HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE:

MISSION STATUS

Location: Molokai, near Penguin Bank

Latitude: 21 ° 01.6000 **Longitude:** 157 ° 22.20

Mission Date: 16 September 2004 **Duration: 0** hours 18 mins

Maximum Depth: 116 m

Project Title: Exploration of Deepwater Macroalgal Meadows in the Main Hawaiian Islands

Principal Investigator: Heather Spalding (for Celia Smith)

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Observer 1: Heather Spalding **Observer 2**
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Pilot 1: Dan Greeson **Pilot 2:**

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

Objectives:
The main objective was to survey deepwater macroalgal meadows from 50 to 150 m depths to determine their composition, densities, lower depth limits, and breadth. Other objectives include surveying macrofauna in areas outside, at the edge, and inside meadows to resolve possible algal-associated organisms, and to survey areas within similar depth ranges that do no contain macroalgal meadows. This data will help us understand the factors (such as current, substrate type, exposure, etc.) that may affect the occurrence and abundance of macroalgal meadows in different habitats and depth distributions.

Observations, findings, etc:

No macroalgal meadows were observed in this area. Substrate was very small cobble and sand, with occasional small, angular black objects that appeared to be basalt rocks. Nongeniculate coralline algae appeared in small patches on the substrate, with a high percent cover of invertebrates (hydroids, bryozoans, sponges?) on hard substrate, given the substrate a fuzzy appearance. Large (~20 cm) green blades of a green macroalga, possibly an *Ulva* sp., were observed drifting on the bottom at all depths. Limited time at depth, strong current, and distortion of video prohibited detailed observations and findings.

Species list:

Drifting blades of a green alga (*Ulva* sp.?)
Small patches of nongeniculate coralline algae

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

From the beginning of the dive, the current was very strong, limiting the ability of the ROV move through the water column and survey the benthos. Because of the strong current, the ROV was dragged through the water column by the boat, putting strain on the tether and distorting the video. After ~15 min., the pilot noticed loss of directional control of the ROV and an oil leak, so the dive was aborted.

Recommendations for corrective action or improvement:

Perhaps a new ROV?

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

The mission did not achieve its purpose. Only a few qualitative observations were possible given the current, technical difficulties, and limited time at depth. No quantitative data was acquired.

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 (project title)

held on_____(date) in the following way:

a. CTD data by_____(date)

b. video and images by_____(date)

c. other_____(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