

New NOAA four-year research initiative to study deep-sea coral and sponge ecosystems in the Southeast United States

National Oceanic and Atmospheric Administration (NOAA)

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This past summer, the National Oceanic and Atmospheric Administration (NOAA) launched a new four-year research initiative to study deep-sea coral and sponge ecosystems across the southeastern U.S., a region including federal waters in the U.S. South Atlantic, the Caribbean Sea and the Gulf of Mexico. The initiative is led by a multidisciplinary science team from multiple NOAA line offices, including National Ocean Service, National Marine Fisheries Service and Office of Oceanic and Atmospheric Research. The team will work in collaboration with partners from federal and academic institutions to generate scientific information needed to improve the management, conservation and protection of deep-sea coral ecosystems. The initiative will provide ~\$2.5M to fund federal research activities in 2016-2019, through NOAA's Deep Sea Coral Research and Technology Program (DSCRTP).



Figure 1. Map showing geographic areas in which the DSCRTP Southeast Initiative will operate in 2016-2019. Areas where deep-sea ecosystems are currently protected are shown in orange (credit: NOAA).

Research priorities identified in a recently released [NOAA report](#) for this initiative include benthic habitat characterization and mapping, as well as improving our understanding of climate change impacts, fishery impacts, taxonomy and population connectivity of deep-sea coral ecosystems.

Fieldwork for this initiative commenced in August 2016 with two expeditions aboard NOAA vessels, including (1) a five-day expedition aboard R/V *Manta* to survey deep-water (50-150 m) banks in the Northwestern Gulf of Mexico by the Flower Garden Banks National Marine Sanctuary using ROV *Mohawk*, and (2) a 15-day expedition aboard NOAA Ship *Pisces* that surveyed deep-sea canyons off North Carolina using AUV *Sentry*. The expedition conducted by the Flower Garden Banks aimed to collect information needed to evaluate sanctuary expansion

proposals, and included the collection of over 2,800 seafloor images, including of some species which are likely new to science. The expedition to the North Carolina canyons supported regional characterizations of canyon ecosystems, and surveyed over 70 km of seafloor through the collection of 59,000 images. Future expeditions are planned in the U.S. South Atlantic, the Caribbean and the Gulf of Mexico as part of this initiative in 2017-2019.

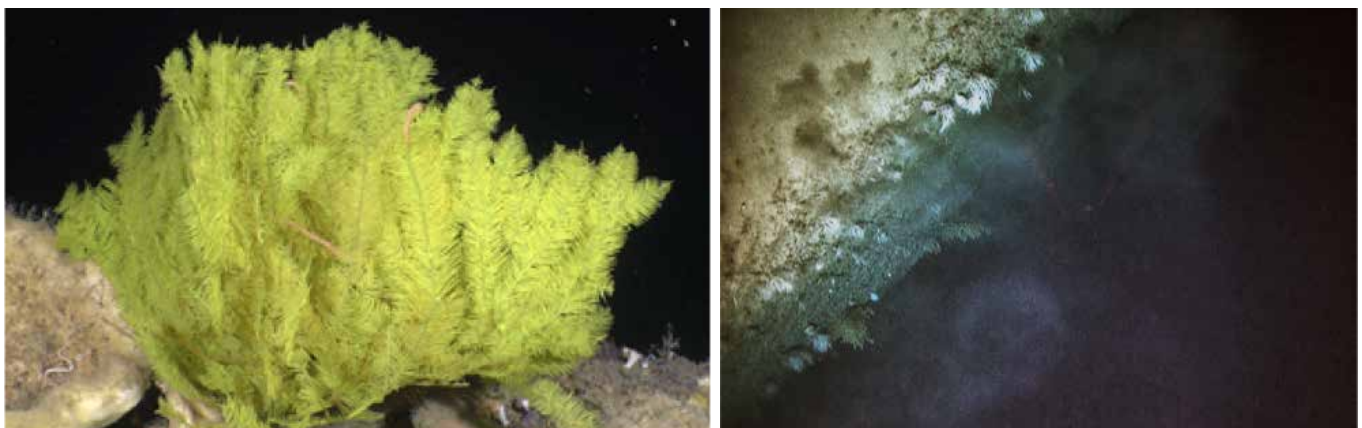


Figure 2 (left): Black coral colony photographed by ROV *Mohawk* during the 2016 expedition that surveyed deep-water coral ecosystems in and around the Flower Garden Banks National Marine Sanctuary. This species is likely new to science and will be verified through pending analyses (credit: NOAA/UNCW-UVP). Figure 3 (right): Hatteras Canyon wall photographed by the AUV *Sentry* during the 2016 expedition that surveyed deep-sea canyons off North Carolina (credit: NOAA-OER-NMFS/WHOI).