CRUISE REPORT
C264

Scientific data collected aboard
SSV Corwith Cramer

St Croix, USVI – St John, USVI – San Juan, Puerto Rico – Samana, Dominican Republic – Santiago, Cuba – Port Antonio, Jamaica – Boca Chica, Dominican Republic

15 February – 25 March, 2016

Humpback whale breaching over Silver Bank, Dominica Republic. Photo credit – Janet Bering 1st Scientist

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Table 1. C264 Ship's crew and student participants

Nautical Staff		
	Chris Nolan	Captain
	Eric Romeczyk	Chief Mate
	Rocky Hadler	2nd Mate
	Ryan Loftus	3rd Mate
	Alex Myers	Engineer
	Tia Leo	Steward
Scientific Staff		
	Jeff Schell	Chief Scientist
	Kelsey Lane	1st Scientist
	Janet Bering	2nd Scientist (1st Scientist)
	Marah Dahn	3rd Scientist
	Marissa Shaw	(2nd Scientist)
Maritime Studies Staff		
	Craig Marin	
Visiting Staff		
	Peter Stone	Natural Historian/Illustrator
	Julianne Gurnee	NOAA Marine Mammal Specialist
	Kimberly Ulmer	Tabor Academy Educator
Students		
	Shane Bannon	Wesleyan University
	Caroline Waverlee Bowman	Stockton University
	Kathryn Condon	University of Michigan
	Kianee Love De Jesus	Hamilton College
	Pamela Maria Cabildo de Lange	De La Salle University Manila
	Emma Fichtner	Muhlenberg College
	Aiden Grace Ford	College of the Atlantic
	Martin Richard Green	Carleton College
	Taylor Kendall Haist	Bowdoin College
	Elliott Hiller	Colorado College
	Michelle Joseph	American University
	Leah Rose Kaplan	Wellesley College
	Cora Paige Knauss	University of Washington, Seattle
	Riley Praeger Mehring	Whitman College
	Hailey Beth Mischler	Ripon College
	Katie Morison	Sewanee: The University of The South
	Sophia DiGioia Prisco	College of the Atlantic
	Timothy Marcel Rajotte	College of the Holy Cross
	Theresa Saburn	Saint Michael's College
	Madalyn Taylor	Barnard College
	Melissa Weiss	University of Vermont
	Catherine Drew Williams	Carleton College

Data Description C264

The cruise track for C-264 (Figure 1) departed from Christiansted, USVIs and concluded in Boca Chica, Dominican Republic 40 days later. During the nearly six-week voyage we had five port stops; the first in St John; the next in Old San Juan, Puerto Rico; the third in Samana, Dominican Republic; the fourth in Santiago, Cuba; and the last in Port Antonio, Jamaica.

Our cruise track traversed several major oceanographic provinces (Figure 1): a) the dynamic coastal waters and island passages of the Greater Antilles, b), the open waters overlying the Puerto Rico Trench and Sargasso Sea, and c) the warm waters of the Western and Eastern Caribbean Sea. In addition, several shallow banks (Navidad, Silver, Grappler) were traversed and coastal waterways surveyed (Samana Bay, Santiago Harbor).

We collected data with 106 individual deployments from 52 discrete geographic stations along our cruise track. Comparison of the physical, chemical, biologic and geologic features of these regions represented the major oceanographic theme of this Sea Semester.

1. Physical oceanographic studies focused on the distribution of surface and sub-surface (to 1500 m) water masses and the delineation of hydrographic boundaries. Specifically, North Atlantic sub-tropical mode water (18°C Water) and Antarctic Intermediate water.
2. Chemical oceanographic studies focused on the geographic and vertical distribution of nutrients (phosphate), extracted chlorophyll-*a*, coliform bacteria, and pH. These chemical parameters were related to patterns in physical hydrography at various scales: nearshore to offshore transitions, ocean fronts and eddies associated with island passages and water column stratification.
3. Biological studies focused on the geographic distribution of charismatic megafauna (seabirds, sea turtles, flying fish, and marine mammals), several nektonic organisms (lantern fish – Family *Myctophidae*, and gelatinous organisms >2cm – i.e salps), meroplanktonic larvae including spiny lobster (phyllosoma) and eels (leptocephali), the floating macrophyte – *Sargassum* spp., and the density (mL/m2) and diversity (i.e. Shannon-Weiner index) of the aggregate zooplankton community.
4. Geological sampling focused on bathymetric transects of continental shelf regions of several Caribbean Islands. Patterns were related to island age and distance from shore. In addition, surface sediment samples were collected from most harbors/anchorages (i.e. Francis Bay, Samana Bay) and shallow banks (i.e. Navidad, Silver, Grappler).

Sea surface temperature, salinity, fluorescence (chlorophyll-*a* and CDOM) and transmissivity levels; along with barometric pressure, winds, bathymetry, and geographic position were recorded continuously along the cruise track. Large-scale hydrography is summarized with surface plots for some parameters (Figure 2a-c) other data is available upon request. Surface samples (76) of nutrients (phosphate), chlorophyll-*a*, coliform bacteria, pH and microplastics (data available upon request) were collected every six hours and in conjunction with all neuston net tows during the cruise track (Table 3).

Additional Hourly Observations included the enumeration of seabirds, sea turtles, flying fish, marine mammals, *Sargassum* spp clumps, and floating plastic debris. Observations occurred only during daylight hours 0700-1900 for a period of 6 minutes each hour. Periodically, opportunistic sightings were also recorded when notable megafauna or marine debris were present. Data available upon request.

But for the occasional eddy surface currents along the C264 cruise track were weak (< 500mm/s, or 1.0 knot) and variable in direction. Regional examination of surface currents highlight the presence of eddies and meanders near constricted island passages (Figure 3a-b).

The density structure of the water column (maximum depth 1500 m) was determined using a Seabird CTD (19 stations, Table 4). A majority of the time three auxiliary sensors were attached to the CTD: *in situ* chlorophyll-*a* fluorescence, dissolved oxygen, and photosynthetic active radiation (PAR). Two of the CTD stations included a 12-bottle carousel to collect water samples to determine vertical profiles of chlorophyll-*a*, nutrients (phosphate) and pH (Table 5). Four hydrographic regimes were identified that differed in water mass structure as revealed by T-S plots and vertical profiles of temperature, salinity, dissolved oxygen, and chlorophyll-*a* fluorescence (Figure 4a-f).

Surface plankton assemblages along with the floating macrophyte *Sargassum* spp., marine debris and tar balls were sampled regularly with a neuston net (27 stations, 335 µm mesh, Table 6). Plankton assemblages at discrete depths (75m) were collected using a 1m diameter Meter net (6 stations, 335 µm mesh, Table 7) and a 2m diameter net (1 station, 500 µm mesh). In combination these myriad net deployments reveal the vertical and horizontal distribution patterns of the marine insect *Halobates*, eel (leptocephali) and spiny lobster (phyllosoma) larvae, pteropods, and general zooplankton diversity and taxonomic composition in relation to numerous environmental parameters (Table 8).

A single phytoplankton sample was collected with a surface (~1-3m) drift net (30cm frame, 63 µm mesh, Table 9) for demonstration purposes only.

Discrete samples of *Sargassum* clumps and marine plastic debris were collected with a dip net (13 stations, 335 µm mesh, Table 10). Shrimp, crab, fish, and snail specimens were rinsed from collected samples. Abundance and diversity of associated biota were related to mass (g) and species form of *Sargassum* and geographic location. Three distinct morphological types of *Sargassum* were recognized (*S. fluitans III, S. natans I*, and *S. natans VIII*) and clear differences in associated fauna were observed even when the *Sargassum* was collected from the same windrow.

Six sediment samples were collected using a shipek grab ranging in depth from 19 to 450m (Table 11). Additional data available upon request.

Additional scientific work conducted aboard ship was the routine deployment of a secchi disc (15 stations, Table 12) to estimate the 1% light level.

Three reef surveys conducted at Cane Bay-St. Croix, Water Lemon Cay-St. John, and West Harbor- Port Antonio-Jamaica, documented seafloor substrate patterns, and algal, sponge, coral, invertebrate, and fish species counts (Table 13).

At several locations humpback whale behavior was closely monitored and recorded (Table 14). On several occasions a hydrophone was deployed (8 stations, Table 15) to record humpback whale songs. Additional data available upon request.

A single marine debris, beach survey was conducted at San Cristobol Beach in Puerto Rico following Ocean Conservancy guidelines. Data available upon request.

Additional CTD, CHIRP, ADCP and biological data not reported here are available on request through Sea Education Association (SEA) and the Chief Scientist. The information in this report is not intended to represent final interpretation of the data and should not be excerpted or cited without written permission from SEA.

As part of SEA's educational program, undergraduates conducted independent oceanographic research during the cruise. Projects explored regionally, relevant topics in the disciplines of physical, chemical, and biological oceanography (Table 16). Student research efforts culminated in a written report and public presentation to the ship's company. These papers are available on request from SEA.

Jeffrey Schell, Associate Professor – Chief Scientist, C264

F**igure 1. Final cruise track for C264** based on hourly (local time) positions, including ports of call.

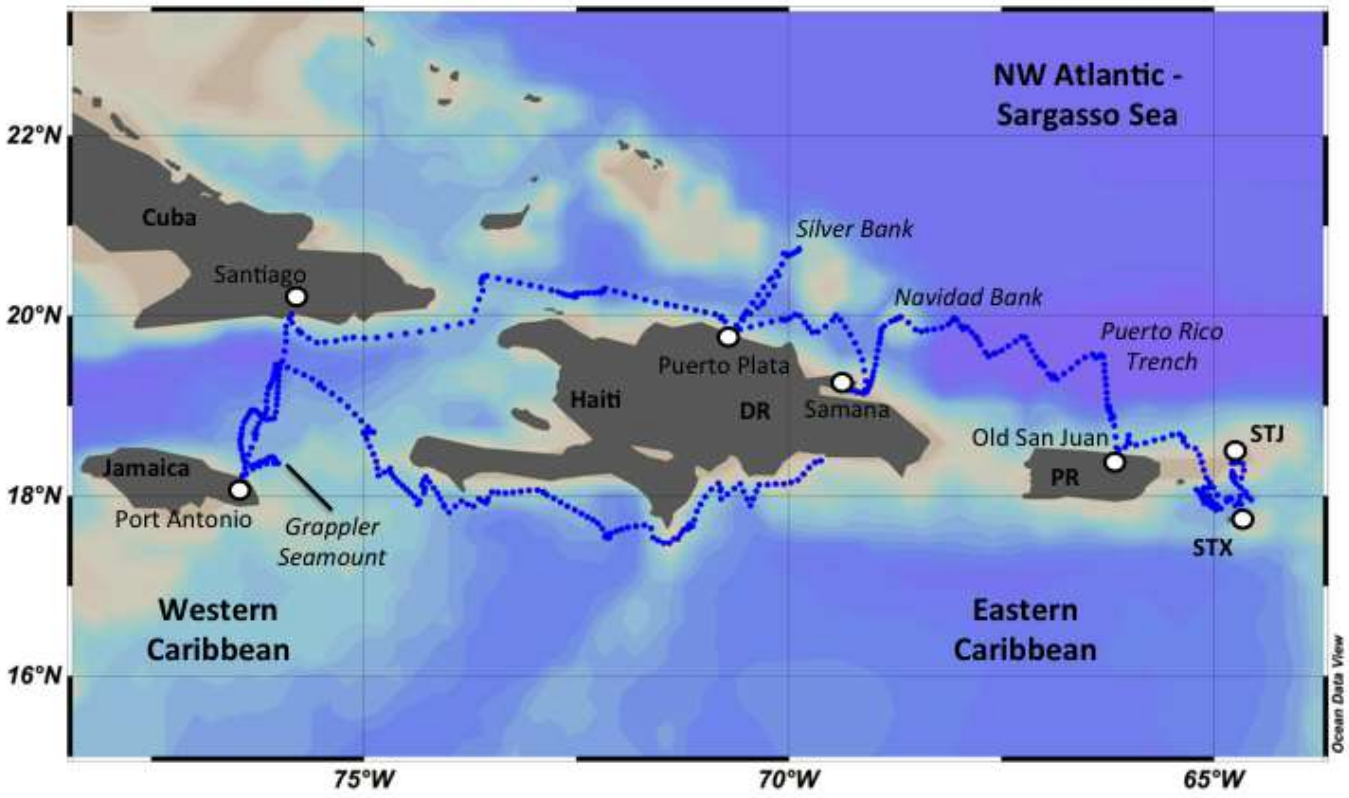


Table 2. Summary of oceanographic sampling stations for C264.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	Log (nm)	Lat (dec Deg N)	Lon (dec Deg W)	Location	Station Type
001	19-Feb	0744	0.0	18.37	-64.75	Francis Bay, St. John	SG
002	19-Feb	1040	24.6	18.24	-64.74	Leeward Islands, S. of St. Thomas	SD
002	19-Feb	1057	24.6	18.23	-64.74	Leeward Islands, S. of St. Thomas	SG
002	19-Feb	1133	24.6	18.23	-64.74	Leeward Islands, West of St. John	CTD
002	19-Feb	1215	24.6	18.23	-64.77	Leeward Islands, S. of St. John	NT
003	20-Feb	0009	40.0	17.99	-64.61	Leeward Islands, S. of St. John	NT
004	20-Feb	1014	90.9	18.09	-65.12	Leeward Islands, S. of St. John	SD
004	20-Feb	1043	90.9	18.07	-65.12	Leeward Islands, S. of St. John	CTD
004	20-Feb	1229	90.9	18.02	-65.14	Leeward Islands, S. of St. John	NT
005	20-Feb	1754	106.2	17.90	-64.97	Leeward Islands, N. of St. Croix	DN
006	21-Feb	0006	126.0	18.01	-65.15	Leeward Islands, S of St. Thomas	NT
007	21-Feb	0942	144.6	17.94	-65.10	Leeward Islands, S of St. Thomas	SD
007	21-Feb	1011	144.6	17.93	-65.10	Leeward Islands, N. of St. Croix	CTD
007	21-Feb	1157	146.3	17.92	-65.11	Leeward Islands, N. of St. Croix	NT
008	22-Feb	0009	193.2	18.61	-65.36	Greater Antilles, N. of Puerto Rico Trench	NT
009	22-Feb	0958	241.9	18.61	-66.01	Greater Antilles, N. of Puerto Rico Trench	MN
009	22-Feb	1054	243.4	18.60	-66.01	Greater Antilles, N. of Puerto Rico Trench	NT
010	24-Feb	2056	263.2	18.90	-66.20	Greater Antilles, over Puerto Rico Trench	MN
011	25-Feb	0010	277.2	18.98	-66.23	Greater Antilles, over Puerto Rico Trench	NT
012	25-Feb	0800	308.8	19.44	-66.29	Greater Antilles, over Puerto Rico Trench	DN
012	25-Feb	0947	313.2	19.65	-66.32	Greater Antilles, North of Puerto Rico	HP
012	25-Feb	1026	313.2	19.56	-66.33	Greater Antilles, over Puerto Rico Trench	SD
012	25-Feb	1050	313.2	19.56	-66.34	Greater Antilles, over Puerto Rico Trench	CTD
013	25-Feb	1635	329.9	19.45	-66.65	Greater Antilles, over Puerto Rico Trench	DN
014	25-Feb	2028	349.5	19.32	-66.90	Greater Antilles, over Puerto Rico Trench	MN
015	26-Feb	0001	363.5	19.48	-67.04	Greater Antilles, over Puerto Rico Trench	NT

016	26-Feb	0848	403.0	19.63	-67.48	Greater Antilles, over Puerto Rico Trench	DN
016	26-Feb	1018	407.5	19.59	-67.56	Greater Antilles, North of Puerto Rico	HP
016	26-Feb	1020	407.5	19.59	-67.56	Greater Antilles, over Puerto Rico Trench	SD
016	26-Feb	1042	407.5	19.58	-67.57	Greater Antilles, over Puerto Rico Trench	CTD
016	26-Feb	1042	407.5	19.58	-67.57	Greater Antilles, over Puerto Rico Trench	HC
017	26-Feb	2009	430.0	19.87	-67.94	Greater Antilles, over Puerto Rico Trench	MN
018	27-Feb	0017	440.5	19.97	-68.06	Greater Antilles, over Puerto Rico Trench	NT
019	27-Feb	0930	477.2	19.98	-68.68	Greater Antilles, Navidad Bank	HP
019	27-Feb	1015	477.2	19.99	-68.69	Greater Antilles, Navidad Bank	DN
019	27-Feb	1130	477.2	19.97	-68.73	Greater Antilles, Navidad Bank	SG
019	27-Feb	1100	477.2	19.97	-68.72	Greater Antilles, Navidad Bank	HP
019	27-Feb	1150	477.2	19.97	-68.73	Greater Antilles, Navidad Bank	SG
020	28-Feb	0730	527.3	19.16	-69.09	Greater Antilles, Entrance Samana Bay	CTD
021	29-Feb	1510	527.3	19.19	-69.33	Samana Harbor, at anchor	PN
022	2-Mar	0812	527.3	19.19	-69.33	Samana Bay, Dominican Republic, Greater Antilles	SG
023	2-Mar	1214	527.3	19.16	-69.21	Greater Antilles, Whale's Hole Samana Bay	CTD
024	2-Mar	1832	553.0	19.56	-69.15	Greater Anttiles, North of the Dominican Republic	DN
025	2-Mar	2358	579.0	20.00	-69.45	Greater Antilles, S. of Silver Bank	NT
026	3-Mar	0840	614.8	19.99	-69.97	Greater Antilles, S. of Silver Bank	DN
026	3-Mar	1003	619.0	19.95	-70.04	Greater Antilles, S. of Silver Bank	HP
026	3-Mar	1012	619.0	19.95	-70.04	Greater Antilles, S. of Silver Bank	SD
026	3-Mar	1042	619.0	19.95	-70.05	Greater Antilles, S. of Silver Bank	CTD
027	4-Mar	0017	679.2	20.15	-70.30	Greater Antilles, Silver Bank	NT
028	4-Mar	0936	724.1	20.74	-69.88	Greater Antilles, Silver Bank	HP
028	4-Mar	1005	724.1	20.74	-69.88	Greater Antilles, Silver Bank	SG
028	4-Mar	1040	724.1	20.74	-70.55	Greater Antilles, Silver Bank	SD
028	4-Mar	1130	724.1	20.74	-69.88	Greater Antilles, Silver Bank	SG
029	5-Mar	0021	745.5	20.41	-70.21	Greater Antilles, N. of Dominican Republic	NT
030	5-Mar	1602	794.9	19.99	-70.79	Greater Antilles, N. of Dominican Republic	SD

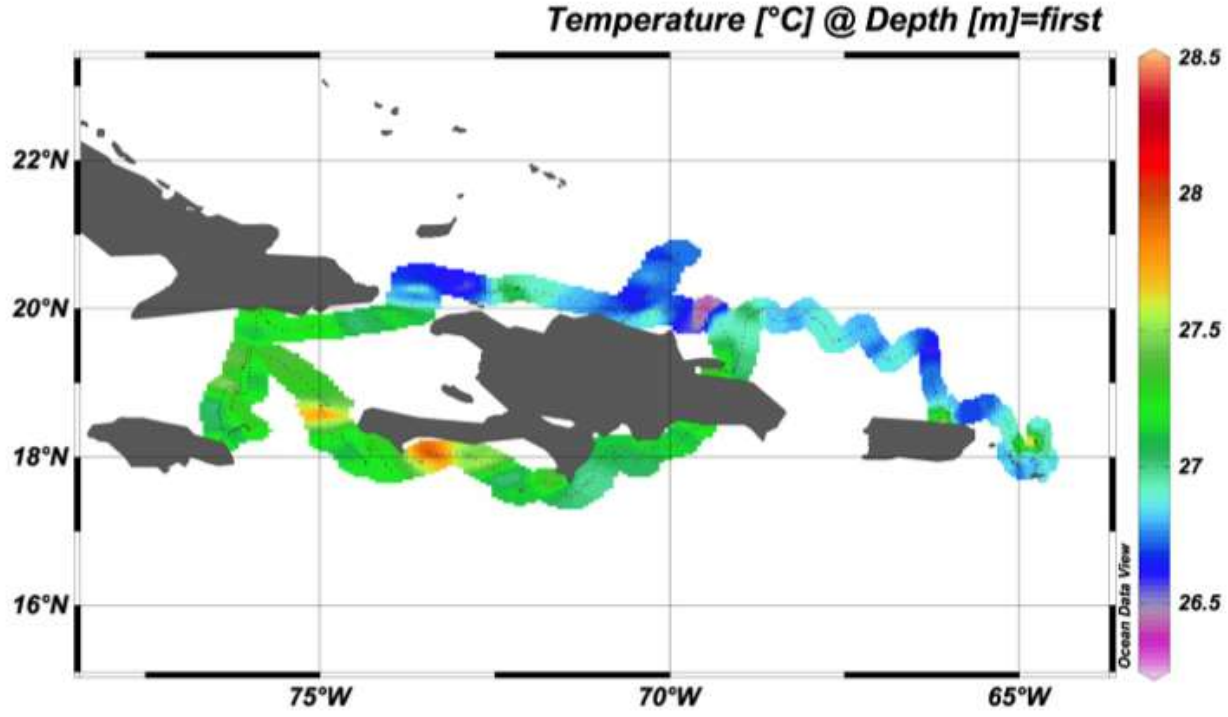
030	5-Mar	1605	794.5	19.99	-70.79	Greater Antilles, N. of Puerto Plata	HP
030	5-Mar	1645	794.9	19.98	-70.79	Greater Antilles, N. of Dominican Republic	CTD
031	6-Mar	0012	827.3	20.13	-71.21	Greater Antilles, N. of Dominican Republic	NT
032	6-Mar	0745	862.5	20.30	-72.17	Greater Antilles, N. of Haiti	DN
032	6-Mar	0830	867.5	20.29	-72.17	Greater Antilles, N of Haiti	HP
032	6-Mar	0927	867.2	20.29	-72.17	Greater Antilles, N. of Haiti	SD
032	6-Mar	0947	867.2	20.29	-72.17	Greater Antilles, N. of Haiti	CTD
032	6-Mar	1130	867.8	20.27	-72.18	Greater Antilles, N. of Haiti	NT
033	6-Mar	2023	881.0	20.23	-72.51	Greater Antilles, N. of Haiti	MN
034	7-Mar	0000	886.2	20.23	-72.63	Greater Antilles, N. of Haiti	NT
035	7-Mar	0935	925.8	20.44	-73.59	Greater Antilles, Windward Passage	SD
035	7-Mar	1011	925.8	20.43	-73.60	Greater Antilles, Windward Passage	CTD
035	7-Mar	1030	925.8	20.43	-73.60	Greater Antilles, Windward Passage	DN
035	7-Mar	1148	926.0	20.38	-73.62	Greater Antilles, Windward Passage	NT
036	8-Mar	0745	1057.0	19.83	-75.76	Greater Antilles, Santiago Cuba	SD
036	8-Mar	0800	1057.0	19.80	-75.76	Greater Antilles, Santiago Cuba	CTD
036	8-Mar	0858	1057.0	19.82	-75.75	Greater Antilles, Santiago Cuba	MN
037	12-Mar	0010	1084.4	19.43	-75.99	Greater Antilles, S. of Cuba	NT
038	12-Mar	0917	1110.5	18.87	-76.06	Greater Antilles S. of Cuba	SD
038	12-Mar	0939	1110.5	18.86	-76.07	Greater Antilles, S. of Cuba	CTD
038	12-Mar	1206	1111.2	18.86	-76.16	Greater Antilles, S. of Cuba	DN

039	13-Mar	0000	1125.2	18.65	-76.45	Greater Antilles, S. of Cuba	NT
040	13-Mar	0915	1149.0	18.36	-76.12	Greater Antilles, N of Jamaica, Grappler Bank	DN
040	13-Mar	1044	1151.5	18.36	-76.00	Greater Antilles, N of Jamaica, Grappler Bank	SG
040	13-Mar	1126	1151.5	18.36	-76.01	Greater Antilles, N of Jamaica, Grappler Bank	SD
040	13-Mar	1200	1151.5	18.37	-76.02	Greater Antilles, N of Jamaica, Grappler Bank	CTD
040	13-Mar	1200	1151.5	18.37	-76.02	Greater Antilles, N of Jamaica, Grappler Bank	HC
041	13-Mar	1608	1153.5	18.41	-76.05	Greater Antilles, N. of Jamaica	DN
042	18-Mar	0001	1175.5	18.67	-76.26	Greater Antilles, N. of Jamaica	NT
043	18-Mar	0703	1192.4	19.05	-76.14	Greater Antilles, SW of Haiti	DN
043	18-Mar	0930	1196.5	19.21	-76.11	Greater Antilles, SW of Haiti	SD
043	18-Mar	0957	1196.5	19.21	-76.11	Greater Antilles, SW of Haiti	CTD
043	18-Mar	1135	1196.5	19.21	-76.11	Greater Antilles, SW of Haiti	NT
044	19-Mar	0030	1230.3	19.24	-75.52	Greater Antilles, SW of Haiti	NT
045	19-Mar	0918	1273.5	18.71	-74.89	Greater Antilles, SW of Haiti	SD
045	19-Mar	0935	1273.5	18.71	-74.89	Greater Antilles, SW of Haiti	CTD
045	19-Mar	1122	1273.5	18.71	-74.92	Greater Antilles, SW of Haiti	NT
046	20-Mar	0050	1309.5	18.29	-74.69	Greater Antilles, SW of Haiti	NT
047	20-Mar	0904	1328.6	17.94	-74.35	Greater Antilles, S. of Haiti	DN
047	20-Mar	0928	1328.6	17.93	-74.33	Greater Antilles, S. of Haiti	SD
047	20-Mar	0944	1328.6	17.93	-74.34	Greater Antilles, S. of Haiti	CTD
047	20-Mar	1124	1329.9	17.92	-74.36	Greater Antilles, S. of Haiti	NT
048	21-Mar	0026	1347.2	17.90	-74.06	Greater Antilles, S. of Haiti	NT
049	21-Mar	0929	1365.2	17.94	-73.54	Greater Antilles, S. of Haiti	SD
049	21-Mar	1002	1365.3	17.94	-73.55	Greater Antilles, S. of Haiti	CTD
049	21-Mar	1220	1369.2	18.00	-73.52	Greater Antilles, S. of Haiti	DN
050	21-Mar	2005	1389.8	18.04	-72.88	Greater Antilles, S. of Haiti	MN
051	22-Mar	0905	1421.3	17.53	-72.11	Greater Antilles, S. of Haiti	CTD
051	22-Mar	1022	1421.3	17.54	-72.13	Greater Antilles, S. of Haiti	DN
052	23-Mar	1524	1502.6	18.06	-70.80	Greater Antilles, S. of DR	SD

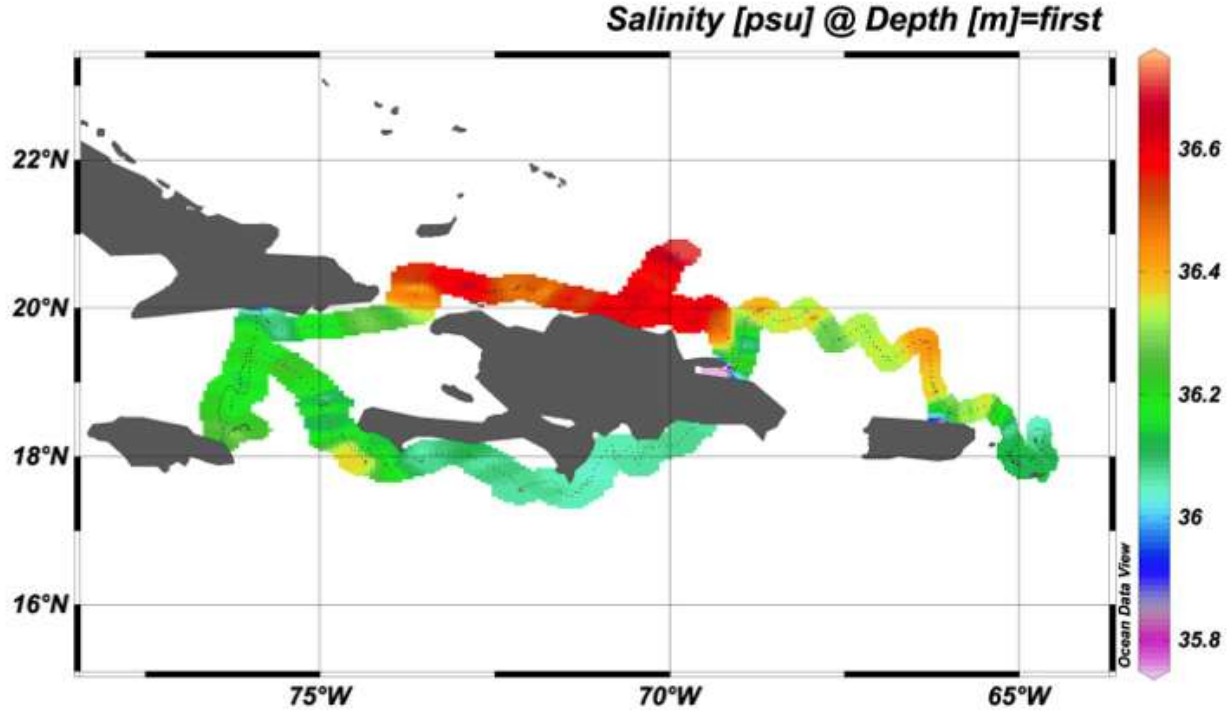
Duplicate station numbers indicate multiple oceanographic deployments that either occurred concurrently in the same location or were deployed sequentially in the same general location after the vessel was hove to. General Locations are categorized by traditional oceanic biomes or significant geologic feature. Abbreviations for oceanographic equipment deployed are: NT – Neuston Tow, MN – Meter Net tow, DN – Dip Net, PN – Phytoplankton Net, HP – Hydrophone, CTD – conductivity, temperature, and depth profilers, HC – Hydrocast with 12 Niskin bottles and CTD, SG – Shipek Grab, and SD – Secchi Disc

Figure 2a-c. Surface water hydrography for C264.

a. Temperature (seawater flow thru system with in-line thermistor)



b. Salinity



c. Chlorophyll-*a* fluorescence. For the first half of the cruise the chlorophyll-a fluorescence sensor was non-operational.

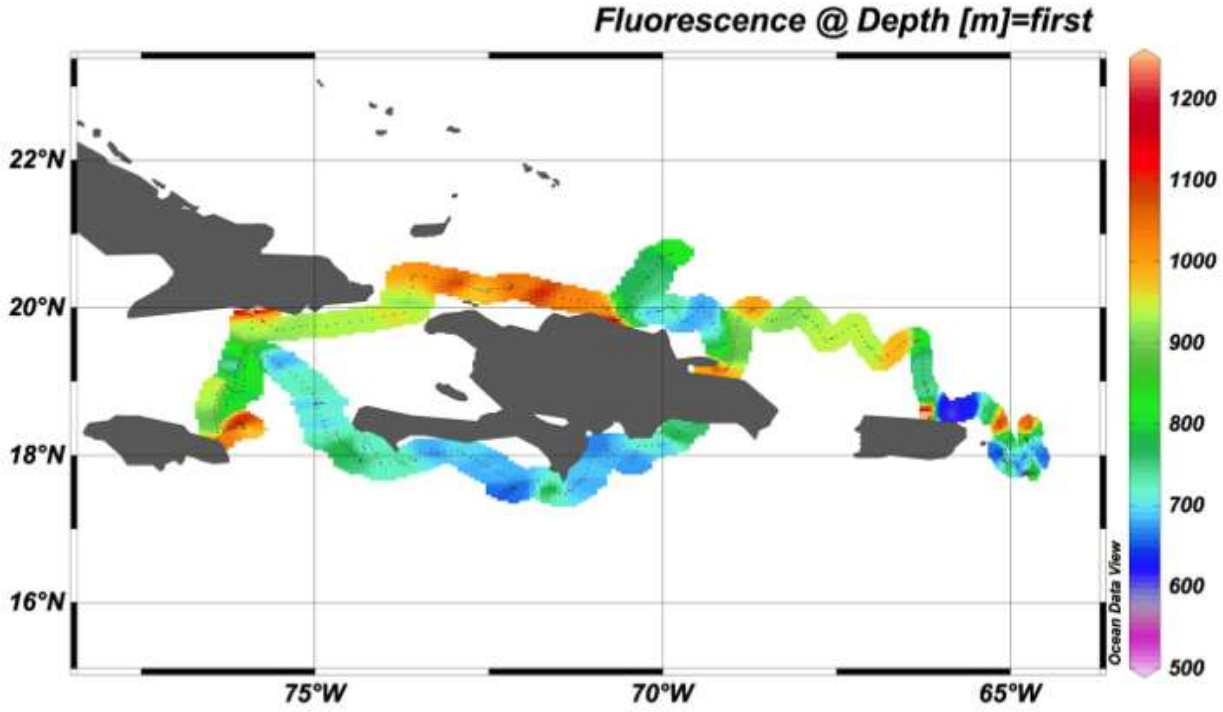


Table 3. Surface station location and surface sensor data for C264.

Station # (C264)	Date (2016)	Time (local +4 and +5 GMT)	Log (nm)	Lat (dec Deg N)	Lon (dec Deg W)	Temp (°C)	Salinity (ppt)	chl-a Fluor (volts x30)
SS-001	17-Feb	0930	0.0	17.75	-64.70	26.8	36.240	954
SS-002	17-Feb	1523	22.5	18.23	-64.66	26.9	36.120	676
SS-003	17-Feb	1935		18.37	-64.77	26.8	36.020	1138
SS-004	19-Feb	1215		18.23	-64.77	27.5	36.070	801
SS-005	20-Feb	0024	40.0	17.99	-64.61	26.9	36.110	662
SS-006	20-Feb	1125	90.9	18.05	-65.13	26.8	36.116	641
SS-007	21-Feb	0020	126.0	18.00	-65.13	26.7	36.132	643
SS-008	21-Feb	0605	137.8	17.87	-65.01	26.8	36.141	754
SS-009	21-Feb	1025	144.6	17.93	-65.11	26.8	36.081	705
SS-010	22-Feb	0030	193.2	18.62	-65.36	26.8	36.171	743
SS-011	22-Feb	0555	221.8	18.59	-65.80	26.7	36.319	603
SS-012	22-Feb	1118	245.4	18.59	-66.01	27.0	36.153	602
SS-013	24-Feb	0735	253.0	18.46	-66.11	27.8	35.250	2412
SS-014	24-Feb	1514	253.0	18.42	-66.13	27.5	35.799	2517
SS-015	24-Feb	0030	278.0	18.97	-66.23	26.5	36.362	765
SS-016	25-Feb	0615	299.5	19.33	-66.28	26.7	36.432	761
SS-017	25-Feb	1132	313.2	19.55	-66.36	26.7	36.405	791
SS-018	25-Feb	1754	337.2	19.36	-66.75	26.9	36.339	970
SS-019	26-Feb	0015	363.9	19.47	-67.04	26.7	36.344	955
016-HC #13	26-Feb	1123	403.5	19.63	-67.58	26.9	36.280	949
SS-020	26-Feb	1813	426.7	19.82	-67.86	26.8	36.329	920
SS-021	27-Feb	0029	441.5	19.96	-68.07	26.9	36.329	883
SS-022	27-Feb	0607	461.8	19.82	-68.45	26.8	36.338	911
SS-023	27-Feb	1800	488.1	19.81	-68.92	26.9	36.264	917
SS-024	28-Feb	0737	527.3	19.16	-69.08	26.9	36.010	991
SS-025	28-Feb	0913	527.3	19.15	-69.18	27.3	35.360	1129
SS-026	28-Feb	0957	527.3	19.17	-69.25	27.2	34.972	1196
SS-027	2-Mar	0825	527.3	19.19	-69.33	27.6	33.900	1170
SS-028	2-Mar	1807	550.9	19.52	-69.14	27.1	36.399	749
SS-029	3-Mar	0021	580.6	20.00	-69.46	26.3	36.632	678
SS-030	3-Mar	0551	603.9	19.92	-69.81	26.6	36.570	728
SS-031	3-Mar	1205	616.3	19.95	-70.06	26.8	36.600	682
SS-032	3-Mar	1802	644.7	19.81	-70.69	26.8	36.600	878
SS-033	4-Mar	0030	679.5	20.15	-70.30	26.7	36.579	746
SS-034	4-Mar	1300	724.1	20.74	-69.88	26.7	36.713	776
SS-035	4-Mar	1800	724.1	20.74	-69.88	26.8	36.714	867

SS-036	5-Mar	0042	745.6	20.41	-70.22	26.8	36.548	787
SS-037	5-Mar	0558	773.8	20.01	-70.52	26.6	36.627	759
SS-038	5-Mar	1715		19.98	-70.80	26.7	36.636	1032
SS-039	6-Mar	0028	827.8	20.12	-71.43	26.8	36.577	1036
SS-040	6-Mar	0621	862.0	20.29	-72.08	26.7	36.546	989
SS-041	6-Mar	1135	867.8	20.27	-72.18	27.0	36.444	1076
SS-042	6-Mar	1813	876.2	20.25	-72.43	27.0	36.502	1011
SS-043	7-Mar	0014	886.8	20.23	-72.63	26.6	36.582	922
SS-044	7-Mar	0600	911.9	20.37	-73.17	26.6	36.602	1046
SS-045	7-Mar	1049	925.8	20.42	-73.62	26.7	36.530	996
SS-046	8-Mar	0906	1057.0	19.81	-75.75	27.1	36.901	973
SS-047	8-Mar	1515	1057.0	20.01	-75.85	27.2	36.661	2705
SS-048	11-Mar	1807	1057.0	19.96	-75.88	27.3	36.127	1070
SS-049	12-Mar	0018	1084.4	19.43	-75.99	27.1	36.232	901
SS-050	12-Mar	0558	1100.2	19.08	-76.02	27.1	36.187	846
SS-051	12-Mar	1205	1111.2	18.86	-76.16	27.1	36.200	815
SS-052	12-Mar	1805	1111.3	18.94	-76.33	27.4	36.185	1011
SS-053	13-Mar	0005	1125.2	18.65	-76.45	27.0	36.198	920
SS-054	13-Mar	1205	1151.5	18.37	-76.02	27.2	36.240	893
SS-055	13-Mar	1800	1153.5	18.43	-76.15	27.3	36.212	1164
SS-056	14-Mar	0600	1153.5	18.36	-76.25	27.1	36.245	1055
SS-057	17-Mar	1800	1153.5	18.23	-76.43	27.4	36.277	783
SS-058	18-Mar	0005	1175.5	18.68	-76.27	27.3	36.160	801
SS-059	18-Mar	0600	1189.0	18.96	-76.14	27.2	36.070	728
SS-060	18-Mar	1201	1197.0	19.21	-76.11	27.4	36.140	700
SS-061	18-Mar	1800	1203.3	19.45	-76.04	27.7	36.146	706
SS-062	19-Mar	0035	1230.3	19.24	-75.35	27.4	36.232	681
SS-063	19-Mar	0558	1258.8	18.91	-75.11	27.3	36.204	726
SS-064	19-Mar	1200	1274.4	18.71	-74.94	27.4	36.149	668
SS-065	19-Mar	1800	1286.5	18.55	-74.93	27.7	36.103	702
SS-066	20-Mar	0034	1309.5	18.30	-74.69	27.2	36.153	712
SS-067	20-Mar	0554	1321.7	18.08	-74.51	27.0	36.393	787
SS-068	20-Mar	1128	1329.9	17.92	-74.36	27.1	36.372	740
SS-069	20-Mar	1800	1337.7	18.17	-74.30	27.3	36.120	733
SS-070	21-Mar	0030	1347.2	17.73	-74.06	27.2	36.210	725
SS-071	21-Mar	0555	1360.3	17.89	-73.72	27.4	36.067	744
SS-072	21-Mar	1053	1365.5	17.94	-73.56	27.7	36.066	706
SS-073	21-Mar	1802	1384.3	18.06	-73.05	27.6	36.094	697
SS-074	22-Mar	0559	1414.9	17.69	-72.25	26.9	36.070	695
SS-075	22-Mar	1754	1436.4	17.66	-71.82	27.4	36.070	688
SS-076	23-Mar	0000	1458.4	17.47	-71.41	27.0	36.052	664

Table 3 continued. Surface station location and surface sensor data for C264.

Station # (C264)	Chl-a (ug/l)	PO4 (uM)	pH	24 hr Bacteria *E. coli* colonies (#/100mL)	24 hr Bacteria Coliform Colonies (#/100mL)	Location
SS-001	0.153	0.183		195	189	Gallows Bay
SS-002	0.115	0.149		0	191	St. John shelf
SS-003	0.431	0.169		17	209	Francis Bay
SS-004	0.274	0.248		136	115	S of St. Thomas
SS-005	0.062	0.223				S of St. Thomas
SS-006	0.081	0.233	7.957	1	112	S of St. Thomas
SS-007	0.083	0.228				S of St. Thomas
SS-008	0.088	0.159				S of St. Thomas
SS-009	0.051	0.302	7.946	183	22	W of St. Croix
SS-010	0.086	6.729				Greater Antilles, North of Puerto Rico
SS-011	0.036	0.312				Greater Antilles, North of Puerto Rico
SS-012	0.050	0.233	7.912	10	275	Greater Antilles, North of Puerto Rico
SS-013	0.672	0.154		190	140	Old San Juan Inner Harbor
SS-014	1.333	0.094		167	45	Greater Antilles, Old San Juan
SS-015	0.020	0.050				Greater Antilles, North of Puerto Rico
SS-016	0.032	0.050				Greater Antilles, Puerto Rico Trench
SS-017	0.031	0.084	7.922	4	6	Greater Antilles, Puerto Rico Trench
SS-018	0.033	0.079				Greater Antilles, Puerto Rico Trench
SS-019	0.033	0.070				Greater Antilles, Puerto Rico Trench
016-HC #13	0.035	0.060	7.979	0	190	Greater Antilles, North of Puerto Rico
SS-020	0.034	0.154				Greater Antilles, North of Puerto Rico
SS-021	0.031	0.149				Greater Antilles, North of Puerto Rico
SS-022	0.041	0.159				Greater Antilles, North of Dominican Republic
SS-023	0.023	0.075				Greater Antilles, North of Dominican Republic
SS-024	0.158	0.114		0	190	Greater Antilles, Entrance Samana Bay
SS-025	0.246	0.075		0	23	Greater Antilles, Samana Bay
SS-026	0.238	0.060	7.895	1	166	Greater Antilles, Inner Samana Bay
SS-027	0.872	0.064		143	75	Greater Antilles, Inner Samana Bay
SS-028	0.055	0.095				Greater Antilles, North of

						Dominican Republic
SS-029	0.027	0.189				Greater Antilles, S. of Silver Bank
SS-030	0.056	0.158				Greater Antilles, S. of Silver Bank
SS-031	0.024	0.189				Greater Antilles, S. of Silver Bank
SS-032	0.188	0.086				Greater Antilles, Puerta Plata Sea Buoy
SS-033	0.029	0.215				Greater Antilles, Silver Bank
SS-034	0.123	4.633		70	280	Greater Antilles, Silver Bank
SS-035	0.128	0.282				Greater Antilles, Silver Bank
SS-036	0.025	0.158				Greater Antilles, Offshore Puerto Plata
SS-037	0.029	0.180				Greater Antilles, Offshore Puerto Plata
SS-038	0.038	0.153				Greater Antilles, North of Puerto Plata, DR
SS-039	0.063	0.166				Greater Antilles, North of Haiti
SS-040	0.044	0.140				Greater Antilles, North of Haiti
SS-041	0.058	0.140		0	51	Greater Antilles, North of Haiti
SS-042	0.045	0.149				Greater Antilles, North of Haiti
SS-043	0.038	0.118				Greater Antilles, North of Haiti
SS-044	0.041	0.055				Greater Antilles, North of Haiti
SS-045	0.072	0.095		2	713	Greater Antilles, Windward Passage
SS-046	0.111	0.131		0	250	Greater Antilles, S. of Santiago
SS-047	20.363	0.620		246	205	Santiago, Cuba Inner Harbor
SS-048	0.213	0.262				Santiago Harbor Mouth
SS-049	0.159	0.140				Greater Antilles, S. of Santiago
SS-050	0.089	0.078				Greater Antilles, S. of Cuba
SS-051	0.084	0.131				Greater Antilles, S. of Cuba
SS-052	0.079	0.070				Greater Antilles, S. of Cuba
SS-053	0.096	0.131				Greater Antilles, S. of Cuba
SS-054	0.115	0.131	7.811			Greater Antilles, N. of Jamaica
SS-055	0.133	0.100				Greater Antilles, N. of Jamaica
SS-056	0.137	0.131				Greater Antilles, N. of Jamaica
SS-057	0.092	0.438				Greater Antilles, N. of Jamaica
SS-058	0.108	0.459				Greater Antilles, N. of Jamaica
SS-059	0.232	0.416				Greater Antilles, N. of Jamaica
SS-060	0.306	0.416				Greater Antilles, SW of Haiti
SS-061	0.087	0.420				Greater Antilles, N. of Jamaica
SS-062	0.048	0.381				Greater Antilles, S. of Cuba
SS-063	0.059	0.350				Greater Antilles, W. of Haiti
SS-064	0.169	0.529				Greater Antilles, W. of Haiti
SS-065	0.082	0.727				Greater Antilles, SW of Haiti
SS-066	0.146	0.438				Greater Antilles, SW of Haiti
SS-067	0.134	0.324				Greater Antilles, S.of Haiti

SS-068	0.197	0.538	Greater Antilles, S.of Haiti
SS-069	0.108	0.350	Greater Antilles, S.of Haiti
SS-070	0.101	0.468	Greater Antilles, S.of Haiti
SS-071	0.225	0.438	Greater Antilles, S.of Haiti
SS-072	0.177	0.556	Greater Antilles, S.of Haiti
SS-073	0.113	0.451	Greater Antilles, S.of Haiti
SS-074	0.086	0.464	Greater Antilles, S.of Haiti
SS-075	0.121	0.529	Greater Antilles, S.of Haiti
SS-076	0.056	0.700	Greater Antilles, S.of Haiti

Surface water samples were collected using a clean, seawater flow-thru system (intake ~ 1-3m depth) with in-line temperature, salinity and *in vivo* chlorophyll-*a*, fluorescence sensors. Discrete water samples were collected for phosphate (PO_4) analysis, measured by colorimetric analysis with an Ocean Optics Chem2000 digital spectrophotometer; and extracted chlorophyll-*a* (Chl-*a*) concentrations, measured with a Turner Designs Model 10-AU Fluorometer following methods outlined in Parsons, Maita and Lalli, *A Manual of Chemical and Biological Methods for Seawater Analysis*, Pergamon Press 1984. Chlorophyll-*a* samples were filtered through 0.45 µm filters. A blank space indicates that no sample was collected for that analysis. Coliform bacteria colony counts were based on EPA Coliquant Test kits incubated at ambient air temperature for 24hrs.

Figure 3a. Surface current magnitude during C264. Note, 500 mm/s is approximately 1.0 knot. Influence of narrow island passages on the flow of the North Equatorial Current into the Caribbean is evident in the dynamic eddy field on the leeward (western) side of Hispaniola.

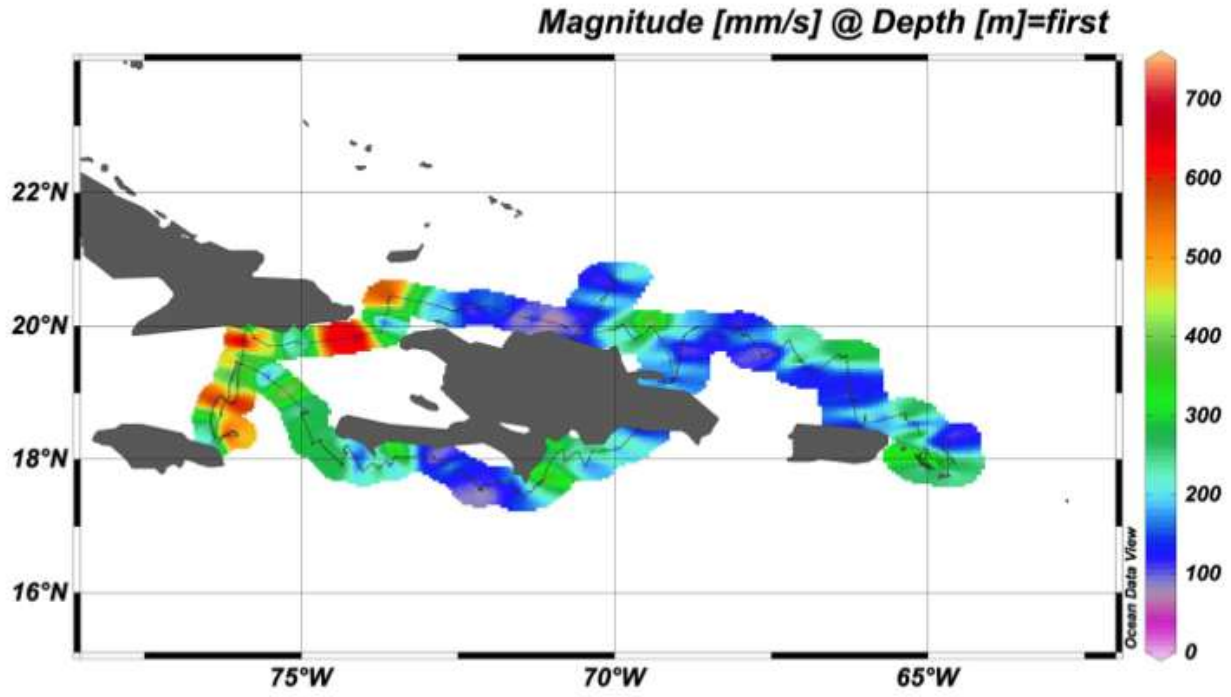


Figure 3b. Surface current direction during C264. Influence of narrow island passages on the flow of the North Equatorial Current into the Caribbean is evident in the dynamic eddy field on the leeward (western) side of the Hispaniola. The general flow of currents in the region is to the west, but abrupt transitions in current direction are associated with the outer edge of each eddy we encountered.

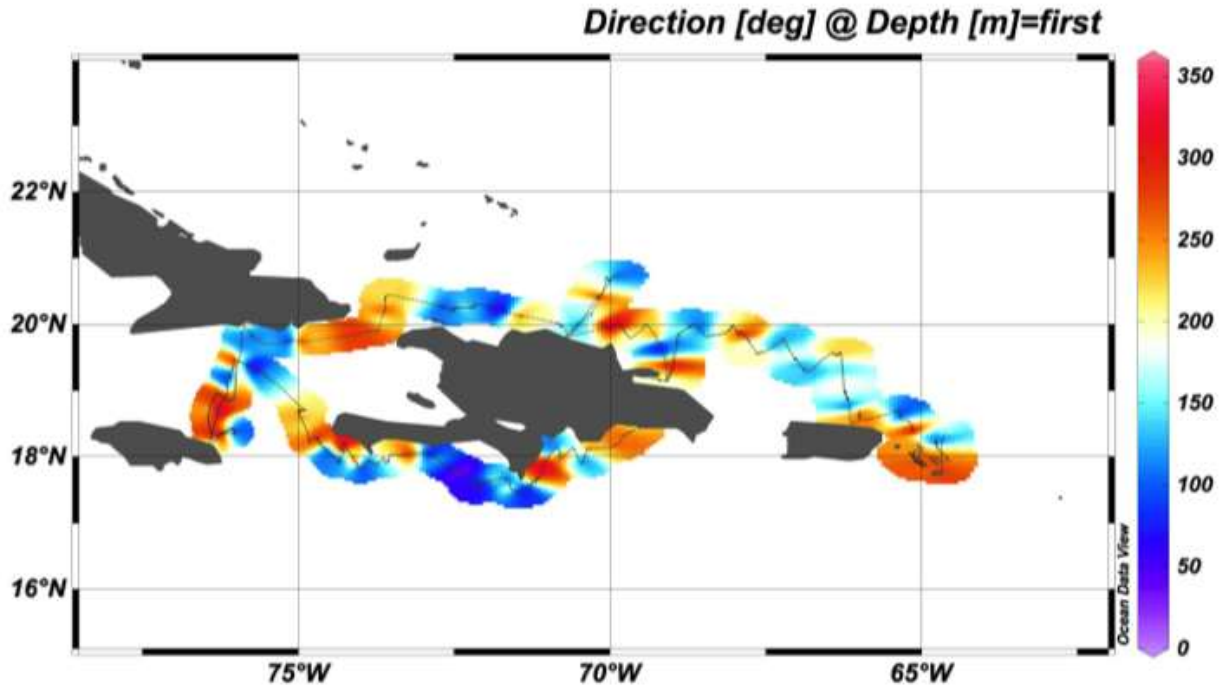


Table 4. CTD station data for C264. Physical characteristics of the water column were measured with a Seabird SEACAT Profiler Model SBE 19plus Conductivity-Temperature-Depth unit and three attached sensors: chlorophyll-*a* (SN – SEA-001), dissolved oxygen (SN-1120) and PAR (SN-70187). Vertical profile data available upon request. Vertical profile data available upon request.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	Cast Depth (m)	Water Depth (m)	Locale	CTD Unit #	Hydrocast (Y/N)
002	19-Feb	1133	41	48	Leeward Islands, West of St. John	2737	N
004	20-Feb	1043	852	1720	Leeward Islands, south of St. John and St. Thomas	4447	N
007	21-Feb	1011	992	4479	Leeward Islands, north of St. Croix	4447	N
012	25-Feb	1050	802	7791	Puerto Rico, Greater Antilles	4447	N
016	26-Feb	1042	912	8019	Greater Antilles, Puerto Rico Trench	4447	Y
020	28-Feb	0730	271	317	Greater Antilles, Entrance Samana Bay	4447	N
023	2-Mar	1214	70	75	Greater Antilles, Whales Hole Samana Bay	4447	N
026	3-Mar	1042	1167	2535	Greater Antilles, South of Silver Bank	4447	N
030	5-Mar	1645	987	2286	Greater Antilles, North of Puerta Plata	4447	N
032	6-Mar	0947	445	3966	Greater Antilles, North of Haiti	4447	N
035	7-Mar	1011	N/A	3292	Greater Antilles, Windward Passage	4447	N
036	8-Mar	0800	565	3051	Greater Antilles, Santiago Cuba	4447	N
038	12-Mar	0939	771	2698	Greater Antilles, S. of Cuba	4447	N
040	13-Mar	1200	535	540	Greater Antilles, N. of Jamaica	4447	Y
043	18-Mar	0957	1002	2995	Greater Antilles, SW of Haiti	4447	N
045	19-Mar	0935	957	1978	Greater Antilles, SW of Haiti	4447	N
047	20-Mar	0944	941	2546	Greater Antilles, S. of Haiti	4447	N
049	21-Mar	1002	987	4152	Greater Antilles, S. of Haiti	4447	N
051	22-Mar	0905	1727	4097	Greater Antilles, S. of Haiti	2737	N

Table 5. Hydrocast station data for C264. Physical characteristics of the water column were measured with a Seabird SEACAT Profiler Model SBE 19plus Conductivity-Temperature-Depth unit and three attached sensors: chlorophyll-a (SN – SEA-001), dissolved oxygen (SN-1120) and PAR (SN-70187). Vertical profile data available upon request. Water samples were collected from 12 depths using niskin bottles and a surface sample (bottle 13) using a clean, seawater flow-thru system (intake ~ 1-3m depth).

Station # (C264-) General Locale Date and Time	Bottle	Z Corr (m)	Temp (deg C)	Salinity (psu)	Density (kg/m3)	O_2 Seapoint (mL/L)	PO4 (uM)	Chl a (ug/l)	pH	Chla-Fluoro (V)
	13	0	26.9	36.28			0.060	0.035	7.979	
Station - 016	12	11	26.7	36.26	23.75	6.51		0.028	7.999	0.046
Greater Antilles,	11	25	26.7	36.26	23.76	6.51				0.037
Puerto Rico Trench	10	50	26.7	36.26	23.76	6.52	0.000	0.038		0.046
26-Feb-16	9	75	26.8	36.44	23.86	6.49	0.134	0.120	7.983	0.059
1042	8	100	26.4	36.86	24.32	6.53		0.205		0.092
Cast Depth	7	125	24.8	37.02	24.95	6.70	0.139	0.085	7.966	0.183
911	6	149	23.4	37.04	25.37	6.86		0.050		0.039
	5	199	20.4	36.81	26.03	7.24	0.188	0.000	7.853	0.008
Water Depth	4	298	18.0	36.56	26.46	7.58		0.000		0.003
8019	3	397	15.2	36.08	26.76	8.03	0.832		7.725	0.002
	2	496	13.9	35.87	26.88	8.25				0.001
CTD Unit # 4447	1	596	12.3	35.63	27.01	8.54	1.461		7.631	0.002
	13	0							7.811	
Station - 040	12	10	26.9	36.23	23.67	6.49				0.185
Greater Antilles,	11	25	26.9	36.23	23.68	6.50				0.219
N. of Jamaica	10	50	26.9	36.30	23.73	6.49				0.327
13-Mar-16	9	75	26.2	36.60	24.19	6.56			7.736	0.426
1200	8	99	25.8	36.79	24.43	6.59			7.794	0.386
Cast Depth	7	149	24.8	36.96	24.89	6.70			7.735	0.138
535	6	150	24.7	36.96	24.91	6.71				0.124
	5	174	24.5	36.98	25.00	6.73			7.757	0.124
Water Depth	4	198	22.5	36.99	25.59	6.97				0.055
540	3	200	22.5	36.99	25.58	6.97				0.054
	2	199	22.5	37.00	25.60	6.97			7.680	0.054
CTD Unit # 4447	1	298	16.9	36.32	26.56	7.76			7.608	0.047

Figure 4a. Hydrographic regimes of cruise C264. Four hydrographic regimes were identified along the cruise track that differed in their observable water mass structure.

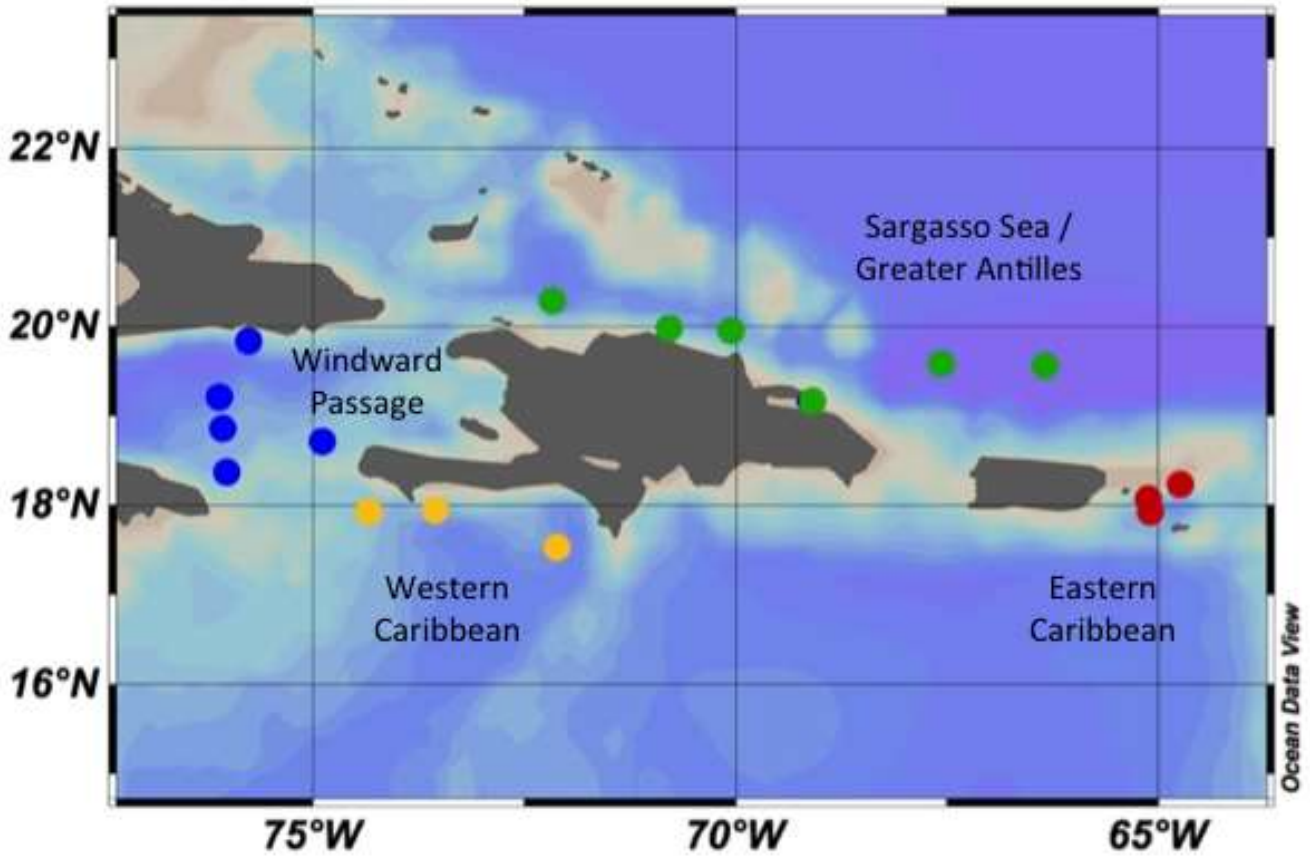


Figure 4b. T-S Plots for cruise C264. Four hydrographic regimes were identified along the cruise track that differed in their observable water mass structure. Below are representative T-S plots.

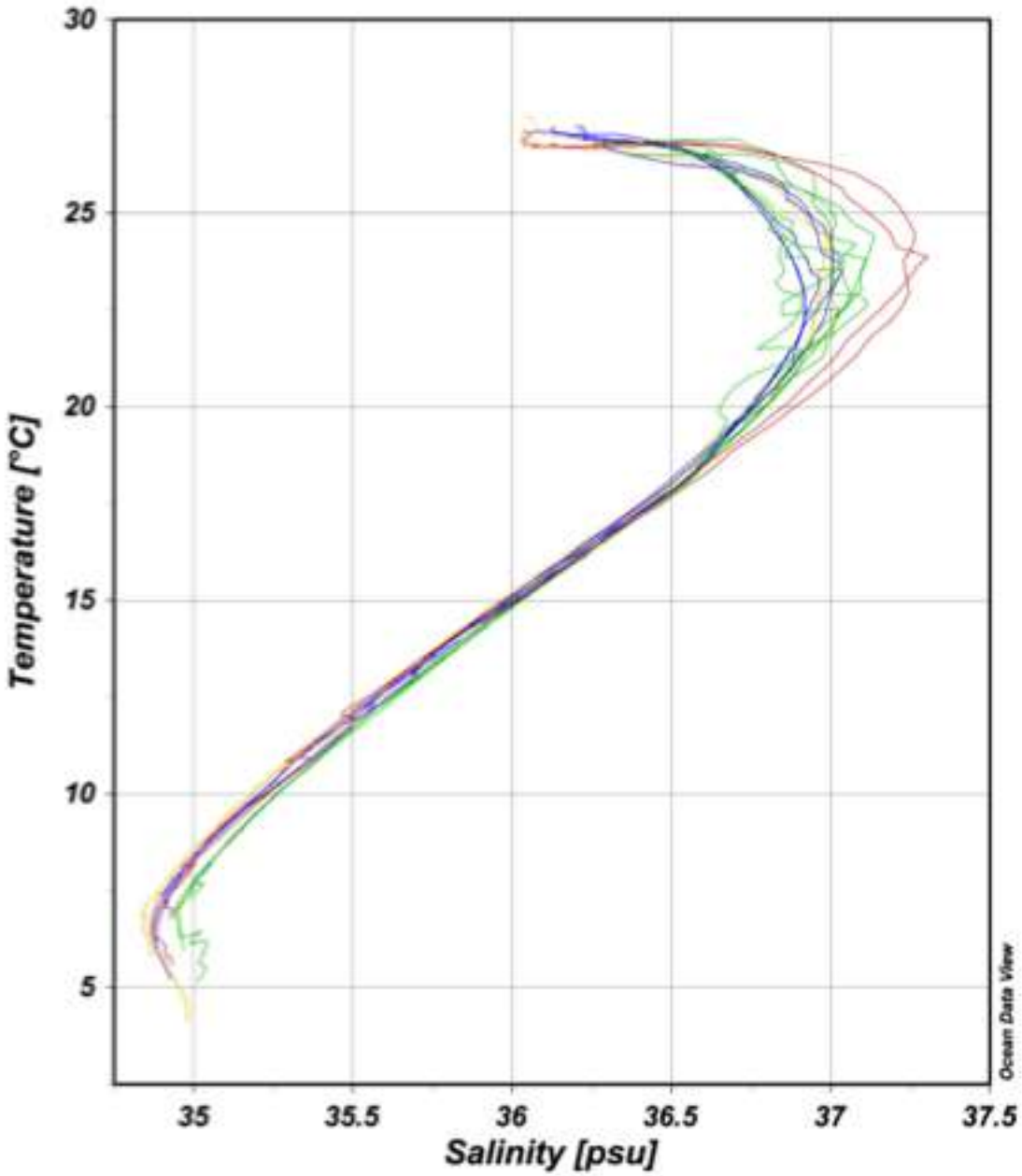


Figure 4c. Temperature profiles for cruise C264. Four hydrographic regimes were identified along the cruise track that differed in their observable water mass structure. Below are representative temperature profiles.

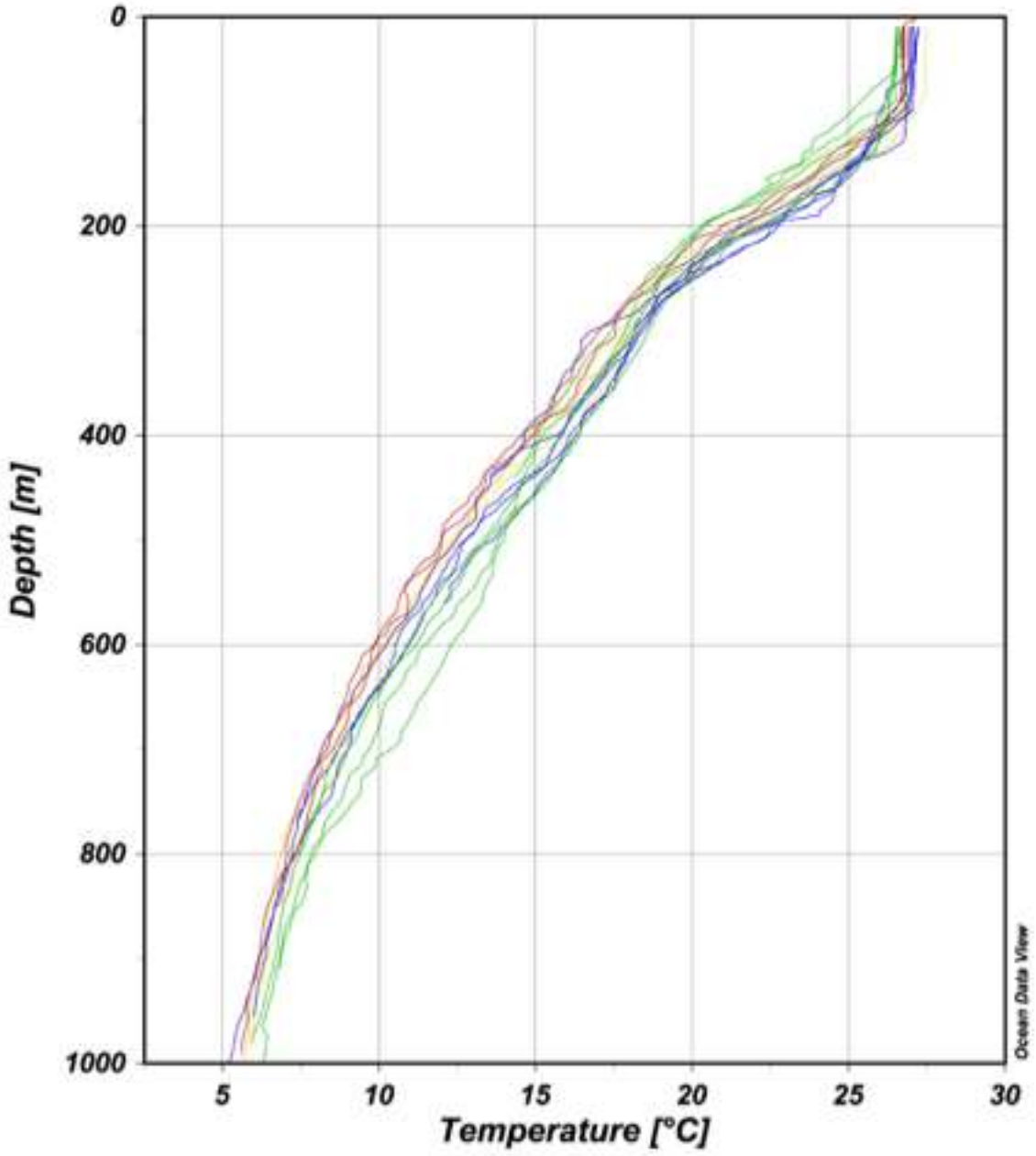


Figure 4d. Salinity profiles for cruise C264. Four hydrographic regimes were identified along the cruise track that differed in their observable water mass structure. Below are representative salinity profiles.

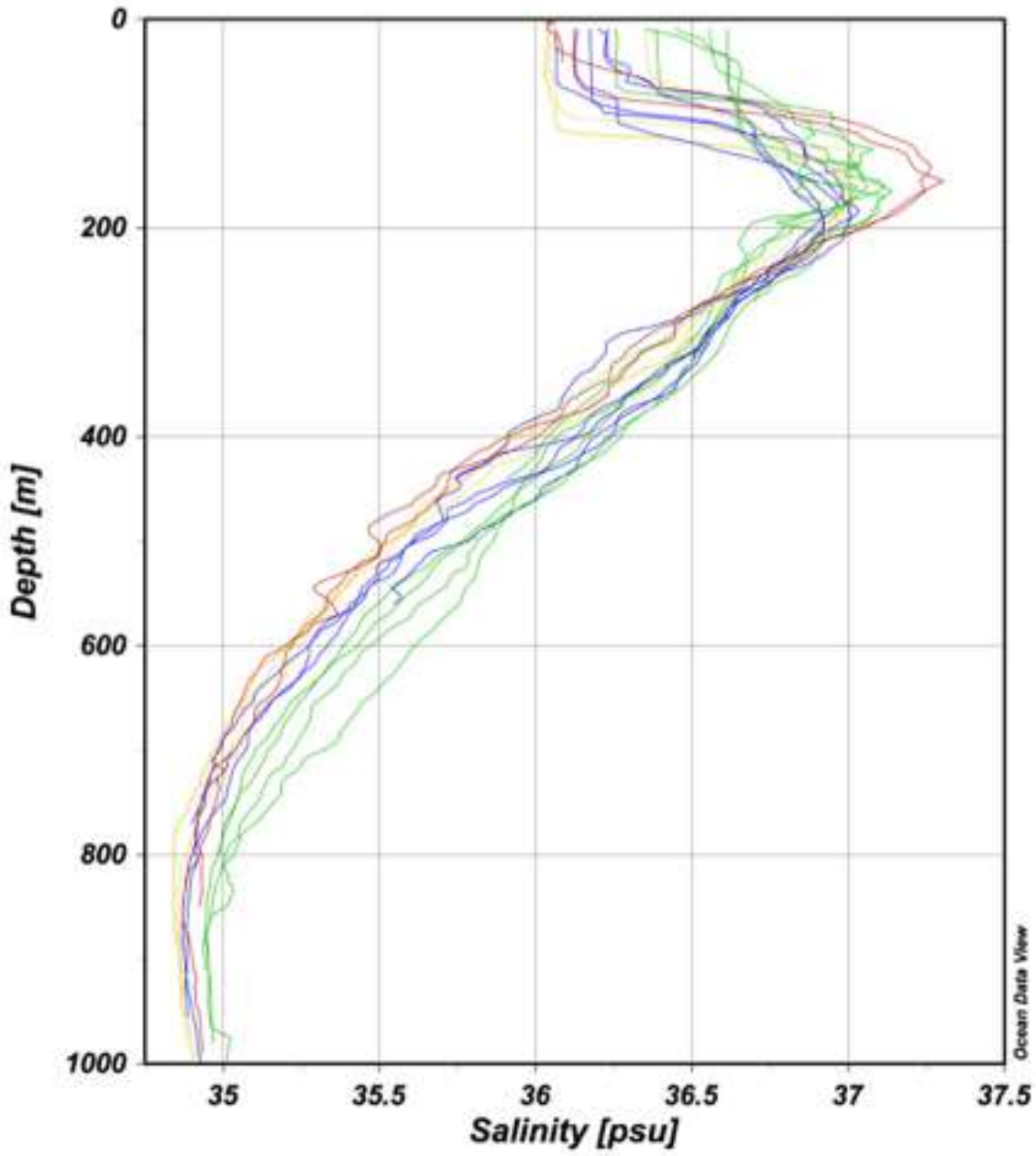


Figure 4e. Dissolved oxygen profiles for cruise C264. Four hydrographic regimes were identified along the cruise track that differed in their observable water mass structure. Below are representative dissolved oxygen profiles.

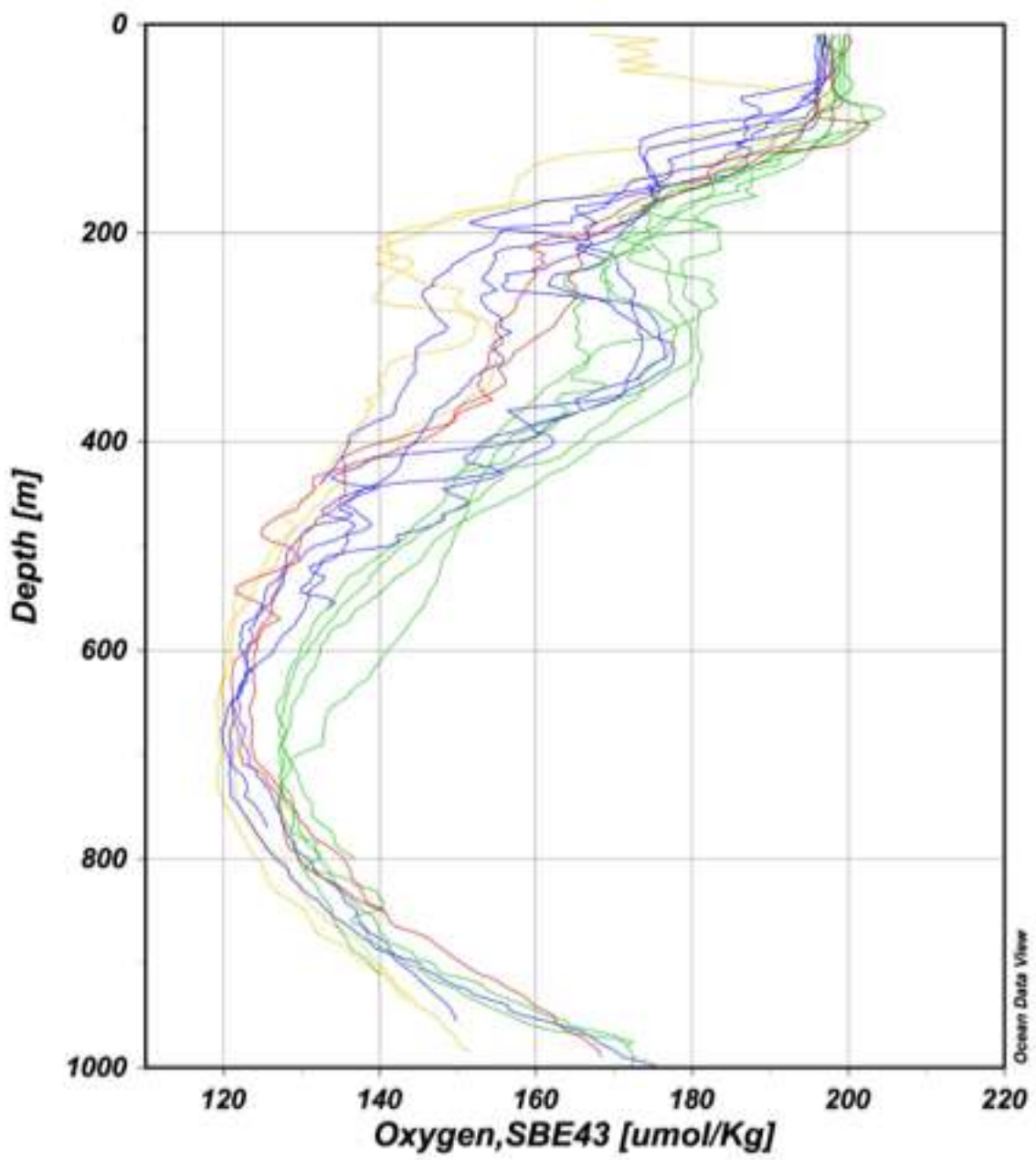


Figure 4f. Chlorophyll-*a* fluorescence profiles for cruise C264. Four hydrographic regimes were identified along the cruise track that differed in their observable water mass structure. Below are representative chlorophyll-*a* fluorescence profiles.

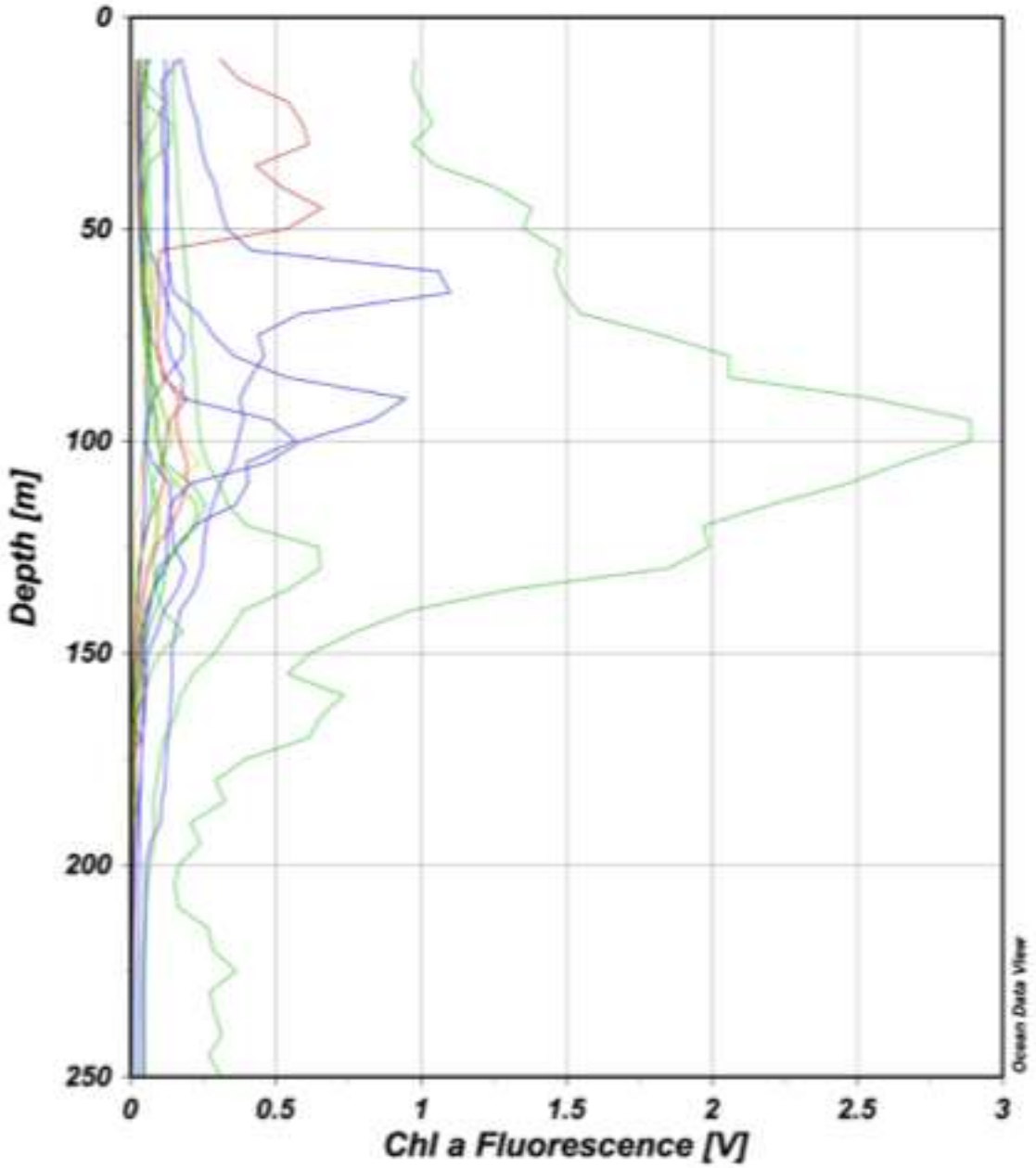


Table 6. Neuston station data for C264.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	Moon Phase %	risen or set	Temp (°C)	Salinity (ppt)	chl-a Fluor (volts x30)	Tow Area (m^2)	Zoop Biomass (ml)	Zoop Den (ml/m^2)	Locale
002	19-Feb	1215	89%	set	27.5	36.07	794.7	1566.1	16.0	0.0102	Leeward Islands, S. of St. John
003	20-Feb	0009	89%	risen	26.9	36.10	676.1	2302.7	5.0	0.0022	Leeward Islands, S. of St. Thomas
004	20-Feb	1229	95%	set	26.8	36.13	637.6	1877.0	4.0	0.0021	Leeward Islands, S. of St. John and St. Thomas
006	21-Feb	0006	98%	risen	26.8	36.13	640.6	1596.1	4.5	0.0028	Leeward Islands, S of St. Thomas
007	21-Feb	1157	98%	set	26.9	36.08	670.1	1198.0	7.0	0.0058	Leeward Islands, N of St. Croix
008	22-Feb	0009	98%	risen	26.8	36.17	744.5	1658.5	5.0	0.0030	Greater Antilles, N of Puerto Rico
009	22-Feb	1054	100%	set	27.1	36.20	616.3	1500.8	10.0	0.0067	Greater Antilles, N of Puerto Rico
011	25-Feb	0010	97%	risen	26.7	36.36	751.0	2106.2	2.0	0.0009	Great Antilles, North of Puerto Rico
015	26-Feb	0001	88%	risen	26.7	36.30	954.3	2137.8	1.5	0.0007	Greater Antilles, over Puerto Rico Trench
018	27-Feb	0017	81%	risen	26.8	36.32	920.2	1982.6	1.8	0.0009	Greater Antilles, North of Puerto Rico
025	2-Mar	2358	45%	set	26.6	36.63	676.2	1934.7	3.5	0.0018	Greater Antilles, S. of Silver Bank
027	4-Mar	0017	25%	set	26.7	36.58	748.5	1474.8	2.4	0.0016	Greater Antilles, Silver Bank
029	5-Mar	0021	25%	set	26.8	36.54	781.6	1637.7	2.2	0.0013	Greater Antilles, Puerto Plata Sea
031	6-Mar	0012	9%	set	26.8	36.57	1031.7	1248.4	12.0	0.0096	Greater Antilles, North of Dominican Republic
032	6-Mar	1130	9%	set	27.0	36.44	1076.3	843.6	3.5	0.0041	Greater Antilles, N. of Haiti
034	7-Mar	0000	4%	set	26.6	36.58	970.8	2046.0	56.0	0.0274	Greater Antilles, N. of Haiti
035	7-Mar	1148	4%	risen	26.6	36.54	963.2	2700.7	1.0	0.0004	Greater Antilles, Windward Passage
037	12-Mar	0010	16%	set	27.1	36.23	901.5	1460.2	7.0	0.0048	Greater Antilles, S. of Cuba
039	13-Mar	0000	26%	set	27.0	36.19	890.5	1613.1	15.0	0.0093	Greater Antilles, S. of Cuba

042	18-Mar	0001	78%	risen	27.3	36.16	800.2	1603.3	8.0	0.0050	Greater Antilles, N. of Jamaica
043	18-Mar	1135	78%	risen	27.4	36.14	708.7	1358.2	11.0	0.0081	Greater Antilles, N. of Jamaica
044	19-Mar	0030	86%	risen	27.4	36.23	681.5	1617.1	18.0	0.0111	Greater Antilles, N. of Jamaica
045	19-Mar	1122	86%	Risen	27.5	36.15	693.2	1860.8	1.8	0.0009	Greater Antilles, W. of Haiti
046	20-Mar	0050	92%	risen	27.2	36.14	734.0	1285.7	14.0	0.0109	Greater Antilles, S.W. of Haiti
047	20-Mar	1124	92%	set	27.1	36.37	744.9	1647.5	10.0	0.0061	Greater Antilles S. of Haiti
048	21-Mar	0026	96%	risen	27.2	36.20	723.5	1946.1	26.0	0.0134	Greater Antilles S of Haiti

Table 6 continued. Neuston station data for C264.

Station # (C264-)	Halo (#)	Lepto (#)	Phyllo (#)	Mycto (#)	Plastic Pellets (#)	Plastic Pieces (#)	Tar (#)	Snatans I (g)	Snatans VIII (g)	Sfluitans III (g)
002	0	0	0	0	0	13	0	1.0	895.0	230.0
003	1	0	0	0	0	2	0	0.0	165.0	0.0
004	0	0	0	0	0	7	0	3.0	205.0	68.1
006	0	3	0	1	0	57	0	0.0	105.0	0.0
007	0	0	0	0	0	111	0	10.0	1435.0	325.0
008	0	0	0	0	0	6	0	0.0	1.5	0.0
009	0	0	0	0	0	13	0	0.0	156.0	0.0
011	0	0	0	1	0	1	0	0.0	0.0	0.0
015	7	1	0	3	0	1	0	0.5	120.0	3.5
018	3	0	0	8	0	1	0	0.0	24.0	0.0
025	3	0	0	2	0	0	0	0.0	8.0	0.0
027	1	0	0	4	0	13	0	5.0	39.0	0.8
029	1	0	0	4	0	2	0	0.0	7.1	0.0
031	1	0	0	8	0	14	0	31.0	70.0	25.0
032	0	0	0	0	0	24	0	3.5	35.0	3.0
034	0	1	0	7	0	22	0	0.0	45.0	14.0
035	0	0	0	0	0	17	0	3.0	5.0	4.0
037	0	0	0	2	0	0	0	0.0	17.0	0.0
039	7	0	0	6	0	2	0	0.0	0.0	0.0
042	2	0	0	1	0	1	0	0.0	390.0	1.4
043	0	0	0	0	0	2	0	70.0	795.0	68.0
044	1	0	0	1	0	27	0	0.0	3.0	0.0
045	2	0	0	0	0	2	0	0.0	1.8	1.6
046	4	1	0	0	0	0	0	2.0	153.0	10.0
047	2	0	0	0	0	3	0	0.0	540.0	0.0
048	14	1	0	0	0	0	0	40.0	215.0	12.0

Table 6 continued. Neuston station data for C264.

Station # (C264-)	Gelatinous >2cm (#)	Types of Gelatinous	Other Nekton >2cm (#)	Types of Nekton	Tow Description and other notes	Surface station #
002	0	None	4	3 Sargassum associated fish (3.1 mL), 1 Sargassum associated crab (0.3 mL)	Zooplankton dark and crunchy with a few small gelatinous organisms and blue calanoid copepods. Some plastic and Sargassum associated fauna. Dominated by Sargassum.	SS-004
003	1	1 salp, ~4 cm, 4 mL	1	1 flying fish (juvenile), ~4 cm, 1 mL	tow contained a shrimp, some silver bait fish, Sargassum was present and manatee grass was present, the biomass was brown.	SS-005
004	0	None	3	1 pipefish, ~3 cm, 0.5 mL; 2 Sargassum crabs, ~2cm, 1.5 ML	tow contained large quantities of Sargassum and 7 small plastic pieces. Also 2 Sargassum associated crabs and a fish. The zooplankton biomass was majority brown.	SS-006
006	3	3 salps, 1.5 mL	1	1 pipefish, 0.2 mL	Bryozoans and barnacles and hydroids on Sargassum. Disseminated gelatinous organisms abundant in 2000 um sieve. Biomass majority brown in color.	SS-007
007	0	none	5	2 needle fish (0.5 ml), 1 Sargassum shrimp (0.5 mL), 2 gravid female Sargassum crabs (2 mL)	Sargassum snails dominated much of the zooplankton. Sargassum crustaceans were also found in abundance. The biomass was crunchy and dark in texture. There was a lot of styrofoam balls and some seagrass.	SS-009
008	0	none	0	None	Lots of black isopods, lots of shrimp and copepods. Some small plastic fragments. Biomass was a gray color.	SS-010
009	0	none	3	1 halfbeak juvenile fish, 1 ocean trigger fish juvenile, 1 small baitfish	Tow contained modest amount of Sargassum and fauna, tan colored plankton mass. Small bits of manatee grass.	SS-013
011	0	1 flying fish larvae (0.2 ml)	1	A live shrimp, dead fish, Sargassum, not very much zooplankton, brownish zooplankton and a pteropod	None	SS-015
015	0	None	3	1 needle fish (<0.5ml), 1 flying fish (2ml), 1 Sargassum crab (1ml)	Hydroids on Sargassum. A blue and brown colored biomass.	SS-019
018	1	1 salp (1ml)	0	None	Sparse zooplankton with some Sargassum fragments and lots of small myctophids. Zooplankton clear with some pteropods.	SS-021
025	2	1 siphonophore (0.5 ml), 1 salp (<0.5ml)	2	1 Sargassum crab, 1 viper fish	Lots of crab larvae less than 2cm. Mostly clear biomass with some blue copepods. Minimal amount of Sargassum	SS-029
027	0	None	1	1 Flying fish juvenile	Small amount of biomass, equal amount Sargassum floats to the biomass of fragments slowed processing. Myctophids small. Lots of bioluminescence in the net.	SS-033

029	15	None	1	1 mesopelagic fish	Our tow had tons of gelatinous organisms, lots of bioluminescence and three Sargassum crabs	SS-036
031	2	2 salps	5	3 mesopelagic fish, 1 sport fish, 1 shrimp	Vellela vellela and Sargassum crab (both less than 2 cm) pulled for viewing. Biomass was clear in color, with some pastel colored zooplankton and dark colored snails. Sargassum fauna noticeable but not overly abundant.	SS-039
032	0	none	2	2 fish	Sargassum, relatively low biovolume, 2 fish 11mm and 7mm in length	SS-041
034	194	194 salps	6	2 flying fish, 4 mesopelagic fish	A lot of salps, Sargassum, some myctophids, 2 flying fish and four other mesopelagic fish and a plastic bag.	SS-043
035	0	None	2	2 small mesopelagic fish	Two Sargassum crabs less than 2cm. Very minimal biomass.	SS-045
037	16	16 salps	1	1 mantis shrimp	Brownish orange biovolume. Lots of shrimp <2 cm. Swell height made it difficult to keep net at Neuston layer.	SS-049
039	2	Salps	7	1 shrimp, 6 stomatopod	Lots of myctophids and Halobates. Very little large nekton, no Sargassum. Overall pinkish biomass.	SS-053
042	0	none	3	1 stomatopod, 1 needlefish, 1 Sargassum crab	Sargassum covered in dark, thick algae. Biomass dark in color. Megalopae present.	SS-058
043	0	none	2	2 Sargassum crab (1mL)	There is an insane amount of shrimp, lots of algae on the Sargassum and the biomass was darker with some blues.	SS-060
044	51	Salps	0	None	Many plastics were found in this tow along with many salps, most of them were under 2cm.	SS-062
045	0	None	0	None	Sparse tow with small fish less than 2cm.	SS-064
046	16	16 salps (45mL)	2	Sargassum crab (0.5mL), flying fish larvae, (1.0mL)	Sargassum covered in dark, thick algae, megalopae present, biomass greyish black in color	SS-066
047	0	none	1	1 flying fish larvae (0.1mL)	TONS of Sargassum natans VIII, with associated shrimp and crabs, lots of polychaetes in the 100ct possibly from the Sargassum	SS-068
048	0	none	1	1 fish larvae (0.5 mL)	There was a large amount of Sargassum, a big leptocephali and a lot of Halobates compared to what we have seen. Biomass is a brownish blue.	SS-070

Tow area was calculated using distance in meters between successive (every minute) GPS positions. Net opening was 1.0 m wide by 0.5 m tall with a net mesh of 335 µm. Zooplankton density is recorded as wet volume displacement per tow area (ml/m^2). Eel larvae (leptocephali), spiny lobster larvae (phyllosoma), and Lantern fish (Family Myctophidae), were sorted from net contents and recorded as numbers caught per tow. Micronekton, gelatinous micronekton, and plant material was removed using a 1 cm mesh sieve and biomass (ml) or length (cm) was recorded. Floating plastic was also removed from net contents, sorted as pellets (none collected entire cruise) or pieces and recorded as numbers collected per tow. Floating tar was sorted from the nets contents and recorded present or absent (none collected entire cruise). Floating *Sargassum* weed was removed, identified to species and measured in grams using a spring scale. Qualitative description of micronekton removed from the zooplankton biomass is provided, and when available biomass (ml) and length (cm) of specimens are recorded

Table 7. Meter Net station data for C264.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	Temp (°C)	Salinity (ppt)	chl-a Fluor (volts x30)	Water depth (m)	Wire Out (m)	Tow depth (m)	Tow Volume (m3)	Mesh Size (µm)
009	22-Feb	0958	26.9	36.25	640.4	1227	150	0 to 59m	1595	333
010	24-Feb	2056	26.8	36.38	734.9	3006	150	0 to 43m	1967	333
014	25-Feb	2028	26.9	36.34	949.0	6618	150	0 to 63m	1377	333
017	26-Feb	2009	26.9	36.38	933.3	6640	150	0 to 67m	1585	333
033	6-Mar	2023	26.9	36.52	967.5	2549	150	0 to 68m	1091	333
036	8-Mar	0858	27.1	36.08	958.3	3014	151	0 to 115m	1321	333
050	21-Mar	2005	27.4	36.12	699.2	1231	450	0 to 174m	9379	500

Table 7 continued. Meter Net station data for C264.

Station # (C264-)	Zoop Biomass (ml)	Zpl Density (ml/m3)	Lepto (#)	Phyllo (#)	Mycto (#)	Other Nekton >2cm (#)	Gelatinous >2cm (#)
009	26.0	0.0163	1	3	0	0	0
010	26.0	0.0132	0	3	0	5	54
014	31.0	0.0225	2	1	2	5	13
017	34.0	0.0215	0	0	0	5	1
033	25.0	0.0229	2	0	2	4	9
036	33.0	0.0250	1	2	0	0	7
050	146.0	0.0156	3	3	7	26	46

Table 7 continued. Meter Net station data for C264.

Station # (C264-)	Types of Nekton	Types of Gelatinous	Tow Description and other notes	General Locale
009	None	None	Tow contained many megalopae, stomatopod and other clear crustacean larvae. Biomass was whitish pink with blue flecks.	Greater Antilles, N. of Puerto Rico
010	4 subadult larval mantis shrimp, 1 stomatopod	54 salps (9 mL)	Biomass was violet gray in color. Tow contained many pteropods, stomatopods and other clear crustaceans. Some gelatinous organisms present	Greater Antilles, Puerto Rico Trench
014	1 needle fish (<0.5 mL), 1 flat fish (<0.5 mL), 1 shrimp (<0.5 mL), 1 larval fish	13 salps (3mL)	Pink and grainy with a lot of pteropods and euphasid, some leptos and fish >2cm,	Greater Antilles, Puerto Rico Trench

	(<0.5 mL)		including a needle and flat fish. Many salps >2cm but not much larger.	
017	3 shrimp (0.5 mL), 2 larval fish (0.25 mL)	1 siphonophore (5 mL)	Brownish biomass with lots of pteropods and blue bioluminescence while rinsing the meter net. Two larval fish (about 2 cm.) Swirled for pteropods.	Greater Antilles, Puerto Rico Trench
033	1 flatfish larvae (0.5mL), 3 shrimp(1ml)	9 salps (5mL)	Red to clear biomass, pteropods, siphonophore, rainbow copepods, shrimp, and krill all observed	Greater Antilles, N of Haiti
036	none	7 salps (12mL)	Many salps and mesopelagic fish. Pinkish biomass. *Sapphrina* copepods, small cephalopod found. Many chaetognath < 2 cm.	Greater Antilles, Santiago Cuba
050	4 bristle mouth (1.5mL), 10 shrimp (1.5mL), 4 snipe-eel larvae (1.5mL), 1 triggerfish (1mL), 3 miscellaneous fish larvae (0.4mL), 1 phronemid amphipod (<0.5mL), 2 lobster (<0.5mL), 1 crab (<0.5mL)	2 pyrosome (25mL), 27 salps (37mL), 17 siphonophore (0.8mL)	Lots of shrimp, high biovolume. Overall pinkish purple color, lots of pteropods.	Greater Antilles, S. of Haiti

Table 8. Zooplankton 100 count station data for C264.

Station	Date	Net Type	Time	Cnidarian medusa	Siphonphores	Ctenophores	Salp/Doliolid	Pteropods	Nudibranch	Heteropods	Other snails	Squid larvae	Polychaete	Chaetognaths	Copepods	Gammerids Amphipods	Hyperiid Amphipod	Megalopae	Zoea
002	19-Feb	NT	1215	0	0	0	0	0	0	0	75	0	0	0	10	0	0	0	0
003	20-Feb	NT	0009	0	0	0	0	9	0	1	2	0	0	0	86	0	1	0	0
004	20-Feb	NT	1229	0	4	0	0	2	0	0	15	0	0	0	80	0	0	0	0
006	21-Feb	NT	0006	0	0	0	0	35	0	0	8	0	0	4	35	0	4	0	2
007	21-Feb	NT	1157	0	0	0	0	0	0	2	66	0	0	0	14	0	0	0	0
008	22-Feb	NT	0009	0	4	0	0	7	0	0	3	0	0	4	49	1	19	0	1
009	22-Feb	NT	1054	0	2	0	0	0	0	0	68	0	0	2	20	0	0	0	0
011	25-Feb	NT	0010	0	8	0	0	14	0	0	1	0	0	0	63	0	3	0	0
015	26-Feb	NT	0001	0	7	0	0	20	0	0	9	0	0	0	53	3	2	0	1
018	27-Feb	NT	0017	0	0	8	2	3	0	3	16	0	0	0	52	0	5	0	0
025	2-Mar	NT	2358	0	2	0	0	11	0	0	7	0	0	0	66	0	1	4	0
027	4-Mar	NT	0017	0	6	4	1	9	0	2	4	0	1	3	54	2	4	2	0
029	5-Mar	NT	0021	0	3	0	0	14	0	1	9	0	1	0	48	3	10	0	1
031	6-Mar	NT	0012	0	1	0	0	4	0	0	4	0	0	0	82	1	0	1	2
032	6-Mar	NT	1130	0	0	0	0	1	0	2	23	0	0	0	58	0	0	0	0
034	7-Mar	NT	0000	0	2	0	13	5	0	0	5	0	1	0	10	1	0	0	0
035	7-Mar	NT	1148	1	1	0	0	14	0	14	54	0	1	1	12	0	1	0	0
037	12-Mar	NT	0010	0	1	0	3	5	0	0	6	0	0	3	63	3	2	1	0
039	13-Mar	NT	0000	0	2	0	0	1	0	3	2	0	1	7	41	0	24	0	0
042	18-Mar	NT	0001	0	0	0	1	9	0	0	10	0	0	0	55	4	18	0	0
043	18-Mar	NT	1135	0	0	0	0	4	0	2	9	0	1	0	28	3	0	0	0
044	19-Mar	NT	0030	0	2	0	8	4	0	0	1	0	0	15	43	5	10	0	0
045	19-Mar	NT	1122	0	4	0	1	6	0	1	15	0	0	1	51	2	7	0	0
046	20-Mar	NT	0050	0	0	0	1	3	0	0	3	0	0	2	38	18	17	0	0
047	20-Mar	NT	1124	0	0	1	0	3	0	3	17	1	22	0	9	1	1	1	0
048	21-Mar	NT	0026	0	1	0	0	1	0	0	0	0	0	5	58	8	24	0	0

Meter Nets																		
009	22-Feb	MN	0958	0	1	1	0	1	0	0	2	0	0	2	85	0	0	0	1
010	24-Feb	MN	2056	0	4	0	2	4	0	1	0	0	0	5	65	1	1	0	1
014	25-Feb	MN	2028	0	4	0	0	12	0	0	0	0	0	0	67	0	0	0	0
017	26-Feb	MN	2009	0	0	0	0	4	0	2	4	0	0	3	72	0	6	0	0
033	6-Mar	MN	2023	0	0	0	0	9	0	0	7	0	0	0	39	11	7	0	0
036	8-Mar	MN	0858	0	8	2	0	2	0	0	3	0	1	2	71	5	0	0	0
050	21-Mar	MN	2005	0	19	3	8	0	0	0	5	0	0	0	52	0	2	0	0

Table 8 continued. Zooplankton 100 count station data for C264.

Station	Date	Net Type	Time	Shrimp (larvae)	Lobster (larvae)	Mysids	Euphausids	Stomatopod (larvae)	Ostracods	Cladocera	Isopods	Fish Larvae	Fish Eggs	Other	Other	Other	Total # of organisms	Shannon-Weiner Diversity Index
002	19-Feb	NT	1215	0	0	0	0	0	0	0	0	0	15	0	0	0	100	0.33
003	20-Feb	NT	0009	1	0	0	0	0	0	0	0	0	0	0	0	0	100	0.25
004	20-Feb	NT	1229	1	0	0	0	0	0	0	0	0	2	0	0	0	104	0.36
006	21-Feb	NT	0006	6	0	0	1	0	5	0	0	0	0	0	0	0	100	0.72
007	21-Feb	NT	1157	13	0	0	2	0	0	0	0	0	3	0	0	0	100	0.48
008	22-Feb	NT	0009	3	0	0	1	0	0	0	0	0	5	0	0	6	103	0.77
009	22-Feb	NT	1054	0	0	0	0	0	0	0	0	0	8	0	0	0	100	0.42
011	25-Feb	NT	0010	4	0	4	1	0	0	1	0	1	0	0	0	0	100	0.58
015	26-Feb	NT	0001	2	0	1	0	0	1	2	0	0	0	0	0	0	101	0.67
018	27-Feb	NT	0017	0	0	1	3	3	1	1	1	0	1	0	0	0	100	0.75
025	2-Mar	NT	2358	6	0	0	2	0	0	0	0	1	0	0	0	0	100	0.55
027	4-Mar	NT	0017	5	0	0	2	1	0	0	0	0	0	0	0	0	100	0.79
029	5-Mar	NT	0021	1	0	1	2	0	1	1	1	0	3	0	0	0	100	0.80

031	6-Mar	NT	0012	2	0	0	2	1	0	0	0	0	0	0	0	100	0.37
032	6-Mar	NT	1130	2	0	0	0	3	0	3	0	0	8	0	0	100	0.57
034	7-Mar	NT	0000	1	0	2	0	0	0	0	0	0	0	0	0	40	0.80
035	7-Mar	NT	1148	1	0	0	1	0	2	2	0	0	1	0	0	106	0.70
037	12-Mar	NT	0010	4	0	0	7	0	2	0	0	0	0	0	0	100	0.65
039	13-Mar	NT	0000	4	0	1	12	2	0	0	0	0	0	0	0	100	0.77
042	18-Mar	NT	0001	6	0	0	0	1	0	0	1	0	1	0	0	106	0.67
043	18-Mar	NT	1135	43	0	3	1	0	0	0	4	1	1	0	0	100	0.74
044	19-Mar	NT	0030	3	0	7	1	0	0	0	0	0	1	0	0	100	0.82
045	19-Mar	NT	1122	4	0	2	1	1	1	0	1	1	1	0	0	100	0.80
046	20-Mar	NT	0050	4	0	3	1	0	5	2	0	0	3	0	0	100	0.84
047	20-Mar	NT	1124	11	0	5	0	0	3	0	5	0	8	9	0	100	1.04
048	21-Mar	NT	0026	2	0	1	0	0	1	0	0	0	0	0	0	101	0.56
Meter Nets																	
009	22-Feb	MN	0958	2	0	0	0	2	2	1	0	0	0	0	0	100	0.33
010	24-Feb	MN	2056	1	0	1	0	0	5	11	0	0	0	0	0	102	0.62
014	25-Feb	MN	2028	0	0	0	3	0	13	1	0	0	0	0	0	100	0.46
017	26-Feb	MN	2009	1	0	0	3	1	3	0	1	0	0	0	0	100	0.52
033	6-Mar	MN	2023	5	0	2	3	0	15	0	0	2	0	0	0	100	0.82
036	8-Mar	MN	0858	1	0	0	3	0	1	0	0	0	1	0	0	100	0.53
050	21-Mar	MN	2005	2	0	1	7	0	0	0	0	1	0	0	0	100	0.67

Table 9. Phytoplankton net station data for C264. Drift depth 1-3m

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	General Locale	NOTES
021	29-Feb	1510	Samana Harbor, at anchor	Sample taken for display and education purposes during ship tours on March 1, 2016

Table 10. Dip net station data for C264.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	Temp (°C)	Salinity (ppt)	chl-a Fluor (volts x30)	Water Depth (m)	Locale	Replicate dip nets collected (#)	Sargassum Species collected
005	20-Feb	1754	26.8	36.08	650.0	4451	Leeward Islands, N. of St. Croix	3	Sn8 / Sf / Sn8
012	25-Feb	0800	26.6	36.46	797.7	7374	Greater Antilles, Puerto Rico Trench	2	Sn8 / Sn1
013	25-Feb	1635	26.8	36.36	978.5	7790	Greater Antilles, Puerto Rico Trench	1	Sn8
016	26-Feb	0848	26.8	36.33	933.4	8089	Greater Antilles, Puerto Rico Trench	2	Sn8 / Sn8
019	27-Feb	1015	26.8	36.41	1027.3	1980	Greater Antilles, Navidad Bank	3	Sn8 / Sn8 / Sn1
024	2-Mar	1832	27.0	36.43	711.0	3425	Greater Antilles, North of the Dominican Republic	1	Sn8
026	3-Mar	0840	26.7	36.57	730.8	3397	Greater Antilles, S. of Silver Bank	2	Sn8, Benthic Sarg, Manatee grass / Sf, Sn8, Benthic Sarg Manatee grass
032	6-Mar	0745	26.7	36.51	1047.3	3994	Greater Antilles, N. of Haiti	3	Sf, Sn8 / Sn1, Sn8 / Sf
035	7-Mar	1030	26.7	36.53	967.5	3316	Greater Antilles, Windward Passage	1	Benthic sarg and manatee grass
038	12-Mar	1206	27.2	36.20	794.0	2131	Greater Antilles, S. of Cuba	1	Benthic (5 clumps)
040	13-Mar	0915	27.0	36.39	888.6	1900	Greater Antilles, North of Jamaica	6	Sn8 / Sn8, Sf, Benthic / Sn8 / Sn8 / Sn8 / Sf
041	13-Mar	1608	27.6	36.24	1208.9	1742	Greater Antilles, North of Jamaica	3	Sf, Sn8 / Sn8 / Sf
043	18-Mar	0703	27.3	36.11	797.8	2998	Greater Antilles, N of Jamaica	3	Sf / Sn8 / Sf, Sn1, Sn8
047	20-Mar	0904	27.2	36.36	753.3	2546	Greater Antilles, S. of Haiti	3	NA / NA / NA
049	21-Mar	1220	27.8	36.05	660.9	3047	Greater Antilles, S. of Haiti	3	NA / NA / Sf, Sn1, Sn8
051	22-Mar	1022	27.1	36.07	657.1	4133	Greater Antilles, S. of Haiti	3	Sn8 / Sn8, Sf, Benthic / NA

Table 11. Shipek Station data for C264.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	Location	Water Depth (m)	General size	Organics	Comments
001	19-Feb	0744	Francis Bay, St. John	18.3	mix of granular and sandy	No smell. Shells.	Subsample preserved in refrigerator for later sieving. The rest of the sample was sieved through a 2000 um mesh and preserved in EtOH for later analysis for critters.
002	19-Feb	1057	Leeward Islands, S. of St. Thomas	42.1			Two grab attempts at one site. Some coral sand, a few pieces of hard coral/shell and leaves of green algae. Very little sediment was collected, most likely a very hard bottom.
019	27-Feb	1130	Navidad Bank, Greater Antilles	24.1			Entire sediment sample preserved in refrigerator for later sieving.
019	27-Feb	1150	Navidad Bank, Greater Antilles	31			Sample consisted entirely of marine sponge, preserved in reefer in seawater for later analysis.
022	2-Mar	0812	Samana Bay, Dominican Republic, Greater Antilles	25	silty, muddy	no smell but see polychaetes and shell fragments	Subsample preserved in refrigerator for later sieving. The rest of the sample was sieved through a 2000 um mesh and preserved in EtOH for later analysis for critters.
028	4-Mar	1005	Greater Antilles, Silver Bank	25	Granular, sandy	No smell. Shells, Sargassum, sand dollar, coral?	First replicate at Silver Bank. Fauna sieved through 2000 um mesh and preserved in EtOH for benthic organism group
028	4-Mar	1130	Greater Antilles, Silver Bank	25	Sandy	No smell. Shells, plants	Second replicate at Silver Bank. Fauna sieved through 2000um mesh and preserved in EtOH for benthic organism group.
040	13-Mar	1044	Greater Antilles, N of Jamaica, Grappler Bank	477	Sandy	No smell. A few small shell pieces	

Table 12. Secchi disc station data for C264.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	General Locale	chl-a Fluor (volts x30)	CDOM Fluor (volts)	Xmiss (volts)	Water Depth (m)	Cloud Cover (%)	Wave ht (ft)	Wind Sp (BF)	Secchi Depth (m)	Calculated 1% Depth (m)
002	19-Feb	1040	Leeward Islands, S. of St. Thomas	848	98	14780	41	50%	3	1	23	62
004	20-Feb	1014	Leeward Islands, S. of St. John	641	86	15054	1634	80%	5	5	28	75
007	21-Feb	0942	Leeward Islands, S. St. Thomas	712	85	15047	4477	38%	2	3	33	87
012	25-Feb	1026	Greater Antilles, North of Puerto Rico	781	81	15063	7791	50%	3	5	33	89
016	26-Feb	1020	Greater Antilles	963	81	15058	8059	63%	4	3	30	79
026	3-Mar	1012	Greater Antilles, S. of Silver Bank	687	80	14952	2550	12%	2	3	27	72
028	4-Mar	1040	Greater Antilles, Silver Bank	711	90	14831	25	20%	2	3	21	56
030	5-Mar	1602	Greater Antilles, North of Puerto Plata, DR	1038	82	14990	2286	70%	2	2	31	83
032	6-Mar	0927	Greater Antilles, North of DR	1075	84	15001	3965	90%	2	2	30	79
035	7-Mar	0935	Greater Antilles, North of Haiti	1001	87	15054	3375	40%	5	5	31	82
036	8-Mar	0745	Greater Antilles, Santiago Cuba	967	86	15062	3045	10%	3	3	24	63
038	12-Mar	0917	Greater Antilles S. of Cuba	807	86	15043	2702	10%	6	4	35	93
040	13-Mar	1126	Greater Antilles, N of Jamaica, Grappler Bank	889	89	14996	493	40%	4	3	31	83

043	18-Mar	0930	Greater Antilles, SW of Haiti	737	90	15006	2986	80%	5	3	30	79
045	19-Mar	0918	Greater Antilles, SW of Haiti	729	85	15074	1981	30%	3	3	35	93
047	20-Mar	0928	Greater Antilles, S of Haiti	770	90	15017	2560	60%	5	4	30	81
049	21-Mar	0929	Greater Antilles, S of Haiti	688	86	15019	4120	40%	3	3	30	79
052	23-Mar	1524	Greater Antilles, S. of DR	681	85	15029	<2500	10%	5	4	37	99

Table 13. Reef survey data for C264.

	CRUISE:	**C264**	**C264**	**C264**
	STATION LOCATION:	St Croix - Cane Bay	St John - Waterlemon Cay	Port Antonio
	DATE (2016):	15-Feb	18-Feb	17-Mar
	START TIME:	930	1430	1230
	END TIME:	1045	1600	1500
	SEA CONDITIONS: calm, choppy, gneral visibility	calm, good visibility (~10m)	calm, good visibility (~10m)	choppy, OK visibility (~5m)
SEAFLOOR Mapping (%)	Reef Patches	65	65	25
	Sea Grass	0	10	70
	Sandy Bottom	35	25	5
REEF PATCH Mapping (average %)	Number Patches Observed	16	18	29
	Hard Coral	11.25	26.39	28.79
	Soft Coral or Sponge	15.00	18.33	1.90
	Algae	1.88	0.28	34.14
	Exposed Rock / Dead Coral	67.50	55.00	35.17
HARD CORAL (#)	Elkhorn	19	0	5
	Staghorn	48	23	1
	Brain	60	44	36
	Pillar	2	20	3
CORAL DISEASE (#)	White Plague/Band/Bleaching	25	60+	49
	Black Band	1	0	9
	Dark Spot	5	9	5
	Aspergillosis	10	95+	0
SOFT/FIRE CORAL (#)	Sea Fans	120	280	4
	Sea Whips	240	440	1
	Fire Coral	40	38	0
ALGAE / SEAGRASS	Turtle Grass (% cover)	0	65	100
	Manatee Grass (% cover)	0	35	0
	Calcareous Algae (# species)	0	0	4
	Dictyota sp (% cover)	0	0	0
SPONGES (#)	Tube Sponge	14	9	11
	Vase Sponge	4	1	0
	Barrel Sponge	21	0	0
	Bowl Sponge	0	4	0

MOLLUSC (#)	Squid	0	0	21
	Conch	3	0	1
	Flamingo Tongue	8	14	0
ECHINODERMS (#)	Long-Spined urchin	225	314	133
	Sea Egg Urchin	2	2	455
	Sea Cucumber	1	1	0
	Other	0	pencil urchin	0
ECHINODERMS (#)	Sea Stars	0	0	0
	Brittle Star	0	0	0
CRUSTACEA (#)	Lobster	0	0	1
	Hermit Crab	0	0	0
WORMS (#)	Xmas Tree Worms	4	19	0
	Feather Duster worms	15	14	6
ANEMONES (#)	Carib Sea Anemone	20	53	24
	Corkscrew Anemone	0	6	0
TERRITORIAL: Herb-Coralivore (#)	Sergeant Major-Damselfish	3	30	5
	Yellowtail Damselfish	2	1	11
	Blue Chromis	23	0	0
	Brown Chromis	40	5	8
SCHOOLING: Herb-Coralivore (#)	Blue Tang	39	22	0
	Doctorfish	18	7	3
	Surgeonfish	23	7	0
ANGELFISH: Herb-Coralivore (#)	Queen Angelfish	0	0	0
	Rock Beauty Angelfish	0	0	0
	French Angelfish	0	12	0
	Black Durgon	3	1	0
PARROTFISH: Herb-Coralivore (#)	Stoplight Parrotfish	151	14	12
	Queen Parrotfish	n/a	52	24
	Bluehead Wrasse	18	2	12
	Slippery Dick	0	3	0
BUTTERFLY FISH: planktivore (#)	Banded	109	77	4
	Reef	81	10	6
	Spotfin	9	2	2
	Four-Eye	9	2	0
CRUISING: Carnivores (#)	Snappers	8	35	15

	Barracuda	1	0	0
CRUISING: Carnivores (#)	Grunts (Blue striped)	100	14	0
	Jacks (Bar)	17	11	3
TERRITORIAL: Carnivores (#)	Squirrelfish	0	1	0
	Box fish (Trunk)	1	2	0
	Grouper (Red Hind)	0	0	0
	Trumpetfish	1	3	0
TERRITORIAL: Carnivores (#)	Lionfish	0	0	0
	Eels	0	0	1
BENTHIC: Carnivores (#)	Yellow Goatfish	0	0	0
	Spotted Goatfish	0	1	1
SHARKS & RAYS (#)	Southern Ray	1	2	1
	Eagle Ray	0	0	0
	Reef Shark	0	0	0
	Nurse Shark	0	1	0
TURTLES (#)	Green	0	0	0
	Hawksbill	1	0	0
	Loggerhead	0	1	0

Table 14. Whale observation data for C264.

Station Location:	Navidad Bank, DR		
Date:	27-Feb-16	**Temp (°C)**	26.8
Start Position	19 59.0'N x 068 40.0'W	**Salinity (ppt)**	36.4
End Position	19 53.2'N x 068 52.5'W	**chl-a Fluor (volts x30)**	992.4
Start Time (local)	9:00	**Water Depth (m)**	3884 to 26m as we came onto the bank.
End Time (local)	15:30	**Visibility, Wind and Weather**	Clear

Time	Behavior	Notes	Number of whales
9:10	Breach		1
9:40	Blow		1
10:08	Breaching, Blows		>3
11:03	Blow		1
11:16	Blow		1
11:18	Breach on horizon		1
11:22	Breach and blows		>1
11:27	2 blows		>1
11:43	Terminal dive		1
11:49	Breach		1
11:54	2 Breaches		1
11:55	2 Breaches		1
12:00	Pectoral fin slapping		1
12:01	2 blows		>1
12:12	5 breaches		>1
12:29	Breach, pectoral slap, 18 tail slaps/lob tails, pectoral slap, breach		>3
12:36	two blows		1
12:55	5 blows, then dorsal arch to dive, no tail visible		3
13:00	fin slapping x 12		>1
13:07	2 breaches		1
13:07	2 partial breaches		1
13:12-13:14	repeated surfacing		>1
13:14	pectoral slap		3
13:16	breach		1
13:20	tail slap and blow		1
13:22	breach		1
13:31	breach		1
13:35	breach		1
13:39	breach		1
13:40	4 tail slaps		1

13:40	blow	2
13:42	7 lob tails	1
13:43	blow	1
13:44	2 blows	1
13:47	breach	1
13:48	tail slap and blow	1
13:53	surface and fluke - very close to ship	1
13:54	breach	1
13:56	breach	1
14:00	breach	1
14:05	two breaches	1
14:39	6 breaches	>1
14:45	two surfaces	1
14:50	two surface loitering	1
14:52	two flukes	2
14:54	one breach	1
14:55	surface	1
15:16	two surface loiter	2

Station Location:	Samana Bay, DR		
Date:	28-Feb-16	**Temp (°C)**	27.1
Start Position	19 08.8' N x 069 09.1'W	**Salinity (ppt)**	36.23
End Position	19 10.2' N x 069 14.4' W	**chl-a Fluor (volts x30)**	933.7
Start Time (local)	9:00	**Water Depth (m)**	522 m
End Time (local)	9:30	**Visibility, Wind and Weather**	Clear

Time	**Behavior**	**Notes**	**Number of whales**
9:00	Two whales surface/fluke	Mother and Calf	2
9:08	Fluke		2
9:15	Surface	Calf	1
9:17	Fluke		2
9:18	Surface		2
9:20	Blow		2
9:21	Surface/fluke		1
9:22	Fluke		1
9:25	Spray and blow/Fluke		3
9:26	Fluke		1
9:28	Surface		1
9:29	Fluke		1

9:30	Surface	1
9:31	Blow	1
9:33	Flukes	2

Station Location:	Samana Bay, DR		
Date:	2-Mar-16	**Temp (°C)**	27.5
Start Position	19 10.4' N x 069 17.5'W	**Salinity (ppt)**	36.31
End Position	19 08.1' N x 069 06.9' W	**chl-a Fluor (volts x30)**	1150.4
Start Time (local)	11:25	**Water Depth (m)**	28
End Time (local)	14:33	**Visibility, Wind and Weather**	Clear

Time	**Behavior**	**Notes**	**Number of whales**
11:25	breach		1
11:30	fin slap		1
	blow		2
11:38	blow		1
11:41	surface		1
	blow		1
11:42	surface		1
11:48	blow		>1
12:01	blow		1
12:06	blow		1
12:34	spy hopping/ blows and breaching		2
12:35	splash		1
12:41	surface		1
	surface		1
	surface	mom and calf	2
12:44	breach		1
12:44	blow		1
12:46	breach		1
12:47	Spy-hop		1
12:49	fin slapping		1
13:59	surface and blow		1
14:33	surface and blow (x2		1

Station Location:	Approaching Puerto Plata, DR		
Date:	3-Mar-16	**Temp (°C)**	26.7
Start Position	19 57.2' N x 070 02.8'W	**Salinity (ppt)**	36.6
End Position	19 57.5' N x 070 03.7'W	**chl-a Fluor (volts x30)**	694
Start Time (local)	10:45	**Water Depth (m)**	2500
End Time (local)	11:15	**Visibility, Wind and Weather**	Clear

Time	**Behavior**	**Notes**	**Number of whales**
10:45	blow (4)		1
10:45	fluke/surface		1
11:15	blow (2)		1
11:15	blow		1

Station Location:	Silver Bank		
Date:	4-Mar-16	**Temp (°C)**	26.7
Start Position	20 41.2' N x 069 57.8" W	**Salinity (ppt)**	36.71
End Position	20 44.6' N x 069 52.7" W	**chl-a Fluor (volts x30)**	744.1
Start Time (local)	8:21	**Water Depth (m)**	1538 to 28m sailing to our anchorage
End Time (local)	18:54	**Visibility, Wind and Weather**	Clear

Time	**Behavior**	**Notes**	**Number of whales**
8:21	Breach		1
8:28	breach		1
9:32	2 blows		1
8:34	Breach		1
8:35	fin slaps x5		1
8:41	fluke		1
8:44	fluke		1
8:50	surface and slaps		2
8:55	surface (m/c)?		2
8:56	2 blows and dive		2
9:05	fin slaps x5		1
9:06	breach		1
9:11	2 blows		1
9:15	2 blows, dive		2 (not a pair)
9:45	fin slaps x5		1
10:02	blow		1
10:04	fluke		1
10:05	blows/lob tailing		2
10:08	blow, fluke slap		1
10:14	surface and blow (m/c)		3
10:16	breach		2

10:16	fin slaps x5	2
10:17	dive	1
10:18	blow 2, fluke	1 (same as 10:17 dive)
10:21	blow	1
10:22	surface -2	1
10:25	surface (m/c) (same pair as at 10:14)	2
10:26	terminal dive	1
10:27	surface x 4	1
10:31	blow	3
10:30	blow	3
10:33	surface	1
10:34	blows/lob tailing	2
10:36	breach, blow, breach, blow, breach, fin slap	1
10:38	swim on side, terminal dive	1 (same as 10:36)
10:40	surface blows	1
10:40	blow	2
10:41	fluke	1
10:41	breach	1
10:41	fin slap x 3	1
10:42	blow	2
10:43	blow (3)	1
10:44	blow/surface	1
10:45	fluke	1
10:46	blow	1
10:55	blow	1
11:00	fluke	1
11:01	breach x 7 plus fin slap over 3 minutes	1
11:06	breach	1
11:06	fin slap	1
11:07	breach	1
11:09	breach	1
11:09	surface	1
10:10	breach	1
11:12	fin slap	1
11:12	blow	1
1:14	blow	1
11:17	breach	1
11:20	breach	1
11:22	breach	2

11:24	tail slap x 2	1
12:31	surface	2
12:33	Blow	1
12:35	splash	1
12:44	surface/blow	2
12:51	blow	1
12:53	surface	1
12:58	finslapx4	1
13:08	splash	1
13:08	blow	1
13:10	Breach	1
13:14	breach	1
13:20	breach	1
13:22	breach	1
13:30	blow/fluke	2
13:32	fluke/ surface	1
13:38	blow/ finslap	1
13:40	fin slaps (4)	more then 1
13:48	fin slap	2
13:48	fluke	2
13:51	breach	1
13:53	breach	1
13:54	breach (2)	1
13:58	breach (3)	1
14:00	tail slap x 23	1
14:40	breach	2
14:56	breach	2
16:24	fin slap x 10	1
16:26	surface	1
16:28	surface	2
16:28	breach	1
18:44	breach/ blow	1

Table 15. Hydrophone-recording station data for C264.

Station # (C264-)	Date (2016)	Time (local +4 and +5 GMT)	General Locale	Temp (°C)	Salinity (ppt)	chl-a Fluor (volts x30)	Recording Duration (hours)	Notes
012	25-Feb	0947	Greater Antilles, North of Puerto Rico	26.6	36.42	794.5	1	One file, test run. No indication of whale sounds.
016	26-Feb	1018	Greater Antilles, North of Puerto Rico	26.8	36.28	956.9	1	Two files. No indication of whale sounds.
019	27-Feb	0930	Greater Antilles, Navidad Bank	26.7	36.40	1007.1	1	One file. Continuous whale vocalizations.
019	27-Feb	1100	Greater Antilles, Navidad Bank	26.8	36.40	982.1	1	One file. Continuous whale vocalizations.
026	3-Mar	1003	Greater Antilles, S. of Silver Bank	26.8	36.59	681.1	2	Three files. Faint indication of whale sounds.
028	4-Mar	0936	Greater Antilles, Silver Bank	26.5	36.71	793.2	8	Four files. Continuous whale vocalizations.
030	5-Mar	1605	Greater Antilles, N. of Puerto Plata	26.7	36.63	1036.2	1	One file. No indication of whale sounds.
032	6-Mar	0830	Greater Antilles, N of Haiti	26.8	36.48	1049.1	2	One file. No indication of whale sounds.

Table 16. Student research topics for C264.

Title	Author(s)
Bathymetry of The Continental Shelves of San Juan PR, Samana DR, and Puerta Plata DR	Caroline Bowman and Emma Fichtner
Shipek, Sediment, and Snails	Melissa Weiss and Pam de Lange
Sediment Size in the Caribbean	Taylor Haist
Thermocline **Who's the real victim here?**	Hailey Mischler and Martin Green
Water Quality in the Caribbean	Michelle Joseph and Catie Williams
Myctophid Nighttime Behaviors	Kathryn Condon Cora Knauss
The effect of environmental conditions on *Sargassum* and associated mobile organisms in the Caribbean Sea	Maddie Taylor
***Sargassum* Distribution across the Caribbean**	Tim Rajotte and Elliot Hiller
Mortality Rates and Distribution of the Phyllosoma Stages of the Caribbean Spiny Lobster	Shane Bannon
***Halobates* Distribution across the Caribbean**	Tess Saburn
The Distribution of Humpback Whales in the Caribbean	Sophia Prisco and Katie Morrison
Microplastic Distribution across the Caribbean	Kianee De Jesus and Leah Kaplan
Macroplastic Distribution across the Caribbean	Riley Mehring and Aiden Ford