HAWAII UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT MISSION NO. RCV-165

MISSION STATUS

Location: **Kahoolawe Island Reserve**

Mission Date: 09-04-02

Maximum Depth: 242 m

Project Title: **RCV bottom survey of benthic resources around Kahoolawe**

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

The primary objective of the KIR surveys is to evaluate bottom resources around Kahoolawe. The start and end positions of RCV-165 were 20:34.914 N by 156:31.972 W at a depth of 101m, and 20:34.85 N by 156:29.753 W at a depth of 242m, respectively. Start and stop times for RCV-165 were 20:30 and 22:46, respectively. The first hour of this transect covered soft bottom substratum consisting of fine carbonate sands with a relatively high silt load. Small pits and craters (all < 0.5m) were abundant. Several species of fish (cow fish and eels) were seen, in the lights of the ROV, to bury themselves rapidly, and may be the source of these bottom pits. *Plesionika* shrimp were abundant all along this portion of the transect; over 400 were counted. At 212 m the bottom steepened suddenly as we passed over a small declivity losing contact with the bottom for several minutes. Subsequently, this happened several more times demonstrating one disadvantage of conducting ROV transects downslope. Other things being equal, ROV pilots prefer upslope transects.

Between 215m and 236m, prominent sediment ripples were present suggesting an area of stronger bottom current. This area was also characterized by deep longitudinal furrows. Pilot whales or other small cetaceans could be the source of these furrows. Toward the end of the transect (near mid-channel between Kahoolawe and Molokini) an

area of hard ground was encountered. Outcrops consisted of highly eroded but smooth carbonate karst. Attached organisms consisted of *Eguchipsammia. Cirrhipathes spiralis,* and *Corallium niveum.* The carbonate outcrops were otherwise relatively barren. The extraordinary smooth surfaces of the carbonate may be due abrasion from suspended sand during episodes of strong bottom current. This area was also remarkable in the absence or low abundance of bottom fish. This may reflect fishing pressure since this area is situated just outside of the boundary of the Kahoolawe Reserve (S. Whitcraft, personnel communication). The transect was ended just beyond these outcrops at a depth of 242m.

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

If conditions of wind and current permit, it is better to conduct transects upslope.

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:
myctophids. 30+
Decapterus macarellus30+
Selar crumenophthalmus 10+
Caranx lugubris 2
Bembrops sp1 5
Priacanthus alalaua 1
Fistularia petimba -3
Torquigener randalli 5
Chrionema squamiceps 2
Carcharhinus sp. 1
Dactyloptena orientalis 1
Symphysanodon maunaloae 500+
Antigonia eos 10
Antigonia capros 5
Ariosoma marginatum 7
Saurenchelys stylurus 15
bothids (small) 3
Parabothus coarctatus 4
Pontinus macrocephalus 1
scorpaenid 1
Chryonema squammiceps 2
Physiculus nigripinnis 2
Nettenchelys gephyra 2
Halieutaea mitigera

ECHINODERMS:
seastar 2
Calliderma spectabilis 7
Stylocidaris rufa 1
Astropecten productus 2
Acanthocidaris hastigera 3
Stylocidaris calacantha 23
Actinocidaris thomasi 7
Holothuria cinerascens 3
Anseropoda insignis 3
comatulid brown 2

CRUSTACEANS
portunid crab 2
Melicertus marginatus 7
Plesionika flag 400+
Plesionika sp.1 20+
Mursia hawaiiensis 1
crab 2
Paramunida type galatheids 20+

MOLLUSKS
Xenophora peroniana 15
gastropod

CNIDARIANS
anemone star 2
Cirrhipathes spiralis 30+
Antipathes brown 20+
Virgularia sp 5
pennatulid long 9
pennatulid 20
Cerianthus sp1 2
cerianthid black 16
cerianthid brown 1
cerianthid green 4
Antipathes sp 1 3
small primnoid
dendrophyllids 200+
Corallium niveum 20+
Narella megalepis 1
Eguchipsammia fistula 40+

OTHER
Lyrocteis sp11

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 bottom survey of benthic resources around Kahoolawe

held on 09-04-02 in the following way:

a. CTD data by 09-04-04

b. video data by 09-04-04

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).

Richard Grigg
_____Principal Investigator