

# US VIRGIN ISLANDS INSULAR SHELF HABITAT MAPPING

CRCP PROJECT

TRIP REPORT

SEPT. 2016

NCCOS scientists conducted field operations from August 20 to September 2, 2016 in areas between 30-100 m in depth on the South Eastern Puerto Rican Shelf. The South Eastern Puerto Rican Shelf stretches off the East Coast of Vieques, PR along the south edge of St. Thomas to the Eastern Edge of St. John (Figure 1). Underwater photos and videos were collected in the project area to support development of a unified benthic habitat map. This new habitat map will provide baseline information to help guide the monitoring and management of important coral reef habitats, fisheries species spawning aggregation sites and MPAs in the USVI and broader jurisdiction.

Leg 1 was conducted by Will Sautter and Arliss Winship from August 20 -September 2, 2016 and Leg 2 was conducted by Kimberly Edwards and Ayman Mabrouk from September 10-17<sup>th</sup>, 2016. Despite bad weather and technical difficulties with field gear, mission objectives were accomplished as planned. HD video and GPS data were recorded at a total of 696 locations across the 665 km<sup>2</sup> the sampling area (Figure 1). Data were collected using a drop camera (Figure 2) and topside recording unit (Figure 3) at each sample site. These data will be used to develop a benthic habitat map (30-100 m in depth) to support marine resource management in the USVI and broader jurisdiction by providing a baseline to develop monitoring plans and evaluate changes in these mesophotic ecosystems over time.

General observations from the field include visible coral bleaching (Figure 4) both west of Sail Rock off St. Thomas (Grid 4, Figure 1) and along the southeastern slope of the insular shelf of the East end of St. John (Grid 18, Figure 1). We also saw 9 derelict fish traps, 4 lionfish and 3 nurse sharks.

This project is being conducted in collaboration with several partners, including: NOAA Office of Coast Survey, NOAA Office of Marine and Aviation Operations, the US Geological Survey, the University of the Virgin Islands, USVI Department of Planning and Natural Resources, and the National Park Service (St. John). Data will specifically support ongoing projects in the USVI, including being used to inform: (1) sampling for the National Coral Reef Monitoring Program (NCRMP), (2) the placement of the acoustic array for the NOAA Marine Fisheries Initiative (MARFIN) project; and (3) sampling for ongoing research of mesophotic reefs by the University of the Virgin Islands (UVI).

Final maps and associated data layers are anticipated by September 2017.

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