HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P4-071

MISSION STATUS

Mission Date: 11-1-02

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

Specific Site (NE side, summit, etc): Makapuu
Position (start latitude & longitude): N21° 19.945/W157° 35.330
Depth range: 331 – 437 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: Chris Kelley
Address: HURL

Observer 2: Walter Ikehara
Address: Division of Aquatic Resources

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 7 at Makapuu, Oahu, 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 two thirty minute transects and two thirty minute bait stations were conducted within the depth range of 300-350 meters, where most species of bottomfish occur. The four transects were conducted at 350 and 330 meters. The two bait stations were conducted at 333 and 331 meters.

Scientific data acquired:

The sub touched bottom at 350 m on a sediment substrate. A transect was begun from this point when it became clear that more suitable substrate was available a short distance away. The 350 m transect was started on a substrate of carbonate covered with sediment. No bottomfish were observed. Then suitable habitat for the first bait station was found in an area where carbonate outcrops and ehu (*Etelis carbunculus*) were seen. At the bait station, two ehu, four *Squalus mitsukurii*, one *Plectranthias kelloggi*, one *Physiculus rhodopinnis*, six ophichthid eels, and a *Chrionema chryseres* were observed. The second transect was over carbonate dusted with sediment with some pillar carbonate forms and plates crusted with manganese. Suitable habitat for the second bait station was found at carbonate outcrops with an extraordinary concentration of *Symphysanodon maunaloae*. It is possible that 500 - 1,000 *S. maunaloae* were seen. No bottomfish were observed at the second bait station, but one *Chrionema chryseres*, two *Meadia abyssalis*, one ophichthid eel, three *Squalus mitsukurii*, one *Physiculus rhodopinnis*, one large *Paromola japonica* crab, and many *Symphysanodon maunaloae* were observed.

Table 1: Biological organisms observed during the dive.

FISHES	ECHINODERMS, CRUSTACEANS, & MOLLUSKS	CORALS, SPONGES & OTHER INVERTS
Glossanodon struhsakeri	Sphaeriodiscus ammophilus	Lepidisis olapa
Physiculus rhodopinnis	Astroceramus sp 1	Acanella dispar
Chaunax umbrinus	Stereocidaris hawaiiensis	Cirripathes spiralis
Setarches guentheri	Paramunida hawaiiensis	Antipathes sp 1
Sphenanthias sp	Paromola japonica	Bathypathes conferta
Etelis carbunculus	Heterocarpus laevigatus	Corallium secundum
Squalus mitsukurii	Nototodarus hawaiiensis	Corallium niveum
Plectranthias kelloggi	octopus	Anthomastus sp
ophichthid eels		Lyrocteis sp
Chrionema chryseres		Leiopathes glaberrima
Chloropthalmus proridens		pennatulid (long tentacles)
Ijimaia plicatellus		tubularid
Satyrichthys engyceros		hexactinellid ribbon
Symphysanodon maunaloae		anemone brown
Pontinus macrocephalus		Gardinaria

Poeciliopsetta hawaiiensis
Chascanopsetta prorigera
Meadia abyssalis
Grammatonotus laysanus
Lophioides miacanthus
Bembrops filifera
scorpaenid
Synodus sp
Antigonia eos
Hollardia goslinei
Polymixia berndti
Polymixia japonica
Physiculus nigripinnis
Cyttomimus stelgis

Callogorgia gilberti
Keratoisis sp 4

Specimens collected:

Regadrella sp (417 m)	pennatulid long tent. (437 m)	Astroceramus (429 m)
tubularid colony (423 m)	Anthomastus sp (419 m)	Anthomastus red (412 m)
shell in rock spec. (331 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.

Yes. Objectives were achieved efficiently, allowing time to collect specimens.

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

P4-071 held on 11-1-02.

a. CTD data by 11-1-04

b. video data by 11-1-04

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