

**Expedition Aboard DISCOVERY Yacht Shredder
July 2018**



EXPEDITION PROFILE

July 18, 2018 aboard DISCOVERY Yacht Shredder

The International SeaKeepers Society partnered with Nova South Eastern University's Professor Paul Arena, and student Louis-Pierre Rich to deploy an OpenROV from the DISCOVERY Yacht Shredder. Their eventual aim is to provide information on the fish communities, which utilize a relatively unknown and unexplored deep water habitat. Due to its depth, SCUBA surveys are restricted, thus an OpenROV unit could be utilized to record video surveys of these areas. The goal is to compare fish assemblages associated with various benthic habitats in the mesophotic zone. Recent bathymetric mapping and submersible dives have discovered an area of deep reef covered by spoil produced by the dredging of Port Everglades Inlet. Areas to the North and South of this buried area remain unaffected and in a natural condition. The goal of this deployment was to test the OpenROV at these depths to determine the feasibility of using this new technology for a Master's thesis project. If the unit works as intended we plan on conducting Baited and Nonbaited North/South transects of both the burial area and the natural areas. In addition, several areas, where sand has been removed for beach renourishment projects (known as sand mining pits) will be surveyed using the same baited and non-baited treatments.

The first pilot surveys and testing of the Open ROV 2.8 unit took place over the course of just a few hours located just off the Fort Lauderdale area. The team consisted of Professor Arena and Mr. Rich, as well as assistance from a SeaKeepers staff member and the crew of the Shredder. These tests showed that the OpenROV's are a viable choice for surveying these depths. As the project continues, data collected will help to determine what affects this type of dredging and dumping has had on the habitats that these species call home. From there, policy may be changed to make sure these harmful practices are a thing of the past.

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