HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: R-473

MISSION STATUS

Location: west Oahu, south Waianae

Latitude: **Longitude:**

Mission Date: Mar_23_2011 **Duration:** 2 hours 30 mins

Maximum Depth: 450m

Project Title: Measuring Animal Metabolism in Hawaiian Bathyal Environments

Principal Investigator: Jeff Drazen

Address: University of Hawaii
Department of Oceanography
1000 Pope Rd.
Honolulu, HI 96822

Phone: 808-956-6567

Observer 1: Jeff Drazen
Address: same as above

Observer 2: various Drazen lab members
Address: same as above

Pilot 1: Dan Greeson

Pilot 2: Pete Townsend

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

Objectives:

1) Capture a diversity of benthic animals and measure their metabolism in the laboratory to estimate energetic demands

   To accomplish this goal and bring the animals back alive we used three techniques
   a) A modified slurp gun with plastic insulated barrel and ball valve to keep cold *in situ* water inside – for crabs, shrimps etc
   b) A modified biobox – thick walled PVC for insulation – to place animals, mostly echinoderms, in after capture with scoops and the manipulator arm
   c) An insulated baited trap – for capture of mobile shrimps, crabs, and fishes

2) Perform submersible transects to measure animal densities so that the metabolism data can be extrapolated to the ecosystem level

ROV dives were conducted to gather additional video transects at night in the areas where animals were collected.

Observations, findings, etc:
Performed a transect along contour south of Waianae, Oahu, moving slightly down slope. The transect started at about 250 m and moved along contour. The terrain was mostly large boulders and small ledges amongst sediment. Towards end of transect (~1.75 hours) the depth began to increase greatly to about 450m.

Species list:
Pontinus macrocephalus
Malacocephalus laevis
Large dragonfish with lure – head down, just above seafloor, great footage (~300m depth)
Micropyga tubuerculata (290m) but not in great abundance
Beryx dedacatulus
Meadia abyssalis
Heterocarpus – many swimming just above seafloor, - these were not seen during the day above the seafloor
Polymixia
Gempylid – Thrysistes? Small Ruvettus?
Morids

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

The ROV worked well except that its maneuverability was very limited.

Recommendations for corrective action or improvement:

Evaluate other means of station keeping for the KOK to allow the ROV a more controlled ability to maneuver on the seafloor.

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

Yes, our objective was partially met.

List specimens or samples collected on the mission.

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

Measuring Animal Metabolism in Hawaiian Bathyal Environments

held on Mar 23, 2011 (date) in the following way:

a. CTD data by immediately (date)

b. video and images by Mar 23, 2011 (date)

c. other Mar 23, 2011 (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