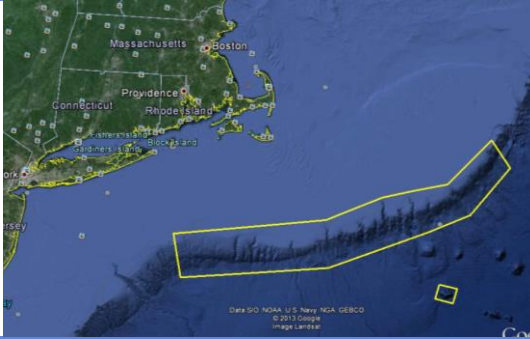


# OKEANOS EXPLORER ROV DIVE SUMMARY

<b>Site Name</b>	Welker Canyon			
<b>ROV Lead/Expedition Coordinator</b>	David Loalvo/ Brian Kennedy			
<b>Science Team Leads</b>	Amanda Demopoulos Martha Nizinski			
<b>General Area Descriptor</b>	Northwest Atlantic Ocean; Northeast U.S. Canyons			
<b>ROV Dive Name</b>	Cruise Season	Leg	Dive Number	
	EX1304	2	DIVE14	
<b>Equipment Deployed</b>	ROV:	Deep Discoverer		
	Camera Platform:	Seirios		
<b>ROV Measurements</b>	<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	
<b>Equipment Malfunctions</b>				
<b>ROV Dive Summary (From processed ROV data)</b>	In Water at:	2013-08-15T12:48:13.604000 40°, 05.976' N ; 068°, 28.481' W		
	Out Water at:	2013-08-15T23:36:39.886000 40°, 05.348' N ; 068°, 28.216' W		
	Off Bottom at:	2013-08-15T21:32:29.045000 40°, 05.375' N ; 068°, 28.204' W		
	On Bottom at:	2013-08-15T16:23:53.142000 40°, 05.359' N ; 068°, 28.104' W		
	Dive duration:	10:48:26		
	Bottom Time:	5:8:35		
	Max. depth:	1445.4 m		
<b>Special Notes</b>				
<b>Scientists Involved (please provide name / location / affiliation / email)</b>	<b>Primary</b>			
	Amanda Demopoulos (Science Lead), USGS, <a href="mailto:ademopoulos@usgs.gov">ademopoulos@usgs.gov</a>			
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	Jason Chaytor, USGS, <a href="mailto:jchaytor@usgs.gov">jchaytor@usgs.gov</a>			
	Les Watling, UH, <a href="mailto:watling@hawaii.edu">watling@hawaii.edu</a>			
Martha Nizinski (Science Lead), NOAA NMFS, <a href="mailto:nizinski@si.edu">nizinski@si.edu</a>				
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**Purpose of the Dive**

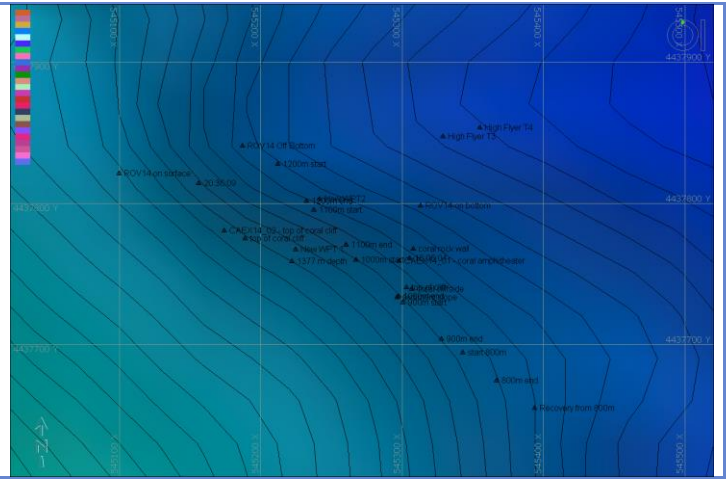
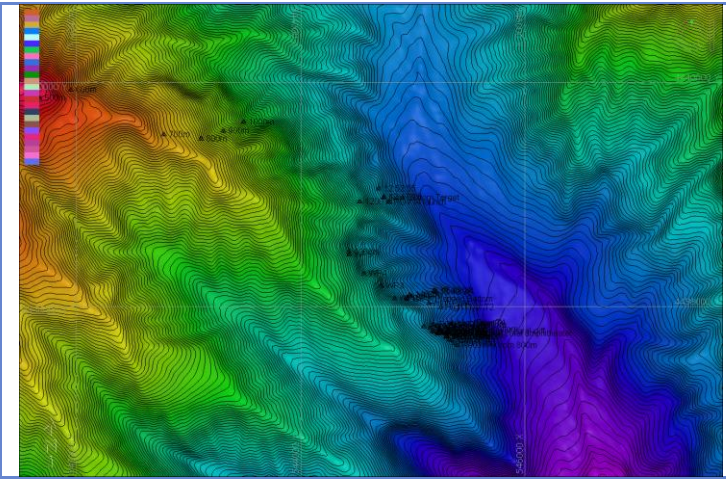
The dive track was chosen based on a combination of regional habitat prediction models for deep sea corals and local identification of high slope features from 20 m multibeam mosaics. Past experience and modeling in this region indicates that deep sea coral habitats are often found in the canyons in areas with slopes > 36°.

**Description of the Dive:**

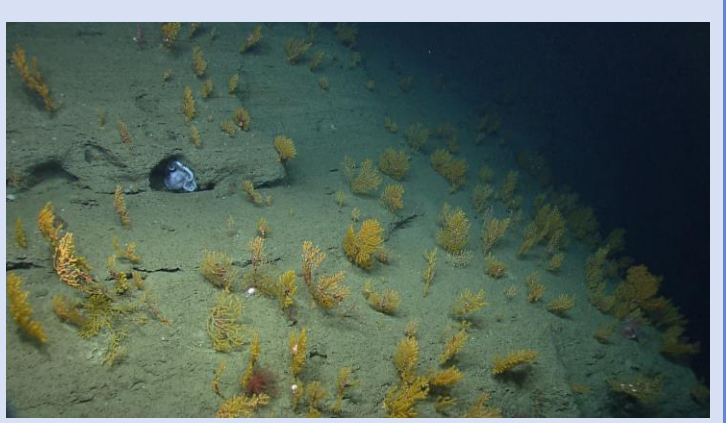
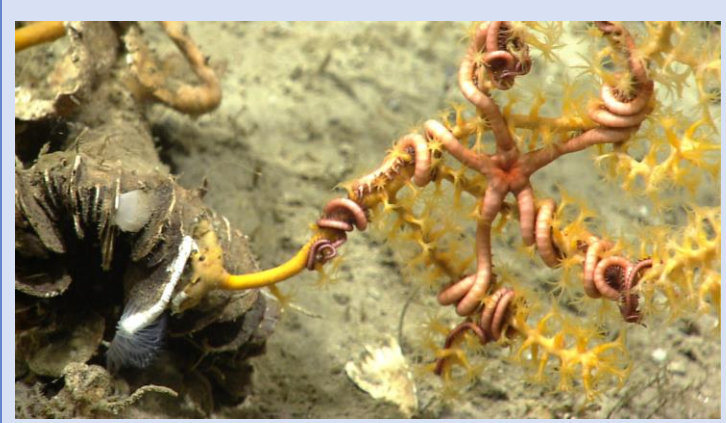
Today we had a deep dive along the southwestern wall of Welker Canyon. The dive started late because there was fishing gear along our planned dive track, and despite a plan to dive at a new target away from the lines, the gear continued to drift toward the ship and ROV. We waited until the fishing vessel removed the line, moved to a safe distance away from a high flier float observed after fishing gear was removed, and then continued deployment of the ROV to the seafloor. While our new track was off the planned waypoints, it still proved to be a very interesting dive. The track started at the base of a wall and transited up a steep slope and around a promontory. The track continued up a sedimented slope, until we reached a ledge. We then changed course and descended back down the wall. The beginning of the dive was characterized by high diversity of corals, including *Anthomastus*, bamboo (*Keratoisis*), *Paramuricea*, cup corals, and *Acanella*. We also observed another purple coiled egg mass, possibly from a nudibranch. Along the sedimented slope, we observed extensive colonies of *Paramuricea* with scattered xenophyophores throughout. Fauna on the steep slope examined in the later part of the dive included multiple large colonies of *Bathypathes*-related, cup corals, *Paragorgia*, octopuses, sea pens, and encrusting zoanthids. Several caves, deep concavities or amphitheater shaped curves in the rock wall, clear erosional features were observed. Octopuses were often observed in these depressions and under large rock ledges. There were multiple areas where a thin rock layer failed and reveal clean rock faces. We also observed some large, deep "burrows" or "pipes" of mysterious origin. A few different fish species were encountered at the base of the wall, including cf. *Gaidiropsarus*, oreo, a skate, and *Antimora*. At least 17 species of corals were observed throughout the dive, including, *Bathypathes*, *Bathypathes*-related, *Parantipathes*, *Anthomastus*, *Paramuricea*, *Keratoisis*, *Solenosmilia*, *Paragorgia*, *Acanella*, *Swiftia*, *Acanthogorgia*, unknown octocoral, *Clavularia*, *Anthothela*, sea pen, *Thourella*, and *Radicipes*. At the end of the dive, we observed an enormous anemone, >30 cm in diameter, with a polychaete attached to a tentacle. The ROV left bottom at 2130 UTC from a depth of 1407 m. Midwater transects were conducted during ascent.

**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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