

Sounding Line

News of the Florida Keys National Marine Sanctuary

FALL 2002

Duane Listed on National Historical Register

The United States Coast Guard Cutter *Duane* artificial reef was officially listed on the National Register of Historic Places. Florida Secretary of State Katherine Harris made the announcement about the new status on June 15, 2002.

The Coast Guard Cutter *Duane* was a steam turbine propulsion 327-foot Secretary Class Cutter built in 1936 at the U.S. Naval Yard in Philadelphia. She was one of seven such vessels, and was named for William J. Duane, Secretary of the Treasury under Andrew Jackson. She had various assignments before being sent to the Atlantic, where she eventually served with the U.S. Atlantic Fleet. Her service included an impressive wartime and peacetime record.

Today, the Cutter *Duane* lies upright on a sandy bottom in 120 feet of water one mile south of Molasses Reef off Key Largo. After being decommissioned on August 1, 1985 as the oldest active U.S. military vessel, the *Duane* was donated to the Keys Association of Dive Operators for use as an artificial reef. On November 27, 1987 she was towed to Molasses Reef, her hatches opened, her holds pumped full of water, and down she went to begin her final assignment. The ship is located in the Florida Keys National Marine Sanctuary and is one of the sites on the Sanctuary's *Shipwreck Trail*.



The Coast Guard Cutter *Duane* became an artificial reef in August 1987. For information on other ships on the *Shipwreck Trail* visit the Sanctuary's website: www.fknms.nos.noaa.gov/edu/welcome.html

The nomination to the National Register was placed by Charles Beeker, Director of the Indiana University Underwater Science and Educational Resources Program. In 1998, Beeker and his students produced a report detailing the history of ships included on the *Shipwreck Trail*.

Inside this Issue

Florida Cabinet Supports
Sanctuary Management Plan

Biological Restoration Begins

Reef Medics to the Rescue

Elkhorn Coral and White Pox

Spotlight on Spoonbills

Rehabilitation in Wild Birds

Volunteer News

Educational Lobster Booth

The *Duane* initially handled search and rescue and law enforcement from the Port of Oakland, California. In 1939 the *Duane* was sent to the North Atlantic to assist shipping and, in 1941, went to Greenland to help provide protection from German invasion. The *Duane's* search and rescue efforts saved 46 sailors from a British merchant ship sunk by a German U-boat and assisted in the rescue of 250 survivors from the U.S. Army transport *Dorchester* in the North Atlantic. On April 17, 1943 the *Duane* and sister ship the *Spencer* sank a German U-boat and rescued 22 crew members from the destroyed Nazi vessel. Post war duties included further search and rescue, a tour of duty in Vietnam as part of the Coastal Surveillance Force and drug intervention. In 1980 the *Duane* was one of several Coast Guard cutters transporting Cubans during the Mariel Boat Lift.

Message from the Superintendent



Florida Keys National Marine Sanctuary

Billy D. Causey
Superintendent

Kacky Andrews
State Co-trustee

Sanctuary Advisory Council

George R. Neugent, Chair
Local Elected Official

Fran Decker, Vice Chair
Citizen at Large-Middle Keys

Bruce Popham
Boating Industry

Richard Grathwohl
Charter Fishing-Flats Guide

David Hawtof
Citizen at Large-Lower Keys

Tony Iarocci
Commercial Fishing-
Shell/Scale

Ken Nedimyer
Commercial Fishing-
Marine/Tropical

Nancy Klingener
Conservation and Environment

Debra Harrison
Conservation and Environment

Don Kincaid
Diving-Lower Keys

Todd Firm
Diving-Upper Keys

Martin Moe
Education/Outreach

Thomas N. Davidson
Recreational Fisher

Deborah A. Shaw
Research and Monitoring

R. Duncan Mathewson III
Submerged Cultural
Resources

Anita Schwessinger
Tourism-Lower Keys

Wayne Blevins
Tourism-Upper Keys

Vacant
Charter Fishing/Sport Fishing

Vacant
Citizen at Large-Upper Keys

Dear Readers,

I wish to dedicate this issue of the Sanctuary's newsletter, *Sounding Line*, to the memory of Douglas Richard Cooper. Doug was an integral member of the Sanctuary Team who was killed by a hit and run driver on Big Pine Key, October 7, 2002. He was a biologist whose university studies emphasized marine science. Doug joined the Lower Keys Mooring Buoy Team in 2000 and very quickly began to demonstrate his dedication and enthusiasm to his work. He assisted in the installation of the mooring buoys in the Tortugas Ecological Reserve and initiated a monitoring program to assess the impact of diver damage to coral reefs in the vicinity of mooring buoys. Doug had the gift of being able to lift the spirits of those around him and his colleagues and friends will miss him. Doug's legacy will live on in the work his colleagues perform every day and in the memories of his friends and family.

As we say goodbye to Doug Cooper, let us welcome Lt. Robert A. Kamphaus as the Lower Keys Assistant Regional Manager. Robert brings to the Sanctuary Team an excellent science background and experience in shipboard operations. We are all excited to have Lt. Kamphaus join the Florida Keys National Marine Sanctuary Team.

This issue of *Sounding Line* is packed with articles about some very exciting new and existing programs and projects in the Sanctuary. These projects serve as a reminder to me of the level of professionalism and dedication that the Sanctuary routinely experiences. Some of the best minds in the world of marine protected areas are hard at work studying and protecting our coral reefs, water quality, and seagrass communities. They are restoration biologists and Reef Medic volunteers who piece together damaged reefs and visiting scientists who work to unravel the secrets and mysteries of coral reefs and their inhabitants. I count our blessings each day for the many dedicated and talented people who give of their time and energy to protect and conserve our marine environment of the Florida Keys. Our coral reefs are in trouble, but if it weren't for the work done by these dedicated people, they would be in worse shape.

It's hard to believe that five years have passed since we implemented the management plan for the Sanctuary in July 1997. In August 2002, Governor Jeb Bush and the Florida Cabinet accepted the Sanctuary's five-year report on the implementation of the management plan. This approval kicked off another five-year partnership between National Oceanic and Atmospheric Administration (NOAA) and the State of Florida in the management of the Sanctuary. These are exciting times for the Sanctuary and we hope you take time to celebrate with us.

Sincerely,

Billy D. Causey





Florida Cabinet Supports Sanctuary Management Plan

Fritz Wettstein, FKNMS Lower Region Manger

At the August 27th Cabinet Meeting in Tallahassee, Florida Governor Jeb Bush and the other Florida Cabinet members accepted the Sanctuary's five-year report on management plan implementation. In doing so, the Cabinet concurred that the Florida Keys National Marine Sanctuary Final Management Plan is providing the protection for which it was designed. This was a critical step in the plan review process, signaling Florida's continued strong support for the direction of the Sanctuary's management efforts.

The Cabinet was well prepared for accepting the report. Cabinet members received a thirty two page summary of sanctuary activities and the fifth annual status report, viewed a short power point slide of accomplishments and heard testimony from sanctuary supporters. Sanctuary Advisory Council (SAC) member Nancy Klingener read a SAC resolution commending cabinet support for the Sanctuary. David White, representing The Ocean Conservancy, presented an acrylic sculpture containing a commemorative inscription recognizing Cabinet actions on the Sanctuary Management Plan and Tortugas Ecological Reserve. State of Florida officials supporting the Sanctuary included Department of Environmental Protection Secretary David Struhs, new Fish and Wildlife Conservation Commission Director of Law Enforcement Julie Jones and Lower Region Manager Fritz Wettstein. Sanctuary Superintendent Billy Causey provided a status report on the management plan revision.

Continued on back cover, p. 12



It is with great sorrow that the Florida Keys National Marine Sanctuary family mourns the loss of Douglas Richard Cooper, Lower Keys Mooring Buoy Team Member. Douglas, 28, was born and raised in Vicksburg, Mississippi. He was most dearly loved and respected by his fellow staff, family and friends. He will always be remembered for his cheerfulness, patience, willingness to work hard, love for the Keys, and for his contributions to the mooring buoy monitoring program.

A motion to recommend that a coral reef in the Tortugas Ecological Reserve be named in memory of Doug passed unanimously at the October 15th meeting of the Sanctuary Advisory Council.



The Florida Keys National Marine Sanctuary welcomes NOAA Corps Officer Lt. Robert A. Kamphaus to the Florida Keys. Lt. Kamphaus, whose last duty assignment was as Operations Officer on the NOAA Ship *Ronald H. Brown*, recently assumed his position as the Lower Region Assistant Manager in the Key West office. "I am excited to be part of the National Marine Sanctuary Program and especially pleased to be part of the Florida Keys National Marine Sanctuary. I look forward to getting out into the Sanctuary and learning about the area," he added.

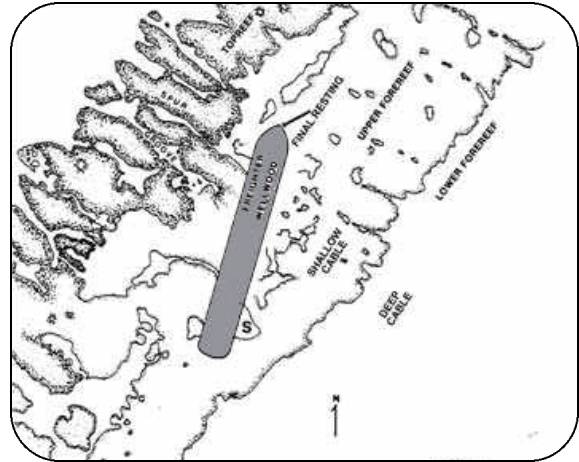


Biological Restoration Begins at Molasses SPA

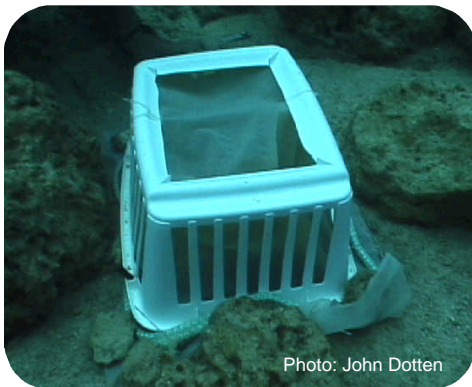
Nancy Diersing, FKNMS Education Specialist

After delays due to high seas and stormy summer weather, the Sanctuary Wellwood Restoration Team was able to place 22 reef restoration modules and many limestone rocks throughout the injury site at Molasses Reef, thus completing the physical restoration of the *M/V Wellwood* grounding site. The restoration modules, which are made of limestone rocks and concrete and contain a central “cave”, will prevent further erosion of the reef infrastructure and provide habitat for fish and invertebrate life. Using a special mixture of concrete, the modules were securely attached to the limestone seafloor throughout the injured area at heights similar to those of the surrounding natural reef structures.

The goal of the project is to restore the reef to the greatest extent possible, to a state similar to what existed before the injury occurred. Because Molasses Reef is a Sanctuary Preservation Area and a high profile tourist destination, the Sanctuary believes it especially important to design an aesthetically pleasing restoration solution for this grounding site.



After the grounding incident, a diagram was made showing the position of the ship in relation to the extensive “spur and groove” formation of the coral reef (above).



To increase the chances of coral colonization, mesh-lined baskets containing coral larvae were temporarily placed over bare rocks at the *Wellwood* Restoration site.

Scientists have recently started applying biological restoration techniques to the site. Coral biologists Dr. Alina Szmant, University of North Carolina at Wilmington, and Dr. Margaret Miller, NOAA-Fisheries, collected coral larvae from mountainous star corals that were spawning in sanctuary waters during late summer. The larvae were cultured until they reached the settlement stage in their development. The larvae were then released into mesh-lined baskets temporarily placed over the limestone rocks at the restored site. This technique is expected to foster the settlement of young corals onto the uncolonized rock surface.

Fish populations on the new structure are being monitored by Reef Environmental Education Foundation’s (REEF) Advance Assessment Team and staff using Roving Diver surveys and belt transect techniques. These techniques enable biologists to collect information about the numbers and species of all fish encountered and to document the size and density of key reef fish species. The first surveys and transects were conducted at the injury site and two adjacent natural reef areas before the physical restoration process began, providing baseline information for comparison purposes. The five-year project is designed to track the changes in fish species composition over time and to evaluate restoration sites as effective replacements for natural habitat in areas damaged by vessel groundings.

Many program offices within the National Oceanic and Atmospheric Administration (NOAA) played key roles in the restoration process. In addition to the National Marine Sanctuary staff, NOAA’s Damage Assessment and Restoration Program brought legal, economic, and biological expertise from the National Ocean Service (NOS), National Marine Fisheries Service (NMFS), and the Office of General Counsel. The State of Florida and the U.S. Coast Guard were partners in the effort as were two private companies, Underwater Engineering Services, Inc. and Coastal Planing and Engineering, Inc., each contracted for certain aspects of the job. For more information about the restoration of the *Wellwood* site, visit: <http://sanctuaries.nos.noaa.gov/special/reef/>.



Reef Medics to the Rescue

What is the Reef Medics Program?

Reef Medics is a new volunteer program that gives trained volunteers the opportunity to assist Florida Keys National Marine Sanctuary Biologists with the restoration of natural marine resources impacted by vessel groundings within the Florida Keys. The Reef Medics program is administered by the Sanctuary in conjunction with the State of Florida's Department of Environmental Protection, The Nature Conservancy, and Mote Marine Laboratory.



Photo: Bill Goodwin

A volunteer moves a broken elkhorn coral branch to a suitable substrate for reattachment.

What do Reef Medics Volunteers do?

The primary focus of the Reef Medics program is the emergency restabilization of coral colonies injured during vessel grounding incidents. In many cases there are "mystery" or "hit and run" sites where there is no known responsible party to charge with a fine and consequently no funding for repair or restoration. Reef Medics provide the "people power" to help Sanctuary staff save surviving coral colonies and reattach them to suitable reef structure. Reef Medics volunteers may also become involved in a number of related activities including restoring vessel-impacted seagrass beds, using GPS/GIS technology, underwater photography and videography, database management, and producing videos, posters, and other educational materials that support program goals.



Photo: Bill Goodwin

Resource Manager Harold Hudson instructs volunteers in cement-making, one of the most important aspects of reef repair work.

How do I become a Reef Medic Volunteer?

For more information about the Reef Medics or to sign up for the next training session, contact:

Bill Goodwin
Reef Medics Program Coordinator
FKNMS Upper Region Office
(305) 852-7717 x 28.





Elkhorn Coral and White Pox: An Answer and More Questions

Margaret W. Miller, Ph D., NOAA-Fisheries, Ecologist



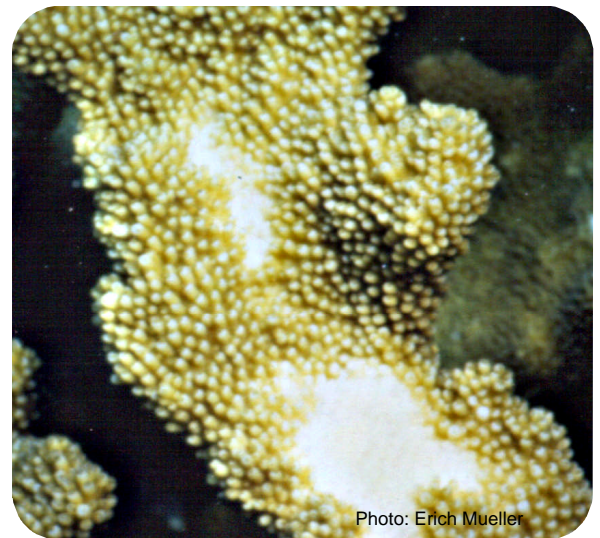
White band disease, not white pox, is the dominant disease affecting elkhorn coral in the Keys. Its specific pathogen has not been identified. Elkhorn corals and other corals appear to be affected by multiple stressors, including bleaching during times of high sea surface temperatures and poor water quality.

and of the possible linkage between a coral pathogen and human sewage inputs into the Keys' coastal environment. Elkhorn coral has undergone huge declines in recent years, so much so that NOAA's National Marine Fisheries Service considers it a candidate for listing under the Endangered Species Act. It is tempting to believe that a simple explanation (human sewage contamination) and a relatively simple "fix" (sewage treatment) might exist. However, there are two factors that make this simple explanation incomplete. First, the bacterium identified as the white pox pathogen is extremely common in all sorts of natural environments and other organisms. There may even be some growing in your shower! So far, only the *identity* of the pathogenic bacterium has been determined, not its *source*. It may come from other reef organisms such as fish or snails that naturally co-exist and interact with (and deposit their waste directly on) elkhorn coral. This crucial question of the source of the pathogenic bacteria infecting elkhorn coral colonies is a topic that requires further and timely research attention.

However, a "natural" (i.e., non-human) source of the bacterium is still cause for concern as it might suggest that other sources of physiological stress to the coral (such as global warming or poor water quality) make it susceptible to an otherwise benign microbe in its environment. Thus, we must continue to minimize human contribution to the multiple stressors affecting corals and continue investigation into their singular

Coral diseases and syndromes (for which the cause of disease-like signs has not been identified) have become recognized in recent years as contributing to coral decline throughout the Caribbean. In the past five years, dramatic increases in the number of diseases and syndromes and the number of affected coral species have been documented in the Florida Keys National Marine Sanctuary (FKNMS). Unfortunately, very few of the specific biological pathogens (or germs) that cause coral disease have been identified and this lack of knowledge inhibits management strategies to mitigate disease effects. Recently, there has been much public attention given to a scientific publication describing an important advance in coral disease study, "The etiology of white pox, a lethal disease of the Caribbean elkhorn coral, *Acropora palmata*", (Proceedings of the National Academy of Sciences). This recent work on white pox is an important advance because it adds one specific coral pathogen to this short list: the common bacterium *Serratia marcescens*, which causes "white pox" disease of elkhorn coral, *Acropora palmata*.

Much emphasis has been placed on the fact that this bacterium resides in the human gut (and therefore, in sewage)



White pox disease is evident as white spots on the branches of elkhorn coral colonies (above). The bacteria identified as the white pox pathogen is found in many natural environments.



Elkhorn Coral Losses, continued from page 6

and synergistic effects.

Additionally, there are many causes and mechanisms of elkhorn coral decline. Disease has been recognized as a major elkhorn-killer throughout the Caribbean region since the early 1980's. However, "white band disease" (not "white pox") was, and probably still is, the dominant disease affecting elkhorn coral and its specific pathogen remains elusive. There are also organisms such as snails that actively prey upon live elkhorn coral tissue. Periodic coral bleaching events and hurricanes have impacted elkhorn coral in the Keys, most recently in 1998, and no doubt will continue to do so. Likewise, multiple vessel groundings in the Sanctuary have damaged elkhorn coral, as does the coral pecking and algal-gardening behaviors of three-spot damselfish. We know that all of these factors contribute to the decline of elkhorn corals in the Sanctuary. Unfortunately, we do not know the relative importance of each source of elkhorn loss. This is the other crucial research question that must be addressed in order to discern what is a reasonable expectation regarding the benefits of any particular management strategy for elkhorn coral recovery.

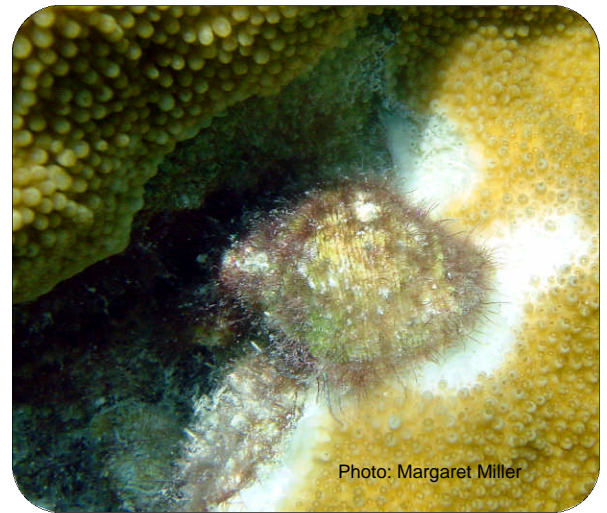


Photo: Margaret Miller

Snail predation is a natural factor affecting elkhorn corals. Two snails, each with its algae-covered shell, are visible in the middle of the white grazed area.

We know that implementation of effective waste water treatment in the Keys is a vital undertaking for preserving the quality of our sensitive marine environment. The ongoing **Water Quality Protection Program**, a cooperative effort of the Sanctuary, the Environmental Protection Agency, the State of Florida, and Monroe County has taken great strides in planning and implementing this goal, including the development of the Monroe County wastewater treatment master plan and implementation of wastewater improvements in Key West and Little Venice, Marathon. Clear benefits for coastal ecosystems will accrue from reduced human inputs of nutrients and contaminants from sewage and stormwater runoff. However, it is premature to expect that wastewater treatment is likely, on its own, to solve the problem of elkhorn coral loss.

NOAA's Coral Health and Monitoring Program (CHAMP)

For more information about coral disease, visit the NOAA CHAMP website at http://www.coral.noaa.gov/coral_disease. This website, designed for use by both scientists and non-scientists, provides easy access to information about coral diseases. The website also offers links to pertinent scientific literature and to the **Coral Disease and Health Consortium**, created by the National Coral Reef Task Force in January of 2002. The purpose of the Consortium is to organize and coordinate the scientific resources of the U.S. and its territories to meet the challenge of globally declining coral reefs.



Spotlight on Spoonbills in Florida Bay

Cheva Heck, Public Information Officer

Once hunted close to extinction for their feathers and meat, roseate spoonbill populations began to recover by the mid-1930s, ultimately reaching half their previous numbers in Florida Bay. Now, these beautiful pink birds face new threats from development, water management practices and tourism.

The Audubon Society's Dr. Jerry Lorenz has extensively studied roseate spoonbill populations in Florida Bay. Spoonbills hunt small fish by touch, a method called tactile location. They depend on brackish, shallow waters for feeding and quiet mangrove islands for nesting and roosting.

Lorenz believes that water management practices have altered natural wet and dry cycles, disrupting the spoonbills' ability to find food. Because the young require a huge amount of food, shortages during nesting seriously impair population growth. Direct destruction of mangrove wetlands and repeated disturbances by improperly conducted "ecotours" worsen the species' plight.

Viewers can learn more in the latest "Species Spotlight", a new feature on the television show Waterways. Each "Species Spotlight" profiles a unique animal or plant found in South Florida. Past segments have profiled three-spot damselfish and hogfish.

Waterways is presented by the Florida Keys National Marine Sanctuary, Everglades National Park and the Environmental Protection Agency and produced by Erik Hutchins of Keys Digital Video Productions. The show profiles aspects of the South Florida environment, including research and efforts to protect and restore the fragile ecosystem.

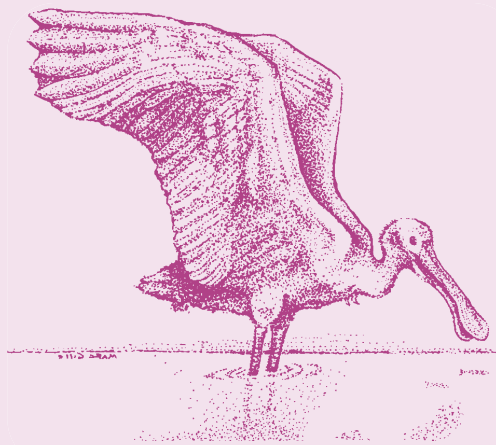
The show airs in Monroe County on AT&T Channel 19, in Miami-Dade on public television station WLRN's Channel 36 and on public access stations throughout Florida.



Photo: Erik Hutchins

Roseate Spoonbills nest and roost in mangrove trees.

Facts about Roseate Spoonbills



* The roseate spoonbill is the only spoonbill native to the Western Hemisphere. They are found along the Gulf coast of Texas, Louisiana, southern Florida, along both coasts of Central America, throughout the Greater Antilles, and in South America.

*Roseate spoonbills feed in shallow marine, brackish, or freshwater sites, including tidal ponds, mudflats, freshwater sloughs and marshes. They consume small fish, prawns, crayfish, fiddler crabs, insects, and sometimes vegetative matter.

*Prior to selecting a mate, spoonbills sometimes engage in "Up Flights". This behavior occurs when a small flock of spoonbills rises up together in flight, circles for a short distance, and then lands. Spoonbills may also be observed "sky gazing", pointing their bills skyward, when another spoonbill flies overhead.



Keys Wild Birds Have Rehabilitation Facilities

Nancy Diersing, FKNMS Education Specialist

“Every bird that is returned to the wild in good condition probably goes on to reproduce and contribute its offspring to future generations,” stated Bruce Horn of the Florida Keys Wild Bird Center. “Saving even one wild bird actually means saving that bird *and* all of its offspring,” he added.

The Florida Keys Wild Bird Center, which began in 1984 through the efforts of local veterinarian Dr. Foley and retired school teacher Laura Quinn, is one of the four non-profit wild bird rehabilitation centers located throughout the Keys. Each of the four facilities offers advice about how to deal with wild bird injuries over the telephone. They provide shelter during and after rehabilitation and every effort is made to return the bird to the place where it was rescued. While all these facilities are open to the public, the Florida Keys Wild Bird Center offers self-guided environmental education tours through a variety of natural habitats.

Living in the Keys or visiting them means encountering birds and other wildlife on a regular basis--out at the reef, on your dock, in your backyard, and along our roads.



The double-crested cormorant is one of the more common species of waterbirds brought to rehabilitation centers with injuries (above). In some cases, birds are not able to return to the wild due to the nature of the injury. Instead, they live out their lives in captivity, depending upon the bird center for food and shelter.

Wild Bird Rescue Contact Info

Upper Keys--Key Largo

Florida Keys Wild Bird Center
(305) 852-4486

Middle Keys--Marathon

Marathon Wild Bird Rescue
(305) 743-8382

Middle Keys--Big Pine Exotic and Wild Bird Rescue

(305) 872-1982

Lower Keys--Key West

Wildlife Rescue of the Florida Keys
(305) 294-1441

Here are just a few things that you can do to reduce wild bird mortality:

- *Contact a wild bird rehabilitation center to learn how to aid in the rescue of wild birds. Volunteer to help at a center near you.
- * If you see an injured bird and are unable to safely capture it, keep an eye on it and/or try to contain it using a box until you can call the closest wild bird center for further advice.
- * Slow down if you see a bird in or near the road to avoid injuring it. (Obviously, keep in mind your own safety, too.)
- *Do not feed wild birds large fish or filleted fish carcasses. Some fish are too large for birds to fully swallow and the bones from filleted carcasses lodge in their throats, causing the birds to starve.
- * Properly dispose of fishhooks, fishing line, plastic six-pack holders, plastic bags, and your other trash. Pick up and properly dispose of any trash you see in the water, on the beach or along the roadside...*even if it is not yours, please!*

* If you are an angler, contact one of the bird centers to learn how to remove hooks from the beaks of hooked birds. Birds that feed on fish, like pelicans and cormorants, often become hooked by fish hooks and subsequently entangled in the attached fishing line.

(Adapted from “What You Can Do” by Kelly Grinter, Exotic and Wild Bird Rescue).





New Sanctuary Volunteer Program Manager



Before accepting her new position as National Marine Sanctuary Volunteer Program Manager, Mary Enstrom served as the Director of the Volunteer Stewardship Exchange of The Nature Conservancy of the Florida Keys.

On June 22nd I began a new position as National Marine Sanctuary Volunteer Program Manager. I am extremely excited about this opportunity. My position is based on an agreement between the National Marine Sanctuary Foundation and The Nature Conservancy (TNC). In this new position I am visiting most of the 13 marine sanctuaries in the next year to assess their current volunteer programs and write a national plan of action for volunteers working in our marine sanctuaries.

There are so many quality volunteer programs in the sanctuaries. I would like to see several of the programs introduced to other sites so that they might be replicated. I have visited the four California Sanctuaries, Hawaii, Texas, and Washington state. We are so very lucky in this country to have leaders that understand our connection with the sea. The Sanctuaries are all exceptional places. The good news for me is that I am visiting these extraordinary sites but will continue to live in the Florida Keys.

Have a wonderful fall and winter and my best regards to all of you.

Mary Enstrom, National Marine Sanctuary Volunteer Program Manager
The Nature Conservancy
57507 Gibson Street, Marathon, FL 33050



Photo: Joy Tatgenhorst

Carrie Tatgenhorst and Brittany Kight survey the bagged trash they picked up on Coco Plum Beach as part of the seventeenth annual Coastal Cleanup, sponsored by The Ocean Conservancy (above). The Coco Plum Beach Cleanup was organized by Sanctuary Education Specialist Joy Tatgenhorst. This is Joy's sixteenth year participating in the Coastal Cleanup.

As part of the Cleanup event, Lower Keys Sanctuary staff removed trash from the mangrove shoreline of the Western Sambo Ecological Reserve.



Photo: Jan Blackmon

Florida Keys National Marine Sanctuary program assistant Robert Keeley frees a spotted eagle ray from a lobster trap line (above). The line was tightly wound around the animal's snout, restricting its ability to feed. Robert, who works with the Sanctuary's Team OCEAN (Ocean Conservation Education Action Network) program, came across the ray while providing information to boaters at the reef off Key West. For information on becoming a Team OCEAN volunteer, call the Lower Keys Team OCEAN Coordinator John Nazzaro at (305) 292-0311.



Interagency Lobster Booth Educates Recreational Harvesters

What is the legal limit in Monroe County during the 2-day Lobster Sport Season? What areas are off-limits and what areas are open to harvesting? How do I know if the lobster meets the legal size limits?

These are only a few of the questions that Florida Fish and Wildlife Conservation Commission (FWC) Officers and Outreach Specialists, John Pennekamp Coral Reef State Park Rangers and Sanctuary Educators were asked at the Lobster Information Booth set up at mile marker 105 in Key Largo during the week before the two-day Lobster Sport Season.

Over 2,000 people passed through the booth to learn about spiny lobsters and pick up a brochure summarizing the rules and regulations that govern their harvest in Keys waters. “After taking a few minutes to learn about the rules, we hope that people have a better understanding of the importance of following the lobster regulations in Keys waters,” commented FWC Officer and Booth Co-coordinator Steve Acton.

“At the booth, we also remind people about being careful not to touch or damage the corals and other marine life while they are diving or boating,” stated Sanctuary Educator and Booth Co-coordinator Amy Massey.



Photo: Joy Tatgenhorst



Photo: Joy Tatgenhorst



Photo: Joy Tatgenhorst

FWC Officer Wade Hefner answers questions and explains lobster regulations to people visiting the Lobster Information Booth in Key Largo (top).

FWC Officer Rob Beaton shows a young man and his father how to measure a live spiny lobster (above). This is the first year that FWC set-up an aquarium with live legal and undersized lobsters.

Park Ranger Elena Muratori explains to a visitor that John Pennekamp Coral Reef State Park is closed to lobstering during the two-day sport season (left).

For a brochure explaining lobster regulations, contact the Upper Keys Sanctuary office at: (305) 852-7717 x 21 or visit the Sanctuary's website at: www.fknms.nos.noaa.gov.

Management Plan Highlights



Florida Cabinet Supports Sanctuary Management Plan, continued from p. 2

This summer marked the fifth year of management plan implementation. The five-year time period coincides with NOAA requirements for sanctuary management plan review/revision and the Florida Governor and Cabinet's requirement of comprehensive evaluation. The evaluation and an annual report are two of the conditions specified by the Governor and Cabinet in its 1997 adoption of the management plan. Public review of the draft plan has been scheduled for the early 2003. The new five-year plan will include two proposed regulatory changes that extend into federal waters protections that already exist in state waters. The first will extend no discharge zone protection into sanctuary federal waters. The second will extend the prohibition on underwater fish feeding.

Five-Year Management Plan Highlights:

- More than 80% of action plans have been completed or are successfully ongoing.
- Tortugas Ecological Reserve has been established as the largest fully protected marine reserve in the states.
- Enforcement has increased from 7 to 17 FWC law enforcement officers.
- Mooring buoy and Team OCEAN programs assist boaters in protecting coral reefs.
- Spiny lobster and several reef fish are larger and more numerous in marine reserves.
- World renown monitoring program has documented trends in corals, seagrasses and water quality.
- Five large vessel grounding sites and seven small ones have been restored.

The Florida Keys National Marine Sanctuary wishes to thank those who contributed their articles, photographs, and editing expertise to the Sounding Line newsletter. Sounding Line is produced on a quarterly basis by the Florida Keys National Marine Sanctuary. For more information or to be placed on the mailing list, email the editor at Nancy.Diersing@noaa.gov.



Florida Keys National Marine Sanctuary
P.O. Box 500368
Marathon, Florida 33050
<http://www.fknms.nos.noaa.gov/>

