

# BIOGEOGRAPHY BRANCH

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

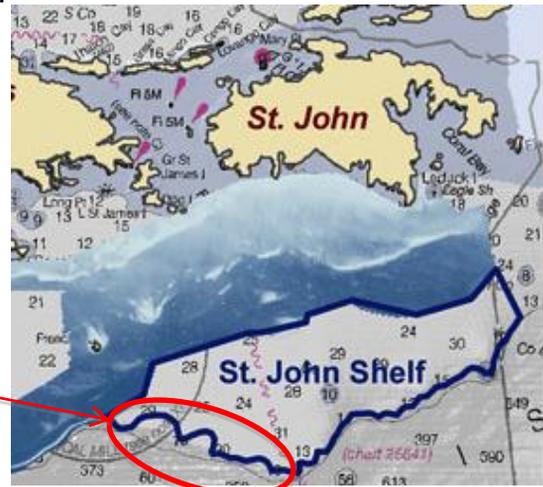
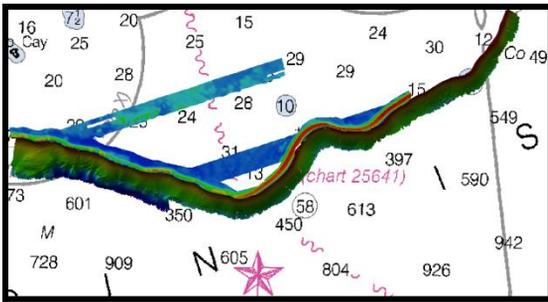
Seafloor Characterization of the U.S. Caribbean  
2010 Field Season  
March 18-April 6, 2010

## Day 16: April 1, 2010

Today data collection activities were conducted along the southwestern edge of the St. John Shelf study area.

### The Day's Events

After a long night of multi-beam mapping along the edge of the St. John Shelf study area, the morning shift of scientists awoke to nice, calm waters in which to launch the ROV. Though there were tentative plans to deploy the small boat operations for some drop camera based groundtruthing, the team decided to focus today's efforts on three ROV dives. Scientists have spend the past two days working on transects on the St. John shelf, and along the shelf edge. Today the ROV was deployed for a total of 3 dives in this area. Additionally, fish acoustics surveys were conducted over two of these three transects.



The multi-beam team is starting to pull together draft maps (above) from the data they have been collecting on the south west edge of the St. John Shelf (right).

### ROV Operations

The ROV dives today revealed fairly uniform substrate of pavement (hard substrate with little relief) and rhodoliths (see Day 5, March 22, 2010 cruise log). The science team reports that there was moderate to high fish diversity as well as high coral diversity.

“Near the shelf’s edge we saw lots of jacks, ocean trigger fish, and two sharks, which are things we don’t typically see as much on the shallower reefs,” remarks Charlie Menza, the Chief Scientist on the cruise. “We also saw the edge of the shelf which was really cool to observe because of it’s geomorphology” he adds as he describes the experience of driving the ROV from the shelf, right over the edge. He explains, “It’s like you are going along the reef and turn the corner and then it’s totally black...” The ROV hovered over the edge a couple of times to check out the view into the abyss, but returned back to the stated course of the transects to gather the necessary data.

The fish acoustics team reported that they were excited to be able to follow the same transect lines as the ROV had, and were able to see presence of fish via acoustic sonar in most of the areas that the ROV documented fish diversity.



Images collected during ROV dives on 3/31 and 4/1:  
(A) School of jacks; (B) a large sponge; (C) a few different coral species; (D) a sea anemone; (E) a very surprised Bigeye

### DID YOU KNOW ...

- Unlike their shallow water relatives, which rely heavily on photosynthesis to produce food, **deep-sea corals** take in plankton and organic matter for much their energy needs.
- Deep-sea corals are often extremely long-lived, slow growing animals, characteristics that make them particularly vulnerable to physical disturbance.
- Deep-sea corals may provide significant opportunities for advancing pharmaceutical and medicinal applications. For example, several deep water sponges—often associated with deep-sea coral communities—have unusual qualities that may potentially aid in the development of drugs for cancer, heart disease, and other medical treatments.

• To learn more about coral reef ecosystems, visit

<http://coralreef.noaa.gov/>



### MEET THE SCIENTISTS ...



**Samantha Allen**  
Sam is a Survey Technician on the Nancy Foster. Her Primary duties included working with the scientists to ensure that they have the technical assistance they need to complete their research.



**Nancy Wright**  
Nancy works for the Olympic Coast National Marine Sanctuary in the state of WA. She has joined this research mission to learn some of the best practices for using the mapping capabilities that are being employed by the Biogeography team on this cruise.