

# OKEANOS EXPLORER ROV DIVE FORM

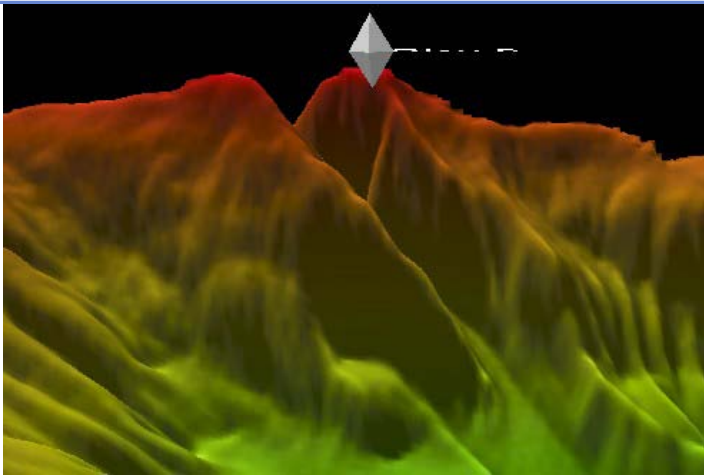
|                                                                                      |                                                                                         |                                                   |   |        |                                                                                     |     |  |  |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------|---|--------|-------------------------------------------------------------------------------------|-----|--|--|
| <b>Site Name</b>                                                                     | Santa Cruz Canyon                                                                       |                                                   |   |        |  |     |  |  |
| <b>ROV Lead</b>                                                                      | Dave Lovalvo                                                                            |                                                   |   |        |                                                                                     |     |  |  |
| <b>General Area Descriptor</b>                                                       | 6 km South of Santa Cruz Island, Channel Islands, CA                                    |                                                   |   |        |                                                                                     |     |  |  |
| <b>UTC Date &amp; Time</b>                                                           | Deployment                                                                              | 4/22/2011 16:17h                                  |   |        |                                                                                     |     |  |  |
|                                                                                      | Recovery                                                                                | 4/22/2011 23:19h                                  |   |        |                                                                                     |     |  |  |
| <b>Bottom Time [HH:MM]</b>                                                           | 5:21                                                                                    |                                                   |   |        |                                                                                     |     |  |  |
| <b>Landing Time &amp; Location</b>                                                   | UTC Time                                                                                | 17:28                                             |   |        | Depth [m]                                                                           | 786 |  |  |
|                                                                                      | Latitude                                                                                | 33                                                | ° | 54.631 | '                                                                                   | N   |  |  |
|                                                                                      | Longitude                                                                               | 119                                               | ° | 47.930 | '                                                                                   | W   |  |  |
| <b>Off Bottom Time &amp; Location</b>                                                | UTC Time                                                                                | 22:49                                             |   |        | Depth [m]                                                                           | 425 |  |  |
|                                                                                      | Latitude                                                                                | 33                                                | ° | 54.473 | '                                                                                   | N   |  |  |
|                                                                                      | Longitude                                                                               | 119                                               | ° | 48.400 | '                                                                                   | W   |  |  |
| <b>ROV Dive Name</b>                                                                 | Cruise Season                                                                           | EX1102                                            |   |        | Leg                                                                                 | -   |  |  |
|                                                                                      | Dive Number                                                                             | ROV03                                             |   |        |                                                                                     |     |  |  |
| <b>Equipment Deployed</b>                                                            | ROV:                                                                                    | Little Hercules                                   |   |        |                                                                                     |     |  |  |
|                                                                                      | Camera Platform:                                                                        | Seirios                                           |   |        |                                                                                     |     |  |  |
| <b>ROV Measurements</b>                                                              | <input checked="" type="checkbox"/> CTD                                                 | <input checked="" type="checkbox"/> Depth         |   |        | <input checked="" type="checkbox"/> Altitude                                        |     |  |  |
|                                                                                      | <input checked="" type="checkbox"/> Scanning Sonar                                      | <input checked="" type="checkbox"/> USBL Position |   |        | <input checked="" type="checkbox"/> Heading                                         |     |  |  |
|                                                                                      | <input checked="" type="checkbox"/> Pitch                                               | <input checked="" type="checkbox"/> Roll          |   |        | <input checked="" type="checkbox"/> HD Camera                                       |     |  |  |
|                                                                                      | <input checked="" type="checkbox"/> Low Res Cam 1                                       | <input checked="" type="checkbox"/> Low Res Cam 2 |   |        |                                                                                     |     |  |  |
| <b>Equipment Malfunctions</b>                                                        | None                                                                                    |                                                   |   |        |                                                                                     |     |  |  |
| <b>Special Notes</b>                                                                 | Click here to enter text.                                                               |                                                   |   |        |                                                                                     |     |  |  |
| <b>Scientists Involved</b><br>(please provide name / location / affiliation / email) | Dr. Steve Katz, EX, CINMS, <a href="mailto:Steve.Katz@noaa.gov">Steve.Katz@noaa.gov</a> |                                                   |   |        |                                                                                     |     |  |  |
| <b>Purpose of the Dive:</b> ROV Shakedown – this was an engineering dive.            |                                                                                         |                                                   |   |        |                                                                                     |     |  |  |

### Description of the Dive:

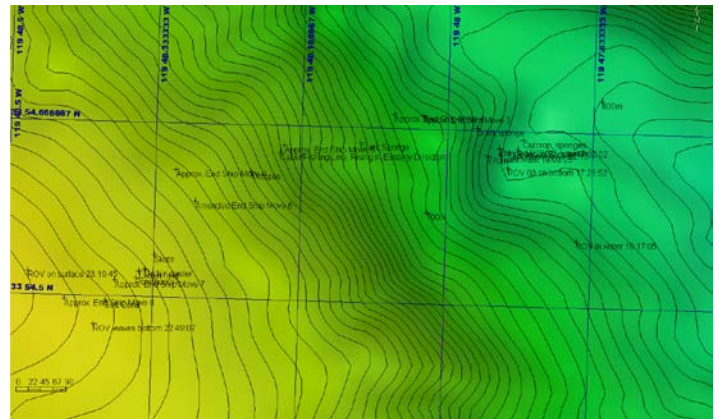
This dive started at the bottom of the Gull Island submarine canyon on the South side of Santa Cruz Island. The dive began on the floor of the canyon at approximately 800m, which is a sedimented soft bottom, and then progressed up the west wall of the canyon, which is steep rock walls, ending at 425m deep. In addition to transiting across a wide range of relief, the dive crossed the boundary of the Gull Island Federal Marine Protected Area (MPA). It was noteworthy that immediately adjacent to the MPA boundary near the beginning of the dive, images were collected documenting the presence of trawl marks on the bottom and numerous dead scallop shells. The portion of the dive that progressed up the canyon wall revealed an unexpectedly high density and diversity of benthic invertebrate fauna. This was our first encounter with really large, cold water sponges; especially impressive were the goiter sponges (*Heterochone calyx*).

These deep habitats are well below the photic zone, and as such almost no one down here is making their own food – but they are relying on sinking nutrition from above and recycling what is already at depth. This has fed the expectation that life in the deep water is sparse. This dive failed to meet that expectation spectacularly; the hard bottom habitat showed as high a productivity as local diver-accessible habitat.

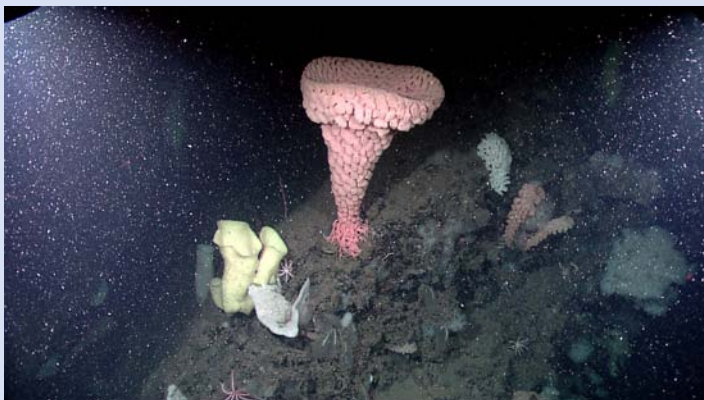
Overall Map of ROV Dive Area



Close-up Map of Main Dive Site



### Representative Photos of the Dive



EX1102\_IMG\_20110422T190725Z\_ROVHD\_PINK\_SPONG\_FLYBY

Rock outcrops encountered during the dive were covered in diverse invertebrate fauna, predominantly sponges, soft corals, large light bulb tunicates and occasional crinoids.



EX1102\_IMG\_20110422T231954Z\_ROVHD\_SOFT\_CORAL

The seafloor was predominantly covered in heavy sediment with few occasional outcrops hosting sessile organisms. These small rocks hosted small sponges and sea anemones (seen here).

Please direct inquiries to:

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