SEAMAP Caribbean Reef Fish Survey

NOAA Ship *Pisces* Survey 12-02 (18)

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
P. O. Drawer 1207
Pascagoula, MS 39568-1207

Introduction

The NOAA Ship *Pisces* departed Pascagoula, MS on May 29, 2012 to conduct the SEAMAP reef fish survey of natural hard bottom areas located on the insular shelf and shelf edge of the 4 major US Caribbean Islands (Figure 1). The planned itinerary divided the cruise into 2 transit legs (Legs I and IV) and two 10 day sampling legs (Legs 2 & 3): Leg 1) 5/29/12 to 6/03/12; Leg 2) 6/04/12 to 6/13/12; Leg 3) 6/16/12 to 6/24/12 and Leg 4) 6/27/12 to 6/30/12 for a total of 30 sea days. The *Pisces* began scientific operations on schedule; however, a medical emergency and a mechanical issue with the Ship's Fast Rescue Boat resulted in an unscheduled port call from 6/08 - 6/09/12. The remainder of the scientific survey was successful and was completed on schedule. The ship deployed a concrete anchor and ground tackle for a University of the Virgin Islands buoy on the evening of 6/21/12 (Figure 6). After disembarking the scientists in San Juan, Puerto Rico on 6/25/12, the vessel recovered a free-floating NOAA Data Buoy Center's Deep-ocean Assessment and Reporting Tsunami buoy east of the Bahamas. The vessel arrived in Mayport, FL on June 30, 2012. Destaging the survey gear from the ship took place in Mayport, FL on 7/2/12.

Objectives

1) Assess relative abundance of reef fish around the US Caribbean Islands.
2) Determine length frequency distributions of reef fish.
3) Collect otoliths from fish for age/growth analysis.
4) Collect conductivity, temperature, dissolved oxygen, fluorescence, and transmissivity data profiles of the water column at each sample site with a Conductivity Temperature Depth (CTD) profiler.
5) Collect acoustic data with the ME70 multibeam sonar and EK60 echosounder over each sample site.

Methods

Portions of the insular shelf and shelf edge around Puerto Rico, St. Croix, St. Thomas and St. John were selected to be sampled (Figure 1). A stratified random design was employed to select sample sites. Strata were defined by depth (50 – 60 m, 60 – 90 m; 90 – 120 m; and 120 to

300 m) and region (Northern Puerto Rico, Western Puerto Rico, St. Croix, southern St. John/St. Thomas and northern St Thomas). Sampling gear included a camera system, bandit reels, fisheries acoustic systems, a chevron fish trap and a Sea-Bird SBE 911+ CTD profiler. The Ship's ME70 and EK60 systems recorded bathymetry and fisheries acoustic data at all times during the 2 scientific sampling legs. The systems were set up to record data according to instructions from the NOAA Fisheries Mississippi Laboratories, Stennis Space Center facility and the NOAA NOS Beaufort, NC Lab. The remaining sampling operations were conducted from 1 hour after sunrise to 1 hour before sunset for day-time operations and from 1 hour after sunset to 1 hour before sunrise for night-time operations.

Day-time operations consisted of the deployment of a camera array at each selected site followed by a CTD cast, recovery of the camera array and then sampling the same site with 3 bandit reels. A Seabird 911+ CTD measured temperature, salinity, dissolved oxygen, fluorescence and transmissivity profiles of the water column. The camera array contained 4 custom made aluminum housings, each containing paired Videre black-and-white stereo cameras and a color mpeg-4 video camera, mounted orthogonally. When the camera housings are mounted into the array frame the stereo cameras are 60 cm above the bottom of the array and the mpeg camera is 45 cm above the bottom. The stereo and mpeg cameras stored data to an internal hard drive in each cylindrical housing. The electronics stack, hard drive and cameras in the housings were powered by an external lead acid battery. The stereo cameras were calibrated prior to the survey in the tank at the NOAA Fisheries Mississippi Laboratories, Stennis Space Center facility. The camera array was baited with squid and recorded 25 min of data while soaking on the bottom at each station. A LoTek Time Depth Recorder (TDR) was attached to the camera array to obtain the water temperature and depth of the camera array as it soaked on the sea bed. Three bandit reels were then employed to capture fish for life history studies. The 3 bandit reels were fished simultaneously at each site for 5 min. The bandit reels used 10 circle hooks per line baited with cut Atlantic mackerel, *Scomber scombrus*, spaced 61 mm (24 in) apart. One reel was mounted on the aft portion of the ship's side sampling station (starboard mid-ship), the second was mounted starboard aft, forward of the ship's propeller and the third was mounted on the starboard side of the stern (stern starboard). Three hook sizes 8/0, 11/0, and 15/0 were rotated through the 3 reel positions throughout the survey. The initial hook size (Station #1) for the starboard mid-ship reel was 11/0, for the starboard aft reel was 8/0 and for the stern starboard was 15/0.

Night-time operations consisted of a CTD cast followed by bandit reel sampling at each selected site. To prevent the night-time operations from getting too far ahead of day-time operations and hopefully increase collection of fish a chevron fish trap was deployed at randomly selected night stations. The fish trap was deployed after sampling the site with the CTD and bandit reels. The trap measured 1.83 m x 1.83 m x 0.75 m with 3.81-cm mesh. Fish traps were baited with squid and soaked on the sea bed for 1 hour. All fish, from both day and night operations, captured by bandit reel or trap were identified, measured, weighed, had gender and maturity determined, and most had otoliths extracted.

Results

The 2012 SEAMAP Caribbean Reef Fish survey completed sampling in all 5 regions that were selected (Figure 1) with 274 stations (120 day & 154 night) completed (Figures 1-7 & Table 1). Out of the 310 pre-selected sites, 273 were sampled. Thirty-five sites (17 day &

18 nights) along the northwest and west regions of Puerto Rico (PRN1 & PRW) were dropped after the unscheduled port call to retain geographic coverage of the sample design and meet the survey schedule during Leg II. Two sites (1 day & 1 night) selected off St. Croix were too shallow to sample and were dropped. One additional site off St. Croix (857) was sampled twice when the cameras did not record on the first deployment. Eleven stations had to be moved to deeper water from the original, too shallow, sites off St. Croix (Table 1). The camera array was deployed at the 120 daytime stations (Figures 1-7 & Table 1). TDR data was successfully recorded at 117 of the video stations (Table 1). All stereo camera, video and TDR data were returned to NOAA Fisheries Mississippi Laboratory for viewing and analysis. Three bandit reels were set at 273 of the 274 stations; 119 during the day and 154 at night (Figures 1-7 & Table 1). Issues with the Ship's Dynamic Positioning System prevented deployment of bandit reels at station 208. Additionally, only 2 bandit reels were fished at Station 129 when reel 3 got tangled during deployment. This resulted in 818 bandit reel deployments during the survey. The chevron fish trap was deployed at 14 randomly selected night-time stations (Figures 2-7 & Table 1).

The catch from both the bandit reels and the fish trap totaled 139 fish representing 9 families (Tables 2 & 3). Snapper dominated the catch followed by small groupers and jacks both numerically and by weight. Bandit reels caught 134 fish at 60 stations or on 74 out of the 818 bandit reel deployments (Tables 1 & 2). Four fish escaped before landing and 2 were bit in half when landed, this resulted in no associated weight or other meristics (Tables 2 & 3). Blackfin snapper, *Lutjanus buccanella*, was the most numerous species captured by the bandit reels followed by silk snapper, *Lutjanus vivanus*, and red hind, *Epinephelus guttatus* (Tables 2 & 3). Day-time bandit reel stations caught 0.6 fish per station while night-time stations caught only 0.38 fish per station (Table 4). Fifty five percent of the total bandit reel catch occurred during the day (Table 4). Bandit reel catches by area are detailed in Tables 5 and 6. Otoliths were taken from 125 of the bandit reel captured fish (Table 2). Otoliths were retrieved from the 2 half fish. The chevron fish trap captured a total of 5 fish in 4 of the 14 deployments (Tables 1 & 3). All otolith samples (130 pairs) were returned to the NOAA Fisheries Mississippi Laboratory for archiving.

The CTD profiler was deployed at all 274 stations. Data was successfully collected at 273 stations (Table 1). CTD profiler data were processed while at sea and returned to the Data Management Unit at the NOAA Fisheries Mississippi Laboratory. The Ship's ME70 and EK60 collected bathymetry and fisheries acoustic data continuously while at sea during both scientific legs. A total of 152 GB of data was collected with the ME70 & 91.5 GB of data was collected with the EK60. Acoustic data were returned to the NOAA Fisheries Mississippi Laboratory for archiving.

Cruise Participants:

Leg 1: 5/29/2012 – 6/03/2012 (6 sea days)
Pascagoula, MS – San Juan, PR

Leg 2: 6/04/2012 – 6/13/2012 (10 sea days)
San Juan, PR – Frederiksted, St. Croix

Name	Title	Organization
Kevin Rademacher	Field Party Chief	NMFS - Pascagoula, MS
Paul Felts	Fisheries Biologist	NMFS - Pascagoula, MS
John Moser	Fisheries Biologist	NMFS - Pascagoula, MS
Ken Wilkinson	Electronics Technician	NMFS - Stennis Space Center, MS
Joey Salisbury	Fishery Biologist I	IAP- Pascagoula, MS
Ariane Frappier	Fishery Biologist I	IAP- Pascagoula, MS
Rebeca Rosado	Fishery Biologist I	IAP- Pascagoula, MS
Travis Holland	Fishery Biologist I	IAP- Pascagoula, MS
Jose Rivera	Fisheries Biologist	NMFS - San Juan, PR

Leg 3: 6/16/2012 – 6/24/2012 (9 sea days)
Frederiksted, St. Croix - San Juan, PR

Name	Title	Organization
Kevin Rademacher	Field Party Chief	NMFS - Pascagoula, MS
Paul Felts	Fisheries Biologist	NMFS - Pascagoula, MS
John Moser	Fisheries Biologist	NMFS - Pascagoula, MS
Ken Wilkinson	Electronics Technician	NMFS - Stennis Space Center, MS
Joey Salisbury	Fishery Biologist I	IAP- Pascagoula, MS
Ariane Frappier	Fishery Biologist I	IAP- Pascagoula, MS
Rebeca Rosado	Fishery Biologist I	IAP- Pascagoula, MS
Travis Holland	Fishery Biologist I	IAP- Pascagoula, MS
Lesley Urasky	Teacher at Sea	Rawlins, WY
Roy Pemberton, Jr	Director	USVI DPNR Div. Fish & Wildlife

Leg 4: 6/26/2012 – 6/30/2012 (5 sea days)
San Juan, PR – Mayport, FL

Name	Title	Organization
Lesley Urasky	Teacher at Sea	Rawlins, WY

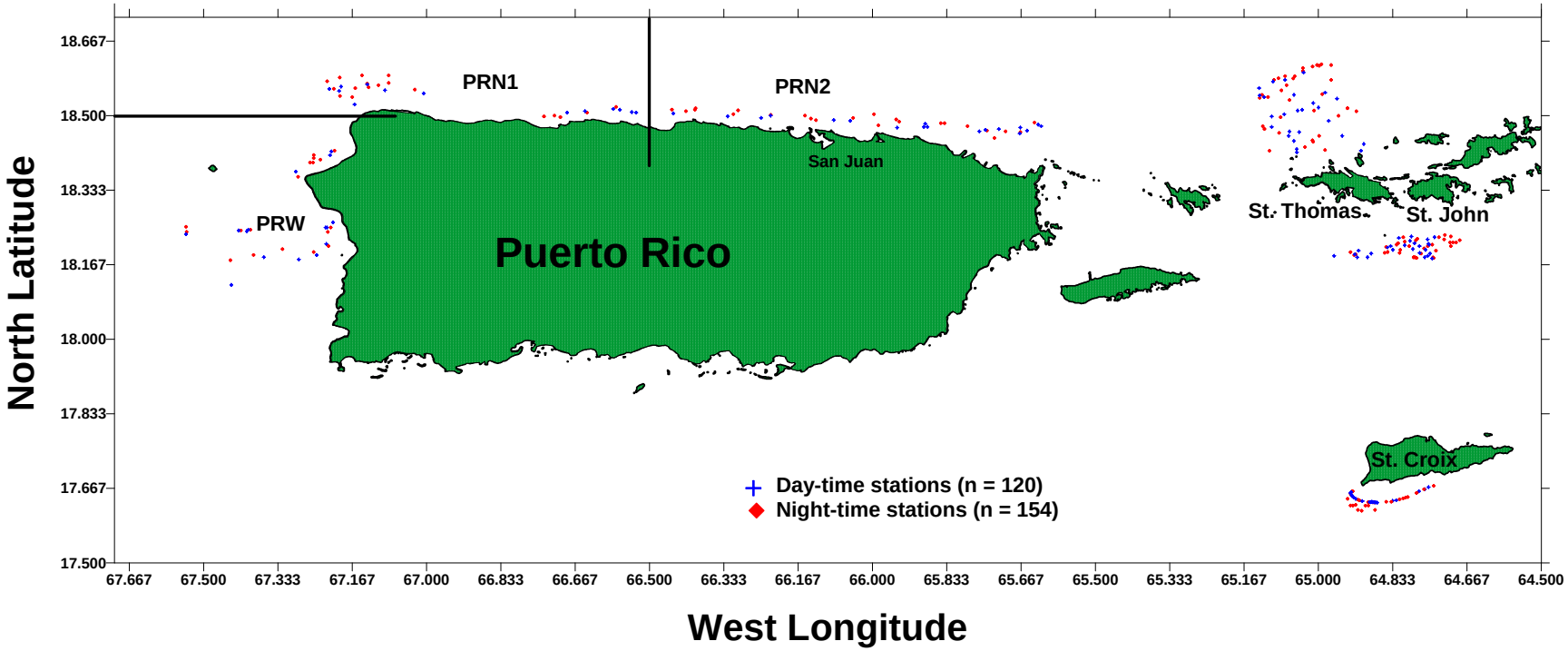

Figure1. Stations sampled around the US Caribbean during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012.

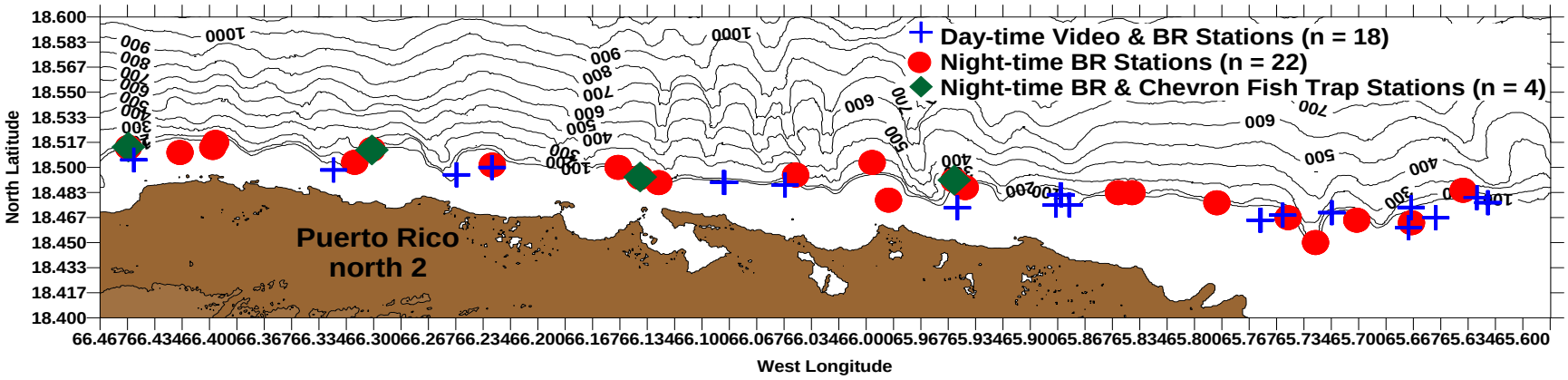

Figure 2. Stations sampled off the northeastern coast of Puerto Rico (PRN2) during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012.

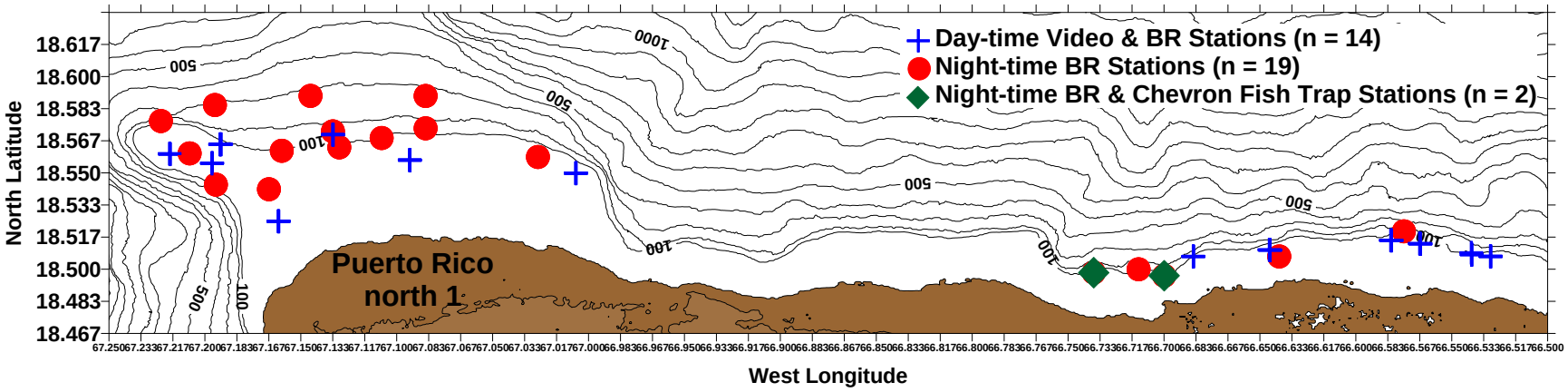

Figure 3. Stations sampled off the northwestern coast of Puerto Rico (PRN1) during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012.

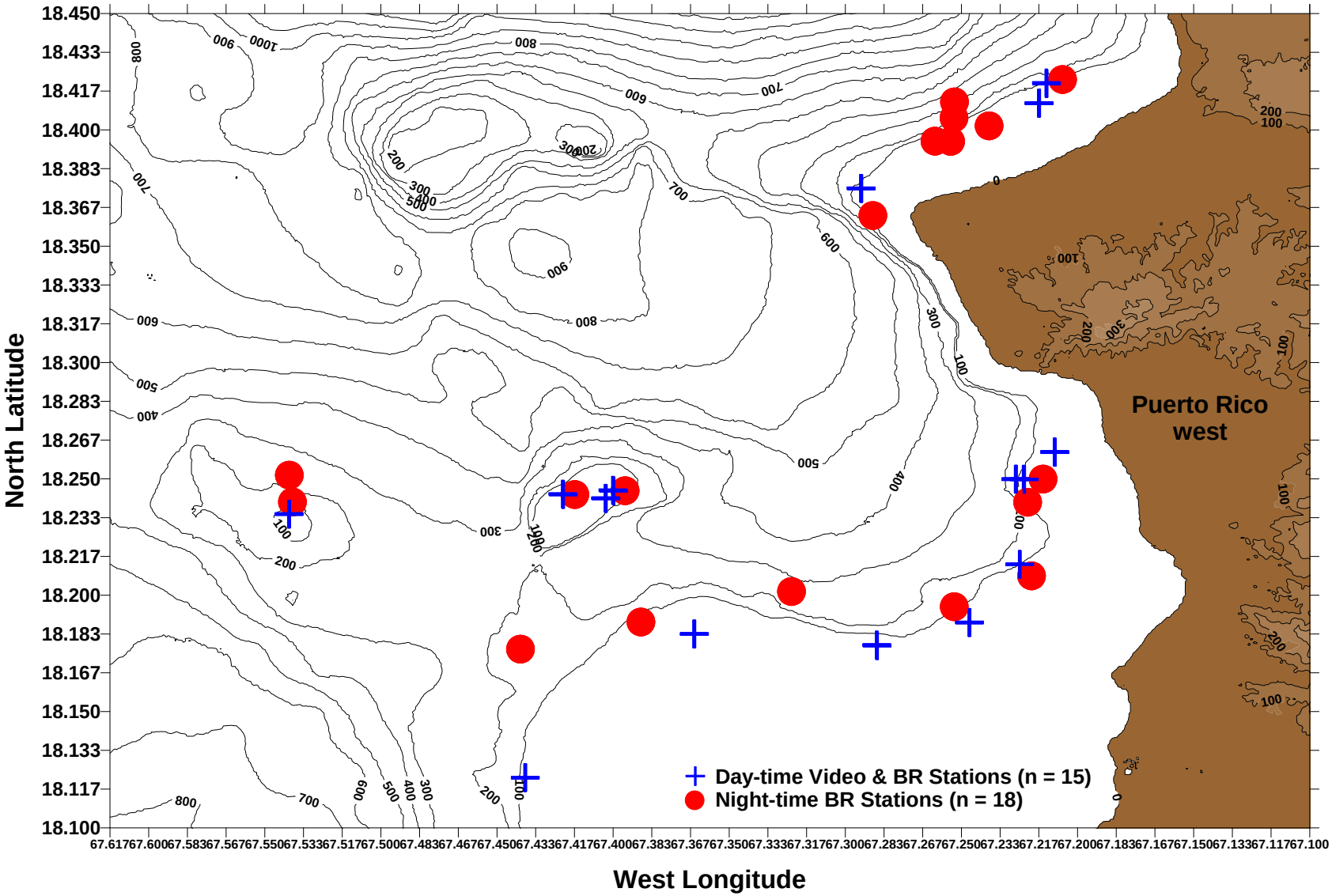

Figure 4. Stations sampled off the western coast of Puerto Rico (PRW) during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012.

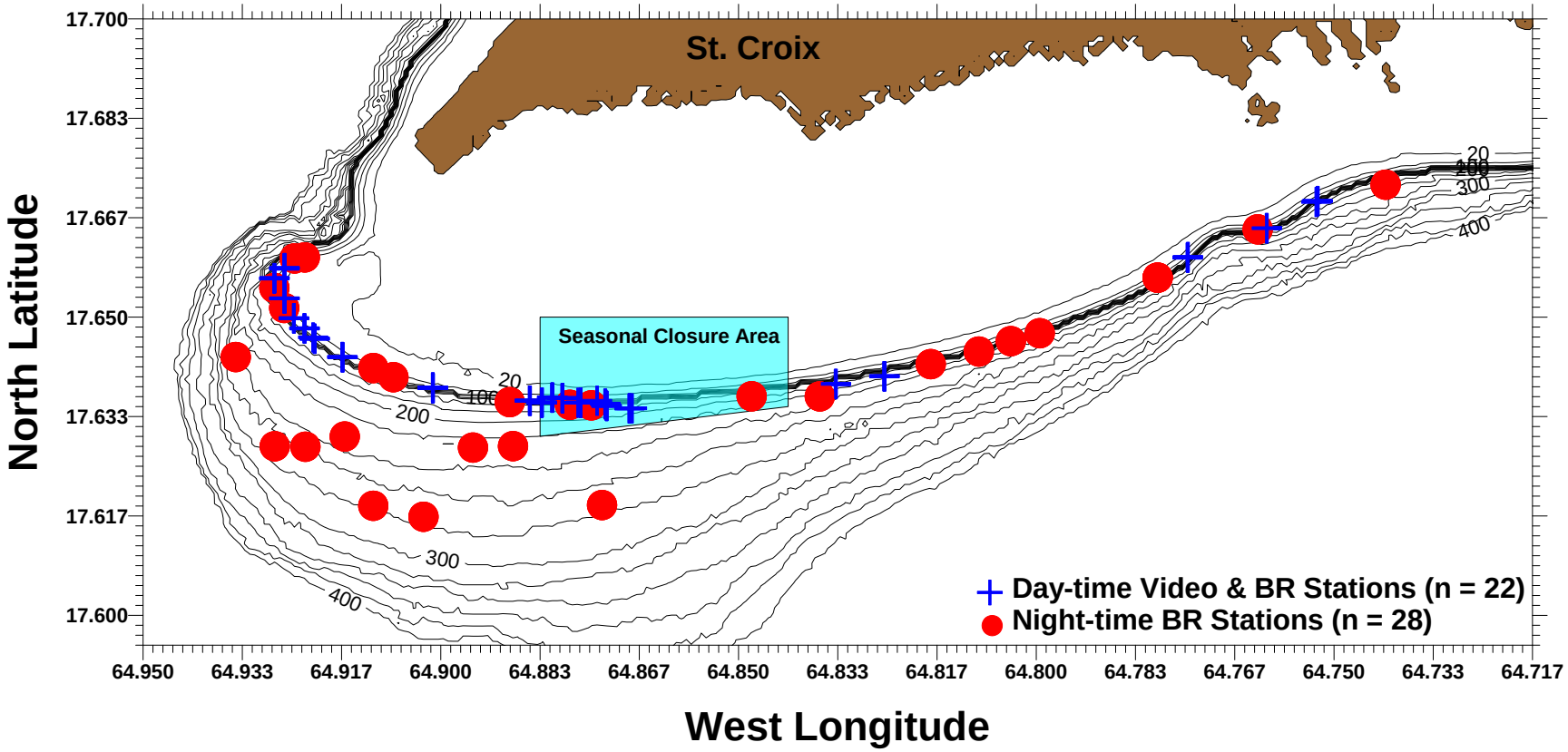

Figure 5. Stations sampled off the southwestern coast of St. Croix during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012.

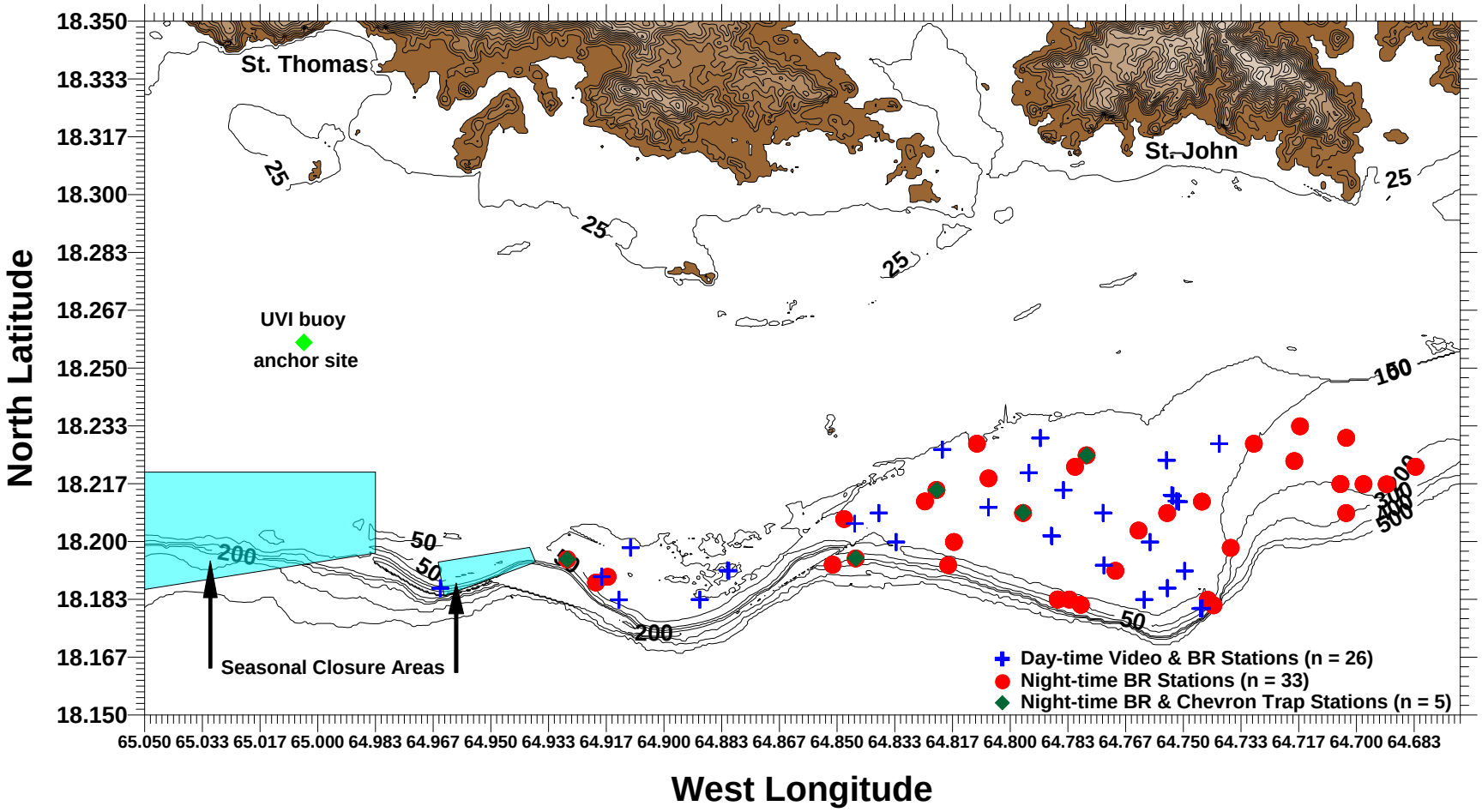

Figure 6. Stations sampled off the southern coasts of St. Thomas and St. John during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012.

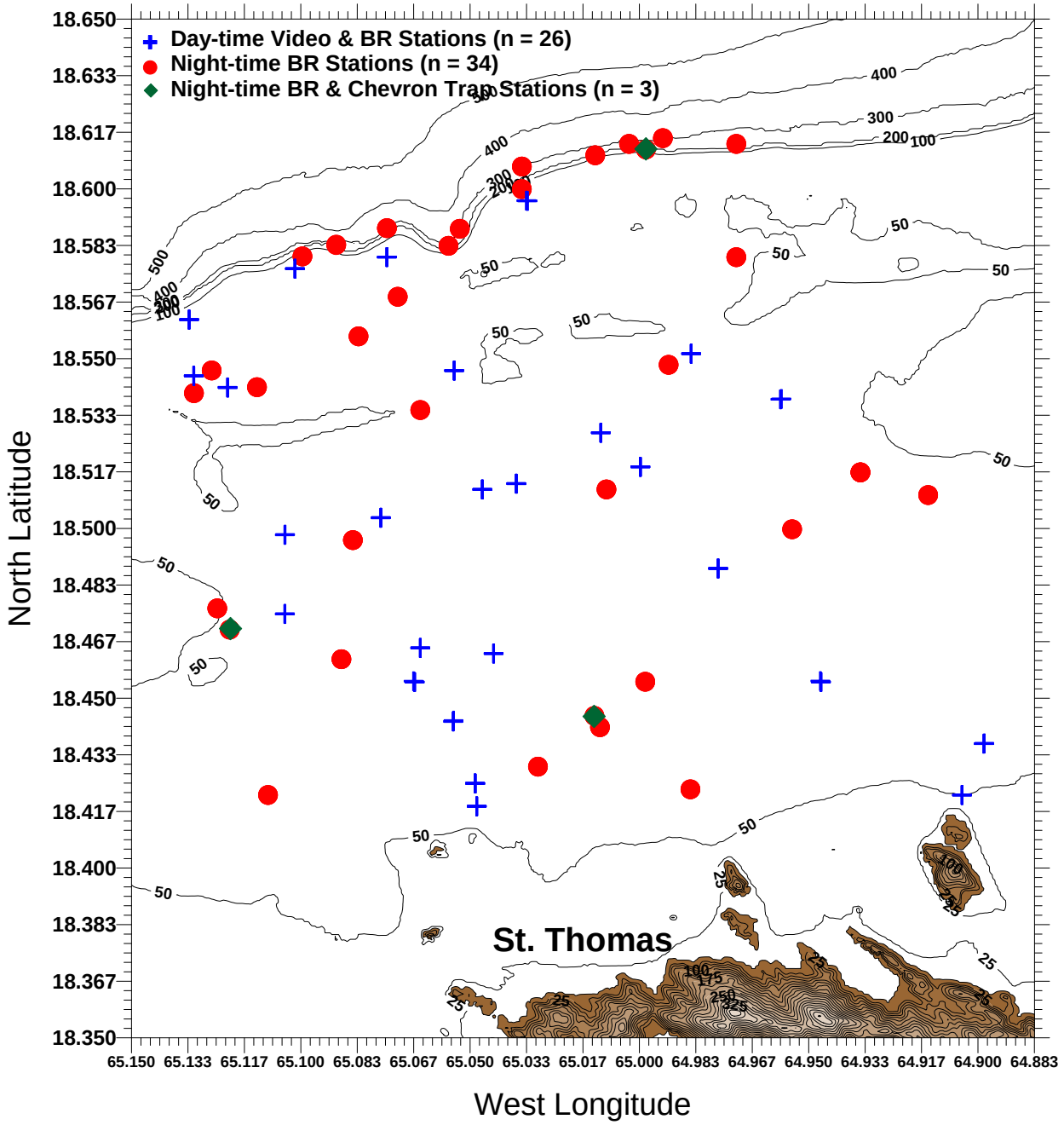

Figure 7. Stations sampled off the north coast of St. Thomas during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012.

Table 1. Sites sampled during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012 (PRN1 = Puerto Rico northwest, PRN2 = Puerto Rico northeast, PRW = Puerto Rico west, STX = St. Croix, STS = St. Thomas south, STN = St. Thomas north, VC = stereo camera, CTD = Seabird 911, BR = Bandit Reel, TR = Chevron Fish Trap, TDR = Temperature Depth Recorder, * = Station moved from original site).

Station	Date/time (z)	Site	Latitude N	Longitude W	Area	Depth (m)	Gear
001	06/04/2012 15:27:31	1515	18° 28.59	065° 37.28	PRN2	80.57	VC, TDR, CTD & BR
002	06/04/2012 16:50:53	1764	18° 28.79	065° 37.70	PRN2	89.55	VC, TDR, CTD & BR
003	06/04/2012 18:36:50	596	18° 28.00	065° 39.20	PRN2	68.28	VC, TDR, CTD & BR
004	06/04/2012 20:06:50	1077	18° 28.38	065° 40.09	PRN2	153.73	VC, TDR, CTD & BR
005	06/05/2012 0:22:59	2726	18° 29.08	065° 38.20	PRN2	247.84	CTD & BR
006	06/05/2012 1:19:31	428	18° 27.79	065° 40.08	PRN2	67.2	CTD & BR
007	06/05/2012 2:09:33	486	18° 27.89	065° 42.08	PRN2	76.05	CTD & BR
008	06/05/2012 3:08:13	43	18° 27.00	065° 43.59	PRN2	229.33	CTD & BR
009	06/05/2012 3:55:46	559	18° 27.99	065° 44.59	PRN2	87.72	CTD & BR
010	06/05/2012 4:54:27	1417	18° 28.58	065° 47.20	PRN2	190.35	CTD & BR
011	06/05/2012 5:56:43	2236	18° 28.99	065° 50.30	PRN2	229.62	CTD & BR
012	06/05/2012 6:37:37	2317	18° 28.99	065° 50.80	PRN2	212.06	CTD & BR
013	06/05/2012 17:19:26	272	18° 27.59	065° 40.18	PRN2	63.27	VC, TDR, CTD & BR
014	06/05/2012 19:10:52	769	18° 28.19	065° 42.98	PRN2	184.15	VC, TDR, CTD & BR
015	06/05/2012 21:02:58	651	18° 28.09	065° 44.78	PRN2	87.76	VC, TDR, CTD & BR
016	06/06/2012 0:15:42	2895	18° 29.19	065° 56.40	PRN2	164.01	CTD & BR
017	06/06/2012 1:02:38	3660	18° 29.48	065° 56.80	PRN2	240.2	CTD, BR & TR
018	06/06/2012 3:14:51	1526	18° 28.69	065° 59.20	PRN2	65.22	CTD & BR
019	06/06/2012 4:15:27	4941	18° 30.19	065° 59.79	PRN2	296.94	CTD & BR
020	06/06/2012 7:19:08	4049	18° 29.69	066° 02.59	PRN2	247.89	CTD & BR
021	06/06/2012 8:25:53	3319	18° 29.39	066° 07.60	PRN2	112.87	CTD & BR
022	06/06/2012 10:48:16	464	18° 27.89	065° 45.58	PRN2	67.66	VC, TDR, CTD & BR
023	06/06/2012 13:00:22	1144	18° 28.51	065° 52.60	PRN2	76.32	VC, TDR, CTD & BR
024	06/06/2012 14:52:57	2062	18° 28.91	065° 52.92	PRN2	100.47	VC, TDR, CTD & BR
025	06/06/2012 16:28:03	1232	18° 28.49	065° 53.08	PRN2	69.21	VC, TDR, CTD & BR
026	06/06/2012 18:07:13	1020	18° 28.39	065° 56.68	PRN2	67.38	VC, TDR, CTD & BR
027	06/06/2012 20:31:27	3138	18° 29.29	066° 02.98	PRN2	105.43	VC, TDR, CTD & BR
028	06/07/2012 0:10:45	3783	18° 29.60	066° 08.28	PRN2	162.78	CTD, BR & TR
029	06/07/2012 2:19:59	4663	18° 30.00	066° 09.08	PRN2	201.73	CTD & BR
030	06/07/2012 3:24:37	4827	18° 30.09	066° 13.68	PRN2	72.98	CTD & BR
031	06/07/2012 4:33:20	5966	18° 30.71	066° 18.08	PRN2	209.25	CTD, BR & TR
032	06/07/2012 6:48:22	5047	18° 30.20	066° 18.71	PRN2	323.97	CTD & BR
033	06/07/2012 7:54:59	6407	18° 30.99	066° 23.80	PRN2	85.93	CTD & BR
034	06/07/2012 8:28:09	6106	18° 30.79	066° 23.89	PRN2	66.99	CTD & BR
035	06/07/2012 9:09:16	5744	18° 30.59	066° 25.09	PRN2	60.23	CTD & BR
036	06/07/2012 11:10:14	3343	18° 29.39	066° 05.18	PRN2	168.15	VC, TDR, CTD & BR
037	06/07/2012 13:18:03	4617	18° 30.00	066° 13.70	PRN2	68.2	VC, TDR, CTD & BR

038	06/07/2012 14:52:38	3958	18° 29.70	066° 15.00	PRN2	126.13	VC, TDR, CTD & BR
039	06/07/2012 17:58:15	4357	18° 29.89	066° 19.48	PRN2	76.26	VC, TDR, CTD & BR
040	06/07/2012 19:51:41	5185	18° 30.29	066° 26.78	PRN2	64.97	VC, TDR, CTD & BR
041	06/07/2012 21:32:45	708	18° 30.39	066° 31.78	PRN1	97.5	VC, TDR, CTD & BR
042	06/08/2012 0:05:55	6075	18° 30.80	066° 26.98	PRN1	177.2	CTD, BR & TR
043	06/08/2012 3:06:55	2672	18° 31.18	066° 34.49	PRN1	231.7	CTD & BR
044	06/08/2012 4:11:43	686	18° 30.39	066° 38.39	PRN1	57.59	CTD & BR
045	06/08/2012 5:08:50	69	18° 29.79	066° 41.99	PRN1	152.97	CTD, BR & TR
046	06/08/2012 6:57:02	174	18° 30.00	066° 42.79	PRN1	155.22	CTD & BR
047	06/08/2012 7:38:31	90	18° 29.89	066° 44.19	PRN1	87.71	CTD, BR & TR
048	06/08/2012 10:51:17	909	18° 30.51	066° 32.38	PRN1	164.91	VC, TDR, CTD & BR
049	06/08/2012 12:21:59	1676	18° 30.80	066° 34.00	PRN1	113.39	VC, TDR, CTD & BR
050	06/08/2012 13:40:20	1942	18° 30.90	066° 34.90	PRN1	72.64	VC, TDR, CTD & BR
051	06/08/2012 15:20:29	1120	18° 30.60	066° 38.70	PRN1	79.52	VC, TDR, CTD & BR
052	06/08/2012 16:57:38	659	18° 30.39	066° 41.08	PRN1	99.37	VC, TDR, CTD & BR
053	06/10/2012 1:24:18	4796	18° 33.49	067° 01.58	PRN1	68.82	CTD & BR
054	06/10/2012 2:25:32	6067	18° 34.38	067° 05.09	PRN1	187.68	CTD & BR
055	06/10/2012 3:14:28	7232	18° 35.39	067° 05.09	PRN1	277.55	CTD & BR
056	06/10/2012 4:23:58	5624	18° 34.08	067° 06.47	PRN1	126.88	CTD & BR
057	06/10/2012 5:23:51	5176	18° 33.79	067° 07.79	PRN1	89.67	CTD & BR
058	06/10/2012 6:30:13	7205	18° 35.40	067° 08.69	PRN1	283.65	CTD & BR
059	06/10/2012 7:23:08	5896	18° 34.29	067° 07.99	PRN1	179.43	CTD & BR
060	06/10/2012 8:10:32	5008	18° 33.69	067° 09.59	PRN1	105.81	CTD & BR
061	06/10/2012 8:57:03	3652	18° 32.49	067° 09.99	PRN1	57.18	CTD & BR
062	06/10/2012 10:52:36	4076	18° 32.99	067° 00.39	PRN1	67.45	VC, TDR, CTD & BR
063	06/10/2012 12:28:26	4611	18° 33.40	067° 05.59	PRN1	64.24	VC, TDR, CTD & BR
064	06/10/2012 14:03:23	5753	18° 34.19	067° 07.99	PRN1	176.54	VC, TDR, CTD & BR
065	06/10/2012 15:50:48	3138	18° 31.50	067° 09.70	PRN1	53.79	VC, TDR, CTD & BR
066	06/10/2012 17:25:20	5286	18° 33.89	067° 11.49	PRN1	110.45	VC, TDR, CTD & BR
067	06/10/2012 18:57:57	4829	18° 33.60	067° 13.10	PRN1	62.84	VC, TDR, CTD & BR
068	06/10/2012 20:42:46	4401	18° 33.29	067° 11.77	PRN1	62.34	VC, TDR, CTD & BR
069	06/11/2012 0:19:52	6995	18° 35.11	067° 11.68	PRN1	316.67	CTD & BR
070	06/11/2012 1:18:08	6267	18° 34.61	067° 13.37	PRN1	224.06	CTD & BR
071	06/11/2012 2:02:54	4835	18° 33.60	067° 12.47	PRN1	63.31	CTD & BR
072	06/11/2012 2:42:40	3682	18° 32.63	067° 11.65	PRN1	63.33	CTD & BR
073	06/11/2012 3:59:17	10597	18° 25.29	067° 12.38	PRW	148.95	CTD & BR
074	06/11/2012 4:57:57	10397	18° 24.72	067° 15.17	PRW	390.73	CTD & BR
075	06/11/2012 5:40:53	9947	18° 23.70	067° 15.28	PRW	78.84	CTD & BR
076	06/11/2012 6:49:50	9306	18° 21.79	067° 17.28	PRW	26.51	CTD & BR
077	06/11/2012 7:43:35	9943	18° 23.71	067° 15.68	PRW	120.85	CTD & BR
078	06/11/2012 8:30:02	10225	18° 24.30	067° 15.19	PRW	274.29	CTD & BR
079	06/11/2012 9:14:20	10130	18° 24.10	067° 14.28	PRW	70.44	CTD & BR
080	06/11/2012 10:52:50	10417	18° 24.68	067° 12.98	PRW	71.74	VC, TDR, CTD & BR

081	06/11/2012 12:05:06	10564	18° 25.21	067° 12.80	PRW	164.88	VC, TDR, CTD & BR
082	06/11/2012 13:44:41	9415	18° 22.49	067° 17.59	PRW	57.01	VC, TDR, CTD & BR
083	06/11/2012 15:47:04	8777	18° 15.68	067° 12.58	PRW	49.24	VC, TDR, CTD & BR
084	06/11/2012 17:07:05	8161	18° 14.98	067° 13.37	PRW	86.17	VC, TDR, CTD & BR
085	06/11/2012 18:27:09	8159	18° 14.99	067° 13.58	PRW	135.13	VC, TDR, CTD & BR
086	06/11/2012 19:52:37	5490	18° 12.79	067° 13.49	PRW	139.26	VC, TDR, CTD & BR
087	06/11/2012 21:18:45	2983	18° 11.29	067° 14.78	PRW	70.2	VC, TDR, CTD & BR
088	06/12/2012 0:03:44	8166	18° 14.99	067° 12.89	PRW	54.39	CTD & BR
089	06/12/2012 0:38:22	7505	18° 14.39	067° 13.28	PRW	65.71	CTD & BR
090	06/12/2012 1:20:06	4959	18° 12.49	067° 13.18	PRW	74	CTD & BR
091	06/12/2012 2:04:03	3719	18° 11.70	067° 15.18	PRW	152.33	CTD & BR
092	06/12/2012 3:07:28	4212	18° 12.09	067° 19.39	PRW	295.99	CTD & BR
093	06/12/2012 4:04:08	3025	18° 11.30	067° 23.28	PRW	90.31	CTD & BR
094	06/12/2012 4:56:13	7825	18° 14.69	067° 23.69	PRW	76.87	CTD & BR
095	06/12/2012 5:46:44	7701	18° 14.59	067° 24.99	PRW	68.71	CTD & BR
096	06/12/2012 7:20:35	8290	18° 15.09	067° 32.36	PRW	234.2	CTD & BR
097	06/12/2012 8:07:11	7537	18° 14.40	067° 32.28	PRW	146.07	CTD & BR
098	06/12/2012 9:25:30	2207	18° 10.60	067° 26.39	PRW	183.4	CTD & BR
099	06/12/2012 10:59:25	2329	18° 10.69	067° 17.17	PRW	82.17	VC, TDR, CTD & BR
100	06/12/2012 12:29:50	2625	18° 10.99	067° 21.89	PRW	66.1	VC, TDR, CTD & BR
101	06/12/2012 13:55:47	7822	18° 14.70	067° 24.00	PRW	72.66	VC, TDR, CTD & BR
102	06/12/2012 15:12:36	7783	18° 14.61	067° 25.30	PRW	76.31	VC, TDR, CTD & BR
103	06/12/2012 16:28:13	7601	18° 14.49	067° 24.18	PRW	72.45	VC, TDR, CTD & BR
104	06/12/2012 18:45:30	7182	18° 14.09	067° 32.37	PRW	101.83	VC, TDR, CTD & BR
105	06/12/2012 20:46:33	1016	18° 07.29	067° 26.27	PRW	77.84	VC, TDR, CTD & BR
106	06/16/2012 15:27:31	1101	17° 40.15	064° 45.17	STX	46.07	VC, TDR, CTD & BR
107	06/16/2012 16:53:09	1106	17° 39.89	064° 45.67	STX	30.43	VC, TDR, CTD & BR
108	06/16/2012 18:10:01	1002	17° 39.59	064° 46.47	STX	37.35	VC, CTD & BR
109*	06/16/2012 19:47:24	892	17° 38.40	064° 49.53	STX	51.91	VC, TDR, CTD & BR
110*	06/16/2012 21:03:51	858	17° 38.32	064° 50.01	STX	44.95	VC, TDR, CTD & BR
111*	06/17/2012 0:10:18	-	17° 40.33	064° 44.47	STX	77.94	CTD & BR
112	06/17/2012 1:05:43	1009	17° 39.88	064° 45.76	STX	28.21	CTD & BR
113	06/17/2012 1:41:09	999	17° 39.39	064° 46.77	STX	35.8	CTD & BR
114*	06/17/2012 2:17:48	-	17° 38.83	064° 47.96	STX	41.5	CTD & BR
115	06/17/2012 2:42:18	962	17° 38.75	064° 48.25	STX	33.53	CTD & BR
116	06/17/2012 3:07:59	951	17° 38.65	064° 48.57	STX	34.21	CTD & BR
117*	06/17/2012 3:38:00	924	17° 38.52	064° 49.06	STX	40.87	CTD & BR
118	06/17/2012 4:20:29	819	17° 38.20	064° 50.18	STX	132.39	CTD & BR
119*	06/17/2012 4:54:41	834	17° 38.20	064° 50.86	STX	43.5	CTD & BR
120	06/17/2012 5:43:02	188	17° 37.10	064° 52.37	STX	263.92	CTD & BR
121*	06/17/2012 6:20:11	-	17° 38.11	064° 52.48	STX	32.19	CTD & BR
122*	06/17/2012 6:57:06	-	17° 38.11	064° 52.69	STX	28.53	CTD & BR
123*	06/17/2012 7:37:58	724	17° 38.14	064° 53.30	STX	25.74	CTD & BR

124	06/17/2012 8:19:18	490	17° 37.70	064° 53.27	STX	206.09	CTD & BR
125	06/17/2012 9:02:45	458	17° 37.68	064° 53.67	STX	208.4	CTD & BR
126*	06/17/2012 10:46:25	-	17° 38.08	064° 52.07	STX	67.39	VC, CTD & BR
127*	06/17/2012 12:00:39	-	17° 38.11	064° 52.33	STX	30.69	VC, TDR, CTD & BR
128	06/17/2012 13:00:25	829	17° 38.15	064° 52.42	STX	23.46	VC, TDR, CTD & BR
129	06/17/2012 14:48:09	813	17° 38.13	064° 52.61	STX	22.2	VC, TDR, CTD & BR
130	06/17/2012 16:01:13	779	17° 38.18	064° 52.77	STX	26.34	VC, TDR, CTD & BR
131	06/17/2012 17:06:33	792	17° 38.19	064° 52.87	STX	37.59	VC, TDR, CTD & BR
132	06/17/2012 18:18:33	791	17° 38.13	064° 52.98	STX	23.18	VC, TDR, CTD & BR
133	06/17/2012 19:38:57	790	17° 38.15	064° 53.09	STX	22.69	VC, TDR, CTD & BR
134	06/17/2012 21:15:55	857	17° 38.29	064° 54.08	STX	42.63	VC, TDR, CTD & BR
135	06/18/2012 0:21:30	122	17° 36.99	064° 54.17	STX	266	CTD & BR
136	06/18/2012 1:02:46	195	17° 37.10	064° 54.68	STX	266.89	CTD & BR
137	06/18/2012 1:46:04	547	17° 37.79	064° 54.96	STX	221.86	CTD & BR
138	06/18/2012 2:22:54	480	17° 37.69	064° 55.36	STX	245.57	CTD & BR
139	06/18/2012 3:01:19	504	17° 37.70	064° 55.67	STX	260.92	CTD & BR
140	06/18/2012 3:38:41	897	17° 38.39	064° 54.47	STX	46.79	CTD & BR
141	06/18/2012 4:09:25	904	17° 38.48	064° 54.67	STX	45.27	CTD & BR
142	06/18/2012 4:52:08	930	17° 38.59	064° 56.06	STX	240.34	CTD & BR
143	06/18/2012 5:24:23	985	17° 39.09	064° 55.57	STX	39.25	CTD & BR
144	06/18/2012 5:55:54	995	17° 39.29	064° 55.67	STX	86.89	CTD & BR
145	06/18/2012 6:52:03	1001	17° 39.59	064° 55.47	STX	237.58	CTD & BR
146	06/18/2012 7:27:56	1003	17° 39.60	064° 55.37	STX	248.69	CTD & BR
147	06/18/2012 10:47:45	857	17° 38.29	064° 54.07	STX	42.88	VC, TDR, CTD & BR
148	06/18/2012 12:04:03	939	17° 38.59	064° 54.99	STX	44.4	VC, TDR, CTD & BR
149	06/18/2012 13:13:20	961	17° 38.79	064° 55.28	STX	42.88	VC, TDR, CTD & BR
150	06/18/2012 14:26:05	965	17° 38.88	064° 55.37	STX	35.21	VC, TDR, CTD & BR
151	06/18/2012 15:35:43	978	17° 38.98	064° 55.48	STX	28.77	VC, TDR, CTD & BR
152	06/18/2012 16:45:51	990	17° 39.18	064° 55.57	STX	27.78	VC, TDR, CTD & BR
153	06/18/2012 17:58:48	998	17° 39.38	064° 55.67	STX	105.87	VC, TDR, CTD & BR
154	06/18/2012 19:17:11	1000	17° 39.48	064° 55.57	STX	104.81	VC, TDR, CTD & BR
155	06/18/2012 23:55:04	2717	18° 13.29	064° 40.97	STS	55.38	CTD & BR
156	06/19/2012 0:25:26	2439	18° 12.98	064° 41.47	STS	57	CTD & BR
157	06/19/2012 0:54:16	2435	18° 12.99	064° 41.87	STS	54.63	CTD & BR
158	06/19/2012 1:23:31	1866	18° 12.49	064° 42.17	STS	55.55	CTD & BR
159	06/19/2012 1:54:40	2340	18° 12.99	064° 42.27	STS	56.1	CTD & BR
160	06/19/2012 2:25:23	3120	18° 13.79	064° 42.17	STS	54.28	CTD & BR
161	06/19/2012 2:55:09	3257	18° 13.99	064° 42.97	STS	52.85	CTD & BR
162	06/19/2012 3:25:47	2787	18° 13.39	064° 43.07	STS	53.19	CTD & BR
163	06/19/2012 3:56:58	3029	18° 13.69	064° 43.77	STS	54.55	CTD & BR
164	06/19/2012 4:39:03	1284	18° 11.89	064° 44.17	STS	52.54	CTD & BR
165	06/19/2012 5:20:22	239	18° 10.89	064° 44.47	STS	279.73	CTD & BR
166	06/19/2012 5:48:49	364	18° 10.99	064° 44.57	STS	45.2	CTD & BR

167	06/19/2012 6:25:08	2034	18° 12.69	064° 44.67	STS	53.36	CTD & BR
168	06/19/2012 6:56:01	1835	18° 12.49	064° 45.28	STS	53.14	CTD & BR
169	06/19/2012 7:26:08	1569	18° 12.18	064° 45.77	STS	54.94	CTD & BR
170	06/19/2012 7:59:30	828	18° 11.49	064° 46.17	STS	56.26	CTD & BR
171	06/19/2012 8:42:53	216	18° 10.90	064° 46.77	STS	207.28	CTD & BR
172	06/19/2012 10:45:43	3023	18° 13.68	064° 44.37	STS	54.28	VC, TDR, CTD & BR
172	06/19/2012 12:03:02	2765	18° 13.40	064° 45.29	STS	53.59	VC, TDR, CTD & BR
173	06/19/2012 12:03:02	2765	18° 13.40	064° 45.29	STS	53.59	VC, TDR, CTD & BR
174	06/19/2012 13:11:55	2124	18° 12.80	064° 45.20	STS	52.45	VC, TDR, CTD & BR
175	06/19/2012 14:20:20	2030	18° 12.70	064° 45.12	STS	52.55	VC, TDR, CTD & BR
176	06/19/2012 15:32:40	1414	18° 11.99	064° 45.57	STS	55.43	VC, TDR, CTD & BR
177	06/19/2012 16:49:54	840	18° 11.48	064° 44.97	STS	56.23	VC, TDR, CTD & BR
178	06/19/2012 18:22:10	179	18° 10.84	064° 44.70	STS	77.27	VC, TDR, CTD & BR
179	06/19/2012 19:55:18	511	18° 11.19	064° 45.27	STS	56.2	VC, TDR, CTD & BR
180	06/19/2012 21:22:16	353	18° 10.98	064° 45.67	STS	56.55	VC, TDR, CTD & BR
181	06/20/2012 0:14:21	277	18° 10.99	064° 46.97	STS	56.36	CTD & BR
182	06/20/2012 1:08:49	338	18° 10.99	064° 47.17	STS	266.66	CTD & BR
183	06/20/2012 1:51:13	1810	18° 12.49	064° 47.77	STS	50.54	CTD, BR & TR
184	06/20/2012 3:37:21	2658	18° 13.29	064° 46.87	STS	51.55	CTD & BR
185	06/20/2012 4:04:05	2837	18° 13.49	064° 46.67	STS	51.15	CTD, BR & TR
186	06/20/2012 5:56:38	2461	18° 13.09	064° 48.37	STS	52.53	CTD & BR
187	06/20/2012 6:26:42	2981	18° 13.69	064° 48.57	STS	52.95	CTD & BR
188	06/20/2012 6:56:49	2176	18° 12.89	064° 49.27	STS	54.98	CTD, BR & TR
189	06/20/2012 8:43:13	1986	18° 12.69	064° 49.47	STS	54.29	CTD & BR
190	06/20/2012 10:45:35	956	18° 11.58	064° 46.37	STS	57.22	VC, CTD & BR
191	06/20/2012 12:00:22	1824	18° 12.49	064° 46.39	STS	55.73	VC, TDR, CTD & BR
192	06/20/2012 13:13:49	1476	18° 12.10	064° 47.28	STS	55.17	VC, TDR, CTD & BR
193	06/20/2012 14:29:18	2198	18° 12.89	064° 47.07	STS	51.73	VC, TDR, CTD & BR
194	06/20/2012 15:39:04	3067	18° 13.78	064° 47.47	STS	54.16	VC, TDR, CTD & BR
195	06/20/2012 17:03:28	2559	18° 13.18	064° 47.67	STS	52.7	VC, TDR, CTD & BR
196	06/20/2012 18:16:34	1902	18° 12.58	064° 48.37	STS	53.61	VC, TDR, CTD & BR
197	06/20/2012 19:43:36	2896	18° 13.58	064° 49.17	STS	50.7	VC, TDR, CTD & BR
198	06/20/2012 21:20:32	1785	18° 12.48	064° 50.27	STS	55.3	VC, TDR, CTD & BR
199	06/21/2012 0:02:48	1380	18° 11.99	064° 48.97	STS	55.69	CTD & BR
200	06/21/2012 0:50:08	929	18° 11.59	064° 49.07	STS	63.26	CTD & BR
201	06/21/2012 1:39:46	1020	18° 11.70	064° 50.67	STS	282.44	CTD, BR & TR
202	06/21/2012 3:49:04	909	18° 11.59	064° 51.07	STS	384.07	CTD & BR
203	06/21/2012 4:24:11	1684	18° 12.38	064° 50.87	STS	53.05	CTD & BR
204	06/21/2012 6:17:30	644	18° 11.38	064° 54.97	STS	54.72	CTD & BR
205	06/21/2012 6:47:46	536	18° 11.29	064° 55.17	STS	56.86	CTD & BR
206	06/21/2012 7:20:46	989	18° 11.69	064° 55.67	STS	52.83	CTD, BR & TR
207	06/21/2012 10:46:27	1305	18° 11.99	064° 49.98	STS	56.72	VC, TDR, CTD & BR
208	06/21/2012 12:08:52	1603	18° 12.30	064° 50.69	STS	53.54	VC, TDR & CTD

209	06/21/2012 13:48:24	780	18° 11.50	064° 52.90	STS	51.31	VC, TDR, CTD & BR
210	06/21/2012 15:03:34	259	18° 10.99	064° 53.37	STS	50.69	VC, TDR, CTD & BR
211	06/21/2012 16:19:35	1199	18° 11.88	064° 54.57	STS	50.85	VC, TDR, CTD & BR
212	06/21/2012 17:35:27	308	18° 10.99	064° 54.77	STS	56.71	VC, TDR, CTD & BR
213	06/21/2012 18:47:59	643	18° 11.38	064° 55.07	STS	56.3	VC, TDR, CTD & BR
214	06/21/2012 20:22:54	446	18° 11.18	064° 57.87	STS	84.17	VC, TDR, CTD & BR
215	06/22/2012 0:29:45	358	18° 25.29	065° 06.58	STN	52.73	CTD & BR
216	06/22/2012 1:12:09	4008	18° 27.68	065° 05.28	STN	54.12	CTD & BR
217	06/22/2012 1:52:51	4773	18° 28.21	065° 07.26	STN	52.41	CTD, BR & TR
218	06/22/2012 3:46:03	5409	18° 28.58	065° 07.48	STN	44.14	CTD & BR
219	06/22/2012 4:28:13	7407	18° 29.79	065° 05.07	STN	59.08	CTD & BR
220	06/22/2012 5:21:03	11055	18° 32.39	065° 07.89	STN	62.14	CTD & BR
221	06/22/2012 5:48:38	11559	18° 32.79	065° 07.57	STN	57.8	CTD & BR
222	06/22/2012 6:18:53	11187	18° 32.49	065° 06.77	STN	61.89	CTD & BR
223	06/22/2012 6:58:43	12146	18° 33.39	065° 04.97	STN	62.55	CTD & BR
224	06/22/2012 7:46:22	13865	18° 35.30	065° 04.47	STN	316.12	CTD & BR
225	06/22/2012 8:38:32	13664	18° 35.01	065° 05.37	STN	376.69	CTD & BR
226	06/22/2012 9:17:25	13494	18° 34.80	065° 05.97	STN	145.34	CTD & BR
227	06/22/2012 10:46:59	12416	18° 33.68	065° 07.98	STN	78.62	VC, TDR, CTD & BR
228	06/22/2012 12:11:49	11427	18° 32.69	065° 07.89	STN	59.36	VC, TDR, CTD & BR
229	06/22/2012 13:22:54	11182	18° 32.49	065° 07.30	STN	62.55	VC, TDR, CTD & BR
230	06/22/2012 14:46:51	13317	18° 34.59	065° 06.10	STN	78.51	VC, TDR, CTD & BR
231	06/22/2012 16:12:11	13509	18° 34.79	065° 04.47	STN	80.76	VC, TDR, CTD & BR
232	06/22/2012 17:40:54	11602	18° 32.78	065° 03.28	STN	55.79	VC, TDR, CTD & BR
233	06/22/2012 19:07:08	8091	18° 30.18	065° 04.58	STN	59.77	VC, TDR, CTD & BR
234	06/22/2012 20:28:06	7564	18° 29.88	065° 06.28	STN	57.81	VC, TDR, CTD & BR
235	06/22/2012 21:40:41	5261	18° 28.48	065° 06.28	STN	53.93	VC, TDR, CTD & BR
236	06/23/2012 0:05:01	1141	18° 25.78	065° 01.79	STN	54.4	CTD & BR
237	06/23/2012 0:41:52	2218	18° 26.48	065° 00.69	STN	53.65	CTD & BR
238	06/23/2012 1:11:24	2523	18° 26.68	065° 00.79	STN	53.85	CTD, BR & TR
239	06/23/2012 2:59:12	3452	18° 27.29	064° 59.89	STN	55.65	CTD & BR
240	06/23/2012 3:38:34	569	18° 25.39	064° 59.09	STN	55.5	CTD & BR
241	06/23/2012 4:34:15	7824	18° 29.98	064° 57.29	STN	57.12	CTD & BR
242	06/23/2012 5:31:26	8868	18° 30.58	064° 54.88	STN	53.6	CTD & BR
243	06/23/2012 6:07:21	9507	18° 30.99	064° 56.08	STN	54.63	CTD & BR
244	06/23/2012 6:57:33	8978	18° 30.68	065° 00.58	STN	58.08	CTD & BR
245	06/23/2012 7:36:55	11770	18° 32.89	064° 59.48	STN	56.55	CTD & BR
246	06/23/2012 8:16:49	13571	18° 34.79	064° 58.28	STN	53.67	CTD & BR
247	06/23/2012 10:46:25	162	18° 25.08	065° 02.88	STN	54.65	VC, TDR, CTD & BR
248	06/23/2012 11:59:19	678	18° 25.49	065° 02.90	STN	54.99	VC, TDR, CTD & BR
249	06/23/2012 13:12:13	2345	18° 26.60	065° 03.29	STN	55.49	VC, TDR, CTD & BR
250	06/23/2012 14:31:28	3411	18° 27.30	065° 04.00	STN	55.42	VC, TDR, CTD & BR
251	06/23/2012 15:42:13	4335	18° 27.89	065° 03.88	STN	55.49	VC, TDR, CTD & BR

252	06/23/2012 16:52:40	4191	18° 27.78	065° 02.58	STN	52.89	VC, TDR, CTD & BR
253	06/23/2012 18:23:19	8956	18° 30.69	065° 02.78	STN	61.37	VC, TDR, CTD & BR
254	06/23/2012 19:29:51	9129	18° 30.78	065° 02.17	STN	60.47	VC, TDR, CTD & BR
255	06/23/2012 20:48:12	10285	18° 31.68	065° 00.68	STN	58.56	VC, TDR, CTD & BR
256	06/24/2012 0:14:06	14621	18° 36.79	064° 58.28	STN	295.91	CTD & BR
257	06/24/2012 1:03:20	14624	18° 36.89	064° 59.58	STN	339.7	CTD & BR
258	06/24/2012 1:43:38	14580	18° 36.69	064° 59.88	STN	265.64	CTD, BR & TR
259	06/24/2012 3:43:35	14602	18° 36.79	065° 00.18	STN	317.24	CTD & BR
260	06/24/2012 4:25:39	14541	18° 36.59	065° 00.78	STN	284.07	CTD & BR
261	06/24/2012 5:15:32	14456	18° 36.39	065° 02.08	STN	365.02	CTD & BR
262	06/24/2012 5:49:00	14281	18° 35.99	065° 02.08	STN	137.64	CTD & BR
263	06/24/2012 6:45:11	13871	18° 35.29	065° 03.18	STN	338.83	CTD & BR
264	06/24/2012 7:31:59	13684	18° 34.99	065° 03.38	STN	329.38	CTD & BR
265	06/24/2012 8:12:07	12853	18° 34.09	065° 04.28	STN	64.31	CTD & BR
266	06/24/2012 8:52:17	10734	18° 32.09	065° 03.88	STN	53.98	CTD & BR
267	06/24/2012 10:46:46	472	18° 25.28	064° 54.28	STN	50.12	VC, TDR, CTD & BR
268	06/24/2012 11:58:05	1829	18° 26.19	064° 53.89	STN	52.61	VC, TDR, CTD & BR
269	06/24/2012 13:25:18	3483	18° 27.30	064° 56.79	STN	55.71	VC, TDR, CTD & BR
270	06/24/2012 14:47:01	6638	18° 29.29	064° 58.60	STN	58.94	VC, TDR, CTD & BR
271	06/24/2012 16:05:41	9613	18° 31.08	064° 59.98	STN	58	VC, TDR, CTD & BR
272	06/24/2012 17:24:13	11038	18° 32.28	064° 57.48	STN	54.81	VC, TDR, CTD & BR
273	06/24/2012 18:39:27	11905	18° 33.08	064° 59.08	STN	55.88	VC, TDR, CTD & BR
274	06/24/2012 20:11:39	14187	18° 35.78	065° 01.98	STN	74.76	VC, TDR, CTD & BR

Table 2. Fish collected by bandit reel during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012 (Reel positions are reel#1 is starboard, reel #2 is starboard aft, and reel #3 is stern starboard; * = fish bit in half).

Station #	**Reel #**	**Hook #**	**Hook Size**	**Taxa**	**Common Name**	**Total Length** (mm)	**Fork Length** (mm)	**Standard Length** (mm)	**Weight** (kg)	**Sex**	**Maturity**	**Comment/ Samples Collected**
004	2	2	8	*Lutjanus vivanus*	silk snapper	385	375	320	0.746	M	3	otoliths
004	2	3	8	*Lutjanus vivanus*	silk snapper	252	233	213	0.205	M	2	otoliths
004	2	4	8	*Lutjanus vivanus*	silk snapper	420	389	340	0.809	F	3	otoliths
004	2	5	8	*Lutjanus vivanus*	silk snapper	243	229	198	0.178	F	2	otoliths
008	1	9	15	Perciformes	unidentified fish	-	-	-	-	-	-	escaped
008	3	5	8	*Caranx crysos*	blue runner	470	389	350	1.089	M	3	otoliths
009	3	4	11	*Echeneis naucrates*	sharksucker	491	485	424	0.348	U	1	released
014	2	1	8	*Lutjanus vivanus*	silk snapper	444	408	358	1.086	F	3	otoliths
014	3	2	11	*Lutjanus vivanus*	silk snapper	298	273	231	0.293	M	3	otoliths
021	3	2	8	*Lutjanus vivanus*	silk snapper	315	287	244	0.367	F	4	otoliths
023	3	1	11	*Caranx crysos*	blue runner	478	406	382	1.187	U	1	otoliths
048	1	2	8	*Lutjanus vivanus*	silk snapper	364	335	291	0.543	M	3	otoliths
049	2	1	11	*Lutjanus synagris*	lane snapper	269	255	228	0.251	F	3	otoliths
049	3	2	15	*Lutjanus synagris*	lane snapper	265	252	222	0.248	M	3	otoliths
049	3	3	15	*Lutjanus synagris*	lane snapper	333	310	274	0.59	M	3	otoliths
051	3	1	8	*Lutjanus synagris*	lane snapper	213	205	178	0.121	F	3	otoliths
051	3	4	8	*Rhomboplites aurorubens*	vermilion snapper	230	208	185	0.145	F	3	otoliths
053	2	1	8	*Lutjanus vivanus*	silk snapper	324	299	255	0.41	M	1	otoliths
053	3	1	11	*Caranx crysos*	blue runner	421	343	310	0.69	M	4	otoliths
055	3	4	15	*Mustelus*	smoothhound	892	777	715	2.35	M	6	released
058	3	2	15	*Squalus cubensis*	Cuban dogfish	530	469	423	0.795	M	6	-
060	3	9	8	*Caranx latus*	horse-eye jack	526	444	393	1.644	F	3	otoliths
063	3	1	8	*Epinephelus guttatus*	red hind	269	-	217	0.233	F	2	otoliths
063	3	2	8	*Epinephelus guttatus*	red hind	322	-	265	0.408	F	3	otoliths
065	2	2	8	*Ocyurus chrysurus*	yellowtail snapper	410	371	328	0.765	F	3	otoliths
070	2	1	11	*Lutjanus vivanus*	silk snapper	391	355	300	0.67	F	5	otoliths

072	3	1	8	*Holocentrus adscensionis*	squirrelfish	325	257	233	0.315	M	3	otoliths
072	3	2	8	*Holocentrus adscensionis*	squirrelfish	291	242	221	0.297	M	3	otoliths
081	3	2	8	*Lutjanus synagris*	lane snapper	340	326	277	0.505	M	3	otoliths
081	3	6	8	*Rhomboplites aurorubens*	vermilion snapper	222	200	180	0.136	M	3	otoliths
081	3	8	8	*Rhomboplites aurorubens*	vermilion snapper	210	190	168	0.108	M	3	otoliths
081	3	9	8	*Rhomboplites aurorubens*	vermilion snapper	241	216	191	0.172	M	4	otoliths
086	2	1	8	*Lutjanus synagris*	lane snapper	218	203	180	0.121	F	3	otoliths
088	1	1	8	*Caranx crysos*	blue runner	335	274	247	0.341	M	3	otoliths
093	1	1	11	*Holocentrus adscensionis*	squirrelfish	276	212	194	0.192	M	2	otoliths
093	1	2	11	*Caranx crysos*	blue runner	449	355	315	0.845	M	3	otoliths
093	3	1	8	*Cephalopholis fulva*	coney*	-	-	-	-	-	-	otoliths
093	3	2	8	*Holocentrus adscensionis*	squirrelfish	274	212	192	0.179	M	2	otoliths
094	1	1	8	*Epinephelus guttatus*	red hind	330	-	272	0.471	F	1	otoliths
094	1	4	8	*Caranx lugubris*	black jack	476	413	372	1.297	F	1	otoliths
095	1	1	15	*Epinephelus guttatus*	red hind	289	-	236	0.3	F	1	otoliths
095	3	1	11	*Lutjanus buccanella*	blackfin snapper	309	284	240	0.378	M	3	otoliths
097	2	1	11	*Lutjanus vivanus*	silk snapper	333	305	257	0.418	F	5	otoliths
097	2	2	11	*Lutjanus buccanella*	blackfin snapper	350	320	262	0.556	M	1	otoliths
101	3	2	11	*Epinephelus guttatus*	red hind	315	-	250	0.407	F	3	otoliths
107	3	2	11	*Haemulon carbonarium*	Caesar grunt	245	218	192	0.177	M	4	otoliths
116	1	2	15	*Sphyraena barracuda*	great barracuda	835	745	671	2.39	M	3	otoliths
120	1	1	11	*Etelis oculatus*	queen snapper	444	357	311	0.72	M	1	otoliths
121	1	2	8	*Holocentrus rufus*	longspine squirrelfish	254	197	180	0.13	M	1	otoliths
121	2	1	11	*Epinephelus guttatus*	red hind	470	-	410	1.73	U	1	otoliths
123	3	1	8	*Cephalopholis cruentata*	graysby	215	-	177	0.134	U	1	otoliths
129	2	2	15	*Epinephelus guttatus*	red hind	357	-	302	0.622	F	3	otoliths
131	2	3	8	*Cephalopholis fulva*	coney	239	-	195	0.213	F	3	otoliths
143	2	1	8	*Lutjanus buccanella*	blackfin snapper	246	227	188	0.187	F	3	otoliths
144	1	2	11	*Lutjanus vivanus*	silk snapper	282	259	219	0.263	M	3	otoliths
144	1	4	11	*Lutjanus buccanella*	blackfin snapper	345	319	267	0.509	M	3	otoliths
144	1	6	11	*Caranx latus*	horse-eye jack	517	429	385	1.39	F	1	otoliths
147	1	1	11	*Epinephelus guttatus*	red hind	367	-	302	0.658	F	3	otoliths

148	1	1	8	*Lutjanus synagris*	lane snapper*	-	-	-	-	-	-	otoliths
149	3	1	11	*Epinephelus guttatus*	red hind	348		282	0.56	F	3	otoliths
149	3	2	11	*Lutjanus buccanella*	blackfin snapper	234	217	184	0.178	M	3	otoliths
151	1	1	8	*Cephalopholis fulva*	coney	234	-	189	0.19	F	2	otoliths
151	1	2	8	*Cephalopholis fulva*	coney	198	-	181	0.144	F	3	otoliths
151	2	1	11	*Cephalopholis fulva*	coney	228	-	191	0.193	F	3	otoliths
153	3	1	8	*Lutjanus synagris*	lane snapper	-	-	-	-	-	-	escaped
154	1	1	8	*Lutjanus buccanella*	blackfin snapper	286	264	231	0.287	M	3	otoliths
154	1	6	8	*Lutjanus buccanella*	blackfin snapper	263	254	216	0.249	M	3	otoliths
154	1	7	8	*Lutjanus buccanella*	blackfin snapper	243	237	198	0.207	F	3	otoliths
154	1	8	8	*Seriola rivoliana*	almaco jack	377	330	285	0.698	M	3	-
154	1	9	8	*Lutjanus buccanella*	blackfin snapper	319	304	249	0.473	M	3	otoliths
154	2	1	11	*Lutjanus buccanella*	blackfin snapper	308	287	240	0.382	M	3	otoliths
154	2	5	11	*Lutjanus buccanella*	blackfin snapper	292	280	234	0.365	M	3	otoliths
154	2	9	11	*Seriola rivoliana*	almaco jack	433	379	320	0.94	F	1	-
158	3	1	11	*Holocentrus adscensionis*	squirrelfish	266	205	190	0.154	F	2	otoliths
158	3	2	11	*Epinephelus guttatus*	red hind	329	-	276	0.504	U	1	otoliths
160	1	1	8	*Epinephelus guttatus*	red hind	329	-	274	0.475	U	1	otoliths
161	3	1	11	*Epinephelus guttatus*	red hind	308	-	257	0.385	U	1	otoliths
162	3	2	8	*Holocentrus adscensionis*	squirrelfish	285	229	207	0.215	F	1	otoliths
163	2	1	11	*Epinephelus guttatus*	red hind	278	-	237	0.28	F	3	otoliths
165	2	2	15	*Lutjanus vivanus*	silk snapper	360	330	282	0.58	M	3	otoliths
167	3	1	11	*Epinephelus guttatus*	red hind	454	-	298	0.558	U	1	otoliths
168	1	1	11	*Holocentrus rufus*	longspine squirrelfish	195	151	135	0.06	F	3	otoliths
170	2	1	8	*Cephalopholis fulva*	coney	242	-	200	0.2	F	3	otoliths
171	1	4	11	*Lutjanus buccanella*	blackfin snapper	363	332	277	0.7	F	3	otoliths
171	1	7	11	*Lutjanus vivanus*	silk snapper	433	390	326	0.94	F	2	otoliths
171	1	9	11	*Lutjanus vivanus*	silk snapper	402	366	307	0.775	M	1	otoliths
171	3	1	8	*Pristipomoides aquilonaris*	wenchman	342	294	261	0.502	F	3	otoliths
171	3	3	8	*Lutjanus vivanus*	silk snapper	355	327	275	0.554	M	3	otoliths
174	3	1	8	*Cephalopholis fulva*	coney	267		221	0.308	F	3	otoliths
178	1	1	11	*Lutjanus vivanus*	silk snapper	471	455	391	1.445	M	3	otoliths

178	1	4	11	*Lutjanus buccanella*	blackfin snapper	540	515	446	2.51	M	3	otoliths
178	1	5	11	*Lutjanus buccanella*	blackfin snapper	394	367	320	0.861	M	3	otoliths
178	1	6	11	*Lutjanus vivanus*	silk snapper	440	426	362	1.172	M	3	otoliths
178	1	10	11	*Lutjanus vivanus*	silk snapper	415	394	331	0.939	M	3	otoliths
178	2	3	11	*Lutjanus buccanella*	blackfin snapper	465	444	384	1.482	M	3	otoliths
178	2	5	11	*Lutjanus buccanella*	blackfin snapper	401	387	328	0.995	M	3	otoliths
178	2	6	11	*Lutjanus vivanus*	silk snapper	421	381	334	0.175	F	3	otoliths
178	2	8	11	*Lutjanus vivanus*	silk snapper	459	428	367	1.215	F	3	otoliths
178	2	10	11	*Lutjanus buccanella*	blackfin snapper	479	459	401	1.517	M	3	otoliths
178	3	3	11	*Lutjanus buccanella*	blackfin snapper	452	415	355	1.275	M	3	otoliths
180	3	1	8	*Cephalopholis fulva*	coney	257	-	213	0.243	F	3	otoliths
180	3	2	8	*Epinephelus guttatus*	red hind	312	-	254	0.422	F	3	otoliths
181	1	1	8	*Lutjanus buccanella*	blackfin snapper	395	361	303	0.915	F	4	otoliths
181	2	3	11	*Lutjanus buccanella*	blackfin snapper	359	331	302	0.58	F	3	otoliths
181	2	7	11	*Holocentrus adscensionis*	squirrelfish	290	225	202	0.201	M	3	otoliths
181	2	8	11	*Lutjanus buccanella*	blackfin snapper	398	361	304	0.93	F	3	otoliths
186	1	1	11	*Epinephelus guttatus*	red hind	376	-	309	0.685	F	1	otoliths
194	3	2	11	*Echeneis naucrates*	sharksucker	-	-	-	-	-	-	escaped
196	2	1	11	*Cephalopholis fulva*	coney	278	-	228	0.358	M	3	otoliths
199	1	1	8	*Epinephelus guttatus*	red hind	332	-	270	0.485	F	3	otoliths
200	2	1	8	*Lutjanus buccanella*	blackfin snapper	327	296	248	0.415	F	3	otoliths
200	2	2	8	*Lutjanus buccanella*	blackfin snapper	303	276	227	0.35	F	3	otoliths
203	2	1	8	*Holocentrus adscensionis*	squirrelfish	250	195	177	0.135	M	3	otoliths
209	2	1	11	*Epinephelus guttatus*	red hind	288	-	235	0.31	F	3	otoliths
210	3	2	11	*Epinephelus guttatus*	red hind	338	-	280	0.552	M	3	otoliths
210	3	3	11	*Epinephelus guttatus*	red hind	327	-	275	0.513	M	3	otoliths
211	2	8	15	*Seriola rivoliana*	almaco jack	547	482	439	1.853	F	3	otoliths
214	1	1	11	*Lutjanus buccanella*	blackfin snapper	383	374	320	1.008	M	3	otoliths
214	3	1	8	*Lutjanus buccanella*	blackfin snapper	304	290	249	0.435	F	3	otoliths
214	3	2	8	*Lutjanus buccanella*	blackfin snapper	310	290	247	0.406	F	3	otoliths
214	3	4	8	*Lutjanus buccanella*	blackfin snapper	296	281	245	0.383	F	3	otoliths
218	1	3	8	*Rhomboplites aurorubens*	vermilion snapper	223	197	165	0.125	F	3	otoliths

221	1	1	8	*Epinephelus guttatus*	red hind	369	-	305	0.62	F	1	otoliths
226	3	2	8	*Holocentrus*	squirrelfish	-	-	-	-	-	-	escaped
246	3	2	8	*Caranx crysos*	blue runner	450	368	333	0.858	F	3	otoliths
250	1	1	11	*Cephalopholis fulva*	coney	261	-	215	0.232	F	3	otoliths
251	2	1	8	*Epinephelus guttatus*	red hind	351	-	282	0.621	F	3	otoliths
252	1	2	11	*Cephalopholis fulva*	coney	291	-	240	0.378	F	3	otoliths
252	1	3	11	*Cephalopholis fulva*	coney	292	-	238	0.397	F	3	otoliths
252	1	4	11	*Cephalopholis fulva*	coney	271	-	227	0.268	F	3	otoliths
252	3	1	8	*Serranus tabacarius*	tabaccofish	169	164	138	0.072	F	3	otoliths
262	1	2	8	*Lutjanus vivanus*	silk snapper	315	288	245	0.365	F	3	otoliths
262	1	3	8	*Lutjanus vivanus*	silk snapper	284	258	215	0.25	F	3	otoliths
262	2	1	11	*Lutjanus buccanella*	blackfin snapper	420	385	320	0.965	M	3	otoliths

Table 3. Fish captured in the night-time chevron fish traps during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012 (n =14).

Station #	**Specimen #**	**Taxa**	**Common Name**	**Total Length** (mm)	**Fork Length** (mm)	**Standard Length** (mm)	**Weight** (kg)	**Sex**	**Maturity**	**Comment/ Samples Collected**
031	1	*Pristipomoides aquilonaris*	wenchman	216	183	163	0.108	F	3	otoliths
185	1	*Holocentrus adscensionis*	squirrelfish	278	220	203	0.180	F	1	otoliths
217	1	*Rhomboplites aurorubens*	vermilion snapper	224	199	170	0.140	F	3	otoliths
217	2	*Rhomboplites aurorubens*	vermilion snapper	225	198	166	0.135	F	3	otoliths
238	1	*Haemulon aurlineatum*	tomtate	220	192	170	0.130	M	1	otoliths

Table 4. Fish caught on bandit reel during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012 ordered by weight (n = # of stations, *(#) = # of fish in each taxon with un-measurable fish due to escaping before landing or landing half a fish).

Number caught			**Name**	**Total Weight (kg)**
Day (n=119)	**Night (n=154)**	**Total (n=273)**		
17	11	28	blackfin snapper, *Lutjanus buccanella*	19.498
13	10	23	silk snapper, *Lutjanus vivanus*	14.398
10	12	22	red hind, *Epinephelus guttatus*	11.799
1	5	6	blue runner, *Caranx crysos*	5.010
3	0	3	almaco jack, *Seriola rivoliana*	3.491
11	2	13	coney, *Cephalopholis fulva*	3.124*(1)
0	2	2	horse-eye jack, *Caranx latus*	3.034
0	1	1	great barracuda, *Sphyraena barracuda*	2.390
0	1	1	smoothhound, *Mustelus* spp.	2.350
8	0	8	lane snapper, *Lutjanus synagris*	1.836*(2)
0	8	8	squirrelfish, *Holocentrus adscensionis*	1.688
0	1	1	black jack, *Caranx lugubris*	1.297
0	1	1	Cuban dogfish, *Squalus cubensis*	0.795
1	0	1	yellowtail snapper, *Ocyurus chrysurus*	0.765
0	1	1	queen snapper, *Etelis oculatus*	0.720
4	1	5	vermilion snapper, *Rhomboplites aurorubens*	0.686
0	1	1	wenchman, *Pristipomoides aquilonaris*	0.502
2	0	2	sharksucker, *Echeneis naucrates*	0.348*(1)
0	2	2	longspine squirrelfish, *Holocentrus rufus*	0.190
1	0	1	Caesar grunt, *Haemulon carbonarium*	0.177
0	1	1	graysby, *Cephalopholis cruentata*	0.134
1	0	1	tabaccofish, *Serranus tabacarius*	0.072
0	1	1	squirrelfish, *Holocentrus* spp.	*
0	1	1	Unidentified fish	*
72	**62**	**134**	**SUM**	**74.304**

Table 5. Bandit reel catch by area off Puerto Rico during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012 ordered by weight (n = # stations, * = fish un-measurable due to escaping before landing or landing half a fish).

Puerto Rico northeast (PRN2)				
Number caught			**Name**	**Total Weight (kg)**
Day (n=18)	**Night (n=22)**	**Total (n=40)**		
6	1	7	silk snapper, *Lutjanus vivanus*	3.317
1	1	2	blue runner, *Caranx crysos*	2.276
1	0	1	sharksucker, *Echeneis naucrates*	0.348
0	1	1	Unidentified fish	*
8	**3**	**11**	**SUM**	**5.941**
Puerto Rico northwest (PRN1)				
Number caught			**Name**	**Total Weight (kg)**
Day (n=13)	**Night (n=19)**	**Total (n=32)**		
0	1	1	smoothhound, *Mustelus* spp.	2.350
0	1	1	horse-eye jack, *Caranx latus*	1.644
2	1	3	silk snapper, *Lutjanus vivanus*	1.623
4	0	4	lane snapper, *Lutjanus synagris*	1.210
0	1	1	Cuban dogfish, *Squalus cubensis*	0.795
1	0	0	yellowtail snapper, *Ocyurus chrysurus*	0.765
0	1	1	blue runner, *Caranx crysos*	0.690
2	0	2	red hind, *Epinephelus guttatus*	0.641
0	2	2	squirrelfish, *Holocentrus adscensionis*	0.612
1	0	1	vermilion snapper, *Rhomboplites aurorubens*	0.145
10	**7**	**17**	**SUM**	**10.475**
Puerto Rico west (PRW)				
Number caught			**Name**	**Total Weight (kg)**
Day (n=15)	**Night (n=18)**	**Total (n=33)**		
0	1	1	black jack, *Caranx lugubris*	1.297
0	2	2	blue runner, *Caranx crysos*	1.186
1	2	3	red hind, *Epinephelus guttatus*	1.178
0	2	2	blackfin snapper, *Lutjanus buccanella*	0.934
2	0	2	lane snapper, *Lutjanus synagris*	0.626
0	1	1	silk snapper, *Lutjanus vivanus*	0.418
3	0	3	vermilion snapper, *Rhomboplites aurorubens*	0.416
0	2	2	squirrelfish, *Holocentrus adscensionis*	0.371
0	1	1	coney, *Cephalopholis fulva*	*
6	**11**	**17**	**SUM**	**6.426**

Table 6. Bandit reel catch by area off the US Virgin Islands during NOAA Ship *Pisces* 12-02 (18) SEAMAP Caribbean Reef Fish survey in June 2012 ordered by weight (n = # of stations, * = fish un-measurable due to escaping before landing or landing half a fish).

St. Croix southwest (STX)				
Number caught			**Name**	**Total Weight (kg)**
Day (n=22)	**Night (n=27)**	**Total (n=49)**		
3	1	4	red hind, *Epinephelus guttatus*	3.570
7	2	9	blackfin snapper, *Lutjanus buccanella*	2.837
0	1	1	great barracuda, *Sphyraena barracuda*	2.390
2	0	2	almaco jack, *Seriola rivoliana*	1.638
0	1	1	horse-eye jack, *Caranx latus*	1.390
4	0	4	coney, *Cephalopholis fulva*	0.740
0	1	1	queen snapper, *Etelis oculatus*	0.720
0	1	1	silk snapper, *Lutjanus vivanus*	0.263
1	0	1	Caesar grunt, *Haemulon carbonarium*	0.177
0	1	1	graysby, *Cephalopholis cruentata*	0.134
0	1	1	longspine squirrelfish, *Holocentrus rufus*	0.130
2	0	2	lane snapper, *Lutjanus synagris*	*
19	**9**	**28**	**SUM**	**13.989**

St. Thomas & St. John south (STS)				
Number caught			**Name**	**Total Weight (kg)**
Day (n=26)	**Night (n=34)**	**Total (n=60)**		
10	6	16	blackfin snapper, *Lutjanus buccanella*	14.762
5	4	9	silk snapper, *Lutjanus vivanus*	7.795
4	7	11	red hind, *Epinephelus guttatus*	5.169
1	0	1	almaco jack, *Seriola rivoliana*	1.853
3	1	4	coney, *Cephalopholis fulva*	1.109
0	4	4	squirrelfish, *Holocentrus adscensionis*	0.705
0	1	1	wenchman, *Pristipomoides aquilonaris*	0.502
0	1	1	longspine squirrelfish, *Holocentrus rufus*	0.060
1	0	0	sharksucker, *Echeneis naucrates*	*
24	**24**	**48**	**SUM**	**31.955**

St. Thomas north (STN)				
Number caught			**Name**	**Total Weight (kg)**
Day (n=26)	**Night (n=34)**	**Total (n=60)**		
4	0	4	coney, *Cephalopholis fulva*	1.275
2	0	2	red hind, *Epinephelus guttatus*	1.245
0	1	1	blackfin snapper, *Lutjanus buccanella*	0.965
0	1	1	blue runner, *Caranx crysos*	0.858
0	2	2	silk snapper, *Lutjanus vivanus*	0.615
0	1	1	vermilion snapper, *Rhomboplites aurorubens*	0.125
1	0	1	tabaccofish, *Serranus tabacarius*	0.072
0	1	1	squirrelfish, *Holocentrus* spp.	*
7	**6**	**13**	**SUM**	**5.155**