

NOAA in the North Atlantic



Credit: Martha Nizinski, NEFSC/
NOAA)

Coral Hotspots Found in Deepwater Canyons off Northeast US Coast

For the first time in decades, researchers have conducted an extensive exploration for deep-sea corals and sponges in submarine canyons off the northeastern coast of the US. The survey revealed coral "hotspots," and found that a new coral habitat suitability model could help predict where corals are likely to occur. The model is being developed by the Northeast Fisheries Science Center (NEFSC) and the National Centers for Coastal Ocean Science.

Among the canyons surveyed during the July 6-18 cruise aboard the NOAA Ship *Henry B. Bigelow* were Toms, Middle Toms, and Hendrickson canyons off New Jersey, and Veatch and Gilbert canyons off Georges Bank. All of these were known or suspected habitats of deep-sea corals. More than 70 deepwater canyons, ranging in depth from 100 meters (about 330 feet) to more than 3,500 meters (about 11,500 feet), exist along the Northeast US continental shelf and slope. Few are well studied.

"We know very little about the distribution and ecology of corals in the canyons off the Northeast coast," said Martha Nizinski of NEFSC's National Systematics Laboratory in Washington, DC, a deep-sea coral specialist who served as the chief scientist on the recent research cruise aboard the *Bigelow*. "Although our explorations have just begun, we've already increased our knowledge about these deepwater coral habitats a hundred times over."



Findings from this cruise will not only improve knowledge about deep-sea life off the Northeastern US, but will also aid the New England and Mid-Atlantic fishery management councils in their efforts to manage these habitats, which support a variety of fish species and other marine life.

The July survey on the *Bigelow* was the culmination of a larger mission to explore deepwater canyons, and gain increased knowledge of deep-sea corals. The *Bigelow* was one of three NOAA ships involved in the Atlantic Canyons Undersea Mapping Expeditions, which has been used to document the deepwater canyons on the continental shelf and slope from Norfolk, Virginia, to New England. During February-June 2012, the NOAA ships *Okeanos Explorer* and *Ferdinand R. Hassler* extensively mapped offshore areas designated as priorities by the NEFSC deepwater coral research team and external partners.

Three NOAA line offices contributed to this deepwater canyon /coral project: NOAA Fisheries Service through NEFSC and the Office of Habitat Conservation; NOAA Research through the Office of Ocean Exploration and Research; the National Ocean Service's Office of Coast Survey and National Centers for Coastal Ocean Science; and NOAA's North Atlantic Regional Team. Vessel support was provided by NOAA's Office of Marine and Aviation Operations (OMAO).

NART FY13 Regional Projects

NOAA's North Atlantic Regional Team (NART) will kick off a number of projects this month with the start of the new fiscal year. The team used information regarding regional drivers and priorities assembled this spring/summer, and then, guided by agreed upon regional outcomes, developed and vetted 15 projects designed to support line office execution in the North Atlantic in Fiscal Year 2013 (FY13).

Healthy Oceans Northeast groundfish and several other fisheries will be under intense scrutiny in FY13. The NART will support a project that will inform managers about what climate change could mean for these important fish stocks (i.e. are we witnessing long term changes or less dramatic shifts?) in the context of ecological forecasting. Another project will continue coordination on 'seascapes' that began in 2012, aligning future research across NOAA and external partners to further define habitat and the conditions necessary for species recovery. Finally, a project promoting collaboration on NOAA's data visualization capabilities will examine methods for more effective communication on how ecosystems are impacting fish stocks.



Weather-Ready Nation Several weather events did significant damage in the North Atlantic in the last year. In FY13, a project between NART and Sea Grant is focused on increasing collaboration between Sea Grant and NWS for a more integrated approach to achieving coastal resiliency, an important dimension of the Weather Ready Nation initiative. Other identified projects include continued development of a wave run-up model in collaboration with USGS, expanded use and demonstration of Mid-Atlantic River Forecast



Center capabilities, and support for NOAA participation in a regional water workshop and an Integrated Water Resources Sciences and Services (IWRSS) demonstration project.

Coastal Communities Demand for offshore renewable energy development is the driver for two NART projects that will directly advance NOAA's ocean planning capacity and federal coordination in the region. The NART will also support an NOS effort to more broadly connect coastal managers to other parts of NOAA based on their state's needs and priorities.



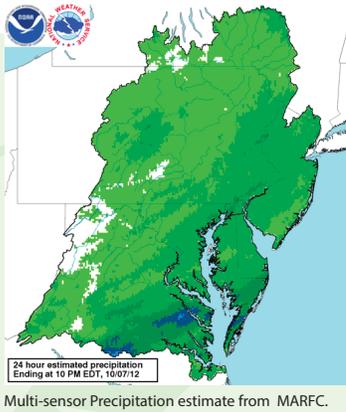
Climate NART projects in FY13 will focus on a protected species vulnerability assessment, stakeholder needs refinement for the Eastern Region, broadened NOAA participation in a climate and coastal habitats workshop, and finally, support to add capacity for a regional drought information workshop in connection with the Chesapeake Bay Executive Order.



The NART will use less than \$50,000 on the projects identified above, to leverage hundreds of thousands of dollars in line office spending and staff time to build capacity for integrated services in the North Atlantic. For more information on these FY13 projects contact NART Coordinator, Nicole.Bartlett@noaa.gov.

DID YOU KNOW?

The 2011 Fisheries of the United States report was released by NOAA in September. According to the report, **New Bedford, Mass.**, for the 12th year in a row, had the highest-valued commercial fish catch (117 million pounds valued at \$369 million) due in large part to the sea scallop fishery.



Linking Water Resources in the Mid-Atlantic to Regional Collaboration

The Mid-Atlantic River Forecast Center (MARFC) in State College, Pa., has jurisdiction over one of the most populous and flood prone regions in the U.S. With almost 1,600 gages in the regional network, and over 1,000 dams in eastern Pennsylvania, flooding outreach tools and water volume information are critical elements of their customer service. The North Atlantic Regional Team (NART) set out to see how these services could help NOAA in the region as well as broaden the RFC's understanding of the regional collaboration network, and its role in advancing water resource capabilities.

On July 31, Peyton Robertson, the Director of the NOAA Chesapeake Bay Office (NCBO) and NART Regional Team met with the MARFC Hydrologist-in-Charge Peter Ahnert. Robertson, Nicole Bartlett (NART Regional Coordinator) and George McKillop (NART member and Water subteam lead) attended the morning "met briefing," and toured the RFC. Participants learned about what regional hydrologists do to forecast and track the water cycle in the region, and heard examples about their expanded water resource services in support of NOAA's mission. Specifically, they learned that the RFC:

- is providing gridded rainfall data to the Maryland Department of the Environment that allows them to put in place more specific and limited shellfish closures areas after periods of heavy rainfall.
- is providing similar information that can be used for beach closures, thereby limiting economic losses associated with such closures; and
- is partnering with the Nurture Nature Center in Easton, Pa. to raise flood awareness and readiness.

RFC and Weather Forecast Office staff joined the meeting to hear about regional collaboration. NOAA West Regional Team Lead Michelle Stokes, Hydrologist-in-Charge for the Colorado Basin RFC, presented by phone on NOAA West's water resource activities. Stokes discussed her personal experiences relating to the value added by regional team engagement.

Throughout the day meeting participants discussed avenues to increase collaboration in the region. The National Integrated Drought Information System pilot for the Chesapeake was cited as a possible example. The connection between RFC predictions of fresh water inflow to the Bay from the Susquehanna watershed and a newly deployed NCBO nutrient sensor on their Susquehanna buoy at Havre de Grace was discussed as another opportunity. Others include pulling NCBO into the RFC's bi-monthly Customer Advisory Board meeting, setting up a briefing for the Chesapeake Bay Program on MARFC, and assisting MARFC in identifying additional audiences for such presentations. The NART coordinator is tracking follow-up actions.



Contact Nicole. Bartlett@noaa.gov for more information.



Fall comes to Acadia National Park, one of the coastal gems in our region.

NOAA People in the North Atlantic Region

NART Member

Adrienne Antoine is the Program Manager for the Coastal and Ocean Climate Applications (COCA) program within the NOAA Climate Program Office, Climate and Societal Interactions (CSI) Division in Silver Spring, MD. She started at the Climate Program Office in late 2005 in the Planning and Programming Division and joined CSI in 2008.



As the COCA program manager, Adrienne supports interdisciplinary research that addresses the needs of decision makers dealing with pressing climate-related issues in coastal and marine systems through the development of an annual call for proposals. In addition, Adrienne collaborates with other NOAA offices, federal agencies, non-governmental organizations, and state, local and tribal governments on building the capacity of coastal and marine decision makers to integrate climate related data and information into planning and management. As a member of the NART and the NART climate sub-team, Adrienne works to better integrate CSI's portfolio with other NOAA climate efforts occurring within the region.

A native to Washington, D.C., Adrienne has an undergraduate degree in biology from Oberlin College and master's in environmental science and policy from Columbia University's School for International and Public Affairs.

NART Background

The NART is one of eight regional teams created by NOAA's Regional Collaboration effort. It is composed of 17 members from five line offices and is currently led by Peyton Robertson. Nicole Bartlett is the NART Regional Coordinator. For more information on team members and activities visit: http://www.regions.noaa.gov/north_atlantic

NOAA Places in the North Atlantic Region

Stellwagen Bank National Marine Sanctuary

The **NOAA Stellwagen Bank National Marine Sanctuary** was designated by Congress in 1992 and this year celebrates its 20th anniversary. The sanctuary's headquarters are located in Scituate, Mass. Dr. Craig MacDonald has served as its superintendent since 2000.

The sanctuary encompasses a total of 638 square nautical miles, all in federal waters, and is home to well over 575 marine species, including herring, cod, endangered humpback whales and northern right whales. The sanctuary's most prominent submerged feature is a

kidney-shaped sandy plateau called Stellwagen Bank. The sanctuary's mission is to conserve, protect, and enhance the biological diversity, ecological integrity, and cultural legacy of this nationally significant area while facilitating uses that are compatible with the primary objective of resource protection.

Over the past 20 years, sanctuary efforts have been instrumental in moving the Boston shipping lanes to protect endangered great whales, linking with Caribbean island nations through sister sanctuary agreements to protect a shared population of humpback whales, successfully nominating historic shipwrecks to the National Register of Historic Places, revealing changes to biodiversity on the seafloor due to human factors, and informing the general public about the rich resources of the sanctuary through museum exhibits, publications and electronic media.

For more information go to <http://stellwagen.noaa.gov/>

