HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV-117

MISSION STATUS

Location: Kealaikahiki Channel

Mission Date: 11/03/01

Maximum Depth: 302 m

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

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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 bottom fish 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 bottom fish habitat site.

Techniques

Prior to this and other ROV dives, the ship arrived on the survey site and we 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 down slope 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 night to a depth of 287 m. It reached minimum and maximum depths of 302 m and 261 m, respectively, and was recovered at 302 m. The transect was conducted on a submerged wall just northwest of Kahoolawe. The RCV landed on a low-relief carbonate bottom dusted with sand, and traversed an area of similar terrain, interspersed with flat sandy regions, until reaching a rocky, ascending slope. The slope consisted of areas of high relief with undercut ledges and numerous holes, and areas of lower relief with sand dusting over carbonate reef. The top of the wall was a flat area consisting of sand, cobbles and smooth limestone. The ROV then descended down a hard, rocky carbonate slope. Approximately 53 different animals were videotaped on this dive. Examples of fish species include; *Etelis coruscans, Poecilopsetta hawaiiensis, Bembradium roseum, Physiculus rhodopinnis, P. nigripinnis, Plectranthias kelloggi, Antigonia eos, Pontinus macrocephalus, Scorpaenodes corallinus, Bathyuroconger vicinus, Xyelacyba myersi,* and *Laemonema rhodochir.* Examples of invertebrate species include; *Sphaeriodiscus ammophilis, Plesionika* sp., *Pennatula flava, Stylocidaris calacantha, Neopilumnolax major, Tamaria scleroderma, Corallium* sp. Nocturnal fishes not observed during the day include; myctophids, *Gnathophis* sp., *Saurenchelys stylurus,* and an ophichthid.

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-117

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 11/03/01in the following way:

a. CTD data by 11/03/03

b. voice transcripts, video, and still camera film by 11/03/03

c. other 11/03/03

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