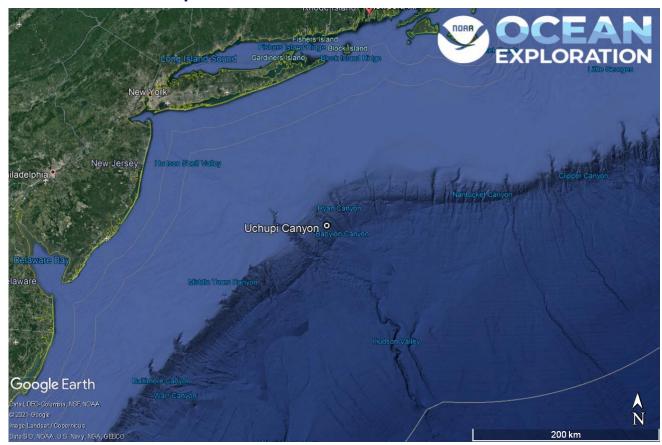


# ROV Dive Summary, EX-21-03, Dive 10, June 25, 2021

## **General Location Map**



Dive 10 named Uchupi Canyon. This site is in Uchupi Canyon off of New York and New Jersey.

#### **Dive Information**

Site Name	Uchupi Canyon
General Area Descriptor	Mid-Atlantic Canyons
Science Team Leads	Karl McLetchie
Expedition Coordinator	Kasey Cantwell/Matt Dornback
ROV Dive Supervisor	Karl McLetchie
Mapping Lead	Shannon Hoy

Dive Purpose	The tenth engineering dive of the ROV Shakedown. Primary objectives include pilot training,		
	testing new motors, motor controllers, lights, cameras, and hydraulic systems on the ROVs.		
	Secondary objectives include exploring the central area of Uchupi Canyon and collecting characteristic geological and biological samples.		
Was the dive	No		
restricted for			
Underwater Cultural Heritage?			
ROV Dive	Dive Summary: EX2103_DIVE10		
Summary Data	Dive Type: Normal		
	In Water: 2021-06-25T12:31:01.021160 39.544834571127616 ; -71.79154749684005		
	On Bottom: 2021-06-25T13:27:53.605485		
	39.542909425804574 ; -71.79292804193973		
	Off Bottom: 2021-06-25T20:09:28.044946 39.53934779246253 ; -71.80182858086877		
	Out Water: 2021-06-25T20:38:06.410574 39.53432208178928 ; -71.8024252627831		
	Dive Duration: 8:7:5		
	Bottom Time: 6:41:34		
	Max Vehicle Depth: 1286.3 m		
	Min Seafloor Depth: 1047.4 m		
	Distance Travelled: 714.3 m		
	Mid Water Transects Summary		
	Number of Transects: 3		
	Transect 1 Start: 18:44:44 39.541000868020355; -71.79944667005088		
	End: 19:06:46 39.54072861623938 ; -71.79978170427357		
	Duration: 0:22:2		
	Depth: 500.0 m		
	Transect 2		
	Start: 19:17:40 39.540289409426535 ; -71.79999472704898		
	33.3T0203T20333 , -11.17333412104030		



End: 19:38:07 39.54030960599953; -71.80067574250059 Duration: 0:20:27 Depth: 450.0 m Transect 3 Start: 19:46:50 39.54042800137336; -71.80098799896996 End: 39.539371493922964; -71.80180700486164 Duration: 0:22:18 Depth: 375.0 m **Dive Description** Dive 10 was successfully completed on Uchupi Canyon. The ROV reached bottom at a depth of 1287m and proceeded to ascend the south canyon wall to 1020m. The slope was mostly soft bottom. Many fish were observed including synaphobranchid eels, blue hake, sol, scorpion fish, and a great interaction between a curious dogfish and D2. Urchins, hydroids, cup coral, anemones, crabs, shrimp, holothurians, and squid were seen. At 1400, the ROVs concluded the benthic portion of the dive and switched to "simulating" water column exploration. The ROVs did three 20 minute transects, one each at 500, 450, and 375. Numerous ctenophores were seen as well as chaetognath worms, lobate jellies, siphonophores, and laternfish. The low light camera was used to attempt to see bioluminescence. No bioluminescence was observed. Notable Observations Community and Corals and Sponges - Present habitat Chemosynthetic Community - Absent observations High biodiversity Community - Absent Active Seep or Vent - Absent Extinct Seep or Vent - Absent Hydrates - Absent CMECS Feature Submarine Canyon, Slope Type(s) https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=2233 SeaTube Link (science

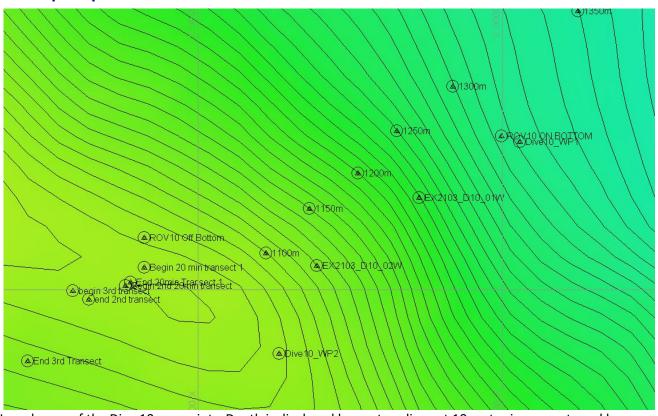


annotation	
system)	

#### **Equipment Deployed**

ROV	Deep Discoverer
Camera Platform	Seirios
ROV Measurements	The following ROV measurements, data streams and equipment are used on each ROV deployment: CTD, depth, scanning sonar, USBL position, altitude, heading, attitude, high-resolution cameras, low resolution cameras, manipulator arms, suction sampler, sample drawers and thrusters. The section below notes if any of these sensors were malfunctioning or not operational
Equipment Malfunctions	Turbidity sensor

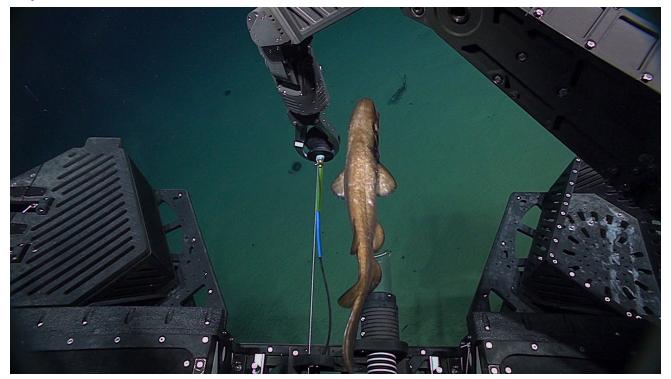
## **Close-up Map of Main Dive Site**



Hypack map of the Dive 10 waypoints. Depth is displayed by contour lines at 10 meter increments and by colors. Warm colors are shallower and cool colors are deeper.



## **Representative Photos of the Dive**



A dogfish interacting with the ROV.



A solitary cup coral and a shrimp on a small boulder.

## **Samples Collected -**

No samples were collected



#### **Niskin Sampling Summary**

No niskin samples were taken.

## Scientists Involved (provide name, email, affiliation)

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