HAWAI'I UNDERSEA RESEARCH LABORATORY

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

DIVE: P4-231

MISSION STATUS

Location: Key Hole Area, Auau Channel, Maui

Latitude: 20° 55.796 **Longitude:** 156° 46.035

Mission Date: 1/17/2010 **Duration:** 7 hours 52 mins

Maximum Depth: 160 meters

Project Title: Deep CRES

Principal Investigator: Pyle, Parrish, Rooney, Montgomery, Popp, Smith

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Observer 1: Tony Montgomery **Observer 2:** Ray Boland

Address: DLNR **Address:** NOAA-NMFS

Pilot 1: Terry Kerby **Pilot 2:** _____

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

Objectives:

1) Conduct benthic and fish transects at 3 different locations (locations spread across large area). Mark transect with bucket lids.
2) Collect marker bucket lids with temperature sensors
3) Collect coral samples for photophysiology measurements.

Observations, findings, etc:

Dropped near location of transect #1. Attempted to find the beginning of transect, but navigation was not working well and habitat did not look to be appropriate. Tracklink system was not working properly. Decided to set-up new transect and mark beginning (#2

near dead black coral tree) and end (#4). Camera recorded benthic data and observer counted fish and size classes.

Moved ~1000m to the NW to transect #2 and marker bucket lids. Found all marker bucket lids (#14, #16, #15, #17, #12, and #13) except #3. Lids above 90m were heavily fouled. Replaced #13 with #18 (no sensor) and marked beginning of transect. The end of the transect was undefined due to issues with the tracklink system and unable to location end marker.

Moved ~1000m NNW to transect #3. Placed marker #19 to begin transect at 86 m. Conducted transect over top of mound with very patchy coral and Halimeda.

Collected 1 sample for coral disease at marker #12 and 5 samples at marker #19.

Observed Species list:

Corals:
Leptoseris hawaiiensis
Leptoseris yabei
Leptoseris paparycea (uncertain, broader blade, potato chip like)
Leptoseris sp (small nodules somewhat in a line)
Leptoseris sp. (vase-like)

Fish:
Acanthurus xanthopterus, Apogonidae sp., Arothron hispidus, Cantherhines sp., Canthigaster coronata, Canthigaster jactator, Carangoides ferdau, Cirrhilabrus jordani, Chaetodon fremblii, Chaetodon kleinii, Chaetodon miliaris, Chaetodon multicinctus, Centropyge fisherii, Centropyge potteri, Chromis leucura, Chromis verater, Ctenochatus strigosus, Cymolutes lecluse, Dascyllus albisella, Forcipiger flavissimus, Genicanthus personatus, Holanthias fuscipinnis, Labroides phthirophagus, Lipropoma aurora, Lutjanus kasmira, Mypristes chryseres, Naso annulatus, Naso hexacanthus, Oligolepis sp., Oxycheilinus bimaculatus, Oxycirrhites typus, Parapercis schauinslandi, Parupeneus chrysonemus, Parupeneus multifasciatus, Pseudanthias hawaiiensis, Pseudanthias thompsoni, Pseudocheilinus evanidus, Pseudoholocanthus arcuatus, Pseudojuloides cerasinus, Pristipomoides filamentosus, Sargocentron sp., Scaridae sp., Seriola dumerili, Symphasandon typus, Synodontidae, and Zanclus cornutus.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:
Tracklink system was not working properly. Dive plan required navigating to previous sites and the tracklink system created problems in relocating transect sites (particularly the end of the transect).

HD video is not able to view the substrate vertically. The pan and tilt is unable to move to a vertical position in order to collect data on benthic communities. The ROS camera is positioned into a vulnerable position in order to be mounted in a vertical position.

Recommendations for corrective action or improvement:
Failure of these systems can occur and can be difficult to predict. The only recommendation is to review the system and improve its reliability where and when feasible.

Develop a mounting system that allows more flexibility in camera mounting position while maintaining the safety of the cameras. This may be difficult, but can add a valuable option to dives that need to collect benthic data. Ideally, the pan and tilt system could be mounted in a way that allows the ROS and HD cameras to view the substrate vertically, but also able to move and pan the field of view. In addition, the pan and tilt for the HMI light could provide more light on the substrate under the cameras. Current set-ups are OK, but a review may make the system more dynamic and provide more data.

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

The mission generally accomplished it goals. The dive required lots of navigation over long distances. The transects could have been better if navigation to the planned sites was better, but overall the mission was successful.

List specimens or samples collected on the mission:

6 Leptoseris samples.

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):

Deep Coral Reef Ecosystem Studies

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).

Rich Pyle, Frank Parrish, John Rooney, Celia Smith, Brian Popp, Tony Montgomery
Principal Investigator