HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT (QLR) for *Pisces* **and** *RCV-150*

DIVE: P5-739

MISSION STATUS

Location: South Keyhole Pinnacle, Maui

Latitude: 20°56.489 **Longitude:** 156°45.686

Mission Date: 4-7-2009 **Duration:** 7 hours 31 mins

Maximum Depth: 211 meters

Project Title: CRES/ Black Coral Taxonomy

Principal Investigator: Tony Montgomery

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Honolulu, HI 96813

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Observer 1: Tony Montgomery **Observer 2:** Daniel Wagner

Address: 1151 Punchbowl St Rm 330
Honolulu, HI 96813 **Address:** HIMB

Pilot 1: Max Cremer **Pilot 2:**

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

Objectives:

This project had several objectives for addressing both black coral taxonomy and deep coral reef ecosystems studies projects. Specimens of several species of black coral were collected in order to better characterize the species assemblages between 90 and 130 meters. A total of 9 specimens were collected and 5 specimens represented a newly discovered antipatharian genus (Aphanipathes) in Hawaii. One specimen appears to be even more unusual as the growth form seems unlike all others collected on this dive as well as previous dives. The specimen may be either an unusual growth form of Apahanipathes or a new genus record for Hawaii (Allopathes). Most specimens were preliminarily identified on the ship. Also, three specimens of *Antipathes grandis* and one specimen of *Antipathes dichotoma* were collected.

In addition, several black coral transects were tentatively planned to count the density of black coral along different isobaths. However, due to interesting specimens observed

during the dive, more time was allocated to collecting and not allowing time to conduct transects.

The deep coral reef ecosystems studies project had three main objectives. One) exchange and deploy 6 thermistors between 160 and 75 meters to characterize temperature regimes on the deep reef, Two) replicate a transect from previous dives to characterize the coral community., Three) collect a small amount of coral and rubble to help document species discovery and biodiversity on the deep reef. All six thermistors were deployed and all 4 existing thermistors were recovered. Time was taken to place the thermistors in the exact locations and depths desired (160 m, 130 m, 115 m, 100 n, 90 m, and 75 m). The benthic transect was conducted and marker lids were placed at the beginning and end of the transect to allow more repeat monitoring of the transect. Previous coordinates and the tracking station on the ship seem to prove highly accurate in finding the location without a marker lid.

Observed Species list:
Target species:
Antipathes grandis
Aphanipathes sp.
Myriopathes ulex
Stichopathes sp.

Other species:
Fish (not extensive):
Odontianthias elzibethae
Odontiathias fuscipinis
Liopropoma auroa
Genicathus personatus
Psueanthias hawaiiensis
Psueanthias thompsoni
Centropyge potteri
Centrpopyge fisheri
Cirrhilabrus jordani
Chromis leucura
Cheatodon milliaris

Algae:
Codium balls
Halimedia

Inverts:
Galathids crabs at 200 m
Gorgonian sp. (maybe new species)
Leptoseris hawaiiensis
Leptoseris yabei
Leptoseris sp (cross hatch pattern)
Leptoseris papyracea
Montipora capitata
Monitora/ Anacropora sp.
Skunk urchins
Culcita sp.
Panularis marginatus

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

This dive had no obvious limitations, failures, or operational problems. The sub functioned perfectly, particularly the ample amount of battery power. Max was an outstanding pilot and was able to collect many hard to collect corals in sometimes difficult terrain. During the course of this cruise, both HURL and the KOK crew were outstanding and help support the science staff whenever needed. The science crew has much appreciation for the HURL staff.

Recommendations for corrective action or improvement:

Since this cruise, not just this dive has operated so smoothly, there are no corrective actions suggested.

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

Yes, an ambitious plan was laid out for this dive and all mission objectives were achieved or exceeded.

List specimens or samples collected on the mission:

3 Antipathes grandis
5 Aphanipathes sp. (1 specimen as a possible type)
1 Antipathes dichotoma
Several Leptoseris specimens
Montipora specimens
Black coral fouling invertebrates (yet to be identified and maybe several new species)
Numerous other invertebrates that are yet to be sorted and identified.

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):

Black Coral Taxonomy/ Coral Reef Ecosystem Studies Project

_____

Held on 4-7-2009 (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).

Tony Montgomery
Principal Investigator