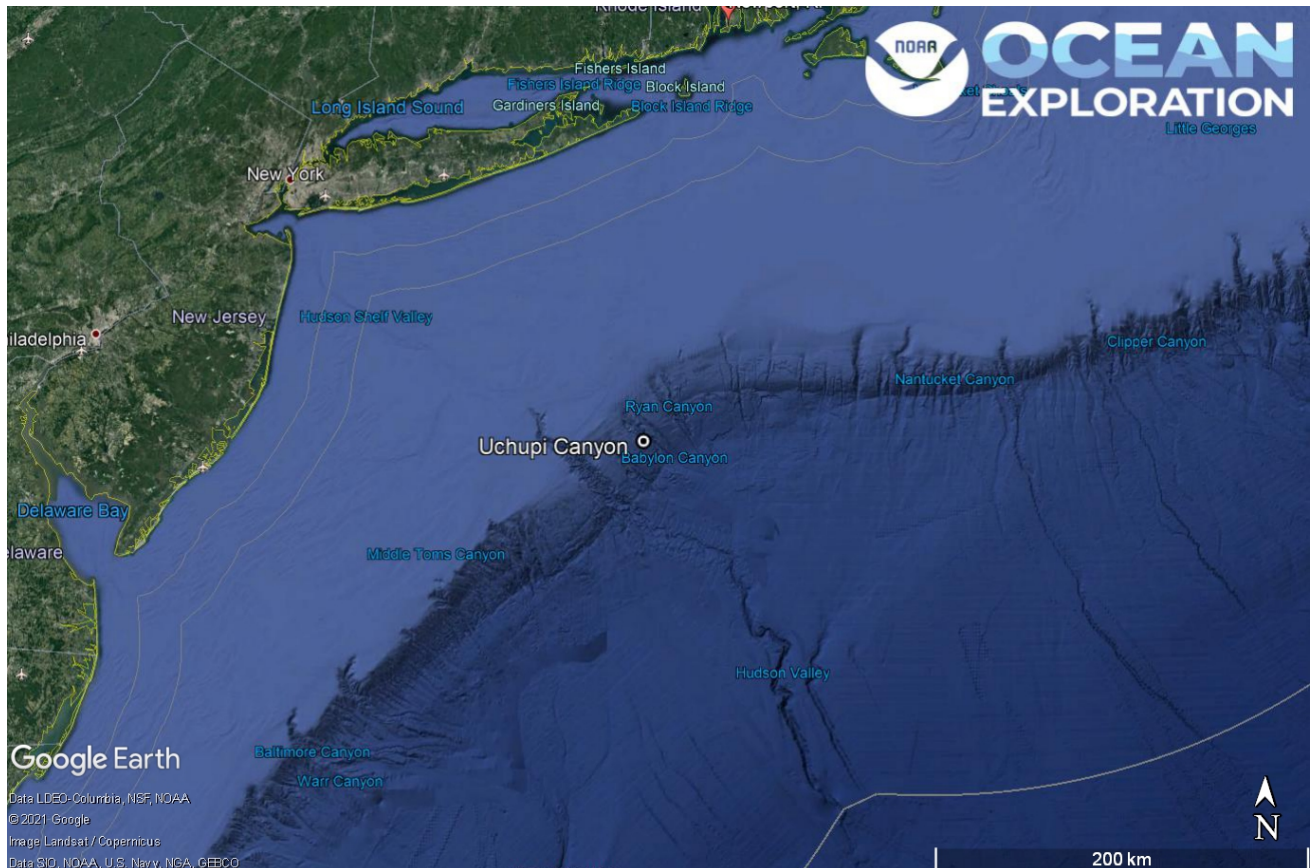


ROV Dive Summary, EX-21-03, Dive 10, June 25, 2021

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

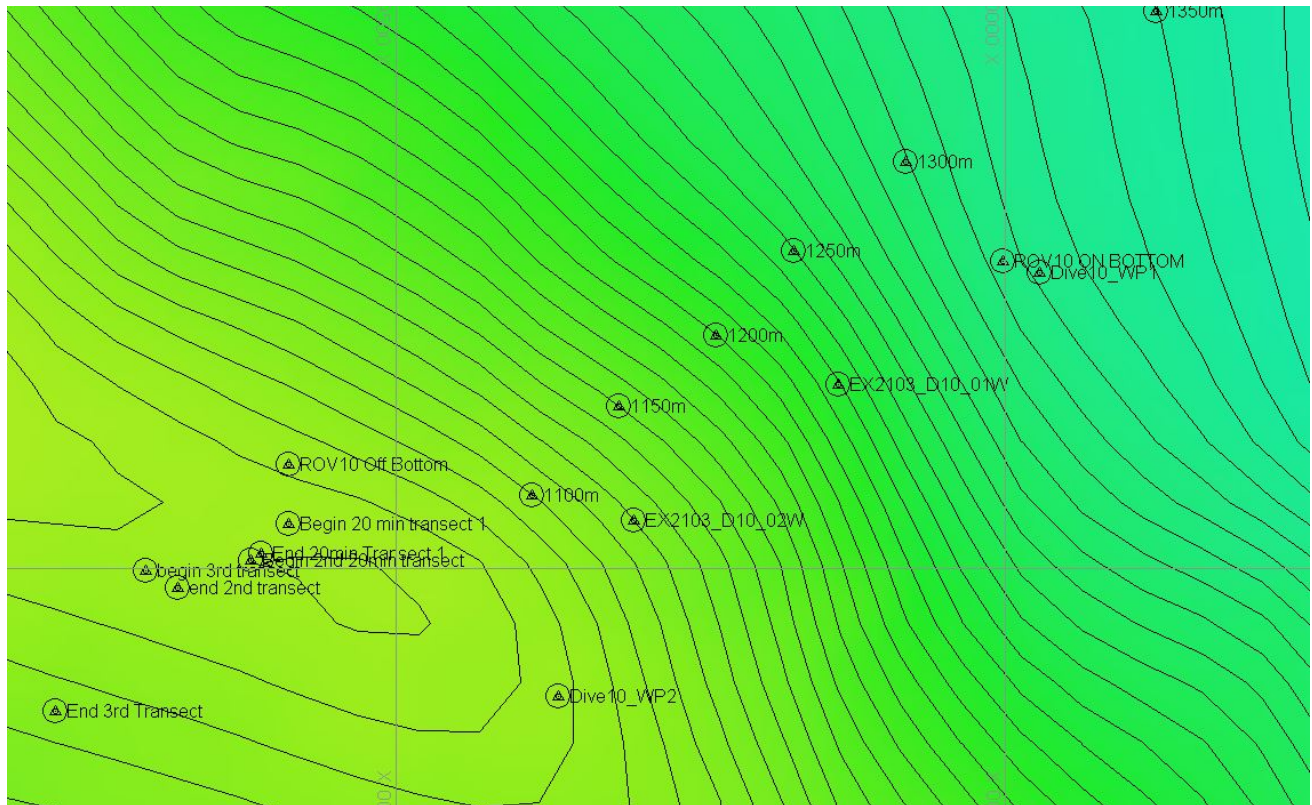
Dive Purpose	<p>The tenth engineering dive of the ROV Shakedown. Primary objectives include pilot training, testing new motors, motor controllers, lights, cameras, and hydraulic systems on the ROVs.</p> <p>Secondary objectives include exploring the central area of Uchupi Canyon and collecting characteristic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

	<p>End: 19:38:07 39.54030960599953 ; -71.80067574250059</p> <p>Duration: 0:20:27</p> <p>Depth: 450.0 m</p> <p>Transect 3</p> <p>Start: 19:46:50 39.54042800137336 ; -71.80098799896996</p> <p>End: 20:09:08 39.539371493922964 ; -71.80180700486164</p> <p>Duration: 0:22:18</p> <p>Depth: 375.0 m</p>
Dive Description	<p>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.</p> <p>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 lanternfish. The low light camera was used to attempt to see bioluminescence. No bioluminescence was observed.</p>
Notable Observations	
Community and habitat observations	<p>Corals and Sponges - Present Chemosynthetic Community - Absent High biodiversity Community - Absent Active Seep or Vent - Absent Extinct Seep or Vent - Absent Hydrates - Absent</p>
CMECS Feature Type(s)	Submarine Canyon, Slope
SeaTube Link (science)	https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=2233

Equipment Deployed

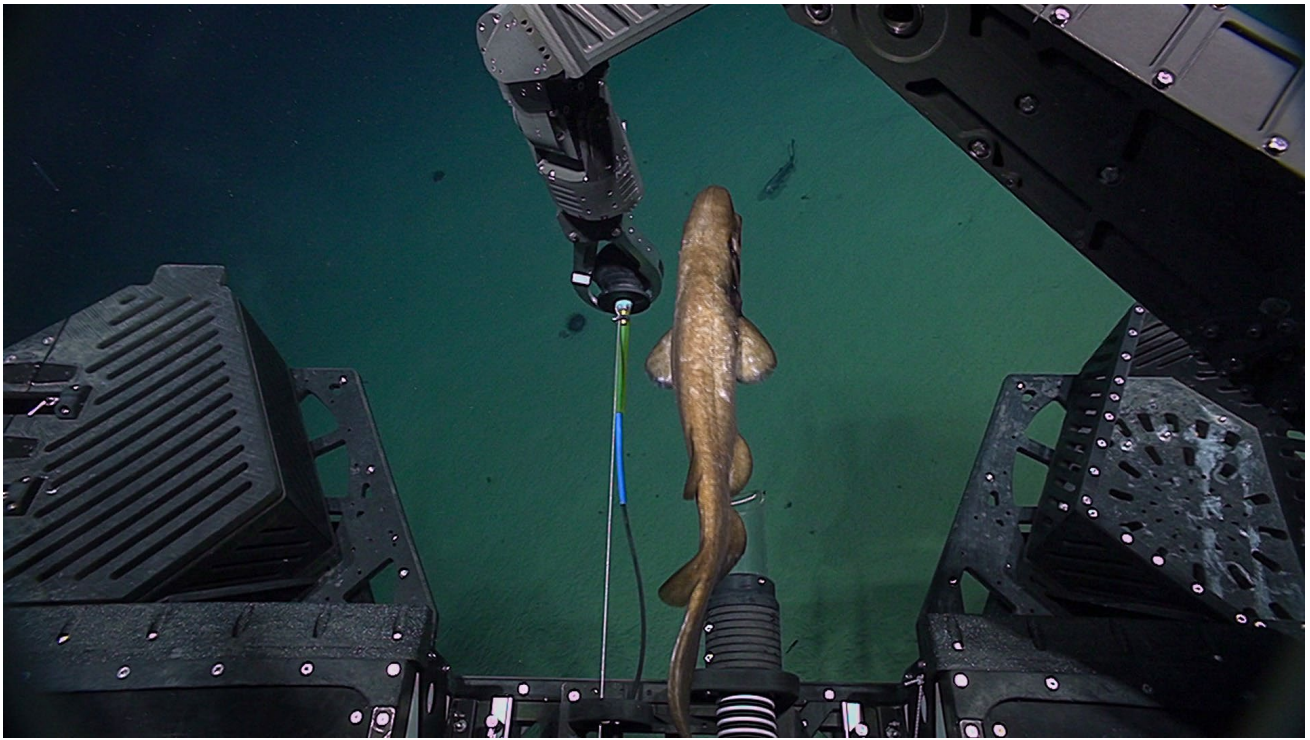
ROV	<i>Deep Discoverer</i>
Camera Platform	<i>Seirios</i>
ROV Measurements	The following ROV measurements, data streams and equipment are used on each ROV deployment: CTD, depth, scanning sonar, USBL position, altitude, heading, attitude, high-resolution cameras, low resolution cameras, manipulator arms, 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)

Name	Email	Affiliation
Quinn Girasek	quinn.girasek@noaa.gov	NOAA Ocean Exploration
Allen Collins	allen.collins@noaa.gov	NOAA & NMNH
Nick Beaseo	nickbezio@gmail.com	University of Maryland
Rene Martin	rpmartin@ku.edu	Kansas University
Michael Vecchione	vecchiom@si.edu	NOAA & NMNH
Steve Haddock	haddock@mbari.org	MBARI
Dhugal Lindsay	dhugal@jamstec.go.jp	JAMSTEC
Kelsey Viator	kviator2000@gmail.com	University of Louisiana at Lafayette

Please direct inquiries to:

NOAA Office of Ocean Exploration & Research
1315 East-West Highway, SSMC3 RM 10210
Silver Spring, MD 20910
oceanexplorer@noaa.gov

