HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: PV-588

MISSION STATUS

Location: Cross Seamount

Latitude: 18° 44.1N **Longitude:** 158° 15.6W

Mission Date: 11 October 04 **Duration:** 8hrs 15min

Maximum Depth: 460 m

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

Principal Investigator: Robert Dunbar

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Observer 1: E. Brendan Roark
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Observer 2: Tom Guilderson
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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 obtaining carbonate bearing deep-sea corals including but not exclusive to "bamboo corals", Corallium, and scleractinids. In addition we were in search of large fossil and sub-fossil Gerardia. 8 samples were collected using a Titan mechanical arm and an aluminum collecting basket. We obtained over 30 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:

Low diversity of deep water corals. Common types include: cup corals (Desmophyllum, Flabellum), bamboo corals (A weberi), primnoids (Callogorgia), Gerardia. Sea pens were the most abundant of all gorgonins/deep-water corals. This location had high topographic complexity and vertical relief. Many of the large structures (boulders, top of ridges/scarps) appeared clear-cut. Numerous hold-fast scars but low living assemblage and small individuals. No small or large specimens on top of Jurassic Park pinnacles. At least 5 and possibly 10 individual Cook Sharks observed around Jurrasic Park, one of which had a circular rope imbedded forward of pectoral fins and which had already cut down to skin level. A second Cook trailed an ~8 foot fishing leader.

Species list:

Porifera: Regadrella sp.; Dictyaulus sp.

Crustacea: Paramola sp. Symparagurus sp.

Cnidaria: Anthomastus sp.; Siphonogorgia alexanderi; Acanella weberi; Keratoisis (sp 4 and/or flabellum).; Callogorgia gilberti; unidentified white gorgonian; Desmophyllum dianthus; Flabellum sp., Gerardia sp.; Pennatula sp.

Chordata: Grammicolepis sp., Beryx sp., Antigonia sp. Setarches sp. Echinorhinus cookei

Echinodermata: Astroceramus sp. Plinthaster or Sphaeroiodiscus

Thaliacean,

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Destroyed aluminum scoop/shovel on first attempt to recover cup corals. Cup coral disintegrated with manipulator forceps.

Recommendations for corrective action or improvement:

More delicate sampling device for cup corals (and if they were there, other stony corals).

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.

5 Gerardia sp. (3 living, 2 sub-fossil); 1 Paragorgia spp.; 1 Keratoisis spp

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