HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P4-064

MISSION STATUS

Mission Date: 10-25-02

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

Specific Site (NE side, summit, etc): Penguin Banks
Position (start latitude & longitude): 20°55.755'N 157° 31.206'W
Depth range: 176-353 m

Project Title: : Effectiveness of refugia on bottomfish stocks

Principal Investigator: Robert Moffitt

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Observer 1: Robert B. Moffitt
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Observer 2: Jane Culp
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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 a follow-up survey to our 1998 and 1999 studies, which provided baseline data on densities of onaga and ehu in two refugia and two adjacent control areas. This particular dive was conducted in RFA 10 on Penguin Banks, one of the two refugia in the study. Specific dive objectives were to assess bottomfish sizes and populations and survey the fish and invertebrate community in the refugia. A set of four thirty minute transects and two thirty minute bait stations were conducted within the depth range of 200-350 meters, where most species of bottomfish occur. The four transects were conducted at 350, 300, 250, and 200 meters. The two bait stations were conducted at 297 and 241 meters.

Scientific data acquired:

We conducted four transects and two bait stations as planned. The 350 m transect was on a 30-45 degree sediment covered carbonate slope with scattered carbonate cobbles. Several small ehu and a single golden kale were observed. The 300 m transect was conducted at the base of the steeper carbonate wall (60-75 degree). On this transect we observed a few small ehu and 10-12 large onaga (roughly 1 m in length). Transect 3 was on the center of this wall at 250 m. We observed many ehu (mostly small, but up to 15 inches in length), about 10 onaga, and a golden kale. The final transect at 200 m was near the top of the wall.

In addition to steep carbonate walls much of the bottom at this depth was low angle sediment covered carbonate with scattered exposed areas. Many small fish were observed on this transect (including Symphysanodon maunaloae, Pseudanthias fucinus, and Grammatonotus laysanus). Also observed were ehu, gindai, and kalekale. The 297 m bait station on a steep carbonate slope attracted 3 large onaga (36 in), 3 Gymnothorax nuttingi, 2 ehu (12-15 in), 1 Conger oligoporus, and 2 Eumegistis illustris. The 241 m bait station, also on a steep carbonate slope, attracted 5 gindai, 6 ehu, 3 yellowtail kale, 4 kalekale, 1 Gymnothorax nuttingi, and 1 kahala.

Table 1: Biological organisms observed during the dive.

FISHES	ECHINODERMS, CRUSTACEANS, & MOLLUSKS	CORALS, SPONGES & OTHER INVERTS
Ariomma luridum	Brachyuran crab	Anthomastus fisheri
	Munida brucei	Anthomastus sp.
Eumegistus illustris	Randallia distincta	Cerianthid green
Seriola dumerili	Munida plexaura	Antipathes subpinnata
Roa excelsa	Neopilumnoplax major	Cirrhipathes spiralis
Conger oligoporus	Paromola japonica	Callogorgia formosa
Erythrocles scintillans	Cyrtomaia smithi	Corallium niveum ?
Epigonus glossodontus	Ciliopagurus hawaiiensis	Corallium secundum
Epigonus sp.	Pagurid	Corallium tortuosum
Pristilepis oligolepis ?	Mediaster ornatus	Narella sp ?
Polylepion russelli	Plintaster ceramoidea	Lyrocteis sp.
Suezichthys notatus	Tamaria triseriata	Holothurian
Etelis carbunculus	Stylocidaris rufa	
Etelis coruscans		
Pristipomoides auricilla		
Pristipomoides filamentosus ?		
Pristipomoides sieboldii		
Pristipomoides zonatus		
Physiculus rhodopinnis		
Gymnothorax berndti		
Gymnothorax nuttingi		
Myctophid		
Bembrops sp 1		
Chrionema chryseres		
Chrionema squamiceps		
Poecilopsetta hawaiiensis		
Chromis struhsakeri		
Cookeolus japonicus		
Pontinus macrocephalus		
Scorpaenid		
Holanthias elizabethae		
Pseudanthias fucinus		
Symphysanodon maunaloae		
Symphysanodon typus		

<u>Specimens collected:</u>
Gorgonian 198 m
Carbonate rock 176 m

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.

All objectives were accomplished efficiently leaving additional time at the end of the dive for valuable specimen collection.

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

P4-064 held on 10-25-02.

a. CTD data by 10-25-04

b. video data by 10-25-04

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