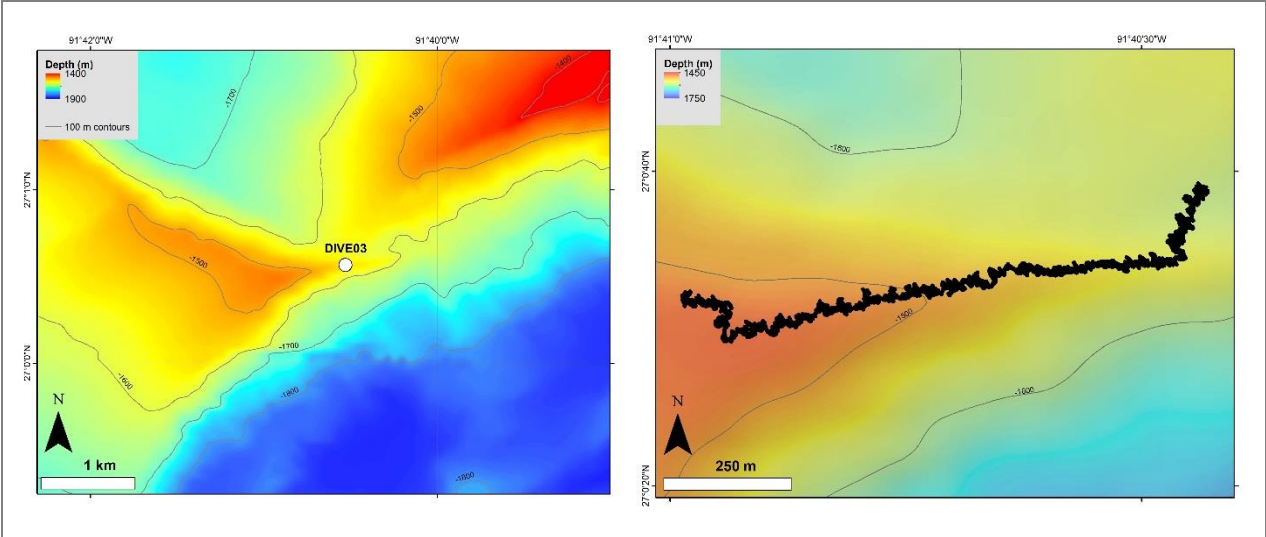


Okeanos Explorer ROV Dive Summary

Dive Information	
General Location Map	
General Area Descriptor	Gulf of Mexico
Site Name	Unnamed Ridge in GC973
Science Team Leads	Daniel Wagner (Biology) Adam Skarke (Geology)
Expedition Coordinator	Nikolai Pawlenko
ROV Dive Supervisor	Karl McLetchie
Mapping Lead	Mike White
ROV Dive Name	
Cruise	EX1803
Dive Number	DIVE03
Equipment Deployed	
ROV	Deep Discoverer
Camera Platform	Seirios

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Purpose of the Dive	Dive 3 targeted GC973, an area of the Western Gulf of Mexico that has never before been explored using deep-sea submersibles. Specifically, Dive 3 targeted an unnamed ridge in GC973, in hopes of finding exposed substrate and associated biological communities. The closest historical dives to the site, four 2010 surveys by HOV <i>Alvin</i> , were all conducted over 35 km to the east in Orcas Basin. Therefore, this dive was highly exploratory in nature with its main purpose being to explore the ridge for deep-sea corals, sponges, and associated fauna. The target start point of the dive was a flat area at 1584 m. The ROV would then move south up a ~15° slope until reaching a depth of ~1560 m. At this point, the ROV would move west parallel to the ridge exploring the ridge for biological communities.	
Description of the Dive	<p>The ROV reached the bottom on a heavily-sedimented area at a depth of 1565 m at 14:56 UTC. A plastic bag with two anemones growing on it were observed close to the landing site. After reaching the bottom, the ROV transited to the south-southeast, moving up the flank of a ridge. Upon reaching the crest of the ridge at approximately 1550 m the ROV followed it to the west, reaching the ridge's maximum elevation at approximately 1460 m. The ROV explored the top of the ridge and then moved briefly to the west-northwest along a slope, before the dive concluded at 20:44 UTC. Lower portions of the ridge crest exhibited linear sediment ripples indicating persistent current movement approximately perpendicular to the ridge axis. This is consistent with the observations of the ROV pilot, which indicated bottom currents moving to the northwest at approximately 0.25 knots during the dive. For the entirety of the dive, the seafloor was characterized by continuous fine-grained sediment with periodic burrows.</p> <p>The most commonly observed animals during the dive were a brown ceriantharian, <i>Nematocarcinus ensifer</i> shrimp, holothurians, the halosaurid <i>Aldrovandia gracilis</i>, and the tripod fishes <i>Bathypterois phenax</i> and <i>Ipnots murrayi</i>. Other species observed during the dive included the skate <i>Fenestraja</i> sp., the cusk eel <i>Cataetyx laticeps</i>, the cusk eel <i>Dicrolene</i> sp., and the red crab <i>Chaceon quiquedens</i>. Patches of <i>Sargassum</i> seaweed, some with bryozoans growing on them, were also observed. A single pennatulacean and a single sponge were also observed, the latter of which was unattached and tumbling on the seafloor. Multiple ctenophores were observed in the water column immediately above the bed during the dive.</p>	
Notable Observations	<i>[Can include number of communities, notable collections or observations, high density communities, etc.]</i>	
Community Presence/Absence (community is defined as more than two species)	<input type="checkbox"/> Corals and Sponges Present <input type="checkbox"/> Chemosynthetic Community Present <input type="checkbox"/> High biodiversity Community Present	<input type="checkbox"/> Active Seep or Vent <input type="checkbox"/> Extinct Seep or Vent <input type="checkbox"/> Hydrates Present
Overall Map of the ROV Dive Area	Close-up Map of Main Dive Site	





Representative Photos of the Dive



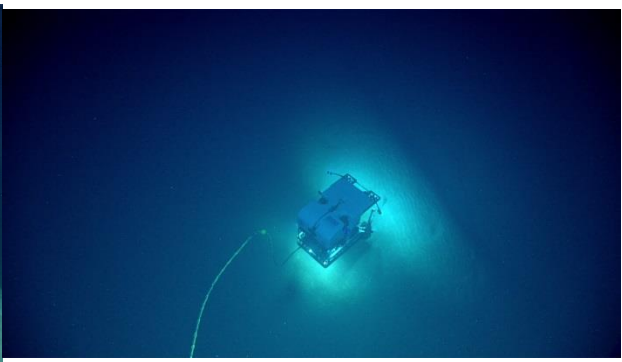
Ctenophore with its tentacles fully expanded.



Holothurian feeding on soft sediment.



Sand ripples parallel to ridge indicating predominant current direction.



ROV *Deep Discoverer* surveying the seafloor.

Samples Collected

No samples were collected during the dive.

Please direct inquiries to:

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