

STELLWAGEN BANK E-NOTES: *sanctuary news & events* July-August 2014



Photo courtesy Mystic Seaport

Whaleship Celebrates Whales in Stellwagen Bank Sanctuary

The 38th voyage of the whaleship *Charles W. Morgan* was an unqualified success, and a very important part was the vessel's day sails into Stellwagen Bank National Marine Sanctuary. Where once the ship was used to hunt and process whales for human use, the new mission was observation and education – a shift from whaling to watching.

For more images and stories, go to pages 2, 3, 4 and 5.



Photo courtesy Mystic Seaport

Morgan under sail

Some 80 years after its last voyage, the whaleship *Morgan* unfurled its new sails and tested the waters. For information about the refitting of the ship and the complete itinerary, go to:

<http://www.mysticseaport.org>.

In This Issue:

Whaling to Watching	p.2
38 th Voyage Recap	p.3
Red Sox Whale Day	p.4
Cousteau at Faneuil Hall	p.5
Center of Excellence	p.6
Rare Anemone Observed	p.7
Seabird Sightings	p.8

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OceansLive shows cover diverse topics in a Whaling to Watching series

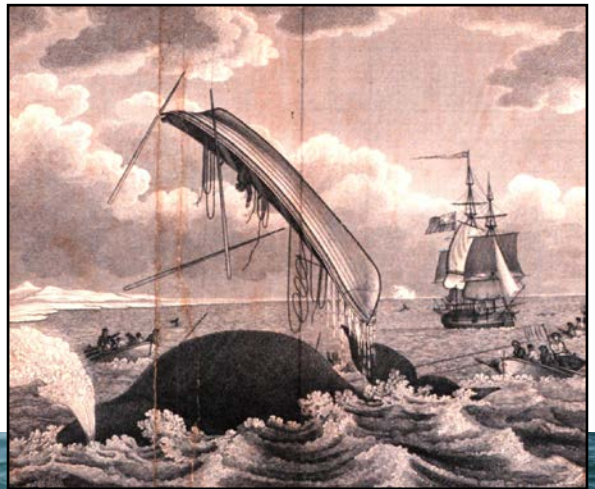
The arrival of the whaleship *Charles W. Morgan* in Stellwagen Bank National Marine Sanctuary was the inspiration for a series of live web-television shows that detailed transitions in science, art and society from whaling days to today, with a particular reference to sanctuary resources, research and region. The programs offered excellent shots of the *Morgan* under sail in an area that is now dedicated to protecting whales.

With technical experts in a Provincetown-based studio (at the Provincetown Museum) and on board the whaleship, the shows explored such topics as navigation technology, sound in the sea, women's roles, and whales as the basis of commerce (whale oil vs. whale watching). Other programs explored the use of whalers' knowledge in modern aspects of whale research and conservation, such as disentanglement.

Taped versions of eight half-hour shows are available at the OceansLive website at <http://www.oceanslive.org>.



Photos (clockwise from top right): Scrimshaw (sperm whale teeth) from New Bedford Whaling Museum showing 19th century women; whale art (winning art from 2012 MME Marine Art contest) by Elisabeth Bowerman; whaling art from NOAA Media Library; humpback whales approach *Morgan* whaleboat in the sanctuary; OceansLive monitor at the NOAA exhibit on MacMillan Wharf, Provincetown.



Overview of the 38th Voyage of the Whaleship *Charles W. Morgan*

(from Mystic Seaport/*Charles W. Morgan* News)

Built in New Bedford, Mass. in 1841, the *Charles W. Morgan* sailed 37 voyages around the globe during an 80-year whaling career. This past May, following a five-year, multi-million dollar restoration, the ship set out on her last voyage— perhaps her most important— to raise awareness of America’s maritime heritage and to call attention to issues of ocean sustainability and conservation. It was the first time the National Historic Landmark had left Mystic Seaport since her arrival in 1941.

With Captain Richard “Kip” Files at the helm, the *Morgan* departed Mystic Seaport May 17 and visited New London, Conn., Newport, R.I., Vineyard Haven, Mass., New Bedford, Mass., Stellwagen Bank National Marine Sanctuary, Boston, and the Massachusetts Maritime Academy as part of the centennial celebration of the opening of the Cape Cod Canal.

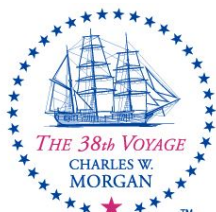
“The nearly three-month journey was a commemoration of the role of the sea in the history of America and an appreciation of our changing relationship with the natural world,” said Steve White, president of Mystic Seaport. “Taking this American icon, the oldest surviving commercial ship in the country, out on her 38th Voyage was a landmark achievement for Mystic Seaport. We truly accomplished our mission to celebrate our nation’s shared maritime heritage.”

More than 64,000 visitors climbed aboard the *Morgan* and visited dockside exhibitions during the 38th Voyage [including a NOAA tent that featured information about Stellwagen Bank sanctuary resources and research]. Highlights of the journey included the ship’s homecoming to New Bedford, docking next to the USS *Constitution* in Boston, and teaming up with the National Oceanic and Atmospheric Administration (NOAA) at Stellwagen Bank National Marine Sanctuary to observe whales in their natural environment.

“For Mystic Seaport the 38th Voyage represents a dynamic new model for engaging with the public. We have added to the whaleship’s historical record and now have a powerful body of knowledge, sensory experiences, images, sounds, and visceral and artistic human responses that all contribute to our understanding of 19th-century whaling and the human-whale dynamic,” said Susan Funk, executive vice president of Mystic Seaport. “The voyage has reinforced our vision of the role of museums in the 21st century, and how museums like Mystic Seaport can play a vital, continued role in education — how the objects we preserve, like the *Charles W. Morgan*, are no longer simply static exhibits but rather dynamic, ever-changing platforms for public engagement.”

Throughout the voyage, some 80 individuals from a wide range of disciplines and backgrounds sailed aboard the ship and participated in an unprecedented public-history project as 38th Voyagers. This group, which included artists, historians, scientists, journalists, teachers, musicians, scholars and whaling descendants, documented and filtered their experience aboard the *Morgan* and will produce a creative product for Mystic Seaport to share with the public. [Many of these individuals provided commentary during nine OceansLive web broadcasts produced by the Office of National Marine Sanctuaries during the three days of cruises to Stellwagen Bank. These half-hour shows have been archived and are now available at <http://www.oceanslive.org>.]

“The *Charles W. Morgan* is an exceptional and truly unique artifact of our shared maritime heritage,” said White. “While the ship is an American icon and a living portal into an important chapter of American history, she now embarks on a new journey with transformed purpose. She’s no longer an instrument of commerce but a source of education, knowledge, and understanding. The 38th Voyage was truly seeing history come alive.”



Whale Day at Fenway Park

The Boston Red Sox organization dedicated July 18 as Whale Day at Fenway Park to recognize the 38th Voyage of the whaleship *Charles W. Morgan*. Ballgame attendees heard about the whaleship's mission to raise awareness about New England's maritime heritage as well as the need for whale conservation.

The Morgan's captain Kip Files threw out the first ball while Mystic Seaport president Steve White (left), Stellwagen Bank sanctuary superintendent Craig MacDonald (next to Wally, the Green Monster) and National Marine Sanctuaries director Dan Basta watched from the back of the pitcher's mound.

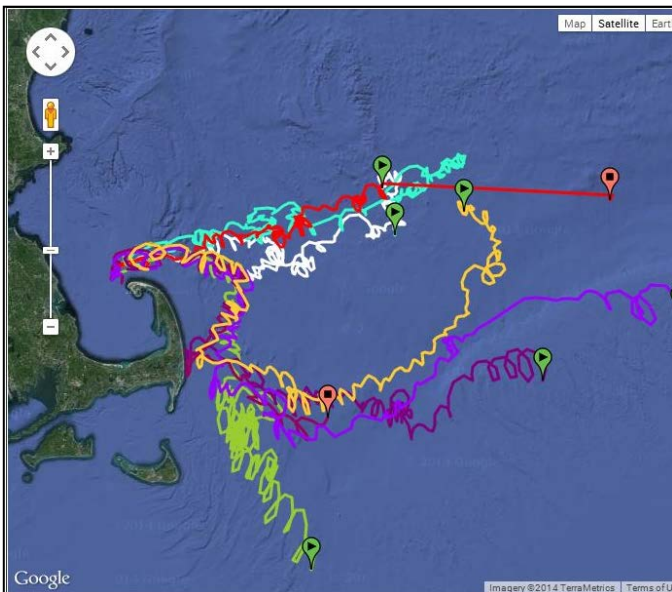
The children of sanctuary staff and associates were tasked with calling out the famous "Play ball!" command.

During pre-game festivities, videos from Mystic Seaport and the Stellwagen Bank sanctuary were played on the Jumbotron and an exhibit under the Fenway Park stands provided sanctuary information.

To make the day even more special, the Red Sox won the game against the Kansas City Royals with a score of 5-4.



Photos by Anne Smrcina, SBNMS



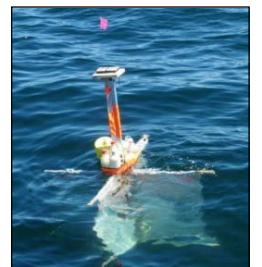
Drifters leave Stellwagen Bank sanctuary on several tracks

Eight student-built surface current buoys, deployed from the *Morgan* during her sails into the sanctuary, are taking a variety of paths away from Stellwagen Bank. As of August 26, all but two of the buoys continue to relay data. One buoy made its way south into the Great South Channel, several circle Georges Bank and others continue to drift in the southern portion of the Gulf of Maine.

To find out more about 38th Voyager and University of Connecticut professor Michael Whitney's drifter project, go to:

<http://cprime.uconn.edu/research-projects/charles-w-morgan-voyages/>

For the latest tracks for all the *Morgan*-deployed buoys, go to: http://www.nefsc.noaa.gov/drifter/drift_uconn_morgan_2014_1.html



GPS-unit on top of the drifter reports its position every two hours. Photo UConn

Jean-Michel Cousteau speaks at historic Faneuil Hall in Boston

Famed ocean conservationist and filmmaker Jean-Michel Cousteau addressed a full house at Boston's historic Faneuil Hall on July 16. After sailing on the whaleship *Charles W. Morgan*, from Provincetown to Boston, Cousteau lauded the ship and its new role as an ambassador for ocean conservation. He also offered the first public announcement of the creation of a National Marine Sanctuaries Center of Excellence for Marine Mammal Acoustic and Conservation Research at Stellwagen Bank sanctuary (*see page 6 for more information on the center of excellence*).

The program, labeled "An Evening with Jean-Michel Cousteau: Our Shared Responsibility for the Ocean," also included Stephen White, president of Mystic Seaport, Dr. David Wiley, research coordinator at Stellwagen Bank National Marine Sanctuary, and Master of Ceremonies James P. Delgado, maritime heritage program director at NOAA's Office of National Marine Sanctuaries.

Cousteau challenged the audience to take personal responsibility in their actions that affect the ocean and to support conservation efforts ranging from protection of water quality, banning of shark finning and protection of whales and other endangered species. He is concerned about global change, sea level rise, ocean warming and acidification, but is also optimistic that society can adapt to these environmental changes, which may then lead to new technologies and more jobs. He previewed a few clips from an upcoming IMAX film ("Secret Ocean 3D") that he is directing and his organization Ocean Futures Society is co-producing with 3D Entertainment Films.

Dave Wiley provided an overview of recent sanctuary research into whale behavior that may lead to better whale conservation programs. Stephen White recapped the *Morgan* 38th voyage and James Delgado tied the program together by showing how an understanding of the past can guide society in decision-making for the present and future.

The Faneuil Hall program was sponsored by the National Marine Sanctuary Foundation and the Office of National Marine Sanctuaries.

Photos: (top) Jean-Michel Cousteau addresses the audience in Boston's historic Faneuil Hall on July 16; (middle) National Marine Sanctuary Foundation executive director Jason Pattis (right), Office of National Marine Sanctuaries director Dan Basta (far left) and maritime heritage program director James Delgado (left) present a framed print of Stellwagen Bank sanctuary whales by renowned artist Ken Freeman to Cousteau; (bottom) Cousteau is joined by Dan Basta at left, sanctuary superintendent Craig MacDonald to his right, and sanctuary research coordinator Dave Wiley, far right, after the presentation. Credit (all photos): Anne Smrcina, SBNMS



BUILDING A CENTER OF EXCELLENCE FOR MARINE MAMMAL ACOUSTIC AND CONSERVATION RESEARCH

Stellwagen Bank National Marine Sanctuary



Image taken under NOAA Fisheries permit #14245

The *Center of Excellence for Marine Mammal Acoustic and Conservation Research* at Stellwagen Bank National Marine Sanctuary will engage in innovative, policy-driven research that will serve as a model for other national marine sanctuaries and institutions throughout the world. The *Center of Excellence* is designed to build extensive collaborations with regional, national, and international agencies and organizations through entrepreneurial partnering.

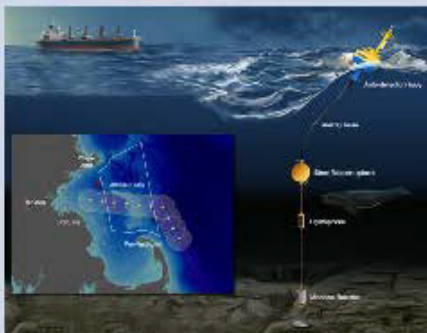


Illustration by Oberbauer, WH O. B. Thompson, SBNMS



Illustration by Thompson, SBNMS



SBNMS pier and marine operations center

Building on Two Decades of Science

As it relates to marine mammals, the Stellwagen Bank National Marine Sanctuary (SBNMS) is renowned for its research accomplishments, national and international reputation, and strategic partnerships with scientists and institutions. Therefore, NOAA's Office of National Marine Sanctuaries has deemed it the sanctuary system's *Center of Excellence for Marine Mammal Acoustic and Conservation Research*.

The *Center of Excellence* will be organized around five principal thematic areas, which are important for understanding marine ecosystems, supported by advancing technologies, and impacted by policy activities:

- Underwater Noise/Acoustics
- Animal Behavior
- Population Dynamics
- Climate Change
- Conservation

Focus on these themes will encourage cooperative endeavors among researchers from around the globe and promote productive alliances with organizations to create a critical mass of marine mammal research and conservation. The resulting momentum will help propel participating scientists towards realizing their career goals and boost their organization's professional prominence and standing.

A Living Laboratory

Stellwagen Bank National Marine Sanctuary has become a natural laboratory for the entire suite of research, management and policy issues confronting marine mammals. The

sanctuary is home to some of the largest aggregations of endangered whales, including the critically endangered North Atlantic right whale, which occurs along the eastern seaboard of the United States. The area also has high concentrations of commercial shipping and fishing, the two human activities that cause marine mammals the most serious injury or mortality.

Infrastructure Development

The SBNMS headquarters in Scituate, MA will serve as the physical campus for the *Center of Excellence's* administration and research vessel operations. Existing facilities include a marine operations center for the maintenance and storage of scientific equipment, and a pier to support multiple vessels. In addition, there is meeting and classroom space for seminars, trainings, and scientific collaboration. As part of the infrastructure development, a shore-based laboratory and lodging for researchers are planned.

The *Center of Excellence* also will have a significant virtual component sustained by ongoing scientific activities of research partners, while at their home facilities and in alignment with the thematic areas.



The National Marine Sanctuary Foundation will serve as the fiscal sponsor of extramural funds (i.e., grants, donations) awarded for projects and activities conducted on behalf of the *Center of Excellence* in collaboration with other partners.

Rare anemone found in the sanctuary

One of the Gulf of Maine's rare invertebrate species, the "pom pom anemone," was observed in Stellwagen Bank National Marine Sanctuary in early August. *Liponema multicornis*'s common name comes from the fact that it looks like a cheerleader's pom pom.

Anemones are in the same group of animals that include corals and jellyfish. Unlike most anemone species, which attach to hard rock surfaces or burrow into mud via long tubular bodies, this species lives unattached on the surface of fine grained sediments. Its presence in the northwest Atlantic Ocean, and the Gulf of Maine in particular, is known only from a handful of specimens. It was first collected in the late 1800s, during a period of ecological exploration in the region. In recent decades one specimen was collected during trawl survey operations from the NOAA Ship *Albatross* in 1963 and three were found in the northern part of the sanctuary during research cruises in 2009 and 2010.

The 2009/2010 observations led to a paper that appeared in *Marine Biodiversity Records* in 2011. Peter Auster, a senior research scientist at Sea Research Foundation and a Research Professor Emeritus at the University of Connecticut, who was a co-author of that paper, set out to see if the animal could again be located in the area. He met with success – finding two more pom pom anemones this year.

“Of interest is that the anemones were found in the Western Gulf of Maine Closed Area – an area closed to most kinds of fishing gear since 1998,” said Auster. “We’ve surveyed the area repeatedly since 2000, and it was only after a decade of protection that these animals were observed. Whether their occurrence is happenstance or due to the protections afforded by the closed area is unclear,” he said. He added that this summer’s sightings, some four years after they were last observed, were in the same general area.

“While there was no obvious local increase in numbers neither was there a total decline,” said Auster. “Simply documenting the persistence of rare species and the dynamics of their numbers in marine communities can yield important information about the ecological role these species might play if abundance increased as well as the value of protected areas in conserving rare elements of our biological heritage.”

The 2014 observations were made using a remotely operated vehicle (ROV) from the National Undersea Research, Technology &

Photo: A pom pom anemone sits on the sanctuary's sandy seafloor at 130 meters depth. Living among its tentacles are commensal amphipods while shrimp keep station along the margin, apparently feeding, in part, on mucus produced by the anemone. This specimen is about 12 cm (5 inches) in diameter; the shrimp are 4-5 cm (1.5-2 inches) total length. Image courtesy of Gulf of Maine Deep Coral Science Team 2014/ NURTEC-UConn/NOAA Fisheries/UMaine.



Education Center at the University of Connecticut during a cruise funded by NOAA's Deep Sea Coral Research and Technology Program. Auster and colleagues from the University of Maine and National Marine Fisheries Service wanted to determine if this species continued to exist in the sanctuary or if the previous sightings were a temporary occurrence with a rapid local extinction. Use of an ROV is a relatively benign form of exploration.

Auster reported that the degree of rarity could be due to the fragility of these animals that live in vulnerable habitats subject to many human-caused disturbances and whose tentacles detach when disturbed. “The use of nets and dredges that are normally used for collections and surveys may make the anemone unrecognizable by the time it is removed on the deck of a ship,” he said. But, he also noted that “despite more than 40 years of video and still photographic surveys from research submersibles and ROVs, we’ve seen very few of these animals.”

According to Auster, while there are hundreds, if not thousands, of species found within particular areas of the ocean, only a small subset have high abundance and are of economic or recreational interest. “We generally monitor the status of these species as they are good indicators of ecosystem state. By detecting changes in numbers we can assess the condition of exploited populations,” he said. “However, the status of rare species is of importance, too. This can be especially helpful in the management of areas, such as National Marine Sanctuaries, where the conservation of biological diversity is a principal goal,” he said.

The challenge,” he noted, “is in detecting the status and dynamics of species when they are represented by only a few individuals in any sample and when they occur in very specific habitats.” For Stellwagen Bank National Marine Sanctuary, the pom pom anemone is a perfect example.

Unusual bird sighting in sanctuary; Shearwaters counted in large numbers

The sanctuary's seabird team (*Stellwagen Sanctuary Seabird Stewards* or *S4*) has been building a detailed seabird database for this region. These trained observers work from the sanctuary's Research Vessel *Auk* during seasonal one-day trips and from whale watch vessels as schedules permit. Two whale watch operations (Capt. John Boats and Hyannis Whale Watcher) offer space to the S4 volunteers as their contribution to the Whale SENSE program (visit <http://www.whalesense.org> for more information about this collaborative program recognizing commercial operations committed to a higher standard of whale watching).

During three S4 whale watch trips in late July and early August, the observers recorded the following numbers:

Species	07/20	07/27	08/03
Cory's Shearwater	314	19	97
Great Shearwater	462	4	84
Sooty Shearwater	286	1	18
Manx Shearwater	0	0	3
Unidentified Shearwater	0	0	380
Wilson's Storm Petrel	156	21	27
Leach's Storm Petrel	1	0	2
Unidentified Storm Petrel	1	0	0
Double-crested Cormorant	2	4	0
Northern Gannet	4	3	27
Laughing Gull	13	13	156
Herring Gull	10	14	31
Great Black-backed Gull	55	40	13
Unidentified Gull	1	4	4
Common Tern	2	4	77
Forster's Tern	0	0	3
Least Tern	0	1	0
Unidentified Tern	0	0	18
Unidentified Jaeger	1	0	0
Tree Swallow	0	1	0
Barn Swallow	0	1	0
Swallow Species	0	3	0
Shorebird Species	0	1	0
TOTALS	1,308	134	940



A South Polar Skua was spotted in the sanctuary this summer. This is a rare visitor to the area and potentially only the second valid Stellwagen Bank sighting. Photo by Tim Factor.

The summer RV *Auk* trip on August 4 reconfirmed the prevalence of shearwaters in the sanctuary. Great Shearwaters (441) topped Cory's Shearwaters (322) in numbers, with Sooty Shearwaters (141) and Manx (3) following somewhat behind. There were also 714 unidentified shearwaters. Other sightings included Northern Gannets, Double-crested Cormorants, Wilson's Storm Petrels and various gulls.

The most unusual sighting this summer was that of a South Polar Skua by S4 members Tim Factor and Sarah Guitart from the deck of a Boston Harbor Cruises whale watch vessel. These dark hawk-like seabirds live in the Antarctic and wander widely into the North Atlantic, even as far as Greenland. They are occasionally seen in the Gulf of Maine during the summer months.

For more information about the S4 program and other sanctuary volunteer programs, contact sanctuary volunteer coordinator Anne-Marie Runfola at anne-marie.runfola@noaa.gov.

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/>