HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT DIVE: PV- 525

MISSION STATUS

Location: Pioneer Bank, East Slope

Latitude:25º48.200N **Longitude:** 173º26.600

Mission Date:10/8/03 **Duration:** 5hours 44minutes

Maximum Depth: 1825 m

Project Title: Seamount Surveys of Deep-Water Coral Distributions as Related to Geological Setting in the Northwestern Hawaiian Islands

Principal Investigator: Amy Baco-Taylor

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Observer 1: Christopher Kelley **Observer 2:** Amy Baco-Taylor

Address: **Address:**

Pilot 1: Terry Kerby **Pilot 2:**

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

Objectives:

1. Perform observational transects of invertebrate fauna along the eastern slope at 1800 m and 1200 m. Also begin vertical transect 1800 m up.
2. Collect samples for identification and for voucher specimens.
3. Collect rock samples to characterize geological setting,

Observations, findings, etc:

We landed on the bottom at 1761 m in basalt with fine sediment. After collecting several samples and moving downslope, we did 1000-m and 500-m transects at 1800 m depth. Basalt was the dominant substrate with occasional channels of fine sand. Coral samples were collected along with a seastar. Numerous "white sticks" were observed on these transects. On close observation, these sticks were sponges, cnidarians, or the stalks of dead stalked sponges, the white sticks in the sediments were polychaete tubes. We could not distinguish between these during

the transect. Numerous Paragorgia regalis and stalked sponges were also observed. At least 2 different lyrate primnoid species were observed along with a chrysogorgid. Every branched octocoral had at least one ophiuroid on it. The small tripod fish was also abundant as were Enipniastes cucumbers. P. multispina urchins were observed in large aggregation. During these two transects we also observed what appeared to be 3 sets of trawl tracks in the sediments areas.

At the end of these 2 transects we began a vertical transect from 1800 m to 1242 m. The dominant substrate was again basalt with impressive dike features. Sand pockets were also observed. The ascent to 1200m was very steep with vertical walls in several places. The polychaete tubes in the sediments were very abundant, several per m2 up to a depth of about 1300m. White sticks on rocks continued for the full depth range. Several large anemones were observed along with more Corallium. The abundance of Corallium decreased with increased depth. A different primnoid became common at about 1700. A Calyptrophora primnoid (formerly Narella nuttingi) also became abundant as we moved shallower.

At 1242 m we found carbonate rocks. This appeared to be the transition zone between basalt and carbonate, so this is where we began our transect. There was also a lot of sediment along this transect. The Calyptrophora primnoid became very abundant along this transect as was the stalked sponge, Sericolophus hawaiieus. As at 1800 m, the corals all had ophiuroids.

The fish fauna included an unidentified ophidiid, very small halosaurids, several very large synaphobranchid eels, tripod fish and other deepwater and rarely seen species. Italosaurids were the most numerically dominant.

Species list:

Please mark whether S-single; F-Few (2-10); M-Many (11-100); A-Abundant (>100)
(e.g., Symphysanodon maunaloae-M)
- add rows as needed

Ophidiid	S	Canlophacus	F
Goniasterid	F	Shrimp	S
polychaete worm tube	AA	Bathygadid	S
Calyptrophora clarkii	F	Walteria sp	AA
Ophiuroid	F	anemone white tip	S
Paragorgia regales	M	Synaphobranchus kaupi	S
Chysogorgia sp	M	Narella dicotoma	F
Holothurian	F	Coryphanoides longicirrus	F
Eel	F	Enypniastes eximia	S
Macrourid	S	Nettastomatid	S
Henriciia pauperimma	S	Narella nuttingi?	M
Phrissocystis longispinna	AA	crab with zoanthid and sponge	F

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

We did not have enough time to complete the vertical transect.
The depth sensor got oil all over me.

Recommendations for corrective action or improvement:

We shortened our transect length so we will be able to fit more transects into future dives.
Terry fixed the leaking oil.

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.
We did not complete our vertical transect. We shortened our horizontal transect length to allow for more transects on future dives.

List specimens or samples collected on the mission.
3 – polychaete tubes
3 – basalt? Rocks
1 – stalked sponge
1 – large seastar
1 – Corallium sp.
1 – Chrysogorgid
7 – Primnoid octocorals

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

_ Seamount Surveys of Deep-Water Coral Distributions as Related to Geological Setting in the Northwestern Hawaiian Islands
(project title)

held on 10/8/2005 in the following way:

a. CTD data by 10/8/2005 (date)

b. voice transcripts, video, and still camera film by 10/8/2005 (date)

c. other 10/8/2005 (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