HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV-013 A, B, C

MISSION STATUS

Location: Penguin Bank

Mission Date: 29-30 Aug 98

Maximum Depth: 185 m

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 3 roughly parallel transects along the axis of the "3rd Finger" of Penguin Bank for comparison with daytime observations made on submersible Dives 367 and 369; on the top of the "finger" (Dive RCV-13A), and over the edge at depths down to 200 m (Dives RCV-13B and C). 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 the first dive left scent plumes continuously for all dives. Lights on the cage and ROV were used continuously. After Dive 13A was completed, the ROV and cage were recovered aboard the ship, moved back to near the starting position, but over the edge in deeper water, and redeployed for Dive 13B. Dive 13C was set up similarly, but the ship track was adjusted to maintain the vessel farther off the top of the bank. However, Dive 13C was aborted at the start due to a short circuit or break in the tether wiring.

The rather flat and featureless top of the "finger" was well surveyed at depths of 85-96 m. Much of it was bare, featureless sand except for occasional mounds

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and rather widely spaced pits, many of which contained coarse coral rubble and cobbles with some algal growth (including Halimeda), sessile benthic invertebrates, and some shell hash. Other large areas of the flat contained more dense cover of rubble, cobbles and coarse sand, with some dead standing coral, considerable algal overgrowth, and densely scattered, unattached fungid coral colonies. No eteline snappers were seen. One shark was seen very briefly. Relatively small fishes seen occasionally included Canthigaster coronata (several, widespread), a goatfish (Mulloidichthyes pfluegeri), Anthron hispidus, Ophidion moraenolepis (?), Apogon kallopteros, A. maculiferus, Lutjanus kasmira (2 of 3-5" in sand pits in one small area), Myripristis chryseres, Heniochus diphreutes, Chaetodon frenblii, Fistularia commersoni (?), Decapterus sp. and myctophids (?). Mobile invertebrates seen included occasional arrow crabs, hermit crabs, gastropods, holothurians (2-3 spp., several inches long), shrimps, and 2 asteroid spp.

The first portion of Dive 13B (100-185m) surveyed a fairly steep and mostly barren sandy slope and a portion of steeper, exposed rock slope at depths just below. Few fish were seen; all were small and poorly identified. Above 100m depth, the habitat and fauna were much as in Dive 13A. One large Seriola dumerili was present and followed the ROV. Small fish seen in small numbers included Neoniphon aurolineatus (2?), a Naso sp., Heniochus diphreutes (3), Desmoholacanthus arcuatus, Canthigaster coronata (3), and myctophids (?). Two of the same holothurian spp. were seen.

Dive RCV-013A, B, C

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

The ship's bow thruster was inoperable because of a part removed to repair a failure in one main engine. This limited the ship's ability to hold the desired track on Dive 13B, and the desired depth was missed. Failure of the electrics in the tether at the start of Dive 13C caused that dive to be aborted.

Recommendations for corrective action or improvement:

Both the engine control failure and tether malfunction are under repair 30 Aug 98, but ROV diving during the night of 30 Aug will also be lost while the tether repair is completed.

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 achieved perhaps half its purpose. Night observations were obtained at the shallowest depths, which is the area of least interest. Perhaps half a transect was completed in somewhat deeper habitat, but no observations were made at the desired depths for comparison with daylight dives. And diving on the night of 30 Aug is lost completely

List specimens or samples collected on the mission.

None

Dive RCV-0134, B, C

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 Deepwater.... (project title)

held on 29-30 Aug 1998 (date) in the following way:

a. CTD data by 30 Aug 2000 (date)

b. voice transcripts, video, and still camera film by 30 Aug 2000 (date)

c. other 30 Aug 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