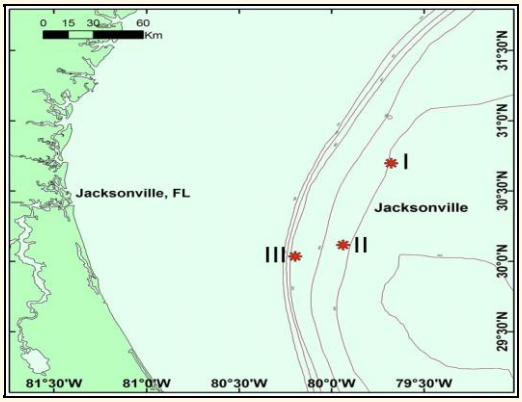
Site Characterization — *Jacksonville_*

OVERVIEW

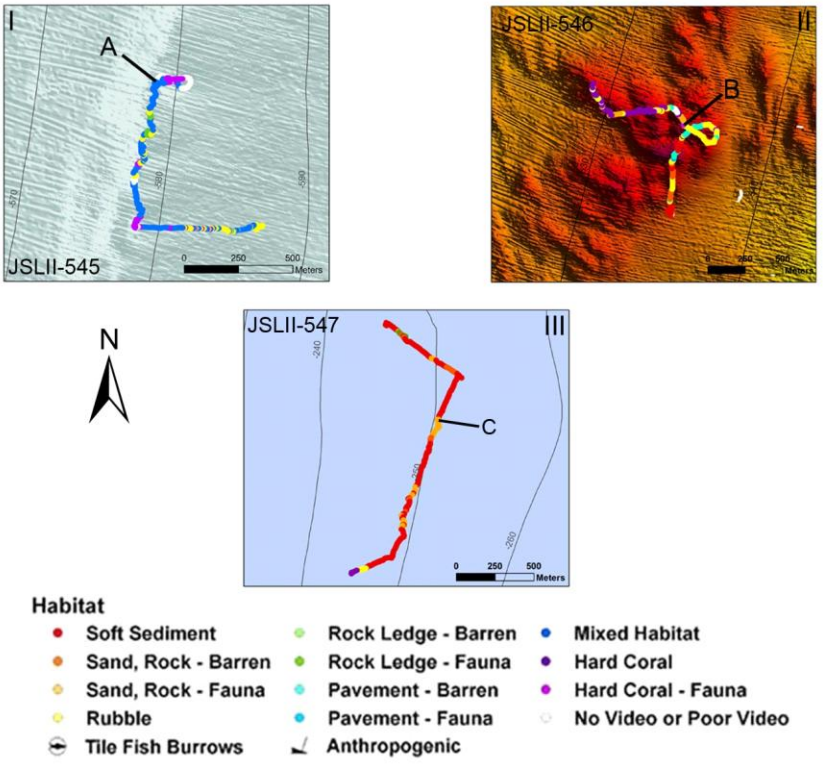
Total Dives 3

Depth Range (m): 210 to 633

GENERAL LOCATION



HABITAT CHARACTERIZATION MAPS



DIVE SUMMARY FOR SITE

Dive Date	PI	Station	Method	Start-Time	End-Time	Start-Lat (N)	Start-Long (W)	End-Lat (N)	End-Long (W)
15-Nov-10	SW Ross, SD Brooke	J2-545	ROV	20:08	1:31	30° 41.850'	79° 40.677'	30° 43.826'	79° 39.679'
17-Nov-10	SW Ross, SD Brooke	J2-546	ROV	9:22	19:32	30° 07.009'	79° 56.260'	30° 05.029'	79° 57.404'
18-Nov-10	SW Ross, SD Brooke	J2-547	ROV	9:43	17:40	30° 02.173'	80° 11.780'	30° 01.508'	80° 11.788'

Site Characterization — *Jacksonville_*

IMAGE GALLERY *** indicates image position is approximated**

Image A: Mixed Habitat
30º 43.811' N, 79º 39.744' W

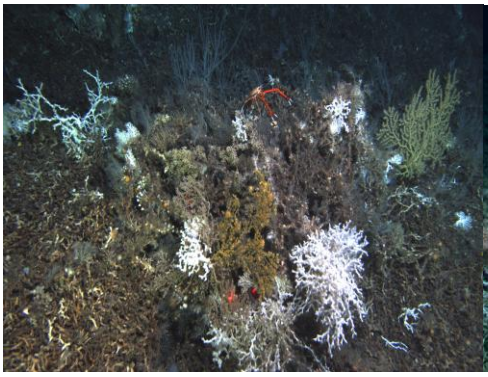


Image B: Hard Corals - with Attached Fauna
30º 04.882' N, 79º 57.084' W

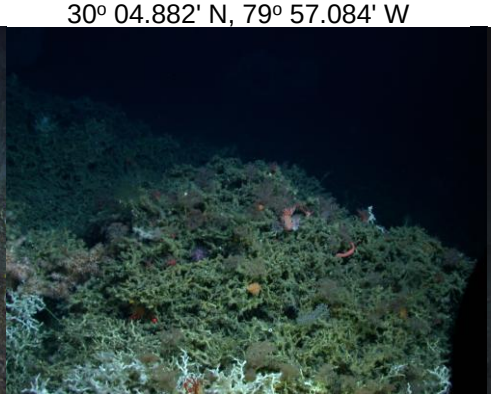
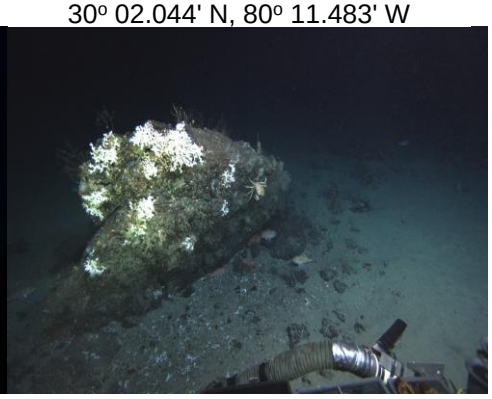


Image C: Sand/Rubble/Rock- with Attached Fauna
30º 02.044' N, 80º 11.483' W



SITE OVERVIEW **AUTHOR** SW Ross **DATE COMPILED** 20-Dec-2012

During the Nov 2010 cruise supported by the NOAA Deep-Sea Coral Research and Technology program three dives were completed on deep coral sites off Jacksonville, FL. There had been numerous previous dives in this region on cruises led by C. Paull, J. Reed, and S.W. Ross. About 834 sq km of this area was mapped with multibeam sonar during the 2010 cruise, but several other cruises have since also contributed multibeam sonar of this area. This area is the subject of US Navy development of an Undersea Warfare Training Range, and there have been recent environmental surveys within the region related to that.

The Jacksonville lithoherms area is a huge region of hardground outcroppings and deep-sea coral bioherms occurring from about 200 to 800 m depths over a latitude range of about 30° to 31° N. The dominant deep-sea coral is *Lophelia pertusa*, which colonizes the rocks as well as builds bioherms. Black corals (mostly *Leiopathes* sp.) are common on the rocky hardgrounds, reach large sizes, and can be hundreds to thousands of years old. Other cnidierians observed in this area include *Madrepora oculata, Enallopsammia profunda, Plumarella* sp., *Bathypathes* sp., *Stylaster* spp., *Keratoisis* sp., cup corals, and numerous anemones. Sponge diversity is quite high.

One of the three 2010 dives in this area was in shallower depths (< 250 m) where an extensive number of *L. pertusa* colonies were encountered, and bioherms built of this coral were also observed. This is the shallowest yet known occurrence of significant colonies of *L. pertusa* in the Western North Atlantic Ocean. It is suspected that this system is maintained by a nearly permanent upwelling of cold, nutrient-rich waters, driven by Gulf Stream dynamics. Discovery and survey of this shallow *Lophelia pertusa* area (several cruises) has led to an expansion of the Coral Habitat Area of Particular Concern (CHAPC); the expansion request is being considered by the South Atlantic Fishery Management Council. The deeper components of this site are already within the CHAPC.

The mobile macrofauna encountered at this site was diverse and typical of upper slope depths. Macroinvertebrates on the deep reef habitats included squat lobsters, golden crabs, urchins, crinoids, brittle starfish, and octopus. The most abundant deep-reef fishes observed on Jacksonville reefs were blackbelly rosefish, *Dysommina rugosa*, *Laemonema* spp., and rattails.