

Okeanos Explorer ROV Dive Summary

Dive Information

General Location	79°W 78°W 77°W 76°W 75°W 74°W 73°W 72°W 71°W 70°W
Мар	Ocean Exploration and Research
	N-SE
	Norfolk, VA
	35W
	• Dive 12
	N-FE
	N ₂ E
	Nautical Miles 0 25 50 100
General Area Descriptor	U.S. Southeast
Site Name	Deep Pamlico Canyon
Science Team Leads	Amy Wagner (CSUS) and Alexis Weinnig (Temple)
Expedition Coordinator	Kasey Cantwell (NOAA-OER)
ROV Dive Supervisor	Chris Ritter (GFOE)
Mapping Lead	Shannon Hoy (NOAA-OER)

ROV Dive Name

Cruise	EX1903L2
Dive Number	Dive 12

Equipment Deployed

ROV	Deep Discoverer		
Camera Platform	Seirios		
ROV Measurements	✓ CTD	✔ Depth	✓ Altitude
	✓ Scanning Sonar	✓ USBL Position	✓ Heading
	✓ Pitch	✔ Roll	✔ HD Camera 1
	✔ HD Camera 2	✓ Low Res Cam 1	✓ Low Res Cam 2
	✓ Low Res Cam 3	✓ Low Res Cam 4	✓ Low Res Cam 5
Equipment			
Malfunctions			
ROV Dive Summary	Dive Summary: EX1903L2_DIVE12		
Processed ROV)			
	In Water:	2019-07-04T12:25:40.933095	
	34°, 34.	709' N ; 74°, 40.617' W	
	On Bottom:	2019-07-04T14:26:45.267533	
	248.24		
	34 [*] , 34.	735 N; 74 , 40.637 W	
	Off Bottom:	2019-07-04T18:40:28.846228	
	34°, 34.	454' N ; 74°, 40.944' W	
	Out Water:	2019-07-04T20:43:18.766020	
	34°, 34.224' N ; 74°, 40.949' W		
	Dive duration:	8:17:37	
	Bottom Time:	1.12.12	
	bottom mile.	4.13.43	
	May danth	2400.0	
Spacial Natas	Nidx. ueptit: Potwoon 2100 and 2200 r	3498.0 III	concreted by the POV pilote. At the
Special Notes	Between 3100 and 3200 meters, a dense turbidity layer was reported by the KOV pilots. At the		
	pottom, visibility was too poor to be able to see the tether between Serios and D2. After		
	now dive site was chosen	It took approximatoly 1 hour to bri	ng the POV to 2100 m and he towed
	new dive site was chosen. It took approximately 1 hour to bring the ROV to 3100 m and		ing the KOV to 3100 m and be towed
	to the new dive location.		



Scientists Involved	(provide name,	affiliation,	email)
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First Name	Last name	Affiliation	Email
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Dive Purpose	The primary objective of this dive is to explore and characterize a small canyon that has the potential to be suitable habitat for deep-water coral, sponges, and associated fauna.
Dive Description	The ROV reached the bottom at 14:26 UTC at 3490 m water depth. The bottom was a very soft, silty sediment with a high amount of sediment in the water column. After consultation with the ROV and science team, a new dive target and track were identified and the ROV ascended to 3100 m to be towed to the new site. The ROV reached the bottom for the second time at 16:33 UTC at 3273 m to a similar bottom and only slightly better visibility. The ROV pilots were able to keep D2 and the tether in view so we proceeded with the dive. Throughout the dive, the bottom remained very soft and silty with poor visibility. A relatively small abundance and diversity of fauna was observed but included several abyssal grenadier (<i>Coryphaenoides armatus</i>), sea cucumber (Holothurian) and brittle stars (Ophiuroidea). Additionally, a few hermit crabs with zoanthid (<i>Epizoanthus sp.</i>) "house", a <i>Radicipes</i> octocoral and a few species of sea pens (order Pennatulacea) were also observed.



Notable Observations	
Community Presence/ Absence (community is defined as more than two species)	 X Corals and Sponges Chemosynthetic Community High biodiversity Community Active Seep or Vent Extinct Seep or Vent Hydrates
Feature Type	Deep canyon base, submarine canyon
SeaTube Link (science annotation system)	https://data.oceannetworks.ca/SeaTubeV2?resourceTypeId=1000&resourceId=23621&diveId=1 453

Overall Map of the ROV Dive Area



Close-up Map of Main Dive Site





Representative Photos of the Dive



View from Sierios camera looking down at D2 when the ROV reached bottom at 3,500 m. Evidence of the low visibility that required a move up to 3,200 to continue the dive.





A few Coryphaenoides armatus fish that were commonly seen throughout the dive



A hermit crab (Paguridae) with zoanthid (Epizoanthus sp.) "house"





Seapen (Order Pennatulacea) in the soft sediment bottom

Samples Collected

There were no samples collected on this dive.

Please direct inquiries to:

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