# Characterizing and determining the extent of coral reefs and associated resources in Southeast Florida through the acquisition of high-resolution bathymetry and benthic habitat mapping

**Introduction:**
Effective resource management begins with knowing the distribution of resources. Benthic habitat maps are needed for the northern extension of the Florida Reef Tract to fully understand and manage the benthic resources of Southeast Florida. Completed benthic habitat maps include Miami-Dade, Broward and Palm Beach counties; however, limited data and knowledge exists about the reef resources of Martin County. Martin County is the northern limit of shallow water reef building corals and has been given little attention in the past. These coral communities need to be documented so that appropriate management strategies can be developed.

**Objectives:**
Map the shallow (<30 m) benthic habitats of Martin County using a combined technique approach.

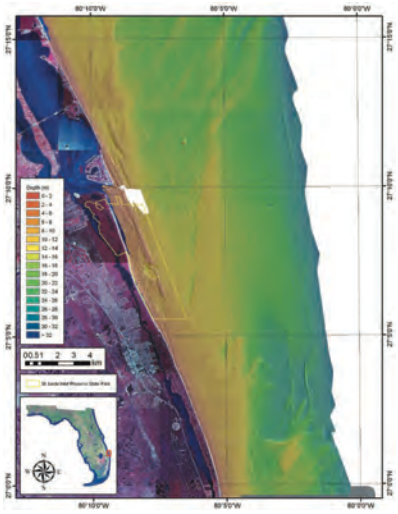
**Approach:**
LiDAR bathymetry and reflectance data from an Airborne Hydrography Hawk Eye II system and aerial photographs were collected to image the seafloor. All available data will be used to outline and define the seafloor features. The habitats will be classified similar to other regional mapping efforts. In situ and video camera groundtruthing data will substantiate the classification. Map accuracy will be tested via stratified random sampling and confusion matrix approach.

**Benefits:**
The maps will provide critical information needed to understand the extent of coral reef habitat throughout the Southeast Florida region, while meeting the priority goals of the U.S. Coral Reef Task Force's National Action Plan and the Southeast Florida Coral Reef Initiative. The maps will enable managers to enforce impact avoidance, improve monitoring efforts and assist in the development of local action strategies to conserve reef resources.

**Location:**
Southeast Florida coast

**Contacts:**
Dr. Brian K. Walker, National Coral Reef Institute, Nova Southeastern University, walkerb@nova.edu
Nicholas Gadbois, Florida Department of Environmental Protection, Coral Reef Conservation Program
Greg Lewis, Bathymetric LiDAR project manager, Blom Aerofilms, Ltd.

This project was funded by the State Wildlife Grants Program under Florida's Wildlife Legacy Initiative.



Photos by Dr. Dave Gilliam, NSU

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