FACT SHEET: NOAA Seafloor Mapping Mission to U.S. Virgin Islands
March 29, 2010
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What:
Scientists from NOAA's Center for Coastal Monitoring and Assessment Biogeography Branch return to the U.S. Caribbean for the seventh year. With support from NOAA's Coral Reef Conservation Program, the group will map and study coral reef ecosystems and fish habitats in the U.S. Virgin Islands during a two-week mission running from March 18-April 6, 2010 aboard the NOAA Ship *Nancy Foster*.

Purpose:
This year, at the request of the Caribbean Fisheries Management Council, the National Park Service and the University of the Virgin Islands, NOAA will be examining high-priority areas off the southern coasts of St. Thomas and St. John due to their ecological significance to commercially important fisheries. Researchers hope to identify key spawning areas for several marine species in the region. Data collected during the research expedition will also be used to update nautical charts for safer navigation.

A number of technical products will be generated from the research conducted during the mapping expedition, including underwater video and photographs, fish distribution and spawning aggregation data, seafloor landscape imagery, processed backscatter imagery, and habitat maps describing the geographic location, physical structure, biological cover and live coral cover on the seafloor. All of this data and information is disseminated at http://ccma.nos.noaa.gov/ecosystems/coralreef/usvi_nps.html

Expedition:
The two-part mission targets little studied areas surrounding St. Thomas and St. John, and includes two days in port at Charlotte Amalie for local education and outreach.

To follow the daily mission logs from this research expedition, visit:
http://ccma.nos.noaa.gov/products/biogeography/usvi_nps/nf2010.html.

Activity:
When the Virgin Islands Coral Reef National Monument was designated in 2001, the boundaries were drawn with limited knowledge of the ecological characteristics of the area. Since 2003, NOAA and National Park Service researchers have been working to fill that informational gap by collecting field data on the underwater landscapes and habitats that exist both inside and outside the monument, as well as information on how fish use these various territories.

NOAA scientists will deploy a new, state-of-the-art seafloor imager and a remotely operated vehicle capable of collecting video and photos to gather information on the location and condition of the region's coral reef ecosystems.

Additionally, the fishery acoustics team will use SONAR to detect fish and identify key gathering and spawning sites. This aspect of the mission holds great potential, as the study will coincide with a key spawning period rarely documented or studied in the USVI.

As part of a separate effort funded by NOAA's Marine Debris Program, the researchers will work with local fishermen to collect data on the number and location of abandoned fish traps using an

autonomous underwater vehicle. This information will help determine the exact impact of derelict fishing gear on local fish populations.

During the expedition we will also be preparing for future use of a LiDAR (Light Detection and Ranging) imaging system. The LiDAR system, which will be deployed on aircraft, represents a significant advance in NOAA's ability to efficiently capture data about shallow seafloor habitats. When deployed, it will be used to further assess areas around the U.S. Caribbean.

Platform:
187' NOAA Ship *Nancy Foster*: http://www.moc.noaa.gov/nf/. Home port: Charleston, S.C.

Who:
Scientific personnel consist of 19 NOAA researchers that will be focusing on fisheries acoustics, groundtruthing, multibeam mapping, and outreach. During the first leg of the expedition Tim Battista, oceanographer for NOAA's Center for Coastal Monitoring and Assessment, will act as chief scientist. The chief scientist for the second part of the mission is Charlie Menza, marine biologist for NOAA's Center for Coastal Monitoring and Assessment.

About NOAA's Center for Coastal Monitoring and Assessment Biogeography Branch:
NOAA's Center for Coastal Monitoring and Assessment Biogeography Branch conducts research, monitoring, mapping and assessments of the Nation's marine ecosystems as a part of NOAA's National Ocean Service. The mission of the Biogeography Branch is to develop information and analytical capabilities through research, monitoring, and assessment on the distribution and ecology of living marine resources and their associated habitats for improved ecosystem management. For more information visit: http://ccma.nos.noaa.gov/about/biogeography/.