HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P4-066

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): 20°58.215'N 157° 22.223'W
Depth range: 200-429 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 on "Second Finger" on Penguin Banks north of RFA 10, 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 at a known fishing site. 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 202 and 250 meters.

Scientific data acquired:
We conducted four transects and two bait stations as planned. The 350 m transect started on a steep carbonate slope ending on a lower angled sediment covered carbonate slope. No bottomfish were observed. We did, however, observe several large Bathypathes conferta trees and a single Echinorhinus cookie. The 300 m transect started and ended on a low angle sediment covered carbonate slope with a steeper wall in the middle section. A few small ehu and a golden kale were observed. Transect 3 at 250 m started on a steep heavy sediment slope with pebble filled terraces and ended on a steep carbonate slope. We

observed 2 onaga (18-22”) and a kalekale (8”). The final transect at 200 m was on a steep carbonate wall. Many small fish were observed on this transect (including Symphysanodon maunaloae, Pseudanthias fucinus, and Grammatonotus sp 1). Also observed were gindai, many Symphysanodon typus, kahala, and kalekale. The 250 m bait station on a steep carbonate slope attracted 4 onaga (18-24 in), 1 gindai, 2 Gymnothorax berndti, 1 Gymnothorax nuttingi, 8 ehu (12-15 in), 2 Conger oligoporus, 1 kahala, 1 Polylepion russelli, and 1 Dasyatis lata. The 202 m bait station, also on a steep carbonate slope, attracted 2 gindai (10-14”), 5 onaga (18-24”), 4 Randallichthys filamentosus (15-18”), 1 Dasyatus lata, 20+ Symphysanodon typus, and 2 kahala.

Table 1: Biological organisms observed during the dive.

FISHES	ECHINODERMS, CRUSTACEANS, & MOLLUSKS	CORALS, SPONGES & OTHER INVERTS
Bembradium roseum	Brachyuran crab	Anthomastus fisheri
Chascanopsetta prorigera	Paramunida hawaiiensis	Cerianthid
Seriola dumerili	Munida plexaura	Bathycyon robusta
Roa excelsa	Neopilumnoplax major	Cirrhipathes spiralis
Conger oligoporus	Paromola japonica	Corallium regale
Erythrocles scintillans	Cyrtomaia smithi	Corallium niveum ?
Epigonus glossodontus	Ciliopagurus hawaiiensis	Corallium secundum
Epigonus sp.	Pagurid	Corallium tortuosum
Pristilepis oligolepis	Anseropoda insignis	Gorgonian
Polylepion russelli	Calliaster pedicellaris	Lyrocteis sp.
Suezichthys notatus	Tamaria triseriata	Holothurian
Etelis carbunculus	Stylocidaris rufa	Pennatula flava
Etelis coruscans	Munida brucei	Antipathes intermedia
Pristipomoides sieboldii	Latreilla velida	Antipathes sp 1
Pristipomoides zonatus	Gastroptychus sp	Bathypathes conferta
Physiculus rhodopinnis	Xanthid	Bathypathes patula
Gymnothorax berndti	Crinoid	Eguchipsammia sp
Gymnothorax nuttingi	Octopus sp	Gardinaria hawaiiensis
Myctophid	Pleurobranchus sp	Javania insignis
Bembrops sp 1	Sphaeirodiscus ammophilus	Regadrella sp 1
Chrionema chryseres	Shrimp	Hexactinellid ribbon
Chrionema squamiceps	Heterocarpus ensifer	
Poecilopsetta hawaiiensis	Stereocidaris hawaiiensis	
Chromis struhsakeri	Stylocidaris calacantha	
Parapercis roseoviridis		
Parapercis schauinslandi		
Pontinus macrocephalus		
Scorpaenid		
Holanthias elizabethae		
Plectranthias kelloggi		
Pseudanthias fucinus		
Symphysanodon maunaloae		
Symphysanodon typus		
Parabothus chlorospilus		
Grammatonotus sp 1		
Antigonia sp		
Chlorophthalmus proridens		
Dasyatis lata		

Echinorhinus cookei
Randallichthys filamentosus
Malthopsis sp
Priacanthus meeki
Priacanthus alalaua
Synodus sp
Hollardia goslinei

Specimens collected:

Carbonate rock 200 m
Corallium tortuosum ? 200 m
Tamaria triseriata 200 m
Antipathes sp 1 298.5 m
Hexactinellid ribbon 295 m
Calliaster pedicellaris 295 m

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Recommendations for corrective action or improvement:

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

P4-066 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