PRELIMINARY CRUISE REPORT
2012 Pulley Ridge Cruise
August 14-25, 2012
R/V Walton Smith – Cruise No. WS1213
UNCW SuperPhantom II ROV

Project Title: Connectivity of the Pulley Ridge - South Florida Coral Reef Ecosystem: Processes to Decision-Support Tools

Project Grant: NOAA-NOS-NCCOS-2011-2002586; REPP-Connectivity-Pulley Ridge

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Cruise Overview

This cruise is the first of four planned for this project. The intent of this preliminary report is to provide information on sampling and other activities of this first cruise, so that processing of data and samples can quickly begin and planning for future cruises can be optimized; a final cruise report will be submitted by the end of the year. Hurricane Isaac curtailed operations by 3 days, but otherwise significant progress was made on all tasks.

Tasks:

1. **Deploy three physical oceanography moorings in vicinity of the Dry Tortugas (2 moorings) and at Pulley Ridge (1 mooring)**

   Two of the three moorings were successfully deployed at the sites identified by the PO group [north Tortugas site (TERN) and east of Pulley Ridge (PR)], with instruments secured by tech divers. The mooring at the second Tortugas site (TERS) was successfully deployed, but the instruments could not be installed due to conditions (high currents at the start of the cruise forced the dive team to abort their dive; high wind and waves prevented the dive team from diving and precluded launching of small boat and tech divers on our last day of ops). The PO mooring was left at TERS, with the idea that the Dive Team could return in the near future and complete the installation. The best option might be to do that as a day trip from Key West with a vessel of opportunity (e.g., the *Tiburon* or *Spree*).

2. **Deploy larval light trap moorings to resolve any design issues and coordinate with overall ship sampling activities.**

   Once some initial kinks were worked out with the galvanic release, the light trap deployments went well, with 3 deployments (two sets of traps) at "South Pulley" and 2 at "North Pulley". We had hoped to do 4 at each site, but we lost one day at the south site due to the problem with the release, and we lost the last 2 deployments in the north due to Isaac.

3. **Conduct survey transects by ROV to quantify benthic habitat and organisms, and identify suitable specimen collection sites**

   Based on various discussions initiated at the All-PI meeting last fall, we pursued a statistically rigorous sampling protocol for the ROV quantitative sampling of Pulley Ridge. Figure 1 shows the location of the twenty (random) chosen grids along the primary/ secondary ridge (~ 90 potential sites). Within each sampling box ("site"), we conducted five 100-m transects with the ROV. We did 2 ROV dives per op day for 7 days, completing 14 of the random boxes (20 had been planned; 6 were lost due to Isaac). We had a problem with the still camera in Box 20, so this site should re-sampled in the future as we will not have enough good photos to adequately quantify.

   During these surveys, we saw much more coral than in our 2010 and 2011 cruises (but still not anything near the undocumented cover reported several years ago). Distribution of the corals remains patchy (both among and within boxes). The approach of randomizing our sampling effort over the designated area of interest proved quite helpful in extending our knowledge of benthic distribution. We also have a good snapshot of the fish community and their habitats. Although not called out in the proposal, we clearly are seeing a large increase in lionfish, since out first observations of that exotic species on PR in 2010. Our total lionfish count during all ROV dives was 332 individuals.

The original DVDs of all ROV video and a hard drive with all video, still images, navigation data, etc. was transmitted from Lance Horn to UM at the end of the cruise. In addition to the habitat characterization done on the video surveys, the CS group at HBOI will be performing analysis of the benthic community (using the still images) and Stacy Harter (Andy David's lab, NOAA Fisheries) will be doing the analyses on fish.

4. Initiate specimen collection by technical diving

We utilized sampling collection and processing plans provided by various PIs for the target species listed below to guide the technical dive team and onboard science team. On our 7 op days for this task (3 others were lost due to Isaac), we did 2 tech dives per day, except for a 1-dive day break halfway through what we thought would be the full cruise. Collections and processing went well, improving as the cruise progressed. Total benthic samples for the target species were 133. Collections for target species were:

Coral
Agaricia spp. - 30
Montastraea cavernosa - 13
Porites asteroides - 0

Fish
Stegastes partitus (bicolor damselfish) - 36
Thalassoma bifasciatum (bluehead wrasse) - 0

Sponge
Xestospongia muta - 39

Alga
Halimeda sp. - 15

We believe there will be no problem on the next cruise to complete the remaining collections (n=60) for the 5 species collected on this trip. We did not see any sign of *Porites*. Blue-head wrasse numbers were minimal; none were seen by the technical divers, and only one was observed on all ROV dives. The Population Group may wish to evaluate what we have done so far and provide guidance for the next cruise in regards to numbers of samples still desired and if any changes in target species are to be made.

5. **Deploy ISIIS on a time available basis**

ISIIS was not deployed due to a fiber optic problem that could not be resolved at sea.

6. Deploy MOCNESS on a time available basis (day or night).

Three MOCNESS samplings were successfully completed as planned.

7. Deploy drifter in North Pulley

The drifter was successfully deployed near the northern end of our operations.

8. Data base and data entry

We utilized our HBOI database demonstrated at the all-PI meeting and modified it to include the diversity of samples and sampling efforts on this cruise. We kept up with data entry and have provided initial data/products in this report (edits will be made before the final report).

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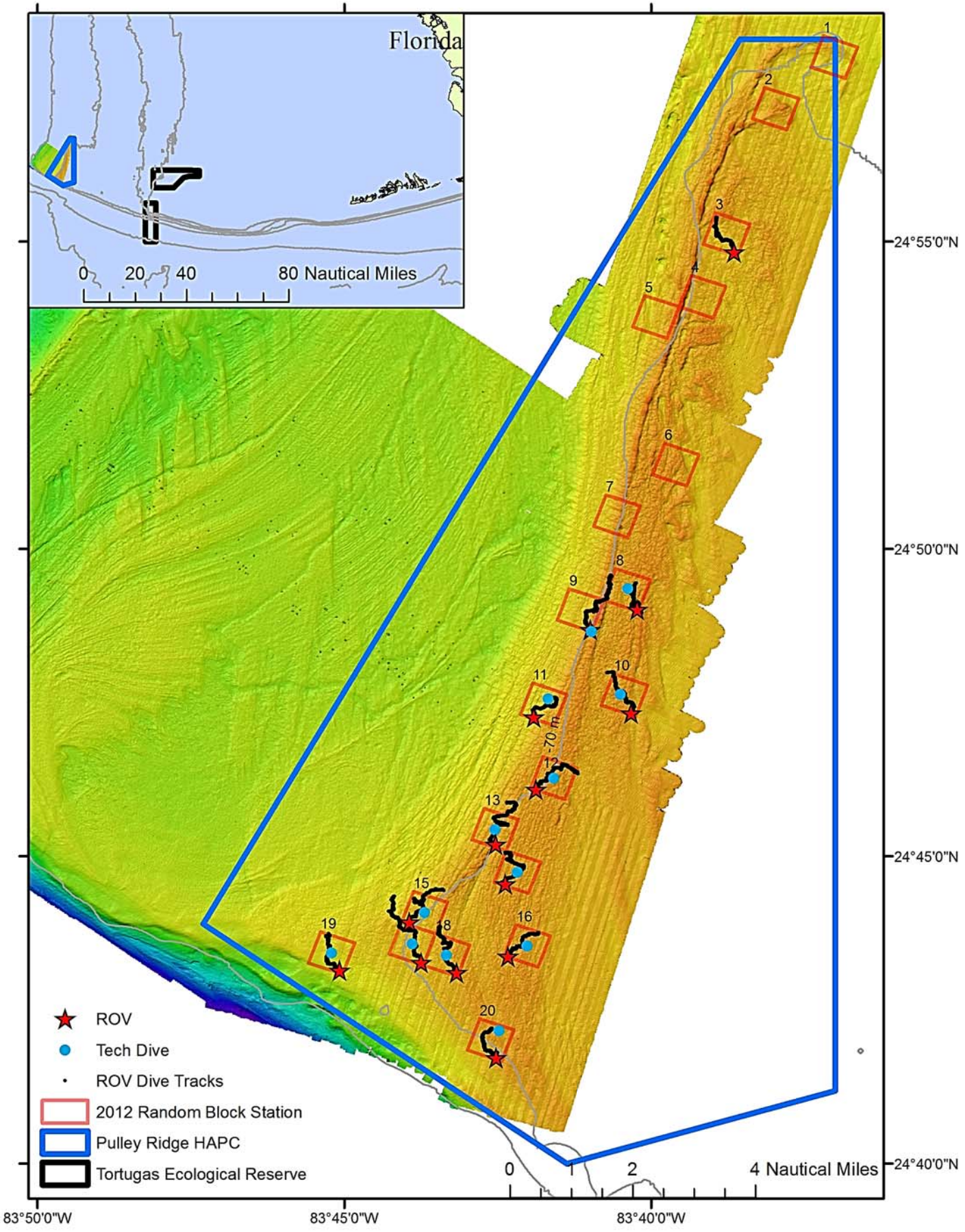
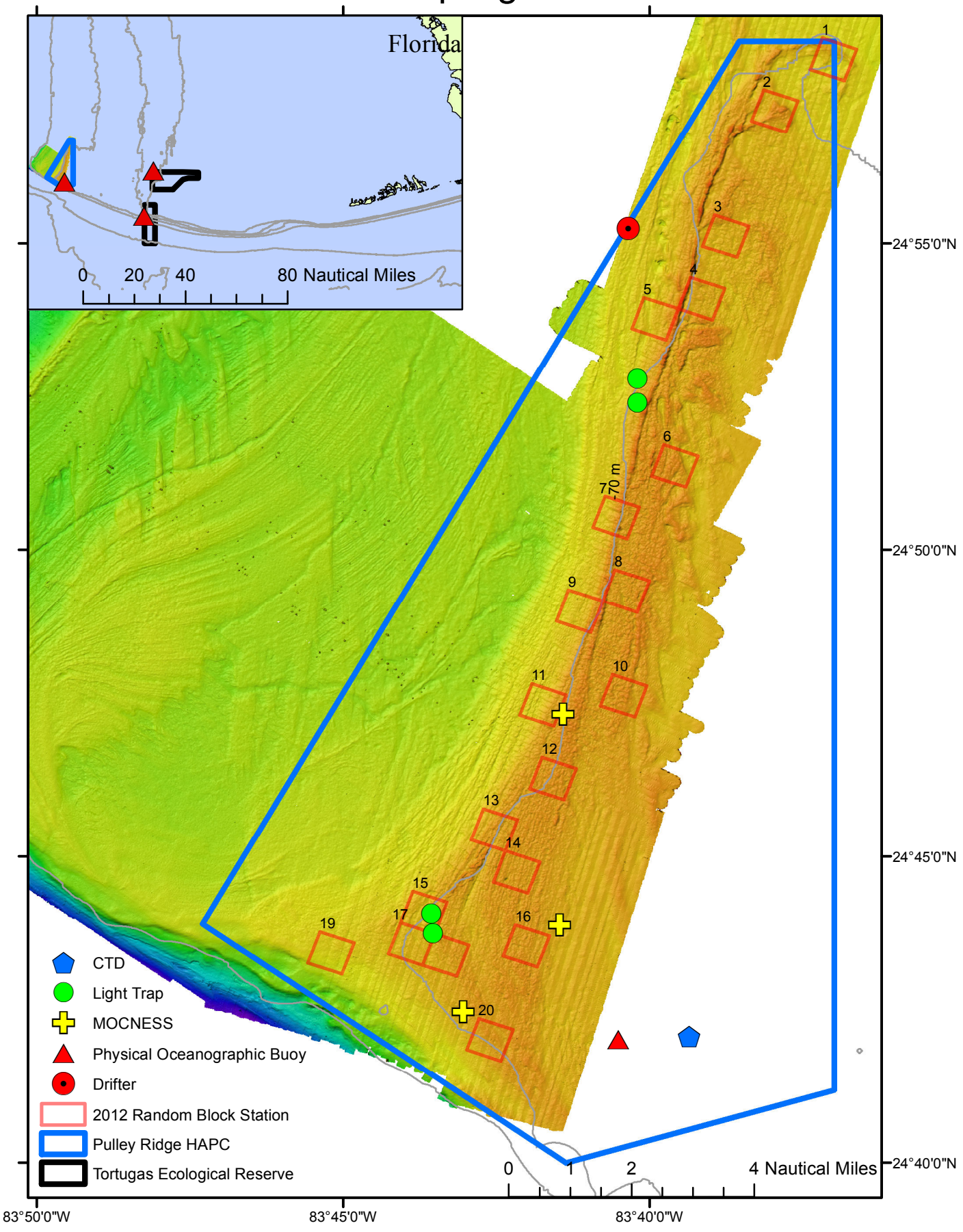
ROV and Tech Dive Stations



2012 Pulley Ridge Cruise - R/V Walton Smith
Other Sampling Stations



COLLECITON METHOD SUMMARY
2012 Pulley Ridge Cruise
August 14-25, 2012

Collection Method	Collection Method Type	Sensors	Still Camera	Still Camera Laser	Standard Def Video	Video Camera Laser	ROV Navigation Program
ROV	UNCW Super Phantom II ROV	Depth (m), GPS	Scorpioplex Insite Pacific - Nikon Coolpix 995	10 cm	Sony Smart Cam	15 cm	Track Point II
Tech Dive	Tech Dive	Temperature (°C), Depth (m)					
MOCNESS	Multiple Plankton Net (plankton)	Temperature (°C), Salinity (PSU), Depth (m)					
Light Trap	Light Trap (plankton)	None					
CTD	CTD Ship	Temperature (°C), Dissolved Oxygen (ml/l), Salinity (PSU), Fluoresence, Turbidity, Conductivity, Depth (m)					
Oceanographic Buoy	Physical Oceanographic Buoy	Temperature (°C), Salinity (PSU), ADCP					
Drifter	Surface Current Meter	GPS					
ISIIS	Plankton Analyzer	not deployed					

CRUISE SUMMARY
2012 Pulley Ridge Cruise
August 14-25, 2012
R/V Walton Smith – Cruise No. WS1213
UNCW SuperPhantom II ROV

Total ROV Dives- 14
- **Total ROV Bottom Time- 47.2 hours**
- **Total Video Time—47.2 hours**
- **Total Digital Photos (biota and habitat)- 2661**
- **Lionfish counts - 332**

Total Tech Dives- 13
- **Total Bottom Time- ~4.3 hours (~13 hours decompression time) (x 4 divers)**
- **Total Insitu Sample Photographs- 70**
- **Insitu Video- Y**

Total CTD Deployments- 2

Total MOCNESS Deployments- 3 (5 nets/tow)

Total Plankton Light Trap Samples- 30 (South Pulley Sites 1 and 2: 3 deployments each, 3 depths each; North Pulley Sites 1 and 2: 2 deployments each, 3 depths each)

Total Benthic Samples (from Tech Dives)- 133 target spp. (137 total)
- **Scleractinia Coral- 44 (target spp.)**
  - **Agaricia spp.- 30**
  - **Montastraea cavernosa- 13**
  - **Madracis myriaster- 1**
- **Xestospongia muta- 39**
- **Stegastes partitus (bicolor damselfish)- 36**
- **Thalassoma bifasciatum (bluehead wrasse)- 0 (1 observed on all ROV dives)**
- **Halimeda sp.- 15**
- **Crinoidea- 2**
- **Peyssonnelia sp.- 1**

STATION LIST
University of Miami Pully Ridge Grant

2012 Pully Ridge Cruise

8/14/2012 To 8/28/2012

R/V Walton Smith - Cruise No. WS1213

UNCW - Super Phantom 2 ROV

Site No. (DD-MM-YY-#)	Method - UM Site No.	Location	Latitude	Longitude	Depth (m)
15-VIII-12-1	PO Buoy 1 - PO-A	Florida, Tortugas Ecological Reserve North, outside NW corner of TER	24°46.4505'N	83°05.6681'W	54.30
15-VIII-12-2	CTD 1 - DT_A	Florida, Tortugas Ecological Reserve North, outside NW corner of TER	24°46.4021'N	83°05.6252'W	54.00
15-VIII-12-3	PO Buoy 2 - PO-B	Florida, Tortugas Ecological Reserve South, outside corner of TER near west border	24°28.5605'N	83°09.2590'W	66.50
16-VIII-12-1	PO Buoy 3 - PO-C	Florida, Pulley Ridge HAPC, inside SE corner of HAPC	24°42.0048'N	83°40.5090'W	68.50
16-VIII-12-2	CTD 2 - PR_C	Florida, Pulley Ridge HAPC, inside SE corner of HAPC	24°42.0564'N	83°39.3527'W	60.00
16-VIII-12-3	Light Trap- South Pulley #1	Florida, Pulley Ridge HAPC, NW corner of random block #18	24°43.7435'N	83°43.5354'W	66.00
16-VIII-12-4	Light Trap- South Pulley #2	Florida, Pulley Ridge HAPC, NW corner of random block #18	24°44.0624'N	83°43.5607'W	66.00
17-VIII-12-1	Tech Dive - Collection 1	Florida, Pulley Ridge HAPC, random block #18	24°43.3940'N	83°43.3340'W	67.00
17-VIII-12-2	ROV 1	Florida, Pulley Ridge HAPC, random block #18	24°43.1055'N	83°43.1735'W	64.00
17-VIII-12-3	Tech Dive - Collection 2	Florida, Pulley Ridge HAPC, random block #19	24°43.4266'N	83°45.2075'W	71.00
17-VIII-12-4	ROV 2	Florida, Pulley Ridge HAPC, random block #19	24°43.1386'N	83°45.0783'W	76.50
18-VIII-12-1	Tech Dive - Collection 3	Florida, Pulley Ridge HAPC, random block #15	24°44.0850'N	83°43.6940'W	71.00
18-VIII-12-2	ROV 3	Florida, Pulley Ridge HAPC, random block #15	24°43.9290'N	83°43.9408'W	69.30
18-VIII-12-3	Tech Dive - Collection 4	Florida, Pulley Ridge HAPC, random block #20	24°42.1630'N	83°42.4760'W	66.00
18-VIII-12-4	ROV 4	Florida, Pulley Ridge HAPC, random block #20	24°41.7170'N	83°42.5293'W	66.00
19-VIII-12-1	MOCNESS-01-001	Florida, Pulley Ridge HAPC, random block #20	24°42.4688'N	83°43.0430'W	55.00
19-VIII-12-2	Tech Dive - Collection 5	Florida, Pulley Ridge HAPC, random block #17	24°43.5750'N	83°43.8920'W	69.00
19-VIII-12-3	ROV 5	Florida, Pulley Ridge HAPC, random block #17	24°43.2702'N	83°43.7490'W	72.00

Site No. (DD-MM-YY-#)	Method - UM Site No.	Location	Latitude	Longitude	Depth (m)
19-VIII-12-4	Tech Dive - Collection 6	Florida, Pulley Ridge HAPC, random block #16	24°43.5410'N	83°42.0180'W	66.50
19-VIII-12-5	ROV 6	Florida, Pulley Ridge HAPC, random block #16	24°43.3692'N	83°42.3334'W	68.00
20-VIII-12-1	MOCNESS 02-002	Florida, Pulley Ridge HAPC, random block #16	24°43.8851'N	83°41.4677'W	50.00
20-VIII-12-2	Tech Dive - Collection 7	Florida, Pulley Ridge HAPC, random block #13	24°45.4340'N	83°42.5400'W	67.36
20-VIII-12-3	ROV 7	Florida, Pulley Ridge HAPC, random block #13	24°45.1920'N	83°42.5326'W	66.00
20-VIII-12-4	Tech Dive - Collection 8	Florida, Pulley Ridge HAPC, random block #11	24°47.5652'N	83°41.6776'W	69.50
20-VIII-12-5	ROV 8	Florida, Pulley Ridge HAPC, random block #11	24°47.2675'N	83°41.9104'W	66.00
21-VIII-12-1	MOCNESS M-03-003	Florida, Pulley Ridge HAPC, random block #11	24°47.3210'N	83°41.4140'W	50.00
21-VIII-12-2	Tech Dive - Collection 9	Florida, Pulley Ridge HAPC, random block #14	24°44.7429'N	83°42.1798'W	66.75
21-VIII-12-3	ROV 9	Florida, Pulley Ridge HAPC, random block #14	24°44.5523'N	83°42.3771'W	65.40
21-VIII-12-4	Tech Dive - Collection 10	Florida, Pulley Ridge HAPC, random block #12	24°46.2740'N	83°41.5840'W	65.53
21-VIII-12-5	ROV 10	Florida, Pulley Ridge HAPC, random block #12	24°46.0886'N	83°41.8745'W	67.50
22-VIII-12-1	Light Trap- North Pulley #1	Florida, Pulley Ridge HAPC, south and outside of block #05	24°52.4000'N	83°40.2000'W	68.00
22-VIII-12-2	Light Trap- North Pulley #2	Florida, Pulley Ridge HAPC, 0.4 nmi N of Trap 1	24°52.8000'N	83°40.2000'W	68.00
22-VIII-12-3	ROV 11	Florida, Pulley Ridge HAPC, random block #10	24°47.3255'N	83°40.3248'W	66.00
22-VIII-12-4	Tech Dive - Collection 11	Florida, Pulley Ridge HAPC, random block #10	24°47.6360'N	83°40.4980'W	66.75
22-VIII-12-5	Drifter 1	Florida, Pulley Ridge HAPC, due west random block #03	24°55.2509'N	83°40.3485'W	71.00
22-VIII-12-6	ROV 12	Florida, Pulley Ridge HAPC, random block #03	24°54.8280'N	83°38.6473'W	68.40
23-VIII-12-1	Tech Dive - Collection 12	Florida, Pulley Ridge HAPC, random block #08	24°49.3595'N	83°40.3790'W	66.14
23-VIII-12-2	ROV 13	Florida, Pulley Ridge HAPC, random block #09	24°48.6878'N	83°40.9875'W	64.00
23-VIII-12-3	Tech Dive - Collection 13	Florida, Pulley Ridge HAPC, random block #09	24°48.6600'N	83°40.9700'W	70.41
23-VIII-12-4	ROV 14	Florida, Pulley Ridge HAPC, random block #08	24°49.0157'N	83°40.2255'W	63.00

SAMPLE LIST

Pully Ridge Mesophotic Reef Project

2012 Pully Ridge Cruise

8/14/2012 To 8/28/2012

R/V Walton Smith - Cruise No. WS1213

UNCW - Super Phantom 2 ROV

Site Number	Location	Collection Date
16-VIII-12-3	Florida, Pulley Ridge HAPC, NW corner of random block #18	8/16/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
SP1-S-1	16-VIII-12-3-001	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-M-1	16-VIII-12-3-002	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-D-1	16-VIII-12-3-003	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-S-2	16-VIII-12-3-004	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-M-2	16-VIII-12-3-005	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-D-2	16-VIII-12-3-006	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-S-3	16-VIII-12-3-007	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-M-3	16-VIII-12-3-008	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00
SP1-D-3	16-VIII-12-3-009	Plankton	Light Trap (plankton)	24°43.7435'N	83°43.5354'W	66.00

Site Number	Location	Collection Date
16-VIII-12-4	Florida, Pulley Ridge HAPC, NW corner of random block #18	8/16/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
SP2-S-1	16-VIII-12-4-001	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-M-1	16-VIII-12-4-002	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-D-1	16-VIII-12-4-003	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-S-2	16-VIII-12-4-004	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-M-2	16-VIII-12-4-005	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-D-2	16-VIII-12-4-006	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-S-3	16-VIII-12-4-007	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-M-3	16-VIII-12-4-008	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00
SP2-D-3	16-VIII-12-4-009	Plankton	Light Trap (plankton)	24°44.0624'N	83°43.5607'W	66.00

Site Number	Location	Collection Date
17-VIII-12-1	Florida, Pulley Ridge HAPC, random block #18	8/17/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
SP01	17-VIII-12-1-001	Stegastes partitus	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
SP02	17-VIII-12-1-002	Stegastes partitus	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
AG01 TZ	17-VIII-12-1-003	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
PR001	17-VIII-12-1-003	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
AG02 TZ	17-VIII-12-1-004	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
PR002	17-VIII-12-1-004	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00

Site Number	Location					Collection Date
17-VIII-12-1	Florida, Pulley Ridge HAPC, random block #18					8/17/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
PR003	17-VIII-12-1-005	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
AG03 TZ	17-VIII-12-1-005	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
PR004	17-VIII-12-1-006	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
AG04 TZ	17-VIII-12-1-006	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
AG05 TZ	17-VIII-12-1-007	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
PR005	17-VIII-12-1-007	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
PR006	17-VIII-12-1-008	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
AG06 TZ	17-VIII-12-1-008	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
AG06 ET	17-VIII-12-1-008	Agaricia sp.	Tech Dive	24°43.3940'N	83°43.3340'W	67.00
Site Number	**Location**					**Collection Date**
17-VIII-12-3	Florida, Pulley Ridge HAPC, random block #19					8/17/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
SP03	17-VIII-12-3-001	Stegastes partitus	Tech Dive	24°43.5356'N	83°45.0700'W	71.00
SP04	17-VIII-12-3-002	Stegastes partitus	Tech Dive	24°43.5356'N	83°45.0700'W	71.00
SP05	17-VIII-12-3-003	Stegastes partitus	Tech Dive	24°43.5356'N	83°45.0700'W	71.00
SP06	17-VIII-12-3-004	Stegastes partitus	Tech Dive	24°43.5356'N	83°45.0700'W	71.00
SP07	17-VIII-12-3-005	Stegastes partitus	Tech Dive	24°43.5356'N	83°45.0700'W	71.00
SP08	17-VIII-12-3-006	Stegastes partitus	Tech Dive	24°43.5356'N	83°45.0700'W	71.00
Site Number	**Location**					**Collection Date**
18-VIII-12-1	Florida, Pulley Ridge HAPC, random block #15					8/18/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
SP09	18-VIII-12-1-001	Stegastes partitus	Tech Dive	24°44.0850'N	83°43.6940'W	71.00
SP10	18-VIII-12-1-002	Stegastes partitus	Tech Dive	24°44.0850'N	83°43.6940'W	71.00
Site Number	**Location**					**Collection Date**
18-VIII-12-3	Florida, Pulley Ridge HAPC, random block #20					8/18/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
AG07	18-VIII-12-3-001	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG07 ET	18-VIII-12-3-001	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG07 TZ	18-VIII-12-3-001	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG08 TZ	18-VIII-12-3-002	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG08	18-VIII-12-3-002	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG08 ET	18-VIII-12-3-002	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG09	18-VIII-12-3-003	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG09 ET	18-VIII-12-3-003	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG10	18-VIII-12-3-004	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG10 ET	18-VIII-12-3-004	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00

Site Number	Location					Collection Date
18-VIII-12-3	Florida, Pulley Ridge HAPC, random block #20					8/18/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
AG10 TZ	18-VIII-12-3-004	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG11	18-VIII-12-3-005	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG11 TZ	18-VIII-12-3-005	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG12	18-VIII-12-3-006	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG12 TZ	18-VIII-12-3-006	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG13 TZ	18-VIII-12-3-007	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG13	18-VIII-12-3-007	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
AG13 ET	18-VIII-12-3-007	Agaricia sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
XM01	18-VIII-12-3-008	Xestospongia muta	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
HA01	18-VIII-12-3-009	Halimeda sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
HA02	18-VIII-12-3-010	Halimeda sp.	Tech Dive	24°42.1630'N	83°42.4760'W	66.00
Site Number	**Location**					**Collection Date**
19-VIII-12-1	Florida, Pulley Ridge HAPC, random block #20					8/19/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
M-01-001	19-VIII-12-1-001	Plankton	MOCNESS (plankton)	24°42.4688'N	83°43.0430'W	55.00
Site Number	**Location**					**Collection Date**
19-VIII-12-2	Florida, Pulley Ridge HAPC, random block #17					8/19/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
HA03	19-VIII-12-2-001	Halimeda tuna	Tech Dive	24°43.5750'N	83°43.8920'W	69.00
XM02	19-VIII-12-2-002	Xestospongia muta	Tech Dive	24°43.5750'N	83°43.8920'W	69.00
XM03	19-VIII-12-2-003	Xestospongia muta	Tech Dive	24°43.5750'N	83°43.8920'W	69.00
XM04	19-VIII-12-2-004	Xestospongia muta	Tech Dive	24°43.5750'N	83°43.8920'W	69.00
XM05	19-VIII-12-2-005	Xestospongia muta	Tech Dive	24°43.5750'N	83°43.8920'W	69.00
XM06	19-VIII-12-2-006	Xestospongia muta	Tech Dive	24°43.5750'N	83°43.8920'W	69.00
Site Number	**Location**					**Collection Date**
19-VIII-12-4	Florida, Pulley Ridge HAPC, random block #16					8/19/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
SP11	19-VIII-12-4-001	Stegastes partitus	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
SP12	19-VIII-12-4-002	Stegastes partitus	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
SP13	19-VIII-12-4-003	Stegastes partitus	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
SP14	19-VIII-12-4-004	Stegastes partitus	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
XM07	19-VIII-12-4-005	Xestospongia muta	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
XM08	19-VIII-12-4-006	Xestospongia muta	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
XM09	19-VIII-12-4-007	Xestospongia muta	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
MC01 TZ	19-VIII-12-4-008	Montastraea cavernosa	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
MC01, PR14	19-VIII-12-4-008	Montastraea cavernosa	Tech Dive	24°43.5410'N	83°42.0180'W	66.50

Site Number	Location					Collection Date
19-VIII-12-4	Florida, Pulley Ridge HAPC, random block #16					8/19/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
MC01 ET	19-VIII-12-4-008	Montastraea cavernosa	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
MC02, PR15	19-VIII-12-4-009	Montastraea cavernosa	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
MC02 TZ	19-VIII-12-4-009	Montastraea cavernosa	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
MC02 ET	19-VIII-12-4-009	Montastraea cavernosa	Tech Dive	24°43.5410'N	83°42.0180'W	66.50
Site Number	**Location**					**Collection Date**
20-VIII-12-1	Florida, Pulley Ridge HAPC, random block #16					8/20/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
M-02-002	20-VIII-12-1-001	Plankton	MOCNESS (plankton)	24°43.8851'N	83°41.4677'W	50.00
Site Number	**Location**					**Collection Date**
20-VIII-12-2	Florida, Pulley Ridge HAPC, random block #13					8/20/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
AG14	20-VIII-12-2-001	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
AG14	20-VIII-12-2-001	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
PR16	20-VIII-12-2-001	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
AG15	20-VIII-12-2-002	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
AG15	20-VIII-12-2-002	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
PR17	20-VIII-12-2-002	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
PR18	20-VIII-12-2-003	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
AG16	20-VIII-12-2-003	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
AG16	20-VIII-12-2-003	Agaricia sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
XM10	20-VIII-12-2-004	Xestospongia muta	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
XM11	20-VIII-12-2-005	Xestospongia muta	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
XM12	20-VIII-12-2-006	Xestospongia muta	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
HA04	20-VIII-12-2-007	Halimeda sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
HA05	20-VIII-12-2-008	Halimeda sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
HA06	20-VIII-12-2-009	Halimeda sp.	Tech Dive	24°45.4340'N	83°42.5400'W	67.36
Site Number	**Location**					**Collection Date**
20-VIII-12-4	Florida, Pulley Ridge HAPC, random block #11					8/20/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
AG17	20-VIII-12-4-001	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
AG17	20-VIII-12-4-001	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
PR19	20-VIII-12-4-001	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
AG18	20-VIII-12-4-002	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
PR21	20-VIII-12-4-002	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
AG18	20-VIII-12-4-002	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
AG19	20-VIII-12-4-003	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50

Site Number	Location					Collection Date
20-VIII-12-4	Florida, Pulley Ridge HAPC, random block #11					8/20/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
AG19	20-VIII-12-4-003	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
PR22	20-VIII-12-4-003	Agaricia sp.	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
MC3	20-VIII-12-4-004	Montastraea cavernosa	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
MC3	20-VIII-12-4-004	Montastraea cavernosa	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
PR20	20-VIII-12-4-004	Montastraea cavernosa	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
XM13	20-VIII-12-4-005	Xestospongia muta	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
XM14	20-VIII-12-4-006	Xestospongia muta	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
XM15	20-VIII-12-4-007	Xestospongia muta	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
XM16	20-VIII-12-4-008	Xestospongia muta	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
HBOI-Reed-009	20-VIII-12-4-009	Madracis myriaster	Tech Dive	24°47.5652'N	83°41.6776'W	69.50
Site Number	**Location**					**Collection Date**
21-VIII-12-1	Florida, Pulley Ridge HAPC, random block #11					8/21/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
M-03-003	21-VIII-12-1-001	Plankton	MOCNESS (plankton)	24°47.3210'N	83°41.4140'W	50.00
Site Number	**Location**					**Collection Date**
21-VIII-12-2	Florida, Pulley Ridge HAPC, random block #14					8/21/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
SP15	21-VIII-12-2-001	Stegastes partitus	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
SP16	21-VIII-12-2-002	Stegastes partitus	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
SP17	21-VIII-12-2-003	Stegastes partitus	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
SP18	21-VIII-12-2-004	Stegastes partitus	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
SP19	21-VIII-12-2-005	Stegastes partitus	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
SP20	21-VIII-12-2-006	Stegastes partitus	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
SP21	21-VIII-12-2-007	Stegastes partitus	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
XM17	21-VIII-12-2-008	Xestospongia muta	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
XM18	21-VIII-12-2-009	Xestospongia muta	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
XM19	21-VIII-12-2-010	Xestospongia muta	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
XM20	21-VIII-12-2-011	Xestospongia muta	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
HA07	21-VIII-12-2-012	Halimeda sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
HA08	21-VIII-12-2-013	Halimeda sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
AG20 TZ	21-VIII-12-2-014	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
AG20 ET	21-VIII-12-2-014	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
PR23	21-VIII-12-2-014	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
AG21 ET	21-VIII-12-2-015	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
PR24	21-VIII-12-2-015	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
AG21 TZ	21-VIII-12-2-015	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75

Site Number	Location					Collection Date
21-VIII-12-2	Florida, Pulley Ridge HAPC, random block #14					8/21/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
AG22 TZ	21-VIII-12-2-016	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
PR25	21-VIII-12-2-016	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
AG22 ET	21-VIII-12-2-016	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
PR26	21-VIII-12-2-017	Montastraea cavernosa	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
MC04 TZ	21-VIII-12-2-017	Montastraea cavernosa	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
MC04 ET	21-VIII-12-2-017	Montastraea cavernosa	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
AG23TZ	21-VIII-12-2-018	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
AG23 ET	21-VIII-12-2-018	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
PR27	21-VIII-12-2-018	Agaricia sp.	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
HBOI- Reed- 019	21-VIII-12-2-019	Comatulida	Tech Dive	24°43.7440'N	83°43.5350'W	66.75
Site Number	**Location**					**Collection Date**
21-VIII-12-4	Florida, Pulley Ridge HAPC, random block #12					8/21/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
SP22	21-VIII-12-4-001	Stegastes partitus	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
SP23	21-VIII-12-4-002	Stegastes partitus	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
SP24	21-VIII-12-4-003	Stegastes partitus	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
SP25	21-VIII-12-4-004	Stegastes partitus	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
SP26	21-VIII-12-4-005	Stegastes partitus	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
PR028	21-VIII-12-4-006	Agaricia sp.	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
AG24 Z	21-VIII-12-4-006	Agaricia sp.	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
AG24 ET	21-VIII-12-4-006	Agaricia sp.	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
XM21	21-VIII-12-4-007	Xestospongia muta	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
XM22	21-VIII-12-4-008	Xestospongia muta	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
XM23	21-VIII-12-4-009	Xestospongia muta	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
XM24	21-VIII-12-4-010	Xestospongia muta	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
XM25	21-VIII-12-4-011	Xestospongia muta	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
XM26	21-VIII-12-4-012	Xestospongia muta	Tech Dive	24°46.2740'N	83°41.5840'W	65.53
Site Number	**Location**					**Collection Date**
22-VIII-12-1	Florida, Pulley Ridge HAPC, south and outside of block #05					8/22/2012
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Latitude**	**Longitude**	**Depth (m)**
NP1-S-1	22-VIII-12-1-001	Plankton	Light Trap (plankton)	24°52.4000'N	83°40.2000'W	68.00
NP1-M-1	22-VIII-12-1-002	Plankton	Light Trap (plankton)	24°52.4000'N	83°40.2000'W	68.00
NP1-D-1	22-VIII-12-1-003	Plankton	Light Trap (plankton)	24°52.4000'N	83°40.2000'W	68.00
NP1-S-2	22-VIII-12-1-004	Plankton	Light Trap (plankton)	24°52.4000'N	83°40.2000'W	68.00
NP1-M-2	22-VIII-12-1-005	Plankton	Light Trap (plankton)	24°52.4000'N	83°40.2000'W	68.00
NP1-D-2	22-VIII-12-1-006	Plankton	Light Trap (plankton)	24°52.4000'N	83°40.2000'W	68.00

Site Number	Location	Collection Date
22-VIII-12-2	Florida, Pulley Ridge HAPC, 0.4 nmi N of Trap 1	8/22/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
NP2-S-1	22-VIII-12-2-001	Plankton	Light Trap (plankton)	24°52.8000'N	83°40.2000'W	68.00
NP2-M-1	22-VIII-12-2-002	Plankton	Light Trap (plankton)	24°52.8000'N	83°40.2000'W	68.00
NP2-D-1	22-VIII-12-2-003	Plankton	Light Trap (plankton)	24°52.8000'N	83°40.2000'W	68.00
NP2-S-2	22-VIII-12-2-004	Plankton	Light Trap (plankton)	24°52.8000'N	83°40.2000'W	68.00
NP2-M-2	22-VIII-12-2-005	Plankton	Light Trap (plankton)	24°52.8000'N	83°40.2000'W	68.00
NP2-D-2	22-VIII-12-2-006	Plankton	Light Trap (plankton)	24°52.8000'N	83°40.2000'W	68.00

Site Number	Location	Collection Date
22-VIII-12-4	Florida, Pulley Ridge HAPC, random block #10	8/22/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
SP27	22-VIII-12-4-001	Stegastes partitus	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
SP28	22-VIII-12-4-002	Stegastes partitus	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
SP29	22-VIII-12-4-003	Stegastes partitus	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
SP30	22-VIII-12-4-004	Stegastes partitus	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
SP31	22-VIII-12-4-005	Stegastes partitus	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
SP32	22-VIII-12-4-006	Stegastes partitus	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
SP33	22-VIII-12-4-007	Stegastes partitus	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
XM27	22-VIII-12-4-008	Xestospongia muta	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
XM28	22-VIII-12-4-009	Xestospongia muta	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
XM29	22-VIII-12-4-010	Xestospongia muta	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
XM30	22-VIII-12-4-011	Xestospongia muta	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
HA9	22-VIII-12-4-012	Halimeda sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
HA9	22-VIII-12-4-012	Halimeda sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG25 ET	22-VIII-12-4-013	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR29	22-VIII-12-4-013	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG25 TZ	22-VIII-12-4-013	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC05 TZ	22-VIII-12-4-014	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC05 ET	22-VIII-12-4-014	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR30	22-VIII-12-4-014	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG26 ET	22-VIII-12-4-015	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR31	22-VIII-12-4-015	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG26 TZ	22-VIII-12-4-015	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR32	22-VIII-12-4-016	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG27 ET	22-VIII-12-4-016	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG27 TZ, Diseased	22-VIII-12-4-016	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR33	22-VIII-12-4-017	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75

Site Number	Location	Collection Date
22-VIII-12-4	Florida, Pulley Ridge HAPC, random block #10	8/22/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
MC06 ET	22-VIII-12-4-017	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC06 TZ	22-VIII-12-4-017	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC07 TZ	22-VIII-12-4-018	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC07 ET	22-VIII-12-4-018	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR34	22-VIII-12-4-018	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR35	22-VIII-12-4-019	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC08 TZ	22-VIII-12-4-019	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC08 ET	22-VIII-12-4-019	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR36	22-VIII-12-4-020	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG28 TZ	22-VIII-12-4-020	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG28 ET	22-VIII-12-4-020	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR37	22-VIII-12-4-021	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC09 TZ	22-VIII-12-4-021	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC09 ET	22-VIII-12-4-021	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG29 TZ	22-VIII-12-4-022	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG29 ET	22-VIII-12-4-022	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR38	22-VIII-12-4-022	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC10 TZ	22-VIII-12-4-023	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC10 ET	22-VIII-12-4-023	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR39	22-VIII-12-4-023	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC11 ET	22-VIII-12-4-024	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR40	22-VIII-12-4-024	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
MC11 TZ	22-VIII-12-4-024	Montastraea cavernosa	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG30 TZ	22-VIII-12-4-025	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
AG30 ET	22-VIII-12-4-025	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
PR41	22-VIII-12-4-025	Agaricia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75
HBOI-Hanisak-101	22-VIII-12-4-101	Peyssonnelia sp.	Tech Dive	24°47.6230'N	83°40.4300'W	66.75

Site Number	Location	Collection Date
23-VIII-12-1	Florida, Pulley Ridge HAPC, random block #08	8/23/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
SP34	23-VIII-12-1-001	Stegastes partitus	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
SP35	23-VIII-12-1-002	Stegastes partitus	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
SP36	23-VIII-12-1-003	Stegastes partitus	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
XM31	23-VIII-12-1-004	Xestospongia muta	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
XM32	23-VIII-12-1-005	Xestospongia muta	Tech Dive	24°49.3595'N	83°40.3790'W	66.14

Site Number	Location	Collection Date
23-VIII-12-1	Florida, Pulley Ridge HAPC, random block #08	8/23/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
XM33	23-VIII-12-1-006	Xestospongia muta	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
XM34	23-VIII-12-1-007	Xestospongia muta	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
XM35	23-VIII-12-1-008	Xestospongia muta	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
XM36	23-VIII-12-1-009	Xestospongia muta	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
MC12 TZ	23-VIII-12-1-010	Montastraea cavernosa	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
PR42	23-VIII-12-1-010	Montastraea cavernosa	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
MC12 TZ - diseased	23-VIII-12-1-010	Montastraea cavernosa	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
MC12 ET	23-VIII-12-1-010	Montastraea cavernosa	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
HA10	23-VIII-12-1-011	Halimeda sp.	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
HA11	23-VIII-12-1-012	Halimeda sp.	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
HA12	23-VIII-12-1-013	Halimeda sp.	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
HA13	23-VIII-12-1-014	Halimeda sp.	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
HA14	23-VIII-12-1-015	Halimeda sp.	Tech Dive	24°49.3595'N	83°40.3790'W	66.14
HBOI-Reed-016	23-VIII-12-1-016	Comatula sp.	Tech Dive	24°49.3595'N	83°40.3790'W	66.14

Site Number	Location	Collection Date
23-VIII-12-3	Florida, Pulley Ridge HAPC, random block #08	8/23/2012

UM Sample No.	HBOI Sample No.	Taxon	Method	Latitude	Longitude	Depth (m)
XM37	23-VIII-12-3-001	Xestospongia muta	Tech Dive	24°48.6600'N	83°40.9700'W	70.41
XM38	23-VIII-12-3-002	Xestospongia muta	Tech Dive	24°48.6600'N	83°40.9700'W	70.41
XM39	23-VIII-12-3-003	Xestospongia muta	Tech Dive	24°48.6600'N	83°40.9700'W	70.41
HA15	23-VIII-12-3-004	Halimeda sp.	Tech Dive	24°48.6600'N	83°40.9700'W	70.41
MC13 ET	23-VIII-12-3-005	Montastraea cavernosa	Tech Dive	24°48.6600'N	83°40.9700'W	70.41
PR43	23-VIII-12-3-005	Montastraea cavernosa	Tech Dive	24°48.6600'N	83°40.9700'W	70.41
MC13 TZ	23-VIII-12-3-005	Montastraea cavernosa	Tech Dive	24°48.6600'N	83°40.9700'W	70.41

SAMPLE DISTRIBUTION LIST
Pully Ridge Mesophotic Reef Project

2012 Pully Ridge Cruise

8/14/2012 To 8/28/2012

R/V Walton Smith - Cruise No. WS1213

UNCW - Super Phantom 2 ROV

Site Number	Location	Collection Date
16-VIII-12-3	Florida, Pulley Ridge HAPC, NW corner of random block #18	8/16/2012

UM Sample No.	Sample No.	Taxon	Sample Use	Preservative	Sample To	Lab Location
SP1-S-1	16-VIII-12-3-001	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-M-1	16-VIII-12-3-002	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-D-1	16-VIII-12-3-003	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-S-2	16-VIII-12-3-004	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-M-2	16-VIII-12-3-005	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-D-2	16-VIII-12-3-006	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-S-3	16-VIII-12-3-007	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-M-3	16-VIII-12-3-008	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP1-D-3	16-VIII-12-3-009	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS

Site Number	Location	Collection Date
16-VIII-12-4	Florida, Pulley Ridge HAPC, NW corner of random block #18	8/16/2012

UM Sample No.	Sample No.	Taxon	Sample Use	Preservative	Sample To	Lab Location
SP2-S-1	16-VIII-12-4-001	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-M-1	16-VIII-12-4-002	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-D-1	16-VIII-12-4-003	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-S-2	16-VIII-12-4-004	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-M-2	16-VIII-12-4-005	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-D-2	16-VIII-12-4-006	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-S-3	16-VIII-12-4-007	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-M-3	16-VIII-12-4-008	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
SP2-D-3	16-VIII-12-4-009	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS

Site Number	Location	Collection Date
17-VIII-12-1	Florida, Pulley Ridge HAPC, random block #18	8/17/2012

UM Sample No.	Sample No.	Taxon	Sample Use	Preservative	Sample To	Lab Location
SP01	17-VIII-12-1-001	Stegastes partitus	DNA	95 ETOH	Andrew Baker	UM - RSMAS
SP02	17-VIII-12-1-002	Stegastes partitus	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG01 TZ	17-VIII-12-1-003	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR001	17-VIII-12-1-003	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG02 TZ	17-VIII-12-1-004	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR002	17-VIII-12-1-004	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS

Site Number	Location					Collection Date
17-VIII-12-1	Florida, Pulley Ridge HAPC, random block #18					8/17/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
PR003	17-VIII-12-1-005	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG03 TZ	17-VIII-12-1-005	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR004	17-VIII-12-1-006	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG04 TZ	17-VIII-12-1-006	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG05 TZ	17-VIII-12-1-007	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR005	17-VIII-12-1-007	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
PR006	17-VIII-12-1-008	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG06 TZ	17-VIII-12-1-008	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG06 ET	17-VIII-12-1-008	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
Site Number	**Location**					**Collection Date**
17-VIII-12-3	Florida, Pulley Ridge HAPC, random block #19					8/17/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP03	17-VIII-12-3-001	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP04	17-VIII-12-3-002	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP05	17-VIII-12-3-003	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP06	17-VIII-12-3-004	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP07	17-VIII-12-3-005	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP08	17-VIII-12-3-006	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
18-VIII-12-1	Florida, Pulley Ridge HAPC, random block #15					8/18/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP09	18-VIII-12-1-001	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP10	18-VIII-12-1-002	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
18-VIII-12-3	Florida, Pulley Ridge HAPC, random block #20					8/18/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
AG07	18-VIII-12-3-001	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG07 ET	18-VIII-12-3-001	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
AG07 TZ	18-VIII-12-3-001	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG08 TZ	18-VIII-12-3-002	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG08	18-VIII-12-3-002	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG08 ET	18-VIII-12-3-002	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
AG09	18-VIII-12-3-003	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG09 ET	18-VIII-12-3-003	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG10	18-VIII-12-3-004	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG10 ET	18-VIII-12-3-004	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU

Site Number	Location					Collection Date
18-VIII-12-3	Florida, Pulley Ridge HAPC, random block #20					8/18/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
AG10 TZ	18-VIII-12-3-004	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG11	18-VIII-12-3-005	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG11 TZ	18-VIII-12-3-005	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG12	18-VIII-12-3-006	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG12 TZ	18-VIII-12-3-006	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG13 TZ	18-VIII-12-3-007	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG13	18-VIII-12-3-007	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG13 ET	18-VIII-12-3-007	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
XM01	18-VIII-12-3-008	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
HA01	18-VIII-12-3-009	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA02	18-VIII-12-3-010	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
Site Number	**Location**					**Collection Date**
19-VIII-12-1	Florida, Pulley Ridge HAPC, random block #20					8/19/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
M-01-001	19-VIII-12-1-001	Plankton	DNA	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
19-VIII-12-2	Florida, Pulley Ridge HAPC, random block #17					8/19/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
HA03	19-VIII-12-2-001	Halimeda tuna	DNA	95 ETOH	Amy Baco-Taylor	FSU
XM02	19-VIII-12-2-002	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM03	19-VIII-12-2-003	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM04	19-VIII-12-2-004	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM05	19-VIII-12-2-005	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM06	19-VIII-12-2-006	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
Site Number	**Location**					**Collection Date**
19-VIII-12-4	Florida, Pulley Ridge HAPC, random block #16					8/19/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP11	19-VIII-12-4-001	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP12	19-VIII-12-4-002	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP13	19-VIII-12-4-003	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP14	19-VIII-12-4-004	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
XM07	19-VIII-12-4-005	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM08	19-VIII-12-4-006	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM09	19-VIII-12-4-007	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
MC01 TZ	19-VIII-12-4-008	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC01, PR14	19-VIII-12-4-008	Montastraea cavernosa	DNA	95 ETOH	Amy Baco-Taylor	FSU

Site Number	Location					Collection Date
19-VIII-12-4	Florida, Pulley Ridge HAPC, random block #16					8/19/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
MC01 ET	19-VIII-12-4-008	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
MC02, PR15	19-VIII-12-4-009	Montastraea cavernosa	DNA	95 ETOH	Amy Baco-Taylor	FSU
MC02 TZ	19-VIII-12-4-009	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
MC02 ET	19-VIII-12-4-009	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
Site Number	**Location**					**Collection Date**
20-VIII-12-1	Florida, Pulley Ridge HAPC, random block #16					8/20/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
M-02-002	20-VIII-12-1-001	Plankton	DNA	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
20-VIII-12-2	Florida, Pulley Ridge HAPC, random block #13					8/20/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
AG14	20-VIII-12-2-001	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG14	20-VIII-12-2-001	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR16	20-VIII-12-2-001	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG15	20-VIII-12-2-002	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
AG15	20-VIII-12-2-002	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR17	20-VIII-12-2-002	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
PR18	20-VIII-12-2-003	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG16	20-VIII-12-2-003	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG16	20-VIII-12-2-003	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
XM10	20-VIII-12-2-004	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM11	20-VIII-12-2-005	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM12	20-VIII-12-2-006	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
HA04	20-VIII-12-2-007	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA05	20-VIII-12-2-008	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA06	20-VIII-12-2-009	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
Site Number	**Location**					**Collection Date**
20-VIII-12-4	Florida, Pulley Ridge HAPC, random block #11					8/20/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
AG17	20-VIII-12-4-001	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
AG17	20-VIII-12-4-001	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR19	20-VIII-12-4-001	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG18	20-VIII-12-4-002	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR21	20-VIII-12-4-002	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG18	20-VIII-12-4-002	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG19	20-VIII-12-4-003	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU

Site Number	Location					Collection Date
20-VIII-12-4	Florida, Pulley Ridge HAPC, random block #11					8/20/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
AG19	20-VIII-12-4-003	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR22	20-VIII-12-4-003	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC3	20-VIII-12-4-004	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC3	20-VIII-12-4-004	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR20	20-VIII-12-4-004	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
XM13	20-VIII-12-4-005	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM14	20-VIII-12-4-006	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM15	20-VIII-12-4-007	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM16	20-VIII-12-4-008	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
HBOI-Reed-009	20-VIII-12-4-009	Madracis myriaster	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
21-VIII-12-1	Florida, Pulley Ridge HAPC, random block #11					8/21/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
M-03-003	21-VIII-12-1-001	Plankton	DNA	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
21-VIII-12-2	Florida, Pulley Ridge HAPC, random block #14					8/21/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP15	21-VIII-12-2-001	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP16	21-VIII-12-2-002	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP17	21-VIII-12-2-003	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP18	21-VIII-12-2-004	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP19	21-VIII-12-2-005	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP20	21-VIII-12-2-006	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP21	21-VIII-12-2-007	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
XM17	21-VIII-12-2-008	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM18	21-VIII-12-2-009	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM19	21-VIII-12-2-010	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM20	21-VIII-12-2-011	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
HA07	21-VIII-12-2-012	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA08	21-VIII-12-2-013	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
AG20 TZ	21-VIII-12-2-014	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG20 ET	21-VIII-12-2-014	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR23	21-VIII-12-2-014	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG21 ET	21-VIII-12-2-015	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR24	21-VIII-12-2-015	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG21 TZ	21-VIII-12-2-015	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU

Site Number	Location					Collection Date
21-VIII-12-2	Florida, Pulley Ridge HAPC, random block #14					8/21/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
AG22 TZ	21-VIII-12-2-016	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR25	21-VIII-12-2-016	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG22 ET	21-VIII-12-2-016	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR26	21-VIII-12-2-017	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC04 TZ	21-VIII-12-2-017	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC04 ET	21-VIII-12-2-017	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
AG23TZ	21-VIII-12-2-018	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG23 ET	21-VIII-12-2-018	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR27	21-VIII-12-2-018	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
HBOI- Reed-019	21-VIII-12-2-019	Comatulida	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
21-VIII-12-4	Florida, Pulley Ridge HAPC, random block #12					8/21/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP22	21-VIII-12-4-001	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP23	21-VIII-12-4-002	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP24	21-VIII-12-4-003	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP25	21-VIII-12-4-004	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP26	21-VIII-12-4-005	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
PR028	21-VIII-12-4-006	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG24 Z	21-VIII-12-4-006	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG24 ET	21-VIII-12-4-006	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
XM21	21-VIII-12-4-007	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM22	21-VIII-12-4-008	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM23	21-VIII-12-4-009	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM24	21-VIII-12-4-010	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM25	21-VIII-12-4-011	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM26	21-VIII-12-4-012	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
Site Number	**Location**					**Collection Date**
22-VIII-12-1	Florida, Pulley Ridge HAPC, south and outside of block #05					8/22/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
NP1-S-1	22-VIII-12-1-001	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP1-M-1	22-VIII-12-1-002	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP1-D-1	22-VIII-12-1-003	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP1-S-2	22-VIII-12-1-004	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP1-M-2	22-VIII-12-1-005	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS

Site Number	Location					Collection Date
22-VIII-12-1	Florida, Pulley Ridge HAPC, south and outside of block #05					8/22/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
NP1-D-2	22-VIII-12-1-006	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
22-VIII-12-2	Florida, Pulley Ridge HAPC, 0.4 nmi N of Trap 1					8/22/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
NP2-S-1	22-VIII-12-2-001	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP2-M-1	22-VIII-12-2-002	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP2-D-1	22-VIII-12-2-003	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP2-S-2	22-VIII-12-2-004	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP2-M-2	22-VIII-12-2-005	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
NP2-D-2	22-VIII-12-2-006	Plankton	Taxonomy	95 ETOH	Robert Cowen	UM - RSMAS
Site Number	**Location**					**Collection Date**
22-VIII-12-4	Florida, Pulley Ridge HAPC, random block #10					8/22/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP27	22-VIII-12-4-001	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP28	22-VIII-12-4-002	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP29	22-VIII-12-4-003	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP30	22-VIII-12-4-004	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP31	22-VIII-12-4-005	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP32	22-VIII-12-4-006	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP33	22-VIII-12-4-007	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
XM27	22-VIII-12-4-008	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM28	22-VIII-12-4-009	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM29	22-VIII-12-4-010	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM30	22-VIII-12-4-011	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
HA9	22-VIII-12-4-012	Halimeda sp.	Taxonomy	95 ETOH	Dennis Hanisak	HBOI at FAU
HA9	22-VIII-12-4-012	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
AG25 ET	22-VIII-12-4-013	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR29	22-VIII-12-4-013	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG25 TZ	22-VIII-12-4-013	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
MC05 TZ	22-VIII-12-4-014	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC05 ET	22-VIII-12-4-014	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR30	22-VIII-12-4-014	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG26 ET	22-VIII-12-4-015	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR31	22-VIII-12-4-015	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG26 TZ	22-VIII-12-4-015	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR32	22-VIII-12-4-016	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS

Site Number	Location					Collection Date
22-VIII-12-4	Florida, Pulley Ridge HAPC, random block #10					8/22/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
AG27 ET	22-VIII-12-4-016	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
AG27 TZ, Diseased	22-VIII-12-4-016	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
PR33	22-VIII-12-4-017	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC06 ET	22-VIII-12-4-017	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
MC06 TZ	22-VIII-12-4-017	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC07 TZ	22-VIII-12-4-018	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC07 ET	22-VIII-12-4-018	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR34	22-VIII-12-4-018	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
PR35	22-VIII-12-4-019	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC08 TZ	22-VIII-12-4-019	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC08 ET	22-VIII-12-4-019	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR36	22-VIII-12-4-020	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
AG28 TZ	22-VIII-12-4-020	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG28 ET	22-VIII-12-4-020	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR37	22-VIII-12-4-021	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC09 TZ	22-VIII-12-4-021	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC09 ET	22-VIII-12-4-021	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
AG29 TZ	22-VIII-12-4-022	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG29 ET	22-VIII-12-4-022	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR38	22-VIII-12-4-022	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC10 TZ	22-VIII-12-4-023	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC10 ET	22-VIII-12-4-023	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR39	22-VIII-12-4-023	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC11 ET	22-VIII-12-4-024	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR40	22-VIII-12-4-024	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC11 TZ	22-VIII-12-4-024	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
AG30 TZ	22-VIII-12-4-025	Agaricia sp.	DNA	Trizol	Joshua Voss	HBOI at FAU
AG30 ET	22-VIII-12-4-025	Agaricia sp.	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR41	22-VIII-12-4-025	Agaricia sp.	DNA	95 ETOH	Andrew Baker	UM - RSMAS
HBOI-Hanisak-101	22-VIII-12-4-101	Peyssonnelia sp.	Taxonomy	95 ETOH	Dennis Hanisak	HBOI at FAU

Site Number	Location					Collection Date
23-VIII-12-1	Florida, Pulley Ridge HAPC, random block #08					8/23/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP34	23-VIII-12-1-001	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS

Site Number	Location					Collection Date
23-VIII-12-1	Florida, Pulley Ridge HAPC, random block #08					8/23/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
SP35	23-VIII-12-1-002	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
SP36	23-VIII-12-1-003	Stegastes partitus	DNA	95 ETOH	Robert Cowen	UM - RSMAS
XM31	23-VIII-12-1-004	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM32	23-VIII-12-1-005	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM33	23-VIII-12-1-006	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM34	23-VIII-12-1-007	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM35	23-VIII-12-1-008	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM36	23-VIII-12-1-009	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
MC12 TZ	23-VIII-12-1-010	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
PR42	23-VIII-12-1-010	Montastraea cavernosa	DNA	95 ETOH	Amy Baco-Taylor	FSU
MC12 TZ - diseased	23-VIII-12-1-010	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU
MC12 ET	23-VIII-12-1-010	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
HA10	23-VIII-12-1-011	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA11	23-VIII-12-1-012	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA12	23-VIII-12-1-013	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA13	23-VIII-12-1-014	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HA14	23-VIII-12-1-015	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
HBOI-Reed-016	23-VIII-12-1-016	Comatula sp.	Taxonomy	95 ETOH	Charles Messing	NSU OC

Site Number	Location					Collection Date
23-VIII-12-3	Florida, Pulley Ridge HAPC, random block #08					8/23/2012
UM Sample No.	**Sample No.**	**Taxon**	**Sample Use**	**Preservative**	**Sample To**	**Lab Location**
XM37	23-VIII-12-3-001	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM38	23-VIII-12-3-002	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
XM39	23-VIII-12-3-003	Xestospongia muta	DNA	95 ETOH	M. Shivji	NSU OC
HA15	23-VIII-12-3-004	Halimeda sp.	DNA	95 ETOH	Amy Baco-Taylor	FSU
MC13 ET	23-VIII-12-3-005	Montastraea cavernosa	DNA	95 ETOH	Joshua Voss	HBOI at FAU
PR43	23-VIII-12-3-005	Montastraea cavernosa	DNA	95 ETOH	Andrew Baker	UM - RSMAS
MC13 TZ	23-VIII-12-3-005	Montastraea cavernosa	DNA	Trizol	Joshua Voss	HBOI at FAU

PLANKTON SAMPLE LIST
Pully Ridge Mesophotic Reef Project

2012 Pully Ridge Cruise

8/14/2012 To 8/28/2012

R/V Walton Smith - Cruise No. WS1213

Site Number	Location	Latitude	Longitude
16-VIII-12-3	Florida, Pulley Ridge HAPC, NW corner of random block #18	24°43.7435'N	83°43.5354'W

UM Sample No.	HBOI Sample No.	Taxon	Method	Depth (m)	Collection Date/Time
SP1-S-1	16-VIII-12-3-001	Plankton	Light Trap (plankton)	South Pulley Light Trap 1- deployment 1- surface	8/18/2012 6:41:00 AM
SP1-M-1	16-VIII-12-3-002	Plankton	Light Trap (plankton)	South Pulley Light Trap 1- deployment 1- mid depth	8/18/2012 6:30:00 PM
SP1-D-1	16-VIII-12-3-003	Plankton	Light Trap (plankton)	South Pulley Light Trap 1- deployment 1- deep	8/18/2012 6:30:00 PM
SP1-S-2	16-VIII-12-3-004	Plankton	Light Trap (plankton)	South Pulley Light Trap 1- deployment 2- surface	8/20/2012 7:40:00 AM
SP1-M-2	16-VIII-12-3-005	Plankton	Light Trap (plankton)	South Pulley Light Trap 1- deployment 2- mid depth	8/20/2012 7:40:00 AM
SP1-D-2	16-VIII-12-3-006	Plankton	Light Trap (plankton)	South Pulley Light Trap 1- deployment 2- deep	8/20/2012 7:40:00 AM
SP1-S-3	16-VIII-12-3-007	Plankton	Light Trap (plankton)	South Pully Light Trap 1 - deployment 3 - surface	8/21/2012 7:55:00 AM
SP1-M-3	16-VIII-12-3-008	Plankton	Light Trap (plankton)	South Pully Light Trap 1 - deployment 3 - mid depth	8/21/2012 7:55:00 AM
SP1-D-3	16-VIII-12-3-009	Plankton	Light Trap (plankton)	South Pully Light Trap 1 - deployment 3 - deep	8/21/2012 7:55:00 AM

Site Number	Location	Latitude	Longitude
16-VIII-12-4	Florida, Pulley Ridge HAPC, NW corner of random block #18	24°44.0624'N	83°43.5607'W

UM Sample No.	HBOI Sample No.	Taxon	Method	Depth (m)	Collection Date/Time
SP2-S-1	16-VIII-12-4-001	Plankton	Light Trap (plankton)	South Pulley Light Trap 2- deployment 1- top	8/18/2012 6:41:00 AM
SP2-M-1	16-VIII-12-4-002	Plankton	Light Trap (plankton)	South Pulley Light Trap 2- deployment 1- mid depth	8/18/2012 6:30:00 PM
SP2-D-1	16-VIII-12-4-003	Plankton	Light Trap (plankton)	South Pulley Light Trap 2- deployment 1- deep	8/18/2012 6:30:00 PM
SP2-S-2	16-VIII-12-4-004	Plankton	Light Trap (plankton)	South Pulley Light Trap 2- deployment 2- surface	8/20/2012 8:20:00 AM
SP2-M-2	16-VIII-12-4-005	Plankton	Light Trap (plankton)	South Pulley Light Trap 2- deployment 2- mid depth	8/20/2012 10:30:00 AM
SP2-D-2	16-VIII-12-4-006	Plankton	Light Trap (plankton)	South Pulley Light Trap 2- deployment 2- deep	8/20/2012 10:30:00 AM

Site Number	Location			Latitude	Longitude
16-VIII-12-4	Florida, Pulley Ridge HAPC, NW corner of random block #18			24°44.0624'N	83°43.5607'W
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Depth (m)**	**Collection Date/Time**
SP2-S-3	16-VIII-12-4-007	Plankton	Light Trap (plankton)	South Pulley Light Trap 2-deployment 3- surface	8/21/2012 7:30:00 AM
SP2-M-3	16-VIII-12-4-008	Plankton	Light Trap (plankton)	South Pulley Light Trap 2-deployment 3- mid depth	8/21/2012 7:30:00 AM
SP2-D-3	16-VIII-12-4-009	Plankton	Light Trap (plankton)	South Pulley Light Trap 2-deployment 3- deep	8/21/2012 7:30:00 AM
Site Number	**Location**			**Latitude**	**Longitude**
19-VIII-12-1	Florida, Pulley Ridge HAPC, random block #20			24°42.4688'N	83°43.0430'W
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Depth (m)**	**Collection Date/Time**
M-01-001	19-VIII-12-1-001	Plankton	MOCNESS (plankton)	0-55, 55-35, 35-25, 25-15, 15-0 m	8/19/2012 1:00:00 AM
Site Number	**Location**			**Latitude**	**Longitude**
20-VIII-12-1	Florida, Pulley Ridge HAPC, random block #16			24°43.8851'N	83°41.4677'W
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Depth (m)**	**Collection Date/Time**
M-02-002	20-VIII-12-1-001	Plankton	MOCNESS (plankton)	0-50, 50-35, 35-25, 25-15, 15-2 m	8/20/2012 1:00:00 AM
Site Number	**Location**			**Latitude**	**Longitude**
21-VIII-12-1	Florida, Pulley Ridge HAPC, random block #11			24°47.3210'N	83°41.4140'W
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Depth (m)**	**Collection Date/Time**
M-03-003	21-VIII-12-1-001	Plankton	MOCNESS (plankton)	0-50, 50-34, 34-25, 25-17, 17-1.5 m	8/21/2012 1:00:00 AM
Site Number	**Location**			**Latitude**	**Longitude**
22-VIII-12-1	Florida, Pulley Ridge HAPC, south and outside of block #05			24°52.4000'N	83°40.2000'W
UM Sample No.	**HBOI Sample No.**	**Taxon**	**Method**	**Depth (m)**	**Collection Date/Time**
NP1-S-1	22-VIII-12-1-001	Plankton	Light Trap (plankton)	North Pulley Light Trap 1-deployment 1- surface	8/23/2012 7:40:00 AM
NP1-M-1	22-VIII-12-1-002	Plankton	Light Trap (plankton)	North Pulley Light Trap 1-deployment 1- mid depth	8/23/2012 7:40:00 AM
NP1-D-1	22-VIII-12-1-003	Plankton	Light Trap (plankton)	North Pulley Light Trap 1-deployment 1- deep	8/23/2012 7:40:00 AM
NP1-S-2	22-VIII-12-1-004	Plankton	Light Trap (plankton)	North Pulley Light Trap 1-deployment 2- surface	8/24/2012 7:00:00 AM
NP1-M-2	22-VIII-12-1-005	Plankton	Light Trap (plankton)	North Pulley Light Trap 1-deployment 2- mid depth	8/24/2012 7:00:00 AM
NP1-D-2	22-VIII-12-1-006	Plankton	Light Trap (plankton)	North Pulley Light Trap 1-deployment 2- deep	8/24/2012 7:00:00 AM

Site Number	Location	Latitude	Longitude
22-VIII-12-2	Florida, Pulley Ridge HAPC, 0.4 nmi N of Trap 1	24°52.8000'N	83°40.2000'W

UM Sample No.	HBOI Sample No.	Taxon	Method	Depth (m)	Collection Date/Time
NP2-S-1	22-VIII-12-2-001	Plankton	Light Trap (plankton)	North Pulley Light Trap 2- deployment 1- surface	8/23/2012 8:05:00 AM
NP2-M-1	22-VIII-12-2-002	Plankton	Light Trap (plankton)	North Pulley Light Trap 2- deployment 1- mid depth	8/23/2012 8:05:00 AM
NP2-D-1	22-VIII-12-2-003	Plankton	Light Trap (plankton)	North Pulley Light Trap 2- deployment 1- deep	8/23/2012 8:05:00 AM
NP2-S-2	22-VIII-12-2-004	Plankton	Light Trap (plankton)	North Pulley Light Trap 2- deployment 2- surface	8/24/2012 8:00:00 AM
NP2-M-2	22-VIII-12-2-005	Plankton	Light Trap (plankton)	North Pulley Light Trap 2- deployment 2- mid depth	8/24/2012 8:00:00 AM
NP2-D-2	22-VIII-12-2-006	Plankton	Light Trap (plankton)	North Pulley Light Trap 2- deployment 2 - deep	8/24/2012 8:00:00 AM

FID	ROV Point Name	ROV SiteID	Point Location	Long DD	Lat DD	Long DM	Lat DM
76	Box # 1-SW	1	SW	-83.623195	24.964029	83°37.3917' W	24°57.84174' N
77	Box # 1-NW	1	NW	-83.619878	24.97253	83°37.19268' W	24°58.3518' N
78	Box # 1-NE	1	NE	-83.610551	24.969506	83°36.63306' W	24°58.17036' N
79	Box # 1-SE	1	SE	-83.613869	24.961004	83°36.83214' W	24°57.66024' N
99	Box # 1-Center	1	Center	-83.616873	24.966767	83°37.01238' W	24°58.00602' N
72	Box # 2-SW	2	SW	-83.639154	24.950049	83°38.34924' W	24°57.00294' N
73	Box # 2-NW	2	NW	-83.635838	24.958551	83°38.15028' W	24°57.51306' N
74	Box # 2-NE	2	NE	-83.626512	24.955527	83°37.59072' W	24°57.33162' N
75	Box # 2-SE	2	SE	-83.629829	24.947026	83°37.78974' W	24°56.82156' N
98	Box # 2-Center	2	Center	-83.632833	24.952788	83°37.96998' W	24°57.16728' N
68	Box # 3-SW	3	SW	-83.652414	24.916042	83°39.14484' W	24°54.96252' N
69	Box # 3-NW	3	NW	-83.649099	24.924543	83°38.94594' W	24°55.47258' N
70	Box # 3-NE	3	NE	-83.639776	24.921521	83°38.38656' W	24°55.29126' N
71	Box # 3-SE	3	SE	-83.643091	24.913019	83°38.58546' W	24°54.78114' N
97	Box # 3-Center	3	Center	-83.646095	24.918781	83°38.7657' W	24°55.12686' N
64	Box # 4-SW	4	SW	-83.659041	24.899038	83°39.54246' W	24°53.94228' N
65	Box # 4-NW	4	NW	-83.655728	24.90754	83°39.34368' W	24°54.4524' N
66	Box # 4-NE	4	NE	-83.646406	24.904517	83°38.78436' W	24°54.27102' N
67	Box # 4-SE	4	SE	-83.64972	24.896015	83°38.9832' W	24°53.7609' N
96	Box # 4-Center	4	Center	-83.652724	24.901777	83°39.16344' W	24°54.10662' N
60	Box # 5-SW	5	SW	-83.671676	24.893557	83°40.30056' W	24°53.61342' N
61	Box # 5-NW	5	NW	-83.668363	24.902059	83°40.10178' W	24°54.12354' N
62	Box # 5-NE	5	NE	-83.659041	24.899038	83°39.54246' W	24°53.94228' N
63	Box # 5-SE	5	SE	-83.662355	24.890535	83°39.7413' W	24°53.4321' N
95	Box # 5-Center	5	Center	-83.665359	24.896297	83°39.92154' W	24°53.77782' N
56	Box # 6-SW	6	SW	-83.666285	24.853505	83°39.9771' W	24°51.2103' N
57	Box # 6-NW	6	NW	-83.662973	24.862007	83°39.77838' W	24°51.72042' N
58	Box # 6-NE	6	NE	-83.653654	24.858985	83°39.21924' W	24°51.5391' N
59	Box # 6-SE	6	SE	-83.656967	24.850483	83°39.41802' W	24°51.02898' N
94	Box # 6-Center	6	Center	-83.65997	24.856245	83°39.5982' W	24°51.3747' N
52	Box # 7-SW	7	SW	-83.682225	24.839522	83°40.9335' W	24°50.37132' N
53	Box # 7-NW	7	NW	-83.678914	24.848025	83°40.73484' W	24°50.8815' N
54	Box # 7-NE	7	NE	-83.669597	24.845003	83°40.17582' W	24°50.70018' N
55	Box # 7-SE	7	SE	-83.672908	24.836501	83°40.37448' W	24°50.19006' N
93	Box # 7-Center	7	Center	-83.675911	24.842263	83°40.55466' W	24°50.53578' N
48	Box # 8-SW	8	SW	-83.679529	24.819496	83°40.77174' W	24°49.16976' N
49	Box # 8-NW	8	NW	-83.676219	24.827999	83°40.57314' W	24°49.67994' N
50	Box # 8-NE	8	NE	-83.666903	24.824977	83°40.01418' W	24°49.49862' N
51	Box # 8-SE	8	SE	-83.670214	24.816475	83°40.21284' W	24°48.9885' N
92	Box # 8-Center	8	Center	-83.673216	24.822237	83°40.39296' W	24°49.33422' N
44	Box # 9-SW	9	SW	-83.692155	24.814015	83°41.5293' W	24°48.8409' N
45	Box # 9-NW	9	NW	-83.688845	24.822517	83°41.3307' W	24°49.35102' N
46	Box # 9-NE	9	NE	-83.679529	24.819496	83°40.77174' W	24°49.16976' N
47	Box # 9-SE	9	SE	-83.68284	24.810994	83°40.9704' W	24°48.65964' N
91	Box # 9-Center	9	Center	-83.685842	24.816756	83°41.15052' W	24°49.00536' N
40	Box # 10-SW	10	SW	-83.680145	24.790968	83°40.8087' W	24°47.45808' N
41	Box # 10-NW	10	NW	-83.676835	24.79947	83°40.6101' W	24°47.9682' N
42	Box # 10-NE	10	NE	-83.667521	24.796449	83°40.05126' W	24°47.78694' N
43	Box # 10-SE	10	SE	-83.670832	24.787947	83°40.24992' W	24°47.27682' N

90	Box # 10-Center	10	Center	-83.673833	24.793709	83°40.42998' W	24°47.62254' N
36	Box # 11-SW	11	SW	-83.702081	24.788507	83°42.12486' W	24°47.31042' N
37	Box # 11-NW	11	NW	-83.698773	24.79701	83°41.92638' W	24°47.8206' N
38	Box # 11-NE	11	NE	-83.689459	24.793989	83°41.36754' W	24°47.63934' N
39	Box # 11-SE	11	SE	-83.692768	24.785487	83°41.56608' W	24°47.12922' N
89	Box # 11-Center	11	Center	-83.69577	24.791248	83°41.7462' W	24°47.47488' N
32	Box # 12-SW	12	SW	-83.699384	24.768482	83°41.96304' W	24°46.10892' N
33	Box # 12-NW	12	NW	-83.696076	24.776984	83°41.76456' W	24°46.61904' N
34	Box # 12-NE	12	NE	-83.686764	24.773964	83°41.20584' W	24°46.43784' N
35	Box # 12-SE	12	SE	-83.690072	24.765461	83°41.40432' W	24°45.92766' N
88	Box # 12-Center	12	Center	-83.693074	24.771223	83°41.58444' W	24°46.27338' N
28	Box # 13-SW	13	SW	-83.715311	24.754496	83°42.91866' W	24°45.26976' N
29	Box # 13-NW	13	NW	-83.712004	24.762999	83°42.72024' W	24°45.77994' N
30	Box # 13-NE	13	NE	-83.702692	24.759979	83°42.16152' W	24°45.59874' N
31	Box # 13-SE	13	SE	-83.706	24.751477	83°42.36' W	24°45.08862' N
87	Box # 13-Center	13	Center	-83.709002	24.757238	83°42.54012' W	24°45.43428' N
24	Box # 14-SW	14	SW	-83.709307	24.742974	83°42.55842' W	24°44.57844' N
25	Box # 14-NW	14	NW	-83.706	24.751477	83°42.36' W	24°45.08862' N
26	Box # 14-NE	14	NE	-83.696689	24.748456	83°41.80134' W	24°44.90736' N
27	Box # 14-SE	14	SE	-83.699996	24.739954	83°41.99976' W	24°44.39724' N
86	Box # 14-Center	14	Center	-83.702998	24.745715	83°42.17988' W	24°44.7429' N
16	Box # 15-SW	15	SW	-83.734538	24.732007	83°44.07228' W	24°43.92042' N
17	Box # 15-NW	15	NW	-83.731234	24.74051	83°43.87404' W	24°44.4306' N
18	Box # 15-NE	15	NE	-83.721923	24.737491	83°43.31538' W	24°44.24946' N
19	Box # 15-SE	15	SE	-83.725229	24.728988	83°43.51374' W	24°43.73928' N
84	Box # 15-Center	15	Center	-83.728231	24.734749	83°43.69386' W	24°44.08494' N
20	Box # 16-SW	16	SW	-83.70661	24.722949	83°42.3966' W	24°43.37694' N
21	Box # 16-NW	16	NW	-83.703303	24.731451	83°42.19818' W	24°43.88706' N
22	Box # 16-NE	16	NE	-83.693994	24.728431	83°41.63964' W	24°43.70586' N
23	Box # 16-SE	16	SE	-83.697302	24.719928	83°41.83812' W	24°43.19568' N
85	Box # 16-Center	16	Center	-83.700302	24.72569	83°42.01812' W	24°43.5414' N
8	Box # 17-SW	17	SW	-83.737843	24.723503	83°44.27058' W	24°43.41018' N
9	Box # 17-NW	17	NW	-83.734538	24.732007	83°44.07228' W	24°43.92042' N
10	Box # 17-NE	17	NE	-83.725229	24.728988	83°43.51374' W	24°43.73928' N
11	Box # 17-SE	17	SE	-83.728534	24.720485	83°43.71204' W	24°43.2291' N
82	Box # 17-Center	17	Center	-83.731536	24.726246	83°43.89216' W	24°43.57476' N
12	Box # 18-SW	18	SW	-83.728534	24.720485	83°43.71204' W	24°43.2291' N
13	Box # 18-NW	18	NW	-83.725229	24.728988	83°43.51374' W	24°43.73928' N
14	Box # 18-NE	18	NE	-83.715919	24.725969	83°42.95514' W	24°43.55814' N
15	Box # 18-SE	18	SE	-83.719225	24.717466	83°43.1535' W	24°43.04796' N
83	Box # 18-Center	18	Center	-83.722227	24.723227	83°43.33362' W	24°43.39362' N
4	Box # 19-SW	19	SW	-83.759766	24.721035	83°45.58596' W	24°43.2621' N
5	Box # 19-NW	19	NW	-83.756463	24.729539	83°45.38778' W	24°43.77234' N
6	Box # 19-NE	19	NE	-83.747153	24.726521	83°44.82918' W	24°43.59126' N
7	Box # 19-SE	19	SE	-83.750456	24.718018	83°45.02736' W	24°43.08108' N
81	Box # 19-Center	19	Center	-83.753459	24.723778	83°45.20754' W	24°43.42668' N
0	Box # 20-SW	20	SW	-83.716528	24.697441	83°42.99168' W	24°41.84646' N
1	Box # 20-NW	20	NW	-83.713223	24.705944	83°42.79338' W	24°42.35664' N
2	Box # 20-NE	20	NE	-83.703915	24.702923	83°42.2349' W	24°42.17538' N
3	Box # 20-SE	20	SE	-83.707221	24.694421	83°42.43326' W	24°41.66526' N

80	Box # 20-Center	20	Center	-83.710222	24.700182	83°42.61332' W	24°42.01092' N

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 17-VIII-12-2 MILSORTCODESITE: 201208172

METHOD (DIVE #): ROV 1 DEPLOY TIME 12:11:00 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #18

DVD: 4 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°43.1055'N LONGITUDE: 83°43.1735'W DEPTH (FT): 209.97 (M): 64.00

TARGET DESCRIPTION: random block #18

ON BOTTOM LATITUDE: 24°43.1077'N LONGITUDE: 83°43.1860'W DEPTH (FT): 223.00 (M): 68.00

ON BOTTOM (GMT): TIME: 0:14 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°43.8429'N LONGITUDE: 83°43.4462'W DEPTH (FT): 230.00 (M): 70.00

OFF BOTTOM (GMT): TIME: 3:45:22 PM HABITAT: ; Slope- flat 0°; Dominated by ALG - Anadyomene menziesii; ALG

DEPTH (Ft-MAX): 230.00 (M): 70.00 (Ft-MIN): 220.00 (M): 67.00

COLLECTORS: Dennis Hanisak, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Sunny (MPH): 9 (DIR FROM): 161

SEAS (FT): 1-2 SEAS (DIR FROM): SE

TOTAL NUMBER OF SAMPLES:

Site Objectives:

UNCW Super Phantom - ROV 1; Florida, Pulley Ridge HAPC, random block #18; 24°43.1055'N, 83°43.1735'W, 64 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 18.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every 30 sec. Off transects between the photo transects were 10-15 minutes. Six 100 m photo transects were made; the first will be discarded as a practice transect. Direction of transects were generally heading NW to NE, but dependent on the ship's maneauverability with the wind and current.

Site Description/Habitat/Biota:

The entire dive transected most of the block from the southeast corner to the northwest; depth range- 67 to 69.5 m. The bottom was very consistant with no obvious changes throughout or between photo transects. The bottom was 100% hard bottom, flat, and predominantly covered with old dead plate coral and coral rubble. There were no ledges or ridges except for occassional red grouper pits, ~5-8 m diameter, 1-2 m deep, which had exposed excavated rock burrows in the bottom. Most grouper pits had a red grouper, lionfish (few to 13), and other reef fish.

Benthic Biota: The exposed dead coral rock was mostly encrusted with crustose coralline algae and Peysonnellia red algae. There was a dense cover (50-80%) of Anadyomene green algae, patchy Agaricia coral (10-20 cm diam) were common, and demosponges were common but not abundant. Dominant sponges included Xestospongia muta, Ircinia spp., Geodia, Verongida, Agelas.
Dominant Benthic Taxa: Scleractinia- Agaricia spp. (common), Leptoseris cucullata (?), Madracis (few), Montastraea cavernosa (1); Gorgonacea (rare)- Telesto (1), Bebryce (1); Corallimorpharia; Hydroida; Actiniaria: Conylactus gigantia; Antipatharia- Stichopathes; Demospongiae (common)- Ircinia campana, Ircinia stobolina, Niphates sp., Polymastis, Plakortis?, Spirostrellidae, Verongida, Xestospongia muta; Crinoidea- Comatulida (abundant); Ascidiacea- Eudistoma, Didemnidae; Chlorophyta- Anadyomene menziesii (abundant), Codium (rare), Halimeda (rare), Valonia; Rhodophyta- crustose coralline

HBOI/DBMR SITE NUMBER: 17-VIII-12-2 MILSORTCODESITE: 201208172

algae (abundant). Peyssonnellia (abundant); Phaeophyta- Dictyota, Lobophora.

Fish: Acanthostracion polygonia - honeycomb cowfish, Balistes vetula - Queen Triggerfish, Bodianus pulchellus - Spotfin hogfish, Canthigaster rostrata - Sharpnose puffer, Centropyge argi - Cherubfish, Cephalopholis cruentatus - graysby, Chaetodon aculeatus - Longsnout butterflyfish, Chaetodon sedentarius - Reef butterflyfish, Chromis cyanea - blue chromis, Chromis enchrysurus - Yellowtail Reeffish, Chromis insolata - Sunshinefish, Chromis scotti - Purple reeffish, Chromis sp. - unid chromis, Epinephelus adscensionis - rock hind, Epinephelus morio - Red grouper, Fistularia tabacaria - cornetefish, Haemulon album - margate, Haemulon striatum - Striped grunt, Halichoeres sp. - wrasse, Holacanthus bermudensis - Blue angelfish, Holacanthus tricolor - Rock beauty, Holocentrus adscensionis - Squirrelfish, Inermiidae - Boga/bonnetmouth, Labrisomidae - scaly blenny, Liopropoma eukrines - Wrasse bass, Lutjanus jocu - dog snapper, Monacanthus tuckeri - slender filefish, Mycteroperca bonaci - black grouper, Mycteroperca interstitailis - yellowmouth grouper, Mycteroperca phenax - Scamp, Mycteroperca venenosa - yellowfin grouper, Neoniphon marianus - Longjaw squirrelfish, Pomacentridae - unid damselfish, Pseudupeneus maculatus - Spotted goatfish, Pterios volitans/miles - Lionfish, Scarus coelestinus - midnight parrotfish, Seriola rivoliana - Almaco jack, Serranus annularis - Orangeback seabass, Serranus tortugarum - Chalk bass, Sparisoma atomarium - Greenblotch Parrotfish, Stegastes partitus -bicolor damselfish (coomon).

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 17-VIII-12-4 MILSORTCODESITE: 201208174

METHOD (DIVE #): ROV 2 DEPLOY TIME 9:12:00 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #19

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°43.1386'N LONGITUDE: 83°45.0783'W DEPTH (FT): 250.98 (M): 76.50

TARGET DESCRIPTION: SE corner of random block #19

ON BOTTOM LATITUDE: 24°43.1052'N LONGITUDE: 83°45.0602'W DEPTH (FT): 253.00 (M): 77.00

ON BOTTOM (GMT): TIME: 21:18 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°43.6380'N LONGITUDE: 83°45.2571'W DEPTH (FT): 240.00 (M): 73.00

OFF BOTTOM (GMT): TIME: 11:42:14 PM HABITAT: ard bottom habitat; pavement; rubble; dead plate coral; Slope- flat 0

DEPTH (Ft-MAX): 256.00 (M): 78.00 (Ft-MIN): 240.00 (M): 73.00

COLLECTORS: Dennis Hanisak, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 15 SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Clear (MPH): 3.2 (DIR FROM): 349

SEAS (FT): Flat SEAS (DIR FROM):

TOTAL NUMBER OF SAMPLES:

Site Objectives:

UNCW Super Phantom - ROV 2; Florida, Pulley Ridge HAPC, random block #19, (starting at SE corner); 24°43.1386'N, 83° 45.0783'W, 76.5 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 19.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made. Direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Night dive- visibility of effective lights ~1.5-2 m. Very few fish observed and most in different coloration than day. Difficult to differentiate live plate coral from Peysonnellia unless directly over.

Site Description/Habitat/Biota:

The entire dive transected most of the block from the southeast corner to the northwest. The bottom was fairly consistant but shallowed from 77.5 m to 73 m from S to N, and some variability in fauna S to N. The bottom was 100% hard bottom, flat, and predominantly covered with coral rubble and dead plate coral. There were no ledges or ridges except for occassional red grouper pits, which have exposed excavated rock burrows in the bottom.

Benthic Biota: Benthos dominated by Anadyomene (10-30% cover) but less dense than ROV 1, Peysonnellia, and coralline algae; macro demosponges were present but not dense, gorgonians were sparse, fan mesh Antipatharia were common, Stylaster were common at southern portion but absent to the north, Agaricia were rare at southern end but more common at northern, and Oculina/Madracis? colonies were common.
Dominant Benthic Taxa: Scleractinia- Stylasteridae (common), Oculina/Madracis (common), Montastraea cavernosa (rare-1), Agaricia (10-15 cm, common); Hydroida; Actiniaria- Conylactus gigantia; Corallimorpharia; Gorgonacea (uncommon)- Ellisellidae, Diodogorgia, Telesto; Antipathidae- Stichopathes, Antipathes? fine mesh; Demospongiae- Axinellidae, Xestospongia muta, Verongida, Geodia, Aplysina, Polymastia; Annelida- Sabellida; Arthropoda- Pycnogonida, Stenorynchus

HBOI/DBMR SITE NUMBER: 17-VIII-12-4 MILSORTCODESITE: 201208174

seticornis; Mollusca- squid; Crinoidea- Comatulida; Holothuroidea- Uapta lapta; Asteroidea; Ascidiacea- Didemnidae; Chlorophyta- Anadyomene menziesii (common), Halimeda (rare), Codium (rare); Rhodophyta- Peyssonnellia, crustose coralline algae.

Fish- Acanthostracion polygonia - honeycomb cowfish, Apogon sp. - cardinalfish, apogon?, Centropyge argi - cherubfish, Chaetodon sedentarius - reef butterflyfish, Chilomycterus sp. - burrfish, Chromis enchrysurus - yellowtail reeffish, Chromis sp. - cromis, Diiodon hystrix - porcupine fish, Epinephelus morio - red grouper, Fistularia tabacaria - cornetefish, Gymnothorax moringa - spotted moray, Haemulon striatum - striped grunt, Holacanthus bermudensis - blue angelfish, Holocentrus adscensionis - squirrelfish, Holocentrus rufus - longspine squirrelfish, Holocentrus sp. - unid squirrelfish, Lutjanus analis - mutton snapper, Mycteroperca phenax - scamp, Neoniphon marianus - longjaw squirrelfish, Ophidiidae - cusk-eels, Pomacentridae - unid damselfish, Priacanthus arenatus - bigeye, Pterios volitans/miles - lionfish, Rhomboplities aurorubens - verrmilion snapper, S. tortugarum or R. aurorubens, Scombridae? / Carangidae?, Serranus tortugarum - chalk bass, Sparisoma atomarium - greenblotch parrotfish, squirrelfish?, Stegastes partitus - bicolor damselfish (rare), Synodus sp. - lizardfish, unid fish,

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 18-VIII-12-2 MILSORTCODESITE: 201208182

METHOD (DIVE #): ROV 3 DEPLOY TIME 12:16:11 PM ZONE: ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #15

DVD: 4 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°43.9290'N LONGITUDE: 83°43.9408'W DEPTH (FT): 227.36 (M): 69.30

TARGET DESCRIPTION: SW corner of random block #15

ON BOTTOM LATITUDE: 24°43.9064'N LONGITUDE: 83°43.9361'W DEPTH (FT): 233.00 (M): 71.00

ON BOTTOM (GMT): TIME: 12:19 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°44.4540'N LONGITUDE: 83°43.4030'W DEPTH (FT): 223.00 (M): 68.00

OFF BOTTOM (GMT): TIME: 3:46:04 PM HABITAT: ıard bottom habitat; pavement; rubble; dead plate coral; Slope- flat (

DEPTH (Ft-MAX): 236.00 (M): 72.00 (Ft-MIN): 223.00 (M): 68.00

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 50 SAL (PPT):

CURRENT (Kn): 0.2 (DIRECTION FROM):

WEATHER (CLOUD COVER): Sunny (MPH): 8.5 (DIR FROM): 206

SEAS (FT): 1 SEAS (DIR FROM): S

TOTAL NUMBER OF SAMPLES:

Site Objectives:

UNCW Super Phantom - ROV 3; Florida, Pulley Ridge HAPC, random block #15, (starting at SW corner); 24°43.9290'N, 83° 43.9408'W, 69.3 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 15.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made; direction of transects were based on flip of coin, and ship's maneauverability due to wind/current.

Site Description/Habitat/Biota:

The entire dive transected most of the block from the southwest corner to the north; depth range- 68.5 to 72 m. The bottom was fairly consistant. The bottom was 100% hard bottom, flat, and predominantly covered with coral rubble and dead plate coral. There were no ledges or ridges except for occassional red grouper pits, which have exposed excavated rock burrows in the bottom. End of dive traveled north of block to ground truth features of multibeam; apparent N-S ridges and valleys were 1.5 m relief with no change in habitat or fauna.

Benthic Biota: Benthos dominated by Anadyomene (50% cover), Peysonnellia, and coralline algae; macro demosponges were present but not common except for Geodia; no gorgonians; Agaricia corals were sparse and patchy.
Dominant Benthic Taxa: Corals- Agaricia, Madracis, Madracis/Oculina?; Hydroida; Antipathidae (rare)- Antipathes?, Tanacetipathes, Stichopathes; Actiniaria- Condylactus gigantia; Gorgonacea- none; Demospongiae- Aplysina, Callyspongia vaginalis, Geodia (common), Ircinia, Ircinia campana, Polymastia, Xestospongia sp., Xestospongia muta (uncommon); Annelida- Filograna; Crinoidea - Comatulida (common); Chlorophyta- Anadyomene menziesii, Halimeda, Ventricaria ventricosa, Verdigellus; Rhodophyta- crustose coralline algae, Peyssonnellia (abundant); Cyanophyta; Phaeophyta- Dictyota (one patch).

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COLLECTION SITE

HBOI/DBMR SITE NUMBER: 18-VIII-12-2 MILSORTCODESITE: 201208182

Fish: Balistes vetula - queen triggerfish, Bodianus pulchellus - spotfin hogfish, Canthigaster rostrata - sharpnose puffer, Centropyge argi - cherubfish, Cephalopholis cruentatus - graysby, Chaetodon aculeatus - longsnout butterflyfish, Chaetodon sedentarius - reef butterflyfish, Chaetodon spp - butterflyfish, Chromis enchrysurus - yellowtail reeffish, Chromis insolata - sunshinefish, Chromis scotti - purple reeffish, Chromis spp. - unid damselfish, Epinephelus morio - red grouper, Gobiidae - goby, Haemulon album - margate, Holacanthus tricolor - rock beauty, Holocentrus adscensionis - squirrelfish, Holocentrus spp - unid squirrelfish, Inermia vittata - boga, Inermiidae - boga/bonnetmouth, Liopropoma eukrines - wrasse bass, Lutjanus analis - mutton snapper, Monacanthus tuckeri - slender filefish, Mycteroperca bonaci - black grouper, Mycteroperca phenax - scamp, Neoniphon marianus - longjaw squirrelfish, Pterios volitans/miles - lionfish (20 +), Serranus annularis - orangeback seabass, Serranus tortugarum - chalk bass, Sparisoma atomarium - greenblotch parrotfish, Sphyraena barracuda - great barracuda, Stegastes partitus - bicolor damselfish, Xanthichthys ringens - sargassum triggerfish,

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 18-VIII-12-4 MILSORTCODESITE: 201208184

METHOD (DIVE #): ROV 4 DEPLOY TIME 9:01:15 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #20

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°41.7170'N LONGITUDE: 83°42.5293'W DEPTH (FT): 216.54 (M): 66.00

TARGET DESCRIPTION: random block #20

ON BOTTOM LATITUDE: 24°41.6955'N LONGITUDE: 83°42.5525'W DEPTH (FT): 223.00 (M): 68.00

ON BOTTOM (GMT): TIME: 21:05 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°42.1970'N LONGITUDE: 83°42.5967'W DEPTH (FT): 220.00 (M): 67.00

OFF BOTTOM (GMT): TIME: 11:59:00 PM HABITAT:

DEPTH (Ft-MAX): 226.00 (M): 69.00 (Ft-MIN): 217.00 (M): 66.00

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): SAL (PPT):

CURRENT (Kn): 0.25 (DIRECTION FROM): S

WEATHER (CLOUD COVER): Partly Cloudy (MPH): 1.3 (DIR FROM): 165

SEAS (FT): SEAS (DIR FROM):

TOTAL NUMBER OF SAMPLES:

Site Objectives:

UNCW Super Phantom - ROV 4; Florida, Pulley Ridge HAPC, random block #20, (starting at SE corner); 24°41.7170'N, 83° 42.5293'W, 66 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 20.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made. Direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Night dive- visibility of effective lights ~1.5-2 m. Difficult to differentiate live plate coral from Peysonnellia unless directly over. Digital still images came out very poor- most blurred, and zoomed to <30 cm field of view. Working to solve problem. Camera unable to focus in dark on auto focus and manual focus not good either.

Site Description/Habitat/Biota:

The entire dive transected most of the block from the southwest corner to the north; depth range 66.5 to 69 m. The bottom was fairly consistant. The bottom was 100% hard bottom, flat, and predominantly covered with coral rubble and dead plate coral. There were no ledges or ridges.

Benthic Biota: Benthos dominated by Anadyomene (50% cover), Peysonnellia, and coralline algae; macro demosponges were common and diverse, Xestospongia muta were common; Agaricia corals were sparse and patchy.
Dominant Benthic Taxa: Scleractinia- Agaricia, Madracis/Oculina?, Montastraea cavernosa (1); Hydroida (white, black

HBOI/DBMR SITE NUMBER: 18-VIII-12-4 MILSORTCODESITE: 201208184

stinging); Gorgonacea- 3; Antipathidae- Antipathes (white mesh fan), Tanacetipathes, Stichopathes; Actiiniaria- Condylactus gigantia; Demospongiae- Agelas, Agelas clathrodes, Aplysina, Cinachyra, Geodia, Ircinia campana, Niphates erecta, Plakortis?, Polymastia, Verongida, Xestospongia (EB), Xestospongia muta (common); Annelida- Filograna; Mollusca- squid, Trition?; Arthropoda- Paguroidea; Ascidiacea- Didemnidae; Chlorophyta- Anadyomene menziesii (abundant), Halimeda (rare), Ventricaria ventricosa; Rhodophyta- crustose coralline algae, Peyssonnellia, Botryocladia; Phaeophyta- Dictyota (uncommon).

Fish: Acanthostracion polygonia - honeycomb cowfish, Apogon pseudomaculatus - twospot cardinalfish, apogon sp. - cardinalfish, Balistes vetula - queen triggerfish, Chaetodon sedentarius - reef butterflyfish, Chromis enchrysurus - yellowtail reeffish, Decapterus macarellus - mackerel scad, Diodon hystrix - porcupinefish, Epinephelus morio - red grouper, Fistularia tabacaria - cornetefish, Gymnothorax moringa - spotted moray, Holacanthus tricolor - rock beauty, Holocentrus adscensionis - squirrelfish, Holocentrus rufus - longspine squirrelfish, Inermia vittata - boga/ Schultzea beta - school bass, Lutjanus analis - mutton snapper, Neoniphon marianus - longjaw squirrelfish, Priacanthus arenatus - bigeye, Pseudupeneus maculatus - spotted goatfish, Pterios volitans/miles – lionfish (3), Rhomboplities aurorubens - verrmilion snapper, Sparisoma atomarium - greenblotch parrotfish, Sphyraena barracuda - great barracuda, Stegastes partitus - bicolor damselfish, unid fish. Sand tilefish burrows present, and one red grouper burrow.

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 19-VIII-12-3 MILSORTCODESITE: 201208193

METHOD (DIVE #): ROV 5 DEPLOY TIME 12:09:00 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #17

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°43.2702'N LONGITUDE: 83°43.7490'W DEPTH (FT): 236.22 (M): 72.00

TARGET DESCRIPTION: random block #17

ON BOTTOM LATITUDE: 24°43.2565'N LONGITUDE: 83°43.7393'W DEPTH (FT): 230.00 (M): 70.00

ON BOTTOM (GMT): TIME: 12:12 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°43.3507'N LONGITUDE: 83°44.1289'W DEPTH (FT): 243.00 (M): 74.00

OFF BOTTOM (GMT): TIME: 2:06:00 PM HABITAT: ard bottom habitat; pavement; rubble; dead plate coral; Slope- flat 0

DEPTH (Ft-MAX): 243.00 (M): 74.00 (Ft-MIN): 226.00 (M): 69.00

COLLECTORS: Dennis Hanisak, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 40 SAL (PPT):

CURRENT (Kn): 0.5 (DIRECTION FROM): S

WEATHER (CLOUD COVER): (MPH): (DIR FROM):

SEAS (FT): 1 SEAS (DIR FROM): SE

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: UNCW Super Phantom - ROV 5; Florida, Pulley Ridge HAPC, random block #17, (starting at SE corner); 24° 43.2702'N, 83°43.7490'W, 72 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 17.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made; direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Completed 5 transects within block 17. Continued to NW and completed 5 more quantitative photo transects in non-random block 60.

Site Description/Habitat/Biota:

The entire dive transected most of block 17 from the southwest corner to the north; depth range- 69 to 71 m. The bottom was fairly consistant. The bottom was 100% hard bottom, flat, and predominantly covered with coral rubble and dead plate coral. There were no ledges or ridges except for occassional red grouper pits, which have exposed excavated rock burrows in the bottom. Five transects were also conducted in non-random block 60 which was slightely deeper and less biota; depth range 70-74 m.

Benthic Biota: Benthos of block 17 dominated by Anadyomene (50% cover), Peysonnellia, and coralline algae; macro demosponges were common; Geodia were common, Xestospongia were present; few gorgonians were observed; Agaricia were common but patchy.
Dominant Benthic Taxa: Corals- Agaricia (33 counts), Madracis, Madracis/Oculina?, Montastraea cavernosa (1); Hydroida; Antipathidae- Antipathes, Stichopathes; Hydroida; Actiniaria- Condylactis gigantea; Corallimorpharia; Gorgonacea- Diogogorgia; Demospongiae- Agelas, Aplysina, Callyspongia vaginalis, Ircinia campana, Polymastia, Ircinia strobilina, Rhaphidophlus?, Xestospongia muta (common); Arthropoda- Stenorynchus seticornis; Crinoidea- Comatulida; Chlorophyta- Anadyomene menziesii (abundant), Halimeda (small and sparse), Verdigellas; Rhodophyta- Peyssonnellia, rustose coralline

HBOI/DBMR SITE NUMBER: 19-VIII-12-3 MILSORTCODESITE: 201208193

algae; Phaeophyta- Dictyota (rare).

Fish: Anthias tenuis - threadnose bass, Anthiinae - unid sea bass, Apogon maculatus - flamefish, Apogon pseudomaculatus - twospot cardinalfish, Apogon sp. - cardinalfish, Balistes vetula - queen triggerfish, Balistidae - unid triggerfish, Bodianus pulchellus - spotfin hogfish, Canthidermis sufflamen - ocean trigger, Canthigaster rostrata - sharpnose puffer, Centrntropyge argi - cherubfish, Cephalopholis cruentatus - graysby, Chaetodon aculeatus - longsnout butterflyfish, Chaetodon aculeatus - longsnout butterflyfish, Chaetodon sedentarius - reef butterflyfish, Chaetodontidae - unid butterflyfish, Chromis cyanea - blue chromis, Chromis enchrysurus - yellowtail reeffish, Chromis insolata - sunshinefish, Chromis scotti - purple reeffish, Chromis sp. - unid chromis, Diodon hystrix - porcupinefish, epiinephelus morio - red grouper, Epinephelus morio - red grouper, Gobiidae - unid goby, Halichoeres sp. - unid wrasse, Holacanthus tricolor - rock beauty, Holocentrus adscensionis - squirrelfish, Inermia vittata - boga/ Schultzea beta - school bass, Liopropoma eukrines - wrasse bass, Lutjanus analis - mutton snapper, Monacanthus tuckeri - slender filefish, Mycteroperca bonaci - black grouper, Mycteroperca interstitailis - yellowmouth grouper, Mycteroperca phenax - scamp, Neoniphon marianus - longjaw squirrelfish, Pomacanthus paru - french angelfish, Pomacentridae - unid damselfish, Pseudupeneus maculatus - spotted goatfish, Pterios volitans/miles - lionfish (80), Seriola dumerili - greater amberjack, Serranidae - unid sea bass, Serranus annularis - orangeback seabass, Serranus tortugarum - chalk bass, Serrranus spp - unid sea bass, Serriola dumerili - greater amberjack, Sparisoma atomarium - greenblotch parrotfish, Stegastes partitus - bicolor damselfish (1), red grouper burrows (>12) .

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 19-VIII-12-5 MILSORTCODESITE: 201208195

METHOD (DIVE #): ROV 6 DEPLOY TIME 9:23:07 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #16

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°43.3692'N LONGITUDE: 83°42.3334'W DEPTH (FT): 223.10 (M): 68.00

TARGET DESCRIPTION: random block #16, SW corner

ON BOTTOM LATITUDE: 24°43.3358'N LONGITUDE: 83°42.2975'W DEPTH (FT): 219.82 (M): 67.00

ON BOTTOM (GMT): TIME: 21:27 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°43.7525'N LONGITUDE: 83°41.8368'W DEPTH (FT): 220.00 (M): 67.00

OFF BOTTOM (GMT): TIME: 11:50:00 PM HABITAT: pavement; rubble; dead plate coral;

DEPTH (Ft-MAX): 223.00 (M): 68.00 (Ft-MIN): 220.00 (M): 67.00

COLLECTORS: Dennis Hanisak, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Clear (MPH): 6.8 (DIR FROM): 254

SEAS (FT): 1 SEAS (DIR FROM): SW

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: UNCW Super Phantom - ROV 6; Florida, Pulley Ridge HAPC, random block #16, (starting at SW corner); 24° 43.3692'N, 83°42.3334'W, 68 m . Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 16.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90° with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made. Direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Night dive- visibility of effective lights ~1.5-2 m. Difficult to differentiate live plate coral from Peysonnellia unless directly over. Camera unable to focus in dark on auto focus and manual focus not good either. After launch tracking started jumping 50-100 m then cleared up after 10 minutes.

Site Description/Habitat/Biota:

The entire dive transected most of block 16 from the southwest corner to the north; depth range- 67 to 68 m. The bottom was fairly consistant. The bottom was 100% hard bottom, flat, and predominantly covered with coral rubble and dead plate coral. There were no ledges or ridges except for numerous apparent bluetile mounds (1/2 m diam) with associated excavated pit.

Benthic Biota: Benthos dominated by Anadyomene (30-50% cover), Peysonnellia, and coralline algae; macro demosponges were common; Geodia were common, Xestospongia were present; gorgonians were rare; Agaricia were common but patchy; several Montastraea were present. There was some variation among the transects; some had more coral and sponges than

HBOI/DBMR SITE NUMBER: 19-VIII-12-5 MILSORTCODESITE: 201208195

others.
Dominant Benthic Taxa: Scleractinia- Agaricia (common), Montastraea cavernosa (11), Madracis/Oculina? (1); Gorgonacea- Diodogorgia?, Telesto; Hydroida; Actiniaria- Condylactis gigantea; Antipatharia- Stichopathes; Demospongiae- Agelas clathrodes, Agelas, Aplysina, Callyspongia vaginalis, Cinachyra, Geodia, Ircinia campana, Polymastia, Xestospongia muta (21); Mollusca- squid; Arthropoda- Panulirus argus (1), Periclimenes (on honeycomb cowfish), decorator crab; Crinoidea- Comatulida; Echinoidea (1); Ophiuroidea; Ascidiacea- Eudistoma (white mushroom); Chlorophyta- Anadyomene menziesii, Halimeda (1), Verdigellas; Rhodophyta- Peyssonnellia, rustose coralline algae; Phaeophyta- Dictyota, Lobophora (patchy, dense).

Fish: Acanthostracion polygonia - honeycomb cowfish, Apogon pseudomaculatus - twospot cardinalfish, Apogon sp. - cardinalfish, Aulostomus maculatus - trumpetfish, Chaetodon sedentarius - reef butterflyfish, Chromis enchrysurus - yellowtail reeffish, Chromis insolata - sunshinefish, Chromis sp. - chromis, Decapterus macarellus - mackerel scad, Diodon hystrix - porcupinefish, Gymnothorax moringa - spotted moray, Haemulon striatum - striped grunt, Holocentrus adscensionis - squirrelfish, Inermia vittata - boga, Monacanthus tuckeri - slender filefish, Neoniphon marianus - longjaw squirrelfish, Pseudupeneus maculatus - spotted goatfish, Pterios volitans/miles - lionfish, Schultzea beta - school bass, Serraniculus pumilio - pygmy sea bass, Sparisoma atomarium - greenblotch parrotfish, Stegastes partitus - bicolor damselfish (very few), Synodus sp. - lizardfish, unid eel, unid fish; numerous apparent sandtile mounds.

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 20-VIII-12-3 MILSORTCODESITE: 201208203

METHOD (DIVE #): ROV 7 DEPLOY TIME 12:17:18 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #13

DVD: 4 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°45.7229'N LONGITUDE: 83°42.9753'W DEPTH (FT): 216.54 (M): 66.00

TARGET DESCRIPTION: random block #13, south border

ON BOTTOM LATITUDE: 24°45.1920'N LONGITUDE: 83°42.5326'W DEPTH (FT): 230.00 (M): 70.00

ON BOTTOM (GMT): TIME: 12:20 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°45.8678'N LONGITUDE: 83°42.3500'W DEPTH (FT): 223.00 (M): 68.00

OFF BOTTOM (GMT): TIME: 4:18:01 PM HABITAT: ard bottom habitat; pavement; rubble; dead plate coral; Slope- flat 0

DEPTH (Ft-MAX): 230.00 (M): 70.00 (Ft-MIN): 213.00 (M): 65.00

COLLECTORS: Dennis Hanisak, John Reed, Kevin Rademacher, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 30 SAL (PPT):

CURRENT (Kn): 0.25 (DIRECTION FROM): S

WEATHER (CLOUD COVER): Sunny (MPH): 13.6 (DIR FROM): 168

SEAS (FT): 1-2 SEAS (DIR FROM): S

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 7; Florida, Pulley Ridge HAPC, random block #13; 24°45.7229'N, 83°42.9753'W, 66 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 13.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made; direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Completed 5 transects within block 13. Continued to NE and completed 4 more quantitative photo transects in non-random block 50 and ground truthed multibeam map (Naar).

Site Description/Habitat/Biota:

The dive transected block 13 from the south to north; depth range- 65 to 70 m. The bottom was fairly consistant. The bottom was 100% hard bottom, flat, and predominantly covered with coral rubble and dead plate coral. There were no ledges or ridges except for occassional red grouper pits, which have exposed excavated rock burrows in the bottom. The second set of 4 transects continued into non-random block 50. Ground-truthed strong NNE-SSW linear ledge on mutlibeam map (XS-3); base was 68.8 m, top was 66.5 m, 100 m to the west; no obvious slope was apparent in the video, no ledges, and habitat remained constant.

Benthic Biota: Benthos of block 13 dominated by Anadyomene (50% cover), Peysonnellia, and coralline algae; macro demosponges were common but not abundant; Geodia were common, Xestospongia were present; gorgonians were very rare; Agaricia were rare and patchy. Transect 1 in block 50 had fairly dense but patchy areas of Agaricia, and some Montastrea. Rubble mounds of 1/2 to 1 m diameter were common, most with excavation pit at base. Larger red grouper burrows usually had several lionfish.
Dominant Benthic Taxa: Scleractinia- Agaricia (common but patchy, 26), Montastraea (4); Antipathidae- Antipathes, Tanacetipathes, Stichopathes; Actiniaria- Condylactus gigantia; Corallimorpharia; Gorgonacea- Diodogorgia; Hydroida;

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COLLECTION SITE

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Demospongiae- Agelas, Agelas clathrodes, Erylus, Callyspongia vaginalis, Geodia, Ircinia campana, Niphates erecta, Plakortis?, Polymastia, Pseudoceratina crassa?, Xestospongia muta (common, 21); Annelida- Filograna; Crinoidea- Comatulida; Arthropoda- Thor amboinesnsis; Ascidiacea- Eudistoma; Chlorophyta- Halimeda, Anadyomene menziesii, Verdigellas; Rhodophyta- crustose coralline algae, Peyssonnellia; Phaeophyta - Dictyota, Lobophora.

Fish: Acanthostracion polygonia - honeycomb cowfish, Apogon maculatus - flamefish, Apogon sp. - cardinalfish, Balistes vetula - queen triggerfish, Bodianus pulchellus - spotfin hogfish, Canthigaster rostrata - sharpnose puffer, Centropyge argi - cherubfish, Chaetodon aculeatus - longsnout butterflyfish, Chaetodon sedentarius - reef butterflyfish, Chromis cyanea - blue chromis, Chromis enchrysurus - yellowtail reeffish, Chromis insolata - sunshinefish, Chromis scotti - purple reeffish, Chromis sp. - unid chromis, Decapterus macarellus - mackerel scad, Epinephelus morio - red grouper, Holacanthus bermudensis - blue angelfish, Holacanthus tricolor - rock beauty, Holocentrus adscensionis - squirrelfish, Holocentrus rufus - longspine squirrelfish, Inermia vittata - boga, Liopropoma eukrines - wrasse bass, Lutjanus analis - mutton snapper, Monacanthus tuckeri - slender filefish, Mycteroperca bonaci - black grouper, Mycteroperca interstitailis - yellowmouth grouper, Mycteroperca phenax - scamp, Neoniphon marianus - longjaw squirrelfish, Pomacanthus sp - unid angelfish, Pterios volitans/miles - lionfish, Seriola dumerili - greater amberjack, Seriola rivoliana - almaco jack, Serranus annularis - orangeback seabass, Serranus tortugarum - chalk bass, Sparisoma atomarium - greenblotch parrotfish, Stegastes partitus - bicolor damselfish (few). Few red grouper burrows, 1/2 m rubble mounds with associated excavated pits were common, but patchy.

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 20-VIII-12-5 MILSORTCODESITE: 201208205

METHOD (DIVE #): ROV 8 DEPLOY TIME 8:55:52 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #11

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°47.2675'N LONGITUDE: 83°42.9104'W DEPTH (FT): 216.54 (M): 66.00

TARGET DESCRIPTION: random block #11, S border

ON BOTTOM LATITUDE: 24°47.1901'N LONGITUDE: 83°41.8964'W DEPTH (FT): 236.00 (M): 72.00

ON BOTTOM (GMT): TIME: 20:59 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°47.5890'N LONGITUDE: 83°41.5782'W DEPTH (FT): 230.00 (M): 70.00

OFF BOTTOM (GMT): TIME: 11:44:33 PM HABITAT: ϭ hard bottom habitat; pavement; rubble; dead plate coral; Slope- fla

DEPTH (Ft-MAX): 243.00 (M): 74.00 (Ft-MIN): 223.00 (M): 68.00

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Clear (MPH): 7.3 (DIR FROM): 265

SEAS (FT): SEAS (DIR FROM):

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 7; Florida, Pulley Ridge HAPC, random block #11; 24°47.2675'N, 83°42.9104'W, 66 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 11.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90° with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made. Direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Night dive- visibility of effective lights ~2 m. Difficult to differentiate live plate coral from Peysonnellia unless directly over. Camera unable to focus in dark on auto focus and manual focus not good either. Tracking jumping 10-20+ m during dive.

Site Description/Habitat/Biota:

The dive transected block 11 from the southwest to northeast, crossing low flat region of multibeam to higher NE-SW ridges to the eastern portion of the block; depth range- 68 to 74 m. The bottom was fairly consistant but showed obvious gradation in biota and habitat from 68 m to 74 m. The deeper region to the west was relatively flat, hard bottom but was 80-90% cover of dead coral plate/coral rubble and 10-20% sand patches. Anadyomene in this region was sparser (20-30% cover), smaller, and less vibrant green than the other sites. The shallower region on the ridges (68 m) had denser and larger Anadyomene.

Benthic Biota: Benthos in the deeper region had a number of new species for the cruise- Aphanipathes, Cribrochalina vasculum, large red blade algae, and possibly different dark purple Peysonnellia. Several large red grouper burrows provided

HBOI/DBMR SITE NUMBER: 20-VIII-12-5 MILSORTCODESITE: 201208205

habitat for numerous small reef fish, and some with lionfish. Agaricia were common and patchy in some transects but sparse in others.
Dominant Benthic Taxa: Scleractinia- Agaricia (common, 19); Leptoseris; Madracis formosa (branching brown pencil coral), Scolymia; Antipathidae- Antipathes, Aphanipathes?, Stichopathes; Corallimorpharia; Gorgonacea- Diodogorgia; Hydroida; Demospongiae; Agelas, Aplysina, Astrophorida, Axinellidae, Cinachyra, Cribochalina vasculum, Erylus, Geodia, Ircinia sp., Ircinia campana, Niphates erecta, Xestospongia muta; Annelida- Sabellidae (feather duster worms); Mollusca- squid; Crinoidea- Comatulida; Echinoidea- Arbacia punctulata; Ascidiacea- Didemnidae; Chlorophyta- Anadyomene menziesii, Halimeda, Verdigellas; Rhodophyta- crustose coralline algae, Peyssonnellia, large red blade algae; Phaeophyta- Dictyota.

Fish: Acanthostracion polygonia - honeycomb cowfish, Acanthostracion quadricornis - scrawled cowfish, Apogon pseudomaculatus - twospot cardinalfish, Apogon sp. - cardinalfish, Aulostomus maculatus - trumpetfish, Calamus bajonado - jolthead porgy, Calamus nodosus - knobbed porgy, Chaetodon sedentarius - reef butterflyfish, Chromis enchrysurus - yellowtail reeffish, Chromis scotti - purple reeffish, Decapterus macarellus - mackerel scad, Epinephelus morio - red grouper, Haemulon striatum - striped grunt, Holacanthus bermudensis - blue angelfish, Inermia vittata - boga, Myripristis jacobus - Blackbar soldier, Neoniphon marianus - longjaw squirrelfish, Pseudupeneus maculatus - spotted goatfish, Pterios volitans/miles - lionfish, Rhomboplities aurorubens - verrmilion snapper, Schultzea beta - school bass, Sparisoma atomarium - greenblotch parrotfish, Sphyraena barracuda - great barracuda. Several large red grouper burrows with associated fish and lionfish.

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 21-VIII-12-3 MILSORTCODESITE: 201208213

METHOD (DIVE #): ROV 9 DEPLOY TIME 12:14:44 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #14

DVD: 4 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°44.5523'N LONGITUDE: 83°42.3771'W DEPTH (FT): 214.57 (M): 65.40

TARGET DESCRIPTION: random block #14, SW corner

ON BOTTOM LATITUDE: 24°44.5293'N LONGITUDE: 83°42.3707'W DEPTH (FT): 223.00 (M): 68.00

ON BOTTOM (GMT): TIME: 12:18 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°45.0570'N LONGITUDE: 83°42.3730'W DEPTH (FT): 217.00 (M): 66.00

OFF BOTTOM (GMT): TIME: 3:43:37 PM HABITAT: ard bottom habitat; pavement; rubble; dead plate coral; Slope- flat 0

DEPTH (Ft-MAX): 226.00 (M): 69.00 (Ft-MIN): 217.00 (M): 66.00

COLLECTORS: Dennis Hanisak, John Reed, Kevin Rademacher, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 30 SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Partly Cloudy (MPH): 15 (DIR FROM): 152

SEAS (FT): 2 SEAS (DIR FROM): SE

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 9; Florida, Pulley Ridge HAPC, random block #14; 24°44.5523'N, 83°42.3771'W, 65.4 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 14.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made; direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Completed 5 transects within block 13. Continued to NW and completed 2 more quantitative photo transects within the block to make up for transects 1 and 2 which were a little fast (<10 minutes), and had fewer photos than normal due to combination of wind and current. Also ground-truthed features of multibeam map (Naar).

Site Description/Habitat/Biota:

The dive transected block 14 from the southwest to north; depth range- 66 to 69 m. The bottom was very consistant. The bottom was 100% hard bottom, flat, and predominantly covered with dead plate coral forming almost pavement structure, with little coral rubble. There were no ledges or ridges except for occassional red grouper pits and small rubble mounds (sandtile? burrows) , which have exposed excavated rock burrows in the bottom. The transects showed some variability with the first 2 having more sandtile rubble mounds.

Benthic Biota: Benthos of block 14 was dominated by Anadyomene (50% cover) and coralline algae with some Peysonnellia; macro demosponges were common but not abundant nor diverse; Geodia were common, Xestospongia were present; no gorgonians were observed; Agaricia and Montastraea were very patchy; some sites near the center of the block had patches of 5-10 m2 of dense coral; this block had the most Montastraea observed to date on the cruise. One large Siderastrea siderea? (~ 1.5 m diameter, very flat) was observed for first time.
Dominant Benthic Taxa: Coral - Siderastrea siderea (1), Agaricia (common, 28), Montastraea cavernosa (common in patches,

HBOI/DBMR SITE NUMBER: 21-VIII-12-3 MILSORTCODESITE: 201208213

14), Scolymia, Madracis formosa; Antipathidae- Antipathes caribbaena? Stichopathes; Corallimorpharia; Hydroida; Demospongiae- Agelas (plate, fan, vase, hollow tube), Aplysina fistularis, Aplysina sp., Bubaris?, Callyspongia vaginalis, Callyspongia sp., Erylus?, Geodia, Niphates erecta, Polymastia, Xestospongia muta (common); Annelida- Filograna; Bryozoa; Arthropoda- Periclimenes, Stenorhynchus seticornis, Panulirus argus; Crinoidea- Comatulida; Echiinoidea- Centrostephanus; Ascidiacea- Eudistoma; Chlorophyta- Anadyomene menziesii, Halimeda, Verdigellas; Rhodophyta- crustose coralline algae, Peyssonnellia; Phaeophyta- Dictyota, Lobophora.

Fish: Acanthostracion polygonia - honeycomb cowfish, Acanthostracion quadricornis - scrawled cowfish, Apogon maculatus - flamefish, Balistes vetula - queen triggerfish, Bodianus pulchellus - spotfin hogfish, Canthigaster rostrata - sharpnose puffer, Centropyge argi - cherubfish, Cephalopholis cruentatus - graysby, Chaetodon aculeatus - longsnout butterflyfish, Chaetodon sedentarius - reef butterflyfish, Chromis cyanea - blue chromis, Chromis enchrysurus - yellowtail reeffish, Chromis insolata - sunshinefish, Chromis scotti - purple reeffish, Chromis sp. - unid chromis, Epinephelus morio - red grouper, Gymnothorax moringa - spotted moray, Holacanthus bermudensis - blue angelfish, Holacanthus tricolor - rock beauty, Holocentrus adscensionis - squirrelfish, Inermia vittata - boga, Liopropoma eukrines - wrasse bass, Lutjanus cyanopterus - cubera snapper, Malacanthus plumieri - sand tilefish, Mycteroperca interstitailis - yellowmouth grouper, Mycteroperca phenax - scamp, Myripristis jacobus - blackbar soldier, Neoniphon marianus - longjaw squirrelfish, Pterios volitans/miles - lionfish, Serranus annularis - orangeback seabass, Serranus tortugarum - chalk bass, Sparisoma atomarium - greenblotch parrotfish, Sphyraena barracuda - great barracuda, Stegastes partitus - bicolor damselfish (very few). Red grouper burrows and sandtile rubble mounds were common,

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 21-VIII-12-5 MILSORTCODESITE: 201208215

METHOD (DIVE #): ROV 10 DEPLOY TIME 8:34:07 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #12

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°46.0886'N LONGITUDE: 83°41.8745'W DEPTH (FT): 221.46 (M): 67.50

TARGET DESCRIPTION: random block #12

ON BOTTOM LATITUDE: 24°46.0144'N LONGITUDE: 83°41.8324'W DEPTH (FT): 218.83 (M): 66.70

ON BOTTOM (GMT): TIME: 20:38 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°46.3558'N LONGITUDE: 83°41.1992'W DEPTH (FT): 223.10 (M): 68.00

OFF BOTTOM (GMT): TIME: 11:35:07 PM HABITAT: bottom habitat 70-80%; pavement; rubble; dead plate coral; Slope- f

DEPTH (Ft-MAX): 223.00 (M): 68.00 (Ft-MIN): 213.00 (M): 65.00

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 15 SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Partly Cloudy (MPH): 13 (DIR FROM): 200

SEAS (FT): 2-3 SEAS (DIR FROM): SW

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 10; Florida, Pulley Ridge HAPC, random block #12; 24°46.0886'N 83°41.8745'W, 67.5 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 12; ground-truth features of multibeam (Naar).

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90° with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made. Direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Night dive- visibility of effective lights ~2-3 m. Difficult to differentiate live plate coral from Peysonnellia unless directly over. Camera unable to focus in dark on auto focus and manual focus not good either.

Site Description/Habitat/Biota:

The dive transected block 10 from the southwest to northeast; depth range- 65 to 68.5 m. The bottom was fairly consistant. The bottom was 100% hard bottom, flat, and predominantly covered with dead plate coraland coral rubble. There were no ledges or ridges except for occassional red grouper pits and small rubble mounds (sandtile? burrows) , which have exposed excavated rock burrows in the bottom. Following the 5 quantitative transects a qualitative transect was made at the east edge of the box and east of the box to ground-truth the multibeam which shows the eastern 'slope' of Pulley Ridge and the low relief flat at the base. This slope dropped from 66 m to 68.5 m over 150 m, with little change in biota but changing to 10-30% sediment patches on the lower slope and flat.

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 21-VIII-12-5 MILSORTCODESITE: 201208215

Benthic Biota: Benthos of block 10 was dominated by Anadyomene (50% cover) and coralline algae and Peysonnellia; macro demosponges were common and fairly diverse; Xestospongia were common; gorgonians were rare; Agaricia and Montastraea were very patchy and sparse.
Dominant Benthic Taxa: Coral- Agaricia (patchy, 18), Montastraea (uncommon, 6), Madracis (rare); Antipatharia- Antipathes (common), Stichopathes; Hydroida; Actiniaria- Condylactis gigantea; Gorgoncea (rare)- Diodogorgia; Demospongiae- Agelas, Agelas clathrodes, Aplysina, Aplysina fistularis?, Callyspongia vaginalis, Cinachyra, Geodia, Ircinia, Ircinia campana, Niphates erecta (on east slope), Polymastia, Pseudoceratina crassa, estospongia muta (common, 17); Annelida- Sabellidae; Mollusca- spiny oyster, squid; Arthropoda- Paguridea, shrimp; Bryozoa; Crinoidea- Comatulida (2 spp, 15 cm, and small); Echinoidea- Arbacia punctulata; Ophiuroidea; Ascidiacea- Eudistoma, Didemnidae; Chlorophyta- Anadyomene menziesii (abundant), Halimeda (uncommon), Ventricaria; Rhodophyta- rustose coralline algae, Peyssonnellia; Phaeophyta- Dictyota, Lobophora (patchy, dense). Human debris- one ghost trap with long line.

Fish: Acanthostracion polygonia - honeycomb cowfish, Apogon pseudomaculatus - twospot cardinalfish, Apogon sp. - cardinalfish, Calamus spp - unid porgy, Carcharhinus sp. - unid shark, Centropyge argi - cherubfish, Chaetodon sedentarius - reef butterflyfish, Chromis enchrysurus - yellowtail reeffish, Chromis scotti - purple reeffish, Chromis sp. - unid chromis, Decapterus macarellus - mackerel scad, Diodon hystrix - porcupinefish, Gymnothorax moringa - spotted moray, Haemulon striatum - striped grunt, Halichoeres sp. - unid wrasse, Holacanthus bermudensis - blue angelfish, Holocentrus adscensionis - squirrelfish, Inermia vittata - boga, Inermia vittata - boga/ Schultzea beta - school bass, Liopropoma eukrines - wrasse bass, Lutjanus analis - mutton snapper, Neoniphon marianus - longjaw squirrelfish, Pterios volitans/miles - lionfish, Rhomboplities aurorubens - verrmilion snapper, Schultzea beta - school bass, Sparisoma atomarium - greenblotch parrotfish, Stegastes partitus - bicolor damselfish (few), Synodus sp. - lizardfish, sand tilefish mounds with excavated pits common.

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 22-VIII-12-3 MILSORTCODESITE: 201208223

METHOD (DIVE #): ROV 11 DEPLOY TIME 12:18:45 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #10

DVD: 4 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°47.3255'N LONGITUDE: 83°40.3248'W DEPTH (FT): 216.54 (M): 66.00

TARGET DESCRIPTION: random block #10

ON BOTTOM LATITUDE: 24°47.2747'N LONGITUDE: 83°40.3017'W DEPTH (FT): 222.44 (M): 67.80

ON BOTTOM (GMT): TIME: 12:22 HABITAT: hard bottom habitat 50% cover; dead plate coral sparse, rubble, flat

OFF BOTTOM LATITUDE : 24°47.9875'N LONGITUDE: 83°40.7194'W DEPTH (FT): 218.18 (M): 66.50

OFF BOTTOM (GMT): TIME: 3:50:14 PM HABITAT: hard bottom habitat; rubble; dead plate coral; Slope- flat 0°;

DEPTH (Ft-MAX): 224.74 (M): 68.50 (Ft-MIN): 211.61 (M): 64.50

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 50 SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Sunny (MPH): 10 (DIR FROM): 117

SEAS (FT): 2 SEAS (DIR FROM): SW

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 11; Florida, Pulley Ridge HAPC, random block #10; 24°47.3255'N, 83°40.3248'W, 66 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 10; ground-truth features of multibeam (Naar).

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made; direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Completed 5 transects within block 11. Continued to the NW corner of box and moved north 75 m to repeat part of previous transect made by HBOI in 2011 with Kraken ROV which was a repeat of USGS SEABOSS transect in 2002. Plotted 3 waypoints over ~200 m where we had logged Agaricia and Montastraea in 2011 and repeated the same line with 30 sec quantitative photos and video. Also ground-truthed features of multibeam map (Naar); primarily the east slope and base of the eastern ridge of Pulley Ridge.

Site Description/Habitat/Biota:

Habitat and Benthic Biota: The dive transected block 10 from the southeast to northwest; depth range- 64.5 to 68.5 m. Dive divided into three parts: Transect 1 parallel N along the base of the eastern ridge slope; depth ~68.5. The bottom had more sediment and rubble than the previous sites. Hard bottom with rock rubble and cobble, but not much solid coral plates or pavement, interspersed with 30-50% cover of sediment. Anadyomene was 10-20% cover, large bladed Rhodophyta and Halimeda was common. Sponges were present; no coral were observed. Sandtile fish mounds (1/2 to 1 m) with excavated pit were common with associated yellowtail reef fish, purple reef fish, and some lionfish. Transect 2 and interim transect went from the base of the ridge slope (68.5 m), west upslope to the top of the east ridge (66.5). The remaining transects 3-5 were on top of the ridge region, mostly 65-66.5 m. This region was the typical consistant dead coral plate pavement, coral rubble, with dense cover of Peysonnellia, crustose corallines, Peysonnellia, and Lobophora. The central area had several patches of Montastraea cavernosa colonies; each patch often 5 m or so diameter with 5-10 separate colonies. Agaricia were patchy but not

HBOI/DBMR SITE NUMBER: 22-VIII-12-3 MILSORTCODESITE: 201208223

uncommon too. The third part of the dive was outside of block 10; 75 m north of the NW corner. This was a photo transect which repeated a segment of HBOI Kraken ROV dive in 2011 and USGS SEABOSS dive in 2002. Two waypoints that were logged as Montastraea and Agaricia sightings from the 2011 dive were repeated. This segment was 66.5 to 67.5 m deep, and had the same bottom habitat as the previous transects 3-5 of this dive. The bottom was primarily dead plate coral pavement wiith dense cover of Anadyomene, crustose coralliine, some sponges, and patches of Montastraea and Agaricia. Montastraea was more common and some were seen right near the starting waypoint 1. The resolution of the navigation of the three ROV dives is probably on the order of 10-20 m, so a specific overlay of video is not possible.

Dominant Benthic Taxa: Coral- Agaricia (11 patches); Montastraea (15); Antipathidae- Stichopathes; Corallimorpharia, Hydroida;
Demospongiae- Aplysina, Geodia, Ircinia campana, Niphates erecta, Polymastia, Xestospongia muta; Sabellida- Feather Duster worms; Echinoidea- Centrostephanus; Crinoidea- Comatulida; Ascidiacea- Eudistoma, Didemnidae; Chlorophyta- Anadyomene menziesii; Codium; Halimeda; Rhodophyta- Red Blade, Peyssonnellia, crustose coralline algae; Phaeophyta- Dictyota, Lobophora, Sargassum.

Fish- Acanthurus sp. - unid surgeonfish, Bodianus pulchellus - spotfin hogfish, Canthigaster rostrata - sharpnose puffer, Centropyge argi - cherubfish, Chaetodon aculeatus - longsnout butterflyfish, Chaetodon sedentarius - reef butterflyfish, Chromis cyanea - blue chromis, Chromis enchrysurus - yellowtail reeffish, Chromis insolata - sunshinefish, Chromis scotti - purple reeffish, Epinephelus morio - red grouper, Equetus lanceolatus - jackknife fish, Gobiidae - unid goby, Gymnothorax moringa - spotted moray, Haemulon album - margate, Haemulon striatum - striped grunt, Halichoeres bathyphilus - greenband wrasse, Halichoeres sp. - unid wrasse, Holacanthus bermudensis - blue angelfish, Holacanthus tricolor - rock beauty, Holocentrus adscensionis - squirrelfish, Inermia vittata - boga, Liopropoma eukrines - wrasse bass, Lutjanus analis - mutton snapper, Malacanthus plumieri - sand tilefish, Monacanthus tuckeri - slender filefish, Neoniphon marianus - longjaw squirrelfish, Pseudupeneus maculatus - spotted goatfish, Pterios volitans/miles - lionfish, Serranus annularis - orangeback seabass, Serranus tortugarum - chalk bass, Sparisoma atomarium - greenblotch parrotfish, Sphyraena barracuda - great barracuda, Stegastes partitus - bicolor damselfish (common).

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 22-VIII-12-6 MILSORTCODESITE: 201208226

METHOD (DIVE #): ROV 12 DEPLOY TIME 9:01:27 PM ZONE: ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #03

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°54.8280'N LONGITUDE: 83°38.6473'W DEPTH (FT): 224.41 (M): 68.40

TARGET DESCRIPTION: SE corner of random block #03

ON BOTTOM LATITUDE: 24°54.7551'N LONGITUDE: 83°38.6122'W DEPTH (FT): 230.97 (M): 70.40

ON BOTTOM (GMT): TIME: 21:05 HABITAT: bottom habitat (30-40% soft bottom); cobble; rubble; dead plate cora

OFF BOTTOM LATITUDE : 24°55.3914'N LONGITUDE: 83°38.9260'W DEPTH (FT): 216.54 (M): 66.00

OFF BOTTOM (GMT): TIME: 12:09:42 AM HABITAT: ı habitat; (20-30 % soft bottom habitat;) rubble; dead plate coral; S

DEPTH (Ft-MAX): 232.94 (M): 71.00 (Ft-MIN): 216.54 (M): 66.00

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Clear (MPH): 3 (DIR FROM): 337

SEAS (FT): 1 SEAS (DIR FROM):

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 12; Florida, Pulley Ridge HAPC, random block #03; 24°54.8280'N, 83°38.6473'W, 68.4 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 03; ground-truth features of multibeam (Naar).

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90° with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made. Direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Night dive- visibility of effective lights ~2-3 m. Difficult to differentiate live plate coral from Peysonnellia unless directly over. Camera unable to focus in dark on auto focus and manual focus not good either. Lasers stopped working at photo 117-180.

Site Description/Habitat/Biota:

The dive transected block 03 from the southeast to northwest corner; depth range- 66 to 71 m. Most of the block was very consistant; 69-70 m; hard bottom, flat, and predominantly covered with dead plate coral, and rock rubble/cobble with sediment patches of 30-50% cover. There were no ledges or ridges except for one red grouper burrow and small sand tilefish mounds, mostly near the end of the transect. Following transect 5, we ground-truthed the multibeam in the northwest corner, transecting north, upslope from 69.5 m to 66 m at the top of the feature over a linear distance of ~150 m. No change was obvious in the video, except for the lack of large red blade algae on top, and the presence of Lobophora on top.

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 22-VIII-12-6 MILSORTCODESITE: 201208226

Benthic Biota: Benthos of block 03 was dominated by Anadyomene (30% cover), coralline algae, Peysonnellia and large blade Rhodophyta were common; macro demosponges were common and diverse but not abundant; Xestospongia muta were present but not common. No gorgonians were observed; Antipathes (fine mesh fans) were common. Only a few Agaricia and Montastraea were observed except for one large patch of Agaricia which showed up immediately upon ending transect 5. Dozens of small (5-10 cm) colonies occurred over ~30 m stretch.
Dominant Benthic Taxa: Coral- Agaricia; Montastraea cavernosa; Actiniaria- Condylactis gigantea, Antipathidae- Antipathes, Stichopathes; Hydroida; Demospongiae- Aplysina, Astrophorida, Axinellidae, Dictyoceratidap- Ciocalyptra?, Geodia, Ircinia campana, Ircinia stobalina, Xestospongia muta; Annelida- Hermodice curunculata; Mollusca- spiny oyster, squid; Echinodermata- Gorgonocephalidae; Crinoidea- Comatulida; Ophiuroidea; Holothuroidea- Uapta lapta; Rhodophyta- crustose coralline algae, Peyssonnellia, rose petal crustose coralline algae, large red blade; Chlorophyta- Anadyomene menziesii, Codium, Halimeda, Verdigellas; Phaeophyta- Dictyota, Lobophora, Sargassum; Cyanophyta.

Fish: Calamus sp. - unid porgy, Chaetodon ocellatus - spotfin butterflyfish, Chaetodon sedentarius - reef butterflyfish, Chromis enchrysurus - yellowtail reeffish, Chromis scotti - purple reeffish, Decapterus macarellus - mackerel scad, Epinephelus morio - red grouper, Gymnothorax moringa - spotted moray, Haemulon striatum - striped grunt, Holocentrus adscensionis - squirrelfish, inermia vittata - boga/Haemulon striaum - striped grunt, Monacanthus tuckeri - slender filefish, Neoniphon marianus - longjaw squirrelfish, Ophidiidae - unid cusk-eels, Pseudupeneus maculatus - spotted goatfish, Rhomboplities aurorubens - verrmilion snapper, Schultzea beta - school bass, Seriola rivoliana - almaco jack, Serranus annularis - orangeback seabass, Sparisoma atomarium - greenblotch parrotfish, Stegastes partitus - bicolor damselfish (1), unid scad; 1 red grouper burrow; few sand tile burrows at end; NO LIONFISH.
Human debris- pile of trawl cable.

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 23-VIII-12-2 MILSORTCODESITE: 201208232

METHOD (DIVE #): ROV 13 DEPLOY TIME 12:06:02 PM ZONE:ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #09

DVD: 4 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°48.6878'N LONGITUDE: 83°40.9875'W DEPTH (FT): 209.97 (M): 64.00

TARGET DESCRIPTION: SE corner of random block #09

ON BOTTOM LATITUDE: 24°48.6411'N LONGITUDE: 83°40.9538'W DEPTH (FT): 221.46 (M): 67.50

ON BOTTOM (GMT): TIME: 12:09 HABITAT: 100% hard bottom; dead coral plates w/ coralline algae; rubble, flat

OFF BOTTOM LATITUDE : 24°49.5567'N LONGITUDE: 83°40.6401'W DEPTH (FT): 61.50 (M): 18.75

OFF BOTTOM (GMT): TIME: 3:51:16 PM HABITAT: hard bottom habitat; rubble; dead plate coral; Slope- flat 0°;

DEPTH (Ft-MAX): 229.66 (M): 70.00 (Ft-MIN): 196.85 (M): 60.00

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): 50 SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Sunny (MPH): 11.4 (DIR FROM): 86

SEAS (FT): 3 SEAS (DIR FROM): SE

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 13; Florida, Pulley Ridge HAPC, random block #09; 24°48.6878'N, 83°40.9875'W, 64.0 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block 09; conduct additional 100 m transects on top of the main ridge of Pulley Ridge along the west border of block 8; ground-truth features of multibeam (Naar).

W ridge- east valley 66.5, 65 top; 69 w slope
Max 70
Main ridge- 64, 60

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20o with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made; direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Completed 5 transects within block 09. Continued to the NE corner of box and continued into block 08 for an additional four 100-m quantitative photo transect. These were non-random selected but used to ground-truth the main ridge of the Pulley Ridge multibeam. Transects 6, 7 and 8 were within the western portion of block 8 on top of the main ridge; transect 9 was also on the main ridge but west of block 8.

Site Description/Habitat/Biota:

Habitat and Biota: The first part of the dive conducted 5 random transects from the SE to NE in block 09. These also ground-truthed a minor ridge just west of the main ridge of Pulley. The valley between the main ridge and the west ridge was ~66.5 m; the top of the west ridge was 65 m and dropped to at least 70 m at the west base. The bottom was fairly consistant; there was no apparent difference in biota or habitat over these transects crossing the ridge. The bottom was 100% hard bottom, flat, and predominantly covered with dead plate coral and some coral rubble. There were no ledges or ridges except for occassional red grouper pits and small rubble mounds (sandtile burrows) , which have exposed excavated rock burrows in the bottom. Other than the algae, biota was fairly sparse, few sponges, few Xestospongia muta, few Antipathes, few Halimeda, few coral; but large

HBOI/DBMR SITE NUMBER: 23-VIII-12-2 MILSORTCODESITE: 201208232

red blade algae were present at depths >69 m. There were several red grouper and sandtile mounds, most with lionfish. Transects 6-9 were non-random and outside block 09; these paralleled the top of the main ridge of Pulley Ridge heading North. The depth ranged from 64-60 m; shallowing to the north. The top of the ridge for transects 6-8 was flat (63-64 m) hard bottom, covered with dead coralline plate pavement and rubble, dominant biota was Anadyomene, crustose coralline and Peysonnellia; sponges were not common nor diverse. Only one coral (Montastraea) was observed even with the extensive available exposed rock pavement. Sand tilefish rubble mounds and red grouper burrows were common; most had lionfish. Transect 9 was slightly shallower (60.5 to 62.5m) but parts were quite different in habitat and biota. Part was nearly all coral/rock rubble, with very little rock pavement or coral plates; Anadyomene was very sparse (<10% cover), and Isididae bamboo coral were common to abundant.
Dominant Benthic Taxa: Coral- Agaricia (2), Montastraea cavernosa (5); Actiniaria- Condylactis gigantea; Antipathidae- Antipathes, Stichopathes; Hydroida; Gorgonacea- Thesea?; Isididae (bamboo coral); Demospongiae- Agelas, Aplysina, Callyspongia vaginalis, Geodia, Ircinia campana, Niphates erecta, Polymastia, Xestospongia muta; Annelida- Sabellida; Arthopods- Panulirus argus, Stenorhynchus seticornis; Bryozoa; Chlorophyta- Anadyomene menziesii, Halimeda, Verdigellas;Rhodophyta- crustose coralline algae, Peyssonnellia, large red blade (> 1 m); Phaeophyta- Dictyota, Lobophora.

Fish: Apogon maculatus - flamefish, Aulostomus maculatus - trumpetfish, Bodianus pulchellus - spotfin hogfish, Canthigaster rostrata - sharpnose puffer, Centropyge argi - cherubfish, Cephalopholis cruentatus - graysby, Chaetodon aculeatus - longsnout butterflyfish, Chaetodon sedentarius - reef butterflyfish, Chromis enchrysurus - yellowtail reeffish, Chromis insolata - sunshinefish, Chromis scotti - purple reeffish, Chromis sp. - unid chromis, Diodon hystrix - porcupinefish, Epinephelus morio - red grouper, Gobiidae - unid goby, Gobiosoma xanthiprora - yellowprow goby, Haemulon album - margate, Halichoeres garnoti - yellowheaded wrasse, Holacanthus bermudensis - blue angelfish, Holacanthus tricolor - rock beauty, Holocentrus adscensionis - squirrelfish, Inermia vittata - boga, Liopropoma eukrines - wrasse bass, Lutjanus analis - mutton snapper, Lutjanus jocu - dog snapper, Malacanthus plumieri - sand tilefish, Mycteroperca bonaci - black grouper, Mycteroperca interstitailis - yellowmouth grouper, Mycteroperca phenax - scamp, Myripristis jacobus - blackbar soldier, Neoniphon marianus - longjaw squirrelfish, Pristigenys alta - short bigeye, Pterios volitans/miles - lionfish, Rypticus saponaceus - greater soapfish, Seriola dumerili - greater amberjack, Seriola rivoliana - almaco jack, Serranus annularis - orangeback seabass, Serranus tortugarum - chalk bass, Sparisoma atomarium - greenblotch parrotfish, Stegastes partitus - bicolor damselfish (few), Synodus synodus. - red lizardfish, Thalassoma bifasciatum - blueheaded wrasse (1; FIRST ON CRUISE!!); red grouper burrows were common (20, some with grouper and lionfish), and sand tilefish mounds were common (25+, some with sand tiles entering hole; lionfish sometimes present).

SITE SKETCH:

HARBOR BRANCH OCEANOGRAPHIC INSTITUTE
COLLECTION SITE

HBOI/DBMR SITE NUMBER: 23-VIII-12-4 MILSORTCODESITE: 201208234

METHOD (DIVE #): ROV 14 DEPLOY TIME 8:40:30 PM ZONE: ESDT - Eastern Daylight Time

LOCATION: Florida, Pulley Ridge HAPC, random block #08

DVD: 3 Hard Drive: 1 HD Cam: 0

TARGET LATITUDE: 24°49.0157'N LONGITUDE: 83°40.2255'W DEPTH (FT): 206.69 (M): 63.00

TARGET DESCRIPTION: SE corner of random block #08

ON BOTTOM LATITUDE: 24°48.9465'N LONGITUDE: 83°40.1706'W DEPTH (FT): 208.99 (M): 63.70

ON BOTTOM (GMT): TIME: 20:43 HABITAT: ottom, 10% sediment cover; dead coral plates w/ coralline algae; rubl

OFF BOTTOM LATITUDE : 24°49.4465'N LONGITUDE: 83°40.2391'W DEPTH (FT): 218.18 (M): 66.50

OFF BOTTOM (GMT): TIME: 11:45:12 PM HABITAT: habitat (20-30% soft bottom); pavement; rubble; dead plate coral; S

DEPTH (Ft-MAX): 219.82 (M): 67.00 (Ft-MIN): 206.69 (M): 63.00

COLLECTORS: Dennis Hanisak, Glenn Taylor, John Reed, Kevin Rademacher, Lance Horne, Stephanie Farrington

ON BOTTOM :TEMP(°C): (°F): VIS (Ft): SAL (PPT):

CURRENT (Kn): (DIRECTION FROM):

WEATHER (CLOUD COVER): Clear (MPH): 16.2 (DIR FROM): 71

SEAS (FT): SEAS (DIR FROM):

TOTAL NUMBER OF SAMPLES:

Site Objectives:

Site/Objectives: ROV 14; Florida, Pulley Ridge HAPC, random block #08; 24°49.0157'N, 83°40.2255'W, 63 m. Conduct ROV video/photo survey; conduct five - 100 m random trasects within block #08.

ROV Setup/Dive Events:

Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90o with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Video time ESDT. Dive Notes depth recorded as total depth (ROV altitude + ROV depth in meters). COG is ROV heading. Events, habitat and fauna are recorded by Reed and Farrington directly into Access database. Fish data recorded by Kevin Rademacher in separate Access database to be added to benthic database. Video camera (standard digital) angled ~20° with 15 cm parallel lasers; digital still camera pointed down 90° with 10 cm parallel lasers for quantitative photo transects. Each 100 m transect conducted at ~0.25 kn, for 15-20 minutes until passed through 100 m circle overlayed on navigation screen; quantitative still images taken every ~30 sec. Off transects between the photo transects were 10-15 minutes; heading determined by flip of coin, depending in part on wind/current. Five 100 m quantitative photo transects were made. Direction of transects were based on flip of coin, and ship's maneauverability due to wind/current. Night dive- visibility of effective lights ~2-3 m. Difficult to differentiate live plate coral from Peysonnellia unless directly over. Camera unable to focus in dark on auto focus and manual focus not good either. Great difficulty maneauvering the ship in a straight line, several squalls, winds variable 10 to 25 kn, current 1.2 kn in opposing directions. Some transects almost circular.

Site Description/Habitat/Biota:

The dive transected block 08 from the southeast to near center; depth range- 63 to 67 m. Most of the transect was very consistant; 65-66 m; hard bottom, flat, and predominantly covered with dead plate coral, and rock rubble with sediment patches of 10-30% cover. There were no ledges or ridges except for red grouper burrows and small sand tilefish mounds, which were predominantly in the SE region of the block.

Benthic Biota: The benthos was fairly consistant dominated by Anadyomene (30-50% cover), Peysonnellia and crustose

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coralline covering all exposed rock. Sponges were diverse and more dense in the southeastern portion and somewhat sparse in the central area. Agaricia and Montastraea cavernosa were very patchy; very sparse in the central area, but some of the southern transects had large patches of many meters. Some Montastraea were clearly on what was once large single colonies of 1- 1.5 m diameter, but now are either dying back or regrowing as isolated patches on the original large colony.
Dominant Benthic Taxa: Coral- Agaricia (31 patches), Montastraea caavernosa (13 patches); Cnidaria- Gorgonacea; Actiniaria- Condylactis gigantea; Antipathidae- Stichopathes; Demospongiae- Agelas, Aplysina, Callyspongia vaginalis, Cribochalina vasculum, Geodia, Ircinia, Ircinia campana, Niphates erecta, Polymastia, Pseudoceratina crassa, Xestospongia muta; Mollusca- squid; Arthropoda- Panulirus argus, Stenorynchus seticornis; Crinoidea- Comatulida; Ascidiacea- Eudistoma; Chlorophyta- Anadyomene menziesii, Halimeda (very sparse); Rhodophyta- crustose coralline algae; Peyssonnellia; Phaeophyta- Dictyota, Lobophora.

Fish: Acanthostracion polygonia - honeycomb cowfish, Apogon pseudomaculatus - twospot cardinalfish, Apogon sp. - cardinalfish, Balistes vetula - queen triggerfish, Chaetodon sedentarius - reef butterflyfish, Chromis enchrysurus - yellowtail reeffish, Chromis sp. - unid chromis, Decapterus macarellus - mackerel scad, Diodon hystrix - porcupinefish, Epinephelus morio - red grouper, Gymnothorax moringa - spotted moray, Haemulon striatum - striped grunt, Holoccentrus sp. - unid squirrelfish, Holocentridae - unid squirrelfish, Holocentrus adscensionis - squirrelfish, Holocentrus rufus - longspine squirrelfish, Inermia vittata - boga, Lutjanus analis - mutton snapper, Neoniphon marianus - longjaw squirrelfish, Ophidiidae - unid cusk-eels, Pseudupeneus maculatus - spotted goatfish, Pterios volitans/miles - lionfish, Rhomboplities aurorubens - verrmilion snapper, S. tortugarum or S. beta, S. tortugarum or S, beta, Schultzea beta - school bass, Serranus tortugarum - chalk bass, Sparisoma atomarium - greenblotch parrotfish.

SITE SKETCH:

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