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 Roberts (bow), C Morrison (stern)	
External Video Tapes	6 mini DVs	
Internal Video Tapes	2 mini DVs	
Digital Still Photos	Yes	
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	7/5/2011	
PI Station Number	JSLI-05-4898	

GENERAL LOCATION







DIVE DATA

Date	21-Oct-05
Minimum Bottom Depth (m)	549
Maximum Bottom Depth (m)	646
Start Bottom Time (EDT)	8:37
End Bottom End (EDT)	10:35
Starting Latitude (N)	32° 15.936'
Starting Longitude (W)	77° 28.422'
Ending Latitude (N)	32° 16.170'
Ending Longitude (W)	77° 28.474'
Surface Current (Kts)	
Bottom Current (Kts)	0.1

Image A: Hard Corals without Attached Fauna 32° 15.941' N, 77° 28.423' W



IMAGE GALLERY

Image B: Hard Corals without Attached Fauna 32° 16.062' N, 77° 28.498' W



Image C: Hard Corals without Attached Fauna 32° 16.182' N, 77° 28.490' W

* indicates image position is approximatedIIs -Image D: Hard Corals -Iunawithout Attached Fauna90' W32° 16.177' N, 77° 28.502' W



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

This dive transected a large portion of off-mound habitat and some on-mound habitat in the end. The low profile, off mound habitat had less than 10% live *Lophelia pertusa* coverage. A few species were seen in the off-mound area. The most common fish species was *Laemonema barbatulum*, and the most common invertebrate was *Plumarella* sp. (both on- and off-mound). Urchins and anemones were common. Galatheids were not present off-mound. In the last 30 minutes of the dive, the sub transected the top of a mound where *L.pertusa* was of higher relief and a greater percentage was alive (>25%). Galatheid crabs, brissingid sea stars, and sponges were common on top of the mound. Other fish species observed included *Conger oceanicus*, *Nezumia* spp., *Beryx decadactylus*, and a few scorpaenids. Sessile invertebrates observed included barrel sponges, glass sponges, *Madrepora oculata*, and a few gorgonians.

PHYSICAL ENVIRONMENT

The majority of this dive took place off mound, with only the last 30 minutes transecting the top of a *L. pertusa* mound. Off mound was characterized by low rolling hills, and low profile (less than 0.5 m relief) *L. pertusa*. Bottom coverage was moderate with visible patches of sand between coral rubble. Off mound had currents of 0.1-0.2 kn from ~120°. On mound had moderate to high profile *L. pertusa* coral and 100% bottom coverage. Current at the top of the mound exceeded 0.5 kn. Visibility was impeded throughout the dive by particulates in the water column.

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 2 mini DVs and archived on 2 DVDs. Video and audio quality was poor on the first external bow DVD. Currents on the top of the mound made controlling the sub and collecting difficult.

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STATION OVERVIEW	
Project	Life on the Edge 2005
Principal investigators	SW Ross ¹
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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	S Ross (bow), J McClain (stern)
External Video Tapes	6 mini DVs
Internal Video Tapes	2 mini DVs
Digital Still Photos	0
Positioning System	dGPS
CTD File	
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	6/27/2011
PI Station Number	JSLI-05-4899

GENERAL LOCATION







DIVE DATA

Date	21-Oct-05
Minimum Bottom Depth (m)	540
Maximum Bottom Depth (m)	603
Start Bottom Time (EDT)	16:22
End Bottom End (EDT)	18:25
Starting Latitude (N)	32° 15.834'
Starting Longitude (W)	77° 28.817'
Ending Latitude (N)	32° 15.882'
Ending Longitude (W)	77° 29.028'
Surface Current (Kts)	
Bottom Current (Kts)	0.4

Image A: Hard Corals - without Attached Fauna 32° 15.836' N, 77° 28.847' W



IMAGE GALLERY

Image B: Hard Corals - with Attached Fauna 32º 15.805' N, 77º 28.846' W



STUDY AREA: Stetson Banks

Image C: Mixed Habitat 32º 15.770' N. 77º 28.887' W

Image D: Rubble 32° 15.884' N, 77° 29.066' W



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

Several fishes were seen throughout this area. Laemonema melanurum and Nezumia sclerorhynchus were most abundant and observed throughout all habitats. Other fishes observed included Trachyscorpia cristulata, Idiastion kyphos, Scyliorhinus retifer, Helicolenus dactylopterus, and squalid sharks. Sessile invertebrates were diverse and common and included several corals and sponges. Small octocorals were abundant and most visible when the sub was stopped. Madrepora oculata and a few cup corals were observed. Numerous glass and barrel sponges were present in rubble habitat, but were also common within the Lophelia pertusa matrix. Other common invertebrates were brissingid sea stars, urchins, galatheids and Bathynectes longispina.

PHYSICAL ENVIRONMENT

The dive began in medium coverage L. pertusa habitat without attached fauna. Current was variable throughout the dive ranging from 0.4 kn in low areas to over 1.5 kn on ridges. Visibility was approximately 30 feet. L. pertusa was low profile throughout, coverage was moderate to high, but there was a good percentage of live coral. In some places 60% of L. pertusa was alive. Some hard coral habitats had attached fauna. The dive also traversed a low profile mixed habitat containing coral rubble with attached sponges, corals, and anemones.

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 2 mini DVs and archived on 2 DVDs. Some parts of the video were dark and made classification difficult. There are good examples of mixed habitat on this dive.