HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: R-393

MISSION STATUS

Location: East French Frigate Shoals, NWHI

Latitude: 23 ° 55.106'N **Longitude: 165° 22.561'W**

Mission Date: 5 Nov 07 **Duration: 1 hours 24 mins**

Maximum Depth: 412 m

Project Title: Deep sea coral research activities in Papahanaumokuakea Marine National Monument (Monument permit # PMNM-2007-050)

Principal Investigator: Dr. Robert B. Dunbar

Address: **Geological and Environmental Sciences**
Stanford University
Stanford, CA 94305-2115

Phone: **650-725-6830** **e-mail: dunbar@stanford.edu**

Observer 1: **Observer 2:**
Address: **Address:**

Pilot 1: Dan Greeson **Pilot 2: Pete Townsend**

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

Objectives: The main objective for this ROV dive (and the one preceding it) was to survey for target deep sea corals to be collected by submersible on Nov 6 during P5-694. Abundant and diverse coral stands are known to exist on a shallow mound at EFFS, the location of Frank Parrish's long-term research project. We wish to collect deep sea corals such as *Leiopathes, Gerardia, Corallium*, and Bamboo spp. from suitable localities that are OUTSIDE the long-term study area. ROV transects R-392 and R-393 are oriented SW to NE and designed to survey the region of EFFS just East of the Parish study site and waters depths ranging from 350 to 450 meters.

Observations, findings, etc:

This ROV transect started out at 359 m on mixed limestone/basaltic terrain. Much of the dive was on basalt but there appears to also be substantial dark Mn-coated limestone or carbonate hardground that has a very similar appearance. A preliminary assessment is that the shallow mound top at EFFS that rises to depths as shallow as 340 meters has mostly exposures of basalt. Below 380 to 390 meters there is a mixture of basalt and limestone.

A key finding for this dive was the discovery of high numbers of branching bamboo coral colonies, at several points along the transect, e.g., bamboo coral bed #1 at waypoint 4 (23°54.9813'N, 165°22.7448'N, z = 357 m) and bamboo coral bed #2 at waypoint 10 (23°55.2404'N, 165°22.497'N, z = 378 m). However, many other types of coral as well as many different fish species were observed. In particular we observed Corallium sp. as well as Gerardia sp. along the transect/

Species list:
Epigonus fragilis
Notododaris hawaiiensis
Actinostolid
Revettus pretiosus
Antipathes
Bathypathes conferta
Corallium (secundum?)
Beryx decadactylus
Setarches guentheri
Gerardia sp.
Lepidisis olapa
Unknown Isidid
Hexactinellid sponge
Diadimatid red urchin
Plesionika
Laemonema rhodochir
Medea abyssalis
Hydrodendra
Polymixia
Regadrella
Actinostollid
Anthomastus fisheri
Symphysanadae maunaloae
Chaunax
Caligorgia formosa
Antigonia
Laemonema
Stereocidaris hawaiiensis
Physiculus rhodopinnus

See attached list by observers Chris Kelley and Jane Culp, HURL. They, not Dunbar are the true identifiers…….

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

This was a short ROV dive. Everything worked beautifully.

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, the mission was successful.

List specimens or samples collected on the mission.

None

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 5 Nov 07 (date) in the following way:

a. CTD data by immediately (date)

b. video and images by immediately (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
Robert B. Dunbar