HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: P4-259

MISSION STATUS

Location: Necker Ridge

Latitude: 21° 55.8' N **Longitude: 167** ° 20.25'W

Mission Date: Oct. 16, 2011 **Duration: 8** hours 34 mins

Maximum Depth: 1896 m

Project Title: Biology of The Enigmatic Necker Ridge

Principal Investigator: Amy Baco-Taylor

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Observer 1: Amy Baco-Taylor
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Observer 2: Melissa Rohal
Address: same

Pilot 1: Max Cremer

Pilot 2:

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:

This third dive on Necker Ridge was conducted on the slope of a flat-topped pinnacle feature near the middle of the Necker Ridge. The seafloor was a mixture of hard pan and manganese nodules and pebbles with a fair amount of sediment. Dead sponge skeletons of a number of species were very abundant in this area, some of them > 2m across.

Crinoids were abundant at this site, but not nearly as abundant in the previous 2 dives, and the yellow/greenish crinoid was not very abundant, the brownish-yellow crinoid instead was the most abundant crinoid observed. The max abundance of crinoids in this area was around 1-3 per square meter.

The most abundant corals in this area were *Metallogorgia*, likely *melantorichos,* along with a small bushy *Chrysogorgia*, likely *stellata,* but possibly 2 species were present of similar size and gross morphology. The unbranched bamboo and unbranched primnoid were also abundant. Several sea stars were also observed on this dive. Another chrysogorgiid, likely a new species of *Metallogorgia* was also observed in abundance, although harder to see. This is the first dive in which Paragorgiids, *Corallium* and *Anthomastus* were observed. *Iridigorgia* was also present.

The dominant type of sponge observed were dead skeleton sponge, which matches *Farrea occa* in the HURL animal guide. Only a single live specimen was observed, although a few young tubey sponges which could be young skeleton sponges were observed live. Other sponges included a vase sponge that may be *Regarderella* sp, and a "lollipop" stalked sponge. A small stick like sponge was also observed and sampled.

One specimen of a carnivorous tunicate was also observed, along with a brown "potato" sea squirt that was abundant on the peaks flow edges of rocks.

Species list:

See Above

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Strong currents make sampling challenging

Recommendations for corrective action or improvement:

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

Yes, a total of 4 transects were completed, and representatives of the most abundant taxa were collected for identification

List specimens or samples collected on the mission.

4 15-min Video Transects

1 Iridigorgia
1 Lollipop Sponge
1 Vase Sponge – likely *Regarderella*
2 Small *Chrysogorgia* likely *stellata*
2 *Anthomastus*
1 Unbracnhed Bamboo
1 Large Sponge - piece
1 Skeleton Sponge piece
1 Branched Candelabra Bamboo
1 Tubey sponge – young skel sponge?
1 *Corallium*
1 Paragorgiid
1 Stick Sponge
1 Chrysogorgiid
11 Epifauna
4 Epifauna picked from rocks
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