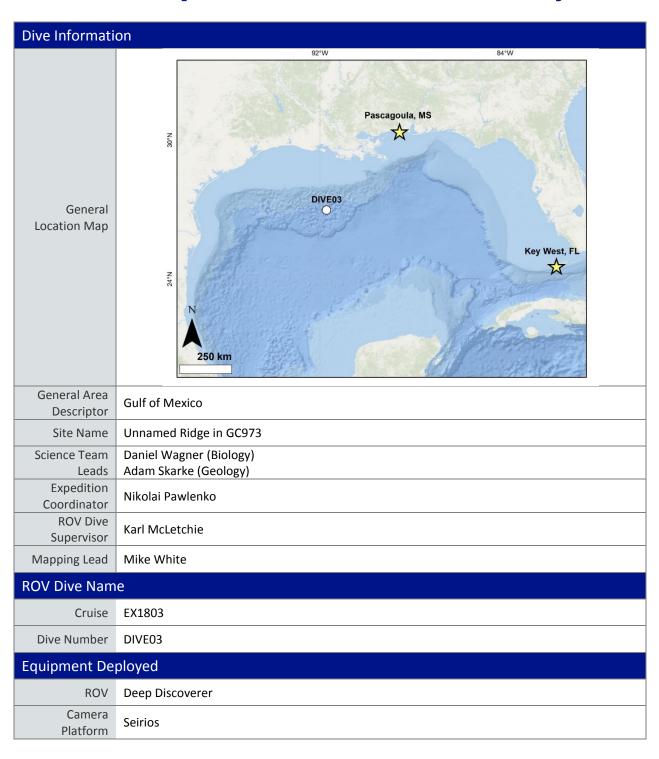


Okeanos Explorer ROV Dive Summary

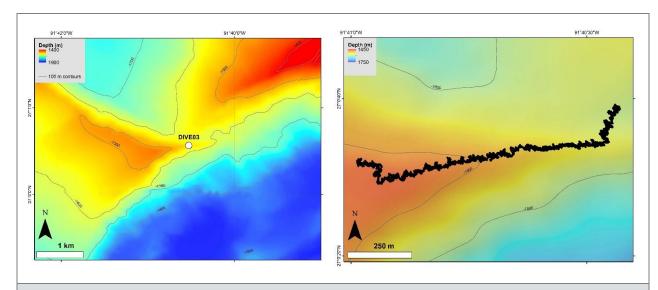


| ROV Measurements | ⊠ CTD | □ Depth | ☑ Altitude | |
|--|---|---|-----------------|--|
| | Scanning Sonar | USBL Position | ☐ Heading | |
| | | ⊠ Roll | ☐ HD Camera 1 | |
| | ⊠ HD Camera 2 | Low Res Cam 1 | ∑ Low Res Cam 2 | |
| | ⊠ Low Res Cam 3 | ⊠ Low Res Cam 4 | ☑ Low Res Cam 5 | |
| Equipment Malfunctions | None | | | |
| ROV Dive Summary (from processed ROV data) | Dive Summary: EX1803_DIVE03 | | | |
| | ^^^^^^^ | | | |
| | In Water: | 2018-04-16T13:52:42.0649 27°, 0.527' N ; 91°, 40.359' | | |
| | On Bottom: | Bottom: 2018-04-16T14:56:47.602954 27°, 0.65' N ; 91°, 40.439' W | | |
| | Off Bottom: | 2018-04-16T20:44:08.069474 27°, 0.516' N ; 91°, 40.983' W | | |
| | Out Water: | 2018-04-16T21:36:19.1479 27°, 0.915' N ; 91°, 41.078' | | |
| | Dive duration: | 7:43:37 | | |
| | Bottom Time: | 5:47:20 | | |
| | Max. depth: | 1574.0 m | | |
| Special Notes | | | | |
| Scientists Involved (please provide name, location, affiliation, email) | Daniel Wagner, NOAA/NCCOS, daniel.wagner@noaa.gov Diva Amon, Natural History Museum, London, divaamon@gmail.com Steve Auscavitch, Temple University, steven.auscavitch@temple.edu Rachel Bassett, NOAA, rachel.bassett@noaa.gov Robert, Carney Oceanography and Marine Sciences, LSU, rcarne1@lsu.edu Matt Dornback, NOAA, matt.dornback@noaa.gov Erin, Easton, ESMOI, erineeaston@gmail.com Mike Ford, NOAA Fisheries, michael.ford@noaa.gov Scott France, University of Louisiana at Lafayette, france@louisiana.edu Lauren Jackson, NCEI-Stennis, Lauren.Jackson@noaa.gov Paul Larson, Florida Fish and Wildlife Conservation Commission, paul.larson@myfwc.com Asako Matsumoto, Chiba Institute of Technology, amatsu@gorgonian.jp George Matsumoto, MBARI, mage@mbari.org Megan McCuller, Southern Maine Community College, mccullermi@gmail.com Robert McGuinn, NOAA, Robert.McGuinn@noaa.gov Colleen Peters, ISC, colleenpeters@my.uri.edu Shirley Pomponi, Harbor Branch Oceanographic Institute at FAU, SPomponi@fau.edu Zach Proux, University of Charleston, Prouxzs@g.cofc.edu Carolyn Ruppel, USGS, cruppel@usgs.gov Enrique Salgado, NOAA, enrique.salgado@noaa.gov William Shedd, BOEM, william.shedd@boem.gov Andrew Shuler, NOAA/JHT, inc., andrew.shuler@noaa.gov | | | |

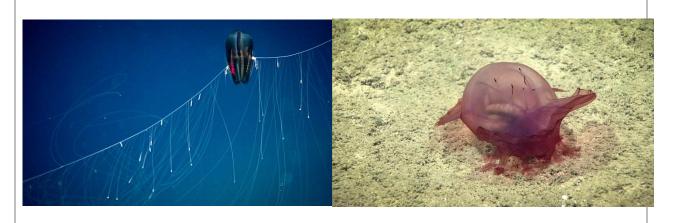


| | Adam Skarke, Mississippi State University, adam.skarke@msstate.edu Michael Vecchione, SI, vecchiom@si.edu Mike White, NOAA/OER, michael.white@noaa.gov Zach Proux, College of Charleston, Prouxzs@g.cofc.edu Amy Bowman, NOAA/OER,amy.bowman@noaa.gov | | | |
|---|--|---|--|--|
| Purpose of the Dive | 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 | 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. The most commonly observed animals during the dive were a brown ceriantharian, Nematocarcinus ensifer shrimp, holothurians, the halosaurid Aldrovandia gracilis, and the tripod fishes Bathypterois phenax and Ipnops murrayi. Other species observed during the dive included the skate Fenestraja sp., the cusk eel Cataetyx laticeps, the cusk eel Dicrolene sp., and the red crab Chaceon quiquedens. Patches of Sargassum 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. | | | |
| Notable Observations | [Can include number of communities, notable collections or observations, high density communities, etc.] | | | |
| Community Presence/ Absence (community is defined as more than two species) | ☐ Corals and Sponges Present ☐ Chemosynthetic Community Present ☐ High biodiversity Community Present | ☐ Active Seep or Vent ☐ Extinct Seep or Vent ☐ Hydrates Present | | |
| Overall Map of th | e ROV Dive Area Close | e-up Map of Main Dive Site | | |



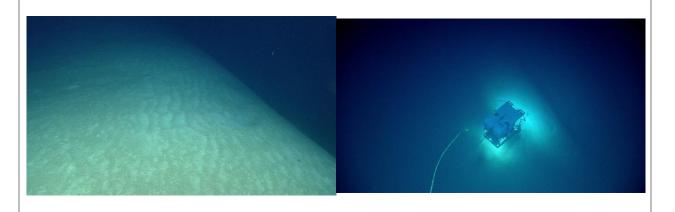


Representative Photos of the Dive



Ctenophore with its tentacles fully expanded.

 $\label{thm:continuous} \mbox{Holothurian feeding on soft sediment.}$



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:

NOAA Office of Ocean Exploration & Research 1315 East-West Highway (SSMC3 10th Floor) Silver Spring, MD 20910 (301) 734-1014

