HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: P4-229

MISSION STATUS

Location: Middle Bank, NWHI

Latitude: 22 43.718 N **Longitude:** 161 11.263 W

Mission Date: 12/04/09 **Duration:** 9 hours mins

Maximum Depth: 1439 m

Project Title: Megafauna of Deep Seamounts and Ridges in the NWHI Monument Year2

Principal Investigator: Christopher Kelley

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Observer 1: Chris Kelley
Address: HURL

Observer 2: Jeff Drazen
Address: HURL

Pilot 1: Terry Kerby

Pilot 2:

Scientific Data Acquired: Prepare an abstract outlining your objectives, techniques, findings, etc.

Objectives: The goal of this project is to census fish and invertebrate species in two under-surveyed but potentially high diversity habitat types: seamounts and submarine ridges, found inside the monument with the bathyal zone of 200-2000 m. The study site is a submarine ridge extending west of Middle Bank. The ridge is a suspected volcanic rift zone that was revealed by a single multibeam sonar swath acquired in 2003. The 800-1800 m portion of the feature was covered in the swath. These two dives will constitute the first assessments on this bank. The first dive was located at a small pinnacle on the western face of Middle Bank, concentrating on collection of potential new species for taxonomic analysis. The second dive will be dedicated to surveying a large ridge adjacent to the pinnacle surveyed in the first dive. All fish and invertebrates encountered will be identified and counted by the two observers. Both high definition and standard video cameras will record video as well as the audio records from each of the observers. A laser scale mounted on one of the cameras will provide the means by which to obtain size data. After the submersible is recovered, the ROV will be used to conduct 1-2 video transects. Observers in the ROV control room will make initial identifications of fish and invertebrates during the dives. Following these dives, the seabeam multibeam sonar system will be used to complete as much of the mapping of the ridge and surrounding features as possible.

Observations, findings, etc

The submersible reached the bottom at 1439m. From there observers continued up the ridge crest, completing the dive at a depth of 1000m. Observers found sparsely inhabited terrain composed of basalt rock walls and large boulders. The area was dominated by many species of sponges while relatively few corals were observed along the

ridge crest. Strong currents encountered around 1200m depth precluded further transecting upwards along the ridge crest. These data along with subsequent dives will provide the means to conduct an analysis of the animal communities on this feature at the meso-habitat scale.

Species list:

Cnidarians
Orange anemone
Actinernus nobilis
Actinoscyphia sp.
Actinostolid unknown sp.
Liponema brevicornis
Hormathiid sp. 5
Marianactis sp.
Anthomastus red
Anthomastus steenstrupi
Bathypathes alternate
Cerianthid
Corymorpha sp.
Solandaria sp.
Pennatulid max
Madrepora sp.
Cup corals
Enallposammia rostrata
Telestula sp.
Acanthogorgia sp.
Anthothela nuttingi
Chrysogorgia geniculata
Chrysogorgia sp.
Iridogorgia bella
Rhrodaniridogorgia superb
Corallium abysalle
Corallium lauense
Corallium ducale
Lepidisis sp.
Lepidisis branched
Branched isidid
New pink isidid
Paragorgia dendroides
Paramurceid orange
Calyptrophora alpha
Calyptrophora sp.
Calyptrophora spinosus branched
Calyptrophora wyvelli
Calyptrophora macrocalyx
Narella alata-like sp.
Candidella gigantean
Candidella sp.
Amphilapsis circumoperculum

Sponges
Semperella schultzei
Semperella sp. 2
Chonelasmatinae ribbon sponge
Unknown sponge, tortured glove
Unknown pheronematid
Hertwigia sp.
Stylocordyla borealis
Bolosoma sp. 1
Bolosoma sp. 2
Saccocalyx sp.
Corbitellinae wide
Dictyaulus sp.
Regadrella sp. 3
Walteria flemmingi
Walteria sp. 3
Walteria sp. 4
Heterochone sp.
Chonelasmatinae leaf
Farrea occa
Farreid hairy
Platylistrum platessa
Tretodictytid waffle
Poliopogon sp. 1
Poliopogon sp. 2
Poliopogon sp. 3
Pheronematid sp. 2
Caulophacus sp. 1
Trichasterina petal

Gastropods
Polychaete worms

Fishes
Aldrovandia phalacra
Synaphobranchus affinis
Apogesoma sp.?
Macrurid sp.
Morid sp.
Ophidiid sp.
Unknown synaphobranchid

Echinoderms
Nereidaster bowersi
Ceramaster bowersi
Tarsastrocles sp.
Henricia pauperrima
Asthenactis papyraceus
Hymenaster pentagonalis
Brisinga alberti
Sperosoma obscurum
Aspidodiadema hawaiiensis
Echinothuroid
Caenopedina hawaiiensis

Ophiuroids
Amperima sp.
Echinoderms cont'd
Paleopatides rotifer
Synallactid sp.
Comatulid brown
Comatulid yellow
Diplocrinus sp.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

1) None

Recommendations for corrective action or improvement:

1) None

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.

Yes. We needed to traverse the ridge crest for this dive to be successful, which we did. We also collected some potentially very valuable specimens.

List specimens or samples collected on the mission.

1. Unknown primnoid
2. Unknown pheronematid sponge
3. Large barnacle
4. Barnacle
5. Barnacle plate
6. Unknown primnoid
7. Unknown sponge –shorty
8. Chonelasmatinae ribbon-like sponge
9. Madrepora sp.
10. Unknown sponge –tortured glove

DATA RELEASE

Data may be retained by the project leader for up to 2 years after the mission date with the following exception. NOAA may request to use photos for publication or publicity purposes at any time.

Fill in the appropriate statement below and sign this form.

I hereby release the data archived by HURL for public consumption following mission P4-229 (Megafauna of Deep Seamounts and Ridges in the NWHI Monument Year 2)

held on 12/04/09 (date) in the following way:

a. CTD data by 12/04/09 (date)

b. video and images by 12/04/09 (date)

c. other 12/04/09 (date)

d. I will give my written consent to individuals wishing to use these data prior to the above dates depending on the nature of the request(s).

_____ Principal Investigator