

# Distributions and Ecology of Deep Coral Habitat in the Southeastern United States

Steve W. Ross<sup>1</sup>, Kenneth J. Sulak<sup>1</sup>, and Martha S. Nizinski<sup>1</sup>

Currently assigned (through Intergovernmental Personnel Act) to: US Geological Survey, Florida Integrated Science Center, Coastal Ecology and Conservation Research Group, Center for Aquatic Resource Studies, Gainesville, Florida

Beginning in 1991 until present we have investigated several unique and difficult to sample deep water habitats off North Carolina and the SE US. Studies have concentrated in the following areas: a canyon system just north of Cape Hatteras, known as “the Point” (200-1200 m), from 1991-2001; deep coral banks (mostly *Lophelia*) from Cape Lookout through south-central Florida (360-800 m) from 1993-present; and outer shelf hardgrounds, between Cape Lookout and Cape Fear, in 80-200 m from 2001-present. The first priority of these studies is to describe community structure and distributions, followed by trophodynamics work, emphasizing the fish communities. Most sampling was during summer to early fall, and in each area we sampled the full water column using a variety of nets (plus other gear) and research submersibles. Either because of unique oceanography and/or habitats these areas harbor fish communities that were both poorly known and that displayed characteristics apparently controlled by the habitats. Data analysis is still in progress and field work also continues at the deep coral banks. I will present results of analyses to date from these areas, comparing their fish communities throughout the water column. Emphasis will be placed on describing our coral bank research.