HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV-016A&B

MISSION STATUS

Location: Mokulua Pinnacle

Mission Date: 2 Sep 98

Maximum Depth: 400m

Project Title: Evaluation of Non-Lethal Methods for Assessment of Overfished Deepwater Snapper Resources

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

The objective was to make a continuous set of observations of benthic habitat and fish and invertebrate fauna on each of 2 roughly parallel transects along the western limb of Mokulua Pinnacle, for comparison with daytime observations to be made on submersible dives and camera tows: (1) at the edge of the feature (Dive RCV-16B) and (2) a little farther east and nearer the center of the feature (Dive RCV-16A). The ship moved slowly into the wind and sea, towing the cage at an altitude of several meters above the bottom, and the ROV made excursions from the cage at altitudes from the bottom to a few meters and scanned the substrate and lower water column. Mesh bags of bait tied to the cage and the ROV before Dive 16A left scent plumes continuously on both dives. Lights on the cage and ROV were used continuously. After Dive 16A was completed, the ROV and cage were recovered aboard the ship, moved back to near the starting position, but slightly farther west, and redeployed for Dive 16B. The ship track was adjusted (heading roughly NNE) to move the ROV generally along the western side of the feature.

On Dive 16A, most of the substrate appeared to be a rock base with nearly complete coverage of sand of variable depth, and without much large sessile fauna. The general slope was mostly relatively gentle without much high relief. Dive 16B followed the western edge of the feature more closely and covered steeper slopes and higher relief. Good potential habitat for small/medium fishes was present on both tracks, especially Dive 16B. Where sediment

(OVER)

was thin over rock, scattered soft corals occurred, including some wire corals and a few deep-water black coral colonies. In one area in Dive 16B, a single discrete field hundreds of square meters in area was found in which the echinoid Chactodiadema pallidum covered the sand surface in such a dense pattern that spaces between individuals were smaller than the size of individuals. Shrimp were present in the water column and fairly abundant on the substrate over both tracks. Several crabs of various kinds were seen.

Few large fish were seen on either dive, and only one commercial snapper (an ehu) was seen (on Dive 16A). Larger noncommercial species included 1 ray (Plesiobatis daviesi) and a dozen or more eels, including congrids. Small fishes were relatively abundant throughout both dives; common taxa included Symphysanodon maunaloae (very abundant and locally in extremely dense concentrations), scorpaenids, Bembrops filifera, Laemonema rhodochir, Satyrichthys engyceros, Antigonia sp. and morids. A nettastomatid eel (very long and slender), probably Saurenchelys stylurus, so far not reported in HURL missions, was seen on both dives (at least 3 individuals). Probable overlap was found with the kind of habitat (medium / large boulders in sand depressions) observed earlier in the southern portion of Pisces Dive PS-373; commercial snappers were not found there in these ROV dives.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Near the end of Dive 16B, diving for the night was aborted due to low oil pressure in the ROV, resulting from failure of the same fitting that had failed on 2 previous dives.

Also see Quick Look Report Mission No. RCV-014 A & B

Recommendations for corrective action or improvement:

The fitting was replaced, with the loss of all ROV diving the following night (3 Sep 98). This appears to be a flaw in the design, material or manufacture of the fitting and should be followed up promptly for a permanent fix.

Also see Quick Look Report Mission No. RCV-014 A & B

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

The mission probably achieved about 75% of its purpose quantitatively, with basically good quality. About 5 hours of observations were accomplished and perhaps 2 hours of potential work lost. All diving planned for 3 Sep was also lost.

List specimens or samples collected on the mission.

None

Dive RCV 16 A+B

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

Evaluation of Non-Lethal Methods for Assessment of Overfished.... (project title)

held on 2 Sept 1998 (date) in the following way:

a. CTD data by 2 Sept 2000 (date)

b. voice transcripts, video, and still camera film by 2 Sept 2000 (date)

c. other 2 Sept 2000 (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).

Robert B. Moffitt Principal Investigator