

Weather Bureau, were distributed to all interests in this section. Snow fell during the afternoon and night to a depth of 6 inches, and drifted badly. 27th. Snow ended in the morning, a total depth of 9.7 inches having fallen. Northwest gale all day, with velocities ranging from 40 to 65 miles. All surface cars were obliged to suspend traffic, with the exception of one cable line in New York. Of the railroad lines centering in New York only two, the New York, New Haven and Hartford Railroad, and the Long Island Railroad were blocked. These are nearly parallel lines and were directly in the path of the storm. The tracks were covered, in places, with snow to a depth of 16 feet. Other lines were delayed, but owing to the timely warnings sent out by the Weather Bureau they were enabled to take precautionary measures whereby the delay in moving trains was minimized. Twenty ocean steamers were compelled to anchor in the upper bay, where they remained during Saturday night on account of the snow and gale. The fleet of sound steamers remained at the various docks about 20 hours waiting for the storm to abate.

The following are among many editorial comments made by the daily press regarding this storm, and the action of the Weather Bureau in forecasting its destructive character.

New York Times, December 1, 1898:

In leaving Boston Saturday night the captain of the *Portland* took chances which no man in his position had a right to take. From a source that warranted implicit belief, he, like every other captain on the Atlantic coast, had received warning that a storm of exceptional severity would strike him as soon as he reached open water, and he knew that his steamer, though well built and comparatively new, was of a type much better designed for entering shallow harbors than for encountering winter gales on as dangerous a coast as there is in the world. Despite all this, and, according to his employers, in defiance of implicit orders, he steamed out into the gathering tempest. Why? * * * Perhaps he belonged to the class, once large, but now small and rapidly disappearing, the members of which sneer at the Government Weather Bureau, and prefer to rely on old "signs" instead of on new science as the basis of meteorological prophesy. Perhaps, a score of things. Only this is certain, he should not have sailed, and he should not have been allowed to sail.

The Evening Star, Washington, D. C., November 30, 1898:

The full story of Saturday night's storm may never be told. Its deadly intensity is revealed by degrees in the wreckage which floats ashore, and perhaps in a few days some approximate estimate of the havoc then wrought on the New England coast may be approachable. Meanwhile it is clear that at least one great disaster marked the gale and that many lives were sacrificed. The steamer *Portland* went to pieces some time Saturday night or Sunday morning, so far out of her course as to show that the storm was of resistless strength and that it was the most criminal folly for the captain to put out from port. * * * At half past 10 on Saturday morning the Weather Bureau in this city wired to all its observers along the New England coast the following order:

"Hoist northeast storm signals; east to northeast gales, with heavy snow to-night."

The observers were also directed to warn all railroad and transportation interests of the coming of heavy snow throughout New England. The warning about the snow was particularly important. Often a ship can go to sea with comparative safety in the face of a storm if the air is not clouded, but when the snow is flying landmarks are obscured, lighthouses are useless, and the vessel is left to fate. * * * The *Portland's* captain ignored the official warning [which had been received some eight hours before sailing time], the gale then blowing, the heavy snow then falling, and the direct orders of his superior to keep in port. He carried with him to death over 100 people, who had no knowledge, presumably, of the desperate chances which he was taking. This tragedy serves to suggest that perhaps there may be some more positive method of preventing disasters in the face of solemn warning that danger is at hand. The traveling public ought to have some safeguard against this chance of death. A foolhardy commander should not be permitted to carry out to meet the hurricane his crew and passengers who rely upon his judgment. In many States the owners of ships which are put to sea in the face of the official danger warnings can not recover their insurance money. It may perhaps be possible for the States to go farther and take steps to actually prevent the sailing of vessels under such circumstances. However impracticable such a plan may appear at first glance, the circumstances of the *Portland's* wreck warrant the consideration of any suggestion tending to prevent repetitions of the tragedy.

Mr. William U. Swan, of the New England headquarters of the Associated Press at Boston, has submitted the following report in connection with this storm:

I was on Cape Cod on Tuesday after the storm and talked with many of the life-savers and others who were out in the blow, and they all

seemed to agree that nothing so severe has ever been experienced in that part of the country.

The heft of the storm seems to have been about the time or shortly after the center passed over the Cape, which is generally agreed to have been about 9:30 on Sunday morning. The sky at that time over the stretch between Chatham and Barnstable cleared off entirely and the wind died out. Fifteen minutes after it was blowing hard from the north, and it was at this time that the gale wrought the greatest destruction among the trees from Yarmouth to Middleboro. In this respect Sandwich seems to have suffered the most, for not only did the silver oaks, as they are called, go down, but great elms in the town of Sandwich were blown across the streets, and it was a day or two before the main street was passable.

I could not find that the storm center was seen at Provincetown, or anywhere north of Eastham, but from the direction of the wind it seems probable that the storm took a diagonal course over the Cape.

THE LAKE STORM OF NOVEMBER 9-11, 1898.

The severe gale which visited the Great Lakes from the 9th to the 11th was the culmination of ten days or more of severe weather, which was very disastrous to lake marine interests. In referring to the work of the Weather Bureau during this period the Buffalo News of November 13, 1898, remarked editorially, as follows:

The Government Weather Bureau has again demonstrated in the view of all the people of the Lake region its great and growing importance as a factor in the commerce and travel of the inland seas. During the past ten days the Great Lakes have been swept by a continuation of severe storms, the fury of which but few vessels could withstand, although the majority of these vessels are as large, staunch, and seaworthy as any of the ocean liners; yet but comparatively few casualties occurred, which was due to the timely warnings of the Weather Bureau, and it is no exaggeration to say that in this instance alone millions of dollars worth of merchandise, hundreds of vessels, and probably many lives have been saved by the forecasts.

COLD WAVE WARNINGS.

The most important cold wave of the month overspread Montana during the 19th, extended over the upper Missouri Valley, with temperature below zero in Montana during the 20th, and carried the line of freezing weather, with snow and high northerly winds, as far south as Oklahoma during the 21st. By the morning of the 22d this cold wave had reached the western Lake region, the lower Ohio Valley, and the Middle and west Gulf States, with freezing weather as far south as San Antonio, Tex., and by the morning of the 23d it had reached the Allegheny Mountains, and freezing weather was noted as far south as Mobile, Ala. The morning of the 24th the minimum temperature at New Orleans and Mobile was 34° and 30°, respectively. On the latter part of the month continued cold over the eastern half of the country, and freezing temperature was reached along the south Atlantic coast on the morning of the 27th. Full and ample warning of the approach of abnormally low temperature, together with statements of the probable continuation of cold calculated to prove injurious to agricultural and commercial interests was telegraphed to all the districts visited except extreme northern Montana.

CHICAGO FORECAST DISTRICT.

The unusually stormy period in the upper Lake region continued over from October. The "northeaster" of the 9th and 10th was primarily due to the development of an area of high barometer of great magnitude over the Lake region. During the 9th a disturbance developed over the lower Mississippi Valley and moved in a northeasterly course, greatly increasing the force of the gale. Several vessels which had not heeded the warnings of the Weather Bureau were wrecked.

A severe "norther" and cold wave reached the eastern limits of the Chicago forecast district the evening of the 22d. Timely notice of its approach was given in the warnings issued