STUDY AREA: Stetson Banks

STATION OVERVIEW	
Project	Life on the Edge 2005
Principal investigators	SW Ross ¹
	MS Nizinski, E Baird, C Morrison
PI Contact Info ¹	Center for Marine Science, 5600 Marvin Moss Ln., Wilmington, NC 28409
Purpose	Mapping of deep coral banks, ecological studies of macroinvertebrates and fishes, paleoclimate studies, coral genetics and education outreach
Vessel	R/V Seward Johnson, Johnson Sea Link I Submersible
Science Divers	M Nizinski (bow), D Angell (stern)
External Video Tapes	4 mini DVs
Internal Video Tapes	2 mini DVs
Digital Still Photos	0
Positioning System	dGPS
CTD File	\checkmark
Specimens Collected	\checkmark
Other	Hard copies of bow and stern audio logs
Acknowledgements	NOAA-OE, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
SEADESC Analyst	A Zilg
Date Compiled	8/19/2011
PI Station Number	JSLI-05-4903

GENERAL LOCATION







DIVE DATA

Date	27-Oct-05
Minimum Bottom Depth (m)	613
Maximum Bottom Depth (m)	633
Start Bottom Time (EDT)	8:30
End Bottom End (EDT)	10:21
Starting Latitude (N)	32° 01.122'
Starting Longitude (W)	77° 40.004'
Ending Latitude (N)	32° 00.948'
Ending Longitude (W)	77° 40.163'
Surface Current (Kts)	0.2
Bottom Current (Kts)	0.1

Image A: Mixed Habitat 32° 01.048' N, 77° 40.159' W



IMAGE GALLERY

Image B: Hard Corals with Attached Fauna 32° 01.006' N, 77° 40.242' W

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Image C: Rock Ledge with Attached Fauna 32° 00.963' N, 77° 40.205' W Image D: Mixed Habitat 32° 00.980' N, 77° 40.222' W

* indicates image position is approximated



RELEVANT WORK AND/OR LITERATURE CITED

Stetson (1961) Stetson et al. (1962) EEZ-SCAN 87 Scientific Staff (1991) Reed (2002) Reed and Ross (2005) Reed et al. (2006) Williams et al. (2006) Williams et al. (2007) Ross and Nizinski (2007) Ross and Quattrini (2007, 2009)

BIOLOGICAL ENVIRONMENT

Very few fishes were observed on this dive and were represented by very few individuals. Fishes observed included *Laemonema melanurum*, *Nezumia sclerorhynchus*, *Squalis cubensis*, a hatchet fish, and a large charcarinid. Motile invertebrates were rare. *Eumunida picta* and *Bathynectes* sp. were observed away from hard coral matrices. Echinoderms were common and included pillow stars, urchins, and other sea stars. Corals and sponges were abundant. *Plumarella* sp. appeared to be the dominant coral species. Other octocorals were extremely abundant, but too small to be properly identified from the video. Individual colonies of *Lophelia pertusa*, *Enallopsammia profunda*, and *Stylaster* sp., were common, with occasional matricies being formed by *L. pertusa* and *E. profunda*. Cup corals were abundant in a patchy distribution. Demosponges were abundant throughout the dive and hexactinellid sponges were common in some areas.

PHYSICAL ENVIRONMENT

This dive transected four habitat types: 1) hard corals with attached fauna, 2) rubble, 3) mixed, and 4) rock ledge with attached fauna. Rubble habitat was the least common. The majority of the area was mixed habitat with numerous attached corals and sponges. Hard corals did not dominate this area and rarely created matrices characteristic of hard coral habitat. Hard coral habitat was a mix of *L. pertusa* and *E. profunda*. The entire dive was low profile (< 1m), with only slightly more relief on hard coral areas and rock ledges. Rock ledges were rare. Current was steady around 0.1 - 0.2 kn.

ADDITIONAL COMMENTS

The external bow video was captured on 2 mini DVs and archived on 2 DVDs. External stern video was captured on 2 mini DVs and archived on 2 DVDs. Internal bow video was captured on 2 mini DVs and archived on 2 DVDs. The video quality was clear.

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Mapping of deep coral banks, ecological studies of macroinvertebrates and fishes, paleoclimate studies, coral genetics and education outreach
R/V Seward Johnson, Johnson Sea Link I Submersible
A Quattrini (bow), M Palmer (stern)
6 mini DVs
3 mini DVs
0
dGPS
Hard copies of bow and stern audio logs
NOAA-OE, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
A Zilg
9/1/2011
JSLI-05-4904

GENERAL LOCATION







DIVE DATA

Date	27-Oct-05
Minimum Bottom Depth (m)	649
Maximum Bottom Depth (m)	705
Start Bottom Time (EDT)	16:29
End Bottom End (EDT)	18:52
Starting Latitude (N)	31° 50.808'
Starting Longitude (W)	77° 36.833'
Ending Latitude (N)	31° 50.792'
Ending Longitude (W)	77° 36.741'
Surface Current (Kts)	1
Bottom Current (Kts)	1

Image A: Rock Ledge with Attached Fauna 31° 50.759' N, 77° 36.786' W



IMAGE GALLERY

Image B: Mixed Habitat 31° 50.642' N, 77° 36.599' W

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* indicates image position is approximated

Image D: Mixed Habitat 31º 50.771' N, 77º 36.713' W



Image C: Rock Ledge -

with Attached Fauna

RELEVANT WORK AND/OR LITERATURE CITED

Stetson (1961) Stetson et al. (1962) EEZ-SCAN 87 Scientific Staff (1991) Reed (2002) Reed and Ross (2005) Reed et al. (2006) Williams et al. (2006) Williams et al. (2007) Ross and Nizinski (2007) Ross and Quattrini (2007, 2009)

BIOLOGICAL ENVIRONMENT

The two most common fish species observed on this dive were *Laemonema melanurum*, and *Nezumia sclerorhynchus*. Other species included *Eptatretus lopheliae*, *Beryx decadactylus*, *Trachyscorpia cristulata*, *Conger oceanicus*, and *Polyprion americanus*. Motile invertebrates included *Bathynectes* sp. crabs, galatheid crabs, and urchins. Octocorals were the most abundant organisms and included primnoids, isidids, and plexaurids. Some individual scleractinians were present such as *Enallopsammia profunda* and *Lophelia pertusa*. *Stylaster* sp. and cup corals were abundant in places, but patchy in distribution. Flytrap anemones were common, and hexatinellid sponges were abundant.

PHYSICAL ENVIRONMENT

Currents were strong throughout this dive and the visibility was approximately 20-30 ft. The majority of the dive took place over mixed habitat; rock ledges with attached fauna were common. Very few areas of rubble habitat were encountered. Rock ledges were of moderate relief (0.5-1 m) with numerous overhangs. Mixed habitat had patchy distributions of attached fauna. Mixed and rubble habitats appeard to have a thin layer of sediment on top. Water mixing was visible and recorded on video. Garbage was also observed on the bottom.

ADDITIONAL COMMENTS

The external bow video was captured on 3 mini DVs and archived on 3 DVDs. External stern video was captured on 3 mini DVs and archived on 3 DVDs. Internal bow video was captured on 3 mini DVs and archived on 3 DVDs. Constistently high currents made controlling the sub and collecting difficult. The video quality was clear.