

# Cruise Report C-203

Scientific data collected aboard  
*SSV Corwith Cramer*

Key West – Roatan, Honduras – Key West

8 February 2006 – 18 March 2006



Sea Education Association  
Woods Hole, Massachusetts

Citation:

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Woods Hole, MA 02543, USA.

To obtain unpublished data, contact the SEA data archivist:

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## Table of Contents

Ship's Company	4
Data Description	5
Figure 1: Cruise track	5
Table 1: Oceanographic sampling stations	7
Table 2: Surface station data	12
Table 3: Neuston net tow data	15
Table 4: Hydrocast bottle data	16
Table 5: Sediment grain size data	18
Table 6: Student research projects, cruise C-203	19

## Ship's Company

SSV *Corwith Cramer*, Cruise C-203

### Nautical Staff

Jen Irving	Captain
Jeremy Law	Chief Mate
Steve Kirk	Second Mate
Nate Darling	Third Mate
Gray Stockmayer	Engineer
Tia Leo	Steward

### Scientific Staff

Kara Lavender	Chief Scientist
Mary Engels	First Assistant Scientist
Cara Fritz	Second Assistant Scientist
Skye Morét-Ferguson	Third Assistant Scientist

### Students

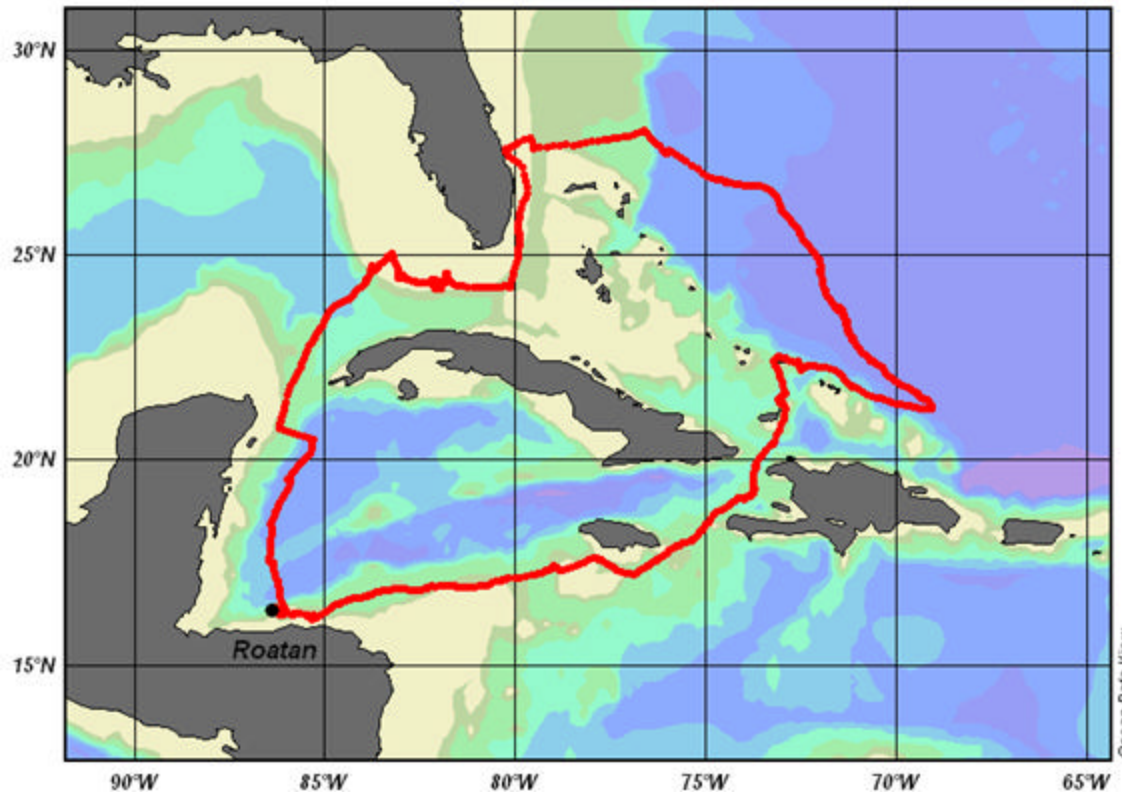
Douglas T. Borst	Reed College
Max G. Bronstein	Ithaca College
Lydia Cole	Wellesley College
Daniel B. Fitzgerald	Drexel University
Marcelle J. Gonzalez	Lewis & Clark College
Colleen R. Hanlon-Smith	Bates College
Leslie E. Heimer	College of the Atlantic
Erika E. Kercher	University of Puget Sound
Joseph R. Kutney	Dartmouth College
Samuel T. Lemonick	Carleton College
Mike F. Morrissey	Carleton College
Hannah A. Nadeau	Community College of Vermont
Jon H. Neckers	Ohio Wesleyan University
Matt Phillips	Carleton College
Nathaniel S. Pope	College of the Atlantic
Miriam Rubin	Barnard College
Celia S. Segel	Carleton College
Tara S. Stevens	College of the Atlantic
Mark Whiting	University of Southern California

### Visitors

A. Michelle Wood	University of Oregon
William P. Mowitt	NOAA

## Data Description

This cruise report provides a record of data collected aboard the SSV *Corwith Cramer* during cruise C-203 (U.S. State Department Cruise 2005-096), which departed from Key West, FL on 8 February 2006 and transited through the Florida Straits, the Sargasso Sea, and the Caribbean Sea before returning to Key West on 18 March 2006 (Figure 1).



**Figure 1:** C-203 cruise track plotted from hourly positions.

During the six week voyage we collected samples or data at 84 discrete oceanographic stations (Table 1), surface samples at 110 locations (Table 2), and we continuously sampled water depth and sub-bottom profiles (CHIRP system), upper ocean currents (Acoustic Doppler Current Profiler, or ADCP), and sea surface temperature, salinity and in vivo fluorescence (seawater flow-through system). This report summarizes sea surface chemical and biological characteristics (Tables 2 and 3), chemical properties with depth (Table 4), and surface sediment properties (Table 5). Lengthy CTD, CHIRP, ADCP, and flow-through data are not reported here. All unpublished data can be made available by arrangement with the Sea Education Association (SEA) data archivist (contact information, p. 2). 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, students conduct oceanographic research at sea for studies they have designed prior to the cruise. Student projects span the four major disciplines of oceanography – physical, chemical, biological, and geological oceanography (Table 6). Student research efforts culminate in a written paper and an oral presentation to the ship's company. The student research papers from cruise C-203 are available upon request from SEA.

Kara Lavender  
Chief Scientist, C-203

**Table 1:** Oceanographic sampling stations.

Station Number	Date	Local Time <sup>#</sup>	Log (nm)	Latitude (N)	Longitude (W)	Cast Depth (m)	General Locale
<b>Bathypotometer</b>							
C203-010-BP	11-Feb-06	0045	97.3	25°27.5'	79°53.9'	100	Florida Straits
C203-018-BP	13-Feb-06	2355	543.4	26°48.3'	74°30.3'	100	Sargasso Sea
C203-025-BP	15-Feb-06	1945	740.5	24°50.8'	72°00.3'	100	Sargasso Sea
C203-026-BP	15-Feb-06	2335	752.8	24°37.9'	71°58.9'	100	Sargasso Sea
C203-027-BP	16-Feb-06	0443	761.3	24°24.1'	71°57.0'	100	Sargasso Sea
C203-032-BP	18-Feb-06	0032	938.5	22°27.7'	70°42.7'	100	Sargasso Sea
C203-043-BP	25-Feb-06	0238	1678.9	18°20.6'	75°04.4'	100	Central Caribbean
C203-046-BP	25-Feb-06	2002	1749.5	17°41.4'	76°04.8'	100	Central Caribbean
C203-047-BP	25-Feb-06	2352	1764.0	17°34.7'	76°16.8'	100	Central Caribbean
C203-048-BP	26-Feb-06	0431	1781.5	17°26.6'	76°30.8'	100	Central Caribbean
C203-063-BP	3-Mar-06	0052	2284.9	16°09.8'	85°17.8'	100	Western Caribbean
C203-065-BP	7-Mar-06	2325	2453.3	17°02.5'	86°14.6'	100	Western Caribbean
C203-070-BP	12-Mar-06	1950	3005.4	24°36.8'	83°47.8'	100	Florida Straits
C203-071-BP	12-Mar-06	2020	3005.5	24°36.7'	83°48.2'	100	Florida Straits
C203-072-BP	12-Mar-06	2035	3005.5	24°36.5'	83°48.6'	100	Florida Straits
C203-073-BP	12-Mar-06	2055	3005.5	24°36.3'	83°49.0'	100	Florida Straits
C203-074-BP	16-Mar-06	0122	3240.8	24°20.1'	82°01.9'	100	Florida Straits
<b>CTD</b>							
C203-008-CTD	10-Feb-06	1000	65.5	24°14.7'	80°07.8'	531	Florida Straits
C203-010-CTD	11-Feb-06	0022	97.3	25°27.5'	79°53.9'	313	Florida Straits
C203-010-HC	11-Feb-06	0140	97.3	25°31.2'	79°54.6'	285	Florida Straits
C203-016-CTD	13-Feb-06	0910	461.7	27°24.5'	76°04.4'	934	Sargasso Sea
C203-018-CTD	14-Feb-06	0040	543.4	26°48.3'	74°30.3'	381	Sargasso Sea
C203-020-CTD	14-Feb-06	1034	584.0	26°41.7'	73°43.7'	421	Sargasso Sea
C203-020-HC	14-Feb-06	1201	584.2	26°41.6'	73°43.2'	729	Sargasso Sea
C203-023-CTD	15-Feb-06	1004	685.2	25°33.0'	72°31.8'	428	Sargasso Sea
C203-026-CTD	16-Feb-06	0036	752.9	24°37.7'	72°00.9'	410	Sargasso Sea
C203-032-CTD	18-Feb-06	0112	938.5	22°26.8'	70°42.8'	427	Sargasso Sea
C203-033-CTD	18-Feb-06	1108	978.6	21°59.9'	70°07.6'	525	Sargasso Sea
C203-035-CTD	19-Feb-06	0936	1057.1	21°17.6'	69°05.1'	454	Sargasso Sea
C203-035-HC	19-Feb-06	1031	1057.2	21°17.2'	69°05.2'	750	Sargasso Sea
C203-038-CTD	21-Feb-06	0027	1246.2	22°18.6'	72°20.7'	280	Bahamas
C203-038-HC	21-Feb-06	0125	1246.2	22°17.6'	72°21.9'	1660	Bahamas
C203-039-CTD	23-Feb-06	0057	1490.4	20°25.1'	73°12.8'	1376	Bahamas
C203-040-CTD	23-Feb-06	1155	1539.3	19°49.7'	73°42.4'	326	Central Caribbean
C203-040-HC	23-Feb-06	1307	1539.3	19°50.1'	73°42.7'	1940	Central Caribbean
C203-042-CTD	24-Feb-06	0943	1594.8	19°03.4'	74°00.5'	1784	Central Caribbean
C203-043-CTD	25-Feb-06	0329	1679.2	18°19.8'	75°04.4'	515	Central Caribbean
C203-047-CTD	26-Feb-06	0100	1764.3	17°34.5'	76°17.5'	528	Central Caribbean
C203-058-CTD	28-Feb-06	2342	2065.3	16°54.4'	81°32.5'	265	Western Caribbean
C203-059-CTD	1-Mar-06	0827	2107.0	16°53.2'	82°18.9'	487	Western Caribbean
C203-061-CTD	2-Mar-06	0840	2214.3	16°36.0'	84°20.1'	317	Western Caribbean
C203-061-HC	2-Mar-06	0952	2214.4	16°35.8'	84°21.3'	841	Western Caribbean

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards

Table 1 continued

Station Number	Date	Local Time <sup>#</sup>	Log (nm)	Latitude (N)	Longitude (W)	Cast Depth (m)	General Locale
<b>CTD continued</b>							
C203-068-CTD	8-Mar-06	0819	2484.9	17°30.7'	86°22.4'	297	Western Caribbean
C203-068-HC	8-Mar-06	0904	2485.0	17°30.5'	86°23.1'	3136	Western Caribbean
C203-076-CTD	16-Mar-06	0921	3273.7	24°11.6'	82°06.0'	573	Florida Straits
<b>Hydrocast</b>							
C203-010-HC	11-Feb-06	0140	97.3	25°31.2'	79°54.6'	285	Florida Straits
C203-020-HC	14-Feb-06	1201	584.2	26°41.6'	73°43.2'	729	Sargasso Sea
C203-035-HC	19-Feb-06	1031	1057.2	21°17.2'	69°05.2'	750	Sargasso Sea
C203-038-HC	21-Feb-06	0125	1246.2	22°17.6'	72°21.9'	1660	Bahamas
C203-040-HC	23-Feb-06	1307	1539.3	19°50.1'	73°42.7'	1940	Central Caribbean
C203-061-HC	2-Mar-06	0952	2214.4	16°35.8'	84°21.3'	841	Western Caribbean
C203-068-HC	8-Mar-06	0904	2485.0	17°30.5'	86°23.1'	3136	Western Caribbean
<b>Secchi Disk</b>							
C203-008-SD	10-Feb-06	1000	65.5	24°14.7'	80°07.8'	25	Florida Straits
C203-016-SD	13-Feb-06	0910	461.7	27°24.5'	76°04.4'	31	Sargasso Sea
C203-020-SD	14-Feb-06	0958	584.0	26°41.7'	73°43.7'	30	Sargasso Sea
C203-023-SD	15-Feb-06	1004	685.2	25°33.0'	72°31.8'	28	Sargasso Sea
C203-033-SD	18-Feb-06	1108	978.6	21°59.9'	70°07.6'	34	Sargasso Sea
C203-035-SD	19-Feb-06	1031	1057.2	21°17.2'	69°05.2'	35	Sargasso Sea
C203-040-SD	23-Feb-06	1155	1539.3	19°49.7'	73°42.4'	34	Central Caribbean
C203-042-SD	24-Feb-06	0915	1594.8	19°02.9'	74°00.4'	44	Central Caribbean
C203-068-SD	8-Mar-06	0819	2484.9	17°30.7'	86°22.4'	32	Western Caribbean
C203-076-SD	16-Mar-06	0921	3273.7	24°11.6'	82°06.0'	24	Florida Straits
<b>Shipek Grab</b>							
C203-001-SG	9-Feb-06	1242	0.0	24°28.4'	81°47.4'	7	Florida Shelf
C203-002-SG	9-Feb-06	1425	0.5	24°24.7'	81°45.6'	204	Florida Shelf
C203-003-SG	9-Feb-06	1535	3.3	24°22.0'	81°42.9'	221	Florida Shelf
C203-007-SG	9-Feb-06	1739	10.7	24°15.5'	81°34.7'	misfire	Florida Shelf
C203-012-SG	11-Feb-06	1950	188.7	27°35.7'	80°15.2'	9	Florida Shelf
C203-013-SG	11-Feb-06	2137	193.2	27°37.4'	80°08.9'	19	Florida Shelf
C203-014-SG	11-Feb-06	2249	198.0	27°40.3'	80°02.9'	37	Florida Shelf
C203-015-SG	12-Feb-06	0025	205.8	27°43.3'	79°56.2'	misfire	Florida Shelf
C203-050-SG	27-Feb-06	0721	1917.3	17°19.1'	78°47.5'	24	Pedro Bank
C203-052-SG	27-Feb-06	1107	1931.0	17°25.0'	78°59.9'	41	Pedro Bank
C203-053-SG	27-Feb-06	1134	1931.7	17°24.5'	79°00.4'	391	Pedro Bank
C203-054-SG	27-Feb-06	1246	1933.3	17°23.7'	79°01.7'	misfire	Pedro Bank
<b>Gravity Core</b>							
C203-064-GC	3-Mar-06	0834	2290.2	16°11.7'	85°27.8'	825	Western Caribbean

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards



Table 1 continued

Station Number	Date	Local Time <sup>#</sup>	Log (nm)	Latitude (N)	Longitude (W)	Cast Depth (m)	General Locale
<b>Neuston Net</b>							
C203-009-NT	10-Feb-06	1102	65.5	24°14.4'	80°07.6'	0	Florida Straits
C203-011-NT	11-Feb-06	0243	98.3	25°35.1'	79°56.4'	0	Florida Straits
C203-017-NT	13-Feb-06	1115	462.4	27°31.5'	76°00.2'	0	Sargasso Sea
C203-019-NT	14-Feb-06	0144	544.6	26°47.2'	74°26.5'	0	Sargasso Sea
C203-022-NT	15-Feb-06	0032	639.3	26°07.5'	73°01.4'	0	Sargasso Sea
C203-024-NT	15-Feb-06	1109	685.7	25°31.0'	72°32.6'	0	Sargasso Sea
C203-029-NT	16-Feb-06	1107	781.9	24°05.7'	71°52.2'	0	Sargasso Sea
C203-031-NT	17-Feb-06	1059	881.3	23°09.6'	71°17.3'	0	Sargasso Sea
C203-034-NT	18-Feb-06	2242	1024.5	21°37.2'	69°27.3'	0	Sargasso Sea
C203-037-NT	20-Feb-06	1040	1172.0	21°48.6'	71°10.7'	0	Bahamas
C203-041-NT	24-Feb-06	0800	1593.6	19°03.2'	74°00.1'	0	Central Caribbean
C203-045-NT	25-Feb-06	1040	1702.5	18°01.2'	75°24.8'	0	Central Caribbean
C203-055-NT	27-Feb-06	1345	1933.6	17°22.2'	79°02.3'	0	Central Caribbean
C203-056-NT	27-Feb-06	2345	1952.2	17°11.8'	79°30.8'	0	Central Caribbean
C203-057-NT	28-Feb-06	1003	1997.9	17°05.2'	80°20.6'	0	Central Caribbean
C203-060-NT	1-Mar-06	2355	2179.3	16°44.9'	83°42.2'	0	Western Caribbean
C203-062-NT	2-Mar-06	2157	2274.2	16°09.0'	85°17.1'	0	Western Caribbean
C203-067-NT	8-Mar-06	0040	2454.4	17°02.4'	86°14.6'	0	Western Caribbean
C203-069-NT	12-Mar-06	1130	2974.7	24°19.4'	83°56.3'	0	Florida Straits
C203-075-NT	16-Mar-06	0515	3257.4	24°17.3'	81°56.7'	0	Florida Straits
<b>Plankton Net - Hand (150 µm mesh, 0.3 m diameter)</b>							
C203-020-HN	14-Feb-06	1019	584.0	26°41.6'	73°43.3'	20	Sargasso Sea
C203-028A-HN	16-Feb-06	0946	781.1	24°06.5'	71°52.3'	25	Sargasso Sea
C203-028B-HN	16-Feb-06	0946	781.1	24°06.5'	71°52.3'	50	Sargasso Sea
C203-033A-HN	18-Feb-06	1034	978.6	22°00.3'	70°07.7'	25	Sargasso Sea
C203-033B-HN	18-Feb-06	1034	978.6	22°00.3'	70°07.7'	50	Sargasso Sea
C203-036A-HN	20-Feb-06	0952	1171.5	21°49.9'	71°10.4'	25	Bahamas
C203-036B-HN	20-Feb-06	0952	1171.5	21°49.9'	71°10.4'	50	Bahamas
C203-058A-HN	28-Feb-06	2259	2065.3	16°54.4'	81°32.2'	25	Western Caribbean
C203-058B-HN	28-Feb-06	2259	2065.3	16°54.4'	81°32.2'	50	Western Caribbean
C203-059A-HN	1-Mar-06	0824	2107.0	16°53.3'	82°18.9'	25	Western Caribbean
C203-059B-HN	1-Mar-06	0824	2107.0	16°53.3'	82°18.9'	50	Western Caribbean
C203-061A-HN	2-Mar-06	0920	2214.3	16°35.9'	84°20.6'	25	Western Caribbean
C203-061B-HN	2-Mar-06	0920	2214.3	16°35.9'	84°20.6'	50	Western Caribbean
C203-064A-HN	3-Mar-06	1000	2290.2	16°13.1'	85°28.5'	25	Western Caribbean
C203-064B-HN	3-Mar-06	1000	2290.2	16°13.1'	85°28.5'	50	Western Caribbean
C203-065A-HN	7-Mar-06	2317	2453.3	17°02.5'	86°14.6'	25	Western Caribbean
C203-065B-HN	7-Mar-06	2317	2453.3	17°02.5'	86°14.6'	50	Western Caribbean
C203-068A-HN	8-Mar-06	0830	2485.0	17°30.6'	86°22.6'	25	Western Caribbean
C203-068B-HN	8-Mar-06	0830	2485.0	17°30.6'	86°22.6'	50	Western Caribbean

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards

Table 1 continued

Station Number	Date	Local Time <sup>#</sup>	Log (nm)	Latitude (N)	Longitude (W)	Cast Depth (m)	General Locale
<b>Plankton Net - Vertical (63 µm mesh, 0.5 m diameter)</b>							
C203-016-VN	13-Feb-06	1044	461.7	27°30.3'	76°01.5'	50	Sargasso Sea
C203-021-VN	14-Feb-06	2332	638.7	26°08.8'	73°01.6'	50	Sargasso Sea
C203-023-VN	15-Feb-06	1030	685.2	25°32.6'	72°32.2'	50	Sargasso Sea
C203-025A-BVN	15-Feb-06	2030	740.5	24°50.4'	72°00.9'	35	Sargasso Sea
C203-025B-BVN	15-Feb-06	2030	740.5	24°50.4'	72°00.9'	100	Sargasso Sea
C203-026A-BVN	16-Feb-06	0013	752.8	24°37.8'	72°00.0'	35	Sargasso Sea
C203-026B-BVN	16-Feb-06	0013	752.8	24°37.8'	72°00.0'	65	Sargasso Sea
C203-027-BVN	16-Feb-06	0520	761.3	24°23.8'	71°57.5'	55	Sargasso Sea
C203-028-VN	16-Feb-06	1030	781.1	24°06.7'	71°52.2'	50	Sargasso Sea
C203-030-VN	17-Feb-06	1015	881.2	23°10.8'	71°16.6'	50	Sargasso Sea
C203-033-VN	18-Feb-06	1149	978.6	21°59.5'	70°07.5'	50	Sargasso Sea
C203-036-VN	20-Feb-06	1005	1171.5	21°49.7'	71°10.4'	50	Bahamas
C203-043-VN	25-Feb-06	0400	1679.3	18°19.4'	75°04.6'	50	Central Caribbean
C203-044-VN	25-Feb-06	0940	1700.2	18°01.7'	75°23.3'	50	Central Caribbean
C203-046A-BVN	25-Feb-06	2040	1749.6	17°41.0'	76°05.0'	35	Central Caribbean
C203-046B-BVN	25-Feb-06	2040	1749.6	17°41.0'	76°05.0'	100	Central Caribbean
C203-047A-BVN	26-Feb-06	0034	1764.1	17°34.6'	76°17.2'	35	Central Caribbean
C203-047B-BVN	26-Feb-06	0034	1764.1	17°34.6'	76°17.2'	100	Central Caribbean
C203-048A-BVN	26-Feb-06	0517	1781.6	17°26.4'	76°31.2'	40	Central Caribbean
C203-048B-BVN	26-Feb-06	0517	1781.6	17°26.4'	76°31.2'	100	Central Caribbean
<b>Plankton Net - Vertical (35 µm mesh, 0.25 m diameter)</b>							
C203-058-VN	1-Mar-06	0004	2065.3	16°54.4'	81°32.9'	50	Western Caribbean
C203-059-VN	1-Mar-06	0856	2107.0	16°52.6'	82°19.2'	50	Western Caribbean
<b>Dip Net</b>							
DN-001	9-Feb-06	1535	3.3	24°22.0'	81°42.9'	0	Florida Straits
DN-002	9-Feb-06	1618	5.8	24°20.6'	81°40.2'	0	Florida Straits
DN-003	9-Feb-06	1635	6.7	24°19.5'	81°38.9'	0	Florida Straits
DN-004	11-Feb-06	1058	130.9	26°31.4'	79°41.5'	0	Florida Straits
DN-005	17-Feb-06	1620	899.4	22°57.2'	71°09.9'	0	Sargasso Sea
DN-006	21-Feb-06	0616	1259.5	22°17.5'	72°33.6'	0	Bahamas
DN 007	16-Mar-06	0945	3273.7	24°11.6'	82°06.1'	0	Florida Straits
DN 008	16-Mar-06	1110	3279.8	24°12.6'	82°06.1'	0	Florida Straits
<b>Bucket Sample</b>							
C203-008-TD	10-Feb-06	1000	65.5	24°14.7'	80°07.8'	0	Florida Straits
C203-010-TD	11-Feb-06	0022	97.3	25°27.5'	79°53.9'	0	Florida Straits
C203-016-TD	13-Feb-06	0954	461.7	27°29.5'	76°04.4'	0	Sargasso Sea
C203-020-TD	14-Feb-06	1039	584.0	26°41.7'	73°43.7'	0	Sargasso Sea
C203-021-TD	15-Feb-06	0002	638.7	26°08.4'	73°01.6'	0	Sargasso Sea
C203-023-TD	15-Feb-06	1020	685.2	25°32.9'	72°32.1'	0	Sargasso Sea

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards

**Table 1** continued

<b>Station Number</b>	<b>Date</b>	<b>Local Time<sup>#</sup></b>	<b>Log (nm)</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>Cast Depth (m)</b>	<b>General Locale</b>
<b>Bucket Sample continued</b>							
C203-031-TD	17-Feb-06	1145	882.8	23°07.3'	71°16.5'	0	Sargasso Sea
C203-035-TD	19-Feb-06	1041	1057.8	21°17.1'	69°05.2'	0	Sargasso Sea
C203-042-TD	24-Feb-06	0915	1594.8	19°02.9'	74°00.4'	0	Central Caribbean
C203-049-TD	26-Feb-06	2320	1865.2	17°38.1'	77°55.5'	0	Central Caribbean
C203-051-TD	27-Feb-06	0930	1924.6	17°21.3'	78°54.5'	0	Central Caribbean
C203-057-TD	28-Feb-06	1020	1997.9	17°04.7'	80°21.5'	0	Central Caribbean

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards

**Table 2:** Surface station data.

Station Number	Date	Local Time <sup>#</sup>	Log (nm)	Latitude (N)	Longitude (W)	PO <sub>4</sub> * (μM)	NO <sub>3</sub> * (μM)	Chl a* (μg/l)	Water Sample
SS-001	9-Feb-06	1130	0.0	24°33.9'	81°48.1'	0.123	0.621	0.187	no
SS-002	9-Feb-06	1149	0.0	24°33.8'	81°48.4'	0.068	0.585	0.193	no
SS-003	9-Feb-06	1200	0.0	24°32.7'	81°48.9'	0.059	0.745	0.325	no
SS-004	9-Feb-06	1204	0.0	24°32.0'	81°49.0'	0.114	0.717	0.392	no
SS-005	9-Feb-06	1211	0.0	24°31.2'	81°48.6'	0.023	0.752	0.179	no
SS-006	9-Feb-06	1218	0.0	24°30.3'	81°48.3'	0.068	0.723	0.196	no
SS-007	9-Feb-06	1245	0.0	24°28.4'	81°47.4'	0.087	0.376	0.129	no
SS-008	9-Feb-06	1437	0.5	24°24.6'	81°45.4'	0.077	0.971	0.165	no
SS-009	9-Feb-06	1552	3.4	24°21.8'	81°42.3'	0.151	0.654	0.512	no
SS-010	9-Feb-06	1800	10.8	24°15.2'	81°33.7'	0.105	0.431	0.037	no
SS-011	10-Feb-06	1109	68.0	24°15.1'	80°07.7'	0.132		0.068	no
SS-012	11-Feb-06	2000	188.7	27°35.9'	80°15.0'	0.452	0.262	0.887	no
SS-013	11-Feb-06	2014	188.7	27°36.2'	80°14.3'	0.169	0.278	0.325	no
SS-014	11-Feb-06	2033	189.7	27°36.4'	80°12.9'	0.260	0.198	0.241	no
SS-015	11-Feb-06	2055	191.1	27°36.5'	80°11.3'	0.205	0.507	0.139	no
SS-016	11-Feb-06	2145	196.2	27°37.6'	80°08.8'	0.196	0.238	0.199	no
SS-017	11-Feb-06	2310	200.1	27°41.3'	80°01.9'	0.864	0.440	0.182	no
SS-018	11-Feb-06	2343	203.4	27°43.0'	79°58.6'			0.175	yes
SS-019	12-Feb-06	0536	245.3	27°36.8'	79°32.5'			0.082	no
SS-020	12-Feb-06	1048	292.6	27°42.2'	78°42.4'	0.215		0.080	no
SS-021	12-Feb-06	1133	299.6	27°41.7'	78°34.3'	0.105		0.102	yes
SS-022	12-Feb-06	1732	358.1	27°49.9'	77°34.8'			0.083	yes
SS-023	12-Feb-06	2340	402.3	27°57.1'	76°50.6'			0.046	yes
SS-024	13-Feb-06	0530	440.0	27°45.8'	76°21.0'			0.040	yes
SS-025	13-Feb-06	1125	463.5	27°31.7'	76°00.1'	0.205		0.034	no
SS-026	13-Feb-06	1125	463.5	27°31.7'	76°00.1'				yes
SS-027	13-Feb-06	1732	504.1	27°08.6'	75°17.6'			0.052	yes
SS-028	14-Feb-06	0200	545.8	26°47.1'	74°25.4'	0.123		0.031	yes
SS-029	14-Feb-06	0630	572.0	26°42.6'	73°55.9'			0.026	yes
SS-030	14-Feb-06	1208	584.2	26°41.6'	73°43.2'				yes
SS-031	14-Feb-06	1730	604.6	26°36.8'	73°21.2'				yes
SS-032	15-Feb-06	0045	639.7	26°07.2'	73°01.4'	0.132		0.016	yes
SS-033	15-Feb-06	1123	686.1	25°31.5'	72°32.6'	0.096		0.022	no
SS-034	16-Feb-06	1130	781.9	24°05.7'	71°52.2'	0.379		0.025	no
SS-035	16-Feb-06	1800	812.7	23°39.7'	71°32.0'				yes
SS-036	17-Feb-06	0000	836.8	23°33.5'	71°23.9'				yes
SS-037	17-Feb-06	0600	864.9	23°25.4'	71°20.9'				yes
SS-038	17-Feb-06	1103	881.3	23°09.5'	71°17.2'	0.114		0.013	no
SS-039	17-Feb-06	1205	885.7	23°05.8'	71°14.6'				yes
SS-040	17-Feb-06	1805	905.9	22°51.2'	71°05.7'				yes
SS-041	17-Feb-06	2300	929.0	22°33.5'	70°49.1'				yes
SS-042	18-Feb-06	0600	958.2	22°15.7'	70°22.4'				yes
SS-043	18-Feb-06	1200	978.6	21°59.3'	70°07.4'				yes
SS-044	18-Feb-06	1800	1003.4	21°46.1'	69°44.2'				yes

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards

\* Blank spaces indicate no data collected

**Table 2** continued

Station Number	Date	Local Time <sup>#</sup>	Log (nm)	Latitude (N)	Longitude (W)	PO <sub>4</sub> <sup>*</sup> (μM)	NO <sub>3</sub> <sup>*</sup> (μM)	Chl a <sup>*</sup> (μg/l)	Water Sample
SS-045	18-Feb-06	2310	1025.3	21°36.4'	69°27.1'	0.105		0.014	no
SS-046	19-Feb-06	0000	1026.8	21°34.9'	69°26.3'				yes
SS-047	19-Feb-06	0600	1046.5	21°25.7'	69°09.4'				yes
SS-048	19-Feb-06	1214	1058.4	21°16.1'	69°03.4'				yes
SS-049	20-Feb-06	1045	1171.5	21°48.4'	71°10.7'	0.114		0.001	no
SS-050	21-Feb-06	0616	1258.9	22°16.9'	72°33.7'	0.123		0.009	no
SS-051	21-Feb-06	0938	1273.6	22°24.2'	72°42.7'	0.114		0.010	no
SS-052	21-Feb-06	1210	1281.0	22°28.0'	72°51.7'	0.160			no
SS-053	21-Feb-06	1428	1288.5	22°30.1'	73°01.7'	0.233		0.008	no
SS-054	21-Feb-06	1719	1299.5	22°27.9'	73°11.9'	0.123		0.010	no
SS-055	21-Feb-06	1744	1302.4	22°25.6'	73°12.7'	0.032		0.019	no
SS-056	21-Feb-06	1902	1309.8	22°19.0'	73°12.3'	0.041		0.012	no
SS-057	21-Feb-06	1958	1314.9	22°15.6'	73°09.1'	0.004		0.012	no
SS-058	22-Feb-06	0439	1360.9	21°34.4'	72°55.7'	2.289		0.013	no
SS-059	22-Feb-06	0530	1365.6	21°36.1'	73°00.3'	0.724		0.012	no
SS-060	22-Feb-06	0615	1370.9	21°32.4'	73°03.2'			0.011	no
SS-061	22-Feb-06	0654	1374.7	21°30.2'	73°05.9'	0.401		0.012	no
SS-062	22-Feb-06	0730	1379.1	21°26.1'	73°05.2'	0.897		0.015	no
SS-063	22-Feb-06	0756	1381.9	21°23.6'	73°04.3'	0.574		0.015	no
SS-064	22-Feb-06	0912	1389.4	21°24.2'	73°02.7'	0.763		0.013	no
SS-065	24-Feb-06	0945	1594.8	19°03.6'	74°00.6'	0.540		0.018	no
SS-066	24-Feb-06	2330	1665.5	18°26.0'	74°58.0'			0.015	yes
SS-067	25-Feb-06	0003	1669.1	18°25.8'	75°01.1'	0.635		0.019	no
SS-068	25-Feb-06	0028	1671.6	18°25.3'	75°03.6'	0.707		0.018	no
SS-069	25-Feb-06	0040	1673.1	18°23.8'	75°03.3'	0.518			no
SS-070	25-Feb-06	0057	1674.2	18°22.7'	75°02.5'	0.518			no
SS-071	25-Feb-06	0113	1674.7	18°22.1'	75°01.8'	0.574		0.029	no
SS-072	25-Feb-06	0530	1683.3	18°15.5'	75°07.9'			0.021	yes
SS-073	25-Feb-06	1045	1703.1	18°01.1'	75°25.1'	0.629		0.017	no
SS-074	25-Feb-06	1138	1706.3	18°00.3'	75°28.9'			0.013	yes
SS-075	25-Feb-06	2330	1762.3	17°34.6'	76°16.6'			0.072	no
SS-076	26-Feb-06	0615	1781.9	17°25.8'	76°32.0'			0.048	no
SS-077	26-Feb-06	1200	1813.4	17°13.6'	76°59.8'			0.048	no
SS-078	26-Feb-06	1758	1842.8	17°28.4'	77°36.1'			0.044	yes
SS-079	27-Feb-06	0000	1866.8	17°37.5'	77°57.6'			0.037	yes
SS-080	27-Feb-06	0600	1910.1	17°21.4'	78°39.8'			0.067	yes
SS-081	27-Feb-06	1200	1932.8	17°24.1'	79°00.4'			0.064	yes
SS-082	27-Feb-06	1300	1933.8	17°21.7'	79°02.6'	0.501		0.047	no
SS-083	27-Feb-06	1800	1940.6	17°17.7'	79°12.6'			0.057	no
SS-084	28-Feb-06	0000	1952.7	17°11.7'	79°31.3'	0.557		0.005	no
SS-085	28-Feb-06	1003	1997.9	17°05.2'	80°20.6'	0.652		0.060	no
SS-086	1-Mar-06	0014	2065.3	16°54.4'	81°33.2'	0.691			no
SS-087	1-Mar-06	0530	2091.8	16°55.1'	82°02.9'			0.046	yes
SS-088	1-Mar-06	1130	2120.5	16°50.2'	82°33.1'			0.053	yes

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards

<sup>\*</sup> Blank spaces indicate no data collected

**Table 2** continued

<b>Station Number</b>	<b>Date</b>	<b>Local Time<sup>#</sup></b>	<b>Log (nm)</b>	<b>Latitude (N)</b>	<b>Longitude (W)</b>	<b>PO<sub>4</sub><sup>*</sup> (μM)</b>	<b>NO<sub>3</sub><sup>*</sup> (μM)</b>	<b>Chl a* (μg/l)</b>	<b>Water Sample</b>
SS-089	1-Mar-06	1730	2152.8	16°51.7'	83°08.8'			0.036	yes
SS-090	1-Mar-06	2330	2178.8	16°45.8'	83°41.3'			0.015	yes
SS-091	2-Mar-06	0010	2179.6	16°44.6'	83°42.6'	0.763		0.039	no
SS-092	2-Mar-06	0545	2207.7	16°38.4'	84°07.4'			0.024	yes
SS-093	2-Mar-06	1200	2221.4	16°33.3'	84°28.9'			0.021	yes
SS-094	2-Mar-06	1730	2242.3	16°24.7'	84°49.5'			0.029	yes
SS-095	2-Mar-06	2220	2275.0	16°08.5'	85°17.6'	0.964		0.057	no
SS-096	2-Mar-06	2330	2280.8	16°06.6'	85°19.0'			0.052	yes
SS-097	3-Mar-06	0540	2295.2	16°11.0'	85°20.9'			0.050	yes
SS-098	3-Mar-06	1130	2296.9	16°14.8'	85°35.3'			0.039	yes
SS-099	3-Mar-06	1730	2318.8	16°14.5'	85°35.3'			0.020	yes
SS-100	3-Mar-06	2230	2343.5	16°16.4'	86°16.1'	0.707		0.027	no
SS-101	3-Mar-06	2340	2348.5	16°20.4'	86°17.3'	0.557		0.025	yes
SS-102	4-Mar-06	0012	2350.2	16°21.9'	86°16.8'	0.362	0.112	0.028	no
SS-103	4-Mar-06	0050	2353.8	16°18.5'	86°15.2'	0.479	0.440	0.021	no
SS-104	4-Mar-06	0647	2377.1	16°23.5'	86°16.5'	0.574	0.040	0.045	no
SS-105	4-Mar-06	0732	2379.5	16°24.0'	86°17.4'	0.668	0.104	0.059	no
SS-106	4-Mar-06	0740	2379.9	16°24.3'	86°17.6'	0.457	0.066	0.067	no
SS-107	4-Mar-06	0743	2380.0	16°24.5'	86°17.6'	0.590	0.336	0.080	no
SS-108	4-Mar-06	0754	2380.3	16°24.8'	86°17.7'	0.540	0.241	0.074	no
SS-109	15-Mar-06	1716	3192.4	24°24.3'	82°04.6'			0.336	no
SS-110	16-Mar-06	0515	3257.4	24°17.3'	81°56.7'			0.186	no

<sup>#</sup> Local time is +5 GMT until 2300, 17-Feb-06 and +6 GMT afterwards

<sup>\*</sup> Blank spaces indicate no data collected

**Table 3:** Neuston net tow data. See Table 1 for station information.

Station Number	Tow Length (m)	Temp. (°C)	Salinity (psu)	Zoop. Biomass (ml)	Zoop. Density (ml/m <sup>2</sup> )	Plastic Pieces (#)	Plastic Pellets (#)	Tar Pieces (#)
C203-009-NT	1883	24.9	36.2	6.5	0.003	3	0	0
C203-011-NT	2532	24.4	36.1	28.0	0.011	2	0	0
C203-017-NT	2222	21.6	36.7	2.0	0.001	10	0	0
C203-019-NT	2593	23.3	36.8	2.5	0.001	8	0	0
C203-022-NT	1852	23.9	36.7	4.0	0.002	10	0	1
C203-024-NT	1852	23.6	36.7	2.0	0.001	21	0	2
C203-029-NT	2248	24.5	36.7	1.0	0.000	3	2	0
C203-031-NT	2778	24.8	36.8	1.0	0.000	45	0	0
C203-034-NT	1852	25.5	36.2	9.1	0.005	4	0	0
C203-037-NT	1852	25.5	36.4	1.0	0.001	2	0	0
C203-041-NT	648	26.9	36.1	13.5	0.021	4	0	0
C203-045-NT	2593	26.6	36.0	1.0	0.000	4	0	0
C203-055-NT	2315	27.0	35.9	4.7	0.002	18	0	0
C203-056-NT	1852	26.8	35.9	24.0	0.013	27	0	0
C203-057-NT	3041	26.9	35.9	2.0	0.001	0	0	0
C203-060-NT	2436	26.7	35.7	16.2	0.007	9	0	0
C203-062-NT	1798	26.8	35.1	9.5	0.005	0	0	0
C203-067-NT	1296	26.6	35.9	6.9	0.005	14	1	5
C203-069-NT	2459	23.5	36.4	7.5	0.003	56	0	0
C203-075-NT	1161	25.8	36.0	1300.0	1.120	4	1	0

**Table 4:** Hydrocast bottle data. See Table 1 for station information.

Station Number	Bottle Number	Bottle Depth (m)	O <sub>2</sub> * (ml/l)	PO <sub>4</sub> * (µM)	Chl a* (µg/l)	NO <sub>3</sub> * (µM)
C203-010-HC	13	0.0		0.105	0.075	
C203-010-HC	12	49.9	4.54	0.087	0.088	
C203-010-HC	11	69.9			0.159	
C203-010-HC	10	76.0	4.42	0.123	0.150	
C203-010-HC	9	93.9			0.062	
C203-010-HC	8	119.7	4.33	0.242	0.028	
C203-010-HC	7	149.2	3.42	0.709	0.014	
C203-010-HC	6	198.9	3.07	1.898	0.007	
C203-010-HC	5	248.1	2.98		0.001	
C203-010-HC	4	275.0	3.09		0.001	
C203-010-HC	3	276.7	2.96	2.822	0.001	
C203-010-HC	2	277.4	2.93			
C203-010-HC	1	278.3	2.99			
C203-020-HC	13	0.0		0.023	0.040	0.264
C203-020-HC	12	51.2	4.77	0.068	0.040	0.210
C203-020-HC	11	70.5		0.023	0.041	0.519
C203-020-HC	10	74.8	4.76		0.047	
C203-020-HC	9	93.9		0.041	0.053	0.340
C203-020-HC	8	119.2	4.77	0.032	0.053	0.202
C203-020-HC	7	148.4	5.36	0.242	0.058	1.035
C203-020-HC	6	198.1	4.62	0.050	0.002	2.025
C203-020-HC	5	248.4	4.78		0.001	
C203-020-HC	4	297.9	4.51	0.242	0.001	4.431
C203-020-HC	3	347.5	4.90			
C203-020-HC	2	396.3	4.69			
C203-020-HC	1	447.3	4.52			
C203-035-HC	13	0.0		0.105	0.008	0.243
C203-035-HC	12	24.6	4.55	0.059	0.027	0.450
C203-035-HC	11	79.0	4.52	0.050	0.035	0.442
C203-035-HC	9	149.3	4.25	0.077	0.004	1.780
C203-035-HC	8	198.9	4.31	0.178	0.000	3.746
C203-035-HC	7	228.5	4.26	0.169	0.000	5.022
C203-035-HC	6	268.6	4.43	0.334	0.000	6.153
C203-035-HC	5	298.5	4.39		0.000	
C203-035-HC	4	396.8	3.93	0.910		9.961
C203-035-HC	3	496.5	3.73			
C203-035-HC	2	595.8	3.77			
C203-035-HC	1	695.4	3.38			
C203-038-HC	13	0.0		0.096	0.007	
C203-038-HC	12	39.3	2.52	0.087	0.006	
C203-038-HC	11	99.1	2.66	0.077	0.050	
C203-038-HC	10	124.6	2.36	0.087	0.111	
C203-038-HC	9	159.1	3.77	0.059	0.062	
C203-038-HC	8	228.5	2.72	0.205	0.001	
C203-038-HC	7	397.5	2.76	0.635	0.000	

\* Blank spaces indicate no data collected



**Table 4** continued

<b>Station Number</b>	<b>Bottle Number</b>	<b>Bottle Depth (m)</b>	<b>O<sub>2</sub>* (ml/l)</b>	<b>PO<sub>4</sub>* (μM)</b>	<b>Chl a* (μg/l)</b>	<b>NO<sub>3</sub>* (μM)</b>
C203-038-HC	6	646.3	2.23	2.218		
C203-038-HC	5	893.1	2.29	3.389		
C203-038-HC	4	1190.3	3.10	2.538		
C203-038-HC	3	1486.0	3.45	3.124		
C203-038-HC	2	1650.1	5.40	2.730		
C203-038-HC	1	1651.7	2.52	2.346		
C203-040-HC	13	0.0	4.44	0.808	0.014	
C203-040-HC	12	50.1	4.46	0.635	0.013	
C203-040-HC	11	99.7	4.13	0.585	0.070	
C203-040-HC	10	129.2	4.32	1.504	0.130	
C203-040-HC	9	169.2	4.20	2.379	0.021	
C203-040-HC	8	248.1	4.30	1.515	0.000	
C203-040-HC	7	397.8	3.84	7.158	0.000	
C203-040-HC	6	596.0	3.07	2.145		
C203-040-HC	5	794.0	3.56	6.406		
C203-040-HC	4	992.3	4.36	0.501		
C203-040-HC	3	1239.7	4.90	2.496		
C203-040-HC	1	1486.4	5.06	2.763		
C203-061-HC	13	0.0		0.607	0.027	
C203-061-HC	11	74.3	4.22	0.863	0.255	
C203-061-HC	10	84.5	3.95	0.663	0.176	
C203-061-HC	9	124.5	3.55	0.964	0.036	
C203-061-HC	8	174.1	3.88	1.058	0.004	
C203-061-HC	7	248.3	3.32	1.560	0.006	
C203-061-HC	5	397.9	3.08	2.373		
C203-061-HC	4	471.9	2.88	2.652		
C203-061-HC	3	570.6	3.11	3.370		
C203-061-HC	2	694.8	3.24	2.908		
C203-061-HC	1	793.2	4.02	2.796		
C203-068-HC	13	0.0			0.013	
C203-068-HC	12	49.6	4.56		0.027	
C203-068-HC	11	89.8	4.06		0.277	
C203-068-HC	10	99.7	3.89		0.169	
C203-068-HC	9	248.8	3.05		0.000	
C203-068-HC	8	496.9	3.09			
C203-068-HC	7	794.4	4.09			
C203-068-HC	6	1190.3	4.85			
C203-068-HC	5	1585.2	5.25			
C203-068-HC	4	1979.4	5.20			
C203-068-HC	2	2471.8	5.67			
C203-068-HC	1	2766.1	5.73		0.000	

\* Blank spaces indicate no data collected

**Table 5:** Sediment grain size data. See Table 1 for station information.

Station Number	Depth (m)	> 2000 $\mu\text{m}$ (%)	1000 – 2000 $\mu\text{m}$ (%)	500 – 1000 $\mu\text{m}$ (%)	250 – 500 $\mu\text{m}$ (%)	125 – 250 $\mu\text{m}$ (%)	63 – 125 $\mu\text{m}$ (%)	<63 $\mu\text{m}$ (%)	Qualitative description
C203-001-SG	7	6.0	26.0	52.0	4.8	3.6	0.2	7.4	Pale greenish yellow (10Y 8/2); angular; granular & sandy; coral fragments
C203-002-SG	204	0.7	18.4	32.3	22.1	19.2	4.2	3.2	Pale olive (10Y 6/2); angular; sandy & silty
C203-003-SG	221	2.8	68.0	9.2	8.3	3.7	0.7	7.3	Grayish yellow green (5GY 7/2); angular; pebbly, granular & sandy
C203-012-SG	9	1.2	13.3	62.0	15.4	4.4	3.2	0.4	Olive gray (5Y 3/2); angular; granular; organic smell; shell fragments
C203-013-SG	19	20.0	24.0	44.8	5.4	4.4	0.7	0.7	Moderate yellowish brown (10YR 5/4); angular; granular; weak smell; shell & coral fragments
C203-014-SG	37	0.6	0.8	0.8	0.6	1.6	32.8	62.8	Dark greenish gray (5GY 4/1); well-rounded; silty; sulfurous smell
C203-050-SG	24	6.4	27.2	39.6	13.2	8.8	2.0	2.8	Grayish yellow (5Y 8/4); rounded to angular; granular; weak smell; shell and coral fragments
C203-052-SG	41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Grayish yellow (5Y 8/4); rounded to angular; sandy; live organics with very little sediment
C203-053-SG	391	1.2	1.2	1.2	1.0	3.0	1.2	91.2	Pale greenish yellow (10Y 8/2); rounded; very silty; live organics and shell fragments

**Table 6:** Student research projects, cruise C-203.

<b>Title</b>	<b>Student Investigators</b>
A Study to Determine the Spatial Distribution of <i>Trichodesmium</i> in the Sargasso and Caribbean Seas with Reference to Surface Water Temperatures and Surface Phosphate Concentration	Doug Borst
Investigating Biotic & Abiotic Factors Influencing Marine Viruses & the Bacterioplankton <i>Synechococcus</i>	Max Bronstein
Water Masses in the Western Tropical North Atlantic and Caribbean with Implications for Global Circulation Patterns	Lydia Cole
Relationship between the Deep Chlorophyll Maximum and the Thermocline in Diel Vertical Migration of Marine Zooplankton	Daniel Fitzgerald
Sediment Layers: Planktic-Benthic Ratios in Relation to Ocean Depth	Marcelle Gonzalez, Celia Segal
The Redfield Ratio: If, How and Why it Varies with Distance from Shore in the Caribbean and Sargasso Seas	Colleen Hanlon-Smith, Jon Neckers
A Comparative Study of Macrofaunal Geographic Diversity in <i>Sargassum fluitans</i> and <i>Sargassum natans</i> Communities	Leslie Heimer
Carbonate Grain Size and Slope Angle as Potential Functions of Slope Stability	Erika Kercher
How Islands Affect the Flow of Currents, the Formation of Eddies, and Chlorophyll Distribution	Joseph Kutney, Mark Whiting
Diel Variations of <i>In Vivo</i> and DCMU-Enhanced Fluorescence Measurements	Sam Lemonick
Examining Variations in Bioluminescent Vertical Profiles with Respect to Time and Turbulence in the Sargasso and Caribbean Seas	Michael Morrissey, Matthew Phillips
<i>Ornithocercus</i> , a Symbiotic Cyanobacteria and How They Relate to Their Environment	Hannah Nadeau
Diversity and Abundance of Sessile Fauna in Pelagic <i>Sargassum</i> Communities of the Gulf Stream and Sargasso Sea	Nathaniel Pope
Vertical Structure of <i>Synechococcus</i> as a Function of Prominent Water Column Features in the Tropical Northwest Atlantic	Miriam Rubin
Small-Scale Spatial Variability in Phytoplankton Biomass Concentrations with Reference to Large-Scale Regional Characteristics	Tara Stevens