

PRECIPITATION.

The precipitation during June was very unevenly distributed. Although slightly above normal in Georgia and the Carolinas and at some stations the amounts for the month exceeded 10 inches, there were no extensive regions covered by excessive rainfall. The precipitation was much below normal in Florida and the Mississippi area and also considerably so in Alabama. Several places in Georgia, Alabama, and Mississippi received less than 1 inch. The average for the entire district was 4.36 inches, or 0.70 inch below the normal. The greatest amount received during June was 12.05 inches at Georgetown, S. C., and the least 0.32 inch at Bay Saint Louis, Miss. There were on the average 10 rainy days.

Unsettled showery weather prevailed practically in all portions of the district for the first 10 or 12 days of the month. A brief period of fair weather followed, varying in length from a few days to a week, after which showers were again frequent but scattering. The number of thunderstorms was unusually large, being at some stations more than ever before recorded in one month; and as the heaviest rains were associated with local storms they occurred on various dates in each State, mostly about the 6th to 10th and on the 12th. The greatest 24-hour fall was 5.60 inches at Garniers, Fla., on the 9th, closely followed by 5.25 inches at St. George, Ga., on the 10th.

MISCELLANEOUS PHENOMENA.

Northeasterly winds prevailed in Virginia, southwest to west winds in the Carolinas and Georgia, and southerly winds in the States touching the Gulf. The wind movement was small, and average hourly velocity exceeding 10 miles only at the coast stations. Gales occurred as follows: Atlanta, 64 miles southwest on the 22d; Savannah, 42 miles southwest, 22d; Cape Henry, Va., 40 miles northeast on the 8th; and Pensacola, 40 miles northeast on the 28th.

The average number of clear days was 15, partly cloudy 9, and cloudy 6. The mean percentage of sunshine was low, the average for 18 stations being only 68 per cent. Meridian, Miss., and Anniston, Ala., reported the greatest amount of sunshine, 82 per cent, and Hatteras the least, 50 per cent.

Beautiful sunset colors were observed at Norfolk, Va., on the 30th.

Ten persons were killed by lightning during June in the district.

LOCAL STORMS.

Virginia.—Ruckersville. A severe hailstorm occurred on the 20th with much damage to crops. One man was killed by lightning.

South Carolina.—Mount Croghan, Chesterfield County. A severe storm of tornadic character occurred at 7 p. m. June 18, injuring one person and causing damage to property estimated at about \$5,000. Columbia.—A thunderstorm during the afternoon of June 29 caused damage approximating \$900. There was a brilliant display of lightning, and the flagstaff on the post office building was shattered, and a barn burned.

Georgia.—Severe local thunderstorms with high winds occurred on the afternoon of June 18 at Coolidge and Moultrie, during which houses were unroofed or blown down, and telephone and telegraph lines were prostrated.

A similar storm occurred at Atlanta on June 22, during which some large plate-glass windows were blown in.

Florida.—Severe local storms occurred in Leon and Gadsden Counties on the afternoon of the 18th, causing damage to crops and other property aggregating \$250,000.

RIVER CONDITIONS.

There were no unusual features pertaining to the rivers in the district during June. The stages averaged nearly normal at most places, the rivers as a rule being highest during the first half of the month and falling during the latter half. In the upper Pedee River in South Carolina, however, stages were highest during the last week. The Salkahatchie River was above flood stage at Broxton Bridge, S. C., from the 9th to the 15th, and the Santee at Rimini and Ferguson was slightly above flood stages about the 13th to the 15th. No other rivers in the district attained flood stages at any point.

SEVERE WIND AND HAIL STORMS IN FLORIDA.

By A. J. MITCHELL, Section Director, Jacksonville, Fla.

During the afternoon of June 18, 1913, between 4 and 6 p. m., a severe wind and hail storm accompanied by heavy rains occurred over considerable portions of Leon and Gadsden Counties, Fla., causing approximately \$200,000 damage, mainly, to tobacco, and \$50,000 damage to other property of various kinds. The distribution of pressure on June 18 was not favorable for the occurrence of tornadoes, and there is no distinct evidence that the storm was of that character.

The storm was first felt at Tallahassee at 4.30 p. m., lasting with maximum intensity until 4.52 p. m. The wind probably reached a velocity of from 60 to 70 miles an hour at Tallahassee, which seems to have been located somewhat to the east of the central path of the storm, as indicated by the shifting of the wind from northeast through east to southeast with diminishing force. Some observers assert that a roaring sound was heard and peculiar dark gyrating clouds were seen, followed by a red glow in the west.

It is evident that the storm was the result of marked convectional conditions that had persisted for several days, and on the day of its occurrence afternoon temperatures of from 100° to 102° were registered in the district. During the same afternoon thunderstorms prevailed over most of Leon and Gadsden Counties, moving in a general direction from southeast to northwest. The storm required about 2 hours to traverse the distance from Tallahassee to Quincy, a distance of about 20 miles.

The greatest damage occurred in the vicinity of Tallahassee and Quincy. At the former place large trees were blown down; tobacco barns were razed, and their contents practically ruined; and a considerable acreage of "shaded" tobacco was lost as a result of the wind and hail. The wind blew off the protecting latticework, exposing the plants to the cutting effect of the hail, which ranged in size from one-half to three-fourths inch in diameter or more, and practically destroyed the crop.

In the city of Tallahassee one building was blown down and another moved from its foundations. All telephone and telegraph companies suffered severe losses. Crops in the vicinity were seriously damaged, including both corn and cotton.