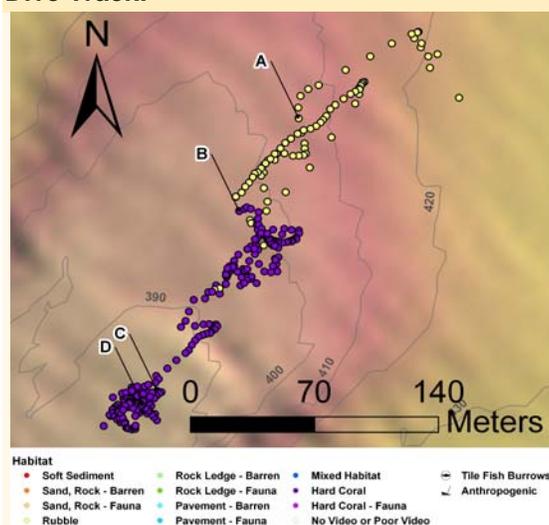


DIVE NUMBER: JSLI-4890**STUDY AREA: Cape Lookout Lophelia A****STATION OVERVIEW**

Project	Life on the Edge 2005
Principal investigators	SW Ross ¹ MS Nizinski, E Baird, C Morrison
PI Contact Info¹	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), M Nizinski (stern)
External Video Tapes	2 mini DVs
Internal Video Tapes	2 mini DVs
Digital Still Photos	0
Positioning System	dGPS
CTD File	<input checked="" type="checkbox"/>
Specimens Collected	<input checked="" type="checkbox"/>
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	3/31/2011
PI Station Number	JSLI-05-4890

GENERAL LOCATION**Dive Track:****DIVE DATA**

Date	17-Oct-05
Minimum Bottom Depth (m)	386
Maximum Bottom Depth (m)	420
Start Bottom Time (EDT)	8:35
End Bottom End (EDT)	10:42
Starting Latitude (N)	34° 19.590'
Starting Longitude (W)	75° 47.040'
Ending Latitude (N)	34° 19.470'
Ending Longitude (W)	75° 47.220'
Surface Current (Kts)	
Bottom Current (Kts)	0.3

Image A: Rubble
34° 19.580' N, 75° 47.159' W



DIVE NUMBER: JSLI-4890

STUDY AREA: Cape Lookout Lophelia A

IMAGE GALLERY

* indicates image position is approximated

**Image B: Hard Corals -
without Attached Fauna**
34° 19.547' N, 75° 47.177' W



**Image C: Hard Corals -
without Attached Fauna**
34° 19.495' N, 75° 47.196' W



**Image D: Hard Corals -
without Attached Fauna**
34° 19.478' N, 75° 47.205' W



RELEVANT WORK AND/OR LITERATURE CITED

Uchupi (1967)
R/V Eastward training cruise 1966 (photo in Rowe and Menzies 1968 and Menzies et al. 1973)
NR-1 submersible cruise Nov 1993 (Sulak and Ross unpubl. data)
R/V Cape Hatteras cruises Aug 2001 & Sep 2006 (S.W. Ross, unpubl. data)
EEZ-SCAN 87 Scientific Staff (1991)
Reed and Ross (2005)
Brooks et al. (2007)

BIOLOGICAL ENVIRONMENT

Several fish and invertebrate species were observed during this dive. The dive began on dense rubble with *Helicolenus dactylopterus*, *Laemonema* spp., squid, and scorpaenids. Scorpaenids and *Nezumia* spp. were observed in rubble and hard coral habitats. The dominant coral in the area was *Lophelia pertusa* and was colonized by *Echinus* spp., numerous galatheids, and brittle stars. Galatheids were observed feeding on a salp. A large (~6ft) carcharhinid was observed on the reef (Image D).

PHYSICAL ENVIRONMENT

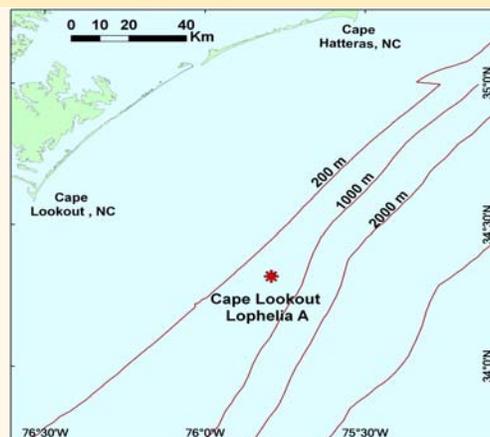
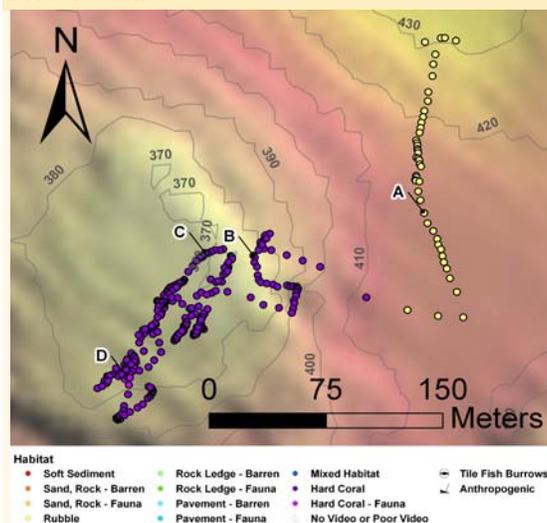
The beginning of the dive was characterized by a gentle sloping rubble habitat and currents ranging from 0.2-1 kn. A thermocline was observed and was associated with a strong current. Temperature changed from 5.5°C to 8.5°C traveling up the slope. This dive transected over rubble habitat with low relief that transitioned into a dense dead coral matrix with small growths of living *L. pertusa*. The coral mound was medium to high relief Hard Corals along a series of ridges and valleys; currents were enhanced in the valleys.

ADDITIONAL COMMENTS

The external video was captured on 2 mini DVs and archived on 3 DVDs. Internal stern video was captured on 2 mini DVs and archived on 2 DVDs. No internal bow video was captured. There was a lot of stationary time for collections, but overall video quality was good. The carcharhinid was captured on the external camera as well as the hand-held stern camera. There is also good footage of three Galatheids feeding on a salp.

DIVE NUMBER: JSLI-4891**STUDY AREA: Cape Lookout Lophelia A****STATION OVERVIEW**

Project	Life on the Edge 2005
Principal investigators	SW Ross ¹ MS Nizinski, E Baird, C Morrison
PI Contact Info¹	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), C Morrison (stern)
External Video Tapes	2 mini DVs
Internal Video Tapes	5 mini DVs
Digital Still Photos	0
Positioning System	dGPS
CTD File	<input checked="" type="checkbox"/>
Specimens Collected	<input checked="" type="checkbox"/>
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	4/1/2011
PI Station Number	JSLI-05-4891

GENERAL LOCATION**Dive Track:****DIVE DATA**

Date	17-Oct-05
Minimum Bottom Depth (m)	366
Maximum Bottom Depth (m)	433
Start Bottom Time (EDT)	16:32
End Bottom End (EDT)	18:27
Starting Latitude (N)	34° 19.494'
Starting Longitude (W)	75° 47.400'
Ending Latitude (N)	34° 19.368'
Ending Longitude (W)	75° 47.520'
Surface Current (Kts)	
Bottom Current (Kts)	0.3

Image A: Rubble
34° 19.435' N, 75° 47.443' W



DIVE NUMBER: JSLI-4891

STUDY AREA: Cape Lookout Lophelia A

IMAGE GALLERY

* indicates image position is approximated

**Image B: Hard Corals -
without Attached Fauna**
34° 19.411' N, 75° 47.519' W



**Image C: Hard Corals -
without Attached Fauna**
34° 19.422' N, 75° 47.534' W



**Image D: Hard Corals -
with Attached Fauna**
34° 19.367' N, 75° 47.568' W



RELEVANT WORK AND/OR LITERATURE CITED

Uchupi (1967)
R/V Eastward training cruise 1966 (photo in Rowe and Menzies 1968 and Menzies et al. 1973)
NR-1 submersible cruise Nov 1993 (Sulak and Ross unpubl. data)
R/V Cape Hatteras cruises Aug 2001 & Sep 2006 (S.W. Ross, unpubl. data)
EEZ-SCAN 87 Scientific Staff (1991)
Reed and Ross (2005)
Brooks et al. (2007)

BIOLOGICAL ENVIRONMENT

Several fishes and invertebrates were observed in coral rubble and hard coral habitats. *Helicolenus dactylopterus*, *Laemonema barbatulum*, *Eumunida picta*, squid and a few pencil urchins were observed in the rubble zone. In the hard coral area a few *Beryx decadactylus* and *Helicolenus dactylopterus* were observed. Other common organisms included brittle stars, basket stars, urchins, flytrap anemones, hexactinellid sponges, *Plumarella* sp. and *Madrepora oculata*. Flytrap anemones and glass sponges were concentrated on the slope facing the current.

PHYSICAL ENVIRONMENT

This dive began over a gently sloping rubble plain. The submersible quickly reached a steep slope (~50°) covered in a dense dead (<10% live) coral matrix. The majority of the dive was spent over a large *Lophelia pertusa* reef with sparse attached fauna. The reef was medium to high profile with ~25% live branches at the peak. Current at the top of the mound was consistently over 1 kn and made it difficult to handle the sub.

ADDITIONAL COMMENTS

The external video was captured on 2 mini DVs and archived on 3 DVDs. Internal bow video was captured on 2 mini DVs and archived on 2 DVDs. Internal stern video was captured on 3 mini DVs and archived on 3 DVDs. Consistently high currents made controlling the sub and collecting difficult. Overall, video quality was clear.