The Miami Terrace is a Miocene-age carbonate platform located off the Southeast coast of Florida. Throughout the Miami Terrace many geologic features exist that are conducive to marine benthic habitat. The NOAA ship Nancy Foster explored the features on a cruise from June 4-9, 2007. The expedition surveyed the area using high resolution multibeam sonar to gain a better understanding of the characteristics found at the Miami Terrace. After the data were collected, they were processed using CARIS HIPS 6.1 to analyze the features surveyed. The fully processed data shows undoubted evidence of multiple high relief escarpments and sinkholes. The images produced should prove to be invaluable when planning future cruises with submersibles to explore the area in greater detail.

The Miami Terrace is littered with pristine benthic marine habitat that includes escarpments of all reliefs and multiple sinkholes. These hard rocky bottoms are composed of carbonate limestone. The escarpments provide essential protection for all types of fish, corals and sponges. The Miami Terrace is also in the direct track of the Gulf Stream, which replenishes nutrients and foods to the marine habitat. The power of the Gulf Stream may play a part in the erosion and formation of these high relief escarpments. Faulting may also play a role. The sinkholes are thought to be formed from sub-seafloor percolating freshwater which eventually causes the ground above to give way to gravity. These sinkholes are also thought to add a level of protection to benthic animals, and biota probably persist around the top edges as well as into the depths of the hole. These high resolution images provide a better level of understanding about the features that exist off the southeast coast of Florida. Continuous protection of the Miami Terrace is essential due to its uniqueness and the diversity of life that it sustains.

References:
Florida Coast Deep Corals 2005 expedition, Ocean Explorer, NOAA
Karazsia, Jocelyn, South Atlantic Fishery Marine Council, NOAA Fisheries
McFall, Greg, Gray’s Reef National Marine Sanctuary, NOAA
Wenner, Elizabeth, South Atlantic Bight Coastal Assessment Survey, SCNR