



NATIONAL MARINE  
SANCTUARIES



# Sanctuary watch

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# Letter from the Director

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*Pisces V. Photo: Hawaii Undersea Research Laboratory*

Exploring the sea is the first step in learning about its many mysteries. I remember about five years ago when I dove on the research sub *Pisces* in Hawaii and how I felt when we closed the hatch — three people in a tiny space, seven feet in diameter, descending 450 meters in the water column and not quite knowing what we would find. It was a reaffirming experience for me. Each dive

reminded me that we still have so much to learn about our ocean world and it is our personal experiences that connect us to learning.

With exploration often comes discovery, and in this issue of *Sanctuary Watch* we highlight an exciting mission called the Secrets of the Gulf Expedition that took place in March in Flower Garden Banks National Marine Sanctuary. Researchers looked for more evidence of how the sanctuary's regions are connected to one another and for signs of early human habitation in that area. Building on past expeditions with our numerous partners, like last year's expedition to the wreck of the USS *Macon*, we are committed to sharing the results of these missions with our stakeholders, managers, academia and local communities. Using telepresence technology, we can showcase the ocean depths for everyone to see and experience.

When I think of exploring our oceans, I think of the many scientists, educators, students and volunteers whose inquisitiveness and determination have brought the mysteries of our ocean realm to our doorstep and into our classrooms. Beyond the pages of this issue, look for our state of the sanctuaries report on our website, [www.sanctuaries.noaa.gov](http://www.sanctuaries.noaa.gov) where you will read more about their efforts in a year filled with exciting accomplishments in ocean science, education and exploration, and links to our partners who make our achievements possible.

Our marine sanctuaries are a living tapestry of marine biological diversity and a repository of our nation's maritime history. The continued survival of our sanctuaries, and all the riches within their boundaries, depends on improved ocean stewardship and understanding. Learning is the first step, and exploration begins that process. So get involved. It is personal and it's about you. Our nation's marine sanctuaries are "What you make them!"

Sincerely,

Daniel J. Basta, Director  
NOAA National Marine Sanctuary Program

|                         |   |
|-------------------------|---|
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| <b>Content Editor</b>   | Michael T. Murphy                           |
| <b>Chief Writer</b>     | Walter Bonora                               |
| <b>Graphic Designer</b> | Auralea Krieger                             |
| <b>Copy Editors</b>     | Sharon Sirkis, Matt Dozier,<br>Angela Calos |
| <b>Contributors</b>     | Shelley Du Puy, Jennifer Stock              |

**Cover:** Manta ray and divers in Flower Garden Banks National Marine Sanctuary *Photo: Kaile Tsapis*

**Sanctuary Watch** is a publication of the Communications Branch of the National Oceanic and Atmospheric Administration (NOAA) National Marine Sanctuary Program. NOAA is an agency of the U.S. Department of Commerce.



Laura Bush announces new name for the Northwestern Hawaiian Islands at a renaming ceremony in Hawaii. (Pictured left to right) Hawaii Governor Linda Lingle, Laura Bush, Secretary of the Interior Dirk Kempthorne, Deputy Secretary of Commerce David A. Sampson, and Hawaiian elder Pualani Kanahele. Photo: NOAA

## First Lady Joins Hawaii Governor to Re-name Marine National Monument

A special place received a special name in March when Laura Bush announced the native Hawaiian name, Papahānaumokuākea, for the Northwestern Hawaiian Islands Marine National Monument. The first lady was joined by Hawaii Governor Linda Lingle, Secretary of the Interior Dirk Kempthorne, and Hawaiian elder Pualani Kanahele at a renaming ceremony in Honolulu. The name Papahānaumokuākea was chosen by the Northwestern Hawaiian Islands Native Hawaiian Cultural Working Group after a year-long process, and comes from an ancient Hawaiian tradition about the formation of the Hawaiian Islands. The announcement highlights a decades-long effort to protect the 140,000 square miles of coral reefs, islands, atolls and ocean areas culminating with a presidential proclamation in June 2006 designating the area a marine national monument. Also at the ceremony were James Connaughton, chairman of the President's Council on Environmental Quality, and David A. Sampson, deputy secretary of commerce.

## Leaders Gather for Capitol Hill Ocean Week

From June 5 - 7, the National Marine Sanctuary Foundation hosted Capitol Hill Ocean Week 2007. The event brought together a wide range of stakeholders to discuss current ocean and coastal issues. Topics included the agenda for ocean legislation in the 110th Congress, impacts of acoustics on marine mammals, nuances of coastal economies, the need for incorporating biological data in ocean observatories, and case studies for an ecosystem-based approach to management. Panel speakers included members of Congress, federal and state government representatives, and members of industry, academia, and nonprofits.

The foundation also hosted its Fifth Annual Leadership Awards Dinner on the evening of June 5, 2007. Congresswoman Lynn Woolsey (D-CA) was honored with a Leadership Award for her dedication to the protection of the marine environment, including her longstanding support of Gulf of the Farallones and Cordell Bank national marine sanctuaries. In addition, Robert M. White, the first NOAA administrator, received the Lifetime Achievement Award.

## Sanctuary System Gets Two New Superintendents

Paul Michel, a veteran with the Environmental Protection Agency (EPA) was recently named to head Monterey Bay National Marine Sanctuary. Michel began overseeing management and operations of the sanctuary in April. He has worked for the EPA in Washington, D.C., and San Francisco since 1987. For eight years, he coordinated the EPA's efforts to recover wetlands in Southern California, and more recently managed the EPA's wetlands and watershed-protection programs in California, Arizona, Nevada, Hawaii and the Pacific Islands.

George R. Sedberry took the helm at Gray's Reef National Marine Sanctuary in June. Sedberry has carried out research at Gray's Reef and on other live-bottom reefs off the southeast since 1980. He has been principal investigating scientist on numerous studies in the waters of the South Atlantic Bight including Gray's Reef. Sedberry comes to Gray's Reef from the Marine Resources Institute of the South Carolina Department of Natural Resources in Charleston, S.C., where he was assistant director and senior marine scientist.



USS Monitor Center at The Mariners' Museum. Photo: The Mariners' Museum

## New USS Monitor Center Opens

Exactly 145 years after the Battle of Hampton Roads, the historic clash in 1862 between the Civil War ironclads USS *Monitor* and CSS *Virginia*, The Mariners' Museum USS *Monitor* Center opened its doors on March 9, 2007. The museum, located in Newport News, Va., serves as the official repository of all *Monitor* artifacts. At the heart of the \$30 million (\$9.5 million from the sanctuary program), 63,500-square-foot facility is the exhibition – a melding of artifacts, original documents, paintings, personal accounts, and the science and technology behind the historic ironclad. Visitors can walk on a full-scale replica of the *Monitor*, experience the drama of the Battle of Hampton Roads in a high-definition theater, get a detailed look at the propeller and the engines that powered the ironclad, and observe the intricate, hands-on conservation taking place in one of the largest high-tech conservation facilities on the East Coast. For more information on the center, visit [www.marinersmuseum.org](http://www.marinersmuseum.org).

# Researchers Explore Hidden Highways of the Flower Garden Banks

Leading-edge technology and a cast of top researchers and explorers were the stars of a ground-breaking expedition to the deeper regions in and around Flower Garden Banks National Marine Sanctuary in the Gulf of Mexico. Billed as the *Secrets of the Gulf Expedition*, scientists mounted the cruise in March aboard the U.S. Navy's NR-1 submarine and two other ships. Their mission: to gain a better understanding of the sanctuary's benthic communities, learn how the sanctuary's marine ecosystems are connected to one another, and to hunt for signs of ancient human habitation in an area of the Gulf of Mexico believed to have once been above water.



“The challenge of exploring our vast ocean is a daunting one,” said Daniel J. Basta, director, National Marine Sanctuary Program, “but dynamic expeditions, like *Secrets of the Gulf*, help us unravel the ocean’s mysteries. Through the application of new technologies in national marine sanctuaries, we’re opening new windows to the marine world and connecting the American people to this realm like never before.”

Robert Ballard, who discovered the wrecks of the *Titanic* and *Bismarck*, led the search for the ancient shoreline from an operation center at the Institute for Exploration at the Mystic Aquarium in Connecticut. For students of archaeology and human prehistory, discovering signs of prehistoric settlements as old as 19,000 years could change the entire landscape of prehistoric studies in early North American settlements, according to Ballard.

“The oldest known settlement is 12,000 years,” Ballard said. Though preliminary data has revealed no signs of early human life in the region, researchers will continue to investigate that mystery.

For biologists wanting to learn more about the deeper regions of North American waters, members of the expedition team explored low-relief ridges in the northwestern Gulf of Mexico, including two of the three banks in the sanctuary. Researchers also looked for evidence that certain areas in the region provide protective cover for animals traveling between them.

“This is a rare opportunity to explore a system of ‘hidden highways’ that connects the Flower Garden Banks ecosystem with other reefs and banks in the area,” said George Schmahl, superintendent of Flower Garden Banks National Marine Sanctuary.

Additionally, scientists surveyed spectacular mud volcanos formed by escaping methane gas and fine sediments.

“Think of these areas as nurseries and diners,” said Steve Gittings, science coordinator for the sanctuary program. “In some places, the mud volcanos looked like Swiss cheese, with extensive burrowing. Some holes served as nurseries for juvenile groupers that probably




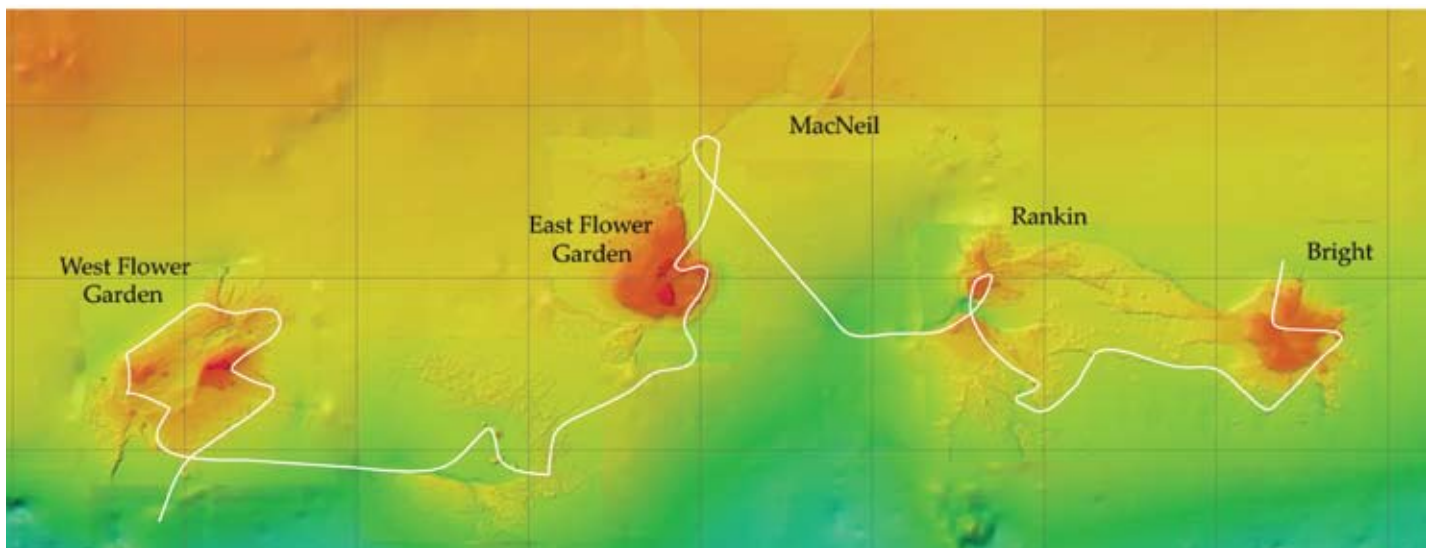
Steve Gittings gives a presentation on the corals and fish in the banks, while Kathy Broughton records marine life data at the Science Command Center in Silver Spring, Md. Photo: Fred Gorell

move to the banks as they mature. Elsewhere, researchers observed huge schools of small fish that are likely food for large jacks.”

In shallower waters, researchers investigated manta ray movements and conch populations within the sanctuary.

Live broadcasts using telepresence technology complemented the mission. A towed camera sled and a satellite feed onboard the sub’s support ship *Carolyn Chouest* beamed high quality video and audio to shore 24 hours-a-day. Bringing science to students, educators, scientists and the general public in real-time was a major focus of the expedition.

Principal partners for the expedition were the National Marine Sanctuary Program, U.S. Navy, NOAA’s offices of exploration and education, Immersion Presents, Institute of Exploration at the Mystic Aquarium, National Marine Sanctuary Foundation, and University of Rhode Island. 



Track line of the banks visited on the mission. Photo: Kathleen Cantner, Institute for Exploration

# Foundation is Key to Program's Role

## Encouraging Public Support for America's Underwater Treasures

**F**oundations, like partnerships, help government do its job. More and more, federal agencies find they cannot perform the numerous tasks in front of them without the help of partners and volunteers. For the National Marine Sanctuary Program, the National Marine Sanctuary Foundation helps shape the program's relationship with the American people.

"The foundation's goal is to help people experience the wonders of America's marine sanctuaries," according to its director, Lori Arguelles. "Many don't know they exist. They could be snorkeling in sanctuary waters, like the Florida Keys, but not be aware that they are in a national marine sanctuary."

A recent success story for the foundation was raising money for the new Florida Keys Eco-Discovery Center which opened in January. This joint effort by NOAA, the U.S. Fish and Wildlife Service, and the National Park Service will be an integral part of the sanctuary's outreach efforts. "We raised \$1.9 million to outfit the center with its exhibits," Arguelles says.

Capitol Hill Ocean Week is another important foundation effort. Now in its seventh year, the annual event brings together various ocean constituents to identify significant ocean issues before the nation's leaders.

Underscoring the foundation's efforts is the work done by their board members who are renowned ocean advocates. People like Jean-Michel Cousteau, Robert Ballard, and Sylvia Earle are not just celebrity names — their respected voices are heard far and wide when talking




Florida Keys Eco-Discovery Center. Photo: Francis Gilbert

about raising ocean awareness, and often their efforts shape national ocean policy.

A telling example is the effect Cousteau's film, *Voyage to Kure*, had on President Bush in declaring the Northwestern Hawaiian Islands a marine national monument. The film, which aired on PBS, highlights the natural wonders of the island archipelago. After a special screening at the White House organized by the foundation, Bush acted quickly to proclaim the islands a marine monument — the largest of its kind in the United States, and the largest marine protected area in the world.

At the heart of everything we do is building bridges with the American people according to Arguelles, and to help them make a connection with ocean conservation.

"In our continual pursuit of environmental excellence," said Daniel J. Basta, program director, "we can make the greatest progress by tapping into America's love for its oceans, and with the foundation's tireless efforts, build partnerships that use our national enthusiasm to make our ocean world a better place." 

To learn more, visit [www.nmsfocean.org](http://www.nmsfocean.org).

The National Marine Sanctuary Foundation supports exciting education programs throughout the sanctuary system that inspire students to explore careers in resource protection. Pictured here: Students with MERITO (Multicultural Education for Resource Issues Threatening Oceans) remove invasive plants at Anacapa Island. MERITO is a marine conservation effort designed to reach diverse ethnic groups.

Photo: Rocío Lozano-Knowlton



# Stellwagen Bank Condition Report Released

The National Marine Sanctuary Program released the first-ever status report evaluating the health of Stellwagen Bank National Marine Sanctuary, home to one of the richest and most productive marine ecosystems in the nation. The Stellwagen Bank National Marine Sanctuary Condition Report presents an initial summary of the pressures and trends facing sanctuary resources, which sanctuary staff will address in detail in the upcoming sanctuary draft management plan. The condition report, which examines the status of everything from water quality in the sanctuary to its endangered right whale population, is available at [www.sanctuaries.noaa.gov](http://www.sanctuaries.noaa.gov).



## Researchers Move to Clean Up Cordell Bank



Scientists launch a remotely operated vehicle in Cordell Bank to locate derelict fishing gear. Photo: NOAA

Marine debris is a global problem. It is nomadic, pervasive and has many faces. Plastic water bottles and caps, balloons, derelict fishing gear, and six-pack holders are just some of the forms of debris that show up in oceans around the world. Its impact on marine ecosystems is staggering. Each year, thousands of marine animals die after getting entangled in or ingesting marine debris.

In Cordell Bank National Marine Sanctuary, researchers have been looking at ways to mitigate the effects of marine debris, while learning more about the deep reef ecosystem around the bank. In 2002, staff observed derelict fishing gear in 18 of 20 dives covering rocky habitat on the bank. Based on those findings, sanctuary staff worked with their advisory council and the Pacific Fisheries Management Council to recommend protection for this critical habitat. In 2006, the council identified Cordell Bank as a conservation area under NOAA Fisheries Essential Fish Habitat designation. Their efforts that year also led to a ban on the use of bottom contact fishing gear on the bank in waters shallower than 50 fathoms.



Humpback whale breaching. Photo: NOAA

## Humpback Whales Get Added Protection

Every year, endangered North Atlantic humpback whales make a hazardous 3,000-mile round-trip journey between the rich feeding grounds of Stellwagen Bank off the coast of Massachusetts and the warmer waters of the Dominican Republic, where they mate and give birth to their young.

Now, a unique “sister sanctuary” agreement is providing a new level of protection for these whales at both ends of their remarkable voyage. NOAA’s National Marine Sanctuary Program has established this linkage between Stellwagen Bank National Marine Sanctuary and the Marine Mammal Sanctuary of the Dominican Republic, opening up new opportunities for the two protected areas to help improve humpback whale recovery in the North Atlantic.

“The sister sanctuary relationship will play a powerful role in protecting endangered humpback whales, and the opportunity for international cooperation in marine conservation is invaluable,” said Craig MacDonald, Stellwagen Bank sanctuary superintendent. “This agreement has the potential to improve our scientific knowledge, enhance our management ability and increase the system’s visibility – benefits that extend far beyond the sanctuaries involved.”

The sister sanctuary initiative is the world’s first effort to protect an endangered migratory marine mammal species on both ends of its range. Researchers are optimistic that more international conservation agreements like it are on the horizon.

“This conservation action is important as a model for the wider Caribbean region,” said Maximiliano Puig, minister for the environment and natural resources for the Dominican Republic. “Our sanctuary was the first marine mammal sanctuary established in the region, and it continues to lead by example.”



## A Drop In The Ocean




The ocean is hot. Not hot in the mercury rising, global warming sense of the word (though that may be true, too), but hot in the public perception sense. People outside of the ocean conservation community are starting to care deeply about the ocean environment. The sensation accompanying this shift is similar to that of 20 years ago, when some people began wearing “Save the rainforests” T-shirts.

In the last year or two, there has been a subtle but unmistakable shift of awareness and understanding in the broader public of the issues we as marine conservationists face every day: overfishing, bycatch, waning biodiversity, acidification, coral bleaching, marine debris, invasive species, shrinking icecaps. A list that is long and growing longer by the day.

Perhaps it was Al Gore’s gripping tale of global warming and coastal inundation. Perhaps it was the recent report that projected an ocean bereft of fish by mid-century. Then again, maybe it was good news, like the Northwestern Hawaiian Islands designation as a national monument. Or, it could have been *Happy Feet*—the wildly popular animated film that touched on themes of overfishing, habitat destruction, and marine debris—some of the same pressing concerns mentioned above.

Regardless of the cause, what is important is that this shift is real and in it there is opportunity. The shift signals a larger change of public appreciation for ocean issues in general, and an unprecedented moment for the marine conservation community to rally together, to find new and more powerful ways to join forces, and to draw more attention to the issues that have been driving our work for years.

One of our four priorities at the Ocean Conservancy is the identification, protection and restoration of special ocean places including, national marine sanctuaries. Protecting large swaths of ocean habitats and returning them to the health they once knew is a top priority for everyone concerned about the ocean. Recent victories like those in the Northwestern Hawaiian Islands and the network of marine protected areas adopted in California are welcome news, but unless they are supported by vigorous programs and adequate funding, the years of effort by the Ocean Conservancy and other organizations who helped make them a reality will have been but a drop in the ocean. 

*Sanctuary Voices offers our readers an opportunity to hear from guest columnists. See past issues of Sanctuary Watch for commentary by leaders in diverse fields such as exploration, boating, and fishing. The opinions expressed in Sanctuary Voices do not imply endorsement by NOAA of any particular product, service, organization, company or policy.*

Galapagos sharks, Papahānaumokuākea Marine National Monument.  
Photo: Jim Watt



## Critter Files:

# Vampire Squid

**Common name:** Vampire squid

**Scientific name:** *Vampyroteuthis infernalis*

**Max size/length:** one foot (30 cm)

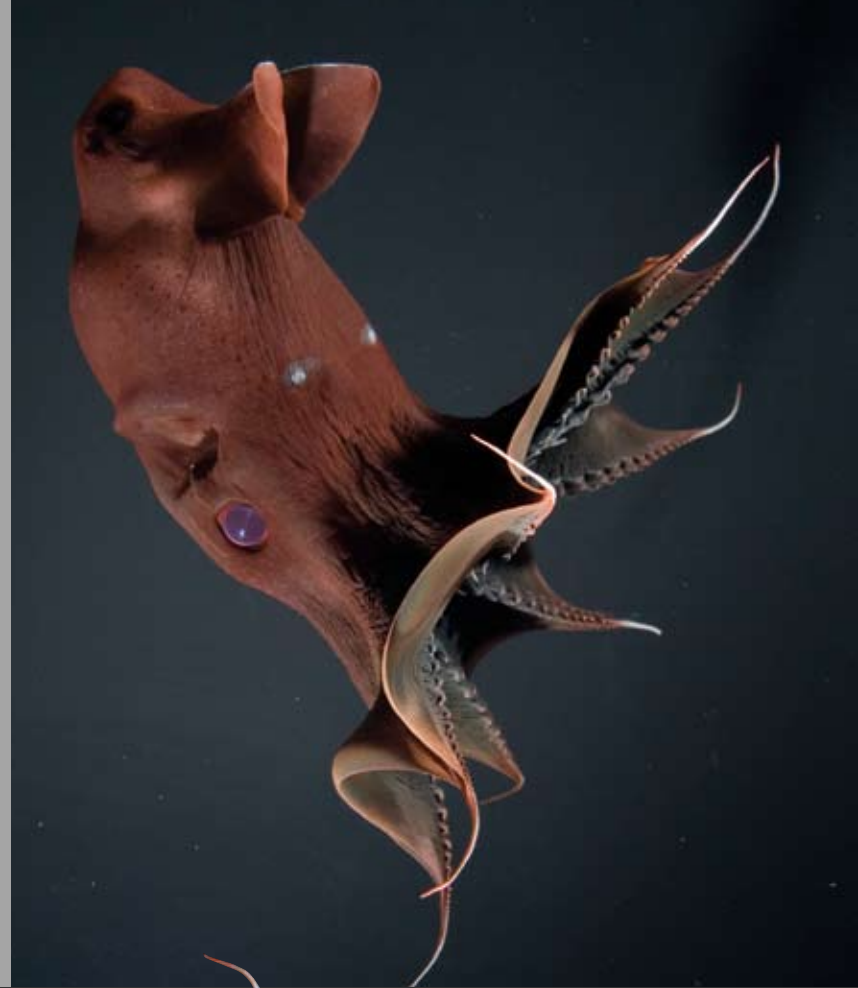
**Max lifespan:** Unknown

**Diet:** Crustaceans, mollusks and fish

**Distribution:** Tropical and temperate oceans.

**Status:** Stable in U.S. waters

Photos by: Kim Reisenbichler© MBARI 2006



**V**ampire squid. Its name suggests something out of a nightmare or a cheesy 1950s horror movie. But this shy little deep-sea cephalopod is hardly as threatening as its scientific name, *Vampyroteuthis infernalis*, would imply.

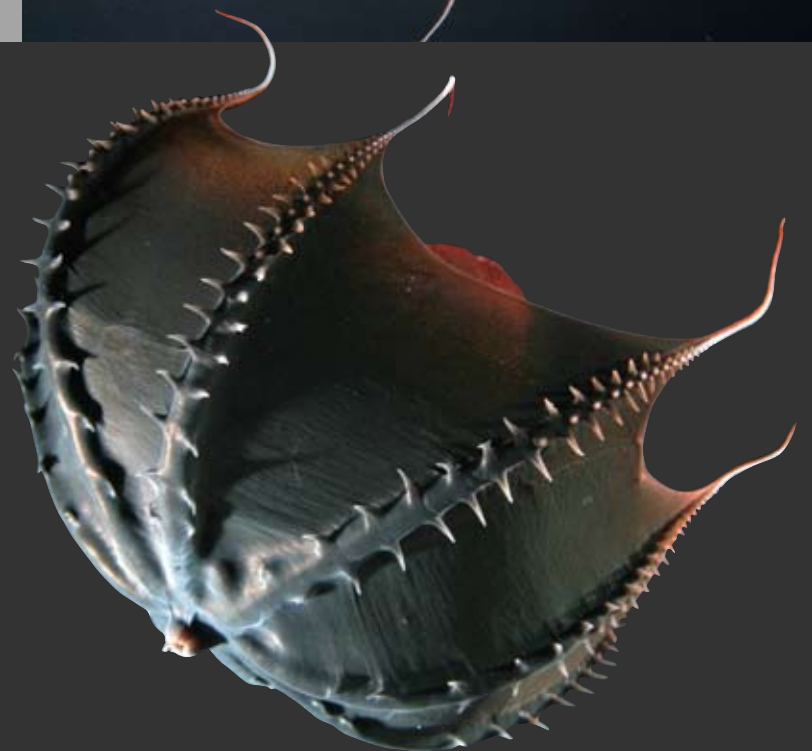
Living in the pitch-black, oxygen-starved depths 3,000 feet below the ocean's surface, the little-known vampire squid is one of the most remarkable creatures in the sea. Despite similarities to species of squid and octopus, it is actually the sole member of a completely separate biological order.

It is a strange-looking animal, to be sure. The squid's six-inch-long, reddish-brown body is similar in consistency to that of a jellyfish, and its eight webbed arms are lined with rows of the fang-like spines that inspired its scary moniker. It has a pair of unusual retractable tentacles that baffled the scientists trying to classify it, and eventually led them to place it in a category of its own.

In the unforgiving, eat-or-be-eaten world of the deep, good defenses are a necessity for survival, and the vampire squid has a few tricks of its own up its sleeve.

In a bizarre protective maneuver called "pineapple posture," a frightened vampire squid will draw its webbed arms up over its head and illuminate the tips of its tentacles, presenting an unappetizing shield of spines and drawing attention away from its body.

And, unlike its shallow-water cousins, the vampire does not possess ink sacs, which would be useless as a defense mechanism in the already pitch black ocean depths. Instead, it must use more innovative means to elude predators: when



threatened, the vampire ejects a dazzling cloud of sticky bioluminescent mucus from the tips of its arms, confusing its pursuer long enough to make a clean getaway.

Vampire squid can be found in the deep waters of Monterey Bay National Marine Sanctuary and in tropical and temperate oceans around the world.



# Star of the Sea

Admiral James D. Watkins, USN (Ret.)



“When I think of marine sanctuaries, I think of them as America’s playgrounds and classrooms, laboratories, treasures, and oases,” said Admiral James D. Watkins, USN (Ret.). “And when thinking about the National Marine Sanctuary Program, I think of a leader in marine conservation, education and resource protection. Their work is dynamic and builds on years of fostering important partnerships to carry out their various missions.”

Spend a few minutes with Watkins and you’ll get hooked – hooked on ocean conservation. Watkins is a passionate voice for ocean stewardship making numerous appearances on Capitol Hill to testify on behalf of an ecosystem in peril.

The seed was planted as a youngster growing up in Pasadena, Calif. “I was an amateur sailor, a body surfer, fisherman, pretty much did anything associated with the water.” He recalled how ocean resources were plentiful. “The beaches were clean, fishing was abundant.” Then, years later, he saw the changes that eventually led him to his role as a strong ocean advocate.

“I don’t ever remember a beach being closed because of pollution,” he added. “When I was a kid, I had it all. Today, much of those precious resources are gone. When I see the ocean pillaged, I get upset.”

So he did something about it. In 1994, after an illustrious 37-year naval career capped by his 1982 appointment as chief of naval operations, the U.S. Naval Academy graduate led a historic effort to establish and expand partnerships between the federal government and

more than 60 U.S. marine institutions. The effort resulted in a non-profit association known as the Consortium for Oceanographic Research and Education (CORE).

At its heart, CORE is dedicated to promoting awareness and appreciation of the oceans among government agencies, non-governmental organizations and the general public.

In 2001, Watkins was appointed chairman of the U.S. Commission on Ocean Policy, which submitted its recommendations for a new, comprehensive national ocean policy to Congress and the president in September 2004. Today he and Leon Panetta, who chaired the independent Pew Oceans Commission, serve as co-chairs of the Joint Ocean Commission Initiative, whose primary goal is to spearhead meaningful ocean policy reform.

With emotion that is often contagious he added, “Good ocean stewardship is daunting. The problems are enormous, but if people do their homework and learn about the terrible consequences of dumping chemicals in the ocean that can cause harmful algal blooms, or plastics and other trash that can choke marine animals and birds, positive results can happen.”

One of the real strengths of the sanctuary program is that it has a congressional mandate to guide its activities, lending a strong voice to ocean conservation, according to Watkins. “The ocean is telling us it can’t take it anymore. We need to stop beating up on it.”



## Innovative Program Promotes Responsible Dolphin Viewing

Key West’s Safari Charters became the first business recognized under a new program seeking to reduce the impact of tourism on wild dolphins. The Florida Keys National Marine Sanctuary, NOAA Fisheries Service, and local partners developed the Dolphin SMART program after four operators approached the Sanctuary Advisory Council with concerns that increases in the number of charters could potentially harass dolphins. To participate, charter operators must meet criteria that promote responsible viewing and prevent harassment of wild dolphins. A particular focus is to eliminate customer expectations of swimming with, feeding or touching dolphins. Other criteria address safe vessel operations around dolphins. Upon acceptance into the program, Dolphin SMART charters receive flags and stickers, and permission to use the program’s logo in their advertising. By looking for the current year on flags and logos and checking the updated participant list, visitors to the Florida Keys seeking the thrill of seeing dolphins in the wild can ensure the tour operator they select is Dolphin SMART.





Researchers conduct aerial surveys over the Channel Islands. Photo: NOAA Library

## Ocean Scientists Take to the Air in California

On a bright California morning Lt. Cmdr. Julie Helmers, a NOAA Corps pilot, boards a Lake Renegade amphibian aircraft to fly over portions of Channel Islands National Marine Sanctuary in search of whales, dolphins and ships. Her job: to help staff make an assessment of vessel use in and around sanctuary waters and how that impacts the marine environment. Helmers, who is the executive officer for the sanctuary, flies the plane while a physical scientist on board uses a laptop computer tied to the aircraft's Global Positioning System (GPS) to record locations and activities of marine mammals and vessels visiting the sanctuary.

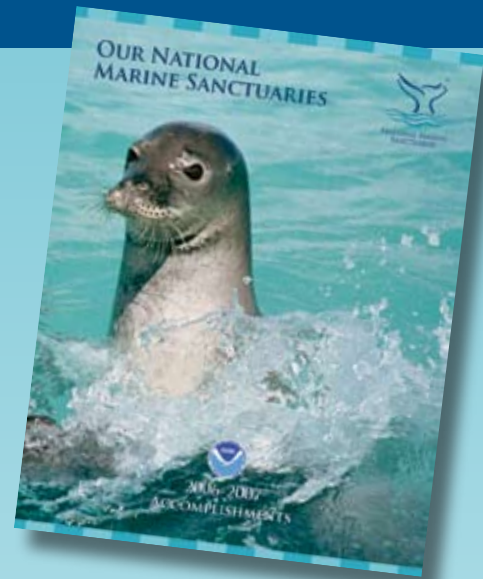
"One of our chief responsibilities," Helmers said, "is to look at how the recent establishment of no-take zones within sanctuary waters affects ocean users and their impact on the marine environment."

Known as Sanctuary Aerial Monitoring and Spatial Analysis, or SAMSAP, researchers collect information that gives managers a clearer picture of vessel traffic in the sanctuary, marine mammal activity, and how the two connect. Since the program began in 1997, researchers have seen changes in blue whale feeding locations, a distinct geographic delineation of areas used by recreational and commercial visitors, and significant increases in recreational use directly related to policy changes regarding island visitation.

A total of 35 flights were flown in 2006 from which 554 vessels were recorded. From these surveys, researchers noted that the nearshore waters of the sanctuary experienced much greater use than deeper waters, with more than 93 percent of vessels observed in shallower waters. Recreational activities, such as kayaking and sailing, were most frequently observed, followed by commercial fishing activities.

In the bigger picture, all the information gathered by researchers fulfills a chief mandate of resource protection.

"We can't effectively manage our resources if we don't know what is out there," says Chris Mobley, Channel Islands sanctuary superintendent. "Efforts like SAMSAP form an essential part in our growing tool kit of results-oriented resource protection measures."



The new, 2006 State of the Sanctuary Report highlights over 100 accomplishments throughout the national marine sanctuary system in education, resource protection, science and exploration, community involvement, and maritime heritage.

**The report is available online at [sanctuaries.noaa.gov](http://sanctuaries.noaa.gov)**

*Hope you enjoyed our new redesigned issue of Sanctuary Watch. Please tell us what you think by sending comments to: [www.sanctuaries@noaa.gov](mailto:www.sanctuaries@noaa.gov) Thanks!*



Sea Otter Photo: Jamie Hall



## NATIONAL MARINE SANCTUARIES

The National Marine Sanctuary Program is part of the NOAA National Ocean Service

### Our Vision

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

### Our 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.

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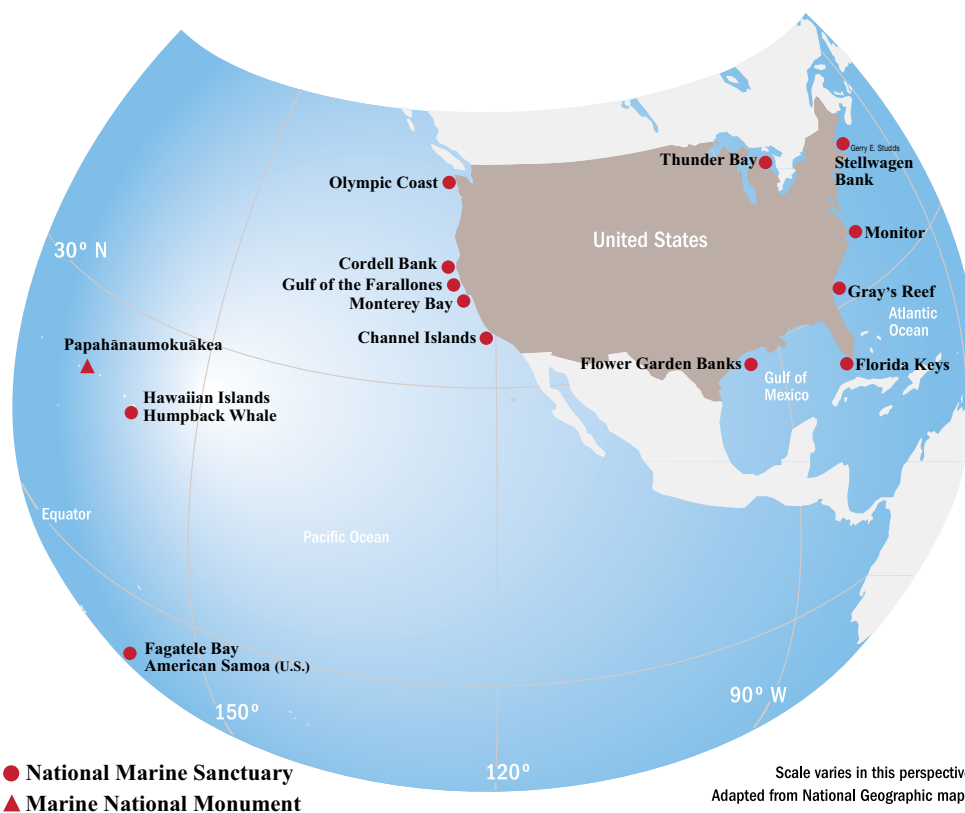
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# National Marine Sanctuary System



The National Marine Sanctuary Program 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 program 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. The program works to enhance public awareness of our nation's marine resources and maritime heritage through scientific research, monitoring, exploration, educational programs and outreach.



1305 East-West Highway  
Silver Spring MD 20910  
301-713-3125  
<http://sanctuaries.noaa.gov>