

HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT

DIVE: R-475

MISSION STATUS

Location: Gardner Pinnacles

Latitude: 25° 20.736' N

Longitude: 167° 54..039' W

Mission Date: Oct. 22, 2011

Duration: 1 hours 3 mins

Maximum Depth: 482 m

Project Title: Evidence for Miocene and Younger Glacial/Deglacial Climate Variability from Drowned Coral Reefs around Gardner Pinnacles

Principal Investigator: David Clague

Address: MBARI, 7700 Sandholdt Road, Moss Landing, CA 95039

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

Objectives: Collect reef samples from coral reefs surrounding Gardner Pinnacles that drowned in the Miocene to determine amount of post-volcanic subsidence and climate variability during the Miocene approximately 12-15 million years ago. Collect basalt samples to date the island using modern techniques. Determine if a ridge paralleling the old shoreline observed in the multibeam maps collected on this cruise was a barrier reef.

Observations, findings, etc:

The ROV mission was to assess the nature of the bottom in a flat area near the crest of the NE rift zone of the main Gardner Pinnacles volcano. A secondary objective was to determine if the region was good habitat and with dense populations of scleractinian corals, as predicted by habitat models. The bottom was very low relief with small hard outcrops, but mostly was covered by unconsolidated sediment. Corals and all other fauna were very sparse. The topography appears to be a network of shallow channels that were best seen in the sonar images.

Species list: corals, sharks, urchins, sea pens, macourid fish.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

Mission aborted when video flickering indicated power issues.

Recommendations for corrective action or improvement:

Utilize the ROV more frequently so issues can be identified and repaired.

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

Yes, despite the very short time on bottom. The area did not form a good habitat for corals and the geology was subtle. We were glad we did not devote a Pisces dive to the area as sampling would have been extremely difficult with such limited and low-relief outcrop, and the expected corals were both rare and very small (less than 2 cm tall).

List specimens or samples collected on the mission.

No samples were collected.

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)

- a. CTD data by Oct. 29, 2011 (date)
- b. video and images by Oct. 29, 2011 (date)
- c. other Oct. 29, 2011 (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).

David Clague Principal Investigator