HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. P4-048

MISSION STATUS

Mission Date: 09-11-02

Location (island, bank, seamount, etc): Brooks Bank

Specific Site (NE side, summit, etc): NE corner

Position (start latitude & longitude): 24 00.2887/166 40.2080

Depth range: 200-350 m

Project Title: Impact of Bottomfishing in the NWHI Coral Reef Ecosystem Reserve

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Observer 2: Ray Boland
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Scientific Data Acquired: Prepare an abstract outlining your objectives, techniques, findings, etc.

Materials & Methods:

The overall goal of this project is to obtain data on bottomfish populations and their habitat for use in evaluating the impacts of commercial fishing in the NWHI Coral Reef Ecosystem Reserve. This particular dive was conducted on Brooks Bank, one of two Reserve Preservation Areas (i.e., RPAs) completely closed to bottomfishing. Specific dive objectives were to assess bottomfish populations and survey the fish and invertebrate community at a known fishing site. To accomplish these objectives, 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, 310, 260, and 200 meters. The two bait stations were conducted at 311 and 249 meters.

Scientific data acquired:

The substrate at the deeper extent of this dive (i.e. 350 m) was relatively flat and consisted of sediment interspersed between sediment covered carbonate. Occasional carbonate blocks and boulder-sized outcrops were also encountered. Upslope between 200-300 m, the substrate was primarily sediment with carbonate pebbles and cobbles. Two ledges were encountered at these depths that were perpendicular to the slope, one of which was the fishing site provided by the commercial fisherman, Mr. Robert Gomes. A high relief carbonate ledge was encountered right at 200 m which extended upslope for an unknown distance.

Table 1 provides a preliminary list of biological organisms observed on this dive. Many of these are typically observed on bottomfish habitats elsewhere. Of particular interest was a potentially new sponge, Corallistes sp, and a large bed of Antipathes intermedia (?) observed on the 200 m transect. Due to their density, trees in this bed could be vulnerable to anchor damage. Several anchors and fishing gear were observed in this area confirming that fishing activity did occur at this site prior to it being closed. The bait stations were conducted on and just below the fishing site. Both stations attracted a relatively large number of E. coruscans as well as a few E. carbunculus, S. dumerili, P. zonatus, R. filamentosus, and two C. galapagensis.

Table 1: Biological organisms observed during the dive.

FISHES	ECHINODERMS, CRUSTACEANS, & MOLLUSKS	CORALS, SPONGES, & OTHER INVERTS
Ammodytoides pylei	Mursia hawaiiensis	Anthomastus fisheri
Glossanodon struhsakeri	Galatheid	Anthomastus red
Bembradeum roseum	Munida brucei	Anemone orange
Grammatonotus laysanus	Neopilumnoplax major	Antipathes intermedia?
Callionymus sp	Paromola sp	Antipathes sp
Antigonia eos	Randallia distincta	Cirrhipathes spiralis
Seriola dumerili	Crinoid	Corallium niveum? (may not be)
Carcharhinus galapagensis	Antedon yellow	Corallium tortuosum
Heniochus diphreutes	Lyrocteis sp	Narella megalepis
Roa excelsa	Holothurian	Narella sp 1
Chaunax umbrinus	Octopus	Pennatulid
Emmelichthys struhsakeri?	Pagurid	Javania insignis?
Erythrocles scintillans	Anseropoda insignis	Gardineria

		hawaiiensis?
Rexea nakamurai	Henricia robusta	Pyrosome
Myripristis chryseres	Astroceramus sp 1	Corallistes sp? (may be new species)
Ostichthys sp	Plinthaster ceramoidea	
Pristilepis oligolepis	Tamaria triseriata	
Bodianus sanguineus	Plesionika flag	
Bodianus vulpinus	Chondrocidaris gigantean	
Suezichthys notatus	Micropyga tuberculata	
Etelis carbunculus		
Etelis coruscans		
Pristipomoides sieboldii		
Pristipomoides zonatus		
Randallichthys filamentosus		
Gymnothorax berndti		
Gymnothorax nuttingi		
Chryonema chryseres		
Parapercis roseoviridis		
Chromis struhsakeri		
Priacanthus alalaua		
Neomerinthes rufescens		
Pontinus macrocephalus		
Scorpaenid		
Caprodon schlegeli		
Epinephelus quernus		
Holanthias elisabethae		
Liopropoma aurora		
Luzonichthys earlei		
Plectranthias kelloggi		
Pseudanthias fucinus		
Symphysanodon maunaloae		
Symphysanodon typus		
Canthigaster inframacula		
Cyttomimus stelgis		

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

The Orion manipulator malfunctioned preventing the deployment of the WIFFLE (weighted high-contrast invertebrate & fish far-field length estimator). This device is primarily intended to calibrate the lasers mounted on the digital camera pan and tilt.

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

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

P4-048 held on 09-11-02.

a. CTD data by 09-11-04

b. video data by 09-11-04

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