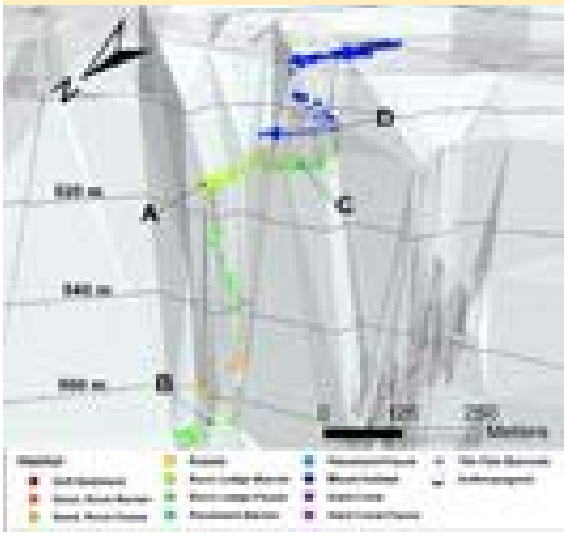
DIVE NUMBER: JSLII-3408 *STUDY AREA: Savannah Banks East*

STATION OVERVIEW

Project	Investigating the Charleston Bump 2003
Principal investigators	GR Sedberry[1] SE Stancyk
PI Contact Info[1]	Marine Resources Research Institute, SCDNR P.O. Box 12559 Charleston SC 29422-2559
Purpose	To explore and describe habitats and associated fauna of high-relief features of the Charleston Bump
Vessel	R/V Seward Johnson, Johnson Sea Link II Submersible
Science Divers	D Wyanski (bow), P Weinbach (stern)
External Video Tapes	3 mini DVs
Internal Video Tapes	0
Digital Still Photos	0
Positioning System	dGPS
CTD File	☑
Specimens Collected	☑
Other	
Acknowledgements	NOAA-OE
SEADESC Analyst	ML Partyka
Date Compiled	11/16/2006

GENERAL LOCATION

Dive Track:



DIVE DATA

Date	06-Aug-03
Minimum Bottom Depth (m)	490
Maximum Bottom Depth (m)	571
Start Bottom Time (EDT)	8:52
End Bottom End (EDT)	11:17
Starting Latitude (N)	31° 44.178'
Starting Longitude (W)	78° 48.177'
Ending Latitude (N)	31° 43.848'
Ending Longitude (W)	78° 48.360'
Surface Current (Kts)	
Bottom Current (Kts)	0

Image A: Rock Ledge-Barren
31° 44.154' N, 78° 48.210' W

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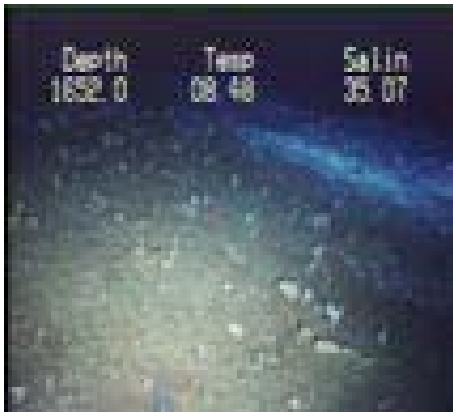
IMAGE GALLERY *** indicates image position is approximated**

Image B: Rock Ledge-Fauna
31° 44.184' N, 78° 48.216' W

Image C: Rock Ledge Fauna
31° 44.100' N, 78° 48.294' W

Image D: Mixed Habitat
31° 44.094' N, 78° 48.330' W



RELEVANT WORK AND/OR LITERATURE CITED

BIOLOGICAL ENVIRONMENT

Very few fish or mobile invertebrates were observed during the course of this dive. *Beryx decadactylus, Cirrhigaleus asper* and *Helicolenus dactylopterus* were the only fishes observed on tape. However, the audio commentary made note of a number of species that were never captured on film, such as *Polyprion americanus,* unidentified Macrouridae and *Laemonema* spp. The only mobile invertebrate observed on film was a single *Eumunida picta,* though another was noted on the audio track. Sessile invertebrates were very common and highly diverse. Hard corals were plentiful, though very small, and included *Stylaster, Enallopsammia* and *Lophelia pertusa.* Octocorals were represented by abundant *Keratoisis* bamboo corals and a few *Paramuricea*. A single large *Leiopathes* black coral was observed clinging to a rock ledge. Sponge density was highest near the end of the dive and was dominated by large fanlike varieties and other encrusting species. Venus flytrap anemones were also common along the rock ledge environment.

PHYSICAL ENVIRONMENT

The dive began along a multi-tiered rocky bluff along a 20-30° slope covered in small corals and sponges. The slope rapidly increased to ~70° with a heavy sediment layer and diverse macrofaunal cover. The central focus of the dive was a large (>60 m), rocky wall that included both barren rock ledges and ledges with large amounts of attached anemones and bamboo corals. The summit of this wall was a large flat plain of thin sediment over a hard bottom with a large diversity of attached macrofauna. Rocks collected during this dive included foraminiferan limestone and calcareous mudstone found in an interbedded sequence. This area had "stairstep" relief of about 20 m. The mudstone exhibited greater erosion in situ and was very chalky to the touch. The result was a terraced, step-like sequence of alternating calcareous mudstones (the eroded terraces) and foraminiferan limestone steps (named "Neptune's Staircase" by the investigators).

ADDITIONAL COMMENTS

This dive was captured on 3 mini DVs. There was no time overlay for this video so the audio commentary was used to correlate video time to real time. The first 30 minutes and last 10 minutes of the footage are spent in descent/ascent. The overall quality of the video was fair-to-good, though many of the transects were underlit. There is excellent footage of a large rocky outcrop and the associated fauna. There was a blurred spot at the center of the frame that caused some scenes to look out of focus.