HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: PV-678

MISSION STATUS

Location: THIRD FINGER PENGUIN BANK, MOLOKAI, HI

Latitude: **20**° 55.9N **Longitude:** 157° 31.9W

Mission Date: 10-01-06 **Duration:** **2**hours 45 mins

Maximum Depth: 110m

Project Title: Deep Seaweed Photosynthesis Research

Principal Investigator: Karla McDermid

Address: Marine Science Dept.
University of Hawaii - Hilo
200 W. Kawili St. Hilo, HI 96720

Phone: (808) 933-3906

Observer 1: John Runcie
Address: University of Sydney
Sydney, Australia

Observer 2: Brent Yamamoto
Address: UH-Hilo

Pilot 1: Max Cremer

Pilot 2: none

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

Objectives:

- Retrieve Pulse Amplitude Modulated Fluorometer (PAM) left in situ on 09/30/06.
- Deploy 2 Pulse Amplitude Modulated Fluorometers and leave in situ for overnight readings
- Using the mobile PAM, measure photosynthetic activity of *Ulva*, *Spatoglossum*, *Halymenia*, etc.
- Sample water at deployment sites using Niskin bottles
- Collect macroalgal specimens.
- Measure light attenuation with depth.
- Measure ambient light levels (photosynthetically active radiation PAR) at collection sites and deployment sites.

Observations, findings, etc:

Initial descent at 08:15 went to a depth of 106m (N20-55.859 W157-31.869) and headed north to recover the data logger. Light measurements were taken at 5m increments as we descended. Once on the 110m contour, we headed east to find the logger but initially past it. Then we were redirected to the 105 contour and headed back west and finally spotted the logger by seeing the flashing light. The recovery of the data logger was at 09:25 with no leaf in the clip followed by the collection of the #50 marker. Shortly after we had lost hydraulic power and had to prepare to return to the surface. We then marked the area because there were a lot of Ulva in the area and wanted to come right back to it so we can deploy more data loggers. At 10:19 we left the bottom from a depth of 103m (N20-56.157 W157-31.914) and made it to the surface at 10:26.

Species list:

ALGAE

Halimeda
Red crusts
Red blades
Ulva

ECHINODERMS

large starfish, large black sea cucumber

FISH

School of small pink fish
Blue fin trevally
Amber jack
Triggerfish
Assorted surgeonfish
Blue line snappers
Stingray
All yellow fish

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Although the collection of the data logger was successful, no other data loggers were deployed due to loss of hydraulic power and returning to the surface.

Recommendations for corrective action or improvement:

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.
No data loggers were deployed, no niskin bottles triggered and no algae samples were taken.

List specimens or samples collected on the mission.
No samples were taken.

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 10-01-06 (date) in the following way:

a. CTD data by 10-01-06 (date)

b. video and images by 10-01-06 (date)

c. other Licor Light meter, PAM 10-010-06 (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).

Karla J. McDermid Principal Investigator