HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV-107

MISSION STATUS

Location: South Kahoolawe

Mission Date: 10/28/01

Maximum Depth: 406 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 noctural 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 was 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 194 m, reached a minimum and maximum depth of 168m and 406 m, respectively, and was recovered at 401 m. The substrate on the shallower half of the dive was sand with layered carbonate ledges. This changed to sand during the deeper second half of the dive. Approximately 52 different animals were videotaped on this dive. Examples of fish species included myctophids, *Ariomma luridum, Rexia nakamuri, carcharhinid, Physiculus sterops, Snyderidia canina, Ruvettus pretiosus, Hymenocephalus sp, Epigonus sp, unknown macrourid, Pyramodon ventralis, Saurenchelys stylurus, and Bembrops sp 1.* Examples of invertebrate species included *Plesionika edwardsi, Homala ikadae, Munida hawaiiensis, Candidella sp, Anthomastus fisheri, Lyrocteis sp, Cirrhipathes spiralis, Sericopholus sp, and a protoalcyonacean.* Of these animals, noctural species that are not observed during the day include the myctophids, *Physiculus sterops, S, canina, P. ventralis*, and *S. stylurus*.

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

Dive RCV-107

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 No. RCV-107: Characterization and Assessment of Critical Habitat for Eteline Snappers in the Main Hawaiian Islands

held on 10/28/01in the following way:

a. CTD data by 10/28/03

b. voice transcripts, video, and still camera film by 10/28/03

c. other 10/28/03

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)

_____Principal Investigator