



# NEWS FROM NOAA

## NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION • US DEPARTMENT OF COMMERCE

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### **NOAA'S FLORIDA KEYS NATIONAL MARINE SANCTUARY APPROVES URCHIN RELOCATION PLAN**

NOAA's Florida Keys National Marine Sanctuary has approved a plan developed by members of its sanctuary advisory council to move juvenile longspined black urchins (*Diadema antillarum*) from unstable coral rubble to deeper reefs before the height of the hurricane season.

*Diadema* are important to the health of coral reefs because they graze on algae, which competes with corals for space on the reef. In the early 1980s, these urchins died off almost completely throughout the reefs of the Caribbean and southeast Atlantic. While the *Diadema* have been returning slowly to the reefs of the Keys, they have not yet approached their former abundance.

"Assisting these urchins in their return to the Keys may give our coral communities a better chance at survival," said Cmdr. Dave Score, acting sanctuary superintendent. "With all the complex challenges facing our coral reefs, we're pleased that our sanctuary advisory council members have come to us with a simple plan that has the potential to improve reef health."

Advisory council members Ken Nedimyer and Martin Moe conducted an urchin transplanting experiment in the Upper Keys from 2002 through 2003 that proved successful both in terms of survival of the juvenile urchins, and the reduction of algal cover on the experimental reef as compared to a reference site. Numerous studies from throughout the Caribbean confirm the benefits of moving *Diadema* to high relief areas and placing the urchins close enough to each other that they may successfully spawn.

"This year appears to be a banner year for juvenile *Diadema* on Upper Keys reefs," said Nedimyer. "By transplanting many of these small urchins out of the high energy rubble zone, we increase their chances of surviving the storm season and living long enough to reproduce."

Over the next few months, Nedimyer and Moe will work with sanctuary staff and volunteers, as well as local marine life collectors to move urchins three to five centimeters in size from the rubble zone at Conch and Pickles reefs to transplant sites. The Nature Conservancy will be working with the sanctuary on a similar effort in the Lower Keys.

The Florida Keys National Marine Sanctuary protects 2,896 square nautical miles of critical marine habitat, including coral reef, hard bottom, seagrass meadows, mangrove communities and sand flats. The NOAA National Marine Sanctuary program and the state of Florida manage the sanctuary.

The NOAA National Marine Sanctuary Program seeks to increase the public awareness of America's marine resources and maritime heritage by conducting scientific research, monitoring, exploration and educational programs. Today, the sanctuary program manages 13 national marine sanctuaries and one marine national monument that together encompass more than 150,000 square miles of America's ocean and Great Lakes natural and cultural resources.

In 2007, NOAA, an agency of the U.S. Commerce Department, celebrates 200 years of science and service to the nation. Starting with the establishment of the U.S. Coast and Geodetic Survey in 1807 by Thomas Jefferson much of America's scientific heritage is rooted in NOAA. The agency is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and information service delivery for transportation, and by providing environmental stewardship of our nation's coastal and marine resources. Through the emerging Global Earth Observation System of Systems (GEOSS), NOAA is working with its federal partners and more than 60 countries to develop a global monitoring network that is as integrated as the planet it observes.

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On the Web:

NOAA: <http://www.noaa.gov>

NOAA National Ocean Service: <http://oceanservice.noaa.gov/>

NOAA National Marine Sanctuary Program: <http://sanctuaries.noaa.gov/>

Florida Keys National Marine Sanctuary: <http://floridakeys.noaa.gov>

**Photo Caption:** Martin Moe collects long-spined black urchins from the unstable rubble zone of an Upper Keys reef. Moe and Ken Nedimyer, both members of the Florida Keys National Marine Sanctuary Advisory Council, have launched a partnership to speed the local recovery of this species, devastated in a mid-1980s epidemic. The urchins are important to the balance of coral reefs because they graze on algae, leaving bare substrate suitable for the settlement of juvenile corals. **Photo Credit:** Ken Nedimyer, used with permission.