HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: P4-227

MISSION STATUS

Location: The Bank, Niihau east side, south of Pueo Point

Latitude: 21° 48.467' N **Longitude:** 160° 04.895' W

Mission Date: Dec 2, 2009 **Duration:** **8** hours mins

Maximum Depth: 382m

Project Title: Bottomfish Habitat Survey and Movement: Value and Effectiveness of State Restricted Fishing Areas and Fishery Effects on Precious Corals

Principal Investigator: Chris Kelley

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Observer 1: Kevin Weng
Address:
Department of Oceanography
University of Hawaii

Observer 2: Jane Culp
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Pilot 1: Max Cremer

Pilot 2:

Scientific Data Acquired: Prepare an abstract outlining your objectives, techniques, findings, etc.

Objectives:

The objective of this project was to conduct three submersible dives and ROV transects on a guyot and two pinnacles off with west coast of Niihau. This location is actively fished for eteline snappers and other deep living bottomfish species. The guyot is within a restricted fishing area (BRFA B) but the other pinnacles are not. The site is an active research area where the distribution and size frequency of bottomfish are being assessed using baited camera stations (Botcam) and where fishes are being tagged with acoustic transmitters to assess movement patterns in relation to habitat features. Tagged fishes are detected on an array of nine Vemco VR2W receivers, bottom mounted with Sonardyne LRT acoustic releases.

The purpose of the submersible dives was to conduct visual transect surveys for deep 7 bottomfish species, determine extent of lost fishing gear and to identify any benthic

invertebrate beds that could be vulnerable to damage from anchors and fishing weights. We also visually inspected the fish tracking acoustic receiver equipment in the area.

It's expected that a greater quantity of lost gear will be found on the pinnacles in comparison to the guyot, which lacks a small summit where fishing effort is typically concentrated. Invertebrate surveys will primarily be looking for gorgonian beds, particularly *Corallium* sp, as well as deepwater scleractinians and antipatharians known to occur in bottomfishing depths.

Observations, findings, etc:

We performed a submersible visual transect from the east side of the guyot, around on contour to the north side of the guyot, and across the channel to the slope of Niihau. We then proceeded north along the slope of Niihau. Three specimens were collected: an urchin, and two Leiopathes, one alive, one dead (see below for list). The samples will be used in the taxonomic work of collaborators.

Species list:

SPONGES
Regadrella sp.1
ribbon sponge
fringed sponge (Poecillastra like)

CNIDARIANS
anemone brown
Anthomastus fisheri
Siphonogorgia alexanderi?
Leiopathes sp
Cirrhipathes sp
Cirrhipathes anguina
Bathypathes sp
Myriopathes ulex ?
cerianthid
Corallimorphus sp
Corallium secundum
Corallium white
Corallium regale
stylasterid white
Paracorallium tortuosum
Narella gigas
Paracaliptrophora hawaiiensis ?
primnoid
Hydrodendrion gorgonoides
Calibelemnon symmetricum
Pennatula flava?
Veretillum or Protoptilum
Eguchipsammia serpentina
single polyp scleractinian
Parazoanthus sp 2

CRUSTACEANS

Paramola alcocki?
Cyrtomaia smithi
pagurid
chirostylid
Babamunida sp
shrimp

ECHINODERMS
Anseropoda insignis
Henricia sp?
Caliderma spectabilis
Sphaeriodiscus ammophilus
Coronaster eclipes
Tameria scleroderma
Tameria tenella
Antedon yellow
Micropyga tuberculata
Acanthocidaris hastigera
Actinocidaris thomasii
Stereocidaris hawaiiensis
Stylocidaris calacantha
Stylocidaris rufa
Clypeaster leptastracon
irregular urchin tests

MOLLUSKS
pectin shell
Octopus sp

OTHER INVERTEBRATES
Lyrocteis sp

FISHES
Ijimaia plicatellus
Chascanopsetta prorigera
Parabothus coarctatus
Synagrops sp
Chlorophthalmus proridens
Dactyloptaena orientalis
Pontinus macrocephalus
Bembrops filifera
Chrionema chryseres
Chrionema squamiceps
Parapercis roseoriridis
Parapercis schauinslandi
Satyrichthys engyceros
Pristipomoides seiboldii (juv)
Neoniphon aurolineatus?
Xanthichthys mento
Xanthichthys aurolineatus
Xyrichths sp
Antigonia eos
Seriola dumerili
Forcepiger flavissimus

Rexea nakamurai
Glossanodon struhsakeri
Etelis carbunculus
Etelis coruscans
Pristipomoides auricilla
Pristipomoides zonatus
Parupeneus chrysonemus
Chromis sp
Priacanthus alalaua
Pseudanthias Hawaiiensis
Pseudanthias fucinis
Plectranthias kelloggi
Symphysanodon maunaloae
Cyttomimus stelgis?
Zenopsis nebulosus
Desmoholocanthus arcuatus
Sufflamen fraenatus
Centropyge potteri
conger eel (grey)
Synodus kianus
Bodianus bilunulatus
Caranx melampygus
Naso maculatus?
Naso brevirostris

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 the dive accomplished its mission. We successfully completed our visual transect, surveyed deep 7 bottomfish species, evaluated the magnitude of fishing gear impacts, identified areas of dense coral cover over the seamount, and visually evaluated the condition of fish tracking receiver equipment in the area.

List specimens or samples collected on the mission.

In order of collection:

1 Micropyga tuberculata urchin

2 Small branch from a living Leiopathes coral
3 Remains of a dead Leiopathes coral

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 (project title)

held on_____(date) in the following way:

a. CTD data by_____(date)

b. video and images by_____(date)

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