HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: PV-570

MISSION STATUS

Location: Au'au Channel, Maui

Latitude: 20º 52.75' N **Longitude:** 156º 45.5' W

Mission Date: September 11 2004 **Duration:** 2 hours 30 mins

Maximum Depth: 71 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, Kewalo Marine Lab
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Pilot 1: Terry Kerby **Pilot 2:**

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 Pisces V submersible track was over a ridge near Circus. Large forests of bushy black coral colonies were common at 40-60m. Size classes were predominantly small and medium. A few large colonies were observed. A green morph (Antipathes grandis) was very common. Heavily eroded, black coral skeletons with their rock bases still attached were observed littering the area as if they were harvested and dropped.

A few dark axial polyps of Carijoa riisei on the open substrata was observed at 57m. C. riisei overgrowth was observed on black coral colonies as shallow as 37m but was restricted to the base of the colony and heavily fouled with dark sponge. C. riisei overgrowth was rare at depth above 55m. C. riisei was common and abundant under ledges and coral heads at 40m along the ridges. At these depths shallow-water Scleractinian corals are abundant (Porites lobata, Pocillopora meandrina, Montipora capitata) but have a flattened morphology. These corals crop off dramatically below 50m and are replaced by plate corals.

Black coral colonies at depths above 50m appear to be safe from C. riisei overgrowth. However, the population at these depths appeared altered due to harvesting given the predominately small size classes and abundance of the greenish colored A. grandis. A. grandis is typically less common than A. dichotoma and not harvested due to its thinner branches. A. grandis has been reported to be more common at greater depths.

Species list:

Carijoa riisei
Antipathes dichotoma
Antipathes grandis
Porites lobata
Pocillopora meandrina
Montipora capitata

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.
Carijoa riisei, black corals, plate corals, macro algae

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_____(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).

_____Principal Investigator