HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
ROV: RCV-287

MISSION STATUS

Location: Kaula Rock, west of Niihau

Latitude: 21° 38.000' N **Longitude:** 160° 32.900' W

Mission Date: September 13, 2004 **Duration:** 1 hours 40 mins

Maximum Depth: 195 m

Project Title: Ecological impact of an invasive marine invertebrate in Hawaii's coral reef communities

Principal Investigator: Richard W. Grigg, University of Hawaii

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Observer 1: Sam Kahng **Observer 2:** Bill Browne, Chip Young
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Pilot 1: Dan Greeson **Pilot 2:** Peter Townsend

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

Objectives:

An investigation of the deep reef habitat was conducted in select locations in the Hawaiian Archipelago to determine the geographic spread and ecological intensity of the *Carijoa riisei* biological invasion on the deep reef. This dive was one of dives on the Pisces V submersible and 4 remotely operated vehicle deployments of the RCV-125 conducted September 8-15.

Observations, findings, etc:

The RCV track was NE across an underwater peninsula feature SE of Kaula Rock. The edge of the sunken Kaula plateau is bordered by a steep carbonate wall which appeared devoid of benthic fauna. The wall rises from beyond 150 m to approximately 105 m where sand and exposed rocks mark the edge. Thin spiral wire corals and possibly sea pens were observed at one location on the edge at 115 m.

The interior is largely sand and rubble sloping gently upward. Turf algae, calcareous green algae (*Halimeda* with large segments), coralline algae (rodoliths), and possible a branch bryozoan (or algae) were observed.

At 50-60 m exposed rock formations were observed with wire corals, occasional colonial cup corals and black corals. Large upright wire corals appeared to be the predominant benthic fauna. Scleractinian corals (*Pocillopora meandrina*, *Porites lobata, Montipora capitata*) were also observed at these depths exhibiting a flattened morphology. No sign of *Carijoa riisei* was observed. Black tunicates (or possibly upright sponges) were common in areas on the rubble sunstrata.

At 60-70 m in the sand flats, large bedforms were visible across a large area. Ripple width was 1.0-1.5 m in diameter running north-south.

Species list:

Antipathes sp.
Pocillopora meandrina
Porites lobata
Montipora capitata
Halimeda sp.
Rodoliths
Wire corals

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

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.

Mission accomplished. The crew did a fine job in helping us meet our scientific objectives.

List specimens or samples collected on the mission.

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)

held on 9/13/06 (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).

Richard Grigg Principal Investigator