Okeanos Explorer ROV Dive Summary

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| **Site Name** | Kona Precious Coral Bed | F:\OKEANOS EXPLORER\2015 CAPSTONE Planning\Web Content\Mission Intro & Plan\MonumentsOverview2(1).jpg |
| **ROV Lead/Expedition Coordinator** | Brian BinghamKelley Elliott |  |
| **Science Team Leads** | Chris Kelley (Biology)Frank Parrish (Biology) |  |
| **General Area Descriptor** | Main Hawaiian Islands |  |
| **ROV Dive Name** | Cruise Season | Leg | Dive Number |
|  | EX1504 | 3 | DIVE02 |
| **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** | Some audio problems were reported by onshore participants. Teleconference was interrupted several times as well. |
| **ROV Dive Summary****(From processed ROV data)** |  Dive Summary: EX1504L3\_DIVE02^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^In Water at: 2015-08-29T19:06:30.125000 19°, 48.194' N ; 156°, 07.643' WOut Water at: 2015-08-30T02:25:52.859000 19°, 48.121' N ; 156°, 07.575' WOff Bottom at: 2015-08-30T02:11:25.218000 19°, 48.094' N ; 156°, 07.560' WOn Bottom at: 2015-08-29T19:24:32.671000 19°, 48.299' N ; 156°, 07.547' WDive duration: 7:19:22Bottom Time: 6:46:52Max. depth: 393.7 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, USMNH, mahch@si.eduMichael Parke, HI, PIFSC, Michael.Parke@noaa.govNicole Morgan, FL, FSU, nbmorgan11@gmail.comScott France, LA, ULL, france@louisiana.eduSteve Auscavitch, PA, Temple, steven.auscavitch@temple.eduTina Molodtsova, Portugal, PPSIO, tina@ocean.ruRachel Bassett, SC, CCEHBR, Rachel.bassett@noaa.govDaniel Wagner, HI, PMNM, daniel.wagner@noaa.gov |
| **Purpose of the Dive** This dive targeted the middle of the Keahole precious coral bed off the Kona Coast of the Big Island of Hawaii. The objectives were to (1) recover an acoustic current meter and three flow meters placed throughout the bed, (2) to make observations on nearby previously marked colonies, and (3) to spend the remaining time exploring the surrounding environment. Most of the Keahole bed is carbonate ledge habitat and this dive was intended to spend much of the dive time working the top edge of the drop off. |
| **Description of the Dive:** |
| All of the dive objectives were completed. The acoustic Doppler current meter and three flow meters were all found and recovered. Colonies of gold coral near these instruments or marked by flower pots at other locations were located and close-up imagery was acquired for comparison to photographs of the colonies taken over 3 years ago. In addition, time remained during the dive to collect two biological specimens, a black coral and a bamboo coral, as well as fossil coral branches.**Animals observed during the dive are listed below.****Cnidarians:**Acanthogorgia sp.Corallium sp.Hemicorallium cf. lauenseIsidella trichotoma?Keratoisis sp. (collected)Lepidisis olapaAcanella dispar?Paracis sp?Plexauridae sp.Callogorgia gilbertiKulamanamana haumeaeLeiopathes annosaTrissopathes pseudotristicha?Chrysopathes sp (collected)Calibelemnon symmetricumPennatula pearceyiHydrodendron gorgonoideStylobates aenaeusSingle polyp scleractinian**Sponges**Regadrella sp**Echinoderms**Stereocidaris hawaiiensisSphaeriocidaris ammophilis**Arthropods**Paromola spSquat lobsterGooseneck barnaclesPlesionika spSympagurus dofleini**Fishes**Chrionema chryseresChlorophthalmus proridensHollardia goslineiOphichthid eelLophioides miacanthusEpigonus glossodontusHoplostethus crassispinusScorpaenidSatyrichthys engycerosSphenanthias sp**Other**Lyrocteis sp (benthic ctenophore) |
| **Overall Map of ROV Dive Area** | **Close-up Map of Main Dive Site** |
| **L3-d2-Dive02_bty.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 the actual ROV dive. |
| **Representative Photos of the Dive** |
| **EX1504L3_IMG_20150829T201956Z_ROVHD_FLOW_METER_COLLECT.jpg** | EX1504L3_IMG_20150829T212349Z_ROVHD_COR_IMAGING_02.jpg |
| Recovery of the Andara ADCP that was placed on the site in 2012. | Gold coral (Kulamanamana haumeae (yellow) in the early stages of colonizing and overgrowing a bamboo coral. |
| **Samples Collected** |
| **Sample ID** | EX1504L3\_D2\_DIVE02\_SPEC01BIO | IMG_0398.JPG |
| **Date (UTC)** | August 30, 2015 |  |
| **Time (UTC)** | 0:50:43 |  |
| **Depth (m)** | 389 |  |
| **Temperature (oF)** | 8.11 |  |
| **Field ID(s)** | Chrysopathes sp |  |
| **Comments** |  |
| **Sample ID** | EX1504L3\_D2\_Dive02\_SPEC02BIO | IMG_0400.JPG |
| **Date (UTC)** | August 30, 2015 |  |
| **Time (UTC)** | 1:43:45 |  |
| **Depth (m)** | 393 |  |
| **Temperature (oF)** | 8.11 |  |
| **Field ID(s)** | Keratoisis sp |  |
| **Comments** |  |
| **Sample ID** | EX1504L3\_D2\_Dive02\_SPEC03GEO | *EX1504L3_20150830T015656Z_D2_DIVE02_SPEC03GEO_L01.JPG* |
| **Date (UTC)** | August 30, 2015 |  |
| **Time (UTC)** | 1:56:56 |  |
| **Depth (m)** | 389 |  |
| **Temperature (oF)** | 8.18 |  |
| **Field ID(s)** | Fossil Coral |  |
| **Comments** |  |
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| **Please direct inquiries to:** | NOAA Office of Ocean Exploration & Research1315 East-West Highway (SSMC3 10th Floor)Silver Spring, MD 20910(301) 734-1014 |