

CRUISE REPORT

C-201

SCIENTIFIC ACTIVITIES UNDERTAKEN ABOARD THE *SSV Corwith Cramer*

Woods Hole, MA – Carriacou, Grenadines - St. Croix USVI

13 October – 20 November 2005



Photo courtesy of Cina Loarie

Sea Education Association
Woods Hole, Massachusetts

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Table of Contents

Ship's Complement	4
Data Description	5
Figure 1: Cruise Track	6
Figure 2: Hydrographic sections	7
Table 1: Student Research Projects	8
Table 2: Oceanographic sampling stations	9
Table 3: Surface station data	13
Table 4: Neuston tow data	14
Table 5: Hydrocast data	17

Ship's Complement for SSV *Corwith Cramer C-201*

Scientific Staff

Gary Jaroslow	Chief Scientist
Mary Engels	First Assistant Scientist
Cina Loarie	Second Assistant Scientist
Skye Moret	Third Assistant Scientist

Nautical Staff

Chris McGuire	Captain
Jeremy Law	Chief Mate
Justin Smith	Second Mate
Jullie Jackson	Third Mate
Jeremy Lucke	Engineer
Chris Wang	Steward

Students

Margaret E. Alferman	Boston University
Jaymievieve G. Ang	Stanford University
Dylan A. Armajani	Bard College
Philip F. Arnolds	Williams College
Rachel L. Beardsley	University of Denver
Elizabeth L. Crockett	Saint Mary's College
Kate E. DeBellis	University of Denver
Kathryn L. Dick	Smith College
Jessie A. Drechsel	Eckerd College
Rachel J. Greenough	Carleton College
Mackenzie A. Haberman	Barnard College
Peter D. Herman	Brown University
Nicole A. Klosterman	Northeastern University
Greg J. Moeller	Butler University
Stephanie A. Owens	Sewanee - University of the South
Christopher N. Reynolds	Colorado College
Astrid L. Rodriguez	Bowdoin College
Lindsey Rutherford	Santa Clara University
Thomas W. Summers	Rollins College
Jessica L. Travers	Eastern Nazarene College
Eleanor D. Tripp	Barnard College

Data Description

This cruise report provides a record of data collected aboard the SSV *Corwith Cramer* during Cruise C-201 during October and November of 2005. The cruise track transected the North Atlantic Ocean from Woods Hole, MA to St. Croix, USVI (Fig. 1). The sea-going program is an extension of Sea Education Association (SEA) courses conducted for six weeks on shore in Woods Hole and emphasizes the application of theoretical concepts to the study of the oceans. Oceanographic research conducted during Cruise C-201 involved extensive data collection for individual student projects (Table 1) and ongoing SEA research programs. The student projects focused on current scientific problems in physical, chemical, biological, geological, and environmental oceanography, and stressed the interdisciplinary nature of the applied science. In particular, the complex interaction of oceanic processes was emphasized by interdisciplinary, regional, and temporal comparative analyses of the various data sets collected. Student research papers are available on request from SEA.

During the cruise, samples or data were collected at 190 discrete oceanographic stations (Tables 2 and 3) in addition to continuously sampling water depth, sub-bottom acoustic profiling, Acoustic Doppler Current Profiles (ADCP) and flow-through sea surface temperature, salinity and *in-vivo* fluorescence. This report summarizes sea surface chemical properties (Table 3), subsurface physical, chemical and biological characteristics (Fig. 2, Tables 4 and 5), and surface sediment qualities (Table 6). Lengthy CTD, CHIRP, ADCP and flow-through data are not reported here. All unpublished data can be made available by arrangement with the SEA archivist (Contact information, p.2). The information contained 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.

Gary E. Jaroslow
Chief Scientist
C-201

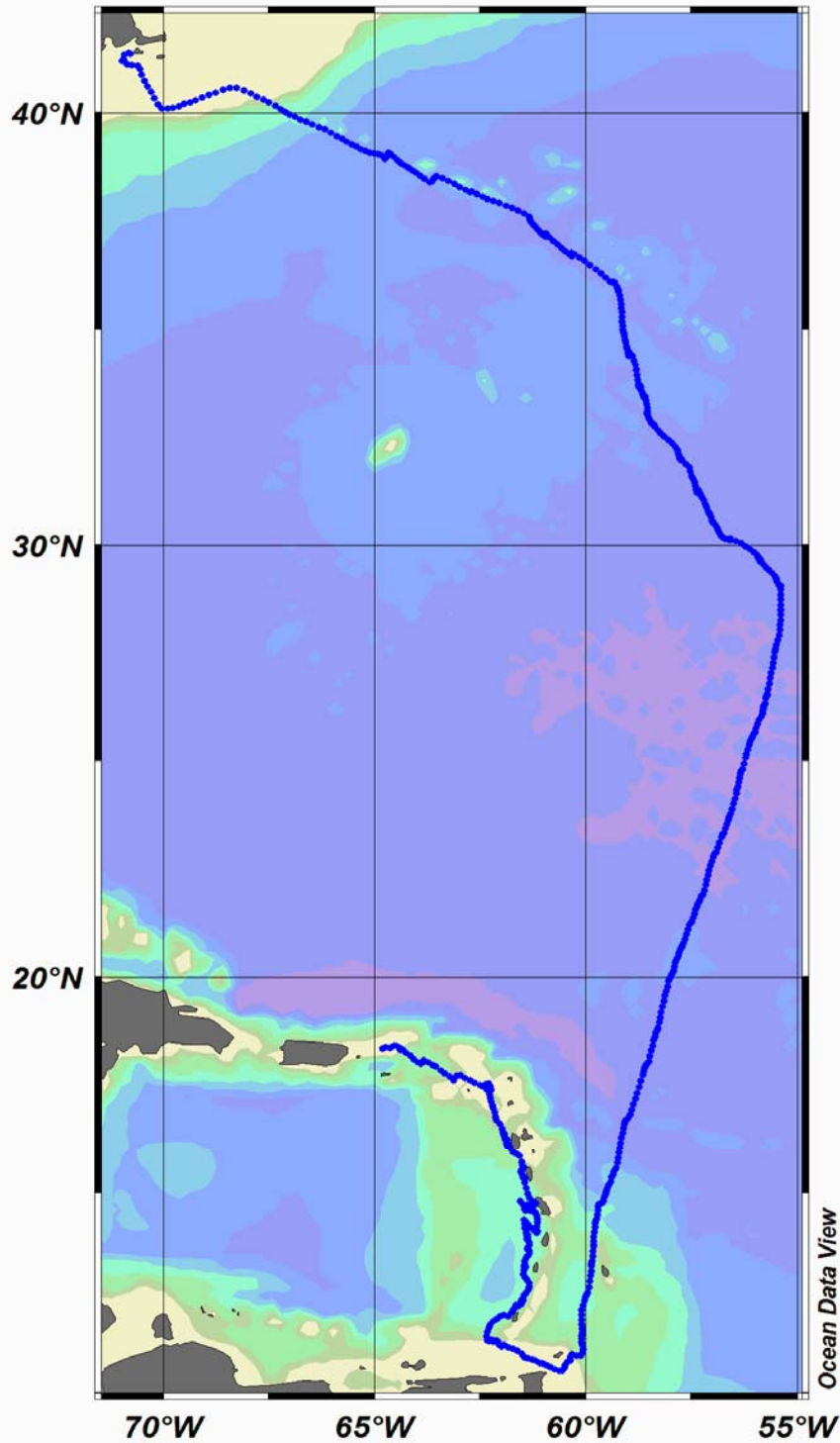


Figure 1. Cruise-track map for Cruise C-201 of the SSV *Corwith Cramer* from October 13 - November 20, 2005. The cruise began in Woods Hole, MA USA, made port stop in the Caribbean island of Carriacou, Grenadines and ended in St. Croix, USVI.

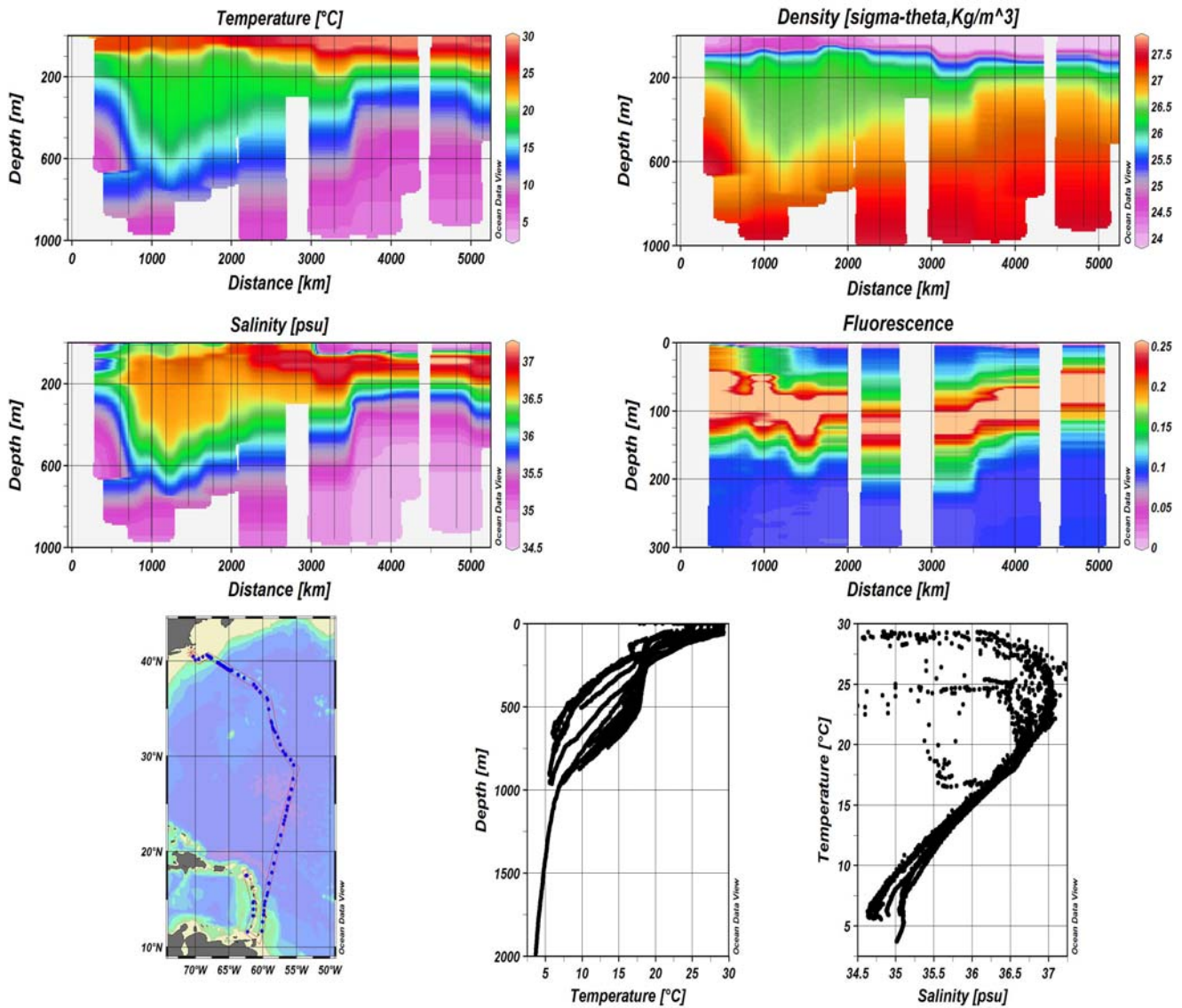


Figure 2. Data collected at CTD and surface stations located in map (lower left, stations shown by blue dots). Along-track water temperature, salinity, density and *in-vivo* relative fluorescence (top and middle sections). Plots of water-column temperature and temperature versus salinity (lower right).

Table 1. Student Research Projects

Title	Student Researcher(s)
The effect of eddy velocity structure on surface properties in the North Atlantic	Rachel Greenough Lindsey Rutherford
The effects of North Atlantic Oscillation variability on the formation and distribution of Eighteen-Degree Water in the Sargasso Sea from 1992 to 2005	Stephanie Owens
Effects of bacteria on the vertical distribution of phytoplankton with respect to nutrient presence in the Atlantic Ocean	Greg Moeller
The regional distribution of <i>Trichodesmium</i> throughout the North Atlantic Ocean and the effect that temperature, wind speed, salinity and nutrient concentration on the abundance.	Rachel Beardsley
A dinoflagellate survey across major oceanic fronts of the Northwest Atlantic	Jessica Drechsel
Variation in bioluminescence due to primary production in the Northern Atlantic Ocean	Jessica Travers
<i>Euthecosomatous pteropods</i> as an indicator species for climate variation	Margaret Alferman Christopher Reynolds
Seasonal distribution of <i>Halobates micans</i> in the Atlantic Ocean	Kate DeBellis
Distribution and composition of zooplankton patches within the North Atlantic Ocean	Mackenzie Haberman
The relationship between marine copepod size and the timing and direction of diel vertical migration	Philip Arnolds
Diel vertical migration of marine zooplankton: the relationship between population composition and variation of timing and velocity of migratory patterns	Elizabeth Crockett Eleanor Tripp
Dietary niche development and health of <i>Centrobranchus nigroocellatus</i> and <i>Gonichthys cocco</i> in the North Atlantic Ocean	Jaymievieve Ang
The relationship between myctophid diversity and depth: A regional comparison between the Northern and Southern Sargasso Sea	Tom Summers
Seasonal variation in siliciclastic terrigenous deposition in a tropical carbonate environment, Galleon's Passage and the Lesser Antilles island arc	Peter Herman Nicole Klosterman
Sediment transport mechanisms and deposition patterns in the Southeastern Caribbean	Kathryn Dick Astrid Rodriguez
The abundance and distribution of pelagic plastic within the N. Sargasso Sea, S. Sargasso Sea, and Subtropical Convergence Zone	Dylan Armajani

Table 2: Oceanographic sampling stations

Station	Date	Local Time	Log (nm)	Latitude (N)	Longitude (W)	Sampling Depth (m)	General Locale
CTD Casts							
C201-010-CTD	17-Oct-05	1845	387.7	38°56.6'	064°43.9'	664	S of Georges Bank
C201-013-CTD	18-Oct-05	1020	475.9	38°32.3'	063°38.6'	878	S of Gulf Stream
C201-019-CTD	19-Oct-05	2146	629.0	37°08.1'	060°56.3'	961	N. Sargasso Sea
C201-028-CTD	20-Oct-05	2039	741.2	36°06.0'	059°21.4'	746	N. Sargasso Sea
C201-033-CTD	22-Oct-05	0922	872.5	33°38.4'	058°44.3'	802	N. Sargasso Sea
C201-051-CTD	24-Oct-05	1033	1048.5	31°12.1'	057°21.1'	732	Subtrop. Converg. Zone
C201-067-CTD	27-Oct-05	0940	1394.3	26°30.8'	055°42.4'	1993	S. Sargasso Sea
C201-085-CTD	29-Oct-05	0928	1630.5	22°52.2'	056°54.8'	898	S. Sargasso Sea
C201-095-CTD	31-Oct-05	1100	1899.9	18°45.0'	058°18.6'	965	S. Sargasso Sea
C201-107-CTD	2-Nov-05	0928	2145.4	14°44.8'	059°39.8'	961	Atl. Tropical Waters
C201-118-CTD	3-Nov-05	1138	2279.9	12°37.9'	059°58.7'	763	36 nm SW of Barbados
C201-152-CTD	13-Nov-05	0947	2826.9	14°43.4'	061°23.2'	912	W of Martinique
Hydrocasts							
C201-013-HC	18-Oct-05	1204	475.9	38°28.5'	063°35.5'	204	S of Gulf Stream
C201-034-HC	22-Oct-05	1032	872.5	33°38.9'	058°44.1'	204	N. Sargasso Sea
C201-064-HC	26-Oct-05	1028	1225	29°03.7'	055°23.0'	484	Subtrop. Converg. Zone
C201-085-HC	29-Oct-05	1040	1630.5	22°52.2'	056°54.8'	288	S. Sargasso Sea
C201-108-HC	2-Nov-05	1047	2145.4	14°45.0'	059°38.8'	311	Atl. Tropical Waters
C201-158-HC	17-Nov-05	0532	3114.0	17°28.4'	062°26.4'	446.8	E of St. Kitts
Meter Nets*							
C201-048-MN	23-Oct-05	2107	983.9	31°57.5'	057°44.2'	60	Subtrop. Converg. Zone
C201-061-MN	25-Oct-05	2034	1180.6	29°39.7'	055°52.1'	295	Subtrop. Converg. Zone
C201-062-MN	25-Oct-05	2047	1181.0	29°40.0'	055°52.6'	150	Subtrop. Converg. Zone
C201-092-MN	30-Oct-05	2118	1813.4	20°03.4'	057°57.6'	300	S. Sargasso Sea
C201-093-MN	30-Oct-05	2130	1813.5	20°03.1'	057°57.8'	150	S. Sargasso Sea
C201-135-MN	11-Nov-05	2035	2495.6	11°35.7'	062°14.6'	300	35nm SW of Grenada
C201-136-MN	11-Nov-05	2048	2495.7	11°35.4'	062°14.9'	300	35nm SW of Grenada
C201-159-MN2	17-Nov-05	2011	3210.7	18°03.7'	063°50.4'	1000	Anegada Passage
*MN = 335- μ m-mesh, 1-m diameter net MN2 = 335- μ m-mesh, 2-m diameter net							
Neuston Nets							
C201-011-NT	17-Oct-05	2004	387.9	39°00.5'	064°41.7'	0	N. Sargasso Sea
C201-015-NT	18-Oct-05	2011	523.5	38°10.2'	062°43.5'	0	N. Sargasso Sea
C201-018-NT	19-Oct-05	1249	613.3	37°28.5'	061°17.7'	0	N. Sargasso Sea
C201-021-NT	20-Oct-05	0038	629.2	37°11.8'	060°55.8'	0	N. Sargasso Sea
C201-022-NT	20-Oct-05	0855	675.9	36°41.2'	060°20.0'	0	N. Sargasso Sea
C201-023-NT	20-Oct-05	0911	676.3	36°41.9'	060°20.0'	0	N. Sargasso Sea
C201-024-NT	20-Oct-05	0935	676.6	36°42.9'	060°20.0'	0	N. Sargasso Sea
C201-025-NT	20-Oct-05	1010	677.5	36°44.2'	060°20.2'	0	N. Sargasso Sea
C201-029-NT	21-Oct-05	0024	747.3	35°55.3'	059°13.9'	0	N. Sargasso Sea
C201-030-NT	21-Oct-05	1202	784.0	34°55.7'	059°06.3'	0	N. Sargasso Sea

C201-036-NT	22-Oct-05	1216	872.2	33°39.6'	058°43.3'	0	N. Sargasso Sea
C201-037-NT	22-Oct-05	1700	890.2	33°25.1'	058°37.5'	0	N. Sargasso Sea
C201-038-NT	22-Oct-05	1722	890.5	33°25.9'	058°37.2'	0	N. Sargasso Sea
C201-039-NT	22-Oct-05	1744	890.6	33°26.6'	058°36.8'	0	N. Sargasso Sea
C201-041-NT	23-Oct-05	0033	905.5	33°01.9'	058°31.8'	0	N. Sargasso Sea
C201-042-NT	23-Oct-05	0500	915.8	32°47.4'	058°24.0'	0	N. Sargasso Sea
C201-043-NT	23-Oct-05	0522	915.8	32°47.9'	058°24.9'	0	N. Sargasso Sea
C201-044-NT	23-Oct-05	0544	918.5	32°48.0'	058°25.8'	0	N. Sargasso Sea
C201-045-NT	23-Oct-05	1156	944.8	32°29.2'	058°07.3'	0	N. Sargasso Sea
C201-050-NT	23-Oct-05	2358	990.0	31°56.5'	057°41.8'	0	Subtrop. Converg. Zone
C201-052-NT	24-Oct-05	1159	1048.3	31°14.6'	057°20.5'	0	Subtrop. Converg. Zone
C201-055-NT	25-Oct-05	0019	1100.3	30°29.7'	056°58.0'	0	Subtrop. Converg. Zone
C201-056-NT	25-Oct-05	0942	1131.5	30°06.7'	056°33.7'	0	Subtrop. Converg. Zone
C201-057-NT	25-Oct-05	0944	1131.5	30°06.7'	056°33.7'	0	Subtrop. Converg. Zone
C201-058-NT	25-Oct-05	1018	1132.3	30°07.4'	056°34.3'	0	Subtrop. Converg. Zone
C201-059-NT	25-Oct-05	1049	1132.3	30°08.3'	056°34.9'	0	Subtrop. Converg. Zone
C201-063-NT	26-Oct-05	0000	1190.0	29°35.8'	055°50.1'	0	Subtrop. Converg. Zone
C201-066-NT	27-Oct-05	0001	1321.1	27°35.5'	055°30.5'	0	Subtrop. Converg. Zone
C201-069-NT	27-Oct-05	1205	1394.2	26°30.8'	055°43.4'	0	Subtrop. Converg. Zone
C201-071-NT	28-Oct-05	0115	1443.5	25°40.2'	056°00.2'	0	S. Sargasso Sea
C201-072-NT	28-Oct-05	0352	1453.1	25°30.3'	056°05.0'	0	S. Sargasso Sea
C201-073-NT	28-Oct-05	0415	1454.3	25°29.6'	056°05.3'	0	S. Sargasso Sea
C201-074-NT	28-Oct-05	0437	1455.0	25°29.0'	056°05.7'	0	S. Sargasso Sea
C201-075-NT	28-Oct-05	1151	1505.0	24°44.9'	056°19.1'	0	S. Sargasso Sea
C201-077-NT	28-Oct-05	1632	1532.0	24°21.8'	056°24.7'	0	S. Sargasso Sea
C201-078-NT	28-Oct-05	1716	1534.2	24°20.3'	056°24.9'	0	S. Sargasso Sea
C201-079-NT	28-Oct-05	1738	1535.3	24°19.6'	056°25.0'	0	S. Sargasso Sea
C201-080-NT	28-Oct-05	1801	1536.6	24°18.9'	056°25.1'	0	S. Sargasso Sea
C201-081-NT	28-Oct-05	0000	1577.4	23°40.8'	056°36.5'	0	S. Sargasso Sea
C201-082-NT	29-Oct-05	0423	1603.3	23°18.4'	056°45.0'	0	S. Sargasso Sea
C201-083-NT	29-Oct-05	0445	1603.7	23°17.7'	056°45.4'	0	S. Sargasso Sea
C201-084-NT	29-Oct-05	0510	1604.0	23°16.9'	056°45.9'	0	S. Sargasso Sea
C201-089-NT	30-Oct-05	0004	1703.0	21°43.0'	057°19.3'	0	S. Sargasso Sea
C201-091-NT	30-Oct-05	1206	1770.7	20°41.7'	057°43.3'	0	S. Sargasso Sea
C201-094-NT	31-Oct-05	0007	1822.4	19°55.7'	058°01.5'	0	S. Sargasso Sea
C201-096-NT	31-Oct-05	1222	1900.0	18°44.0'	058°19.6'	0	S. Sargasso Sea
C201-099-NT	31-Oct-05	2354	1955.3	17°48.6'	058°37.7'	0	S. Sargasso Sea
C201-101-NT	01-Nov-05	1106	2021.0	16°40.7'	059°02.7'	0	N. Equatorial Current
C201-102-NT	01-Nov-05	1112	2021.1	16°40.5'	059°02.9'	0	N. Equatorial Current
C201-103-NT	01-Nov-05	1141	2021.6	16°39.4'	059°03.6'	0	N. Equatorial Current
C201-104-NT	01-Nov-05	1216	2021.9	16°38.2'	059°04.4'	0	N. Equatorial Current
C201-106-NT	02-Nov-05	0002	2100.5	15°23.7'	059°21.3'	0	N. Equatorial Current
C201-109-NT	02-Nov-05	1200	2145.6	14°44.2'	059°39.8'	0	Atlantic Tropical Waters
C201-111-NT	02-Nov-05	1715	2173.8	14°22.0'	059°45.3'	0	Atlantic Tropical Waters
C201-112-NT	02-Nov-05	1737	2173.8	14°21.5'	059°45.5'	0	Atlantic Tropical Waters
C201-113-NT	02-Nov-05	1759	2173.8	14°21.1'	059°45.6'	0	Atlantic Tropical Waters
C201-114-NT	03-Nov-05	0008	2213.5	13°47.2'	059°49.0'	0	NW of Barbados
C201-115-NT	03-Nov-05	0430	2239.5	13°22.2'	059°51.6'	0	NW of Barbados
C201-116-NT	03-Nov-05	0458	2239.7	13°21.0'	059°51.5'	0	NW of Barbados
C201-117-NT	03-Nov-05	0523	2240.0	13°19.9'	059°51.6'	0	NW of Barbados
C201-120-NT	03-Nov-05	1243	2280.2	12°36.1'	060°00.3'	0	40nm SW of Barbados
C201-122-NT	04-Nov-05	0000	2335.9	11°40.5'	060°05.6'	0	32 nm NE of Tobago

C201-137-NT	05-Nov-05	2122	2495.9	11°34.5'	062°15.1'	0	35 m SW of Grenada
C201-149-NT	10-Nov-05	2357	2644.3	13°15.8'	061°25.4'	0	SW of St. Vincent
C201-151-NT	13-Nov-05	0015	2793.9	14°35.9'	061°26.1'	0	W of Martinique
C201-156-NT	17-Nov-05	0101	3100.6	17°30.2'	062°18.3'	0	E of St. Kitts

McLane Pump

C201-016-MP	19-Oct-05	1025	HB	37°29.2'	061°17.9'	10	N. Sargasso Sea
C201-020-MP	19-Oct-05	2256	629.0	37°09.6'	060°55.8'	10	N. Sargasso Sea
C201-087-MP	29-Oct-05	2010	1693.5	27°53.2'	057°14.0'	15	S. Sargasso Sea
C201-100-MP	1-Nov-05	0931	2020.6	16°42.9'	059°00.5'	15	N. Equatorial Current

Sediment Samples*

C201-126-SG	04-Nov-05	2126	2440.1	11°02.9'	061°01.2'	77	Galleon's Passage
C201-127-SG	4-Nov-05	2205	2440.3	11°03.1'	061°02.7'	73	Galleon's Passage
C201-128-SG	4-Nov-05	2253	2441.0	11°03.4'	061°05.1'	70	Galleon's Passage
C201-129-SG	5-Nov-05	0033	2445.1	11°07.3'	061°10.4'	97	Galleon's Passage
C201-138-SG	6-Nov-05	1336	2587.6	12°24.7'	061°31.0'	35	Carriacou Shoals
C201-139-SG	6-Nov-05	1350	2587.6	12°24.6'	061°31.6'	36	Carriacou Shoals
C201-140-SG	6-Nov-05	1402	2587.6	12°24.6'	061°31.9'	36	Carriacou Shoals
C201-141-SG	6-Nov-05	1433	2587.6	12°24.6'	061°33.0'	49	Carriacou Shoals
C201-142-SG	6-Nov-05	1440	2587.6	12°24.6'	061°33.1'	74	Carriacou Shoals
C201-143-SG	6-Nov-05	1448	2587.6	12°24.7'	061°33.4'	350	Carriacou Shoals
C201-145-SG	10-Nov-05	1010	2594.3	12°29.1'	061°27.8'	8	Hillsbrgh Bay, Carriacou
C201-146-SG	10-Nov-05	1114	2594.6	12°30.1'	061°29.1'	33	Hillsbrgh Bay, Carriacou
C201-147-SG	10-Nov-05	1145	2595.0	12°30.0'	061°30.0'	53	Hillsbrgh Bay, Carriacou
C201-148-SG	10-Nov-05	1225	2595.6	12°29.9'	061°31.2'	257	Hillsbrgh Bay, Carriacou
C201-123-GC	4-Nov-05	1126	2395.8	11°06.6'	060°22.6'	343	10nm SE of Tobago
C201-130-GC	5-Nov-05	0417	2455.0	11°11.2'	061°25.6'	143	SW of Tobago
C201-131a-GC	5-Nov-05	1154	2481.1	11°27.8'	061°57.0'	196	Shelf Break NW Tobago
C201-131b-GC	5-Nov-05	1210	2482.1	11°28.1'	061°57.4'	196	Shelf Break NW Tobago
C201-132-GC	5-Nov-05	1335	2482.9	11°26.0'	061°59.5'	165	Shelf Break NW Tobago
C201-133-GC	5-Nov-05	1708	2491.8	11°34.7'	062°07.3'	629	Grenada Passage
C201-134-GC	5-Nov-05	1750	2491.8	11°34.1'	062°08.9'	593	Grenada Passage
C201-123-GC	4-Nov-05	1126	2395.8	11°06.6'	060°22.6'	343	10nm SE of Tobago
C201-130-GC	5-Nov-05	0417	2455.0	11°11.2'	061°25.6'	143	SW of Tobago
C201-131-GC	5-Nov-05	1154	2481.1	11°27.8'	061°57.0'	196	Shelf Break NW Tobago
C201-153-SG	16-Nov-05	2312	3100.6	17°31.8'	062°17.6'	46	Bank E of St. Kitts

*SG=Shipek Grab

GC=Gravity Core

Phytoplankton Samples*

C201-001-PS	15-Oct-05	2300	56.0	40°24.0'	070°15.0'	2	57 nm SE of Nantucket
C201-002-PS	16-Oct-05	1432	167.5	40°31.6'	068°09.1'	2	New Eng. conti. shelf
C201-004-PS	16-Oct-05	1735	229.0	40°20.1'	067°41.5'	2	New Eng. shelf break
C201-005-PS	16-Oct-05	1945	244.8	40°10.3'	067°23.0'	2	Edge of Warm Eddy
C201-006-PS	17-Oct-05	0925	334.9	39°17.9'	065°36.0'	2	Nearing Gulf Stream
C201-007-PS	17-Oct-05	1206	349.1	39°09.4'	065°18.7'	2	Nearing Gulf Stream
C201-009-PS	17-Oct-05	1410	360.4	39°09.5'	065°19.0'	2	Nearing Gulf Stream
C201-012-PS	17-Oct-05	2230	395.6	39°00.4'	064°34.6'	2	Gulf Stream
C201-017-PS	19-Oct-05	1600	613.0	37°28.4'	061°17.7'	2	N. Sargasso Sea
C201-040-PS	23-Oct-05	0243	910.1	33°12.2'	058°32.5'	2	N. Sargasso Sea
C201-047-PS	24-Oct-05	0017	990.1	32°01.2'	057°46.4'	2	Subtrop. Converg. Zone

C201-125-PS	4-Nov-05	2027	2435.8	11°00.5'	060°53.7'	2	Galleon's Passage
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*sampled underway using filtered flow-through system

Bathy-Photometer

C201-027-BP	20-Oct-05	1952	741.0	36°05.3'	059°21.9'	100	N. Sargasso Sea
C201-049-BP	23-Oct-05	2220	984.0	31°49.4'	057°45.2'	100	Subtrop. Converg. Zone
C201-054-BP	24-Oct-05	2005	1086.5	30°43.2'	057°03.9'	100	Subtrop. Converg. Zone
C201-070-BP	28-Oct-05	0023	1443.0	25°40.5'	055°59.6'	100	S. Sargasso Sea
C201-088-BP	29-Oct-05	2115	1693.5	21°52.6'	057°15.1'	100	S. Sargasso Sea
C201-098-BP	31-Oct-05	2209	1945.3	17°57.6'	058°34.4'	100	S. Sargasso Sea
C201-155-BP	17-Nov-05	0012	3100.6	17°31.0'	062°18.0'	30	E. of St. Kitts
C201-157-BP	17-Nov-05	0445	3114.0	17°28.7'	062°26.0'	100	E. of St. Kitts

Tucker Trawl

C201-032-TT	21-Oct-05	2127	818.4	34°24.4'	058°58.8'	300	N. Sargasso Sea
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Trichodesium Samples

C201-003	16-Oct-05	1700	224.5	40°22.0'	067°45.6'	0	New Engl. shelf break
C201-008	17-Oct-05	1320	356.5	39°005.8'	065°09.6'	0	Gulf Stream
C201-014	18-Oct-05	1700	499.4	38°21.3'	063°06.5'	0	N. Sargasso Sea
C201-026	20-Oct-05	1212	683.8	36°44.0'	060°15.6'	0	N. Sargasso Sea
C201-031	21-Oct-05	1210	789.1	34°55.9'	059°06.2'	0	N. Sargasso Sea
C201-035	22-Oct-05	1020	872.5	33°38.9'	058°44.1'	0	N. Sargasso Sea
C201-046	23-Oct-05	1200	944.8	32°29.2'	058°07.3'	0	N. Sargasso Sea
C201-053	24-Oct-05	1215	1048.3	31°15.1'	057°20.5'	0	Subtrop. Converg. Zone
C201-060	25-Oct-05	1158	1132.4	30°08.4'	056°35.3'	0	Subtrop. Converg. Zone
C201-065	26-Oct-05	1045	1225.0	29°03.8'	055°27.7'	0	S. Sargasso Sea
C201-068	27-Oct-05	1040	1394.4	26°31.0'	055°42.8'	0	S. Sargasso Sea
C201-076	28-Oct-05	1201	1505.5	24°44.6'	056°19.1'	0	S. Sargasso Sea
C201-086	29-Oct-05	1015	1630.5	22°51.9'	056°55.5'	0	S. Sargasso Sea
C201-090	30-Oct-05	1203	1770.7	20°41.8'	057°43.2'	0	S. Sargasso Sea
C201-097	31-Oct-05	1233	1900.1	18°44.0'	058°19.6'	0	S. Sargasso Sea
C201-105	1-Nov-05	1305	2024.1	16°35.8'	059°05.4'	0	N. Equatorial Current
C201-110	2-Nov-05	1225	2146.0	14°43.8'	059°40.4'	0	Atl. Tropical Waters
C201-119	3-Nov-05	1155	2279.9	12°37.6'	059°59.0'	0	Atl. Tropical Waters
C201-124	4-Nov-05	1300	2398.9	11°04.7'	060°26.4'	0	Shelf waters of Tobago
C201-144	6-Nov-05	1530	2587.6	12°25.6'	061°33.9'	0	SE Caribbean Sea

Table 3. Surface station data.*

Station	Date	Time	Log	Latitude	Longitude	Temp (°C)	Salinity (PSU)	PO ₄ (μM)	SiO ₂ (μM)	Chl-a (μg/l)
SS-001	15-Oct-05	2255	68.0	40°28.8'	070°17.4'	21.0	34.3	0.163	10.907	0.267
SS-002	16-Oct-05	0210	103.0	40°05.7'	070°00.3'	22.5	34.6	0.328	3.907	0.302
SS-003	16-Oct-05	0607	138.6	40°12.3'	069°29.2'	20.0	33.8	0.672	127.240	0.220
SS-004	16-Oct-05	1025	167.5	40°25.6'	068°51.3'	18.5	33.8	0.851	149.173	0.322
SS-005	16-Oct-05	1400	198.0	40°34.0'	068°15.2'	17.9	33.7	0.991	161.640	0.440
SS-006	16-Oct-05	1456	206.7	40°30.3'	068°05.5'	18.4	33.5	0.609	110.573	0.465
SS-007	16-Oct-05	1533	212.2	40°28.2'	067°59.6'	22.6	34.9	0.315	54.907	0.328
SS-008	16-Oct-05	1605	216.7	40°26.1'	067°55.1'	22.9	34.4	0.239	135.240	0.244
SS-009	16-Oct-05	1718	224.5	40°22.0'	067°45.6'	23.0	34.4	0.112	97.507	0.381
SS-010	16-Oct-05	1739	229.0	40°20.1'	067°41.5'	23.1	34.6	0.366	130.773	0.322
SS-011	16-Oct-05	1806	233.1	40°17.7'	067°36.7'	23.2	34.5	0.188	38.973	0.267
SS-012	16-Oct-05	1841	238.0	40°15.0'	067°31.6'	23.3	34.9	0.239	116.907	0.244
SS-013	17-Oct-05	0115	283.6	39°49.8'	066°42.6'	26.4	35.6	0.264	132.573	0.181
SS-014	17-Oct-05	0305	296.0	39°43.4'	066°27.5'	26.9	35.4	0.175	135.240	0.192
SS-015	17-Oct-05	0503	307.0	39°36.8'	066°11.0'	26.7	34.0	0.213	105.573	0.262
SS-016	17-Oct-05	0705	319.3	39°27.3'	065°52.8'	26.1	35.4	0.213	131.573	0.169
SS-017	17-Oct-05	0835	329.3	39°21.2'	065°41.9'	25.0	35.0	0.099	133.040	0.172
SS-018	17-Oct-05	1010	338.7	39°15.5'	065°31.1'	23.6	35.3	0.443	125.573	0.127
SS-019	17-Oct-05	1147	348.1	39°10.0'	065°20.3'	24.0	35.0	0.252	109.640	0.188
SS-020	17-Oct-05	1345	360.4	39°04.9'	065°06.5'	24.7	35.0	0.290		0.144
SS-021	17-Oct-05	1450	368.0	39°03.7'	065°00.6'	24.4	35.6	0.163	128.773	0.140
SS-022	17-Oct-05	1705	377.5	39°00.2'	064°49.7'	24.5	35.2		126.973	0.121
SS-023	17-Oct-05	2211	393.2	39°01.7'	064°35.9'	25.7	35.9	0.264	135.440	0.088
SS-024	19-Oct-05	1054	613.4	37°29.2'	061°17.9'	23.9	36.6	0.175	81.507	0.135
SS-025	19-Oct-05	2315	629.9	37°09.8'	060°55.8'	24.3	36.6	0.252	91.573	0.048
SS-026	23-Oct-05	0300	910.1	32°54.8'	058°29.3'	24.5	36.8	0.188	113.707	0.024
SS-027	24-Oct-05	0008	990.0	31°56.8'	057°42.1'	24.9	36.7	0.137	123.640	0.024
SS-028	1-Nov-05	2100	2081.2	15°40.4'	059°14.9'	28.8	35.5	0.201	95.240	0.024

*Blank spaces = data not available.

Table 4: Neuston tow data. Locations given in Table 1.

Station	Tow length (m)	Temp (°C)	Salinity (PSU)	Zoopl. Biomass (ml)	Zoopl. Density (ml/m ²)	Plastic Pieces (#)	Plastic Pellets (#)	Tar (yes/no)	Halobates (#)	Myctophids (#)
C201-011-NT	1852	25.6	36.2	14.0	0.0076	4	0	no	0	1
C201-015-NT	2778	25.4	36.5	7.2	0.0026	0	0	no	0	4
C201-018-NT	1042	24.3	36.5	7.9	0.0076	8	0	no	0	0
C201-021-NT	2849	24.5	36.4	17.8	0.0063	9	1	no	0	10
C201-022-NT	2426	24.5	36.6	16.0	0.0066	16	1	no	0	0
C201-023-NT	6878	24.4	36.7	141.0	0.0205	24	1	no	0	0
C201-024-NT	2426	24.5	36.6	12.0	0.0050	7	0	yes	0	0
C201-025-NT	2610	24.4	36.7	26.0	0.0100	0	0	no	0	0
C201-029-NT	1429	24.4	36.5	19.0	0.0130	13	0	no	1	1
C201-030-NT	1512	24.6	36.4	18.0	0.0120	27	0	no	0	0
C201-036-NT	1674	24.8	36.4	36.5	0.0218	28	10	no	0	0
C201-037-NT	1377	24.8	36.5	12.5	0.0091	11	1	no	0	1
C201-038-NT	1036	24.8	36.5	23.0	0.0222	0	0	no	1	5
C201-039-NT	1036	24.8	36.5	21.0	0.2028	0	0	no	3	2
C201-041-NT	2399	24.5	36.5	8.9	0.0037	15	0	yes	0	8
C201-042-NT	1449	24.5	36.5	14.5	0.0100	28	0	no	0	0
C201-043-NT	1364	24.5	36.5	6.0	0.0044	16	0	no	1	0
C201-044-NT	1798	24.5	36.5	12.5	0.0070	9	1	no	0	0
C201-045-NT	2181	25.2	36.9	7.0	0.0032	51	4	no	0	0
C201-050-NT	2429	24.9	36.7	9.5	0.0039	10	1	no	0	3
C201-052-NT	2043	25.5	36.6	3.0	0.0015	4	2	no	0	1
C201-055-NT	2670	26.3	36.6	5.0	0.0019	65	1	no	8	7
C201-056-NT	4897	26.4	36.6	23.0	0.0047	173	2	no	11	0
C201-057-NT	1415	26.4	36.6	7.0	0.0049	89	0	no	0	0
C201-058-NT	1330	26.3	36.6	11.0	0.0083	12	0	no	0	0
C201-059-NT	1410	26.3	36.6	6.2	0.0044	32	1	no	1	0
C201-063-NT	2804	26.0	36.0	6.5	0.0023	4	0	no	22	12
C201-066-NT	1518	26.8	37.1	17.0	0.0112	550	0	yes	11	28
C201-069-NT	2064	27.9	36.9	5.5	0.0027	75	0	no	5	0
C201-071-NT	1788	27.6	36.8	2.3	0.0013	5	0	no	11	7
C201-072-NT	1053	27.7	37.1	5.0	0.0047	34	0	no	7	1
C201-073-NT	1053	27.7	36.9	7.0	0.0066	20	0	no	2	0
C201-074-NT	1160	28.0	37.0	3.0	0.0026	7	0	no	11	0
C201-075-NT	1519	28.2	36.6	2.4	0.0016	4	0	no	1	0
C201-077-NT	2163	28.3	36.5	2.5	0.0012	0	1	no	11	11
C201-078-NT	2798	28.3	36.5	6.0	0.0021	4	0	no	9	0
C201-079-NT	1307	28.4	36.4	3.5	0.0027	21	0	no	7	1
C201-080-NT	1140	28.3	36.5	0.9	0.0008	2	0	no	2	0
C201-081-NT	1461	28.1	36.6	8.0	0.0055	6	0	no	7	10
C201-082-NT	1223	28.2	36.6	1.5	0.0012	0	0	no	1	0
C201-083-NT	1223	28.2	36.6	1.9	0.0015	1	0	no	0	0
C201-084-NT	1223	27.9	36.9	4.8	0.0039	1	0	no	1	0
C201-089-NT	1517	28.3	35.9	5.3	0.0035	3	0	no	13	4
C201-091-NT	1775	28.7	35.5	1.6	0.0009	2	0	no	2	0
C201-094-NT	1342	28.6	35.0	5.5	0.0041	0	0	no	8	5
C201-096-NT	1572	28.9	35.3	2.0	0.0006	0	3	no	0	0
C201-099-NT	1982	28.8	35.2	13.0	0.0065	0	0	no	4	3
C201-101-NT	2637	28.9	35.3	1.0	0.0004	3	0	no	4	0
C201-102-NT	7886	28.9	35.3	4.0	0.0005	8	0	no	77	0
C201-103-NT	2230	28.9	35.3	3.5	0.0016	1	0	no	0	0
C201-104-NT	2136	28.9	35.3	2.8	0.0013	3	0	no	1	0
C201-106-NT	1828	28.7	35.5	4.5	0.0025	0	0	no	5	8

C201-109-NT	1456	29.5	34.9	1.0	0.0007	3	0	no	4	0
C201-111-NT	823	29.3	34.8	8.0	0.0097	0	0	no	4	0
C201-112-NT	741	29.2	34.7	23.0	0.0310	0	0	no	10	2
C201-113-NT	926	29.2	34.8	22.0	0.0238	1	0	no	5	2
C201-114-NT	1861	28.8	34.5	19.0	0.0102	0	2	no	5	4
C201-115-NT	1861	29.1	35.2	20.0	0.0120	0	0	no	2	0
C201-116-NT	1861	29.2	35.2	17.5	0.0094	2	0	no	4	2
C201-117-NT	1493	29.2	35.2	17.5	0.0117	0	0	no	4	0
C201-120-NT	2514	29.3	34.9	4.5	0.0018	0	0	no	4	0
C201-122-NT	2109	29.4	36.0	49.0	0.0232	0	0	no	1	12
C201-137-NT	2037	28.9	34.5	50.0	0.0250	0	0	no	8	37
C201-149-NT	1982	28.8	34.8	19.0	0.0096	0	0	no	1	4
C201-150-NT	1833	29.0	35.2	2.6	0.0014	0	0	no	0	0
C201-151-NT	2880	28.9	34.5	4.5	0.0016	0	0	no	15	3
C201-156-NT	1492	28.4	34.9	8.5	0.0057	1	0	No	6	0

Table 5. Hydrocast station data. Locations given in Table 1.*

Station	Bottle (#)	Depth (m)	O ₂ (ml/l)	PO ₄ (μM)	Chl a (μg/l)
C201-013	13	0	4.6	0.303	0.109
	12	20.1	4.91	0.264	0.113
	11	39.3	4.91	0.213	0.072
	10	59.3	4.6	0.264	0.079
	9	70.3			
	8	69.4	4.69	0.226	0.353
	7	79.2	4.9	0.723	0.190
	6	91.2	4.83	0.137	0.195
	4	110	4.7	0.226	0.029
	3	130.4			
C201-034	2	129.3	4.9	0.328	
	1	158.5	4.2	0.213	
	13	0.0	4.62	0.163	0.029
	12	75.3	2.46	0.137	0.046
	11	87.5			
	10	90.3	2.62	0.226	0.076
	9	102.7	2.71	0.175	0.101
	8	105.2	2.52	0.201	0.112
	7	113.0	2.37	0.150	0.241
	6	119.4			
C201-064	5	117.9	2.21	0.124	0.169
	4	121.8	2.37	0.201	0.095
	3	142.9	2.57	0.277	0.015
	2	173.7			
	1	174.4	2.74	0.213	
	13	0.0	4.64		
	12	39.9	4.78		
	11	79.3	4.99		
9	159.1	4.65			
8	199.2	4.74			

	7	228.7	4.72		
	6	259.0	4.67		
	5	288.0	4.75		
	4	318.6	4.46		
	3	348.2	4.79		
	2	377.7	4.57		
	1	407.2	4.20		
C201-085	13	0.0	4.46	0.736	0.048
	12	24.5	4.55	0.723	0.029
	11	49.4	5.19	0.698	0.057
	10	69.5	5.22	0.659	0.076
	9	84.3	5.12	0.698	0.120
	8	99.5	4.77	0.761	0.171
	7	114.2	4.10	0.264	0.157
	6	129.0	4.21	0.201	0.117
	5	143.0	4.68	0.264	0.056
	4	158.7	4.75	0.163	0.041
	3	179.4	4.65	0.252	0.018
	2	204.1	4.65	0.354	
	1	228.0	4.64	0.456	
C201-108	13	0.0		0.073	0.068
	12	24.8	4.54	0.634	0.106
	11	49.2	4.92	1.271	0.088
	10	70.3	4.85	0.736	0.121
	9	84.4	4.54	0.685	0.160
	8	98.5	3.84	0.74	0.220
	7	114.1	3.98	0.749	0.108
	6	127.6	3.80	0.851	0.052
	5	144.8	3.56	1.080	0.050
	4	158.1	3.41	1.34	0.009
	3	178.7	3.32	1.437	0.006
	2	204.2	3.51	1.309	
	1	227.9	3.32	1.41	
C201-158	13	0.0	1.84		
	12	18.8	2.17		
	11	39.8	2.37		
	10	59.9	2.25		
	9	79.0	1.88		
	8	98.5	2.18		
	7	128.9	1.89		
	6	167.4	2.43		
	5	209.1	2.07		
	4	258.3	2.29		
	3	312.5	1.22		
	2	377.3	1.42		
	1	446.8	1.28		

*Blank spaces = no data collected.