# HAWAI'I UNDERSEA RESEARCH LABORATORY

## QUICK LOOK REPORT (QLR) for *Pisces* and *RCV-150*

**DIVE:** P5-710

(*Extend length of sections as needed/appropriate*)

## MISSION STATUS

**Location:** Olowalu, Auau Channel, Maui

**Latitude:** 20° 48.03 **Longitude:** 156° 43.125

**Mission Date: 12/7/2007** **Duration: 7** hours 18 mins

**Maximum Depth:** 112 meters

**Project Title:** Investigating Deep (50 – 100 m) Coral Reefs of Hawaii

**Principal Investigator:** Montgomery/Pyle/Rooney/Popp/Parrish/Smith

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Honolulu, HI 96813

**Phone:** 587-0365

**Observer 1:** Tony Montgomery **Observer 2:** John Rooney

**Address:** 1151 Punchbowl St Rm 330
Honolulu, HI 96813

**Address:** NOAA Pacific Islands Fisheries Science Center

**Pilot 1:** Max Cremer **Pilot 2:**

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

Objectives:

The main objectives of this dive was to collect representative samples from the deep reef zone (50-100m) and conduct preliminary transects along high coral cover areas. The collections and transects were also coordinated with P4-199 in order to collect comparative fish and benthic data. This dive targeted scleractinian corals, algae, and macro invertebrates. More specifically, corals with any potential disease or stress were collected as well as sponges, black corals, and rubble rocks for documentation of baseline biodiversity information.

*QLR continued*
Observations, findings, etc:

Observations from this particular location include less scleractinian corals than expected, but still found moderate numbers. Many common shallow water phenomenon were also seen in deep water such as the predation by *Acanthatser planci*, Crown-of-thorns starfish, as well as potential coral disease (not confirmed). The area was moderate coverage of stony corals with some higher cover areas. The middle part of the plateau was dominated by Halimeda. Small rock outcropping near beginning of dive had high coral cover while the basin slope had moderate, and the plateau had very little.

Observed Species list:

*Antipathes grandis,* Stichopathes *sp. Leptoseris spp., Monitpora capitata, Porties lobata?, Panulirus marginatus, Scyllarides haanii, Stenopus hispidus, mantis shrimp, Pseudobolentia indiana, Brissus latecarinatus Pentaceraster cumingi, Acanthaster planci, Pteria brunnea, black barrel/tube sponge (photo taken), tube bryazoan? (photo taken), Yellow bulbous sponge, small yellow tube sponge*

## MISSION EVALUATION:

**Limitations, failures, or operational problems noted:**
Collection of plate corals is difficult due to coral fragility.
Titan mechanical arm shutters some times prevent it from collecting fragile specimens or allowing the pilot to have full control of the specimen.
Dual sub dives conducting transects needs more communication between scientists and pilots

**Recommendations for corrective action or improvement:**
Develop method for plate coral collection. Have some larger tray or other tool to push under the colony and have a slightly larger basket to place the colony in. This would at least allow one or two intact plates to be collected.

The scientists need to have a very clear methodology worked out and review the plan with the pilots before the dive.

**In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished:**
The dive was successful and accomplished all the main goals expected. Utilizing 2 subs was very important, but could have been more productive given more communication and planning for methodology.

**List specimens or samples collected on the mission:**

**Invertebrates**

**P5-710 Sta. 1**

sponge- yellow bulbous tough
sponge- pale yellow spikey
brittle star- Ophiocoma sp.
trapezid crab- Trapezius intermedia
unknown micromolluscs-bivalves and gastropods

**P5-710 Sta. 2**

large bivalve- Spondylus sp.
polychaete- Eunicid
small unid brachyura
sponge- yellow bulbous tough
sponge- pale yellow spikey

**P5-710 Sta. 4**

brittle star- Ophiocoma sp.
red crab- Xanthid
small hermit crab- Anomura
hydroids- unknown sp.
small bivalve micromollusc
gastropod-Drupa?
polychaete- Phyllodocid
sponge- bright yellow dense ball
sponge- dark pink mounds
sponge- pale yellow spikey
amphipod
white didemnum tunicate
sponge- green slimy encrusting
small alpheid

**P5-710 Sta. 5**

gastropod micromollusc

**P5-710 Sta. 6**

sponge- yellow mild spike, gooey

**P5-710 Sta. 8**

sponge- white clear glassy spikey
white didemnum tunicate

**P5-710 Sta. unknown**

bryozoan- orange/red light spot
bryozoan- pink/red long spikes
small hermit crab- Anomura
hydroids- unknown sp.
polychaete- Phyllodocid and Eunicid
sponge- yellow bulbous tough
sponge- dark pink mounds
white didemnum tunicate
brittle star- Ophiocoma sp.
gastropod micromollusc

**Corals**

Antipathes grandis
Leptoseris spp.
Porites lobata
Montipora capitata

## Algae

Caulerpa  sp. (taxifolia or mexicana)
Halimeda sp. (opuntia or distorta)
Epiphytic red and green algae
Amansia sp.
Codium mamillosum
Nongeniculate coralline algae
Distromium flabellatum (pieces)
Green epiphytic alga
Distromium flabellatum
Halimeda sp. (opuntia or distorta)
Red epiphyte
Peyssonnelia sp.
Fleshy red alga
Palmophyllum crassum
Codium mamillosum
Peyssonnelia sp.
Green and red epiphytes
Halimeda sp. (opuntia or distorta)
Amansia sp.
Nongeniculate coralline algae

*QLR continued*

## 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): Investigating Deep (50 – 100 m) Coral Reefs of Hawaii

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_____

Held on 12/7/2007 (date) in the following way:

a. CTD data by 12/8/2009 (date)

b. Video and images by 12/8/2009 (date)

c. Other 12/8/2009 (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).

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Principal Investigator

# ANNUAL/FINAL REPORT

NOAA's Office of Undersea Research
Submersible Science Program

Report Status: _____ Final or Continuing _____

Date of Report: _____ Dive Numbers: _____

Inclusive Dates of Mission: _____

Project Title: _____

_____

Principal Investigator: _____ Signature: _____

Names of Co-Investigators: _____

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I. Abstract of Mission Results: Please include diagrams or figures as appropriate.

II. Please discuss the following:

A. Significance of the mission in relation to your research goals.
B. Scientific contributions of the mission in terms of species, patterns, and processes observed or measured. Were the initial hypotheses addressed; were any new ones posed as a result of the mission? Was the methodology and/or technology utilized successful and repeatable by others?
C. For continuing status reports, indicate the extent of data analysis or manuscript preparation completed to date.
D. Advantages of NOAA's Undersea Research Program to your research investigations.
E. Plans for use of the data gathered on this mission and the applications, products and/or benefits to NOAA.

III. Please include any comments on the following operational details, where applicable:

A. Weather and water conditions affecting operations
B. Safety problems and/or concerns
C. Dive management and personnel cooperation
D. Logistics and support activities