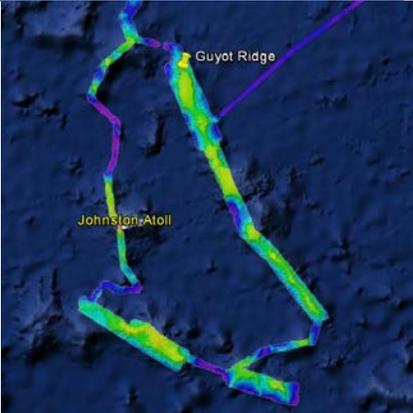


# OKEANOS EXPLORER ROV DIVE SUMMARY

<b>Site Name</b>	Guyot Ridge												
<b>ROV Lead/Expedition Coordinator</b>	Karl Mcletchie/ Brian RC Kennedy												
<b>Science Team Leads</b>	Scott France and Mackenzie Gerring												
<b>General Area Descriptor</b>	Johnston Atoll Pacific Remote Islands Marine National Monument												
<b>ROV Dive Name</b>	Cruise Season	Leg	Dive Number										
	EX1504	4	DIVE13										
<b>Equipment Deployed</b>	ROV:		Deep Discoverer										
	Camera Platform:		Seirios										
<b>ROV Measurements</b>	<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 type="checkbox"/> Seirios DO sensor										
<b>Equipment Malfunctions</b>	VSAT continues to underperform												
<b>ROV Dive Summary (From processed ROV data)</b>	Dive Summary: EX1504L4_DIVE13												
	~~~~~												
	In Water:	2015-09-26T19:04:45.953000 18°, 07.005' N ; 169°, 00.072' W											
	Out Water:	2015-09-27T02:41:39 18°, 07.043' N ; 168°, 59.586' W											
	Off Bottom:	2015-09-27T00:26:59.984000 18°, 06.995' N ; 169°, 00.044' W											
	On Bottom:	2015-09-26T20:38:39.937000 18°, 07.020' N ; 169°, 00.138' W											
	Dive duration:	7:36:53											
	Bottom Time:	3:48:20											
Max. depth:	2133.9 m												
<b>Special Notes</b>													
<b>Scientists Involved (please provide name / location / affiliation / email)</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Name</th> <th style="width: 33%;">Institution</th> <th style="width: 34%;">Email Address</th> </tr> </thead> <tbody> <tr> <td>Asako Matsumoto</td> <td>University of Tokyo</td> <td>amatsu@gorgonian.jp</td> </tr> <tr> <td>Chris Kelley</td> <td>University of Hawaii</td> <td>ckelley@hawaii.edu</td> </tr> </tbody> </table>				Name	Institution	Email Address	Asako Matsumoto	University of Tokyo	amatsu@gorgonian.jp	Chris Kelley	University of Hawaii	ckelley@hawaii.edu
	Name	Institution	Email Address										
	Asako Matsumoto	University of Tokyo	amatsu@gorgonian.jp										
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	Mackenzie Garringer	University of Hawaii	mgerring@hawaii.edu
	Scott France	University of Louisiana at Lafayette	france@louisiana.edu
	Andrew Shuler	NOAA/NOS/NCCOS	andrew.shuler@noaa.gov

#### Purpose of the Dive

To explore the bathyal community of a hard bottom on the slope just below the steepest part of the wall at the edge of the plateau on the NW end of the Karin Seamounts in the Pacific Remote Islands Marine National Monument and to conduct 5 midwater transects at 100 m intervals between 1200-800 m depth

#### Description of the Dive:

The landing site was marked by steep topography, including tall pillars or boulders. The sharp relief of the wall and pinnacle features offered an excellent habitat for a wide variety of sponges and corals and their associates. Immediately, several corals were seen, including a boulder that had colonies of all three major families of deep-sea octocorals (*Chrysogorgiidae*, *Isididae*, *Primnoidae*). Corals were in high abundance on the sharp slopes of the wall. In particular, there was an overwhelming abundance of planar *Chrysogorgia* colonies (unidentified species) for over 100 m of vertical elevation change on the dive; a sample was collected from 1937 m.

The list of octocorals observed includes bamboo corals (isidid whips, *Lepidisis*, *Acanella weberi*, *Jasonisis*), *Primnoidae* (*Calyptrophora*, *Candidella gigantea*, unidentified fans), *Chrysogorgiidae* (*Pleurogorgia*, *Chrysogorgia pinnata*, *Iridigorgia magnispiralis*, *Iridigorgia ?superba*), a precious coral, *Hemicorallium lauense*, and several *Anthomastus* soft corals. Many large precious corals (*Coralliidae*) were seen just below the plateau edge. Interestingly, we recorded no black corals. Large, purple tube anemones (*Ceriantharia*) were imaged, as were.

The sharp sloping features gave way to interspersed fields of rubble. Some of these showed high accumulations of dead sponge skeletons. Very little sediment was seen throughout the dive, and then tucked in areas of rubble and vesiculated manganese encrustation. *Holothurians* (*Synallactidae*) were seen in these patches. Two rocks were collected from these rubble fields, from 2104 and 1971 m. Several squat lobsters (*Galatheididae*, *Chirostylidae*) were seen, most of which were associated with *Chrysogorgia* coral colonies. Crinoids (some stalked but mostly unstalked, several *Atelocrinus*) were imaged, often attached to the taller sponges. A couple of large, purple tube anemones (*Ceriantharia*) were seen. As with most dives on this leg, few fish were seen, only four individuals, each of a different family – *Macrouridae* (*Kumba hebetate*), *Ophidiidae*, *Synaphobranchidae*, and *Moridae*.

Moving from the steep slope to the edge of the plateau showed a sharp transition from coral dominated community to a high abundance of sponges, including at least seven genera on the flat edge of the plateau.

The D2 ROV left bottom at 00:34:25 UTC from a depth of 1880 m to do midwater transects. Five midwater transect were conducted, each for 10 minutes, at depths of 1200, 1100, 1000, 900 and 800 m. Several organisms were imaged, including multiple medusa, larvaceans, salp chains, chaetognaths, a decapod shrimp, and two fishes (*Gonostomatidae*, *Myctophidae*).

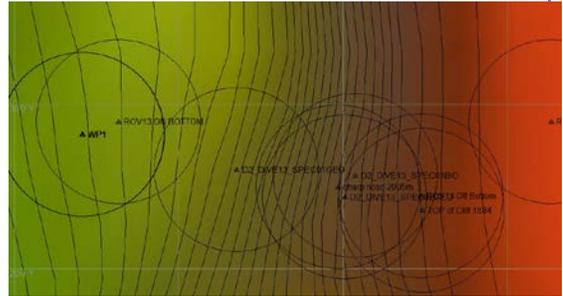
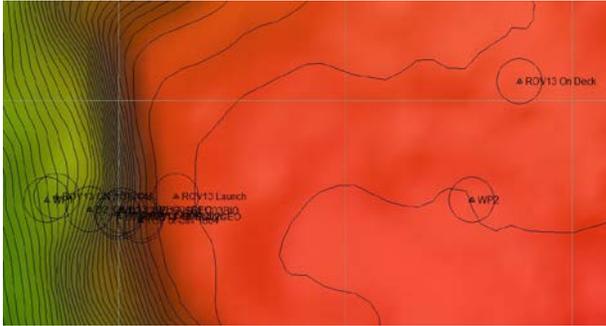
#### Other Metazoa Observed

**Crustaceans:** Pycnogonid sea spider (on bamboo coral)

**Other:** swimming polychaete

**Overall Map of ROV Dive Area**

**Close-up Map of Main Dive Site**



### Representative Photos of the Dive



### Samples Collected

Sample ID	EX1504L4_20150926T211815_D2_DIVE13_SPE C01GEO
Date (UTC)	20150926
Time (UTC)	211815
Depth (m)	2104.05



<b>Temperature (°C)</b>	1.86	
<b>Field ID(s)</b>	Mn-encrusted basalt	
<b>Comments</b>		
<b>Sample ID</b>	EX1504L4_20150926T231823_D2_DIVE13_SPE C02GEO	
<b>Date (UTC)</b>	20150926	
<b>Time (UTC)</b>	231823	
<b>Depth (m)</b>	1971.51	
<b>Temperature (°C)</b>	2.14	
<b>Field ID(s)</b>	Mn-encrusted basalt	
<b>Comments</b>		
<b>Sample ID</b>	EX1504L4_20150927T002243_D2_DIVE13_SPE C03BIO	
<b>Date (UTC)</b>	20150927	
<b>Time (UTC)</b>	002243	
<b>Depth (m)</b>	1882.44	
<b>Temperature (°C)</b>	2.08	
<b>Field ID(s)</b>	Chrysogorgia sp.	
<b>Comments</b>		
<b>Please direct inquiries to:</b>	NOAA Office of Ocean Exploration & Research 1315 East-West Highway (SSMC3 10 <sup>th</sup> Floor) Silver Spring, MD 20910 (301) 734-1014	