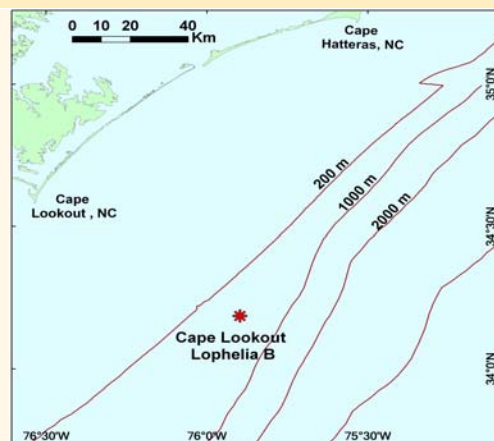
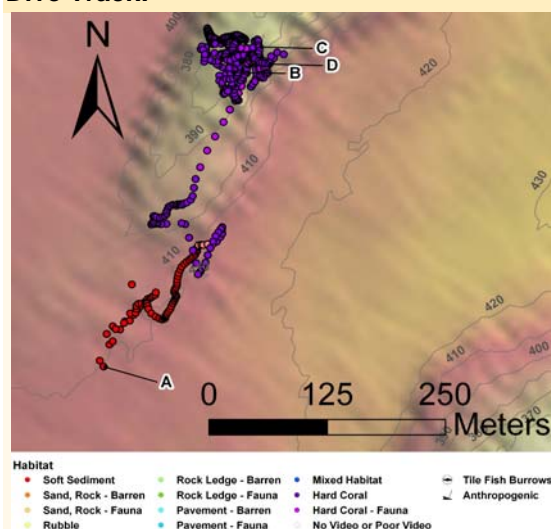


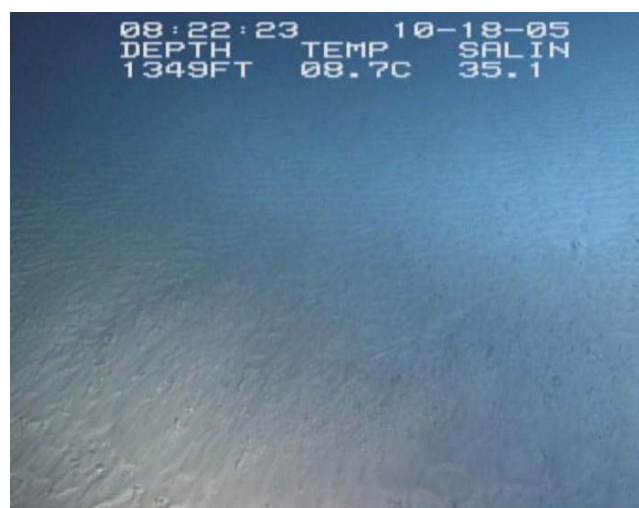
**DIVE NUMBER: JSLI-4892****STUDY AREA: Cape Lookout Lophelia B****STATION OVERVIEW**

<b>Project</b>	Life on the Edge 2005
<b>Principal investigators</b>	SW Ross <sup>1</sup> MS Nizinski, E Baird, C Morrison
<b>PI Contact Info<sup>1</sup></b>	Center for Marine Science, 5600 Marvin Moss Ln., Wilmington, NC 28409
<b>Purpose</b>	Mapping of deep coral banks, ecological studies of macroinvertebrates and fishes, paleoclimate studies, coral genetics and education outreach
<b>Vessel</b>	R/V Seward Johnson, Johnson Sea Link I Submersible
<b>Science Divers</b>	C Morrison (bow), L Baird (stern)
<b>External Video Tapes</b>	6 mini DVs
<b>Internal Video Tapes</b>	3 mini DVs
<b>Digital Still Photos</b>	Yes
<b>Positioning System</b>	dGPS
<b>CTD File</b>	<input checked="" type="checkbox"/>
<b>Specimens Collected</b>	<input checked="" type="checkbox"/>
<b>Other</b>	Hard copies of bow and stern audio logs
<b>Acknowledgements</b>	NOAA-OE, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
<b>SEADESC Analyst</b>	A Zilg
<b>Date Compiled</b>	6/1/2011
<b>PI Station Number</b>	JSLI-05-4892

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

<b>Date</b>	18-Oct-05
<b>Minimum Bottom Depth (m)</b>	370
<b>Maximum Bottom Depth (m)</b>	411
<b>Start Bottom Time (EDT)</b>	8:22
<b>End Bottom End (EDT)</b>	10:42
<b>Starting Latitude (N)</b>	34° 13.896'
<b>Starting Longitude (W)</b>	75° 52.436'
<b>Ending Latitude (N)</b>	34° 14.076'
<b>Ending Longitude (W)</b>	75° 52.328'
<b>Surface Current (Kts)</b>	1
<b>Bottom Current (Kts)</b>	0.6

**Image A: Soft Substrate**  
34° 13.892' N, 75° 52.434' W



**DIVE NUMBER: JSLI-4892**

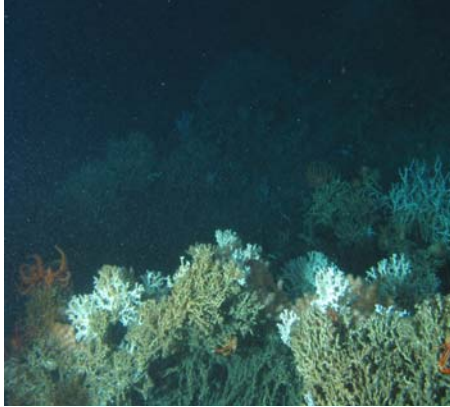
**STUDY AREA: Cape Lookout Lophelia B**

**IMAGE GALLERY**

\* indicates image position is approximated

**Image B: Hard Corals -  
with Attached Fauna**

34° 14.067' N, 75° 52.350' W



**Image C: Hard Corals -  
without Attached Fauna**

34° 14.083' N, 75° 52.330' W



**Image D: Hard Corals -  
with Attached Fauna**

34° 14.072' N, 75° 52.320' 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**

A large number of fishes and invertebrates were observed on this dive. On the sand bottom leading to the mound there were hermit crabs, skates, and squid. Common vertebrates on reef included scorpaenids, *Laemonema* sp., *Beryx decadactylus*, and *Helicolenus dactylopterus*. *Anthias woodsi* was also observed on reef, as well as a shark. A manta ray was recorded on internal cameras swimming over the top of the mound. Much of the hard coral had attached fauna, including brisingid sea stars, urchins, anemones, and sponges. Gorgonians (unidentified), flytrap anemones, and *Aphrocallistes* spp. were abundant on this mound. Other invertebrates on mound included hermit crabs in sandy patches and numerous galatheid crabs on *Lophelia pertusa*.

**PHYSICAL ENVIRONMENT**

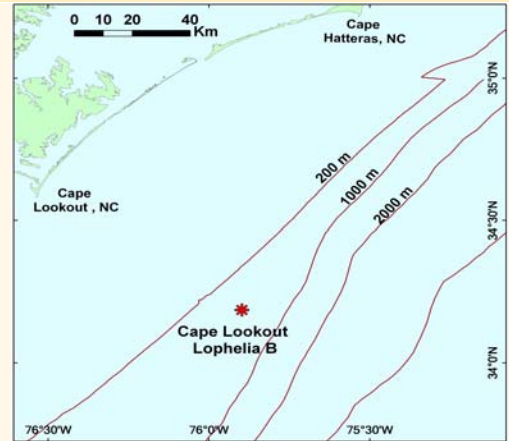
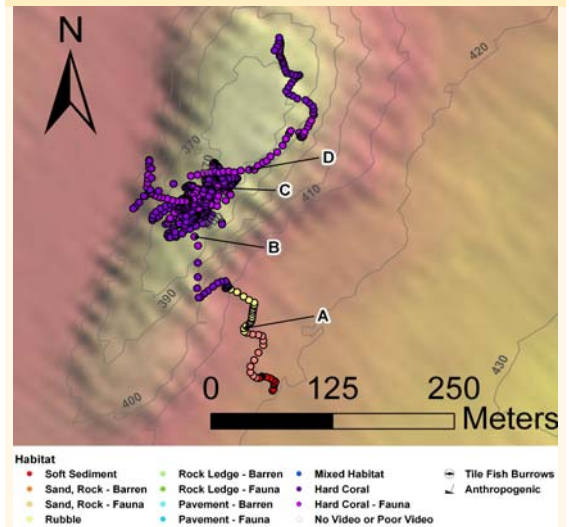
This site is located at the northern end of the Cape Lookout B mounds. The mound consisted of moderately steep slopes leading to ridges. Troughs between ridges were flat and sandy with some coral rubble. The area was very rugged with a profile of around 0.5-1 m throughout. At the tops of ridges currents reached upwards of 1 kn, while in the troughs currents were still stable at around 0.6-0.7 kn. There were a lot of particulates in the water column. Off mound was a sand bottom habitat, and the base of the mound was a mix of soft substrate and rubble. The mound itself was almost entirely hard coral matrices with some areas of attached fauna. Areas observed with steeper slopes lacked attached fauna.

**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. Consistently high currents made controlling the sub and collecting difficult. The video was good quality, with very few unusable sections.

**DIVE NUMBER: JSLI-4893****STUDY AREA: Cape Lookout Lophelia B****STATION OVERVIEW**

<b>Project</b>	Life on the Edge 2005
<b>Principal investigators</b>	SW Ross <sup>1</sup> MS Nizinski, E Baird, C Morrison
<b>PI Contact Info<sup>1</sup></b>	Center for Marine Science, 5600 Marvin Moss Ln., Wilmington, NC 28409
<b>Purpose</b>	Mapping of deep coral banks, ecological studies of macroinvertebrates and fishes, paleoclimate studies, coral genetics and education outreach
<b>Vessel</b>	R/V Seward Johnson, Johnson Sea Link I Submersible
<b>Science Divers</b>	A Howard (bow), S Ross (stern)
<b>External Video Tapes</b>	5 mini DVs
<b>Internal Video Tapes</b>	HD video (A. Howard)
<b>Digital Still Photos</b>	Yes
<b>Positioning System</b>	dGPS
<b>CTD File</b>	<input checked="" type="checkbox"/>
<b>Specimens Collected</b>	<input checked="" type="checkbox"/>
<b>Other</b>	Hard copy of stern audio log
<b>Acknowledgements</b>	NOAA-OE, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
<b>SEADESC Analyst</b>	A Zilg
<b>Date Compiled</b>	6/21/2011
<b>PI Station Number</b>	JSLI-05-4893

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

<b>Date</b>	18-Oct-05
<b>Minimum Bottom Depth (m)</b>	366
<b>Maximum Bottom Depth (m)</b>	420
<b>Start Bottom Time (EDT)</b>	16:30
<b>End Bottom End (EDT)</b>	18:31
<b>Starting Latitude (N)</b>	34° 13.998'
<b>Starting Longitude (W)</b>	75° 52.298'
<b>Ending Latitude (N)</b>	34° 14.184'
<b>Ending Longitude (W)</b>	75° 52.282'
<b>Surface Current (Kts)</b>	
<b>Bottom Current (Kts)</b>	

**Image A: Rubble**  
34° 14.023' N, 75° 52.314' W





**DIVE NUMBER: JSLI-4893**

**STUDY AREA: Cape Lookout Lophelia B**

**IMAGE GALLERY**

\* indicates image position is approximated

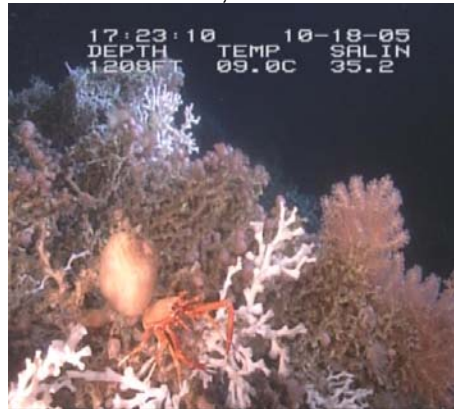
**Image B: Hard Corals -  
with Attached Fauna**

34° 14.083' N, 75° 52.336' W



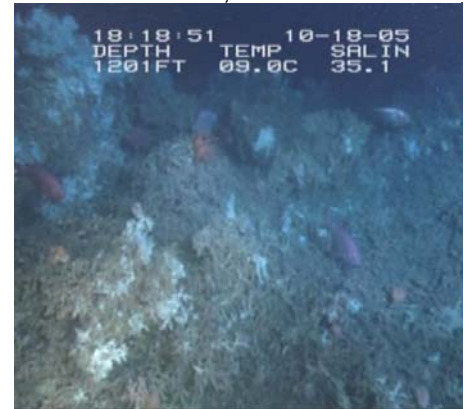
**Image C: Hard Corals -  
with Attached Fauna**

34° 14.104' N, 75° 52.338' W



**Image D: Hard Corals -  
with Attached Fauna**

34° 14.117' N, 75° 52.304' 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**

A few fishes were observed on this dive, while attached fauna was very abundant. Soft substrate and rubble bottom leading to the mound was inhabited by *Rochinia* sp. crabs, *Fenestrella plutonia*, *Laemonema melanurum*, and a few *Beryx decadactylus*. Common fishes on reef included scorpaenids, *L. melanurum*, *L. barbatulum*, *B. decadactylus*, *Anthias woodsi*, *C. oceanicus*, and *Helicolenus dactylopterus*. *Scyliorhinus meadi* and a squalid shark were also observed. *Eumunida picta* was also common on mound and was caught in traps deployed during the dive. Much of the hard coral had attached fauna, including brisingid sea stars, anemones, and sponges. Gorgonians (unidentified), flytrap anemones, (white and pink anemones), and glass sponges were abundant on this mound.

**PHYSICAL ENVIRONMENT**

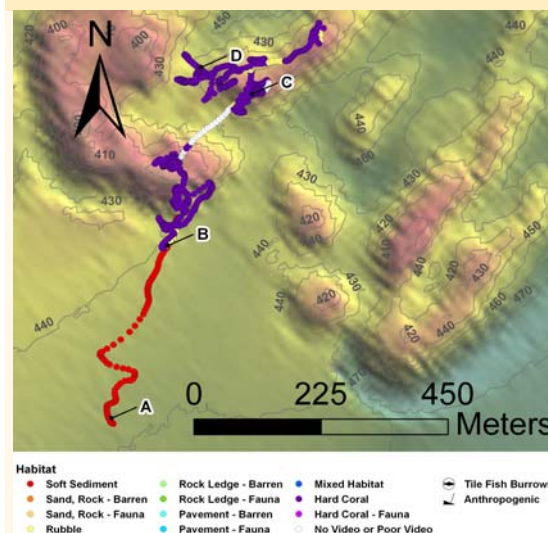
This site is located at the northern end of the Cape Lookout B mounds. Visibility was about 25ft, with an overall current of 0.5 kn from the West. The dive started on soft sand bottom and approached the mound base, a mix of soft substrate and rubble. On mound was rugged and very dense with a moderate profile around 0.5-1m. The mound consisted of few troughs and ridges with moderate to steep slopes. This dive transected numerous areas of attached fauna on a mostly dead *Lophelia pertusa* matrix (<10% living).

**ADDITIONAL COMMENTS**

The external bow video was captured on 3 mini DVs and archived on 3 DVDs. External stern video was captured on 2 mini DVs and archived on 2 DVDs. Internal bow video was a digital copy placed on a hard drive. The video quality was clear.

**DIVE NUMBER: JSLI-4894****STUDY AREA: Cape Lookout Lophelia B****STATION OVERVIEW**

<b>Project</b>	Life on the Edge 2005
<b>Principal investigators</b>	SW Ross <sup>1</sup> MS Nizinski, E Baird, C Morrison
<b>PI Contact Info<sup>1</sup></b>	Center for Marine Science, 5600 Marvin Moss Ln. Wilmington NC 28409
<b>Purpose</b>	Mapping of deep coral banks, ecological studies of macroinvertebrates and fishes, paleoclimate studies, coral genetics and education outreach
<b>Vessel</b>	R/V Seward Johnson, Johnson Sea Link I Submersible
<b>Science Divers</b>	S Ross (bow), M Roberts (stern)
<b>External Video Tapes</b>	6 mini DVs
<b>Internal Video Tapes</b>	3 mini DVs
<b>Digital Still Photos</b>	Yes
<b>Positioning System</b>	dGPS
<b>CTD File</b>	<input checked="" type="checkbox"/>
<b>Specimens Collected</b>	<input checked="" type="checkbox"/>
<b>Other</b>	Hard copies of bow and stern audio logs
<b>Acknowledgements</b>	NOAA-OE, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
<b>SEADESC Analyst</b>	A Zilg
<b>Date Compiled</b>	6/16/2011
<b>PI Station Number</b>	JSLI-05-4894

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

<b>Date</b>	19-Oct-05
<b>Minimum Bottom Depth (m)</b>	397
<b>Maximum Bottom Depth (m)</b>	450
<b>Start Bottom Time (EDT)</b>	8:22
<b>End Bottom End (EDT)</b>	10:59
<b>Starting Latitude (N)</b>	34° 10.656'
<b>Starting Longitude (W)</b>	75° 53.580'
<b>Ending Latitude (N)</b>	34° 10.998'
<b>Ending Longitude (W)</b>	75° 53.340'
<b>Surface Current (Kts)</b>	
<b>Bottom Current (Kts)</b>	0.1

**Image A: Soft Substrate**  
34° 10.610' N, 75° 53.595' W



**DIVE NUMBER: JSLI-4894**

**STUDY AREA: Cape Lookout Lophelia B**

**IMAGE GALLERY**

\* indicates image position is approximated

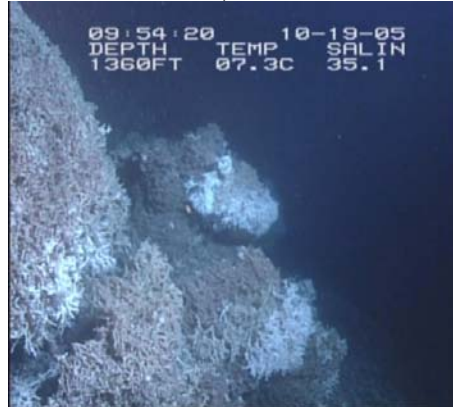
**Image B: Rubble**

34° 10.781' N, 75° 53.530' W



**Image C: Hard Corals - without Attached Fauna**

34° 10.928' N, 75° 53.442' W



**Image D: Hard Corals - without Attached Fauna**

34° 10.958' N, 75° 53.492' 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**

This dive transected two mounds. Soft substrate leading to the mound was inhabited by a few hagfish and numerous crabs, including *Rochinia* sp. Schools of squid were common throughout the dive, as well as shrimps attracted to the light. *Ateleopus* sp. was observed at the base of the first mound on rubble habitat. Other fishes included *Laemonema barbatulum*, *L. melanurum*, and *Chlorophthalmus agassizi*. *Dysommima rugosa* was extremely abundant throughout the entire dive on both mounds. *Echinus* spp. was common. Very few Galatheids were observed. Sessile invertebrates were largely lacking.

**PHYSICAL ENVIRONMENT**

Two Cape Lookout B mounds were transected as part of this dive, both were characterized by a moderate profile of mostly dead (>75%) *Lophelia pertusa*. The base of each mound had a transition zone from soft substrate to rubble to hard coral habitat. There was little current over the mound, although current increased slightly as the JSL reached the summit. Both mounds had slopes between 30° and 60°.

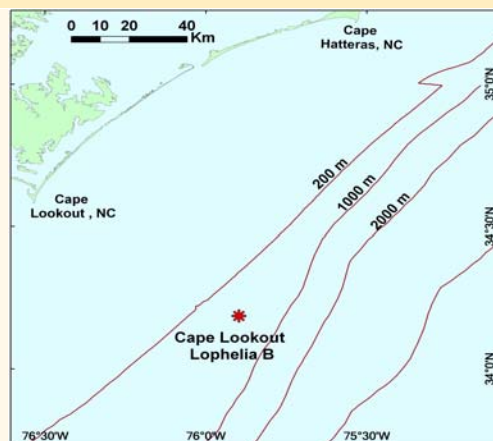
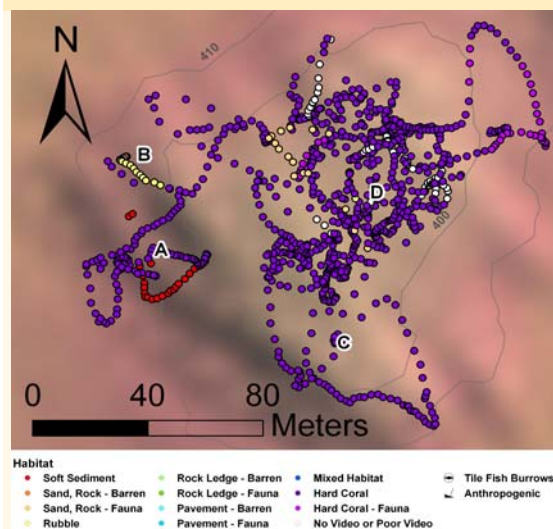
**ADDITIONAL COMMENTS**

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. Video contains good footage of *Ateleopus* sp.



**DIVE NUMBER: JSLI-4895****STUDY AREA: Cape Lookout Lophelia B****STATION OVERVIEW**

<b>Project</b>	Life on the Edge 2005
<b>Principal investigators</b>	SW Ross <sup>1</sup> MS Nizinski, E Baird, C Morrison
<b>PI Contact Info<sup>1</sup></b>	Center for Marine Science, 5600 Marvin Moss Ln., Wilmington, NC 28409
<b>Purpose</b>	Mapping of deep coral banks, ecological studies of macroinvertebrates and fishes, paleoclimate studies, coral genetics and education outreach
<b>Vessel</b>	R/V Seward Johnson, Johnson Sea Link I Submersible
<b>Science Divers</b>	L Baird (bow), A Quattrini (stern)
<b>External Video Tapes</b>	6 mini DVs
<b>Internal Video Tapes</b>	HD video (A. Howard)
<b>Digital Still Photos</b>	0
<b>Positioning System</b>	dGPS
<b>CTD File</b>	<input checked="" type="checkbox"/>
<b>Specimens Collected</b>	<input checked="" type="checkbox"/>
<b>Other</b>	
<b>Acknowledgements</b>	NOAA-OE, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
<b>SEADESC Analyst</b>	A Zilg
<b>Date Compiled</b>	9/16/2011
<b>PI Station Number</b>	JSLI-05-4895

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

<b>Date</b>	19-Oct-05
<b>Minimum Bottom Depth (m)</b>	390
<b>Maximum Bottom Depth (m)</b>	413
<b>Start Bottom Time (EDT)</b>	16:22
<b>End Bottom End (EDT)</b>	18:51
<b>Starting Latitude (N)</b>	34° 12.954'
<b>Starting Longitude (W)</b>	75° 53.040'
<b>Ending Latitude (N)</b>	34° 12.960'
<b>Ending Longitude (W)</b>	75° 52.980'
<b>Surface Current (Kts)</b>	
<b>Bottom Current (Kts)</b>	0.1

**Image A: Soft Substrate**  
34° 12.946' N, 75° 53.081' W



**DIVE NUMBER: JSLI-4895**

**STUDY AREA: Cape Lookout Lophelia B**

**IMAGE GALLERY**

\* indicates image position is approximated

**Image B: Rubble**

34° 12.965' N, 75° 53.087' W



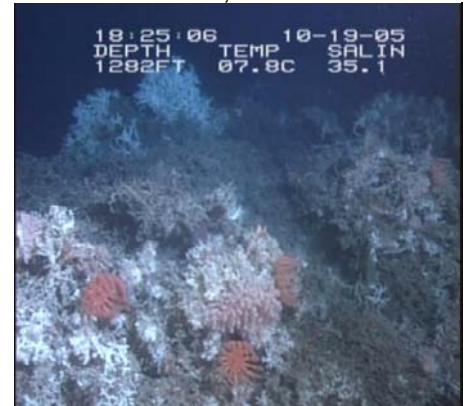
**Image C: Hard Corals - without Attached Fauna**

34° 12.926' N, 75° 53.039' W



**Image D: Hard Corals - without Attached Fauna**

34° 12.958' N, 75° 53.032' 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**

The majority of this dive transected hard coral habitat with abundant fauna. Fishes commonly observed throughout the entire dive included *Conger oceanicus*, *Synaphobranchus* sp., *Laemonema melanurum*, *Beryx decadactylus*, and *Helicolenus dactylopterus*. Other scorpaenids were observed less commonly as well as *Nezumia* sp. Galatheid crabs were extremely abundant in patchy distributions throughout the entire dive, as were flytrap anemones, hexactinellid sponges, and brisingid sea stars. Common invertebrates included pencil urchins, pillow stars, and white anemones. *Lophelia pertusa* was the dominant coral; *Anthothela* sp. was commonly observed, while *Enallopsammia profunda* was rare.

**PHYSICAL ENVIRONMENT**

This dive began transecting over soft substrate leading up to hard coral habitat. The majority of the dive covered hard coral habitat without attached fauna. Soft substrate was visible between *L. pertusa* matrices of moderate to high profile (0.5-1 m). The area was very patchy, less than 50% of the *L. pertusa* was living, with most of that occurring at the tips of coral bushes. Moderate slopes between ridges and troughs characterized the overall area. Some troughs contained soft substrate with rubble habitat, with and without attached fauna. Visibility was approximately 25 ft and currents were steady around 0.1 kn.

**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 a digital copy placed on a hard drive. The majority of the last half of the dive was spent looking for crab traps that were set out at the beginning of the dive, they were found but the video has a lot of footage that overlaps areas of the reef. The quality of video is extremely clear.