

OKEANOS EXPLORER ROV DIVE FORM

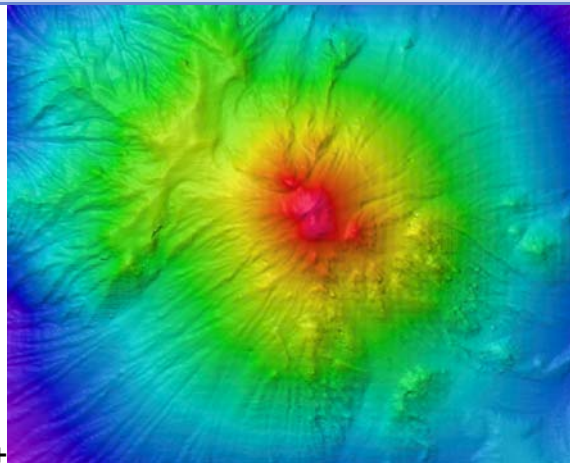
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|---|---|---|---|---|-----------|---|
| Site Name | Site K | | | | |  |
| ROV Lead | Dave Lovalvo | | | | | |
| General Area Descriptor | 150km N of Bitung, Indonesia | | | | | |
| UTC Date & Time | Deployment | 7/22/2010 8:00 PM | | | | |
| | Recovery | 7/23/2010 6:25 AM | | | | |
| Bottom Time [HH:MM] | 08:58 | | | | | |
| Landing Time & Location | UTC Time | 20:45 | | | Depth [m] | 632 |
| | Latitude | 2 | ° | 50.874 | ' | N |
| | Longitude | 124 | ° | 3.928 | ' | E |
| Off Bottom Time & Location | UTC Time | 05:43 | | | Depth [m] | 537 |
| | Latitude | 2 | ° | 50.656 | ' | N |
| | Longitude | 125 | ° | 4.012 | ' | E |
| ROV Dive Name | Cruise Season | Leg | | Dive Number | | |
| | EX1004 | LEG03 | | ROV01 (14) | | |
| Equipment Deployed | ROV: | Little Hercules | | | | |
| | Camera Platform: | Phoenix Camera Platform | | | | |
| ROV Measurements | <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 | | | | |
| Equipment Malfunctions | None | | | | | |
| Special Notes | Broadcast for event in Silver Springs, MD | | | | | |
| Scientists Involved <i>(please provide name / location / affiliation / email)</i> | <p>Santiago Herrera (on-board Science Lead), EX, WHOI, sherrera@whoi.edu Rainer Troa, EX, renertroa@gmail.com Tim Shank (on-shore Science Lead), USA, WHOI, tshank@whoi.edu Eleanor Bors, ECC Seattle, WHOI, ekbors@gmail.com Ed Baker, ECC Seattle, NOAA, Edward.Baker@noaa.gov David Butterfield, ECC Seattle, NOAA, David.A.Butterfield@noaa.gov Catriona Munro, WHOI, WHOI, c.munro@ucl.ac.uk Elizabeth Sibert, WHOI, WHOI, esibert@ucsd.edu Verena Tunnicliffe, U. Victoria, U. Victoria, verenat@uvic.ca Jonathan Rose, U. Victoria, U. Victoria, jonmrose@uvic.ca Dustin Schomagel, U. Victoria, U. Victoria, dbs@uvic.ca</p> | | | | | |

Purpose of the Dive: To explore the ~500-600m region on Site K Seamount and compare diversity and abundance of faunal species at that depth

Description of the Dive:

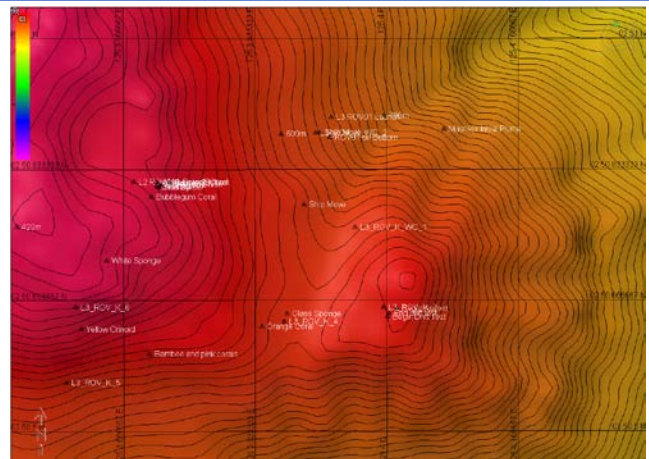
The ROV was deployed east of one of the locations where a water anomaly was previously detected (K_WC_2), on the parasitic cone located SE of the main cone. In the search for the source of the anomaly we moved south up-slope on the parasitic cone. The water was loaded with suspended particles of unknown origin. The terrain was dominated by outcrops with carbonate/volcanoclastic sediments. There was moderate animal coverage on talus blocks, lots for small corals (chrysogorgiids, primnoids, antipatharians, cf Anthomastus, Paragorgiids) stalked sponges, demosponges; carbonate debris. As we observed no evidence of venting or clues as to the origin of the anomaly, it was decided to move W to the main cone to a known area of high abundance and diversity. Abundance rapidly increased as we moved upslope direction West, especially of primnoid octocorals and black corals. Substrate had linear outcrops hosting corals, (barrel) sponges, crinoids and their epifaunal associates. The base was sedimented with ripples; low biodiversity. Diversity and abundances rapidly increased as we moved shallower and the terrain became steeper. As we navigated SW over a ridge towards K_6 we found a dramatic increase in biomass and diversity. Large paragorgiids, paramuriceas, antipatharians, crinoids, sponge barrels, stylasterids and ophiuroids. As we went South downslope the abundances and diversity declined again. The terrain dropped very steeply. There were few sponges, few corals, some black corals (some Metallogorgia) and whips. We then started our ascent over the outer wall moving NE towards K_4 where the two cones are connected. As we move to the secondary peak we reached a 'plateau' where the terrain was dominated by sediments hosting little observable fauna. Exceptions to this were a number of outcrops hosting high coral and sponge diversities. As we kept going East and approached K_5 near the summit of the secondary cone, the abundances and diversity of animals increased once again. Due to the time constraints imposed by the VIP event in the Silver Spring ECC we could not reach the summit of the secondary cone. Nor were we able to reach the last waypoint WC_1. In general, the dive in this region of site K confirmed that this seamount hosts the highest diversity and abundances of organisms observed so far in the region.

Overall Map of ROV Dive Area



Overview of Site K

Close-up Map of Main Dive Site



Hypack screen grab of dive Targets

Representative Photos of the Dive



20100723_01h41m48s03_ROVHD_RED_CORAL_STARFISH_014150
Diversity and abundances rapidly increased as we moved shallower and the terrain became steeper. Outcrops also hosted



20100722_20h58m16s07_ROVHD_EEL_FISH_205836
Flat areas were heavily sedimented with ripples and hosted low biodiversity.

high coral and sponge diversity.

Please direct inquiries to:

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