

Climate researchers employ tool from 1800s: Whaling logs

December 16 2015, by Mark Pratt



In this Tuesday, Dec. 8, 2015 photo, New Bedford Whaling Museum senior maritime historian Michael Dyer combs through the racks of whaling vessel log books in New Bedford, Mass. Maritime historians, climate scientists and ordinary citizens are coming together on a project to study 19th-century whaling ship logbooks to better understand modern-day climate change. The New Bedford Whaling Museum is transcribing and digitizing its logbooks as well as original data sources for this project, called Old Weather: Whaling. (AP Photo/Stephan Savoia)

Maritime historians, climate scientists and ordinary citizens are coming

together on a project to study the logbooks of 19th-century whaling ships to better understand modern-day climate change and Arctic weather patterns.

Whaling ships kept meticulous daily logbooks of weather conditions during their often yearslong voyages searching the globe for [whales](#), valued for their light-giving oil, said Michael Dyer, senior maritime historian at the New Bedford Whaling Museum, which is supplying much of the data.

Some logs include information about life on board, such as sailors falling overboard, or being disciplined for stealing or other transgressions, and of course, notations whenever whales are spotted. More important for this [project](#), they include precise longitude and latitude measurements, [weather conditions](#), the presence of icebergs and the edge of the ice shelf.

"If they're cruising in the Bering Strait and there's ice, there will be a notation in the logbook that ice fields are present," Dyer said.

The project, called Old Weather: Whaling, is led by the National Oceanic and Atmospheric Administration. The whaling museum is transcribing and digitizing its own logbooks, as well as original data sources from the Nantucket Historical Association, Martha's Vineyard Museum, Mystic Seaport in Connecticut, and the New Bedford Free Public Library.

The digitized logbooks are being posted online so ordinary "citizen-scientists" can help researchers sift through the vast amounts of information.



In this Tuesday, Dec. 8, 2015 photo, New Bedford Whaling Museum senior maritime historian Michael Dyer carries several whaling vessel log book from the racks in New Bedford, Mass. Maritime historians, climate scientists and ordinary citizens are coming together on a project to study 19th-century whaling ship logbooks to better understand modern-day climate change. The New Bedford Whaling Museum is transcribing and digitizing its logbooks as well as original data sources for this project, called Old Weather: Whaling. (AP Photo/Stephan Savoia)

The museum has about 2,600 whaling logbooks dating from 1756 to 1965, but the project so far includes just about 300 logbooks related to whaling trips to the Arctic from the mid-1800s to the first decade of the 20th century.

One entry from the San Francisco-based whaler *Beluga* during a two-year voyage to the Bering, Chukchi and Beaufort seas from 1897 to 1899 is typical of the information in the logs.



In this Tuesday, Dec. 8, 2015 photo, a copy station sits at the New Bedford Whaling Museum used for the digitization of source material in New Bedford, Mass. Maritime historians, climate scientists and ordinary citizens are coming together on a project to study 19th-century whaling ship logbooks to better understand modern-day climate change. The New Bedford Whaling Museum is transcribing and digitizing its logbooks as well as original data sources for this project, called Old Weather: Whaling. (AP Photo/Stephan Savoia)

"Lat. 61.19. Long. 175.42. Fast to the ice till 6 A.M. then made sail and worked to the N.E. at 8:45 A.M. Commenced steaming. Steamed till 1 P.M. then struck open water. Carrying topsail and fore and aft sails. Steering from N.N.W. to N.E. as the ice allowed. Wind light and variable first part. Latter part strong E.S.E. winds thick and snowing. Ther. 30. Bar. 29.60."

On a most basic level, the information from an old whaling logbook can

be compared to current conditions; for example, is there sea ice today in the places where whalers saw sea ice 150 years ago?

But the project is much more than that, said Kevin Wood, a climate scientist with NOAA's Joint Institute for the Study of the Ocean and Atmosphere at the University of Washington and a lead researcher on the project. By recovering as much weather data as possible, the information could help create sophisticated computer models of past climate and help predict future conditions.

He called it a "virtual time-traveling weather satellite."



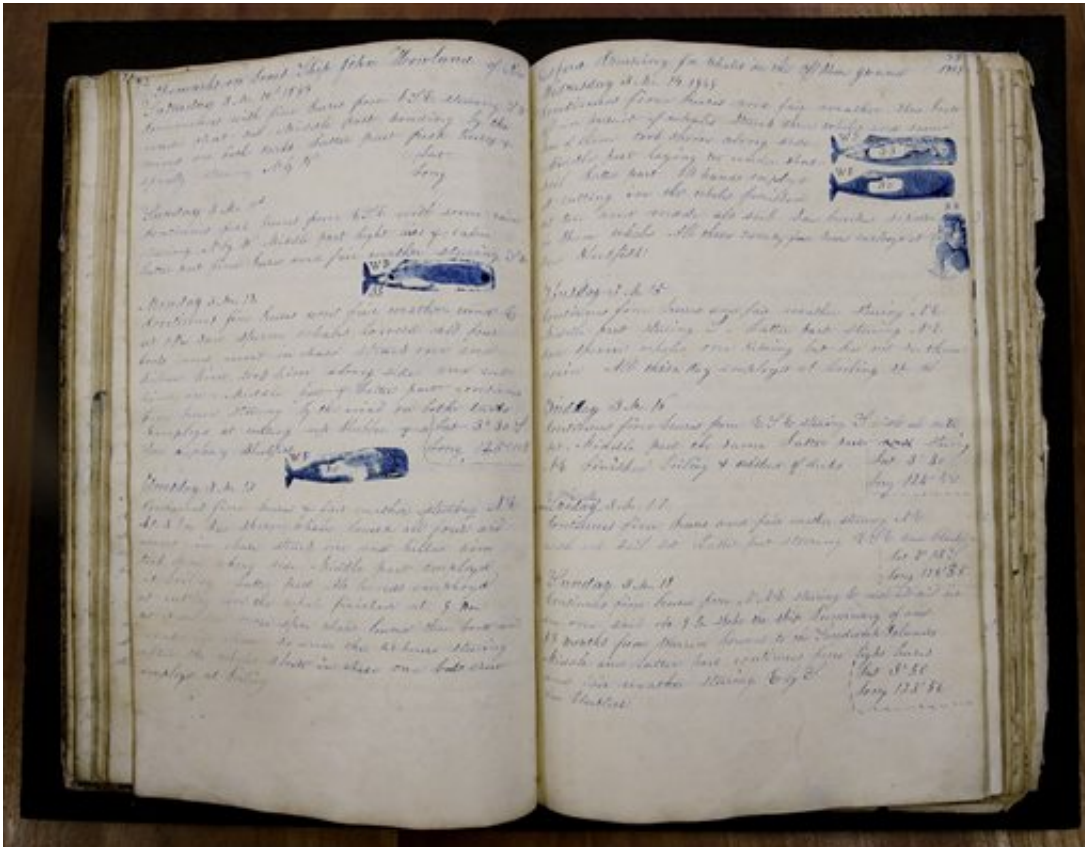
In this Tuesday, Dec. 8, 2015 photo, original source materials from the era of whaling sit in cases at the newly constructed archives at the New Bedford Whaling Museum in New Bedford, Mass. Maritime historians, climate scientists and ordinary citizens are coming together on a project to study 19th-century whaling ship logbooks to better understand modern-day climate change. The New Bedford Whaling Museum is transcribing and digitizing its logbooks as well

as original data sources for this project, called Old Weather: Whaling. (AP Photo/Stephan Savoia)

"We can build an enormously detailed reconstruction of the conditions at the time ... and we can we can understand how the climate has been changing over a longer period of time," Wood said.

The project launched this month is an offshoot of Old Weather, an ongoing partnership between NOAA and Zooniverse, the citizen science Web portal that is looking at logbooks of other vessels, including merchant and naval ships.

Sifting through the documents is where the public comes in. There is just too much data for a small group of scientists to pore over.



In this Tuesday, Dec. 8, 2015 photo, a log book dated Nov. 2, 1847 through July 21, 1851 from the whaling vessel "John Harland" sits at the New Bedford Whaling Museum in New Bedford, Mass. The John Harland's log book is from a nearly four year-long sperm whale voyage off the coast of Peru. Maritime historians, climate scientists and ordinary citizens are coming together on a project to study 19th-century whaling ship logbooks to better understand modern-day climate change. The New Bedford Whaling Museum is transcribing and digitizing its logbooks as well as original data sources for this project, called Old Weather: Whaling. (AP Photo/Stephan Savoia)

High-resolution images of historical documents, extracted data and related research products are available online, said Michael Lapedes, the museum's director of digital initiatives.

Already, the logbooks of more than 20 whalers are online. The project is

expected to take about a year, Lapides said.



In this Tuesday, Dec. 8, 2015 photo a door at the New Bedford Whaling Museum is adorned with a whale in New Bedford, Mass. New Bedford was known as the city that lit the world during the height of American whaling. (AP Photo/Stephan Savoia)

More information: Online: Logbook project: whaling.oldweather.org

Whaling museum: www.whalingmuseum.org

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