HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: PV-573

MISSION STATUS

Location: Makauena Point, Kauai

Latitude: 21º 52.25' N **Longitude:** 159º 26.0' W

Mission Date: September 14 2004 **Duration:** **2** hours mins

Maximum Depth: 143 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:** Marc McGowen, UH
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Pilot 1: Max Cremer **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 offshore from Makauena Point, Kauai.

A steep drop-off at 105-120 m surrounds the island. Interior sloping sand flats abruptly lay interior to a largely exposed carbonate ledge which forms the top of a near vertical wall of barren rock. Clouds of small fish as well as conspicuously large pelagic fish were encountered at the ledge. Holes along the ledge and in the vertical wall were inhabited by moray eels and a variety of fish. Small spiral wire corals covered the steep vertical wall. Exposed rocks were common along the sandy slope rising from the ledge.

A visible thermocline was recorded at 70-75 meters with water temperature rising 2-3ºC to approximately 25ºC.

An extensive area of exposed rocks and very boulders (10 X 10 X 40 meters) was encountered at 60-70 meters. Heavy east to west currents prevented travel eastward. Black coral colonies were very abundant everywhere on the boulders. South facing steep walls were often carpeted. Almost all colonies appeared bushy and free of epifauna. Relatively few exhibited partial mortality or epifauna (i.e., sponge, bivalves, bryozoans). Both red and green morphs were observed. Wire corals 6-8 feet tall were also observed.

Relative to black corals in Maui, the maximum height and branch thickness were considerably smaller. With the different branching morphology, anecdotal evidence suggests that the Kauai black corals may be a different species.

Despite the abundant habitat, no Carijoa riisei was observed.

Species list:

Carijoa riisei
Antipathes sp.
Wire coral
Balanophyllia sp.

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