand	.07				.40						.65					.03				.49			.02									.74	2.40
Albia	Des Moines	.15				.45		T.				.62	T.	T.						.04	.67	T.	T.										.34	2.27
Atlantic	Nishnabotna					.35						.30	.09	.03			.01			.03	.12	.03			.05							.01	.18	1.40
Bonaparte (near)	Des Moines	.06				.50		.04				.47	T.	T.					.19	.45	.44	T.											.18	3.33
Burlington	Mississippi					.36	.01	.02				1.16		.34					.17	.42	.60	T.			.12	.02							.02	3.24
Centerville	Charlton	.13				.43	.02	.05				.78		T.					.03		.57	.49	.02		T.		.07						.46	3.05
Chariton (near)	Charlton	.22				.40						.48									T.	T.											.34	1.44
Clarinda	Nodaway	.10				.48						.65	.12	.10						.40	.30	.20								.30		.85	3.50	
Columbus Jct.	Iowa					.36		.07				.98	.10						.12	.62	.56	.07			.18	.01	.13					.04	3.24	
Corning (near)	Nodaway	.03				.95						.78								.24												1.11	3.43	
Corydon	Charlton	.14				.25		.01				.82						T.		.22	.40						.04					.60	2.48	
Creston	Missouri	.05				.40						.60	.05	.02				T.		.10	.39				.05							.60	2.17	
Cumberland (near)	Nodaway	.09				.25						.35	.11	.04				T.		.04												.17	1.05	
Earlham (near)	Des Moines	.10				.31						.32	.13	.02				T.		.05	.30	T.	T.		T.							.03	1.26	
Fairfield	Skunk	.05				.58		.12				.98	.08	T.					.35	.93	.18	T.	T.				.08				T.	.29	3.64	
Glenwood	Missouri	.15				.26						.24	.13	.03						T.	.03											1.10	1.94	
Indianola	Des Moines	.05				.22	.20					.09	.05	T.						T.	.25	.16										.25	1.27	
Keokuk**	Mississippi	.06				.29	T.	.11				1.30							.06	.02	.70	.02	T.	T.	.01	T.						.91	3.48	
Keosauqua	Des Moines	.10				.48	T.	T.				.66	T.					T.	.08	.49	.27			T.	T.							.40	2.48	
Knoxville	Des Moines	T.				.62						.42								.10	.28			T.		.05					.05	.20	1.72	
Lacona	Des Moines	.10				.58						.60			.01					.01	.18	.10	.10				.01					.31	2.00	
Lamoni	Grand	.15				.25						.66								.03	.40	.02				.03					.02	1.34	2.90	
Lenox	Missouri	.10				.60						.65	.63	T.						.05	.08	T.		T.	T.							.02	1.05	
Mount Ayr	Grand	.18				.22						.60								.07	.18	.02			T.	T.						1.10	2.37	
Mt. Pleasant	Skunk					.49		.04				.80	.08							.02	.60	.50					.09					T.	2.62	
Oakland	Nishnabotna					.12						.36									.20				T.							T.	.55	1.23
Oskaloosa	Des Moines	.05				.73						.73	T.	.03						.02	T.	.21	.44	.02		T.		.07			.04	.14	2.48	
Ottumwa	Des Moines	.04				.6		T.				.81	T.	T.						.28	T.	.22	.75	T.	T.		.05					.03	2.78	
Red Oak (near)	Nishnabotna	.10				.10						.30	T.										T.									T.	.90	
Riverton (near)	Nishnabotna	.18				.32						.50								T.	.07	.21										.01	1.93	3.22
Sigourney (near)	Skunk	.03				.57		T.				.75	.05	.02						T.	.18	T.	.15	.53	.06	T.					.12	.04	.16	2.66
St. Clark	Skunk	.07				.44		.07				.78	T.							.14		.25	.55	T.			.07					.23	2.60	
Thurman	Missouri	.06				.25						.25	.03								T.	.13	T.			T.						T.	.64	1.36
Tingley	Platte	.33				.20						.71	T.	T.							T.	.18	.03			T.						T.	1.89	3.34
Washington	Skunk					.48		.02				.98	.02						.04	.44		.64	.24	.16	.02		.03	.04				.01	.12	3.24
Wescott (near)	Mississippi					.18						.54								.05	T.	.05	.50									.02	.20	1.89
Winterset	Des Moines	.30				.18						.36	.10	.01						T.	.03	.23	.01										.90	1.88
Omaha, Neb.***	Missouri	.08			.10	.06						.36	.10	.01						T.	.03	.23	.01										.90	1.88

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

|||Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.

**Incomplete.

*Precipitation included in the next following measurement.

T. Precipitation is less than .01 inch rain or melted snow.

MISCELLANEOUS PHENOMENA

Aurora: 24th, 27th.

Birds (migration of): Alton, martins, 30th; Belmond, robins, 10th; Boone, Phoebe, 18th; Marathon, robins, 9th; Washta, robins, 8th, martins, 29th.

Fog: 5th, 11th, 12th, 13th, 16th, 17th, 18th, 22d, 23d, 27th, 28th, 30th.

Hail: 7th, 11th, 12th, 17th, 19th, 20th, 25th.

Halos (lunar and solar): 1st, 9th, 15th, 16th, 18th, 22d, 23d, 24th, 27th, 28th.

Haze: 11th, 15th, 28th.

Ice storm: 19th, 20th.

Parhelia: 24th.

Rainbow: 12th.

Sleet: 7th, 16th, 19th, 20th, 23d, 25th, 31st.

Thunderstorms: 5th, 11th, 12th, 16th, 17th, 19th, 20th, 23d, 25th, 31st.

Winds (strong): 9th, 15th, 19th, 31st.

RIVERS

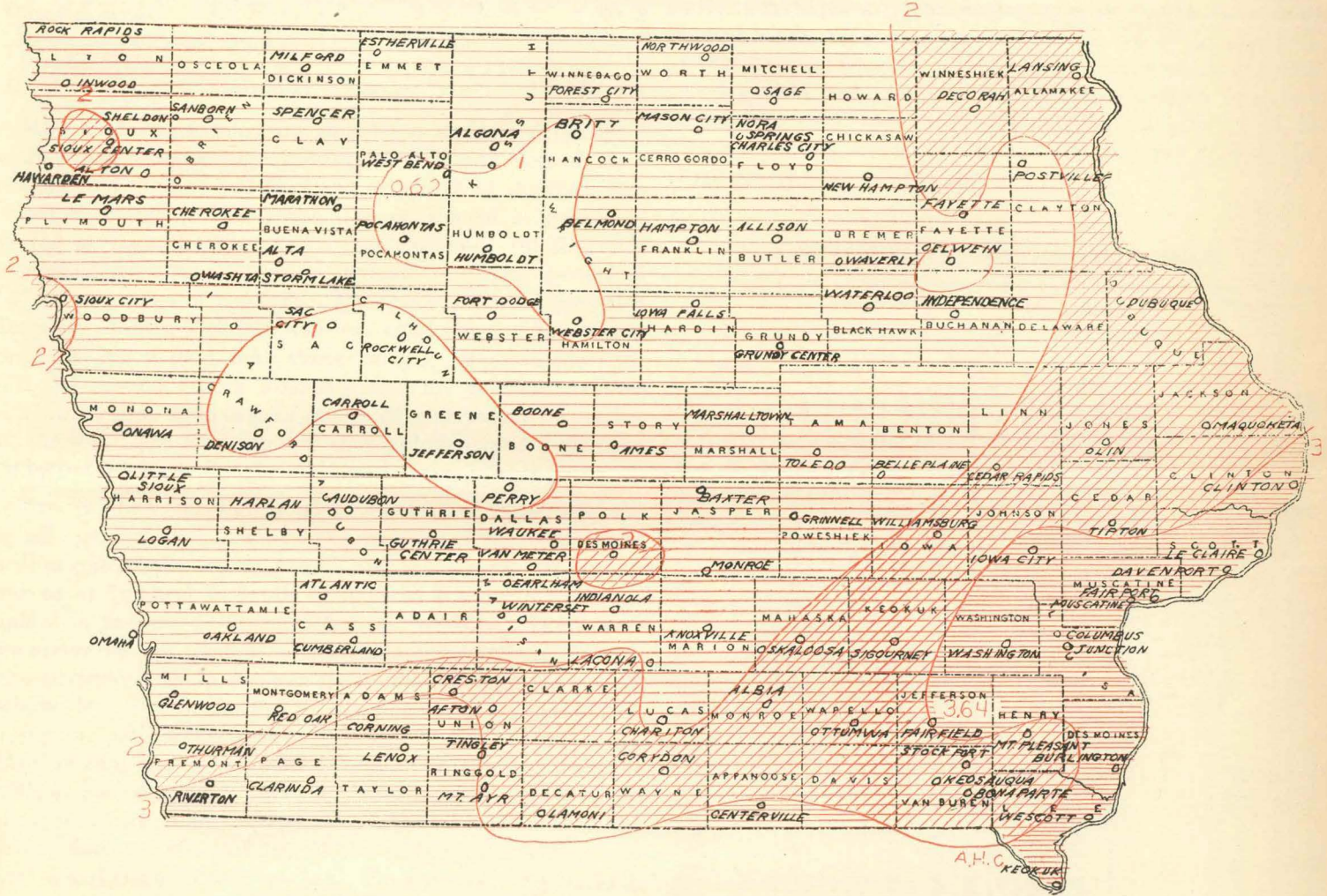
There was a gradual rising tendency on the Mississippi River till the middle of the last week, and a slight fall the remainder of the month. The average was considerably above the normal but the flood stage was not reached, though there was considerable bottom land covered. On the Missouri River nearly stationary stages prevailed except there was a marked fall at Sioux City, when the ice broke up on the 8th, but the fall was very slight below this point. Moderate stages prevailed on the interior rivers with no unusual features.

Daily Maximum and Minimum Temperature for the Month of March 1927

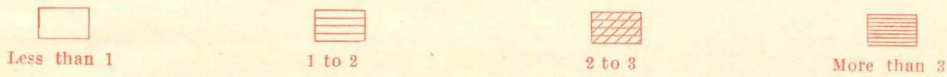
Table with columns for Stations (1-31 and Mean) and rows for various Iowa locations including Northern Division (Algona, Alta, Alton, Belmond, Charles City, Decorah, Dubuque, Forest City, Independence, Inwood, Mason City, Milford, New Hampton, Northwood, Pocahontas, Postville, Rock Rapids), Central Division (Belle Plaine, Boone, Carroll, Cedar Rapids, Davenport, Des Moines, Ft. Dodge, Grinnell, Guthrie Center, Iowa City, Iowa Falls, Little Sioux, Marshalltown, Olin, Sioux City), and Southern Division (Albia, Atlantic, Burlington, Columbus Jet, Corning, Corydon, Creston, Fairfield, Keokuk, Knoxville, Lamoni, Sigourney, Thurman, Winterset, Omaha). Each station entry includes maximum and minimum temperatures for each day.

a, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

TOTAL PRECIPITATION, MARCH, 1927



SCALE OF SHADES IN INCHES



CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, APRIL, 1927 No. 4

GENERAL SUMMARY

The outstanding feature of the weather during April, 1927, was the persistent rainy weather during most of the first three weeks. The precipitation was much above normal in each division and only twice in April has there been a higher average for the State and never has there been more cloudy and rainy days. The rain set in on the 1st and for three weeks precipitation occurred almost daily in some part of the State with only a few short intervals without rain at all stations. This was very detrimental to farm operations, as the soil was too wet most of the time to plow, except for short periods on well drained land. Oat seeding was much delayed and some land that was intended for oats will have to be seeded to other crops. The preparation of corn ground was also much delayed but good progress was made during the last week. Conditions were favorable for winter wheat and nearly all fields were looking well. Pastures and meadows also got a good start.

During most of the first three weeks travel on highways was a very risky undertaking and much travel by automobile was given up. Nearly all dirt roads were absolutely impassable for long periods and many unpaved primary roads were almost as bad during the rainy period. During the last week, conditions rapidly improved and travel was generally practicable. Hail, sleet and thunderstorms occurred on an unusually large number of days but the damage was very slight. A sleet storm on the 20th-21st did some damage to telephone and telegraph wires from Dubuque county westward, the heavy deposit of ice causing wires to break and a few poles were snapped. The principal area with damaging hail occurred from Poweshiek county southeastward to Washington county on the 20th. Windows were broken and roofs damaged. In the vicinity of Crawfordsville, Washington county the damage was estimated at about \$20,000. A very unusual thunderstorm occurred at Charles City on April 4th. The darkness was so intense that automobiles were compelled to use lights from 11:45 a. m., till 12:15 p. m., and all stores were compelled to turn on all lights. The condition was described as being as dark as it is on a cloudy night thirty or forty minutes after sunset. The same condition prevailed westward to Mason City and southward to Waterloo.

The temperature for the State averaged slightly above normal, though there was a slight deficiency in the northern division. While the excess for the State was slight, this is the fourth consecutive month in which there has been an excess and the average daily excess since January 1 is more than 4°. Temperature fluctuations were unusually frequent; the warmest period was from the 15th to 19th, though over most of the State the warmest day was the 26th; the coldest period occurred 20th to 25th, and the last general killing frost occurred on the 23d. The frost on the 20th to 23d did considerable damage to small fruit and truck crops but tree fruit generally escaped, though there

was some damage to cherry and plum trees that were in full bloom in the southern portion of the State.

An unusually brilliant detonating meteor was observed about 10:38 p. m., on the 16th. A full account of this appears on page 29.

F. L. D.

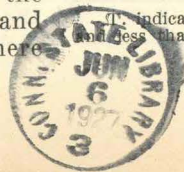
TEMPERATURE

The mean temperature for the State, as shown by the records of 104 stations, was 49.2°, or 0.3° higher than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 47.0°, or 0.1° lower than the normal; Central, 49.5°, or 0.3° higher than the normal; Southern, 51.2°, or 0.7° higher than the normal. The highest monthly mean was 53.4°, at Thurman, and the lowest was 45.4°, at Milford. The highest temperature reported was 91°, at Little Sioux, on the 26th, and the lowest was 15°, at Inwood on the 21st. The temperature range for the State was 76°.

COMPARATIVE DATA FOR THE STATE—APRIL

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. .01 in. or more	Clear	Partly cloudy	Cloudy
1873	43.2	- 5.7	83	24	3.13	+ 0.14	5.65	1.24					
1874	41.9	- 7.0	76	16	1.90	- 1.09	3.15	0.65					
1875	43.0	- 5.9	77	10	2.20	- 0.79	4.00	0.89					
1876	48.1	- 0.7	78	24	3.06	+ 0.07	6.80	0.85					
1877	47.5	- 1.4	91	14	3.33	+ 0.34	8.61	1.10					
1878	52.4	+ 3.5	82	26	3.14	+ 0.15	5.87	1.32					
1879	50.3	+ 1.4	88	12	1.13	- 1.86	3.70	0.00					
1880	47.9	- 1.0	92	15	2.08	- 0.91	5.65	0.35					
1881	42.5	- 6.4	84	10	2.26	- 0.73	5.40	0.45					
1882	48.8	- 0.1	91	20	3.73	+ 0.74	8.08	1.60					
1883	49.9	+ 1.0	90	24	2.25	- 0.74	5.00	0.58					
1884	46.8	- 2.1	86	18	2.54	- 0.45	5.40	0.83					
1885	47.5	- 1.4	80	16	2.94	- 0.05	7.82	0.78					
1886	50.3	+ 1.4	88	4	2.70	- 0.29	6.90	0.70					
1887	51.1	+ 2.2	94	9	1.38	- 1.61	2.65	0.10					
1888	48.8	- 0.1	90	20	2.65	- 0.34	7.80	0.40					
1889	50.3	+ 1.4	86	10	2.35	- 0.64	6.03	0.25					
1890	51.2	+ 2.3	88	2	1.73	- 0.26	5.15	0.25					
1891	50.6	+ 1.7	93	13	2.15	- 0.84	5.06	0.59					
1892	45.4	- 3.5	88	14	4.75	+ 1.76	8.38	2.43	5.7	9	8	9	13
1893	45.5	- 3.4	96	15	4.21	+ 1.22	8.51	1.24	6.0	10	8	9	13
1894	51.7	+ 2.8	93	12	3.07	+ 0.08	6.91	0.55	0.2	9	11	11	8
1895	54.2	+ 5.3	98	8	2.62	- 0.37	5.88	0.28	2.1	5	14	8	8
1896	54.5	+ 5.6	94	10	5.02	+ 2.03	9.67	2.35	4.5	11	11	10	9
1897	47.9	- 1.0	89	19	5.35	+ 2.36	9.86	2.22	T.	11	9	9	12
1898	48.1	- 0.8	91	14	2.56	- 0.43	4.82	0.27	T.	8	13	9	8
1899	48.9	- 0.0	89	1	2.40	- 0.59	5.76	0.56	2.0	7	12	11	7
1900	52.2	+ 3.3	89	19	2.67	- 0.32	6.62	0.43	0.9	6	12	9	9
1901	49.9	+ 1.0	92	15	1.79	- 1.20	3.47	0.66	2.0	5	14	8	8
1902	48.2	- 0.7	96	9	1.71	- 1.28	4.15	0.40	T.	5	14	11	5
1903	49.8	+ 0.9	86	17	2.98	- 0.01	6.00	0.74	0.8	9	11	9	10
1904	44.1	- 4.8	86	13	3.63	+ 0.64	8.97	1.52	1.4	7	15	6	9
1905	47.5	- 1.4	90	10	3.03	+ 0.04	5.49	0.63	1.2	8	12	8	10
1906	52.5	+ 3.6	94	22	2.42	- 0.57	5.55	0.53	0.6	8	14	9	7
1907	41.5	- 7.4	80	10	1.32	- 1.67	3.22	0.24	2.7	6	12	8	10
1908	50.5	+ 1.6	91	8	2.24	- 0.75	4.59	0.67	0.3	8	14	8	8
1909	43.8	- 5.1	86	14	4.58	+ 1.59	9.43	0.83	3.1	12	9	9	12
1910	52.5	+ 3.6	99	15	1.48	- 1.51	4.86	0.10	3.0	7	14	7	9
1911	46.7	- 2.2	86	3	3.09	+ 0.10	6.04	1.33	3.6	9	11	8	11
1912	49.9	+ 1.0	84	20	2.66	- 0.33	5.66	0.78	1.1	8	13	8	9
1913	50.2	+ 1.3	88	16	3.28	+ 0.29	7.43	1.12	2.7	9	15	5	10
1914	48.6	- 0.3	88	11	2.52	- 0.47	5.03	0.37	0.3	8	10	8	12
1915	57.2	+ 8.3	95	18	1.41	- 1.58	4.02	0.05	T.	7	15	10	5
1916	47.1	- 1.8	90	11	2.62	- 0.37	5.92	1.13	1.1	10	10	9	11
1917	45.5	- 3.4	88	17	4.55	+ 1.56	7.84	2.05	3.8	11	9	7	14
1918	44.8	- 4.1	79	12	2.32	- 0.67	4.20	1.01	3.5	9	12	8	10
1919	48.4	- 0.5	81	20	4.78	+ 1.79	9.00	1.94	0.7	14	8	8	14
1920	42.4	- 6.5	78	22	4.59	+ 1.60	7.13	1.93	2.0	12	8	9	13
1921	52.4	+ 3.5	88	14	3.34	+ 0.35	6.69	0.99	3.6	10	13	7	10
1922	49.9	+ 1.0	87	21	3.06	+ 0.07	6.70	1.04	1.0	9	11	9	10
1923	48.4	- 0.5	85	11	2.09	- 0.90	4.26	0.47	0.8	8	15	7	8
1924	50.5	+ 1.6	90	8	1.38	- 1.61	4.53	0.38	1.4	7	16	8	6
1925	56.5	+ 7.6	95	21	2.20	- 0.79	5.34	0.71	T.	8	14	9	7
1926	46.1	- 2.8	95	9	0.91	- 2.08	2.29	0.06	1.5	4	16	7	7
1927	49.2	+ 0.3	91	15	4.84	+ 1.85	9.06	2.09	2.6	14	9	7	14

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



Daily Precipitation for April, 1927—Continued

Table with columns: Stations, Drainage Basin, Day of Month (1-30), Totals. Lists stations like Afton, Albia, Atlantic, etc., with precipitation amounts for each day.

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

|||Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

||||Precipitation measured in the morning; amount then recorded is for preceding 24 hours, except amount measured on April 1, is for preceding 12 hours.

***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.

**Incomplete.

*Precipitation included in the next following measurement.

T. Precipitation is less than .01 inch rain or melted snow.

RIVERS

There was a gradual fall on the Mississippi River in the upper course but there was a slight rise during the latter part of the 3d week in the lower course. The average was considerably above normal, with considerable bottom land overflowed at the first of the month and again during the last decade.

letters indicate that it was almost overhead at Sioux Center traveling in the direction of Adrian, Minnesota. Most of the observers state that the general direction was from the southwest to the northeast, and one man gives it as north 35° east.

The average of the time given by observers is about 10:38 p. m., with the range from 10:00 to "between 11:00 and 12:00." One man states definitely that his watch said 10:50.

People in northwestern Iowa heard a rumbling like thunder some time after they saw the light. A man in Alton, Iowa said he drove forty rods with a horse walking through mud before the noise came to him. Reports from Alton and Inwood state that the explosion was of such force as to rattle the windows.

ERRATA

Report for March, 1927. Page 18. Fort Dodge precipitation published 2.03 inches, should be 1.19 inches; departure publishes, +0.43 inch, should be, -0.41 inch; days with 0.01 inch, or more, precipitation published 11, should be 10. Page 20. Precipitation published .84 inch on 31st, should be trace; total precipitation 2.03 inches, should be 1.19 inches.

THE METEOR OF APRIL 16, 1927

C. C. Wylie

State University of Iowa, May 5, 1927

Reports are still being received regarding the brilliant detonating meteor of April 16 which passed over northwestern Iowa. It has been reported by observers as far east at Otley and Hampton and as far south as Creston. The exact path cannot be definitely determined because of conflicting reports.

Because of its brilliance the meteor seemed very close to the observers. A man in Alton thought it was falling on top of him. The report from Otley states that it passed over the car and lit in a cornfield 120 feet distant, one from Webster City states that it fell in Fremont township about 10 miles to the northwest, one from Clare states it dropped a quarter of a mile away.

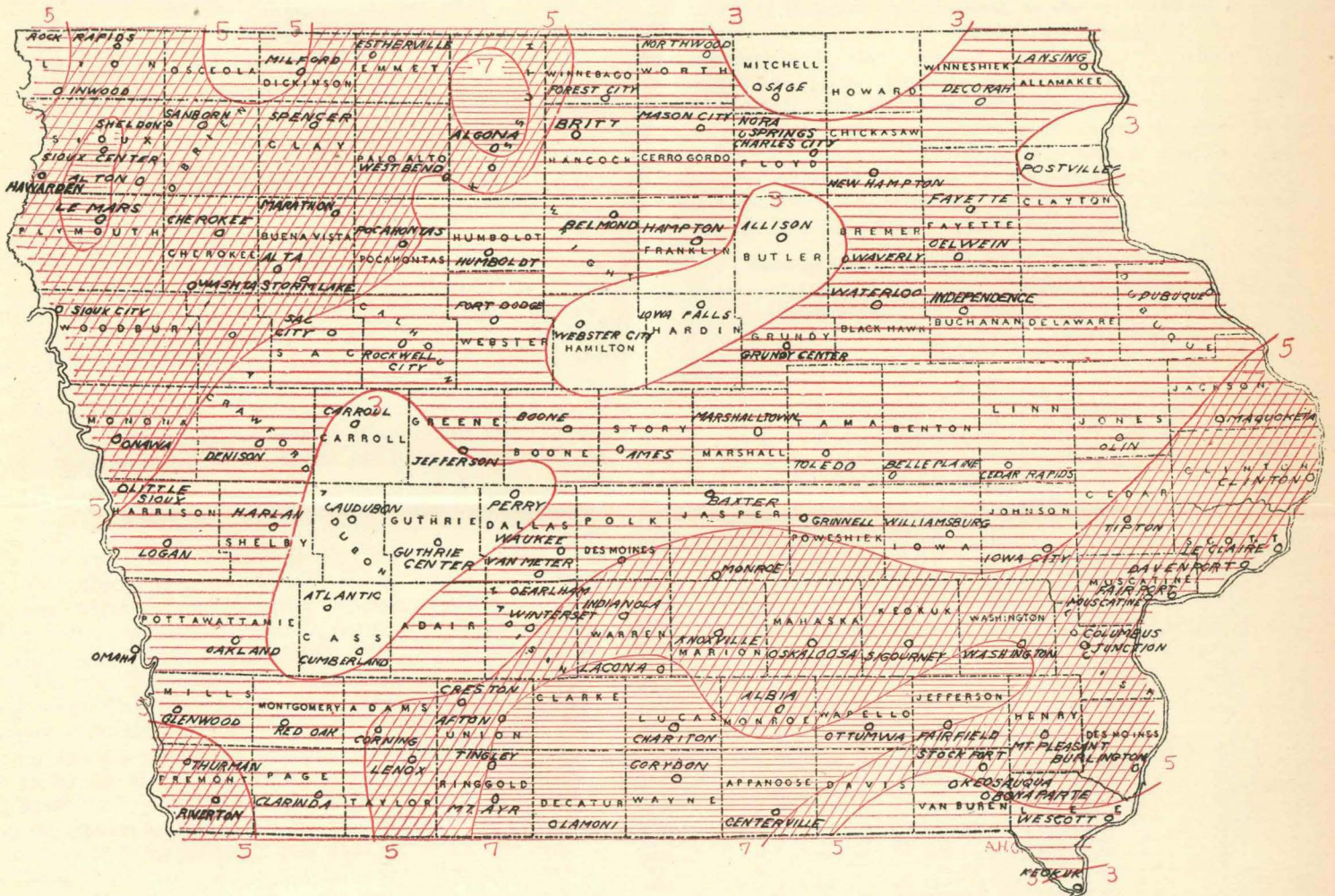
Note: Most of these reports were obtained by the Weather Bureau Office in Des Moines through its cooperative observers and correspondents.—C. D. R.

Daily Maximum and Minimum Temperature for the Month of April, 1927

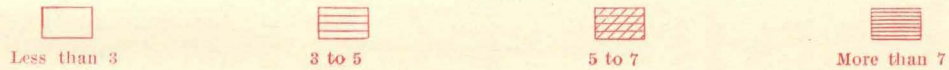
Table with columns for Stations, days 1-30, and Mean. Rows are grouped into Northern, Central, and Southern Divisions, listing various Iowa cities and their daily temperature ranges.

a, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

TOTAL PRECIPITATION, APRIL, 1927



SCALE OF SHADES IN INCHES



CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, MAY, 1927 No. 5

GENERAL SUMMARY

May, 1927, temperature averaged slightly below normal but due to several causes the month seemed more disagreeable than the mean temperature would indicate. The principal cause was the fact that the deficiency was due almost entirely to low day-time temperatures. The minima averaged about normal and there was no unusually cold weather during the month. The other causes were an unusually large number of cloudy, rainy days, deficient sunshine, high humidity and many days with strong winds. The average wind velocity for the State was 1 mile or 11 per cent above the May normal. Most of the deficiency in temperature occurred during two periods extending from the 9th to 16th and from the 26th to the end of the month; the only warm period of consequence occurred from the 20th to 25th. Frost occurred on several days but due to the backward condition of vegetation generally there was not much damage and over a large portion of the State no frost whatever occurred.

The precipitation averaged only slightly above normal but it occurred at frequent intervals throughout the month. This condition, following a wet month, and a saturated condition of the soil greatly hindered all farm operations, and bottom lands were generally too wet to work. Much corn land in the eastern portion of the State and along the Missouri River was under water and will have to be seeded to other crops or abandoned. There was serious damage from cutworms and many fields had to be replanted. On June 1, only 78 per cent of the corn had been planted which was the least since 1903. Nearly all farm work was about two weeks later than usual and the eastern portion of the State suffered most on account of weather.

There was considerable damage from severe local rain, hail and wind storms. One of the worst rain storms occurred at Dubuque. The sewers were unable to carry off the water, causing basements to become flooded. Large boulders were washed from the hills and paving was damaged. Telephone lines were damaged considerably and at one time there was only one telegraph line in working order out of the city. The damage in Dubuque amounted to about \$35,000. Severe washouts occurred on some small streams the worst being near Ottumwa, on the C., B. & Q. R. R. Many culverts and highway bridges were damaged. Dust storms did a great deal of damage to plants, many cabbage and tomato plants were cut off at the ground by a blast of sand but the soil was generally too wet to drift.

Cool weather crops made good progress and pastures and meadows were in excellent shape. The frequent rains kept most unpaved roads in poor condition most of the month.

F. L. D.

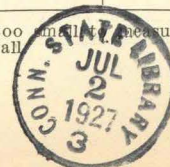
TEMPERATURE

The mean temperature for the State, as shown by the records of 105 stations, was 58.4°, or 1.8° lower than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows. Northern, 56.3°, or 2.3° lower than the normal; Central, 58.7°, or 1.7° lower than the normal; Southern, 60.3°, or 1.2° lower than the normal. The highest monthly mean was 61.9°, at Thurman, and the lowest was 54.7°, at Sanborn. The highest temperature reported was 91°, at Denison and Little Sioux on the 17th, and the lowest was 30 degrees at Inwood and Sanborn, on the 5th, and Boone and Earlham on the 12th. The temperature range for the State was 61°.

COMPARATIVE DATA FOR THE STATE—MAY

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre-.01 in. or more	Clear	Partly cloudy	Cloudy
1873.....	56.5	- 3.7	86	38	5.90	+ 1.33	9.10	3.42					
1874.....	64.1	+ 3.9	94	41	1.88	- 2.73	4.49	0.50					
1875.....	61.5	+ 0.3	91	26	2.94	- 1.67	6.70	1.63					
1876.....	61.1	+ 0.9	90	32	2.84	- 1.77	7.98	1.09					
1877.....	60.3	+ 0.1	92	29	4.30	- 0.31	11.00	1.60					
1878.....	55.7	- 4.5	88	32	5.01	+ 0.40	11.95	2.14					
1879.....	62.9	+ 2.7	93	26	4.38	- 0.23	8.70	1.40					
1880.....	66.3	+ 6.1	96	37	4.06	- 0.55	8.45	1.47					
1881.....	66.7	+ 6.5	95	35	3.73	- 0.88	9.30	0.40					
1882.....	54.3	- 5.9	83	24	5.42	+ 0.81	12.55	1.50					
1883.....	54.6	- 5.6	90	31	6.25	+ 1.64	11.68	1.30					
1884.....	59.6	- 0.6	88	33	3.15	- 1.46	6.36	1.00					
1885.....	57.4	- 2.8	86	27	3.44	- 1.17	9.33	1.05					
1886.....	62.5	+ 2.3	96	30	3.38	- 1.23	7.63	1.30					
1887.....	64.6	+ 4.4	96	34	1.55	- 3.06	5.84	0					
1888.....	58.8	- 6.4	88	22	6.58	+ 1.97	10.85	2.00					
1889.....	59.2	- 1.0	92	22	4.06	- 0.55	8.54	1.40					
1890.....	56.5	- 3.7	96	26	3.64	- 0.97	6.44	1.67					
1891.....	58.3	- 1.9	94	21	3.18	- 1.43	7.10	1.46					
1892.....	54.0	- 6.2	88	29	8.77	+ 4.16	12.64	4.87	T.	8	14	9	8
1893.....	56.6	- 3.6	96	26	3.45	- 1.16	5.82	1.65	0	9	13	9	9
1894.....	61.1	+ 0.9	96	22	1.87	- 2.74	4.77	0.33	0	6	17	10	4
1895.....	61.7	+ 1.5	104	24	3.19	- 1.42	5.79	0.84	0	9	11	12	8
1896.....	65.5	+ 5.3	100	34	6.69	+ 2.08	11.79	3.40	0	12	11	12	8
1897.....	58.5	- 1.7	96	20	1.92	- 2.60	3.59	0.21	0	5	16	10	5
1898.....	59.6	- 0.6	92	26	4.67	+ 0.06	7.82	2.22	0	12	9	10	12
1899.....	60.2	0.0	90	27	6.23	+ 1.62	11.47	3.09	0	13	9	12	10
1900.....	63.2	+ 3.0	98	22	3.31	- 1.30	6.98	0.96	0	8	14	10	7
1901.....	60.7	+ 0.5	95	28	2.35	- 2.26	4.57	0.72	0	7	16	9	6
1902.....	63.8	+ 3.6	97	25	5.39	+ 0.78	18.04	0.87	0	13	10	12	9
1903.....	61.6	+ 1.4	91	24	8.55	+ 3.94	15.45	2.88	0	16	9	12	10
1904.....	59.6	- 0.6	93	27	3.78	- 0.83	8.15	1.50	0	8	13	10	8
1905.....	58.2	- 1.9	88	28	5.95	+ 1.34	10.83	2.57	0	14	12	11	8
1906.....	61.8	+ 0.6	95	24	3.54	- 1.07	10.72	0.89	0	11	13	10	8
1907.....	53.5	- 6.7	96	14	3.48	- 1.13	7.68	0.71	1.0	10	11	10	10
1908.....	59.4	- 0.8	93	13	8.34	+ 3.73	14.33	1.33	0	15	9	11	11
1909.....	57.9	- 2.3	97	18	4.34	- 0.27	7.85	1.86	0.1	9	12	12	7
1910.....	55.4	- 4.8	89	18	3.41	- 1.20	6.91	1.29	T.	10	15	7	9
1911.....	64.9	+ 4.7	98	23	3.76	- 0.85	8.73	0.42	0.7	9	16	9	6
1912.....	62.7	+ 2.5	97	29	3.33	- 1.27	6.41	0.72	0	10	14	11	6
1913.....	59.4	- 0.8	102	30	6.24	+ 1.63	10.25	3.14	0	13	11	8	12
1914.....	62.2	+ 2.0	98	25	3.31	- 1.30	6.90	0.30	T.	10	14	11	6
1915.....	56.1	- 4.1	85	25	7.34	+ 2.73	13.21	3.82	T.	14	9	9	13
1916.....	59.9	- 0.3	97	27	4.93	+ 0.32	10.44	2.14	T.	12	13	10	8
1917.....	55.1	- 5.1	95	18	3.87	- 0.74	7.33	1.69	0.6	10	15	8	8
1918.....	64.9	+ 4.7	98	25	6.87	+ 2.26	11.98	2.72	T.	13	13	11	7
1919.....	58.2	- 2.0	93	30	3.11	- 1.50	7.14	0.73	0	9	13	11	7
1920.....	59.4	- 0.8	89	29	3.26	- 1.35	5.73	0.62	0	8	14	9	8
1921.....	63.3	+ 3.1	99	25	4.23	- 0.38	9.41	1.32	0	10	14	10	7
1922.....	63.4	+ 3.2	91	34	3.53	- 1.08	8.36	0.47	0	12	13	10	8
1923.....	59.6	- 0.6	90	20	2.84	- 1.77	6.55	1.07	T.	10	14	10	7
1924.....	54.1	- 6.1	94	26	1.71	- 2.90	3.23	0.78	0.1	9	13	9	9
1925.....	57.8	- 2.4	102	20	1.16	- 3.45	2.62	0.30	T.	6	19	8	4
1926.....	64.5	+ 4.3	97	25	2.76	- 1.85	6.83	0.52	0	9	15	11	5
1927.....	58.4	- 1.8	91	30	4.69	+ 0.08	9.07	0.86	T.	11	10	10	11

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall



Climatological Data for May, 1927

Table with columns: Stations, COUNTIES, Elevation, feet, Length of record, years, Temperature, in Degrees Fahrenheit (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation, in inches (Total, Departure from normal, Greatest in 24 hours, Total snowfall), Number of Days (Precipitation of in. or more, Clear, Partly cloudy, Cloudy), Prevailing direction of wind, Observers. Rows include Northern Division (Akron, Algona, Allison, etc.) and Central Division (Ames, Audubon, Baxter, etc.).

Climatology Data for May, 1927—Continued

Stations	COUNTIES	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days				Observers		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (melted)	Precipitation, .01 in. or more	Clear	Partly cloudy		Cloudy	Prevailing direction of wind
<i>Southern Division</i>																				
Afton	Union	1,212	33	60.5	-0.9	80	23	38	4†	33	3.90	-0.73	2.00	0	10	11	9	11	nw.	S. R. Brown
Albia	Monroe	949	29	60.8	-0.5	87	23	35	12	36	7.13	+2.14	2.00	0	15	12	7	12	w.	O. E. McBride
Atlantic	Cass	1,104	36	59.6	-1.1	89	17	33	12	39	1.30	-2.93	0.35	0	12	3	8	20	nw.	T. H. Whitney
Bonaparte (near)	Van Buren	563	35	59.6	-1.7	84	23	37	12	30	6.40	+1.77	3.06	0	11	11	12	8	nw.	B. R. R. Val
Burlington	Des Moines	544	31	61.1	-1.8	84	21†	40	12	33	5.34	+0.81	2.17	0	15	11	7	13	nw.	John T. Donnelly
Centerville	Appanoose	1,013	22	60.6	-0.8	87	23	31	12	38	3.39	-1.20	1.11	0	12	14	7	10	nw.	Thomas Wood
Chariton (near)	Lucas	1,042	32	59.6	-0.5	89	23	35	12	35	1.64	-2.88	0.70	0	5	9	13	9	n.	C. O. Burr
Clarinda	Page	1,009	37	60.4	-2.5	88	23	36	4†	36	1.80	-3.15	0.55	0	10	18	9	4	nw.	Dr. H. C. Hawley
Columbus Jet.	Louisa	595	26	59.2	-3.0	84	21	40	4†	29	6.00	+1.69	2.08	0	16	4	19	8	se.	Miss Musa Todd
Corning (near)	Adams	1,117	35	59.5	-1.0	89	23	37	4†	39	1.68	-3.36	0.52	0	7	16	7	8	w.	W. A. Seybold
Corydon	Wayne	1,101	34	60.8	-0.5	89	23	37	12	35	2.83	-1.84	0.94	0	10	10	13	8	nw.	A. T. Gallagher
Creston	Union	1,312	22	59.6	-1.1	88	23	35	12	34	1.22	-3.32	0.23	0	11	16	9	6	sw.	J. W. Goodsell
Cumberland (near)	Cass	1,225	28	60.4	-1.7	85	23	36	12	34	2.60	-1.49	0.84	0	9	6	17	8	nw.	Carl E. Pollock
Earlham (near)	Madison	1,126	25	59.4	-0.8	86	23	30	12	40	3.81	-0.63	2.10	0	8	20	1	10	sw.	Geo. Phillips
Fairfield	Jefferson	780	43	59.4	-1.7	85	21	36 ^a	12	31 ^a	7.81	+2.37	2.40	0	10	10	8	13	s.	Prof. R. M. McKenzw
Glenwood	Mills	1,100	29	60.6	-0.7	86	17	38	4†	34	1.15	-3.46	0.45	0	6	5	18	8	ne.	Geo. Mogridge
Indianola	Warren	972	36	59.8	-1.7	89	23	35	12	35	4.31	-0.14	1.08	0	9	10	13	8	nw.	Seth F. Shenton
Keokuk	Lee	614	56	61.2	-2.6	85	23	40	12	28	4.55	+0.36	1.11	0	12	3	15	13	s.	U. S. Weather Bureau
Keosauqua	Van Buren	644	35	60.7	-0.6	87	23	34	12	34	5.04	+0.16	2.00	0	11	9	10	12	se.	J. H. Landes
Knoxville	Marion	920	32	60.4	-1.1	88	23	35	12	35	3.75	-0.50	1.16	0	12	10	10	11	nw.	W. J. Casey
Lacona	Warren	824	28	60.0	-1.2	88	17	32	12	40	0.86	-----	0.29	0	7	16	8	7	nw.	W. S. Matthews
Lamoni	Decatur	1,123	20	60.6	-0.4	88 ^a	23	36	12	35 ^a	1.23	-3.72	0.27	0	8	11	12	8	nw.	F. S. Parks
Lenox	Taylor	1,250	32	61.0	-0.4	90	23	35	12	39	1.22	-3.46	0.27	0	10	16	10	5	nw.	J. L. Hurley
Mt. Ayr	Ringgold	1,245	34	60.4	-0.4	90	23	36	4	38	2.13	-3.34	0.88	0	8	14	8	9	ne.	Alex. Maxwell
Mt. Pleasant	Henry	730	40	60.6	-1.1	84	21	40	16	32	4.77	+0.15	1.93	0	11	3	19	9	nw.	J. H. Jericho
Oakland	Pottawattamie	1,105	8	60.0	-1.2	88	17	32	12	40	0.86	-----	0.29	0	7	16	8	7	nw.	W. S. Matthews
Oskaloosa	Mahaska	835	51	59.2	-2.0	87	23	34	12	34	3.80	-0.45	1.15	0	12	9	12	10	ne.	Roy R. Robinson
Ottumwa	Wapello	649	32	60.9	-----	88	23	36	12	35	6.69	+2.04	2.23	0	11	14	9	8	ne.	C. L. Mikesh
Red Oak (near)	Montgomery	1,030	2	-----	-----	-----	-----	-----	-----	-----	1.01	-----	0.33	0	4	-----	-----	-----	nw.	B. R. Bridge
Riverton (near)	Fremont	920	1	-----	-----	-----	-----	-----	-----	-----	1.94	-----	0.92	0	11	8	8	15	nw.	Geo. O. Rader
Sigourney (near)	Keokuk	790	31	60.2	-0.6	84	21†	38	12	33	4.61	+0.34	1.03	0	11	8	10	13	ne.	W. E. Utterback
Stockport	Van Buren	747	25	59.6	-0.9	84	23	37	12	31	5.46	+0.80	2.56	0	11	11	9	11	nw.	C. L. Beswick
Thurman	Fremont	960	30	61.9	-0.6	87	17	38	4	35	1.97	-2.98	1.26	0	6	11	11	9	s.	H. H. Askev
Tingley	Ringgold	1,275	2	59.5	-----	89	23	35	12	36	1.71	-----	0.95	0	9	9	16	6	nw.	James A. Verploegh
Washington	Washington	757	45	59.8	-1.7	87	21†	37	16	44	5.42	+1.20	1.08	0	14	6	12	13	ne.	D. D. Sherman
Wescott (near)	Lee	523	5	61.4	-----	87	21	40	12	27	5.85	-----	2.65	0	10	15	8	8	sw.	Lester J. Larson
Winterset	Madison	1,118	36	60.6	-1.0	88	23	37	4†	38	2.72	-1.80	0.72	0	9	13	9	9	sw.	H. S. Ely
Omaha, Nebr.	-----	1,105	56	61.1	-1.3	91	17	39	10	29	1.36	-3.14	0.53	0	11	8	11	12	nw.	U. S. Weather Bureau
Means and extremes	-----	-----	-----	60.3	-1.2	91	17	30	11	44	34.9	-1.13	3.05	0	10	10	11	10	nw.	-----
State means and extremes	-----	-----	-----	58.4	-1.8	91	17	30	5†	44	4.60	+0.08	3.50	T.	11	10	10	11	nw.	-----

The departure from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc. †Also other dates. ††Received too late to be included in means and summaries. T. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %			Wind			Sunshine						
	Mean	Highest	Date	Lowest	Mean	7 a. m. to 12 noon	7 p. m. to lowest	Total movement	Average hourly velocity	Maximum Miles From Date	Per cent of possible	Departure from normal					
Charles City	29.86	30.21	31	29.17	9.80	61	66	28	16	6,523	8.8	36	sw.	27	45	-16	
Davenport	29.86	30.16	31	29.32	9.81	73	75	42	14	6,567	8.8	36	e.	35	55	-28	
Des Moines	29.84	30.18	31	29.20	9.80	58	60	29	43	6,606	8.9	37	sw.	9	59	-6	
Dubuque	29.84	30.16	31	29.25	9.78	61	65	23	3	5,551	7.5	23	s.	9	39	-19	
Keokuk	29.87	30.16	31	29.35	9.81	67	67	44	16	6,104	8.2	35	sw.	23	56	-9	
Sioux City	29.85	30.26	31	29.02	9.78	62	61	27	15	11,344	15.2	52	w.	3	51	-7	
Omaha, Neb.	29.84	30.21	31	29.10	9.75	58	54	22	8	7,604	10.2	36	nw.	14	58	-3	
Means and extremes	29.85	-----	-----	29.02	-----	79	63	-----	-----	-----	9.7	-----	-----	-----	48	-----	-13
Normals and records	29.95	-----	4th	-----	17th	77	-----	-----	-----	8.7	-----	-----	-----	-----	-----	-----	-----
	-----	30.58	1910	29.02	8.75	-----	-----	1889	-----	-----	184	nw.	1891	-----	-----	-----	-----

*Dubuque. †Omaha, also Sioux City 9th, 1927. ‡Sioux City. †Local mean time. †And other dates.

PRECIPITATION

The average precipitation for the State, as shown by the records of 116 stations, was 4.69 inches, or 0.08 inch greater than the normal. By divisions, the averages were as follows: Northern, 5.77 inches, or 1.17 inches greater than the normal; Central, 4.81 inches,

or 0.20 inch greater than the normal; Southern, 3.49 inches, or 1.13 inches less than the normal. The greatest amount, 9.07 inches, occurred at Independence, and the least, 0.86 inch, occurred at Oakland. The greatest amount in any 24 consecutive hours, 3.50 inches, occurred at Dubuque on the 8th-9th.

MISCELLANEOUS PHENOMENA

- Aurora: 4th, 5th.
- Dust Storms: 2d, 3d, 9th, 14th, 15th, 25th.
- Fog: 13th, 24th, 28th.
- Frost: 3d, 4th, 5th, 12th, 15th, 16th.
- Hail: 2d, 8th, 13th, 14th, 17th, 18th, 20th, 23d, 24th, 27th.
- Halos (lunar and solar): 2d, 3d, 4th, 5th, 7th, 9th, 12th, 13th, 15th, 16th, 17th, 24th.
- Meteor: 25th.
- Rainbow: 3d, 12th. (lunar) 18th.
- Thunderstorms: 2d, 7th, 8th, 9th, 13th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 26th, 27th, 28th.
- Tornado: 23d.
- Winds (strong): 3d, 4th, 9th, 10th, 14th, 15th, 21st, 23d, 25th, 27th.

RIVERS

Rather high stages prevailed on all rivers but the flood stage was not reached except on the Missouri south of Sioux City and on the lower Des Moines. There was very little fluctuation on the Mississippi River above Davenport but below there was considerable fluctuation and a rather marked rise during the last ten days of

Daily Precipitation for May, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>Southern Division</i>																																			
Afton	Grand	2.00				.12		.45					.08					.08				.07	.18	.08	.02			.91						3.99	
Abia	Des Moines		.60		T.			.15	.31	T.		T.	.01	.06	.01			.01	.15			.02	.28	1.93	2.00			.03	.10					7.13	
Atlantic	Nishnabotna		T.		.02	.11		.31	.03				.07	.02				.01	.15			.02	.06	.15			.35						1.30		
Bonaparte (near)	Des Moines		.80	T.		T.	.11	.09	.55		T.		.23	.06				3.05		T.	T.	.28	.60	.60			.03		T.				6.40		
Burlington	Mississippi		.54		T.			.22	.20	.24		T.	.01	.36	.03			.01	.03	2.17			.06	.64	.27	.41		T.		.15			5.34		
Centerville	Charlton		.15			.13		.16	.35	T.			.06	.07				T.	.41	T.	.01		.24	.35	1.11			.35		T.			3.39		
Chariton (near)	Charlton		T.		T.	T.	T.	.70			T.		T.	T.				.38			.16		.25	T.			.15						1.64		
Clarinda	Nodaway		.28		.02	.30		.55											.01	.03		.03	.08	.24			.26						1.86		
Columbus Jet	Iowa		.76	T.	.01		.02	.07	.47	.02			.35	T.				.12	.71			.01	.82	2.08	.29	.03		.23	.01				6.00		
Corning (near)	Nodaway		T.			.25	.41	.11							.35				.35			T.	.22			.14		.23						1.68	
Corydon	Charlton		T.	.47			.13	.50	.02				.03							.03			.24	.37	.94			.10						2.83	
Creston	Missouri					.10		.22	.01				.14	.04					.22		T.	.16		.05	.05	.13	.03	.23						1.22	
Cumberland (near)	Nodaway				T.		.07	.52	T.				.08				T.		.84		T.	.03		.05	.04	.05	.05	.77						2.69	
Earlham (near)	Des Moines				T.			.46					.05						2.10		T.		.06	.41	.02	.15	.56							3.81	
Fairfield	Skunk		.60					.78	.98				.64					.01	2.40				.50	.75	.89			.26						7.81	
Glenwood	Missouri					.25	.45	.12					.05								.06			T.	T.		.22							1.15	
Indianola	Des Moines		.14		T.	T.		.96					.06					.21	1.08		T.		.08	.61	T.	.15	1.02							4.31	
Keokuk**	Mississippi		.43			.02	.33	.35	.67		T.		.37	.06				.28	T.	T.		.55	.59	.80			.10		T.					4.55	
Keosauqua	Des Moines			.21	T.	.04		.12	.29	.37			.21	T.				2.00				.55	.45	.73			.07							5.04	
Knoxville	Des Moines	.08	.12		T.			.56	.04				.04				.08	.72		T.			.25	1.16	.15	.15	.40							3.75	
Lacona	Des Moines		.01			.01		.98	.02				.04	.01			.04	1.25					.40	.38	.25	.05		.78						4.22	
Lamoni	Grand		.03			.25		.25	T.				T.						.25				.02	.03	.27	T.		.13						1.23	
Lenox	Missouri		.08			.27	.18	.07				T.	.03					.02			T.		.13		.20	.02		.22							1.22
Mount Ayr	Grand		.39		T.		.31	.17	.71				T.	T.				.19	T.	.03			.17	T.			.16							2.13	
Mt. Pleasant	Skunk		.75				T.		.43				.08	.06			.05	1.93			T.	.47	.29	.66	.01		.04							4.77	
Oakland	Nishnabotna					.15	.02	.02					.10						.29						.05		.23								0.86
Oskaloosa	Des Moines	T.	.07		T.	T.		1.15	.07	T.	T.		.13	.04			T.	.36				.39	.64	.58	.12		.22	.03						3.80	
Ottumwa	Des Moines		.17	.15	T.			1.03	.94		T.		.11	.07	T.			2.23				.36	.08	1.29			.26							6.69	
Red Oak (near)	Nishnabotna		T.				.33	.20					T.								T.		.25	T.		T.	.23							1.01	
Riverton (near)	Nishnabotna		.01		.02		.35	.92	.01				.09	.07							.01			.30	.01		.15							1.94	
Sigourney (near)	Skunk		.23		T.			1.03	.53		T.		.10	T.	T.		.38	.40		T.		.40	.66	.62	.07		.19	T.						4.61	
Stockport	Skunk		.50	T.		T.	.06	.25	.41				.38	.06				2.56		T.		.28	.19	.67			.10							5.46	
Thurman	Missouri		T.			.34	1.26	.06					.07						T.		T.			.13			.11							1.97	
Tingley	Platte		.11		T.		.21	.95				T.	.08					.13			.04		.05		.13	.01						T.		1.71	
Washington	Skunk		.98	.10	T.			.18	.74	.18	.01		.59	T.			.13	.67				.30	.88	.40	.02		.24					T.		5.42	
Wescott (near)	Mississippi		.50				.25	.25	.50		T.		.20	T.				2.65				.67	.25	.60			.05						5.85		
Winterset	Des Moines				T.			.52	.25				.09								.01		.03	.50	.08	.10		.72				T.		2.72	
Omaha, Neb.***	Missouri				.01	T.	.19	.13	.09				.05	.05					T.	.53		.03				.02	.20	.06						1.36	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.
 |||Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
 ***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.
 **Incomplete.
 *Precipitation included in the next following measurement.
 T. Precipitation is less than .01 inch rain or melted snow.

the month and considerable low lands were under water. At Sioux City the highest May stage of record, 16.8 feet, occurred on the 13th, which was the highest stage recorded since July 7, 1905. At Omaha the crest stage was slightly above flood stage. Much bottom land was flooded but timely warnings prevented any serious loss. The only important rise on interior rivers occurred during the middle of the 4th week. Several serious washouts occurred in small streams in the southeastern portion of the State.

ERRATA

Report for April, 1927. Page 26. Dubuque. Precipitation published 3.95 inches, should be 4.12 inches; departure published +1.27 inches, should be +1.44 inches. Page 28, amount recorded on 20th, 0.20 inch, should be 0.37 inch; total recorded 3.95, should be 4.12 inches.

NORMAL RAINFALL MAPS

Beginning with this the May issue of Climatological Data, on the page with the map of current rainfall, a map will be published showing the normal rainfall, based on the records of stations having 30 or more years of record. In some cases shorter records have been given consideration, but the maps have not been greatly modified by such consideration. Several of the records are for more than 50 years.

At some stations like Monroe, where the short period record gives averages that are much too high to harmonize with surrounding stations, it has been necessary to wholly ignore these records, upon the belief that in the next 40 years or so such records will smooth out into harmonious relation with neighboring stations. On the other hand Oskaloosa, though apparently too low in rainfall in most of the months, has been given full weight because of its long and well kept record.

Such maps are of necessity only approximations, yet they serve a useful purpose in quickly visualizing the available data. There has been much demand for such maps from schools, statistical and commercial institutions and research workers generally.

Daily Maximum and Minimum Temperature for the Month of May, 1927

Table with columns for Stations, days (1-31), and Mean. Rows are grouped by Northern Division, Central Division, and Southern Division, listing various Iowa cities and their daily temperature ranges.

A, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

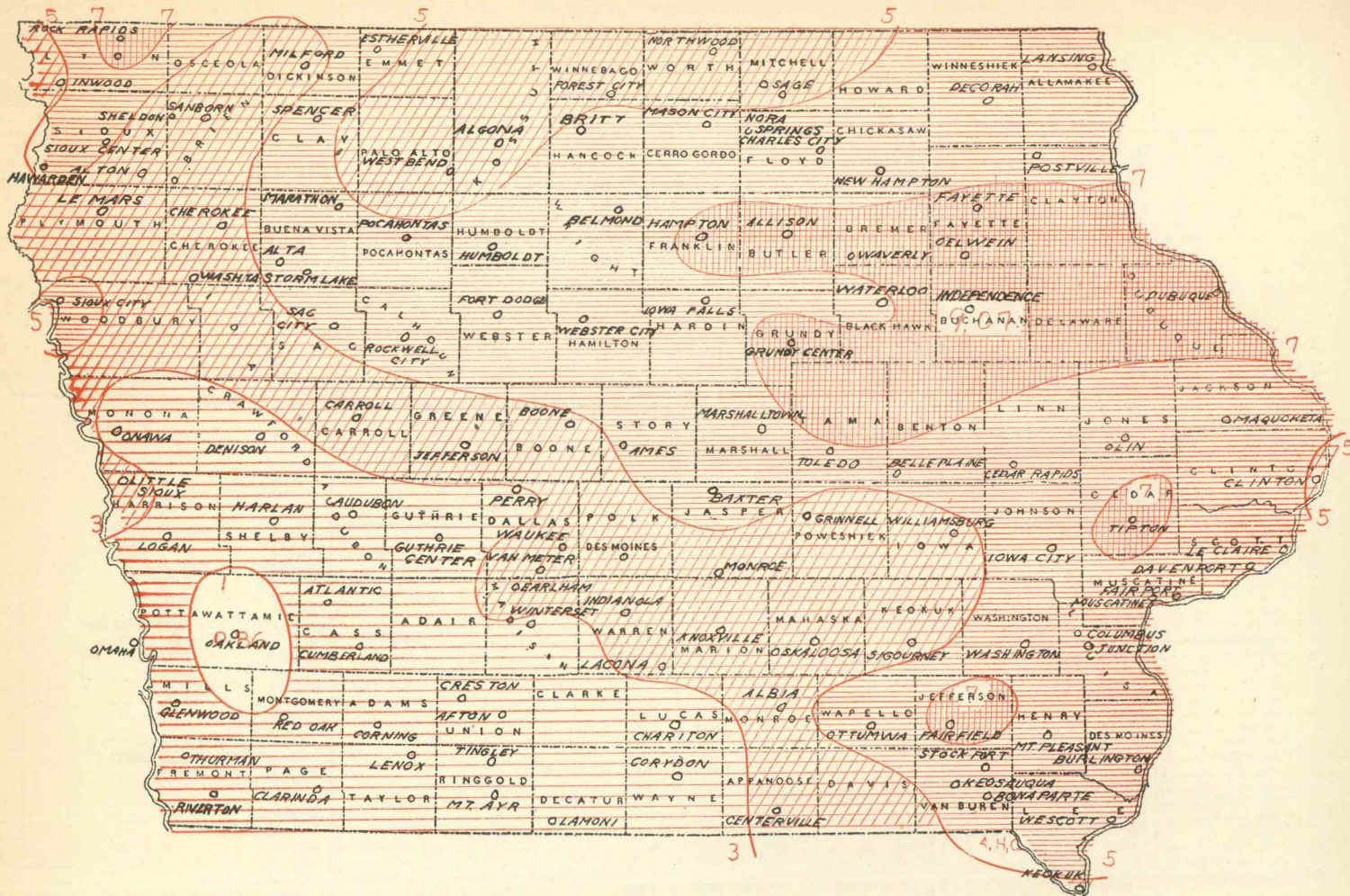
IOWA STORMS, APRIL, 1927

Date	County	Township	Nature of Storm	Time	Storm Moved From	Width of Path Miles	Length of Path Miles	Area Sq. Miles	Size of Hailstones Inches	Damage	Persons	
											Injured	Killed
4	Floyd	St. Charles	Wind							\$160		
4	Floyd	Rock Grove	Wind							\$400		
4	Grundy	Palermo	Hail	2:30 p.	SE to NW							
4	Poweshiek	Pleasant	Hail	10:30 a.	E to W	1 1/2			Walnuts	Many windows broken		
19	Washington	Crawford & Oregon	Wind	2:00 p.	SE to NW	1 1/2				\$20,000		

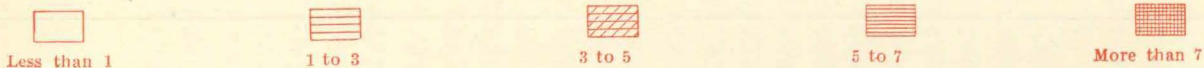
IOWA STORMS, MAY, 1927

1	Lucas	Otter Creek	Wind & Hail	3:00 a.	E to W				Small	Bldgs. \$600, Livestock \$100		
2	Cerro Gordo	Lake & Mason	Wind	5:15 p.								
8	Dubuque	Dubuque	Flood	10:00 a.						\$50,000		
8	Boone	Grant	Hail & Flood	5:00 p.	NW to SE				1/2	Crops, \$18,000		
8	Iowa	Pilot	Hail & Wind	9:15 p.	S to N				1	Considerable to Bldgs		
8	Keokuk	Warren & Washington	Hail & Wind	7:30 p.						\$8,500		
8	Keokuk	Adams	Hail	8:00 p.						Windows and Poultry		
8	O'Brien	Hartley & Omega	Tornado	8:00 p.	S to N	1/8				\$20,000		
8	Woodbury	Sioux City	Wind		SW to NE					\$1,000		
9	Clinton	Dewitt	Tornado	4:15 p.	SW to NE	1				\$15,000		
9	Scott	Winfield	Tornado	4:05 p.	SW to NE	100						
						rds.				\$7,000		
13	Keokuk	Lafayette	Tornado	3:00 p.	W to E	1/4	3	1		\$3,000		
13	Woodbury	Woodbury	Hail		NW to SE					\$200		
15	Lyon	Wheeler	Wind	6:30 p.	SW to NE					\$300		
17	Butler	West Point	Hail	8:40 p.	NW to SE					\$1,500		
17	Cherokee	Cherokee	Hail	11:00 p.					1	Hen eggs		
17	Franklin	15 mile strip	Hail	9:30 p.	N to S	15	20	300	3/4	\$10,000		
17	Grundy	Blackhawk & Palermo	Hail	11:00 p.	NW to SE	3			2	\$5,000		
17	Monroe	Union	Hail	11:59 p.	N to S				Walnuts	Small Grain		
17	Tama	Grant & Perry	Hail	11:00 p.	NW to SE				2	\$8,000		
17	Tama	Lincoln	Hail	11:00 p.	NW to SE				2	Bldgs. \$12,000; Crops, \$5,000		
18	Benton	Fremont	Hail		NW to SE				1 1/2	\$700		
18	Buchanan	Homer	Hail	4:00 p.	NW to SE	8			1 1/2	\$18,000		
18	Emmet	Estherville	Hail		NW to SE	8				Fruit		
20	Clayton	Cass	Wind	2:30 p.	W to E	2				\$2,000		
20	Fayette	Scott & Putnam										
20	Clayton	Sperry	Wind	2:00 p.	SW to NE					\$1,500		
20	Greene	Cedar	Hail	10:15 a.	SW to NE				1	Fruit, 30%		
21	Harrison	Jefferson	Wind	1:30 a.	SE to NW					Bldg. \$5,000; Livestock, \$500		
23	Allamakee	Ludlow & Union City	Hail	10:00 p.	SW to NE				1 1/2	Bldg. \$2,500; Crops, \$500		
23	Iowa	Troy	Tornado	6:00 p.	SW to NE	1/4	6	2		\$25,000		
25	Delaware	Prairie	Hail & Wind	3:00 p.	SW to NE					Bldgs. \$550	2	1
26	Harrison	Boyer	Hail & Wind	11:00 p.	SW to NE					\$7,000		
27	Cass	Union	Wind	3:30 a.	SE to NW					\$1,000		
27	Madison	Jackson & Webster	Wind	3:00 a.	W to E					Bldgs. \$2,500		
27	Pocahontas	Cedar	Wind	6:00 a.	SE to NW					\$5,000		
27	Pottawattamie	Minden	Wind	3:00 p.	SW to NE	2				\$500		
27	Shelby	Union, Greely & Westphalia	Hail & Wind	2:00 a.	NE to SW				1	Bldgs. \$19,000		
27	Shelby	Lincoln	Hail & Wind	2:00 a.	S to N				1/2	\$5,000		
27	Warren	Belmont	Tornado	4:00 p.	SW to NE					\$6,000		
29	Harrison	Lagrange	Wind	12:30 a.	E to W					Bldgs. \$1,000		

TOTAL PRECIPITATION, MAY, 1927

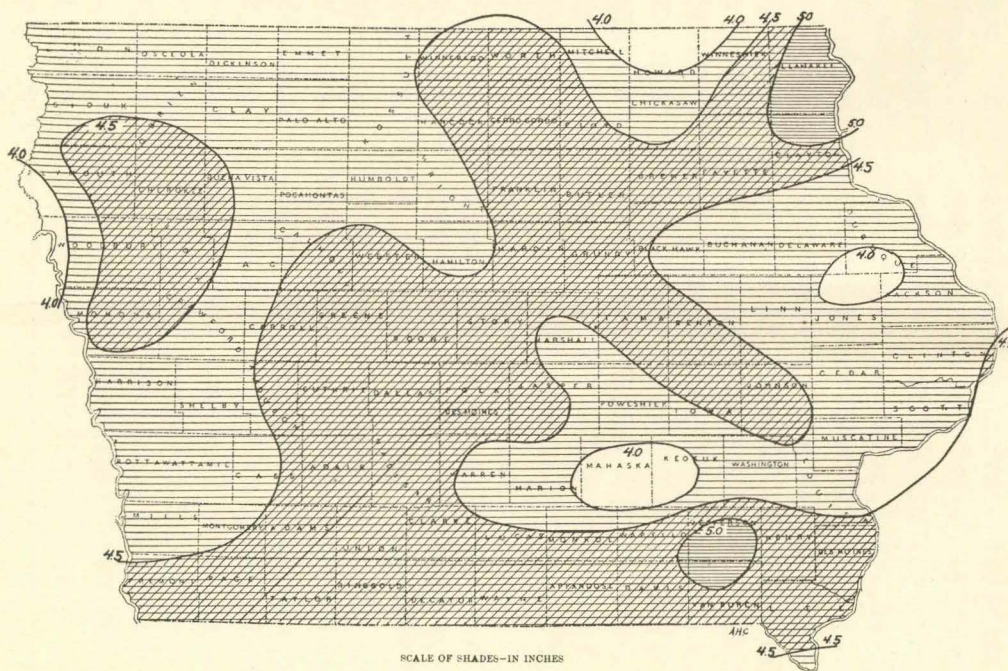


SCALE OF SHADES IN INCHES

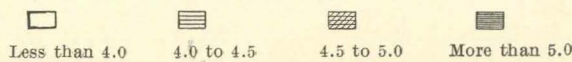


NORMAL PRECIPITATION, MAY

(Based on station records of 30 years or more)



SCALE OF SHADES—IN INCHES



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.
 CHARLES F. MARVIN, Chief.

CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
 IOWA WEATHER AND CROP BUREAU
 CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, JUNE, 1927 No. 6

GENERAL SUMMARY

June, 1927, was disagreeably cool during the greater portion of the month. The first 23 days, with the exception of two brief periods, were continuously below normal, and had it not been for an unusually warm period during the last week the month would have ranked as one of the coolest summer months of record. As it finally ended the month did not average as cool as last June. During the coolest part of the month there was a decided deficiency of sunshine and though the sunshine was almost continuous during the last eight days, the average was below normal. As was the case in May the deficiency in temperature was due mainly to low maxima. The deficiency in temperature was unusually uniform but there was a decided contrast from east to west; over the eastern portion the deficiency was marked and it diminished to the Missouri River where several stations reported a deficiency of less than 0.5°. Light frost was reported from several stations on the 5th and 15th but no damage resulted.

The precipitation for the State as a whole averaged slightly more than one-half the normal and was unevenly distributed; several stations reported less than half an inch. There were numerous local heavy downpours. The principal one occurred in the southern portions of Greene and Boone Counties on the 8th, and there are no official data covering the storm. The rainfall was reported from four to thirteen inches and it is evident that it was very heavy as it produced a rise of nearly two feet on the Des Moines River at Des Moines and Beaver Creek reached an unusual height. The principal damage from this storm was to crops though several bridges were destroyed and railway tracks were considerably damaged.

Other locally heavy rainfall occurred in this area on the 19th-20th and also in the vicinity of Storm Lake, Iowa City and Olin. The principal damage in the last named places was due to flooded basements. There was a decided deficiency in rainfall over a rather wide strip running north-eastward entirely across the State and at the end of the month a rather severe drouth had developed over much of the area. Due to the prevailing cool weather, crops generally were able to withstand the drouth but the hot, dry and windy period that began on the 23d and continued the rest of the month was telling on some crops. Due to an excess of subsoil moisture corn suffered very little though it had begun to curl in localities, but pastures were failing

fast and gardens were very badly injured, potatoes especially. The berry crop, which had been very promising, was badly damaged and many berries were drying on the vines. Most small grain were advanced so that they escaped damage and conditions were ideal for harvest which had begun in portions of the State. Conditions were also favorable for hay harvest.

F. L. D.

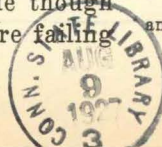
TEMPERATURE

The mean temperature for the State, as shown by the records of 104 stations, was 66.4°, or 2.9° lower than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 65.1°, or 2.9° lower than the normal; Central, 66.7°, or 2.9° lower than the normal; Southern, 67.4°, or 2.8° lower than the normal. The highest monthly mean

COMPARATIVE DATA FOR THE STATE—JUNE

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With Drs. of in. or more	Clear	Partly cloudy	Cloudy
1873	74.5	+ 5.2	96	56	4.68	+ 0.15	8.40	1.20					
1874	71.4	+ 2.1	98	47	5.83	+ 1.30	8.55	2.60					
1875	67.5	- 1.8	92	45	7.81	+ 3.28	10.80	1.63					
1876	67.6	- 1.7	92	41	4.09	+ 0.44	10.34	0.25					
1877	66.9	- 2.4	92	40	6.80	+ 2.27	13.12	3.21					
1878	66.7	- 2.6	94	44	6.34	+ 1.81	11.60	2.78					
1879	69.4	+ 0.1	92	40	5.12	+ 0.59	10.60	1.47					
1880	71.0	+ 1.7	96	42	4.40	+ 0.13	11.12	1.03					
1881	70.4	+ 1.1	100	40	7.37	+ 2.84	17.37	2.75					
1882	68.1	- 1.2	98	33	7.48	+ 2.95	15.41	2.93					
1883	67.6	- 1.7	96	38	6.69	+ 2.16	14.20	1.30					
1884	70.2	+ 0.9	95	36	3.65	+ 0.88	8.80	0.70					
1885	67.9	- 1.4	89	42	5.08	+ 0.55	11.04	1.31					
1886	69.3	+ 0.0	98	34	1.73	- 2.80	3.42	0.10					
1887	72.1	+ 2.8	103	40	2.93	- 1.60	7.02	0.96					
1888	69.4	+ 0.1	102	34	2.93	- 1.60	6.01	0.96					
1889	66.7	- 2.6	98	33	4.75	+ 0.22	9.87	1.69					
1890	72.2	+ 2.9	106	39	6.67	+ 2.14	16.53	1.57		11	12	10	8
1891	69.1	- 0.2	99	37	5.39	+ 0.86	19.88	1.68		11	8	10	12
1892	69.2	- 0.1	102	42	5.19	+ 0.66	14.76	0.67		10	12	11	7
1893	71.2	+ 1.9	100	40	3.91	+ 0.62	7.56	1.36		8	15	11	4
1894	75.2	+ 3.9	104	34	2.07	- 1.86	6.20	0.57		7	16	10	4
1895	69.7	+ 0.4	102	34	4.32	+ 0.21	9.26	0.98		10	11	11	8
1896	69.1	- 0.2	100	40	3.11	- 1.42	7.89	0.81		9	12	13	5
1897	69.1	- 0.2	103	29	3.81	+ 0.72	9.38	1.03		10	10	12	8
1898	71.4	+ 2.1	99	42	4.72	+ 0.19	12.48	1.90		9	13	10	7
1899	70.7	+ 1.4	100	42	5.04	+ 0.51	11.99	1.10		10	12	13	5
1900	69.7	+ 0.4	102	38	3.98	+ 0.55	12.35	0.67		5	17	10	3
1901	72.3	+ 3.0	106	30	3.71	+ 0.82	7.84	1.05		9	15	11	4
1902	65.2	- 4.1	97	32	7.16	+ 2.63	16.04	1.46		14	8	11	11
1903	64.6	- 4.7	96	30	2.86	- 1.67	6.04	0.75		10	13	10	7
1904	67.1	- 2.2	94	35	3.45	+ 1.08	8.35	0.44		7	13	10	7
1905	69.9	+ 0.6	100	36	5.53	+ 1.00	14.89	1.80		10	12	11	7
1906	67.9	- 1.4	99	37	3.92	+ 0.61	8.27	1.48		8	15	10	5
1907	66.5	- 2.8	98	36	5.35	+ 0.82	9.33	2.07		11	14	9	7
1908	67.1	- 2.2	94	35	5.66	+ 1.13	11.88	1.77		13	12	10	8
1909	69.1	- 0.2	96	40	6.41	+ 1.88	13.80	2.80		13	12	10	8
1910	69.5	+ 0.2	105	33	1.99	- 2.54	5.51	0.05		7	18	7	5
1911	75.7	+ 6.4	108	36	1.82	- 2.71	6.28	0.06		5	20	8	2
1912	66.2	- 3.1	101	34	2.74	- 1.79	5.71	0.78		7	15	9	3
1913	71.5	+ 2.2	102	33	3.31	+ 1.22	8.95	0.74		7	19	8	6
1914	72.2	+ 2.9	101	40	5.57	+ 1.04	13.24	1.17		13	12	14	4
1915	65.1	- 4.2	91	31	4.16	+ 0.37	9.99	1.72		11	12	12	6
1916	64.5	- 4.8	96	38	3.71	+ 0.82	7.96	1.41		10	13	11	6
1917	66.0	- 3.3	100	32	6.65	+ 2.12	13.82	3.04		12	13	10	7
1918	70.8	+ 1.5	104	38	5.29	+ 0.76	10.19	1.55		11	16	10	4
1919	71.9	+ 2.6	98	41	6.13	+ 1.60	12.25	1.82		13	12	12	6
1920	70.7	+ 1.4	99	40	3.56	+ 0.97	8.48	1.25		9	16	10	4
1921	74.7	+ 5.4	100	40	3.76	+ 0.77	8.85	0.56		9	16	10	4
1922	72.2	+ 2.9	104	38	1.82	- 2.71	7.19	0.28		6	19	8	3
1923	70.9	+ 1.6	100	40	4.93	+ 0.40	7.69	2.43		12	14	10	3
1924	66.8	- 2.5	96	35	8.10	+ 3.57	14.92	4.00		14	11	14	5
1925	70.4	+ 1.1	98	38	6.64	+ 2.11	13.80	2.89		12	15	9	6
1926	66.2	- 3.1	105	32	4.52	+ 0.01	12.09	1.05		8	16	9	5
1927	66.4	- 2.9	101	35	2.42	- 2.11	7.05	0.55		9	16	7	7

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



Climatological Data for June, 1927

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall, Precipitation .01 in. or more, Clear, Partly cloudy, Cloudy), Prevailing direction of wind, Observers. Includes sections for Northern Division, Central Division, and Means and extremes.

Climatological Data for June, 1927—Continued

Main climatological data table for June 1927, including columns for Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall), Number of Days (Precipitation, Clear, Partly cloudy, Cloudy), Prevailing direction of wind, and Observers.

The departure from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Table with columns for Stations, Barometric Pressure (Mean, Highest, Date, Lowest), Relative Humidity (Mean, 7 a.m., 12 noon, 7 p.m., Lowest), Wind (Total movement, Average hourly velocity, Miles From, Date), Sunshine (Per cent of possible, Departure from normal).

*Dubuque. §Omaha. ¶Sioux City. †Local mean time.

PRECIPITATION

The average precipitation for the State, as shown by the records of 115 stations, was 2.42 inches, or 2.11 inches less than the normal. By divisions, the averages were as follows: Northern, 2.20 inches, or 2.41 inches less than the normal; Central, 2.13 inches, or 2.33 inches less than the normal; Southern, 2.92 inches, or 1.59 inches less than the normal. The greatest amount, 7.05 inches occurred at Olin, and the least, 0.55 inch, occurred at Audubon. The greatest amount in 24 consecutive hours, 4.68 inches, occurred at Iowa City on the 21st.

MISCELLANEOUS PHENOMENA

Aurora: 4th.
Fog: 3d, 4th, 7th, 16th, 17th, 18th.
Frost (light): 5th, 15th.
Hail: 4th, 8th, 9th, 10th, 11th, 19th, 20th.
Halos (lunar and solar): 5th, 7th, 8th, 9th, 12th, 13th, 16th, 19th, 20th, 24th.
Thunderstorms: 1st, 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 16th, 17th, 18th, 19th, 20th, 21st, 22d, 23d, 30th.
Winds (high): 9th, 24th, 25th, 27th, 28th, 29th, 30th.

RIVERS

was 71.0°, at Thurman, and the lowest was 62.4°, at Postville. The highest temperature reported was 101°, at Inwood, on the 28th, and the lowest was 35°, at Webster City, on the 5th. The temperature range for the State was 66°.

Except for a few slight rises on the Mississippi River there was a gradual fall throughout the month, with the average stage slightly above normal. Similar conditions prevailed on most interior rivers but unusually heavy rainfall on the 8th caused small streams in

Daily Precipitation for June, 1927

Stations	Drainage Basin	Day of Month																															Totals	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Northern Division</i>																																		
Akron	Big Sioux	.18		1.09		.03						.12				.09	.30			.97	.16	.09									.11	3.14		
Algona	Des Moines	.40						.10	.30	.28		.30				.15	.64	.09	.16	.24												2.08		
Allison (near)	Cedar	.03						.15	.02	.15		.03				.18	.40		.22	.13												1.59		
Alta	Raccoon	1.62	.02			.06						1.35				.62	.02		.15	.13	.24											4.21		
Alton	Floyd	.06	.56			.09						.21				.08	.23			.79												2.02		
Belmond	Iowa	.26	.02			.02		.10	3.60		.27					.22			.47	.05	.14											5.15		
Britt	Iowa	.20	T.			T.		.08	.05	.16		.16				.38	.15		1.03	.09	.08											2.22		
Charles City***	Cedar	.11	T.			T.	T.	.25	.35	.08					.01	.29	.04		.15	.20	T.											1.48		
Cherokee	Little Sioux	.16	.07	T.		.08					1.14					.57			.71	.09												2.82		
Decorah	Mississippi	.35	.07	.05				.12	.03	.28		.08				.03	.13			.06		T.										1.20		
Dubuque***	Mississippi	T.	T.	.11	.03			T.	.01	.16		.07	T.			T.	.01		1.37	.55	T.											2.31		
Estherville	Des Moines	.05		.06					.03			.30				.10	.25		.27	.18		.03										1.27		
Fayette	Mississippi	.08				T.	.06	.17	.50	.16						.10	T.		.10	.08	.02											1.27		
Forest City	Cedar	.12		.08		T.	T.	T.	.25		.12					.08	.24	T.	1.12	.12	.05											2.18		
Hampton	Cedar	T.	.08					.50	.26		.38					.22	.50		.57	.09	.06											2.60		
Hawarden	Big Sioux	.10	.38			.10					.43					.09	.25		.74	.05	.06									.29	2.49			
Humboldt	Des Moines	.18	T.			T.				T.	.34					.28	T.	.10	1.00	.02	.08											2.00		
Independence	Wapsipicon						T.				.30	.41							.08	.61	.04											1.44		
Inwood	Big Sioux	.05	.12	T.		T.	.02			T.	.02	.22				.13	T.		.61	.35	.06											1.58		
Lake Park (near)	Little Sioux	.05	.12			.10					.51					.02	.14		.77	.08												1.74		
Lansing	Mississippi	.04	.22	.02				.05	T.	.28		.10				T.	.09	.22		.16			.11									1.29		
Le Mars	Floyd	.21	1.19			.20			T.	.66						.09	.49	.01	.61	.19	.13											3.78		
Marathon	Raccoon	.37	.09			.08		T.		.51						.33	.09		1.12	.05	T.											2.64		
Mason City	Cedar	.23	T.	.02	.02	.01		.03	.63	.01	.04					.24	.10		.68	.18	.04											2.23		
New Hampton	Wapsipicon	.14	T.					.47	.40	.11	.04					.15	T.		.27	.20	T.											1.74		
Northwood	Cedar	T.		T.		T.		.30	.30	.20						.55	.06		.75	.45	.06											2.67		
Oelwein	Wapsipicon								.50	.10						.10			.20	.30												1.20		
Osage	Cedar	1.14						.62	.76	.05	.05					.36	.05		.30	.28	.04											3.60		
Pocahontas	Des Moines	.72	.03			.08				.35						.05	.20		.07	.17												1.67		
Postville	Mississippi	.41				.06	T.			.31	.10					.07	T.		.05	.05	.04											1.09		
Rock Rapids	Big Sioux	.04	.08			.07				.65						.14			.75	.03	.03											1.99		
Sanborn	Floyd	.26				.09				.30					.08	.19			1.00													1.92		
Sheldon	Floyd	.01	.23			.09	.07		.04	.24						.07	.28		1.09	T.	.06											2.18		
Sioux Center	Floyd	.02	.46			.37			.03	.24									.85													2.11		
Spencer	Little Sioux	.10	.10	.04				.15	.40	.40						.05	.60		.30		.10											1.84		
Storm Lake	Raccoon	.61	.02			.03				1.66						.09	.52		2.05		.10											5.08		
Washta	Little Sioux	.41	.02			.04		.04		.43			T.			.24	.54		.45	.10												2.27		
Waterloo	Cedar			.07			T.		.08	.12		.25						.01	.01	.07			T.									0.61		
Waverly	Cedar	.07						.01	.04	.28	.25					.14	.10		.01	.40	.01											1.31		
West Bend	Des Moines	.46	.06			.04			T.	.27						.05	.16	T.	.17	.07												1.29		
<i>Central Division</i>																																		
Ames	Skunk	T.	.08					.15		.85	.02	T.				T.		T.	.01	.15												1.26		
Audubon (near)	Nishnabotna	T.	.02	.20						.05	.07	.05			.05	.05			.02	.02	.02											0.55		
Baxter	Skunk	T.	.13				.04	.61	.24	.14	.88	.05	.02			.02			.37	.11	T.											2.11		
Belle Plaine	Iowa	T.	.21			T.		.12	.02	.22	.23	T.							.14	.03												1.03		
Boone (near)	Des Moines	T.	.02	.08				T.	1.14		1.06	.07				.03		.11	.20	.03	.04												2.78	
Carroll	Raccoon	.05		.06			T.	.02			.66							.13		.32	.03											1.27		
Cedar Rapids	Cedar		.01	.26				.08	.11	.22	T.					T.			1.85		.05											2.58		
Clinton	Mississippi	.04	.19	.64					.06	.02	.03							.01		.84												1.86		
Davenport***	Mississippi	.17	1.04	.07		T.	T.	T.	.06	.01	.26	.02	.10			T.			.34	.71	.05	.02	.01									2.83		
Davenport No. 2	Mississippi	.20	.44	.84				T.	.24	.15	.14	.12	T.			T.			1.18	.09	.01											3.41		
Denison	Missouri	.12	.07					.25		.04						.06	.21		.71	T.	T.											1.46		
Des Moines***	Des Moines	.06	.21			T.		.02	.07	.29	.01	.01			T.	.02		T.	T.	T.	T.											0.69		
Fairport	Mississippi	.38	.40	.62					.07	.45	.21	.14							.27	.71	.05											3.30		
Fort Dodge	Des Moines	.01	.22	.04						.61							.23	.07	.07	.33	.22	.01											1.66	
Grinnell	Iowa	.01	.22			T.	.16	.23	.20	.42	.03					T.	.01		.05	.05													1.83	
Grundy Center	Cedar		.04					T.	.50	.06	.26							.02	.12		.24												1.24	
Guthrie Center	Raccoon	T.	.13					.36	.29	.29			.05					.09	.34	.34													1.60	
Harlan	Nishnabotna	T.	T.	.13		T.		.12		T.	.05	.05			.17	.09		.38		T.													0.99	
Iowa City	Iowa	T.	.13	.44			.01	.10	.03		.22	.02	T.					.02		4.68	.02											5.67		
Iowa Falls	Iowa							.24	.03		.25					.07	.04	.08		.34	T.												1.02	
Jefferson	Raccoon	.03	.11			T.				.76	.01					T.	.13		.94	.38	.28	.05											2.60	
Le Claire	Mississippi	T.	T.	.08	1.04			.11	.11		.14	.04	.04				.02		.12	.54	.03												2.15	
Little Sioux	Little Sioux	.35	.16	.03		.49		.35		.01	.03				T.	.16	.26		.12	.06													2.02	
Logan	Missouri	.28		.15			.15	.31		.02	.08					.08	.18		.15	.02													1.42	
Maquoketa	Maquoketa	.03	.02	.11						.15						.01			.32	2.90	.09												3.64	
Marshalltown	Iowa	T.	T.	.07					1.34	.15	.23	T.				T.	T.			T.	T.												1.79	
Monroe	Des Moines	.34																																

Daily Precipitation for June, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>Southern Division</i>																																				
Afton	Grand			.68					.09			.65	.17	.12			.11	.02			.17														2.01	
Albia	Des Moines		.48	.16	1.00		T.		.08			.32	.24	.03			.05			.53			.02											2.91		
Atlantic	Nishnabotna			.16				.02	.36	.02			.03	.10			.15			.02	T.	T.												0.86		
Bonaparte (near)	Des Moines		.44	.60	1.14		T.				T.	.45	.83	.34			T.	T.		.08	.33	T.												4.21		
Burlington	Mississippi			.15	1.38						.06		1.72	.26	.04				T.		.75		.01											4.37		
Centerville	Chariton		.31	1.46	.56				.02		T.	.32	1.55	.37			T.	.02			.21	.22		T.										5.04		
Chariton (near)	Chariton		.30	1.00					T.			.38	.18	.20			T.			.34	T.													2.40		
Clarinda	Nodaway		.06	.30	.75			.02	.03			.30	.60	.03				.12	.02		.15													2.38		
Columbus Jct.	Iowa		.64	.58	.55				.02		.01	.24	.20	.18				.01			.12			T.										2.57		
Corning (near)	Nodaway			.60					.60			.63	.80	.13			T.				.25													3.01		
Corydon	Chariton		1.07	.95	.03				.04			.38	.56	.44			.04	.04			1.42													4.97		
Creston	Missouri			.68				.10				.31	.22					.12			.13													1.56		
Cumberland (near)	Nodaway			.20			T.		.37			.05	.08	.05			.05	.02			.04	.04												0.90		
Earlham (near)	Des Moines			.29					T.	T.		.20	.08	T.			T.	T.		2.35	T.		T.											2.92		
Fairfield	Skunk		.15	1.50	.22						.05	.15	.40	.20			.01				.12	.32	T.											3.12		
Glenwood	Missouri			.22					.02				.26	.15				.06	.12			.02	.02												1.13	
Indianola	Des Moines		.09	.48					.27			.53	.04	.03			.02	T.		.03	.02	T.													1.51	
Keokuk**	Mississippi		1.47	1.27	.04						.07	2.34	.17	.09	T.			.06		.03	.87	.22	.01												6.61	
Keosauqua	Des Moines		.24	.67	.98							.80	.86	.35			T.	T.			.15	.50													4.55	
Knoxville	Des Moines		.10	.63					.03			.20	.12	.03	.06			.08			.38	.21	T.												1.84	
Lacona	Des Moines		.02	.68					.02		.01	.12	.10				.02	.08			1.25	.18													2.48	
Lamon	Grand		.29	.34	.66				.13			.57	1.42	.59	T.			.10			.34	.47													4.91	
Lenox	Missouri		1.20	.64					.15		.17	.50	.29	.13			.15	.03		.27	.15														3.68	
Mount Ayr	Grand		.20	.78			T.		.10			.37	.29	.25	.42			.11	.14		.05	.66													3.37	
Mt. Pleasant	Skunk		.10	.43	1.95							.12		.83	.17						.09	.39													4.08	
Oakland	Nishnabotna			.29					.18				.15	.07				.05																		0.74
Oskaloosa	Des Moines		.76	.19	.03				.13		.03	.19	.05	.06			T.	.04			.09	.67	.04												2.28	
Ottumwa	Des Moines		.14	.70	.10				T.			.19	.52	.26			T.	T.			.37	.42	T.												2.70	
Red Oak (near)	Nishnabotna			.43					.21				.43				T.	.14															.12		1.33	
Riverton (near)	Nishnabotna		.05	.58			.01		.10			.48	.34	.34				.25				.26													2.41	
Sigourney (near)	Skunk		.55	.72	.08		T.	T.	.06		T.	.13	.18	.06			T.	.09			.78	.20	.04												2.89	
Stockport	Skunk		.17	2.00	.18							.14	1.18	.26				.02			.19	.51													4.65	
Thurman	Missouri		T.	.47							T.	.32	.21				.17	T.		T.	.31														1.48	
Tingley	Platte		1.66	.89					.11		.06	.44	.56	.27			.10	.04			.70														4.83	
Washington	Skunk		1.20	.63	1.18				.05	T.		.04	.18	.06				.10	.04		.42	.64	.13												4.53	
Westcott (near)	Mississippi		.45	2.50								2.00									1.10														6.05	
Winterset	Des Moines			.05	.40				.05			.20	.05	.07			.05	.05		.65	.03		.00												1.66	
Omaha, Nebr.**	Missouri		T.		.20	T.	T.	T.			.15		.05	.13	.03			.10	T.		.01	.05										.55		1.27		

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

- ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
- ***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.
- **Incomplete.
- * Precipitation included in the next following measurement.
- T. Precipitation is less than .01 inch rain or melted snow.

Greene and Boone counties to overflow, the greatest damage from high water occurred on Beaver Creek. The locally heavy rain caused a material rise on both the Raccoon and Des Moines Rivers. Locally heavy rains on the Wapsipicon and Iowa Rivers on the 20th-21st caused marked rises on these rivers. On the Missouri rather high and nearly stationary stages prevailed during the greater part of the month. Breaks in levees south of Omaha caused about 8,000 acres to be inundated.

ERRATA

Report for April 1927. Page 26. Sanborn, precipitation published 5.72 inches, should be 6.92 inches; departure published +2.72 inches, should be +3.92 inches. Page 27. Washington, highest temperature publishes 83° on 17th, should be 84° on 13th. Page 28. Sanborn, precipitation on 1st published 0.78 inch, should be, 1.93 inches; total published 5.72 inches, should be 6.92 inches.

DISCOIDAL, PEAR-SHAPED AND SPHERICAL HAILSTONES

By W. J. Humphreys

Reprinted from the Bulletin of The American Meteorological Society, August-September, 1926.

By fracture and through cohesion, hailstones may and do have many irregular and accidental shapes. The great majority, however, of hailstones have one or the other of three normally produced symmetrical forms: (a) spherical, by far the most common; (b) pear-shaped (c) discoidal. All these are alike in the essential fact that they consist of alternate accretions of clear and opal ice, gathered in the rain and snow levels, respectively, of the cumulus

cloud as they were driven from the one to the other under the opposing forces of gravity and the up-blast of the tempest.

When stones form quite within the ascending portion of a cumulus cloud they are equally exposed, approximately, on all sides, and therefore assume nearly spherical shapes, which usually they still have on reaching the ground.

However, as they fall towards the ground they are melted, to a greater or less extent, by the relatively warm air through which they pass. Hence those that are not rotating or rotating only about a vertical or nearly vertical axis, are moulded by this melting, when considerable, to approximate streamline forms, that is, pear shapes, with the bulged end down and the pointed end up.

Finally, if a stone falls from the front, say, of a thunder head and is caught on a sloping outer side of the uprushing column of air, it may be set rapidly rotating about a horizontal axis, just as balls and rings are set spinning on the side of a jet of water or air. This spin would whirl the water to the outer rim, and if maintained, as it would tend to be, through two or three rises and falls between snow and rain levels, would cause the stone also to catch most material on this rim and therefore to become discoidal with concentric rings of alternatingly clear and opal or snowy ice, precisely as from time to time some hailstones are found to be.

In short, it appears probable that hailstones are made spherical by equal exposure on all sides within the body of the uprushing air; discoidal by spinning on the outer side of the rising column; and pear-shaped by streamline melting while falling through the warm lower air.

Daily Maximum and Minimum Temperature for the Month of June, 1927

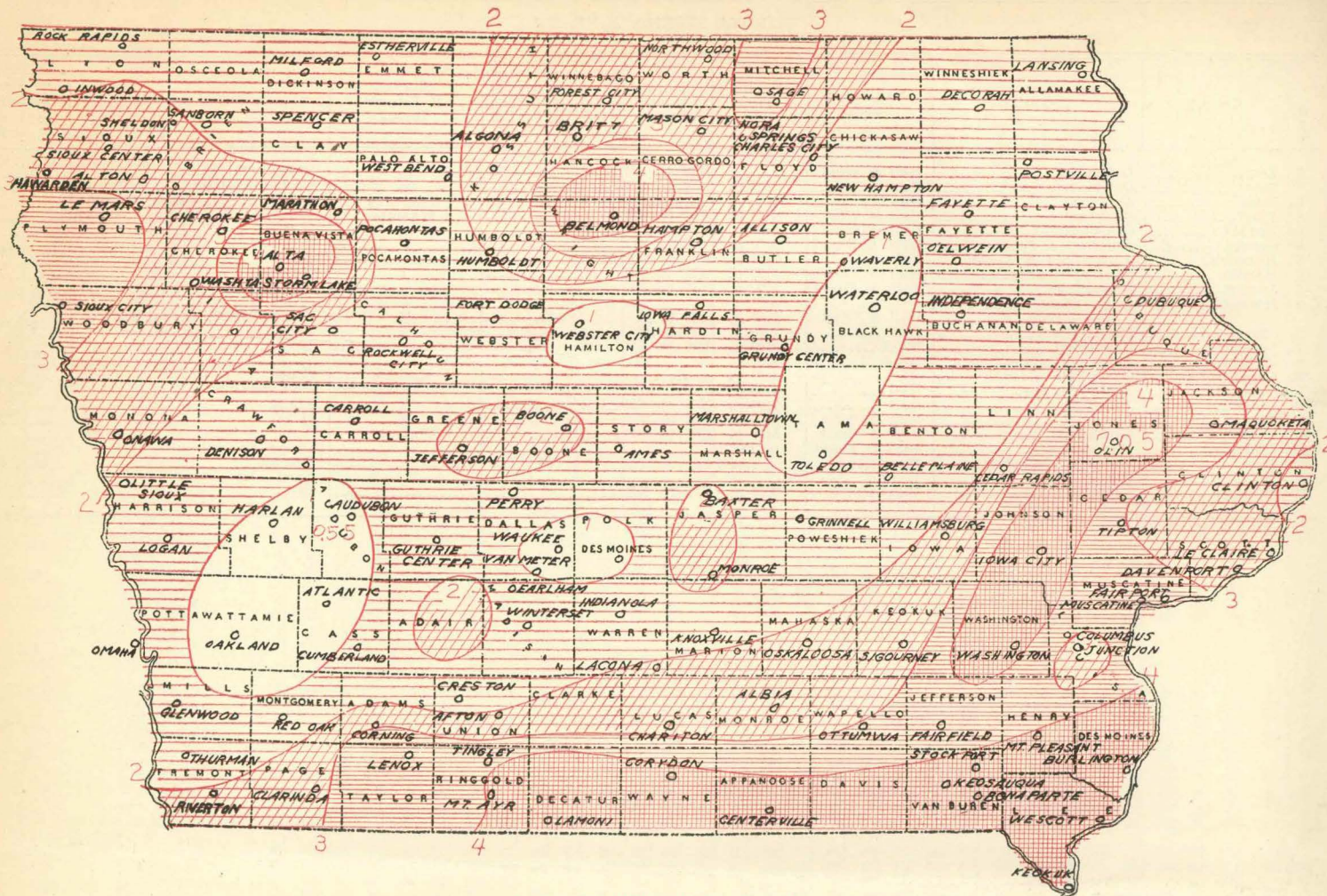
Table with columns for Stations, days 1-30, and Mean. Rows are categorized by Northern Division, Central Division, and Southern Division, listing various Iowa cities and their daily temperature ranges.

a, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

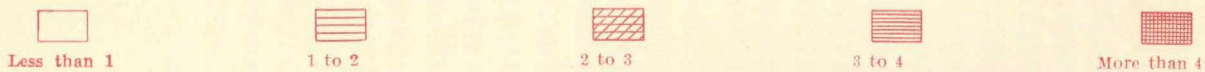
IOWA STORMS, JUNE, 1927

Date	County	Township	Nature of Storm	Time	Storm Moved From	Width of Path Miles	Length of Path Miles	Area Sq. Miles	Size of Hailstones Inches	Damage	Persons	
											Injured	Killed
3	Lee	Denmark	Hail & Wind		NW to SE	6	6	36	1/2	Bldgs. \$15,000		
7	Scott	Davenport	Hail	7:00 p.	NW to SE				1/2	Crops, \$30,000		
8	Boone	Amaquia	Hail	5:30 p.		4	7	28		Bldgs. \$2,500; Crops, \$25,000		
8	Floyd	Rockford	Hail & Wind	4:00 p.	SW to NE				Hen eggs	Bldgs. \$1,200; Crops, unknown		
8	Franklin	Geneva and Grant	Hail & Wind	5:00 p.	S to N				Walnuts	\$1,000		
8	Greene	Junction & Dawson	Rain & Flood	6:00 p.	N to S				1/2	\$4,000		
8	Hancock	Amsterdam & Magor	Rain	7:00 p.	SE to NW					\$10,000	1	
8	Hardin	Most of County	Hail & Flood	5:00 p.	NW to SE	12			1	\$50,000		
8	Jasper	Poweshiek	Rain & Flood	5:00 p.	NW to SE					Crops, considerable		
8	Marshall	Eden, State Center & Washington	Hail & Wind	7:00 p.	W to E				1/2	Bldgs. \$6,000; Crops, \$10,000		
8	Story	Indian Creek	Hail	4:30 p.	W to E				3/4	Fruit		
9	Decatur	Bloomfield	Wind	9:00 p.	NW to SE		6			Bldgs., considerable		
9	Wright	Lake	Wind	6:00 p.								1
18	Cerro Gordo	Clear Lake	Hail	4:00 p.					Marbles	Crops		
18	Kossuth	Northwest part	Hail	4:00 p.		1				Considerable		
18	Greene	Junction	Hail	7:00 p.	NW to SE				3/4	Light		
19	Adair	Lincoln	Hail & Wind	3:00 p.	S to N				1/2	\$1,500		
19	Greene	South half	Hail & Wind	3:00 p.	SW to NE				Walnuts	Some to buildings and crops		
20	Jackson	Maquoketa	Rain & Flood	p. m.						Crops flooded		
22	Mills	West end of County	Flood			3	10	30		\$100,000		
24	Polk	Beaver	Wind							None		1
27	Monona	Kennebec	Wind	9:00 p.	SW to NE					\$200		

TOTAL PRECIPITATION, JUNE, 1927

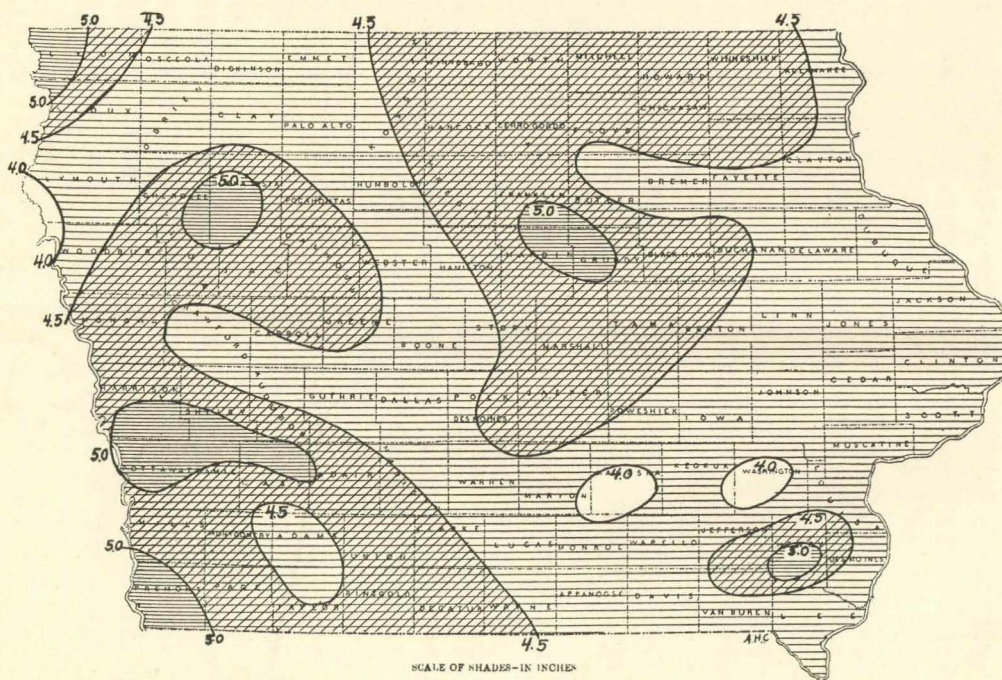


SCALE OF SHADES IN INCHES

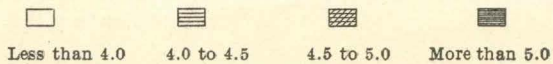


NORMAL PRECIPITATION, JUNE

(Based on station records of 30 years or more)



SCALE OF SHADES-IN INCHES



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.
CHARLES F. MARVIN, Chief.

CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, JULY, 1927 No. 7

GENERAL SUMMARY

The principal feature of the weather during July was the continuation of a drouth that began in June and affected almost the entire State. There were no unusual temperature conditions; the mean temperature for the State averaged less than one degree below the normal and the deficiency was general except at a few stations in the southwestern and south-central sections. The greatest deficiency occurred in the east-central, northeastern and northwestern portions. The temperature extremes were less than usual and there were no periods of oppressive weather. The longest period of warm weather extended from the 8th to 12th, inclusive, and the coolest period from the 14th to 25th, though there was an occasional day in this period that the temperature was normal or slightly above. During the warmest weather the heat was less oppressive than usual during July, due to a low humidity; and very few, if any, heat prostrations occurred. There were numerous cool nights but none that would be considered cold.

The rainfall averaged slightly more than one-half of the July normal, being least in the northern and greatest in the southern division. There were no general soaking rains and the amounts occurred mostly in the form of light showers at frequent intervals beginning at the first and continuing till the end of the month. There were several well defined periods of precipitation that covered most of the State, but as a rule less than one-half of the State received beneficial showers during the same periods. Much of the rainfall was marked by decided local contrasts and during periods that indicated rather general beneficial amounts many points did not receive more than traces. There were but five stations in the State that reported amounts exceeding the normal. The drouth was felt in nearly all portions of the State but the north-central, north-eastern and south-central portions fared the worst. Due to an abundance of subsoil moisture the corn crop in general was able to withstand the drouth till relief came, but there was permanent damage in some of the drier sections and some corn on high lands is very poor. Pastures were badly injured and many were burned bare and the showers were sufficient to revive them in only a few scattered places; meadows also were injured and late potatoes were cut short of growth and will make a poor crop over most of the State. Conditions were favorable for harvesting and threshing; harvesting was completed in nearly

all portions of the State and threshing was progressing rapidly and had been finished in some sections. Gardens were badly injured and made very little growth but they were greatly benefited by showers during the middle of the month.

Hailstorms and thunderstorms occurred on an unusually large number of days but generally they were confined to rather limited areas. The hailstorms were light as a rule, but there were several reported that were unusually severe in places and local damage was very heavy. For the State the damage was less than usual in July. Tornadoes were reported on three days and there was some damage from wind squalls.

F. L. D.

COMPARATIVE DATA FOR THE STATE—JULY

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. .01 in. or more	Clear	Partly cloudy	Cloudy
1873.....	74.0	+ 0.2	96	54	2.78	- 1.07	7.73	0.85					
1874.....	77.8	+ 4.0	101	56	3.04	- 0.81	6.15	0.55					
1875.....	72.8	- 1.0	97	56	6.05	+ 2.20	9.70	1.60					
1876.....	74.2	+ 0.4	95	54	6.15	+ 2.30	11.92	1.84					
1877.....	74.0	+ 0.2	97	54	2.35	- 1.50	7.58	0.38					
1878.....	76.5	+ 2.7	104	52	5.13	+ 1.28	13.20	0.90					
1879.....	76.0	+ 2.2	102	55	2.20	- 1.65	8.66	0.00					
1880.....	73.8	0.0	98	48	4.16	+ 0.31	10.40	1.30					
1881.....	75.9	+ 2.1	100	50	5.33	+ 1.48	16.31	0.28					
1882.....	69.1	- 4.7	94	46	3.66	- 0.19	7.30	0.85					
1883.....	72.9	- 0.9	100	46	5.14	+ 1.29	13.99	1.26					
1884.....	71.0	- 2.8	96	50	5.41	+ 1.56	11.51	0.70					
1885.....	74.6	+ 0.8	102	48	4.73	+ 0.88	11.45	0.68					
1886.....	76.2	+ 2.4	103	48	0.50	- 3.85	2.20	0.00					
1887.....	77.0	+ 3.2	105	45	2.85	- 1.00	8.43	0.87					
1888.....	75.9	+ 2.1	103	38	4.31	+ 0.46	8.45	1.17					
1889.....	72.6	- 1.2	102	40	4.00	+ 0.15	8.25	1.15					
1890.....	75.2	+ 1.4	110	45	2.04	- 1.81	6.16	0.06					
1891.....	68.5	- 5.3	90	41	4.22	+ 0.37	8.20	1.77		8	13	13	5
1892.....	73.0	- 0.8	104	38	5.29	+ 1.44	12.86	1.61		9	16	10	6
1893.....	75.0	+ 1.2	102	47	3.33	- 0.52	8.84	1.49		7	10	10	2
1894.....	76.4	+ 2.6	109	39	0.63	- 3.22	3.50	T.		3	22	8	1
1895.....	72.1	- 1.7	104	35	3.40	- 0.45	10.10	0.45		7	15	12	4
1896.....	73.6	- 0.2	104	42	6.90	+ 3.05	12.67	1.61		9	14	11	6
1897.....	75.6	+ 1.8	106	42	3.26	- 0.59	7.00	1.01		6	18	10	3
1898.....	73.4	- 0.4	102	42	2.98	- 0.87	12.88	0.55		7	19	9	3
1899.....	73.1	- 0.7	101	38	3.07	- 0.78	8.06	0.42		7	16	10	5
1900.....	73.4	- 0.4	102	37	6.15	+ 2.30	18.45	1.80		9	16	10	5
1901.....	82.4	+ 8.6	113	46	2.34	- 1.51	5.97	0.27		5	21	9	1
1902.....	73.1	- 0.7	99	41	8.67	+ 4.82	13.57	4.82		13	14	10	7
1903.....	72.9	- 0.9	100	40	4.83	+ 0.98	12.72	0.94		9	17	9	5
1904.....	70.6	- 3.2	100	38	4.41	+ 0.56	11.97	1.28		10	16	9	6
1905.....	70.6	- 3.2	102	40	2.91	- 0.94	7.08	0.69		9	14	10	7
1906.....	70.9	- 2.9	102	42	3.04	- 0.81	7.05	0.26		8	18	10	3
1907.....	73.7	- 0.1	102	41	7.27	+ 3.42	13.66	3.97		13	16	11	4
1908.....	73.0	- 0.8	100	42	3.66	- 0.19	9.21	0.70		8	16	10	5
1909.....	72.3	- 1.5	102	46	4.77	+ 0.92	12.20	1.20		10	15	8	8
1910.....	74.5	+ 0.7	108	43	1.86	- 1.99	5.69	0.12		7	19	8	4
1911.....	75.5	+ 1.7	111	38	2.27	- 1.58	6.62	0.08		7	18	10	3
1912.....	74.6	+ 0.8	103	38	3.71	- 0.14	7.56	1.17		10	17	10	4
1913.....	76.1	+ 2.3	108	45	1.82	- 2.03	6.23	T.		5	21	8	2
1914.....	76.6	+ 2.8	109	43	2.27	- 1.58	6.50	0.44		5	20	8	3
1915.....	69.5	- 4.3	92	40	8.32	+ 4.47	15.83	3.68		14	10	12	9
1916.....	79.7	+ 5.9	105	48	1.78	- 2.07	6.87	0.10		5	23	7	1
1917.....	74.3	+ 0.5	106	38	2.27	- 1.58	6.06	0.23		7	21	8	2
1918.....	73.1	- 0.7	105	40	3.17	- 0.68	8.05	0.26		8	19	8	4
1919.....	77.4	+ 3.6	104	41	2.86	- 0.99	7.82	0.39		6	22	8	1
1920.....	72.3	- 1.5	102	45	4.22	+ 0.37	7.49	1.11		9	19	9	3
1921.....	77.9	+ 4.1	104	41	2.53	- 1.32	7.45	0.42		7	19	9	3
1922.....	71.5	- 2.3	98	40	6.31	+ 2.46	11.72	3.13		11	14	12	5
1923.....	76.5	+ 2.7	102	47	1.75	- 2.10	5.54	0.29		5	19	9	3
1924.....	70.2	- 3.6	99	41	3.67	- 0.18	8.90	0.57		9	16	11	4
1925.....	74.1	+ 0.3	105	40	2.66	- 1.19	7.93	0.80		8	19	10	2
1926.....	74.8	+ 1.0	109	38	3.72	- 0.13	9.08	0.82		10	15	10	6
1927.....	72.9	- 0.9	102	45	1.96	- 1.89	4.80	0.09		7	18	10	3

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than 105 inch snowfall.



Climatological Data for July, 1927

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit					Precipitation, in inches				Number of Days			Prevailing direction of wind	Observers			
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more			Clear	Partly cloudy	Cloudy
Northern Division																				
Akron	Plymouth	1,153	1							2.76	0.96	0	8	13	17	1	nw.	Orlan C. Moore		
Algona	Kossuth	1,213	54	72.0	-1.0	97	27	51	3	38	0.45	-2.61	0.20	0	3	23	1	2	se.	W. E. Laird
Alison (near)	Butler	1,044	15	71.0	-1.8	96	27	47	3	39	0.85	-2.90	0.31	0	5	17	14	0	nw.	J. A. Bell
Alta	Buena Vista	1,513	33	72.0	0.4	95	27	54	3	33	1.02	-3.23	0.58	0	5	19	12	0	n.	D. E. Hadden
Alton	Stout	1,306	22	71.4	-2.1	95	27	50	29	34	1.94	-1.60	0.86	0	5	6	25	0	s.	W. S. Slagle
Belmond	Wright	1,181	17	70.9	-2.7	97	27	48	3	37	0.65	-2.97	0.31	0	5	15	8	8	nw.	H. F. Luick
Britt	Hancock	1,236	40	69.8	-1.4	94	27	48	3	35	2.34	-1.64	1.80	0	5	22	3	6	sw.	James S. Ross
Charles City	Floyd	1,015	36	70.4	-1.9	94	27	48	3	33	1.70	-2.14	0.66	0	9	16	14	1	se.	U. S. Weather Bureau
Cherokee	Cherokee	1,196	5	70.2		95	27	48	29	34	2.63	0.75	0	10	18	12	1	n.	J. E. Wirth	
Decorah	Winnebago	872	34	70.6	-1.6	95	28	45	3	40	2.05	-1.40	1.33	0	10	19	9	3	nw.	M. D. Whitney
Dubuque	Dubuque	700	54	72.4	-1.7	93	27	52	20	29	0.84	-3.03	0.63	0	8	9	18	4	n.	U. S. Weather Bureau
Estherville	Emmet	1,298	32	71.4	-0.5	95	27	50	29	37	0.80	-3.36	0.43	0	6	19	11	1	s.	A. O. Peterson
Fayette	Fayette	1,008	39	71.2	-0.7	95	27	49	3	36	2.69	-1.14	0.92	0	9	21	10	0	sw.	R. Z. Latimer
Forest City	Winnebago	1,226	33	70.5	-1.7	97	27	48	3	36	0.99	-2.58	0.27	0	7	13	15	3	nw.	Dr. M. B. Nell
Hampton	Franklin	1,145	2	70.7 ^a	-3.6	95 ^a	27	48 ^a	3	35 ^a	1.26	-2.39	0.55	0	5				nw.	L. H. Davis
Hawarden	Sioux	1,181	1																s.	Earl V. Slife
Humboldt	Humboldt	1,095	39	72.8	-1.3	102	27	49	23	42	0.22	-3.52	0.09	0	3	17	13	1	nw.	H. O. Snitkey
Independence	Buchanan	921	63	72.0	-1.0	93	11	50	3	34	4.22	+0.08	1.41	0	11	23	5	3	sw.	Dr. Geo. Boody
Inwood	Lyon	1,474	23	70.8	-1.8	97	27	47	29	37	1.73	-1.64	0.71	0	7	20	10	1	nw.	A. O. Hanson
Lake Park (near)	Dickinson	1,489	7	69.6		97	26	50	20	35	1.45		0.55	0	10	14	14	3	nw.	P. M. Lawrence
Lansing	Allamakee	682	20																	Mrs. Mary Spinner
Le Mars	Plymouth	1,224	31	71.9	-1.4	95	27	50	23	35	1.79	-2.29	1.03	0	5	19	11	1	n.	Henry Newell
Marathon	Buena Vista	1,390	1																	E. G. Smith
Mason City	Cerro Gordo	1,148	30	70.0	-2.4	98	27	46	3	38	1.06	-2.46	0.29	0	8	11	20	0	sw.	American Beet Sugar Co.
New Hampton	Chickasaw	1,169	30	69.2	-3.0	93	27	47	3	35	2.47	-1.30	1.25	0	7	3	28	0	sw.	D. W. Dawson
Northwood	Worth	1,222	31	69.8 ^b	-1.4	93 ^a	27	49 ^b	3	32 ^c	0.44	-3.39	0.17	0	5	11	17	3	nw.	Charles Dwelle
Oelwein	Fayette	1,036	3	70.8		94	27	48	3	33	2.10		0.75	0	5	17	10	4	s.	John T. Ridler
Osage	Mitchell	1,163	2	69.6 ^a		95 ^a	27	46 ^a	3	33 ^a	1.74		0.83	0	8				nw.	Dr. C. E. Juhl
Pocahontas	Pocahontas	1,248	23	72.0	-0.7	99	27	49	8	41	0.59	-2.86	0.32	0	6	19	11	1	sw.	F. E. Hronek
Postville	Clayton	1,192	28	68.1	-1.9	90	27	47	3	31	1.59	-2.80	0.53	0	6	15	15	1	sw.	F. L. Williams
Rock Rapids	Lyon	1,349	23	69.4	-3.2	95	27	47	29	39	2.45	-0.92	0.67	0	8	23	8	0	ne.	J. K. Medberry
Sanborn	O'Brien	1,553	13	70.2	-2.6	95	27	48	29	38	3.40	-0.10	1.30	0	8	19	8	4	n.	J. W. Dow
Sheldon	O'Brien	1,418	2	70.4		95	27	48	29	34	1.73		0.72	0	9	14	17	0	nw.	Ross E. Forward
Sioux Center	Sioux	1,426	23	71.0 ^m	-2.0	98 ^m	27	50 ^m	17	32 ^m	1.06	-2.77	0.57	0	6				n.	J. DeRuyter
Spencer	Clay	1,319	13	71.8	-1.6	96	27	49	23	38	0.47	-3.03	0.34	0	4	17	13	1	sw.	E. W. Little
Storm Lake	Buena Vista	1,440	33	72.0	-1.5	95	27	53	29	31	1.20	-2.87	0.45	0	8	25	5	1	se.	George H. Fracker
Washta	Cherokee	1,157	29	71.4	-0.9	98	27	48	23	39	1.88	-2.35	0.75	0	8	20	11	0	se.	H. L. Felter
Waterloo	Black Hawk	854	44	72.6	-1.1	97	6	48	3	39	3.45	-0.53	1.50	0	7	22	8	1	se.	R. B. Slippy
Waverly	Bremer	936	31	70.6 ^a	-1.9	94 ^a	27	49 ^a	3	35 ^a	2.25	-1.50	1.18	0	10				ne.	D. H. Murphy
West Bend	Palo Alto	1,197	34	71.1	-2.1	98	27	49	29	36	0.52	-2.95	0.25	0	5	23	8	0	nw.	Jos Dorweiler
Means and extremes.				70.9	-1.8	102	27	45	3	42	1.63	-2.16	1.80	0	7	17	12	2	nw.	
Central Division																				
Ames	Story	926	50	74.2	+0.2	98	6	52	3	40	1.25	-2.61	0.49	0	7	26	5	0	nw.	Iowa State College
Audubon (near)	Audubon	1,297	32	74.0	+1.3	97	6	54	3	36	2.30	-1.37	1.05	0	5	27	4	0	sw.	George Kibby
Baxter	Baxter	908	27	73.5	-0.7	100	12	50	3	43	2.31	-1.58	1.32	0	5	5	26	0	sw.	Otto Sanderman
Belle Plaine	Benton	866	37	73.0	-0.5	98	11	50	3	40	2.59	-1.36	1.50	0	8	14	16	1	se.	O. O. Burrows
Boone (near)	Boone	1,134	22	72.4	-1.1	97	6	47	23	42	1.95	-1.77	1.49	0	6	12	17	2	s.	C. F. Henning
Carroll	Carroll	1,265	37	73.2	0.0	99	27	50	20	37	1.61	-1.97	0.54	0	5	24	7	0	se.	Mrs. Jos. J. Wolfe
Cedar Rapids	Linn	737	45	72.0	-3.9	95	6	50	24	37	2.37	-1.53	1.00	0	9	14	6	11	nw.	J. T. Wurster
Clinton	Clinton	595	54	73.6	-1.2	95	27	50	8	35	1.57	-2.32	0.72	0	6	15	5	11	s.	Dr. A. P. Bryant
Davenport	Scott	580	56	74.6	-0.7	94	6	56	3	29	1.59	-1.90	1.12	0	6	10	13	8	nw.	U. S. Weather Bureau
Davenport No. 2	Scott	690	2	74.6		96	6	50	8	38	1.81		1.13	0	8				nw.	Rex Shriver
Denison	Crawford	1,171	33	74.0	+0.6	97	27	54	8	39	0.88	-2.87	0.46	0	6	23	8	0	nw.	V. L. Byers
Des Moines	Polk	861	49	75.3	-0.1	98	11	56	3	35	1.93	-1.68	0.78	0	6	8	14	9	n.	U. S. Weather Bureau
Fairport	Muscataine	567	6	73.9		95	10	50	11	41	1.56		0.67	0	6	14	3	14	s.	Bureau of Fisheries
Fort Dodge	Webster	1,114	27	71.7	-2.3	100	27	48	3	40	0.67	-3.24	0.49	0	6	23	5	3	n.	Samuel Sampson
Grinnell	Poweshiek	1,031	33	75.6	+1.3	100	7	53	3	39	1.06	-3.31	0.34	0	8	10	12	9	nw.	Paul P. Meyers
Grundy Center	Grundy	976	36	72.5	-1.6	94	6	49	3	34	2.25	-1.48	1.00	0	4	21	10	0	sw.	M. G. Heiberger
Guthrie Center	Guthrie	1,074	32	73.1	-0.5	98	27	50	23	40	2.42	-1.80	1.08	0	5	22	7	2	sw.	E. L. Nesselroad
Harlan	Shelby	1,192	28	73.7	+0.6	97	6	52	23	36	2.08	-1.80	0.77	0	6	17	14	0	nw.	Walter Bell
Iowa City	Johnson	733	67	72.7	-1.1	95	11	53	3	35	2.02	-2.10	0.70	0	11	15	13	3	nw.	Prof. J. F. Reilly
Iowa Falls	Hardin	1,127	34	71.8	-0.5	99	27	50	23	40	0.88	-3.06	0.60	0	7	20	11	0	nw.	O. H. Gilbert
Jefferson	Greene	1,052	28	72.1 ^s	-1.2	96 ^s	11	50 ^s	23	35 ^s	1.34	-2.34	0.72	0	3					W. I. Lyon
Le Claire	Scott	576	27								2.09	-0.84	1.04	0	4					Margaret T. Disney
Little Sioux	Harrison	1,040	22	74.7	+0.3	97	27	54	23	38	1.98	-2.22	0.89	0	8				sw.	H. W. Kerr
Logan	Harrison	1,120	60	75.6	+1.4	98	6	52	22	39	0.74	-3.67	0.33	0	5	17	9	5	sw.	Amy Ann Stern
Maquoketa	Jackson	692	2	70.0 ^a		94 ^a	27	46 ^a	8	39 ^a	1.18		0.48	0						

Climatological Data for July, 1927—Continued

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days			Prevailing direction of wind	Observers		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear			Partly cloudy	Cloudy
Southern Division																				
Afton	Union	1,212	33	75.0	+ 1.2	98	6†	53	3†	34	2.99	-0.98	0.93	0	8	19	11	1	sw.	S. R. Brown
Albia	Monroe	949	29	74.8	+ 0.3	101	27	52	3	38	1.24	-2.90	0.31	0	8	10	17	4	n.	O. E. McBride
Atlantic	Cass	1,164	36	75.5	+ 1.3	100	6	53	23	40	2.87	-0.67	1.02	0	10	17	11	3	sw.	T. H. Whitney
Bonaparte (near)	Van Buren	563	36	73.2	- 1.2	93	27	54	3†	34	1.61	-2.25	0.66	0	7	25	5	1	w.	B. R. Vale
Burlington	Des Moines	544	31	76.0	0.0	97	6†	54	4	33	2.38	-1.03	1.21	0	7	17	13	1	sw.	John T. Donnelly
Centerville	Appanoose	1,013	22	73.8	- 1.1	96	11	52	3	34	2.03	-1.90	0.65	0	6	17	6	8	sw.	Thomas Wood
Chariton (near)	Lucas	1,042	32	73.8	+ 0.5	97	11	52	4	37	1.32	-2.99	0.33	0	4	23	7	1	n.	O. C. Burr
Clarinda	Page	1,009	37	74.3	- 1.2	97	11	52	23†	39	3.86	-0.47	1.57	0	8	26	5	0	nw.	Dr. H. C. Hawley
Columbus Jet.	Louisa	595	26	72.2	- 2.8	93	6†	52	8	32	1.31	-2.26	0.31	0	10	12	19	0	sw.	Miss Musa Todd
Corning (near)	Adams	1,117	35	72.9 ^a	- 1.2	99 ^a	11	45 ^a	17	41 ^a	3.79	-0.34	1.23	0	5				sw.	W. A. Seybold
Corydon	Wayne	1,101	34	74.0	- 0.6	95	11†	52	3†	37	1.34	-2.47	0.60	0	7	19	10	2	sw.	A. T. Gallagher
Creston	Union	1,312	22	74.8	+ 1.4	99	11	56 ^a	25	37 ^a	1.88	-2.12	0.90	0	8	22	6	3	sw.	J. W. Goodsell
Cumberland (near)	Cass	1,225	28								1.51	-2.17	0.92	0	5	21	10	0	sw.	Carl E. Pollock
Earlham (near)	Madison	1,126	25	73.3	+ 0.5	96	6†	48	23	37	1.81	-1.85	1.03	0	6	30	0	1	nw.	George Phillips
Fairfield	Jefferson	780	43	73.4	- 1.0	99	11	51	3†	39	3.64	-0.18	1.65	0	6	11	12	8	n.	R. M. McKenzie
Glenwood	Mills	1,100	29	75.9	+ 0.6	100	6	54	2†	40	1.66	-1.94	1.04	0	6	20	11	0	sw.	Geo. Mogridge
Indianola	Warren	972	36	74.8	0.0	100	11	54	3	37	2.50	-1.29	1.59	0	6	19	9	3	sw.	Seth F. Shenton
Keokuk	Lee	614	56	75.4	- 1.5	93	6	56	4	23	1.38	-2.47	0.94	0	6	12	12	7	s.	U. S. Weather Bureau
Keosauqua	Van Buren	644	35	74.2	- 0.5	100	11†	51	3†	40	3.81	-0.18	2.21	0	5	12	15	4	se.	J. H. Landes
Knoxville	Marion	920	32	74.6	+ 0.1	99	11	53	23	39	1.61	-2.36	0.70	0	6	15	13	3	nw.	W. J. Casey
Lacona	Warren	824	28								1.69	-2.09	0.80	0	9	13	13	5	---	J. B. Alter
Lamoni	Decatur	1,123	20	73.6	- 0.3	96	11†	53	3†	32	2.43	-1.51	0.93	0	8	19	9	3	nw.	F. S. Parks
Lenox	Taylor	1,250	32	75.2	+ 0.1	98	6†	53	3	41	4.08	-0.13	1.15	0	7	23	3	0	sw.	J. L. Hurley
Mount Ayr	Ringgold	1,245	34	73.4	- 0.9	96	11	52	3†	33	4.80	+0.38	1.94	0	7	23	5	3	sw.	Alex Maxwell
Mt. Pleasant	Henry	730	46	74.4	- 1.3	95	6	53	8	31	3.57	-0.09	1.80	0	8	9	20	2	nw.	J. H. Jericho
Oakland	Pottawattamie	1,105	8	75.3	+ 1.0	101	6	50	23	44	1.38	---	0.52	0	5	25	6	0	nw.	W. S. Matthews
Oskaloosa	Mahaska	835	51	73.0	- 0.7	99	11	52	3	37	2.61	-1.11	1.56	0	8	14	11	6	nw.	Roy R. Robinson
Ottumwa	Wapello	649	32	75.2	---	99	11	53	3	39	4.14	+0.58	1.50	0	9	27	3	1	sw.	C. L. Mikesh
Red Oak (near)	Montgomery	1,030	2								1.92	---	1.24	0	3	18	13	0	s.	B. R. Bridge
Riverton (near)	Fremont	920	1								2.08	---	0.74	0	4	19	6	6	s.	Geo. C. Rader
Sigourney (near)	Keokuk	790	31	74.0	- 0.1	102	11	53	3	38	3.25	-0.60	1.40	0	6	19	8	4	sw.	W. E. Utterback
Stockport	Van Buren	747	25	73.9	+ 0.1	98	10†	51	8	40	1.88	-2.71	0.78	0	7	23	7	1	s.	C. L. Beswick
Thurman	Fremont	960	30	76.2	+ 0.6	101	6	53	2	42	3.07	-1.10	0.87	0	7	24	7	0	s.	H. H. Askew
Tingley	Ringgold	1,275	2	73.5	---	96	27	52	3†	33	1.65	---	0.45	0	5	19	12	0	sw.	James A. Verploegh
Washington	Washington	757	45	74.4	- 0.1	99	11	54	4†	34	1.15	-2.19	0.47	0	8	16	12	3	s.	D. D. Sherman
Wescott (near)††	Lee	523	5	76.4	---	97	6†	55	4	35	2.65	---	1.75	0	3	8	12	11	sw.	Lester J. Larson
Winterset	Madison	1,118	36	74.4	- 0.5	99	11	47	3	34	1.28	-3.12	0.47	0	8	29	2	0	sw.	H. S. Ely
Omaha, Neb.		1,105	56	76.8	+ 0.1	99	6	62	17	32	2.92	-1.41	1.43	0	5	21	6	4	se.	U. S. Weather Bureau
Means and extremes				74.4	- 0.2	102	11	45	17	44	2.36	-1.54	2.21	0	7	19	9	3	sw.	
State means and extremes				72.9	- 0.9	102	11†	45	3†	44	1.96	-1.89	2.21	0	7	18	10	3	sw.	

The departure from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc. †Also other dates. ††Received too late to be included in means and summaries. †. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %				Wind				Sunshine				
	Mean	Highest	Date	Lowest	Mean		Lowest	Date	Total movement	Average hourly velocity	Maximum			Per cent of possible departure from normal			
					7 a. m.	12 noon					7 p. m.	Miles			From	Date	
Charles City	30.00	30.38	3	29.73	12	74	45	53	27	6	3,945	5.3	23	s.	12	80	+ 5
Davenport	29.99	30.34	4	29.69	6	73	16	48	30	16	4,235	5.7	22	nw.	6	65	- 9
Des Moines	29.99	30.30	3	29.73	6	74	42	43	21	11	4,965	6.7	36	sw.	12	76	+ 3
Dubuque	30.00	30.36	4	29.72	6	74	48	50	29	24	4,044	5.4	20	s.	5	70	+ 0
Keokuk	30.01	30.33	4	29.80	14	73	50	52	27	8	3,519	4.7	28	nw.	21	76	+ 3
Sioux City	30.00	30.31	22	29.67	16	77	48	48	30	6	7,056	9.5	40	nw.	31	82	+ 11
Omaha, Neb.	30.00	30.27	3	29.71	12	71	44	42	26	11	5,196	7.0	33	nw.	16	81	+ 7
Means and extremes	30.00					74	46	48				6.3				76	+ 2
Normals and records	29.97		7 th		9 th	79		57				6.7			13 th	74	
		*30.47	1892	29.29	1926										†64	ne.	1905

*Davenport. §Sioux City. ¶Des Moines. ||Omaha. ‡Local mean time. †And other dates.

TEMPERATURE

The mean temperature for the State, as shown by the records of 103 Stations, was 72.9°, or 0.9° lower than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 70.9°, or 1.9° lower than the

normal; Central, 73.3°, or 0.7° lower than the normal; Southern, 74.4°, or 0.2° lower than the normal. The highest monthly mean was 76.2°, at Thurman, and the lowest was 68.1°, at Postville. The highest temperature reported was 102°, at Sigourney on the 11th and Humboldt on the 27th, and the lowest was 45° at Decorah on the 3d, and Corning on the 17th. The temperature range for the State was 57°.

PRECIPITATION

The average precipitation for the State, as shown by the records of 114 stations, was 1.96 inches, or 1.89 inches less than the normal. By divisions, the averages were as follows: Northern, 1.63 inches, or 2.16 inches less than the normal; Central, 1.83 inches, or 1.97 inches less than the normal; Southern, 2.36 inches, or 1.54 inches less than the normal. The greatest amount, 4.80 inches, occurred at Mount Ayr, and the least 0.09 inch, occurred at Webster City. The greatest amount in 24 consecutive hours, 2.21 inches occurred at Keosauqua on the 29th.

MISCELLANEOUS PHENOMENA

- Aurora: 12th, 21st, 22d.
- Fog: 25th.
- Hail: 6th, 7th, 8th, 9th, 11th, 13th, 18th, 21st, 24th, 27th, 30th.
- Halos (lunar and solar): 5th, 10th, 13th, 28th.
- Haze: 13th.
- Rainbow: 5th.

Daily Precipitation for July, 1927

Stations	Drainage Basin	Day of Month																															Totals	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Northern Division</i>																																		
Akron	Big Sioux	.51		.05						.17						.49				.06				.47						.96	.05	2.76		
Algona	Des Moines											.11				.20		.10														0.45		
Allison (near)	Cedar				.14							.34				.04					T.		.08						.30		0.85			
Alta	Raccoon	.19		.07					T.		T.					.56	.02							.18				T.			T.	1.02		
Alton	Floyd	.86								.32		T.				.50						.06		.20						T.	T.	1.94		
Belmond	Iowa			.04					T.			.19				.31								.10	.01					T.	T.	0.65		
Britt	Iowa			T.								.07	.15			.17							.15									2.34		
Charles City***	Cedar	.04		.06	.06	T.			.08			.66				.32					T.	.50		1.80							1.70			
Cherokee	Little Sioux	.32		.11						.56	.05	.01				.75						.03		.63				.02			2.63			
Decorah	Mississippi	T.	.10		.23		.03			.18		.28	1.33			.11			.09			T.	T.				.20	.10		.11	.06	2.65		
Dubuque***	Mississippi	.01		.01	.07	T.				.04		T.	.01			.02				T.			.63	T.							0.84			
Estherville	Des Moines	.05		.05							.10					.43				T.			.02			.15					0.50			
Fayette	Mississippi	T.		.15	.18					.06	.08	T.	.38			.08			.06				.92					.78			2.69			
Forest City	Cedar	T.			.19							.23			.15		.05	.02					.27			.08					0.99			
Hampton	Cedar			*	.08		T.	T.				.26			.26									.37							1.26			
Hawarden	Big Sioux	.27		.01								T.		T.		.57				T.		.02		.46						.04	T.	1.37		
Humboldt	Des Moines	.08		T.											T.								.09								0.22			
Independence	Wapsipicon			T.	.27					.17	.03	.04	.06						.51	.16			1.41	.84			.05		.08		4.22			
Inwood	Big Sioux	.71		T.						T.		.02			.22	.37							.11		.21						1.73			
Lake Park (near)	Little Sioux	.55		.08						T.	.09	T.		.14		.29						.09		.03					.10	.09	1.45			
Lansing	Mississippi		T.		.02	.26	.02			.14		.32	.55					.19				.05	.05						T.	.01		1.61		
Le Mars	Floyd	1.03		.08												.39								.26						T.		1.79		
Marathon	Raccoon			.11						.27		T.			.77	T.						.01		T.						.15	T.	1.31		
Mason City	Cedar	.01		.02	.17	T.			T.		.02	.26	.08			.21					T.	.29		T.							1.06			
New Hampton	Wapsipicon	.10		.08	.24							.22	.30			T.		.28					1.25								2.47			
Northwood	Cedar			.10	.17	T.				T.	.06	.01				.10					T.	T.		T.							0.44			
Oelwein	Wapsipicon			.55						.25						T.		.45				.75							.10		2.10			
Osage	Cedar			.15						.05	.25	.83	.14			.09							.10		.13						1.74			
Pocahontas	Des Moines	.07		.04						.07						.32						T.			.05						T.	0.59		
Postville	Mississippi	T.		.15	T.					.16		T.	.48			T.		.08				T.	.19						.53		1.59			
Rock Rapids	Big Sioux	.61		.04						.13	.04		.43			.39								.14						.67		2.45		
Sanborn	Floyd	.94		.06											.06	.62	.07							1.30						T.	.32	.03	3.40	
Sheldon	Floyd	.50		.04						.03		T.		T.		.72	.01						.10		.04						T.	.22	.07	1.73
Sioux Center	Floyd									.20		.06				.57							.11		.10						T.	.02	T.	1.06
Spencer	Little Sioux	.02										T.				.34								.08								.03	T.	0.47
Storm Lake	Raccoon	.31		.08							.07	.03				.45								.24						.01		.01	1.20	
Washta	Little Sioux	.31		T.						.30		.02				.75							.07		.02					.38	T.	.03	T.	1.88
Waterloo	Cedar			.05								.65				T.		.10				.01	.89		1.50				.25			3.45		
Waverly	Cedar	.11		.05	.06						.02	.48				.01							1.18		.17							2.25		
West Bend	Des Moines	.02		.02								.09				.25		.14													T.		0.52	
<i>Central Division</i>																																		
Ames	Skunk	.03		T.											.01															.49		.01	1.25	
Audubon (near)	Nishnabotna												1.05		T.	.41					T.	.30		.30					.39			T.	.01	2.30
Baxter	Skunk										.20	T.											1.32		.45				.22	.12			2.31	
Belle Plaine	Iowa	.02		T.							.19					T.							.74	T.	.04				1.49	.01	T.		2.59	
Boone (near)	Des Moines											.22				.08	.08	.07							1.49				.01				1.95	
Carroll	Raccoon	.07											.54			.20																	1.61	
Cedar Rapids	Cedar		.01		.10					.09	.04	.39	.09											1.00		.40			.40				2.37	
Clinton	Mississippi			T.			.72			.03	.10					T.							.23						.03		.41	.08		1.57
Davenport***	Mississippi			T.	.03	.27				T.	.03													1.12					.12			.02	1.59	
Davenport No. 2	Mississippi			T.	.02		.41				.03	.03	T.											1.13	.02				T.	.08		.09	1.81	
Denison	Missouri	.27										.02				.46									.01				.07		.05		0.88	
Des Moines***	Des Moines	.09		T.		T.					.04				T.	.07							.19		.78				.76		T.		1.93	
Fairport	Mississippi				.09	.12					.21	.34												.67					.13				1.56	
Fort Dodge	Des Moines	.06			.03					.03						T.	.03								.03				.49				0.67	
Grinnell	Iowa										.01	.01				T.	.02	.07					.15			.26			.20	.34	T.		1.06	
Grundy Center	Cedar			T.								.14											1.00		.33	T.			.78				2.25	
Guthrie Center	Raccoon	T.										.78			.02	.42									.12				1.08				2.42	
Harlan	Nishnabotna	.77		T.						.15		.05			.64				T.	T.	T.	T.		.22				.25	T.			2.08		
Iowa City	Iowa		.02		.11	.02		.33		.02	.01	.01												.70		.28			.02	.50			2.02	
Iowa Falls	Iowa	.05		.03								.04						.05						.08			.03			.60				0.88
Jefferson	Raccoon	T.		T.								T.	.45		T.	.17										.72			T.	T.		T.	1.34	
Le Claire	Mississippi		T.		T.			.58			T.	T.		.13										T.	.94				1.04				2.69	
Little Sioux	Little Sioux	.40														.89									.21				.01	.38	.02		1.98	
Logan	Missouri	.33																							.01				.32		.02	.06	0.74	
Maquoketa	Maquoketa			T.	.02					.07	.48														.18				.43				1.18	
Marshalltown	Iowa	T.			T.		T.						.31						T.			.33			1.77			.02		.48	T.		2.91	
Monroe	Des Moines												.05			.02								.84			.23			.07	.04		1.25	
Muscataine	Mississippi			.05	T.		.74					1.75												.98					.24				3.76	
Olin	Wapsipicon</																																	

Daily Precipitation for July, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>Southern Division</i>																																	
Afton	Grand	.06			.11	.02							.81		.45									.93	.58			.08					
Albia	Des Moines	T.	.04			T.	.08		.02				.26			T.							.18		.31		.22	.13					
Atlantic	Nishnabotna	.23						.08				.93		1.02	.01								.10		T.	.15		.33	.01	.01			
Bonaparte (near)	Des Moines	T.						.03		.14		.14	T.		.09							.66				.19		T.	.36				
Burlington	Mississippi	T.		.15	T.		1.21			.02	.11					T.							.62		.03	T.			.24				
Centerville	Chariton	.05				T.			T.			.46		T.	T.								.41			.65			.32	.14			
Chariton (near)	Chariton	T.				.38					T.	.28		T.	T.	.28												T.					
Clarinda	Nodaway	.07					.30					1.57		.30	.50											.20		.80	.12				
Columbus Jct.	Iowa	.01		.15		.08				.31				.04	T.								.12	T.		.15	.02		.12	.31			
Corning (near)	Nodaway	.01				1.23						1.12		.70											.40			.34					
Corydon	Chariton	.13					.02			T.	T.	.60		.20									T.			.20		.11	.08				
Creston	Missouri	.08				.05						.90		.20	.32										.03	.20		T.	.10				
Cumberland (near)	Nodaway	.01				T.						.92		.42									T.			T.	.10		.06	T.			
Earlham (near)	Des Moines	T.				T.			.16			.40		.07											.97	.06		.15					
Fairfield	Skunk					.11						.12		.02		T.						1.56			.18		1.65		T.				
Glenwood	Missouri	.17										.02		1.04											.03		.37	T.	.03				
Indianola	Des Moines	T.										.30		.20									.26		T.	.15	1.58	.01					
Keokuk**	Mississippi	T.		T.	T.	.02				.01	T.	T.	T.	.03		T.							.94			.21		.10			.07		
Keosauqua	Des Moines	T.				T.						.42		T.										.61		.47		T.	2.21		.10		
Knoxville	Des Moines	T.					.06			T.		.10		.14										.38		T.	.23	.70					
Lacona	Des Moines	.02			.01			.02				.22											.80		.01	.28		.30	.03				
Lamon	Grand	.06					.16					.80		.08	.31										.09		.66	.27					
Lenox	Missouri	.05				1.15						.87		.48											.50	.05	.98						
Mount Ayr	Grand	.03				.72				T.	1.94		.42										T.		.01	.15		1.53					
Mt. Pleasant	Skunk	T.		.08					.10			.03		.20												.57		.36	.43				
Oakland	Nishnabotna	.23										.11	.32		.52													.20					
Oskaloosa	Des Moines	.07		T.		T.			T.			.03		T.	.04								1.51	.05	T.	.10	.79	.02					
Ottumwa	Des Moines	.11				.35			.03			.17		.07		T.								.78		.81		.32	1.50				
Red Oak (near)	Nishnabotna	.14									.54			1.24																			
Riverton (near)	Nishnabotna	.17										.65		.52														.74					
Sigourney (near)	Skunk	T.				.06						.02		T.		.32							1.20			.25		1.40					
Stockport	Skunk	T.		T.		T.		.17				.14		.10										.55		.14		.14	.64				
Thurman	Missouri	.15				.02						.55		.65									T.	T.			T.	.87	.81	.02			
Tingley	Platte	T.				T.	.22		T.			.38		.45												.22		.38	T.				
Washington	Skunk	T.		.18		.18	.24			T.		T.		T.												.01		.04					
Westcott (near)	Mississippi					.70																			1.75			.20					
Winterset	Des Moines	.02				.13						.47		.25											.12		.01	.20					
Omaha, Nebr.***	Missouri	.02		T.		T.						.70		T.		.76												1.43		.08			

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.

** Incomplete.

* Precipitation included in the next following measurement.

T. Precipitation is less than .01 inch rain or melted snow.

Thunderstorms: All dates except the 2d, 7th, 17th and 26th.

Tornadoes: 6th, 8th, 28th.

Winds (strong): 4th, 5th, 6th, 12th, 27th, 28th, 31st.

RIVERS

There was a gradual falling tendency on the Mississippi River till near the end of the third week after which there was a tendency to higher stages but with numerous fluctuations. The average stage was considerably below normal. There was a general falling tendency on the Missouri River throughout the month though there were several slight rises. The average stage was considerably above normal. On all interior rivers there was a general falling tendency; low stages prevailed the latter part of the month on nearly all small streams.

ERRATA

Report for June, 1927. Page 42. Dubuque, date of lowest temperature published 5th, should be 15th.

JULY STORMS

An unusually large number of hailstorms, straight wind squalls and three small tornadoes are listed in the table on page 55 and there are about 28 others that will be carried over into next month's report.

This should not mislead the reader into the belief that these storms were unusually severe or prevalent. An experiment was tried this year for the first time in which a commercial news

clipping service furnished copious clippings from the newspapers of the State along these lines. So far as possible the news reports were verified by flooding the localities reporting storms, with questionnaires.

Inquiry has been made of the insurance companies as to how their losses in July compared with losses in other Julys. At this writing a good many losses have not yet been adjusted, but it is the opinion of the hail companies that the July losses were slightly greater than normal yet not as great as in some Julys and that the total losses of the season to the close of July were not as large as usual. The hail losses were dotted over the State in many local areas that did not reach a large aggregate. One large windstorm company reported total losses in July, 1927 as \$42,700 compared with the last five-year average of \$97,549 and \$265,000 in July, 1924. This windstorm insurance company, like the hail company, reports that the number of claims is larger than usual but the total losses are less than half as large. This may be partly due to the better insurance coverage of this growing company. The business written by this company has steadily increased for many years and their risks are well distributed, so the decline in losses in July, 1927 undoubtedly indicates an actual decrease in windstorms.

Really comparable figures over a period of years are not available. The Weather Bureau is limited greatly in its means of obtaining and summarizing the information, though its increased efforts are reflected in the large storm table published this month.

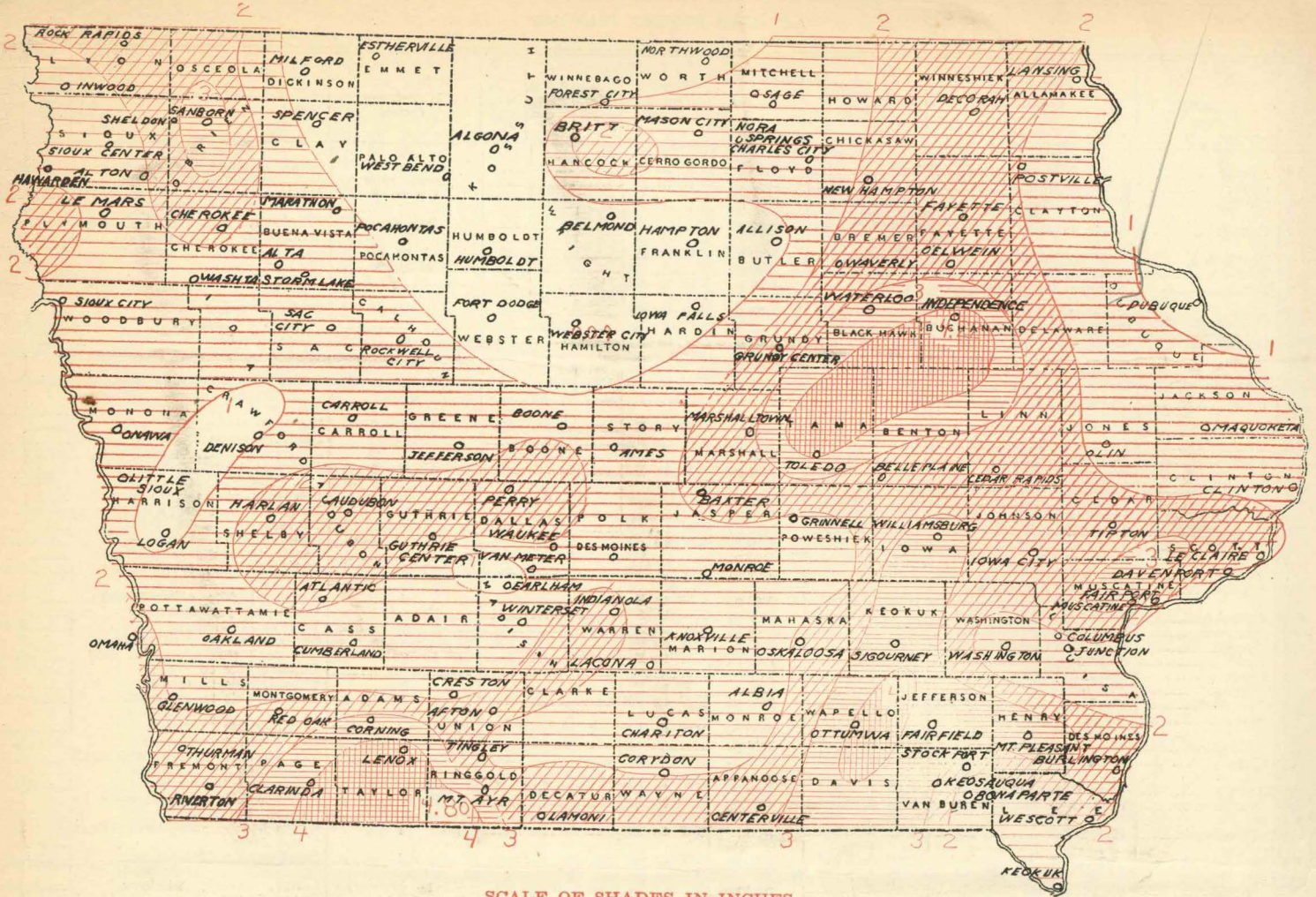
C. D. R.

Daily Maximum and Minimum Temperature for the Month of July, 1927

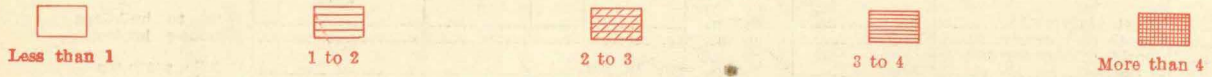
Table with columns for Stations, days 1-31, and Mean. Rows are categorized by Northern Division, Central Division, and Southern Division, listing various Iowa cities and their daily temperature ranges.

a, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

TOTAL PRECIPITATION, JULY, 1927

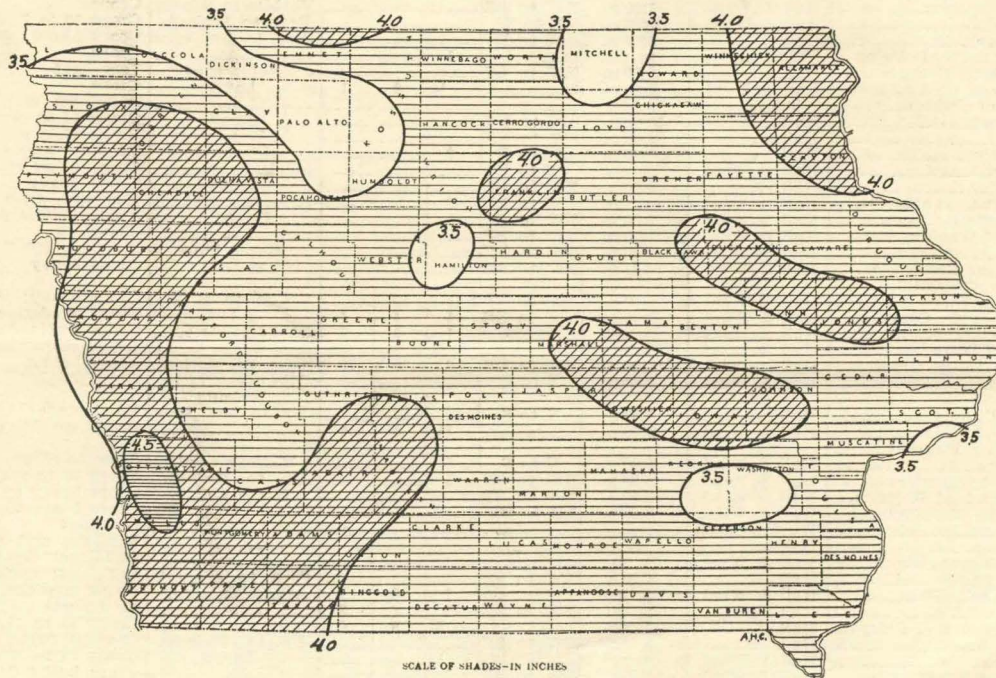


SCALE OF SHADES IN INCHES

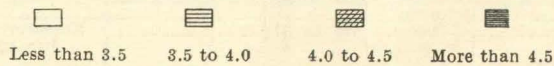


NORMAL PRECIPITATION, JULY

(Based on station records of 30 years or more)



SCALE OF SHADES-IN INCHES



CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, AUGUST, 1927 No. 8

GENERAL SUMMARY

The principal feature of the weather during August, 1927, was the persistence of cool weather almost the entire month. There were but two brief periods in which the temperature was above normal, the last three days of the first week and the last three days of the month. During the rest of the month the temperature went as high as normal on but a few scattered days. The deficiency was about equally divided between low maxima and minima; over the eastern half of the State the minima departed the most from normal and over the western half of the State low maxima were responsible for most of the deficiency. At many times during the month furnace fires were necessary for comfort in homes and the coolness was intensified by humidity considerably below normal. Only twice since 1873 has the mean temperature for August been lower than that of the current year; in 1915 it was 2.0° lower and in 1885 it was 1.0° lower, but in the same period there have been 10 times in which a lower maximum has been recorded and eleven times the minimum has been lower. Frost was reported on the 2d, 9th and 24th. The only damage reported occurred on the 9th. On this date frost occurred in about half the counties in the northern division, but damage was limited to a few small areas in low places on peat soil mostly in the vicinity of Marathon and Clear Lake. Two 45-acre fields of corn were reported killed and several smaller tracts and small patches of potatoes were badly damaged. Another feature of the month's weather was the unusually light wind movement; the average velocity as reported by the regular Weather Bureau stations was 1.1 miles below the average for August and Keokuk reported the least wind movement for any month since records have been available.

The precipitation was below normal over almost the entire state, and occurred at frequent intervals till the 22d, after which there were only a few light and widely scattered showers. As a rule the rainfall occurred as gentle showers and practically all that fell was absorbed by the soil. However, there was a very destructive downpour at Clinton and vicinity that did a great amount of damage by erosion and flooding basements, short circuiting telephone and telegraph cables and washing the surfacing from roads. Damage from hail and squall winds was unusually light.

The weather was favorable for harvesting and threshing and this work was practically completed, but the lack of

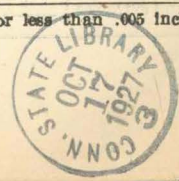
moisture was causing pastures generally to become bare, and the production of milk was falling off rapidly at the close of the month. The weather was considered too cool for the corn crop to develop normally, but in spite of the cool weather the crop made good progress and the backwardness and unsatisfactory condition at the end of the month were due more to late planting than an unfavorable season. At the end of the month the crop was in all stages from not yet tasseled to a stage where good seed could be gathered from many fields in the western portion of the State. The warm, dry weather that began on the 29th was very beneficial to corn but very injurious to truck crops in the drier portions of the State.

F. L. D.

COMPARATIVE DATA FOR THE STATE—AUGUST

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. .01 in. or more	Clear	Partly cloudy	Cloudy
1873	75.7	+ 4.0	102	54	4.17	+ 0.73	8.40	0.00					
1874	74.3	+ 2.6	99	55	3.12	- 0.32	9.16	0.85					
1875	68.9	- 2.8	92	41	4.04	+ 0.60	7.60	1.07					
1876	73.2	+ 1.5	96	46	5.15	+ 1.71	10.04	1.50					
1877	71.9	+ 0.2	100	53	4.36	+ 0.92	12.65	0.10					
1878	74.4	+ 2.7	100	50	3.22	- 0.22	9.15	0.43					
1879	72.0	+ 0.3	100	42	2.70	- 0.74	7.50	0.45					
1880	72.5	+ 0.8	104	41	4.77	+ 1.33	9.88	0.77					
1881	76.5	+ 4.8	104	48	2.71	- 0.73	6.85	0.32					
1882	71.5	- 0.2	96	43	1.61	- 1.83	6.90	0.07					
1883	69.2	- 2.5	98	42	2.58	- 0.86	8.95	0.22					
1884	68.5	- 3.2	93	44	4.09	+ 0.65	8.34	1.98					
1885	66.9	- 4.8	98	40	5.90	+ 2.46	12.68	2.79					
1886	74.2	+ 2.5	103	34	2.02	- 1.42	7.13	0.30					
1887	70.8	- 0.9	103	34	2.75	- 0.69	8.85	0.51					
1888	70.4	- 1.3	110	40	4.37	+ 0.93	8.40	0.95					
1889	71.3	- 0.4	104	37	1.87	- 1.57	9.95	1.02					
1890	68.1	- 3.6	102	34	3.25	- 0.19	6.44	1.13					
1891	69.1	- 2.6	106	34	4.24	+ 0.80	13.02	1.23		8	13	12	6
1892	71.4	- 0.3	102	40	2.24	- 1.20	4.69	0.65		5	18	9	4
1893	69.4	- 2.3	101	30	2.32	- 1.12	6.22	0.40		5	19	9	3
1894	74.6	+ 2.9	108	38	1.58	- 1.86	4.53	T.		4	21	8	2
1895	71.9	+ 0.2	103	37	4.43	+ 0.99	10.63	0.67		7	17	9	5
1896	71.7	- 0.0	104	34	3.52	+ 0.08	12.25	0.86		8	15	11	5
1897	68.9	- 2.8	104	35	1.86	- 1.58	4.98	0.47		6	15	11	5
1898	71.2	- 0.5	103	40	3.44	+ 0.00	10.55	0.58		6	17	9	5
1899	74.4	+ 2.7	100	41	3.68	+ 0.24	10.45	1.12		7	17	10	4
1900	77.4	+ 5.7	103	44	4.65	+ 1.21	10.43	1.26		6	18	10	3
1901	73.8	+ 2.1	105	40	1.29	- 2.15	4.46	T.		5	20	9	2
1902	69.1	- 2.6	98	37	6.58	+ 3.14	15.47	1.57		11	11	11	0
1903	69.1	- 2.6	101	41	6.64	+ 3.20	17.74	2.55		11	12	10	9
1904	69.1	- 2.6	97	35	3.43	- 0.01	6.75	0.65		7	17	8	6
1905	74.3	+ 2.6	104	44	4.05	+ 0.61	8.47	1.04		9	16	9	6
1906	74.1	+ 2.4	101	33	3.95	+ 0.51	10.51	0.92		9	17	9	5
1907	71.1	- 0.6	99	37	4.33	+ 0.89	9.67	1.05		9	17	9	5
1908	70.0	- 1.7	101	38	4.77	+ 1.33	10.55	1.35		9	17	9	5
1909	76.1	+ 4.4	103	33	1.81	- 1.63	8.21	T.		5	21	8	2
1910	71.9	+ 0.2	104	36	3.88	+ 0.44	11.22	0.37		8	15	10	6
1911	71.7	- 0.0	107	34	3.32	- 0.12	9.47	0.44		9	16	10	6
1912	71.0	- 0.7	101	40	3.78	+ 0.34	7.90	0.89		10	15	10	6
1913	76.6	+ 4.9	108	40	2.68	- 0.76	7.13	0.08		6	17	10	4
1914	73.7	+ 2.0	103	40	2.19	- 1.25	4.90	0.42		7	17	10	4
1915	65.9	- 5.8	91	30	2.81	- 0.63	9.14	0.27		8	16	8	7
1916	74.0	+ 2.3	106	35	2.58	- 0.86	6.23	0.49		7	18	9	4
1917	69.4	- 2.3	102	31	2.29	- 1.15	6.31	0.70		7	19	8	4
1918	76.0	+ 4.3	113	38	3.61	+ 0.17	8.38	0.54		8	16	10	5
1919	71.5	- 0.2	103	38	2.59	- 0.85	5.72	0.97		7	19	9	3
1920	69.3	- 2.4	98	39	3.35	- 0.09	8.52	0.44		7	18	8	5
1921	72.1	+ 0.4	102	37	5.04	+ 1.60	9.04	2.20		8	16	11	4
1922	73.8	+ 2.1	102	42	3.06	- 0.38	9.80	0.33		8	19	8	4
1923	70.6	- 1.1	102	38	5.42	+ 1.98	13.14	1.46		12	15	9	7
1924	71.7	- 0.0	100	40	5.35	+ 1.91	12.38	1.90		10	16	10	5
1925	72.4	+ 0.7	99	39	3.47	+ 0.03	8.36	0.31		8	18	9	4
1926	73.5	+ 1.8	103	47	3.80	+ 0.36	7.33	1.64		10	16	10	5
1927	67.9	- 3.8	99	35	2.36	- 1.08	5.68	0.67		8	15	10	6

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



Climatological Data for August, 1927

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit					Precipitation, in inches				Number of Days			Prevailing direction of wind	Observers			
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more			Clear	Partly cloudy	Cloudy
Northern Division																				
Akron	Plymouth	1,153	1																Orlan C. Moore	
Algona	Kossuth	1,213	54	67.6	-2.7	90	6	42	9	36	2.26	-1.29	0.85	0	8	20	10	1	W. E. Laird	
Allison (near)	Butler	1,044	15	66.3	-4.2	96	6	39	9	50	3.11	-0.29	1.14	0	6	14	12	5	J. A. Bell	
Alta	Buena Vista	1,513	36	67.8	-2.5	93	6	45	9	33	2.60	-0.98	0.90	0	13	16	9	6	D. E. Hadden	
Alton	Sioux	1,305	22	66.5	-4.4	93	6	40	9	35	2.13	-0.97	0.57	0	11	5	20	6	W. S. Slagle	
Belmond	Wright	1,181	17	66.4	-3.4	93	6	39	9	37	3.04	-0.04	0.91	0	9	13	6	12	H. F. Luick	
Britt	Hancock	1,236	40	66.4	-3.5	91	6	40	24	35	1.33	-2.39	0.73	0	6	20	8	3	James S. Ross	
Charles City	Floyd	1,015	36	66.0	-3.1	92	6	41	9	34	1.74	-1.09	1.27	0	6	15	11	5	U. S. Weather Bureau	
Cherokee	Cherokee	1,196	5	66.5a		93a	6	40a	9	35a	1.60		0.40	0	10				J. E. Wirth	
Decorah	Winnebago	872	34	64.9	-3.6	93	6	35	24	45	0.91	-2.39	0.40	0	4	20	7	4	M. D. Whitney	
Dubuque	Dubuque	700	54	67.2	-4.5	92	6	46	9	30	1.47	-1.86	0.82	0	8	14	10	7	U. S. Weather Bureau	
Estherville	Emmet	1,298	32	66.0	-2.8	90	6†	35	9	44	2.93	-0.21	1.40	0	9	15	14	2	A. O. Peterson	
Fayette	Fayette	1,003	39	66.2	-3.2	95	6	38	9	41	1.34	-2.20	1.01	0	5	21	6	4	R. Z. Latimer	
Forest City	Winnebago	1,226	33	67.0	-3.2	92	6	43	9	37	1.14	-2.23	0.34	0	8	11	9	11	Dr. M. B. Neil	
Hampton	Franklin	1,145	2	66.0	-5.9	91	6	40	9	39	3.56	+0.11	1.02	0	9	19	9	3	L. H. Davis	
Hawarden	Sioux	1,181	1								1.79		0.78	0	8	14	8	9	Earl V. Slife	
Humboldt	Humboldt	1,095	39	68.1	-3.7	96	6	40	9	37	3.73	+0.43	1.87	0	8	14	11	6	H. O. Smitkey	
Independence	Buchanan	921	63	66.2	-5.1	90	6†	45	2†	31	2.45	-0.76	0.71	0	5	24	3	4	Dr. Geo. Boody	
Inwood	Lyon	1,474	23	67.5	-3.0	96	6	39	9	40	0.82	-1.77	0.38	0	6	19	10	2	A. C. Hanson	
Lake Park (near)	Dickinson	1,489	7	66.4c		91c	6	42c	9	33c	1.39		0.59	0	7				F. M. Lawrence	
Lansing	Allamakee	632	20								1.30	-1.65	0.53	0	9				Mrs. Mary Spinner	
Le Mars	Plymouth	1,224	31	67.8	-3.2	94	6	41	9	41	1.80	-0.88	0.73	0	7	21	8	2	Henry Newell	
Marathon	Buena Vista	1,390	1								3.92		2.51	0	11	9	15	7	E. G. Smith	
Mason City	Cerro Gordo	1,148	30	65.5	-4.1	93	6	36	9	41	1.77	-1.97	0.64	0	8	10	20	1	American Beet Sugar Co.	
New Hampton	Chickasaw	1,109	30	65.4	-4.4	92	6	37	9	39	1.37	-2.13	0.85	0	4	6	23	2	D. W. Dawson	
Northwood	Worth	1,222	31	65.4b	-3.1	89b	6	41b	9	33d	1.82	-2.14	0.93	0	6	10	18	3	Charles Dwelle	
Oelwein	Fayette	1,036	3	66.0		93	6	40	9	36	2.20		1.20	0	4	19	7	5	H. L. Ridler	
Osage	Mitchell	1,163	2	65.3a		91e	6	40e	9†	35e	0.99		0.65	0	4				Dr. C. E. Juhl	
Pocahontas	Pocahontas	1,248	23	66.7	-3.9	93	6	40	9	47	3.53	+0.16	0.93	0	10	18	9	4	F. E. Hronek	
Postville	Clayton	1,192	28	64.5	-3.3	88	6	40	9†	37	1.07	-2.33	0.55	0	5	12	16	3	F. L. Williams	
Rock Rapids	Lyon	1,349	28	66.4	-3.3	92	6	38	9	40	0.73	-1.62	0.17	0	7	20	9	2	J. K. Medberry	
Sanborn	O'Brien	1,553	13	66.0	-4.5	91	6	43	9†	35	1.08	-2.13	0.25	0	8	15	7	9	J. W. Dow	
Sheldon	O'Brien	1,418	2	66.9		93	6	38	9	38	0.84		0.37	0	9	14	13	4	Ross E. Forward	
Sioux Center	Sioux	1,426	28	66.6	-3.9	95	6	43	9	37	1.28	-1.54	0.43	0	6	12	12	7	J. DeRuyter	
Spencer	Clay	1,319	13	66.6	-4.0	94	6	38	9	42	2.09	-1.21	1.00	0	12	14	10	7	E. W. Little	
Storm Lake	Buena Vista	1,440	38	68.1	-3.3	92	6	44	9	30	1.51	-1.63	0.53	0	11	20	6	5	George H. Fracker	
Washita	Cherokee	1,157	29	66.0	-4.6	91	6	38	9	37	2.62	-0.32	1.15	0	7	17	5	9	H. L. Felter	
Waterloo	Black Hawk	854	44	67.0	-4.5	95	6	41	9	38	2.75	-0.56	1.21	0	5	22	3	6	R. B. Slippy	
Waverly	Bremer	936	31	66.5a	-4.1	95a	6	39a	9	33a	2.17	-1.07	0.84	0	4				D. H. Murphy	
West Bend	Palo Alto	1,197	34	67.0	-3.6	95	6	41	9	36	0.89	-2.80	0.21	0	8	17	12	2	Jos. Dorweiler	
Means and extremes.				66.5	-3.8	96	6	35	9	50	1.97	-1.22	2.51	0	8	16	10	5		
Central Division																				
Ames	Story	926	50	68.4	-3.4	94	6	44	24	33	1.41	-2.03	0.70	0	8	22	6	3	Iowa State College	
Audubon (near)	Audubon	1,297	32	68.6	-2.2	93	6	48	9	32	2.84	-0.79	0.90	0	8	17	13	1	George Kirby	
Baxter	Jasper	968	27	67.8	-4.4	94	6	43	24	36	3.52	+0.29	2.27	0	7	10	18	3	Otto Sanderman	
Belle Plaine	Benton	866	37	67.5	-4.0	93	6	43	9	37	4.18	+0.95	2.00	0	9	16	11	4	O. C. Burrows	
Boone (near)	Boone	1,134	22	66.6	-4.3	93	6	40	9	39	2.40	-1.16	0.70	0	11	12	14	5	C. F. Henning	
Carroll	Carroll	1,265	37	68.0	-3.1	96	6	45	9	35	4.47	+0.62	2.18	0	9	16	9	6	Mrs. Jos. J. Wolfe	
Cedar Rapids	Linn	737	45	66.6	-6.7	94	6	43	3†	37	3.60	+0.10	1.83	0	8	17	7	7	J. T. Wurster	
Clinton	Clinton	595	54	68.1	-4.6	94	6	45	3†	36	5.68	+2.05	4.48	0	10	17	6	8	Dr. A. P. Bryant	
Davenport	Scott	580	56	69.6	-3.5	92	6	51	9	25	3.23	-0.13	1.56	0	8	14	10	7	U. S. Weather Bureau	
Davenport No. 2.	Scott	600	2	69.4		95	6	46	3†	38	3.41		1.47	0	10				Rex Shriver	
Denison	Crawford	1,171	33	68.4	-3.1	99	6	43	9	36	3.48	-0.33	1.92	0	11	12	16	3	V. L. Byers	
Des Moines	Polk	861	49	69.8	-3.3	95	6	50	24	31	1.61	-1.93	0.78	0	7	8	13	10	U. S. Weather Bureau	
Fairport	Muscatine	567	6	69.4		91	6†	48	3†	33	1.74		0.78	0	8	21	1	9	Bureau of Fisheries	
Fort Dodge	Webster	1,114	27	67.4	-3.4	93	6	40	9†	39	2.07	-1.53	0.63	0	7	19	4	8	Samuel Sampson	
Grinnell	Poweshiek	1,031	33	71.3	-1.3	96	7	49	9	36	3.17	-0.53	0.85	0	8	3	8	20	Paul P. Meyers	
Grundy Center	Grundy	976	36	67.0a	-4.9	93a	6	43a	9	33a	5.25	+1.95	1.67	0	8				M. G. Heiberger	
Guthrie Center	Guthrie	1,077	32																E. L. Nesselroad	
Harlan	Shelby	1,192	28	67.4	-3.6	92	6	44	9	34	4.79	+1.13	1.69	0	10	11	13	7	Walter Bell	
Iowa City	Johnson	733	67	68.0	-4.0	93	6	44	9	34	1.36	-2.74	0.55	0	8	18	7	6	Prof. J. F. Reilly	
Iowa Falls	Hardin	1,127	34	66.8	-2.8	93	6	40	9	38	2.47	-0.94	0.99	0	8	14	15	2	C. H. Gilbert	
Jefferson	Greene	1,052	28	66.4d	-4.3	94d	6	42d	9	34d	2.65	-0.53	1.60	0	9				W. I. Lyon	
Le Claire	Scott	576	27								2.94	-0.09	0.89	0	13				Margaret T. Disney	
Little Sioux	Harrison	1,040	22	69.0	-3.6	95	6	45	9	33	3.28	-0.46	1.67	0	9	10	19	2	H. W. Kerr	
Logan	Harrison	1,120	60	68.7	-4.0	92	6	43	9†	40	3.80	+0.11	0.88	0	11	6	16	9	Amy Ann Stern	
Maquoketa	Jackson	692	2	64.8a		92a	6	40a	3†	40a	1.97		1.59	0	7	20	1	10	John Struthoff	
Marshalltown	Marshall	947	35	67.9	-4.9	93	6	44	9	22	3.13	+0.13	1.04	0	8	13	10	8	C. C. Pigman	
Monroe	Jasper	922	15	69.2j	-4.2	92j	6	47j	9	33j	1.82	-1.58	0.58	0	7	23	2	6	J. A. Dibel	

Climatological Data for August, 1927—Continued

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days			Prevailing direction of wind	Observers		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear			Partly cloudy	Cloudy
Southern Division																				
Afton	Union	1,212	33	70.2	-2.4	95	6	45	9	36	2.14	-1.24	0.68	0	8	15	11	5	ne.	S. R. Brown
Albia	Monroe	949	29	70.6	-2.0	97	6	46	9	36	1.73	-1.60	0.45	0	8	13	10	8	e.	O. E. McBride
Atlantic	Cass	1,164	36	69.2	-3.5	95	6	44	9	35	1.33	-2.14	0.43	0	11	8	12	11	ne.	T. H. Whitney
Bonaparte (near)	Van Buren	563	36	69.1	-3.7	93	6	48	9	32	1.53	-1.96	0.71	0	6	23	3	5	w.	B. R. Vale
Burlington	Des Moines	544	31	70.3	-4.1	95	6	50	3	30	1.40	-2.33	0.69	0	8	20	4	7	ne.	John T. Donnelly
Centerville	Appanoose	1,013	22	69.7	-3.5	94	6	46	9	34	1.83	-1.65	0.75	0	9	16	10	5	ne.	Thomas Wood
Chariton (near)	Lucas	1,042	32	69.8	-2.1	95	6	46	9	35	1.62	-2.07	0.60	0	6	14	12	5	sw.	O. C. Burr
Clarinda	Page	1,009	37	69.5	-5.1	94	6	45	9	34	1.67	-1.86	0.35	0	12	11	19	1	se.	Dr. H. C. Hawley
Columbus Jct.	Louisa	595	26	67.6	-5.5	91	6	46	3	31	2.19	-2.15	0.83	0	8	18	13	0	sw.	Miss Musa Todd
Corning (near)	Adams	1,117	35	67.4 ^a	-4.8	91	6	47	9	45 ^b	2.63	-1.15	0.96	0	8	16	10	5	sw.	W. A. Seybold
Corydon	Wayne	1,101	34	70.9 ^f	-2.3	96 ^f	6	44 ^f	9	36 ^f	2.27	-0.57	1.20	0	4	15	16	0	sw.	A. T. Gallagher
Creston	Union	1,312	22	69.1	-2.9	92	5	44	9	37	2.55	-0.71	1.10	0	10	15	16	0	sw.	J. W. Goodsell
Cumberland (near)	Cass	1,225	28	69.1	-2.9	92	5	44	9	37	1.47	-1.98	0.50	0	7	15	9	7	sw.	Carl E. Pollock
Earlham (near)	Madison	1,126	25	66.9	-4.5	94	6	42	3	40	3.03	-0.89	1.65	0	6	23	3	5	sw.	George Phillips
Fairfield	Jefferson	780	43	68.8	-4.0	92	6	45	9	37	2.44	-1.03	1.17	0	9	15	10	5	s.	R. M. McKenzie
Glenwood	Mills	1,100	29	69.4	-4.6	94	6	42	9	36	2.91	-0.45	1.90	0	11	8	20	3	sw.	Geo. Mogridge
Indianola	Warren	972	36	69.8	-3.3	95	6	47	24	33	0.67	-3.17	0.20	0	5	15	15	1	se.	Seth F. Shenton
Keokuk	Lee	614	56	70.6	-4.4	93	6	53	20	27	3.10	+0.17	1.19	0	8	9	14	8	e.	U. S. Weather Bureau
Keosauqua	Van Buren	644	35	69.8	-4.4	94	6	47	24	36	2.66	-0.61	1.54	0	7	15	10	6	se.	B. R. Landes
Knoxville	Marion	920	32	69.2	-3.2	96	6	43	9	38	2.78	-1.13	1.75	0	5	13	9	9	ne.	W. J. Casey
Lacona	Warren	824	28	69.2	-3.2	93	6	46	9	36	2.82	-0.63	1.35	0	10	12	18	1	-----	J. B. Alter
Lamoni	Decatur	1,123	20	69.2	-3.2	93	6	46	9	36	1.72	-2.06	0.60	0	11	14	11	6	ne.	F. S. Parks
Lenox	Taylor	1,250	32	70.0	-3.7	94	6	45	9	38	3.08	-0.28	0.85	0	9	13	14	4	nw.	J. L. Hurley
Mount Ayr	Ringgold	1,245	34	68.6	-4.4	91	6	46	9	34	2.02	-1.98	0.77	0	9	16	10	5	s.	Alex Maxwell
Mt. Pleasant	Henry	730	46	69.8	-3.8	94	6	46	3	32	1.51	-1.76	0.58	0	7	9	16	6	n.	J. H. Jericho
Oakland	Pottawattamie	1,105	8	68.9	-4.0	95	6	41	9	33	2.51	-----	0.53	0	8	12	11	8	sw.	W. S. Matthews
Oskaloosa	Mahaska	835	51	67.3	-4.3	92	6	47	3	32	3.59	+0.50	1.79	0	6	16	7	3	nw.	Roy R. Robinson
Ottumwa	Wapello	649	32	70.2	-----	95	6	47	9	34	1.98	-1.47	0.94	0	6	24	4	3	ne.	C. L. Mikesh
Red Oak (near)	Montgomery	1,030	2	68.3	-----	93	6	44	9	35	1.89	-----	0.63	0	6	14	17	0	s.	B. R. Bridge
Riverton (near)	Fremont	920	1	67.8	-----	90	6	48	9	30	3.11	-----	0.89	0	12	8	15	8	se.	Geo. O. Rader
Sigourney (near)	Keokuk	790	31	69.2	-3.4	95	6	45	9	36	2.23	-0.87	1.61	0	6	18	7	6	ne.	W. E. Utterback
Stockport	Van Buren	747	25	68.4	-3.8	94	6	46	9	36	2.52	-0.58	0.82	0	7	21	5	5	ne.	C. L. Beswick
Thurman	Fremont	930	30	69.5	-4.2	93	6	42	9	36	2.12	-1.95	0.50	0	9	12	12	7	s.	H. H. Askew
Tingley	Ringgold	1,275	2	68.3	-----	93	6	44	9	35	1.89	-----	0.63	0	7	12	14	5	sw.	James A. Verploegh
Washington	Washington	757	45	67.8	-4.6	90	6	48	9	30	4.26	+0.61	1.53	0	6	14	14	5	sw.	D. D. Sherman
Wescott (near)	Lee	523	5	69.9	-----	94	6	40	20	34	1.80	-----	1.00	0	3	14	12	5	sw.	Lester J. Larson
Winterset	Madison	1,118	36	69.6	-3.6	96	6	44	9	35	1.35	-2.14	0.30	0	7	19	8	4	sw.	H. S. Ely
Omaha, Neb.	-----	1,105	56	70.4	-4.0	92	6	52	9	24	2.35	-1.27	1.04	0	12	8	17	6	se.	U. S. Weather Bureau
Means and extremes	-----	-----	-----	69.3	-3.7	97	6	37	9	45	2.22	-1.27	1.90	0	8	15	11	5	ne.	-----
State means and extremes	-----	-----	-----	67.9	-3.8	99	6	35	9	50	2.36	-1.08	4.48	0	8	15	10	6	se.	-----

The departure from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc. †Also other dates. ‡Received too late to be included in means and summaries. T. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %				Wind				Sunshine				
	Mean	Highest	Date	Lowest	Mean		Lowest	Date	Total movement	Average hourly velocity	Maximum		Per cent of possible	Departure from normal			
					7 a. m.	12 noon					Miles	From					
Charles City	30.05	30.37	26	29.76	7	81	45	53	28	3	3,352	4.5	23	w.	21	76	+5
Davenport	30.04	30.34	26	29.70	7	79	51	54	30	27	3,496	4.7	28	e.	13	66	-4
Des Moines	30.03	30.30	26	29.72	7	82	50	55	32	4	3,332	5.2	31	sw.	7	66	-6
Dubuque	30.04	30.38	26	29.74	7	79	44	51	30	27	3,119	4.2	23	n.	8	59	-5
Keokuk	30.04	30.33	26	29.78	12	77	50	58	26	20	2,833	3.8	44	sw.	7	69	-4
Sioux City	30.03	30.36	23	29.76	12	82	58	58	33	14	6,230	8.4	33	s.	26	62	-7
Omaha, Neb.	30.02	30.30	23	29.73	13	79	54	57	29	4	4,170	5.6	31	n.	8	54	-15
Means and extremes	30.04	-----	-----	29.70	7	80	50	55	-----	-----	5.2	-----	-----	-----	7	65	-5
Normals and records	29.97	-----	24 th	-----	10 th	82	-----	61	-----	5 th	-----	6.3	-----	6 th	70	-----	-----
		30.43	1900	29.40	1874	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

§Sioux City. §Omaha. ¶Des Moines. †Local mean time. †And other dates.

TEMPERATURE

The mean temperature for the State, as shown by the records of 103 stations, was 67.9°, or 3.8° lower than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 66.5°, or 3.8° lower than the normal; Central, 67.9°, or 4.0° lower than the normal; Southern,

69.3°, or 3.7° lower than the normal. The highest monthly mean was 71.3°, at Grinnell, and the lowest 64.5°, at Postville. The highest temperature recorded was 99°, at Denison on the 6th, and the lowest was 35° at Estherville on the 9th and Decora on the 24th. The temperature range for the State was 64°.

PRECIPITATION

The average precipitation for the State, as shown by the records of 114 stations, was 2.36 inches, or 1.08 inches less than the normal. By divisions, the averages were as follows: Northern, 1.97 inches, or 1.32 inches less than the normal; Central, 2.88 inches, or 0.65 inch less than the normal; Southern, 2.22 inches, or 1.27 inches less than the normal. The greatest amount, 5.68 inches occurred at Clinton, and the least, 0.67 inch occurred at Indianola. The greatest amount in 24 consecutive hours, 4.48 inches, occurred at Clinton on the 7th.

MISCELLANEOUS PHENOMENA

- Aurora: 19th, 20th, 21st.
- Fog: 5th, 7th, 8th, 9th, 14th, 16th, 17th, 18th, 27th, 29th.
- Frost (light): 2d, 9th, 24th.
- Hail: 3d, 5th, 6th, 7th, 8th, 10th, 19th, 21st, 28th.
- Halos (lunar and solar): 5th, 7th, 15th, 24th, 30th.
- Rainbow: 10th.
- Thunderstorms: 4th, 5th, 6th, 7th, 8th, 10th, 11th, 12th, 13th, 15th, 16th, 17th, 18th, 19th, 21st, 22d, 23d, 31st.

Daily Precipitation for August, 1927

Stations	Drainage Basin	Day of Month																															Totals		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>Northern Division</i>																																			
Akron	Big Sioux					.07																												.02	3.46
Algona	Des Moines							.85	.22	.05																									2.26
Allison (near)	Cedar							.12		.05																									3.11
Alta	Raccoon	.05			.24	.16				.05	.03																								2.60
Alton	Floyd					.23				.02	.24		.16		.05																			.02	2.13
Belmond	Iowa					.01	.63			.40																									3.04
Britt	Iowa							.25		.02																									1.83
Charles City***	Cedar					.04				T.	.06																								1.74
Cherokee	Little Sioux	T.			.20	.08				T.	.23		.11	T.		.25		.40	.19	.04										.02				1.60	
Decorah	Mississippi											T.																						.40	0.91
Dubuque***	Mississippi						T.		.02	T.				T.	.82		.09	.01	T.				.38	.11							.01	.03			1.47
Etherville	Des Moines	.20					1.40		.08	.02				T.	.03		.10	.43			.42													2.98	
Fayette	Mississippi							.14		T.																								.09	1.34
Forest City	Cedar						.34			.26	T.				.05		.02	.13	.15	.05														.14	1.14
Hampton	Cedar						.26						.17	.20			.83	.11	.05				1.02	.41										3.56	
Hawarden	Big Sioux				.18	T.			T.	.17					.78		.08	.34	T.	.09			T.	.11									.04	1.79	
Humboldt	Des Moines					.23	.10			.61			T.	1.87			.33	.16	.06				.32	T.										3.73	
Independence	Wapsipicon								.65	.35					.11		.71																	2.45	
Inwood	Big Sioux	.05					.02			.07			T.				.24					.06												0.82	
Lake Park (near)	Little Sioux						.22	.10	.06					T.				.18	.24				.08	.51										1.39	
Lansing	Mississippi	.14					.05			.21	.01	.02							.05	.13				.53								T.	.16	1.30	
Le Mars	Floyd						.13			.11							T.	.73	.18	.07				.52	.06									1.80	
Marathon	Raccoon						.37	T.	.17	.04		.10			2.51		.38	.08	.08	.02			.12	.05										3.92	
Mason City	Cedar						.03	.18	.02	T.							.64	.03	.10				.57	.20										1.77	
New Hampton	Wapsipicon																.38	.14					.40	.45										1.37	
Northwood	Cedar					.09	T.	.17	T.										.37	T.	.15			.93	.11									1.82	
Oelwein	Wapsipicon								.40	T.							.10		.50					1.20										2.20	
Osage	Cedar							T.										.29	.05				.25	.40									T.	0.99	
Pocahontas	Des Moines					.08	.47			.93		.02			.10		.70	.50	.63				.05	.05										3.53	
Postville	Mississippi				.02				T.	.01			T.				.17	.32					.55										T.	1.07	
Rock Rapids	Big Sioux	T.				.15										.06		.15		.05			.06	.11									.15	0.73	
Sanborn	Floyd					.15		.04	T.		.25				.21		.11	.06	.17				.09											1.08	
Sheldon	Floyd					.09		.02	.06		.08	T.			.06		T.	.08	.02	T.				.37										T.	0.84
Sioux Center	Floyd					.06			T.	T.					.31		T.	.27	T.	.12				.48										T.	1.28
Spencer	Little Sioux	.24				.17	.25	.02	.05		.10			1.00		.14	.02	.05					.02	.03										2.09	
Storm Lake	Raccoon				.10	.18	.02		.16		.07				.13		.53	.17	.05	.01				.09											1.51
Washta	Little Sioux			.10	T.	T.	T.	T.	.22				T.				1.15	.35	.02				.76										.02	2.62	
Waterloo	Cedar										.33						.55		.02	1.21				.64										2.75	
Waverly	Cedar														.06				.84				.46	.81										2.17	
West Bend	Des Moines					.09	.12	.04	.21		T.						.08		.16	.11				.08										0.89	
<i>Central Division</i>																																			
Ames	Skunk						.40	.02			T.	.06		.03		.70	.12	.04						.04										1.41	
Audubon (near)	Nishnabotna					T.	.25		.90	.04		T.	.13		T.		.88	.48	.07			T.	.09											2.84	
Baxter	Skunk						.27	2.27							.10		.30		.31				.15	.12										3.52	
Belle Plaine	Iowa						.15	1.85	.50			.03		.43		.98	.08	T.				.08	.08											4.18	
Boone (near)	Des Moines				.01		.53		.08	.02		.70	T.		.29		.15	.45	.01	T.			.09	.07										2.40	
Carroll	Raccoon				.11		.13				.38		.74	T.		2.18		.28	.33	.21			.11											4.47	
Cedar Rapids	Cedar	.75								1.35	.48								.58	.02			.19	.04										3.60	
Clinton	Mississippi						T.	4.48	.72				.03	.01		.09	.01						.03	.12									.09	5.68	
Davenport***	Mississippi							.16	1.40				.69	.06	.13		.09	T.					.49	.26									T.	3.28	
Davenport No. 2	Mississippi							.57	1.47				.20	.06	.19		.13	.03	T.				.29	.46									.01	5.41	
Denison	Missouri					.02				.36		.30	.12					1.92	.27	.22			.07	.14	.04								.02	3.48	
Des Moines***	Des Moines					T.	.02	.76	.16	.01			T.				.48	T.	T.				.11	.07										1.61	
Fairport	Mississippi								T.	.36			.02	.09	.16		.28	.05					.44	.34										1.74	
Fort Dodge	Des Moines					.68				.61							.66	.07	.02				.01	.02										2.07	
Grinnell	Iowa					T.	.12	.79	T.			T.	.56		.33		.85	T.	.42				.06	.04										3.17	
Grundy Center	Cedar						.12	T.	.20			.12		1.67			1.27	.25	1.38				T.	.24										5.25	
Guthrie Center	Raccoon																																		4.79
Harlan	Nishnabotna	T.				.60		.56	.23		1.51	.18		.28		.76	.39	.21				.07												1.36	
Iowa City	Iowa								.13	.06			.01		.55		.38	.05					.10	.08										2.47	
Iowa Falls	Iowa						.27			.08					T.	.08		.85	.99	.02	.08			.10											1.86
Jefferson	Raccoon				.15		1.60	T.	.62	T.	T.	T.			.03		.57	.17	.02				.08	.01										2.65	
Le Claire	Mississippi	.34						.12	.78	.89		.01	.08	.02	.03		.07	.02					.01	.55	.02								T.	2.94	
Little Sioux	Little Sioux					.56			.21			.18					1.67	.05	.02				.17	.06									.36	3.28	
Logan	Missouri				.60		.29	.29				.24		.43		.88	.27	.30	.07				.20												

Daily Precipitation for August, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>Southern Division</i>																																				
Afton	Grand		.02			.24						.16	.68			.82	.21	.05						.46											2.14	
Albia	Des Moines	T.				.15	.10						.14	.44		T.	.37	.07	.01					.45										1.73		
Atlantic	Nishnabotna			.01		.03			.02	.08		.11	.27			.22	.08	.06						.43										1.33		
Bonaparte (near)	Des Moines		.10	T.				T.	.10		T.	T.	.05	.21	T.		.36		T.			T.	.71											1.53		
Burlington	Mississippi			.04	T.					.10	T.		.11			.08		.21	.02		T.			.69	.15									1.40		
Centerville	Chariton		.05		.04			.04					.47			.38	.01	.09					.01	.74										1.83		
Chariton (near)	Chariton		.12	.22									.26			.24		.18						.60											1.62	
Clarinda	Nodaway		.04	.21			.03			.04		.05	.30			.13	.05	.02	.13					.32											1.67	
Columbus Jct.	Iowa		.01					T.	.05			.39	.48			.83	.04		T.				.10	.29										2.19		
Corning (near)	Nodaway		.06			.28						.19	.17			.96	.27	.23						.47											2.63	
Corydon	Chariton	T.	.10			T.		T.					1.20					.77						.60										2.67		
Creston	Missouri		.03	.02			1.10						.25	.30	.05		.10	.10	.10					.50											2.55	
Cumberland (near)	Nodaway	T.	T.			.25			T.			.20	.08	T.		.29	.06	.09					T.	.50											1.47	
Earlham (near)	Des Moines					T.		1.65	T.	T.		.35	T.	T.		.16	.57	.02					T.	.28											3.03	
Fairfield	Skunk		.03					.01					.10	.45		1.16	.01	.01	.01					.66											2.44	
Glenwood	Missouri		.02	.17			.02				T.	1.80	.10	.02			.02	.01	.11					.52					.02						2.91	
Indianola	Des Moines						.06	.07	T.				.20			.17		.17						.17											0.67	
Keokuk**	Mississippi	T.	.14				1.19	T.				.01	.57			.25	.01	T.					.20	.73											3.10	
Keosauqua	Des Moines		.07		.02			.04	T.				.36	T.		.63	T.						.84	.70											2.66	
Knoxville	Des Moines	T.	T.		.04		T.	T.					1.75			.47		.19						.33											2.78	
Lacona	Des Moines		.01	.01	.01	.01	.01					.01	1.35				.18	.75						.48											2.82	
Lamoni	Grand		.06	.20			.10		.29				.06	.20	.03		.07	.10	.01					.60											1.72	
Lenox	Missouri	T.	.05			.15					.05	.24	.73			.85	.13	.35						.55											3.08	
Mount Ayr	Grand		.03	.17		.41		.01				.12	.36			.06	.09	T.						.77											2.02	
Mt. Pleasant	Skunk		.03					.02				.25	.17			.39	.04							.58												1.51
Oakland	Nishnabotna					.12						.40		.46			.39	.32	.24					.05	.53										2.51	
Oskaloosa	Des Moines	T.				.19	.15						1.79			.44		.84						.18											3.59	
Ottumwa	Des Moines		.03				.08						.30			.94		.05						.58												1.98
Red Oak (near)	Nishnabotna		.43			.14			T.		T.	.24		.14		T.			.33				.40												1.68	
Riverton (near)	Nishnabotna		.21		.26		.05				.09	.80		.86		.38	.01	.02				.01		.39											3.11	
Sigourney (near)	Skunk	T.					.09					.04	.44			1.61		.03						.72											2.23	
Stockport	Skunk		.08				.08	.37				.44			.82		.01						T.	.72												2.52
Thurman	Missouri	T.	.27				.02					.56	.15	.16		.25		.33						.26						.07					2.12	
Tingley	Platte	T.	.14	T.		.28						.15	.42			.14	.10	T.						.66											1.89	
Washington	Skunk	T.	T.				T.					1.02	1.53			1.20	.03	T.					.30	.18											4.26	
Westcott (near)	Mississippi						.08		.24	T.			.06	.20			.22	T.	.25					.70											1.80	
Winterset	Des Moines												.06	.20			.22	T.	.25					.30											1.35	
Omaha, Nebr.***	Missouri		.02	.02		.19	T.		.03		.06	.36		T.		1.04	.03	.05					.08	.01									T.		2.35	

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Daily Precipitation for August, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>Southern Division</i>																																				
Afton	Grand		.02			.24						.16	.68			.32	.21	.05						.46											2.14	
Albia	Des Moines	T.				.15	.10						.14	.44		T.	.37	.07	.01					.45											1.73	
Atlantic	Nishnabotna			.01		.03			.02	.08			.11	.27			.22	.06	.06						.43										1.33	
Bonaparte (near)	Des Moines		.10	T.				T.	.10		T.	T.	.05	.21	T.		.36			T.			T.	.71											1.53	
Burlington	Mississippi			.04	T.					.10	T.		.11		.08			.21	.02		T.			.69	.15										1.40	
Centerville	Chariton		.05		.04			.04					.47			.38	.01	.09					.01	.74											1.83	
Chariton (near)	Chariton		.12	.22									.26			.24		.18						.60											1.62	
Clarinda	Nodaway		.04	.21			.03			.04		.05	.30	.35		.13	.05	.02	.13					.32											1.67	
Columbus Jct.	Iowa		.01					T.	.05			.39	.48			.83	.04		T.				.10	.29											2.19	
Corning (near)	Nodaway		.06			.28						.19	.17			.96	.27	.23						.47											2.63	
Corydon	Chariton	T.	.10			T.		T.					1.20						.77					.60											2.67	
Creston	Missouri		.03	.02			1.10						.25	.30	.05		.10	.10	.10					.50											2.55	
Cumberland (near)	Nodaway	T.			.25			T.				.20	.08	T.		.29	.06	.09					T.	.50											1.47	
Earlham (near)	Des Moines				T.		1.65	T.	T.			.35	T.	T.		.16	.57	.02					T.	.28											3.03	
Fairfield	Skunk		.03						.01				.10	.45		1.16	.01	.01	.01					.66												2.44
Glenwood	Missouri		.02	.17		.02					T.	1.80	.10	.02		.02	.01	.11						.52					.02						2.91	
Indianola	Des Moines						.06	.07	T.				.20		.17									.17											0.67	
Keokuk**	Mississippi	T.	.14				1.19	T.					.01	.57		.25	.01	T.					.20	.73											3.10	
Keosauqua	Des Moines		.07		.02			.04	T.				.36	T.		.63	T.						.84	.70											2.66	
Knoxville	Des Moines	T.	T.			T.		T.					1.75		.47		.19							.33											2.78	
Lacona	Des Moines		.01	.01	.01	.01	.01						.01	1.35			.18	.75						.48											2.82	
Lamon	Grand		.06	.20			.10		.29				.06	.20	.03		.07	.10	.01					.60												1.72
Lenox	Missouri	T.	.05			.15						.05	.24	.73		.85	.18	.33						.55											3.08	
Mount Ayr	Grand		.03	.17		.41		.01					.12	.36		.06	.09	T.						.77											2.02	
Mt. Pleasant	Skunk		.03					.02					.28	.17			.39	.04						.58												1.51
Oakland	Nishnabotna					.12						.40	.46		.39	.32	.24						.05	.53											2.51	
Oskaloosa	Des Moines	T.				.19	.15						1.79		.44		.84							.18											3.59	
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Tingley	Platte	T.	.14	T.		.28						T.	.15	.42		.14	.10	T.						.66											1.89	
Washington	Skunk	T.	T.					T.				1.02	1.53		1.20	.03	T.						.30	.18											4.26	
Westcott (near)	Mississippi												1.00	T.		.10								.70											1.80	
Winterset	Des Moines					.08		.24	T.			T.	.06	.20		.22	T.	.25						.30											1.35	
Omaha, Nebr.***	Missouri		.02	.02		.19	T.		.03		.06	.36		T.		1.04	.03	.05					.08	.01									T.		2.35	

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Daily Maximum and Minimum Temperature for the Month of August, 1927

Table with columns for Stations, days 1-31, and Mean. Rows are categorized by Northern Division, Central Division, and Southern Division, listing various Iowa cities and their daily temperature ranges.

a, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

IOWA STORMS, JULY, 1927—Continued From July Climatological Data

Date	County	Township	Nature of Storm	Time	Storm Moved From	Width of Path Miles	Length of Path Miles	Area Sq. Miles	Size of Hailstones Inches	Damage	Persons	
											Injured	Killed
24	Osceola	Ashton and vicinity	Hail & Wind	1:30 p.						Some crops total loss		
24	Palo Alto	Near Mallard, Curlew and Ayrshire	Hail	p. m.						Crops		
24	Pocahontas	West of Rolfe	Hail			2	4	8		Oats 25 to 50%; corn some		
24	Taylor	Vicinity of East Mission, Conway and Sharpsburg	Hail & Wind	7:00 p.	NW to SE	1				Large Hazel nuts Crops ruined Crops \$5,000		
24	Union	Dodge	Hail & Wind	7:00 p.	W to E						Crops \$35,000	
24	Webster	Gowrie	Hail	4:00 p.	SE to NW					Peas to hazel nuts		
27	Benton	Cedar and Jackson	Hail & Wind	11:00 p.	SW to NE					Peas		
27	Black Hawk	Waterloo	Wind, Rain and Hail	p. m.						1/4		
27	Buena Vista	Albert City	Hail & Wind	5:00 p.								
27	Butler	Parkersburg	Wind	6:30 p.								
27	Cherokee	Rock and Pilot	Hail & Wind	4:00 p.	W to E					Peas to Walnuts		
27	Franklin	Geneva and vicinity	Wind	5:30 p.	SW to NE	4						
27	Grundy	Palermo	Hail & Wind	8:20 p.	W to E					Small to hen eggs		
27	Grundy	Black Hawk	Hail & Wind	6:00 p.	SW to NE					1/4		
27	Howard	Jamestown	Hail	6:30 p.	W to E					Hazel nuts to hen eggs		
27	Mitchell	Near McIntire	Hail & Wind	p. m.	NW to SE	2 1/2	20	50				
27	Marshall	Vicinity of Liscomb	Wind	p. m.	NW to SE	1						
27	Plymouth	Garfield	Hail & Wind	5:00 p.	NW to SE					1		
27	Tama	Lincoln and Spring Creek	Hail & Wind	10:00 p.	NW to SE					Small		
27	Woodbury	Union	Hail & Wind	5:00 p.	NW to SE					1 1/4		
28	Butler	West of Greene	Hail	a. m.								
28	Cherokee	South of Cherokee	Hail & Wind	p. m.		2	3	6				
28	Jefferson	Near Libertyville	Tornado	6:00 p.								
28	Pocahontas	Marshall	Hail & Wind	5:00 p.	N to S					Dove eggs		
28	Tama	Lincoln	Hail & Wind	10:00 p.	W to E					1/2 to 1		
28	Monona	Fairview, Lake & Lincoln	Hail & Wind	6:00 p.	NW to SE					1/4		
31	Greene	Near Cooper	Hail & Wind	p. m.	NW to SE	3						
31	Webster	Near Gowrie	Hail & Wind	p. m.						Marbles		

IOWA STORMS, AUGUST, 1927

3	Woodbury	Union	Hail	p. m.								
5	Calhoun	Lake Center and Twin Lakes	Wind and Hail	p. m.								
5	Emmet	Armstrong, Grove and Denmark	Hail	4:00 p.	N to S	3	6	18	1			
6	Buchanan	Homer and Cono	Hail	6:00 p.	NE to SW				1			
6	Linn	Linn	Hail	7:00 p.	NE to SW				1/2			
8	Johnson	Big Grove and Cedar	Wind	1:00 p.	NW to SE	6						
8	Kossuth	Fenton	Hail	6:00 p.	NW to SE				3/4			
8	Scott	Rockingham, Buffalo and Blue Grass	Hail	p. m.	NW to SE	2	6	12	1			
10	Shelby	Douglas, Center, Union and Greeley	Hail	6:00 p.	N to S				1			
13	Lucas	Pleasant	Wind	5:00 p.								
19	Polk and Warren	Allen and Allen	Hail	6:40 p.	NW to SE	1			1/2			
21	Cerro Gordo	Mason	Wind	p. m.	NW to SE							
21	Sioux	Sittlers	Hail	8:00 p.	NW to SE				1/2			
23	Hancock	Erin	Hail	p. m.	W to E							

WHAT MAKES IT THUNDER?

How often that question is asked by inquisitive boys, and Dad's answer is generally something like this, "Run and shut the windows, son, it is going to rain."

It is not easy to go up where it thunders and find out, so Dad nor no one else can be seriously blamed for sidestepping the question, but when heavy thunder rattles the windows and jars the house the question involuntarily springs from multitudes of young lips. The United States Weather Bureau has full information about all these things and this is what it says about thunder.

In active "thunder-head" clouds the upward currents of air are so strong that they keep raindrops from falling and often carry them upward some distance. Smaller drops unite to form larger ones but they can not become larger than a quarter of an inch in diameter. They can not fall through still air faster than 24 feet per second nor be carried upward by a current of air rising faster than 24 feet per second without breaking into smaller drops.

When they break into smaller drops there is a separation of the electricity, the drops taking the positive charge and the air the negative charge. This goes on till the positive charge on the raindrops that are being held up becomes very strong while the negative charge is carried away rapidly by the up-rushing stream of air. At intervals from several minutes to a few seconds the charge becomes so strong that it is discharged in the flash of lightning.

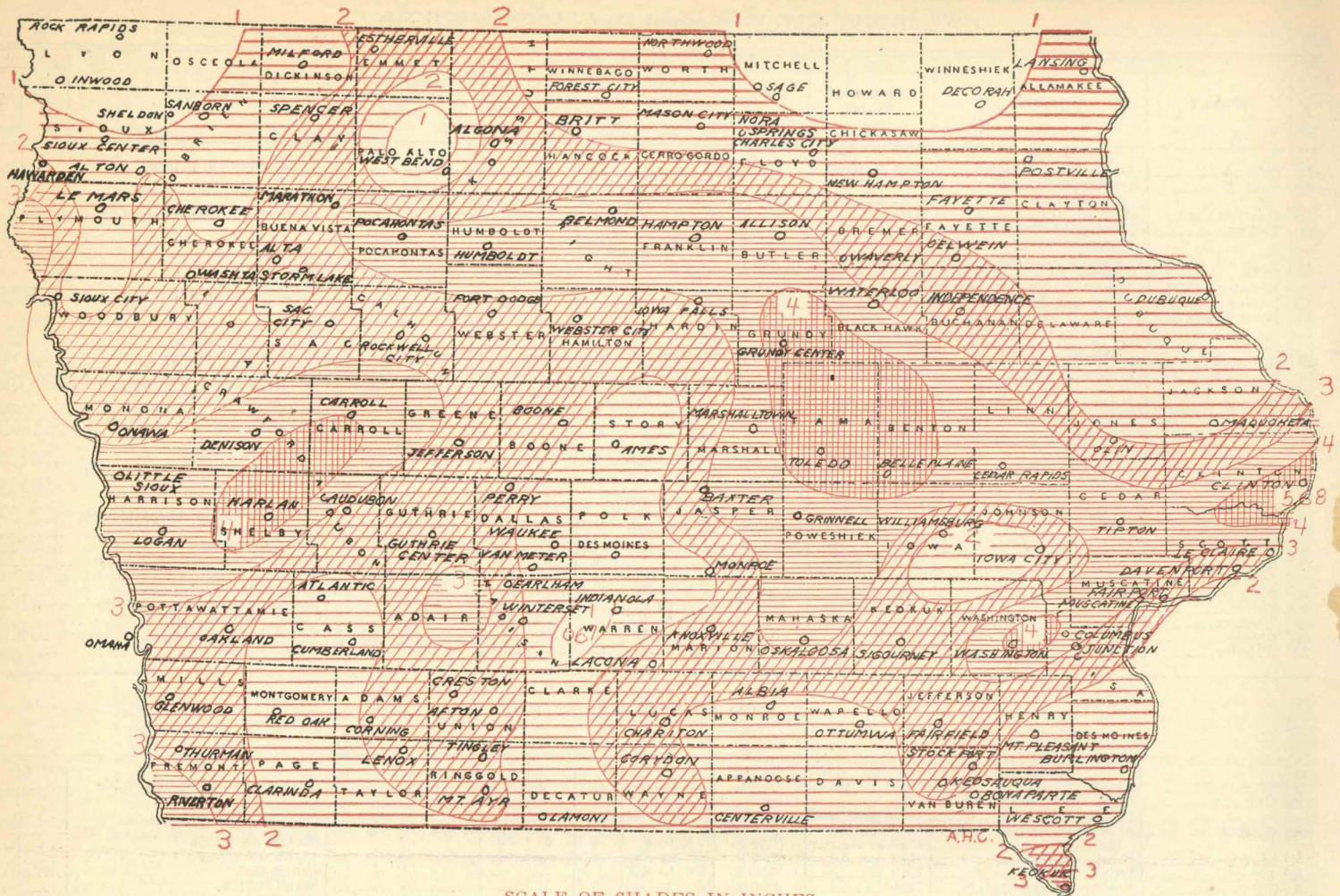
As the lightning breaks its way through the air, extremely high temperatures are generated in the narrow channel which it cuts for itself. This expands the air with explosive violence. It is the explosion we hear and call thunder. The rumbling, rolling sound is due to several causes. A lightning flash is often several miles long. The sound of the explosion at the near end reaches our ears first, then the wave arrives from more distant parts at the rate of about a mile in five seconds. If a flash proceeds from directly overhead two miles across the sky we hear the explosion from the near end about 10 seconds sooner than from the far end. Then there are the endless echoes from cloud to cloud and from hills, mountains and even buildings that prolong the roar and rumble.

Retracing our story, thunder can not occur without lightning; the lightning results from an over charge of positive electricity on raindrops that are broken up by a current of air that is rising more than 24 feet per second and it takes a large volume of air at or near the surface of the earth considerably warmer than the air aloft to start an updraft of that speed.

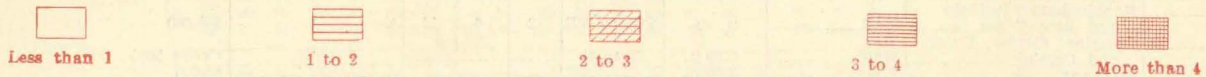
The reader who cares to go further into the details should read "Physics of the Air," Humphreys pp. 284-339 or Broadcast Talk on Thunderstorms by Dr. G. C. Simpson, D. B., F. R. S. Journal Royal Meteorological Society, London, April, 1927.

C. D. R.

TOTAL PRECIPITATION, AUGUST, 1927

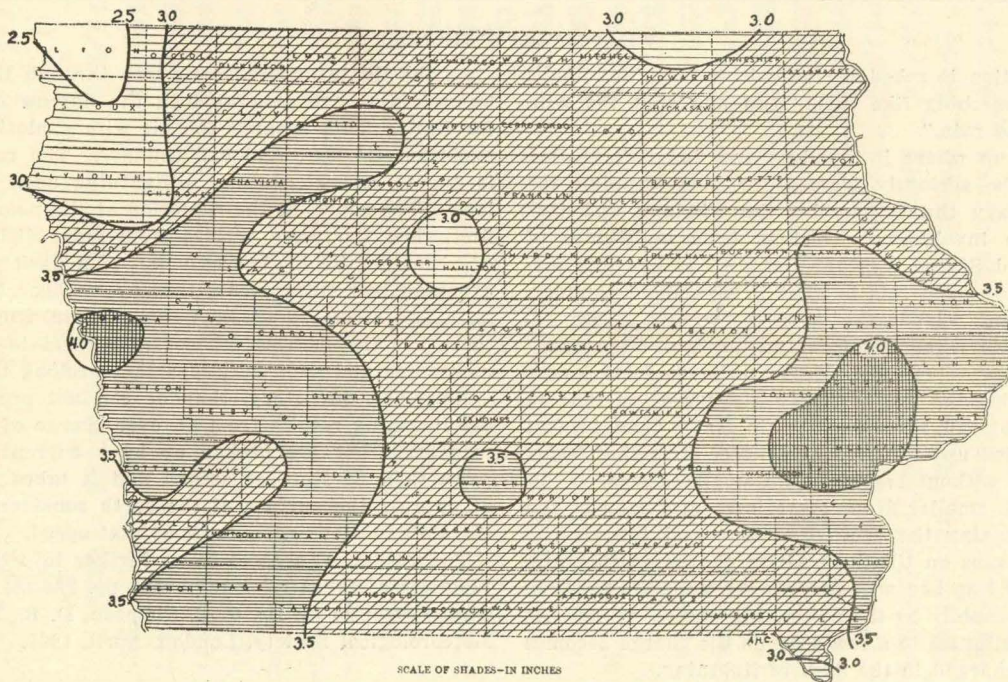


SCALE OF SHADES IN INCHES

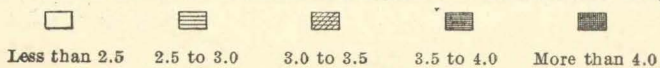


NORMAL PRECIPITATION, AUGUST

(Based on station records of 30 years or more)



SCALE OF SHADES-IN INCHES



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.
CHARLES F. MARVIN, Chief.

CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, SEPTEMBER, 1927 No. 9

GENERAL SUMMARY

During the first 17 days of September the temperature was continuously above normal and mid-summer conditions prevailed throughout the State, with the average daily excess in temperature ranging from 12 to 14 degrees. This period was the warmest ever experienced in any September and was the warmest period of the current year. However, the highest observed temperature in the State was only 101°, which has been exceeded in September, 12 times in the preceding 54 years. Neither was the lowest observed temperature, 29°, unusual, for lower temperatures have been observed in 27 of the 54 preceding Septembers. From the 18th till the end of the month there was a decided reaction to colder weather and during this period the temperature was continuously below normal except on the 24th and 25th there was a slight excess in the extreme eastern portion of the State. The average daily deficiency during the last 13 days was almost as great as the excess during the first 17, changing what promised to be the warmest September of record, to one ranking as the 5th warmest since 1873. The protracted heat caused great discomfort both to man and beast but was a great benefit to the corn crop which had been very backward, particularly in the eastern counties, throughout the season. All corn that developed normally was hastened to maturity. At the end of the month the situation was much better than had been expected and the immature corn susceptible to frost injury was no greater than the average of the last five years. Some late corn in portions of the State where moisture was deficient, fired and dried too rapidly and considerable will be chaffy. The heat caused a rather serious situation to dairy interests as the pastures were soon burned bare in most of the State and flies were such a pest that even in portions of the State where pastures were good the milk flow was reduced. In the central portion of the State there was a decided falling off in the milk supply during the first week which spread till almost the entire State was affected and it was necessary to import milk from distant points. In some of the larger centers the milk supply was not sufficient to meet the demand and had not the production of butter been curtailed there would have been a milk famine. With the advent of cooler weather there were general rains which greatly revived pastures and by the end of the month the situation was greatly relieved. Frosts were general over most of the State from the 19th till the 22d, the temperature reaching the freezing point, or lower, at many places, and the deposit of frost was generally heavy but the damage was almost negligible. Only 2% of the corn was touched by frost up to October 1 and by some this was thought to be more beneficial than detrimental.

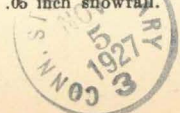
For the State precipitation was above normal but there was a deficiency in the Southern Division. During the first

half of the month precipitation was mostly in the form of showers, some portions of the State receiving copious amounts, and other parts, little or none. This period was characterized by some unusually heavy local downpours. The first occurred on the 6th and was especially heavy in the vicinity of Northwood, though a number of other stations reported heavy amounts. The most notable case was on the night of the 8th and morning of the 9th and covered most of Clinton, Jackson and Dubuque Counties. At Clinton a fall of 8.71 inches occurred in less than 12 hours, making the greatest daily amount ever recorded at that point; also at Dubuque the total of 5.48 inches is the greatest 24-hour amount of record. There was much damage both in Dubuque and Clinton by washouts of streets, flooded basements and dirt washed from the hills. During the rest of the month rains occurred at frequent intervals and were

COMPARATIVE DATA FOR THE STATE—SEPTEMBER

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. of in. or more	Clear	Partly cloudy	Cloudy
1873	59.1	- 5.2	89	33	2.18	- 1.47	5.40	0.81					
1874	62.8	- 1.5	90	40	6.04	+ 2.39	9.50	4.50					
1875	60.6	- 3.7	92	37	5.02	+ 1.37	9.38	1.33					
1876	60.4	- 3.9	86	38	6.42	+ 2.77	12.60	3.42					
1877	65.4	+ 1.1	96	40	1.95	- 1.70	5.20	0.65					
1878	62.9	- 1.4	92	38	3.13	- 0.52	10.85	0.70					
1879	59.3	- 5.0	90	24	2.70	- 0.95	9.45	0.57					
1880	61.1	- 3.2	90	30	4.18	+ 0.53	11.64	0.10					
1881	64.5	+ 0.2	103	37	7.14	+ 3.49	13.35	2.64					
1882	63.4	- 0.9	97	31	0.87	- 2.78	3.71	0.00					
1883	58.5	- 5.8	93	30	2.04	- 1.61	6.20	0.06					
1884	66.5	+ 2.2	95	30	5.20	+ 1.55	11.00	2.20					
1885	61.7	- 2.6	92	32	3.04	- 0.61	5.59	0.65					
1886	63.0	- 1.3	97	30	4.68	+ 1.03	7.93	0.39					
1887	62.1	- 2.2	98	30	6.17	+ 2.52	12.87	1.40					
1888	59.9	- 4.4	96	26	1.07	- 2.58	3.44	0.10					
1889	60.7	- 3.6	96	23	2.80	- 0.85	7.19	0.70					
1890	59.5	- 4.8	96	23	2.71	- 0.94	4.85	0.30					
1891	67.3	+ 3.0	104	28	1.33	- 2.32	3.60	0.13		4	20	7	3
1892	64.7	+ 0.4	99	29	1.53	- 2.12	4.15	0.16	0	4	16	8	6
1893	64.7	+ 0.4	102	18	2.34	- 1.31	5.49	0.74	0	4	20	6	4
1894	65.1	+ 0.8	100	26	3.57	- 0.08	7.43	0.67	0	8	15	10	5
1895	66.8	+ 2.5	103	22	3.03	- 0.62	7.43	0.85	T.	5	18	8	4
1896	58.5	- 5.8	95	22	4.09	+ 0.44	9.96	1.82	0	10	11	9	10
1897	70.9	+ 6.6	106	26	2.04	- 1.63	5.88	0.00	0	4	23	5	2
1898	65.3	+ 1.0	99	29	2.60	- 0.96	8.45	0.41	0	7	16	9	5
1899	62.5	- 1.8	104	15	0.93	- 2.72	4.32	T.	0	4	16	9	5
1900	64.4	+ 0.1	99	26	4.98	+ 1.33	8.82	2.48	T.	9	15	8	7
1901	63.3	- 1.0	102	26	4.77	+ 1.12	13.62	1.71	0	9	13	9	8
1902	59.1	- 5.2	88	23	4.35	+ 0.70	10.41	1.65	0	9	15	6	10
1903	60.8	- 3.5	94	28	3.81	+ 0.16	8.79	1.42	0	10	14	6	10
1904	64.0	- 0.3	94	30	2.78	- 0.87	8.33	0.99	0	7	13	8	9
1905	65.8	+ 1.5	96	36	3.81	+ 0.16	13.18	0.50	0	8	14	8	8
1906	67.2	+ 2.9	100	27	4.16	+ 0.51	11.10	0.64	0	8	16	8	6
1907	62.8	- 1.5	98	25	2.75	- 0.90	6.06	1.38	0	8	15	9	6
1908	67.9	+ 3.6	98	20	1.20	- 2.45	3.46	0.25	T.	3	21	6	3
1909	62.4	- 1.9	94	30	3.58	- 0.07	7.34	1.39	0	9	14	8	9
1910	63.2	- 1.1	99	30	3.59	- 0.06	7.43	1.18	0	9	14	7	9
1911	65.8	+ 1.5	103	32	5.12	+ 1.47	13.73	1.19	T.	10	11	9	10
1912	62.1	- 2.2	104	24	3.98	+ 0.33	10.12	0.28	T.	11	12	8	10
1913	64.5	+ 0.2	107	19	3.31	- 0.34	7.44	0.45	0	9	15	8	7
1914	64.5	+ 0.2	99	30	7.88	+ 4.23	16.24	2.48	0	10	16	7	7
1915	62.7	- 0.6	91	30	6.03	+ 2.38	12.45	2.88	0	11	11	8	11
1916	63.5	- 1.8	98	21	3.89	+ 0.24	9.71	1.45	T.	7	17	8	5
1917	62.6	- 1.7	97	28	2.90	- 0.75	8.68	0.39	0	7	15	7	8
1918	58.6	- 5.7	93	20	1.87	- 1.78	4.62	0.48	T.	6	16	8	6
1919	67.5	+ 3.2	99	33	5.34	+ 1.69	11.82	1.49	0	8	16	6	8
1920	66.5	+ 2.2	98	24	3.30	- 0.35	7.21	0.69	0	8	17	8	5
1921	67.3	+ 3.0	99	31	6.72	+ 3.07	11.95	1.72	0	11	14	8	8
1922	67.1	+ 2.8	103	31	2.03	- 1.62	4.34	0.31	0	6	20	6	4
1923	64.2	- 0.1	92	28	5.79	+ 2.14	12.14	1.88	0	11	14	8	8
1924	59.1	- 5.2	91	25	3.13	- 0.52	5.68	1.01	0	8	16	7	7
1925	69.0	+ 4.7	105	32	5.04	+ 1.39	9.13	1.54	0	9	14	10	6
1926	63.0	- 1.3	92	18	9.76	+ 6.11	18.57	4.75	T.	14	8	7	15
1927	67.4	+ 3.1	101	29	4.56	+ 0.91	11.94	2.02	T.	10	15	8	7

T. Indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



Climatological Data for September, 1927

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit					Precipitation, in inches				Number of Days			Prevailing direction of wind	Observers		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more			Clear	Partly cloudy	Cloudy
Northern Division																			
Akron	Plymouth	1,153	1															Orlan C. Moore	
Algonaw	Kossuth	1,213	54	66.7	+ 3.7	95	9†	35	20†	28	5.74	+2.42	1.10	0	10	17	6	7	se.
Alison (near)	Butler	1,044	15	64.3	+ 1.2	96	12	32	20	37	4.40	+0.90	0.98	0	12	15	8	7	se.
Alta	Buena Vista	1,513	36	65.2	+ 2.5	94	10	33	20	34	5.43	+2.15	1.22	T.	12	12	9	9	s.
Alton	Sioux	1,305	22	64.5	+ 1.7	91	9†	33	26	31	2.02	-0.04	1.26	2.0	10	6	15	9	sw.
Belmond	Wright	1,121	17	65.8	+ 2.2	98	12	32	20	39	3.32	-0.88	1.34	0	11	9	8	13	nw.
Britt	Hancock	1,236	40	65.0	+ 2.6	93	9†	32	20	32	6.39	+2.93	2.22	0	11	14	7	9	sw.
Charles City	Floyd	1,015	36	64.6	+ 3.6	94	12	35	20	31	7.06	+3.54	1.83	0	9	12	9	9	se.
Cherokee	Cherokee	1,196	5	64.4		92	10†	32	20	35	5.22		2.40	T.	11	13	11	6	s.
Decorah	Winnesiek	872	34	65.4	+ 3.8	96	13†	30	23	41	4.23	+0.12	1.43	0	11	15	5	10	sw.
Dubuque	Dubuque	700	54	66.8	+ 2.8	95	12	39	20	29	10.70	+6.88	5.48	0	13	8	10	12	s.
Estherville	Emmet	1,298	32	63.9	+ 2.2	96	12	32	26	49	3.35	+0.03	0.85	T.	13	9	17	4	sw.
Fayette	Fayette	1,003	39	66.8	+ 4.5	101	12	33	22	42	4.61	+0.94	1.71	0	14	17	6	7	sw.
Forest City	Winnebago	1,226	33	64.8	+ 2.1	94	14	32	24	34	5.28	+1.95	2.02	0	11	6	11	13	nw.
Hampton	Franklin	1,145	?	65.2	+ 0.9	97	12	33	20	37	3.01	-0.42	0.79	0	8	16	7	7	se.
Hawarden	Sioux	1,181	1								2.12		0.87	T.	9	14	6	10	s.
Humboldt	Humboldt	1,095	39	67.2	+ 3.0	98	11†	36	20	36	3.22	-0.05	1.59	0	8	17	3	10	sw.
Independence	Buchanan	921	63	66.6	+ 2.7	94	12†	35	22	37	5.32	+1.37	1.81	0	10	16	4	10	se.
Inwood	Lyon	1,474	23	64.6	+ 1.5	94	9†	31	20	35	3.97	+1.18	1.78	0	10	18	5	7	s.
Lake Park (near)	Dickinson	1,489	7			92	11†	33	20	33	5.48		1.30	0	9				ne.
Lansing	Allamakee	632	20								3.92	+0.23	1.10	0	8				
Le Mars	Plymouth	1,224	31	65.7	+ 2.0	94	10	33	26	32	4.44	+1.21	1.58	0	6	15	8	7	s.
Marathon	Buena Vista	1,390	1								4.50		1.11	T.	11	15	6	9	sw.
Mason City	Cerro Gordo	1,148	30	64.4	+ 2.7	95	12†	31	23	46	3.89	+1.08	0.67	0	14	8	13	9	se.
New Hampton	Chickasaw	1,169	30	64.0	+ 1.6	95	15	32	22	36	6.58	+2.99	1.40	0	11	9	11	10	se.
Northwood	Worth	1,222	31	63.1 ^a	+ 2.1	90 ^a	14	33 ^a	20†	29 ^b	9.44	+5.91	6.53	T.	12	9	11	10	se.
Oelwein	Fayette	1,033	3	66.9		96	15	34	22	36	4.10		1.40	0	8	11	10	9	s.
Osage	Mitchell	1,163	2	64.8 ^a		95 ^a	14	35 ^a	20†	33 ^a	4.35		1.14	0	9				
Pocahontas	Pocahontas	1,248	23	65.6	+ 2.1	97	11†	33	20	42	3.49	-0.10	0.76	0	9	16	7	7	s.
Postville	Clayton	1,192	28	64.4	+ 3.6	94	12†	34	20†	36	3.11	-0.73	1.12	0	11	7	15	8	sw.
Rock Rapids	Lyon	1,319	23	63.7	+ 2.0	91	9	32	20	34	3.57	+0.98	1.39	0	11	16	7	7	se.
Sanborn	O'Brien	1,553	13	63.2	+ 0.4	92	11†	29	20	36	4.04	+0.84	1.95	T.	10	14	5	11	se.
Sheldon	O'Brien	1,418	2	64.7		93	17	31	20	35	3.95		2.03	T.	11	11	12	7	sw.
Sioux Center	Sioux	1,426	28	64.2	+ 1.2	93	10	30	20	33	4.32	+1.87	1.60	0.2	8	11	8	11	s.
Spencer	Clay	1,319	13	65.2	+ 1.7	95	12†	32	20	38	5.62	+2.39	1.93	0	13	12	8	10	sw.
Storm Lake	Buena Vista	1,440	33	65.8	+ 1.8	93	10	34	20	31	5.79	+2.54	2.64	0	10	19	2	9	se.
Washita	Cherokee	1,157	29	65.5	+ 2.0	94	17	35	20†	37	4.24	+0.87	1.60	0	6	15	6	9	se.
Waterloo	Black Hawk	854	44	67.0	+ 2.9	100	15	33	22	38	4.80	+0.76	1.00	0	11	19	3	8	se.
Waverly	Bremer	936	31	66.0 ^b	+ 2.6	96 ^b	12	34 ^b	22	36 ^b	4.75	+1.25	1.08	0	13				nw.
West Bend	Palo Alto	1,197	34	66.1	+ 2.7	97	6	30	20	43	3.76	+0.62	1.07	0	9	11	11	8	s.
Means and extremes				65.2	+ 2.3	101	12	29	20	46	4.65	+1.22	5.48	0.1	10	13	8	9	s.
Central Division																			
Ames	Story	926	50	68.4	+ 4.0	99	9†	37	20†	35	5.82	+2.15	3.10	0	10	16	4	10	sw.
Audubon (near)	Audubon	1,297	32	67.0	+ 3.3	97	15	36	20	33	8.42	+4.66	4.92	0	12	21	4	5	sw.
Baxter	Jasper	998	27	67.4 ^b	+ 2.8	98 ^b	9†	34 ^b	22	40 ^b	4.01	+0.04	1.28	0	9				sw.
Belle Plaine	Benton	866	37	68.2	+ 3.8	98	17	35	22	38	6.15	+2.58	2.00	T.	12	12	10	8	s.
Boone (near)	Boone	1,134	22	67.6	+ 3.8	99	8†	33	22	42	6.21	+2.16	3.52	0	9	13	6	11	s.
Carroll	Carroll	1,265	37	66.6	+ 2.9	97	10	34	20	34	3.88	+0.41	0.80	0	9	15	7	8	se.
Cedar Rapids	Linn	737	45	67.4	+ 1.2	96	12	33	22	33	5.08	+1.48	1.12	0	12	14	4	12	sw.
Clinton	Clinton	595	54	68.4	+ 3.2	95	15	39	20†	34	11.94	+8.45	8.71	0	10	13	7	10	s.
Davenport	Scott	580	56	69.7	+ 4.1	97	15	42	20	32	5.73	+2.28	1.98	0	14	12	10	8	s.
Davenport No. 2	Scott	690	2	70.2		100	15	39	20†	39	5.81		2.00	0	10				
Denison	Crawford	1,171	33	66.4	+ 2.4	95	10	35	20	38	4.90	+1.78	1.48	0	11	13	11	6	s.
Des Moines	Polk	861	49	68.2	+ 3.3	99	10	39	22	35	3.65	+0.12	1.63	0	10	11	8	11	sw.
Fairport	Muscatine	567	6	70.1		96	13†	41	20	34	4.56		1.76	0	8	11	4	15	s.
Fort Dodge	Webster	1,114	27	65.9	+ 1.9	97	11†	31	20	38	4.70	+0.32	1.32	0	12	15	2	13	sw.
Grinnell	Poweshiek	1,031	33	68.6	+ 3.7	97	15	37	20	33	4.74	+1.09	1.19	0	11	16	10	4	s.
Grundy Center	Grundy	976	36	66.6	+ 2.0	96	12	35	20	32	5.97	+2.20	1.00	0	10	13	9	8	sw.
Guthrie Center	Guthrie	1,077	32																
Harlan	Shelby	1,192	28	65.9	+ 2.1	94	12†	35	20	37	5.81	+2.04	2.28	0	12	17	6	7	sw.
Iowa City	Johnson	733	67	68.8	+ 4.0	97	15†	36	22	34	3.73	-0.15	1.31	0	10	12	11	7	s.
Iowa Falls	Hardin	1,127	34	66.6	+ 4.0	98	9†	34	20†	37	4.24	+0.44	0.95	0	9	15	7	8	sw.
Jefferson	Greene	1,052	28	66.6	+ 3.0	97	8†	35	20†	40	-4.36	+0.37	1.74	0	7	16	6	8	sw.
Le Claire	Scott	576	27								5.96	+2.55	2.34	0	9				
Little Sioux	Harrison	1,040	22	67.8	+ 2.5	96	10†	36	21†	34	4.57	+1.40	1.51	0	10	15	10	5	sw.
Logan	Harrison	1,120	60	67.6	+ 1.9	97	17	35	22	43	2.05	-1.11	1.25	0	7	6	19	5	n.
Maquoketa	Jackson	692	2	66.3 ^b		96 ^b	15	35 ^b	22	39 ^b	9.54		4.11	0	11				sw.
Marshalltown	Marshall	947	35	68.2	+ 2.8	99	15	37	20	32	6.05	+1.94	1.50	0	12	13	8	9	sw.
Monroe	Jasper	922	15	69.7	+ 3.6	98	10†	40	27	35	4.18	+0.08	0.97	0	10	19	3	8	s.
Muscatine	Muscatine	546	68								4.04	+0.44	1.34	0	11				
Olin†	Jones	760	28	68.2															

Climatological Data for September, 1927—Continued

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit					Precipitation, in inches				Number of Days				Observers			
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear		Partly cloudy	Cloudy	Prevailing direction of wind
Southern Division																				
Afton	Union	1,212	33	69.4	+ 4.3	100	15	37	20	30	3.52	-0.86	0.94	0	10	15	11	4	sw.	S. R. Brown
Albia	Monroe	949	29	69.6	+ 3.2	100	10†	38	20	34	3.58	-0.48	1.30	0	9	9	7	14	sw.	O. E. McBride
Atlantic	Cass	1,164	36	67.7	+ 2.7	96	12†	37	20	35	5.35	+1.94	1.90	0	13	13	8	9	sw.	T. H. Whitney
Bonaparte (near)	Van Buren	563	36	69.4	+ 3.5	97	10	36	22	37	3.20	-0.93	0.87	0	10	21	4	5	sw.	B. R. Vale
Burlington	Des Moines	544	31	71.2	+ 4.0	99	15	41	20†	32	2.32	-1.60	0.60	0	11	18	6	6	sw.	John T. Donnelly
Centerville	Appanoose	1,013	22	70.0	+ 4.4	96	10†	35	21	34	2.44	-1.66	0.77	T.	10	17	6	7	sw.	Thomas Wood
Chariton (near)	Lucas	1,042	32	69.7	+ 4.9	100	15	36	21	37	2.88	-1.06	1.17	0	8	14	12	4	sw.	O. C. Burr
Clarinda	Page	1,009	37	69.2	+ 2.9	97	10†	33	21	40	3.47	0.00	0.84	0	11	19	7	4	sw.	Dr. H. C. Hawley
Columbus Jct.	Louisa	595	26	68.8	+ 2.7	97	17	37	22	32	3.04	-0.62	0.87	0	11	16	11	3	sw.	Miss Musa Todd
Corning (near)	Adams	1,117	35	68.8	+ 3.9	96	10†	33	21	35	3.76	-0.16	1.30	0	7	19	5	6	sw.	W. A. Seybold
Corydon	Wayne	1,101	34	69.9	+ 4.2	99	10	36	21	35	2.90	-1.19	0.78	0	11	15	8	7	sw.	A. T. Gallagher
Creston	Union	1,312	22	67.8	+ 3.7	95	11†	35	21	32	5.39	+1.39	1.20	0	15	19	7	4	sw.	J. W. Goodsell
Cumberland (near)	Cass	1,225	28								4.48	+1.10	1.15	0	9	17	6	7	sw.	Carl E. Pollock
Earlham (near)	Madison	1,126	25	67.8	+ 3.7	98	10	36	22†	39	3.53	-0.16	0.82	0	9	21	2	7	sw.	George Phillips
Fairfield	Jefferson	780	43	69.2	+ 3.6	101	15†	32	22	41	2.02	-1.61	0.60	0	8	18	7	5	sw.	R. M. McKenzie
Glenwood	Mills	1,100	29	68.9	+ 2.2	94	10†	36	21†	42	5.01	+2.33	1.80	0	10	19	6	5	sw.	Geo. Mogridge
Indianola	Warren	972	36	69.6	+ 4.0	101	10	38	20	36	4.01	+0.23	1.15	0	9	16	9	5	sw.	Seth F. Shenton
Keokuk	Lee	614	56	71.0	+ 3.5	96	17	43	20	29	2.91	-0.95	0.78	0	12	9	12	9	s.	U. S. Weather Bureau
Keosauqua	Van Buren	644	35	69.5	+ 3.7	99	17	33	22	36	2.45	-1.75	0.76	0	10	11	11	8	s.	J. H. Landes
Knoxville	Marion	920	32	69.8	+ 4.0	100	10	38	22	37	3.38	-0.76	0.95	0	10	14	7	9	sw.	W. J. Casey
Lacona	Warren	824	28								3.43	-0.93	1.12	0	10	13	9	8	sw.	J. B. Alter
Lamoni	Decatur	1,123	20	69.2	+ 4.5	99	10	32	21	35	2.47	-1.54	0.86	0	11	18	7	5	sw.	F. S. Parks
Lenox	Taylor	1,250	32	68.6	+ 2.9	98	10	33	21	33	4.10	-0.11	1.70	0	11	16	10	4	sw.	J. L. Hurley
Mount Ayr	Ringgold	1,245	34	68.1	+ 2.7	94	10†	32	21	39	3.50	-0.45	1.06	0	10	17	7	6	sw.	Alex Maxwell
Mt. Pleasant	Henry	736	46	70.2	+ 4.1	100	15	38	22	39	2.56	-0.97	0.66	v	11	7	20	3	sw.	J. H. Jericho
Oakland	Pottawattamie	1,105	8	67.4	+ 2.3	94	15	37	21†	39	6.48		1.86	0	9	19	7	4	sw.	W. S. Matthews
Oskaloosa	Mahaska	835	51	68.0	+ 3.1	98	15	37	20	35	4.24	+0.84	1.57	T.	9	17	3	10	sw.	Roy R. Robinson
Ottumwa	Wapello	649	32	69.5 ^a		98 ^a	10†	35 ^a	24	41 ^a	5.17	+1.32	1.10	0	10	17	9	4	s.	O. L. Mikes
Red Oak (near)	Montgomery	1,030	2								6.67		1.83	0	10	15	8	7	s.	B. R. Bridge
Riverton (near)	Fremont	920	1								3.70		1.73	0	9	19	2	9	s.	Geo. C. Rader
Sigourney (near)	Keokuk	790	31	69.6	+ 4.5	99	15	35	22†	39	3.46	-0.23	0.98	0	10	15	5	10	sw.	W. E. Utterback
Stockport	Van Buren	747	25	69.8	+ 4.8	100	15	34	22	40	2.75	-1.34	0.77	0	11	17	6	7	s.	C. L. Beswick
Thurman	Fremont	960	30	69.4	+ 3.7	95	10†	32	21	43	4.40	+0.14	0.99	0	10	19	6	5	s.	H. H. Askew
Tingley	Ringgold	1,275	2	68.0		96	8†	32	21	38	3.67		1.41	0	8	17	8	5	sw.	James A. Verploegh
Washington	Washington	737	45	69.9	+ 4.7	99	15	38	20†	34	3.58	+0.20	1.28	0	8	13	11	6	s.	D. D. Sherman
Wescott (near)	Lee	523	5																	Lester J. Larson
Winterset	Madison	1,118	36	68.9	+ 3.4	99	10	37	20	34	4.00	+0.25	1.05	0	12	19	5	6	sw.	H. S. Ely
Omaha, Neb.	Madison	1,105	56	69.2	+ 2.4	96	12	39	26	27	3.16	+0.13	1.53	0	13	15	7	8	s.	U. S. Weather Bureau
Means and extremes				69.2	+ 3.6	101	10†	32	21†	43	3.70	-0.13	1.90	T.	10	16	8	6	sw.	
State means and extremes				67.4	+ 3.1	101	10†	29	20	46	4.56	+0.91	8.71	T.	10	15	8	7	sw.	

The departure from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc. †Also other dates. ‡Received too late to be included in means and summaries. T. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %				Wind				Sunshine					
	Mean	Highest	Date	Lowest	Date	Mean		Date	Total movement	Average hourly velocity	Maximum		Per cent of possible	Departure from normal				
						7 a. m.	12 noon				Miles From	Date						
Charles City	29.96	30.30	4	29.23	29	86	59	74	36	3	4,234	5.9	32	n.	2	62	0	
Davenport	29.96	30.28	4	29.32	29	83	55	64	26	3	4,052	5.6	24	n.	17	65	+ 3	
Des Moines	29.94	30.27	26	29.20	29	85	52	58	26	19	5,079	7.1	28	sw.	14	65	+ 3	
Dubuque	29.96	30.30	4	29.33	29	83	59	67	27	3	3,694	5.1	28	nw.	17	60	+ 1	
Keokuk	29.98	30.24	4	29.41	29	81	52	61	21	19	3,764	5.2	26	s.	29	65	- 1	
Sioux City	29.94	30.29	26	29.24	29	85	60	66	32	3	6,796	9.4	38	nw.	17	62	- 1	
Omaha, Neb.	29.94	30.34	26	29.31	29	80	54	61	29	19	4,985	6.9	31	nw.	19	64	- 1	
Means and extremes	29.95					83	56	64				6.5				63	0	
		30.34	26	29.20	29				21	19					38	nw.	17	
Normals and records	30.02		25th		29th	83			64			7.2			7th	63		
		30.07	1926	29.20	1927				18	1921					172	w.	1872	

*Sioux City. †Des Moines. §Omaha. ||Davenport. ‡Local mean time.

almost continuous from the 25th, being rather heavy over much of the State. Dirt roads and some that were graveled were in bad shape during the last week and some were impassable. The rains made fall plowing possible over all parts of the State and where the soil had been baked so

hard that plowing had been impossible the work was pushed. Winter wheat seeding was proceeding rapidly at the close of the month and in some parts of the State where it had been seeded early it was up and doing well.

F. L. D.

TEMPERATURE

The mean temperature for the State, as shown by the records of 101 stations, was 67.4°, or 3.1° higher than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 65.2°, or 2.3° higher than the normal; Central, 67.7°, or 3.6° higher than the normal; Southern, 69.2°, or 3.6° higher than the normal. The highest monthly mean was 71.2° at Burlington and the lowest was 63.1° at Northwood. The highest temperature reported was 101°, at Indianola on the 10th, Fayette on the 12th and Fairfield on the 15th and 17th, and the lowest was 29°, at Sanborn on the 20th. The temperature range for the State was 72°.

Daily Precipitation for September, 1927

Stations	Drainage Basin	Day of Month																														Totals		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Northern Division																																		
Akron	Big Sioux				.37	.45		T									.74									.55	.57			.41			3.09	
Algona	Des Moines					.22									.94	.74	1.10	.16									.64	.55		.24	.90	.25	5.74	
Allison (near)	Cedar		.02					.84							.34	.30	.30	.38	T		.04						.25	.98		.13	.75	.07	4.40	
Altamont	Raccoon	T				.84	1.22	1.05							T	.04		1.02			.02						.06	.72	.21	.07	.02	.16	5.43	
Aiton	Floyd				.36	.90		.07					.02			.17	.34	T		.02							.17	.34			.53		2.92	
Belmond	Iowa								.03						.43	.10	.67			.07							.82	.52	.04	.15	.37	.12	3.32	
Britt	Iowa				.02	2.22									.73	.14	1.65			T							.70	.35	.02	.10	.23	.18	6.39	
Charles City***	Cedar		1.83			.18						T			1.21	T	.84									.90	.63	.04	.13	1.30		7.06		
Cherokee	Little Sioux				2.40			.48							.08	.01	.73	T		T		T	.03			.42	.35	.05		.65	.02	5.22		
Decorah	Mississippi	.03		.10				.12					T			.12	.07	.53								.02	1.10	.50	.21		1.43	4.23		
Dubuque**	Mississippi		T			.24		1.76	3.72						1.57	.01	.06	.07	.08							.47	.51	.24	.33	.74	T	10.70		
Estherville	Des Moines	.50				.85	.12	.10							.12	.15		.25			.05					.02	.40	.20	.25		.35	3.36		
Fayette	Mississippi		.02			.06									1.47	.24	.40	.05	.02	.01						.70	1.00	.10	.10	.38	.06	4.61		
Forest City	Cedar				2.02		.42	T							.12	.36	.11	.30									.03	.67	.55	.15		.55	5.28	
Hampton	Cedar					.03		.28							.26		.52		.10								.34	.79		.69			3.01	
Hawarden	Big Sioux				.15	.52		.01							T	.01	.52	.01	T	T							.43	.32			.15		2.12	
Humboldt	Des Moines					.17										.75	.11	T								1.10	.49		.10	.43	.07		3.22	
Independence	Wapsipicon					.31									.11	.38	.98										.87	1.81	.24	.10	.24	.28	5.32	
Inwood	Big Sioux	.45			T	1.78	.07		T				.14			.24	.41					.02					.04	.76			.06		3.97	
Lake Park (near)	Little Sioux				1.30	.50		.31	T						1.10	.52	.08	.41			T						.29		.08	1.30		5.48		
Lansing	Mississippi			.01				.53								T	.04	.97									1.10	.49	.28		.50		3.92	
Le Mars	Floyd				T	1.15		T								.94											.32	.42	T		1.58	.03	4.44	
Marathon	Raccoon				1.11	.68	.25									.75	.11		.04								.66	.21	.06	.04	.65	T	4.50	
Mason City	Cedar		.08			.67	.13	T		T					.45	.02	.18	.18			.02						.47	.61	.05	.20	.65	.18	3.89	
New Hampton	Wapsipicon		.85				.29	T		T					.38	.10	1.40				.60						.47	1.15	.05	T	1.12	.17	6.58	
Northwood	Cedar		.21			6.53							.13		.01	.08	1.03	T		T							.42	.48	.07	.14	.32	.02	9.44	
Oelwein	Wapsipicon		T			.20									.70	.50	1.10										.60	.50	.20	.10	.40	T	4.10	
Osage	Cedar		.63			.57									.14	1.00	.05										1.00	.07	.11	.78			4.35	
Pocahontas	Des Moines					.37		.26								.76			.07								.63	.70		.08	.58	.04	3.49	
Postville	Mississippi			.02					T						.04	.17	.30			T							.49	1.12	.18	.08	.55	.11	3.11	
Rock Rapids	Big Sioux				1.15	.24		.08						.03		1.06	.06		.03								.55	.63			.31	.03	3.57	
Sanborn	Floyd		.75			.85	1.10	.04								.13		.05	.70								.05	.28			.70	.09	4.04	
Sheldon	Floyd				1.34	.69		.15						.03	T	.03	.35		.02								.27	.22		.01	.84	T	3.95	
Sioux Center	Floyd				1.12	.48		.73								.82	.32		T								.32	.32			.46	.07	4.32	
Spencer	Little Sioux		.03			.03	1.90		.75						.16		.75		.03								.27	.30	.05	.05	1.25	.05	5.62	
Storm Lake	Raccoon					.93		2.64							.10		.87	.02	.01	T							.50	.60		.06		.06	5.79	
Washita	Little Sioux					1.60										.95											.40	.40	.07		.82	T	4.24	
Waterloo	Cedar			.70			.02	.03								.48		1.00			.05						.93	.58	.37	.10	.54		4.80	
Waverly	Cedar		.92	.16			.01	.23	T							.32		1.01				.04						.87	.05	.12	.82	.07	4.75	
West Bend	Des Moines					.35		T	.17						T		1.07			.02							.60	.58	T	.13	.74	.10	3.76	
Central Division																																		
Ames	Skunk														.25	3.10		.55	T	.05							.54	.71	.05	.20	.32	.05	5.82	
Audubon (near)	Nishnabotna			.14		.34	.04									4.92		.68		.03							1.05	.82	.02	.14	.23	.01	8.42	
Baxter	Skunk						.06									.80		.55		.05								.78	1.28	.08	.10	.31		4.01
Belle Plaine	Iowa			.06		.10		2.00							.36	.29		.86	T								.52	.92	.23	.11	.65	.05	6.15	
Boone (near)	Des Moines							T								3.52		.62		.06							.14	1.08	.39	.18	.02	.20	6.21	
Carroll	Raccoon	.15				.65		.04								.77	T	.56										.80	.41	.09		.41		3.88
Cedar Rapids	Cedar					.50	.15	.10								1.12	.01	.90		.10									.42	.29	.04	.72		5.08
Clinton	Mississippi							8.71								.01	.02	1.28		.23			T				.35	.28	.39	.42	.25		11.94	
Davenport**	Mississippi				.01	.01	.16	1.97								1.48	.13	.11	.06									.18	.31	.25	.39	.06	.60	5.73
Davenport No. 2	Mississippi						.10	2.00								1.89		.20										.23	.24	.43	.56	.09	.07	5.81
Denison	Missouri				1.00	.12										1.48	.62	.22		.01								.41	.62		.05	.33	.04	4.90
Des Moines***	Des Moines		.32				T								.07	.42	.76		.05								1.60	.25	.04	.02	.12	T	3.65	
Fairport	Mississippi						T	1.18								.36		1.76		.20							.30	.18	.28	.43	.28		4.56	
Fort Dodge	Des Moines		.12			.40	.05	1.32								.42		.84		.10							.05	.55	.40	.11		.46	4.70	
Grinnell	Iowa			.14		.42		.15								.42		.84		.09							.23	1.06	.10	.10	1.19		4.74	
Grundy Center	Cedar			1.00				.90								.80		.90		.12							.40	.87	.15	.15	.68		5.97	
Guthrie Center	Raccoon																																	
Harlan	Nishnabotna	.20				.50	.06									.02	2.28	.25	.34		T						.83	.87	T	.04	.40	.02	5.81	
Iowa City	Iowa					.15	.22	.11									T	1.31		.17							.54	.40	.15	.02	.66		3.73	
Iowa Falls	Iowa			T				.48								.89		.95		.09							.10	.77	.37	.15	T	.44	4.24	
Jefferson	Raccoon						T									T	1.74	T	.47	T								.75	.76		.15	.46	.03	4.36
Le Claire	Mississippi						T	.22	2.34								2.22					.22						.22	.04	.48	.11	.11		5.96

Daily Precipitation for September, 1927—Continued

Stations	Drainage Basin	Day of Month																														Totals	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Southern Division																																	
Afton.....	Grand.....			.03	T.			.18								.94	.77		.06							.39	.90	.08	.12	.05	T.	3.52	
Albia|||.....	Des Moines.....						.65	.05								T.	1.30		.11								.43	.37	.07	.03	.57	3.58	
Atlantic|||.....	Nishnabotna.....				.27	.15			.07							1.90	.02	.76		.03						.46	1.24	.10	.19	.06	.10	5.35	
Bonaparte (near).....	Des Moines.....					.65	.11										.53	.34		.12						.17	.36	.17	.15	.60	T.	3.20	
Burlington|||.....	Mississippi.....						.02	.14	.12								.21			.17				T.	.21	.03	.60	.46	.04	.32	2.92		
Centerville.....	Chariton.....					.10	.11									.03	.77		.07							.18	.60	.10	T.	.46	.02	2.44	
Chariton (near).....	Chariton.....					.18	.15									.32	.22	.95								.18	.72	.16	T.	T.	T.	2.88	
Clarinda|||.....	Nodaway.....				.01	.25			.20							.84	.82		.01							.18	.73	.14	.20	.09	---	3.47	
Columbus Jct.....	Iowa.....					.04	.02	.50									.87		.15							.09	.46	.15	.20	.55	.01	3.04	
Corning (near).....	Nodaway.....		.27				.29									1.30	.55									.56	.71	.08			---	3.76	
Corydon.....	Chariton.....		.24	.06		.18	.26									.22	.78		.08							.61	.13	.09	.25	---	2.90		
Creston|||.....	Missouri.....		.50	.22	.50	.02		.20								.55	.65	1.00		.10						.15	.95	.20	.15	.10	.10	5.39	
Cumberland (near).....	Nodaway.....			T.		.06	.13	.20								.87	.70								1.10	1.15	.05	.25	.17	T.	4.48		
Earlham (near).....	Des Moines.....		.43				T.									.37	.73		.03							.32	.80	.05	.13	.17	3.53		
Fairfield.....	Skunk.....					.01	T.									T.	.60		.30							.03	.44	.07	.21	.36	2.02		
Glenwood.....	Missouri.....					.32	.87									.28	.17	.57								1.80	.80	.04	.06	.10	5.01		
Indianola.....	Des Moines.....			T.												.37	.04	1.15		.08						1.06	.94	.04	.02	.31	4.01		
Keokuk***.....	Mississippi.....					.70	.19	T.								.08	.08	.05	.14				T.		.39	.49	.27	.09	.37	.15	2.91		
Keosauqua.....	Des Moines.....					.15	.26									.01	.33		.10							.19	.35	.29		.76	.01	2.45	
Knoxville.....	Des Moines.....			T.		.12	.03									T.	.18	.85		.16						.46	.95	.19	.13	.31	3.38		
Lacona.....	Des Moines.....		.01				.01									.49	.50	.65	.05							.38	1.12	.10	.12		3.43		
Lamon|||.....	Grand.....			.40			.01	.10								.19	.67		.01	.10						.11	.51	.39	.06	.02	.01	2.47	
Lenox.....	Missouri.....			.02		.03	.10									1.70	.60		.03							.45	.83	.14	.10	.10	4.10		
Mount Ayr.....	Grand.....		.01	T.		.20										.39	.66	.02								1.06	.95	.12	.06	.03	T.	3.50	
Mt. Pleasant.....	Skunk.....					.31	.03	.07									.04	.62	.02	.11						.17	.34	.13	.18	.56	2.56		
Oakland.....	Nishnabotna.....			.51		.57	.10									.18	1.27	.64								1.86	.98			.37	6.48		
Oskaloosa.....	Des Moines.....				.45	T.	T.									.04	T.	.83		.17							.12	.37	.09	.16	.47	T.	4.24
Ottumwa.....	Des Moines.....				.85	.18										T.	.92	.70		.15						.17	.81	.15	.14	1.10	5.17		
Red Oak (near).....	Nishnabotna.....				.34	.70										.90	.90	.63								.98	1.83	.14	.11	.14	6.67		
Riverton (near).....	Nishnabotna.....				.68	.08									.04	.36	.56									T.	.75	.98	.24		.01	3.70	
Sigourney (near).....	Skunk.....					.37	.08	.04								T.	T.	.79		.16						.21	.51	.13	.19	.98	T.	3.46	
Stockport.....	Skunk.....					.47	.09										.33	.44		.09						.12	.37	.09	.16	.47	.12	2.75	
Thurman.....	Missouri.....				.73	.27										.62	.50	.51								.67	.99	.03	.07	.01	T.	4.40	
Tingley.....	Platte.....					T.	.17									.49	.67									1.41	.70	.09	.10	.04	T.	3.67	
Washington.....	Skunk.....				.04		1.28									T.		.92								.18	.48	.08	.20	.40	3.58		
Westcott (near).....	Mississippi.....																.50	.05	1.05		.05						.35	.97	.05	.12	.31	T.	4.00
Winterset.....	Des Moines.....		.45	.03			.07									.40	.12	.14								T.	1.34	.33	.01	.01	.17	.01	3.16
Omaha, Nebr.***.....	Missouri.....			.07	.19	.05	.32																									---	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

- ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
- ***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.
- ** Incomplete.
- * Precipitation included in the next following measurement.
- T. Precipitation is less than .01 inch rain or melted snow.

PRECIPITATION

The average precipitation for the State, as shown by the records of 113 stations, was 4.56 inches, or 0.91 inch more than the normal. By divisions, the averages were as follows: Northern, 4.65 inches, or 1.22 inches more than the normal; Central, 5.32 inches, or 1.63 inches more than the normal; Southern, 3.70 inches, or 0.91 inch less than the normal. The greatest amount, 11.95 inches, occurred at Clinton, and the least 2.02 inches occurred at Fairfield. The greatest amount in 24 consecutive hours, 8.71 inches, occurred at Clinton on the night and morning of the 8th-9th.

SNOWFALL

Traces of snow were reported at several stations on the 26th and appreciable amounts at three stations in the north-western portion of the State. The largest amount was 2.0 inches at Alton.

MISCELLANEOUS PHENOMENA

- Aurora:** 4th.
- Fog:** 7th, 10th, 11th, 17th, 24th, 27th, 28th, 29th.
- Frost:** 19th, 20th, 21st, 22d.
- Hail:** 2d, 3d, 15th, 17th, 29th, 30th.
- Halos (lunar and solar):** 3d, 4th, 9th, 16th, 19th.
- Haze:** 27th.
- Sleet:** 26th.
- Thunderstorms:** 2d, 3d, 4th, 5th, 6th, 7th, 8th, 9th, 12th, 15th, 16th, 17th, 18th, 19th, 25th, 26th, 27th, 28th, 29th, 30th.

Tornadoes: 29th.

Winds (strong): 9th, 17th, 18th, 24th, 26th.

RIVERS

The average stage of the Mississippi was nearly normal. There was a slight, gradual fall during the first week; and after the heavy rains on the 8th-9th there was a marked rise. Following the passing of the crest nearly stationary stages prevailed. On the Missouri River there was a gradual fall till the 26th when a moderate rise occurred at Sioux City and a slight rise down the rest of the course; during the rest of the month nearly stationary stages prevailed. Owing to the dry conditions of the soil the interior rivers showed very little fluctuation; the only rise of consequence occurred on the Raccoon River with a rise of nearly three feet at Van Meter on the 17th, and the Wapsipinicon overflowed between Clinton and Davenport following the excessive rainfall of the 8th-9th.

Daily Maximum and Minimum Temperature for the Month of September, 1927

Table with columns for Stations, days 1-30, and Mean. Rows are categorized by Northern Division, Central Division, and Southern Division. Each station entry includes maximum and minimum temperature values for each day.

a, b, c, etc., indicates respectively 1, 2, 3, etc., days missing.

IOWA STORMS, SEPTEMBER, 1927

Date	County	Township	Nature of Storm	Time	Storm Moved From	Width of Path Miles	Length of Path Miles	Area Sq. Miles	Size of Hailstones Inches	Damage	Persons	
											Injured	Killed
2	Bremer	West central part of county	Hail & Wind	7:00 p.						Crops and trees		
2	Floyd	Floyd, Russ, W. St. Charles, Ulster	Hail & Wind	5:00 p.	NW to SE				¼ to ½	Electric lines, \$625; Bldgs., \$1,700; Crops, \$5,000		
2	Mitchell	General over county	Hail & Wind	5:00 p.					Hazel Nuts	No report		
2	Worth	Near Gordersville	Hail & Wind						Baseballs	Crops badly damaged		
8	Benton	Blairstown	Rain Flood							Wires down, railroad tracks washed out		
8-9	Clinton	City of Clinton	Rain Flood	p. m.	W to E					Paving and cables damaged; railroad tracks washed out		
8-9	Dubuque	City of Dubuque	Rain Flood	10:00 p.						Streets flooded; paving washed out		
17	Benton	Town of Newhall	Wind	7:30 p.						Unroofed one building		
17	Clayton	Edgewood to Mississippi River	Rain & Wind	5:30 p.						Corn damaged; low ground flooded; some to buildings		
17	Emmet	East and south of Armstrong	Hail & Wind							Several thousand dollars		
17	Kossuth	Harrison and Greenwood	Hail & Wind	3:00 p.	NW to SE	2 to 4	8		Hen Eggs	\$50,000 to crops and buildings		
17	Louisa	South of Morning Sun	Wind	8:00 p.						Corn, trees and some buildings blown down		
17	Mitchell	Near Mitchell	Wind	p. m.						Some to buildings and corn		
17	Muscatine	Near Pleasant Prairie	Wind	p. m.						Trees, corn and wires		
17	Winnebago	Center	Rain, Hail & Wind									
17	Worth	Silver Lake	Wind	p. m.						Corn damaged		
17	Wright	Scattered areas	Wind							Some to buildings and corn		
29	Allamakee	Lansing	Tornado	5:15 p.	SW to NE	¼				Buildings and trees \$1,700		
29	Guthrie	Town of Menlo	Tornado	1:30 p.	SW to NE	¼ narrow	2			\$5,000 to buildings, trees and poles		
29	Lee	Denmark	Wind	11:00 a.	S to N	6	6	36		Crops damaged 20%		
29	Monroe	Bluff Creek	Wind	2:00 p.	S to N	6	6	36		Corn \$500		
29	Audubon	Greely and Melville	Tornado	Noon	S to NE	¼	6			\$4,000 crops, buildings, trees		

HEAVY RAINSTORMS OF SEPTEMBER 8th-9th, 1927

By H. Merrill Wills

U. S Weather Bureau, Dubuque, Iowa

On the night of September 8th-9th, 1927, a very heavy rain-storm occurred about 11 p. m., and a second storm of similar intensity but more prolonged, occurred the following morning. The excessive fall in the first storm lasted from 10:48 p. m. to 11:21 p. m., a period of 33 minutes, during which 1.65 inches fell. In the second shower the excessive rate of fall lasted from 5:49 a. m. to 7:35 a. m., a period of 1 hr. 46 min., during which 3.01 inches was received.

The most intense fall for a period of 5 minutes was in the first shower, from 10:58 p. m. to 11:03 p. m., during which 0.57 inch was recorded. In the first storm 1.00 inch fell in 16 minutes, and in the second, 1.00 was received in 17 minutes. The first shower was the more intense for all periods up to 30 minutes, but for longer periods the second was the more intense, the first only showing a total of 1.75 inches at the end of 1 hour, and 1.76 for the entire storm, while the second showed a fall of 2.30 inches in 1 hour, 3.06 inches in 2 hours, and a total of 3.72 inches for the entire shower. Combining the two storms, it is found that 5.46 inches was recorded in 5 hr. 4 min., actual duration of fall, and the combined fall within the 12-hour period amounted to 5.48 inches.

Compared with past rains, it appears that the intensity of the night shower during the heavy 5-minute period mentioned, has only been exceeded by the storms of July and October, 1919. The July, 1919, storm will be remembered as the deluge that cost the lives of five persons at Union Park and two in the city by drowning. The 2-hour fall in the morning storm of September 9th, 3.06 inches, exceeds that in the July, 1919, storm, and, in fact, has not been surpassed in a half century but once, namely, in July, 1925, when 3.22 inches was received in 2 hours. It is of peculiar significance, in comparing the morning shower with all other rains in recent years, that each one of the six big rains in the last eight years ranged between 3 and 4 inches, the last one ranking second in amount.

The total fall from the two storms combined, 5.48 inches, set a new record for a 24-hour period. The previous record of 5.40 inches has stood for exactly 52 years, having occurred on September 8th-

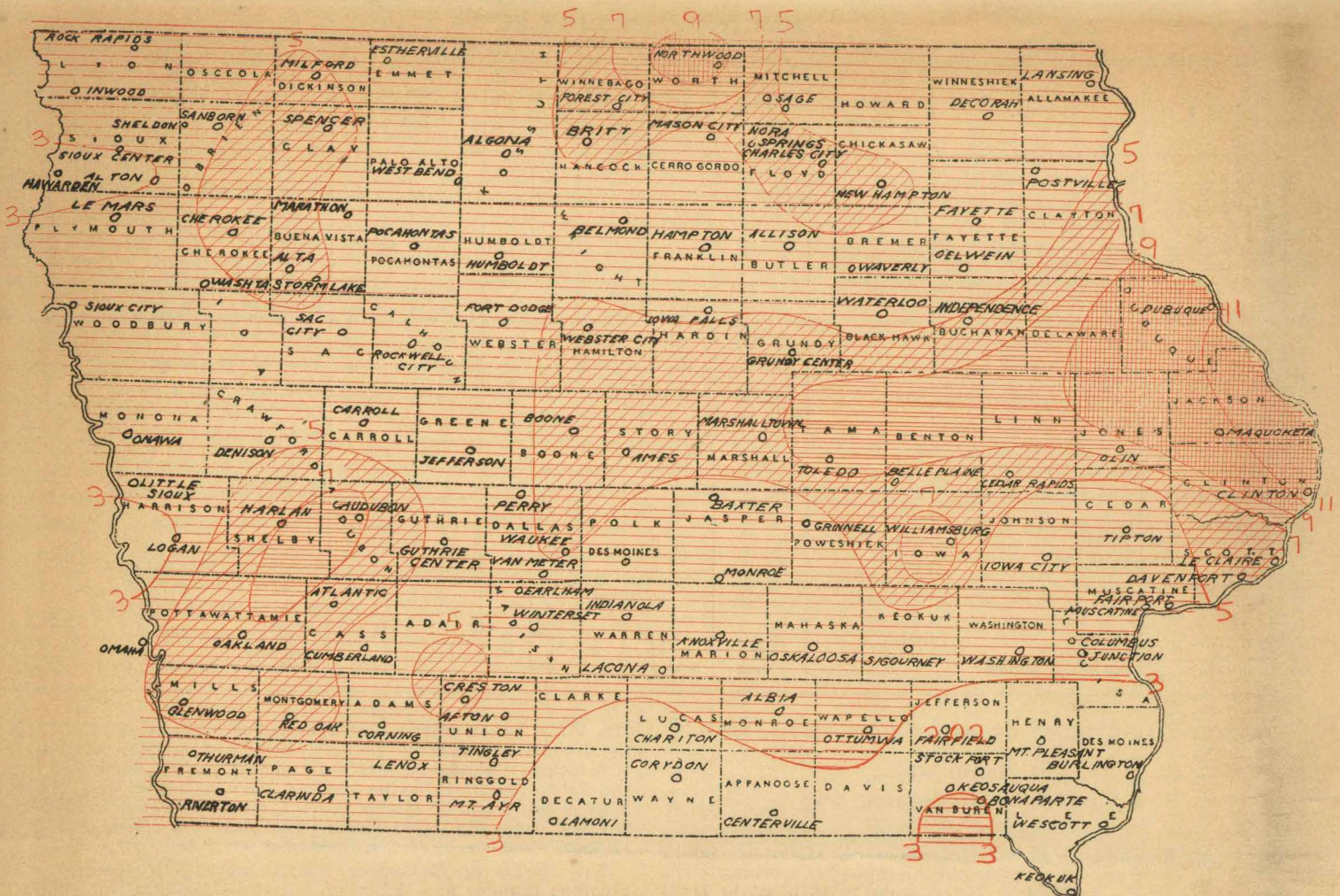
9th, 1875. Other storms that approached these records for 24-hour falls, were as follows: In July, 1896, 4.82 inches; August, 1912, 5.23 inches; September, 1915, 4.79 inches; August, 1918, 5.22 inches. On July 4th-5th, 1876, the records show a fall of 4.55 inches in 2 hr. 5 min., and if this is correct, such a downpour in 2 hours has not been duplicated since. That was the storm that flooded Rockdale and drowned forty persons.

The storms of September 8th-9th were both accompanied by vigorous thunder and lightning, but these features were more pronounced in the first storm than in the second. In the first storm the loud, bursting peals of thunder and brilliant flashes of lightning were almost incessant from 10:30 p. m. to 11:30 p. m. At about 1:00 a. m., of the 9th, L. F. Hefner, an Illinois Central freight conductor, while walking on top of a freight car in the lower yards, was killed by lightning. There were also other instances of minor damage by lightning at scattered points about the city.

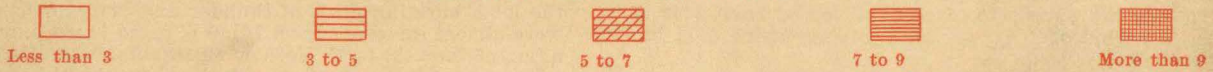
The water came down from the hill through the waterway streets in torrents, going over the curbs in places, gushing up from the sewers, tearing out manholes, ripping up the paving in parts of West 8th Street and the major part of Central Avenue from 24th to 32d; soon overflowed much of the northeastern portions of the city, filling cellars, washing down debris and mud from the hills to the lower sections, and mashing down gardens. Numerous automobiles were caught in the downpour and rushing waters from the hills, and had their electrical connections grounded and were stalled until morning. Street cars were unable to operate during the downpours. Hundreds of telephones were put out of commission as a result of the water and lightning, and electric current supply was cut off in many instances. Telegraph service was not seriously hampered, but trains were greatly delayed on the 9th east of the city, in Grant County, Wisconsin, due to flooded or washed-out tracks, and there were also some delays southward and southeastward. The Cascade division of the C. M. & St. P. suffered the loss of 1,000 feet of track and one bridge, 7 miles west of Bellevue. Fields and country roads were badly washed and considerable corn was lodged. Although the rains were mostly local in character, 8.71 inches fell at Clinton, Iowa, 50 miles south-east of the city.

The total damage to streets, sewers and other property in the city, and to crops, highways and railroads in the immediate vicinity probably did not exceed \$25,000.

TOTAL PRECIPITATION, SEPTEMBER, 1927.

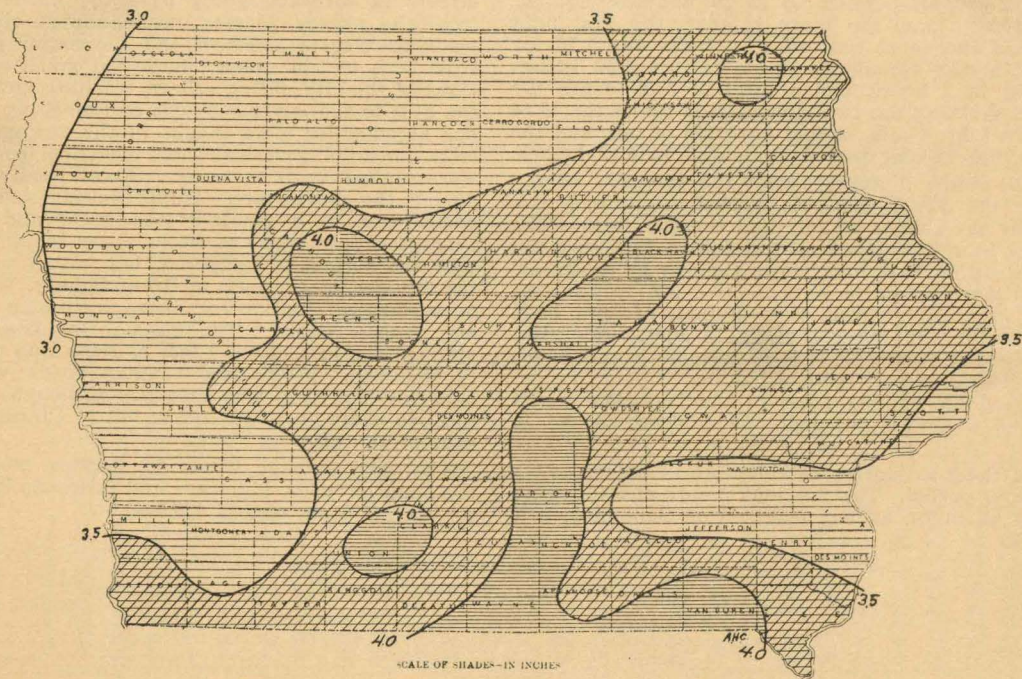


SCALE OF SHADES IN INCHES

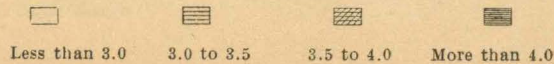


NORMAL PRECIPITATION, SEPTEMBER

(Based on station records of 30 years or more)



SCALE OF SHADES IN INCHES



CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, OCTOBER, 1927 No. 10

GENERAL SUMMARY

The cool, rainy weather that prevailed during the last week of September continued well into October; the rainy condition lasting generally till the middle of the 2d week and the cool weather till near the end of the 3d week. During the first 17 days, except for an occasional day, the temperature was continuously below normal over the western portion of the State and the cool weather continued a couple of days longer over the eastern portion. After a change to warmer occurred, the temperature remained continuously above normal during the rest of the month. After the rain ceased, generally on the 12th, one of the most remarkable periods of so-called "Indian Summer" that ever prevailed over the State set in and no further rain occurred till near the end of the month. Over practically all the State, except a small area along the Mississippi River, the sunshine was 100 per cent of the possible amount for a period of two weeks from the 14th to 27th, inclusive. The extremes in temperature were not pronounced. During the cool period there were no marked departures. During the warm period the departures were pronounced and while no monthly extremes were established there were new records established for high temperatures for the last decade. At Des Moines there were new records for maxima established daily from the 24th to 28th, inclusive. New records for so late in the season were also established on several dates over most of the central and eastern portions of the State. The maximum for the month, however, was well under the record for the State and there has been a higher maximum on 15 previous Octobers but in only three previous months has the minimum for October been higher, the last time being in 1881 when the minimum for the State was 26°.

The first general killing frost occurred on the 14th, though a few stations reported killing frosts on the 8th. In some portions of the State none occurred till the 31st and in portions of Monona, Harrison, Pottawattamie and Buena Vista counties and a few other localities killing frost had not occurred yet. Over a large portion of the State the occurrence of freezing temperatures was no index of killing frosts, for tender vegetation was unhurt by such temperatures and continued green until killed by hard freezes.

The weather was especially favorable for all farm work. The warm, dry weather during the last of the month was particularly favorable for the drying of corn and at the end of the month husking was becoming active in some western and

northern counties. For the State about 5 per cent of the husking had been done. The damage to corn from frost was less than usual due to the lateness of killing frost and the favorable drying conditions. Seventy-nine per cent escaped frost damage which is above the average of the preceding five years. Corn that ordinarily would have been soft became chaffy. The rains the latter part of September and the first part of October put the soil in good condition for plowing, except it was too wet in areas in the extreme southeast portion. There was further seeding of winter grain. Clover hulling which had been much delayed was completed. A short apple crop was harvested under favorable conditions. Roads were in poor shape the first half of the month and good the latter half, but very dusty.

F. L. D.

COMPARATIVE DATA FOR THE STATE—OCTOBER

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre-.01 in. or more	Clear	Partly cloudy	Cloudy
1873	46.0	- 5.9	76	15	2.64	+ 0.22	4.80	1.25					
1874	51.2	- 0.7	84	25	1.52	- 0.90	2.70	0.65					
1875	47.8	- 4.1	77	22	1.36	- 1.06	2.71	0.28					
1876	47.0	- 4.9	78	18	1.16	- 1.26	3.31	0.18					
1877	49.6	- 2.3	93	28	4.45	+ 2.03	8.08	1.90					
1878	48.9	- 3.0	85	10	2.73	+ 0.31	5.52	0.40					
1879	58.3	+ 6.4	90	11	2.19	- 0.23	6.28	0.28					
1880	47.6	- 4.3	83	13	1.90	- 0.52	6.90	0.25					
1881	52.1	+ 0.2	86	26	6.42	+ 4.00	14.03	3.10					
1882	54.4	+ 2.5	86	23	3.97	+ 1.55	6.50	0.55					
1883	47.2	- 4.7	88	20	3.37	+ 0.95	6.95	0.40					
1884	54.2	+ 2.3	86	17	4.20	+ 1.38	9.00	2.00					
1885	46.7	- 5.2	80	20	2.62	+ 0.20	4.30	0.92					
1886	55.0	+ 3.1	88	18	2.51	+ 0.09	8.15	0.43					
1887	46.4	- 5.5	86	- 3	1.46	- 0.96	3.41	0.05					
1888	47.7	- 4.2	84	22	1.16	- 1.26	2.81	0.10					
1889	47.5	- 4.4	94	12	0.58	- 1.84	2.88	0.00					
1890	49.2	- 2.7	84	15	3.44	+ 1.02	6.43	1.59					
1891	50.0	- 1.9	92	19	2.77	+ 0.35	6.53	0.85		6	18	7	6
1892	54.5	+ 2.6	96	14	1.55	- 0.87	2.58	0.00	0.0	4	21	6	4
1893	52.4	+ 0.5	94	10	1.28	- 1.14	4.56	0.02	0.0	4	16	9	6
1894	51.7	- 0.2	90	20	2.67	+ 0.25	5.25	0.03	0.2	8	14	8	9
1895	46.0	- 5.9	88	4	0.47	- 1.95	1.38	0.00	T.	2	19	8	4
1896	47.8	- 4.1	88	12	3.13	+ 0.71	5.05	1.51	T.	5	18	6	7
1897	56.8	+ 4.9	97	12	1.14	- 1.28	3.30	0.03	0.0	4	17	8	6
1898	47.5	- 4.4	88	17	3.56	+ 1.14	5.75	1.27	3.6	8	7	9	15
1899	56.7	+ 4.8	95	17	1.73	- 0.69	4.64	1.15	0.0	5	17	8	6
1900	59.3	+ 7.4	90	21	3.91	+ 1.49	8.00	1.20	0.0	7	16	7	8
1901	54.2	+ 2.3	88	20	1.98	- 0.44	4.23	0.45	T.	6	17	7	7
1902	53.5	+ 1.6	83	20	2.54	+ 0.12	6.66	0.28	T.	5	16	8	7
1903	52.2	+ 0.3	90	16	1.95	- 0.47	4.50	0.32	0.0	5	19	6	6
1904	53.1	+ 1.2	96	16	1.67	- 0.75	4.43	0.14	T.	6	15	8	8
1905	49.2	- 2.7	95	16	3.40	+ 0.98	5.36	1.20	1.6	8	16	6	9
1906	50.5	- 1.4	87	7	1.96	- 0.46	4.25	0.50	0.1	6	14	7	10
1907	50.4	- 1.5	85	10	1.50	- 0.92	3.71	0.30	0.0	5	20	5	6
1908	51.1	- 0.8	89	17	3.33	+ 0.96	8.83	0.58	2.6	8	16	6	9
1909	49.7	- 2.2	97	10	2.22	- 0.20	4.70	0.43	T.	6	16	6	9
1910	55.2	+ 3.3	93	10	0.77	- 1.65	1.73	T.	0.1	4	21	4	6
1911	48.7	- 3.2	87	14	3.34	+ 0.92	7.03	0.73	0.6	10	12	8	11
1912	52.2	+ 0.3	92	16	2.98	+ 0.56	5.77	1.03	T.	6	21	3	7
1913	49.2	- 2.7	89	- 2	3.03	+ 0.61	7.29	0.35	1.2	9	15	8	8
1914	55.9	+ 4.0	88	14	3.23	+ 0.81	6.64	0.74	T.	9	16	6	9
1915	54.4	+ 2.5	86	19	1.31	+ 1.11	3.25	T.	0.1	5	19	6	6
1916	50.9	- 1.0	92	6	2.00	- 0.42	4.33	0.20	2.0	8	16	7	8
1917	42.9	- 9.0	85	0	1.41	+ 1.01	4.00	0.15	2.2	6	10	11	10
1918	55.1	+ 3.2	93	21	3.64	+ 1.22	7.56	1.36	0.8	7	13	7	11
1919	50.7	- 1.2	89	8	3.02	+ 0.60	8.65	0.45	T.	10	11	8	12
1920	57.7	+ 5.8	90	11	2.13	- 0.29	4.64	0.48	T.	6	19	6	6
1921	54.6	+ 2.7	90	21	1.96	- 0.46	3.61	0.21	T.	6	17	8	6
1922	56.1	+ 4.2	96	14	1.81	- 0.61	3.93	0.06	T.	5	21	4	6
1923	48.5	- 3.4	81	10	1.22	- 1.20	3.67	0.29	1.7	6	18	6	7
1924	58.1	+ 6.2	89	21	0.87	- 1.55	2.58	0.03	0.0	4	22	5	4
1925	40.2	- 11.7	78	- 15	2.91	+ 0.49	2.70	0.97	4.9	10	8	8	15
1926	51.2	- 0.7	91	14	1.53	- 0.89	3.91	0.11	T.	7	19	9	7
1927	55.5	+ 3.6	91	24	3.25	+ 0.83	8.51	0.46	T.	7	12	5	9

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



Climatological Data for October, 1927

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days			Prevaling direction of wind	Observers		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear			Partly cloudy	Cloudy
Northern Division																				
Akron	Plymouth	1,153	1															Orlan C. Moore		
Algona	Kossuth	1,213	54	54.1	+ 3.6	83	25†	32	14†	37	1.63	-0.53	1.10	0	4	22	1	W. E. Laird		
Allison (near)	Butler	1,044	15	52.8	+ 2.1	84	22†	27	14	42	1.83	-0.67	1.04	0	7	22	4	J. A. Bell		
Alfa	Buena Vista	1,513	36	54.8	+ 4.7	84	25†	33	7†	38	1.52	-0.71	0.95	0	8	19	4	D. E. Hadden		
Alton	Sioux	1,305	22	52.7	+ 2.9	81	25†	30	16†	45	1.52	-0.24	1.09	0	4	15	8	W. S. Slagle		
Belmond	Wright	1,181	17	53.6	+ 3.0	85	22†	25	14	45	1.88	-1.34	0.78	0	8	14	7	H. F. Luick		
Britt	Hancock	1,236	40	53.1	+ 3.4	86	26†	31	17	41	1.54	-0.86	0.75	0	7	18	5	James S. Ross		
Charles City	Floyd	1,015	36	52.4	+ 3.8	84	26	28	14	37	1.33	-1.10	0.75	0	8	17	5	U. S. Weather Bureau		
Cherokee	Cherokee	1,196	5	53.4		84	25†	29	31	45	0.62		0.23	0	8	19	10	J. E. Wirth		
Decorah	Winneshiek	872	34	52.1	+ 3.0	80	26†	24	14	50	3.20	+0.38	2.27	0	10	18	7	M. D. Whitney		
Dubuque	Dubuque	700	54	55.0	+ 3.1	83	27	31	14	36	4.55	+1.97	1.37	T.	10	16	5	U. S. Weather Bureau		
Estherville	Emmett	1,298	32	54.3	+ 5.2	88	25†	29	16	43	0.98	-0.93	0.70	0	5	18	6	A. O. Peterson		
Fayette	Fayette	1,003	39	53.8	+ 4.2	85	26	25	14†	42	2.68	+0.15	1.75	0	8	19	4	R. Z. Latimer		
Forest City	Winnebago	1,226	33	53.6	+ 4.5	85	26	27	14	39	1.90	-0.53	0.90	0	8	16	7	Dr. M. B. Nell		
Hampton	Franklin	1,145	2	53.6	+ 1.7	85	25†	28	17	44	2.84	+0.29	1.93	0	7	20	4	L. H. Davis		
Hawarden	Sioux	1,181	1								1.67		0.60	0	6	22	3	Earl V. Sifte		
Humboldt	Humboldt	1,095	39	54.8	+ 3.5	89	26	29	31	46	1.65	-0.57	0.67	0	5	17	7	H. C. Snitkey		
Independence	Buchanan	921	63	55.8	+ 3.7	84	27	30	14	37	3.76	+1.21	1.81	0	8	18	2	Dr. Geo. Boody		
Inwood	Lyon	1,474	23	53.5	+ 3.7	84	25†	29	31	48	1.55	-0.36	0.64	0	6	21	3	A. C. Hanson		
Lake Park (near)	Dickinson	1,489	7	53.1		87	25	28	9	47	0.81		0.30	0	6	17	5	P. M. Lawrence		
Lansing	Allamakee	632	20								2.46	-0.44	1.23	0	10			Mrs. Mary Spinner		
Le Mars	Plymouth	1,224	31	54.3	+ 3.2	82	25†	30	31	46	1.18	-0.88	0.65	0	5			Henry Newell		
Marathon	Buena Vista	1,390	1								1.98		1.28	0	12	16	6	E. G. Smith		
Mason City	Cerro Gordo	1,148	30	52.0	+ 2.4	83	22†	26	14†	42	1.65	-0.55	1.14	0	7	17	9	American Beet Sugar Co.		
New Hampton	Chickasaw	1,169	30	51.9	+ 1.7	83	26	26	14	47	2.25	-0.32	1.25	0	7	15	6	D. W. Dawson		
Northwood	Worth	1,222	31	50.4†	+ 2.2	86	27	27	14	36	1.79	-0.85	1.08	0	8	18	5	Charles Dwelle		
Oelwein	Fayette	1,036	3	54.3		83	26	29	14	36	4.05		2.50	0	5	16	5	John T. Ridler		
Osage	Mitchell	1,163	2	52.0†		85	26	23	14	39	1.29		0.79	0	8			Dr. C. E. Juhl		
Pocahontas	Pocahontas	1,248	23	54.2	+ 3.5	86	26	28	31	45	2.05	-0.68	1.55	0	7	22	5	F. E. Hronek		
Postville	Clayton	1,192	28	53.2	+ 3.9	84	26	28	14†	40	3.75	+1.07	2.34	0	9	16	8	F. L. Williams		
Rock Rapids	Lyon	1,349	28	52.0	+ 3.1	81	25	28	16†	50	1.96	+0.17	1.24	0	9	19	5	J. K. Medberry		
Sanborn	O'Brien	1,553	13	52.7	+ 3.3	85	25	28	16†	49	0.99	-0.86	0.62	0	4	19	2	J. W. Dow		
Sheldon	O'Brien	1,418	2	53.7		85	25	29	31	48	1.00		0.47	0	6	19	5	Ross E. Forward		
Sioux Center	Sioux	1,426	23	53.4	+ 3.6	84	25	30	13†	49	1.39	-0.4†	0.77	0	6	19	3	J. DeRuyter		
Spencer	Clay	1,319	13	53.6	+ 3.4	86	25	27	31	48	0.59	-1.33	0.31	0	6	17	6	E. W. Little		
Storm Lake	Buena Vista	1,440	38	55.6	+ 4.4	87	27	33	7	37	1.18	-0.86	0.87	0	8	21	3	George H. Fracker		
Washita	Cherokee	1,157	29	53.3	+ 2.8	85	25†	25	31	50	0.46	-1.65	0.13	0	6	22	1	H. L. Felter		
Waterloo	Black Hawk	854	44	54.7	+ 2.8	86	25†	27	14†	42	3.03	+0.59	1.61	0	7	23	1	R. B. Slippy		
Waverly	Bremer	936	31	53.2	+ 2.1	84	26	27	14†	38	2.80	+0.20	1.69	0	9	23	3	D. H. Murphy		
West Bend	Palo Alto	1,197	34	53.5	+ 2.9	84	22†	30	31	40	1.86	-0.17	1.29	0	7	23	6	Jos. Dorweiler		
Means and extremes					53.5	+ 3.2	89	26	24	14	50	1.91	-0.41	2.50	T.	7	19	5	7	sw.
Central Division																				
Ames	Story	926	50	56.2	+ 4.5	86	25	30	14	43	3.45	+0.84	2.30	0	7	19	4	Iowa State College		
Audubon (near)	Audubon	1,297	32	56.4	+ 5.6	84	25	34	13	36	1.54	-0.77	0.60	0	6	20	7	George Kibby		
Baxter	Wasson	998	27	56.2	+ 3.8	85	25†	28	14	42	3.42	+1.00	0.88	0	6	16	11	Otto Sanderman		
Belle Plaine	Benton	866	37	55.2	+ 3.3	88	25†	26	18	43	4.62	+2.13	1.45	T.	10	15	9	O. C. Burrows		
Boone (near)	Boone	1,134	22	54.8	+ 3.1	87	25†	26	14	51	2.73	-0.06	1.89	0	5	20	4	C. F. Henning		
Carroll	Carroll	1,265	37	55.4	+ 3.8	85	25	31	31	41	2.53	-0.05	1.03	0	6	22	2	Mrs. Jos. J. Wolfe		
Cedar Rapids	Linn	737	45	54.6	+ 1.0	86	27	25	14	43	5.97	+3.52	1.82	0	7	20	0	J. T. Wurster		
Clinton	Clinton	505	54	56.2	+ 3.2	85	27	30	14†	43	5.61	+3.05	1.41	0	9	17	3	Dr. A. P. Bryant		
Davenport	Scott	580	56	57.8	+ 4.1	84	27	35	14	32	5.25	+2.95	1.78	0	8	17	2	U. S. Weather Bureau		
Davenport No. 2	Scott	690	2	53.0		87	27	30	14	39	6.92		1.88	0	9			Rex Shriner		
Denison	Crawford	1,171	33	55.2	+ 3.5	84	25	28	31	43	3.14	+0.91	1.83	0	6	18	7	V. L. Byers		
Des Moines	Polk	861	49	57.6	+ 4.2	87	25	32	14	38	2.16	-0.40	1.20	0	5	16	6	U. S. Weather Bureau		
Fairport†	Muscatine	567	6	58.4		81	27†	35	14	32	6.80		2.00	0	11	18	4	Bureau of Fisheries		
Fort Dodge	Webster	1,114	27	53.6	+ 2.3	86	25†	27	14	48	1.27	-1.77	0.50	0	5	22	3	Samuel Sampson		
Grinnell	Poweshiek	1,031	33								2.79	+0.28	1.12	0	7	17	6	Paul P. Meyers		
Grundy Center	Grundy	976	36	54.8	+ 3.7	84	26	30	14†	41	3.24	+0.45	1.25	0	8	20	4	M. G. Helberger		
Guthrie Center	Guthrie	1,077	32											0	10			E. L. Nesselroad		
Harlan	Shelby	1,192	23	55.2	+ 4.0	84	25	29	31	41	1.85	-1.30	0.63	0	6	19	6	Walter Bell		
Iowa City	Johnson	733	67	56.2	+ 3.8	86	27	29	14†	38	7.37	+4.63	2.52	0	9	18	7	Prof. J. F. Reilly		
Iowa Falls	Hardin	1,127	34	53.6	+ 2.9	85	26	27	14	43	3.16	+0.70	2.23	0	5	22	2	C. H. Gilbert		
Jefferson	Greene	1,052	23	54.6	+ 3.2	86	22†	28	14	45	1.66	-0.88	0.51	0	5	21	2	W. I. Lyon		
Le Claire	Scott	576	27								6.36	+3.91	1.48	0	10			Margaret T. Disney		
Little Sioux	Harrison	1,040	22	57.6	+ 5.4	91	22	33	31	47	1.36	-0.69	0.56	0	6	21	5	H. W. Kerr		
Logan	Harrison	1,120	60	56.6	+ 3.4	88	29	29	31	44	1.44	-0.94	0.82	0	6	10	16	Amy Ann Stern		
Maquoketa	Jackson	692	2	52.6		84	27	25	14	42	6.61		1.87	0	9	18	3	John Strothoff		
Marshalltown	Marshall	947	35	56.0	+ 3.0	85	25†	31	14	38	2.20	-0.56	0.80	0	7	20	3	C. C. Pigman		
Monroe	Jasper	922	15			85	25				4.68	+2.18	1.58	0	7	24	1	J. A. Dibel		
Muscataine	Muscataine	546	66								5.76	+3.11	2.17	0	11			William Mings		
Olin	Jones	760	28	54.4	+ 3.4	84	28	27	14	42	6.35	+3.86	1.65	0	6	21	0	Mrs. L. Stingley		
Onawa	Monona	1,051	26	55.4	+ 3.6	85	22	31	30	41	1.02	-1.16	0.40	0	4	20	6	Mrs. H. E. Colby		
Perry	Dallas	975	26	55.0</																

Climatological Data for October, 1927—Continued

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days			Observers			
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear		Partly cloudy	Cloudy	Prevailing direction of wind
Southern Division																				
Afton	Union	1,212	33	58.2	+ 4.9	89	25	34	14†	42	2.61	+0.03	1.43	0	6	22	5	4	sw.	S. R. Brown
Albia	Monroe	949	29	58.0	+ 4.5	88	25	33	14	37	5.38	+3.10	1.32	0	7	21	2	8	sw.	O. E. McBride
Atlantic	Cass	1,164	36	55.6	+ 3.4	83	25	30	81	41	2.15	-0.45	1.03	0	7	18	5	8	sw.	T. H. Whitney
Bonaparte (near)	Van Buren	563	36	57.6	+ 3.9	84	22†	32	14†	36	5.48	+3.60	1.74	0	7	20	3	8	sw.	B. R. Vale
Burlington	Des Moines	544	31	59.0	+ 4.1	84	22	34	14	32	8.51	+6.23	4.20	0	6	18	5	8	sw.	John T. Donnelly
Centerville	Appanoose	1,013	22	58.6	+ 4.6	86	25	32	14†	37	4.87	+2.66	1.01	0	6	19	6	6	sw.	Thomas Wood
Chariton (near)	Lucas	1,042	32	58.0	+ 4.2	86	22†	32	14	38	4.72	+2.40	1.72	0	6	19	7	5	sw.	C. C. Burr
Clarinda	Page	1,009	37	58.0	+ 4.0	88	24	30	31	44	2.28	-0.36	1.40	0	5	19	8	4	s.	Dr. H. C. Hawley
Columbus Jct.	Louisa	595	26	57.2	+ 2.9	85	22†	30	14	36	5.72	+3.17	1.61	0	9	19	7	5	se.	Miss Musa Todd
Corning (near)	Adams	1,117	35	58.4	+ 6.0	86	24†	26	31	50	2.36	-0.40	1.03	0	5	21	6	4	sw.	W. A. Seybold
Corydon	Wayne	1,101	34	58.4	+ 4.6	86	20†	32	8†	46	4.84	+2.25	1.39	0	7	21	5	5	sw.	A. T. Gallagher
Creston	Union	1,312	22	58.0	+ 4.2	86	22†	32	14	38	4.72	+2.40	1.72	0	6	19	7	5	sw.	J. A. Spangler
Cumberland (near)	Cass	1,225	28	58.0	+ 4.0	88	24	30	14	37	3.47	+0.76	2.09	0	5	22	3	6	sw.	Carl E. Pollock
Earlham (near)	Madison	1,126	25	56.6	+ 4.6	86	25	26	14	47	1.99	-0.45	1.05	0	4	24	0	7	sw.	George Phillips
Fairfield	Jefferson	780	43	56.1	+ 3.1	86	27	28	18	38	7.52	+4.76	3.10	0	7	20	2	9	s.	R. M. McKenzie
Glenwood	Mills	1,100	29	57.4	+ 3.8	86	24†	30	31	40	1.12	-1.56	0.50	0	5	21	5	5	se.	Geo. Mogridge
Indianola	Warren	972	36	57.7	+ 4.5	87	25	31	14	37	3.10	+0.74	1.31	0	5	21	5	5	nw.	Seth F. Shenton
Keokuk	Lee	614	56	59.3	+ 3.9	85	27	35	14	36	4.16	+1.77	1.67	0	6	15	8	8	s.	U. S. Weather Bureau
Keosauqua	Van Buren	644	35	57.0	+ 3.8	85	22†	27	18	43	8.02	+6.03	4.91	0	8	18	6	7	se.	B. H. Landes
Knoxville	Marion	920	32	57.7	+ 4.0	87	25	32	14	41	4.60	+2.29	1.70	0	7	20	3	8	sw.	W. J. Casey
Lacona	Warren	824	28	58.0	+ 4.6	87	25	34	14	37	3.92	+1.21	1.75	0	7	17	6	8	sw.	J. B. Alter
Lamoni	Decatur	1,123	20	58.1	+ 4.6	87	25	34	14	37	4.54	+1.61	1.65	0	7	22	5	4	sw.	F. S. Parks
Lenox	Taylor	1,250	32	57.8	+ 4.6	89	24†	34	13†	42	2.78	+0.06	1.50	0	6	21	6	4	sw.	J. L. Hurley
Mount Ayr	Ringgold	1,245	34	56.8	+ 3.2	82	22†	33	14	37	4.02	+1.50	1.95	0	7	21	6	4	s.	Alex Maxwell
Mt. Pleasant	Henry	730	46	59.0	+ 5.0	88	27	31	18	36	5.14	+2.74	2.14	0	8	15	9	7	nw.	J. H. Jericho
Oakland††	Pottawattamie	1,105	8	56.0	+ 3.7	86	25	28	31	46	0.69	-----	0.50	0	2	21	4	6	sw.	W. S. Matthews
Oskaloosa	Mahaska	835	51	56.8	+ 4.0	86	25†	31	14	40	5.25	+3.00	2.07	0	9	18	5	8	s.	Roy R. Robinson
Ottumwa	Wapello	649	32	57.9	-----	88	25	30	14†	44	5.93	+3.55	1.94	0	6	21	6	4	se.	C. L. Mikesch
Red Oak (near)	Montgomery	1,030	2	57.0	-----	85	22†	34	14†	39	3.92	-----	1.74	0	5	18	6	7	s.	B. R. Bridge
Riverton (near)	Fremont	920	1	57.0	-----	85	22†	34	14†	39	3.92	-----	1.74	0	5	18	6	7	s.	Geo. C. Rader
Sigourney (near)	Keokuk	790	31	57.1	+ 4.1	86	22†	30	18	40	5.06	+2.81	1.45	0	8	23	1	7	sw.	W. E. Utterback
Stockport	Van Buren	747	25	57.5	+ 4.1	86	22	29	18	39	6.12	+4.06	2.39	0	7	22	2	7	s.	C. L. Beswick
Thurman	Fremont	960	30	57.4	+ 5.6	89	24	30	31	45	1.65	-1.29	0.81	0	5	21	2	8	s.	H. H. Askew
Tingley	Ringgold	1,275	2	57.2	-----	85	22†	34	14†	39	4.44	-----	2.53	0	6	20	6	5	sw.	James A. Verploegh
Washington	Washington	757	45	57.2	+ 3.9	84	27	31	14†	36	8.26	+6.06	4.28	0	9	19	3	9	sw.	D. D. Sherman
Wescott (near)	Lee	523	5	57.0	-----	85	22†	34	14†	39	4.44	-----	2.53	0	6	20	6	5	sw.	Lester J. Larson
Winterset	Madison	1,118	36	58.8	+ 5.2	88	24†	35	14†	40	2.07	-0.30	0.95	0	6	21	4	6	nw.	H. S. Ely
Omaha, Neb.	-----	1,105	56	59.1	+ 4.8	87	22	36	13	32	1.12	-1.23	0.82	0	7	19	7	5	s.	U. S. Weather Bureau
Means and extremes.	-----	-----	-----	57.7	+ 4.3	89	24†	26	14	50	4.29	+1.83	4.91	0	7	20	5	6	sw.	-----
State means and extremes.	-----	-----	-----	55.5	+ 3.6	91	22	24	14	51	3.25	+0.83	4.91	T.	7	19	5	7	sw.	-----

The departure from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc. †Also other dates. ‡Temperature not included in means. ††Received too late to be included in means and summaries. T. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %				Wind				Sunshine				
	Mean	Highest	Date	Lowest	Date	Mean			Total movement	Average hourly velocity	Maximum		Per cent of possible	Departure from normal			
						7 a. m.	12 noon	7 p. m.			Miles	From			Date		
Charles City	29.99	30.40	16	29.59	2	90	57	70	32	26	4,344	5.8	27	sw.	30	63	+ 4
Davenport	30.00	30.36	18	29.59	11	84	57	64	36	24	4,242	5.7	28	s.	5	62	+ 1
Des Moines	29.97	30.36	16	29.61	10	82	50	56	29	22	4,647	6.2	34	sw.	30	70	+ 7
Dubuque	29.98	30.39	18	29.56	2	86	57	68	33	20	3,797	5.1	20	n.	6	58	+ 3
Keokuk	30.01	30.37	18	29.59	11	79	53	60	27	22	4,783	6.4	35	s.	2	67	+ 6
Sioux City	29.98	30.38	16	29.45	10	80	47	52	21	25	8,263	11.1	43	s.	4	72	+ 10
Omaha, Neb.	29.97	30.36	16	29.54	10	74	52	50	23	24	5,088	6.8	34	nw.	12	70	+ 8
Means and extremes.	29.99	30.40	16	29.45	10	82	53	60	21	25	-----	6.7	-----	-----	-----	66	+ 6
Normals and records.	30.03	-----	31st	-----	20th	81	-----	62	-----	25th	-----	8.1	-----	16th	60	-----	-----
		*30.69	1913	§28.96	1876	-----	-----	-----	-----	-----	-----	-----	*60	sw.	1880	-----	-----

*Davenport. §Omaha. ¶Sioux City. †Local mean time.

TEMPERATURE

The mean temperature for the State, as shown by the records of 100 stations, was 55.5°, or 3.6° higher than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern: 53.3° or 3.2° higher than the

normal; Central, 55.4°, or 3.3° higher than the normal; Southern, 57.7°, or 4.3° higher than the normal. The highest monthly mean was 59.3°, at Keokuk, and the lowest was 50.4°, at Northwood. The highest temperature reported was 91°, at Little Sioux on the 22d, and the lowest was 24°, at Decorah on the 14th. The temperature range for the State was 67°.

PRECIPITATION

The average precipitation for the State, as shown by the records of 113 stations, was 3.25 inches, or 0.83 inch more than the normal. By divisions, the averages were as follows: Northern, 1.91 inches, or 0.41 inch less than the normal; Central, 3.56 inches, or 1.03 inches more than the normal; Southern, 4.29 inches, or 1.83 inches more than the normal. The greatest amount, 8.51 inches, occurred at Burlington, and the least, 0.46 inch, occurred at Washta. The greatest amount in any 24 consecutive hours, 4.91 inches, occurred at Keosauqua on the 1st-2d.

SNOWFALL

Practically no snowfall occurred during the month, traces being reported from but two stations.

MISCELLANEOUS PHENOMENA

Aurora: 21st, 22d, 23d, 24th.
Fog: 1st, 3d, 7th, 8th, 14th, 18th, 19th, 29th 31st.
Frost: 4th, 7th, 8th, 9th, 10th, 13th, 14th, 16th, 17th, 18th, 19th, 21st, 30th, 31st.

Daily Precipitation for October, 1927

Stations	Drainage Basin	Day of Month																															Totals
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Northern Division																																	
Akron	Big Sioux	.02	.20	.27		.05							.05															.05	.02	.33	.64	1.63	
Algona	Des Moines	.10	1.10	.20			.34																									1.74	
Allison (near)	Cedar	.07	1.04	.10		.22	.33			.03			.04																			1.83	
Alta	Raccoon	.45	.50	.18		T.	.15		.02				.03																.06	.13	1.52		
Aiton	Floyd	T.	.12	.22			T.	T.					.09															T.		1.09	1.52		
Belmond	Iowa	.05	.73	.18		.16	.12			.03			.04																	.07	1.38		
Britt	Iowa	.04	.75	.22		.10	.33			.05		T.		.05															T.		1.54		
Charles City***	Cedar	.52	.24	.13		.17	.09		.05	.01		T.	T.															T.	.12	1.33			
Cherokee	Little Sioux	.01	.14	.23	.03	.05	.04		T.	.01																	T.	T.	.11	0.62			
Decorah	Mississippi	.15	2.12	.12		.18	.24			.13		.03	.09															.05	.09	3.20			
Dubuque***	Mississippi	.34	4.32	.10	T.	.98	.80		T.	.02		.78	.01															.02	.18	4.55			
Estherville	Des Moines	T.	.70				.05	.03					.05																.15	0.98			
Fayette	Mississippi	.14	1.61	.10		.18	.42			.13		T.	.04																.06	2.68			
Forest City	Cedar		.90	.03	.02	.05	.47			.12				.08															.23	1.90			
Hampton	Cedar	.18	1.75	.34		.31	.21			.04																			.01	2.84			
Hawarden	Big Sioux	T.	.14	.26		.04							.05															T.	.60	.58	1.67		
Humboldt	Des Moines	T.	.67	.15		.22	.34						.27																T.		1.65		
Independence	Wapsipinicon	.08	1.81	.17		.85	.61	.06		.07																		T.	.11	3.76			
Inwood	Big Sioux		.36	.16	.08								.06															T.	.25	.64	1.55		
Lake Park (near)	Little Sioux	.29		.07					.05				.04															.06	.30	0.81			
Lansing	Mississippi	.02	1.23	.23	.10		.18	.40		.10			T.	.08														T.	.01	.11	2.46		
Le Mars	Floyd	T.	.21	.23			T.						.07																.02	.65	1.18		
Marathon	Raccoon	1.28	.02	.21	.08	T.	.13	.02	.02			.05	.01															.01	T.	.11	1.98		
Mason City	Cedar	.06	1.14	.12		.12	.12	T.		.07		T.	T.	.02														T.	T.		1.65		
New Hampton	Wapsipinicon	.07	1.25	.15		.20	.50		.05		.03																	T.	T.		2.25		
Northwood	Cedar	.02	1.08	.08		T.	.35	T.	.02	.12			.02	T.														T.	.10	1.79			
Oelwein	Wapsipinicon	.10	2.40	.20		.75	.60																								4.05		
Osage	Cedar	.05	.79	.08		.06	.14					.06	T.	T.	.04															.07	1.29		
Pocahontas	Des Moines	.18	1.37	.10		.04	.27						.05																T.	.04	2.05		
Postville	Mississippi	.09	2.34	.16		.11	.49		.02				.50															.02	.02	3.75			
Rock Rapids	Big Sioux		.33	.12		.02			.03				.06															.04	.10	1.24	.02	1.96	
Sanborn	Floyd		.15	.18		.04																								.62	0.99		
Sheldon	Floyd	T.	.24	.13					T.				.05															.01	.10	.47	1.00		
Sioux Center	Floyd	T.	.17	.18		.04	T.						.16																.07	.77	1.39		
Spencer	Little Sioux		.31	.10		.02	.05						.07																T.	.04	0.59		
Storm Lake	Raccoon	.03	.87	.10		.03	.11			.02			.01		T.														.01	T.	1.18		
Washita	Little Sioux	.08	.13	.12		T.	.02																						.03	.08	0.46		
Waterloo	Cedar	.81	1.61	.09		.26	.18			.03		.05																			3.03		
Waverly	Cedar	.29	1.69	.25	.03	.24	.18			.04		.02																		.06	2.80		
West Bend	Des Moines	.05	1.24	.14		.07	.24		T.				.08	T.															T.	.04	1.86		
Central Division																																	
Ames	Skunk	.35	1.95	.21		.50	.21					T.	.22																T.	.01	3.45		
Audubon (near)	Nishnabotna	.60	.20	.24		.21	.25					.04	T.																T.		1.54		
Baxter	Skunk	.88	.45	.80		.45	.79					T.	.05																T.		3.42		
Belle Plaine	Iowa	1.45	.65	.72		.46	.87			.14		.29	.02	.01															.01	4.62			
Boone (near)	Des Moines	.42	1.39	.20		.37	.35					T.	T.																T.		2.73		
Carroll	Raccoon	.47	1.03	.26		.30	.43						.04																		2.53		
Cedar Rapids	Cedar	.54	1.45	.80		.76	1.82			.14		.46	T.																		5.97		
Clinton	Mississippi	1.41	1.19	.36	.08	.15	1.18	.04		.12		1.08		T.																	5.61		
Davenport***	Mississippi	.73	1.51	.27	T.	.37	1.07		.14	T.	1.15	.01																	T.		5.25		
Davenport No. 2	Mississippi	1.10	1.88	.22		.63	.56	1.03		.25		1.23	.02	T.															T.	T.	6.92		
Denison	Missouri	.30	1.83	.12		.72	.14					.03																			3.14		
Des Moines***	Des Moines	1.10	.11	.04		.51	.40					T.	T.																T.		2.16		
Fairport	Mississippi	1.05	2.00	.02	.17	.66	.83	.72		.03		1.05	.04																	.03	6.60		
Fort Dodge	Des Moines	.50	.47			.16	.11						.03																T.		1.27		
Grinnell	Iowa	.57	1.12	.12		.18	.74		.05		.01	T.																	T.		2.79		
Grundy Center	Cedar	1.00	1.25	.35		.40	.10			.02		.06	T.																	.06	3.24		
Guthrie Center	Raccoon																																
Harlan	Nishnabotna	.43	.63	.12		.03	.11					.03	T.																			1.35	
Iowa City	Iowa	1.05	2.45	.11		.30	2.52		.29		.58	.01																		.06	7.37		
Iowa Falls	Iowa	* 2.23	.28		.28	.37																								T.		3.16	
Jefferson	Raccoon	.51	.21	.16		.37	.41					T.	T.																		1.66		
Le Claire	Mississippi	1.48	1.12	.09	.38	.35	.54	1.10		.17			1.12	.01																T.	6.36		
Little Sioux	Little Sioux	.37	.10	.06		.56	.16					T.																		.11	1.36		
Logan	Missouri	.29	.82	.04		.12	.10					.07																			1.44		
Maquoketa	Maquoketa	1.11	1.87	.37	.03	.65	1.81	.02		.09		.66																			6.61		
Marshalltown	Iowa	.80	.58	.25		.20	.32			T.		.01	T.																	.04	2.20		
Monroe	Des Moines	1.58	.64	.43		.50	1.46					.02																		.05	4.68		
Muscataine	Mississippi	.98	2.17	.07	.07	.10	.70	.30		.22		.06	1.05	T.																.04	5.76		
Olin	Wapsipinicon	.87	1.60	.45		.70	1.65																										

Daily Precipitation for October, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Southern Division																																			
Afton	Grand	1.43	.33	.18		.16	.42					.09																						2.61	
Albia	Des Moines	1.23	1.15	.18		.68	1.32					.76																			.06		5.38		
Atlantic	Nishnabotna	1.03	.16	.02		.30	.56					.07																			.01		2.15		
Bonaparte (near)	Des Moines	1.74	1.62	.04		.35	.48					1.20	T.																		T.	.05	5.48		
Burlington	Mississippi	4.20	2.12	.28		.03	.42					1.46																					8.51		
Centerville	Chariton	1.01	.97	.09		.97	1.01					.82	T.																		T.		4.87		
Chariton (near)	Chariton	1.72	.62	.25		.65	1.12					.36																					4.72		
Clarinda	Nodaway	1.40	.49	.14			.10					.15																					2.28		
Columbus Jct.	Iowa	1.00	1.61	.30		.41	.87					1.27	.05																		.18	.03	5.72		
Corning (near)	Nodaway	1.03	.35	.14			.73					.11																					2.36		
Corydon	Chariton	1.21	.82	.24		.25	1.39					.80																			.13		4.84		
Creston	Missouri																																		
Cumberland (near)	Nodaway	2.09	.23	T.		.14	.95					.06																				T.		3.47	
Earlham (near)	Des Moines	.90	.15	T.		.45	.49					T.																					1.99		
Fairfield	Skunk	.86	3.10	.18		.38	1.20					1.40																			.40		7.52		
Glenwood	Missouri	.50	.44	.04		.04	.10																											1.12	
Indianola	Des Moines	1.31	.35	.18		.58	.68					T.																				T.		3.10	
Keokuk**	Mississippi	1.25	.94	.11			.54					1.30	T.																		.02		4.16		
Keosauqua	Des Moines	1.80	3.11	.10		.52	.74					1.59																			.10	.06	8.02		
Knoxville	Des Moines	1.70	.70	.68		.28	.92					.29	T.																		.03		4.60		
Lacona	Des Moines	1.75	.05	.38		.47	1.15					.10																			.02		3.92		
Lamoni	Grand	1.01	.64	.17		1.05	.90					.70																			.07		4.54		
Lenox	Missouri	1.50	.30	.22		.04	.60					.12																				T.		2.78	
Mount Ayr	Grand	1.95	.49	.19		.01	.60					.75																				.03		4.02	
Mt. Pleasant	Skunk	.97	2.14	.22		.27	.24					1.17																			.02	.11	5.14		
Oakland	Nishnabotna	.50	.19									T.																						0.69	
Oskaloosa	Des Moines	1.19	1.05	.23		.24	2.07	T.		.04		.36	.02																		.05		5.25		
Ottumwa	Des Moines	.99	1.27	.19		.73	1.94					.81	T.																				5.93		
Red Oak (near)	Nishnabotna	.24	1.70	.10			1.74					.14																					3.92		
Riverton (near)	Nishnabotna	* 2.00	.05				.83					.12																				T.		3.00	
Sigourney (near)	Skunk	.96	1.22	.29		.43	1.45			.04		.66	T.																		.01		5.06		
Stockport	Skunk	1.14	2.39	.09		.29	.73					1.46	.02																				6.12		
Thurman	Missouri	.81	.39	.02		T.	.38					.05																						1.65	
Tingley	Platte	2.53	.41	.19		.25	.67					.39	T.																				T.		4.44
Washington	Skunk	.92	4.28	.18		.32	1.10			.04		1.02	.02																			T.	.38	8.26	
Westcott (near)	Mississippi																																		
Winterset	Des Moines	.65	.23	.06		.13	.95					.05																					T.		2.07
Omaha, Nebr.***	Missouri	.81	.01	.02		.05	.17					.04																				.02		1.12	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

- ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
- ***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.
- ** Incomplete.
- * Precipitation included in the next following measurement.
- T. Precipitation is less than .01 inch rain or melted snow.
- |||| Precipitation measured on October 1st for a 36-hour period ending at 7:00 p. m.

Hail: 3d, 5th, 30th.
 Halos (lunar and solar): 3d, 10th, 23d, 28th, 31st.
 Thunderstorms: 1st, 2d, 3d, 5th, 6th, 7th, 8th, 9th, 11th, 28th, 29th, 30th.
 Winds (strong): 10th, 30th.

RIVERS

Nearly stationary stages prevailed on the Missouri River throughout the month though there were numerous slight fluctuations and the extreme monthly range at both Sioux City and Omaha was less than one foot. Due to the heavy rainfall over eastern Iowa in the first decade there were numerous fluctuations on the Mississippi River during the first two weeks with a general tendency to higher stages, after which there was a steady fall till the end of the month. Excessive rainfall beginning late on September 30th in extreme southeastern Iowa caused a record rise at Keokuk on the 1st, being 6.3 feet in 24 hours. There were moderate rises on all interior rivers during the first decade and a general fall thereafter with low stages general at the end of the month.

ERRATA

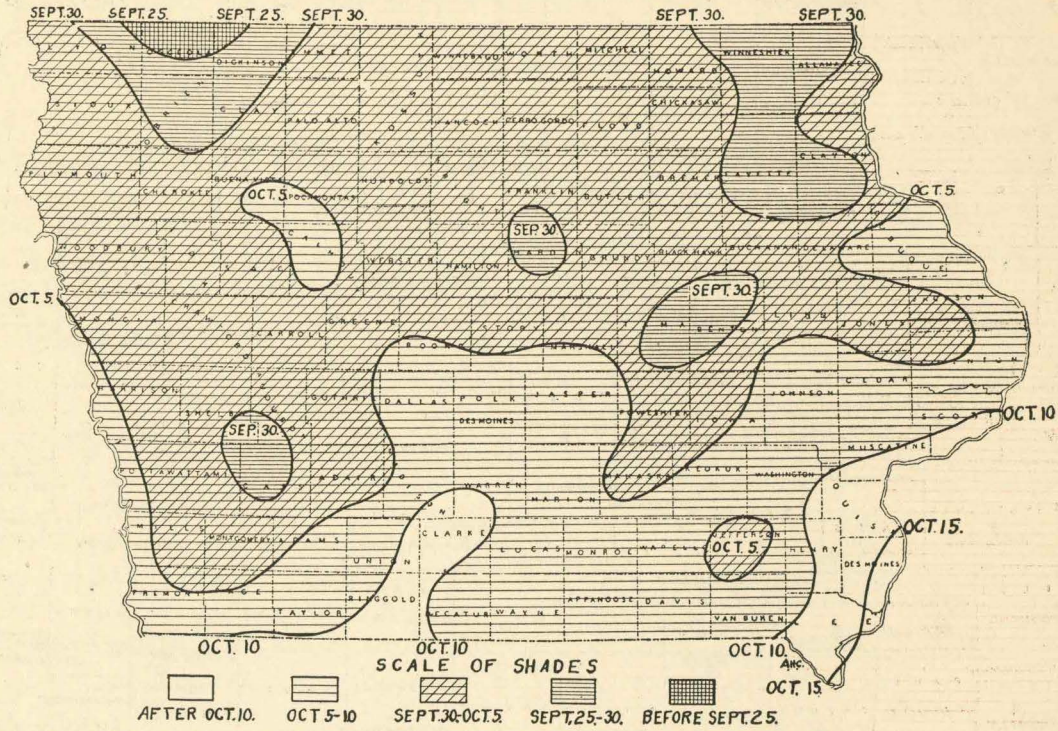
Report for July, 1927. Page 50. Boone, precipitation, recorded 1.95 inches, should be 1.87, departure recorded -1.77, should be -1.85 inches; days with 0.01 inch, or more, precipitation recorded 6, should be 5. Page 52. Entry of .08 on 17th should be canceled and total changed from 1.95 inches to 1.87 inches.

Daily Maximum and Minimum Temperature for the Month of October, 1927

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
Northern Division																																	
Algona	(Maximum) 60	62	63	68	63	50	55	60	58	72	66	50	48	63	56	59	61	62	72	73	72	81	74	73	83	83	77	67	76	76	61	65.9	
	(Minimum) 46	52	43	38	49	42	35	39	35	46	39	37	32	43	33	37	35	37	48	48	37	50	40	44	46	51	54	46	57	52	32	42.3	
Alta	(Maximum) 60	60	57	71	57	46	62	65	60	73	61	45	51	69	59	66	67	68	78	75	77	82	79	79	84	84	80	74	75	62	62	67.4	
	(Minimum) 45	48	41	37	45	41	33	36	34	39	44	38	34	34	42	35	37	38	42	47	40	49	41	48	51	53	53	48	54	47	38	42.2	
Alton	(Maximum) 57	58	57	70	63	49	57	62	59	72	66	50	54	66	59	61	64	67	77	74	78	79	76	74	81	81	75	68	73	61	60	66.0	
	(Minimum) 40	50	42	35	47	41	31	32	34	41	42	39	35	31	42	30	36	40	34	37	33	41	34	42	42	44	48	48	54	45	30	39.4	
Belmond	(Maximum) 56	62	55	69	60	52	58	64	55	72	64	45	49	65	55	64	64	63	74	75	73	85	74	75	84	85	82	75	80	73	70	67.0	
	(Minimum) 44	54	40	35	49	44	38	38	37	39	43	37	30	25	43	29	27	33	32	40	33	46	37	37	39	48	56	50	59	54	32	40.3	
Charles City	(Maximum) 62	64	56	67	59	50	54	61	50	67	58	44	43	61	54	59	60	58	71	73	69	82	71	74	82	84	82	70	75	73	60	64.3	
	(Minimum) 47	49	42	38	50	43	38	38	38	38	41	36	31	28	37	30	30	32	34	39	35	49	39	39	46	47	52	51	52	48	38	40.5	
Decorah	(Maximum) 57	68	72	66	58	62	54	61	55	63	58	48	43	58	56	57	65	56	79	72	69	78	70	70	76	80	80	66	67	74	67	64.7	
	(Minimum) 44	52	41	38	50	42	39	35	38	33	45	36	36	24	38	28	25	25	29	36	34	47	41	38	41	46	53	46	50	55	38	39.5	
Dubuque	(Maximum) 70	70	62	67	61	63	51	62	52	63	58	52	45	58	63	59	54	58	69	76	64	79	71	71	77	82	83	75	72	74	65	65.3	
	(Minimum) 55	53	46	44	54	45	40	36	40	37	46	40	37	31	44	37	34	32	33	44	42	54	48	48	48	51	59	53	51	55	45	44.6	
Forest City	(Maximum) 58	62	55	67	63	58	58	64	58	68	60	54	48	66	56	64	63	62	73	73	73	84	71	73	83	85	80	68	77	70	60	66.3	
	(Minimum) 45	52	40	35	48	43	35	35	34	38	45	35	35	27	41	32	35	32	38	48	35	48	39	45	44	51	53	46	50	53	33	41.0	
Independence	(Maximum) 67	67	60	68	70	60	54	64	63	67	64	57	50	61	58	61	61	58	70	75	71	81	78	74	82	82	84	82	75	76	74	68.2	
	(Minimum) 51	55	43	40	52	42	41	38	44	37	50	38	30	43	35	34	31	34	44	48	52	44	42	45	42	46	54	51	50	58	40	43.5	
Inwood	(Maximum) 62	59	60	72	63	49	63	67	54	74	62	51	54	64	62	62	67	71	80	77	82	81	80	76	84	84	75	67	69	60	64	67.6	
	(Minimum) 41	45	40	34	44	40	33	33	32	42	40	34	30	32	40	35	38	41	48	42	34	45	35	35	45	49	45	48	50	43	29	39.4	
Lake Park	(Maximum) 62	59	59	69	62	47	62	63	54	73	65	44	51	68	58	65	66	68	78	73	78	82	79	76	87	85	76	62	73	66	64	66.9	
	(Minimum) 38	39	42	36	45	39	31	36	28	41	41	36	35	31	42	31	37	38	39	48	35	47	32	40	45	49	52	43	51	42	30	39.3	
Mason City	(Maximum) 57	63	55	68	62	52	56	62	55	70	64	46	44	63	55	60	62	61	72	73	72	83	72	74	83	83	78	65	77	72	59	65.1	
	(Minimum) 43	53	40	35	49	42	35	37	35	36	44	36	34	26	36	26	29	31	38	33	48	36	38	41	47	54	45	49	52	34	39.0		
New Hampton	(Maximum) 60	65	57	67	60	53	56	63	53	65	61	45	45	59	56	65	60	58	72	76	67	80	75	75	82	83	81	72	73	75	61	65.2	
	(Minimum) 46	51	38	35	49	41	38	35	36	35	41	35	30	26	38	30	28	27	32	29	33	44	36	37	42	45	51	51	48	56	34	38.6	
Northwood	(Maximum) 66	61	55	65	55	47	49	58	53	67	58	48	43	63	54	56	58	59	68	70	68	80	70	70	70	81	86	81	86	81	61	61.8*	
	(Minimum) 45	51	40	37	47	41	41	39	33	36	45	36	34	27	38	32	33	31	35	45	38	50	39	41	41	41	41	41	41	41	41	38.9*	
Pocahontas	(Maximum) 60	63	55	72	59	49	60	65	57	75	65	50	53	68	58	64	66	76	77	75	85	79	76	85	86	84	73	81	68	60	68.0		
	(Minimum) 44	48	40	35	49	43	35	35	31	33	44	38	37	29	42	31	32	37	34	45	35	50	37	41	41	41	41	41	41	41	41	41	41
Postville	(Maximum) 60	66	58	66	59	55	51	65	56	63	58	48	44	59	56	62	5	59	70	74	65	80	73	73	81	84	82	70	68	74	63	64.3	
	(Minimum) 47	53	43	39	53	43	39	37	38	34	48	37	34	28	43	34	31	28	35	46	35	51	43	43	41	52	58	51	48	54	38	42.1	
Rock Rapids	(Maximum) 62	60	57	70	62	57	60	62	52	66	52	40	40	66	52	60	60	64	67	79	72	80	80	78	75	81	80	75	66	72	62	60	66.5
	(Minimum) 39	50	40	34	45	40	38	33	33	42	40	38	33	30	37	28	31	38	32	33	30	40	32	35	37	46	45	50	46	28	37.4		
Central Division																																	
Belle Plaine	(Maximum) 74	65	62	54	64	60	54	67	53	70	60	45	45	64	61	63	62	61	74	81	71	84	75	81	88	87	88	84	81	78	66	68.5	
	(Minimum) 54	49	42	35	46	50	39	34	41	36	43	38	34	28	41	32	31	26	33	38	33	50	39	42	46	54	53	55	54	62	37	41.8	
Boone	(Maximum) 60	65	59	73	63	57	58	68	57	75	68	47	53	68	58	64	66	65	77	81	74	86	79	82	87	87	85	84	79	74	64	69.8	
	(Minimum) 47	54	39	33	53	46	42	32	40	40	47	39	40	26	38	29	29	29	32	35	31	48	35	38	36	39	44	48	55	59	30	39.8	
Carroll	(Maximum) 56	63	56	70	67	49	55	68	56	73	67	50	51	67	58	63	64	65	76	78	73	83	79	78	85	84	81	80	76	70	64	67.9	
	(Minimum) 44	51	42	39	49	42	38	35	33	47	38	37	32	43	35	36	35	35	48	48	38	50	42	49	50	54	56	50	58	50	31	42.9	
Cedar Rapids	(Maximum) 70	68	65	70	63	64	56	65	53	67	60	47	45	61	64	62	59	59	71	77	68	81	77	76	83	83	86	81	77	76	66	67.7	
	(Minimum) 54	59	42	37	59	49	40	31	39	34	46	40	35	25	44	31	27	27	30	38	38	52	43	39	44	40	45	52	50	58	37	41.5	
Davenport	(Maximum) 71	72	67	70	70	70	53	62	52	65	59	50	46	60	68	62	56	58	68	79	68	84	73	80	80	82	84	84	81	76	67	68.3	
	(Minimum) 59	54	50	46	55	47	44																										

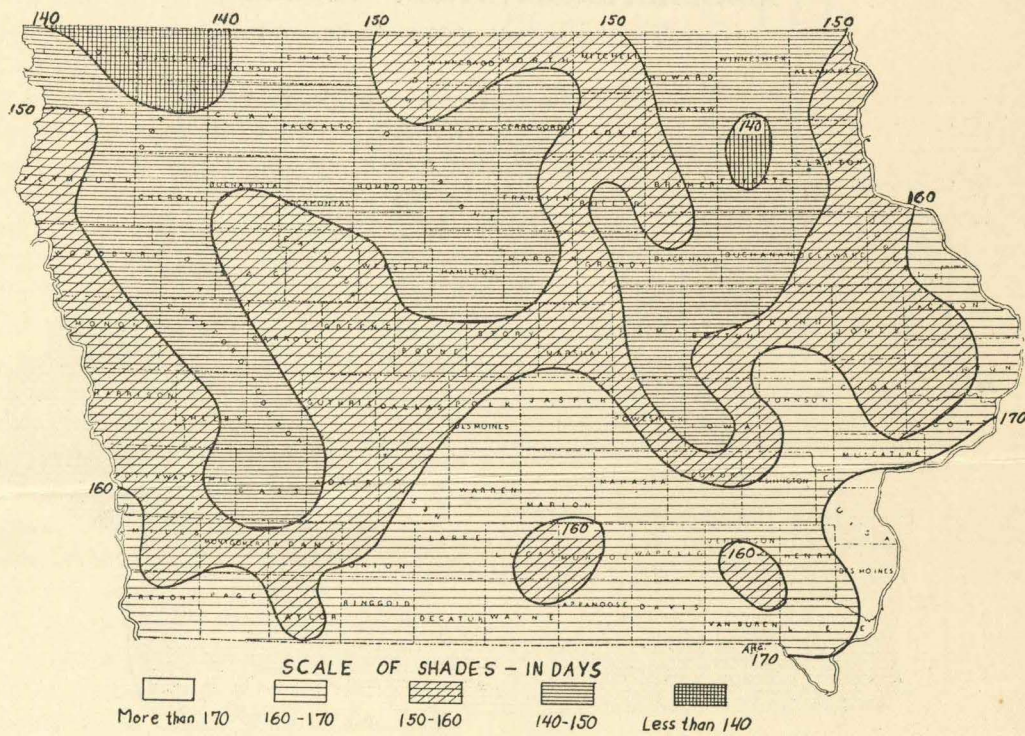
AVERAGE DATE OF FIRST KILLING FROST IN AUTUMN

State average, October 5

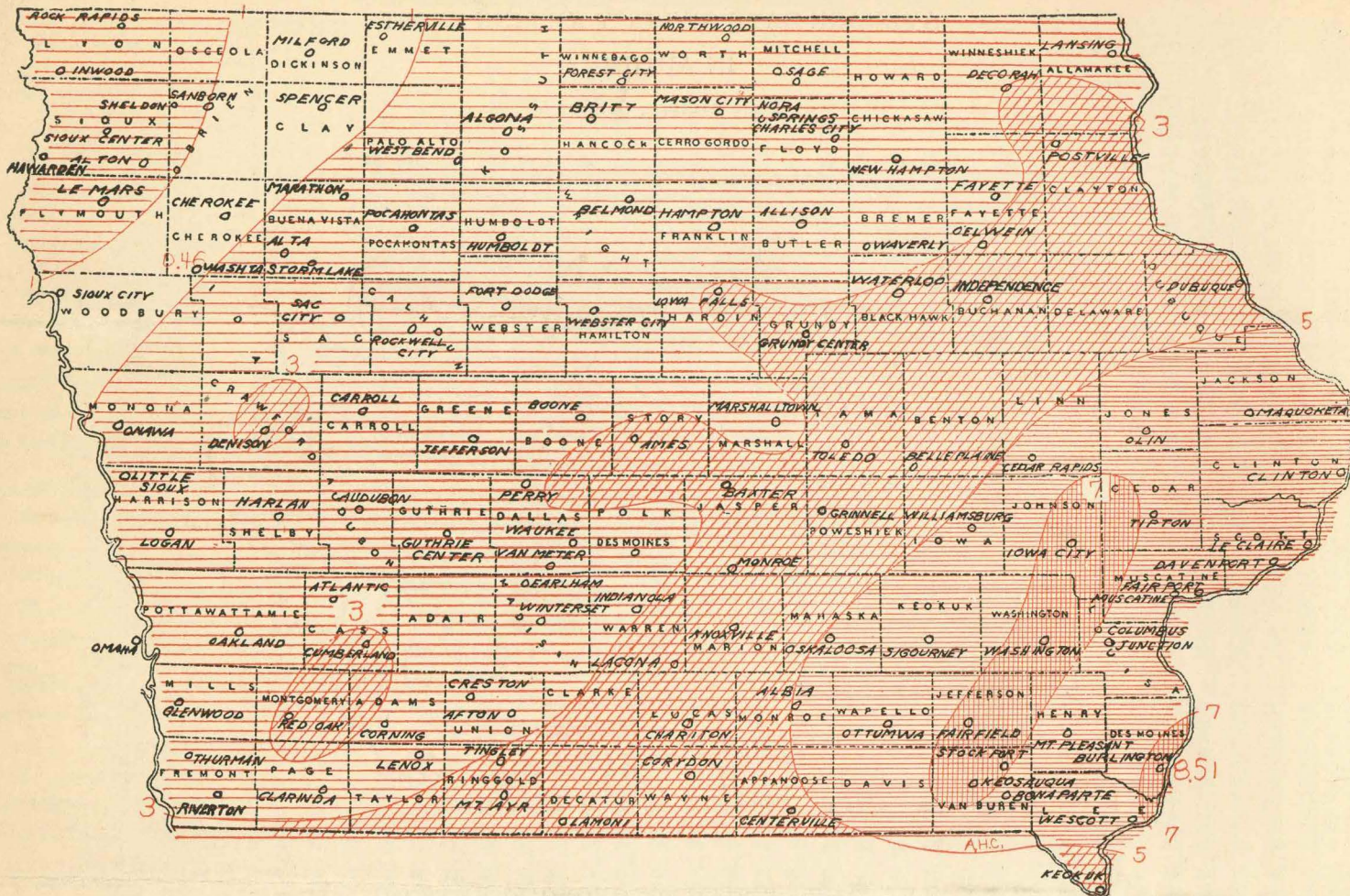


AVERAGE LENGTH OF GROWING SEASON

Number of days between last killing frost in spring and first
killing frost in autumn. State average, 155 days.



TOTAL PRECIPITATION, OCTOBER, 1927

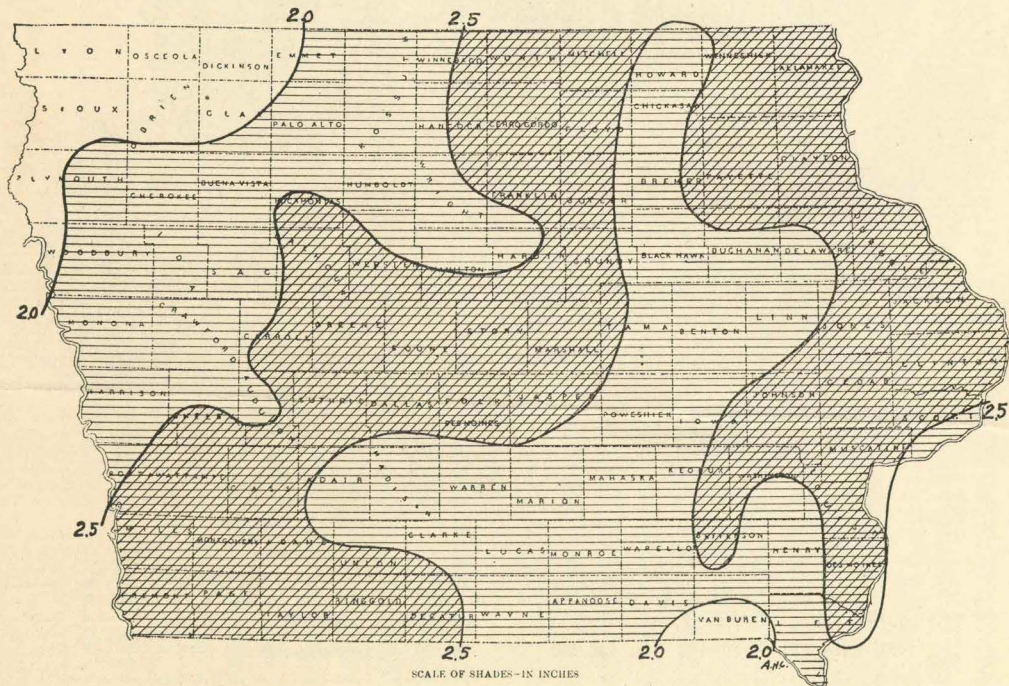


SCALE OF SHADES IN INCHES

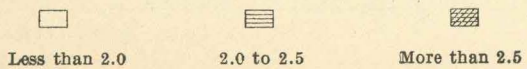


NORMAL PRECIPITATION, OCTOBER

(Based on station records of 30 years or more)



SCALE OF SHADES - INCHES



CLIMATOLOGICAL DATA.

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU

CHARLES D. REED, Meteorologist

TEMPERATURE

The mean temperature for the State, as shown by the records of 110 stations, was 37.7°, or 1.1° higher than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 34.1°, or 0.1° lower than the normal; Central, 38.2°, or 1.5° higher than the normal; Southern, 40.7°, or 2.0° higher than normal. The highest monthly mean was 43.8°, at Keokuk, and the lowest was 31.2° at Sioux Center. The highest temperature reported was 81° at Clarinda on the 9th, Thurman on the 10th, and Corning on the 11th, and the lowest was zero at Sanborn on the 18th. The temperature range for State was 81°.

PRECIPITATION

The average precipitation for the State, as shown by the records of 110 stations, was 0.87 inch, or 0.69 inch less than the normal. By divisions, the averages were as follows: Northern, 0.89 inch, or 0.63 less than the normal; Central, 0.97 inch, or 0.61 inch less than the normal; Southern, 0.76 inch, or 0.81 inch less than the

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GENERAL SUMMARY

Though November averaged 1.1° warmer for the State than usual, the first 19 days were mostly below normal and this deficiency was overcome by a protracted warm period the rest of the month, except in the northwest division and some adjacent territory where the monthly average was below normal. The temperature extremes were well within the November limits but there were numerous fluctuations and rather sudden changes till the 20th. The changes to warmer were more pronounced than those to colder.

There was a decided deficiency in precipitation except in about five counties in the northeastern division and a narrow strip along the Mississippi River from Jackson county southward. After the general precipitation on the 1st there were only a few light, scattered amounts till the 10th. During the rest of the month precipitation occurred at frequent intervals, but excepting the 14th-15th, the amounts were light.

The outstanding feature of the month was the lack of sunshine, which was less than last November. The average for the State, 31%, is the least for any November in the history of the state, and possibly the least for any month. At Des Moines the average was 33% but a slightly smaller per cent was recorded, in November, 1906, and in January, 1907 and 1909. The number of clear days was the least and the number of cloudy days was the greatest ever recorded in November. The weather was favorable for all farm work but the excessive cloudiness and high humidity were unfavorable for drying corn. As a result there was some corn that could not be safely cribbed and some down corn was moldy.

Corn picking was interrupted very little and the amount gathered at the end of the month compared favorably with the average and the quality was better than the average. The yield varied greatly, even in the same localities, being poorest in the southeast counties. Plowing was possible except for a short period at the last of the third week and the first part of the fourth. Pastures were green throughout the month but they were getting very short at the close. Cattle were generally in good condition but hogs were developing the "flu" in many localities. Roads were in good condition, except dirt roads for a few short periods in the first of the third week.

COMPARATIVE DATA FOR THE STATE—NOVEMBER

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. .01 in. or more	Clear	Partly cloudy	Cloudy
1873.....	36.2	0.4	64	-4	0.72	-0.84	2.78	0.00					
1874.....	32.9	-3.7	74	-6	2.21	+0.65	4.79	1.05					
1875.....	30.1	-6.5	60	-16	0.19	-1.37	0.63	0.00					
1876.....	31.3	-5.3	69	-6	1.70	+0.14	3.50	0.16					
1877.....	33.3	-3.3	82	-10	1.86	+0.30	3.84	0.12					
1878.....	39.7	+3.1	72	12	0.63	-0.93	2.69	0.00					
1879.....	36.3	0.5	75	4	4.08	+2.52	7.00	0.20					
1880.....	25.3	-11.3	68	-12	1.29	-0.27	3.30	0.05					
1881.....	34.4	-2.2	65	-1	2.01	+0.45	3.97	0.60					
1882.....	37.5	+0.9	76	4	1.71	+0.15	7.15	0.30					
1883.....	36.3	+0.2	70	-3	1.44	-0.12	4.17	0.00					
1884.....	35.6	-1.0	68	-15	0.79	-0.77	1.90	0.00					
1885.....	36.4	0.2	67	14	0.69	-0.87	2.60	0.10					
1886.....	32.1	-4.5	75	-4	1.49	-0.07	5.18	0.30					
1887.....	35.1	-1.5	78	-26	0.85	-0.71	4.10	0.10					
1888.....	37.1	+0.5	82	0	1.56	0.00	6.00	0.00					
1889.....	33.0	-3.6	68	-9	1.44	-0.12	4.90	0.05					
1890.....	38.9	+2.3	78	-2	1.31	-0.25	3.55	0.50					
1891.....	30.5	-6.1	84	-24	1.70	+0.14	3.64	0.66		7	10	8	12
1892.....	33.3	-3.3	70	-3	1.10	-0.46	3.16	0.05	1.8	4	11	8	11
1893.....	34.0	-2.6	86	-13	1.17	-0.39	2.66	0.05	4.6	4	16	8	6
1894.....	32.7	-3.9	72	-5	0.92	-0.64	2.42	T.	0.4	4	9	11	10
1895.....	34.3	-2.3	86	-12	1.51	-0.05	3.01	0.45	4.9	6	9	8	13
1896.....	29.6	-7.0	82	-15	1.83	+0.27	4.51	0.16	2.9	6	9	8	13
1897.....	34.3	-2.3	81	-19	0.66	-0.90	2.24	T.	1.2	5	12	8	10
1898.....	32.2	-4.4	78	-17	1.50	-0.06	3.61	0.33	8.7	6	14	8	8
1899.....	43.9	+7.3	86	8	1.20	-0.36	2.97	0.13	0.5	5	12	8	10
1900.....	33.5	-3.1	79	-6	1.06	-0.50	3.85	T.	3.7	6	12	7	11
1901.....	35.8	-0.8	77	2	0.86	-0.70	2.80	0.20	2.6	3	18	6	6
1902.....	41.2	+4.6	79	4	2.13	+0.57	4.19	0.16	1.8	7	9	7	14
1903.....	34.2	-2.4	76	-5	0.52	-1.04	1.74	T.	1.1	3	13	8	9
1904.....	41.0	+4.4	80	4	0.15	-1.41	0.50	0.00	0.5	1	20	6	4
1905.....	38.4	+1.8	70	-12	2.84	+1.28	5.30	0.90	0.6	5	16	7	7
1906.....	35.4	-1.2	76	-5	2.03	+0.47	3.86	0.35	4.4	8	9	7	14
1907.....	36.7	+0.1	68	-4	1.03	-0.53	2.27	0.05	0.9	4	17	6	7
1908.....	39.3	+2.7	80	5	1.56	0.00	3.31	0.21	1.4	5	14	7	9
1909.....	42.4	+5.8	84	-3	5.39	+3.83	1.48	2.07	6.8	10	10	7	13
1910.....	33.4	-3.2	76	-5	0.34	-1.22	1.03	T.	0.7	3	13	9	8
1911.....	29.9	-6.7	79	-8	1.42	-0.14	4.99	0.11	1.6	6	11	8	11
1912.....	40.1	+3.5	77	6	0.98	-0.58	2.38	0.00	T.	2	18	8	4
1913.....	44.1	+7.5	78	10	1.18	-0.38	3.49	0.20	0.4	6	11	7	12
1914.....	41.0	+4.4	80	-4	0.22	-1.34	0.95	0.00	T.	2	19	6	5
1915.....	40.2	+3.6	83	-5	1.94	+0.38	4.86	0.30	1.2	6	11	10	9
1916.....	37.3	+0.7	80	-8	1.61	+0.05	3.65	0.05	3.6	5	16	6	8
1917.....	40.7	+4.1	77	3	0.28	-1.28	1.02	T.	1.4	3	14	6	10
1918.....	39.9	+3.3	76	0	2.13	+0.55	5.10	0.70	4.4	7	13	5	12
1919.....	33.6	-3.0	68	-12	3.40	+1.84	6.22	1.97	6.3	8	11	7	12
1920.....	35.4	-1.2	71	5	2.18	+0.62	4.45	0.73	1.2	8	10	5	15
1921.....	33.6	-3.0	70	-5	0.58	-0.98	1.61	T.	3.4	5	16	5	15
1922.....	42.2	+5.6	74	11	3.54	+1.98	5.28	1.96	0.3	9	11	6	13
1923.....	40.1	+3.5	72	9	0.58	-0.98	1.84	0.00	1.2	3	16	6	8
1924.....	38.9	+2.3	82	0	0.58	-0.98	1.55	T.	0.4	4	15	7	8
1925.....	36.1	-0.5	68	-6	0.71	-0.85	2.30	0.10	4.0	4	15	6	9
1926.....	32.6	-4.0	71	-3	2.10	+0.54	3.88	0.68	4.2	7	8	7	15
1927.....	37.7	+1.1	81	0	0.87	-0.69	3.61	T.	0.6	5	7	6	17

F. L. D.

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.

Climatological Data for November, 1927

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days			Prevaling direction of wind	Observers	
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear			Partly cloudy	Cloudy
Northern Division																			
Akron	Plymouth	1,153	1															Orlan C. Moore	
Algona	Kossuth	1,213	54	34.0	+ 0.6	59	11	5	18	29	0.82	-0.54	0.24	2.4	4	17	6	7	W. E. Laird
Alison (near)	Butler	1,044	15	34.6	+ 0.1	64	11	9	18	32	0.78	-0.78	0.25	3.5	6	5	10	15	J. A. Bell
Alta	Buena Vista	1,513	36	33.0	- 0.9	62	10	4	18	33	0.43	-0.99	0.25	0.4	5	6	9	15	D. E. Hadden
Alton	Sioux	1,305	22	32.4	- 1.2	55	10	5	18	30	0.45	-0.92	0.20	2.0	3	5	14	11	W. S. Slagle
Belmond	Wright	1,181	17	34.3	+ 0.1	64	11	5	18	35	0.76	-0.89	0.30	2.0	9	4	5	21	H. F. Luick
Britt	Hancock	1,236	40	33.8	+ 0.3	61	11	6	18	31	0.57	-0.88	0.53	T.	2	7	10	13	James S. Ross
Charles City	Floyd	1,015	36	34.2	+ 1.2	63	11	12	17	38	0.96	-0.64	0.40	3.6	9	5	7	18	U. S. Weather Bureau
Cherokee	Cherokee	1,196	5	33.8 ^b		61 ^b	10	3 ^b	18	30 ^b	0.33		0.20	T.	4				J. E. Wirth
Decorah	Wingeshiek	872	34	35.1	+ 0.4	65	11	13	18	35	2.03	+0.19	1.25	1.0	10	6	7	17	M. D. Whitney
Dubuque	Dubuque	700	54	39.5	+ 2.5	71	11	20	18	42	1.01	-0.82	0.48	1.4	8	4	3	23	U. S. Weather Bureau
Estherville	Emmet	1,298	32	32.0	- 2.0	59	1	3	18	27	0.95	-0.36	0.45	3.0	5	10	8	12	A. O. Peterson
Fayette	Fayette	1,003	39	36.6	+ 2.5	65	11	15	6 [†]	38	2.22	+0.50	1.72	3.2	6	8	4	18	R. Z. Latimer
Forest City	Winnebago	1,226	33	33.6	+ 0.1	61	11	5	18	31	1.17	-0.38	0.55	1.0	6	10	4	16	Dr. M. B. Nell
Hampton	Franklin	1,145	2																L. H. Davis
Hawarden	Sioux	1,181	1								0.59		0.36	T.	3	11	6	13	Earl V. Sliffe
Humboldt	Humboldt	1,095	39	33.9	- 1.6	66	10	2	18	34	0.55	-1.12	0.34	0.5	5	6	7	17	H. O. Snitkey
Independence	Buchanan	921	63	37.1	+ 0.6	67	11	10	18	33	1.37	+0.13	0.82	1.6	8	0	2	28	Dr. Geo. Boody
Inwood	Lyon	1,474	23	31.3	- 1.7	56	3	1	18	28	0.55	-0.57	0.38	0.7	4	14	3	13	A. C. Hanson
Lake Park (near)	Dickinson	1,489	7	31.6		54	1 [†]	1	18	30	0.56		0.36	T.	3	9	5	16	F. M. Lawrence
Lansing	Allamakee	632	20								1.92	-0.03	1.53	1.0	6				Mrs. Mary Spinner
Le Mars	Plymouth	1,224	31	34.2	- 0.8	58	10	5	18	30	0.18	-0.95	0.18	0	1	13	2	15	Henry Newell
Marathon	Buena Vista	1,390	1								0.40		0.23	0.3	6	7	4	19	E. G. Smith
Mason City	Cerro Gordo	1,148	30	33.3	- 0.2	54	1 [†]	7	18	27	0.80	-0.68	0.37	3.0	9	6	12	12	American Beet Sugar Co.
New Hampton	Chickasaw	1,169	30	34.5	+ 0.4	66	11	12	18	36	1.55	-0.14	0.67	2.0	7	2	10	18	D. W. Dawson
Northwood	Worth	1,222	31								1.75		1.75	T.	1	8	3	19	Charles Dwelle
Oelwein	Fayette	1,036	3	36.6		65	11	16	6 [†]	32	1.75		1.75	T.	1	8	3	19	John T. Ridler
Osage	Mitchell	1,163	2	33.8 ^a		60 ^a	11	9 ^a	18	35 ^a	1.02		0.43		9				Dr. C. E. Juhl
Pocahontas	Pocahontas	1,248	23	34.2	- 0.5	63	10	5	18	30	0.70	-0.98	0.40	T.	8	10	8	12	F. E. Hronek
Postville	Clayton	1,192	28	35.2	+ 1.2	64	11	13	18	33	2.47	+0.78	1.34	0.5	10	7	6	17	F. L. Williams
Rock Rapids	Lyon	1,349	28	31.4	- 1.8	54	3	4	18	28	0.91	-0.28	0.50	2.2	5	8	8	14	J. K. Medberry
Sanborn	O'Brien	1,553	13	31.5	- 1.0	55	10	0	18	33	0.58	-0.72	0.32	1.5	4	9	9	12	J. W. Dow
Sheldon	O'Brien	1,418	2	32.2		55	26	4	18	28	0.52		0.30	0.8	5	3	14	13	Ross E. Forward
Sioux Center	Sioux	1,426	28	31.2	- 2.3	55	3	2	18	31	0.79	-0.39	0.30	2.0	5	8	2	20	J. DeRuyter
Spencer	Clay	1,319	13	33.1	- 0.5	60	10	2	18	30	0.64	-0.66	0.32	0.9	6	9	6	15	E. W. Little
Storm Lake	Buena Vista	1,440	38	34.9	- 0.6	62	10	5	18	29	0.33	-0.97	0.22	T.	4	12	5	13	George H. Fracker
Washta	Cherokee	1,157	29	34.0	- 1.0	64	10	5	18	40	0.10	-1.22	0.10	T.	1	8	7	15	H. L. Felter
Waterloo	Black Hawk	854	44	38.8	+ 2.7	67	11	12	6	35	1.20	-0.29	0.75	1.9	7	10	4	16	R. B. Slippy
Waverly	Bremer	936	31	36.2	+ 0.6	67	1	13	6	34	1.36	-0.29	0.53	1.2	8	9	9	12	D. H. Murphy
West Bend	Palo Alto	1,197	34	33.2	- 0.9	59	10	2	18	30	0.62	-0.87	0.40	0.5	5	6	11	13	Jos. Dorweiler
Means and extremes				34.1	- 0.1	71	11	0	18	42	0.89	-0.63	1.75	1.1	6	8	7	15	nw.
Central Division																			
Ames	Story	926	50	38.2	+ 2.3	69	11	9	18	37	0.68	-0.61	0.25	1.4	6	8	3	19	nw.
Audubon (near)	Audubon	1,297	32	37.1	+ 2.3	72	10	9	18	42	0.31	-1.02	0.12	0.2	5	9	10	11	nw.
Baxter	Sioux	998	27	38.1	+ 0.9	72	10	10	18	37	0.77	-0.66	0.62	0.5	6	2	9	19	nw.
Belle Plaine	Benton	866	37	39.4	+ 2.4	70	11	14	6 [†]	36	1.15	-0.54	0.83	0.2	9	5	4	21	nw.
Boone (near)	Boone	1,134	22	37.8	+ 1.2	72	10	7	18	37	0.90	-0.47	0.60	1.0	5	5	8	17	nw.
Carroll	Carroll	1,265	37	36.2	+ 0.1	69	10	6	18	38	0.15	-1.17	0.06	0.5	4	14	2	14	nw.
Cedar Rapids	Linn	737	45	38.9	+ 1.1	71	11	13	6	38	1.42	-0.23	1.09	T.	6	6	2	22	nw.
Clinton	Clinton	595	54	41.6	+ 3.7	73	1 [†]	17	6	36	3.25	+1.36	0.98	T.	11	6	1	23	s.
Davenport	Scott	580	56	41.8	+ 2.8	72	11	21	18	40	2.38	+0.58	1.12	T.	11	4	6	20	s.
Davenport No. 2	Scott	600	2	42.0		73	1 [†]	18	6 [†]	36	2.58		0.78	T.	10				U. S. Weather Bureau Res. Shriver
Denison	Crawford	1,171	33	36.6	+ 1.0	68	10	7	18	40	0.44	-0.89	0.24	T.	4	3	11	16	nw.
Des Moines	Polk	861	49	39.2	+ 0.8	77	10	12	18	40	0.44	-1.03	0.38	T.	5	3	5	22	nw.
Fairport	Muscatine	567	6	42.4		71	1 [†]	18	18	28	2.45		0.80	0	7	5	5	20	sw.
Fort Dodge	Webster	1,114	27	34.8	- 0.5	65	10	2	18	34	0.69	-0.89	0.23	0.8	7	5	8	17	nw.
Grinnell	Poweshiek	1,031	33	39.4	+ 1.7	68	10 [†]	13	6 [†]	38	1.08	-0.61	0.95		6				nw.
Grundy Center	Grundy	976	36	37.4 ^a	+ 1.1	63 ^a	1	11 ^a	17	39 ^a	1.00	-0.44	0.40	1.0	5				nw.
Guthrie Center	Guthrie	1,077	32																E. L. Nesselroad
Harlan	Shelby	1,192	28	37.8	+ 2.0	74	9	9	18	41	0.26	-1.20	0.10	T.	3	9	5	16	nw.
Iowa City	Johnson	733	67	40.4	+ 2.8	71	1 [†]	15	6	36	1.29	-0.83	0.55	T.	8	3	10	17	nw.
Iowa Falls	Hardin	1,127	34	36.1	+ 0.8	66	11	8	18	36	1.26	-0.34	0.50	3.7	6	8	8	14	nw.
Jefferson	Greene	1,052	28	37.2	+ 1.0	71	10	5	18	39	0.33	-1.60	0.18	1.0	4	8	6	16	nw.
Little Sioux	Harrison	1,040	22	37.7	+ 1.2	71	10	9	18	44	0.57	-1.00	0.28	0.5	7	8	8	14	nw.
Logan	Harrison	1,120	60	38.2	+ 0.9	70	10	11	16 [†]	40	0.34	-1.06	0.16	1.1	5	9	10	11	s.
Maquoketa	Jackson	692	2	39.0 ^d		72 ^d	11	14 ^b	6 [†]	38 ^d	1.41		0.39	T.	6				nw.
Marshalltown	Marshall	947	35	38.4	+ 1.0	66	10 [†]	13	18	34	0.71	-0.81	0.60	0.5	6	4	6	20	nw.
Monroe	Jasper	922	15																J. A. Dibel
Olin	Jones	760	28	40.0	+ 3.7	73	11	15	6 [†]	35	1.50	-0.12	0.59	0	3	9	0	21	nw.
Onawa	Monona	1,051	26	36.5	+ 0.8	64	10	10											

Climatological Data for November, 1927—Continued

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit					Precipitation, in inches				Number of Days			Prevailing direction of wind	Observers			
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more			Clear	Partly cloudy	Cloudy
Southern Division																				
Afton	Union	1,212	33	40.6	+ 1.5	78	10	11	18	40	0.90	-0.53	0.70	0	2	6	12	12	sw.	S. R. Brown
Albia	Monroe	949	29	40.6	+ 2.4	73	10	12	18	35	0.79	-0.77	0.29	T.	8	4	2	24	sw.	O. E. McBride
Atlantic	Cass	1,164	36	38.3	+ 0.8	76	10	11	18	42	0.35	-0.95	0.10	2.1	8	5	6	19	nw.	T. H. Whitney
Bonaparte (near)	Van Buren	563	36	41.6	+ 2.0	75	1	16	6†	36	1.21	-0.59	0.48	T.	6	5	2	23	w.	B. R. Vale
Burlington	Des Moines	544	31	43.0	+ 1.9	76	1	19	18	33	3.12	+1.26	1.58	T.	7	5	6	19	sw.	John T. Donnelly
Centerville	Appanoose	1,013	22	41.7	+ 2.2	73	10	12	18	36	1.18	-0.26	0.82	T.	6	5	3	22	nw.	Thomas Wood
Chariton (near)	Lucas	1,042	32	40.5	+ 1.8	72	10	12	18	37	0.46	-1.00	0.46	T.	1	4	10	16	nw.	J. A. Burr
Clarinda	Page	1,009	37	41.9	+ 2.2	81	9	15	18	41	0.04	-1.48	0.03	0	2	7	19	4	nw.	Dr. H. C. Hawley
Columbus Jct.	Louisa	595	26	41.3	+ 1.7	74	11	16	6†	37	1.19	-0.59	0.40	T.	8	3	13	14	nw.	Miss Musa Todd
Corning (near)	Adams	1,117	35	40.6	+ 3.2	81	11	12	6†	53	0.27	-1.20	0.27	0	1	9	5	16	sw.	W. A. Seybold
Corydon	Wayne	1,101	34	41.0	+ 2.2	75	10	11	18	38	1.03	-0.47	0.72	T.	3	6	6	18	s.	A. T. Gallagher
Creston	Union	1,291	22	38.8	+ 0.6	78	10	11	18	42	0.35	-1.37	0.22	0.2	7	9	10	11	s.	O. E. McBride
Cumberland (near)	Cass	1,225	28								0.10	-0.99	0.07	T.	3	7	7	16	nw.	Carl E. Phollock
Earlham (near)	Madison	1,126	25	39.4	+ 2.2	78	10	8	18	42	0.04	-1.62	0.04	T.	1	8	5	17	sw.	George Phillips
Fairfield	Jefferson	780	43	40.6	+ 2.1	73	1	11	6	38	1.06	-1.10	0.40	0	9	6	3	21	s.	R. M. McKenzie
Glenwood	Mills	1,100	29	39.6	+ 1.0	80	10	14	18	46	0.02	-1.13	0.02	0	1	9	5	16	nw.	Geo. Mogridge
Indianola	Warren	972	36	39.6	+ 1.3	77	10	10	18	38	0.63	-0.94	0.59	T.	3	6	10	14	nw.	Seth F. Shenton
Keokuk	Lee	614	56	43.8	+ 2.7	78	1	19	18	39	3.61	+1.60	1.27	T.	11	3	7	20	nw.	U. S. Weather Bureau
Keosauqua	Van Buren	644	35	42.8	+ 3.8	73	1	14	18	35	1.33	-0.28	0.50	T.	5	6	5	19	se.	J. H. Landes
Knoxville	Marion	920	32	40.6	+ 1.8	75	10	12	18	36	0.44	-1.12	0.25	T.	3	5	8	17	sw.	W. J. Casey
Lacona	Warren	824	28								0.59	-1.00	0.52	0	9	6	7	17	---	J. B. Alter
Lamoni	Decatur	1,123	20	40.4	+ 1.7	78	10	12	18	40	0.79	-0.65	0.60	0	6	7	5	18	nw.	F. S. Parks
Lenox	Taylor	1,250	32	40.0	+ 1.8	78	10	13	18	46	0.07	-1.40	0.05	0.2	2	8	7	15	nw.	J. L. Hurley
Mount Ayr	Ringgold	1,245	34	39.4	+ 2.6	77	10	12	18	40	0.77	-0.77	0.60	T.	5	6	6	18	n.	Alex Maxwell
Mt. Pleasant	Henry	730	46	42.2	+ 0.5	77	1	16	18	36	1.58	-0.23	0.62	T.	6	3	5	22	nw.	J. H. Jericho
Oakland	Pottawattamie	1,105	8	39.0a	+ 1.5	78a	10	11a	18	45a	0.15	---	0.08	T.	4	---	---	---	nw.	W. S. Matthews
Oskaloosa	Mahaska	835	51	40.4	+ 1.9	76	10	14	6†	38	0.88	-0.92	0.41	T.	7	5	6	19	se.	Roy R. Robinson
Ottumwa	Wapello	649	32	42.6	---	72	10	15	18	34	0.86	-0.52	0.67	T.	4	8	8	14	nw.	C. L. Mikes
Pella	Marion	850									1.06	-0.50	0.71	T.	5	4	8	18	nw.	L. L. Langerak
Red Oak (near)	Montgomery	1,030	2								T.	---	---	T.	0	7	11	12	nw.	B. R. Bridge
Riverton (near)	Fremont	920	1								0.05	---	0.03	0.2	3	7	2	21	nw.	Geo. C. Rader
Sigourney (near)	Keokuk	790	31	41.0	+ 2.8	72	10	15	18	35	1.33	-0.32	0.56	T.	5	8	3	19	nw.	W. E. Utterback
Stockport	Van Buren	747	25	41.6	+ 3.2	75	1	16	6†	38	1.18	-0.46	0.47	0	6	5	5	20	s.	C. L. Beswick
Thurman	Fremont	960	30	40.2	+ 2.8	81	10	14	18	45	T.	-1.85	T.	T.	0	8	4	18	s.	H. H. Askew
Tingley	Ringgold	1,275	2	39.2	---	77	10	10	18	41	0.42	---	0.42	T.	1	4	9	17	sw.	James A. Verploegh
Washington	Washington	757	45	40.9	+ 2.2	74	10	16	6†	34	0.95	-0.72	0.35	0	7	5	3	22	se.	D. D. Sherman
Wescott (near)	Lee	523	5								0.21	-1.26	0.18	T.	2	8	6	16	nw.	Lester J. Larson
Winterset	Madison	1,118	36	40.1	+ 1.7	78	10	9	18	40	0.21	-1.26	0.18	T.	2	8	6	16	nw.	H. S. Ely
Omaha, Neb.		1,105	56	39.2	+ 0.7	78	10	14	18	41	0.06	-1.00	0.02	0.2	4	7	8	15	nw.	U. S. Weather Bureau
Means and extremes.				40.7	+ 2.0	81	9†	8	18	53	0.76	-0.81	1.58	0.1	4	6	6	18	nw.	
State means and extremes.				37.7	+ 1.1	81	9†	0	18	53	0.87	-0.69	1.75	0.6	5	7	6	17	nw.	

The departure from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means. Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc. †Also other dates. ††Received too late to be included in means and summaries. T. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %				Wind				Sunshine			
	Mean	Highest	Date	Lowest	Mean		Lowest	Date	Total movement	Average hourly velocity	Maximum		Per cent of possible	Departure from normal		
					7 a. m.	12 noon					Miles	From			Date	
Charles City	30.06	30.58	12	29.54	29.86	70	78	39	4	5,178	7.3	25	nw.	11	31	-16
Davenport	30.05	30.60	12	29.51	28.84	70	75	36	†2	5,559	7.7	34	w.	11	24	-26
Des Moines	30.04	30.61	12	29.57	29.81	64	68	30	4	5,629	7.8	30	sw.	10	8	-23
Dubuque	30.05	30.59	12	29.53	28.80	66	76	36	12	5,139	7.1	30	nw.	11	20	-26
Keokuk	30.08	30.65	12	29.51	28.80	62	68	33	4	6,509	9.0	35	nw.	1	32	-23
Sioux City	30.07	30.66	12	29.52	29.82	66	69	31	30	8,328	11.6	46	nw.	11	38	-15
Omaha, Neb.	30.06	30.62	12	29.59	29.76	69	70	35	25	6,194	8.6	37	nw.	11	36	-19
Means and extremes	30.06				81	67	72				8.4				31	-21
	30.06	12	29.51	28			30	4			46	nw.	11			
Normals and records	30.07	2d	28th	81	72		6th			8.2				10th	52	
	*30.96	1896	§29.03	1918			†16	1916			†63	sw.	1919			

*Sioux City. §Davenport. †Omaha. ††Keokuk. †Local mean time. †And other dates.

normal. The greatest amount, 3.61 inches occurred at Keokuk, and the least, a trace, occurred at Red Oak and Thurman. The greatest amount in any 24 consecutive hours, 1.75 inches, occurred at Oelwein.

SNOWFALL

The average snowfall for the State was 0.6 inch, or 1.7 inches less than the normal. Less than one inch occurred in about three-fifths of the State, and in most of this area the amount was only a trace and a number of stations in each division reported none. The heaviest amounts occurred in the northeastern and north-central divisions.

MISCELLANEOUS PHENOMENA

Fog: 2d, 7th, 9th, 10th, 11th, 14th, 19th, 20th, 21st, 22d, 24th, 25th, 26th, 27th, 28th.
 Frost (killing): 2d, 3rd, 5th.
 Hail: 1st, 9th, 11th.
 Halos (lunar and solar): 4th, 5th, 30th.
 Parhelia: 23d.
 Sleet: 1st, 8th, 14th, 15th, 16th, 17th, 18th, 19th, 21st, 22d, 23d.
 Thunderstorms: 1st, 11th, 14th, 15th, 28th.
 Winds (strong): 4th, 5th, 11th, 12th, 13th, 29th.

Daily Precipitation for November, 1927—Continued

Stations	Drainage Basin	Day of Month																														Totals					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
Southern Division																																					
Afton	Grand	.20												T.	.70			T.																			
Albia	Des Moines	.18	.01											T.	.18	.29			T.																		
Atlantic	Nishnabotna	.05									.01				.06	T.			.05	.05	.10			T.	.01												
Bonaparte (near)	Des Moines	.11						T.							.26	.22			T.						.34	.13											
Burlington	Mississippi	.45										.09			.43	1.15	T.								.28	.03			T.								
Centerville	Chariton	.22	.02					T.			T.	T.	T.		.01	.82			T.	T.	T.	T.															
Chariton (near)	Chariton	T.													T.	.46																					
Clarinda	Nodaway																																				
Columbus Jct.	Iowa	.02										.01			.27	.23	T.																				
Corning (near)	Nodaway	T.													.27																						
Corydon	Chariton	.29						T.	T.						T.	T.	.72																				
Creston	Missouri	.06	.01						T.	T.		.02			T.	.22					.01	T.															
Cumberland (near)	Nodaway	.01	.02																																		
Earlham (near)	Des Moines							T.							T.	.04																					
Fairfield	Skunk	.10														.01																					
Glenwood	Missouri	.02																																			
Indianola	Des Moines	.04	T.		T.											.03	.56	T.																			
Keokuk**	Mississippi	1.18						.01	.01	T.		.02	.20		T.	.96	.48																				
Keosauqua	Des Moines	.21						T.								.50	.28	T.																			
Knoxville	Des Moines	.08														.11	.25																				
Lacona	Des Moines	.01	.01									.01			.22	.30																					
Lamoni	Grand	.05						T.								.36	.24																				
Lenox	Missouri	T.														.05																					
Mount Ayr	Grand	T.	.02													.10	.60																				
Mt. Pleasant	Skunk	.42														.62																					
Oakland	Nishnabotna	.04														.08	T.																				
Oskaloosa	Des Moines	.14							T.	T.						.07	.24	.41	T.																		
Ottumwa	Des Moines	T.														.02	.67																				
Pella (near)	Skunk	.06		T.												.02	.24	.71																			
Red Oak (near)	Nishnabotna																																				
Riverton (near)	Nishnabotna										.01					.03																					
Sigourney (near)	Skunk	.22														.10	.56																				
Stockport	Skunk	.21														.47	.19																				
Thurman	Missouri	T.						T.																													
Tingley	Platte	T.															.42																				
Washington	Skunk	.04														.18	.35																				
Westcott (near)	Mississippi											.03																									
Winterset	Des Moines	T.														.03	.18																				
Omaha, Nebr.***	Missouri	.01				T.			T.	T.		.01	T.			.02	T.																				

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

- ||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
- ***Regular Weather Bureau Station; precipitation is for 24-hour period, midnight to midnight.
- ** Incomplete.
- * Precipitation included in the next following measurement.
- T. Precipitation is less than .01 inch rain or melted snow.

RIVERS

There were numerous slight fluctuations on the Mississippi River during the entire month with a slight tendency to higher stages. On the Missouri fluctuations were also numerous but there was a pronounced aggregate fall from the beginning to the end of the month. Low and nearly stationary stages prevailed on all interior rivers.

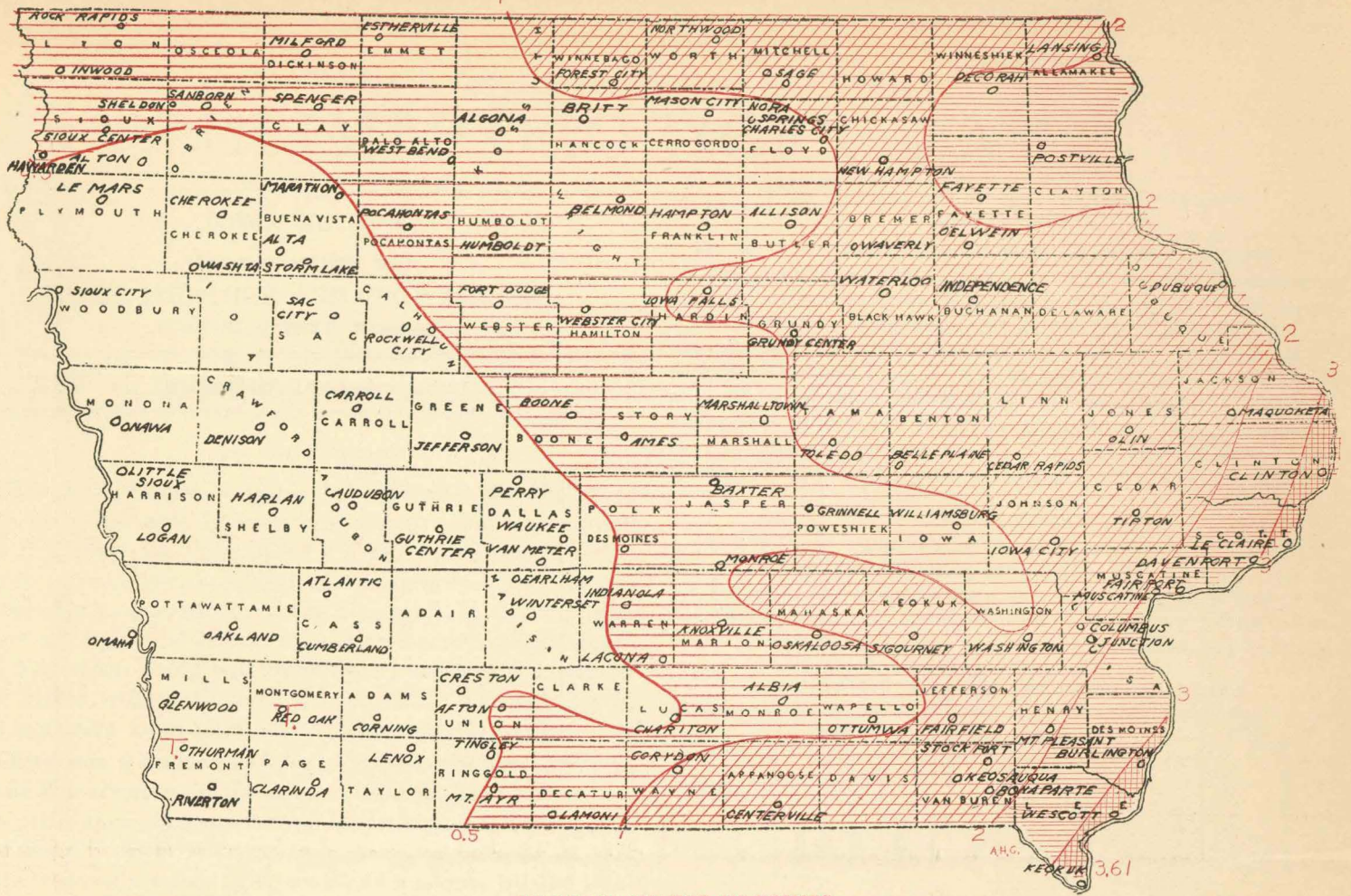
ERRATA

Report for February, 1927. Page 11. Average wind velocity at Dubuque published 6.8 miles, should be 6.9 miles. Report for October, 1927. Page 74. Date of lowest temperature at Onawa published 30th, should be 31st. Page 75. Mean barometric pressure at Charles City published 29.99 inches, should be 29.98 inches.

Daily Maximum and Minimum Temperature for the Month of November, 1927

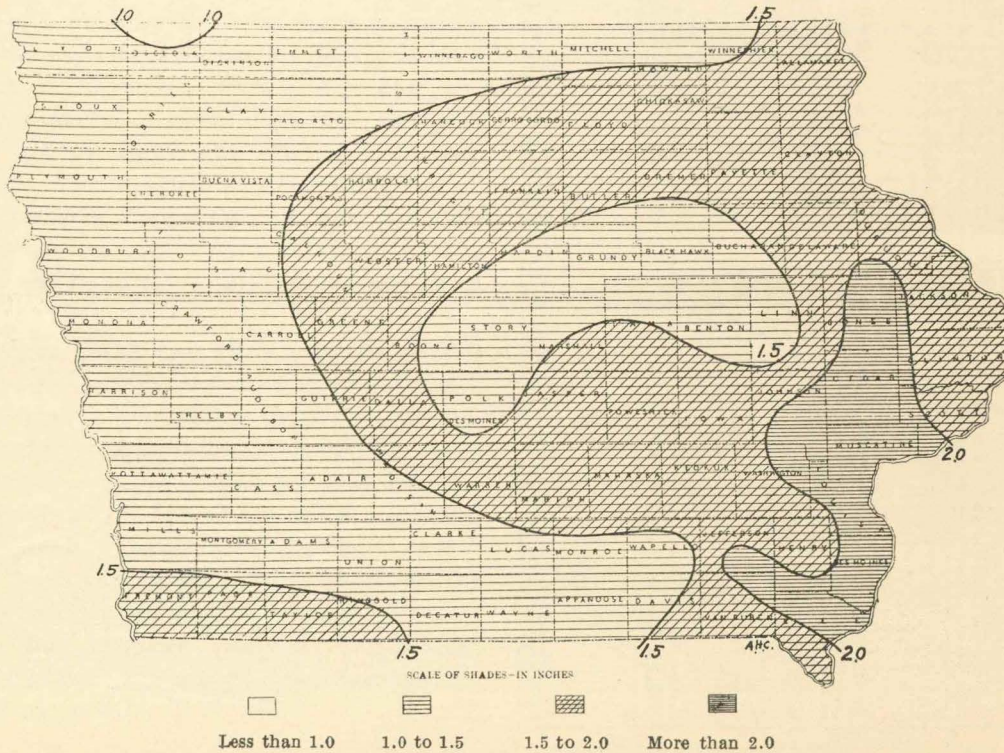
Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Mean	
Northern Division																																
Algona	{Maximum	56	49	53	49	40	37	35	44	50	57	59	30	46	40	38	26	23	21	33	49	47	37	30	43	49	49	43	46	45	33	42.1
	{Minimum	35	27	34	33	22	19	31	30	30	42	30	17	24	30	26	18	15	5	19	31	33	24	18	24	29	33	26	37	32	13	26.0
Alta	{Maximum	50	50	52	47	37	33	34	38	52	62	55	30	50	38	33	26	21	19	31	49	48	30	37	44	55	51	42	48	46	30	41.3
	{Minimum	33	27	32	32	19	18	30	30	33	42	22	15	25	31	17	15	9	4	19	29	30	23	16	24	29	32	26	36	28	12	24.6
Alton	{Maximum	51	49	52	47	44	37	35	38	47	55	45	28	52	38	33	25	21	19	31	47	40	31	37	43	54	54	41	48	48	30	40.5
	{Minimum	35	26	32	32	24	17	31	32	35	45	25	14	25	30	19	12	5	19	28	31	22	14	13	25	28	25	34	30	12	24.4	
Belmond	{Maximum	57	51	51	49	39	37	34	40	49	58	64	29	46	43	42	25	23	22	32	48	50	42	36	43	51	52	44	45	49	34	42.8
	{Minimum	33	26	34	32	22	15	30	28	39	29	18	23	31	21	18	13	5	21	28	35	26	18	26	25	33	29	37	34	14	25.8	
Charles City	{Maximum	57	51	50	45	31	40	37	39	46	61	63	28	42	44	45	24	22	26	32	43	49	38	35	41	49	50	45	43	47	31	41.9
	{Minimum	34	27	33	30	20	17	31	30	30	37	25	18	25	32	21	16	12	13	23	31	38	28	22	26	27	34	31	35	31	16	26.4
Decorah	{Maximum	58	57	54	46	38	38	36	39	44	52	65	31	41	43	43	33	26	29	31	43	47	43	36	40	45	51	44	41	48	30	42.4
	{Minimum	35	24	40	36	22	15	28	30	33	35	30	18	21	32	27	20	18	13	27	28	37	32	25	28	25	37	30	35	36	16	27.8
Dubuque	{Maximum	68	49	54	50	36	37	37	43	44	66	71	33	46	61	60	30	28	29	33	49	54	53	38	40	52	58	50	48	57	37	47.0
	{Minimum	41	32	38	35	24	22	32	34	38	29	25	27	41	30	24	23	20	24	31	42	36	35	32	31	47	38	39	37	21	37	32.0
Forest City	{Maximum	56	51	52	49	43	43	34	39	48	53	61	30	42	43	37	33	23	23	30	48	45	41	35	43	46	57	44	43	47	34	42.4
	{Minimum	33	24	33	30	20	15	30	29	38	30	16	22	30	33	14	12	5	14	23	30	25	15	25	25	32	27	37	34	11	24.7	
Independence	{Maximum	58	50	52	49	48	37	37	39	46	57	67	37	43	51	64	34	31	27	32	42	51	50	40	46	40	56	54	45	52	45	46.0
	{Minimum	39	27	36	31	24	17	32	31	29	36	34	20	23	34	31	21	20	16	22	27	32	31	21	30	27	27	33	37	36	21	28.2
Inwood	{Maximum	54	50	56	48	39	32	34	39	45	54	45	26	51	39	34	22	24	18	28	43	35	30	36	44	54	52	40	47	46	39	39.8
	{Minimum	33	26	31	33	22	15	31	31	35	35	24	11	23	28	17	8	9	17	23	29	20	14	23	28	28	24	30	26	8	22.8	
Lake Park	{Maximum	54	48	51	47	38	35	34	40	49	54	45	28	52	42	39	22	20	18	28	46	35	29	41	45	51	49	41	48	48	32	40.3
	{Minimum	32	25	34	33	20	17	31	29	34	41	21	11	22	28	15	9	8	1	17	22	27	19	14	23	27	32	23	34	28	8	22.8
Mason City	{Maximum	54	52	50	47	38	39	35	39	47	54	29	44	40	40	23	22	24	30	46	46	43	34	43	47	53	45	43	46	34	41.4	
	{Minimum	38	27	34	31	20	14	30	30	27	38	27	16	22	29	21	15	12	7	21	27	35	27	14	24	25	32	28	35	33	13	25.2
New Hampton	{Maximum	57	51	51	50	40	40	37	40	45	55	66	33	41	45	47	27	27	27	31	42	49	49	37	43	50	51	46	42	48	37	43.5
	{Minimum	35	22	29	27	20	21	29	28	26	35	30	17	21	33	24	17	15	12	20	28	36	30	20	25	25	32	30	30	33	15	25.5
Northwood	{Maximum																															
	{Minimum																															
Pocahontas	{Maximum	57	53	54	49	38	35	35	43	52	63	55	43	49	40	38	27	24	20	32	50	49	34	37	46	55	50	43	50	45	32	43.2
	{Minimum	38	27	33	29	23	16	31	30	3	41	25	17	24	29	20	17	14	5	19	28	33	25	17	23	25	30	27	36	32	13	25.2
Postville	{Maximum	61	52	50	47	36	40	35	37	42	60	64	33	40	43	46	29	23	30	42	48	45	33	40	50	53	47	41	48	36	42.7	
	{Minimum	36	25	32	31	20	16	29	29	26	35	31	19	18	38	29	20	19	13	20	30	37	32	27	30	26	40	31	35	35	18	27.6
Rock Rapids	{Maximum	52	50	54	47	42	37	35	40	45	52	45	27	50	36	35	22	20	18	27	44	35	32	35	40	50	50	40	46	47	31	39.5
	{Minimum	32	24	33	33	22	17	31	30	3	42	25	12	22	28	18	8	10	4	18	20	30	20	14	24	25	26	23	31	30	8	23.2
Central Division																																
Belle Plaine	{Maximum	67	54	57	54	42	38	37	41	47	67	70	37	46	59	59	29	31	26	34	52	55	54	39	51	59	64	56	49	61	41	49.2
	{Minimum	37	26	31	31	21	14	32	31	32	37	34	22	26	43	28	23	21	14	25	29	44	34	28	31	28	40	33	38	33	19	29.5
Boone	{Maximum	61	57	58	53	44	35	36	47	52	72	69	39	47	57	57	31	26	22	35	47	53	51	35	53	60	54	51	50	50	41	48.1
	{Minimum	38	24	29	28	26	12	32	37	41	33	21	27	33	25	19	17	7	21	29	43	30	21	26	23	29	30	41	34	20	27.6	
Carroll	{Maximum	58	54	57	49	43	35	35	46	52	69	66	33	48	48	49	27	24	24	34	52	51	41	33	46	58	56	49	50	56	37	45.8
	{Minimum	35	28	33	33	24	17	30	30	37	41	28	17	24	33	20	18	16	6	19	28	32	25	19	24	28	35	26	37	36	15	26.5
Cedar Rapids	{Maximum	69	51	56	52	40	38	37	38	46	67	71	38	48	59	60	32	30	28	33	50	54	52	39	40	57	61	54	47	59	40	48.2
	{Minimum	40	26	31	26	25	13	31	31	28	37	33	22	24	41	31	23	23	15	24	29	43	37	31	32	25	41	38	35	33	20	29.6
Davenport	{Maximum	71	49	58	52	37	38	38	38	42	67	72	38	50	64	58	32	30	31	35	51	60	59	42	40	58	65	60	54	59	41	49.6
	{Minimum	42	34	40	37	24	22	32	32	35	39	32	26	30	42	32	27	24	21	25	35	48	39	36	34	34	50	41	42	41	24	34.0
Des Moines	{Maximum	65	55	59	54	42	36	36	42	50	77	68	38	47	61	42	31	28	25	36	49	60	45	37	54	61	58	45	53			

TOTAL PRECIPITATION, NOVEMBER, 1927



NORMAL PRECIPITATION, NOVEMBER

(Based on station records of 30 years or more)



CLIMATOLOGICAL DATA

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IA., DECEMBER, 1927 No. 12

GENERAL SUMMARY

Wintry conditions prevailed during most of December and the month was classed as cold. Except for an occasional day or two the temperature was continuously below normal till the 24th in the western portion and till the 25th in the eastern portion of the State, when a mild period of 5 days set in. This period was followed by a decided change to colder and at the end of the month zero weather was general. By far the coldest portion and area of greatest deficiency occurred over the northwest section and a surrounding area. Several stations in this area showed a deficiency of more than ten degrees while several stations in the extreme eastern and extreme southern portions reported a deficiency of less than three degrees.

The outstanding feature of the month's weather was a severe storm beginning as a light rain on the 6th, turning to sleet and snow, and continuing into the 7th. The storm was what is popularly known as a real "Blizzard," and in many places in the northern and western portions of the State it was regarded as the worst storm of this character ever experienced. During the entire time that snow was falling and for some time after, a strong northwest gale prevailed and no part of the State escaped. The snowfall was heaviest in the northern and western portions and even where the snow was light it drifted badly and caused some trouble. In most of the northern portion the drifting was very bad. Train service was seriously interrupted and many highways were blocked. Telephone, telegraph and electric service experienced a great deal of trouble. Many poles were broken by the wind and the severe cold made repairing broken wires difficult. Much suffering was caused to man and beast by this storm. One death, a school girl on her way home, was reported. The conveyance in which she was traveling was stranded in the snow and in attempting to walk the remaining distance she became exhausted and sank in the snow.

Livestock, unless securely protected, suffered greatly and much snow was blown into buildings through very small openings. Another storm of more than ordinary severity occurred on the 15th, but as it was accompanied by very little snow, it caused very little discomfort. The month closed with another severe storm accompanied by zero weather but fortunately the area of heavy snow was confined to a limited area in the southeast portion, and the principal damage was delayed train schedules and blocked highways.

The precipitation was slightly below normal and the average for each division was practically the same. More than half was in the form of rain. After the first week

there was very little precipitation till the 27th-28th, when a general storm, mostly rain, occurred. Outdoor work was practicable during the greater portion of the month and corn husking continued in portions of the State. The wind movement was much above the December average and this dried corn rapidly so that which had been too moist to crib could be cribbed safely.

As every snowstorm was accompanied by strong winds most of the fields were bare during the severe weather and winter wheat and clover are likely to have been injured. Stock generally were in good condition and "Hog Flu" diminished after the outbreak attending the blizzard of the 6th-7th. Roads were in unusually good condition for the season.

F. L. D.

COMPARATIVE DATA FOR THE STATE—DECEMBER

YEAR	Temperature				Precipitation				Number of Days				
	Mean	Departure	Highest	Lowest	Total	Departure	Greatest	Least	Snowfall	With pre. .01 in. or more	Clear	Partly cloudy	Cloudy
1873	22.6	-1.5	65	-10	2.51	+1.37	8.56	0.60					
1874	24.0	-0.1	60	-18	0.84	-0.30	3.22	0.10					
1875	30.0	+5.9	68	-18	2.06	+0.92	4.73	0.73					
1876	11.9	-12.2	56	-28	0.24	-0.90	1.40	0.00					
1877	36.8	+12.7	65	-11	2.18	+1.04	3.90	1.00					
1878	17.2	-6.9	52	-17	0.77	-0.37	2.78	0.10					
1879	16.1	-8.0	58	-35	1.40	+0.26	3.31	0.20					
1880	16.1	-8.0	55	-25	0.85	-0.29	2.50	0.06					
1881	33.8	+9.7	60	-10	1.24	+0.10	4.67	0.10					
1882	21.0	-3.1	54	-23	1.57	+0.43	3.50	0.48					
1883	24.8	+0.7	62	-24	1.03	+0.11	2.75	0.00					
1884	16.2	-7.9	59	-30	2.15	+1.01	4.42	0.70					
1885	24.6	+0.5	55	-22	1.45	+0.31	3.73	0.40					
1886	14.4	-9.7	55	-32	0.80	-0.34	1.64	0.10					
1887	20.3	-3.8	57	-25	2.17	+1.03	5.85	0.60					
1888	28.6	+4.5	66	-6	1.46	+0.32	2.90	0.25					
1889	35.8	+11.7	69	-2	1.06	-0.08	3.20	0.00					
1890	28.5	+4.4	68	-18	0.58	-0.56	2.72	0.00					
1891	32.3	+8.2	72	-14	2.41	+1.27	4.50	1.21	6	14	9	8	8
1892	22.9	-5.2	68	-29	1.65	+0.51	3.04	0.20	10.9	8	9	8	14
1893	18.0	-2.1	70	-21	1.31	+0.17	2.80	0.46	7.6	7	10	9	12
1894	30.1	+6.0	73	-17	0.95	-0.19	1.75	0.25	1.3	3	15	6	10
1895	25.4	+1.3	63	-16	1.63	+0.49	5.74	0.00	4.1	5	11	9	11
1896	30.8	+6.7	70	-10	0.65	-0.49	1.79	T.	1.6	4	10	8	13
1897	18.0	-6.1	60	-25	1.65	+0.51	3.22	0.61	15.9	6	11	7	13
1898	18.1	-6.0	60	-25	0.48	-0.66	1.70	T.	3.9	3	15	8	8
1899	22.6	-1.5	75	-19	1.61	+0.47	4.28	0.10	4.3	5	12	9	10
1900	26.9	+2.8	63	-10	0.45	-0.69	2.70	T.	2.4	4	13	6	12
1901	20.5	-3.6	64	-31	0.93	-0.21	2.75	0.05	5.4	6	10	9	12
1902	20.1	-4.0	59	-20	2.23	+1.09	5.51	0.67	12.9	8	9	6	16
1903	19.6	-4.5	58	-27	0.41	-0.73	1.96	T.	3.7	4	11	9	11
1904	23.4	-0.7	67	-19	1.44	+0.30	3.68	0.06	12.3	5	12	7	12
1905	27.0	+2.9	62	-11	0.52	-0.62	1.69	T.	4.2	3	19	6	6
1906	25.7	+1.6	65	-9	1.43	+0.29	2.81	0.37	1.4	6	11	7	13
1907	28.8	+4.7	62	-9	1.00	-0.14	2.28	0.05	4.7	5	10	7	14
1908	27.2	+3.1	67	-17	0.57	-0.57	2.07	0.05	3.8	3	15	8	8
1909	15.1	-9.0	60	-26	2.18	+1.04	6.10	0.89	13.7	11	10	5	16
1910	23.4	-0.7	57	-14	0.37	-0.77	1.39	0.01	3.0	3	15	7	9
1911	27.9	+3.8	60	-24	2.57	+1.43	4.43	0.62	12.6	7	13	6	12
1912	29.2	+5.1	64	-13	0.74	-0.40	1.75	0.10	1.1	3	18	7	6
1913	32.0	+7.9	65	-13	1.02	-0.12	4.73	0.00	1.3	4	15	5	11
1914	15.7	-8.4	63	-31	1.30	+0.16	2.24	0.57	11.1	9	10	6	15
1915	25.0	+0.9	56	-10	0.69	-0.45	1.70	T.	4.6	5	11	8	12
1916	18.7	-5.4	67	-25	1.04	-0.10	2.00	0.35	6.7	6	15	8	8
1917	14.5	-9.6	62	-40	0.56	-0.58	1.70	0.14	6.7	6	10	9	12
1918	32.7	+8.6	68	-7	1.30	+0.16	3.30	0.37	5.1	8	9	8	14
1919	15.0	-9.1	52	-36	0.54	-0.60	1.55	0.08	5.8	4	11	7	13
1920	26.4	+2.3	65	-26	1.16	+0.02	2.61	0.26	7.4	5	10	8	13
1921	28.2	+4.1	69	-22	1.02	-0.12	3.72	T.	2.9	4	14	9	8
1922	24.0	-0.1	65	-25	0.37	-0.77	0.97	T.	2.2	3	16	7	8
1923	33.5	+9.4	68	-21	0.76	-0.38	2.22	T.	4.4	4	14	6	11
1924	15.4	-8.7	62	-33	1.79	+0.65	2.93	0.90	8.1	8	12	6	13
1925	21.0	-3.1	64	-25	1.30	+0.16	3.52	0.30	10.6	5	12	8	11
1926	21.9	-2.2	58	-21	1.06	-0.08	2.42	0.28	5.7	4	10	7	14
1927	18.7	-5.4	59	-22	1.04	-0.10	2.60	0.23	4.4	5	13	8	10

T. indicates an amount too small to measure, or less than .005 inch rainfall and less than .05 inch snowfall.



Climatological Data for December, 1927

STATIONS	COUNTIES	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days				OBSERVERS		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear	Partly cloudy		Cloudy	Prevailing direction of wind
<i>Northern Division</i>																				
Akron	Plymouth	1,153	1															Orlan C. Moore		
Algona	Kossuth	1,213	51	14.5	-6.0	48	26	-14	8	38	0.95	-0.00	0.21	4.5	4	11	12	8	w.	
Allison (near)	Butler	1,014	15	15.2	-6.2	40	28	-15	8	37	1.14	-0.06	0.34	8.0	5	11	10	10	nw.	
Alta	Buena Vista	1,513	36	13.2	-8.2	38	1†	-18	8	33	0.50	-0.41	0.22	3.0	3	11	10	10	w.	
Alton	Sioux	1,305	22	11.4	-9.4	38	1†	-18	8	41	1.15	+0.35	0.55	6.0	5	8	14	9	nw.	
Belmond	Wright	1,181	17	14.0	-6.9	40	1†	-13	8	38	1.25	-0.08	0.60	8.2	6	9	4	18	nw.	
Britt	Hancock	1,236	40	14.2	-6.3	40	26	-12	8	32	0.35	-0.45	0.19	2.4	2	9	6	16	nw.	
Charles City	Floyd	1,015	36	13.4	-7.0	39	28	-12	8	35	1.91	+0.66	0.61	12.6	9	10	9	12	nw.	
Cherokee	Cherokee	1,196	5	13.0		42	12	-18	8	36	0.23		0.13	2.5	3	12	8	11	s.	
Decorah	Winneshek	872	34	14.0	-8.2	41	28	-15	9	37	1.34	+0.06	0.50	14.0	5	12	11	8	nw.	
Dubuque	Dubuque	700	54	20.3	-4.4	47	26	-8	31	42	1.58	+0.07	0.89	3.3	7	6	9	16	nw.	
Estherville	Emmet	1,298	32	11.7	-8.6	42	13	-15	8	41	0.85	+0.14	0.35	8.0	6	12	13	6	nw.	
Fayette	Fayette	1,003	39	16.5	-4.9	43	26	-13	9	40	2.60	+1.19		12.0	9	12	10	9	nw.	
Forest City	Winnebago	1,226	33	13.4	-7.9	40	26	-16	8	36	1.01	+0.13	0.36	6.0	4	13	3	15	nw.	
Hampton	Franklin	1,145	2																	
Hawarden	Sioux	1,181	1								0.77		0.29	5.0	4	17	4	10	nw.	
Humboldt	Humboldt	1,095	39	14.6	-8.0	41	1†	-15	8	39	0.44	-0.42	0.19	6.0	3	11	8	12	nw.	
Independence	Buchanan	921	63	19.4	-4.2	46	25	-13	8	35	0.55	-0.76	0.16	4.5	6	6	2	23	nw.	
Inwood	Lyon	1,474	23	8.9	-10.5	38	12†	-21	8	38	0.77	+0.11	0.26	5.1	6	17	5	9	nw.	
Lake Park (near)	Dickinson	1,489	7	8.8b		41b	28	-20b	8	41b	0.60		0.30	4.0	4				nw.	
Lansing	Allamakee	632	20								0.66	-0.21	0.30	5.0	5	13	8	10	n.	
Le Mars	Plymouth	1,224	31	14.0	-8.4	42	13	-17	8	38	1.10		0.40	8.0	7	9	4	18	nw.	
Marathon	Buena Vista	1,390	1								1.35	+0.47	0.40	11.8	8	12	11	8	nw.	
Mason City	Cerro Gordo	1,148	30	13.6	-7.3	40	13†	-14	8	39	1.30	+0.21	0.64	10.0	3	10	7	14	nw.	
New Hampton	Chickasaw	1,169	30	14.1	-6.7	39	26†	-16	9	39										
Northwood	Worth	1,222	31																	
Oelwein	Fayette	1,036	3	18.4		42	26†	-11	8	33	0.70		0.60	6.0	1	12	11	8	nw.	
Osage	Mitchell	1,163	2	13.3a		39a	26†	-14a	8	31a	1.63		1.00	9.0	7				nw.	
Pocahontas	Pocahontas	1,248	23	14.6	-7.1	40	1†	-15	8	36	0.50	-0.42	0.17	4.7	7	16	7	8	nw.	
Postville	Clayton	1,192	28	15.5	-5.4	40	26†	-12	8†	36	1.30	-0.06	0.70	9.5	6	9	15	7	sw.	
Rock Rapids††	Lyon	1,319	28	9.4	-10.3	40	13	-20	8	44	1.32	+0.69	0.37	13.2	6	18	3	10	nw.	
Sanborn	O'Brien	1,553	13	10.6	-8.8	42	5	-22	8	38	0.98	+0.13	0.50	6.0	3	11	8	12	nw.	
Sheldon	O'Brien	1,418	2	11.4		37	1†	-19	8	34	1.10		0.56	8.8	6	11	11	9	nw.	
Sioux Center	Sioux	1,426	28	9.9	-10.9	42	13	-21	8	34	0.93	+0.05	0.40	8.5	5	11	4	16	nw.	
Spencer	Clay	1,319	13	12.1	-8.6	40	13	-18	8	39	1.52	+0.67	0.80	9.0	7	16	6	9	nw.	
Storm Lake	Buena Vista	1,410	38	16.0	-6.5	40	1†	-17	8	38	0.47	-0.35	0.13	3.1	6	17	7	7	nw.	
Washta	Cherokee	1,157	29	14.4	-7.7	42	12	-16	8	47	0.65	-0.18	0.30	3.5	4	15	5	11	nw.	
Waterloo	Black Hawk	854	44	17.3	-6.2	43	26†	-13	8	38	1.39	+0.19	0.65	8.4	5	18	4	9	nw.	
Waverly	Bremer	936	31	14.8	-8.4	41	26†	-16	9	39	1.89	+0.71	0.66	9.0	4	19	7	5	nw.	
West Bend	Palo Alto	1,197	34	13.3	-7.8	39	6†	-16	8	33	1.04	-0.12	0.80	3.0	3	12	11	8	nw.	
Means and extremes				13.9	-7.6	48	26	-22	8	47	1.03	0.00	1.00	6.8	5	12	8	11	nw.	
<i>Central Division</i>																				
Ames	Story	926	50	19.2	-4.6	41	1†	-10	8	42	0.46	-0.60	0.31	1.3	6	19	1	11	nw.	
Audubon (near)	Audubon	1,297	32	18.4	-4.4	45	14	-13	8	38	0.77	-0.22	0.35	6.0	5	15	10	6	sw.	
Baxter	Jasper	998	27	19.9	-4.5	45	28	-12	8	44	0.88	-0.07	0.63	2.4	5	6	14	11	nw.	
Belle Plaine	Benton	866	37	20.8	-3.4	47	26	-7	8	38	1.61	+0.26	0.82	6.0	8	9	12	10	se.	
Boone (near)	Boone	1,134	22	19.2	-4.8	46	21	-13	9	44	0.76	-0.13	0.33	4.0	4	12	8	11	nw.	
Carroll	Carroll	1,265	37	17.6	-6.2	42	1†	-15	8	33	0.51	-0.47	0.40	4.5	3	20	5	6	sw.	
Cedar Rapids	Linn	737	45	20.2	-5.7	45	26†	-7	8	39	1.67	+0.36	0.93	3.0	4	11	5	15	nw.	
Clinton	Clinton	595	54	23.6	-2.7	50	26	-6	8	36	1.76	-0.02	0.94	1.0	6	12	7	12	s.	
Davenport	Scott	580	56	24.3	-2.8	51	13	-6	31	46	1.63	+0.12	0.87	1.6	7	9	8	14	w.	
Davenport, No. 2	Scott	690	2	24.2		51	13	-4	8	40	1.92		0.95	1.3	6					
Denison	Crawford	1,171	33	17.9	-5.9	48	12	-15	8	36	0.25	-0.62	0.12	3.0	3	9	8	14	nw.	
Des Moines	Polk	861	49	21.2	-4.8	47	28	-9	8	37	1.10	-0.11	0.57	4.5	8	8	10	13	nw.	
Fairport	Muscatine	567	6	24.6		52	13	-4	8	37	2.37		1.18	0.4	6	14	1	16	nw.	
Fort Dodge	Webster	1,114	27	16.4	-5.9	42	28	-16	8	40	0.84	+0.01	0.42	5.5	3	17	0	14	nw.	
Grinnell	Poweshiek	1,031	33	20.9	-4.3	50	13	-9	8	44	0.60	-0.57	0.32	5.4	4	18	4	9	nw.	
Grundy Center	Grundy	976	36	17.7	-6.2	44	27	-11	8	38	0.68	-0.48	0.32	6.0	3	12	7	12	nw.	
Guthrie Center	Guthrie	1,077	32																	
Harlan	Shelby	1,192	28	19.0	-4.6	44	1†	-15	8	37	0.28	-0.72	0.11	1.7	4	14	10	7	nw.	
Iowa City	Johnson	733	67	22.6	-3.2	48	26†	-5	8	40	1.90	+0.29	0.97	0.5	4	11	9	11	nw.	
Iowa Falls	Hardin	1,127	34	16.6	-5.9	40	28	-11	8	35	1.06	-0.24	0.35	5.6	6	15	6	10	nw.	
Jefferson	Greene	1,052	28	17.6	-6.0	45	21	-15	8†	40	1.08	+0.01	0.40	8.0	4	15	8	8	nw.	
Le Claire	Scott	576	27																	
Little Sioux	Harrison	1,040	22	19.0	-5.0	49	12	-15	8	36	0.58	-0.30	0.30	3.5	4	14	8	9	nw.	
Logan	Harrison	1,120	60	19.1	-6.3	46	12	-14	8	36	0.28	-0.85	0.24	3.0	2	19	6	6	s.	
Maquoketa	Jackson	692	2	21.2b		46b	26	-6b	8	36b	1.74		0.98	0.7	5				nw.	
Marshalltown	Marshall	947	35	19.4	-5.7	44	28	-10	8	39	0.87	-0.40	0.44	5.1	5	11	7	13	nw.	
Monroe	Jasper	922	15	21.6	-4.3	46	28	-10	8	40	1.11	+0.05	0.57	T.	3	16	5	10	w.	
Muscatine	Muscatine	546	66																	
Olin	Jones	760	28	21.8	-3.1	45	28	-6	8	38	1.92	+0.57	0.94	3.0	5	13	1	17	nw.	
Onawa																				

Climatological Data for December, 1927—Continued

STATIONS	COUNTIES	Elevation, feet	Length of record, years	Temperature, in Degrees Fahrenheit						Precipitation, in inches				Number of Days			Prevailing direction of wind	OBSERVERS		
				Mean	Departure from normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from normal	Greatest in 24 hours	Total snowfall (unmelted)	Precipitation, .01 in. or more	Clear			Partly cloudy	Cloudy
<i>Southern Division</i>																				
Afton	Union	1,212	33	21.5	- 4.7	50	13	-11	8	45	0.76	- 0.43	0.31	4.1	4	13	11	7	sw.	S. R. Brown
Albia	Monroe	949	29	23.2	- 3.0	52	13	- 7	8	46	0.98	- 0.09	0.50	1.8	3	13	3	15	nw.	O. E. McBride
Atlantic	Cass	1,164	36	19.1	- 6.6	45	14	-13	8	38	1.32	+ 0.20	0.60	10.5	9	10	10	11	sw.	T. H. Whitney
Bonaparte (near)	Van Buren	563	36	24.6	- 3.2	54	13	- 5	8	43	1.13	- 0.13	0.56	0.3	4	14	4	13	sw.	B. R. Vale
Burlington	Des Moines	544	31	26.0	- 3.4	53	13	- 3	8	37	2.36	+ 0.76	0.99	5.5	7	16	3	12	nw.	John T. Donnelly
Centerville	Appanoose	1,013	22	24.3	- 3.4	55	13	- 7	8	48	1.19	+ 0.09	0.78	0.8	5	14	8	9	nw.	Thomas Wood
Chariton (near)	Lucas	1,042	32	23.0	- 3.4	52	13	- 9	8	46	0.87	- 0.29	0.55	T.	2	11	10	10	w.	C. C. Burr
Clarinda	Page	1,009	37	22.6	- 4.3	50	6	-11	8†	40	0.89	- 0.21	0.49	4.0	4	9	19	3	nw.	Dr. H. C. Hawley
Columbus Junction	Louisa	595	26	23.4	- 4.4	51	13	- 4	8	39	1.06	- 0.26	0.88	1.5	4	11	10	10	nw.	Miss Musa Todd
Corning (near)	Adams	1,117	35	21.8	- 3.4	52	6†	-12	8	51	0.35	- 0.89	0.25	1.0	2	20	5	6	sw.	W. A. Seybold
Corydon	Wayne	1,101	34																	
Creston	Union	1,291	22	20.4	- 4.6	49	6	-13	8	40	0.51	- 0.55	0.27	2.4	7	14	8	9	nw.	A. T. Gallagher
Cumberland (near)	Cass	1,225	28																	
Earlham (near)	Madison	1,126	25	21.0	- 3.5	47	22	-11	8	38	0.76	- 0.43	0.29	3.5	6	16	3	12	nw.	Carl E. Pollock
Fairfield	Jefferson	780	43	23.0	- 3.4	51	13	- 7	8	44	0.75	- 0.87	0.60	1.0	6	15	4	12	nw.	George Phillips
Glenwood	Mills	1,100	29	21.8	- 5.0	48	13	-10	8	38	0.48	- 0.19	0.20	4.3	4	12	12	7	nw.	R. M. McKenzie
Indianola	Warren	972	36	21.6	- 4.0	47	6†	-10	8	40	1.16	- 0.16	0.46	4.7	4	13	11	7	nw.	George Mogridge
Keokuk	Lee	614	56	26.9	- 2.7	59	13	- 4	31	50	2.07	+ 0.48	0.84	6.7	6	10	10	11	w.	Seth F. Shenton
Keosauqua	Van Buren	644	35	24.6	- 3.1	54	13	- 5	8	46	1.57	+ 0.19	0.76	3.0	6	11	9	11	se.	U. S. Weather Bureau
Knoxville	Marion	920	32	22.4	- 3.5	48	26†	- 9	8	45	1.09	- 0.23	0.60	6.0	3	14	8	9	nw.	J. H. Landes
Lacoma	Warren	824	28																	
Lamoni	Decatur	1,123	20	22.9	- 3.1	53	13	-10	8	44	1.28	+ 0.10	0.89	1.7	4	13	6	12	nw.	W. J. Casey
Lenox	Taylor	1,250	32	21.6	- 4.0	50	13	-12	8	41	0.75	- 0.23	0.40	2.0	7	14	7	10	nw.	J. B. Alter
Mount Ayr	Ringgold	1,245	34	21.4	- 5.1	49	6	-13	8	45	0.81	- 0.42	0.53	0.8	5	14	5	12	nw.	F. S. Parks
Mt. Pleasant	Henry	730	46	23.7	- 4.4	52	6†	- 4	8†	43	1.81	+ 0.44	0.93	3.2	8	8	9	14	nw.	J. L. Hurley
Oakland	Pottawattamie	1,105	8	20.6	- 4.6	47	14	-12	8	38	0.41		0.28	1.5	4	15	9	7	nw.	Alex Maxwell
Oskaloosa	Mahaska	835	51	22.0	- 4.0	48	6†	-10	8	46	1.50	+ 0.33	0.71	4.8	5	13	7	11	nw.	W. S. Matthews
Ottumwa	Wapello	649	32	24.2		51	6†	- 5	8	44	0.90	- 0.36	0.82	0.2	4	16	3	12	nw.	Roy R. Robinson
Pella	Marion	850																		
Red Oak (near)	Montgomery	1,030	2																	
Riverton (near)	Fremont	920	1																	
Sigourney (near)	Keokuk	790	31	23.0	- 1.9	48	28	- 7	8	40	1.52	+ 0.29	0.79	2.0	5	14	0	17	nw.	C. L. Mikesch
Stockport	Van Buren	747	25	24.2	- 2.6	53	6†	- 5	8	47	1.50	+ 0.23	0.73	1.7	7	10	7	14	nw.	L. L. Langerak
Thurman	Fremont	960	30	22.6	- 2.7	49	28	-10	8	42	0.28	- 1.03	0.15	1.7	4	11	10	10	nw.	B. R. Bridge
Tingley	Ringgold	1,275	2	21.3		50	13	-13	8	42	1.04		0.83	2.2	6	13	10	8	sw.	James A. Verploegh
Washington	Washington	757	45	22.6	- 4.0	48	13†	- 9	8	40	1.31	- 0.01	1.05	1.5	5	7	7	17	nw.	Geo. C. Rader
Wescott (near)	Lee	523	5																	
Winterset	Madison	1,118	36	22.3	- 3.5	48	26	-11	8	41	0.70	- 0.49	0.30	3.0	3	15	7	9	nw.	W. E. Utterback
Omaha, Neb.		1,105	56	19.6	- 6.8	48	12	-10	8	37	0.49	- 0.42	0.37	4.5	7	11	14	6	nw.	C. L. Beswick
Means and extreme State means and extremes				22.6	- 3.9	59	13	-13	8	51	1.03	- 0.19	1.05	2.9	5	13	8	10	nw.	H. H. Askew
				18.7	- 5.4	59	13	-22	8	51	1.04	- 0.10	1.18	4.4	5	13	8	10	nw.	U. S. Weather Bureau

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete records are used in determining means.

Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc.

†Also other dates.

‡Received too late to be included in means and summaries.

T. Precipitation is less than 0.01 inch rain or melted snow.

PRESSURE, RELATIVE HUMIDITY, WIND AND SUNSHINE

Stations	Barometric Pressure, Inches (Sea Level)				Relative Humidity, %				Wind				Sunshine				
	Mean	Highest	Date	Lowest	Date	Mean		Lowest	Date	Total movement	Average hourly velocity			Miles			
						7 A. M.	12 Noon†				7 P. M.	From	Date				
Chas. City	30.13	30.58	20	29.29	28	90	77	88	51	1	6,185	8.3	29	nw.	7	46	+ 2
Davenport	30.12	30.53	20	29.17	7	86	71	78	30	5	6,287	8.5	35	nw.	7	38	+ 5
Des Moines	30.13	30.57	20	29.33	28	79	65	69	32	20	6,150	8.3	35	s.	1	56	+ 4
Dubuque	30.11	30.53	20	29.22	7	86	71	77	45	1†	5,596	7.5	28	nw.	7	27	+ 15
Keokuk	30.15	30.58	20	29.28	7	76	62	67	33	21	7,017	9.4	40	w.	7	55	+ 10
Sioux City	30.18	30.65	19	29.33	28	86	71	79	46	21	9,841	13.2	46	nw.	7	52	+ 3
Omaha, Neb.	30.16	30.64	31	29.35	28	80	69	74	38	1	7,620	10.2	41	nw.	7	62	+ 11
Means and extreme	30.14					83	69	76				9.3				48	+ 1
Normals and records		30.65	19	29.17	7				30	5			46	nw.	7		
	30.12		29th		13th	84			77		12th	8.1			24th	47	
		*31.09	1917	§29.00	1920				†18	1922			*58	nw.	1907		

*Sioux City. §Dubuque. ¶Keokuk. †Local mean time. ‡And other dates.

TEMPERATURE

The mean temperature for the State, as shown by the records of 101 stations, was 18.7°, or 5.4° lower than the normal. By divisions, approximately three tiers of counties to the division, the means were as follows: Northern, 13.9°, or 7.6° lower than the normal; Central, 19.6°, or 4.7° lower than the normal; Southern, 22.6°, or 3.9° lower than the normal. The highest monthly mean was 26.9°, at Keokuk, and the lowest was 8.8°, at Lake Park. The highest temperature reported was 59°, at Keokuk on the 13th, and the lowest was -22°, at Sanborn on the 8th. The temperature range for the State was 81°.

PRECIPITATION

The average precipitation for the State, as shown by the records of 109 stations, was 1.04 inches, or 0.10 inch less than the normal. By divisions, the averages were as follows: Northern, 1.03 inches, or exactly normal; Central, 1.06 inches, or 0.11 inch less than the normal; Southern, 1.03 inches, or 0.19 inch less than the normal. The greatest amount, 2.60 inches occurred at Fayette, and the least 0.23 inch occurred at Cherokee. The greatest amount in any 24 hours, 1.18 inches occurred at Fairport on the 28th.

Daily Precipitation for December, 1927

Stations	Drainage Basin	Day of Month																															Totals	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>Northern Division</i>																																		
Akron.....	Big Sioux.....			.16				.17			T.				.02														.24		T.		0.59	
Algona.....	Des Moines.....			.04				.91																									0.95	
Allison (near).....	Cedar.....			.25	.20			.30				T.			.05												T.	.34		T.		1.14		
Alta.....	Raccoon.....			.22				.10						T.													T.	.18				0.50		
Alton.....	Floyd.....	T.	T.	.30				.20			.05				.05												T.	.55	T.		T.	1.15		
Belmond.....	Iowa.....		T.	.27	.03			.60				T.			.07														.23		.05	1.25		
Britt.....	Iowa.....		T.	.16	T.			.19							T.													T.				T.	0.35	
Charles City***.....	Cedar.....			.20	.21			.07				T.			.04	.15			T.	T.								.20	.38		.05	1.91		
Cherokee.....	Little Sioux.....			.13	T.			.08				T.			T.	.02												T.	.11		T.	0.23		
Decorah.....	Mississippi.....			.24				.50								.20												.10	.30		T.	1.34		
Dubuque***.....	Mississippi.....			.08	T.			.05	.85			T.	T.	T.		.01	T.	T.	T.	T.								.20	.37		.02	1.58		
Estherville.....	Des Moines.....			.05	.25			.35								.10												.05	.05		.05	0.85		
Fayette.....	Mississippi.....			.30	.05		*		1.40							T.	T.	T.	T.									.05	.75		.05	2.60		
Forest City.....	Cedar.....			.30				.30				T.				.05	T.	T.	T.									.36	T.			1.01		
Hampton.....	Cedar.....																																	
Hawarden.....	Big Sioux.....			T.	.29			T.	.19			T.			T.	.07													.22	T.	T.	T.	0.77	
Humboldt.....	Des Moines.....			T.	.07			.19																					.18	T.	T.	T.	0.44	
Independence.....	Wapsipinicon.....				.08	.06		.15	.16					.02					T.	T.									.08	T.	T.	T.	0.55	
Inwood.....	Big Sioux.....			T.	.16			T.	.17						.08														.26		.03	T.	0.77	
Lake Park (near).....	Little Sioux.....			.01				.30																				.05	.24			T.	0.60	
Lansing|||.....	Mississippi.....																																	
Le Mars.....	Floyd.....							.10	.30						.02																		0.66	
Marathon.....	Raccoon.....			.16	.09			.14	.26						T.														.10	.20	T.	T.	1.10	
Mason City.....	Cedar.....	T.	T.	.13	.06			T.	.40	.23		T.	T.		T.	.11			T.	T.								.07	.32		.03	1.35		
New Hampton.....	Wapsipinicon.....				.16			.64								T.	T.	T.											.50			T.	1.30	
Northwood.....	Cedar.....																																	
Oelwein.....	Wapsipinicon.....				T.				.60																								0.60	
Osage.....	Cedar.....			T.	.08	.20		.16																					T.	1.00		.05	1.73	
Pocahontas.....	Des Moines.....			.01	.14			.01	.17					T.	T.	T.	.01													.15		.01	0.50	
Postville.....	Mississippi.....			T.	.12	.04		.70																					.04	.36		.04	1.30	
Rock Rapids.....	Big Sioux.....			.01	.37			.37							.07																		1.32	
Sanborn.....	Floyd.....				.32			.16																					.50				0.98	
Sheldon.....	Floyd.....			T.	.56	T.		T.	.17					T.															.22				1.10	
Sioux Center.....	Floyd.....			T.	.40			T.	.30						.03																		0.93	
Spencer.....	Little Sioux.....			.04	.32	.12		.16						.04															.80				1.52	
Storm Lake.....	Raccoon.....			.12	.04			.12	.05																					.13		.01	0.47	
Washita.....	Little Sioux.....			T.	.10	.05		.20																						.30		T.	0.65	
Waterloo.....	Cedar.....			.12	.02			.65	.05						T.														.55		T.		1.39	
Waverly.....	Cedar.....			.22				.64																					.37				1.89	
West Bend.....	Des Moines.....			T.	.16			.08																					.80				1.04	
<i>Central Division</i>																																		
Ames.....	Skunk.....			.02	.02			.08						.01																.31		T.	0.46	
Audubon (near).....	Nishnabotna.....			.04	.06	.14		.35						T.															.18		T.		0.77	
Baxter.....	Skunk.....			T.	.01			.23	T.						T.														.08	.55		T.	0.88	
Belle Plaine.....	Iowa.....			T.	.06	.01		T.	.82	.12				.02	T.														.04	.52	T.	.02	1.61	
Boone (near).....	Des Moines.....			.06				.33	.05																				T.	.32		T.	0.76	
Carroll.....	Raccoon.....			.05				.40																									0.51	
Cedar Rapids.....	Cedar.....			.08				.93	T.																				.61		T.		1.67	
Clinton.....	Mississippi.....							.59	.08						T.	.08													.94			.03	1.76	
Davenport***.....	Mississippi.....			T.	T.			.63						T.	.06														.40	.47		.05	1.63	
Davenport, No.	Mississippi.....			T.	T.			.65	.05					T.	.07														T.	.95	T.	.08	1.92	
Denison.....	Missouri.....			T.	.05			.12																						.08			T.	0.25
Des Moines***.....	Des Moines.....			T.	.02	.02		.03	.56						T.															.11		T.	1.10	
Fairport.....	Mississippi.....							.70		.25						.20														1.18		.02	.02	2.37
Fort Dodge.....	Des Moines.....			T.	.21			.42																						.21			T.	0.84
Grinnell.....	Iowa.....			.03	.01			T.	.32																					.24			T.	0.60
Grundy Center.....	Cedar.....			.16				T.	.32																									0.68
Guthrie Center.....	Raccoon.....																																	
Harlan.....	Nishnabotna.....			T.	.04	.03		.10							T.																			0.28
Iowa City.....	Iowa.....			T.	T.			.90								.03														.11		T.	1.90	
Iowa Falls.....	Iowa.....			.10	.15			.30																						.35			T.	1.06
Jefferson.....	Raccoon.....			T.	.10	.30		.40																										1.08
Le Claire|||.....	Mississippi.....																																	
Little Sioux.....	Little Sioux.....			.01	.05			.30																										0.58
Logan.....	Missouri.....			T.	T.			.24																										0.28
Maquoketa.....	Maquoketa.....				.01			.72							T.	.01														.98		.02		1.74
Marshalltown.....	Iowa.....			T.	.03	T.		T.	.44						T.																			0.87
Monroe.....	Des Moines.....			T.	T.	T.		.54							T.																			1.11
Muscatine|||.....	Mississippi.....																																	
Olin.....	Wapsipinicon.....				.10			.94	.08			</																						

Daily Precipitation for December, 1927—Continued

Stations	Drainage Basin	Day of Month																															Totals		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>Southern Division</i>																																			
Afton.....	Grand.....		T.					.10								.31												.10	.25						0.76
Albia.....	Des Moines.....		T.					.47	T.							T.												T.	.50				.01	0.98	
Atlantic.....	Nishnabotna.....		.10	.05	.20			.60								T.	.02											.05	.20				.05	1.32	
Bonaparte (near).....	Des Moines.....		T.	T.				.47									T.											T.	.56			.03	.13	1.13	
Burlington.....	Mississippi.....							.56	.05					.07	.24	T.												T.	.11	.88		.32	.20	2.36	
Centerville.....	Chariton.....		T.		T.			.36																					.01	.77		.01	.04	1.19	
Chariton (near).....	Chariton.....		T.		T.			.32																				T.	.55			T.	.87	0.87	
Clarinda.....	Nodaway.....							.30																				.14	.35			.10		0.89	
Columbus Jct.....	Iowa.....			T.				.05								T.												T.	.88			T.	.10	1.06	
Corning (near).....	Nodaway.....		T.					.19																					T.	.25				0.35	
Corydon.....	Chariton.....																																		
Creston.....	Missouri.....		.01		.01			.05								T.	T.	T.											.17	.10	T.	T.	.01	0.51	
Cumberland (near).....	Nodaway.....		.01		T.			.07																					T.	.17		T.	T.	0.25	
Earlham (near).....	Des Moines.....		.05		.05			.16	.04																				T.	.29			T.	0.76	
Fairfield.....	Skunk.....				T.			.08	.02																				.36	.24		.02	.03	0.75	
Glenwood.....	Missouri.....		T.		.20			.20																										.03	0.48
Indianola.....	Des Moines.....		T.		.05			.40	T.																					.25	.46		T.	1.16	
Keokuk***	Mississippi.....							.49									.29												T.	.62	.22		.38	.07	2.07
Keosauqua.....	Des Moines.....							.58	T.								T.	.03												.08	.68		.15	.05	1.57
Knoxville.....	Des Moines.....				T.			.60									T.	.03											T.	.06	.43		T.	1.09	
Lacona.....	Des Moines.....				.01			.20	.10								.01	.01										.01	.05	.50			.05	.94	
Lamoni.....	Grand.....		T.		T.			.32																					.34	.55			.07	1.28	
Lenox.....	Missouri.....		.03		.02			.10																					.10	.40			.05	.75	
Mount Ayr.....	Grand.....		T.		T.			.22	T.																					.19	.34			.03	0.81
Mt. Pleasant.....	Skunk.....							.51	.03									.08											.03	.90			.02	.20	1.81
Oakland.....	Nishnabotna.....		.04		.05			.04																										.28	0.41
Oskaloosa.....	Des Moines.....		T.	T.	T.			.69	T.																					.09	.62			.08	1.50
Ottumwa.....	Des Moines.....							.05									.01													T.	.82			.02	0.90
Pella (near).....	Skunk.....		T.	T.	T.			.82																											1.64
Red Oak (near).....	Nishnabotna.....																																		
Riverton (near).....	Nishnabotna.....				.04			.20																										.08	0.50
Sigourney (near).....	Skunk.....			T.	T.			.64	.07																					.02	.77			.02	1.52
Stockport.....	Skunk.....							.58	.02																					.06	.67		.05	.10	1.50
Thurman.....	Missouri.....				.04			.07																							.15		T.	.02	0.28
Tingley.....	Platte.....		T.					.23																						.23	.60			.07	1.04
Washington.....	Skunk.....			T.				.18																						.06	.99			.04	1.31
Wescott (near).....	Mississippi.....																																		
Winterset.....	Des Moines.....		T.	T.	T.			.30																						T.	.30		T.	T.	0.70
Omaha, Neb., **	Missouri.....		T.	T.	.01			.02	.35																				T.	.02	.02		.04	.03	0.49

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for 24 hours ending at the time of observation.

- |||||Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
- ***Regular Weather Bureau Station: precipitation is for 24-hour period midnight to midnight.
- **Incomplete.
- *Precipitation included in the next following measurement.
- T. Precipitation is less than .01 inch rain or melted snow.

SNOWFALL

The average snowfall for the State was 4.4 inches, or 1.6 inches less than the normal. It was above normal in the northern division and below in the central and southern divisions. The greatest amount, 14.0 inches occurred at Decorah, and the least a trace, at Chariton. All snowfall drifted badly and many railroads and highways were blocked, particularly after the severe storm of the 7th. Due to the general drifting of the snow the ground was bare over the central and southern divisions most of the month, and except for short periods winter wheat was unprotected. Over large portions of the northern division the snow cover was continuous from the 3d till the end of the month, while in the south-central section the snow melted soon after falling.

MISCELLANEOUS PHENOMENA

- Aurora: 8th, 13th, 15th, 18th.
- Fog: 2d, 12th, 13th, 14th, 20th, 21st, 22d, 23d, 24th, 25th, 26th, 28th, 29th.
- Halos (lunar and solar): 1st, 6th, 7th, 8th, 11th, 12th, 15th, 16th, 17th, 18th, 21st, 26th, 30th, 31st.
- Haze: 24th, 25th, 27th.
- Parhelia: 15th, 16th, 17th.
- Sleet: 6th, 7th, 11th, 16th, 25th, 28th, 30th.
- Thunderstorm: 27th.

RIVERS

There were numerous fluctuations on the principal rivers with rather wide extremes. The Mississippi River at Dubuque showed a falling tendency till the middle of the 2d week, when a stage of 1.1 foot was recorded and a gradual rise until the 30th, when a stage of 6.9 feet was recorded; at Davenport there was a gradual falling tendency till the 11th, when a stage of 0.5 feet was recorded after which there was a general rising tendency though numerous fluctuations with a maximum stage of 8.4 feet on the 31st. Floating ice was present the 1st week and mostly frozen thereafter. A sharp rise occurred throughout the course beginning on the 28th. At Sioux City the river was open till the 7th and frozen the rest of the month. Nearly stationary stages prevailed till the 15th and rising stages prevailed till the 25th, having reached a maximum stage of 8.5 feet; at Omaha the river was frozen most of the month. Falling stages prevailed till the 10th with a stage of 2.7 feet after which there was a rise till the end of the month with a crest stage of 9.4 feet. Low stages prevailed on all interior rivers with very little fluctuation, and they were generally frozen after the 1st week.

Daily Maximum and Minimum Temperature for the Month of December, 1927

Stations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
<i>Northern Division</i>																																		
Algona.....	(Maximum.....	39	13	20	25	38	30	23	-2	16	10	14	37	37	34	32	9	9	10	19	25	34	38	20	30	33	48	38	40	28	14	-3	24.5	
	(Minimum.....	12	-2	6	5	7	22	-8	-14	-10	-2	-2	7	20	4	0	-6	-3	4	-6	0	2	10	-2	12	15	10	31	27	14	-5	-9	4.5	
Alta.....	(Maximum.....	38	9	27	18	37	26	13	-1	20	3	15	38	37	38	17	10	6	10	19	34	36	23	26	30	32	37	38	38	19	8	-5	22.5	
	(Minimum.....	5	-1	7	-1	18	13	9	-18	-7	-3	-4	9	21	7	-4	-8	-5	-7	-7	6	16	8	2	12	14	18	33	16	8	-10	-11	3.8	
Alton.....	(Maximum.....	38	10	23	23	36	27	12	-3	12	4	15	38	31	22	8	5	7	15	31	30	22	23	28	28	35	38	37	17	10	-7	21.1		
	(Minimum.....	10	0	7	-3	12	12	-9	-18	-10	-3	-6	6	20	8	-3	-9	-4	-8	-6	4	13	-4	10	8	8	28	17	10	-10	-10	1.6		
Belmond.....	(Maximum.....	40	10	21	26	37	31	26	0	20	6	15	37	38	34	33	11	8	6	12	33	27	23	25	31	37	39	37	40	29	13	-3	23.9	
	(Minimum.....	8	-2	6	4	6	25	-6	-13	-12	0	1	5	22	4	1	-5	-3	4	-7	5	6	9	3	11	11	31	30	28	13	-4	-10	4.0	
Charles City.....	(Maximum.....	38	9	27	26	36	32	26	-1	18	7	14	37	37	35	33	8	5	6	16	29	35	22	21	29	34	39	37	39	25	9	-6	23.3	
	(Minimum.....	3	-1	6	2	6	26	-6	-12	-10	2	2	3	17	6	-2	-2	-5	-6	-6	5	4	7	-2	6	12	12	33	25	9	-6	9	3.6	
Decorah.....	(Maximum.....	36	30	25	27	36	34	29	-4	17	9	15	37	38	32	34	4	5	9	15	25	30	24	24	28	28	39	37	41	34	18	0	24.4	
	(Minimum.....	10	-2	0	0	1	21	-4	-12	-15	-4	1	1	25	5	0	-3	-4	-2	5	0	-2	10	-5	0	16	8	32	32	14	-2	-5	3.6	
Dubuque.....	(Maximum.....	36	19	28	31	40	40	38	2	23	20	18	44	44	41	37	12	11	8	17	32	42	25	30	33	37	47	40	45	36	20	-3	29.0	
	(Minimum.....	13	7	11	10	10	29	-4	-7	-2	11	11	10	29	21	5	2	2	1	2	12	12	17	13	15	20	24	34	36	20	-3	8	11.6	
Forest City.....	(Maximum.....	34	11	20	25	35	31	26	3	18	22	15	35	38	33	33	10	10	6	12	33	39	28	23	30	35	40	36	38	33	12	0	24.6	
	(Minimum.....	8	-4	4	5	4	21	-5	-16	-12	-4	-4	0	12	2	-3	-5	-1	-5	-8	-3	7	8	-3	7	12	5	25	30	10	-7	-12	2.3	
Independence.....	(Maximum.....	37	35	24	27	37	38	36	10	21	20	14	38	40	38	36	15	11	9	17	31	39	38	26	31	46	41	40	45	41	32	8	29.7	
	(Minimum.....	14	3	10	13	3	27	-1	-13	-7	7	7	5	33	15	7	1	0	-1	-3	5	8	13	4	13	16	20	32	32	22	4	-5	9.2	
Inwood.....	(Maximum.....	34	9	19	19	36	26	8	4	11	5	11	38	38	26	18	6	4	6	12	28	31	20	16	25	21	24	34	36	36	27	5	-7	19.2
	(Minimum.....	6	-1	5	-9	14	8	-9	-21	-17	-6	-13	0	14	5	-6	-15	-5	-12	-14	-1	2	10	-9	10	5	5	16	14	4	-11	-11	-1.4	
Lake Park.....	(Maximum.....	35	5	19	24	34	21	15	-6	5	1	10	38	.....	25	26	6	1	8	27	32	35	20	20	30	.....	37	36	41	18	5	-9	19.3b
	(Minimum.....	5	-4	-4	-5	8	8	-10	-20	-16	-11	-12	0	.....	-1	-5	-11	-5	-14	-1	10	5	-5	11	.....	4	7	27	16	5	-10	-11	-1.7b
Mason City.....	(Maximum.....	39	8	24	26	35	30	27	-2	19	8	13	37	40	34	33	10	6	5	14	32	34	23	24	30	34	40	37	40	29	12	-4	23.8	
	(Minimum.....	7	-3	3	1	6	22	-6	-11	-9	-1	2	3	22	4	1	-2	-2	-4	-8	-7	3	9	-4	6	13	9	31	27	11	-5	-11	3.4	
New Hampton.....	(Maximum.....	38	23	26	27	35	32	30	11	13	10	14	36	36	34	34	8	6	7	16	27	33	24	20	29	34	39	36	39	32	15	0	24.6	
	(Minimum.....	20	-4	11	-1	-4	22	-4	-5	-16	0	0	-2	21	5	0	-5	-5	-5	-8	-3	6	7	-5	5	14	11	30	30	12	-4	-10	3.6	
Northwood.....	(Maximum.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pocahontas.....	(Maximum.....	40	10	24	22	37	30	22	0	23	7	18	40	37	37	32	11	9	12	22	35	40	26	25	32	37	39	40	40	24	12	0	25.3	
	(Minimum.....	10	-2	6	2	7	20	-8	-15	-13	-3	0	5	24	7	-2	-6	-3	-5	-6	0	12	11	0	12	12	10	32	21	12	-5	-10	4.0	
Postville.....	(Maximum.....	35	26	25	26	35	31	30	4	17	10	15	37	39	35	34	7	7	7	15	27	34	24	24	30	34	40	37	40	34	16	2	25.1	
	(Minimum.....	13	0	4	2	2	24	-4	-12	-12	0	1	28	11	1	-2	-2	-2	-4	-4	4	12	12	1	7	16	12	33	32	16	0	-8	5.9	
Rock Rapids.....	(Maximum.....	35	11	19	19	36	22	11	-5	9	2	10	39	40	26	18	8	6	7	15	28	31	24	19	27	23	35	36	37	18	8	-6	19.6	
	(Minimum.....	7	-2	5	-7	7	9	-6	-20	-16	-5	-12	5	15	5	-5	-12	-5	-7	-11	-12	-2	10	-2	9	6	9	19	15	6	-10	-11	-0.9	
<i>Central Division</i>																																		
Belle Plaine.....	(Maximum.....	41	31	29	29	43	40	38	4	26	22	16	40	41	43	37	17	15	12	23	35	45	35	29	28	39	47	39	45	38	22	7	30.8	
	(Minimum.....	15	5	15	9	6	27	0	-7	-6	11	10	10	31	19	9	3	0	-1	5	11	11	6	13	20	20	33	34	22	7	-5	10.8		
Boone.....	(Maximum.....	42	30	29	29	40	39	35	7	27	14	19	40	40	43	37	17	12	14	25	37	46	32	32	34	43	42	40	43	36	26	5	30.8	
	(Minimum.....	12	4	13	8	5	26	-3	-11	-13	3	2	7	28	9	6	1	2	-2	-1	-2	2	13	2	15	12	12	36	36	20	-2	6	7.7	
Carroll.....	(Maximum.....	42	19	30	27	39	33	28	0	23	15	17	41	41	39	35	14	11	14	21	34	41	29	25	30	41	41	41	42	33	15	6	28.0	
	(Minimum.....	14	2	10	2	12	24	-5	-15	-8	-3	2	8	29	11	-3	-1	-4	-3	6	15	12	2	13	14	17	33	31	15	-2	-9	7.1		
Cedar Rapids.....	(Maximum.....	39	30	28	30	43	39	38	5	25	20	17	40	42	42	37	18	14	10	20	34	44	28	32	29	40	45	38	45	38	23	9	30.4	
	(Minimum.....	14	5	15	6	4	26	0	-7	-5	11	12	7	31	19	8	3	2	-1	-2	7	6	15	6	11	15	16	34	22	7	-5	10.1		
Davenport.....	(Maximum.....	37	23	31	36	47	44	47	6	27	33	23	49	51	42	42	20	14	9	21	35	43	33	21	34	40	47	41	48	41	26	9	32.9	
	(Minimum.....	19	11	18	16	17	29	1	-3	4	23	19	20	32	28	9	7	5	3	3	12	19	15	15	16	22	30	33	36	26	9	-6	15.7	
Des Moines.....	(Maximum.....	43	17	32	30	43	44	34	7	27	24	16	42	44	42	37	21	16	17	26	36	43	26	29	33	41	46	41	47	32	19	1	30.8	
	(Minimum.....	13	6	15	13	16	28	-3	-9	0	9	9</																						

AMERICAN METEOROLOGICAL SOCIETY

On December 29th-30th, 1927, the American Meteorological Society assembled at the George Peabody College, Nashville, Tennessee as a section of the American Association for the Advancement of Science.

Many interesting and valuable papers were presented. One session was devoted to the meteorological aspects of the great Mississippi flood of 1927. Another was devoted to the highly technical features of weather forecasting and physics of the air. Among the other sessions, one of the most interesting was devoted wholly to the work of cooperative observers. At this session there was a goodly attendance of the cooperative observers of the State of Tennessee and one of the outstanding papers of the entire convention was read by Mrs. Ross Woods, cooperative observer at Palmetto, Tennessee, entitled, "Duties and Experiences of a Cooperative Observer." At the suggestion of the writer the Society will make an effort to publish about 5,000 copies of this paper for distribution to all of the cooperative observers in the United States.

The work of cooperative observers is held in such high esteem by meteorologists that the following "Expression of Appreciation" was enthusiastically voted by the Society.

"The members of the American Meteorological Society here assembled heartily endorse the action of the Program Committee in planning a session in the interest of and participated in by the cooperative observers of the State of Tennessee. They recognize fully the fine spirit and the unselfish service of these faithful servants of the public and appreciate the valuable contribution they are making to local and national weather history.

While enjoying the personal contact with a number of these observers the Society regrets, of course, that the entire force could not be present. To those of Tennessee unable to attend this meeting and to the several thousand other such observers scattered throughout the United States the Society wishes to extend its greetings and its best wishes for the New Year, and also to express its appreciation of the important part they are playing in establishing the climatology of our country.

To this end, the Secretary of the Society is asked to publish this statement in an early issue of our Bulletin and to mail a copy to each of the Tennessee observers who did not attend this meeting." While the motion was pending extended remarks were made by several of the State Section Directors, including the writer, commending the work of cooperative observers.

One of the pleasant features of the convention was a luncheon at the College Cafeteria in a separate room exactly fitted to the number of the guests. Mr. Roscoe Nunn, Section Director of the

Maryland and Delaware Section, Baltimore, Maryland, proved himself to be a versatile and highly entertaining toastmaster. Among those responding to the toasts were Prof. Charles F. Marvin, Chief of the Weather Bureau, Washington, D. C.; Mrs. Woods, Cooperative Observer; Mrs. Marvin; and Dr. W. J. Humphreys, who is in charge of Meteorological Physics in the Weather Bureau at Washington, D. C. Telegrams and letters were read from several cooperative observers and prominent meteorologists expressing regret at their inability to attend the convention.

As a final toast Mr. Nunn called on Dr. Brooks, "our live wire secretary." Dr. Brooks made a complimentary characterization of the toastmaster in return, and then turned to his pet theme—"Join the Society." But, he said, he felt rather embarrassed to ask cooperative observers to contribute to the advancement of meteorology and climatology by joining. He said he seemed to be in the position of the tramp who went to a bishop for money, but who on returning had to admit to a fellow tramp: "Naw, I gave him a dollar, for his new church." Instead of asking cooperative observers to contribute to the Society it might be more appropriate for the Society to pay them for joining. Whichever is correct, the observers are welcome to regular membership at \$2.00 or to enrollment as subscribers for the Bulletin at \$1.00; but they are not urged to join.
C. D. R.

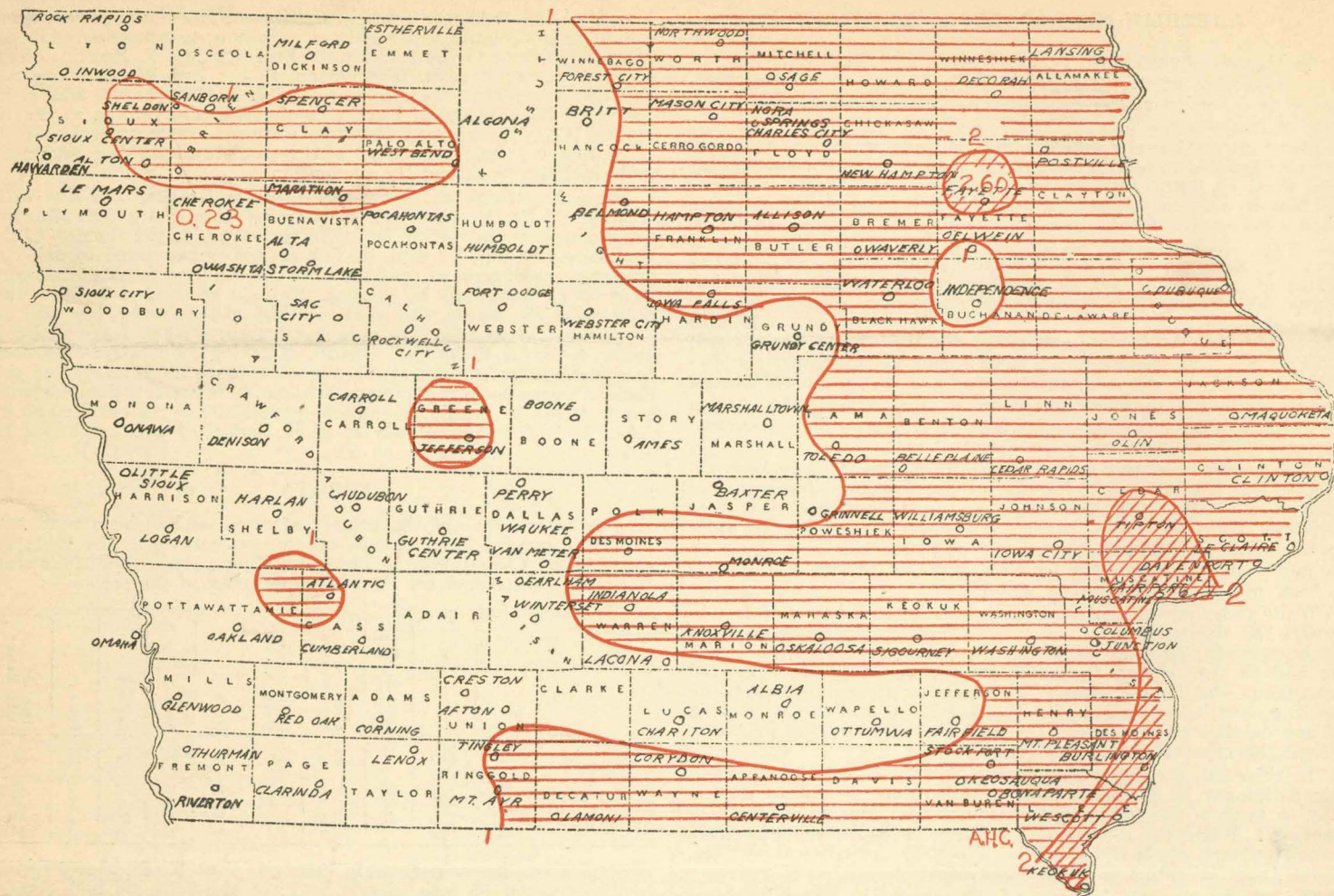
ERRATA

Due to an error of the printer after proof had been read and approved, several lines of type became transposed in the table on page 42 of Climatological Data for June, 1927. The following should be substituted for the data appearing in the table.

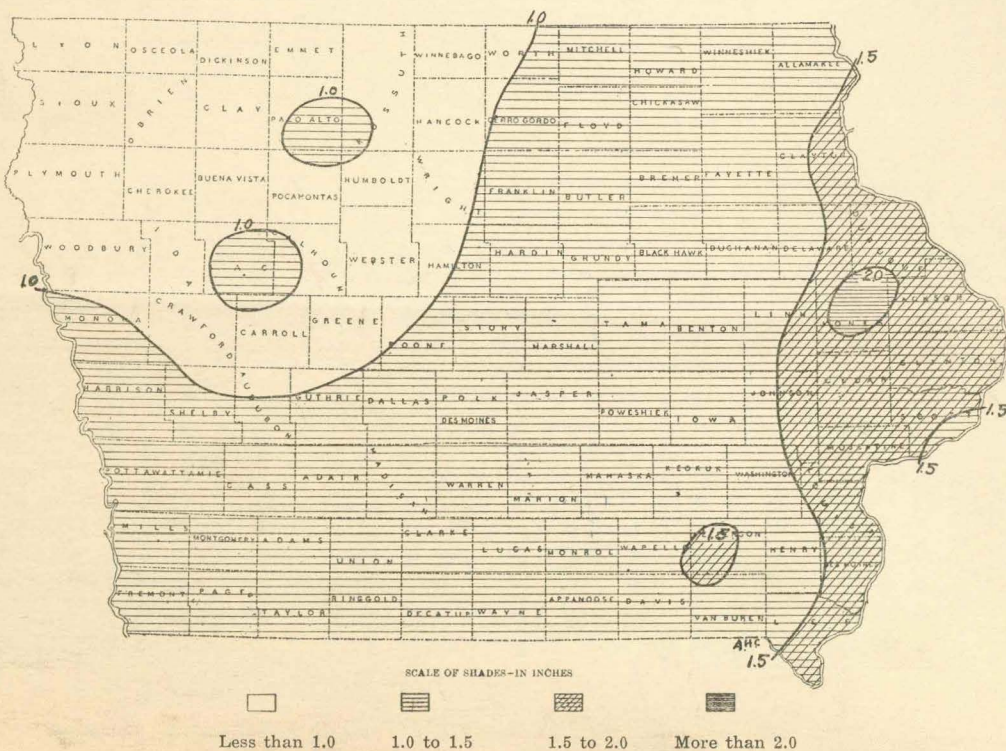
	Elevation	Length of Record Years	Mean Temperature	Departure From Normal	Highest	Date	Lowest	Date	Greatest Daily Range
Lansing.....	632	20							
Le Mars.....	1224	31	67.2	-1.4	97	28	38	14	38
Marathon.....	1390	1							
Mason City.....	1148	30	64.0	-3.6	96	28 ^f	37	5	32
New Hampton.....	1169	30	63.2	-4.5	93	30	37	5	32
Northwood.....	1222	31	64.4 ^f	-2.3	95 ^f	28	39 ^g	5	34 ⁱ
Oelwein.....	1036	3	65.0		94	30	41	5	30

Report for November, 1927. Page 84. Iowa Falls; precipitation on 23d, entered .35 inch, should be T; on the 24th, .35 inch should appear. Page 86. Dubuque; minimum temperature on the 20th, entered 31°, should be 32°.

TOTAL PRECIPITATION, DECEMBER, 1927



NORMAL PRECIPITATION, DECEMBER
(Based on station records of 30 years or more)



CLIMATOLOGICAL DATA

IOWA SECTION

In co-operation with
IOWA WEATHER AND CROP BUREAU
CHARLES D. REED, Meteorologist

VOL. XXXVIII DES MOINES, IOWA, ANNUAL, 1927 No. 13

GENERAL SUMMARY

The year, 1927, in Iowa, with a mean temperature of 48.8° was 0.8° above normal. The accumulated excess in temperature reached a peak about the middle of April followed by a general deficiency till the close of August. The excess of the first 17 days of September, and the latter portions of October and November offset the deficiency from May to August. December was cold with two decided cold waves. Extreme temperature readings were conspicuously absent. The growing season between the State average date of last killing frost in spring and the first killing frost in autumn, was 174 days, or 19 days longer than normal. The growing season averaged 44 days longer than last year in the west central district and 22 days longer in the southeast district.

Precipitation averaged 29.35 inches, 2.87 inches below normal. April was the rainiest in 29 years and May was above normal in frequency and amount in the eastern counties which greatly delayed planting. January, June, July, August and November were notably deficient. From Webster and Hardin counties northward, drouth injured corn. Less than 20 inches of rain fell in 1927 in Pottawattamie and portions of adjoining counties and in the vicinity of West Bend in Palo Alto County. The least reported in the State was 18.75 inches at Oakland, though at Omaha it was only 17.66 inches. From Wapello County northeast to Jackson County the rainfall generally exceeded 40 inches, the greatest being 47.54 inches at Maquoketa. Snowfall averaged 17.9 inches, 12.8 inches below normal, ranging from about 35 inches along the northern boundary to less than 10 inches in some southern counties. Rainy days, with 0.01 inch or more of precipitation averaged 94 which is 9 more than usual. Cloudy days averaged 113 or 15 more than usual. Sunshine and wind movement were slightly below normal.

Corn production was below normal and below last year. The yield per acre averaged slightly below normal though very good in the western counties, the quality was the best in three years. The acreage was reduced about 2% by the continuously saturated soil at planting time, mostly in the southeastern counties. The hay and oats crops were good and harvested with little rain.

SYNOPSIS BY MONTHS

Moderate, dry, winter weather with no severe storms but several windy days prevailed in January. The heaviest snowfall amounting to about one foot occurred in extreme southeast Iowa but the most continuous snow cover was in the western third of the State where it remained throughout the month. An ice crop of 12 to 16 inches was mostly harvested before the mild weather at the close of the month.

February was very mild—nearly as mild as the preceding February. The warm weather with considerable rain on the 4th-5th broke up the ice in streams over much of the State, causing ice gorges and slight overflow with some damage. Frost left the ground to considerable depths, making dirt and gravel roads bad. Snow and wind

were light so there was very little drifting. Building operations were not interrupted and livestock kept in good condition. As a whole the winter was mild with little snow.

Mild weather continued most of March. Frost in the ground which had diminished in February, practically all disappeared by the middle of March. Precipitation was slightly above normal and rather evenly timed and distributed over the State. There was a damaging ice storm on the 18th, rather severe in the east central counties. The loss of poles and wires was estimated at \$90,000. Many fruit and shade trees were damaged and destroyed. Very little oats seeding was done. Fruit buds advanced too rapidly. Feed, especially hay, became scarce.

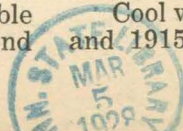
April was persistently rainy and the total precipitation was the greatest for April in 29 years. Only twice in 54 years has it been exceeded. This with the unprecedented rains of the preceding September saturated the soil to great depths and greatly delayed field work except on high and well drained land. Considerable intended oats acreage was left for corn or later crops. Severe damage was done to buildings by hail in Poweshiek and Washington counties on the 20th and by glaze and sleet in Dubuque and westward on the 20th-21st. Temperatures averaged slightly above normal. The last general killing frost was on the 24th about 9 days earlier than the average. It damaged small fruits and truck crops considerably but tree fruits only a little, mainly cherries and plums that were in full bloom in the southern counties. Unpaved roads were mostly impassable.

Low day-time temperatures made May seem unusually cold and disagreeable, but the minima averaged about normal. The lowest temperature reported was 30° and 40 other Mays out of 54 have had lower. The average temperature was only 1.8° below normal. Occasional light frosts continued till the 16th. Frequent rainy days and much wind contributed to the unpleasantness of the month. Rainfall averaged nearly normal but with the soil already saturated it greatly interfered with field work, particularly in the eastern and south central counties. Corn planting was greatly delayed. Overflows occurred along the Missouri River.

June was cool till near the close, but did not average as cool as June, 1926, and seven Junes out of 54 have been cooler. The temperature deficiency was greatest in the eastern counties and amounted to very little in the western counties. Light frost was reported at several stations on the 5th and 15th. Rain was well distributed but about half the normal which was fortunate for corn in view of the previous saturated condition of the soil in the southern and eastern counties. A heavy local downpour occurred in portions of Green and Boone counties on the 8th. Considerable corn was planted at an unusually late date on lowland that had not become dry enough to plow earlier.

Drouth continued in July and coupled with the heat, 8th-12th, injured pastures and potatoes. Early corn, being deeply rooted, made good progress, but late corn that could not reach subsoil moisture suffered from drouth. Pastures were injured by the drouth. The weather was excellent for harvesting and threshing. The first part of the month was warmer than normal and the latter part cool. Hailstorms and windstorms were numerous but not very destructive.

Cool weather persisted in August, though August 1895 and 1915 were cooler. In many years the extremes of



temperatures were greater. The mean temperature of the three summer months June, July and August was 69.1 degrees. Four other summers since 1873 have been cooler. The coolest, 1915, had a mean of 66.8°. Light frost was reported on August 2d, 9th and 24th, those of the 9th occurring in many counties of the northern division. Only a very small fraction of one per cent of the corn, potatoes and other crops was damaged. Rainfall was generally light and well distributed, though there was a destructive downpour in the vicinity of Clinton on the 7th. Harvesting and threshing were generally completed with favorable weather. The losses to shocked grain were unusually small. Pastures failed and the milk flow was greatly reduced. The weather turned warm toward the close of the month. Wind movement was unusually light and local storms were infrequent.

The first 17 days of September were the warmest of the season and the warmest, as a whole, ever recorded in September in Iowa, yet, the highest temperature observed, 101°, has been exceeded 12 times in 54 Septembers. An abrupt and prolonged cool period came on the 18th. Frost or freezing was general 19th-22d but the damage was negligible, only 2% of the corn being touched by frost up to October 1. Lower temperatures have occurred in 27 out of 54 Septembers. Heat, drouth and flies prior to the 18th further curtailed the milk supply. Unprecedented local downpours of rain occurred at Northwood, Dubuque and Clinton. Corn made wonderful progress.

Cool, rainy weather prevailed the early part of October, followed by an unprecedented "Indian summer" period during which new records were established over much of the State for high temperatures so late in the season, yet as in all the preceding months, of the year, the monthly extremes of temperature were not unusual. The first general killing frost was on the 14th, though it came on the 8th in some localities, and in other localities not till November. The growing season, between killing frosts, averaged about 19 days longer than usual. Seventy-nine per cent of the corn escaped frost damage which is above the average of the last five years. October was favorable for seeding winter wheat, for drying the corn and for the beginning of corn husking.

November is believed to have established a new record for smallest amount of sunshine in any month in Iowa, the average for the State being only 31 per cent of the possible. Temperatures were mostly below normal with numerous sudden changes till the 19th when a warm spell began which by the end of the month brought the average temperature up to more than a degree above normal. Precipitation was generally light and scattered. Corn husking progressed about normally. The yield was variable but mostly good in the western and light in the southeastern counties, and the quality was better than the three preceding crops with lower moisture content and less complaint from spoilage in cribs. Plowing was possible most of the month.

Wintry weather prevailed most of December, the cold being relatively more severe in the northwestern portion of the State where several stations reported deficiencies in temperature amounting to more than 10 degrees. The most severe "blizzard" in years started as a rainstorm on the 6th turning to sleet and snow and continuing through the 7th with northwest gales on the 7th-8th. The snow was not deep on the level but it drifted badly, interrupting rail and highway traffic. There was much suffering of people and livestock and one death. The month closed with another severe storm and subzero temperature but heavy snow and blockades were confined mostly to the southeastern portion of the State. The inclement weather stopped corn husking after the 6th.

SUPPLEMENTAL PRECIPITATION TABLE, YEAR 1927

STATIONS	January	February	March	April	May	June	July	August	September	October	November	December	Annual
<i>Northern Division</i>													
Akron.....			1.72	6.10	4.62	3.14	2.76	3.46	3.69	1.63	0.27	0.59	
Hampton.....	0.23	0.60	1.25	3.19	7.45	2.66	1.26	3.56	3.01	2.84			
Lansing.....			2.63	3.63	6.25	1.29	1.61	1.30	3.92	2.46	1.92		
New Hampton.....	0.30	0.40		3.11	6.64	1.74	2.47	1.37	6.58	2.25	1.55	1.30	
Northwood.....	0.25	0.60	1.43	6.15	4.65	2.67	0.44	1.82	9.44	1.79			
Osage.....					4.97	3.60	1.74	0.99	4.35	1.29	1.02	1.73	
<i>Central Division</i>													
Guthrie Center.....	0.16	0.86	1.40	2.76	2.50	1.60	2.42						
Le Claire.....			3.15	4.86	5.90	2.15	2.69	2.94	5.96	6.36			
Monroe.....	0.08	1.53	1.45	6.23	4.14	2.67	1.25	1.82	4.18	4.68		1.11	
Olin.....	0.44	1.57	2.54	4.38	6.43	7.05	1.59	1.17		6.35	1.50	1.92	
Rockwell City.....	0.10	0.76	0.98	3.69	6.07	1.29				2.01	0.30	0.80	
Sac City.....	0.08	0.69	0.73		5.45	1.53	1.19	2.59	3.06	2.07	0.37	0.32	
Van Meter.....	0.06	1.28	1.51	4.55	3.42	1.26	0.66	1.31	4.47	1.98	0.27	0.70	21.47
Waukeo.....			.82	3.26	3.73	0.64	2.85	1.60	5.04	2.62	0.31	0.77	
<i>Southern Division</i>													
Corydon.....	0.49	2.01	2.48	7.26	2.83	4.97	1.34	2.67	2.90	4.81	1.03	0.41	18.75
Oakland.....	0.05	0.98	1.23	3.27	0.86	0.74	1.38	2.51	6.48	0.69	0.15	0.61	
Pella (near).....											1.00	1.61	
Red Oak (near).....	0.20	0.96		3.58	1.01	1.33	1.92	1.68	6.67	3.92	T.		
Riverton (near).....	0.20	0.85	3.22	6.34	1.94	2.41	2.08	3.11	3.70	3.00	0.05	0.50	27.40
Wescott (near).....	0.80				5.85	6.05	2.65	1.80					

COMPARATIVE DATA FOR THE STATE—Annual

Year	Temperature				Precipitation in Inches			
	Mean annual	Highest	Date	Lowest	Annual	Greatest annual	Least annual	Average snowfall
1873	46.1	102	August 31.....	-38				
1874	47.7	101	July 5.....	-24	January 21.....	33.92	41.04	23.34
1875	43.3	97	July 16.....	-31	January 14.....	35.83	48.42	28.55
1876	45.9	96	August 24.....	-28	December 9.....	36.05	53.57	19.92
1877	48.4	100		-31	January 8.....	35.16	49.82	22.52
1878	50.0	104		-13	January 6.....	34.53	42.08	20.92
1879	48.0	102		-35	December 25.....	28.23	46.71	16.49
1880	47.9	104		-25	December 27.....	30.95	51.10	14.90
1881	47.5	104		-10		44.16	56.81	34.02
1882	48.4	98		-23	December 7.....	33.40	50.30	17.71
1883	44.8	790		-38		34.54	46.15	18.00
1884	46.0	96		-38		35.59	46.60	23.35
1885	44.7	102	July 30.....	-12	January 28.....	32.23	44.89	17.91
1886	46.4	103	July 13.....	-34	February 4.....	24.71	35.48	15.55
1887	46.6	105	July 29.....	-34	January 7.....	26.31	38.61	12.30
1888	45.3	110	August 2.....	-43	January 15.....	31.44	41.17	20.60
1889	48.0	104	August 30.....	-28	February.....	25.07	37.61	13.66
1890	47.5	101	July* 13.....	-27	January 22.....	29.48	45.45	16.54
1891	47.3	106	August 9.....	-31	February 4.....	32.90	49.05	23.48
1892	46.6	104	July 11.....	-38	January 19.....	36.58	48.77	24.78
1893	45.7	102	July* 13.....	-36	January 14.....	27.59	33.27	19.19
1894	49.7	109	July 26.....	-37	January 25.....	21.94	29.81	15.65
1895	47.2	104	May 28.....	-33	February 1.....	26.77	35.25	18.57
1896	48.6	104	July 3.....	-20	January 4.....	37.23	51.60	28.68
1897	47.8	106	July* 23.....	-30	January 25.....	26.98	36.18	20.21
1898	47.7	103	August 20.....	-25	December 31.....	31.34	55.47	19.51
1899	47.3	104	Sept. 6.....	-40	February 11.....	28.68	42.06	21.79
1900	49.3	103	August 3.....	-27	February 15.....	55.05	47.33	25.05
1901	49.0	113	July 22.....	-31	December 15.....	24.41	37.09	16.35
1902	47.7	98	July 30.....	-31	January 27.....	43.82	58.80	20.14
1903	47.2	101	August 24.....	-27	December 13.....	35.39	50.53	26.41
1904	46.3	100	July 17.....	-32	January 27.....	28.51	38.93	19.34
1905	47.2	101	August 11.....	-41	February* 2.....	36.56	52.26	24.66
1906	48.4	102	July 21.....	-32	February 10.....	31.60	44.34	20.63
1907	47.4	102	July 5.....	-31	February 5.....	31.61	43.90	19.93
1908	49.4	101	August 3.....	-18	January 29.....	35.09	49.98	24.11
1909	47.4	103	August* 15.....	-26	February* 15.....	40.01	53.48	37.20
1910	48.6	108	July 16.....	-35	January 7.....	19.87	27.99	12.11
1911	49.5	111	July* 3.....	-35	January 3.....	31.37	46.77	19.74
1912	46.3	104	Sept. 8.....	-47	January 12.....	28.65	33.13	15.25
1913	49.7	108	July* 16.....	-25	January 8.....	29.95	45.18	20.31
1914	49.1	109	July 12.....	-31	December 26.....	31.93	44.11	23.30
1915	47.8	99	May 14.....	-32	January 28.....	39.53	51.15	27.29
1916	47.2	106	August 4.....	-34	January 13.....	28.90	46.34	22.48
1917	44.8	106	July 30.....	-40	December 29.....	27.81	36.00	20.78
1918	49.2	113	August 4.....	-36	February 4.....	32.78	47.53	25.03
1919	48.6	104	July* 30.....	-36	December 10.....	36.76	48.16	26.88
1920	48.2	102	July 23.....	-26	January* 4.....	31.75	44.00	20.95
1921	52.2	104	July* 11.....	-22	December 25.....	32.03	46.47	20.44
1922	50.2	101	June 23.....	-29	January 6.....	29.98	44.20	19.08
1923	49.0	102	July* 22.....	-23	February* 3.....	29.50	37.47	21.36
1924	46.4	100	August* 21.....	-36	January 5.....	31.39	43.85	19.41
1925	48.8	105	July* 1.....	-25	December 29.....	28.24	45.53	13.77
1926	48.3	109	July* 19.....	-22	January 28.....	33.07	48.36	22.35
1927	48.8	102	July 11.....	-27	January 15.....	29.35	47.54	18.75
M'n	47.6					31.80		29.7

*And other dates.

ERRATA

Annual Climatological Data, 1926, page 97. "General Summary," first line, make mean temperature, 1926, 48.3° instead of 48.0°.

CLIMATOLOGICAL DATA FOR THE YEAR 1927—Continued

STATIONS	COUNTIES	Elevation, feet	Length of record, years.	Temperature, in Degrees Fahrenheit					Length of record, years	Precipitation, in Inches					Number of Days				Prevailing direction of wind	
				Mean	Highest	Date	Lowest	Date		Total	Greatest Monthly	Month	Least Monthly	Month	Total snowfall (unmelted)	Precipitation .01 in. or more	Clear	Partly cloudy		Cloudy
<i>Southern Division</i>																				
Afton	Union	1,212	33	50.9	100	Sept. 15	-11	Dec. 8	33	30.16	7.98	Apr.	0.08	Jan.	16.1	81	177	99	89	sw.
Albia	Monroe	949	29	51.6	101	July 27	-13	Jan. 15	29	35.06	7.13	May.	0.40	Jan.	13.8	100	156	68	141	nw.
Atlantic	Cass	1,164	36	50.0	100	July 6	-13	Dec. 8	36	21.22	5.35	Sept.	0.35	Jan.*	25.6	113	124	91	150	sw.
Bonaparte (near)	Van Buren	563	36	51.1	97	Sept. 10	-21	Jan. 15	36	34.01	6.40	May	0.37	Jan.	9.3	85	202	49	111	sw.
Burlington	Des Moines	544	31	52.7	99	Sept. 15	-12	Jan. 15	31	41.44	8.51	Oct.	0.90	Jan.	16.5	107	172	74	119	sw.
Centerville	Appanoose	1,013	22	51.5	96	July 11†	-17	Jan. 15	22	33.93	7.06	Apr.	0.40	Jan.	9.5	102	169	73	123	nw.
Chariton (near)	Lucas	1,042	32	50.8	100	Sept. 15	-16	Jan. 15	32	27.80	7.45	Apr.	0.21	Jan.	10.0	59	157	108	100	sw.
Clarinda	Page	1,009	37	51.4	97	July 11†	-15	Jan. 15	37	25.33	4.39	Apr.	0.04	Nov.	11.2	95	180	141	44	nw.
Columbus Junction	Louisa	595	26	50.5	97	Sept. 17	-20	Jan. 15	26	34.74	6.00	May	0.55	Jan.	10.9	120	135	155	75	se.
Corning (near)	Adams	1,117	35	50.3	99a	July 11	-12	Dec. 8	35	27.94	5.76	Apr.	0.16	Jan.	7.0	61				sw.
Corydon	Wayne	1,101	34		99	Sept. 10	-14	Jan. 15	34		7.26	Apr.	0.13	Jan.						sw.
Creston	Union	1,291	22	49.9	99	July 11	-13	Jan. 15†	22	24.08	5.98	Apr.	0.05	Jan.	6.1	96				sw.
Cumberland (near)	Cass	1,225			99				27	19.08	4.48	Sept.	T.	Jan.	8.5	74	162	98	105	nw.
Earlham (near)	Madison	1,126	25	49.7	98	Sept. 10	-16	Jan. 15	25	23.66	3.81	May	0.04	Nov.	11.5	70	225	35	105	sw.
Fairfield	Jefferson	780	43	50.4	101	Sept. 15†	-20	Jan. 15	45	42.62	7.81	May	0.69	Jan.	14.0	95				s.
Glenwood	Mills	1,100	29	51.3	100	July 6	-10	Dec. 8	33	20.86	5.01	Sept.	0.02	Jan.*	11.9	79	157	116	92	nw.
Indianola	Warren	972	36	50.7	101	Sept. 10	-15	Jan. 15	36	26.67	6.27	Apr.	0.30	Jan.	19.5	78	170	106	89	nw.
Keokuk	Lee	614	56	52.9	96	Sept. 17	-12	Jan. 15	56	37.30	6.61	June	1.10	Jan.	21.4	105	105	121	139	s.
Keosauqua	Van Buren	644	35	51.5	100	July 11†	-24	Jan. 15	35	37.16	8.02	Oct.	0.50	Jan.	17.1	87				se.
Knoxville	Marion	920	32	51.0	100	Sept. 10	-15	Jan. 15	32	27.57	4.69	Apr.	0.35	Jan.	14.5	84	159	91	115	sw.
Lacoma	Warren	824							28	31.58	7.06	Apr.	0.59	Nov.	23.5	115	132	134	99	
Lamoni	Decatur	1,123	20	50.9	99	Sept. 10	-13	Jan. 15	21	31.53	7.16	Apr.	0.23	Jan.	13.4	97	176	83	106	nw.
Lenox	Taylor	1,250	32	50.9	98	July 6†	-12	Dec. 8	32	29.96	5.89	Apr.	0.07	Nov.	10.5	89	171	115	79	nw.
Mount Ayr	Ringgold	1,245	34	50.2	96	July 11	-13	Dec. 8	34	33.94	9.06	Apr.	0.13	Jan.	9.5	91	187	81	97	sw.
Mt. Pleasant	Henry	730	46	51.8	100	Sept. 15	-14	Jan. 15	46	36.73	6.67	Apr.	0.47	Jan.	11.4	99	100	152	113	nw.
Oakland	Pottawattamie	1,105	8	50.5	101	July 6	-12	Dec. 8	8	18.75	6.43	Sept.	0.05	Jan.	10.3	64				sw.
Oskaloosa	Mahaska	835	51	50.0	99	July 11	-16	Jan. 15	51	34.22	5.31	Apr.	0.34	Jan.	17.3	110	145	94	126	se.
Ottumwa	Wapello	619	32		99	July 11	-18	Jan. 15	33	41.03	7.40	Apr.	0.31	Jan.	8.6	88	209	60	96	se.
Red Oak (near)	Montgomery	1,030	8						14		6.67	Sept.	T.	Nov.						s.
Riverton (near)	Fremont	920							1	27.40	6.34	Apr.	0.05	Nov.	11.4	83	155	64	146	s.
Sigourney (near)	Keokuk	790	31	50.9	102	July 11	-14	Jan. 15	31	35.66	5.68	Apr.	0.48	Jan.	13.7	98	167	69	129	sw.
Stockport	Van Buren	747	25	50.9	100	Sept. 15	-27	Jan. 15	25	37.69	6.46	Apr.	0.49	Jan.	12.7	97	185	66	114	sw.
Thurman	Fremont	960	30	52.0	101	July 6	-10	Jan. 15	36	22.32	5.16	Apr.	T.	Nov.	8.1	71	172	87	106	s.
Tingley	Ringgold	1,275	2	49.9	96	July 27†	-13	Jan. 15†	2	30.73	6.03	Apr.	0.23	Jan.	10.1	77	158	117	90	sw.
Washington	Washington	757	45	51.1	99	July 11†	-15	Jan. 15	48	44.87	8.26	Oct.	0.83	Jan.	18.1	110				s.
Wescott (near)	Lee	523							5		6.05	June	0.80	Jan.						
Winterset	Madison	1,118	36	50.9	99	July 11†	-11	Dec. 8	36	22.13	5.04	Apr.	0.21	Nov.	19.5	87	205	73	87	sw.
Omaha, Neb.		1,105	56	51.5	99	July 6	-10	Dec. 8	56	17.66	3.16	Sept.	0.06	Nov.	16.3	100	147	108	110	s.

Reference a, b, c, etc., appearing in the table indicate the number of days missing; for example b represents two days, etc.
 *Also in November. †Also on other dates.

MONTHLY STATE DATA FOR 1927

MONTH	Barometric Pressure Inches (Sea Level)					Temperature Degrees, F.				Relative Humidity Per Cent				Precipitation, Inches				No. of Days		Sun- shine	Wind							
	Mean	Highest	Date	Lowest	Date	Mean	Departure from Normal	Highest	Lowest	7 a. m.*	12 noon†	7 p. m.*	Departure from Normal†	Lowest	Average	Departure from Normal	Greatest	Least	Snowfall	With .01 inch or More Precipitation	Clear	Partly Cloudy	Cloudy	Pct. of Possible Amt.	Departure from Normal	Average Hourly Velocity	Departure from Normal	Prevailing Direction
January	30.24	31.07	14	29.44	29	21.7	+3.2	59	-27	83	68	73	-1	31	0.29	-0.79	1.10	T.	3.0	4	14	8	9	55	+5	8.4	-0.3	nw.
February	30.08	30.73	8	29.39	21†	30.6	+8.0	65	-17	83	65	71	-3	31	1.15	-0.05	3.60	0.13	4.4	5	13	6	9	59	+4	8.2	-1.1	nw.
March	30.05	30.73	2	29.42	31	39.6	+4.9	75	0	82	61	67	+1	17	1.92	-0.17	3.64	0.62	2.9	9	11	7	13	49	-8	8.8	-0.8	sw.
April	29.99	30.54	22	29.38	1	49.2	+0.3	91	15	81	64	67	+8	23	4.84	+1.85	9.06	2.09	2.6	14	9	7	14	44	-14	9.6	-0.3	se.
May	29.85	30.26	31	29.02	9	58.4	-1.8	91	30	79	63	65	+4	22	4.69	+0.08	9.07	0.86	T.	11	10	10	11	48	-13	9.7	+1.0	nw.
June	29.96	30.40	5	29.50	21	66.4	-2.9	101	35	77	57	58	-2	26	2.42	-2.11	7.05	0.55	0	9	16	7	7	64	-4	7.8	-0.2	s.
July	30.00	30.38	3	29.67	16	72.9	-0.9	102	45	74	46	48	-7	21	1.96	-1.89	4.80	0.09	0	7	18	10	3	76	+2	6.3	-0.4	sw.
August	30.04	30.38	26	29.70	7	67.9	-3.8	99	35	80	50	55	-4	26	2.36	-1.08	5.68	0.67	0	8	15	10	6	65	-5	5.2	-1.1	se.
September	29.95	30.34	26	29.20	29	67.4	+3.1	101	29	83	56	64	0	21	4.56	+0.91	11.95	2.02	T.	10	15	8	7	63	0	6.5	-0.7	sw.
October	29.99	30.40	16	29.45	10	55.5	+3.6	91	24	82	53	60	-1	21	3.25	-0.83	8.51	0.46	T.	7	19	5	7	66	+6	6.7	-1.4	sw.
November	30.06	30.66	12	29.51	28	37.7	+1.1	81	0	81	67	72	0	30	0.87	-0.69	3.61	T.	0.6	5	7	6	17	31	21	8.4	-0.2	nw.
December	30.12	30.65	19	29.17	7	18.7	-5.4	59	-22	83	69	76	-1	30	1.04	-0.10	2.60	0.23	4.4	5	13	8	10	48	+1	9.3	+1.2	nw.
Means and Extremes	30.03	31.07	Jan. 14	29.02	May 9	48.8	+0.8			81	60	65	-1		29.35	-2.87			17.9	94	160	92	113	56	-3	7.9	-0.3	nw.
Normals and Records	30.02	31.09	Jan. 25	28.69	Feb. 28	48.0		113	-17	81		66		5	32.22		19.80	0	30.7	85	166	101	98	59		8.2		nw.

†Local mean time.
 *Normal central time.
 †7 a. m., and 7 p. m., observations only.
 †And other dates.

MEAN MONTHLY AND ANNUAL TEMPERATURES, WITH DEPARTURES FROM THE NORMAL, FOR 1927

Table with columns for months (January to December) and Annual, and rows for various stations (Northern and Southern Divisions). Each cell contains temperature values and departures from normal.

Reference letters a, b, c, etc., appearing in the table indicate the number of days missing; for example, b represents two days, etc.

MEAN MONTHLY AND ANNUAL PRECIPITATIONS, WITH DEPARTURES FROM THE NORMAL, FOR 1927

Table with columns for STATIONS, months (January-December), and Annual. Rows are categorized into Northern Division, Central Division, and Southern Division. Each row contains 25 numerical values representing precipitation and its departure from the normal for each month and the annual total.

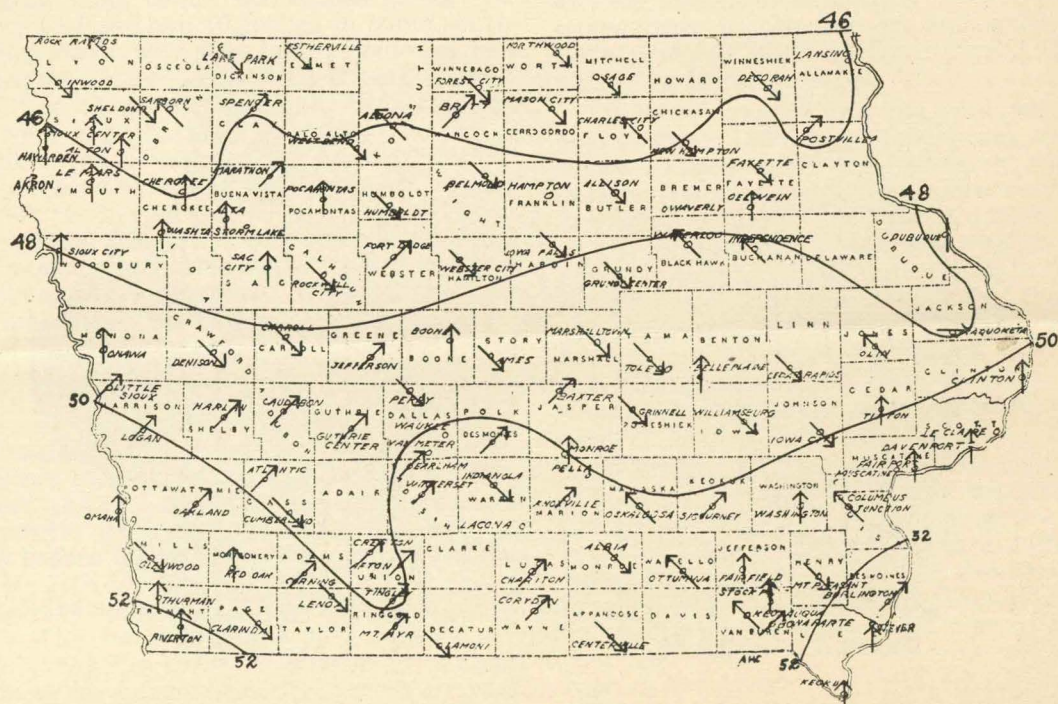
DATES OF KILLING FROST, 1927

Charles City, Davenport, Des Moines, Dubuque, Keokuk, Sioux City, Omaha, and Marshalltown excluded from averages because of city influences

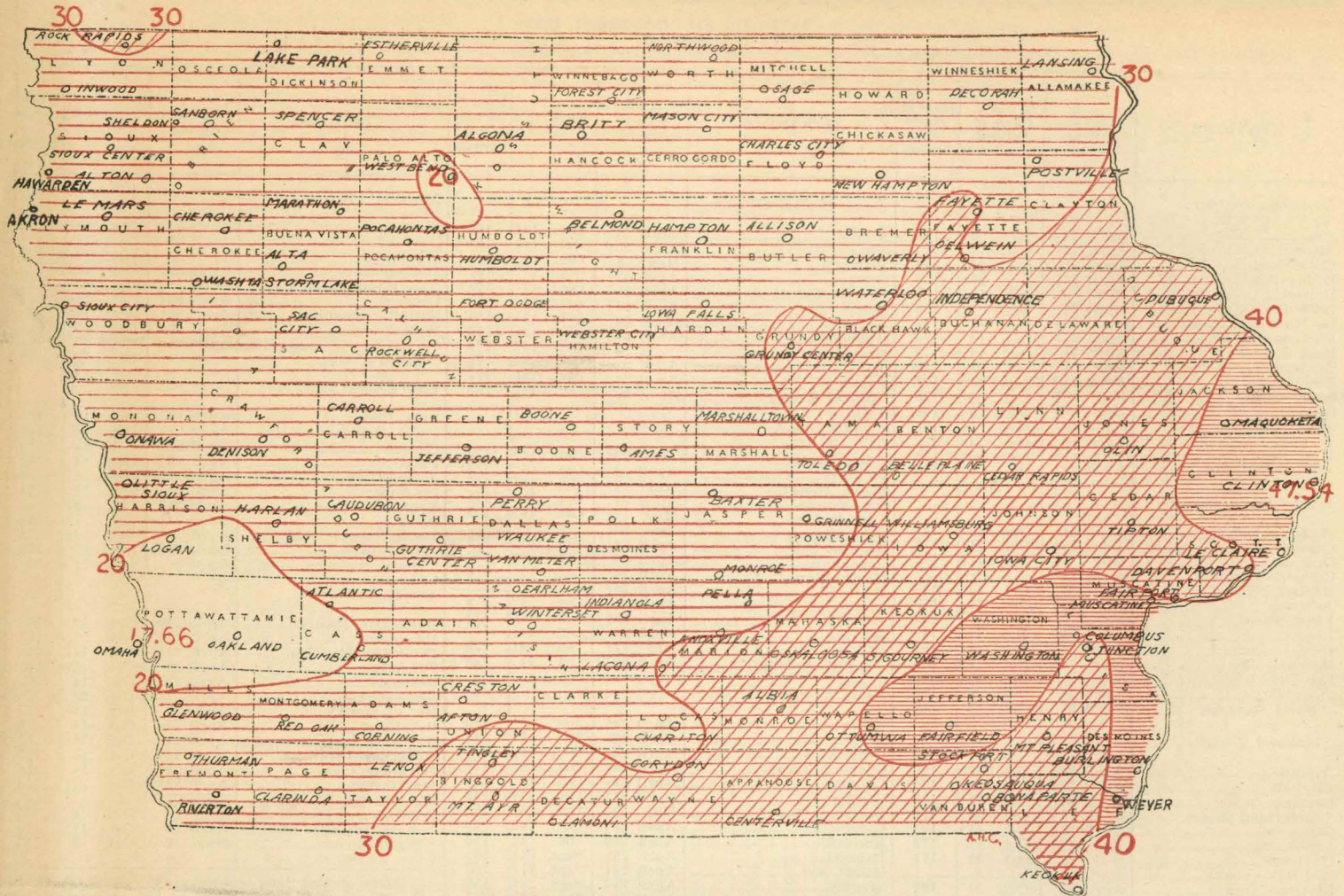
Table with columns for STATIONS, Last in Spring, First in Autumn, Days in Growing Season, and rows for Northwest, West Central, Southwest, North Central, Central, South Central, Northeast, East Central, and Southeast districts.

†Date of last temperature of 32° or lower in the Spring, or first temperature of 32° or lower in the Autumn (as the case may be) when frost was not reported.

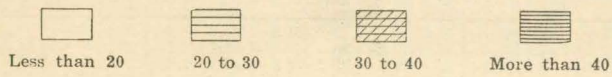
MEAN ISOTHERMS AND PREVAILING WINDS, YEAR, 1927



TOTAL PRECIPITATION, YEAR, 1927

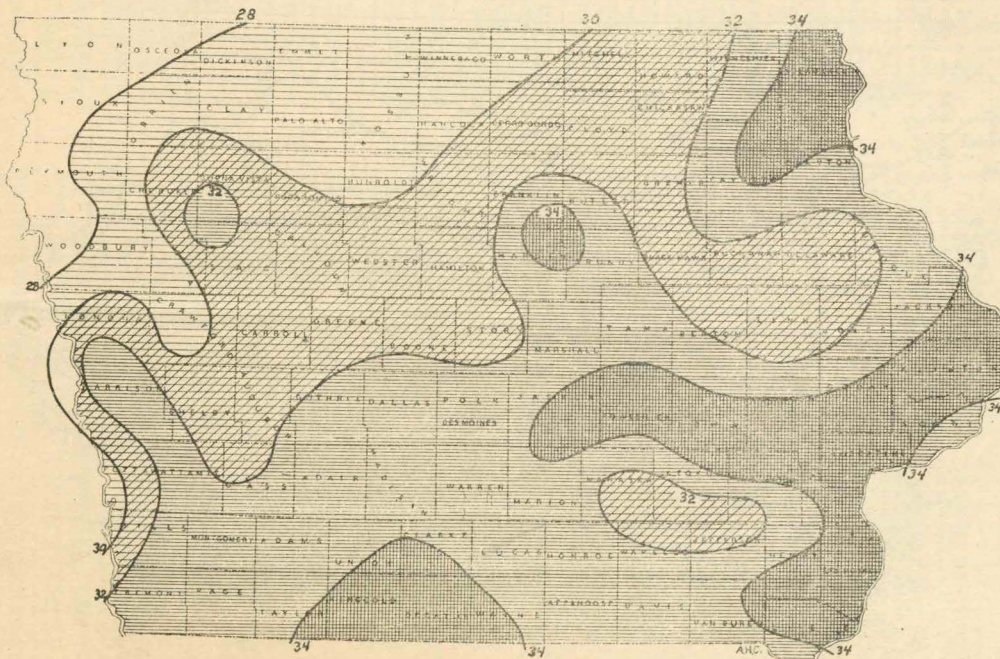


SCALE OF SHADES IN INCHES

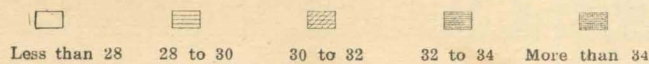


NORMAL ANNUAL PRECIPITATION STATE OF IOWA

Based on station records of 30 years or more



SCALE OF SHADES—IN INCHES



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