

Amy Meloski, Research Vessel *Auk* captain, took this sunset photo over the sanctuary during a January cruise to refurbish acoustic recording equipment that is part of a major research project to understand our nation's ocean soundscape.

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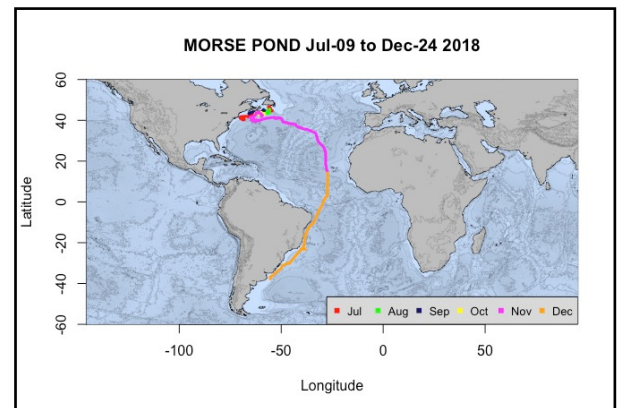
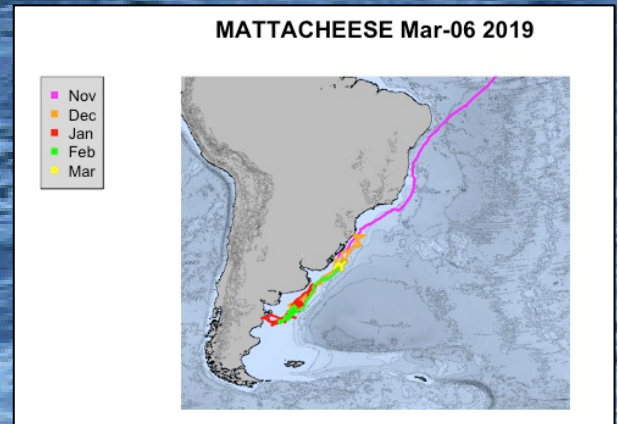
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EDITOR: Anne Smrcina

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# One is the loneliest number

Only Mattacheese's tag continues to transmit data



Great shearwater MORSE POND's tag stopped transmitting on Dec. 29, but as of publication date, Mattacheese's tag keeps on ticking. Maps: NOAA/SBNMS

The 2018 contingent of nine satellite-tagged great shearwaters and one sooty shearwater logged a diverse mix of tracks, some for a few days and others over extended excursions. Morse Pond's tag failed at the end of December while over the Patagonian Shelf off Argentina. Only Mattacheese's tag continues to transmit (as of publication date), indicating that the bird is still wandering over that same shelf. Mattacheese flew to the southernmost location of the ten birds, roughly equivalent to the entrance of the Bay of Fundy in the Northern Hemisphere, but looks to be starting his northward trek.

Researchers named the birds after Cape Cod middle schools and plan on naming 2019 birds for other schools interested in following their travels. Contact [anne.smraina@noaa.gov](mailto:anne.smraina@noaa.gov) for 2018 bird data, tracking maps, and information about how you can get your school's name onto the list of potential names for 2019-tagged birds...

BIRD NAME	Species	Start Date	Last Date	Final Long.	Final Lat.	Duration
BARNSTABLE	GRSH	7/9/2018	12/13/2018	-38.70	-13.41	156.73
EDDY	GRSH	7/11/2018	7/12/2018	-70.09	41.46	1.44
MONOMOY	GRSH	7/9/2018	10/14/2018	-68.03	43.24	96.64
SANDWICH	GRSH	7/9/2018	7/23/2018	-66.09	44.57	13.67
<b>MATTACHEESE</b>	<b>GRSH</b>	<b>7/9/2018</b>	<b>3/6/2019</b>	<b>-52.36</b>	<b>-34.63</b>	<b>239.58</b>
VOLGENAU6	SOSH	7/9/2018	9/7/2018	-69.89	41.40	60.05
MORSE POND	GRSH	7/9/2018	12/29/2018	-56.19	-38.97	172.67
NAUSET	GRSH	7/9/2018	10/13/2018	-66.83	41.52	96.00
WAREHAM	GRSH	7/9/2018	9/27/2018	-70.01	43.37	79.79
C.C. LIGHTHOUSE	GRSH	7/9/2018	10/26/2018	-59.73	-41.59	108.63

Tag final locations in decimal Longitude/Latitude; Duration in decimal days; GRSH = Great Shearwater; SOSH = Sooty Shearwater  
Mattacheese's tag is the only active unit as of March 6 (in bold type)

## Another successful Christmas Bird Count

The 2018 Christmas Bird Count in Stellwagen Bank National Marine Sanctuary occurred on December 21. The sanctuary bird team jumped on the first available good-weather day in the official bird count calendar (understanding the vagaries of planning an at-sea project in the winter). National Audubon Society, which administers this international citizen-science effort, specifies that counts be scheduled between December 14, 2018 and January 5, 2019. Here are some of the highlights of the 2018 count:

- 2 Atlantic Puffins
- 25-30 Dovekies and Razorbills
- Large numbers of Common Murres
- Plentiful Black-legged Kittiwakes
- Herring and Black-backed Gulls
- No Northern Fulmars this year.



Dovekie in flight. Photo: Peter Flood

### Notes from the March 1 Stellwagen Sanctuary Seabird Stewards Cruise—

#### Many alcids, no gannets, and a dead dolphin

Sandwiched between days of inclement weather, the Stellwagen Sanctuary Seabird Stewards (S4) mid-winter cruise found a small window of opportunity on March 1. Despite short advance notice, six expert bird identification volunteers joined sanctuary staff on the Research Vessel *Auk* for the cy ocean voyage. The trip proved fruitful, according to Anne-Marie Runfola, S4 and volunteer programs coordinator. Among the trip observations were:

- Two tiny Atlantic puffins -- always a spotting challenge, even on the calmest seas (puffins here on the bank do not display the bright beak colors seen in breeding colonies);
- An Iceland gull;
- Hundreds of alcids, including razorbills, common murres and black guillemots, but no dovebies;
- No northern gannets, although in past years they were a common sight (researchers are interested as to whether there is any connection to a gannet die-off on Cape Cod in 2017); and
- A dead common dolphin with a satellite tag attached to its dorsal fin. A month ago, this animal had been a stranding victim, treated and released by the International Fund for Animal Welfare (IFAW). The *Auk* brought the animal back to shore for IFAW to necropsy. We will share results when available.



Art from the 2018 and 2017 Marine Art Contests: *Atlantic Puffins* by Joya W., gr. 4; *Common Murres* by Amy C., gr. 4; *Razorbill*, by Matthew Cahill, gr. 11. See page 10 for information about the 2019 art contest.

## Hopeful sign, but still concerns

As of press time, the total for North Atlantic right whale births in the 2018-2019 calving season stood at seven, according to NOAA Fisheries. Although this is a positive development, considering researchers did not spot any calves last year and only five in the previous year, the low numbers remain a cause for concern, since a birth rate of a dozen or more is necessary to maintain and increase the current population, estimated at only 411.

Acoustic buoys have recorded right whales in the sanctuary most months of the year, with most detections occurring in spring and fall. If whales behave as they have in recent years, a significant portion of the population should be passing through the sanctuary and feeding in Cape Cod Bay in upcoming weeks.

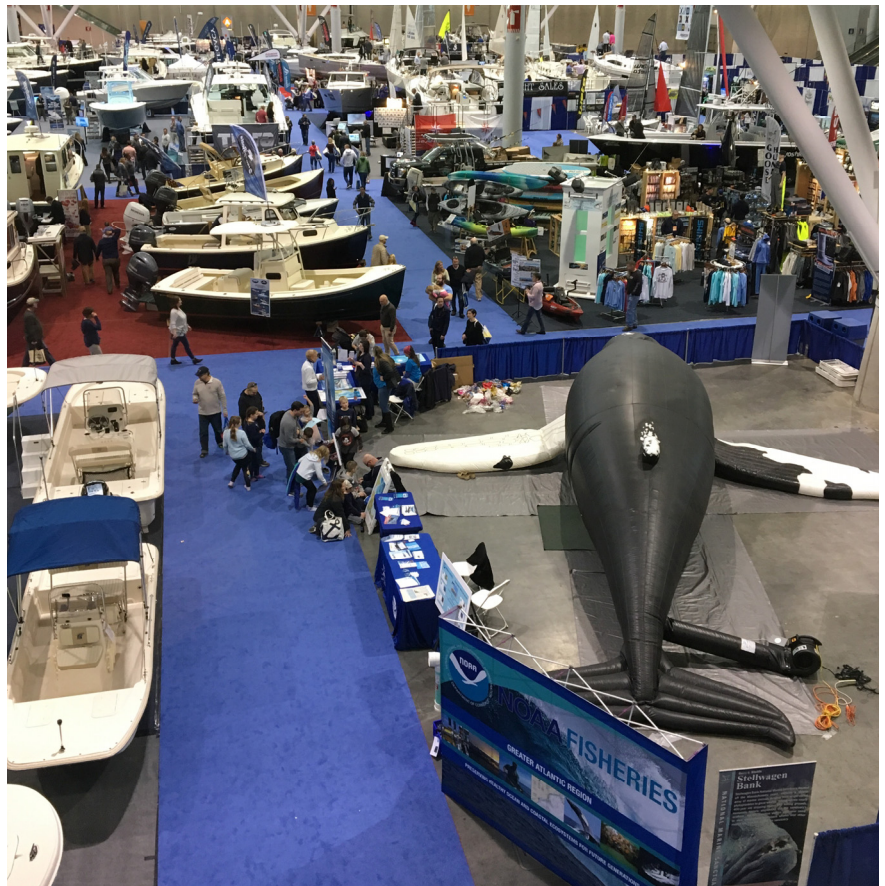
Federal and State law require boaters to stay at least 500 yards away from these whales. To learn more about right whales, visit the NOAA Fisheries page at <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>

Right whale mother and calf. Photo: Florida Fish and Wildlife Conservation Commission, taken under NOAA permit.

## Salt Visits N.E. Boat Show

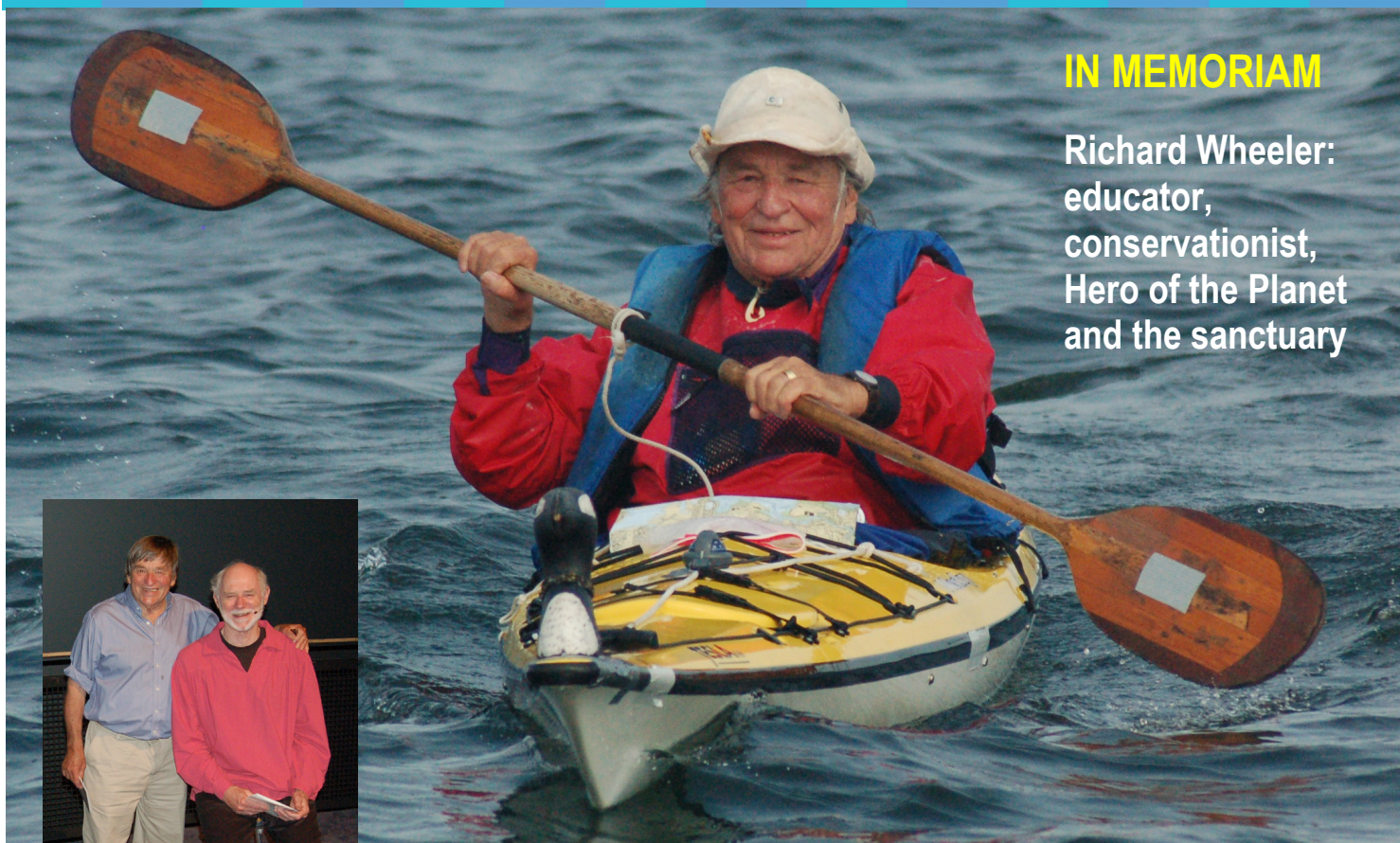
Salt, the sanctuary's life-sized, inflatable whale, rests on the main floor of the New England Boat Show surrounded by vessels during the 2019 exhibition. But, don't worry; despite the crowded conditions, vessel speeds never topped 0 knots and sanctuary staff and volunteers monitored all interactions.

The sanctuary, partnering with NOAA Fisheries (recreational fishing, port agents and protected species) and whale watch naturalists from Boston Harbor Cruises, provided information about safe boating around whales along with tips on sustainable fishing. The show offers an opportunity to talk to active and future boaters who may not be familiar with whale watching guidelines and recommended fishing practices. Over the course of the show, which ran from February 9-17, thousands of individuals, adults and children alike, learned about whale biology, behavior and recent research – many from inside the whale. Photo: Anne Smrcina, NOAA/SBNMS



## IN MEMORIAM

**Richard Wheeler:  
educator,  
conservationist,  
Hero of the Planet  
and the sanctuary**



Dick Wheeler sits in his well-traveled kayak with its figurehead of "Little Aukie." A multi-day paddle from Provincetown to Scituate, Boston and Gloucester in 2007, labeled "Aukathon," helped raise awareness of the sanctuary and its friends group. Photo: Anne Smrcina, NOAA/SBNMS.

Dick Wheeler (left) with Jay O'Callaghan (an internationally renowned storyteller) who created and performs a powerful 50-minute program entitled "The Spirit of the Great Auk," which tells the story of Dick's long kayak trip from Newfoundland to Cape Cod following the migration route of the extinct great auk. Photo: Anne Smrcina, NOAA/SBNMS

The ocean lost an important friend on January 31, 2019. Named a TIME Magazine "Hero of the Planet" in 1998, Richard ("Dick") Cross Wheeler was a dedicated educator, active environmental advocate, talented amateur artist, powerful long-distance kayaker, and devoted animal lover who took it upon himself to raise awareness of our society's treatment of marine resources and the state of the ocean.

At age 61, Dick Wheeler undertook a nearly 1,500-mile kayak trip from Newfoundland to Cape Cod following the migration route of the great auk. These flightless seabirds, once found in great numbers in the North Atlantic, were easily slaughtered in their breeding colonies for their meat, oil and feathers. A NOVA special, *The Haunted Cry of a Long-Gone Bird*, captured the tragic story of the now extinct seabird and Dick's 1991 journey. The auk's tale serves as a metaphor for the crash of the cod population off Atlantic Canada and the decline of marine species along the New England coast. The sanctuary produced a 20-minute educational video with a kayak-based Dick as narrator called *Bounty of the Banks*, which explained why cod and other species gravitate to certain areas in the ocean, such as Stellwagen, Georges and the Grand Banks. Dick's commitment inspired the naming of the sanctuary's research vessel *Auk*, where research efforts are focused on preventing the loss of other ocean species.

Dick devoted time to the sanctuary as a member of the advisory council and in support of educational and outreach programs, including the Cape Cod Bay/Massachusetts Bay sea kayak "Aukathon" with Ben Haskell, deputy superintendent. The two paddlers kayaked from Provincetown to Scituate and then on to Boston and Gloucester to raise awareness of the sanctuary's living resources. Note: The great auk probably visited Stellwagen Bank in the winter as its relatives, razorbills, murrelets, guillemots and Atlantic puffins, do today.

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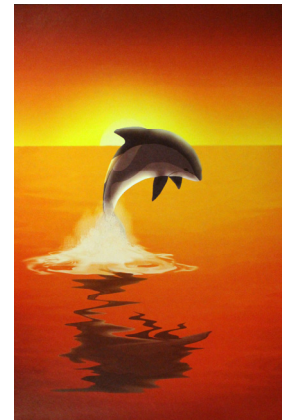
Richard Wheeler *continued from page 5*

Ben recalls that the experience was a humbling one. “Dick had three decades on me by age, but his skill, strength and knowledge of the ocean left me awestruck – and often far behind.” Ben noted, “Dick paddled with a graceful style and the utmost efficiency. He took me under his wing and I learned a lot from him over those few days on the water.”

Dick was a font of information and the teller of amazing tales – including his time with the Navy's underwater demolitions team (UDT) or frogmen (the forerunners of SEALs). This author, who worked with Dick on the “*Bounty of the Banks*” video and other educational programs for local students, found that work sessions often became story time. He recalled a UDT recruit test that required teams to row boats out into the surf. One after another, the boats swamped. “You had to read the waves and work with the ocean, not against it,” said Dick (whose team was able to meet the challenge successfully). It was this oneness with the ocean that led to success in the great auk journey, the sanctuary Aukathon, and other Cape Cod area environmental and educational fund-raising kayak trips.

Dick’s love of animal life extended from the ocean to his home, where one could find turkeys, chickens, ducks, tortoises, hedgehogs, cats, and Portuguese water dogs, among his eclectic menagerie. His generosity and enthusiasm were contagious, and the sanctuary is thankful that we were able to benefit from his selfless efforts. We will miss him.

-- Anne Smrcina, *E-Notes* editor and sanctuary education coordinator

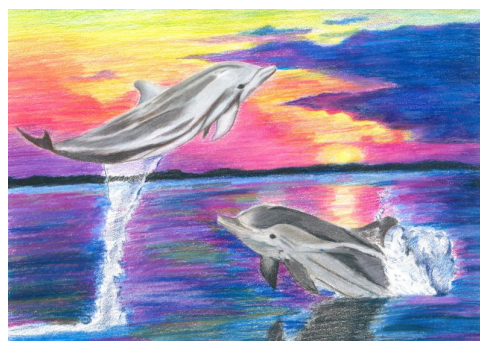


Atlantic White-Sided Dolphins: (left) Lucy Meng, gr. 10; (middle top) Gray Thomas, gr. 10; (right) Fallon Mello, gr. 11; (below) Irene Ji, gr. 10.

### March is Dolphin Awareness Month!

Dolphins (primarily Atlantic white-sided dolphins and common dolphins) are among the marine mammals that visit sanctuary waters. Keep their home clean by refraining from dumping waste materials overboard and containing your litter for shore-side disposal.

Check out some wonderful dolphin art submitted in the 2016-2018 marine art contests. You can view all award-winning and honorable mention winners at <https://stellwagen.noaa.gov/pgallery/kidscorner.html>



Leaping Dolphins: (above right) Xinyao Chang, gr. 11; (right) Lingfeng C., gr. 3; Atlantic White-beaked Dolphins: (left) Julia Tang, gr. 10; Bottlenose Dolphins: (far left) Matthew Q., gr. 4;





Great Shearwater. Photo: Rob MacDonald

## Mass Audubon honors Dave Wiley

He is well known internationally for his humpback studies, but now Dr. David Wiley, the sanctuary's research coordinator, is gaining recognition in seabird circles. On March 3, Gary Clayton, president of Mass Audubon, the state's largest nature conservation nonprofit, awarded the organization's annual Hemenway + Hall Conservation Award to Dave. The ceremony took place during the 27<sup>th</sup> annual Birders Meeting in Worcester.

Dave's recent seabird project involves leading a team of researchers studying the movements of great shearwaters in their feeding grounds and taking various physiological samples to determine animal health, age, and diet. These studies may provide early indications of the condition of the bird's environment (the canary in the coal mine theory). The birds serve as a proxy for whales as well for sanctuary management and resource protection.

The Hemenway + Hall Award recognizes and celebrates individuals or organizations whose research and related ecological successes have achieved significant and lasting wildlife conservation benefits. The award is named for Mass Audubon founders Harriet Hemenway and Minna Hall, who in 1896 organized a national campaign that succeeded in ending the commercial slaughter of bird species for the millinery trade while inspiring broader public support for wildlife conservation in general.

"Just as our founding mothers understood more than a century ago that all wildlife species warrant protection, Dave is committed to understanding and protecting our seas and the amazing and diverse life they support," noted Mass Audubon's Clayton.

A sanctuary booth at the meeting attracted swarms of birders interested in learning about our research and volunteer seabird steward program.



(Top photo) Dave Wiley holds the 2019 Hemenway + Hall plaque awarded to him by Gary Clayton, President of Mass Audubon. Photo courtesy of Mass Audubon. (Bottom photo) Dave gets ready to release tagged great shearwaters in the sanctuary. Photo: Anne-Marie Runfola, SBNMS

## NOAA, recreation industry to strengthen sustainable fishing and boating

Recreational fishing and boating are enormously popular American pastimes, an economic force, and a bridge to conservation. In recognition of the importance of these activities to coastal economies, NOAA today announced a formal partnership with leading industry and resource management groups. This partnership aims to strengthen collaboration promoting sustainable, long-term recreational fishing and boating opportunities in federal waters, including national marine sanctuaries.

The formal agreement is between [NOAA's Office of National Marine Sanctuaries](#), [NOAA Fisheries](#), the [National Marine Manufacturers Association](#), the [American Sportfishing Association](#), the [Association of Fish and Wildlife Agencies](#), and the [Recreational Boating and Fishing Foundation](#). The agreement is intended to help communities realize greater social and economic benefits from sustainable recreational fishing and boating and inspire momentum for a healthy ocean.

The success of many businesses, millions of dollars in sales, and thousands of jobs directly depend on thriving national marine sanctuaries – iconic destinations that help support sustainable blue economies.

For many coastal communities, recreational anglers and boaters are the lifeblood of the local economy, supporting bait and tackle shops, fishing guides, charter boats, boat sales, restaurants, hotels, and other businesses. Across all national marine sanctuaries, about \$8 billion annually is generated in local, coastal, and ocean dependent economies from various activities, including recreation and tourism.

In 2016, saltwater recreational fishing nationwide supported 472,000 jobs, generated \$63 billion in sales impacts across the economy, and contributed \$39 billion to the gross domestic product. The National Marine Manufacturers Association estimates that the recreational boating industry contributed \$170.3 billion in economic activity to the U.S. economy in 2018.

To read the full text of the agreement, go to <https://sanctuaries.noaa.gov/media/docs/20190227-rec-fishing-boating-moa.pdf>

*This article was adapted from an Office of National Marine Sanctuaries web story*



### Recreational fishing funding opportunity planned for 2019

The National Marine Sanctuary Foundation, with the assistance of Stellwagen Bank National Marine Sanctuary, will offer another round of recreational fishing funding for 2019. Keep checking our newsletters, website and social media tools for a request for proposals in March...

Through this program, local groups can work to address conservation issues, such as bycatch, barotrauma and interactions with whales, or develop education programs to heighten awareness of the sanctuary and sustainable recreational fishing practices.

The sponsoring organizations expect awards to range between \$500 and \$3,000 each, totaling \$10,000 in available funding. The projects must be completed within one calendar year.

Contact [anne-marie.runfola@noaa.gov](mailto:anne-marie.runfola@noaa.gov) for more information regarding sanctuary recreational fishing projects.

### 2018 Recipients

**Educational Outreach about Best Practices to Minimize Mortality from Recreational Discards in the Sanctuary**  
On the Water Media with Massachusetts Division of Marine Fisheries

**15th Annual Brockton High School Deep Sea Fishing Trip**  
Brockton Public Schools.

**At the Helm of Conservation: A Program to Promote Safe Boating around Whales**  
Whale and Dolphin Conservation with NOAA Fisheries and Stellwagen Bank National Marine Sanctuary

**Use the Pail, Not the Rail: A Program to Minimize and Reduce Recreational Marine Debris**  
Lobster Foundation of Massachusetts.



## Sanctuary education coordinator wins annual Sea to Shining Sea Award

For six years, NOAA's Office of National Marine Sanctuaries has recognized outstanding achievement among staff across the country by presenting the Sea to Shining Sea Award for Excellence in Interpretation and Education. The award acknowledges demonstrated successes in advancing ocean and climate literacy and conservation through national marine sanctuaries. It also recognizes awardees' innovation and creative solutions for successfully enhancing the public's awareness and appreciation of the National Marine Sanctuary System.

This year, the award was presented to Anne Smrcina for *Exploring sanctuary biodiversity through a marine art contest: a STEM to STEAM initiative*.



Anne Smrcina, the sanctuary's education coordinator, stands in front of a display of student art from recent contests. Photo: NOAA/SBNMS

The Marine Art Contest has long been a staple for Massachusetts students as a way to engage them with the amazing biodiversity found in Stellwagen Bank National Marine Sanctuary off the coast of Massachusetts. Now an annual tradition for many schools, the contest is going on its 18th year of inspiring and challenging students to share their renditions of the rich life found within the sanctuary's waters.

The Sea to Shining Sea Award was presented in November 2018 at the National Association for Interpretation conference in New Orleans, Louisiana, during the federal awards ceremony. Smrcina, the education and outreach coordinator for the sanctuary, will soon celebrate 25 years with the NOAA Office of National Marine Sanctuaries, so this award honors a true veteran of America's national marine sanctuaries.

Smrcina has spent her career helping children and adults get to know about the Gulf of Maine ecosystem, where whales feed on tiny fish and migrating birds feast before their long journeys. About twenty years ago, Smrcina and members of the Massachusetts Marine Educators realized that local students knew more about organisms in coral reefs and rainforests than in their own backyard. The Marine Art Contest aims to remedy that, giving Massachusetts students – and students all over the world – the opportunity to get to know the diversity of marine life off the coast of New England. Stellwagen Bank National Marine Sanctuary also hosts teacher workshops to demonstrate ways to incorporate the art contest and information about the Gulf of Maine into curriculum.

Co-sponsored by Stellwagen Bank National Marine Sanctuary and Massachusetts Marine Educators, along with the New England Aquarium, Center for Coastal Studies, Whale and Dolphin Conservation, Northeastern University Ocean Genome Project and now Woods Hole Sea Grant, the contest has grown each year. In the past few years, the contest has been averaging about 800 submissions a year with a high total of 915. It is no longer limited to students within Massachusetts; students from a dozen other states and even foreign countries such as China, France, England, Serbia, and Kazakhstan have submitted art in recent years.

The contest helps students engage with science in nontraditional ways like drawing and painting. In addition to dividing entries by age, the contest also includes categories for computer graphics and scientific illustration, giving students the opportunity to work with multiple media. Award-winning art provides additional high profile material for student portfolios.

**THE 2019 MARINE ART CONTEST IS NOW UNDERWAY (DEADLINE IS APRIL 26, 2019).** To obtain a copy of the rules and entry form, visit <https://stellwagen.noaa.gov/media/docs/2019-art-contest-rules.pdf>.

To view winning art from 2018 to 2003, go to <https://stellwagen.noaa.gov/pgallery/kidscorner.html>.



Download rules and entry form at  
<https://stellwagen.noaa.gov/media/docs/2019-art-contest-rules.pdf>

### March is Youth Art Month!

Be amazed by our talented youth by exploring winning art from past years' contests at  
<https://stellwagen.noaa.gov/pgallery/kidscorner.html>

Massachusetts Marine Educators and co-sponsors invite students in grades K-12 to participate in the 2019 Marine Art Contest. The theme is "Revealing the Biodiversity of Stellwagen Bank National Marine Sanctuary."

#### REQUIREMENTS:

- ❖ Artwork must depict species that are found in Stellwagen Bank National Marine Sanctuary located in the Gulf of Maine just off the Massachusetts coast. The art can focus on a single species, a predator-prey relationship or a group of animals in a sanctuary habitat.
- ❖ Entries should be no smaller than 5"x 7" and no larger than 18"x 24".
- ❖ White, non-glossy paper is recommended — please do NOT laminate and try to keep artwork flat. Do not fold, if possible.
- ❖ Label each entry on the back with student's name, age, grade, school, school address, school phone number, teacher's name and teacher's email address or use the official entry form. On a separate line, write the name(s) of the animal(s) in the artwork.
- ❖ For individual entries (not associated with a school program) include home address, email of parent or guardian, and phone number for correspondence purposes and art return.

#### DEADLINE — Friday, April 26, 2019

Deliver in person or via delivery service or postal service (1st class mail) postmarked by deadline date to: MME Marine Art Contest, c/o Stellwagen Bank National Marine Sanctuary, 175 Edward Foster Road, Scituate, MA 02066

#### RETURN OF ART

Organizers of the contest will return packages of art from schools before the end of the school year. Due to the large number of individual entries, contest staff ask that, if possible, entrants include a self-addressed stamped envelope to expedite returns; but, all art will be returned to its owners.

#### DIVISIONS:

- ❖ Elementary School — Grades K-4
- ❖ Middle School — Grades 5-8
- ❖ High School — Grades 9-12
- ❖ Scientific Illustration — All Grades
- ❖ Computer Graphics & Photography — All Grades

#### PRIZES:

- 1st Place: \$50 cash award, 4 NE Aquarium passes, certificate.
- 2nd Place: \$30 cash award, 2 NE Aquarium passes, certificate.
- 3rd Place: \$15 cash award, 2 NE Aquarium passes, certificate.
- 4th-6th Places: certificate.

#### SPECIAL AWARDS (\$20 each):

- MME/Joseph McQuade Memorial Award for Seabird Art
- Whale and Dolphin Conservation Award for Marine Mammal Art
- New England Aquarium Award for Fish Art
- Center for Coastal Studies Award for Sea Turtle, Invertebrate or Plankton Art
- Stellwagen Bank National Marine Sanctuary Award for Invertebrate Art
- Ocean Genome Project Award for Invertebrate or Plankton Art

Free admission passes for winning artists have also been donated by the Harvard Museum of Natural History and the South Shore Natural Science Center. Additional prizes may be available.

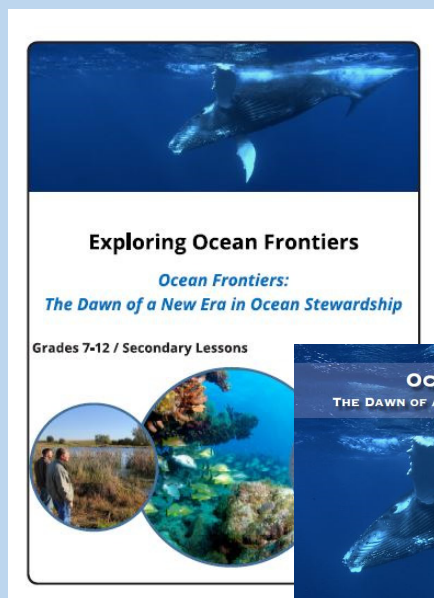
Contest sponsors retain the right to use artwork submitted to this contest for educational, outreach and promotional non-commercial use.

Cover Art: Northern Gannet by Carly LaCasse, gr. 12, Bourne HS; Humpback Mother & Calf by Aayan Patel, gr. 9, Davidson Academy of Nevada, Reno, NV; Dinoflagellates by Walter Shen, gr. 10, Luckie Art Studio, Lexington; Striped Bass by Gabrielle Gu, gr. 10, Westborough HS; (Page 2) Marine Biodiversity with Blue Whale by Roger C., gr. 2, Li Mao Art Studio, Houston, TX.

## Sanctuary case study in *Ocean Frontiers* education package

In 2011, the sanctuary's efforts to help shift the Boston shipping lanes to protect whales served as a central story in the award-winning film *Ocean Frontiers*. Now, after three *Ocean Frontiers* programs, Green Fire Productions has released educator resource packages for grades 7-12 and post-secondary teachers. The Stellwagen Bank project provides the basis for a lesson on using GIS data for informed decision-making. The post-secondary guide uses the Stellwagen case study to advance discussion on the topics of ocean planning and the difficulties of managing competing uses

Green Fire Productions has provided free DVDs in English and Spanish to the sanctuary. Email us at [stellwagen@noaa.gov](mailto:stellwagen@noaa.gov) for a copy. Educators can also download the video and PDFs of the *Exploring Ocean Frontiers* secondary lessons and the *Ocean Frontiers* post-secondary discussion guide from the official website at <https://ocean-frontiers.org>



## Reminder from NOAA: Seals need space



Photos (top) Gray seal pup waving -- a sign of disturbance and fear, not friendship or play, NOAA Fisheries;  
(right) Adult gray seal, Matt McIntosh, NOAA ONMS

Seal pupping season has begun – at least for gray seals. With its growing population, this species is becoming a more common sight in sanctuary waters and nearby haul-out areas, particularly off Cape Cod.

Gray seals pup early in the year with the season extending through March. Later, in May, harbor seal pupping season begins. Sanctuary whale watchers often see harbor seals during summer trips.

Although their cuteness factor is high and they draw attention, these animals need space. Keep yourself (and your children and pets) at least 150 feet (about four school bus lengths) away from seals.

Despite good intentions, some beach-goers take actions that put themselves and the seals at risk of injury. More often than not, interactions with seals leave the adults and their pups in potentially grave situations – pups can be abandoned by their mothers, forced into the water when they are not old enough, or fed foods that make them ill. Most human foods do not make nutritious seal meals; plus, it is illegal to feed or disturb a seal under the Marine Mammal Protection Act.

*This article was adapted from a notice from NOAA Fisheries, Greater Atlantic Region Office.*

### Seal Safety Hints

If a curious seal pup approaches, back away so the mother does not perceive you as a threat

Do not chase a resting pup into the water – it might drown. Pups are not good swimmers. A mother may leave her pup on the beach for up to 24 hours while she hunts and feeds.

A mother may abandon her pup if she feels threatened by a human's presence; even if all you are doing is trying to get a selfie photo.

If you are too close, you may see a seal waving its flippers, repeated yawning, barking or other noises, movement away from you, or a sleepy appearance. Back off. The seal is uncomfortable and getting nervous. Seals may bite when frightened.

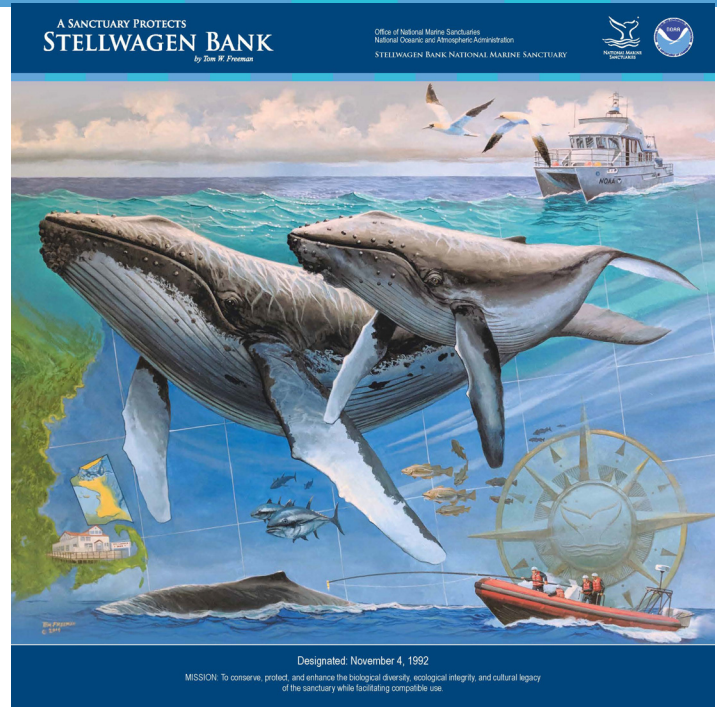
Keep pets away. Not only will they disturb the seals, but also your pets may be endangered. In 2018 large numbers of gray and harbor seals succumbed to a virus called phocine distemper, which although not dangerous to humans, may affect other animal species.

How can you help? Keep a safe distance from any wild animals on the beach or in the water. Call the Stranding Network at 866-755-NOAA (6622) about sightings of stranded or floating seals. You can also donate to the [Marine Mammal Unusual Mortality Event Contingency Fund](https://www.fisheries.noaa.gov/national/marine-life-distress/marine-mammal-unusual-mortality-event-contingency-fund) to support timely response and ongoing research -- <https://www.fisheries.noaa.gov/national/marine-life-distress/marine-mammal-unusual-mortality-event-contingency-fund>

**Read all about it –  
2018 *Earth is Blue Magazine* is online**

The 2018 edition of *Earth is Blue*, the magazine of the National Marine Sanctuaries, is now accessible online. The magazine brings viewers amazing photography and fascinating stories from around the sanctuary system. In this issue, our sanctuary research team figures prominently. Learn about the work of Research Coordinator Dr. David Wiley, Marine Ecologist Dr. Leila Hatch, and 2017 National Volunteer of the Year and seabird expert Kevin Powers. You can view the magazine at

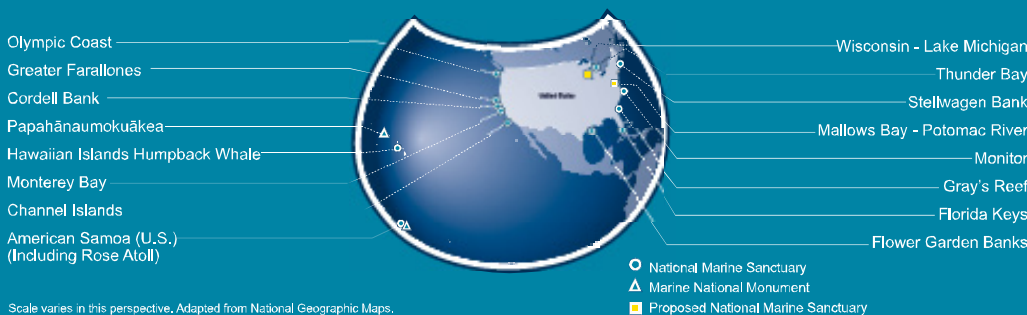
<https://sanctuaries.noaa.gov/magazine/3/>.



**25th Anniversary Poster Available** – This 24”x24” poster showcasing Tom W. Freeman’s painting dedicated to Stellwagen Bank National Marine Sanctuary is now available from the sanctuary office or at one of our education partners – Maritime Gloucester; New England Aquarium Teacher Resource Center; Center for Coastal Studies in Provincetown or the National Marine Life Center in Buzzards Bay. Posters are free, but must be picked up in person (call ahead to determine if posters remain in stock).

National Oceanic and Atmospheric Administration  
National Ocean Service  
Office of National Marine Sanctuaries  
Stellwagen Bank National Marine Sanctuary

# NATIONAL MARINE SANCTUARY SYSTEM



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

The Office of National Marine Sanctuaries serves as the trustee for a network of underwater parks encompassing more than 600,000 square miles of marine and Great Lakes waters from Washington state to the Florida Keys, and from Lake Huron to American Samoa. The network includes a system of 13 national marine sanctuaries and Papahānaumokuākea and Rose Atoll marine national monuments. For more information on the National Marine Sanctuary System, visit: <http://sanctuaries.noaa.gov>



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