

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 17: April 2, 2010

Today data collection activities continued along the southwestern edge of the St. John Shelf study area. Both small boat operations and ROV dives were used to collect groundtruth data.

The Day's Events

After another full night of collecting multi-beam data along the southwest shelf of St. John, the small boat was launched and a couple of members from the science team traveled to 16 sites to survey habitat type with the drop camera. The ROV was also deployed on two dives to continue groundtruthing the shelf. We bid farewell to Edward Owens today, who had to travel back to the mainland for another commitment. Because it would have taken too long to take the Nancy Foster back into port in St. Thomas, the US Coast Guard picked him up in one of their small boats and delivered him safely back to Charlotte Amalie for us. The rest of the afternoon was filled with more multi-beam mapping and acoustic surveys.



The small boat gets launched for drop camera operations (above left; middle left); Science team members say farewell to Ed (above middle right); USCG transports Ed back to shore (above right)

ROV Operations

The ROV ran into some technical difficulties this morning during its first dive. Lance Horn and Glen Taylor went to work, and found the culprit: a broken washer. After performing a little ROV "surgery," it was ready to go back in for another dive.

There were several exciting marine life encounters today, most notably two sightings of Staghorn coral (*Acropora cervicornis*), a threatened species of coral that is listed under the Endangered Species Act (ESA). Acroporids are structure forming corals, meaning they are important reef builders and provide important physical structure to reef ecosystems. Caribbean/Atlantic species of Acroporids, are comprised of Staghorn coral (*A. cervicornis*), Elkhorn coral (*A. palmata*), and Fused staghorn (*A. prolifera*), and were once prolific throughout the Caribbean, but have declined as much as 98% throughout their range since the 1980s.



Lance and Glen working on repairing the ROV



The decline in this region can be attributed to several disturbances, both natural and human-induced. Coral disease, namely white band disease, has inflicted Staghorn corals throughout the Atlantic and Caribbean. Hurricanes, land-based sources of pollution such as run-off, increased fishing pressure and climate change are also major threats to these coral species.

The USVI is part of Acroporid restoration efforts taking place as a result of the American Recovery and Reinvestment Act. The goal of the project is to try and recover Acroporids by regenerating them in coral nurseries. Nursery-grown coral fragments will be transplanted to 34 reefs in eight distinct areas throughout Florida and the USVI where they will be monitored for success. For more information about this project please see:

http://www.nmfs.noaa.gov/habitat/restoration/restorationatlas/recovery_map.html

<http://www.nature.org/wherewework/northamerica/states/florida/science/staghorn.html>

DID YOU KNOW ...

- Staghorn coral, like many corals, receive most of their energy and oxygen from symbiotic organisms called zooxanthellae.
- Like counting rings in the trunk of a tree, the age of corals can be determined by examining coral growth rings.
- To learn more about coral reef ecosystems, visit <http://coralreef.noaa.gov/>



Images collected during ROV dives on 4/2:
(A) School of grunts hang out near large stand of Staghorn coral; (B) close up shot of Staghorn coral; (C) another stand of Staghorn coral which is an endangered species; (D) a large lobster takes the ROV head on!



MEET THE CREW...



Kevin Adams
Kevin is the Navigation Officer on the Nancy Foster. He is responsible for preparing the track line for the ship to follow, and ensuring the ships safety where navigation is concerned. He has been aboard the Foster for almost 2 years. He will be rotating off the ship for a land assignment in Seattle in just a few months.



Steve Williams
Steve is "on loan" from the NOAA Ship R/V Rainier, while it undergoes it's midlife retrofit (a lengthy process that aims to prolong a ships life approximately 10-15 years). Steve works with the deck department on board the Nancy Foster. He helps with up-keep of the ship, and in this picture he is standing lookout watch.

For more information about NOAA's Center for Coastal Monitoring and Assessment Biogeography Branch visit, <http://ccma.nos.noaa.gov/about/biogeography/welcome.html>