HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV- 036, 037, 038, 039

MISSION STATUS

Location: All dives at Penguin Bank; 036, 037: Along S. side of the slope connecting bases of 2nd and 3rd Fingers, moving NW to E; 038,039: Pinnacle just E of 3rd Finger, ROV traveled roughly SW-NE.

Mission Date: 036,037: Sept. 15, 99; 038: Sept. 15-16, 99; 039: Sept. 16, 99

Maximum Depth: 036: 150m; 037: 252m; 038: 252m; 039: 292m.

Project Title: Evaluation of Non Lethal Methods for Assessment of Overfished Deep Water Snapper Resources.

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

A major objective was to scout these 3 areas for general physical geological characteristics and common, conspicuous flora and fauna, and characterize the properties of habitat for fishes where the fishes occur. Particular emphasis was placed on finding sites where taape (Lutjanus kasmira) and eteline native snappers occur, separately of together. For all commercial species of interest, we wanted to obtain some sense of their general density and distribution. All these results will contribute to assessment of potential interactions between taape and the etelines. A less critical objective is to identify other large, numerous of ecologically important animals that occupy the same of nearby habitats.

Techniques: The RCV was deployed by the Ka'imikai-o-Kanaloa in areas that would permit it to move along pre-plotted tracts of interest: RCV-036 dive began at 1849 at a point on the southward sloping face between the 2nd and 3rd Fingers at a depth of ~81m. The RCV subsequently traversed a track beginning a few kilometers west of the base of

3rd Finger, and moving through depths of ~80-150 m as it moved eastward. Much of the substrate at shallow depths was consolidated rock/old reef material with a rough, cable size surface of relatively low relict for fish habitat. Their substrate was unevenly covered by a thin layer of coarse coral sand. The rock/reef substrate contained many small pukas, and apparently sheltered many small/juvenile fish. Many small individuals moved frequently across the bottom demersally, often close about the substrate, e.g. Several large and/or important resource fish* were seen, usually in shallow holes in substrate. Other portions of this track and the 037 track contained large cliffs of steeply sloping rock face, relatively smooth, and without much sand covering. Eastward toward base of 2nd Finger, the same steep solid walls continued with less signs of megafauna.

Important fish seen on RCV-037 (depths 90-269m): M. chryseres; Neoniphon holocentrid; taape, Seriola dumerili.

* 2 acanthurid; Myripristis chryseres; Arothron hispidus (?); Sargocentron xantherythrum; Kahala (same 6 species from most of dive); Mulloides pflugeri; L. kasmira; balistid; Apogon maculiferus; Canthigaster coronata; Neoniphon aurolineatus; Sargocentron; hermit crab (Dardanus bryops) in large fun shells w/anemones

For dive RCV-038, the ship relocated the RCV near the SW corner of the pinnacle, which resulted in a short track area just a small SW portion of the periphery between depths of 162 and 252 m. Moved across area of carbonate substrate, sparsely covered with sand, considerable slope in this short run, some sizable topography, but encountered few fish or mega-invertebrates. Some unidentified fish near substrate. All Chromis struhsakeri with large external isopod parasite on right cheek. Also scorpaenid (?); E. carbunculus; around rocky ground 20 s m deep; Pontinus macrocephalus, morid (Physiculus rhodopinnis; eels).

Bottom contains many sand mounds and rock piles. Many red/pink shrimp in water column, but apparently demersal.

For dive RCV-039, the ship relocated the RCV a little farther around the periphery of the pinnacle on the south side then toward a track diagonally across the pinnacle. Seems to bisect it cleanly. Apparently good fish habitat - ~ rugose and with considerable topography on a medium scale, some part of track (early) substrate appeared much like RCV-036; Some important/interesting fish and mega-inverts: C. struhsakeri; morids; eels, including Conger oligoporus; scorpaenid; L. kasmira; B. filifera; R. excelsa; P. sieboldii; Ariosoma bowersi; kahala – or more (maybe all or some from –036) stayed near for whole track.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

At the beginning of Dive RCV-039, an ~ total failure of power connection and/or communication occurred, the failure cleaned and we were able to carry out the dive.

Recommendations for corrective action or improvement:

The RCV team is working on repair now, looking to an estimate of Sept. 17, 99 dive.

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 shows promise of taking care of the diving support needed for my project. Collaboration with the principal P.I. in his uses of the Pisces V diving this time seems to be effective. For the 4-dive series reported here, I think results are all I could have hoped for. J. D. Parrish

List specimens or samples collected on the mission.

None – visual and instrumental data only are used as input to our analyses.

Dive RCV-036, 037, 038, 039

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 ..... (project title)

held on Sept. 15, 1999 (date) in the following way:

a. CTD data by Sept. 15, 2001 (date)

b. voice transcripts, video, and still camera film by Sept. 15, 2001 (date)

c. other Sept. 15, 2001 (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