



Okeanos Explorer ROV Dive Summary

Dive Information

<p>General Location Map</p>	
<p>General Area Descriptor</p>	<p>U.S. Mid-Atlantic, Frank R. Lautenberg Deep Sea Coral Protection Area</p>
<p>Site Name</p>	<p>Baltimore Canyon</p>
<p>Science Team Leads</p>	<p>Amy Wagner (CSUS) and Alexis Weinnig (Temple)</p>
<p>Expedition Coordinator</p>	<p>Kasey Cantwell (NOAA-OER)</p>
<p>ROV Dive Supervisor</p>	<p>Chris Ritter (GFOE)</p>
<p>Mapping Lead</p>	<p>Shannon Hoy (NOAA-OER)</p>

ROV Dive Name

<p>Cruise</p>	<p>EX1903L2</p>
<p>Dive Number</p>	<p>Dive 18</p>

Scientists Involved (provide name, affiliation, email)

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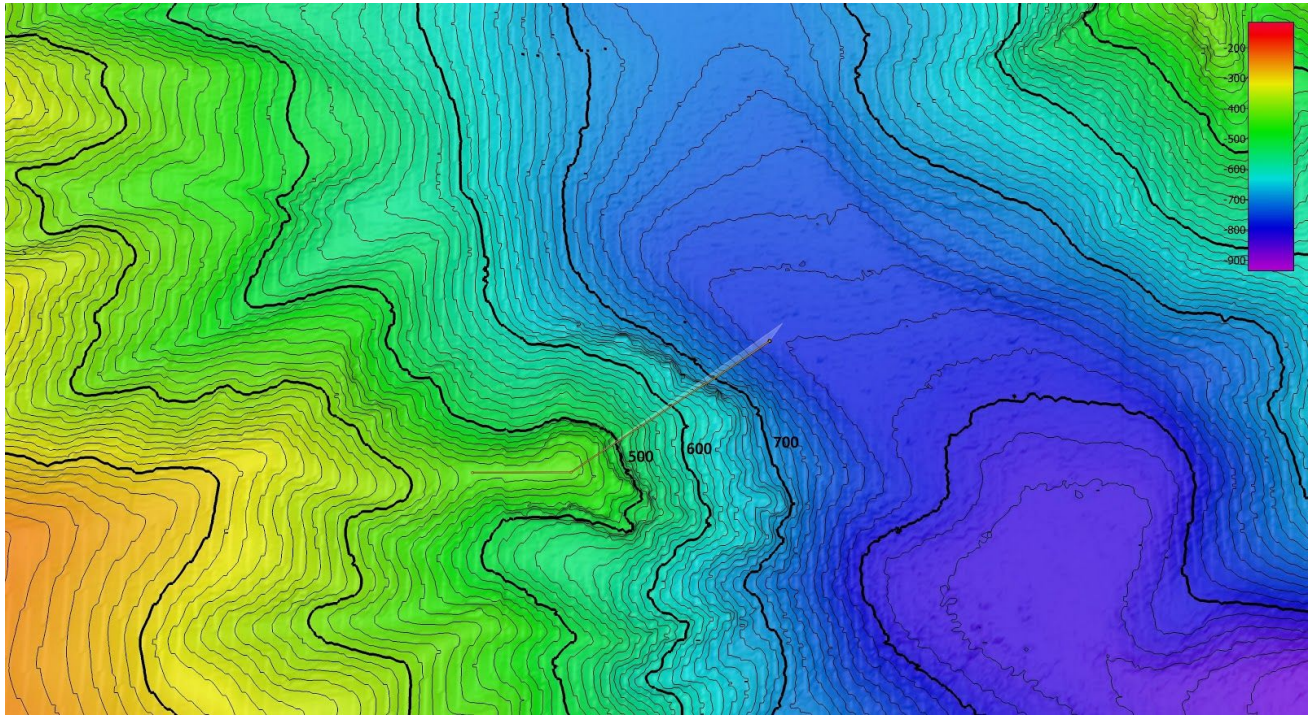
Dive Purpose	The primary objective of this dive is to explore and characterize a mid-Atlantic canyon wall with a relatively steep slope that has the potential to be suitable habitat for deep-water coral, sponges, and associated fauna.
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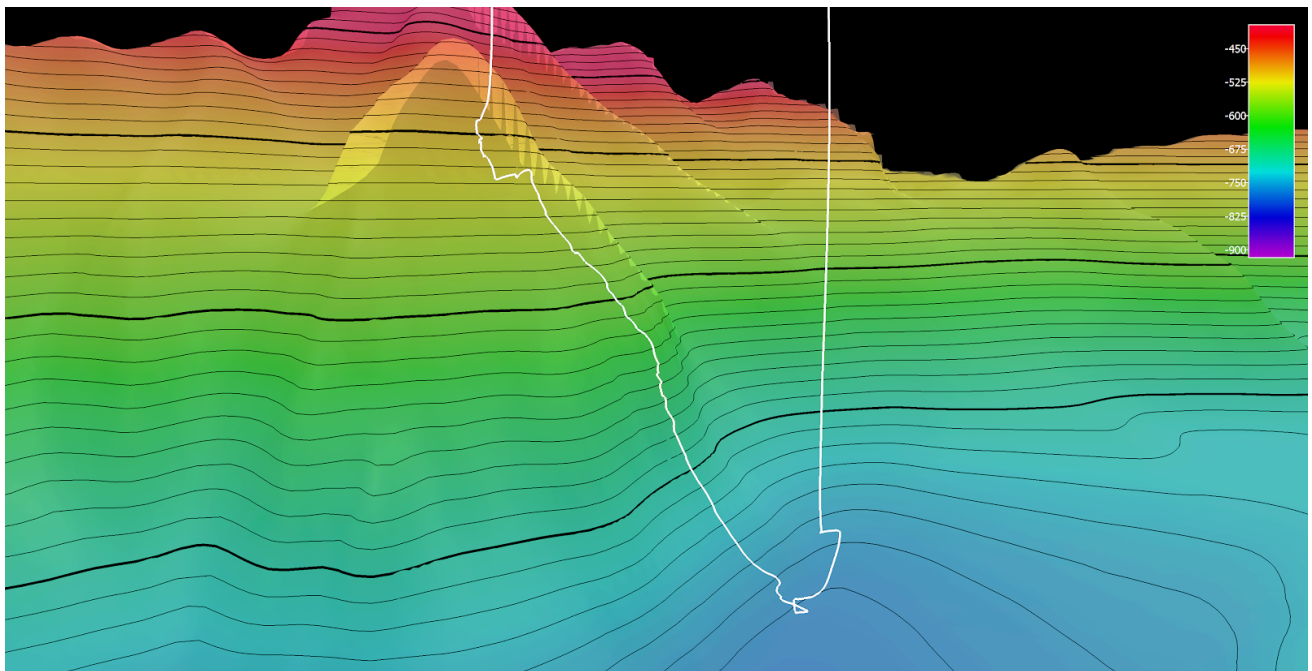
Dive Description	<p>Today (7/10/19) turned out to be Paragorgia Fest 2019. We explored a north facing wall of Baltimore Canyon. We started the dive at approximately 760 meters and worked our way up to 494 meters by the end of the dive. There was a relatively dense nepheloid layer through the majority of the dive, however, it did not impede operations. At the base of the canyon wall and up to about 531 meters the seafloor was relatively sedimented with scattered rock debris and many burrow holes in the face of the wall. In this area we observed numerous <i>Chaceon</i> red crabs of various sizes, some in mating pairs, copious brittle star arms extending from the below shallow layer of sediment, <i>Munida</i> squat lobsters, fly trap anemones, and >10 skates on the seafloor. As we continued up the slope and we observed larger rock outcrops and overhangs that were home to a high density of <i>Paragorgia sp.</i> colonies, some of which were over two meters in size. Alongside the <i>Paragorgia sp.</i> colonies we also observed <i>Anthethela sp.</i> and <i>Primnoa resedaeformis</i> colonies, as well as a few different species of sea stars (<i>Poraniomorpha hispidia</i> and <i>Porania pulvillus</i>). The densely packed coral colonies were also covered with shrimp (pandalids, possibly <i>Heterocarpus sp.</i>) and we also observed skate or shark eggs attached to <i>Paragorgia</i>. We suction sampled two of the shrimps, collected a piece of <i>Paragorgia</i> (with two shrimp associates still attached), and two bonus shrimp swam into the biobox of their own volition (so a total of 6 shrimp samples!).</p>
Notable Observations	A high number of skate sightings - BIG <i>Paragorgia</i> colonies
Community Presence/Absence (community is defined as more than two species)	<ul style="list-style-type: none"> ✓ Corals and Sponges ✓ Chemosynthetic Community ✓ High biodiversity Community ✓ Active Seep or Vent ✓ Extinct Seep or Vent ✓ Hydrates
Feature Type	Submarine Canyon, Scarp/wall
SeaTube Link (science annotation system)	https://data.oceannetworks.ca/SeaTubeV2?resourceTypeid=1000&resourceId=23621&divId=1513



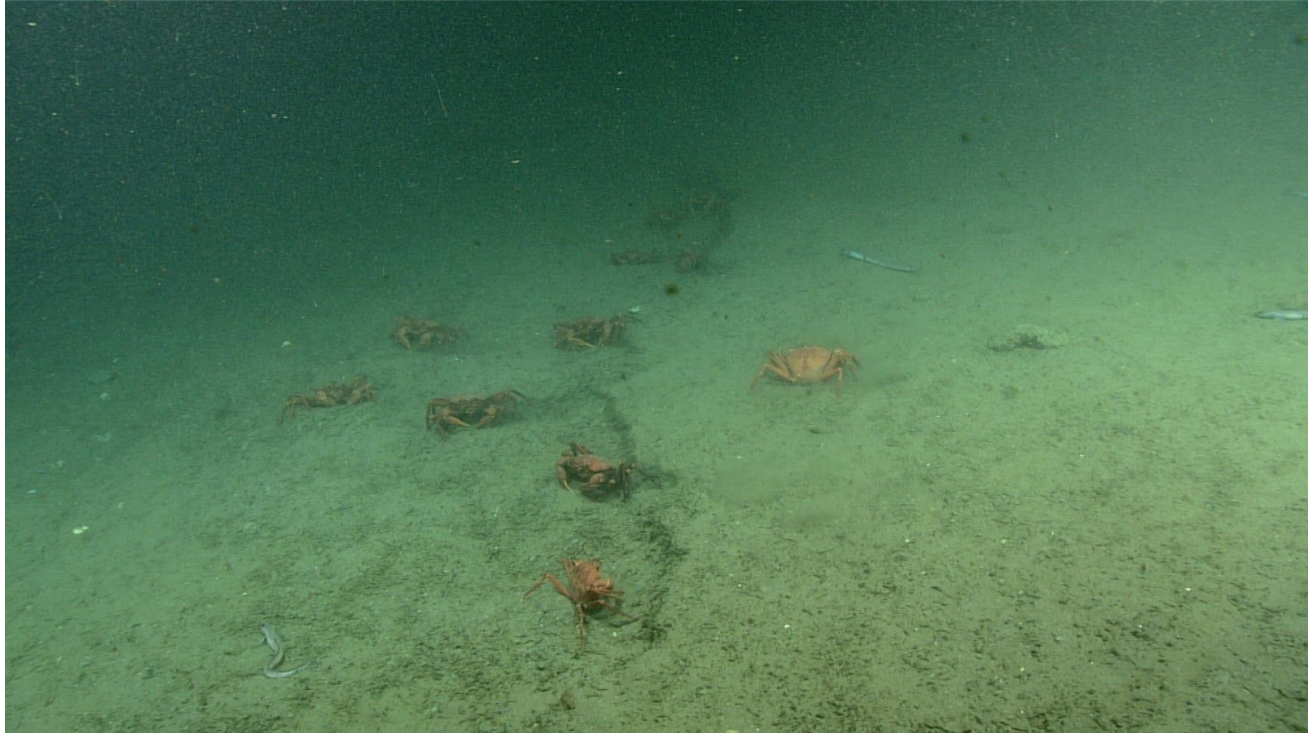
Overall Map of the ROV Dive Area



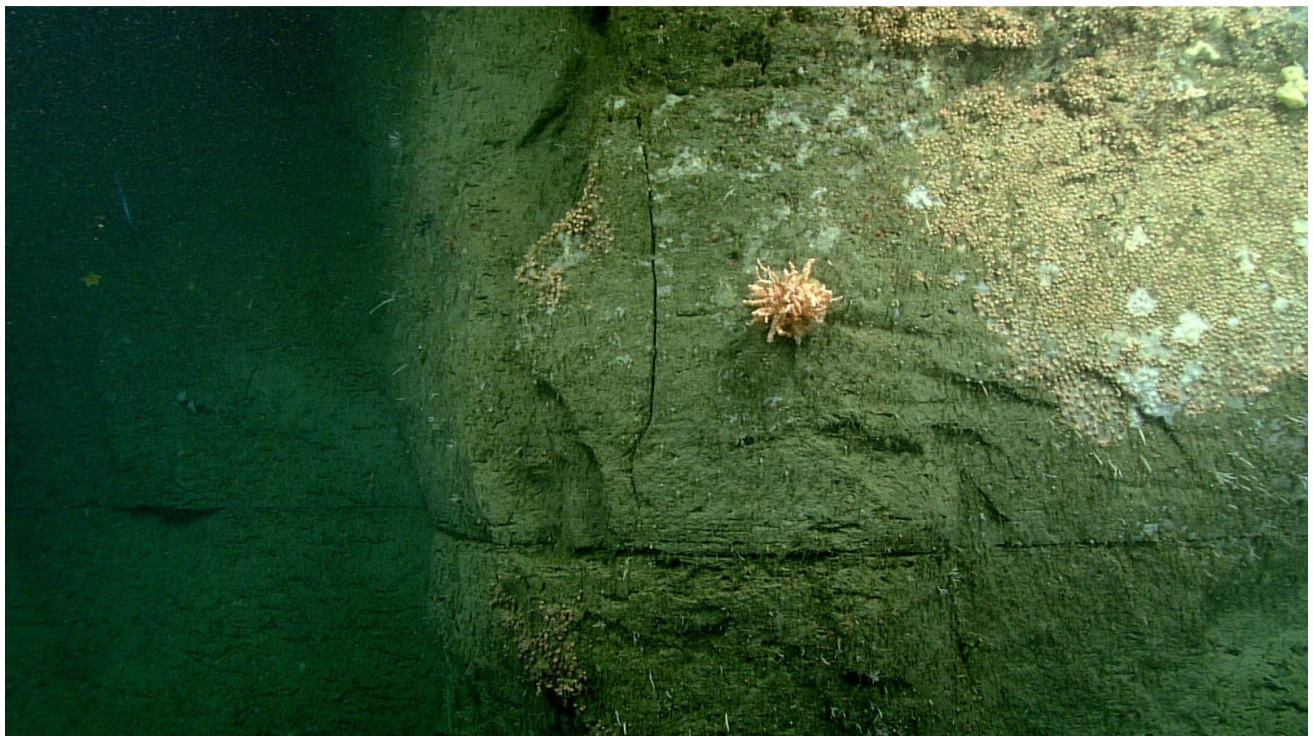
Close-up Map of Main Dive Site



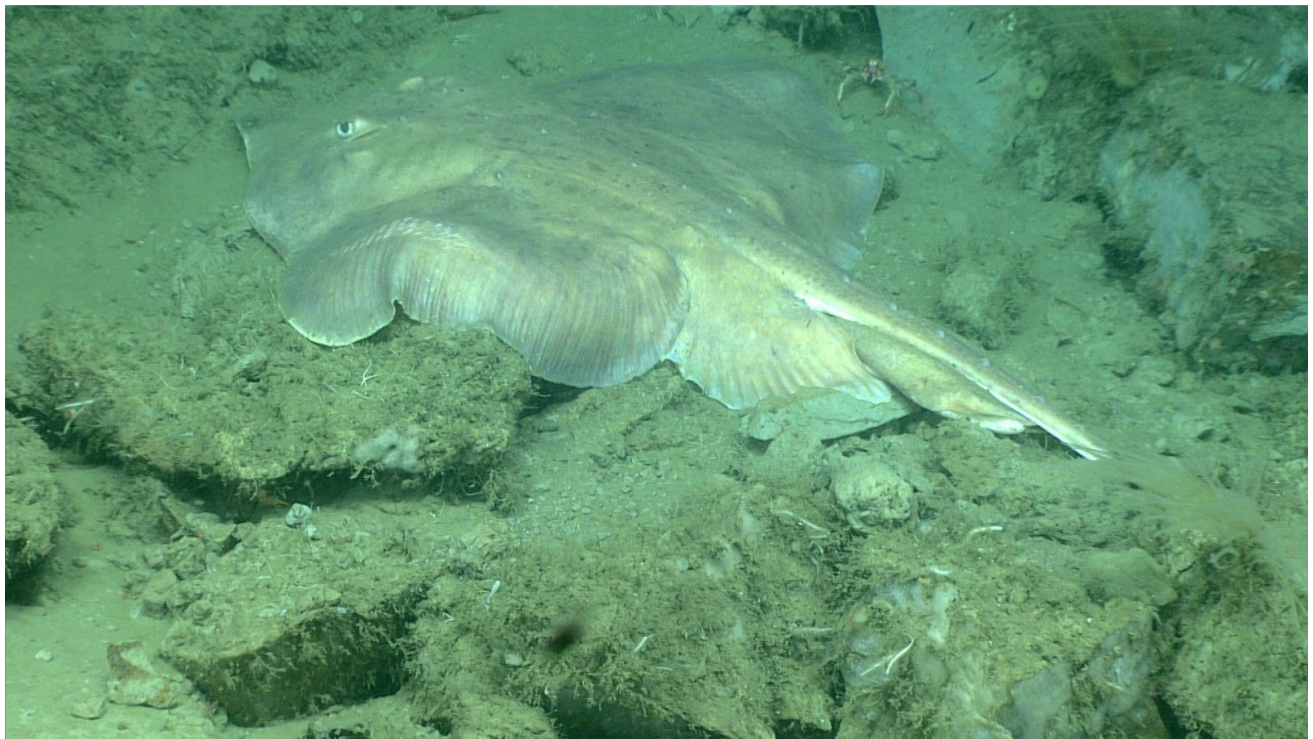
Representative Photos of the Dive



Chaceon red crabs on the sedimented slope during the first half of the dive



First sightings of a steep wall face, enhabitated by zooanthids and an *Anthothella* sp.



One of the many rays/skates seen throughout the dive. Also observed numerous ray/skate/shark egg casings on the seafloor and attached to *Paragorgia* branches.

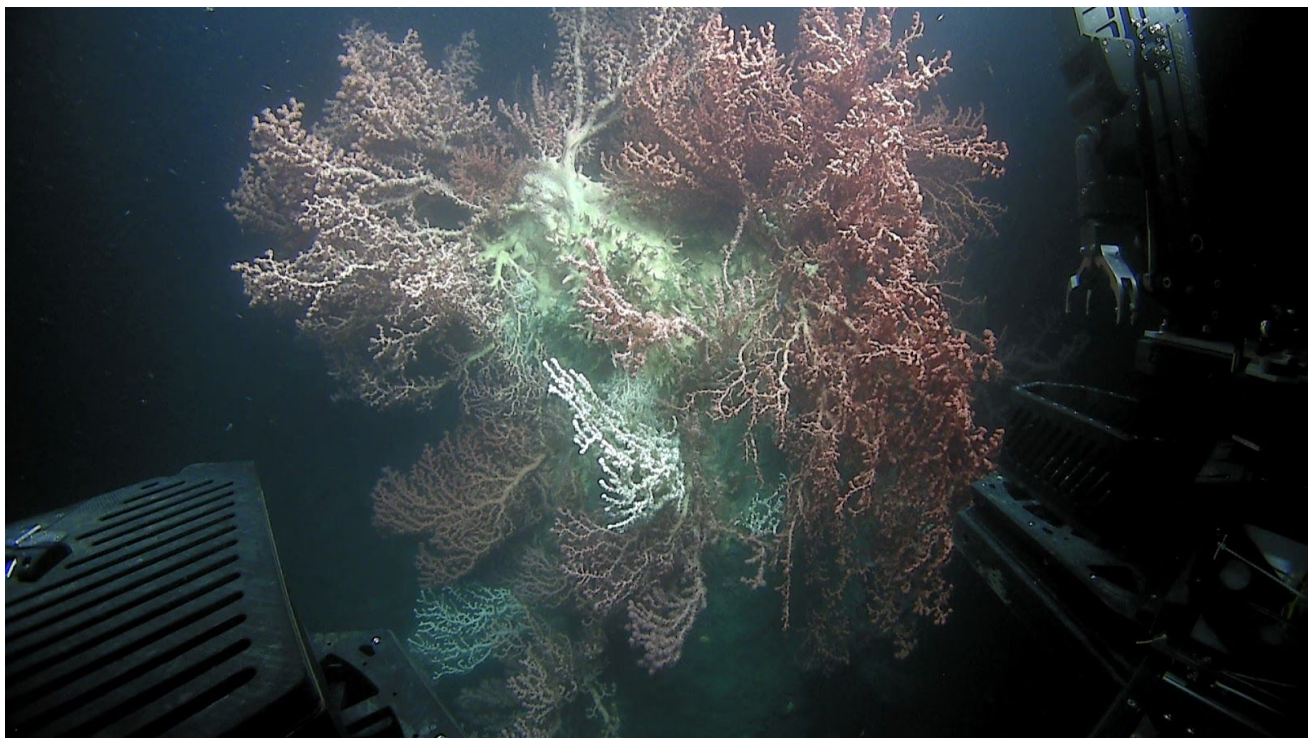


Close up of *Paragorgia* sp. with shrimp (pandalids, possibly *Heterocarpus* sp.), squat lobster (*Eumunida picta*), and a shark/ ray/ skate egg case attached.





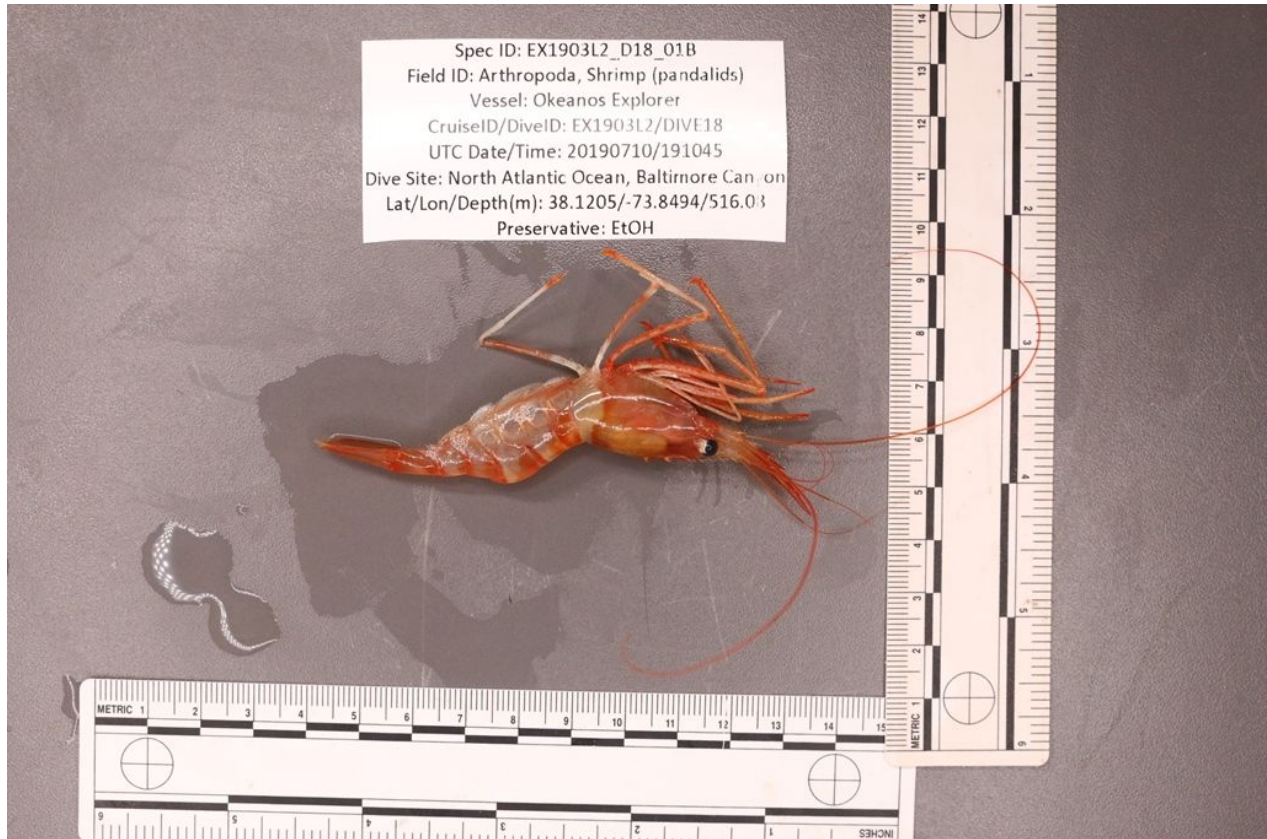
Clusters of *Paragorgia* and *Primnoa resedaeformis* colonies on a ledge as the dive continued up slope



Wide angle camera view of dense *Paragorgia* colonies (some very large) on a rock ledge right before ascent at the end of the dive

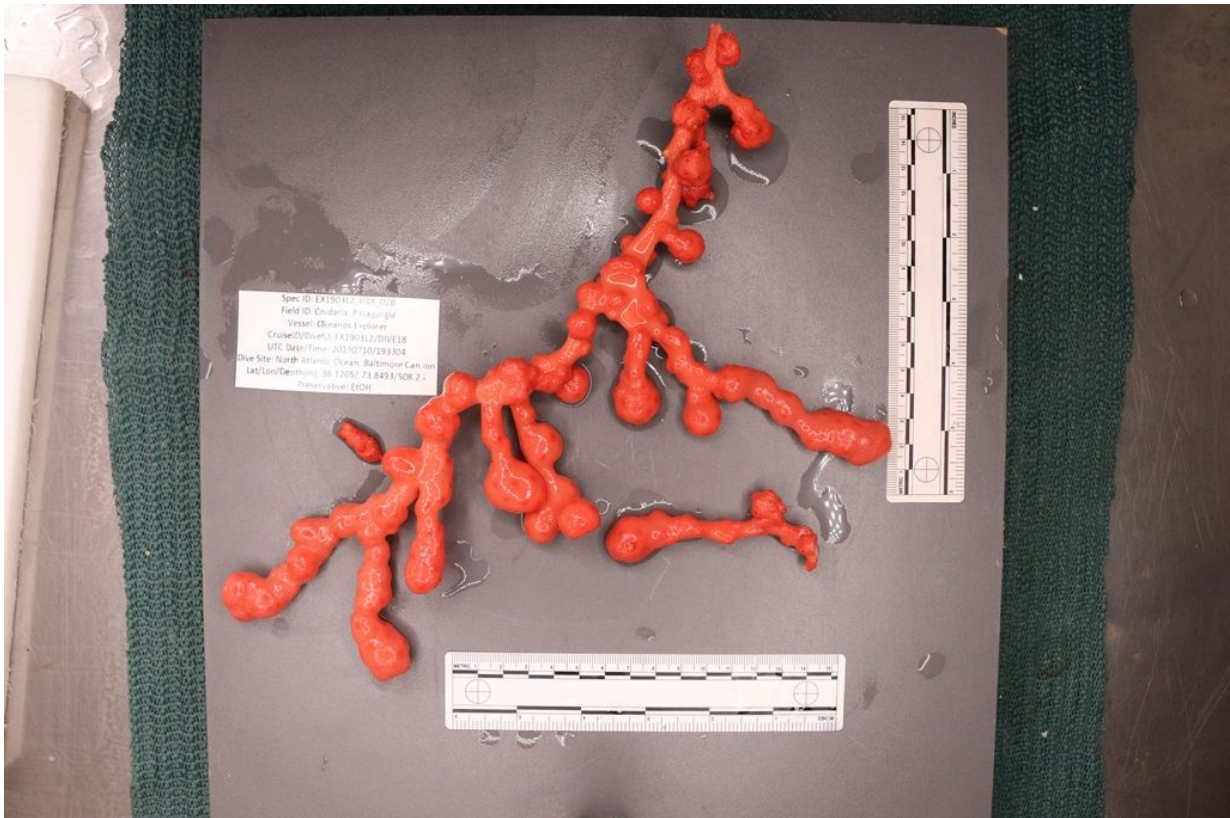


Samples Collected



Sample ID	EX1903L2_D18_01B	
Date (UTC)	20190710	
Time (UTC)	191045	
Depth (m)	516.1	
Temp. (°C)	5.907	
Field ID(s)	Shrimp, Pandalidae	
Associates	Associates Sample ID	Field Identification
	EX1903L2_D18_01B_A01	Shrimp, Pandalidae
	EX1903L2_D18_01B_A02	Amphipoda
Comments		



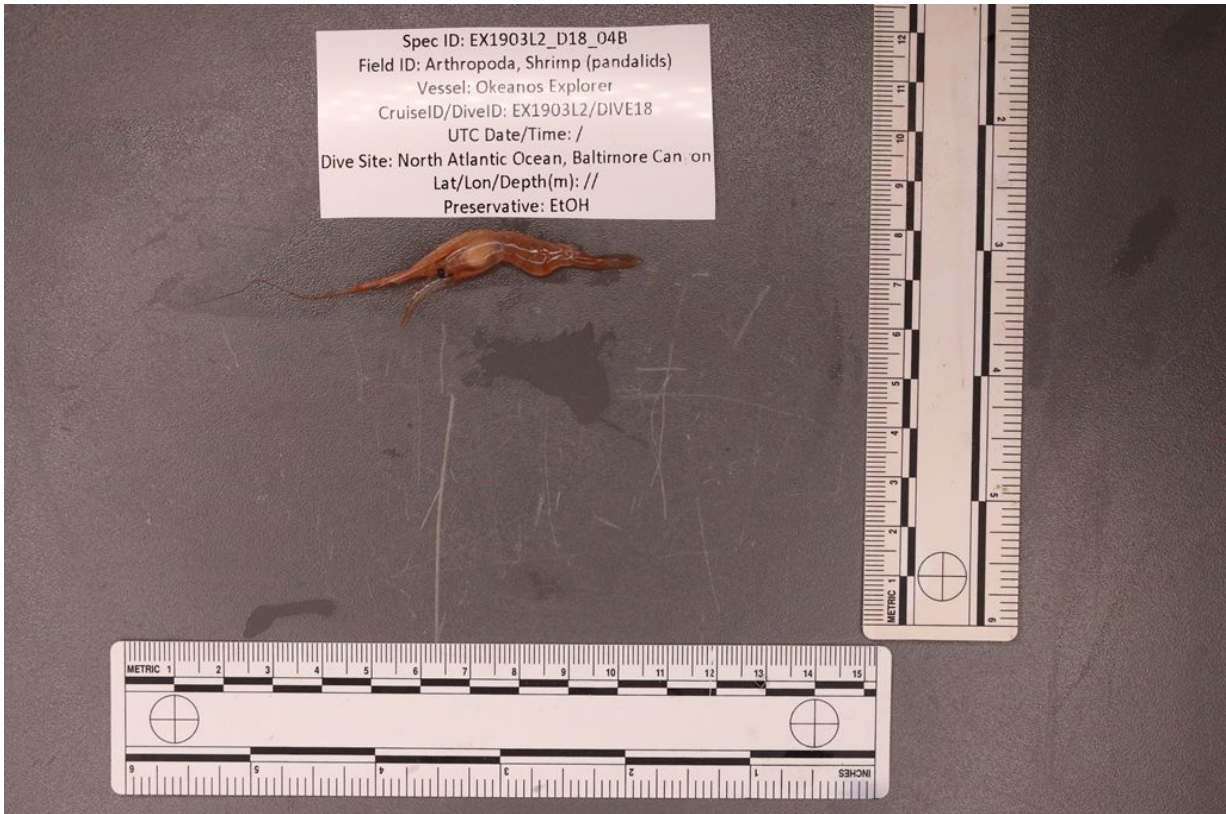


Sample ID	EX1903L2_D18_02B	
Date (UTC)	20190710	
Time (UTC)	193304	
Depth (m)	508.2	
Temp. (°C)	6.432	
Field ID(s)	Paragorgia	
Associates	Associates Sample ID	Field Identification
	EX1903L2_D18_02B_A01	Shrimp, Pandalidae
	EX1903L2_D18_02B_A02	Shrimp, Pandalidae
Comments		



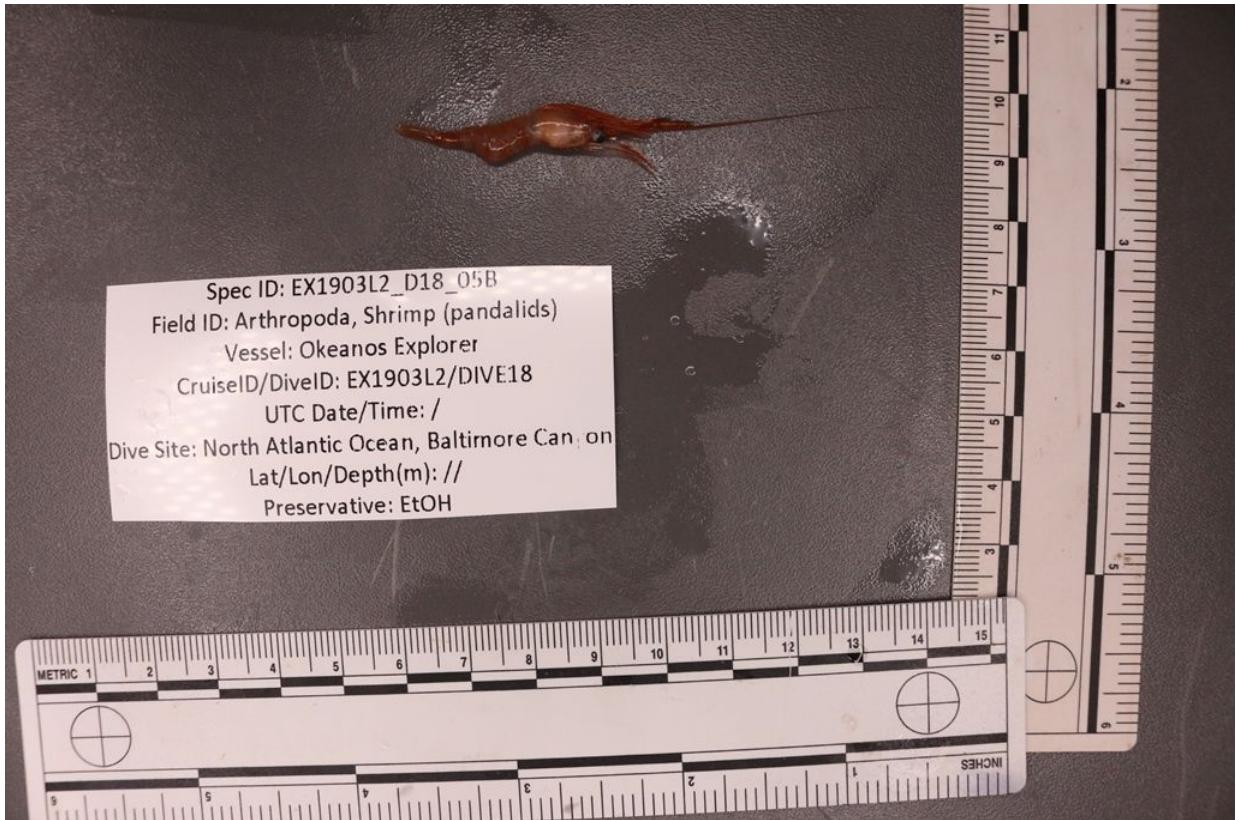
Sample ID	EX1903L2_D18_03G											
Date (UTC)	20190710											
Time (UTC)	195200											
Depth (m)	507.1											
Temp. (°C)	6.596											
Field ID(s)	Rock											
Associates	<table border="1"> <thead> <tr> <th>Associates Sample ID</th> <th>Field Identification</th> </tr> </thead> <tbody> <tr> <td>EX1903L2_D18_03G_A01</td> <td>Porifera</td> </tr> <tr> <td>EX1903L2_D18_03G_A02</td> <td>Hydrozoa</td> </tr> <tr> <td>EX1903L2_D18_03G_A03</td> <td>Tubeworm (Annelida)</td> </tr> <tr> <td>EX1903L2_D18_03G_A04</td> <td>Porifera</td> </tr> </tbody> </table>		Associates Sample ID	Field Identification	EX1903L2_D18_03G_A01	Porifera	EX1903L2_D18_03G_A02	Hydrozoa	EX1903L2_D18_03G_A03	Tubeworm (Annelida)	EX1903L2_D18_03G_A04	Porifera
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	EX1903L2_D18_03G_A03	Tubeworm (Annelida)										
EX1903L2_D18_03G_A04	Porifera											
Comments												





Sample ID	EX1903L2_D18_04B	
Date (UTC)	20190710	
Time (UTC)	could not be ascertained as this was an unintentional sample	
Depth (m)	NA	
Temp. (°C)	NA	
Field ID(s)	Shrimp, Pandalidae	
Associates	Associates Sample ID	Field Identification
	No associates	
Comments	Unintentional Sample	





Sample ID	EX1903L2_D18_05B					
Date (UTC)	20190710					
Time (UTC)	could not be ascertained as this was an unintentional sample					
Depth (m)	NA					
Temp. (°C)	NA					
Field ID(s)	Shrimp, Pandalidae					
Associates	<table border="1"> <thead> <tr> <th>Associates Sample ID</th> <th>Field Identification</th> </tr> </thead> <tbody> <tr> <td>No associates</td> <td></td> </tr> </tbody> </table>		Associates Sample ID	Field Identification	No associates	
	Associates Sample ID	Field Identification				
	No associates					
Comments	Unintentional Sample					

Please direct inquiries to:

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