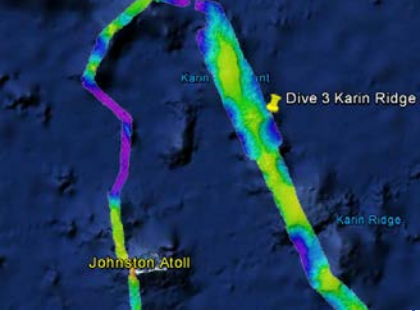


OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Karin Ridge East			
ROV Lead/Expedition Coordinator	Karl Mcletchie/ Brian RC Kennedy			
Science Team Leads	Scott France and Mackenzie Gerringe			
General Area Descriptor	Johnston Atoll Pacific Remote Islands Marine National Monument			
ROV Dive Name	Cruise Season	Leg	Dive Number	
	EX1504	4	DIVE03	
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 type="checkbox"/> Seirios DO sensor	
Equipment Malfunctions	The VSAT was not working so almost no live video reached shore. The scientists that did participate from shore were on an audio only connection.			
ROV Dive Summary (From processed ROV data)	Dive Summary: EX1504L4_DIVE03			
	~~~~~			
	In Water:	2015-09-16T18:40:36.875000 17°, 39.930' N ; 168°, 40.307' W		
	Out Water:	2015-09-17T02:28:02.812000 17°, 39.969' N ; 168°, 40.202' W		
	Off Bottom:	2015-09-17T00:45:14.562000 17°, 39.768' N ; 168°, 40.708' W		
	On Bottom:	2015-09-16T20:27:51.093000 17°, 39.856' N ; 168°, 40.354' W		
	Dive duration:	7:47:25		
	Bottom Time:	4:17:23		
Max. depth:	3186.7 m			
<b>Special Notes</b>				
<b>Scientists Involved (please provide name / location / affiliation /</b>	Name	Institution	Email Address	
	Abby Lapointe	University of Hawaii Zoology	abbylap@hawaii.edu	
	Asako Matsumoto	University of Tokyo	amatsu@gorgonian.jp	

<b>email)</b>	Astrid Leitner	University of Hawaii	aleitner@hawaii.edu
	Brian Boston	University of Hawaii	bboston@hawaii.edu
	Bruce Mundy	NOAA NMFS Pacific Islands Fisheries Science Center	bruce.mundy@noaa.gov
	Chris Kelley	University of Hawaii	ckelley@hawaii.edu
	Jasper Konter	University of Hawaii	jkonter@hawaii.edu
	Mackenzie Garringer	University of Hawaii	mgerring@hawaii.edu
	Scott France	University of Louisiana at Lafayette	france@louisiana.edu
	Tina Molodtsova	P.P.Shirshov Institute of Oceanology	tina.molodtsova@gmail.com tina@ocean.ru

**Purpose of the Dive**

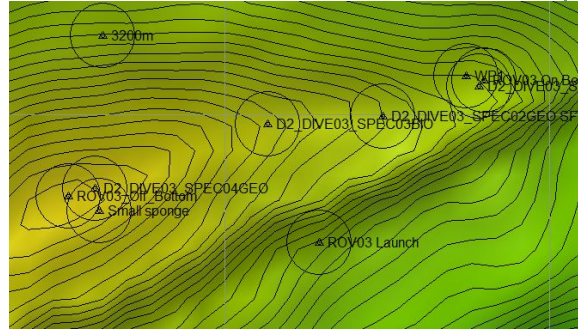
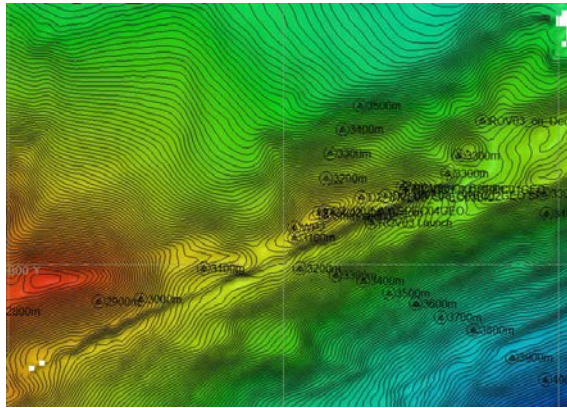
To explore the bathyal community of a hard bottom on one of the Karin Seamounts in the Pacific Remote Islands Marine National Monument - Johnston Atoll

**Description of the Dive:**

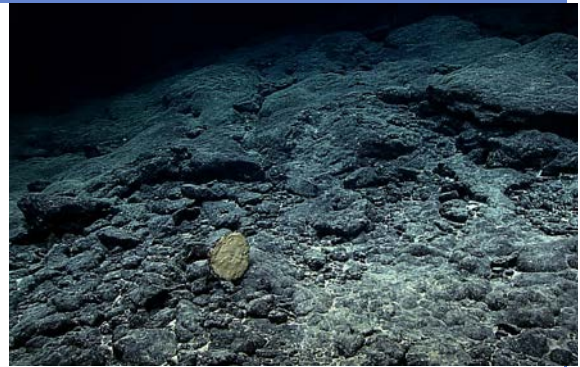
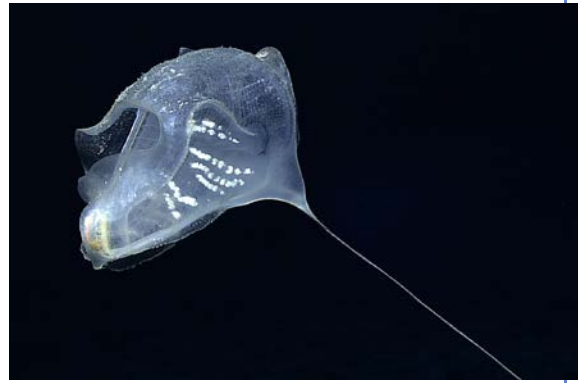
Dive 3 explored along the spine of a deep ridge that extends eastward from the slope of a plateau of a guyot-like feature, working from 3183 to 3050 m depth. In situ temperatures were low (1.55C) and dissolved oxygen high (3.9 mg/L). The substrate was rocky, with light sedimentation, and the fauna were sparse. Sponges were the most abundant metazoans seen, large, stalked *Caulophacus*. Numerous “headless” sponge stalks were seen, which raised the question whether these were old sponges that had lost the “head/body” or younger undeveloped sponges. A very small individual (<15cm) was eventually observed that supported that these animals grow isometrically, with the large head structure present in young individuals. Many of these *Caulophacus* sponges had associated shrimp. Several of the broken stalks were being overgrown by hydroids. We observed a thicket of short stalked sponges, later tentatively identified as *Monoraphis*-like, that waved in the current; one sample was collected. Only two corals were observed along the dive track, both bamboo coral thought to be in the genus *Bathygorgia*. Two fish were seen, a cutthroat eel (*Synaphobranchus brevidorsalis*), and an ophiidid (??*Bassozetus* sp.??), both at 3180 m. Other observations of fauna included stalked tunicates (likely *Culeolus*); purple holothurian; actinarian anemones (?*Hexostylactis* and tube building Edwardsiidae), a cluster of tube anemones (Ceriantharia) growing from a dead sponge stalk, thread-legged shrimp (Nematocarcinidae), an isopod, a yellow spiny ophiuroid, a few brisingid asteroids, crinoids (both comatulid and stalked). There were several very small sessile organisms that had branching (hydroids?) or stalked disk-like structures, (Xenophyophora/Foraminifera?). On ascent a snipe eel was imaged.

**Overall Map of ROV Dive Area**

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






**Representative Photos of the Dive**



**Samples Collected**

Sample ID	EX1504L4_20150916T204822_D2_DIVE03_SPE C01GEO
Date (UTC)	20150916
Time (UTC)	204822



<b>Depth (m)</b>	3184.06	
<b>Temperature (°C)</b>	1.56	
<b>Field ID(s)</b>	Rock	
<b>Comments</b>		
<b>Sample ID</b>	EX1504L4_20150916T220116_D2_DIVE03_SPE C02GEO	
<b>Date (UTC)</b>	20150916	
<b>Time (UTC)</b>	220116	
<b>Depth (m)</b>	3162.12	
<b>Temperature (°C)</b>	1.57	
<b>Field ID(s)</b>	Rock	
<b>Comments</b>		
<b>Sample ID</b>	EX1504L4_20150916T232107_D2_DIVE03_SPE C03BIO	
<b>Date (UTC)</b>	20150916	
<b>Time (UTC)</b>	232107	
<b>Depth (m)</b>	3106	
<b>Temperature (°C)</b>	1.56	
<b>Field ID(s)</b>	SPONGE 'Foxtail'	
<b>Comments</b>	Saw a stand of dozen of same morph earlier in the dive. Flexible stalk, bent over in current.	
<b>Sample ID</b>	EX1504L4_20150917T004328_D2_DIVE03_SPE C04GEO	
<b>Date (UTC)</b>	20150917	
<b>Time (UTC)</b>	004328	
<b>Depth (m)</b>	3049.22	
<b>Temperature (°C)</b>	1.54	
<b>Field ID(s)</b>	Rock	

**Please direct inquiries to:**

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