

cent for photographic and 4 per cent for thermometric records.

The details are shown in the preceding table, in which the stations are arranged according to the *total possible* duration of sunshine, and not according to the *observed* duration as in previous years.

ATMOSPHERIC ELECTRICITY.

Numerical statistics relative to auroras and thunderstorms are given in Table IX, which shows the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month, respectively.

Thunderstorms.—The dates on which reports of thunderstorms for the whole country were most numerous were: 1st, 40; 2d, 64; 16th, 73.

Thunderstorm reports were most numerous in: Louisiana, 27; Missouri, 42; Ohio, 50.

Thunderstorms were most frequent in: Louisiana, 9 days; Arizona and Ohio, 7; Missouri and Texas, 6.

Auroras.—The evenings on which bright moonlight must have interfered with observations of faint auroras are assumed to be the four preceding and following the date of full moon, viz, from the 14th to the 22d, inclusive. On the remaining twenty-two days of this month 104 reports were received, or an average of about 5 per day. The dates on which the number of reports especially exceeded this average were: 1st, 15; 2d, 52.

Auroras were reported most frequently in: Montana and South Dakota, 7 days; North Dakota, 6.

The number of reports was a large percentage of the number of observers in: Vermont, 62; Maine, 56; South Dakota, 37; Montana, 30; North Dakota, 25.

CANADIAN REPORTS.

A thunderstorm was reported at Montreal on the 21st.

Auroras were reported as follows: Halifax, 14th; Father Point, 30th; Quebec, 1st; Banff, 1st, 2d; Minnedosa, 2d, 3d, 5th, 28th, 30th; Qu'Appelle, 2d; Swift Current, 2d, 19th; Calgary, 1st, 3d, 26th, 27th; Prince Albert, 1st; Battleford, 2d, 3d, 4th; Kamloops, 2d.

CLIMATE AND CROP SERVICE.

By JAMES BERRY, Chief of Climate and Crop Service Division

The following extracts relating to the general weather conditions in the several States and Territories are taken from the monthly reports of the respective sections of the Climate and Crop Service. The name of the section director is given after each summary.

Snowfall and rainfall are expressed in inches.

Alabama.—The mean temperature was 42.2°, or 0.7° below normal; the highest was 83°, at Healing Springs on the 12th, and the lowest, 7° below zero, at Valleyhead on the 28th. The average precipitation was 3.60, or 1.76 below normal; the greatest monthly amount, 5.74, occurred at Greensboro, and the least, 1.23, at Pineapple.—*F. P. Thaffes.*

Arizona.—The mean temperature was 46.3°, or 6.3° above normal; the highest was 80°, at Maricopa, and the lowest, 5°, at Fort Apache on the 7th. The average precipitation was 3.16, or 2.16 above normal; the greatest monthly amount, 8.30, occurred at Pinal Ranch, and the least, 0.23, at San Simon.—*W. T. Blythe.*

Arkansas.—The mean temperature was 38.9°, or 0.7° below normal; the highest was 76°, at Texarkana on the 1st, and the lowest, 2° below zero, at Silver Springs on the 27th. The average precipitation was 6.53, or 2.47 above normal; the greatest monthly amount, 13.83, occurred at Pinebluff, and the least, 3.57, at Picayune.—*F. H. Clarke.*

California.—The mean temperature was 45.5°, or 0.1° below normal; the highest was 82°, at Coronado and Nordhoff on the 22d, and the lowest, 14° below zero, at Bodie on the 18th. The average precipitation was 2.69, or 1.33 below normal; the greatest monthly amount, 9.10, occurred at Mutch Flat, Ventura County, and the least 0.32, at Bishop, Inyo County. The unusual feature of the month was the greater rainfall in southern California as compared with the central and northern portions, the greatest rainfall occurring south of the Tehachapi range of mountains, while the least amount was in central and eastern California. This reverses the usual precipitation for the month of January. The excess of rainfall will be very beneficial to southern California, as the seasons have been drier than usual for several years past.—*J. A. Barwick.*

Colorado.—The mean temperature was 21.8°, or 3.0° above normal; the highest was 67°, at Cripple Creek on the 10th and 11th, and at Minneapolis on the 23d, and the lowest, 32° below zero, at Lay on the 27th. The average precipitation was 0.82, or 0.8 below normal; the greatest monthly amount, 8.60, occurred at Ruby, and the least, 0.06, at Lamar.—*F. H. Brandenburg.*

Florida.—The mean temperature was 56.2°, or 3.8° below normal; the highest was 86°, at Kissimmee on the 4th, and the lowest, 17°, at Pensacola on the 28th. The average precipitation was 1.90; the greatest monthly amount, 5.20, occurred at Jupiter, and the least, 0.18, at Kissimmee.—*A. J. Mitchell.*

Georgia.—The mean temperature was 42.6°, or 2.8° below normal; the highest was 77°, at Morgan on the 2d, Quitman on the 1st and 3d, and Brag on the 3d; the lowest was 6° below zero, at Tallapoosa on the 27th. The average precipitation was 2.66, or 2.44 below normal;

the greatest monthly amount, 5.89, occurred at Diamond, and the least, 0.59, at Poulan.

Idaho.—The mean temperature was 23.1°; the highest was 58°, at Pollock on the 22d, and the lowest, 30° below zero, at Lake and Warren on the 26th. The average precipitation was 0.78; the greatest monthly amount, 2.82, occurred at Fort Sherman, while none fell at Martin.—*D. P. McCallum.*

Illinois.—The mean temperature was 24.1°, or 0.5° above normal; the highest was 70°, at Mt. Vernon on the 1st, and the lowest, 28° below zero, at Oregon on the 25th. The average precipitation was 4.59, or 2.30 above normal; the greatest monthly amount, 10.38, occurred at La Harpe, and the least, 1.96, at Scales Mound.—*O. E. Linney.*

Indiana.—The mean temperature was 25.3°, or 0.8° below normal; the highest was 68°, at Vevay on the 1st and 3d, and lowest, 22° below zero, at Lafayette on the 25th. The average precipitation was 3.39, or 0.48 above normal; the greatest monthly amount, 5.97, occurred at Valparaiso, and the least, 1.73, at Greensburg. The weather during the month was not very favorable for wheat and clover, but there is no doubt that a good covering of snow during the greater part of the month protected these crops from greater injury during the exceedingly cold nights in the latter part of the month.—*O. F. R. Wappenhans.*

Iowa.—The mean temperature was 17.2°; the highest was 66°, at Keokuk and Madrid on the 1st, and the lowest, 30° below zero, at Rock Rapids on the 25th and at Elkador on the 26th. The average precipitation was 2.01; the greatest monthly amount, 6.16, occurred at Fort Madison, and the least, 0.15, at Portsmouth.—*G. M. Chappel.*

Kansas.—The mean temperature was 28.4°, or 0.4° above normal; the highest was 68°, at Columbus and Ottawa on the 1st, and the lowest, 16° below zero, at Goodland on the 27th. The average precipitation was 1.10, or 0.36 above normal; the greatest monthly amount, 5.46, occurred at Columbus, and the least, "trace," at Goodland and Grainfield.—*T. B. Jennings.*

Kentucky.—The mean temperature was 32.0°; the highest was 75°, at Ashland on the 3d, and the lowest, 16° below zero, at Louisa on the 30th. The average precipitation was 3.25, or 0.73 below normal; the greatest monthly amount, 4.96, occurred at Pilot Oak, and the least, 2.10, at Louisa. The general effects of the low temperature that prevailed the last week have not yet been ascertained definitely, but it is not likely they will be of a serious nature. The cold wave set in on the night of the 24th, and a general fall of snow occurred on the 27th, which was the central date of the cold period. This snow aided materially in heating the soil at about the time when it had become thoroughly frozen. It is probable that winter grain withstood the cold spell without much injury to the crop. Winter pastures had been excellent up to the period of cold weather.—*Frank Burke.*

Louisiana.—The mean temperature was 47.5°, or 3.1° below normal; the highest was 80°, at Melville on the 3d, and the lowest, zero, at Farmerville on the 28th. The average precipitation was 5.50, or 0.94 above normal; the greatest monthly amount, 12.20, occurred at Oberlin, and the least, 1.88, at Lawrence. It is evident that the severe cold of the latter part of January did considerably less damage than was expected, even to the orange trees and tender vegetation, and none