HAWAII UNDERSEA RESEARCH LAB
QUICK LOOK REPORT MISSION NO. P5-489

MISSION STATUS

Location: Kailua-Kona (19-37.642 N 156-02.159 W)

Mission Date: 8 December, 2001

Maximum Depth:

Project Title: Ecological Role and Faunal Associates of Abundant Hexactinellid Sponges on the Hawaiian Slope

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

There were 6 primary objectives to this dive and are discussed in order of completion.

Objective 1. Plant sponge stalks for to examine recruitment.

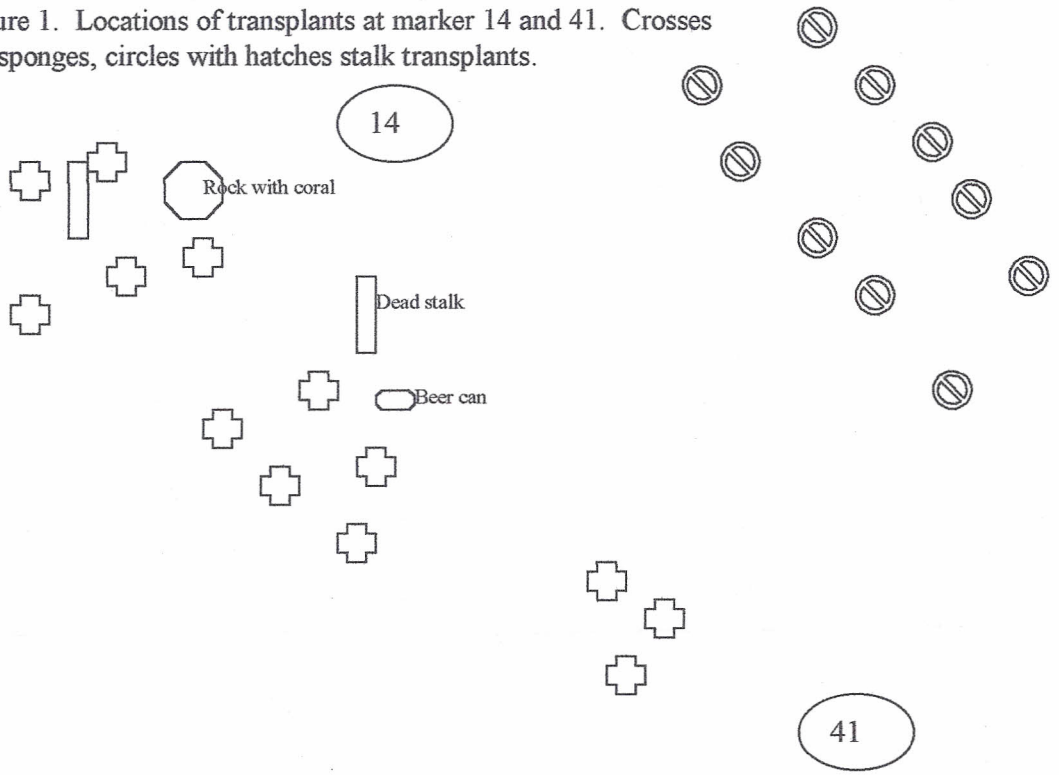
We planted 10 sponge stalks which had been attached with cable ties to pvc pipe. The stalks were placed in an array the was 2 parallel lines to the right of marker 14 towards the outcrop (Figure 1). Stalks were placed approximately 1 m apart from each other making a center pathway which can be monitored.

Objective 2: Check on the status of the transplanted sponges. Reposition sponges as necessary.

Of the sponges at marker 14 only a few were still standing and all the sponges in the area were covered in a layer of silt. We collected 5 small adult sponges for transplant and positioned them to the left (if facing up slope) of marker 14 (Figure 1). We then collected 5 more medium adult sponges and arranged them in

front of marker 14. Group 1 is marked with a rock with coral placed by the sub (looks like a bonsi) and group 2 with a Coors can. We took lots of reference video and stills as these sponges were transplanted into an existing community. We took 3 small adult sponges to Marker 41 where only 4 sponges were standing. Sponges were scattered up to 20 m away from the marker. We transplanted them slightly up slope and to the left of the marker.

Figure 1. Locations of transplants at marker 14 and 41. Crosses are sponges, circles with hatches stalk transplants.



Objective 3: Use sponge suckers to collect near bottom water profiles.

We used the sponge suckers to take exhalent and ambient water samples from 3 *S. hawaiicus*. The 4th sample moved out of position when the pin was pulled.

Table 1. Description of the positioning of the sponge suckers.

Sampler	Positioning
White/green	Plain arm in the exhalent portion of the sponge
White/red	Plain arm is in the exhalent portion of the sponge
White/white	Green arm is in the exhalent portion of the sponge

Objective 4: Conduct 20 min transect at 340 m.

We conducted a 20 horizontal transect at 340 m towards the north. We only observed one small sponge despite the fact that there was lots of appropriate habitat.

Objective 5: Take sediment cores near and away from sponges.

We collected 4 sediment cores using the punch cores at marker 14. 1 cores were collected in the sponge spicule base and 2 in areas away from the sponges (Figure 2).

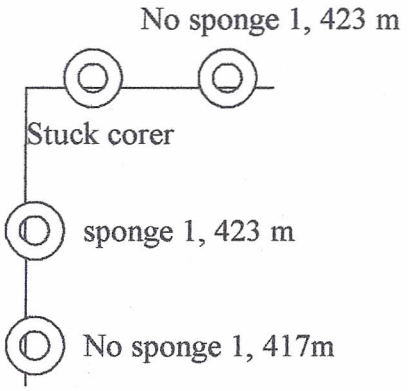


Figure 2. Diagram of corer assembly.

Objective 6: Take water column samples.

We collected a water column profile using the niskin bottles on the top of the sub. Water samples were collected as described in Table 1. All samples were collected while the sub ascended from the bottom Bottle 12 and 16 were empty.

Table 2. Water samples collected in niskin bottles on top of sub. Analyzed for chlla, ultraplankton.

Depth	Bottle	T°C	Time
400	1	8.4	1602
350	2	9	1604
300	3	9.8	1606
250	4	12.2	1608
200	5	15.8	1610
180	6	17.2	1611
160	7	18	1612
140	8	19.3	1613
120	9	20.2	1614
100	10	22.9	1614
80	11	25.3	1618
60	13	24.4	1619
40	14	26.0	1620
20	15	26.2	1620
5	16	26.2	1621

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

none

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.

This was a highly successful dive and all of the objectives were achieved.

List specimens or samples collected on the mission.

5 *S. hawaiicus* and associated fauna
2 benthic ctenophores
Water samples as described in Table 2.
Sediment cores as described in Figure 2.

Dive **P5-489**

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

Ecological Role and Faunal Associates of Abundant Hexactinellid Sponges on the Hawaiian Slope (project title)

held on November 30 2001 in the following way:

a. CTD data by Nov 2003 (date)

b. voice transcripts, video, and still camera film by Nov 2003 (date)

c. other Nov 2003 (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