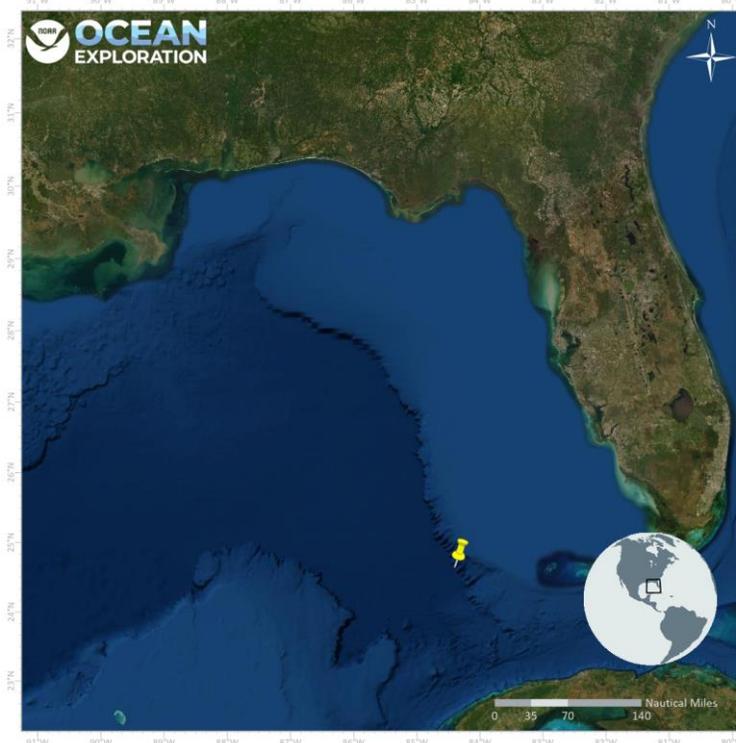


# ROV Dive Summary, EX-22-01, Dive 06, March 01, 2022

## General Location Map



## Dive Information

Site Name	Southernmost Canyon
General Area Descriptor	Straits of Florida
Science Team Leads	Karl McLetchie, Anna Lienesch
Expedition Coordinator	Kimberly Galvez
ROV Dive Supervisor	Chris Ritter
Sample Data Manager	Anna Lienesch
Mapping Lead	Sam Candio
Dive Purpose	Engineering focus
Was the dive restricted for	No

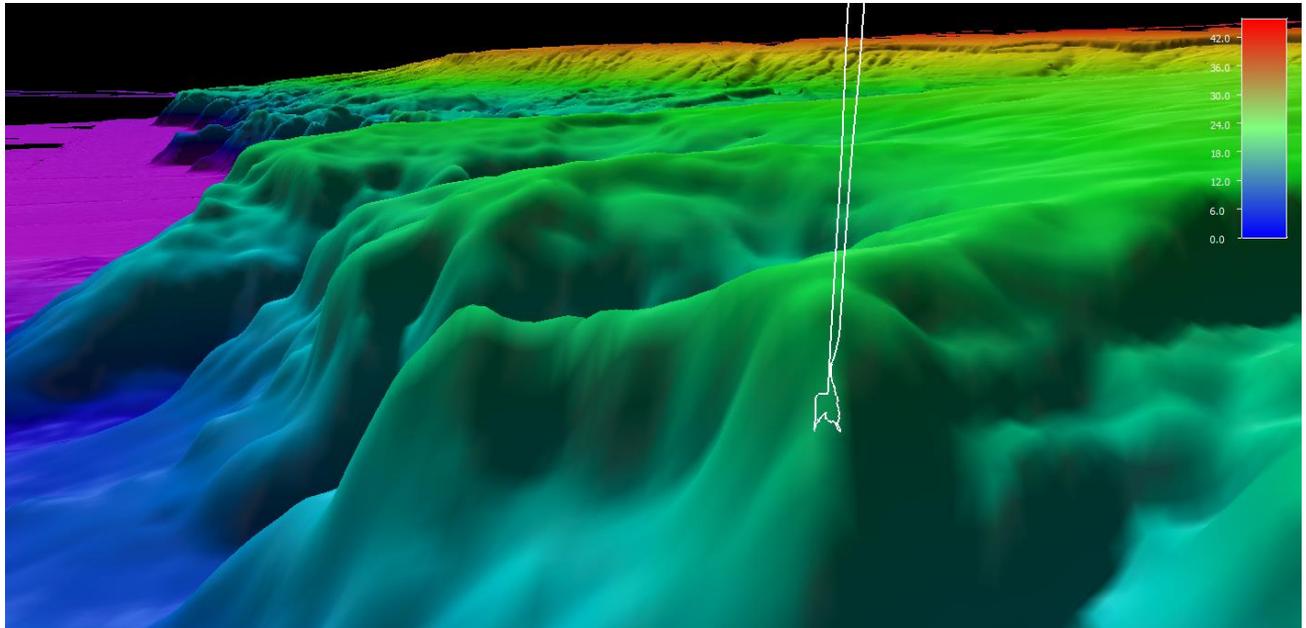


Dive Description	<p>The ROV descended on the flank of a canyon with unconsolidated carbonate sediment. The canyon has boulder and rock debris, all coated in FeMn crust. Various species of glass sponges were seen throughout the dive (some dead and some alive). Corals were also seen: primnoids, bamboo corals, and bubble gum corals. Holothurians were also seen throughout the dive and various fish (likely cusk eel).</p> <p>Near the end of the dive, we got off bottom with the intent of including final midwater objectives testing the bioluminescence agitator and low light camera within the deep scattering layer. Bioluminescence was observed on multiple occasions throughout this transect.</p>
Notable Observations	Primnoids, bamboo corals, and bubble gum corals were seen. Bioluminescence was observed on multiple occasions throughout the midwater section.
Community and habitat observations	<p>Corals and Sponges - Present</p> <p>Chemosynthetic Community - Absent</p> <p>High biodiversity Community - Present</p> <p>Active Seep or Vent - Absent</p> <p>Extinct Seep or Vent - Absent</p> <p>Hydrates - Absent</p>
CMECS Feature Type(s)	Limestone canyons, unconsolidated carbonate sediment
SeaTube Link (science annotation system)	<a href="https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&amp;resourceId=5940">https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&amp;resourceId=5940</a>

## Equipment Deployed

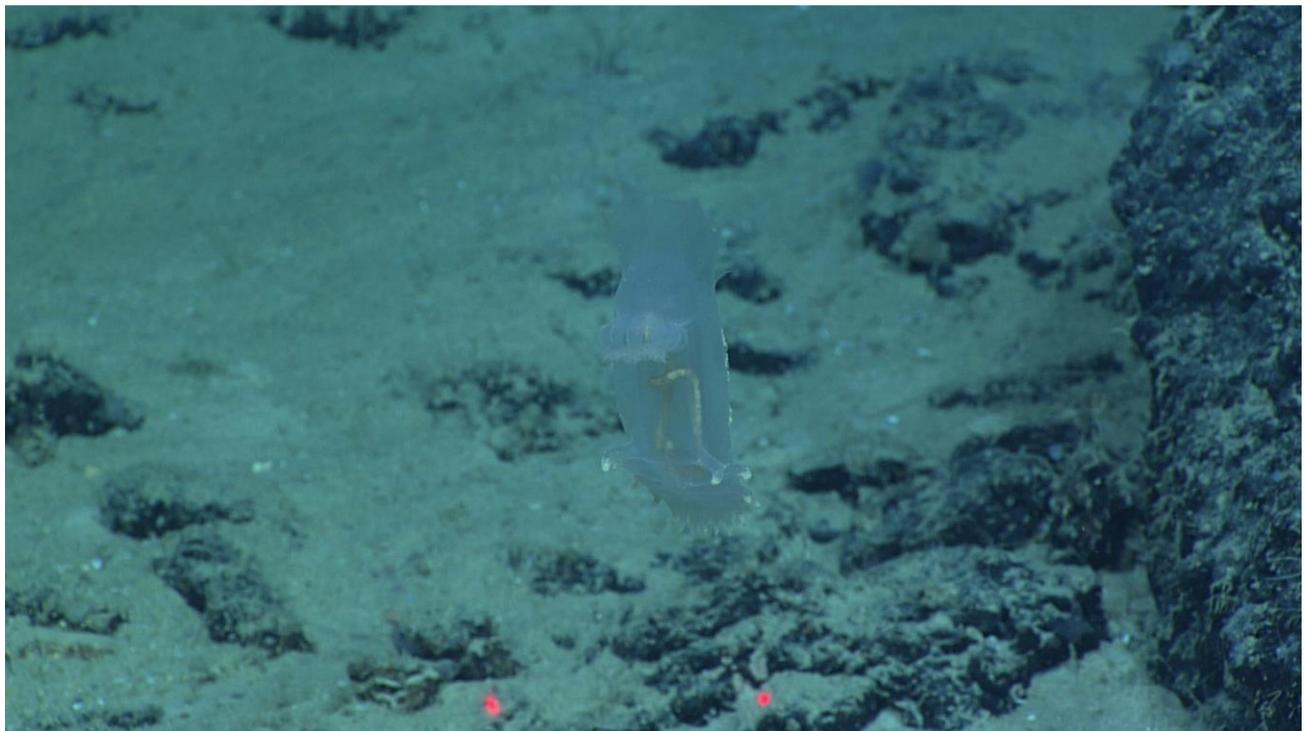
ROV	<i>Deep Discoverer</i>
Camera Platform	<i>Seirios</i>
ROV Measurements	The following ROV measurements, data streams and equipment are used on each ROV deployment: CTD, depth, scanning sonar, USBL position, altitude, heading, attitude, high-resolution cameras, low resolution cameras, manipulator arms, suction sampler, sample drawers and thrusters. The section below notes if any of these sensors were malfunctioning or not operational
Equipment Malfunctions	None.

## Close-up Map of Main Dive Site

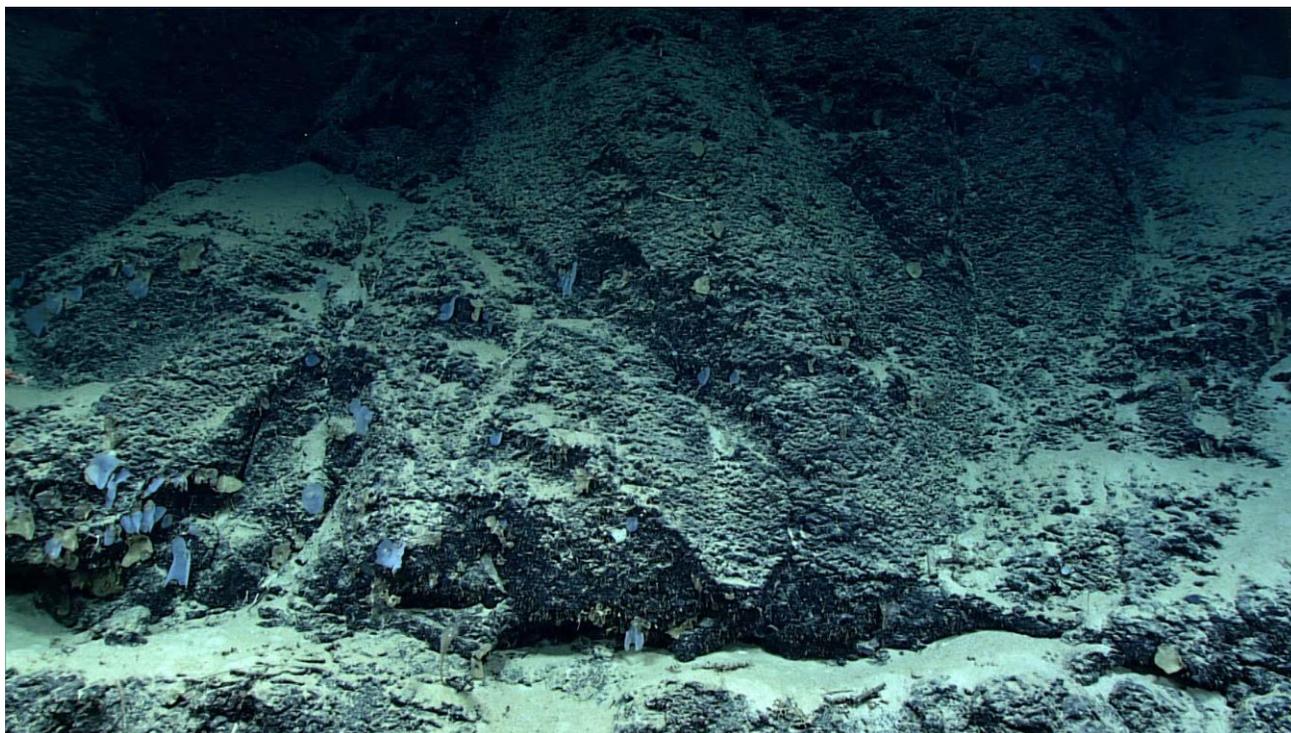


Smoothed ROV dive track in white on the bathymetry, 3x vertical exaggeration, depth in meters.

## Representative Photos of the Dive

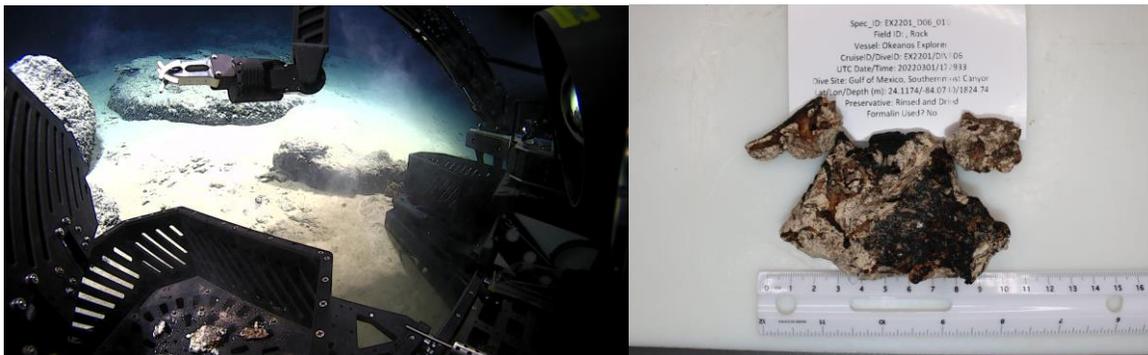


Holothurian observed near the seafloor, swimming into the water column. Transparent in color, digestive system seen through tissue.



Canyon walls and large boulders was the dominant landscape observed throughout the dive. All carbonate material seen have FeMn crust with glass sponges scattered throughout the hard substrate.

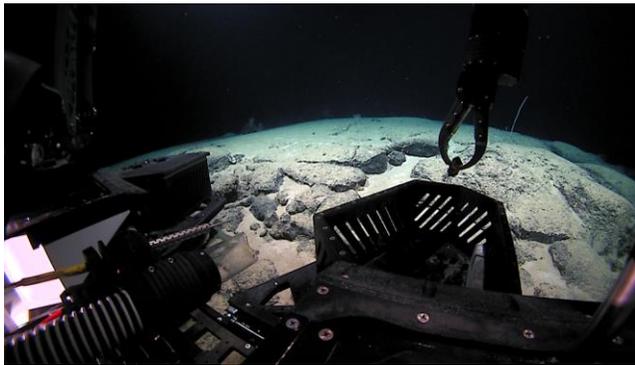
## Samples Collected -



Sample ID	EX2201_D06_01G
Date (UTC)	20220301
Time (UTC)	17:29:33
Depth (m)	1824.73999
Latitude (decimal degrees)	24.11739349

Longitude (decimal degrees)	-84.07403564
Temp. (°C)	4.31099987
Field ID(s)	Rock
Comments	FeMn crusting, partially cemented carbonate sediment. Kim licked the rock, said fine to medium coarse grain. Worm tubes on outside. In 3 big pieces. 0.122Kg

Associates Sample ID	Field Identification	Count
N/A	N/A	N/A



Sample ID	EX2201_D06_03G
Date (UTC)	20220301
Time (UTC)	20:43:46
Depth (m)	1744.581055
Latitude (decimal degrees)	24.11875916
Longitude (decimal degrees)	-84.0734787
Temp. (°C)	4.316999912
Field ID(s)	Rock
Comments	FeMn crusted. Cemented limestone, worm tubes, rusting oxidation present. 0.129Kg

Associates Sample ID	Field Identification	Count
N/A	N/A	N/A

## Niskin Sampling Summary

Sample ID	EX2201_D06_02W
Date (UTC)	20220301
Time (UTC)	17:31:18
Depth (m)	1823.744
Latitude (decimal degrees)	24.117418
Longitude (decimal degrees)	-84.074039
Bottle number	NISKIN 1
Temperature (°C)	4.31044
Dissolved Oxygen (ml/L)	4.703076
Treatment	Longmire's Buffer Solution

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

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