

HAWAI'I UNDERSEA RESEARCH LABORATORY

**QUICK LOOK REPORT
DIVE: PV-588**

MISSION STATUS

Location: Cross Seamount

Latitude: 18° 43.954'N

Longitude: 158° 15.693'W

Mission Date: 9 October 04

Duration: 8 hours 09 mins

Maximum Depth: 439 m

Project Title: Paleoclimate records of Pacific variability from deep sea corals

Principal Investigator: Robert Dunbar

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Observer 1: Rob Dunbar

Address: as above

Observer 2: Geoff Shester

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Pilot 1: Max Cremer

Pilot 2:

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

Objectives: To collect deep sea corals of various species for paleoclimate studies. The focus for this dive was on *Gerardia* spp., particularly on the recovery of large fossil and sub-fossil "stumps". 15 samples were collected using a Titan mechanical arm and an aluminum collecting basket. We obtained over 200 digital photographs, and seven hours of video on each of two digital video cameras with audio record. Dissolved oxygen concentrations were recorded with a CTD throughout the duration of the dive.

Observations, findings, etc:

High density and diversity of deep water corals at "Coral Gardens" site, particularly *Gerardia* sp. This location had high topographic complexity and vertical relief. Some small *Gerardia* sp. found on slope leading up to "Jurassic Park" site.

Species list:

Porifera: *Regadrella* sp.; *Dictyaulus* sp.

Ctenophora: *Lyrocteis* sp.

Cnidaria: *Anthomastus* sp.; *Siphonogorgia alexanderi*; *Bathypathes patula*; *Leiopathes glaberrima*; *Parantipathes* sp.; *Paragorgia* sp.; *Iridogorgia* sp.; *Corallium* sp.; *Acanella weberi*; *Narella* sp.; *Callogorgia gilberti*; unidentified yellow gorgonian; *Calibelemnon symmetricum*; *Virgularia* sp.; *Desmophyllum dianthus*; *Gerardia* sp.; zoanthinarian coral

Crustacea: *Paramola japonica*

Echinodermata: *Asteroschema* sp.; *Mediaster* sp.; *Spaeriodiscus ammophilus*; unidentified crinoid

Chordata: *Meadia abyssalis*; *Chloropthalmus* sp.; *Chrionema chryseres*; *Beryx decadactylus*; *Grammatonotus laysanus*; *Epigonus* sp.; *Hollardia goslinei*; *Polymixia berndti*

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Unable to remove large Gerardia sp. from the base. Damage to Corallium sp. samples caused by Titan claw.

Recommendations for corrective action or improvement:

Better sampling tool for large Gerardia sp. More delicate sampling device for Corallium sp.

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.

We accomplished more than expected and met all objectives of the dive.

List specimens or samples collected on the mission.

11 Gerardia sp. (living, fossil, and sub-fossil); 3 Corallium sp.; 1 unidentified yellow gorgonian

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