STATION OVERVIEW Project Ocean Exploration 2005 **Principal investigators** SD Brooke¹ J Reed, C Messing PI Contact Info¹ Oregon Institute of Marine Biology, 63466 Boat Basin Rd., Charleston, OR 97420 Exploration of deep-water coral ecosystems off Purpose the east coast of Florida Vessel R/V Seward Johnson, Johnson Sea Link I Submersible J Harasewych (bow), T Griffin (stern) **Science Divers External Video Tapes External Hard Drive Internal Video Tapes Digital Still Photos** 0 dGPS **Positioning System CTD** File ✓ **Specimens Collected** ✓ Other Acknowledgements NOAA-OE SEADESC Analyst M Watts **Date Compiled** 9/19/2011 **PI Station Number** 16-XI-05-1





STUDY AREA: Miami Terrace



DIVE DATA

Date	16-Nov-05
Minimum Bottom Depth (m)	245
Maximum Bottom Depth (m)	267
Start Bottom Time (EDT)	8:24
End Bottom End (EDT)	11:13
Starting Latitude (N)	25° 51.360'
Starting Longitude (W)	80° 01.980'
Ending Latitude (N)	25° 51.540'
Ending Longitude (W)	80° 01.920'
Surface Current (Kts)	2.2
Bottom Current (Kts)	0.1

Image A: Pavement - Barren 25° 51.684' N, 80° 01.92' W



IMAGE GALLERY

Image B: Hard Corals with Attached Fauna 25° 51.709' N, 80° 01.902' W

STUDY AREA: Miami Terrace

Image C: Rock Ledge - Barren 25° 51.6528' N, 80° 01.890' W

* indicates image position is approximatedBarrenImage D: Rock Ledge -890' Wwith Attached Fauna25° 51.652' N, 80° 01.920' 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)

BIOLOGICAL ENVIRONMENT

The north and northeast edges of the rock feature supported small regions of 100% dead standing *Lophelia pertusa* on the face and base of the rock and 10% live hard coral on the upper edge of the rock. Both the outer perimeter of the rock feature and the hard corals supported significant attached fauna including anemones (e.g. venus flytrap), ballshaped hexactinellid sponges, gorgonians (e.g. *Plumerella* sp. and *Eunicella* sp.), bamboo and black coral, *Anthomastus* sp., cup corals and zooanthids. Mobile fauna were abundant and included cidaroid and echinoid urchins, galatheid, golden, and hermit crabs, a brisingid star, crinoids, a topshell snail, numerous swallowtail bass, blackbellyrosefish and other scorpionfish, shortbeard codling, and a ragged-toothed shark.

PHYSICAL ENVIRONMENT

This dive began on soft sediment with the sub traversing along a northerly path to the base of a 3m high rock feature. At the north and northeast edge of the feature, small patches of dead *L. pertusa* could be found at the base of the rock feature and live *L. pertusa* at the top edge of the rock ridge with abundant attached fauna. Continuing along the east and south of the feature the rock face and top ledge transitions from supporting sessile invertebrates to barren rock with increasing sediment cover. The top of the rock feature plateaus into barren pavement with variable soft sediment cover. This site possessed an abundance of trash and discarded fishing gear.

ADDITIONAL COMMENTS

Original dives are on mini DVs transferred to digital on a mini DV reader and stored on an external hard drive. Video quality was sufficient to categorize the habitat present in most of the video though the video was often zoomed out or lacked

enough light to identify sessile invertebrates. Also, the tape was turned off occasionally for a few minutes by the bow scientist resulting in parts of the dive with no data collection. Collections were taken of a brisingid seastar, galatheid crab, topshell snail, dead *L. pertusa*, and a rock.

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GENERAL LOCATION



STUDY AREA: Miami Terrace



DIVE DATA

Date	17-Nov-05
Minimum Bottom Depth (m)	282
Maximum Bottom Depth (m)	377
Start Bottom Time (EDT)	8:28
End Bottom End (EDT)	11:11
Starting Latitude (N)	26° 05.713
Starting Longitude (W)	79° 50.625
Ending Latitude (N)	26° 05.544
Ending Longitude (W)	79° 50.394
Surface Current (Kts)	4
Bottom Current (Kts)	

Image A: Hard Corals without Attached Fauna 26° 05.641' N, 79° 50.388' W



STUDY AREA: Miami Terrace

IMAGE GALLERY

Image B: Hard Corals with Attached Fauna 26° 05.671' N, 79° 50.412' W Image C: Rock Ledge with Attached Fauna 26° 05.723' N, 79° 50.412' W

 * indicates image position is approximated

 ge Image D: Pavement

 na
 with Attached Fauna

 12' W
 26° 05.703' N. 79° 50.370' 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)

BIOLOGICAL ENVIRONMENT

The western and southern edges of the rock feature supported small regions of 90% live standing *Lophelia pertusa* on the top edge and accumulated dead coral rubble below ledges. Both the rock ledges and the hard coral habitat supported significant attached fauna including anemones (e.g. white and venus flytrap), hexactinellid and demospongia sponges, various gorgonians (including an abundant small white, whip-like species, *Eunicella* sp., *Paramuricea* spp. and *Plumarella* sp.), black corals (e.g. *Antipathes* sp.), bamboo corals, *Anthomastus* sp., abundant large hydrozoan corals (family Stylasteridae), and cup corals. Mobile fauna were abundant and included cidaroid and echinoid urchins, crinoids, brittlestars (including basketstars), numerous sea star species (e.g. brissingids and goniasterids), galatheid and golden crabs, scorpionfish (e.g. blackbelly rosefish), red dory, red bream, a conger eel, wreckfish, barrelfish, coral hakes, shortbeard codlings, a red eye gaper, *Polymixia* sp., a skate, and a sand tiger shark.

PHYSICAL ENVIRONMENT

This dive began over rubble habitat to the west side of the rock feature. The submersible traversed along an easterly path over barren pavement that transitioned into pavement with attached fauna. At the west side of the 2-3m high rock feature the habitat changed to rock ledges with abundant attached fauna. The submersible conducted a southerly transect along the west side of the feature encountering regions of hard coral habitat with attached fauna. Subsequently, the submersible headed to the northeast, running back and forth along the top, north and east sides of the feature. The sides of the feature consisted primarily of rock ledges with fauna while the top was often pocked rock pavement with attached fauna. The submersible continued to the southern end of the feature, traversing rock pavement with fauna before reaching hard coral and rock ledge habitat with fauna at the southern edge. Hard coral consisted primarily of live *L. pertusa* with occasional patches of dead coral rubble.

ADDITIONAL COMMENTS

Original dives are on mini DVs transferred to digital on a mini DV reader and stored on an external hard drive. Video quality was clear with only brief sections of unusable footage. Collections were taken of live and dead *L. pertusa*, hydrozoans (Stylasteridae), large orange and small whip gorgonians, and brittle stars.

STATION OVERVIEW Project Ocean Exploration 2005 **Principal investigators** SD Brooke¹ J Reed, C Messing PI Contact Info¹ Oregon Institute of Marine Biology, 63466 Boat Basin Rd., Charleston, OR 97420 Exploration of deep-water coral ecosystems off Purpose the east coast of Florida Vessel R/V Seward Johnson, Johnson Sea Link I Submersible C Messing (bow), S Farrington (stern) **Science Divers External Video Tapes External Hard Drive** Internal Video Tapes 0 **Digital Still Photos** 0 dGPS **Positioning System CTD** File ✓ **Specimens Collected** ✓ Other Acknowledgements NOAA-OE **SEADESC** Analyst M Watts **Date Compiled** 9/26/2011 **PI Station Number** 17-XI-05-2

GENERAL LOCATION



STUDY AREA: Miami Terrace



DIVE DATA

Date			17-Nov-05
Minimum Bottom	Depth (m)		322
Maximum Bottom	n Depth (m)		381
Start Bottom Tim	e (EDT)		17:32
End Bottom End	(EDT)		19:37
Starting Latitude	(N)	2	25° 42.023'
Starting Longitud	le (W)	7	'9° 52.336'
Ending Latitude (N)	2	25° 42.023'
Ending Longitud	e (W)	7	'9° 52.016'
Surface Current (Kts)		
Bottom Current (Kts)		0.5

Image A: Pavement with Attached Fauna 25° 42.031' N, 79° 52.212' W



IMAGE GALLERY

Image B: Hard Corals with Attached Fauna 25° 42.032' N, 79° 52.146' W

STUDY AREA: Miami Terrace

* indicates image position is approximated

Image D: Mixed Habitat 25° 42.021' N, 79° 52.020' W



Image C: Rock Ledge -

with Attached Fauna

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)

BIOLOGICAL ENVIRONMENT

The east and west edges of the rock escarpment supported abundant fauna including regions of 50-100% live standing *Lophelia pertusa* on the top of ledges and accumulated dead coral rubble below ledges and dense matrices on the top of the feature. Both the rock ledges and the hard coral habitat supported significant attached fauna including anemones (white and venus flytrap), a diversity of hexactinellid and demospongia sponges (e.g. *Phakellia* sp.), various gorgonians (including an abundant small white, whip-like species and dense fields of *Plumarella* sp.), black corals (e.g. *Antipathes* sp.), bamboo corals, *Anthomastus* sp., abundant large hydrozoan corals (Stylasteridae), and cup corals. Mobile fauna were abundant and included cidaroid urchins, crinoids, brittlestars, sea stars, galatheid and golden crabs, squid, scorpionfish (e.g. blackbelly rosefish), wreckfish, coral hakes, a chimera, cat sharks, and a large and persistent school of rough scad, *Trachurus lathami.*

PHYSICAL ENVIRONMENT

This dive began with drifts of black, fine rubble over rock pavement habitat with attached fauna to the west side of the rock feature. Along an easterly traverse, the submersible passed over outcrops of large rocks covered in fauna before reaching the vertical rock face of the escarpment. The west side of the rock feature was comprised of rock ledges with abundant attached fauna. Many ledges and the top of the west edge of the escarpment supported dense beds of *L. pertusa* with and without fauna. In an easterly transect across the top of the feature the submersible traversed rubble, rock ledges with fauna, and pavement with fauna habitat. A southerly transect along the west edge of the escarpment revealed rock ledges with fauna often with dense hard coral habitat with attached fauna on upper ledges with a coral rubble matrix below. The subsequent northern transect 3-4m in from the edge supported primarily mixed habitat with dense assemblages of soft corals and sponges on a rubble matrix.

ADDITIONAL COMMENTS

Original dives are on mini DVs transferred to digital on a mini DV reader and stored on an external hard drive. Video quality was clear with only brief sections of unusable footage. The dense school of *T. lathami* periodically blocked the view of the camera. Collections were taken of live and dead *L. pertusa*, hydrozoan corals (Stylasteridae), *Plumerella sp.*, a crinoid, a yellow sponge and a cup hexactinellid sponge.