

HAWAI'I UNDERSEA RESEARCH LABORATORY

**QUICK LOOK REPORT
DIVE: PV-579**

MISSION STATUS

Location: South Side Penguin Bank, Third Finger

Latitude: 20°55.9

Longitude: 157° 32.0

Mission Date: 9-21-04

Duration: 7 hours 30 mins

Maximum Depth: 201m

Project Title: Deep Seaweed Photosynthesis Research

Principal Investigator: Karla McDermid

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University of Hawaii - Hilo
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Phone: (808) 933-3906

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

Observer 2: None
Address:

Pilot 1: Terry Kerby

Pilot 2: Colin Wollerman (PIT)

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

Objectives:

- Collect macroalgal specimens.
- Measure light attenuation with depth.
- Measure ambient light levels (photosynthetically active radiation PAR) at collection sites.
- Measure photosynthetic rate of seaweeds at various depths.
- Deploy PAM and data logger for over night measurement of photosynthetic activity of seaweeds.

Observations, findings, etc:

The primary objective of this dive was to deploy the data logger to be left overnight at a depth, and to collect macroalgal specimens from varying depths. The sub reached to the bottom at 86m at 20° 55.877 N / **157°** 32.078 W. Proceeded down slope to NW. PAM and Data loggers were deployed and left at 102m at 20° 56.147 N / **157°** 32.027 W. Made observations while conducting photosynthesis experiments. Moved down slope to 120m N. Explored slope at the depth of 120m to search for Halimeda. Moved down slope to the N from the position of 20° 56. 157 N / **157°** 32.015 W. Conducted more experiments at 163m before moving down slope to 200m. At 201m, conducted more experiments and collected samples. Light measurements and *in situ* photosynthetic rates of algae were taken at various sites and depth. The dive ended at 140m of 20°56.187 N / **157°**31.899 W.

Species list:

ALGAE

Halimeda
Red crusts
Red blades
Ulva
Antithamnion
Peyssonnelia
Cryptonemia
Anadyomene
Distromium
Osmundaria
Delesseriaceae tiny blades

SPONGES

Yellow
Orange

CNIDARIA

Hydroids
Plate coral

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

None

Recommendations for corrective action or improvement:

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

List specimens or samples collected on the mission.

ALGAE (about 20 specimens total)

Halimeda
Red crusts
Red blades
Ulva
Antithamnion
Peyssonnelia
Cryptonemia
Anadyomene
Distromium
Osmundaria
tiny Delesseriaceae

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 9-21-04 (date) in the following way:

- a. CTD data by 9-21-06 (date)
- b. Video and images by 9-21-06 (date)
- c. other Licor Light meter, PAM, Data logger 9-21-06 (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).

Principal Investigator