

HAWAI'I UNDERSEA RESEARCH LABORATORY

**QUICK LOOK REPORT
DIVE: RCV-304**

MISSION STATUS

Location: Penguin Bank, Dive Site #4

Latitude: 21° 01.7620

Longitude: 157° 22.0840

Mission Date: 14 Dec 2004

Duration: 4 hours 3 mins

Maximum Depth: 120 m

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

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

The objectives were to survey deep water macroalgal assemblages and associated organisms from 50 to 100 m depths to determine their composition, densities, and spatial distribution. We were particularly interested in determining the abundance of fleshy red and green macroalgae, and various *Halimeda* sp. Similar to Sept. 2004, there was a high abundance (~75% cover) of fleshy red algae, *Halimeda* sp., and *Codium* sp. from 85 to 65 m depths, but strong currents limited our ability to quantitatively assess this assemblage throughout the dive. In contrast to Sept. 2004, we did not observe a high % cover of *Ulva* sp., e.g. 2 m long blades, although small patches of *Ulva* sp. occurred from 60 to 70 m depths. A moderate abundance (~10% cover) of a large-lobed *Halimeda* sp. was observed with the prostrate *Halimeda* sp. from 75 to 60 m depths. Substrate types ranged from carbonate hard pan to sand. A slipper lobster was observed at 64 m depth. A high density of *Carijoa* and a few black coral trees were found at 111 m depth, while a diversity of

yellow, orange, black, and red sponges were observed throughout the dive. Fish and invertebrates were identified by Frank Parrish.

Observations, findings, etc:

High diversity of red, green, and brown algae. Numerous *Halimeda* sp., but no *Halimeda incrassata* meadows.

Species list:

A gross tentative species list of macroalgae includes:

Lobophora/Distromium brown blades

Codium sp.

Ulva sp.

Prostrate *Halimeda* sp.

Large-lobed *Halimeda* sp.

Fleshy red algae

Filamentous red algae

Fish seen included:

Naso unicornus	1
Myripristis chryseres	2
Sargocentron ensiferum	1
Lutjanus kasmira	1
Lactoria sp.	1
Unid fish	1
Lactoria sp.	1
Naso brevirostris	1
Seriola dumerili	1
Myripristis chryseres	1
Lutjanus kasmira	1
Seriola dumerili	1
Apogon evermanni	1
Arothon hispidus	1
Sargocentron ensiferum	1
Canthigaster coronata	1
Arothon hispidus	1
Parapercus schauinslandii	2
Lactoria sp.	1
Fistularia petumba	1
Lutjanus kasmira	1
Canthigaster coronata	2
Fistularia petumba	1
Decapterus macarellus	1
Canthigaster coronata	1
Parapeneus pflugeri	1
Acanthurus xanthopterus	1
Parapeneus pflugeri	1
Lutjanus kasmira	1
Lutjanus kasmira	1
Parapeneus pflugeri	1
Cheatodon klienii	1

Arothon hispidus	1
Sargocentron ensiferum	1
Acanthurus xanthopterus	2
Apogon evermanni	1
Acanthurus xanthopterus	1
Carcharhinus plumbeus	1
Canthigaster coronata	1
Juv. Naso	1
Decapterus macarellus	4
Naso unicornus	1
Decapterus macarellus	2
Canthigaster coronata	2
Acanthurus xanthopterus	1
Decapterus macarellus	3
Arisoma marginatum	1
Decapterus macarellus	2
Apogon evermanni	2
Cheatodon klienii	1

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Strong currents

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.

This was a tremendously successful mission. We were able to quantitatively document expansive meadows of deep water algae, invertebrates, and fishes.

List specimens or samples collected on the mission.

No collections

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