**HAWAII UNDERSEA RESEARCH LABORATORY**

**QUICK LOOK REPORT MISSION NO. P5-278**

## MISSION STATUS

**Location:** off Kailua-Kona - 019 36.4 N; 156 04.2 W

**Mission Date:** July 16, 1996

**Maximum Depth:** 1700m

**Project Title:** Reproductive Biology of Deep-Sea Animals

**Principal Investigator:** Craig M. Young

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**Observers:** 1) Craig Young, 2) Roland Emson

**Addresses:** 1) HBOI
2) Dept. of Bioscience
King's College London
Camden Hill Rd.
London, U.K.

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

The main objective of this dive was to collect a deep-water sea urchin, Phrissocystis multispina, for embryological work. Secondary objective was to characterize distribution of other megafaunal animals, to collect voucher specimens, and to obtain any large animals from which larval stages might be obtained for experimentation. The objectives were completed. A number of interesting hexactinellid sponges, cnidarians and ophiuroids were videotaped and collected. Two sea cucumbers collected were ripe males. A large aggregation of Phrissocystis was encountered at the end of the dive and two individuals, both females, were collected. Following the dive, gametes were obtained from the echinoderms and all animals were preserved as vouchers. Very large aplacopherans were found on a rock, and a large number of scalpellid barnacles (two species) were preserved in ETOH for population genetic analysis. Nauplius larvae were obtained from one of these barnacles.

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# MISSION EVALUATION:

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

Both manipulator arms had some functions fail, but skilled work by the pilot made the mission successful nevertheless.

User-supplied current probe did not work at depth.

Sodasorb was old and less efficient than newer stock would have been, requiring more frequent changes.

**Recommendations for corrective action or improvement:**

Fix manipulators.

Re-solder and pot connectors for current probe.

Use freshest possible sodasorb.

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

With the exception of the current data, we obtained everything needed. The collecting box was limited in size - otherwise we would have obtained more animals! Most objectives were achieved.

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

2 Phrissocystis multispina
2 synallactid holothurians
1 basket star
1 euryalid ophiuroid
2 other ophiuroids
5 aplacopherans
~ 20 sabellarid polychaetes
~ 10 small sea anemones
2 large haxactinellid sponges
~ 150 scalpellid barnacles (2 species)
1 large gorgonian

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# 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

Reproductive Biology of Deep-Sea Animals (project title) held on July 16, 1996

(date) in the following way:

a. CTD data by 7/17/96 (date)

b. voice transcripts, video, and still camera film by 7/17/98 (date)

c. other 7/17/98 (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