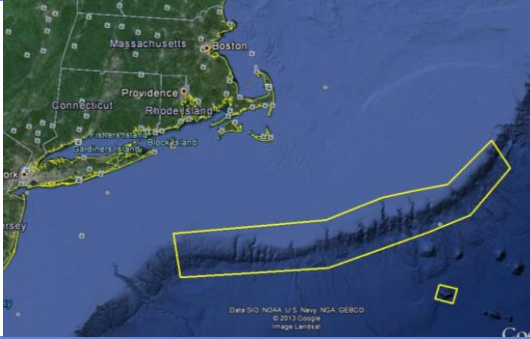


OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Heezen Canyon Shallow			
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	DIVE09	
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:	2013-08-09T12:29:27.833000 41°, 03.915' N ; 066°, 23.450' W		
	Out Water at:	2013-08-09T20:42:55.839000 41°, 03.834' N ; 066°, 23.378' W		
	Off Bottom at:	2013-08-09T19:40:55.862000 41°, 03.952' N ; 066°, 23.403' W		
	On Bottom at:	2013-08-09T13:05:13.020000 41°, 03.871' N ; 066°, 23.297' W		
	Dive duration:	8:13:28		
	Bottom Time:	6:35:42		
	Max. depth:	925.9 m		
Special Notes				
Scientists Involved <i>(please provide name / location / affiliation / email)</i>	Primary			
	Adam Skarke, NOAA OER, Adam.Skarke@noaa.gov			
	Amanda Demopoulos, (Science Lead), USGS, ademopoulos@usgs.gov			
	Brian Kennedy, NOAA OER, Brian.Kennedy@noaa.gov			
	Jamie Austin, UTIG, jamie@ig.utexas.edu			
	Jason Chaytor, USGS, jchaytor@usgs.gov			
Katherine Coykendall, USGS, dcoykendall@usgs.gov				
Les Watling, UH, watling@hawaii.edu				
Martha Nizinski (Science Lead), NOAA NMFS, nizinski@si.edu				

Michael Vecchione, NOAA NMFS, VecchioneM@si.edu
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 Nicole Morgan, FSU, nbmorgan11@yahoo.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 at a depth of ~1400-1700 m on the southwestern wall of Heezen Canyon and 2) groundtruth a model of predicted deep-sea coral occurrence.

Description of the Dive:

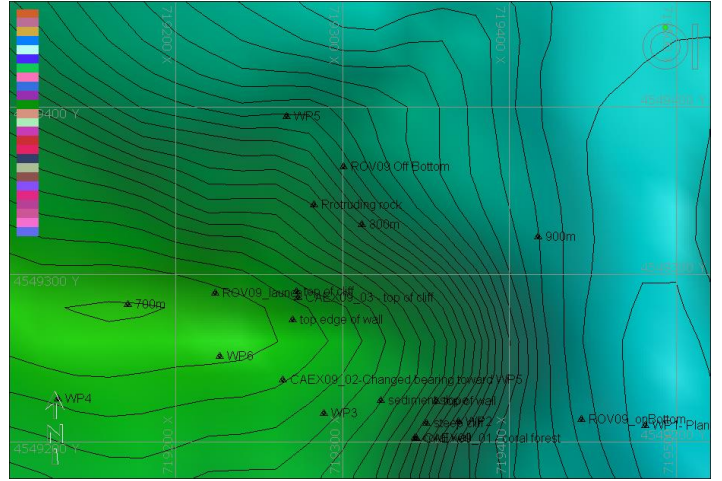
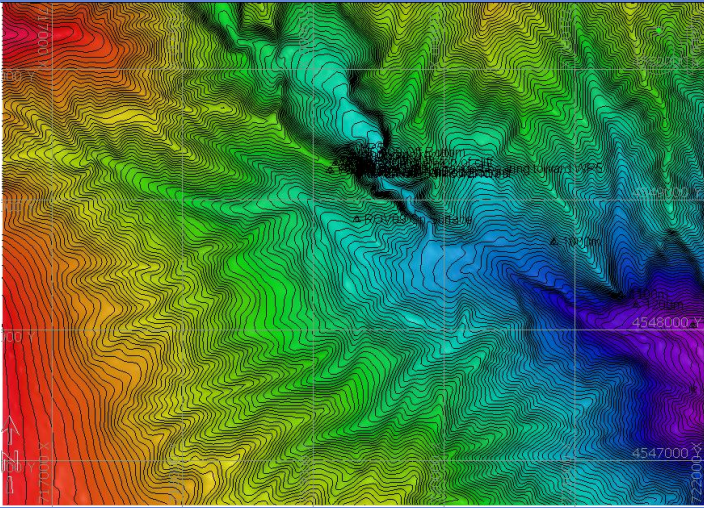
Dive # 9 was a shallow dive along the southwestern wall of Heezen Canyon. The ROV was on bottom at 1315 UTC at a depth of 924 m. The dive track started at an area with soft sediment and small rocks. The ROV transited up slope along a steep wall to the top, then along soft sediment and back down the northern part of a steep slope. The 1st rock feature was minimally encrusted by fauna, including sponges and anemones. At least 13 species of corals were observed either attached to the vertical face or on small rocks at the top of the slope, including: *Anthomastus*, unknown bamboo, *Acanella*, 2 species of cup corals, *Lophelia pertusa*, *Solenosmilia*, *Paramuricea*, *Primnoa*, *Paragorgia*, *Acanthogorgia*, *Anthothela* and *Clavularia*. Shark egg cases were observed attached to *Paramuricea*, *Paragorgia*, and possibly bamboo coral. Fish species included *Rhinochimaera*, black dogfish, witch flounder, *Sebastes*, black belly rosefish, synaphobranchids, ophidids, long fin hake, offshore hake, eelpout, hatchetfish (midwater), and myctophids (midwater).

The steep slope was characterized by large rocks composed of mudstone or siltstone with cracks with either a thin sediment drape or clean surface. Along the steep wall, chutes from possible turbidity flows were observed. Also, the geology of the dive track consisted of well exposed, but highly eroded (possibly Oligocene/Eocene age) outcrops, complex failure and sediment transport/canyon cutting morphologies. All providing clues to the possible relationship between lithology, sediment stability, and associated sessile and encrusting organisms. The sediment laden top was interspersed with various sized rocks, usually populated with small colonies of *Acanthogorgia*, with shrimp associates, and sponges.

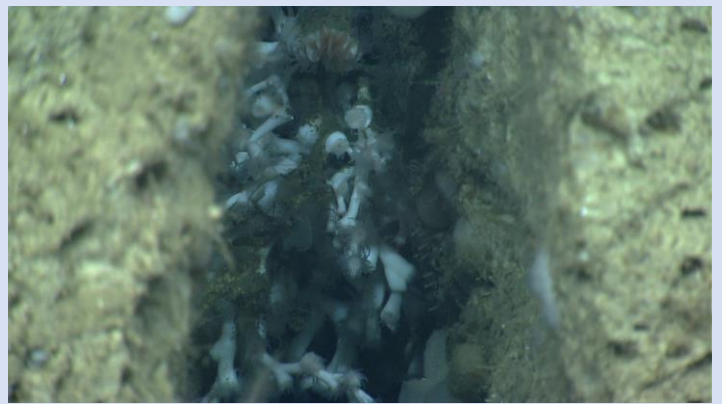
Highlights of the dive included the enormous *Paragorgia*, *Primnoa*, and *Paramuricea* colonies that were attached to the vertical face. Other corals were interspersed among these > 2m colonies, including very large cup corals attached to the underside of ledges. Predation was also observed, including an eel eating a shrimp, a small fish (possibly midwater) attached to a solitary hydroid, and a fish escaping an octocoral. ROV was off bottom at 2006 UTC at a depth of 742 m.

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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