HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT
DIVE: P5-757

MISSION STATUS

Location: Au'au Channel, South of Maui, Hawaii

Latitude: 20° 48.777N **Longitude:** 156° 42.746W

Mission Date: 3 March 2011 **Duration:** 8 hours 12 mins

Maximum Depth: 93 m

Project Title: CRES 2007: Investigating Deep (50-100 m) Coral Reefs in Hawai'i

Principal Investigator: Richard Pyle

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Observer 1: Brian N. Popp (chief Scientist)
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Observer 2: Melissa Roth
Address: Univ. of California - Berkeley
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Pilot 1: Max Cremer **Pilot 2:** None

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

Objectives: The primary goal of this dive was to collect 6 paired samples of *Leptoseris hawaiiensis*, Halimeda, Ulva and a common brown alga from 65 and 75 m. These samples will be used to examine the physiology of this common group of organisms as a function of depth. These samples served as our "shallow water" representatives.

Observations, findings, etc:

Our goal was to collect 6 paired samples of coral and algae from 65 and 75 m. These shallower depths presented a challenge particularly for *L. hawaiiensis* because it is near the shallow limit of its depth tolerance. Six representatives of nearly all organisms were located in the dive region. Most collection sites had at least 3 of the 4 target organisms and many sites had all 4 in close proximity. We generally did not collect the same kind of organism within 10 m of a collection

site. The conditions were favorable for these collections and the sub pilot and Pisces V worked flawlessly.

Species list:

Leptoseris hawaiiensis
Ulvales alga
Halimeda
Brown alga

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

No limitations, failures or operational problems were encountered.

Recommendations for corrective action or improvement:

None necessary.

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 was a resounding success. All primary objectives were met.

List specimens or samples collected on the mission.

Sample ID	Box	Time	Depth, m	Latitude, °N	Longitude, °W	Coral Cover
L. hawaiiensis	Sm.	09:09	77	20 48.861	156 42.808	5%
Ulva	12	09:19	77	20 48.861	156 42.808	5%
Halimeda	12	09:23	77	20 48.861	156 42.808	5%
L. hawaiiensis	Sm.	09:47	78	20 48.827	156 42.824	5%
Ulva	11	09:56	78	20 48.827	156 42.824	5%
Halimeda	11	10:00	78	20 48.827	156 42.824	5%
Brown alga	11	10:07	78	20 48.827	156 42.824	5%
L. hawaiiensis	Sm.	10:19	78	20 48.815	156 42.860	<5%
Halimeda	11	10:30	78	20 48.815	156 42.860	<5%
L. hawaiiensis	Sm.	10:53	73	20 48.726	156 42.904	~2%
Ulva	10	11:00	73	20 48.726	156 42.904	~2%
Brown alga	10	11:02	73	20 48.726	156 42.904	~2%
Halimeda	10	11:03	73	20 48.726	156 42.904	~2%
L. hawaiiensis	25	11:55	79	20 48.708	156 42.870	GFP - base of slope
L. hawaiiensis	25	12:22	75	20 48.692	156 42.857	<5%
Brown alga	16	12:34	75	20 48.692	156 42.857	<5%
Halimeda	16	12:35	75	20 48.692	156 42.857	<5%
L. hawaiiensis	25	12:54	76	20 48.674	156 42.917	~10%
Brown alga	17	13:06	76	20 48.674	156 42.917	~10%
Ulva	17	13:25	76	20 48.674	156 42.917	~10%
Halimeda	17	13:30	76	20 48.674	156 42.917	~10%
L. hawaiiensis	26	13:33	76	20 48.674	156 42.917	~10%
L. hawaiiensis	26	13:35	76	20 48.674	156 42.917	~10%
Ulva	18	13:36	76	20 48.674	156 42.917	~10%
L. hawaiiensis	18	13:41	76	20 48.674	156 42.917	~10%
Montipora	19	13:59	69	20 48.642	156 42.963	~10%
L. hawaiiensis	26	14:16	67	20 48.638	156 43.009	1%
Ulva	20	14:18	67	20 48.638	156 43.009	1%
Brown alga	20	14:19	67	20 48.638	156 43.009	1%
Halimeda	20	14:20	67	20 48.638	156 43.009	1%
L. hawaiiensis	20	14:25	67	20 48.638	156 43.009	1%
L. hawaiiensis	26	14:33	67	20 48.648	156 42.983	3%
Ulva	21	14:46	67	20 48.648	156 42.983	3%
Brown alga	21	14:48	67	20 48.648	156 42.983	3%

L. hawaiiensis	26	14:57	67	20 48.652	156 42.982	3%
Brown alga	22	14:58	67	20 48.652	156 42.982	3%
Ulva	22	15:00	67	20 48.652	156 42.982	3%
L. hawaiiensis	23	15:05	67	20 48.652	156 42.982	3%
L. hawaiiensis	24	15:15	67	20 48.652	156 42.982	3%
Brown alga	24	15:16	67	20 48.652	156 42.982	3%
Ulva	24	15:18	67	20 48.652	156 42.982	3%
L. hawaiiensis	Sm.	15:30	67	20 48.652	156 42.982	3%
Halimeda	13	15:35	66	20 48.652	156 42.982	3%
Ulva	13	15:36	66	20 48.652	156 42.982	3%
Ulva	14	15:42	66	20 48.652	156 42.982	3%
Halimeda	14	15:45	66	20 48.652	156 42.982	3%
L. hawaiiensis	19	15:47	65	20 48.652	156 42.982	3%
Ulva	15	15:51	65	20 48.652	156 42.982	3%
Halimeda	15	15:52	65	20 48.672	156 42.999	3%

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)

CRES 2007: Investigating Deep (50-100 m) Coral Reefs in Hawai‘i

held on 2 March 2011 (date) in the following way:

a. CTD data by 2 March 2013 (date)

b. video and images by 2 March 2013 (date)

c. other 2 March 2013 (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).

Brian N. Popp Principal Investigator