

# HAWAII UNDERSEA RESEARCH LABORATORY

## QUICK LOOK REPORT MISSION NO. RCV-164

### MISSION STATUS

**Location:** Au'au Channel

**Mission Date:** 09-03-02

**Maximum Depth:** 105 m

**Project Title:** RCV bottom survey Au'au Channel for black coral and *Carijoa*

**Principal Investigator:** Rick Grigg

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

The primary objective of the RCV-164 was to evaluate the abundance of black coral and *Carijoa* at the southern boundary of the bed in the Au'au Channel. The start and end positions for RCV-164 were 20:48.73 N by 156:42.75 W at a depth of 105m, and 20:49.084 N by 156:42.688 at a depth of 72m, respectively. Start and end times of the transect were 19:52 and 20:42. RCV-164 started on the bottom in a solution basin at 105 meters. The substrate in the basin was fine carbonate sand characterized by many small (<1m) craters and mounds. Moving to the north, a steep carbonate wall rising abruptly to 70m meters was encountered. Two black coral colonies, both heavily encrusted by pteriid oysters and sponges were encountered at 94 m. Otherwise the wall was barren of black coral and *Carijoa*. Bottom currents were very weak and a fine carbonate silt patina covered the substratum. The condition of the black coral colonies and their low abundance mark this habitat as sub-optimal and appear to demarcate the southern boundary of the black coral bed. At the top of the solution rim at depths between 70 and 50 meters, numerous colonies of deep reef corals including *Leptoseris spp.*, *Porites lobata*, *Pocillopora meandrina*, *Montipora capitata* and *Porites compressa* were observed. On the north side of the rim, a soft bottom was again encountered where rows of rhodolith rubble alternated with sand lenses and patches of *Halimeda* pasture communities. A second transect about 2 miles to the northwest was attempted but was aborted due to an electronic problem with the joy-stick that resulted in a loss of control of the camera robot. At this point, it was necessary to terminate RCV dives on this evening.

MISSION EVALUATION:

**Limitations, failures, or operational problems noted:**

None

**Recommendations for corrective action or improvement:**

None

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

Yes

**List specimens observed on the mission.**

**FISHES**

Decapterus macarellus 100+  
bothid (small) 1  
Acanthurus (check) 1  
Naso unicornis 1  
Lutjanus kasmira 2  
Myripristis berndti 3  
Zanclus cornutus 3  
Seriola dumerili 1

**ECHINODERMS**

Pseudoboletia indiana 9  
Echinothrix calimaris 3

**CRUSTACEANS**

shrimp red 3  
Stegopontonia comensalis 2

**MOLLUSKS**

Sepioteuthis lessoniana 2  
pteriid oysters 16  
terebrid gastropod  
gastropod

**CORALS**

Leptoseris sp 100+  
Porites lobata 30+  
Pocillopora meandrina 5+  
Montipora capitata 2  
Porites compressa 10+

**SPONGES**

purple encrusting (on black coral)  
yellow round 5  
red round 2  
small encrusting sponges (abundant)

**OTHER**

red tunicate (encrusting)  
small bryozoans (abundant)

**ALGAE**

Halimeda (large 7 small beds)  
red algae (abundant)  
coralline algae (very abundant)  
green algae (100+)  
filamentous algae (one large area)

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

**RCV 164 RCV bottom survey Au'au Channel for black coral and Carijoa**  
held on 09-03-02 in the following way:

- a. CTD data by 09-03-04
- b. video data by 09-03-04
- 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