HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV-018A,B,C

MISSION STATUS

Location: Makapuu Closed Area # 6

Mission Date: 6-7 Sep 98

Maximum Depth: 463 m

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

Principal Investigator: Robert B. Moffitt

Address: National Marine Fisheries Service
2570 Dole St.
Honolulu, HI 96822-2396

Phone: (808) 983-5373

Observer 1: James D. Parrish

Address: Hawai'i Cooperative Fishery Research Unit
2538 The Mall, Univ. Hawaii
Honolulu, HI 96822

Observer 2: Walter N. Ikehara

Address: Division Aquatic Resources
1151 Punchbowl St.
Honolulu, HI 96813

Observer 3: Robert B. Moffitt

Address: Same as Prin. Invest.

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 4 roughly parallel transects distributed across the tops of the 3 mound-like features along the northeastern border of Closed Area #6, for comparison with daytime observations made on submersible dives and camera tows: (1) across the (large) northernmost mound near its northern edge (Dive RCV-18A) and near its center (Dive RCV-18D [aborted]), (2) across the middle mound (Dive RCV-18B), and (3) across the southernmost mound (Dive RCV-18C). The ship moved slowly into the wind and sea in a [redacted] generally northeasterly direction, 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. A mesh bag of bait (mixed fish and squid) tied to the ROV before Dive 18A left scent plumes continuously on all dives. Lights on the cage and ROV were used continuously. After Dive 18A was completed, the ROV and cage were recovered aboard the ship, moved nearly due south, and redeployed for Dive 18B. Similarly, after recovery of the equipment from Dive 18B, it was relocated to the southwest and redeployed for Dive 18C. Dive 18D was aborted because of ROV electrical equipment failure.

Dive 18A began on a relatively level sandy plain nearly 400m deep, rose over a relatively steep and rocky slope to depths of ~360m, where the substrate was again sandy

(OVER)

and relatively level, then descended a steeper, primarily rocky slope to depths of ~460 m, where the transect ended. Dive 18B was somewhat similar, but rose only briefly from ~350m to ~325m to a more level sandy surface, before descending continuously and at times over steep, rocky terrain, to depths of ~420m. Dive 18C depths and topography similar to 18B, but the track lacked the initial upslope. Overall, much of the substrate on gentle slopes consisted of sand at least several centimeters deep with vague bedforms from water motion in some places, usually mixed with some mounds, pits and trails made by benthic fauna. On steeper slopes, much rocky substrate was exposed. with vertical relief in general of a few to several centimeters and some areas with much larger scale relief and apparently good cover for small/medium size fish. Larger benthic sessile fauna (e.g soft corals and a few glass sponges) was scattered and never dense. Several asteroids were seen, but cidaroid echinoids were very rare. Shrimp were present, primarily on the substrate, but not abundant. Two opisthobranch molluscs were seen. The fish fauna seemed generally similar on the 3 transects. No commercially valuable species were seen. Large fishes seen included a ray Plesiobatis daviesi, a torpedo ray, 3 lophiid goosefish, and several eels (including congrids). Relatively common smaller taxa included Symphysanodon maunaloae, Beryx decadactylus, a few species of scorpaenids, Chaunax umbrinus, Chrionema sp., Chlorophthalmus proridens, morids (including Laemonema rhodochir), macrourids, and Polymixia berndti.

Dive RCV-018 A, B, C

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

After 3 successful dives, at the start of Dive RCV-018D, an electrical failure of communications between the ship and the ROV caused Dive RCV-018D to be aborted.

Also see notes on Quick Look Report for Dive RCV-014.

Recommendations for corrective action or improvement:

See notes on Quick Look Report for Dive RCV-014.

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

Essentially the mission was successful in terms of the data collected both qualitatively and quantitatively, within the capabilities of the equipment. Over 75% of the planned work was accomplished.

Also see notes on Quick Look Report for Dive RCV-014.

List specimens or samples collected on the mission.

None

Dive RCV018 A, 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... (project title)

held on 6-7 Sept 1998 (date) in the following way:

a. CTD data by 7 Sept 2000 (date)

b. voice transcripts, video, and still camera film by 7 Sept 2000 (date)

c. other 7 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