


OKEANOS EXPLORER ROV DIVE FORM

Site Name	Mississippi Canyon 297					
ROV Lead/Expedition Coordinator	Dave Lovalvo/Jeremy Potter					
General Area Descriptor	~315nm northwest of Tampa, Florida					
UTC Date & Time	Deployment	4/01/2012 12:16 PM				
	Recovery	4/01/2012 19:23 PM				
Bottom Time [HH:MM]	7:07					
Landing Time & Location	UTC Time	13:33		Depth [m]	1400	
	Latitude	28	°	68245	'	N
	Longitude	88	°	34502	'	W
Off Bottom Time & Location	UTC Time	19:23		Depth [m]	1584	
	Latitude	28	°	68244,	'	N
	Longitude	88	°	34508	'	W
ROV Dive Name	Cruise Season	Leg		Dive Number		
	EX1202	LEG02		ROV12		
Equipment Deployed	ROV:	Little Hercules				
	Camera Platform:	Seirios Camera Platform				
ROV Measurements	<input checked="" type="checkbox"/> CTD	<input checked="" type="checkbox"/> Depth		<input checked="" type="checkbox"/> Altitude		
	<input checked="" type="checkbox"/> Scanning Sonar	<input checked="" type="checkbox"/> USBL Position		<input checked="" type="checkbox"/> Heading		
	<input checked="" type="checkbox"/> Pitch	<input checked="" type="checkbox"/> Roll		<input checked="" type="checkbox"/> HD Camera		
	<input checked="" type="checkbox"/> Low Res Cam 1	<input checked="" type="checkbox"/> Low Res Cam 2				
Equipment Malfunctions	None					
Special Notes	Click here to enter text.					
Scientists Involved <i>(please provide name / location / affiliation / email)</i>	Tim Shank (on-board Science Lead), EX, WHOI, tshank@whoi.edu Pen-Yuan Hsing, PSU, penyuan.hsing@psu.edu Eleanor Bors, WHOI, WHOI, ekbors@gmail.com Catriona Munro, WHOI, WHOI, cmunro@whoi.edu					

Purpose of the Dive: The timing of today's dive is critical to a substantial effort by NOAA and other parties to track changes over time at a site in lease block MC297. We will explore and image corals growing on hard substrate for changes since a previous visit in 2011. Today's exploration in the time domain will be a wonderful complement to the work that we have been doing on this cruise.

Description of the Dive:

The ROV reached bottom at 09:37 EDT (depth 1581m), reaching the first dive target, marker M3, at 09:45 EDT. Site location was confirmed with sightings of two physical markers, M3 and MM1, deployed here in October 2011.

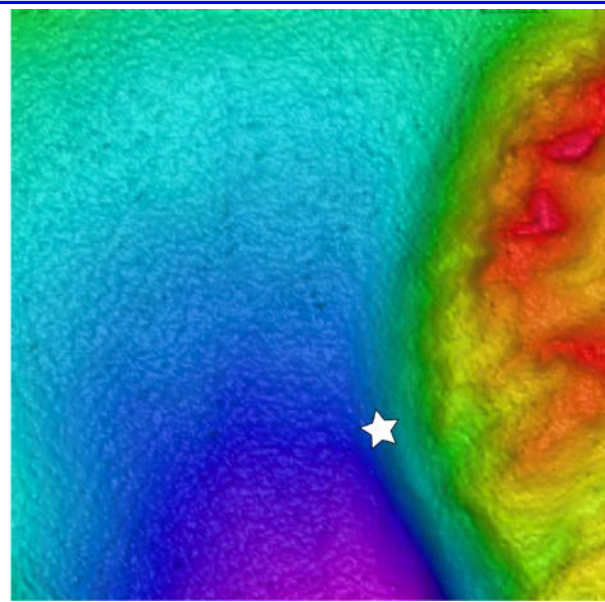
Starting from 09:57 EDT (28.68241°N, 88.34503°W), we started close up imaging of each coral on scattered rocks between physical markers M3 (south) and MM1 (north). With the exception of a large Isididae bamboo coral, most corals here For each coral, imaging started with a full frame view where the coral filled the entire image, followed by closeups of all associate fauna on the coral. They may include ophiuroids, amphipods, shrimps, or squat lobsters. When imaging associates, we focused on obtaining clear views of features that enable us to identify them down to the lowest possible taxonomic level. In addition, the presence of hydroids on branches were noted for some corals. For each coral, we also noted the ROV heading and other pertinent information that allow future revisits to image them from the same perspective. When deemed useful for providing spatial context information, we also made overview video clips of groups of corals. We imaged at least 54 individual coral colonies this way.

At least three new *Paramuricea* corals were discovered in the survey area, and we imaged them using the same method as other corals. The last coral, named MM1-31, was imaged at 15:08 EDT.

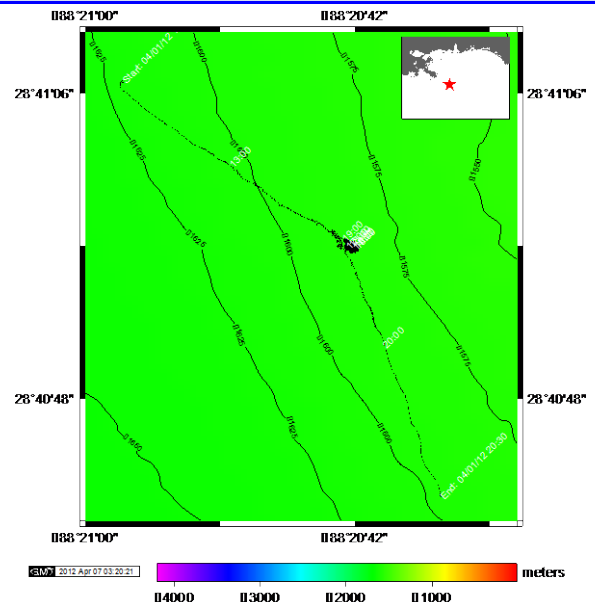
During the dive, we observed an ophiuroid apparently leaving its coral (M3-21) (12:09 EDT, 28.68258°N, 88.34507°W, depth 1584m), right after its arms touched an adjacent anemone. It looked like the ophiuroid was propping up its basal disc with its arms on the sediment. We returned to image this individual at the end of the dive, but the ophiuroid was no longer there.

The water temperature was consistent through the dive at about 4.3°C. Virtual targets were deployed for the pre-existing physical markers and imaged corals.

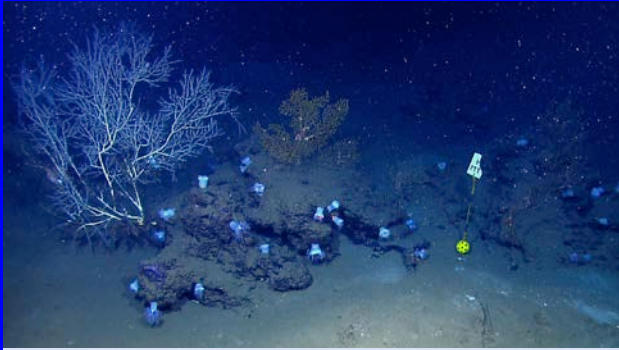
Overall Map of ROV Dive Area



Close-up Map of Main Dive Site



Representative Photos of the Dive



EX1202L2_IMG_20120401T191845Z_ROVHD_MC297_TRANSECT_00.jpg (cropped from original)
Overview of corals near marker MM1. The large white coral on the left is a bamboo coral (Isididae).

EX1202L2_IMG_20120401T161619Z_ROVHD_MC297_M21_OPH.jpg (cropped from original)
Ophiuroid apparently “walking” off of its coral. Note that it propped its basal disc off the sediment with its arms.

Please direct inquiries to:

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