

STELLWAGEN BANK E-NOTES: *sanctuary news & events*

March 2015



Snow entombed the sanctuary's mailbox and backyard.
Photo: A. Smrcina

Record-Setting Snow Storms Bury Sanctuary Headquarters

The official Boston snowfall during the month of February broke records as being the greatest ever measured, and Scituate (just south of the Massachusetts capital and home to the sanctuary's administrative offices) had its fair share, too. Sanctuary staff plowed and shoveled immense amounts of the frozen precipitation into giant mounds that surround the campus. Due to hazardous weather and dangerous road conditions, the offices were closed for several days and many staff members met their responsibilities via telework.

See more snow photos on page 7.

<http://sanctuaries.noaa.gov/earthisblue.html>

View amazing ocean photos and interesting videos from across the sanctuary system at the Earth is Blue website.



earth is blue

NOTICE

The February Sanctuary Advisory Council (SAC) meeting, cancelled due to snow, will be rescheduled in April. Check the sanctuary website for updated information.

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www.facebook.com/SBNMS



www.youtube.com/user/SBNMS

<http://stellwagen.noaa.gov/>

Proposed expansion of right whale critical habitat incorporates entire sanctuary (plus a whole lot more)

Comment period now open



North Atlantic right whales skim feeding..
Credit: NOAA. Photo taken under NOAA
Fisheries Permit #605-1904

NOAA Fisheries has proposed an expansion of the designated critical habitat for endangered North Atlantic right whales in the northwestern Atlantic Ocean.

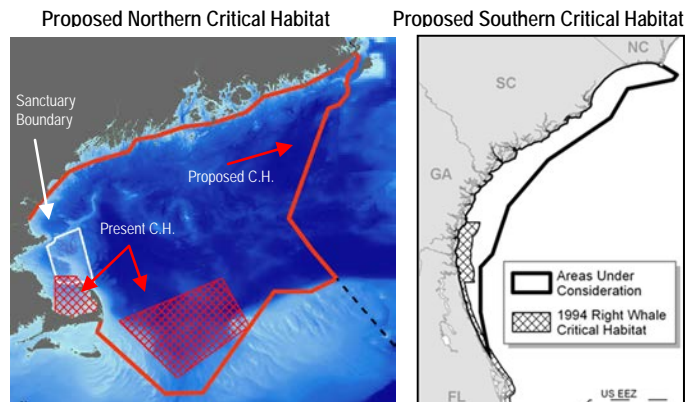
The area, proposed in compliance with a court order, would expand the critical habitat to roughly 29,945 square nautical miles, and includes northeast feeding areas in the Gulf of Maine/Georges Bank region (including the entire Stellwagen Bank National Marine Sanctuary) and calving grounds from southern North Carolina to northern Florida.

Critical habitat is a term that identifies geographic areas containing physical and biological features essential to the conservation of a listed species. Although the proposed rule does not include new restrictions or management measures for commercial fishing operations, the expansion would heighten awareness of this critically endangered species.

Federal agencies conducting funding or permitting activities that may affect these areas would be required to consult with NOAA Fisheries to evaluate whether the actions would affect the habitat and to what degree. The goal is to avoid or reduce impacts to the physical and biological features that define critical habitat for the whales.

Studies over the past 20 years, including work by sanctuary scientists, have greatly increased understanding of right whale ecology, leading to this proposed expansion of the habitat delineation.

In northern feeding areas, the whales strain the water for copepods (tiny planktonic crustaceans). In southern waters, the habitat supports calving and nursing with calm sea surface conditions, sea surface temperatures in the 45-63 degree F range, and water depths of 20-92 feet.



PUBLIC COMMENT PERIOD: FEB. 20-APRIL 20

NOAA Fisheries is seeking public comments on the proposed expansion of the critical habitat for North Atlantic right whales.

Mail: Assistant Regional Administrator
Protected Resources Division
NMFS, Greater Atlantic Regional Office
55 Great Republic Drive
Gloucester, MA 01930

Electronic submissions via the Federal eRulemaking Portal

In Memoriam: Jonathan Nash

The sanctuary was saddened to learn of the passing of Jonathan Brewster Nash, a newly installed member of the Sanctuary Advisory Council and a strong advocate of the environment. Jon died unexpectedly on February 13th at age 49.



Jon was an avid outdoorsman and sportsman who was committed to environmental sustainability and stewardship. He had recently accepted the alternate sportfishing seat on the sanctuary council. He had previously served as co-chair of the Board of Councillors for the Manomet Center for Conservation Sciences, on the Board of Trustees for the Sailor's Snug Harbor of Boston and in leadership capacities with Ducks Unlimited, Boston Flycasters, and as a founder of the Duxbury Yacht Club Anglers Club. Jon's expertise, experience and enthusiasm will be missed by all members of the Stellwagen Bank sanctuary family.

New Tool Aids U.S. Conservation and Management of Cetaceans

Researchers have identified more than 100 areas within U.S. waters that should be considered biologically important when making management and regulatory decisions about human activities that could affect whales, dolphins and porpoises.

The creation of Biologically Important Areas (BIAs) is described in a special issue of the journal *Aquatic Mammals*. Expert judgment was combined with published and unpublished data to identify 131 BIAs covering 24 species, stocks or populations in seven regions of the U.S. It is the first time so much information has been brought together for these species in one place and made available to scientists, managers, policymakers and the general public.

Sofie Van Parijs of NOAA's Northeast Fisheries Science Center was a guest editor of the special issue. Research in Stellwagen Bank National Marine Sanctuary contributed to the database.

In the East Coast region, feeding BIAs were identified for humpback, minke, sei, fin and North Atlantic right whales, all of which use sanctuary waters.

For more information on this report, go to: http://www.nefsc.noaa.gov/press_release/pr2015/cispt/ss1503/

Spotlight on our Sanctuary Students

Mackenzie Welch



Mackenzie was born in Houston, Texas, but is definitely a New Englander now. This Hanover (MA) High School senior and inveterate beach-goer loves to snorkel and is fascinated by marine life. "When I found out that I could have a profession related to the ocean, I knew I had found my ideal career," she said. Mackenzie noted that the sanctuary's goal of sustaining biodiversity while developing conservation programs that allow for compatible human uses was a draw. "I am looking forward to working at the sanctuary as a volunteer before starting my freshman year at college this fall."

Connor Ives



Connor Ives, a sophomore at Mass Maritime Academy, had one overarching thought as he completed his winter term sanctuary internship – "It's been one of the best experiences I've ever had and I never want to leave." A fisherman, diver and surfer, this ocean enthusiast is a huge supporter of the mission of the sanctuary. During his internship, Connor provided valuable contributions in restoring the sanctuary's RHIB (Rigid-Hulled Inflatable Boat), removing some of the masses of snow that covered the walkways, decks and stairs, and helped prep the boathouse for renovations to come later this year. Connor has narrowed down his plans for the future to two possibilities – a commission into the Coast Guard or working for NOAA. His summer plans include another internship placement at the sanctuary.

FOLLOWING FOOTPRINTS:

A whale of a tail across the ocean



Migration of whale documented in new sanctuary-initiated program

A picture may be worth a thousand words, but two pictures taken years apart have given scientists new insight into humpback whale migration patterns from the Gulf of Maine to the Caribbean Sea off Guadeloupe. In 2008, researchers in the Gulf of Maine photographed a humpback whale they named Footprints. Three years later, a different team of scientists spotted Footprints in the Caribbean Sea off Guadeloupe, although positive identification was not confirmed until late 2014.

The photo match was the first successful pairing of images under a new international citizen science humpback whale tracking and identification project called CARIB Tails, launched in 2014 by Stellwagen Bank National Marine Sanctuary. Sailors and yachters are the key contributors, especially in the remote and under-surveyed areas of the Eastern Caribbean.

Supported by the United Nations' Caribbean Environment Programme, CARIB Tails is collaboration between the sanctuary and its Sister Sanctuary Program – a network of marine mammal sanctuaries that protect the North Atlantic population of humpback whales in the U.S., Bermuda, the Dominican Republic, the French Antilles, and the Caribbean Netherlands (Dutch Antilles).

“We’re excited about the potential insights into humpback whale behavior that may develop from this program,” said Craig MacDonald, superintendent of Stellwagen Bank National Marine Sanctuary. “Photographs submitted through CARIB Tails may provide valuable data to extend our understanding of North Atlantic humpback whale migration patterns. We’re especially curious about where our whales go once they leave Stellwagen Bank.”

After decades observing whales off Massachusetts, the Gulf of Maine, the northwestern Atlantic and the Dominican Republic, scientists have been able to identify a number of individual humpback whales as they migrate north and south. But whales visiting the eastern Caribbean remain somewhat of a mystery.

CARIB Tails gives researchers in the eastern Caribbean the opportunity to learn whether humpback whales that congregate off their shores have been photographed in northern waters. A grant to CARIB Tails from Sister Sanctuary partners provided funding to Allied Whale in



(Photo at left): Footprints, a humpback whale, was photographed in the Gulf of Maine in 2008. Image courtesy of Center for Coastal Studies. (Photo at right): The same whale was photographed in the French Antilles in 2011. Note the "trail" of narrow marks on the right fluke that resemble tracks. Photo courtesy AGOA Marine Mammal Sanctuary of the French Antilles. The match gives evidence of this animal's long-distance migratory path.



Bar Harbor, Maine (custodians of the North Atlantic Humpback Whale Catalog database) for whale fluke photo identification.

"Yachters and cruisers have a wonderful opportunity to assist researchers by taking photographs of the whales they see during their travels," said Nathalie Ward, founder of CARIB Tails and external affairs coordinator at Stellwagen Bank National Marine Sanctuary. "Photos of the undersides of the tail provide distinctive identification information that can contribute critical information to protect these animals beyond national borders."

The 2008 photograph of Footprints in the northern feeding grounds, taken by the Center for Coastal Studies, had been logged into a long-term database of North Atlantic humpback whales. Three years later, members of Association Evasion Tropicale, a humpback whale research organization in Guadeloupe and a science partner to AGOA Marine Mammal Sanctuary in the Caribbean's French Antilles, captured an image in the southern breeding/calving grounds. The photo was one of a batch from the eastern Caribbean awaiting identification and inclusion into the North Atlantic Humpback Whale Catalog.

With the new project funding, experts at Allied Whale were able to confirm that the two photographs were of the same whale. This was done using the distinct pattern on the underside of its right fluke (a lobe of the tail), consisting of a trail of black marks, probably scars of some kind.

Those identifying marks had been the inspiration for the animal's name – Footprints.

"The movements of humpback whales as they travel across the North Atlantic is a complex puzzle," said Peter Stevick, senior scientist with Allied Whale. "Finding that an animal like Footprints has been in two areas that are more than 1,500 miles apart help to fill in a piece of that puzzle." Allied Whale staff review and catalog identification photographs taken in all areas of the North Atlantic Ocean.

CARIB Tails' citizen science initiative also resulted in the program's second match – this time for a whale named Face-Off. This whale had previously been photographed on Stellwagen Bank in 2007, 2009 and 2013. A CARIB Tails submission from the British Virgin Islands provided the migration link. The very first citizen scientist submission came from Saba in the Netherland Antilles; this and three other photos have been deemed to reveal new, unnamed whales.

continued on next page



A NASA satellite photo shows the earth from space; stars indicate the general vicinity of the Gulf of Maine and the French Antilles (migration points for the humpback whale *Footprints*..

FOLLOWING FOOTPRINTS (continued from page 5)

“Humpback whales have been seen in the waters of the eastern Caribbean for hundreds of years, but we are only recently recognizing the importance of these animals to our local history and economy,” said Amandine Eynaudi, manager of AGOA marine mammal sanctuary. “Through CARIB Tails we will strengthen our links to our Sister Sanctuaries and better understand the travels of these whales when they leave our waters. We are excited about this first concrete link of humpbacks between AGOA and Stellwagen Bank, our U.S. counterpart.”

Researchers in New England have been identifying and naming humpback whales for more than 40 years. To date, there are about 8,000 individuals in the catalog. Scientists estimate that today’s North Atlantic humpback whale population numbers conservatively about 12,000, with approximately 1,000 feeding primarily in the Gulf of Maine, including Stellwagen Bank. There are four other major feeding areas in northern waters including Canada, Iceland, Greenland and Norway. All of these whales congregate in the Caribbean and move among the islands in the winter months.

“This joint push towards identifying more whales will hopefully also help to solidify indications of links with the Northeastern Atlantic humpback whale populations,” said Paul Hoetjes of the Caribbean Netherlands “These matches may demonstrate the need to protect humpback whales around Iceland as well and even as far away as northern Europe.”

To learn more about the CARIB Tails project or to submit whale tail photos taken in the eastern Caribbean, go to: <http://www.caribtails.org>.

CALENDAR LISTINGS

March 28: *Whales in Your Backyard*, family program at the Gus Cnty Recreation Center, Falmouth, MA. 1-3pm

April 1: Aviation and Maritime STEM Education Expo, sanctuary exhibit at Boston Logan International Airport

April 11: Maritime History Symposium: Proving It: Maritime Investigations and Research
Maine Maritime Museum, Long Reach Hall.
SBNMS Maritime Archaeologist Matthew Lawrence will present “*Sailing Tombstones: Granite Trade Shipwrecks in Stellwagen Bank Sanctuary*”

You Said It?

“You Said It!” – an interactive activity in two parts.

1. Readers are invited to submit their guesses (or informed beliefs) about the pictured event, item and/or place. The first person to email us the correct answer will receive a sanctuary poster.
2. Readers can write their own humorous captions – the funnier the better (but please refrain from crude, sexist or other inappropriate language). Sanctuary staff will vote for their favorite selection; the winning entry will be posted in the following issue of *E-Notes*. Again, the winner gets a sanctuary poster.

Winning selections (1. real-life caption and 2. humorous caption) will run in the following issue.

March 2015 Photo



Submit your entries to: stellwagen@noaa.gov. In the subject line of your email write: November (real or humorous) caption. Include your name and mailing address in the body of the email text along with your caption.

December 2014 Answers

REAL:

The Great Shearwater, one of the more common summer seabirds in the sanctuary, cannot easily get up into the air from the sea surface. Its webbed feet provide wide paddles that help increase speed and provide stability as its strong wings give thrust for liftoff.



HUMOR: “I’m late, I’m late for a very important date.”
“Whoa. What happened to the runway?”



Snowy Scituate

(clockwise from top left) Intern Connor Ives stands on the snow covered deck of the boathouse with ice chocked Scituate Harbor in the background; snow covered the shrubs and handicapped walkway at the main building's entrance; visitors to the sanctuary stand near an impressive snow drift between the main building and meeting annex while burying the mailbox. Photo credits: Anne-Marie Runfola, Anne Smrcina, Ben Haskell.





Massachusetts Marine Educators K-12 Marine Art Contest



DIVISIONS:

Elementary (K-4)
Middle School (5-8)
High School (9-12)
Computer Graphics
(all grades)
Scientific Illustration
(all grades)

Deadline: May 1, 2015



SPONSORS:

MA Marine Educators
New England Aquarium
Provincetown Center for
Coastal Studies
Whale and Dolphin
Conservation
Stellwagen Bank National
Marine Sanctuary



THEME: Amazing Ocean Creatures of Stellwagen Bank National Marine Sanctuary

Celebrating the marine biodiversity of New England's national marine sanctuary

ART CREDITS:
#0fish by Sayra Rivera,
Greater Lawrence Tech HS;
Harbor Seal by Milan S.,
Pierce MS, Milton; Waves &
Bluefin Tuna by Deanna
Longo, Old Colony Reg Voc
Tech HS, Rochester;
Copepod by Michael N.,
Provincetown Schools;
Octopus, Gulf & Black Sea
Bass by Charles A., Lincoln
School Extended Day,
Brockline; Ocean Sunfish
by Luke Sammons, Norfolk
County Agricultural HS.

For complete rules and an entry form, go to: http://stellwagen.noaa.gov/news/pdfs/mme_artcontest_rules_2015.pdf

Student Art Exhibit Installed at JFK Federal Building in Boston

An exhibit of the winning art from the 2014 marine art contest has been installed at the JFK Federal Building in Government Center, Boston. The show will run until the end of March, then move to the Cape Cod National Seashore's Eastham Visitor Center.

NATIONAL MARINE SANCTUARY SYSTEM



Scale varies in this perspective. Adapted from National Geographic Maps.

National Oceanic and Atmospheric
Administration

National Ocean Service

Office of National Marine Sanctuaries

Gerry E. Studds Stellwagen Bank
National Marine Sanctuary



<http://stellwagen.noaa.gov/>