

# HAWAII UNDERSEA RESEARCH LABORATORY

## QUICK LOOK REPORT MISSION NO. RCV-108

### MISSION STATUS

**Location:** South Kahoolawe

**Mission Date:** 10/30/01

**Maximum Depth:** 316 m

**Project Title:** Characterization and Assessment of Critical Habitat for Eteline Snappers in the Main Hawaiian Islands

**Principal Investigator:** E. Gordon Grau and Christopher Kelley\*

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

### Objectives

This study was awarded a total of 12 submersible dives, six of which were conducted in 1998 (i.e. P5-360-P5-366). The original objectives of the study were to 1) to characterize and compare the biological and physical aspects of pinnacle and wall habitats for onaga and ehu, and 2) to assess the numbers and sizes of onaga, ehu, and other important species of bottomfish in these habitats. The first objective was associated with the following 2 hypotheses:

Hypothesis 1) tops and bases of vertically oriented habitats, such as walls and pinnacles, have different physical and biological characteristics.

Hypothesis 2) the locations on the walls and pinnacles where onaga and ehu are found will have similar biological and physical characteristics.

The RCV-150 ROV was originally going to be used to examine a nocturnal shift in the species composition on habitats surveyed by submersible during the day. However, the high relief on a number

of these sites precluded that plan. Instead, the ROV was used on this and other dives to conduct nocturnal surveys on the nearest suitable locations to the bottomfish habitat site.

### Techniques

Prior to this and other ROV dives, the ship arrived on the survey site and determined the optimal direction for the transect. Based on this heading, two 2-mile or 3 one-mile lines were then selected, which depending on the speed of the ship, would allow for 2-4 hour surveys. In most cases, the dive site and subsequent transect line were set up in a manner to allow for an oblique up or downslope transect. After the ROV was deployed, an effort was made to identify and count all fish and invertebrates observed.

### Findings

The ROV was deployed at a depth of 294 m, reached a minimum and maximum depth of 258m and 316 m, respectively. The substrate was initially low relief carbonate and sand, followed by a sand field, then high relief carbonate (ledges and boulders). Approximately 65 different animals were videotaped on this dive. Examples of fish species included myctophids, *Symphysanodon maunaloae*, *Squalus mitsukurii*, *Epigonus devaneyi*, *Symphurus undulatus*, *Pontinus macrocephalus*, *Bembradeum roseum*, *Antigonia eos*, *Physiculus rhodopinnis*, *Poecillosetta hawaiiensis*, *Lophiodes miacanthus*, and *Synagrops argyrea*. Examples of invertebrate species included gooseneck barnacles, *Javania sp.*, *Narella megalepis*, *Anthomastus sp.*, cerianthid black, *Flabellum pavoninum*, *Munida hawaiiensis*, *Anseropoda insignis*, *Berrya hoylei*, *Corallium sp.*, *Stylocidaris calacantha*, and a crinoid. Of these animals, nocturnal species that are not observed during the day include the myctophids and *P. rhodopinnis*.

**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. The dive was conducted on its intended site.

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

None

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

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held on 10/30/01 in the following way:

- a. CTD data by 10/30/03
- b. voice transcripts, video, and still camera film by 10/30/03
- c. other 10/30/03
- 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