

## HAWAII UNDERSEA RESEARCH LABORATORY

### QUICK LOOK REPORT MISSION NO. P5-325

#### MISSION STATUS

**Location:** Makapuu coral beds

**Mission Date:** Aug.21, 1997

**Maximum Depth:** 480 m.

**Project Title:** Climate records from Hawaiian deep-sea corals

**Principal Investigator:** Robert B. Dunbar

**Address:** Geology and Environmental Sciences  
Stanford University  
Stanford, CA 94305

dunbar@pangea.stanford.edu

**Phone:** (650)725-6830

**Observer 1:** Rob Dunbar

**Observer 2:** Rick Grigg

**Address:** as above

**Address:** Univ. of Hawaii  
Dept. of Oceanography  
Honolulu, HI 96822

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

On this first dive in support of the project, our objectives were:

1. To survey the Makapuu coral bed across a depth range of 350 to 480 m.
2. To collect representative specimens of Corallium and Gerardia, and
3. To collect a series of water samples for measurement of  $F^{18}OH_2O$  and  $F^{13}C$   $ECO_2$ . Using the water samples and physical data as a modern "calibration", we hope to work backwards in time using coral growth bands to reconstruct past changes in deep water conditions. On this dive we collected 2 specimens of gold coral (Gerardia), 4 specimens of pink coral (Corallium), and 1 black coral. Some of these may be as old as 200 years. R. Grigg conducted a size frequency study of pink coral, estimating the size of 200-300 of individuals.

**MISSION EVALUATION:**

**Limitations, failures, or operational problems noted:**

1. Basket would preserve samples better during recovery if a lid or cover was installed.
2. Several Niskin bottles leaked water.

**Recommendations for corrective action or improvement:**

Basket could be difficult to modify.

You do need new Niskins

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

We accomplished more than anticipated and achieved all mission objectives.

**List specimens or samples collected on the mission.**

4 Corallium

2 Gerardia

1 black coral

9 water samples

## 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

Climate record from Hawaiian deep water corals (project title)

held on Aug.21, 1997 (date) in the following way:

- a. CTD data by Aug.31, 1998 (date)
- b. voice transcripts, video, and still camera film by Aug.31, 1998 (date)
- c. other samples - Aug.31, 1998 (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).

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Principal Investigator