

and 600,000 to 1,000,000 feet of logs were carried out of the river.

Numerous plantations are already saturated with water from the threatening river.

At Shreveport, Louisiana, 17th, the Red river rose rapidly, caused by the swollen condition of its tributaries. Much damage was done to the cotton crop, and many farmers along the river have plowed up the cotton and are planting corn and millet.

Reports from Bolivar county, Mississippi, dated May 22d, state that 7,000 acres of land are under water in that county.

At Palestine, Texas, on the seventh, heavy rains caused washouts on the railroad; two bridges and trestle-work near Buffalo creek were destroyed.

At Saint Vincent, Minnesota, 4th, the lower part of the town was about twenty inches under water. On the eleventh the water receded but on the fifteenth again rose, and reached the habitations, causing several families to vacate their dwellings. The average depth of water throughout the town was from three to four feet, except in the extreme northern part, which was not overflowed. The rise being gradual, the people were enabled to secure their property and the damage was consequently slight. The overflowed region extended from Breckenridge, Minnesota, to Morris, Manitoba, about twenty-five miles north. No damage occurred to crops in the vicinity of Saint Vincent, as the average width of the flood on either side of the river, contiguous to the town, did not exceed one mile.

Keokuk, Iowa, during the sixth and seventh, the Skunk and Des Moines rivers rose rapidly, washing out railroad tracks and causing considerable damage.

HIGH TIDES.

- New London, Connecticut, 12th, 26th.
- Little Egg Harbor, New Jersey, 11th, 12th.
- Fort Macon, North Carolina, 15th.
- Hatteras, North Carolina, 14th, very high tide; overflowing the greater portion of the island.
- Portsmouth, North Carolina, 14th.
- Cape Lookout, North Carolina, 13th, cape nearly covered.
- New River, North Carolina, 13th, highest tide since 1876.
- Indianola, Texas, 9th.
- Flushing, New York, very high tides on 10th, 11th, 12th.
- Delaware Breakwater, 13th.
- New York, 11th, 12th, highest tides ever known, causing great damage at various watering places along the coasts of Long Island and New Jersey.

TEMPERATURE OF WATER.

The temperature of water, as observed in rivers and harbors at Signal Service Stations, with the average depth at which observations were taken, is given in the table on the right-hand of chart ii. In the first column of the table is given the maximum temperature observed during the month; and in the second column the minimum temperature observed during the same period.

The following table gives the highest and lowest temperature of water at the several stations, with the range of water temperature, mean temperature of the air at the station, and the depth of water at which the observations were taken. It will be seen that the greatest ranges of water temperature occurred at the following stations: Chincoteague, 21°; Galveston, 19°; New Haven, 16°; Alpena and Toledo, 15°.

Temperature of Water for May, 1882.

STATION.	Temperature at bottom.		Range.	Average depth in feet and inches.	Mean temperature of the air at station.
	Max.	Min.			
Atlantic City.....	59.3	51.2	8.1	5 7	73.2
Alpena.....	55.	40.	15.0	12 0	44.4
Augusta.....	73.9	68.	11.3	6 10	69.7
Baltimore.....	67.	56.	12.0	9 11	60.1

Temperature of Water for May, 1882—Continued.

STATION.	Temperature at bottom.		Range.	Average depth in feet and inches.	Mean temperature of the air at station.
	Max.	Min.			
Boston.....	54.5	45.2	9.3	25 0	49.8
Buffalo.....	57.	46.	11.0	9 11	49.3
Burlington.....					
Cedar Keys.....	84.	70.	14.0	9 2	75.2
Charleston.....	77.4	67.4	10.0	41 9	71.7
Chincoteague.....	70.	49.	21.0	6 0	56.2
Cleveland.....	59.1	48.6	10.5	14 0	51.9
Detroit.....	57.	45.	12.0	24 3	53.2
Duluth.....	45.	36.	9.0	14 11	46.1
Delaware Breakwater.....	63.5	51.	12.5	8 7	55.0
Eastport.....	39.7	33.8	5.9	15 8	43.5
Escahama.....	52.	40.	12.0	15 0	46.6
Galveston.....	83.	64.	19.0	14 8	75.2
Grand Haven.....	58.5	46.5	12.0	19 0	51.9
Indianola.....	82.4	71.7	10.7	9 8	75.8
Jacksonville.....	81.	73.	8.0	18 0	74.6
Key West.....	57.2	47.8	9.4	17 1	80.0
Marquette.....	46.9	38.9	8.0	10 8	46.0
Millwaukee.....	51.5	42.6	8.9	8 0	48.7
Mobile.....	75.5	69.0	6.5	16 0	72.6
New Haven.....	63.2	47.2	16.0	14 9	51.3
New London.....	54.	46.	8.0	13 2	51.5
Newport.....	55.1	43.9	11.2	10 9	49.8
New York.....	59.	48.5	10.5	22 7	53.5
New Shoreham.....	53.8	44.8	9.0	9 4	48.9
Norfolk.....	70.	60.	10.0	16 11	63.0
Pensacola.....	77.7	72.	5.7	17 9	72.8
Portland, Me.....	48.5	40.5	8.0	19 1	51.5
Portland, Oreg.....	58.8	50.	8.8	76 4	56.3
Port Eads.....	70.5	67.	3.5	9 9	74.1
Provincetown.....	53.5	44.	9.5	14 0	48.0
Punta Rasa.....	87.	76.6	10.4	11 8	76.7
Sandusky.....	59.7	48.5	11.2	10 0	52.8
Sandy Hook.....	56.6	47.9	8.7	2 3	54.3
San Francisco.....	58.6	53.6	5.0	29 4	56.2
Savannah.....	78.8	69.9	8.9	18 3	72.5
Smithville.....	75.	67.	8.0	10 0	68.0
Thatcher's Island.....	56.6	40.5	16.1	7 0	47.8
Toledo.....	65.	50.	15.0	12 1	53.4
Wilmington.....	74.7	67.	7.7	13 0	68.5

ATMOSPHERIC ELECTRICITY.

AURORAS.

No remarkable auroral displays were observed during the month. The most important display occurred on the seventeenth, and was reported by stations in New England, Alpena, Michigan, and Bismarek, Dakota, as follows: Portland, Maine: A faint auroral light visible from 9 to 11 p. m. Gardiner, Maine: Faint aurora visible from 10 p. m. to 12.30 a. m. of the eighteenth; Mount Washington: Faint aurora visible from 10.15 p. m. until 12.20 a. m. of the eighteenth, extending from northwest to northeast, and to an altitude of 15°; Burlington, Vermont: From 11 to 11.40 p. m., aurora consisting of a dark segment with a few well-defined streamers; Alpena, Michigan: From 8.40 to 11.40 p. m., aurora consisting of a diffuse light in the northern sky, with a few faint streamers shooting towards the zenith; Bismarek, Dakota: Auroral light visible from 9 to 11 p. m.; beams reaching altitude of 15° were observed from 9.30 to 10 p. m. Other displays have been reported as follows:

Antrim, New Hampshire, 5th; Aurora observed during the evening.

New Corydon, Indiana, 9th; Faint aurora observed from ten p. m. until midnight.

Pensacola, Florida, 9th, from 8 to 9.15 p. m.: An aurora of whitish color, sufficiently bright to attract the attention of all persons on the streets, was observed between the north and northwest. The presence of clouds prevented its extent from being more fully determined.

Bangor, Maine, 10th; Aurora with streamers at 9 p. m.; was more brilliant at 11 p. m.

Newport, Vermont, 10th; Aurora during the evening.

Vevay, Indiana, 10th: Faint aurora, visible from 10 to 11.30 p. m.

Eastport, Maine, 11th, from 11 to 11.40 p. m.: Aurora of bright straw color, appearing in bright flashes and fading away at intervals. In the northwest, streaks of a deep crimson color were observed.

Gardiner, Maine, 11th, 8 p. m.: Bright aurora; obscured by clouds at 10.30 p. m.