HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P4-068

MISSION STATUS

Mission Date: 10-29-02

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

Specific Site (NE side, summit, etc): Penguin Banks Second Finger
Position (start latitude & longitude): 20° 58.208/157° 23.259
Depth range: 200 - 443 m

Project Title: : Effectiveness of refugia on bottomfish stocks

Principal Investigator: Robert Moffitt

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Observer 1: Christopher Kelley
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Observer 2: Robert Moffitt
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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, Penguin Banks, one of the two open fishing control areas. 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.

In addition to these tasks, a transducer, triggering mechanism, and custom computer system were installed on the Pisces 4 to obtain acoustic reflectivity from bottomfish species *in situ*. This task was carried out during the bait stations.

Scientific data acquired:

The four transects were conducted at 200, 250, 300, and 350 meters. The two bait stations were conducted at 253 and 204 meters. Very rugose and steep carbonate formations were observed between 250-350 meters in this area of the second finger.

Carbonate substrate was also predominant at 200 meters but was more pavement-like than at deeper depths. Table 1 below provides a listing of all the organisms observed on this dive. Of particular note was the presence of a very large school of onaga midway through the 200 m transect. We conservatively estimated the number of fish in this school at 400. This is by far the largest number of onaga seen at any site by the observers.

Table 1: Biological organisms observed during the dive.

FISHES	ECHINODERMS, CRUSTACEANS, & MOLLUSKS	CORALS, SPONGES & OTHER INVERTS
Synagrops japonicus	Paramunida hawaiiensis	Anthomastus sp
Glossanodon struhsakeri	Munida brucei	Bathyalcyon robusta
Parabothus coarctatus	Paromola japonica	Bathypathes conferta
Grammatonotus sp1	Randallia distincta	Bathypathes patula
Chlorophthalmus proridens	Mursia hawaiiensis	Cirrhipathes spiralis
Ariosoma marginatum	Neopulimniplax major	Antipathes sp 1
Conger oligoporus	Homola dickensoni	Corallium niveum
Antigonia eos	Cyrtomaia smithi	Corallium secundum
Seriola dumerili	Tutankhamen pteromerus	Corallium tortuosum
Roa excelsa	Octopus sp	Gardineria hawaiiensis
Erythrocles scintillans	Pleurobranchus sp	Javania insignis
Epigonus sp.	Squid	Callogorgia gilberti
Dasyatis lata	Goniasterid	Calyptrophora japonica
Polylepion russelli	Henricia robusta	Narella megalepis
Rexea nakamurai	Calliaster pedicellaris	Hydrozoan feather
Etelis carbunculus	Mediaster ornatus	pennatulid
Etelis coruscans	Sphaeriodiscus ammophilus	White sponge
Pristipomoides sieboldii	Tamaria triseriata	Regadrella sp
Pristipomoides zonatus	Diadema savignyi	
Pristipomoides filamentosus	Acanthocidaris hastigera	
Gymnothorax ypsilon	Stereocidaris hawaiiensis	
Bembrops sp 1	Stylocidaris calacantha	
Chrionema chryseres	Stylocidaris rufa	
Poecillopsetta hawaiiensis		
Cookeolus japonicus		
Pontinus macrocephalus		
Holanthias elizabethae		
Liopropoma aurora		
Plectranthis kelloggi		
Pseudanthias fucinus		
Symphysanodon maunaloae		
Symphysanodon typus		
Hoplostethis crassispinus		
Hollardia goslinei		
Cyttomimus stelgis		

After completing the 200 m transect, the submersible backtracked to the site where the school had been observed to conduct a bait station. Acoustic data were obtained from a number of these fish as well as from *E. carbunculus* and *S. dumerili*.

Specimens collected:

bivalve
Javania sp
hormathiid anemone
worm and small cnidarian removed from a rock

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, all mission objectives were met. Four transects and two bait stations were successfully completed.

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

P4-068 held on 10-29-02.

a. CTD data by 10-29-04

b. video data by 10-29-04

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