HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV- 043, 044, 045

MISSION STATUS

Location: All dives at Penguin Bank; 043: from base of 3rd Finger, NNE; 044: from base of 2nd Finger, N and NE; 045: across 2nd Finger near base

Mission Date: Sept. 18-19, 99

Maximum Depth: 043: 202m; 044: 179m; 045: 220m.

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 & Results: 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-043 began at 1916 on the north side of 3rd Finger at its base at a depth of 72m. The RCV then traveled on a roughly NNE track, descending into a basin with a greatest depth

on the track of 202m, rising on a slight ridge to depths as shallow as 70m, descending again to depths of 158m, and finally ascending the northern slope to end at 51m at 2103, after covering ~ 2 ½ km. Much of the substrate was sandy with little relief, but rubble was often present, and in many places sediment was heavily distribute by pits, mounds and burrows. The bottom shaved considerable slope, especially near the end, when rubble was common, with occasional large rocks.

No etelines were seen, nor other fishes of much market value. Fish sighted frequently or in sizable numbers included: holocentrids (only a few Myripristis chryseres were identified), eels (including the long slender species [nettastomatids ?] and a good many congrids), very many of the small, black, fast-moving fishes with reflecting sides, taape (5 sighted), Seriola dumerili. Several other fish spp. and some macro-invertebrates were also sighted, indicating a diverse fauna and some habitat for demersal spp.

RCV-044 began at 2800 on the S. side of the broad base of 2nd Finger at a depth of 113 m. The RCV then traveled on a track ~ N and NE for ~ 1 ½ km total, passing over the finger to ~ eastward facing slope north of the base of the finger to a final position at 179 m depth at 0012. Depth was as little as 83 passing over the center of the finger width, then increased continuously to the final depth of 179 m. Bottom was initially coarse sand with some exposed limestone, considerable rubble near the crest, followed a little farther down the slope by more hard terrain, rubble and sand.

Fish fauna seemed less diverse and abundant than on same other tracks. The black shiny "myctophid" fish was sighted most often. There were ≥ 3 sightings of congrids, 3-4 of apogonids, 3 of bothids, and 1 or more of a carcharhinid shark, a Dasyatis, Canthigaster coronata, and a few mega-invertebrates (holothurians, sea stars, crabs). No etelines or taape were seen. Overall, habitat seemed reasonable good, although it lacked the extreme high relief of some other tracks, but it did not harbor large numbers of large fishes.

RCV-045 began at 0100 on the S side of 2nd Finger just over the edge at a depth of 151 m. The RCV then traveled roughly northeast, diagonally across the finger about 1.4 km. This track went up the southern slope to a minimum depth of 107 m on top of the finger, then descended on the north slope and continued descent on the N side to a maximum depth of 220 at the end of the track at 0201. Most of the track had considerable sand covering, but the steep ascent on the south side and descent on the north side contained some large, irregular, exposed rock areas. From the base of the finger on the north side (~ 170 m), the rest of the track sloped very gently with mostly smooth sand covering.

The only eteline snapper seen was 1 ehu near the bottom of the steep northern slope. Eels (apparently mostly congrids) were much the most abundant fishes reported *. Other fishes were neither diverse nor numerous. Some taxa seen more than once were Seriola dumerili (at least 6), Myripristis (maybe all chryseres) and an unidentified holocentrid, apogonids, the "myctophid" fish, and 5 taape.

Overall, the habitat seems favorable for etelines and other large fishes, but was not heavily used during the track.

*Primarily seen in soft substrate, relatively flat area north of the finger.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

None.

Recommendations for corrective action or improvement:

N/A

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

Yes

List specimens or samples collected on the mission.

None

Dive RCV-043, 044, 045

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. 18-19, 1999 (date) in the following way:

a. CTD data by Sept. 18, 2001 (date)

b. voice transcripts, video, and still camera film by Sept. 18, 2001 (date)

c. other Sept. 18, 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