

Sounding Line

News of the Florida Keys National Marine Sanctuary

Fall 2004

Exotic Batfish Relocated to Aquarium

Cheva Heck, Media/Public Affairs Coordinator

The Florida Keys hosts millions of visitors each year who come to view the underwater wonders of the coral reef. But earlier this summer, the Florida Keys National Marine Sanctuary whisked the welcome mat out from under a pair of fishy visitors that had taken up residence at Molasses Reef.

In partnership with Reef Environmental Education Foundation (REEF) and the Florida Aquarium, the sanctuary removed two orbicular batfish, native to the Indo-Pacific region, from Molasses Reef. While there are fish known as “batfish” that are native to the Atlantic and the Gulf of Mexico, they are odd-looking bottom dwellers, completely different in appearance and species than the foreign invaders.

Exotic species, those introduced by humans, are a growing problem in the United States, at an estimated cost to the U.S. economy of more than \$100 billion a year. A study by researchers from REEF and the University of Washington documented 16 non-native marine fish species off the coast of the United States. Florida Keys National Marine Sanctuary and State of Florida rules prohibit the release of exotics, out of fear that they may compete with native species for food or shelter, or even prey on them directly.



Divers from the Florida Aquarium captured the batfish and placed them in a live well aboard their collecting vessel. After being quarantined, the fish will be part of an exotic species exhibit at the Aquarium.

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Reports of Indo-Pacific batfish on Molasses Reef led to the capture of two fish a few years previously, but a third remained. With no breeding partner for the fish, sanctuary managers decided not to pursue it. But that changed in early 2004, when REEF volunteers and interns once again reported seeing two exotic batfish. The Florida Aquarium agreed to lend their skills to their capture and provide a permanent home for the fish.

Local dive boat crews confirmed that the exotics were sticking close to a section of Molasses Reef known as the Winch Hole, taking cover in a school of spadefish, which have a similar shape and appearance at first glance.

On June 8th, 2004, the capture team arrived early to begin the fish rodeo. After an extensive chase, they captured first one fish and then a second and transferred them to a live well aboard the Florida Aquarium's collecting vessel, as media looked on. The Monroe County Tourist Development Council helped publicize the capture, educating viewers nationwide about the importance of keeping Florida Keys coral reefs free of non-native species.

At press time, the two fish are in quarantine at the Florida Aquarium, undergoing treatments to make sure they don't bring diseases from the wild. Meanwhile, aquarium staff are finishing exhibits designed to teach visitors that releasing unwanted aquarium fish may be kind to the fish, but ultimately harms our oceans.

**Florida Keys
National Marine
Sanctuary**

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Superintendent

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State Co-trustee

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Jack Curlett
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Captain Brad Simonds
Charter Fishing/Sport Fishing

Mark Klingbeil
Recreational Fisher



Dear Readers,

As you will see from this issue of *Sounding Line*, the Sanctuary Team has been extremely busy since you last heard from us. Only a small portion of our many projects and events make it into our newsletter. Clearly, this is because we have so many dedicated and talented Team members and volunteers involved in so many great projects, it becomes a challenge on what to feature in each edition.

We were honored in June when the President's chief environmental policy advisor, James Connaughton, chairman of the White House Council on Environmental Quality, was joined by Tim Keeney, deputy assistant secretary of commerce for oceans and atmosphere, and Daniel J. Basta, director of the National Marine Sanctuary Program, in the placement of the world's first underwater geodetic survey marker on a coral reef. The marker provides a highly accurate navigational aid for boaters who want to verify the accuracy of their global positioning systems (GPS), while representing the first time this precise survey technology has been used underwater. It was truly a momentous occasion when Mr. Connaughton and our other VIP guests assisted Sanctuary Restoration Biologist Harold Hudson in permanently setting the marker on the reef.

June also signaled the close of an era in our Volunteer Program, as the overall management of the program was shifted from The Nature Conservancy (TNC) to the Florida Keys National Marine Sanctuary. Since we jointly funded and hired our first Volunteer Coordinator, Mary Enstrom, in February 1992, TNC has managed the sanctuary's Volunteer Program. Now, that role has been handed off to the sanctuary and the various volunteer programs will continue in a seamless transition. We will be forever grateful to TNC for managing the program for over 12 years. This was one of the longest standing federal-nongovernmental organizational partnerships in the Sanctuary Program, and we sincerely thank TNC for its enormous contribution to making our Volunteer Program a huge success. And, of course, we want to thank all of our volunteers who continually give one of their most precious possessions, their free time. We would not be as successful as we are in our programs, if it were not for the hard work and commitment of our many tremendous volunteers. We thank each of you!

Another article featured in this issue is one of almost heroic proportions. Sanctuary Resource Manager Lauri MacLaughlin has worked for months, with the assistance of Team members and volunteers, to rescue coral colonies from a large seawall under construction by the U.S. Navy in Key West Harbor. Lauri has coordinated with permitted scientists, public aquaria, and aquaculture facilities to rescue and transport living coral colonies all over the United States. Since corals are protected species, it becomes difficult for scientists to obtain samples to be used in research. By literally saving thousands of individual colonies, Lauri and her colleagues helped put these salvaged corals to good use. Lauri was recently recognized by the U.S. Coral Reef Task Force for her leadership role in his project. Lauri, the corals and all of us thank you!

In the last edition of the newsletter, I emphasized our concern over water quality. No organization takes that concern more seriously than our partners in the U.S. Environmental Protection Agency (EPA), who manage the sanctuary's Water Quality Protection Program (WQPP). The EPA is continually making progress in implementing major components of the WQPP. Be sure to read the article about the Little Venice Project by Dr. Bill Kruczynski of EPA in this *Sounding Line*. We thank our partners in EPA for their continued commitment and contributions to addressing water quality issues in the sanctuary.

Sincerely,

Billy D. Causey



Awards Ceremony Marks Change in Volunteer Program



At the annual Volunteer Awards ceremony, The Nature Conservancy (TNC) Florida Keys Program Director Jodi Thomas, passed management of selected volunteer programs into the hands of Florida Keys National Marine Sanctuary Superintendent Billy Causey. Thomas used a boat hook with a card marked "Volunteer Program," the method that Team OCEAN volunteers use when providing information packets to boaters visiting the Sanctuary Preservation Areas (SPAs). Team OCEAN, Coral Reef Classroom, Submerged Resource Inventory and Reef Medics are the four major volunteer efforts that will now be managed solely by the sanctuary. In 1992, TNC developed a keys-wide volunteer program in partnership with the sanctuary. During the past 12 years, and under the expert guidance of TNC, volunteers have provided over 170,000 hours (a \$2.8 million value) of work. The sanctuary will always be grateful to TNC for creating the program framework. TNC will continue to manage GreenSweep and the *Diadema* Restoration Project. (Photo: Ivy Kelley)

2004 Volunteer Award Recipients

Coral Reef Classroom
--*Julio Martinez*

Team OCEAN
--*Angela and Brad Compton*

Submerged Resource Inventory
--*Denis Trelewicz*

Reef Medics
--*Carolyn Touryniere*

Special Projects
--*Christine Jaccarino*



Carolyn Touryniere received the Volunteer of the Year Award for the sanctuary's Reef Medics program. From left to right: Bill Goodwin, sanctuary resource manager; Amy Massey, environmental specialist and Reef Medics coordinator; Dan Basta, director of the National Marine Sanctuary Program; and Carolyn Touryniere.

(Photo: Ivy Kelley)



NOAA Corps Officers Serve the Sanctuary

The Florida Keys National Marine Sanctuary is fortunate to have two National Oceanic and Atmospheric Administration (NOAA) Corps officers serving in positions within the sanctuary. LT Robert Kamphaus, based in the Key West office, serves as the Lower Region Assistant Manager. LCDR Stephen Beckwith, based in the Key Largo office, recently joined the sanctuary as the Upper Region Manager. Beckwith replaced LCDR Dave Score, who is now the executive officer on the *Nancy Foster*, a NOAA vessel that supports research activities along the Atlantic and Gulf Coasts.

The NOAA Commissioned Officer Corps is one of the seven uniformed services of the United States. The 299 commissioned officers that make up the Corps are professionals trained in engineering, oceanography, fisheries, meteorology and related fields. Officers serve in staff positions throughout NOAA and typically operate ships and planes, and manage diving and research operations.

The NOAA Corps traces its roots back to 1807, when President Thomas Jefferson signed a law authorizing a survey of the coasts. The agency created to conduct the survey was NOAA's earliest "ancestor" and was known as the United States Coast Survey. By the 1920s, the Coast Survey had become the U.S. Geodetic Survey. In 1970, a new era of ocean exploration was launched with the creation of NOAA.

For more information about NOAA Corps, please visit: <http://www.noaaacorps.noaa.gov>. For more information about the history of ocean exploration and NOAA, please visit: <http://www.oceanexplorer.noaa.gov>.



Former Sanctuary Upper Region Manager LCDR Dave Score now serves as the executive officer on newest commissioned vessel, *Nancy Foster*.

The *Nancy Foster* was originally built as a Navy yard torpedo test craft. The ship was transferred to NOAA in 2001 where it was outfitted to conduct coastal research along the U.S. Atlantic and Gulf coasts. Named for the late Dr. Nancy Foster for her outstanding contributions to NOAA, the *Nancy Foster* continues the work of its predecessor, the *Ferrel*, supporting NOAA's Office of Ocean and Coastal Resource Management and the National Sea Grant College Program.

The *Nancy Foster* conducts oceanographic research that includes assessing pollutants, characterizing habitats of the National Marine Sanctuaries, and investigating the connections between estuarine and marine environments. (Photo: NOAA Corps)



LCDR Stephen Beckwith relocated to Key Largo from Woods Hole, Massachusetts, where he served as Commanding Officer on the NOAA ship *Delaware II*, Executive Officer on the NOAA ship *Albatross* and Port Captain.



Before his departure in June, Upper Region Manager LCDR Dave Score was awarded the Sanctuary Team Member of the Year Award and the NOAA Special Achievements Award for his work in the sanctuary during the past three years. (Photo: Ivy Kelley)



LT Robert Kamphaus was recently awarded the NOAA Special Achievement Award for his outstanding contributions and dedication to the Florida Keys National Marine Sanctuary. (Photo: Ivy Kelley)



Keys Community Outfitted with Advanced Wastewater Treatment

Dr. Bill Kruczynski, EPA Water Quality Protection Program



Deputy Executive Director of the Florida Keys Aqueduct Kerry Shelby (second from the right) presided over the ribbon cutting ceremony in Marathon, Florida. The ceremony marked the culmination of work by many individuals, state, local, and federal entities.

On June 25, 2004, the Little Venice Sewage Treatment Plant officially came online. This state-of-the-art sewage treatment plant will treat sewage generated by approximately 970 equivalent dwelling units in Marathon. The plant provides “advanced wastewater treatment” that includes nutrient removal, and disposes of treated wastewater into a 90-foot injection well. The treatment plant provides residents with sewage treatment that meets all Florida Statute 99-395 requirements. All treatment systems in the Florida Keys are mandated to meet those requirements by 2010, and the residents of the Little Venice treatment area are six years ahead of that schedule!

The Florida Keys Aqueduct Authority was selected in 1998 to implement central wastewater systems in unincorporated areas of Monroe County. The Little Venice Wastewater System was initiated in 1998 based upon the County’s wastewater facilities plan for the Marathon area. After incorporation, the City of Marathon continued the construction project. Unique features of the plant include a

vacuum wastewater collection system and disinfection with ultraviolet light. The \$15.3 million project received a grant from the U.S. Environmental Protection Agency (USEPA) in April 1999 for \$4.326 million. The Florida Department of Environmental Protection worked closely with USEPA to help secure the \$4.3 million federal grant. The State of Florida also provided \$2.8 million in grants for this project. Other funding sources include the “Citizens of Little Venice” and a bonding company.

The ribbon-cutting ceremony at the Little Venice Treatment Plant was the culmination of a lot of work by many individuals. Kerry Shelby, deputy executive director of the Florida Keys Aqueduct Authority, presided over the ribbon-cutting ceremony. The festivities included speeches by federal, state, and local dignitaries and a tour of the facility. Shelley Miklas, representing Congresswoman Ileana Ros-Lehtinen, presented John Koenig, Sr., chairman of the Board of the Florida Keys Aqueduct Authority, with a United States flag for the facility.

Water quality of the oceanside residential canals in the Little Venice area has been monitored weekly for three years prior to operation of the wastewater treatment plant. Most homes in the area were built over cesspits, which provide little or no treatment of wastewater. Canal water quality showed higher levels of nutrients and bacteria compared to offshore control sites, particularly after rains, which wash wastewater into the adjacent canals. Canal water quality will be sampled again for a one-year period after all residences in the area are connected to the sewage treatment plant to assess any changes to nearshore water quality as the result of improved sewage treatment. The activation of this treatment facility is expected to reduce the nutrients and bacteria entering the nearshore waters of the Florida Keys National Marine Sanctuary in the vicinity of the Little Venice community.

If you have any questions about the Little Venice Treatment Plant, or water quality in the Florida Keys, please call Dr. Bill Kruczynski, U.S. Environmental Protection Agency, at (305) 743-0537.

W a s t e w a t e r W e b s i t e s

Water Quality Protection Program--<http://www.epa.gov/region4/programs/cbep/fl-nms.html>

Wastewater Treatment episode from Waterways--

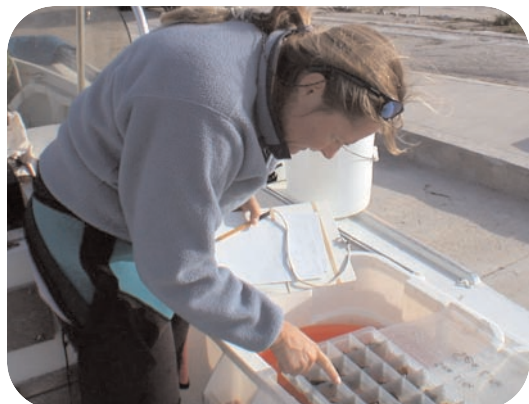
www.fknms.nos.noaa.gov/water/episodes/214/welcome.html

Wastewater Treatment in the Florida Keys--US Coral Reef Task Force--www.coralreef.gov/waterq.cfm

Wastewater Treatment in Key West--<http://www.keywestwastewater.com/future.htm>



Rescued Coral Transplanted to Restoration Sites & Aquariums



Project Coordinator Lauri MacLaughlin checks the corals collected from the dredging site before sending them to the Florida Aquarium in Tampa. (Photo: Ken Nedimyer)



Sanctuary Environmental Specialist Russell Reardon uses a chisel to carefully remove a brain coral colony from the walls of the channel. (Photo: Alicia Farrer)



Sanctuary Environmental Specialist Scott Donahue brings a detached coral to the surface. The coral was kept alive in an underwater coral nursery until it was transported to one of the coral recipient sites. (Photo: Alicia Farrer)

Sanctuary staff, project partners, and volunteers worked tirelessly for weeks to recover over 3500 corals and coral fragments that otherwise would have been lost with the construction associated with the installation of a Homeland Security Battleship Training Facility at the Truman Annex Mole Pier in Key West, Florida.

Hundreds of rescued corals have been transplanted to reef restoration sites, orphan grounding sites, Fort Zachary Taylor State Park, and patch reefs off the Lower Florida Keys. Other corals and fragments have been donated to aquariums, where they will be displayed in educational exhibits, or to laboratories where they will be used in scientific research investigating coral growth, disease and bleaching. Mote Marine Laboratory Center for Tropical Research on Summerland Key is now the home of about 100 colonies of transplanted corals.

The project, coordinated by Sanctuary Resource Manager Lauri MacLaughlin, was monumental in that it required the individual removal and transportation of corals growing along the seawalls that were slated to be widened or demolished in order to accommodate larger ships in the new facility.

MacLaughlin was honored by the United States Coral Reef Task Force “for her exceptional efforts with the U.S. Navy and other partners to rescue and protect corals during harbor dredging and construction projects in Key West.”

For more information about NOAA’s Damage Assessment and Restoration Program, please visit: <http://www.darp.noaa.gov/>. For more information about the U.S. Coral Reef Task Force, please visit: <http://coralreef.gov/>.



Fragments of coral were attached to small rocks before being transported to the restoration site, where they were permanently attached to a firm surface. (Photo: Ken Nedimyer)



Restored Reef Chosen as the Site for Underwater Geodetic Marker

David Hall, East Coast Media Coordinator

During the summer of 2004, scuba divers from the National Oceanic and Atmospheric Administration placed the nation's first underwater geodetic marker at a coral reef in the Florida Keys National Marine Sanctuary.

The marker was installed at Molasses Reef off Key Largo, where NOAA and partners are conducting a successful recovery effort following a major ship grounding that destroyed more than 5,000 meters of living corals in 1984. Together with a highly visible surface buoy, the geodetic marker will serve as a navigational aid to boaters and divers. The marker will also allow researchers to precisely monitor the recovery of the reef over time.

"The coral reefs of the Florida Keys are among America's finest treasures and an abundant source of awe and joy to those who encounter them," said James Connaughton, chairman of the White House Council on Environmental Quality. "The placement of a geodetic marker in the Florida Keys National Marine Sanctuary is both an important tool and symbol of our commitment to better understand, restore and manage our thriving coral reef ecosystems."

The *Wellwood*, a 122-meter freighter registered in Cyprus, ran aground in approximately 18 feet of water on Molasses Reef and remained there for 12 days. The grounding destroyed 5,085 square meters of living coral and injured 644 meters of reef framework, caused widespread destruction of bottom-dwelling organisms and displaced fish and other mobile marine life. Additional injury to the reef occurred as a result of Hurricanes *Elena* and *Kate* in 1985 and the active 1998 storm season.

"This is a wonderful step that NOAA has taken to protect our precious coral reef from boaters and divers," said U.S. Congresswoman Ileana Ros-Lehtinen (R-Fla.). "We must do everything possible to assure that this reef is protected for future generations. The reef is such an important part of our ecosystem that everything that can be done to protect it, must be done."

Drawing on experience gained from restoring other grounding

sites in the region, NOAA, working with the State of Florida and the U.S. Coast Guard, developed and executed a plan for restoring the Wellwood site. The Molasses Reef restoration effort involved experts from NOAA's Damage Assessment and Restoration Program, National Marine Sanctuary Program, National Marine Fisheries Service, National Geodetic Survey and the Office of General Counsel. A number of volunteers aided the restoration effort.

"The NOAA geodetic marker at Molasses Reef will serve as a constant reminder of the fragility of our coral reefs while offering boaters and divers a practical tool for staying safe both above and below the waves," said Tim Keeney, deputy assistant secretary of commerce for oceans and atmosphere.

The Florida Keys National Marine Sanctuary receives reports of about 600 vessel groundings each year, most of them small boats. The proper use of navigational aids, such as global positioning systems, can help boaters avoid running aground. The geodetic marker and surface buoy will provide a calibration site for boaters to check the accuracy of on-board navigational systems. The marker is located at 25° 00' 38" N and 80° 22' 22" W.

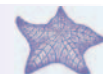
"We are grateful to the dedicated team of professionals and volunteers who have worked so tirelessly to restore Molasses Reef to health after such a devastating incident," said Florida Keys National Marine Sanctuary Superintendent Billy D. Causey. "We hope divers and snorkelers use the

marker and buoy to locate and explore the restoration site while following the 'look, but don't touch' guideline to allow the reef to continue its recovery."

To learn more about NOAA, please visit: <http://www.noaa.gov>. To learn more about the *Wellwood* restoration, please visit: <http://www.restorereef.nos.noaa.gov>



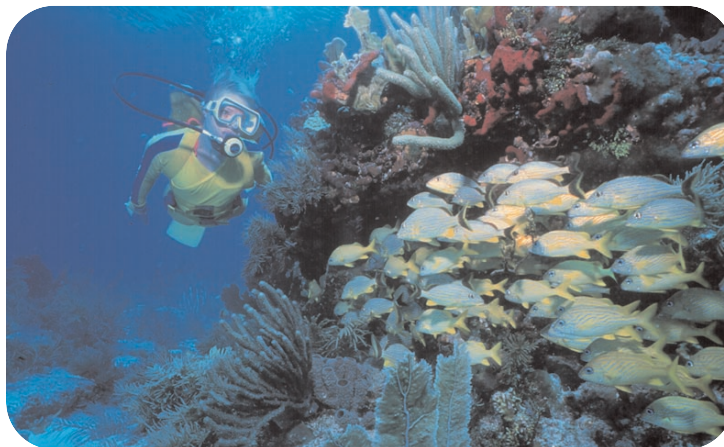
A spar buoy with the latitude and longitude marks the location of the geodetic marker placed on the seafloor. Boaters can use this marker to calibrate the accuracy of on-board navigational systems.



Lipsky's Photographs Donated to Sanctuary

Over 300 underwater images were recently donated to the Florida Keys National Marine Sanctuary by Deborah Lipsky, widow of Keys photographer Larry Lipsky. Lipsky's collection of 35 mm colorful slides captures the array of marine life inhabiting the coral reefs of the Keys. The images, which were taken between 1981 and 1996, are slated to be used in educational materials.

"The collection is truly a lasting treasure for the people of the Florida Keys, and indeed the nation. Larry's work is especially significant for those who love exploring and learning about the marine world. For many years to come, these images will serve to further the Sanctuary's goals of education and awareness of the natural resources," commented Billy D. Causey, sanctuary superintendent. "Again, we are extremely grateful for this very generous and thoughtful contribution of Larry's excellent work," added Causey.



Lipsky's photographs captured the beautiful colors of the marine life found in the coral reef community. Deborah Lipsky often served as a model in her husband's photographs (above). (Photo: Larry Lipsky)

The Florida Keys National Marine Sanctuary thanks everyone who contributed their articles, photographs, and editing expertise to Sounding Line newsletter. Sounding Line is produced 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.



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