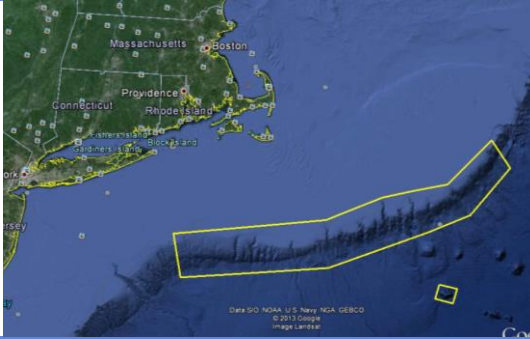


OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Lydonia Canyon			
ROV Lead/Expedition Coordinator	David Lovalvo/ Brian Kennedy			
Science Team Leads	Amanda Demopoulos Martha Nizinski			
General Area Descriptor	Northwest Atlantic Ocean; Northeast U.S. Canyons			
ROV Dive Name	Cruise Season	Leg	Dive Number	
	EX1304	2	DIVE12	
Equipment Deployed	ROV:	Deep Discoverer		
	Camera Platform:	Seirios		
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 1	
	<input checked="" type="checkbox"/> HD Camera 2	<input checked="" type="checkbox"/> Low Res Cam 1	<input checked="" type="checkbox"/> Low Res Cam 2	
	<input checked="" type="checkbox"/> Low Res Cam 3	<input checked="" type="checkbox"/> Low Res Cam 4	<input checked="" type="checkbox"/> Low Res Cam 2	
Equipment Malfunctions				
ROV Dive Summary (From processed ROV data)	In Water at:	2013-08-13T12:34:41.968000 40°, 18.262' N ; 067°, 40.613' W		
	Out Water at:	2013-08-13T20:48:52.456000 40°, 17.942' N ; 067°, 40.588' W		
	Off Bottom at:	2013-08-13T19:50:41.887000 40°, 18.263' N ; 067°, 40.599' W		
	On Bottom at:	2013-08-13T13:26:42.289000 40°, 18.190' N ; 067°, 40.569' W		
	Dive duration:	8:14:10		
	Bottom Time:	6:23:59		
	Max. depth:	1238.9 m		
Special Notes				
Scientists Involved <i>(please provide name / location / affiliation / email)</i>	Primary			
	Amanda Demopoulos (Science Lead), ademopoulos@usgs.gov			
	Amy Baco-Taylor, FSU, abacotaylor@fsu.edu			
	Andrea Quattrini, Temple, andrea.quattrini@temple.edu			
	Brian Kennedy, NOAA OER, Brian.Kennedy@noaa.gov			
	Jamie Austin, UT, jamie@ig.utexas.edu			
	Jason Chaytor, USGS, jchaytor@usgs.gov			
Les Watling, UH, watling@hawaii.edu				
Martha Nizinski (Science Lead), NOAA NMFS, nizinski@si.edu				
Morgan Kilgour, UCONN, morgan.kilgour@uconn.edu				

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Passive

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Thomas Ritter, MSU, rittercraft@gmail.com

Purpose of the Dive

The purpose of the dive was to characterize 1) the submarine canyon geomorphology and benthic habitats, including possible coral and sponge communities and 2) groundtruth a model of predicted deep-sea coral occurrence.

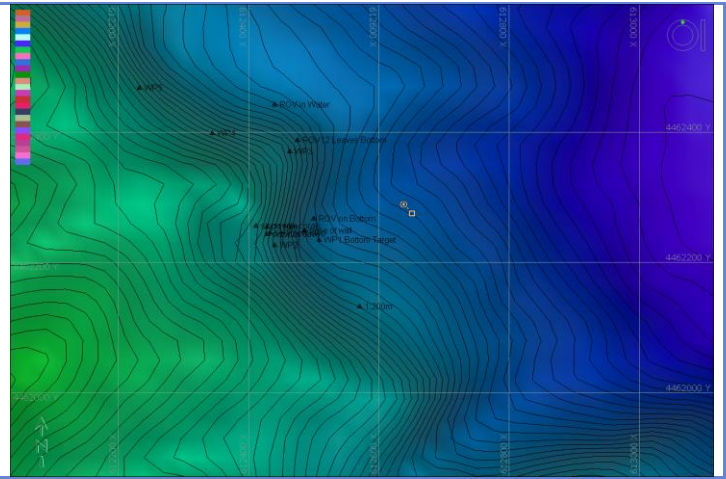
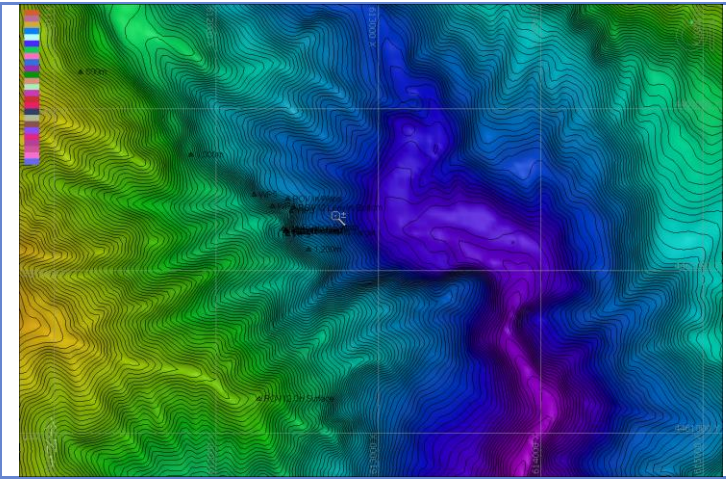
Description of the Dive:

Today we had a deep dive along the southwestern wall of Lydonia Canyon. The ROV was on bottom, ready to start exploring at 1328UTC at a depth 1236 m. The dive track started at the base of a wall and transited up and around a promontory. The primary geological attributes included rock walls with erosional features, clear ledges of harder rock, light in color, possibly consisting of chalk, or limestone. Dive was characterized by scattered patches of corals living on the rock face, including *Swiftia*, *Paramuricea*, bamboo, and *Anthomastus*. *Swiftia* was extremely common throughout the dive. In contrast, a high abundance of fauna were observed living on the underside of ledges, including bivalves, *Solenosmilia*, cf. primnoid, cup corals, squat lobsters, and sponges. Scale worms, ophiuroids, a few solitary hydroids, and sipunculids were observed on sediment laden rock slopes. Two individuals of *Neolithodes* were observed clinging to the rock face, one of which had barnacles attached to its shell. Two grey/purple shrimps, cf. Glyphocrangonidae, were imaged on sediment-covered rock. These were observed on a previous dive this leg. At least 15 coral species were observed (*Swiftia*, *Paramuricea*, *Paragorgia*, *Anthomastus*, Bamboo-unknown, white stoloniferous octocoral, sea pen, *Bathypathes*-related, *Keratoisis*, *Solenosmilia*, *Parantipathes*, *Clavularia*, cf. *Desmophyllum*, cf. *Javania*, *Primnoa*, *Paragorgia*). Fishes included black dogfish, chimaera, ophidid, halosaur, synphobranchid eel, *Chaudiolus*, long-fin hake, grenadier, flounder, Notocentridae (spiny eel, first time observed this expedition), and cf. *Cyclothone*.

For the first time this cruise, we observed a purple deep-sea nudibranch, *Tritonia* sp., known to consume stoloniferous octocorals. In addition, an egg mass, likely from a fish, was found on *Bathypathes*-related black coral. We observed two potential predation events, a sea star sitting on an *Anthomastus* octocoral, and a pycnogonid with its proboscis touching an anemone attached to a *Paramuricea*. At the end of the dive, we saw a large *Paragorgia*, covered with ophiuroid associates. The ROV left bottom from a depth of 1136 m at 1953 UTC.

Overall Map of ROV Dive Area

Close-up Map of Main Dive Site



Representative Photos of the Dive



Please direct inquiries to:

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