

SPRING/SUMMER 2008

# SANCTUARY WATCH

*Huron Explorer*  
— the nation's first  
petroleum-  
free vessel  
**9**



**SANCTUARIES  
GO GREEN **2****

**Introducing  
new sanctuary  
vessel lineup **6****



DIRECTOR'S LETTER

ON THE COVER



9 HURON EXPLORER

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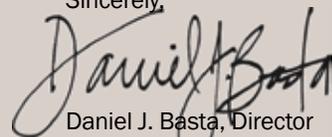
**SANCTUARY WATCH** is a publication of the communications branch of the National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries. NOAA is an agency of the U.S. Department of Commerce.

It seems everywhere you go you hear about “green” companies and “green” products. Well, we have been running down this road for some time, and this issue of *Sanctuary Watch* features some of the great things we are doing in the Sanctuary System to be more energy-efficient and walk the talk when it comes to being “green.” Everything from working with the Department of Energy to conduct energy audits at our facilities to using recycled building products and reusable grocery bags can add up to make a real difference. Our new Blue Seas, Green Communities initiative is also taking this greening concept a bit further by involving our sanctuary advisory councils at each sanctuary site to explore ways to be more environmentally friendly. Also, in an effort to reduce costs and paper, please look for our Fall issue online.

While we are just beginning to understand the ramifications of climate change in our sanctuaries, it is so important that we realize the impact of our own everyday actions on the special marine places we are trying to protect and what each of us can do to help. In fact, the main theme of this year’s Capital Hill Ocean Week activities deals with climate change and its effects on the ocean and our sanctuaries.

Another story in this issue focuses on the newest additions to the sanctuary vessel program, like the state-of-the-art R/V *Manta*, which will soon be cruising the waters of the Gulf of Mexico. The development and expansion of our capabilities on the water will offer enormous rewards in the future as we explore the depths of our sanctuaries, conduct scientific research and provide new opportunities for education and outreach initiatives. With the increasing use of new vessels in our sanctuaries also comes the need for constant vigilance in our adherence to important safety standards.

Unfortunately, this past March, we lost a member of the sanctuary family, Rusty Mason. While working on a mission in the Tortugas Ecological Reserve in Florida Keys National Marine Sanctuary, Rusty passed away in a tragic dive accident. His untimely death has had an impact on all of us, especially those who worked closely with him in the Keys. It reminds us how fragile and short life is and that doing what you love is such an important way to live life. Rusty died doing just that — pursuing his passion for diving to help protect the sanctuary for which he cared so deeply. Thank you, Rusty.

Sincerely,  
  
 Daniel J. Basta, Director  
 Office of National Marine Sanctuaries

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## MONUMENT RECEIVES WORLDWIDE RECOGNITION

Protecting the fragile ecosystems and historic shipwrecks of Papahānaumokuākea Marine National Monument reached a new milestone in April when the International Maritime Organization designated the region the world's 12th particularly sensitive sea area and the second in U.S. waters. The designation, which took effect May 1, 2008, is recognized internationally and includes a mandatory ship reporting system for vessels traveling through the monument.

The area covers all waters of the monument, which was established by President Bush in June 2006. It encompasses a 1,200-mile stretch of coral islands, seamounts, banks and shoals that is home to more than 7,000 marine species and contains 4,500 square miles of pristine coral reefs.

The designation will augment domestic protective measures by alerting international mariners to exercise extreme caution when navigating through the monument.

A particularly sensitive sea area is one deserving of special protection because of its significance for recognized ecological, socioeconomic or scientific reasons and its possible vulnerability to damage from international maritime activities. Other notable par-



Photo: NOAA

ticularly sensitive sea areas include Australia's Great Barrier Reef, the Galapagos Archipelago, and Florida Keys National Marine Sanctuary, which was the first in U.S. waters.

Additionally, Secretary of the Interior Dirk Kempthorne said the monument is one of two sites in the United States he is considering to officially nominate for inclusion on the UNESCO World Heritage List.

## SCIENTISTS GATHER AT INTERNATIONAL CORAL REEF SYMPOSIUM

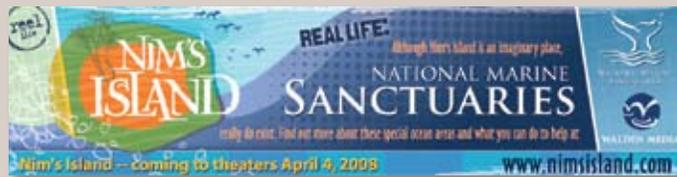
The 11th International Coral Reef Symposium kicks off July 7 in Fort Lauderdale, Fla. The four-day event ending July 11 will address issues concerning the condition of reefs in the world today and how best to manage coral reef ecosystems. Sanctuary staff will lead field trips in and around Florida Keys and Flower Garden Banks national marine sanctuaries, and will present papers and posters on the results of monitoring and research on coral reefs in the marine sanctuaries.

Recognizing an urgent need to increase awareness and un-

derstanding of coral reefs and to further conserve and manage valuable reef ecosystems, the International Coral Reef Initiative designated 2008 the International Year of the Reef. In addition to participating in the coral reef symposium, the sanctuary system plans several events and outreach efforts throughout the year, including a coral reef lecture series at the Florida Keys Eco-Discovery Center in Key West, Fla., a telepresence project at the Maui Ocean Center, and several community events and workshops led by staff from Flower Garden Banks National Marine Sanctuary.

## SANCTUARY OFFICE PARTNERS WITH WALDEN MEDIA TO PROMOTE OCEAN CONSERVATION

Sanctuary staff and representatives from Walden Media, producer of such films as "Bridge to Terabithia" and "The Chronicles of Narnia," teamed up to promote ocean conservation to the public — especially children, by developing education materials for their newest film, "Nim's Island." A 16-page educator's guide was distributed to over 500,000 elementary school teachers, and thousands of book-



Design: Matt McIntosh

marks were made available at participating Borders book stores. A key message featured in the materials is, "Although Nim's Island is an imaginary place, there are special places in the ocean called national marine sanctuaries that you can explore and help protect." Through this partnership, kids can also join the Nim's Ocean Guard-

ian Kid's Club, a program that encourages children to explore their natural surroundings and submit original artwork, poems and short stories expressing what the environment means to them. By partnering with Walden Media, thousands of kids were reached with the message that they can be stewards of the ocean by learning more about the marine environment and how to protect it.

Teachers can also participate in the Ocean Guardian Classroom Program to promote environmental conservation at their school or in their local community. Visit <http://sanctuaries.noaa.gov/education> for more information about the sanctuary system and ways to bring the message of ocean conservation to the classroom.

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# Go green

Striving for better energy efficiency and green practices throughout the National Marine Sanctuary System has become a major priority for sanctuary leadership. From recycling plastics to building facilities with recycled materials to using hydrothermal energy to heat facilities, the sanctuary system is doing its part to practice what it preaches when it comes to “going green.”

Taking a major step in the greening direction, the Office of National Marine Sanctuaries and the U.S. Department of Energy reached an agreement in January calling for the two federal agencies to find ways to promote energy efficiency within their respective offices and facilities. Daniel J. Basta, director of the Office of National Marine Sanctuaries, and Andy Karsner, DOE assistant secretary for energy efficiency and renewable energy, signed the agreement in Honolulu.

Already, the DOE completed an energy assessment in April at the Dr. Nancy Foster Florida Keys Environmental Complex in Key West, Fla. Staff will evaluate the potential use of renewable energy, such as geothermal and solar. More assessments are planned for NOAA-owned facilities in Maui and Scituate, Mass.

“This DOE agreement supports our new Blue Seas, Green Communities initiative, contributing to the environmental quality of sanctuary communities for all Americans,” Basta said.

The Blue Seas, Green Communities initiative encourages all

sanctuary advisory council members and employees to practice green habits. Each site will be asked to work with single members or a working group of their council to initiate or enhance a project in their local community that contributes to the greening of the community and the protection of sanctuary resources.

Some notable past efforts to reduce energy consumption in the sanctuary system include the installation of a geothermal heating and cooling system at the Stellwagen Bank National Marine Sanctuary office in Scituate, Mass. “We are pleased with the energy-efficient system we have had in our facility in Scituate for a few years. Before that, our energy bills were much higher,” said sanctuary superintendent Craig MacDonald.



Photo: Andy Collins



Photo: NOAA

Daniel J. Basta and Andy Karsner sign agreement (top), Emma Hickerson holds an environmentally friendly reusable bag (right).



Thunder Bay National Marine Sanctuary offices.

Photo: NOAA

The Dr. Nancy Foster Complex, home of the Key West headquarters for Florida Keys National Marine Sanctuary, received a DOE “You Have The Power” Leadership Award in 2007, and has submitted a nomination to the U.S. Green Building Council for a Leadership in Energy and Environmental Design (LEED) Silver certification. LEED is a cutting-edge set of standards for the design, construction, operation and certification of the world’s “greenest” buildings.

The Great Lakes Maritime Heritage Center, which houses the Thunder Bay National Marine Sanctuary offices in Alpena, Mich., has won several federal energy awards for wise energy and water use and was nominated by the Department of Commerce for a White House environmental award. The center has also received a LEED Gold certification.

“We build to LEED standards,” said Chris Ostrom, facilities coordinator for the Office of National Marine Sanctuaries, “which result in environmental benefits such as improving air and water quality, reducing solid waste, and conserving natural resources. By going green, we not only provide a healthier workplace, but contribute to

enhancing and protecting local ecosystems and biodiversity.”

In California, Gulf of the Farallones National Marine Sanctuary concluded phase 1 of its facilities greening initiative by completing a redesigned and remodeled visitor center at Crissy Field in the San Francisco Presidio. The center incorporates recycled redwood fencing in its cabinetry, structural pieces made of wood from deconstructed houses, and the manila ropes used for a nautical-themed trim were taken from an old theater.

Reaching beyond facilities and into the home, staff at Flower Garden Banks National Marine Sanctuary launched a reusable shopping bag campaign distrib-

uting 2,500 reusable bags to sanctuary personnel and community members. Emma Hickerson, research coordinator for the Flower Gardens sanctuary, said, “If all sanctuary staff adopt reusable shopping bags, as an office we can potentially reduce consumption by 312,000 bags a year.”

“It is important that we understand the impact of our everyday actions,” Basta added, “and look for things each of us can do to attain better energy efficiency throughout our sanctuary system.” ■

**“It is important that we understand the impact of our everyday actions, and look for things each of us can do to attain better energy efficiency throughout our sanctuary system.”**



## EASY WAYS TO REDUCE ENERGY USE:

### IN YOUR HOME

- Replace regular light bulbs with compact, energy-saving fluorescent bulbs.
- Buy Energy Star-rated appliances that use less energy and water.
- Recycle and reduce use of plastic bags. Typically, it takes up to 1,000 years for these bags to biodegrade in landfills. Most grocery stores offer recycling containers for plastic bags.
- Lower home thermostat and heat and cool rooms only as needed.

### IN YOUR OFFICE

- Turn off lights when leaving the office.
- Recycle — it’s not just paper, plastic and aluminum anymore. You can recycle ink cartridges, lunch containers and batteries, to name just a few common household items.
- Practice smart printing and filing by limiting the amount of documents you print and keep in hard copy. Circulate documents in electronic format whenever possible. When making hard copies, print double-sided.
- Turn off copiers, printers and computers when not in use.
- Don’t use personal heaters or fans. They are against safety regulations, they use extra energy and they cause the HVAC system to work harder to regulate the office temperature.

To find out more about how to be energy efficient, visit the Energy Savers Web site for homeowners at <http://energysavers.gov/homeowners.html> or <http://lowimpactliving.com>.

**For other energy saving tips, visit <http://www.energystar.gov>.**

# MONITOR CONDITION REPORT RELEASED

The Office of National Marine Sanctuaries has released the first-ever status report evaluating the condition of *Monitor* National Marine Sanctuary. The report indicates the sanctuary is in good condition, but cites pressure from human impacts and natural deterioration that may further degrade the wreck of the USS *Monitor*, the site of the nation's first national marine sanctuary.

The report cited recreational and commercial bottom fishing as potential human stressors on the wreck and marine species in the sanctuary. Looting of the site by

divers also poses a major threat to the wreck's archaeological resources, along with other activities such as waste water discharge, seabed drilling, cable-laying and dredging. Natural impacts on the sanctuary include ocean currents, temperature and salinity.

The *Monitor* condition report is part of the sanctuary office's efforts to compile similar evaluations of every site in the sanctuary system. The condition reports examine the status of everything from water quality to endangered species populations, and provide a wealth of

information about the complex marine resources and archaeological sites found in sanctuary waters. Reports on Stellwagen Bank and Fagatele Bay national marine sanctuaries have already been released, with several more slated for completion this year.

The reports are available at <http://sanctuaries.noaa.gov/science/condition>. ■

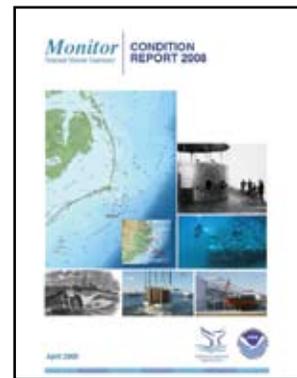


Photo: Miami Herald, 1929, Monroe County Library

Eight-foot, 750-pound goliath grouper caught in 1929 near Fort Lauderdale, Fla.

Spurred by the continued decline in the health of marine ecosystems, NOAA and its research partners have begun looking at the history of life in the ocean through historical records to gain a better understanding of how best to sustain and enhance the ecological diversity of several national marine sanctuaries. Research efforts are currently underway in three sanctuaries: Stellwagen Bank, Florida Keys and Monterey Bay.

"Managing ocean resources is not just about trying to maintain the status quo," said Andy Rosenberg of the University of New Hampshire who is leading a team of historians and scientists in the Stellwagen Bank effort. "Historical analyses help us understand the potential productivity of the ocean, the role ocean ecosystems have played in supporting coastal communities, and how marine resources look after they recover."

Poring over charts, fishing logs, explorer's narratives, maps,

## HISTORICAL ECOLOGY IN NATIONAL MARINE SANCTUARIES

There was a time when the world's oceans and rivers teemed with fish. Long ago in the Gulf of Maine cod often weighed more than 65 pounds each, and sturgeon could weigh in at 700 pounds. Today, an average cod barely tips the scales at seven pounds, and sturgeon are rare. How do we know this when the fish kept no records? Historical documents tell us that fish like cod and sturgeon were plentiful and big.

scientific surveys and many other historical records, researchers are painting a fascinating picture of how marine ecosystems and resources have been altered over time, what caused these changes, and how these changes have affected the people dependent on these resources for their livelihood.

Along the way, scientists and historians are uncovering some interesting facts. "In the 1690s, Massachusetts Bay General Court imposed fishing restrictions on codfish, haddock and other commercially viable fish after noticing a shortage in those fish stocks," said Bill Leavenworth, historian at the University of New Hampshire. Even then, local New England communities recognized a need to do something about overfishing.

In some cases, one does not have to go that far back in time to get a perspective of how fish stocks have changed. In the Florida Keys, graduate student Loren McClenachan, working under a NOAA grant, has compared the size of fish taken today by fishermen in the Keys and those taken over 50 years ago from the same area – noting how much larger the fish were then. "We can actually see the fish shrinking over time. Big sharks and groupers disappear and the fish caught become much smaller," McClenachan said.

Sanctuary staff hope to use results from the research in future management plans and to conduct similar projects in all sanctuaries. ■



Dumping menhaden fish in pens at the Menhaden Factory, Church & Co. in Tiverton, R.I.

Courtesy of National Archives

## Northern Fur Seal

Northern fur seals, hunted for their luxurious and valuable fur, all but disappeared from California's northern coast more than 170 years ago.

The Farallon Islands, located 27 miles west of San Francisco within Gulf of the Farallones National Marine Sanctuary, once supported hundreds of thousands of breeding northern fur seals — marine predators with thick, soft pelts. But their lush fur proved their undoing. During a three-year period in the early 1800s, hunters slaughtered over 150,000 seals. The killing continued until 1834 when the remaining population fled, abandoning their rookeries for more than a century and a half.

A few seals started returning to the islands in the early 1970s. Each year thereafter more arrived, and in 1996 the first northern fur seal pup in over 150 years was born in the sanctuary. Approximately 100 pups have been born in each of the past two breeding seasons, an indication of the islands' enduring vitality and proof that a sensitive species can rebound under favorable circumstances.

Those circumstances exist thanks to the Marine Mammal Protection Act, and were further improved when Gulf of Farallones National Marine Sanctuary was designated in 1981, giving numerous marine species, including the northern fur seals, protected waters in which to thrive. The islands where they breed are also a wildlife refuge, providing further protection for the seals.

The story of the northern fur seal gives hope that other threatened and endangered marine species can rebound if given the necessary protections — like those afforded by national marine sanctuaries.

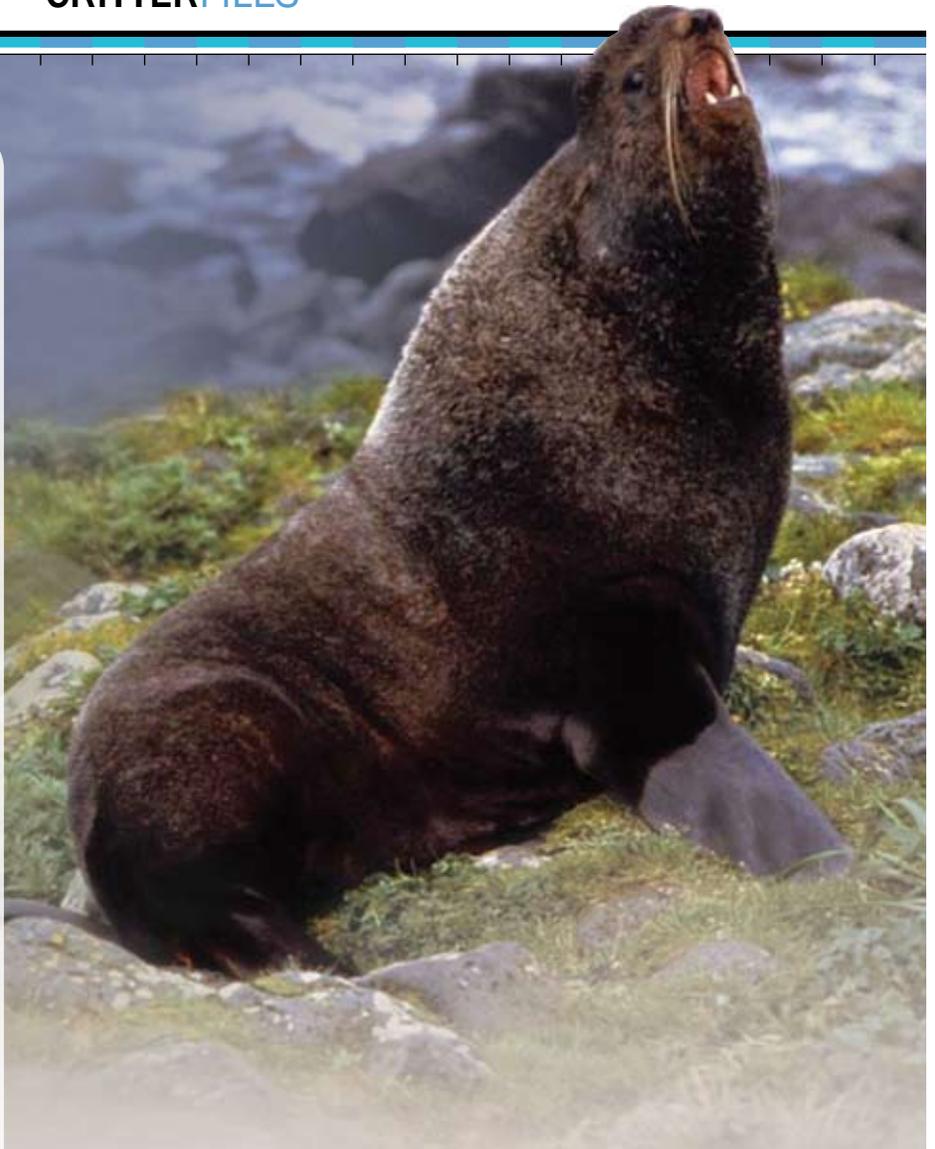


Photo: Paul Hillman



Photo: NOAA



Photo: NOAA

Photo Courtesy: U.S. Fish and Wildlife Service

**COMMON NAME:** .....Northern fur seal  
**SCIENTIFIC NAME:** .....*Callorhinus ursinus*  
**DISTRIBUTION:** .....North Pacific, Bering Sea  
**MAX. LENGTH:** .....7 feet  
**MAX. WEIGHT:** .....700 lbs  
**DIET:** .....Small fish, crustaceans, squid  
**STATUS:** .....Vulnerable

The northern fur seal is found along the U.S. Pacific coast from California, Oregon and Washington, north to Alaska and across the Bering Sea.





# New Vessels

## E X P A N D

# Sanctuary Capabilities

A fleet of new vessels will debut throughout the National Marine Sanctuary System in 2008, providing greater flexibility, safety and efficiency in the daily operations of sanctuary staff. These new ships will enhance the Office of National Marine Sanctuaries ability to conduct research, monitoring, education, enforcement and emergency response missions as it preserves, protects and manages our sanctuaries now and in the future.

In the Gulf of Mexico, the state-of-the-art, 83-foot research vessel *Manta* will enter service at Flower Garden Banks National Marine Sanctuary in June. Designed with input from researchers, educators and vessel operators, the *Manta's* versatility will make it a valuable tool for the sanctuary and its research partners.

“The *Manta* will be the first platform built from the hull up focusing on the needs of the Flower Garden Banks sanctuary,” said Ted Lillestolen, deputy director of facilities, safety, vessels and aviation for the sanctuary system. “It’s going to allow us more dedicated time on the water at the sanctuary site, and it will be a vital part of promoting NOAA’s partnerships throughout the region.”

Planned operations for the *Manta* include seafloor mapping, hurricane response, coral reef ecosystem monitoring and educa-

tional cruises. The *Manta* can berth up to 25 people and will also have an onboard decompression chamber and compressors to fill multiple dive tanks with air and mixed gases.

Also, in late summer 2008, the sanctuary office will conduct sea trials for a new boat called the *SRVx* (Small Research Vessel experimental). As a “regional-class” vessel, the *SRVx* will perform a variety of research, education and resource protection missions throughout the five West Coast marine sanctuaries. Its operations will range from northern Washington to Southern California, spanning more than 12,000 square miles.

The *SRVx* has the potential to fill the gap between smaller sanctuary boats and larger NOAA research vessels, which have greater capabilities but much higher operating costs due to their complexity and higher crew requirements. The *SRVx* trials will evaluate whether its speed, adaptability and cost effectiveness meet the sanctuary system’s needs for a vessel that can effectively cover large distances in a variety of sea conditions.

Two new 41-foot research vessels are also scheduled to make their debut for the sanctuary system in 2008. The as-yet unnamed “sister ships” — constructed by Seemann Composites, Inc. of

Photo Courtesy: NOAA

The R/V *Manta* is the newest and largest addition to the sanctuary system.



#### FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY



### Manta

**LENGTH:** ..... 82 feet, 10 inches  
**BEAM:** ..... 30 feet  
**RANGE:** ..... 600 nautical miles  
**CRUISE SPEED:** ..... 27 knots  
**ACCOMMODATIONS:** ... 14 people for 5 days;  
25 people for day trips

Gulfport, Miss. — are identical in design, featuring a stable catamaran hull and an impressive cruising speed of 28 knots.

One of the research vessels is headed for Channel Islands National Marine Sanctuary off Southern California, where it is scheduled to replace the 28-foot utility vessel *Xantu* in early summer 2008. The new ship will supplement and enhance the missions already undertaken aboard the sanctuary vessel *Shearwater*, including seabird surveys, intertidal monitoring, education, emergency response, logistics and small-scale diving and research operations.

The other 41-footer is bound for the waters of Hawaiian Islands Humpback Whale National Marine Sanctuary, where it is scheduled for delivery in the 2009 fiscal year. The addition of this vessel will expand the humpback whale sanctuary's capabilities, allowing staff to conduct research and rescue missions throughout the main Hawaiian Islands. The ship's hull design will allow safe passage through Hawaii's challenging channels in most weather conditions, and its size will also provide a stable working platform for up to 10 people on a wide range of missions. ■

#### MONTEREY BAY NATIONAL MARINE SANCTUARY



### Fulmar

**LENGTH:** ..... 67 feet  
**BEAM:** ..... 24 feet  
**RANGE:** ..... 400 nautical miles  
**CRUISE SPEED:** ..... 22 knots  
**ACCOMMODATIONS:** ..... 2-3 crew; 10 berths;  
27 passengers

#### WEST COAST REGION (INCLUDES 5 SANCTUARIES)



### SRVx

**ANTICIPATED DELIVERY:** ..... Summer '08  
**LENGTH:** ..... 85 feet  
**BEAM:** ..... 23 feet  
**RANGE:** ..... 1,700 nautical miles  
**SPEED:** ..... 35 knots  
**ACCOMMODATIONS:** ..... 4 crew;  
20 passengers

#### HAWAIIAN ISLANDS HUMPBACK WHALE NATIONAL MARINE SANCTUARY CHANNEL ISLANDS NATIONAL MARINE SANCTUARY



### 41-footer

**ANTICIPATED DELIVERY:** ..... Summer '08  
**LENGTH:** ..... 41 feet  
**BEAM:** ..... 14 feet  
**RANGE:** ..... 300 nautical miles  
**SPEED:** ..... 28 knots  
**ACCOMMODATIONS:** ..... 10 passengers

#### CHANNEL ISLANDS NATIONAL MARINE SANCTUARY



### Shearwater

**LENGTH:** ..... 62 feet  
**BEAM:** ..... 24 feet  
**RANGE:** ..... 450 nautical miles  
**CRUISE SPEED:** ..... 20 knots  
**ACCOMMODATIONS:** ..... 5 days, with berthing  
for 9-10 people

#### STELLWAGEN NATIONAL MARINE SANCTUARY



### Auk

**LENGTH:** ..... 50 feet  
**BEAM:** ..... 19 feet  
**RANGE:** ..... 400 nautical miles  
**CRUISE SPEED:** ..... 20 knots  
**ACCOMMODATIONS:** ..... 2 crew;  
science party: 12,  
4-6 for overnight

#### FLORIDA KEYS NATIONAL MARINE SANCTUARY



### Peter Gladding

**LENGTH:** ..... 57 feet  
**BEAM:** ..... 21 feet  
**RANGE:** ..... 500 nautical miles  
**CRUISE SPEED:** ..... 36 knots  
**ACCOMMODATIONS:** ..... 3-4 law enforcement  
officers

#### THUNDER BAY NATIONAL MARINE SANCTUARY



### 10-meter

**LENGTH:** ..... 32 feet, 10 inches  
**BEAM:** ..... 10 feet, 4 inches  
**RANGE:** ..... 126 nautical miles  
**CRUISE SPEED:** ..... 28 knots  
**ACCOMMODATIONS:** ..... 1-2 crew  
6-8 passengers

#### PAPAĀNAUMOKUĀKEA MARINE NATIONAL MONUMENT



### 11-meter

**LENGTH:** ..... 36 feet  
**BEAM:** ..... 10 feet, 4 inches  
**RANGE:** ..... 126 nautical miles  
**CRUISE SPEED:** ..... 28 knots  
**ACCOMMODATIONS:** ..... 1-2 crew,  
9-10 passengers



Photo: Claire Facilier, NOAA

Steve Lonhart is interviewed live from the *Fulmar*.

## MONTEREY BAY SANCTUARY MISSION COMES ALIVE FOR KIDS

Students and Internet users around the country followed along last March in real time as sanctuary scientists dove through kelp forests, cruised near migrating grey whales, and explored the undersea wonders of the Monterey Bay National Marine Sanctuary, as part of an educational mission with partners from Bob Ballard's Immersion Presents.

"The goal is to increase ocean literacy by bringing the ocean to kids and the public no matter where they live," said Dawn

Hayes of Monterey Bay National Marine Sanctuary.

Several 30-minute shows were broadcast live online through OceansLive.org via satellite and on Internet2 to 54 Boys and Girls Clubs and 30 other sites across the country.

For the first time, shows were broadcast from the sanctuary research vessel *Fulmar*, using mobile telepresence and wireless microwave technology linked to underwater cameras that beamed live images from the sanctuary to the masses.

Different topics were featured each day of the mission. In one broadcast viewers learned about the leafy hornmouth, a marine snail that uses a special tooth at the edge of its mouth to pry open barnacles and other tasty shellfish morsels.

Kimberly Pratt, a fifth-grade teacher from a local elementary school who participated in the broadcasts from the *Fulmar*, said her kids were really excited about being able to see the marine life in the Bay and interact with scientists.

One of the stars of the underwater broadcasts was Steve Lonhart, the research coordinator for the Monterey Bay sanctuary, who fielded questions from kids watching the show from remote locations across the country while he was diving.

"It's really interesting being underwater and being able to hear someone asking a question from the East Coast," Lonhart said. ■

### NEWSPLASH continued from page 1

#### 2008 CAPITOL HILL OCEAN WEEK TO FOCUS ON CLIMATE CHANGE

From June 3-5, the National Marine Sanctuary Foundation hosted Capitol Hill Ocean Week 2008. The event brought together a wide-range of stakeholders to discuss ocean and coastal issues. Panel speakers included members of Congress, as well as representatives of federal and state government, industry, academia, and nonprofits.

This year, the symposium focused on the effects of climate change on the oceans. Topics included challenges and impacts to resources and people, the science used to determine the condition of marine habitats, and possible solutions on how best to deal with the effects of climate change, such as using more alternative sources of energy. Other topics included aquaculture and the launching of an updated Keep Oceans Clean campaign — a public awareness initiative aimed at children to help prevent marine debris.

The foundation also hosted its sixth annual Leadership Awards Dinner on June 3, 2008. Speaker of the House Nancy Pelosi and Senator Barbara Mikulski were honored with a Leadership Award

for their dedication to protecting the marine environment. The foundation presented its Lifetime Achievement Award to Jean-Michel Cousteau and Dr. Sylvia Earle, recognizing them for their lifelong contributions to ocean science and conservation, and their critical involvement with establishing the Papahānaumokuākea Marine National Monument.



#### OSTROM WINS ENERGY AWARD

Chris Ostrom of the Office of National Marine Sanctuaries received a Department of Commerce Federal Energy Management Program award for his role in working closely with the sanctuaries to incorporate sustainable policies and practices into new construction and renovations, as well as day-to-day operations and management of sanctuary facilities.

# HURON EXPLORER

## NOAA's First Green Vessel



In 2005, Thunder Bay National Marine Sanctuary acquired the 41-foot *Huron Explorer*, the nation's first vessel to operate without any petroleum products. The vessel uses rapeseed hydraulic oil for its deck crane, winches and marine gear, 100% soy biodiesel for engine fuel, and canola motor oil. The *Huron Explorer* is used for research in the sanctuary, with two primary missions:

preserving the sanctuary's maritime heritage and protecting the environment.

Like Thunder Bay's Great Lakes Maritime Heritage Center, the vessel was recently awarded the U.S. Department of Energy's "You Have the Power" Award. The Thunder Bay sanctuary's goal is to make its entire fleet environmentally friendly and economical to operate. ■

### Huron Explorer

LENGTH:	41 feet
BEAM:	13.5 feet
RANGE:	300 nautical miles
SPEED:	25 knots
ENGINES:	Two 903 Cummins (636 hp)
FUEL:	Biodiesel
ENDURANCE:	8-10 hours
ACCOMMODATIONS:	3 crew; Science Party: 1-8
CAPABILITIES:	Diving, Remote Sensing, & ROV Operations

Photo: Wayne Lusardi-State of Michigan



## STEPHEN FRINK

### PROFESSIONAL UNDERWATER PHOTOGRAPHER

Recently I had occasion to look closely at an old slide. The first thing I noticed was how absolutely pristine the brain coral was in the photo. Then, I realized which particular brain coral I was looking at. I've been a professional underwater photographer for 30 years, and have traveled the world in pursuit of photo-ops, so I've seen plenty of brain corals. Yet, this was a special one, for at the statue of Christ of the Abyss in Key Largo there was one giant specimen on the ridge overlooking the Statue. It was in about 12 feet of water, shallow enough for snorkelers to see, and touch, unfortunately, and in proximity to one of the most popular dive sites off Key Largo. The potential for accidental contact with fin tips was inevitable, and the brain coral died. It was really spectacular for more years than I'd believed possible.

I have heard stories about brain coral in Papua New Guinea regenerating itself after being damaged by a diver. The water quality was so good that new polyps were able to colonize the damaged area quickly. Not so with "my" coral, for our water quality off Key Largo has changed over the years, and the coral's talent for regeneration was just overwhelmed by the frequent diver contact.

This is not a gloom-and-doom story, though, for I'd say the diving off Key Largo overall has actually improved over the past decade. There are several significant resource management accomplishments Florida Keys National Marine Sanctuary made to assure that. Mooring buoy installations are among the most obvious, because they prevent misplaced anchors from dragging through corals and doing more harm by accident than a careless diver could do on purpose. The other is the concept of sanctuary preservation areas, also known as no-take zones — no spearfishing, no lobstering, and most significantly, no hook-and-line fishing, either. Those of us who dived these reefs daily had no idea of the impact of hook-and-line until it stopped and we saw the marine life populations explode. Now, Key Largo has fish, more fish than anywhere I've dived anywhere in the Caribbean. It is a huge success story, totally due to enlightened conservation.

We still have issues in our Florida Keys waters. The die-off of the black-spined sea urchin allowed algae to cover many of the places coral used to colonize. But mostly, it is about water quality, and there may not be too much the Florida Keys sanctuary can do about that, except indirectly. In an area that has been protected since 1960 with the establishment of John Pennekamp Coral Reef State Park, NOAA and our sanctuary team have inspired a

conservation ethic that now influences Monroe County's mandate to install sewers throughout the island chain, replacing the aging cesspools and septic tanks, thereby improving water quality.

I believe that the sea urchins will come back, and I believe my brain coral can come back to its once inspirational splendor. But, actions beyond the actions taken by our Florida Keys National Marine Sanctuary have to happen — like installing sewers and a return to reasonable water temperatures unaffected by extremes of global warming. We must all act locally, as our national marine sanctuaries do, and think globally if we want to protect our coral reefs for future generation to enjoy.

*The opinions expressed in Sanctuary Voices do not imply endorsement by NOAA of any product, service, organization, company or policy.*



Photo: Stephen Frink

Divers observe Christ of the Abyss statue in 25 feet of water off Key Largo.



## RUSTIN “RUSTY” MASON

1953 -2008

In each issue of *Sanctuary Watch*, through our Star of the Sea column, we highlight special people who are making a difference in ocean conservation, particularly in our sanctuaries. This time, we are highlighting a special person for Star of the Sea. Rusty Mason, our colleague and friend,

who embodied what this column is all about.

This past March, while working on a mission in the Tortugas Ecological Reserve in Florida Keys National Marine Sanctuary, Rusty passed away in a tragic dive accident.

His untimely death has had an impact on all of us in the sanctuary family, especially those who worked closely with him in the Keys. It reminds us how fragile and short life is and that doing what you love is such an important way to live life. Rusty died doing just that — using his passion for diving to help protect the sanctuary for which he cared so deeply. We wanted to offer our readers an opportunity to get to know a little bit about Rusty, our Star of the Sea, from the following bio.

Rustin “Rusty” Mason, was born in 1953 in Evansville, Ind. He attended the Florida Institute of Technology, where he graduated in 1976 with a B.A. in oceanographic technology. Rusty was an active and beloved member of the dive community in the Lower Keys since 1990, when he first worked for Looe Key Reef Resort as a vessel

operator and dive instructor. At the time of his death, Rusty was employed as a marine mechanic for the Florida Department of Environmental Protection’s Office of Coastal and Aquatic Managed Areas working with the Florida Keys National Marine Sanctuary staff.

Rusty’s accreditations include serving as a U.S. Coast Guard licensed vessel operator, NOAA working diver and NOAA dive master responsible for installation, repair and maintenance of mooring systems within the sanctuary. Rusty had been employed in this role since May 2002. Outside of his everyday mooring buoy duties, he was routinely called upon to assist with numerous assignments. He played a key role assisting with vessel and dive support for the NOAA Dive Program’s annual Key West training class.

Rusty regularly acted as vessel operator and dive support for the sanctuary’s annual coral spawning cruise. He also provided boating support for researchers, elected officials, and other visitors to the sanctuary. His love for people and his outgoing nature made him a natural in his role as the unofficial “morale officer” for the Keys sanctuary office.

A cement Sea Star engraved with Rusty’s name will be placed in front of the Dr. Nancy Foster Florida Keys Eco-Discovery Center in memory of his passion and dedication to protecting marine life in the Keys for future generations to enjoy. He was truly our Star of the Sea, and he is deeply missed.

— *We’ll miss you, Rusty!*

## THE KELLERS’ SOLAR HOME



One of the sanctuary system’s very own is walking the talk when it comes to greening. Brian Keller, regional science coordinator for the southern region, and his wife Fiona

Wilmot are also doing their part to live “greener” lives. Residents of St. Petersburg, Fla., since 2006, they bought a 1957, ranch-style “tear-it-all-down-and-start-over fixer-upper.”

Keller, the science coordinator for Florida Keys National Marine Sanctuary, recalled the staggering amount of work facing them to make the house livable, which included bringing everything up to code.

Their laborious efforts paid off, and today the house is a marvel of eco-friendly construction, with solar panels, a solar hot water system, foam-injected insulation behind exterior concrete walls, solar light tubes in bathrooms and the living room, and EnergyStar rated appliances. In addition, the renovated home features a dual-flush commode to reduce water consumption and a rainwater collection

system that channels water into two 500-gallon tanks used to water their vegetable garden and fruit trees. These are just some of the many eco-friendly features in their home.

From the original home, they re-used some of the old wood for structural support and recycled old concrete, glass, aluminum, plumbing and wiring materials. Some of the original appliances and fixtures were donated to Habitat for Humanity.

The Keller house was featured in a St. Petersburg Times article and in a local news video clip as a fine example of an energy-saving home. ■

## U.S. ARMY DIVERS SUPPORT SANCTUARIES IN PILOT PROJECT

In a new effort to protect sanctuary resources, two teams of divers from the U.S. Army Dive Company joined divers with NOAA's Office of National Marine Sanctuaries in March to repair buoy moorings, remove trash from dive sites, and install listening devices to track fish in the Florida Keys and Gray's Reef national marine sanctuaries.

"By applying military capabilities to support ongoing civilian efforts, the pilot program benefits their training requirements and helps us meet our mandate for resource conservation," said Daniel J. Basta, director of the Office of National Marine Sanctuaries.

"We hope that this is the beginning of a long-standing relationship with NOAA," said Capt. Charles Denike, commander of

the U.S. Army Dive Company based in Fort Eustis, Va. "We can provide NOAA with needed diving support and they provide us with real-world missions to keep the company trained and ready for deployment around the world in support of the global war on terror."

In the Florida Keys sanctuary, NOAA and Army divers inspected, repaired, and installed mooring buoys and conducted several dives to remove marine debris from two popular Florida Keys shipwrecks, the *Adolphus Busch* and the *Cayman Salvager*. The Army dive team also assessed the seawall adjacent to the Florida Keys sanctuary offices in Key West and provided recommendations for structural reinforcement in areas where

repair is needed.

In the Gray's Reef sanctuary, divers installed acoustic receivers and transmitters for a system that will help researchers study and monitor fish behavior and track movements of tagged fish, such as grouper and snapper, within the sanctuary. During rough sea days, the Army divers remained topside and constructed moorings for the full system of acoustic receivers that will be deployed by Gray's Reef divers this summer.

"It is a win-win partnership. If the Army's work in the sanctuaries proves successful this year, plans are to assist other sanctuaries in the future," said Mitchell Tartt, national dive coordinator for the sanctuary office. ■

## MONITORING SYSTEM REDUCES RISKS TO ENDANGERED WHALES

With as few as 300 endangered right whales left in the North Atlantic, NOAA marine managers and scientists are developing new techniques to help protect these majestic creatures from vessel traffic in New England's busy shipping lanes.

An innovative acoustic monitoring system recently installed in and around Stellwagen Bank National Marine Sanctuary is doing just that. The system, which was devised by sanctuary staff as a license requirement for two liquid natural gas ports near the western edge of the sanctuary, detects the calls of right whales and broadcasts their location data in real-time to tankers in the area. Liquid natural gas tankers that receive these right whale alerts are required to lower their speed and post observers to avoid collisions with the animals.

"It has been pretty amazing to see this system go into action," said Leila Hatch, regional marine bioacoustics coordinator for the National Marine Sanctuary System. "The shipping industry has been extremely interested in learning more about how they can avoid harming whales, and this is providing us with a whole new set of information about how these animals are distributed."

The number of acoustic detections peaked this April, supporting evidence from visual sighting efforts that record-breaking

numbers of right whales were feeding in the greater sanctuary waters. During one week, more than 79 right whales were estimated to be congregating in the southern sanctuary and Cape Cod Bay — an unprecedented gathering that was even more significant because so few of these whales remain.

"Their numbers are so low that the loss of even one right whale is determined to be a population impact," Hatch said. "If we can make even one ship strike less probable, then we are having a positive effect on the population of these animals."

The right whale detection system's 10 acoustic buoys were installed along the newly realigned Boston shipping lanes in the Stellwagen Bank sanctuary area in January. The buoys use special software to identify right whale calls and transmit this information via satellite to computers at Cornell University, where technicians are available 24 hours a day to confirm the detections.

NOAA is now incorporating these right whale acoustic detections into its Sighting Advisory System, which broadcasts whale position information to all large vessels in the region and to the Web. These broadcasts notify ships of nearby right whales and inform them of steps they can take to avoid harming the animals. Information gathered by the underwater listening system also supports the NOAA Fisheries visual database of right whales in northeast waters. ■

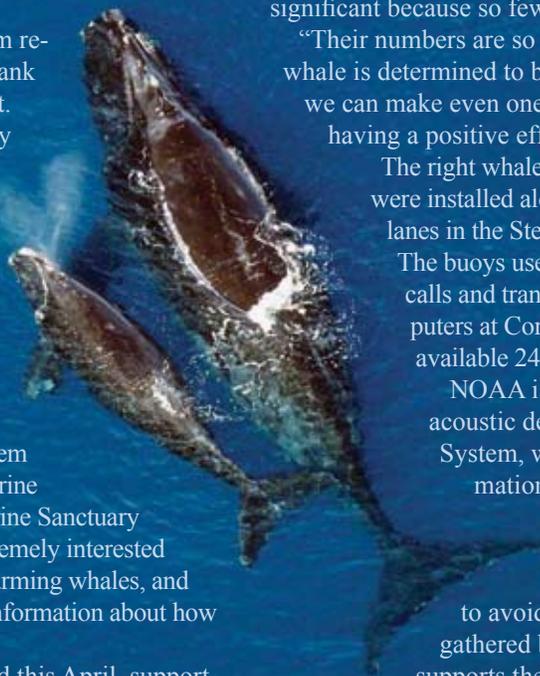


Photo: NOAA

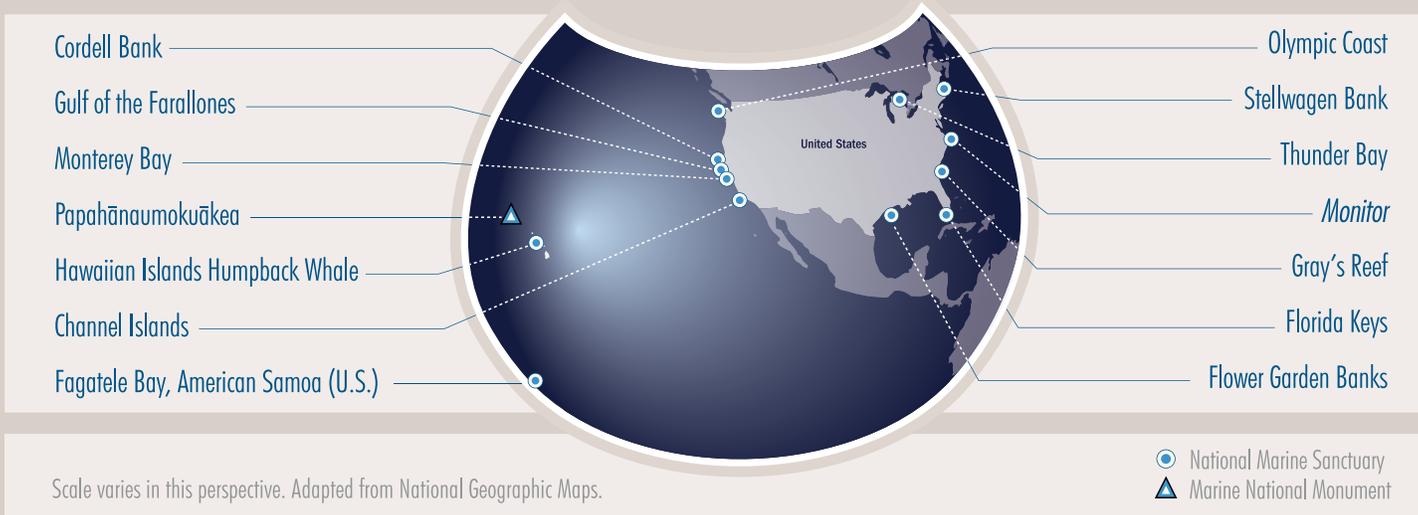
## SANCTUARYSNAPSHOT



The new **SANCTUARYSNAPSHOT** section will feature photographs representing one of our sanctuaries. In this issue, we showcase a queen angelfish with *Tubastrea coccinea* (orange cup coral) that was photographed in Florida Keys National Marine Sanctuary by Stephen Frink.

# SANCTUARY SYSTEM

The Office of National Marine Sanctuaries serves as the trustee for a system of 14 marine protected areas, encompassing more than 150,000 square miles of ocean and Great Lakes waters. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. The sanctuary system is part of the National Oceanic and Atmospheric Administration (NOAA), which manages sanctuaries by working cooperatively with the public to protect sanctuaries while maintaining compatible recreational and commercial activities. Sanctuary staff work to enhance public awareness of our nation's marine resources and maritime heritage through scientific research, monitoring, exploration, educational programs and outreach.



The Office of National Marine Sanctuaries is part of NOAA's National Ocean Service.

**VISION** - People value marine sanctuaries as treasured places protected for future generations.

**MISSION** - To serve as the trustee for the nation's system of marine protected areas to conserve, protect and enhance their biodiversity, ecological integrity and cultural legacy.

## SANCTUARY WATCH GOING DIGITAL

To save trees and costs, the Fall issue of Sanctuary Watch will be digital and will only be available online via our Web site at [sanctuaries.noaa.gov](http://sanctuaries.noaa.gov).

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