**HAWAII UNDERSEA RESEARCH LABORATORY**

**QUICK LOOK REPORT MISSION NO. P4-074**

MISSION STATUS

**Mission Date:** 11-04-02

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

**Specific Site (NE side, summit, etc): Lanikai**
**Position (start latitude & longitude):** 21°23.849'N 157° 38.840'W
**Depth range:** 329-411 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 B. Moffitt
**Address:** 2570 Dole St.
Honolulu, HI 96822

**Observer 2:** Jane Culp
**Address:** HURL, 2000 Pope Rd., MSB 303,
Honolulu, HI 96822

**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 off Lanikai. 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.

Scientific data acquired:
We conducted two transects and two bait stations as planned. The drop point was on sediment dusted, manganese crusted carbonate slope. From here we travelled down to 350 m. The 350 m transect was conducted on a manganese covered carbonate bottom with a light sediment cover. No bottomfish were observed. The 300 m transect was conducted on a manganese covered carbonate bottom with a light sediment cover, as well. A many small to medium sized ehu (8-16") and one onaga (approx. 18") were observed. Symphysanodon maunaloae and Grammatonotus laysanus aggregated together in large numbers. The 309 m bait station, on sediment covered carbonate at the base of a short wall, attracted 2 ehu (10-12"), 3 onaga (18-26"), 5 Squalus mitsukurii, 3 Antigonia sp, and approx 30 Erythrocles scintillans. The second bait station was conducted at 279 m on light sediment covered

carbonate in an area where we had observed 12+ onaga. We attracted 5 onaga (3 were 16-18", 2 were 26"), 1 ehu (12"), 3 Squalus mitsukurii, 40+ Antigonia, 1 Polylepion russelli, and 1 Conger oligoporus. Just up slope from this bait station we encountered a tangle of floating, heavy line. In the area of these lines we observed hundreds of Antigonia, Symphysanodon maunaloae, and Grammatonotus laysanus, 50-100 Erythocles scintillans, 25+ onaga, and a few ehu.

**Table 1: Biological organisms observed during the dive.**

| FISHES | ECHINODERMS, CRUSTACEANS, & MOLLUSKS | CORALS, SPONGES & OTHER INVERTS |
|---|---|---|
| Chrionema chryseres | Henricia sp | Lyrocteis sp. |
| Symphysanodon maunaloae | Sphaeirodiscus ammophilus | Antipathes sp 1 |
| Pontinus macrocephalus | Munida plexaura | Cirrhipathes spiralis |
| Scorpaenid | Paromola sp | Corallium tortuosum |
| Squalus mitsukurii | starfish | Lepidisis olapa |
| Etelis carbunculus | Plinthaster ceremoides | sponge ribbon |
| Bembradeum roseum | Parapagurus dolfleini | Eguchipsammia sp |
| Meadia abyssalis | Anseropoda insignis | Farrea sp |
| Laemonema rhodochir | Pleurobranchid tan | White cnidarian |
| Synagrops argyrea | crinoid - yellow | sponge white |
| Erythrocles scintilans | Octopus sp | Leiopathes glaberrima |
| Squalus mitsukurii | Plesionika sp | Corallium regale |
| Grammatonotus laysanus | Eumunida sp | Corallium secundum |
| Etelis coruscans | Stereocidaris hawaiiensis | Bathypathes conferta |
| Chaunax umbrinus | | Gardinaria hawaiiensis |
| Physiculus sp | | Regadrella sp 1 |
| Antigonia sp | | Gerardia sp |
| Congrid | | zoanthid sp |
| Plectranthias kelloggi | | |
| Bathycongrus aequoria ? | | |
| Epigonus sp. | | |
| Hollardia goslinei | | |

<u>Specimens collected:</u>

crinoid yellow 403 m
dead Gerardia sp 403 m
Carbonate rock 411 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

**P4-074** held on 11-04-02.

a. CTD data by 11-04-04

b. video data by 11-04-04

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