Okeanos Explorer ROV Dive Summary

|  |  |  |
| --- | --- | --- |
| **Site Name** | McCall 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)Christopher Kelley (Biology) |  |
| **General Area Descriptor** | Main Hawaiian Islands |  |
| **ROV Dive Name** | Cruise Season | Leg | Dive Number |
|  | EX1504 | 3 | DIVE04 |
| **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** | Onshore participants reported frequent transmission problems including periodic loss and freezing of video as well as periodic loss of the chat room and teleconference interface. |
| **ROV Dive Summary****(From processed ROV data)** |  Dive Summary: EX1504L3\_DIVE04^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^In Water: 2015-08-31T18:42:14.156000 N/A ; N/AOut Water: 2015-09-01T02:27:19.453000 18°, 58.959' N ; 157°, 06.310' WOff Bottom: 2015-09-01T00:58:41.500000 18°, 58.616' N ; 157°, 06.651' WOn Bottom: 2015-08-31T20:03:54.390000 18°, 58.983' N ; 157°, 06.705' WDive duration: 7:45:5Bottom Time: 4:54:47Max. depth: 2715.0 m |
| **Special Notes** |  |
| **Scientists Involved*****(please provide name / location / affiliation / email)*** | Frank Parrish, EX, NOAA, 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.eduTina Molodtsova, Portugal, PPSIO, tina@ocean.ruRachel Bassett, SC, DSCRTP, rachel.bassett@noaa.govMeagan Putts, UH ECC, HPU, Mputts@HPU.eduBrendan Roark, TX, TAMU, broark@geos.tamu.eduMichael Garcia, UH ECC, UH, mogarcia@hawaii.eduBruce Mundy, IRC ECC, PIFSC, NOAA, bruce.mundy@noaa.gov  |
| **Purpose of the Dive** This dive was the first ever conducted on McCall Seamount in the group of topographic features referred to as the Geologist Seamounts. The dive surveyed the crest of a sharp ridge that extended north of the seamount at a depth of 2700 m. 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. Nearly the full planned distance of the dive track was achieved. The ridge crest was covered with loose talus and was almost completely barren of animals, which was unexpected. This type of substrate continued throughout the dive except for a couple of small ledges consisting primarily of pillow lavas. Two basalt rocks were collected specifically for geology and one additional rock was collected as part of a coral sample. In total 4 coral samples (a stoloniferous hydrozoan, Stauropathes sp., a primnoid, and a Schizopathes sp?. were collected. **Animals observed during the dive are listed below.****Cnidarians:**Chrysogorgia pinnataPrimnoidIsididae unbranchedKeratoisis spHydrozoan stoloniferousStauropathes sp.Narella dichotomaKeratoisis sp. Schizopathes sp?ActinostolidaeBathypathes sp**Sponges**Hexactinellida various unidentifiedFarrea nr occa erecta?Semperella sp.Caulophacus (oxydiscus) spCaulophacus (Caulodiscus) spRossellidae?Corbitellinae?**Echinoderms**HolothuroideanDeimatidaeUnidentified sea starStalked crinoid HyacrinidaeComatulina crinoidHymenaster spGlyptometra lateralis?**Arthropods**Nematocarcinus tenuirostrisBalanoid or verricid barnaclesUnidentified shrimp**Fishes**Ophidiidae**Other** |
| **Overall Map of ROV Dive Area** | **Close-up Map of Main Dive Site** |
| **L3-d2-Dive04_bty2.jpg** | F:\OKEANOS EXPLORER\2015 CAPSTONE Planning\EX1504 Leg 3 - MHI & Geologists Seamounts\ROV Dive Summaries\Dive4_divetrack_summary.JPG |
| Bathymetry data for the dive site. Planned dive start and end points are shown as green and red dots, respectively. | Close-up showing actual ROV dive track as executed. |
| **Representative Photos of the Dive** |
| **EX1504L3_IMG_20150831T203058Z_D2_DIVE04_SPEC01GEO_01.jpg** | EX1504L3_IMG_20150901T005907Z_D2_DIVE04_SPEC06BIO_01.jpg |
| Collection of a vessiculated basalt sample from the crest of the ridge at the beginning of the dive. The expected thick Mn crusting was not observed at this site. | Collecting of a potential Schizopathes sp at the end of the dive. If the field identification is correct, this is either a new record or new species for Hawaii. |
| **Samples Collected** |
| **Sample ID** | D2\_DIVE04\_SPEC01GEO | **IMG_0430.JPG** |
| **Date (UTC)** | August 31, 2015 |  |
| **Time (UTC)** | 20:27:16 |  |
| **Depth (m)** | 2699 |  |
| **Temperature (oF)** | 1.67 |  |
| **Field ID(s)** | Vessiculated basalt |  |
| **Comments** |  |
| **Sample ID** | D2\_DIVE04\_SPEC02BIO | IMG_0412.JPG |
| **Date (UTC)** | August 31, 2015 |  |
| **Time (UTC)** | 23:40:32 |  |
| **Depth (m)** | 2646 |  |
| **Temperature (oF)** | 1.58 |  |
| **Field ID(s)** | Stauropathes sp. |  |
| **Comments** |  |
| **Sample ID** | D2\_DIVE04\_SPEC03GEO | IMG_0433.JPG |
| **Date (UTC)** | September 1, 2015 |  |
| **Time (UTC)** | 0:05:04 |  |
| **Depth (m)** | 2643 |  |
| **Temperature (oF)** | 1.57 |  |
| **Field ID(s)** | Mn encrusted Basalt sample |  |
| **Comments** |  |
| **Sample ID** | D2\_DIVE04\_SPEC04GEOD2\_DIVE04\_SPEC04GEO\_C01D2\_DIVE04\_SPEC04GEO\_C02 | IMG_0427.JPG |
| **Date (UTC)** | September 1, 2015 |  |
| **Time (UTC)** | 0:23:16 |  |
| **Depth (m)** | 2634 |  |
| **Temperature (oF)** | 1.57 |  |
| **Field ID(s)** | Mn encrusted Basalt sampleHydrozoanPolychaete Worm |  |
| **Comments** |  |
| **Samples Collected** |
| **Sample ID** | D2\_DIVE04\_SPEC05BIO | **IMG_0421.JPG** |
| **Date (UTC)** | September 1, 2015 |  |
| **Time (UTC)** | 0:47:21 |  |
| **Depth (m)** | 2638 |  |
| **Temperature (oF)** | 1.58 |  |
| **Field ID(s)** | PrimnoidOphiuroid |  |
| **Comments** |  |
| **Sample ID** | D2\_DIVE04\_SPEC06BIO | IMG_0419.JPG |
| **Date (UTC)** | September 1, 2015 |  |
| **Time (UTC)** | 0:57:03 |  |
| **Depth (m)** | 2638 |  |
| **Temperature (oF)** | 1.58 |  |
| **Field ID(s)** | Schizopathes sp |  |
| **Comments** |  |
| **Please direct inquiries to:** | NOAA Office of Ocean Exploration & Research1315 East-West Highway (SSMC3 10th Floor)Silver Spring, MD 20910(301) 734-1014 |