HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV-192

MISSION STATUS

Mission Date: 10-27-02

Location (island, bank, seamount, etc): Molokai

Specific Site (NE side, summit, etc): Penguin Banks
Position (start latitude & longitude): 21° 02.745/157° 42.031
Depth range: 223-431 m

Project Title: Effectiveness of refugia on bottomfish stocks

Principal Investigator: Robert Moffitt

Address: NOAA Fisheries
2570 Dole St, Honolulu, HI 96822

Phone: 983-5373

Observer 1: Robert Moffitt
Address: NOAA Fisheries, 2570 Dole St, Honolulu, HI 96822

Observer 2: Christopher Kelley
Address: HURL

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

Materials & Methods:

The main objective of this study is to complete an evaluation of the effectiveness of DLNR's bottomfish management plan. This is being accomplished with follow-up submersible surveys to our 1998 and 1999 studies, which provided baseline data on densities of onaga and ehu in two refugia and two adjacent control areas. ROV dive objectives are to characterize habitats at and near the study sites. This is being accomplished by conducting video-surveys during which all fish and invertebrate species encountered are recorded along with substrate and depth information.

Scientific data acquired:

The dive was conducted exactly as planned. The ROV was first lowered into the NE corner of RFA 9 where a hard carbonate substrate was encountered at 223 meters. This area was essentially a finger extending out from the main western slope of Penguin Banks. Typical bottomfish habitat species were observed (see Table 1). As the ROV crossed over the finger and down the opposite side, the substrate changed to sediment/pebbles at approximately 336 meters. At 400 meters, relatively flat bedform sediment was encountered which continued to a depth of 431 meters.

Table 1: Biological organisms observed during the dive.

FISHES	ECHINODERMS, CRUSTACEANS, & MOLLUSKS	CORALS, SPONGES & OTHER INVERTS
Scorpaenid	Pagurid in mollusk shell	Cirrhipathes spiralis
Antigonia sp	Urchin	Calyptrophora sp?
Etelis coruscans?	Holothurian	Gorgonian
Carapid	Stylocidaris rufa	Hydrozoans
Myctophid	Neopulimnoplax major	Lyrocteis sp
Eel	Plesionika martia	Sericolophus hawaiicus
Trichiurid	Cyrtomaia smithi	**Bathyalcyon sp (striped)?**
Nettenchelys gephyra	Pleurobranchus sp	Pennatulid
Symphysanodon maunaloae	Irregular urchin	Cerianthid grey?
Epigonus sp	Heterocarpus ensifer	Funiculina sp
Xyelacyba myersi	Plinthaster ceramoidea	Cerianthid brown
Ijimaia plicatellus	Shrimp	**Cnidarian unknown**
Caelorinchus spilonotus	**Crabs unknown**	Regadrella sp
Bothid	Mediaster ornatus?	Bathypathes patula
Chrionema chryseres	Gooseneck barnacles	Antipathes sp 1
Chaunax umbrinus	Sphaeriodiscus ammophilus	Bathypathes conferta
Pontinus macrocephalus		Narella sp
Beryx decadactylus?		Bolocera sp
Laemonema rhodochir		Leiopathes glabberima
Epigonus devaneyi		
Meadia abyssalis		
Cyttomimus stelgis		

Two very unusual cnidarians were observed in this area: a possible striped protoalcyonacean (Bathyalcyon sp?) and an unkown cnidarian that could have been either an alcyonacean or a cerianthid. Neither of these organisms had been recorded on any previous HURL dives. Cobbles and pebbles began to appear on the bedforms and the depth started to decrease when the base of the second carbonate finger was encountered at 425 meters. This was a known productive bottomfishing site. The substrate was high relief carbonate with unusual cracks as well as a relatively large number of cavities. After crossing over the finger, a sediment substrate was again encountered at 421 meters. The dive was terminated shortly thereafter.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

None

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, the transect was conducted on an important bottomfishing site. To our knowledge, this was the first time this site has been surveyed.

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

RCV-192 held on 10-27-02.

a. CTD data by 10-27-04

b. video data by 10-27-04

c. other_____(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