OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Lydonia Powell Intercanyon		
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	DIVE11
Equipment Deployed	ROV:	Deep Discoverer	
	Camera Platform:	Seirios	
ROV Measurements	☒ CTD	☒ Depth	☒ Altitude
	☒ Scanning Sonar	☒ USBL Position	☒ Heading
	☒ Pitch	☒ Roll	☒ HD Camera 1
	☒ HD Camera 2	☒ Low Res Cam 1	☒ Low Res Cam 2
	☒ Low Res Cam 3	☒ Low Res Cam 4	☒ Low Res Cam 2
Equipment Malfunctions			
ROV Dive Summary (From processed ROV data)	In Water at: 2013-08-12T12:24:54.939000 40°, 20.986' N ; 067°, 32.346' W Out Water at: 2013-08-12T20:38:40.456000 40°, 21.419' N ; 067°, 31.694' W Off Bottom at: 2013-08-12T20:22:05.157000 40°, 21.442' N ; 067°, 31.755' W On Bottom at: 2013-08-12T12:49:57.168000 40°, 20.994' N ; 067°, 32.200' W Dive duration: 8:13:45 Bottom Time: 7:32:7 Max. depth: 662.8 m		
Special Notes			
Scientists Involved *(please provide name / location / affiliation / email)*	**Primary** Amanda Demopoulos (Science Lead), USGS, ademopoulos@usgs.gov Andrea Quattrini, Temple, andrea.quattrini@temple.edu Brian Kennedy, NOAA OER, Brian.Kennedy@noaa.gov Erik Cordes, Temple, ecordes@temple.edu Esprit Saucier, UL Lafayette, heestand.saucier@louisiana.edu Jamie Austin, UT, jamie@ig.utexas.edu Les Watling, UH, watling@hawaii.edu		

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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. The New England and Mid-Atlantic Fisheries Management Councils are particularly interested in intercanyons to provide more information on depth boundaries for deep-sea coral protection.

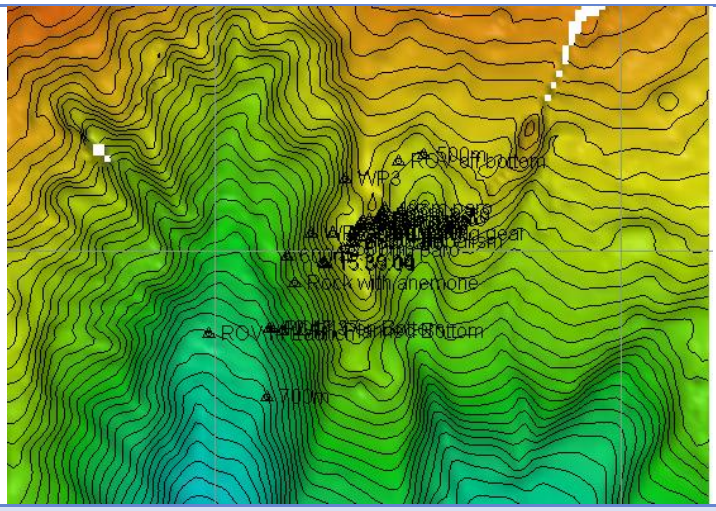
Description of the Dive:

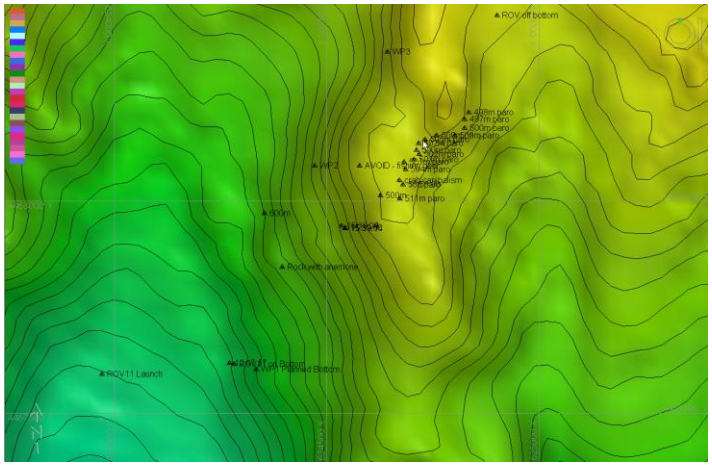
Today's dive followed a shallow dive track along the northeastern wall of an intercanyon between Powell and Lydonia Canyons. The ROV was on bottom at 13:10 UTC at a depth of 655m. The dive track traversed similar sedimented terrain from start to finish. The soft sediment was punctuated by small to large rocks that were typically populated by flytrap anemones, sponges (yellow and white), hydroids, shrimp, squat lobsters, and fish (longfin hake and *Sebastes* sp.). Other fish observed included witch founder, black belly rose fish, goosefish, eelpout, rattails, synaphobranchid eels, skate, and a juvenile cf. *Beryx*. One unidentified fish with distinct dorsal and pectoral fins, with extremely elongate posterior region was observed. Epifauna on the soft sediments was dominated by *Hyalinoecia* sp. (quill worms), small zoanthids?, *Cancer* sp. and *Chaceon quinquedens* crabs. Rocks included boulders with a moat developed around periphery and various sized gravel scattered around. Rounded rocks considered to be dropstones were observed throughout the dive.

In the water column, we observed midwater fish (*Stomias* sp. and myctophids), snipe eels, barracudina, squid (*Brachioteuthis* sp.), siphonophores, salps, amphipods, two types of ctenophores (beroid and lobate), and shrimp including *Sergestes* sp.

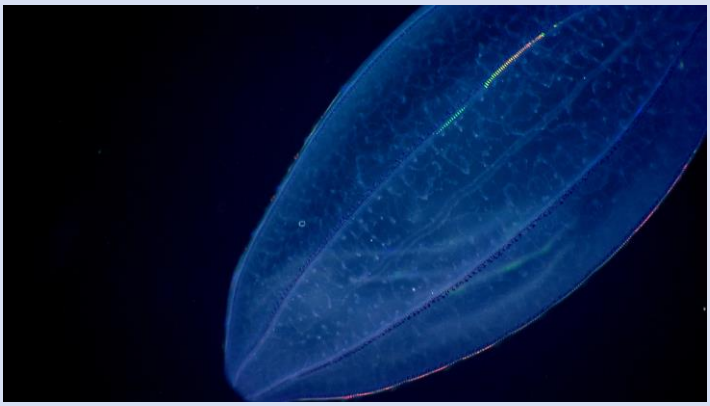
Notable observations included a possible pink flatworm (not observed on dives to date), *Brachioteuthis* mating, mating red crabs sharing a fish, several other predation events, including a red crab eating a squid, anemone catching a midwater fish and squid (got away), Cancer crab eating a red crab, and a swordfish knocking over a red crab perched on a boulder. Only one piece of trash, tentatively identified as a sheet of metal, was observed on the dive.

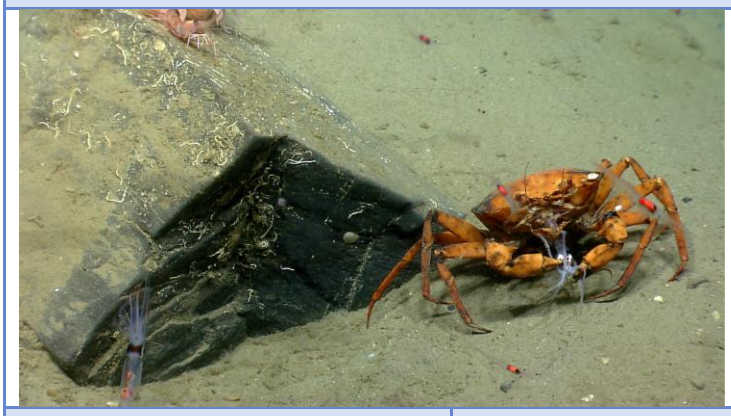
Overall Map of ROV Dive Area	**Close-up Map of Main Dive Site**





Representative Photos of the Dive





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