

# BIOGEOGRAPHY BRANCH

CENTER FOR COASTAL MONITORING & ASSESSMENT  
NATIONAL CENTERS FOR COASTAL OCEAN SCIENCE

Seafloor Characterization of the U.S. Caribbean  
2010 Field Season  
March 18-April 6, 2010

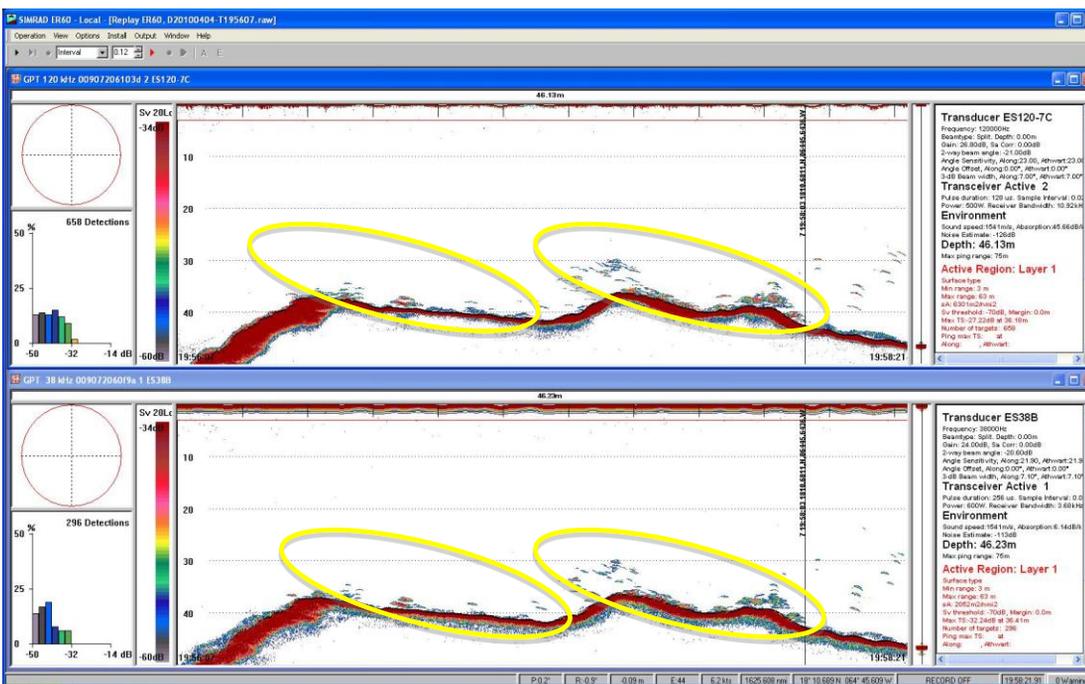
## Day 20: April 5, 2010

Today was filled with activity as the science team wrapped up the research that they have been working on for the past 20 days. Multi-beam mapping continued along the shelf's edge, an area that has indicated variable habitat types, and thus critical to attain accurate mapping data for. Fish acoustics work, ROV transects, and ground truthing with the drop camera collected last minute data before the science team had to pack things up to head home.

**Fish Acoustics:** The fish acoustics team worked last night and into this morning on acoustics surveys around Tampo Bank. They deployed the ROV early in the evening, and were excited to see a notable aggregation of fish at the onset of the dive. They saw several sharks, Yellow fin grouper, and a diversity of other fish species using the ROV. Unfortunately, the ROV became tangled in a line and had to be recovered early, terminating the ROV activities for the night. Though this put a damper on some of the fish acoustics work, they were still able learn important information about the area from their split-beam sonar.

"We found a lot of fish density and distribution along the SE ledge, at about 40 meters depth" reports Laura Kracker. "At around midnight, several fish seemed to congregate right at the tip of the shelf" adds Erik Ebert. "This work was useful, in that suggests to us that fish are consistently using this area over time" Kracker explains. "We confirmed that this is an important area for fish habitat use" Kracker explains.

The fish acoustics team also indicated that while using the high resolution sonar on the ROV, they were able to detect fishing traps, which may prove useful in locating derelict traps in the future. Additionally, Kracker mentions that in future research, they will likely utilize a stationary deployment of the high resolution sonar, so that they may capture presence of fish over longer periods of time.

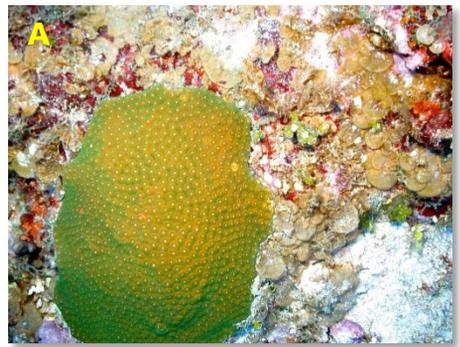


The echogram from 120 kHz transducer (top) and the 38 kHz transducer (bottom) indicates that there are multiple schools of fish (in yellow circles) along this transect from the shelf's edge along Tampo bank (SW section of St. Johns Bank research area).

**Small Boat Operations:** A team took out one of the small boats this morning and completed groundtruthing at 22 sites with the drop camera. The team reported that they saw a big school of bar jacks on their first camera drop, and confirmed that the area they surveyed has a high coverage of rhodoliths, with limited coral coverage.

**ROV Dives:** The ROV team conducted two ROV transect dives along the St. John Shelf today. Glen Taylor, ROV operator, reported that they documented mostly patch reef, with scattered coral that appeared very healthy. He remarked that they came upon a small ridge that had an abundance of fish, including species such as yellow-tail snappers, grunts, etc.

**Wrapping Things Up:** Scientists and crew spent the afternoon wrapping up their research, and packing up all of their tools and gear – an effort that was quite an undertaking! Divers got into the water to remove Reson multi-beam sonar, which was bolted to the bottom of the ship, while staff and scientists on board packed up ROV equipment, wrapped up cables, and boxed computer screens. The team will continue to multi-beam map the St. John Shelf's edge tonight, but will do so with the 1020 sonar, which provides a lower resolution, but deeper mapping capabilities.



(A) *Montastraea cavernosa*, found on the ROV dive; (B) A trunk fish hovers above rhodoliths; (C) Two Rock Beauties forage on the reef; (D) Scientists pack up gear; (E) Diver jumps in water to remove the multi-beam sonar from the bottom side of the ship; (F) Crew pack up the sonar once its aboard the ship.

## MEET THE CREW...



**Ben Nolan** (left) is a Deck Utilityman, **Greg Walker** (middle) is Chief Botswain and **Derrick Williams** (right) is the Oiler on the Nancy Foster.

Several more crew work aboard the ship, but we've run out of days! Thanks crew for a great cruise!



**Maile Sullivan**  
Maile works for NOAA's Coral Reef Conservation Program in Silver Spring, MD. She has been responsible for the cruise logs and communications during the second leg of the cruise. Thanks for reading!