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 BinghamKelley 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** | [x]  CTD | [x]  Depth | [x]  Altitude |
|  | [x]  Scanning Sonar | [x]  USBL Position | [x]  Heading |
|  | [x]  Pitch | [x]  Roll | [x]  HD Camera 1 |
|  | [x]  HD Camera 2 | [x]  Low Res Cam 1 | [x]  Low Res Cam 2 |
|  | [x]  Low Res Cam 3 | [x]  Low Res Cam 4 | [x]  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' WOut Water: 2015-09-03T01:29:03.343000 19°, 13.179' N ; 157°, 37.081' WOff Bottom: 2015-09-03T00:10:00.031000 19°, 13.642' N ; 157°, 36.956' WOn Bottom: 2015-09-02T19:39:38.812000 19°, 13.889' N ; 157°, 36.712' WDive duration: 7:3:50Bottom Time: 4:30:21Max. depth: 2153.1 m |
| **Special Notes** |  |
| **Scientists Involved*****(please provide name / location / affiliation / email)*** | Frank Parrish, EX, PIFSC PSD, Frank.Parrish@noaa.govChris Kelley, EX, UH, ckelley@hawaii.eduAmy Baco-Taylor, FL, FSU, abacotaylor@fsu.eduAsako Matsumoto, Japan, CIT, amatsu@gorgonian.jpChris Mah, DC, SI, mahch@si.eduNicole Morgan, FL, FSU, nbmorgan11@gmail.com Scott France, LA, ULL, france@louisiana.eduBrendan Roark, TX, TAMU, broark@geos.tamu.eduMichael Garcia, UH ECC, UH, mogarcia@hawaii.eduBruce Mundy, IRC ECC, PIFSC, bruce.mundy@noaa.gov Daniel Warren, TX, C&C Technologies, dan.warren@cctechnol.comMary Wicksten, TX, TAMU, wicksten@bio.tamu.eduSteven Auscavitch, PA, Temple, steven.auscavitch@temple.eduMichael 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 spIsadella spIsadella trichotomaAcanella weberiEknomisis spMetallogorgia melanotrichosPleurogorgia pinnataIridigorgia magnaspiralisChrysogorgia spPrimnoidIsididae unbranchedAnthomastus sp. redMetallogorgia melanotrichosZoanthidaeBathypathes cf alternateStauropathes spUnbranched isididPseudoanthomastus steepstrupiCandidella giganteaNarella bowersiTrissopathes spChrysogorgia stellata**Sponges**HexactinellidaTretopleura spCaulophacus (Caulodiscus) spBolosoma sp A and BFarreidaeSaccocalyx cf pedunculatusPoliopogon spWalteria cf flemmingiFarrea nr occa erecta**Echinoderms**Hippasteria spOphiuroidsHolothurianBrisinga spEvoplosoma forcipifera**Arthropods**Nematocarcinus tenuirostrisUroptychus spChirostylidaeLebbeus spAristeidaeRed shrimp**Fishes**Ophidiidae Synaphabranchidae IlyophineMacrouridaeTrachonurus/Malacocephalus spBassogigas spBasozetus spDiplopomacantha 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 & Research1315 East-West Highway (SSMC3 10th Floor)Silver Spring, MD 20910(301) 734-1014 |