



Okeanos Explorer ROV Dive Summary

Dive Information	
Dive Map	<p>The map displays the dive track for EX-17-03 in the Pacific Remote Islands Marine National Monument. The track starts near Baker Island and proceeds southward. Key features include: <ul style="list-style-type: none"> Bathymetry (m): Color scale from -500 (red) to -8000 (purple). Legend: <ul style="list-style-type: none"> White circles: EX-17-03 ROV Dive Locations Light blue outline: Howland/Baker PRIMNM Dark blue outline: Phoenix Islands Protected Area (PIPA) Scale: 0 to 200 Nautical Miles. Inset: A small globe showing the location of the study area in the central Pacific. </p>
Site Name	Baker Island Shallow
Expedition Coordinator(s)	Brian RC Kennedy, Nick Pawlenko
ROV Lead(s)	Karl McLetchie
Science Team Lead(s)	Amanda Demopoulos and Steven Auscavitch
General Area Descriptor	Pacific Remote Islands Marine National Monument
ROV Dive Name	
Cruise	EX-17-03

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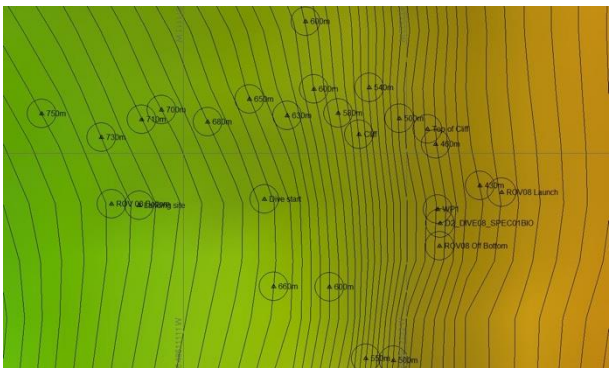
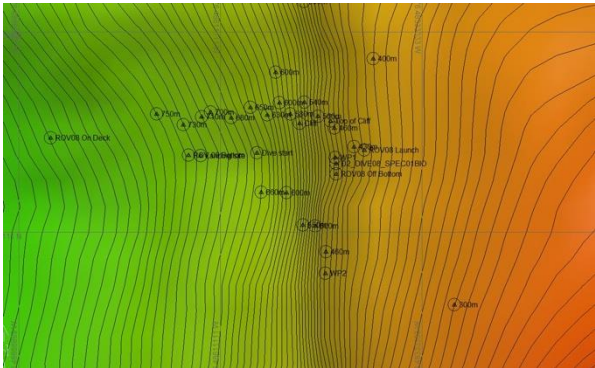
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Purpose of the Dive	The goal of this dive is to acquire baseline information on deep sea habitats, seafloor geology, and biological communities on Baker Island in the Howland & Baker Unit of the Pacific Remote Islands Marine National Monument. Deep-sea environments around Howland & Baker Islands are virtually unexplored leading to poor knowledge of biological resources protected by these reserves.		
Description of the Dive	<p>EX1703 dive # 8 was along the NW ridge of Baker Island. The ROV descended to 725m and the seafloor was characterized by a steep rock wall with a sedimented slope at the base. Specific fishes observed on the dive included midwater myctophids and gonostomatids, plus oreo fish (<i>Neocyttus</i> sp.), beard fish (<i>Polymixia</i> sp.), conger eels (<i>Bathycongrus?</i>), alfonsinos (<i>Beryx splendens</i>), cusk eels (<i>Pycnocraspedum</i> spp., <i>Neobythites</i>, <i>Benthocometes?</i>), roughy (<i>Hoplostethus</i> spp.), goosefish (<i>Lophiomus</i> or <i>Lophioides</i> sp.), lanternfish (<i>Neoscopelus</i>), tonguefish (<i>Symphurus</i> spp.), rattails (<i>Nezumia</i>, <i>Coelorinchus</i>, <i>Diplacanthopoma</i>), deep-sea cardinalfish (<i>Epigonus</i>), green-spotted duckbill fish (<i>Chironema chryseres</i>), snake eels (<i>Ophichthus?</i>), Randall's snapper (<i>Randallichthys filamentosus?</i>), distant relative to the dory (<i>Cyttomimus</i> sp.), lanternbelly (<i>Synagrops</i> sp.), greeneye (<i>Chlorophthalmus</i> sp.), dogtooth tuna (<i>Gymnosarda unicolor</i>), spikefish (Triacanthodidae), sea toad (<i>Chaunax</i> sp.) and amberjack (<i>Seriola</i> sp.). While we have infrequently observed ectoparasites on very few fishes thus far, on this dive there were several fishes (<i>Pycnocraspedum</i> sp., other cusk eel, lophiids) that had ectoparasites (e.g., gnathiid isopods) attached to the skin, including different fins, mouth, and behind the eye. As the ROV progressed up a very steep slope, several coral taxa were observed isidids (whips and <i>Keratoisis</i>), cup corals (multiple species), mushroom coral (<i>Anthomastus</i>), black corals (<i>Bathypathes</i>, <i>Lillipathes?</i>, <i>Umbellapathes</i>), unknown plexaurids (<i>Acanthogorgia?</i>), unknown primnoids, <i>Victorgorgia?</i>, <i>Swiftia?</i>, <i>Chrysogorgia</i>, and colonial scleractinians (<i>Enallopsammia?</i>, <i>Madrepora</i>).</p> <p>Other invertebrates observed included 2 homolids, one holding onto a dead colonial scleractinian skeleton and one with a sponge, encrusting sponges with zoanthids, barrel sponges, an unusual</p>		

branched sponge (*Walteria*-like), demosponges, corallimorpharian with pink tips on the tentacles, large *Heterocarpus* shrimps, red crabs (*Chaceon* sp.), seastars (*Circeaster pullus?*, *Ceremaster*, *Cheiraster*, *Henricia*, *Tremaster mirabilis*), sea urchins (echinothuriids), majid crabs with white and orange banded legs (*Cyrtomaia?*), hermit crabs with anemone houses, and comatulid feather stars.

Along the steep karst-like rock wall, there were several eroded channels and caverns, some of which hid limid bivalves (*Acesta?*) with tiny cup corals attached to the shells, an octopus, spiny sea urchins, and squat lobsters. These dramatic, cathedral-like rock features, continued up the slope to about 423m, where the seafloor leveled out to a sedimented plain. We will have a dive at a similar depth range on Howland Island coming up soon, so it will be interesting to see if we observe similar patterns in the geology, the biology and ecology.

Overall Map of the ROV Dive Area

Close-up Map of Main Dive Site



Representative Photos of the Dive



A pelagic holothurian

A roughy get up close and personal

Samples Collected

Sample

Sample ID	EX1703_20170316T015221_D2_DIVE08_SPEC01BIO	
Date (UTC)	20170316	
Time (UTC)	01:52:21	
Depth (m)	436.54	
Temperature (°C)	8.45	
Field ID(s)	Primnoidae	
Comments		

Please direct inquiries to:

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