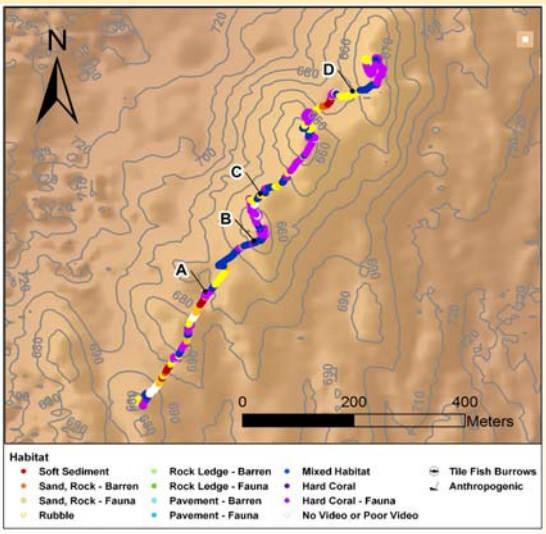
DIVE NUMBER: J2-549 *STUDY AREA: Cape Canaveral South*

STATION OVERVIEW

Project	Extreme Corals 2010
Principal investigators	SW Ross[1], SD Brooke
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	NOAA Ship Ronald H. Brown, Jason 2 ROV
Science Divers	S Ross, M Nizinski, B Owens
External Video Tapes	External Hard Drive
Internal Video Tapes	
Digital Still Photos	Yes
Positioning System	dGPS
CTD File	☑
Specimens Collected	☑
Other	Hard copy of observation log. Virtual van logs.
Acknowledgements	NOAA- DSCRT, NOAA-OER, NOAA Fisheries, USGS, UNCW, NC Museum of Natural Sciences
SEADESC Analyst	M Wolf
Date Compiled	8/3/2011
PI Station Number	ROV-2010-RB-549

GENERAL LOCATION

Dive Track:



DIVE DATA

Date	21-Nov-10
Minimum Bottom Depth (m)	633
Maximum Bottom Depth (m)	687
Start Bottom Time (EDT)	10:42
End Bottom End (EDT)	17:32
Starting Latitude (N)	27° 53.735'
Starting Longitude (W)	79° 37.050'
Ending Latitude (N)	27° 54.097'
Ending Longitude (W)	79° 36.899'
Surface Current (Kts)	
Bottom Current (Kts)	

Image A: Hard Corals - with Attached Fauna
27º 53.860' N, 79º 37.080' W

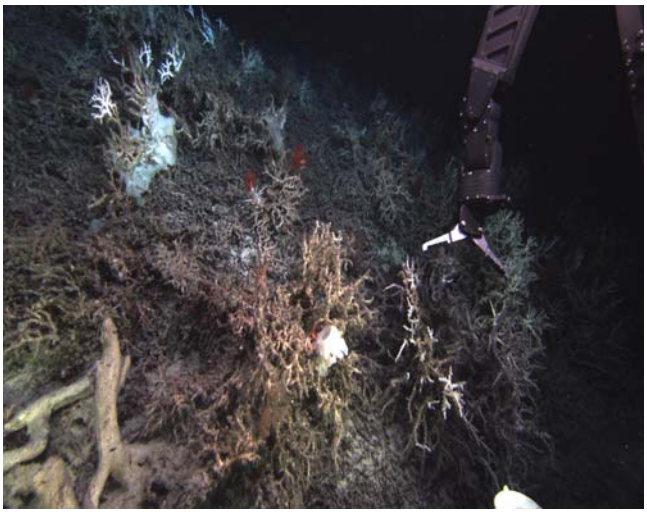


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IMAGE GALLERY

*** indicates image position is approximated**

Image B: Mixed Habitat
27º 53.911' N, 79º 27.026' W

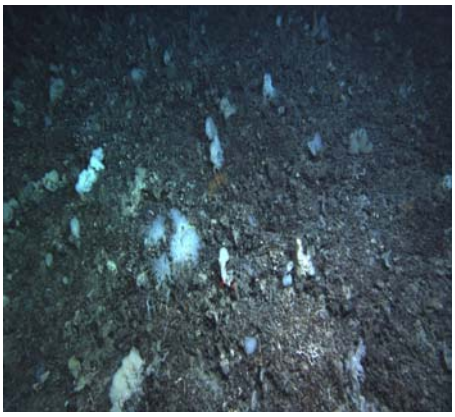


Image C: Sand/Rubble/Rock - with Attached Fauna
27º 53.959' N, 79º 37.014' W

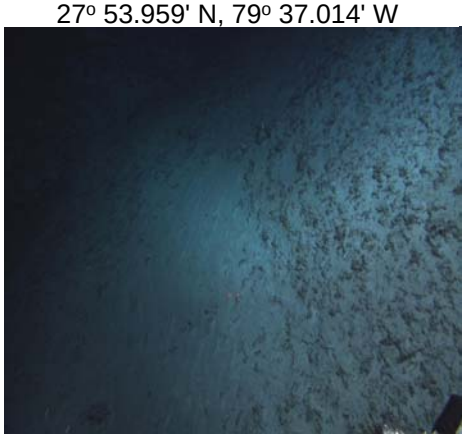
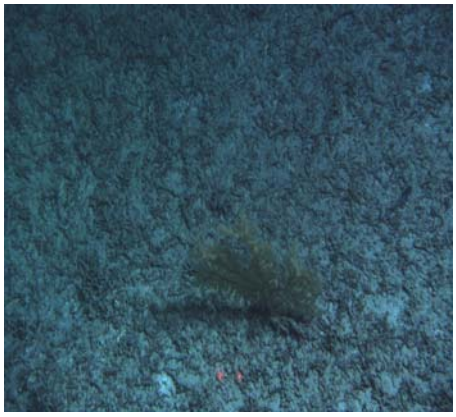


Image D: Rubble
27º 54.062' N, 79º 36.912' W



RELEVANT WORK AND/OR LITERATURE CITED

Ayers and Pilkey (1981)
EEZ-SCAN 87 Scientific Staff (1991)
Reed (2002)
Reed and Ross (2005)
Reed et al. (2006)
Ross and Nizinski (2007)
Ross and Quattrini (2007, 2009)
Ross et al. (unpubl. cruise data)

BIOLOGICAL ENVIRONMENT

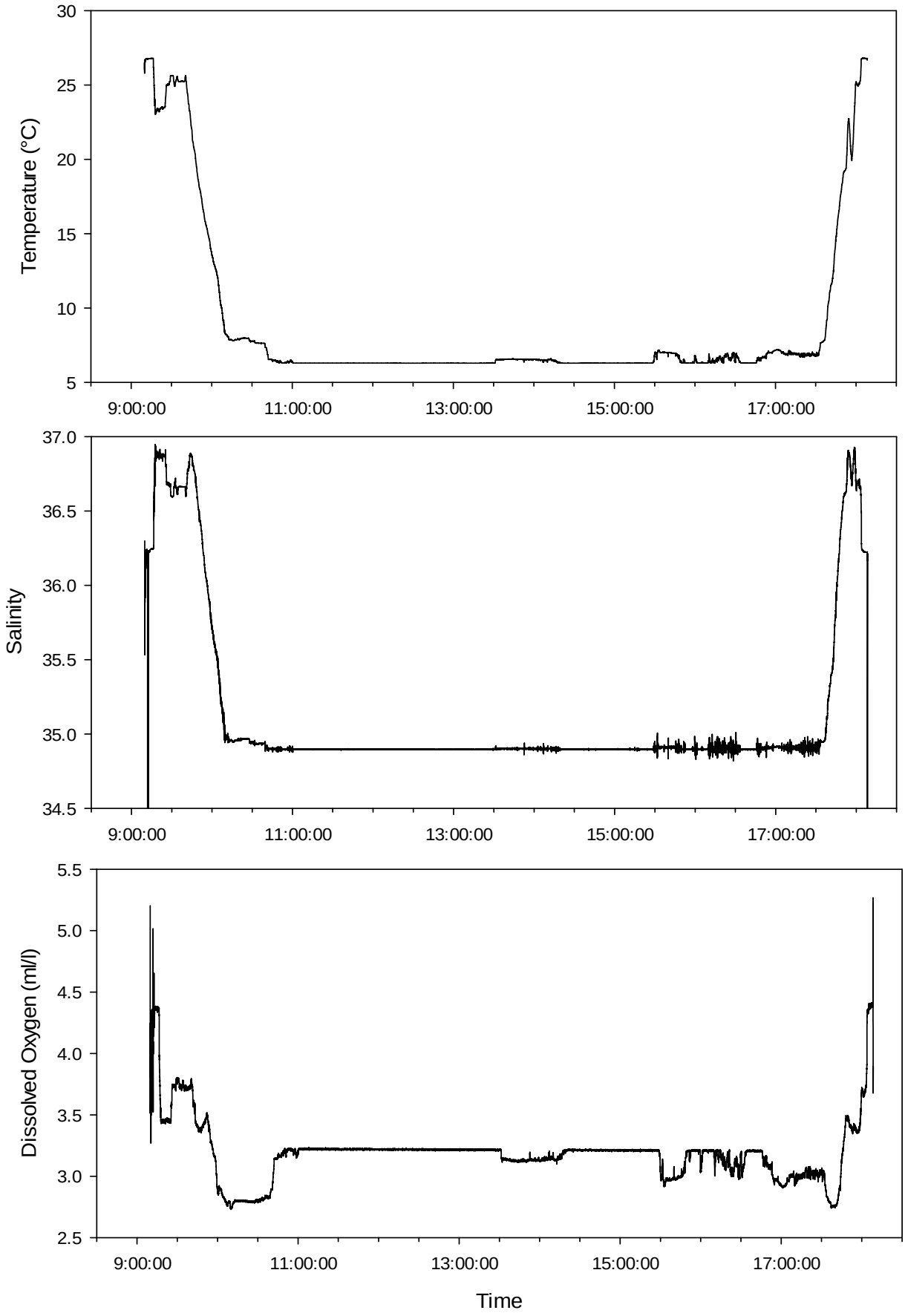
Lophelia pertusa mounds were composed largely of a dead coral matrix (~90% dead) with live patches and distal tips. The percentage of live *L. pertusa* was highest at the top of ridges. Sessile invertebrates attached to the hard coral matrix and live colonies include the hydrozoan coral (Stylasteridae), soft corals such as gorgonians (e.g. *Plumarella* sp.), bamboo coral, and *Anthomastus* sp., and a large diversity of hexactinellid sponges some with yellow zooanthids and an encrusting blue sponge. Mobile fauna included gastropods, asteroids, galatheid crabs, cidaroid and echinoid urchins, rattail fish, coral hake, and eels.

PHYSICAL ENVIRONMENT

This dive traversed a series of moderate relief coral mounds separated by shallow valleys and flats of soft sediment. The ROV transitioned through soft sediment with rubble with fauna to dense coral rubble with fauna. The size and density of coral rubble chunks increased with proximity to the mounds. The mounds were primarily low to moderate relief dead (70-99% dead) *L. pertusa* matrix with interspersed small to large live patches with abundant attached fauna. The percentage of live coral appeared to increase with elevation up the mound. These hard coral habitats were evenly dispersed with areas of low relief *L. pertusa* rubble that supported mixed habitats with a diversity of sponges, hard and soft corals.

ADDITIONAL COMMENTS

Video is stored on a Mac-formatted external hard drive. Quality was extremely clear, with very few sections of unusable footage. No audio was recorded for the first four hours of footage. Video time in GMT. Collections were taken of live and dead *L. pertusa*, bamboo coral, gorgonians, cidaroid urchins, *Anthomastus* sp., galatheid crabs, squid, hydrozoan coral (Stylasteridae), hexactinellid sponges with and without yellow zooanthids and a crinoid.



Plots of CTD data recorded during ROV dive ROV-2010-RB-549 (21 Nov 2010) off Cape Canaveral, FL.