HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT DIVE: PV- 518

MISSION STATUS

Location: Bank 11 – Helsley Seamount

Latitude: N 28º52.223 **Longitude:** W 179º34.399

Mission Date: Sept. 30, 2003 **Duration:** 8hrs 21m

Maximum Depth: 531.8m

Project Title: Reproductive Biology and Population Genetics of Hawaiian Precious Corals

Principal Investigator: Amy Baco-Taylor

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Observer 1: A. Baco-Taylor

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Observer 2: Emily Yam

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Pilot 1: Chuck Holloway **Pilot 2:**

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

Objectives:
1. Locate precious corals
2. Sample for population genetics + reproductive biology

Observations, findings, etc:
We landed on bottom right next to a very large gold coral. Entire dive was steeply sloped terrain and walls. Mostly carbonates and some manganese and/or basalt. Precious corals were sparse, but present in sufficient numbers for sampling. Pink, red, and gold corals were all sampled. Other octocorals were also observed in low abundance. Many Anthomastus juveniles and urchins were observed, also many coral stumps.

The objective of the dive was to collect precious corals. Pisces Dive 518 covered a small portion of the southwestern section of Bank 11. The dominant substrate was a steep carbonate slope covered with sediment. The submersible did pass by a section of sheer wall before the sediment became too sandy for the target organisms, at which point we turned eastward to continue looking for corals.

A large gold coral found at the beginning of the dive (depth= 530 m) was the largest seen during the course of the dive, at nearly 7 m across and 2 m high. That particular tree was covered with basket stars and had many fish living inside. The dive continued well after that, with many samples of gold, red, and pink corals collected. Other organisms that were seen from the submersible included large numbers of urchins, anemones, sponges, and sharks (many Squalus mitsukurii and one six-gill). There were entire fields of urchins and anemones. Also, we collected some algae on rocks at a depth of nearly 500 m. A longline fishing rod was seen at the bottom as well. We also collected a cartilaginous fragment which, initially, we thought was a shark jaw bone. It could possibly be the mandibular portion of a very large squid beak. At approximately 1506, the starboard collection box shook loose from the submersible and we lost the pink coral samples inside. The box floated to the surface and was recovered after the dive. We continued to collect samples of pink corals and gold corals before returning to the surface after a full day underwater. Audio data were not collected during this dive. All collected specimens were preserved in the laboratory in frozen at -80, in ethanol, and in formalin. The dive was a great success.

Species list:

Please mark whether S-single; F-Few (2-10); M-Many (11-100); A-Abundant (>100)
(e.g., Symphysanodon maunaloae-M)
- add rows as needed

Corallium secundum – M	Squalus mitsukurii- F	
Corallium lauuense - M	Hexanchus griseus- S	
Gerardia sp. – F	Grammicolepis brachiusculus- S	
Anthomastus – AA	Beryx decadactylus- S	
Aspidodiadema – A	Diadematids- M	
Acanthocodaris hastigera - A	Regadrella- F	
Pink Gorgonocephalid - M		
Galathaeids – A		
Other octocorals - M		
Pseudopentaceros wheeleri - M		
pennatulids – F		
antipatharians – S		

MISSION EVALUATION:

Limitations, failures, or operational problems noted:
Lost a sampling box while on bottom.

Recommendations for corrective action or improvement:

It's okay because Ross located the sampling box during sub recovery. Boxes should be secured better.

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

Yes, but we need more samples.

List specimens or samples collected on the mission.

Gold coral – 4, C. secundum – 7, Red coral - 8

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

Precious corals
(project title)

held on 9/30/2003 (date) in the following way:

a. CTD data by 9/ 30/2005 (date)

b. voice transcripts, video, and still camera film by 9/30/2005 (date)
c. other 9/ 30/2005 (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