

HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT

DIVE: P5-732

MISSION STATUS

Location: Penguin Bank-Pinnacle at tip of Third Finger

Latitude: 20 56°N

Longitude: 157 30°W

Mission Date: March 26, 2009

Duration: 8 hours 9 mins

Maximum Depth: 284m

Project Title: Deep Seaweed Photosynthesis Research

Principal Investigator: Karla McDermid/ John Runcie

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Observer 1: John Runcie
Address: University of Sydney
Sydney, Australia

Observer 2: Bryce Edwards
Address: UH-Hilo

Pilot 1: Max Cremer

Pilot 2: none

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

Objectives:

To collect macroalgal specimens for pigment analyses and taxonomic identification.

To measure photosynthetically active radiation at various depths in the water column and at collection sites.

Observations, findings, etc:

The dive began with the Pisces V descending to 120 meters, during which time Bryce and John recorded light attenuation every five meters. We performed a buoyancy check and moved down slope to the south and collected at several sites before reaching 284m. Rock samples were collected at this depth, scrapings from these rocks are to be analysed for chlorophyll concentration (deepest recorded algae is 268 m). At this point, around 10:30, the main HMI failed. The dive was able to continue on without it. The observers watched for any potential algae growth and collected several samples on the slow ascent back to 126m. Many samples of macroalgae were collected between 100 and 120m. Additionally, the team watched and followed three thresher sharks that were encountered at 105m. The new HD video camera was used to capture footage of the threshers as they cruised by the front of the sub. During this time another one or two gray reef sharks were observed. The sub broke off pursuit as soon as a major entanglement hazard was spotted ahead. Shortly thereafter the dive ended normally and the Pisces V was retrieved by the KOK.

Species list:

ALGAE

Halimeda

Rhodoliths of encrusting corallines

Encrusting corallines on rock substrate

Red blades with dichotomous branching

Cryptonemia

Ulva

Peysonellia

Distromium

Dictyota

Caulerpa

Hypoglossum

ECHINODERMS: unidentified solitary urchins, sand dollars

FISH Thresher sharks (probably *Alopias vulpinus*), Amberjacks, Scorpion fish family member in small crevice (photo taken)

CNIDARIA: tube anemones in soft substrate (about 100m)

MISSION EVALUATION:

Limitations, failures, or operational problems noted: Light meter, gave unusual readings, HMI failed

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.

Yes, we met our objectives.

List specimens or samples collected on the mission.

Alga specimens are same as observed species (see above). Voucher numbers KM 10351-10392

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 3/26/09 (date) in the following way:

- a. CTD data by 3/2011 (date)
- b. video and images by 3/2011 (date)
- c. other Licor Light meter 3/2011 (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).

signed Karla J. McDermid _____ Principal Investigator