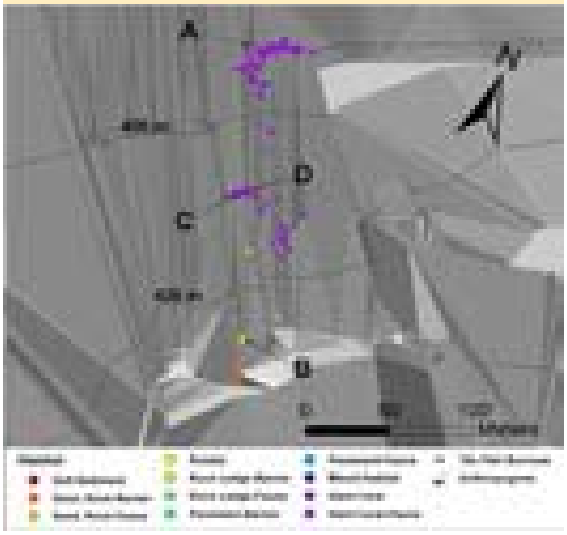
DIVE NUMBER: JSLI-4693 *STUDY AREA: Cape Lookout Lophelia A*

STATION OVERVIEW

Project	Life on the Edge 2004
Principal investigators	SW Ross[1] KJ Sulak, MS Nizinski, E Baird
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 educational outreach
Vessel	R/V Seward Johnson, Johnson Sea Link I submersible
Science Divers	SW Ross (bow), M Nizinski (stern)
External Video Tapes	2 mini DVs, 1 HD
Internal Video Tapes	4 mini DVs
Digital Still Photos	0
Positioning System	dGPS
CTD File	☑
Specimens Collected	☑
Other	Hard copy of stern audio log
Acknowledgements	NOAA-OE, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
SEADESC Analyst	AM Necaise, ML Partyka
Date Compiled	11/16/2006

GENERAL LOCATION

Dive Track:



DIVE DATA

Date	15-Jun-04
Minimum Bottom Depth (m)	392
Maximum Bottom Depth (m)	431
Start Bottom Time (EDT)	16:20
End Bottom End (EDT)	18:27
Starting Latitude (N)	34° 19.436'
Starting Longitude (W)	75° 47.140'
Ending Latitude (N)	34° 19.512'
Ending Longitude (W)	75° 47.148'
Surface Current (Kts)	
Bottom Current (Kts)	0.7

Image A: Hard Coral
34° 19.512' N, 75° 47.178' W

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IMAGE GALLERY

*** indicates image position is approximated**

Image B: Rubble
34° 19.440' N, 75° 47.142' W

Image C: Hard Coral
34° 19.470' N, 75° 47.154' W

Image D: Hard Coral
34° 19.488' N, 75° 47.154' 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)
Ross and Nizinski (in press)

BIOLOGICAL ENVIRONMENT

Schools of mesopelagic fishes (Myctophidae and Sternoptychidae) and invertebrates (e.g., squid) were commonly encountered throughout all habitats during this dive. *Laemonema barbatulum* was observed on sand/coral rubble and rubble areas. In addition to *L. barbatulum*, the following species were observed on hard coral habitats: *Scyliorhinus* spp., *Laemonema melanurum*, and *Helicolenus dactylopterus*. Galatheoid crabs and brittle stars were abundant throughout this dive. Other observed invertebrates included *Lophelia pertusa*, urchins, and sea stars.

PHYSICAL ENVIRONMENT

Three habitat types observed during this dive included: 1) sand mixed with coral rubble, 2) coral rubble, and 3) hard corals. Attached macrofauna was lacking throughout the dive. Sand mixed with small amounts of coral rubble was the dominant substrate off reef. Sediment covered coral rubble was present on the base and face of the slope, and dense matrices of mostly dead *Lophelia pertusa* were present on the top of the slope. Closer to and at the top of the slope, a greater percentage of live *Lophelia* was present as small bushes or standing twigs.

ADDITIONAL COMMENTS

This dive was captured on 2 mini DVs and saved to 2 DVDs for archiving. The overall quality of this footage was fair-to-good. There was, however, a lot of particulate matter in the water column and currents were fairly strong. There was good footage of numerous squid over an area of hard coral habitat. The sub was stationary for the majority of the second DV.