

HAWAI'I UNDERSEA RESEARCH LABORATORY

**QUICK LOOK REPORT
DIVE: R-392**

MISSION STATUS

Location: East French Frigate Shoals, NWHI

Latitude: 23 ° 54.27'N

Longitude: 165° 22.027'W

Mission Date: 5 Nov 07

Duration: 1 hours 47 mins

Maximum Depth: 437 m

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

Principal Investigator: Dr. Robert B. Dunbar

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Observer 1:
Address:

Observer 2:
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 following 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:

The ROV transect started out at 382 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 medium to high numbers of *Gerardia* colonies, some very large, at several points along the transect, e.g. gold coral bed #1 at waypoint 9 (23°54.5582'N, 165°21.7425'N, z = 401 m) and gold coral bed #2 at waypoint 12 (23°54.622'N, 165°21.6858'N, z = 403 m). However, many other types of coral as well as many different fish species were observed.

Species list:

Malacocephalus
 Actinostolid
 Plesionika
 Chaunax
 Antipathes
 Paragorgia
 Certomaia smithi
 Bathypathes conferta
 Corallium (secundum?) Beryx decadactylus
 Setarches guentheri
 Gerardia sp.
 Lepidisis olapa
 Unknown Isidid
 Hexactinellid sponge
 Diadematid red urchin
 Laemonema rhodochir
 Medea abyssalis
 Hydrodendra
 Zenopsis
 Polymixia
 Regadrella
 Lyrocteis
 Actinostollid
 Anthonastus fisheri
 Symphysanadae maunaloae

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).

Robert B. Dunbar Principal Investigator