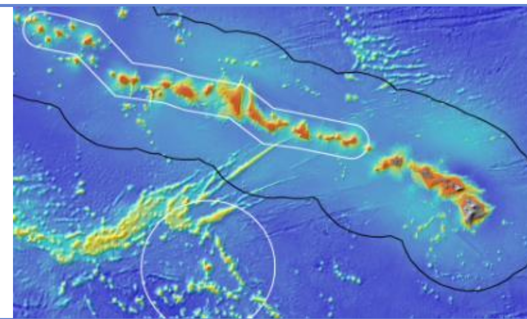
<table>
<tr><td>Site Name</td><td colspan="2">East Salmon Bank</td><td rowspan="4">  </td></tr>
<tr><td>ROV Lead/Expedition Coordinator</td><td colspan="2">Karl McLetchie
Kelley Elliott</td></tr>
<tr><td>Science Team Leads</td><td colspan="2">Chris Kelley (Biology)
Daniel Wagner (Biology)</td></tr>
<tr><td>General Area Descriptor</td><td colspan="2">Northwestern Hawaiian Islands</td></tr>
<tr><td rowspan="2">ROV Dive Name</td><td>Cruise Season</td><td>Leg</td><td>Dive Number</td></tr>
<tr><td>EX1504</td><td>2</td><td>DIVE09</td></tr>
<tr><td rowspan="2">Equipment Deployed</td><td>ROV:</td><td colspan="2">Deep Discoverer</td></tr>
<tr><td>Camera Platform:</td><td colspan="2">Seirios</td></tr>
<tr><td rowspan="5">ROV Measurements</td><td>☒ CTD</td><td>☒ Depth</td><td>☒ Altitude</td></tr>
<tr><td>☒ Scanning Sonar</td><td>☒ USBL Position</td><td>☒ Heading</td></tr>
<tr><td>☒ Pitch</td><td>☒ Roll</td><td>☒ HD Camera 1</td></tr>
<tr><td>☒ HD Camera 2</td><td>☒ Low Res Cam 1</td><td>☒ Low Res Cam 2</td></tr>
<tr><td>☒ Low Res Cam 3</td><td>☒ Low Res Cam 4</td><td>☒ Low Res Cam 2</td></tr>
<tr><td>Equipment Malfunctions</td><td colspan="3">There were only a few communications issues between the shore-based and shipboard science team. Other than that, all other equipment worked properly.</td></tr>
<tr><td>ROV Dive Summary (From processed ROV data)</td><td colspan="3">Dive Summary: EX1504L2_DIVE09
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In Water at: 2015-08-10T18:12:07.328000
27°, 08.354' N ; 176°, 14.204' W

Out Water at: 2015-08-11T02:26:43.171000
27°, 08.710' N ; 176°, 13.243' W

Off Bottom at: 2015-08-11T01:15:24.781000
27°, 08.594' N ; 176°, 13.574' W

On Bottom at: 2015-08-10T19:26:48.406000
27°, 08.424' N ; 176°, 13.964' W

Dive duration: 8:14:35

Bottom Time: 5:48:36

Max. depth: 2284.6 m</td></tr>
<tr><td>Special Notes</td><td colspan="3"></td></tr>
<tr><td>Scientists Involved (please provide name / location / affiliation / email)</td><td colspan="3">Abby Lapointe, UH, UH, abbylap@hawaii.edu
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</table>

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Tina Molodtsova, PPSIO, tina@ocean.ru

Purpose of the Dive

This dive site was located on a sharp ridge that extended west from East Salmon Bank, and its objective was to survey for the presence of high densities of corals and sponges and examine the impact of ridge orientation on the presence of high density communities. The discovery of a high density community would provide information valuable to NOAA's Deep Sea Coral and Technology Program (DSCTP). The target start point was a small relatively flat area located at a depth of 2300m, which transitioned into a steep slope towards the east at approximately 2250m. At this depth, the ROV would move northeastward to a final target depth of approximately 2046m, documenting in particular the abundance of corals and sponges.

Description of the Dive:

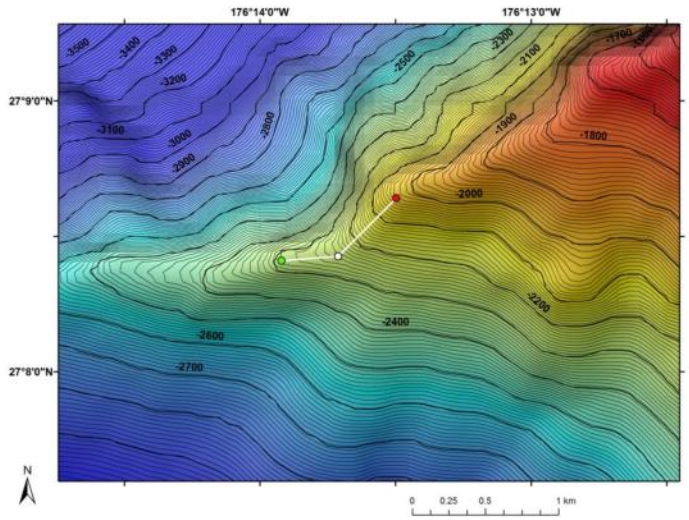
The ROV landed on a Mn-crusted, sloped surface covered with boulders and rubble at 2282m. There was a slight current from the east towards the west and a moderate density of sponges and corals. A Mn-crusted basalt sample was collected close to the landing spot at 2278 m. As the ROV moved up the slope, the density of animals remained moderate and included sponges, corals and asteroids. A second Mn-crusted basalt sample was collected at 2253m and a sponge sample at 2248m. Further up the ridge, the ROV passed by a region of well preserved pillow flows at 2206m, which had a higher density of corals and sponges growing on them. A third Mn-crusted basalt sample was collected at 2170m after consultation with monument staff. Further up the slope, a hexactinellid sponge, along with a commensal shrimp, was collected at 2106m. The ROV left the bottom at a depth of 2103m after a total bottom time of 5:50h, having covered a linear distance of 730m. This seamount has also been dated to 90 ma ago (Cretaceous) and the lack thick mn crusts similar to the previous dive is very puzzling to the participating geologists. The rock samples will be tremendously valuable in figuring out this puzzle.

Animals observed during the dive are listed below:

Phylum	Group	Species
Anellida	Polychaetes	Polychaete
Arthropod	Crab	Hermit crab with symbiotic anemone
Arthropods	Squat lobsters	Munidopsis sp.
Cnidarians	Actiniarians	Hormathiidae?
Cnidarians	Actiniarians	Unidentified anemone
Cnidarians	Alcyonaceans	Anthomastus sp.
Cnidarians	Alcyonaceans	Stoloniferous octocoral
Cnidarians	Antipatharians	Bathypathes alternata
Cnidarians	Antipatharians	Stauropathes staurocrada
Cnidarians	Antipatharians	Umbellapathes helioanthes
Cnidarians	Gorgonians	Calyptrophora/Narella sp.
Cnidarians	Gorgonians	Chrysogorgia geniculata
Cnidarians	Gorgonians	Corallium sp.
Cnidarians	Gorgonians	Eknomisis? sp.
Cnidarians	Gorgonians	Iridogorgia bella
Cnidarians	Gorgonians	Iridogorgia magnispiralis
Cnidarians	Gorgonians	Isidella sp.
Cnidarians	Gorgonians	Isidella trichotoma
Cnidarians	Gorgonians	Lepidisis sp.
Cnidarians	Gorgonians	Keratoisis sp.
Cnidarians	Gorgonians	Narella alata?
Cnidarians	Gorgonians	Paracalyptrophora sp.
Cnidarians	Gorgonians	Unbranched isidids
Cnidarians	Gorgonians	Unbranched primnoid
Cnidarians	Hydrozoans	Hydromedusae
Cnidarians	Hydrozoans	Siphonophore
Cnidarians	Hydrozoans	Hydroids overgrowing Solanderia
Cnidarians	Hydrozoans	Solanderia? sp.

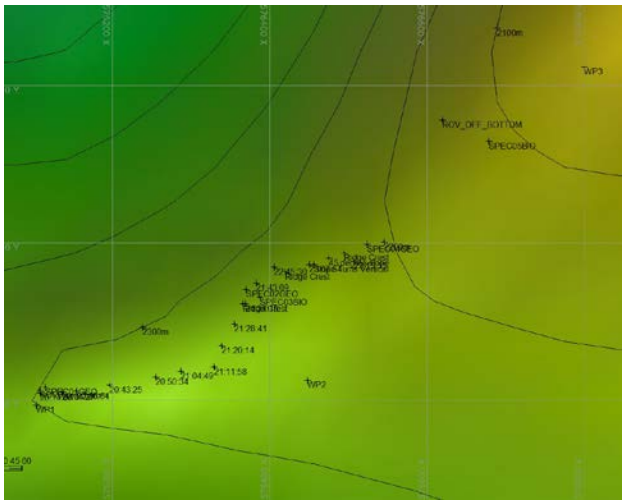
Ctenophores	Ctenophores	Platyctenid ctenophore
Echinoderms	Asteroids	Henricia sp.
Echinoderms	Asteroids	Hypasteria municepula
Echinoderms	Asteroids	Unidentified brisingid
Echinoderms	Asteroids	Atelecrinidae
Echinoderms	Crinoids	Comatulid crinoid
Fishes	Eels	Haptenchelys sp?
Mollusks	Gastropods	Aplocophoran
Sponges	Hexactinellids	Bolosoma sp.
Sponges	Hexactinellids	Rosellid vase? sp. (collected)
Sponges	Hexactinellids	Caulophacus (Caulodiscus) sp.
Sponges	Hexactinellids	Caulophacus (New subgenus) sp.
Sponges	Hexactinellids	Caulophacus (Oxydiscus) sp.
Sponges	Hexactinellids	Farrea sp.
Sponges	Hexactinellids	Farrrea nr occa erecta
Sponges	Hexactinellids	Poliopogon sp.
Sponges	Hexactinellids	Tretopleura sp.1
Sponges	Hexactinellids	Tretopleura sp.2
Sponges	Hexactinellids	Uncinateridae sp.
Sponges	Hexactinellids	Unidentified hexactinellid (collected)
Sponges	Hexactinellids	Corbitellinae new genus
Tunicate	Ascidacea	Culeolus sp.

Overall Map of Dive Area



Bathymetry data for the dive site. Planned dive start and end points are shown as green and red dots, respectively.

Actual track of ROV dive



Hypack screen grab showing waypoints dropped during actual ROV track.

Representative Photos of the Dive

Example of the modest density community observed on this site which included bamboo corals, corallium sp, and primnoids.

Large “folded blanket sponge collected during the dive. After an examination of the spicules, the identification of the family this hexactinellid belongs in is still uncertain.

Samples Collected

Sample ID	EX1504L2_20150810194044_D2_Dive09_SPEC01GEO
Date (UTC)	2015/08/10
Time (UTC)	19:40:44
Depth (m)	2278
Temperature (°C)	1.73783
Oxygen (mL/L)	3.18724
Field ID(s)	Mn-crusted basalt
Comments	

Sample ID	EX1504L2_20150810220806_D2_Dive09_SPEC02GEO
Date (UTC)	2015/08/10
Time (UTC)	22:08:06
Depth (m)	2251
Temperature (°C)	1.7404
Oxygen (mL/L)	3.10643
Field ID(s)	Mn-crusted basalt
Comments	

Sample ID	EX1504L2_20150810223048_D2_Dive09_SPEC03BIO
Date (UTC)	2015/08/10
Time (UTC)	22:30:48
Depth (m)	2247
Temperature (°C)	1.73356
Oxygen (mL/L)	3.10438
Field ID(s)	Bathydorus? sp.
Comments	

Sample ID	EX1504L2_20150810233649_D2_Dive09_SPEC04GEO
Date (UTC)	2015/08/10
Time (UTC)	23:36:49
Depth (m)	2171
Temperature (°C)	1.80602
Oxygen (mL/L)	2.98121
Field ID(s)	Mn-crusted basalt
Comments	

Sample ID	EX1504L2_20150811005814_D2_Dive09_SPEC05BIO
Date (UTC)	2015/08/11
Time (UTC)	00:58:14
Depth (m)	2104
Temperature (°C)	1.78398
Oxygen (mL/L)	2.99952
Field ID(s)	Hexactenellid sponge
Comments	Had commensal shrimp on it that was also collected.

Sample ID	EX1504L2_20150811005814_D2_Dive09_SPEC05BIO_C01
Date (UTC)	2015/08/11
Time (UTC)	00:58:14
Depth (m)	2104
Temperature (°C)	1.78398
Oxygen (mL/L)	2.99952
Field ID(s)	Commensal shrimp
Comments	Collected on unidentified hexactenellid sponge

Please direct inquiries to:	NOAA Office of Ocean Exploration & Research 1315 East-West Highway (SSMC3 10th Floor) Silver Spring, MD 20910 (301) 734-1014