HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV- 049, 050, 051

MISSION STATUS

Location: All dives at Penguin Bank; 049: S-N on small shallow protrusion just W of 1st Finger; 050: Diagonally across 1st Finger near middle; 051: NE of 1st Finger, up onto main slope.

Mission Date: Sept. 20, 99

Maximum Depth: 049: 184m; 050: 222m; 051: 220m.

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

Principal Investigator: Robert B. Moffitt

Address: National Marine Fisheries Service
Honolulu, Laboratory
2570 Dole St.
Honolulu, HI 96822

Phone: 983-5373

Observer 1: Greta S. Aeby

Address: Zoology Dept.
2538 The Mall
University of Hawaii
Honolulu, HI 96822

Observer 2: James D. Parrish *

Address: Hawaii Cooperative
Fishery Res. Unit
2538 The Mall, UH
Honolulu, HI 96822

* Also U.S. Geological Survey, U.S. Dept. of the Interior Biological Resources Division

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-049 began at ~1923 near the tip of a small ridge projecting from shallow ground a little W of the N-S limb of 1st Finger at a depth of 176 m. The RCV then traveled on a roughly NNE track up onto the ridge with a minimum depth of 105 m, then steeply off the ridge again to depths of 184 m, then gradually ascending the slope to 152 m at the end of the track. The track began in a flat, sandy area, but areas with corals, cobbles and occasional large rock outcrops were encountered in some shallow portions on the ridge, followed by large stretches of mostly sand and some rubbles.

The fish fauna was diverse and fairly abundant. Sightings of eteline snappers were: 1 onaga, 1 ehu, 1 kalekale and 1 identified as kalekale or opakapake. Heniochus were very abundant (~ 40 counted) and Chaetodon miliaris next in sightings. Several flatfish (possibly all bothids) were seen. Four holocentrids (including at least 1 M. chryseres) were noted and 3 apogonids. Most other species were seen only once or twice, including an Antigonia and a Dasyatis ray. The area seems to provide some good habitat for a variety of large (commercial) and small fishes.

RCV-050 began near the south edge of 1st Finger at a depth of 148 m, about the middle of the E-W length of the finger. The RCV then traveled on a roughly ENE track diagonally across the top of the finger and over the north edge at ~ 160 m, then slowly down the north face to its base at ~ 227 m. Except for the deepest waters north of the finger, the substrate was mostly rough and uneven, with a good many large boulders and large, exposed steep surfaces. Commercial eteline snappers seen were 2 kalekale and 1 ehu. Bembropsids were far the most frequently seen fish (>20 individuals). Other taxa observed more than once included: scorpaenids, morids, holocentrids (including 2 Sargocentron), flatfish (probably bothids), and eels (including 2 congers). Much of the substrate near the top of the Finger and on its steep, rocky sides seems to provide suitable habitat for large commercial fishes and other groups.

RCV-051 began ~ 2 ½ km N and slightly E of the tip of 1st Finger near a small ridge extending slightly down the general southerly slope. Beginning at a depth of 124 m, the RCV traveled a track roughly NNE across the top of the small ridge, then descended sharply off the ridge on the E side to depths of 220 m, then slowly ascended the general southerly slope to a depth of 112 m. The substrate was mostly sand covered, with growth of wire corals in some places, and some large boulders near greatest depths.

The most abundant and frequently sighted fishes were eels * (≥ 60). The next most frequently sighted taxa (all also abundant) were the small, black "myctophoid" fish, flatfish (most probably bothids), and bembropsids (several individual sightings). Heniochus was sighted only twice, but at least 30 individuals were seen. Chaetodon miliaris and Myripristis chryseres were and sighted more than once.

No commercial eteline snappers or taape were seen. It is not clear how suitable the area is for large fishes.

* Including at least 4 congrids, probably more.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Nothing new.

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

List specimens or samples collected on the mission.

None

Dive RCV-049, 050, 051

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. 20-21, 1999 (date) in the following way:

a. CTD data by Sept. 20, 2001 (date)

b. voice transcripts, video, and still camera film by Sept. 20, 2001 (date)

c. other Sept. 20, 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