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UNH Climatologists Look to the Past

18th century diaries offer glimpse of weather in days gone by

By [Carmelle Druchniak](#)
UNH News Bureau

DURHAM, N.H. -- They just don't make snowstorms like they used to. Using local diaries dating back to the 1700s, University of New Hampshire climate researchers are finding that the size and frequency of modern-day big snowstorms don't measure up to those of previous centuries.

Readings from one such "weather watcher" diary will be presented as part of the 23rd Annual Conference of the Northeast Society for 18th-Century Studies held at UNH Dec. 9-12.

"An extreme snowstorm, which drops more than one foot of snow, used to occur at least annually," says Greg Zielinski, UNH research associate professor of earth sciences. "Now, those extreme events on average occur once every two years."

Zielinski and Barry Keim, UNH associate professor of geography and state climatologist -- both work within the [Climate Change Research Center](#), in the [UNH Institute for the Study of Earth, Oceans and Space](#) -- have reviewed personal diaries as part of the university's AIRMAP project (Atmospheric Investigation, Regional Modeling And Prediction), a program aimed at understanding New England weather history and tracking current and future climate trends. In addition to using state-of-the-art tracking instruments atop Mt. Washington and at other monitoring sites, AIRMAP researchers are spending time in libraries and historical societies, using traditional sources like personal journals and town histories to learn more about the weather of yesteryear.

And what weather it was.

The Great Snow of 1717 was considered the hallmark New England snowstorm until supplanted by the Blizzard of 1888, says Zielinski. The 1717 snow was produced by four storms in rapid succession from Feb. 27 to March 7, producing three to four feet of snow across most of southern New England.

According to a personal account from a New London, Conn., resident in a diary entry dated March 3, 1717: "Great Storm of snow, two sloops forced from their anchors ashore upon the rockes."

A Boston resident noted on March 8, "Deep snow on the ground hindered all three of our posts coming in... in some places between 6 and 14 feet deep." Another diarist wrote on March 12, 1717, "..the snow is said to be five feet deep on a level up in the country: we travel here altogether on snow shoes, horses not being able to pass."

On Cape Cod, poor Rev. Samual Treat, who died March 18, couldn't be buried for several days. "Finally an arch was dug in a huge drift through which he was borne to his grave."

Some saw divine wrath as a possible explanation for the snow. A Rev. Eliphalet Adams in New London, Conn., sermonized soon after the storm, "The Lord hath His way in the whirlwind and in the storm, and the clouds are the dust of His feet."

Zielinski says the diary that offered researchers the most "quantitative" research is Samual Lane's. He wrote from his home in Stratham from 1735 to 1801.

From his entries, Zielinski found that annual snowfall during this period averaged 58.5 inches. Durham currently averages about 55 inches.

The Lane Diary averaged one storm a year with more than one foot of snow, says Keim, who adds that today's average is one storm of this magnitude every other year.

Zielinski and Keim add that instead of snarled traffic and closed malls, our ancestors faced bigger challenges when a snowstorm dumped its load. These problems ranged from blocked roads for horse travel, massive livestock deaths and damage to ships and wharves that prevented shipping.

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