

coral molecular applications. These transferable skills have provided guidance on her current research interest and compliment the taxonomic expertise she wishes to advance in South Africa. Zoleka's trip was wrapped up with her participation on the National Oceanic Atmospheric Administration (NOAA) five-day cruise onboard the *Nancy Foster*, as part of the Deep Sea Coral Program. This second leg of the cruise was dedicated to mapping priority areas identified by the South Atlantic Fisheries Management Council. In this time, Zoleka gained insight on the importance of outreach, science communication, and data management through the various interactions with the students and experts onboard.

Research skills acquired on this trip will undoubtedly contribute to building capacity in the field of deep-water coral research in South Africa. Zoleka, would therefore like to extend her gratitude to the Department of Environmental Affairs and WWF: GreenMatter Fellowship program for funding the visit. A heartfelt thank you to Dr Sandra Brooke (FSU), Dr Stephen Cairns (SI: NMNH), Dr Cheryl Morrison (USGS), and Dr Daniel Wagner (NOAA) for hosting her at their respective institutions.

## Southeast Deep Coral Initiative: successful second year of deep-sea coral explorations off the Southeast United States

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In 2016, the National Oceanic and Atmospheric Administration (NOAA) launched the [Southeast Deep Coral Initiative \(SEDCI\)](#), a four-year effort that aims to study deep-sea coral and sponge ecosystems across the Southeast U.S., a region including U.S. waters of the South Atlantic Bight, Gulf of Mexico, and Caribbean Sea. The initiative is the latest regional research effort supported by NOAA's [Deep Sea Coral Research and Technology Program](#). It is led by a multidisciplinary science team from multiple NOAA offices, and works in close collaboration with federal partners and academic institutions.

Guided by the [SEDCI science plan](#), the initiative supports multiple research expeditions each year, which aim to map, survey and sample deep-sea coral ecosystems, focusing on areas where information is needed to support

management decisions. In 2017, SEDCI expeditions surveyed (1) deep-water banks in the northwestern Gulf of Mexico, (2) deep-sea habitats on the West Florida Slope, and (3) submarine canyons off North Carolina.

Led by Emma Hickerson, surveys in the northwestern Gulf of Mexico were conducted using ROV *Mohawk* during missions aboard the R/V *Manta*. These surveys targeted seven deep-water banks, all of which are being considered for expansion of the Flower Garden Banks National Marine Sanctuary. A total of 49 ROV dives were conducted to depths of 50-210 m, yielding a bottom time of over 48 hours.

Seafloor surveys on the West Florida Slope were conducted using ROV *Odyssey* during an expedition aboard NOAA Ship *Nancy Foster*. Led by Peter Etnoyer, the expedition focused on four areas that are being considered by the Gulf of Mexico Fishery Management Council for the establishment of new habitat areas of particular concern off West



Above: Map showing seafloor areas surveyed during SEDCI expeditions in 2017. These areas include (1) seven deep-water banks in the northwestern Gulf of Mexico surveyed using ROV *Mohawk* during an expedition aboard FGBNMS R/V *Manta*; (2) five areas on the West Florida Slope surveyed by ROV *Odyssey* during an expedition aboard NOAA Ship *Nancy Foster*; and (3) five submarine canyons off North Carolina surveyed using AUV *Sentry* during an expedition aboard NOAA Ship *Pisces*.

Florida. A total of thirteen ROV dives were conducted to depths of 390-710 m, yielding a bottom time of over 51 hours. Additionally, the expedition included CTD casts and multibeam mapping operations.



Above: Deep-sea coral habitats surveyed during SEDCI expeditions in 2017 including (left) aggregation of black corals and crinoids at 122 m depth on Elvers Bank in the northwestern Gulf of Mexico (credit: NOAA-FGBNMS /UNCW-UVP); (middle) aggregation on *Lophelia pertusa* stony corals and the thorny tinsselfish *Grammicolepis brachiusculus* on the West Florida Slope at 496 m depth (credit: NOAA-Pelagic Research Services); and (right) corals on Pamlico Canyon wall at 1300m depth (credit: NOAA-OER-NMFS/WHOI).

The North Carolina canyon surveys were conducted using AUV Sentry during a 12-day expedition aboard NOAA Ship *Pisces*. Led by Martha Nizinski, the expedition included seven AUV dives to depths of 700-2000 m, for a total of 150 hours of bottom time covering a distance of 210 km. Additionally, CTD casts, monocoore sample collections, and multibeam mapping operations were conducted in order to further characterize these deep-sea canyon habitats. This research complements submarine canyon surveys off the northeast U.S. conducted between 2012-2015.

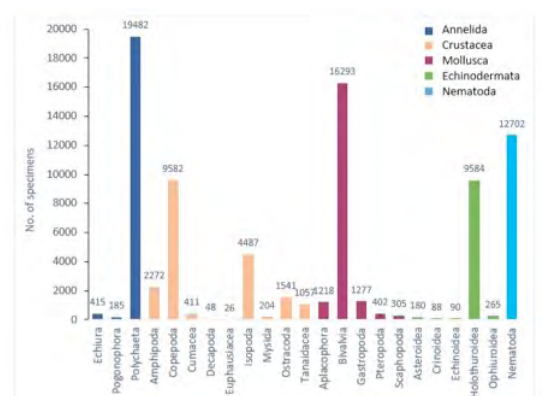
The 2017 SEDCI expeditions provided a great amount of new data on deep-sea coral ecosystems in the Southeast U.S. Region. While most of these data will take many months to process, some important findings are beginning to emerge. The surveys in the northwestern Gulf of Mexico indicate that many, but not all, deep-water banks host very dense communities of corals and sponges. Similarly, large aggregations of *Lophelia pertusa* and various species of black corals were documented during dives on the West Florida Slope. Finally, coral diversity and abundance varied widely in each surveyed canyon off North Carolina. Collectively, these surveys highlight the importance of surveying deep-sea habitats to support decision-making with the best possible science.

## Updates on the project KuramBio II: Kuril Kamchatka Biodiversity Studies

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One year has passed since the expedition SO250 with RV *Sonne* in the framework of the Kurambio II project. As reported in Deep-Sea Life last year (Issue 8, Nov 2016), this project follows the course of three preceding German-Russian collaborations investigating the diversity and distribution of organisms in the northwest Pacific deep sea. We have now a huge amount of new records (more than 82,000 specimens) and new species described from various taxonomic groups, from meiofauna to megafauna. These records are soon going to be uploaded to the OBIS database through the Beneficial Project (also introduced in this issue). We took samples from the abyss down to hadal depths of up to 9581m. We sampled transects across the trench to compare the composition



Above: Numbers of specimens from the most abundant taxonomic groups of the KuramBio II expedition (sorting state Nov 2017).