

Reef Restoration Takes Many Forms at M/V Wellwood Site

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For the past two decades, the Florida Keys National Marine Sanctuary has led the world in developing techniques to restore corals reefs damaged by vessel groundings. On Molasses Reef, the grounding site of the M/V *Wellwood* is one such reef restoration project. Now, a comprehensive effort to monitor the recovery of this major grounding site documents the structural stability of this project, as well as its success in attracting juvenile hard and soft corals and other marine life. The reef restoration modules have withstood not only winter storms, but the effects of four hurricanes passing by the Florida Keys in 2005 alone.

The most encouraging news is that juvenile hard and soft corals are settling on the reef restoration modules, both on natural limestone and concrete surfaces. If this continues and the corals survive, coral populations in the restored area should begin to match those of the natural reefs over time. Surveys of fish, as well as lobster and other invertebrates, demonstrate that the design of the reef restoration modules provides ample habitat for an array of species to survive and thrive. Other restored sites are also being monitoring regularly by sanctuary biologists. Funds collected from responsible parties through legal settlements pay for the monitoring program.



During the monitoring surveys, new coral recruits growing on the reef modules like this young *Montastrea cavernosa* were recorded and measured. The scale shown is in centimeters. Photo: Jeff Anderson



Limestone rocks and concrete were used to build reef modules to fill in large excavations left behind at the site.



Staghorn coral "branches" were transplanted to one module on site in 2004 to promote recovery. The corals were originally cultivated in a nursery maintained by marine life collector and SAC Co-chair Ken Nedimyer. Photo: Jeff Anderson



Sanctuary Restoration Biologist Harold Hudson, designer of the reef restoration modules, measures the new coral growing on one of the 22 reef modules placed on the site. Photo: Jeff Anderson