# HAWAI'I UNDERSEA RESEARCH LABORATORY

## QUICK LOOK REPORT (QLR) for *Pisces* and *RCV-150*

**DIVE:** RCV150-R351

## MISSION STATUS

**Location:** North of Kahoolawe Island Reserve

**Latitude:** 23 ° 43.613'N **Longitude:** 156 ° 43.043'W

**Mission Date:** Oct. 24, 2006 **Duration:** 1 hours 40 mins

**Maximum Depth:** 225 meters

**Project Title:** Boundaries and Bridges: Efficacy of marine protected areas for deep-slope snappers

**Principal Investigator:** Dr. Daniel Polhemus*/Walter Ikehara**

**Address:** *Department of Land and Natural Resources: Division of Aquatic Resources, 1151 Punchbowl, Rm 330, Honolulu, HI 96813
**NMFS PIRO, 1601 Kapiolani Blvd., Suite 1110, Honolulu, HI 96814

**Phone:** 808-587-0110

**Observer 1:** Christopher Kelley **Observer 2:** Robert Moffitt

**Address:** Hawaii Undersea Research Lab
University of Hawaii
1000 Pope Rd, MSB 303
Honolulu, HI, 96822

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

**Pilot 1:** Dan Greeson **Pilot 2:** Pete Townsend

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

Objectives:
1) Characterize "habitat bridges" as a potential mechanism to facilitate movement of adult bottomfish species from bottomfish restricted fishing areas into adjacent exploitable areas.
2) With input from a companion tagging and tracking study, observe opakapaka and onaga associated with the areas where habitat bridges may link protected areas and adjacent exploited areas.
3) Develop methodologies for introducing acoustic tags to selected bottomfish at depth in situ using a manned submersible.

Observations, findings, etc:

The ROV was deployed at a depth of 200 m on a sediment plain at the base of a hard slope. The transect continued down a gentle slope of soft sediment with scattered coralline outcroppings and rubble to a maximum depth of 225 m then continued up a gently sloping saddle to 135 m. At this point we encountered more hard, calcareous features. We then dropped rapidly to 191 m along a steep hard slope. Piloting became difficult with the hard sloping bottom and rapid ship speed. The transect ended on the hard slope at a depth of 170 m. During the transect, efforts were made to identify all fish and invertebrates encountered. Closeups of organisms were obtained when possible, though the rapid ship speed made this a rare treat. Fish and invertebrates observed during the transect are listed below. Of particular note was a vast cerianthid field composed largely of cerianthid green with a scattering of cerianthid brown, cerianthus white, and Cerianthus sp. The most common fish along the transect was Saurenchelys stylurus. Also of note was the presence of fishing line and a single ehu at the end of the transect suggesting that this point (23° 56.27'N 156° 41.23'W, 170 m) is a known fishing site.

Observed Species list:

Fish: Saurenchelys stylurus, Chrionema squamiceps, Conger oligoporus, Decapterus macarellus, bothid, Gymnothorax sp, Squalus mitsukurii, Ophidion muraenolepis, Synagrops japonicus, Polymixia sp, myctophid ,Torquigener randalli, Carcharhinus plumbeus, holocentrid, Etelis carbunculus, Scorpaenid.

Echinoderms: Calliderma spectabilis, Actinocidaris hastigera, Stylocidaris rufa, Tamaria triseriata

Cnidarians: Alicia sp, unidentified anemone, cerianthid green, cerianthid brown, cerianthid white, Cerianthus sp., unidentified jellyfish, Virgularia sp., Cirrhipathes spiralis

Mollusks: Nototodarus hawaiiensis

Other Invertebrates: Lyrocteis sp,

Crustaceans: Plesionika sp., Mursia hawaiiensis, Melicertus marginatus, Paramunida hawaiiensis, Plesionika flag, Cyrtomaia smithi

Man-made Objects: Cloth, fishing line, bottle?

## MISSION EVALUATION:

**Limitations, failures, or operational problems noted:**

Poor weather and sea conditions prevented the deployment of the ROV in the Kahoolawe Island Reserve. Several alternative sites were investigated and rejected. Finally an alternate potential bottomfish habitat site well north of the Kahoolawe Island Reserve was and the ROV was deployed to obtain data on habitat characteristics and community structure.

**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:**

Despite the fact that the dive could not be conducted in the reserve, excellent video and closeups were obtained in a bottomfish habitat site. The mission was therefore considered a success.

**List specimens or samples collected on the mission:**

None

# 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 (Project title):

____ Boundaries and Bridges: Efficacy of marine protected areas for deep-slope snappers

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Held on Oct. 24, 2006 _____ (date) in the following way:

a. CTD data by Oct. 24, 2008 _____ (date)

b. Video and images by Oct. 24, 2008 _____ (date)

c. Other Oct. 24, 2008 _____(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).

_____

Principal Investigator