OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Oceanographer Canyon 2		
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	DIVE13
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: 2013-08-14T12:31:37.652000 40°, 17.362' N ; 068°, 07.074' W Out Water at: 2013-08-14T20:41:14.672000 40°, 17.503' N ; 068°, 07.004' W Off Bottom at: 2013-08-14T20:02:07.816000 40°, 17.579' N ; 068°, 06.700' W On Bottom at: 2013-08-14T13:17:19.887000 40°, 17.336' N ; 068°, 07.064' W Dive duration: 8:9:37 Bottom Time: 6:44:47 Max. depth: 1247.6 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 Eleanor Bors, WHOI, ekbors@gmail.com Jamie Austin, UT, jamie@ig.utexas.edu Jason Chaytor, USGS, jchaytor@usgs.gov Les Watling, UH, watling@hawaii.edu		

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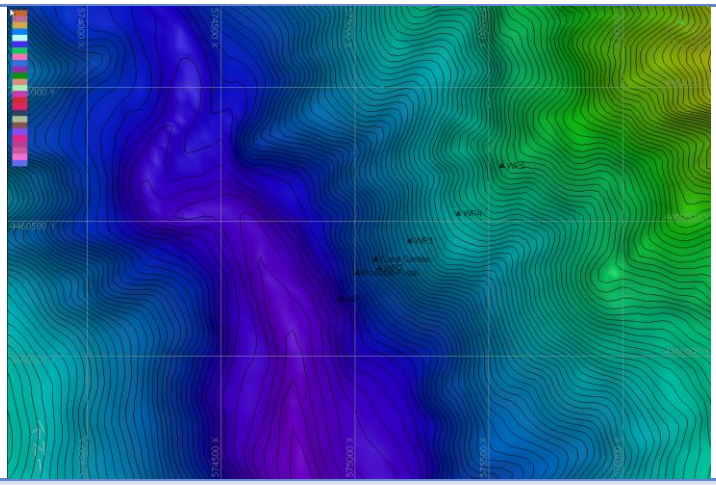
Purpose of the Dive

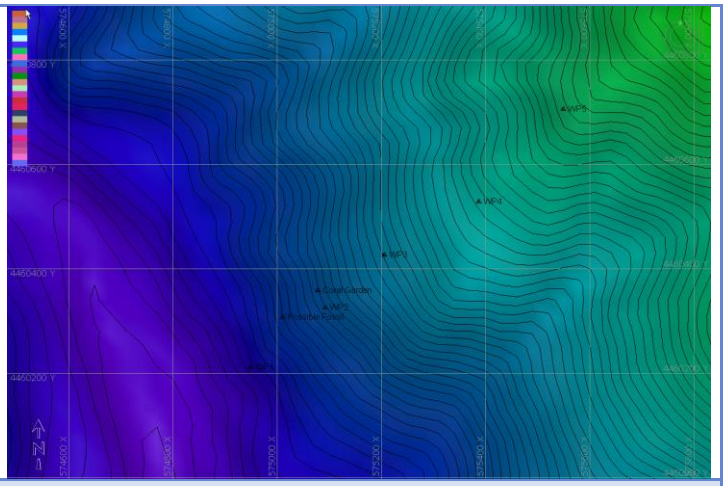
The purpose of the dive was to characterize 1) the submarine canyon geomorphology and benthic habitats, including possible coral and sponge communities and 2) groundtruth a model of predicted deep-sea coral occurrence. This dive track is along the approximate location of Alvin dive 1035 from 1980 and 3702 from 2001 and will examine potential changes in the biology and geology of the area over 30+ years.

Description of the Dive:

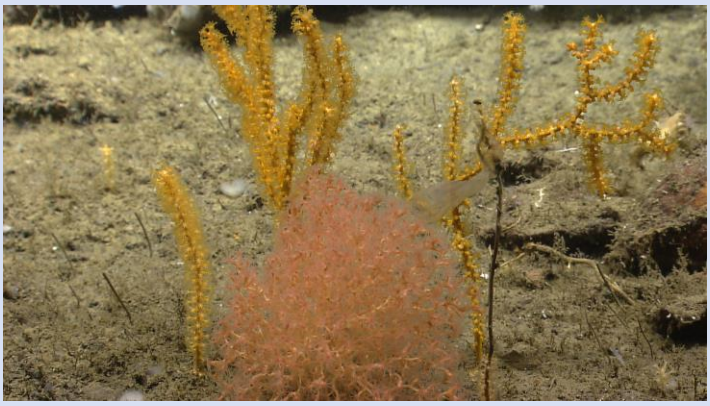
Today we had a deep dive along the southeastern wall of Oceanographer Canyon. The ROV was on bottom at 1321 UTC at a depth of 1246 m. The dive track started at the base of a wall and transited up a steep rock slope, with intermittent sedimented ledges, then transitioned to a softer sedimented slope, finishing at a steep promontory. The dive was characterized by dense colonies of *Paramuricea* of similar sizes. On the steeper areas, we observed cup corals, *Clavularia*, *Acanella*, and other bamboo corals. One large (~ 25 cm diameter) cf. *Placogorgia* was noted, with no obvious ophiuroid associates, despite the presence of several ophiuroids on *Paramuricea* colonies nearby. During the latter half of the dive, the ROV traversed a sedimented plane with clear ripple marks, signifying consistently high current flow and direction. Beyond the rippled area, on the sediment plain, there were several burrows with a semi-consolidated mud periphery and several white carnivorous sponges, some with eggs. We encountered multiple colonies of cf. *Placogorgia* and *Paramuricea* toward the end of the dive, attached to rocks scattered over sedimented slope. Several of these colonies were covered with yellow zoanthids. At least 16 species of corals were observed, with octocorals remaining the most diverse: *Swiftia, Acanthogorgia, Paramuricea, Placogorgia, Anthomastus, Acanella, Thourella,* cup corals (cf. *Javania, Desmophyllum*), *Parantipathes, Bathypathes, Bathypathes-related, Paragorgia* (white and pink), *cf. Keratoisis, cf. Eknomisis. Anthothela,* unk. Bamboo, *Solenosmilia,* and *Clavularia*. A few fish species were observed, including black dogfish, *Antimora* (with isopod parasites), *Cottunculus* (2, one with isopods), *Gaidropsarus*, synaphobranchids, grenadiers, brotulids, longfin hake, and witch flounder. Several fresh rock fractures were observed, revealing clean surfaces, and rock piles were present at the base of some of the steep slopes. Within the fractured rock, we observed a fossil, possibly an ammonite, at the base of a rock wall. We also observed several coral colonies laying prone on the sedimented rock, possibly knocked over by rock fall. Trash included a ribbon entwined on a dead coral skeleton and monofilament laying on the sediment surface. Dive ended at a steep promontory with large colonies of *Paragorgia* at 872m. The ROV was off bottom at 1959 UTC at 891 m.

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





Representative Photos of the Dive



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