Okeanos Explorer ROV Dive Summary

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| **Site Name** | | Ellis Seamount | | | | F:\OKEANOS EXPLORER\2015 CAPSTONE Planning\Web Content\Mission Intro & Plan\MonumentsOverview2(1).jpg | |
| **ROV Lead/Expedition Coordinator** | | Brian Bingham  Kelley Elliott | | | |  | |
| **Science Team Leads** | | Frank Parrish (Biology)  Chris Kelley (Biology) | | | |  | |
| **General Area Descriptor** | | Main Hawaiian Islands –  Geologists Seamounts | | | |  | |
| **ROV Dive Name** | | Cruise Season | | Leg | | | Dive Number |
|  | | EX1504 | | 3 | | | DIVE06 |
| **Equipment Deployed** | | ROV: | | Deep Discoverer | | | |
|  | | Camera Platform: | | Seirios | | | |
| **ROV Measurements** | | CTD | | Depth | | | Altitude |
|  | | Scanning Sonar | | USBL Position | | | Heading |
|  | | Pitch | | 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 2 |
| **Equipment Malfunctions** | |  | | | | | |
| **ROV Dive Summary**  **(From processed ROV data)** | | Dive Summary: EX1504L3\_DIVE06  ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^  In Water: 2015-09-02T18:25:13.234000  19°, 14.075' N ; 157°, 36.733' W  Out Water: 2015-09-03T01:29:03.343000  19°, 13.179' N ; 157°, 37.081' W  Off Bottom: 2015-09-03T00:10:00.031000  19°, 13.642' N ; 157°, 36.956' W  On Bottom: 2015-09-02T19:39:38.812000  19°, 13.889' N ; 157°, 36.712' W  Dive duration: 7:3:50  Bottom Time: 4:30:21  Max. depth: 2153.1 m | | | | | |
| **Special Notes** | |  | | | | | |
| **Scientists Involved**  ***(please provide name / location / affiliation / email)*** | | Frank Parrish, EX, PIFSC PSD, Frank.Parrish@noaa.gov  Chris Kelley, EX, UH, [ckelley@hawaii.edu](mailto:ckelley@hawaii.edu)  Amy Baco-Taylor, FL, FSU, [abacotaylor@fsu.edu](mailto:abacotaylor@fsu.edu)  Asako Matsumoto, Japan, CIT, [amatsu@gorgonian.jp](mailto:amatsu@gorgonian.jp)  Chris Mah, DC, SI, mahch@si.edu  Nicole Morgan, FL, FSU, nbmorgan11@gmail.com  Scott France, LA, ULL, france@louisiana.edu  Brendan Roark, TX, TAMU, [broark@geos.tamu.edu](mailto:broark@geos.tamu.edu)  Michael Garcia, UH ECC, UH, [mogarcia@hawaii.edu](mailto:mogarcia@hawaii.edu)  Bruce Mundy, IRC ECC, PIFSC, bruce.mundy@noaa.gov  Daniel Warren, TX, C&C Technologies, [dan.warren@cctechnol.com](mailto:dan.warren@cctechnol.com)  Mary Wicksten, TX, TAMU, [wicksten@bio.tamu.edu](mailto:wicksten@bio.tamu.edu)  Steven Auscavitch, PA, Temple, steven.auscavitch@temple.edu  Michael Parke, IRC ECC, PIFSC, Michael.Parke@noaa.gov  John R. Smith, UH ECC, UH, jrsmith@hawaii.edu | | | | | |
| **Purpose of the Dive**  This was the first dive ever conducted on Ellis Seamount located in the Geologist Seamounts group. The objective of this dive was to survey a rift zone ridge coming off the northern end of the seamount for corals and sponges, testing the hypothesis that high density communities can be found on ridge topography. Discovery of high density communities at this dive site will provide valuable information to NOAA’s Deep Sea Coral and Technology Program (DSCTP).The dive plan was to survey the ridge crest at a depth of approximately 2100m. The survey employed the standard methodology of the D2 with the objectives of 1) making observations and collecting video and 2) collecting rock and biological samples. | | | | | | | |
| **Description of the Dive:** | | | | | | | |
| All of the dive objectives were completed. The full planned distance of the dive track was achieved for a total distance of roughly 800 m travel. From beginning to end the dive observed high densities of coral colonies with the most dominant taxa being species of Keratoisis, Isidella, and Acanella which was present as full size mature colonies throughout the survey track. Basalt rocks were collected on the flank of the ridge at the start of the dive and on the crest near the end of the dive. One bamboo specimen was collected inadvertently by the skid of the ROV and discovered when the vehicle was brought on deck.  **Animals observed during the dive are listed below.**  **Cnidarians:**  Keratoisis sp  Isadella sp  Isadella trichotoma  Acanella weberi  Eknomisis sp  Metallogorgia melanotrichos  Pleurogorgia pinnata  Iridigorgia magnaspiralis  Chrysogorgia sp  Primnoid  Isididae unbranched  Anthomastus sp. red  Metallogorgia melanotrichos  Zoanthidae  Bathypathes cf alternate  Stauropathes sp  Unbranched isidid  Pseudoanthomastus steepstrupi  Candidella gigantea  Narella bowersi  Trissopathes sp  Chrysogorgia stellata  **Sponges**  Hexactinellida  Tretopleura sp  Caulophacus (Caulodiscus) sp  Bolosoma sp A and B  Farreidae  Saccocalyx cf pedunculatus  Poliopogon sp  Walteria cf flemmingi  Farrea nr occa erecta  **Echinoderms**  Hippasteria sp  Ophiuroids  Holothurian  Brisinga sp  Evoplosoma forcipifera  **Arthropods**  Nematocarcinus tenuirostris  Uroptychus sp  Chirostylidae  Lebbeus sp  Aristeidae  Red shrimp  **Fishes**  Ophidiidae  Synaphabranchidae Ilyophine  Macrouridae  Trachonurus/Malacocephalus sp  Bassogigas sp  Basozetus sp  Diplopomacantha sp (Bythididae)  **Other**  Polynoid polychaete | | | | | | | |
| **Overall Map of ROV Dive Area** | | | | | **Close-up Map of Main Dive Site** | | |
| **L3-d2-Dive06_bty2.jpg** | | | | | \\192.168.4.200\CruiseData\EX1504L3\Products\ROV\EX1504L3_DIVE06_20150902\EX1504L3_DIVE06_HYPACK_MAP_ZOOM.JPG | | |
| Bathymetry data for the dive site. Planned dive start and end points are shown as green and red dots, respectively. | | | | | Hypack screen grab showing waypoints dropped during actual ROV dive. | | |
| **Representative Photos of the Dive** | | | | | | | |
| **EX1504L3_IMG_20150902T232725Z_ROVHD_COR_AUD_PSD.jpg** | | | | | EX1504L3_IMG_20150902T222530Z_D2_DIVE06_SPEC02GEO_01.jpg | | |
| Dense community of bamboo corals (Isididae) found on the dive site from the beginning to the end of the dive. | | | | | One of the two rock samples obtained during the dive. | | |
| **Samples Collected** | | | | | | | |
| **Sample ID** | D2\_DIVE06\_SPEC01GEO | | | | **EX1504L3_20150902T200846Z_D2_DIVE06_SPEC01GEO_L01.JPG** | | |
| **Date (UTC)** | September 2, 2015 | | | |  | | |
| **Time (UTC)** | 20:08:46 | | | |  | | |
| **Depth (m)** | 2135 | | | |  | | |
| **Temperature (oF)** | 1.98 | | | |  | | |
| **Field ID(s)** | Mn crusted basalt | | | |  | | |
| **Comments** |  | | | | | | |
| **Sample ID** | D2\_DIVE06\_SPEC02GEO | | | | *EX1504L3_20150902T222131Z_D2_DIVE06_SPEC02GEO_L02.JPG* | | |
| **Date (UTC)** | September 2, 2015 | | | |  | | |
| **Time (UTC)** | 22:21:31 | | | |  | | |
| **Depth (m)** | 2125 | | | |  | | |
| **Temperature (oF)** | 1.98 | | | |  | | |
| **Field ID(s)** | Mn crusted basalt | | | |  | | |
| **Comments** |  | | | | | | |
| **Sample ID** | D2\_DIVE06\_SPEC03BIO | | | | *EX1504L3_20150903T002000Z_D2_DIVE06_SPEC03BIO_L02.JPG* | | |
| **Date (UTC)** | September 3, 2015 | | | |  | | |
| **Time (UTC)** | 00:20:00 | | | |  | | |
| **Depth (m)** | 2097-2150 | | | |  | | |
| **Temperature (oF)** | N/A | | | |  | | |
| **Field ID(s)** | Isididae | | | |  | | |
| **Comments** | Specimen was found on the bottom of the ROV after recovery. Time of collection was therefore considered to be the time off bottom. | | | | | | |
| **Please direct inquiries to:** | | | NOAA Office of Ocean Exploration & Research 1315 East-West Highway (SSMC3 10th Floor)  Silver Spring, MD 20910  (301) 734-1014 | | | | |