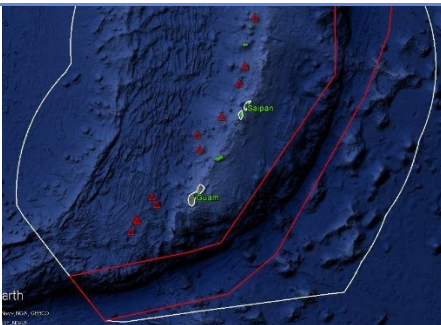


OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Enrique Guyot			
ROV Lead/ Expedition Coordinator	Jim Newman / Kelley Elliott			
Science Team Leads	Deborah Glickson & Diva Amon			
General Area Descriptor	Southern Marianas			
ROV Dive Name	Cruise Season	Leg	Dive Number	
	EX1605	1	DIVE 15	
Equipment Deployed	ROV:	Deep Discoverer		
	Camera Platform:	Seirios		
ROV Measurements	<input checked="" type="checkbox"/> D2 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"/> ROV HD 2	<input checked="" type="checkbox"/> Seirios CTD	
	Temperature Probe	<input checked="" type="checkbox"/> D2 DO Sensor	<input checked="" type="checkbox"/> Seirios DO sensor	
Equipment Malfunctions	There was a problem with a fiberoptic cable in the ROV tether, which delayed the dive by about 2 hours.			
ROV Dive Summary (From processed ROV data)	Dive Summary: EX1605L1_DIVE15 ~~~~~			
	In Water:	2016-05-05T23:01:59.884000 15°, 00.226' N ; 148°, 31.069' E		
	Out Water:	2016-05-06T04:42:59.972000 15°, 00.334' N ; 148°, 31.292' E		
	Off Bottom:	2016-05-06T03:23:25.790000 15°, 00.205' N ; 148°, 30.967' E		
	On Bottom:	2016-05-06T00:27:13.528000 15°, 00.283' N ; 148°, 31.102' E		
	Dive duration:	5:41:0		
	Bottom Time:	2:56:12		
Max. depth:	2269.4 m			
Special Notes				
Scientists Involved (please provide name / location / affiliation / email)	Patty Fryer, UH; pfryer@soest.hawaii.edu Mackenzie Gerring, UH; mgerring@hawaii.edu Tara Harmer Luke, Stockton University; Tara.Luke@stockton.edu Chris Kelley, UH; ckelley@hawaii.edu Scott France, UL Lafayette; france@louisiana.edu Asako Matsumoto, Chiba Institute of Technology; amatsu@gorgonian.jp Tina Molodtsova, Shirshov Institute of Oceanology; tina@ocean.ru			

Bruce Mundy, NOAA PIFSC; bruce.mundy@noaa.gov
Shirley Pomponi, FAU/HBOI; spomponi@fau.edu

Purpose of the Dive

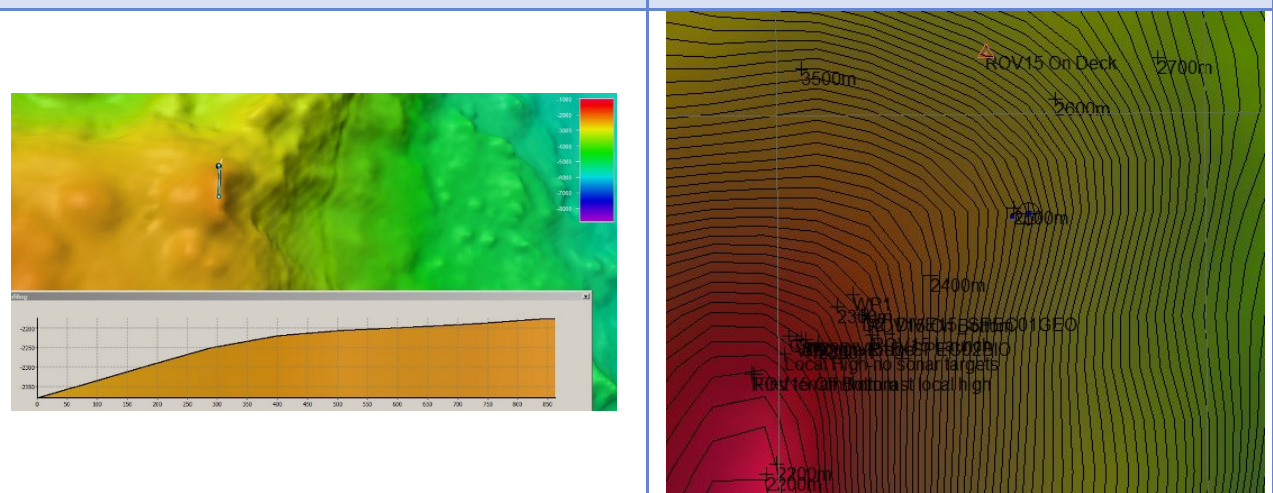
This dive was on Enrique Guyot, a Cretaceous seamount just to the east of the trench. The dive had objectives that included exploring for high-density communities of deep-sea corals and sponges and doing an initial characterization of Mn-crust habitats on one of the presumed oldest seamounts on the Pacific plate. The dive was planned to begin at a depth of 2360 m and to move up along the ridge to the S-SW for ~725 m, to a depth of 2010 m.

Description of the Dive:

This dive began at a depth of 2260 m along a ridge on Enrique Guyot. We landed in an area of Mn-crust volcanic rocks with light sediment. While most of the rocks looked intact, we were able to collect one quite early in the dive (D2_DIVE15_SPEC01GEO). As we slowly moved up the ridge, the rocks were quite blocky and looked intact, including a possible dike. However, many of the angular edges were rounded by Mn-crust, some of which had botryoidal texture. At about 2220 m depth, we encountered a tilted pillow lava ridge, and then several other faulted/fractured blocks with pillow lavas either flowing down the side or emplaced on top. The terrain was much steeper and more fractured than we had expected based on the 100-m and 50-m multibeam grids and this resulted in a slow-going dive to maximize the safety of the vehicles. Towards the end of the dive, we ended up on a pillow ridge that was a local high over 25 m high – much higher than the surrounding area. We flew over to another, lower plateau in an attempt to find the “main” ridge. While we did end up on a lower ridge, it was unclear whether we were actually on the ridge we had hoped to attain.

This dive had a high diversity of sponges and corals. Interestingly, the community had a high abundance of antipatharians. Octocorals such as *Hemicorallium* sp. and *Pleurogorgia militaris* were also observed. Sponges included *Poliopogon* sp., *Tretopleura* sp., and others from the family Euretidae. Midway through the dive, a colony of small sponges with unidentified ‘white dots’ on their surfaces were observed. Three of these were collected (D2_DIVE15_SPEC01GEO).

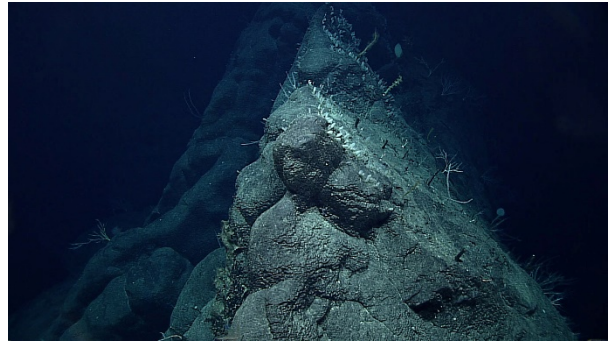
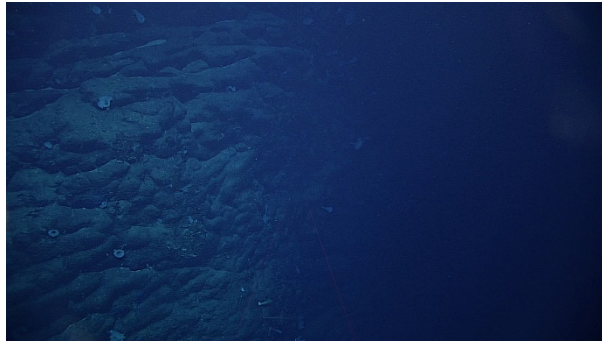
Map of ROV Dive Area



Fledermaus map of planned dive EX1605L1-DIVE15 track.

Hypack screengrab of actual dive EX1605L1-DIVE15 track.

Representative Photos of the Dive



Most of the terrain during Dive 15 was comprised of sheer cliffs of tilted pillow lavas.

There were many sponge and coral aggregations that followed the ridges.

Samples Collected

Sample ID	D2_DIVE15_SPEC01GEO
Date (UTC)	20160506
Time (UTC)	00:37:24
Depth (m)	2266.41
Temperature (°C)	1.909
Field ID(s)	Mn-crusted rock



Comments: No commensals.

Sample ID	D2_DIVE15_SPEC02BIO
Date (UTC)	20160506
Time (UTC)	01:41:53
Depth (m)	2190.92
Temperature (°C)	1.952
Field ID(s)	Porifera sp.



Comments: No commensals.

Please direct inquiries to: NOAA Office of Ocean Exploration & Research
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