Community Involvement

New Program will Reduce Dolphin Harassment

Key West's Safari Charters became the first business recognized under a new program known as Dolphin SMART, which seeks to reduce the impact of tourism on wild dolphins. Florida Keys National Marine Sanctuary, NOAA Fisheries and local partners developed the program after tour operators approached the sanctuary's advisory council with concerns that the increasing number of charters could potentially disturb dolphins. To participate in the SMART program, charter operators must meet criteria that promote responsible viewing and prevent harassment of wild dolphins — in particular, discouraging swimming with, feeding or touching dolphins, and practicing safe vessel operations around dolphins. Dolphin SMART-certified charters receive flags and stickers, and permission to use the program's logo in their advertising.

DOLPHIN SMART 2007

Traveling Music Festival Drums Up Support for Watershed Cleanup

Trading their guitars and drum sets for shovels and garbage bags, hundreds of rock stars and roadies from the Vans Warped Tour music festival and Earth Echo International joined sanctuary staff for a day of cleaning up the watersheds feeding into Monterey Bay National Marine Sanctuary. The Warped Tour, a traveling music festival featuring more than 50 bands that tour internationally, contributed 400 volunteers from its bands and crew to assist with a watershed cleanup in August 2007. Monterey Bay sanctuary staff and local environmental organizations led the volunteers in eco-friendly activities including picking up litter, removing invasive weeds, and planting native species at sites throughout the area. These efforts will help improve the health of the area's watersheds, which in turn will benefit the marine sanctuary they feed into.

Program Goes International to Help World's Oceans

Coastal development is expanding worldwide and contributing to the loss of critical habitat and fragile marine resources. In order to achieve a healthy ocean ecosystem nationally, it is also important to engage our partners worldwide so that all benefit. Program staff and numerous international partners have been working with marine resource managers in China, Vietnam and Cambodia and in the Eastern Tropical Pacific Seascape which includes Costa Rica, Panama, Colombia and Ecuador to look at ways to manage marine protected areas (MPAs). This exchange of knowledge and information between countries on how to effectively manage fragile marine ecosystems helps build expertise within these developing countries. In Vietnam, a network of 15 MPAs are being established by the Vietnamese Ministries of Fisheries. Through training courses, program staff are helping Vietnam build a foundation to plan for sustainable tourism and fisheries.

Fishermen and Staff Help Remove Debris in Stellwagen Bank

Stellwagen Bank National Marine Sanctuary staff joined with fishermen from Scituate, Mass., to remove derelict fishing gear and other marine debris that threatens marine resources as well as commercial fishing operations in the sanctuary. In a year-long project, two local captains collected lost gear and brought it to shore for safe disposal. Derelict fishing gear poses a threat of entanglement to marine mammals, including endangered whale species, like the North Atlantic right whales and humpback whales that feed in sanctuary waters. These lost lines, nets and traps accumulate on the seafloor, where they can snare active fishing gear and threaten safe fishing operations, requiring additional labor and fishing time to free the working gear. The project is a good example of collaboration between the sanctuary and commercial fishermen working together to improve the environment.

Photo Credit: Jacob Asher/NOAA

Education & Outreach

Changing Demographics Call for MERITO Expansion

The Multicultural Education for Resource Issues Threatening Oceans (MERITO) program is a marine conservation education effort designed to reach diverse ethnic groups. Its goals are to build community stewardship for national marine sanctuaries, increase understanding of ocean-related threats, and motivate culturally diverse students to pursue careers in marine sciences and/or resource protection. In 2007, MERITO taught 48 Hispanic educators through its annual educator workshops, led more than 80 field trips, and created many new partnerships. Among other highlights, 30 minority college students received training to be environmental leaders and nearly 300 people participated in five MERITO-sponsored beach cleanups.

Photo Credit: Robin Llizarbe/Flickr

New Visitor Centers Open in 2007

One of the best ways to help people form a connection with their marine environment is through visitor centers, aquaria and museums. In 2007, NOAA opened two centers that offer the public opportunities to connect with sanctuaries. The 6,400 square-foot Florida Keys Eco-Discovery Center in Key West opened in January, offering visitors an exciting array of interactive exhibits highlighting the rich natural environment of the Florida Keys. In March, The Mariners' Museum and NOAA opened the doors to the USS *Monitor* Center, one of America's premier maritime Civil War attractions, in Newport News, Va. The 63,500 square-foot center is home to numerous original documents, paintings, personal accounts, the science and technology behind the historic ironclad, and numerous Monitor artifacts undergoing careful conservation. Both centers are shining examples of NOAA's dedication to educating the public about the nation's precious marine resources and maritime history.

'If Reefs Could Talk': Undersea Research in Real-Time

Scientists and educators hunkered down for nine days in NOAA's Aquarius Undersea Laboratory — America's only underwater research facility — in September for "If Reefs Could Talk", a high-profile mission to study coral reefs in Florida Keys National Marine Sanctuary. Scientists looked at changes in corals and other marine life in the sanctuary, gathered data at monitoring stations originally established in 1994, and measured the effects of sponge metabolism on reef water quality. Preliminary findings suggest that sponges play an important role in filtering and converting particulate matter, and releasing dissolved inorganic nitrogen that could enhance algae growth on reefs. Scientists also looked at changes on the reef that may have occurred due to human activities, climate change and other variables. During the mission, the team broadcast live educational science programs to students across the country through underwater classroom sessions via the OceansLive.org Web portal. Media for the mission included 140 national and international radio, TV, and online outlets as well as a visit from National Geographic Wild Chronicles, and a Fox News Channel broadcast.

Photo Credit: NOAA

Maritime Heritage

Coast Survey Shipwreck Explored in Alaska

Program archaeologists and Alaska's Office of History and Archaeology documented the remains of the *Hassler*, a Coast Survey vessel that sank in 1898 off Eldred Rock, Alaska. The objectives of the 2007 *Hassler* expedition were to document the shipwreck's archaeological details through site drawings, still photography and video, and to compile sufficient data to nominate the wreck to the National Register of Historic Places. When it was built in 1871, the *Hassler* represented the cutting edge in ship construction and design. The *Hassler* was the first U.S. Coast Survey vessel constructed from iron and the most technologically advanced science vessel of its time.

Photo Credit: NOAA

Schooner Receives National Register Listing

The wreck of the coal schooner *Paul Palmer*, which rests on the seafloor within Stellwagen Bank National Marine Sanctuary, has been added to the National Register of Historic Places, the nation's official list of cultural resources deserving of special preservation. The early 20th-century vessel was part of a larger fleet that carried bulk cargos throughout the East Coast, and Caribbean. Its archaeological remains will likely yield important historical information.

Photo Credit: Tane Casserley

The *Clelia* Exhibit Unveiled at Nauticus

The program unveiled a new exhibit at Nauticus in Norfolk, Va., that features a mock-up of *Clelia*, a Harbor Branch Oceanographic Institution's submersible. The exhibit will provide a simulated archaeological dive to the *Monitor* National Marine Sanctuary. In this interactive exhibit, visitors walk into the back of the mock-up where they find instruments and a screen continuously showing video from the *Monitor* site. They will have the opportunity to operate a mechanical arm in an attempt to recover samples from the sea floor, as well as a remote video camera to help investigate the survey area. Interpretive signs describe the sub, the Maritime Heritage Program, and the National Marine Sanctuary Program. Exhibits like the *Clelia* are invaluable education tools giving visitors a glimpse into our maritime past.

Archaeologists Explore Sites at Papahānaumokuākea Marine National Monument

Sanctuary program archaeologists are adding to the nation's understanding of maritime history in the Papahānaumokuākea Marine National Monument by conducting non-invasive surveys on wreck sites in the Northwestern Hawaiian Islands. Part of the sanctuary program's mandate is to document historical shipwrecks and find ways to protect these important sites. The team investigated several sites including an F4U-1 Corsair at Midway Atoll, the former liberty ship *Quartette* at Pearl and Hermes Atoll, and a new, unidentified wreck site at French Frigate Shoals thought to be the late 19th-century schooner *Churchill*.

Photo Credit: Robert Schwemmer

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Our National Marine Sanctuaries

2007 Accomplishments Report

Introduction

This report highlights the National Marine Sanctuary Program's key 2007 accomplishments and leadership efforts in marine conservation. Every year, the program makes major strides in developing results-oriented resource protection, science, management and educational programs. A major reason for our accomplishment is the continued involvement and dedication of numerous partners such as aquaria, universities, government agencies, non-profit organizations and countless volunteers who dedicate thousands of hours to ensure continued protection of our fragile ocean ecosystems and maritime heritage. To learn more about these accomplishments visit:

sanctuaries.noaa.gov

Featured 2007 Accomplishment

NOAA Establishes Largest Marine Reserves Network in Continental U.S.

Marine conservation in U.S. waters increased in July when NOAA expanded protected areas within the Channel Islands National Marine Sanctuary. The move permanently bans fishing from nearly 111 square miles around the Channel Islands, extending a network of marine reserves that now make up the largest area of no-fishing zones in the continental United States. NOAA's action complements an existing network of marine zones established in the waters of the sanctuary by the state of California in 2003. Combined with the state marine reserves of the sanctuary, the protected area encompasses more than 300 square miles. The move further protects various fish species, invertebrates and marine habitats by prohibiting extractive activities such as fishing in sanctuary waters.

The federal action adds nine new marine zones, eight of which are no-take marine reserves and one limited-take marine conservation area. The marine reserves prohibit all extractive activities and injury to sanctuary resources. The marine conservation area allows commercial and recreational lobster fishing and recreational fishing for pelagic species — all other resource extraction and injury is prohibited.

With this added protection, the abundance, size, biomass and diversity of fished species are expected to increase within the reserves relative to areas outside. Habitats supporting marine populations are anticipated to benefit through reduced disturbance as well.

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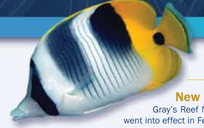
Protection & Management



New Regulations To Protect Gray's Reef

Gray's Reef National Marine Sanctuary received increased protection through new regulations that went into effect in February 2007. The regulations prohibit anchoring, discharge and certain types of fishing gear in the sanctuary. Under these regulations, which stem from the revised June 2007 management plan for the sanctuary, NOAA will work with the U.S. Coast Guard and Office of Law Enforcement of the Georgia Department of Natural Resources to ensure compliance. Enforcement reporting is now a regular part of the quarterly sanctuary advisory council meetings and a law enforcement working group of the council has been formed.

Decrease in Vessel Groundings Key to Resource Protection

One of the sanctuary program's goals is to closely monitor injuries to resources within sanctuary waters and respond appropriately. This is especially important in Florida Keys National Marine Sanctuary, where heavy recreational vessel traffic occurs close to sanctuary resources. In 2007, there were 234 reported vessel groundings in the Florida Keys sanctuary, representing a significant decline in the number of groundings in recent years. This success is due to increased enforcement and public education about regulations. The sanctuary program settled several legal cases concerning vessel-related damage in the Florida Keys in 2007, resulting in the recovery of more than $200,000.

Restored Eelgrass Bed Thriving at Anacapa Island

Found in shallow coastal waters around the world, seagrasses are the driving force behind many thriving marine ecosystems, providing critical food and habitat for countless species of fish and invertebrates. Unfortunately, this important habitat is disappearing at a faster rate than both rainforests and coral reefs alike. But in Channel Islands National Marine Sanctuary, a restored bed of eelgrass — a type of seagrass — is thriving at Frenchy's Cove on Anacapa Island, six years after the non-profit organization Santa Barbara Channelkeeper initiated restoration efforts. During sanctuary-approved surveys conducted last spring, divers observed a lush eelgrass bed where vegetation had been previously absent for about 15 years. The eelgrass location has now been restored and is spreading to other nearby sites.

Mark Spalding/ ©TNC

Coral Nurseries Established in Florida Keys

Nursery-raised corals may prove to be key building blocks in restoring coral reefs in the Florida Keys. These nurseries are important not only in re-establishing corals where they once existed, but also in preserving the genetic material of the many species of coral found in the Keys. In a first for coral restoration transplant effort, sanctuary scientists and volunteers recently relocated staghorn coral colonies to a reef where the corals had once existed. Through careful monitoring, researchers will identify the corals that survive best under known environmental conditions and use this information in managing coral reefs in the future. Sanctuary biologists also maintain a coral nursery nearshore in Key West that provides corals for research purposes and for restoration projects.

Coral Nursery

Photo Credits: Fish: NOAA; Coral Nursery: Ken Nedimyer

Science & Exploration

Many Sanctuary Media events are posted at sanctuaries.noaa.gov/news

© Marty Snyderman/ Corbis

First "Megapclicks" Recorded

For the first time, researchers have recorded "megapclicks" — a series of clicks and buzzes from humpback whales during nighttime feeding behaviors — in and around Stellwagen Bank National Marine Sanctuary. The study offers the first documentation that baleen whales produce this type of sound, normally associated with toothed whales. Researchers have known that humpback whales exhibit a variety of foraging behaviors and vocalizations, but these animals and other baleen whales were not known to produce broadband clicks in association with feeding. This type of research will help managers find the best ways to understand whale behavior in order to develop further protection methods.

Reports on Health of Sanctuaries Released in 2007

In 2007, the sanctuary program released two in a series of reports evaluating the health of the nation's marine sanctuaries. These condition reports examine the status of everything from water quality to endangered whale populations, and provide a wealth of information about the complex marine resources and archaeological sites found in sanctuary waters. The reports will give marine resource managers an unprecedented ability to evaluate environmental changes and potential threats to some of the nation's most precious underwater areas, allowing them to make well-informed and timely management decisions. The 2007 reports highlight Stellwagen Bank and Fagatele Bay national marine sanctuaries. Stellwagen Bank's report examines the status of sanctuary resources including water and habitat quality, fish and invasive species, and endangered right whale population. Topping the list of concerns in Fagatele Bay's report are threats like blast fishing and other harmful, prohibited fishing practices, as well as increased coral bleaching events caused by elevated surface water temperatures. But the report also states that habitat and water quality in the sanctuary are in very good condition. Regulations that prohibit or restrict human activities, such as dredging and discharging, are in place at both sanctuaries.

Research Cruises Provide Valuable Information for Resource Protection

Research cruises to all our sanctuaries continue to provide invaluable information to researchers and managers about the health and stability of marine habitats and species within our protected waters. For example, researchers visited Papahānaumokuākea Marine National Monument, where they looked at coral health, apex predator movement and photographed deep sea organisms that had never before been captured on film. Information gathered from all cruises will help staff develop ecosystem approaches to managing and supporting marine science and education efforts, and develop management plans to best address threats to sanctuary resources. A full list of research cruises to the sanctuaries is available at sanctuaries.noaa.gov.

Navy's submarine NR-1

Photo Credit: Institute of Exploration

Jonathan Dalton

Media Coverage of Program Activities Reached Millions

Every year the program reaches millions of Americans by encouraging media coverage of its many exciting educational programs, missions, research and discoveries. This year was a landmark year for media coverage as some of the top sanctuary stories of 2007 included the Aquarius Mission, Secrets of the Gulf Mission, expansion of the Channel Islands marine reserves, opening of the new Monitor visitor center, discovery of the U.S.S. Macon in Monterey Bay, and the naming of the Papahānaumokuākea Marine National Monument.

Total media coverage in FY 07 exceeded 618,743,000 impressions for a comparable advertising value of nearly $23 million, an increase of 30% over FY 06. Online news site coverage yielded potential audiences in the tens of millions.

National Marine Sanctuaries

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

SANCTUARIES.NOAA.GOV