HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: P4-260

MISSION STATUS

Location: Necker Ridge

Latitude: 22° 7.0' N **Longitude: 167** ° 8.0'W

Mission Date: Oct. 17, 2011 **Duration: 8** hours 6 mins

Maximum Depth: 1926 m

Project Title: Biology of the Enigmatic Necker Ridge

Principal Investigator: Amy Baco-Taylor

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Observer 1: Nicole Butler Morgan
Address: above

Observer 2:
Address:

Pilot 1: Collin Wollerman

Pilot 2: Terry Kerby

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

Objectives:
The goal of this series of dives is to compare the hard substrate fauna of Necker Ridge to the fauna of the Hawaiian Archipelago. To address this goal, the objectives on each dive are to complete quantitative video transects and to collect representative specimens of the most abundant species. The specimens will later be identified morphologically and using DNA analyses.

Observations, findings, etc:
The dive was conducted along the slope of a northern pinnacle on Necker Ridge. We first landed on sediment that was very evenly paved with manganese encrusted nodules. Nearby the slope began rising and turned into a hard substrate of welded rock with almost no sediment.

Most of the dive area was dominated by three species of bamboo corals, a long soft species with no discernible branching pattern, a harder planar branching bamboo species

with gold coloration, and a purple colored bamboo with a six sided star shaped base that branches grew from. Also abundant were tightly spiraled *Iridigorgia* species on tall stalks and short bush-like *Chrysogorgia* species. Crinoids were not abundant in this area as they had been in previous dives. Some unstalked yellow crinoids and unstalked purple tipped, white based crinoids were seen, but very few. At locations where the slope would become less steep and at the base of the pinnacle there were numerous sponge skeletons on the ground, but sponges were not abundant throughout the dive. Only the skeleton shaped sponge and the large wide curved sponge were somewhat numerous.

At the top of this location at 1700m the corals most dense and three new specimen were found: *Antothela, Metallogorgia,* and a gold colored zoanthids that could be a *Gerardia*. However the bamboo corals previously mentioned were still the most abundant species. Also present were small *Bathypathes* corals, but they were sparse.

Species list:
Chrysogorgia, Iridigorgia, Antothela, Metallogorgia, Bathypathes, 3 bamboos, 2 crinoids, skeleton sponge, curved sponge

MISSION EVALUATION:

Limitations, failures, or operational problems noted:
None

Recommendations for corrective action or improvement:
None

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.
Yes, we completed 4 transects, one at a deepest location at that point, and collected the dominant taxa at this location. We had planned on one more transect, but sampling took slightly longer than expected.

List specimens or samples collected on the mission.

4 15-min video transects

1 *Chrysogorgia*,
1 *Iridigorgia*,
1 *Antothela*,
1 *Metallogorgia*
1 long, softer, red colored bamboo
1 internodal, gold branching bamboo
1 nodal, purple branching bamboo
1 gold colored zoanthid
1 crinoid
1 skeleton sponge
1 piece of a large, curved sponge
2 epifauna on a rock
2 shrimp
2 ophuroids
Rocks

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) : Biology of the Enigmatic Necker Ridge

a. CTD data by Oct. 29, 2013 (date)

b. video and images by Oct. 29, 2013 (date)

c. other Oct. 29, 2013 (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).

Amy Baco-Taylor Principal Investigator