Oceanographic Data Report

Number 4: YABLED Cruises

College of Marine Studies
University of Delaware

DEL-SG-11-87

Data from the YABLED Cruises

September 1981 - July 1984

by

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INTRODUCTION

This report presents physical, chemical, and biological data collected during 18 cruises on the Delaware River and Bay from September 1981 to July 1984. These cruises, designated YABLED, covered the entire salinity gradient in the estuary from freshwater in the river near Philadelphia to seawater at the entrance of the bay.

During YABLED-14, -15, and -16, stations were also occupied in the coastal waters off Delaware and New Jersey.

The data tables for each cruise in this report are accompanied by a cruise report outlining the events of the cruise, and by a chart(s) showing station positions occupied during the cruise.

Preceeding data reports in this series are those for the six SALSX Cruises (May 1978 to July 1980; University of Delaware Oceanographic Data Report No. 2), and the seven SALT Cruises (October 1980 to July 1981; University of Delaware Oceanographic Data Report No. 3).

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We thank the crew of the R. V. Cape Henlopen for their aid in accomplishing the objectives of each cruise. Their help was instrumental in making the cruises a success.

DELAWARE BAY DATABASE

The chemical, biological, and hydrographic data in this report, plus that from previous cruises, is available as a sequential file on a set of 5 1/4 inch, double sided, double density floppy disks for use with the IBM PC and compatible microcomputers under MS-DOS.

The database contains 1446 records of discrete water quality observations, collected on 31 oceanographic cruises between May 1978 and July 1984. Each record contains 169 fields, listing the hydrographic, chemical, and biological data measured for each observation.

To obtain a copy of the database plus the ¾ Oceanographic Data Reports which provide printed listings of the data, send $40 to,

Delaware Bay Database
Delaware Sea Grant College Program
University of Delaware
Newark, DE 19716.

A copy of the database only, without the ¾ Oceanographic Data Reports, is $20.

Make checks payable to 'University of Delaware'.

GLOSSARY

Each of the measured parameters in the following data tables is associated with a comment field which indicates special characteristics of the variable. The comment field is the single space following the last digit of the parameter and will usually be blank. However, it will contain a character if there is anything unusual about the variable. For instance, temperatures measured with the Neil Brown mark IIIb CTD are indicated by the letter 'C' following the temperature. Definitions of the comment characters are given in the 'Methods' section under the appropriate technique. The mathematical symbols '<' or '>' in any comment field mean that the true value of the parameter is less than or greater than the value given.

Parameter	Description
CAST TYPE	technique used to collect water samples, see discussion of Water Sampling in Methods section for description
DISTANCE TO CAPES	distance in kilometers from designated station to the Delaware River Basin Commission bay mouth position (38°50'32"N, 75°03'18"W)
WATER DEPTH	depth of water in meters
	Inorganics
STA	station name
DEPTH	depth in meters at which sample was taken
SALINITY	salinity in parts per thousand (ppt)
TEMP	water temperature in degrees Celsius
CL	chloride, micromolar
O2	dissolved oxygen, micromolar
% O2 SAT	percent oxygen saturation
pH(25C)	measured pH at 25°C and atmospheric pressure on NBS pH scale
ALK	total alkalinity, microequivalents/liter

Nutrients, Organics, Productivity, Light

PO4	dissolved phosphate, micromolar
NO3	dissolved nitrate, micromolar
NO2	dissolved nitrite, micromolar
NH4	dissolved ammonium, micromolar
SI	dissolved silicate, micromolar
DOC	dissolved organic carbon, micromolar C
DON	dissolved organic nitrogen, micromolar N
DOP	dissolved organic phosphorus, micromolar P
PC	particulate carbon, micromolar C
PN	particulate nitrogen, micromolar N
PP	particulate phosphorus, micromolar P
HUMIC ACID C	humic acid carbon, micromolar carbon
HUMIC ACID N	humic acid nitrogen, micromolar nitrogen
SESTON	total suspended solids, milligrams/liter
Chl-a	chlorophyll-a, micrograms/liter
APROD	areal production, millimoles carbon/m^2/day
VPROD	volume production, micromoles carbon/liter/day
LIGHT ATTEN	negative value of total attenuation coefficient (k) per meter
SECCHI DEPTH	Secchi disk depth, centimeters

Dissolved Trace Metals

Mn	dissolved manganese, nanomolar
Fe-A	dissolved iron by direct injection atomic absorption, nanomolar
Fe-C	dissolved iron by colorimetry, nanomolar
Fe-E	dissolved iron by atomic absorption of extracted sample, nanomolar

Co	dissolved cobalt, nanomolar
Ni	dissolved nickel, nanomolar
Cu	dissolved copper, nanomolar
Zn-A	dissolved zinc by direct injection atomic absorption, nanomolar
Zn-E	dissolved zinc by atomic absorption of extracted sample, nanomolar
Cd	dissolved cadmium, nanomolar
Pb	dissolved lead, nanomolar
As	dissolved arsenic, nanomolar

Particulate Trace Metals

Al	particulate aluminium, micromoles/gram-seston
Mn	particulate manganese, micromoles/gram-seston
Fe	particulate iron, micromoles/gram-seston
Co	particulate cobalt, micromoles/gram-seston
Ni	particulate nickel, micromoles/gram-seston
Cu	particulate copper, micromoles/gram-seston
Zn	particulate zinc, micromoles/gram-seston
Cd	particulate cadmium, micromoles/gram-seston
Ba	particulate barium, micromoles/gram-seston
Pb	particulate lead, micromoles/gram-seston

METHODS

Water Sampling

Water samples aboard the R/V Cape Henlopen were collected in 10 liter PVC Niskin bottles attached to a General Oceanics rosette sampler. Sampling depths were determined from continuous vertical temperature, salinity, and oxygen profiles measured with a Neil Brown mark IIIb CTD.

Water samples taken by small boat were collected by hand using 5 or 10 liter PVC Niskin bottles. Positions of the small boat samples were determined by a battery operated Loran C system. Temperatures of these samples were determined by a hand held thermometer.

The technique used to collect a water sample is listed under the parameter 'Cast Type'.

Cast type = 'CTD' indicates that the water sample was taken with the General Oceanics rosette sampler.

= 'pump' indicates that the sample was taken from the circulating seawater system aboard the R/V Cape Henlopen.

= 'boat' indicates that the sample was collected by hand using 5 or 10 liter Niskin bottles from a small boat.

= 'copter' indicates that the sample was taken with a Niskin bottle suspended from a Coast Guard helicopter.

= 'wire' indicates that the Niskin bottle was attached to the hydrographic wire and tripped by messenger.

Temperature

Temperature was measured with reversing thermometers; 2 or 3 thermometers were used on each Niskin bottle. On small boat samples, temperature was measured with a bucket thermometer. In cases where the reversing thermometers malfunctioned or where 4 minutes could not be allowed to equilibrate the reversing thermometers, temperature was taken from the CTD system. The CTD temperature may differ slightly from the actual temperature of the water sample, since the CTD temperature sensor lies 0.9 meters below the mid-point of the 10 liter Niskin bottles.

The precision (2σ) of the calculated temperatures, based on 816 replicate reversing thermometer readings, was 0.04°C.

A letter 'B' in the temperature comment field means that the temperature was determined with a hand held thermometer; the letter 'C' means that the temperature was taken from the CTD; the letter 'D' means that the temperature was taken from the Beckman Electrodeless Induction Salinometer aboard the R/V Wolverine.

Salinity

Salinity was measured with an Industrial Instruments Model RS-7A portable induction salinometer. Salinity was calculated from the measured conductivity ratio using the equations of Cox, Culkin, and Riley (1967). The agreement between salinities calculated from conductivity and from chloride is within $\pm 0.03^{\circ}/_{\circ\circ}$ at salinities $\geq 0.5^{\circ}/_{\circ\circ}$. The equations used to calculate salinity from conductivity yield negative salinities at low conductivities. These negative values are included in this data report for consistency.

The conductivity ratio of successive aliquots from the salinity sample was measured until the conductivity ratios of consecutive aliquots differed by less than 0.0001. The reported salinity is the average of salinities calculated from the last 2 conductivity readings. The precision (2σ) of the calculated salinity, based on 1213 duplicate conductivity ratio measurements, was $0.002^{\circ}/_{\circ\circ}$.

In a few cases where salinity samples were lost before analysis, salinities were taken from the CTD system. The CTD salinity may differ slightly from the actual salinity of the water sample, since the CTD conductivity sensor lies 0.9 meters below the mid-point of the 10 liter Niskin bottles.

A letter 'C' in the salinity comment field means that the salinity was taken from the CTD; the letter 'T' means that the salinity was calculated from the measured chloride concentration; the letter 'D' means that the salinity was taken from the Beckman Electrodeless Induction Salinometer aboard the R/V Wolverine.

Chloride

Chloride was measured by an automated potentiometric titration using a silver electrode and a double junction reference electrode (Corning #476067; 1 molar potassium nitrate outer filling solution). The potential was measured at 5 points after the endpoint, and the endpoint calculated by linear regression of the silver concentration versus volume of titrant added. Titrant (0.01 M $AgNO_3$) was added with a microcomputer controlled Metrohm model E535 5 ml digital buret readable to 0.001 ml. The electrode potential was measured to ± 0.1 mv with an Orion model 701A digital pH/mv meter, and recorded automatically by the microcomputer.

The relative precision (2σ) of the chloride measurements, based on 133 replicate analyses, was 0.6%.

Oxygen and Percent Oxygen Saturation

On cruises Yabled-1 through -16, oxygen was measured by Winkler titration using a starch endpoint (Carpenter, 1965). Titrant (0.14 N $Na_2S_2O_3$) was added with a Metrohm model E535 5 ml digital buret readable to 0.001 ml. Oxygen samples were measured in triplicate.

The precision (2σ) of the manual oxygen measurements, based on 954 replicate analyses, was 1.5 µM.

Percent oxygen saturation was calculated from the measured oxygen concentration using oxygen solubilities from Kester (1975).

Alkalinity

Total alkalinity was measured by an automated potentiometric titration using a semi-micro combination pH electrode (Corning #476050). A 25 ml sample was titrated with standardized 0.025 M HCl using a microcomputer controlled Metrohm model E535 5 ml digital buret readable to 0.001 ml. The titrant volume and electrode potential were measured at 5 pH values (3.9, 3.6, 3.42, 3.3, and 3.2), and the equivalence point calculated from linear regression of hydrogen ion activity, corrected for carbonic acid ionization, versus volume of HCl added. Potentials were measured to ±0.1 mv with an Orion model 701A digital pH/mv meter.

The precision (2σ) of the alkalinity measurements, based on 925 replicate analyses, was 5 µequivalents/L.

A letter 'S' in the alkalinity comment field means that the sample was stored several weeks before analysis.

pH

The reported pH values are the measured values at 25.0°C on the National Bureau of Standards pH Scale. Samples for pH measurement were brought to 25°C in a water bath prior to analysis. The pH was calculated from the measured electrode potential by the following equation,

$$pH(25°C) = 7.413 - (E_x - E_{7.413})/59.157$$

where 7.413 is the pH of the NBS blood pH buffer at 25°C;
E_x is the measured electrode potential in the water sample; and
$E_{7.413}$ is the measured electrode potential in the buffer.

Potentials were measured to ±0.1 mv with an Orion model 701A digital pH/mv meter.

Several different techniques were used for the pH measurements listed in this data report. The basic pH technique involved measurements with a salt bridge consisting of a free diffusion liquid junction. However, the free diffusion pH assemblies (Culberson, 1981) used prior to this series of cruises were broken during the preparations for Yabled-1. Consequently, pH measurements on Yabled-1 and Yabled-3 were made with a conventional frit type liquid junction until a new free diffusion pH assembly was constructed.

The technique and precision of pH measurements on each cruise are given in the following paragraphs.

Yabled-1

The free diffusion pH assembly was broken just prior to this curise, and pH measurements during Yabled-1 were made with a semi-micro combination pH electrode (Corning #476050) mounted in a rubber stopper containing an 18 gauge needle as an air vent. Samples were drawn in 125 ml erlenmeyer flasks, stoppered without an air space, and brought to 25°C in a water bath. The pH electrode was then inserted into the sample and the pH calculated from the measured electrode potential. The precision of pH measurements with this technique is estimated as ±0.03 pH.

Yabled-2

pH was measured with a free diffusion pH assembly, similar to that of Culberson (1981), except that a 0.5 inch diameter flat membrane glass electrode replaced the micro-blood pH electrode in the original pH assembly. The precision (2σ) of pH measurements on this cruise, based on 59 replicate analyses, was 0.006 pH units. This assembly was not used on subsequent cruises because the slope of the electrode response, 97.5% theoretical, was too low.

Yabled-3

Measurements of pH were made with a Corning triple purpose glass electrode and a 3.5 molar KCl calomel reference electrode mounted in a rubber stopper with an 18 gauge needle as an air vent. Samples were drawn in 250 ml wide mouth plastic bottles, capped with #7 rubber stoppers, and brought to 25°C in a water bath. The electrode pair was then inserted into the sample and the pH calculated from the measured electrode potential. The precision of pH measurements with this technique is estimated as ±0.01 pH.

Yabled-5 to Yabled-9

pH measurements were made with a semi-micro combination pH electrode (Corning #476050) in which the normal frit junction was sealed and replaced by a free diffusion liquid junction. Samples were collected in large diameter test tubes, stoppered without an air space, and brought to 25°C in a water bath. The electrode was then inserted into the sample and the pH calculated from the measured electrode potential. The precision (2σ) of pH measurements with this technique, based on 340 replicate analyses, was 0.006 pH units.

Yabled-10 to Yabled-16

pH was measured with a free diffusion pH assembly, similar to that of Culberson (1981), except that a 0.5 inch diameter pH electrode replaced the micro-blood pH electrode in the original pH assembly. The precision (2σ) of pH measurements with this assembly, based on 569 replicate analyses, was 0.005 pH units.

Inorganic Nutrients

The water sample for dissolved nutrient analysis was filtered through a precombusted Whatman GF/C filter (nominal pore size 1 μm) on board ship and quick frozen in dry ice for analysis ashore. Phosphate, nitrate, nitrite, and silicate were analyzed by manual colorimetry using standard methods (Strickland and Parsons, 1972), as modified in Sharp et. al. (1982). Ammonium was determined by the method of Solorzano (1969), as modified in Sharp et. al. (1982).

Each method was calibrated with standards prepared in pure water. No salt corrections have been applied to the reported values.

Nutrients were analyzed in duplicate. The standard deviation of each method as a function of concentration, based on a statistical analysis of duplicate measurements, is given below.

	---------- Concentration Interval (μM) ----------								Number of
Nutrient	<0.1	.1-.2	.2-.7	.7-2	2-7	7-20	20-70	>70	Duplicates
PO_4 σ(μM)=	.01	.02	.03	.04	.08	--	--	--	966
TDP	--	--	.10	.15	.20	--	--	--	514
Si	--	--	.03	.04	.07	.16	.96	1.92	988
NO_3	.005	.02	.03	.04	.10	.24	.82	1.59	1005
TDN	--	--	--	--	--	.25	1.02	3.32	834
NO_2	.003	.006	.01	.02	.03	.07	--	--	973
NH_4	.06	.08	.06	.18	.19	.41	.54	--	984

Detection limits using the above methods were 0.05 μM for phosphate, nitrate, and nitrite, and 0.1 μM for ammonium and silicate.

Dissolved Organic Carbon

DOC was determined by the method of Menzel and Vaccaro (1964) with modified sample preparation of Sharp (1973). The coefficient of variation of this method ranged from 2.4 to 4.7%.

Dissolved Organic Nitrogen

DON was calculated from measurements of total dissolved nitrogen (Solorzano and Sharp, 1980a). The standard deviation of this method for total dissolved nitrogen is listed in the above table as TDN. The limit of detection was 0.6 μM.

Dissolved Organic Phosphorus

DOP was calculated from measurements of total dissolved phosphorus (Solorzano and Sharp, 1980b). The standard deviation of this method for total dissolved phosphorus is listed in the above table as TDP.

Particulate Carbon (PC) and Particulate Nitrogen (PN)

PC and PN were measured by the method of Sharp (1974) using a Hewlett-Packard model 185b CHN analyzer. The precision of these analyses were ±12 µg carbon and ±1.4 µg nitrogen based on analysis of blanks and replicate samples.

Particulate Phosphorus

PP was determined by the method of Solorzano and Sharp (1980b). The precision of this method is estimated to be twice that of the method for inorganic phosphate.

Humic Acid Carbon and Nitrogen

Humic acid carbon and nitrogen were determined by the method of Fox (1983). Filtered seawater (500 ml) was acidified with 4 ml of 1 molar H_2SO_4, and the precipitated humic acids were collected on a 25 mm GF/C filter. The analytical blank for this method was equivalent to 1 µM carbon and 0 µM nitrogen. Background carbon, carbon that adsorbed to the glass fiber filter without acid induced aggregation, varied from 5-20 µM carbon depending on the sample. Humic acid samples from the lower estuary often have low concentrations; 5-10 µM carbon and 0.5-1.0 µM nitrogen. Concentrations this low probably indicate no or very little humic acid content. However, no blank corrections were made to the measured values.

Chlorophyll-a

Chlorophyll-a was measured by fluorometric analysis of acetone extracts (Strickland and Parsons, 1972). The fluorometer (Turner III) was calibrated with spectrophotometric measurements of chlorophyll extracts.

Productivity

Productivity was measured with ^{14}C using a procedure modified from the general procedure of Eppley and Sharp (1975). Within 20 minutes of collection, samples were transferred (under low light conditions) to 65 ml Wheaton bottles and 2 µCi of $[^{14}C]HCO_3$ were added. Time zero (T_0) bottles were filtered immediately and simulated in-situ incubations (Head, 1976) were started at 6 light levels (100, 60, 30, 12, 3.3, and 1.1% of incident photosynthetically available radiation, PAR) using neutral density screens that were calibrated in the field. After 24 hours, incubations were

terminated by filtration onto Whatman GF/C filters at reduced (<350 mm Hg) vacuum followed by rinses with filtered seawater. Wet filters were immediately placed in scintillation vials containing 10 ml of toluene/triton-X cocktail and counted on a Packard Tri-Carb liquid scintillation counter using the external standard ratio determination of efficiency.

Daily net phytoplankton areal production (millimoles $C/m^2\text{-}d^1$), APROD, was estimated at each station by integrating productivity (mg $C/m^3\text{-}d^1$) at each light level over the photic depth estimated by the diffuse attenuation coefficient (k).

Maximum production rates per unit volume, VPROD, were estimated by the maximum rate measured in the screen bags at each station.

Light Attenuation Coefficient

Light attenuation coefficients (k) were estimated from light profiles obtained with a Biospherical Instruments QSR-100 submersible probe. The coefficient, k, was calculated from light meter readings, I_z, taken at discrete depths, z, throughout the water column at each station. The coefficient, k, is the slope of the least squares linear regression line fitted to these data,

$$\log(I_z) - \log(I_{z0}) = k(z - z0)$$

where z0 is a reference depth, usually 0.25 or 0.50 m.

Seston

Total suspended seston was determined by passing a known volume of water through an acid rinsed, dried, preweighed Nuclepore filter (47 mm diameter, 0.4 µm pore size). After filtration, each filter was rinsed with distilled water, stored in a plastic petri dish, and frozen until analysis. In the laboratory, filters were dried at 70°C for 24 hours and reweighed.

Dissolved Trace Metals

Samples for dissolved trace metal analysis were collected in Go-Flo (General Oceanics) bottles from a Kevlar (DuPont) hydrowire, or pumped with a peristaltic pump through acid washed Tygon and conventional polyethylene tubing. The samples were pressure filtered, in line, successively through 142 mm diameter 1.0 µm and 0.4 µm Nuclepore filters held in all plastic acid cleaned Geo-filters (Leonold Mold & Die Co., Denver, Colorado) under about 3.5 bar of filtered nitrogen gas pressure.

Filters were back flushed after each sampling and reused until the filtering rate slowed sufficiently to indicate irreversible clogging, at which time the filter(s) was replaced.

Filtered seawater samples were collected in acid cleaned and distilled water (from a quartz still) rinsed polyethylene bottles, acidified to pH ≤2, placed in ziplock plastic bags, and frozen until analysis. Samples were acidified on board in a portable plastic hood supplied with filtered air.

The acidified samples were extracted ashore by an APDC-DDDC/freon procedure (Kinrade and VanLoon, 1974; Danielsson et. al., 1978). Analysis for Ni, Cd, Co, Fe (Fe-E), Zn (Zn-E), Pb, and Cu was by graphite furnace atomic absorption spectrometry under filtered clean air conditions. Iron (Fe-C) was also analyzed colorimetrically by a modification of the ferrozine procedure (Murray and Gill, 1978). Manganese, iron (Fe-A), and zinc (Zn-A) were determined by direct injection graphite furnace atomic absorption. The precision (2σ) of the analyses, based on replicate measurements, were:

Fe (direct injection)	1.6	nanomolar	Ni	2.7	nanomolar
Fe (ferrozine)	7	nanomolar	Cu	2.2	nanomolar
Fe (extraction)	11	nanomolar	Cd	0.05	nanomolar
			Pb	0.07	nanomolar
Zn (direct injection)	9	nanomolar	Mn	5%	
Zn (extraction)	0.8	nanomolar	Co	8%	

Particulate Trace Metals

After weighing, the seston filters were rinsed with spectrographic grade acetone to remove sediment. The sediment was transferred to a 10 ml test tube and 5.0 ml of 0.1 N HCl was added. The sample was dispersed ultrasonically for 5-10 minutes, shaken on a reciprocal shaker for 18 hours (Duinker and Nolting, 1974), and then centrifuged. The supernatent was analyzed for Fe, Mn, and Zn using flame atomic absorption spectrometry, and for Co, Ni, Cu, Cd, and Pb using graphite furnace atomic absorption. All equipment used for the analyses was acid cleaned (Patterson and Settle, 1976).

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Cruise Report

Yabled-1
9-11 September 1981

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: C. H. Culberson
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: R. Biggs, T. Church, A. Frake, J. Scudlark, J. Tramontano, J. Pennock, J. Scibek, R. Stumpf, D. Kieber, R. Ellsinger (Univ. South Carolina), S. Pike, W. Mitchell, T. Pfeiffer

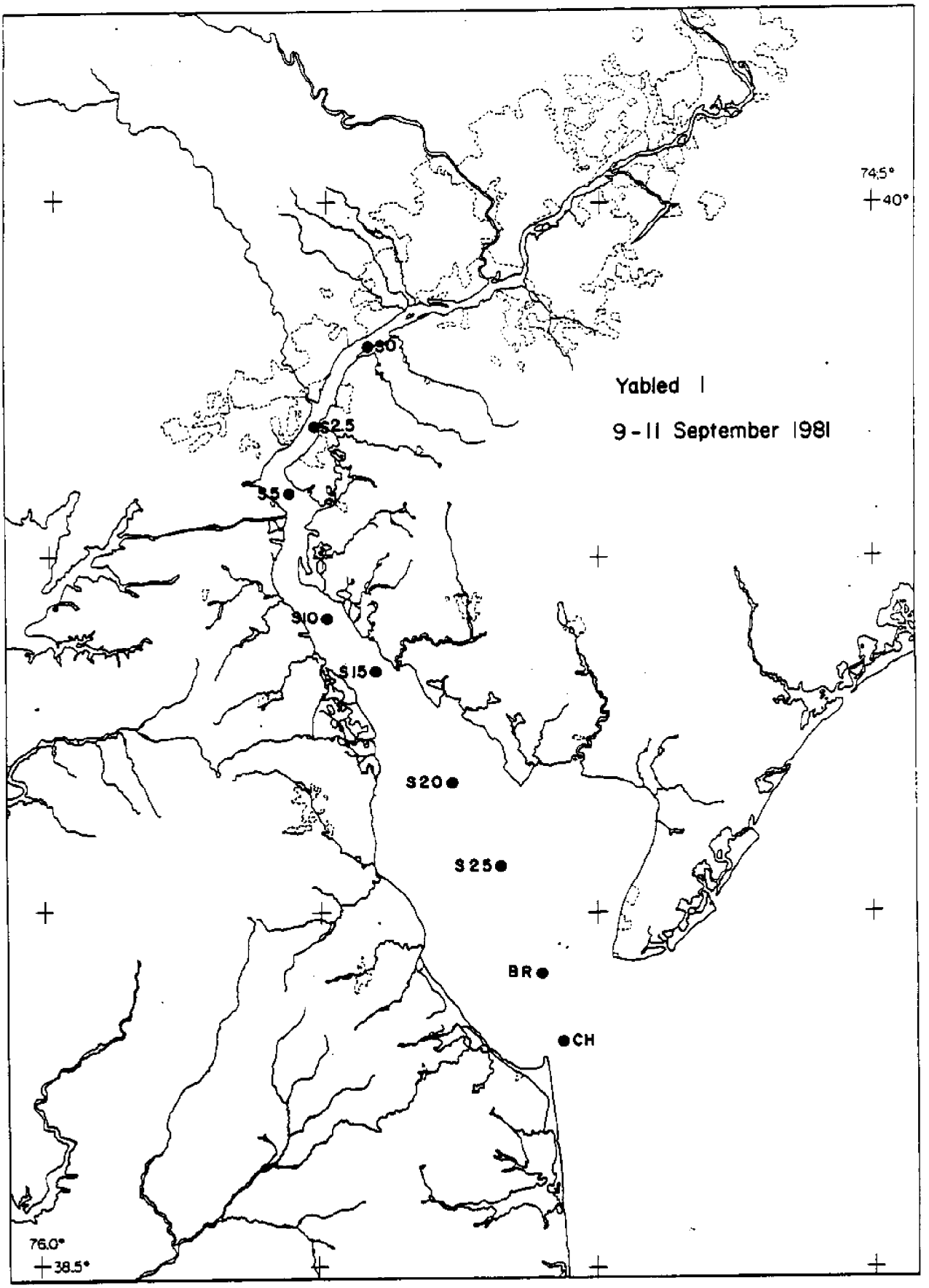
Supporting Agency: Office of Sea Grant

Cruise Summary:

This cruise was designed to study diurnal changes in estuarine water chemistry. Consequently, the major portion of the cruise was devoted to repetitive sampling of three stations at salinities of 7.3, 12.6, and 17.2°/$_{oo}$. These stations, designated by the letter F, were sampled over a 30 hour period and were approximately 16 km apart.

The R/V Cape Henlopen departed Lewes on 9 September at 0518 hours and returned on 11 September at 1700 hours. Stations CH, BR, S25, S20, S15, S10, S5, S2.5, and S0 were sampled on Wednesday, September 9. The ship anchored overnight, and repetitive sampling of 7, 13, and 17°/$_{oo}$ salinity occurred for a 30 hour period beginning 10 September. Station locations are shown on the following charts.

The parameters measured at each station are listed in the following tables. Continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples were taken at some stations but are not listed. In addition, surface temperature, salinity, chlorophyll-a, and water turbidity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire curise with a quantum meter. Robert Ellsinger (University of South Carolina) extracted water samples for radium isotopes 224, 226, and 228 to help interpret the barium measurements.


74.5°
40°
S0
S2.5
S5
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S15
S20
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BR
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Yabled I
9-11 September 1981
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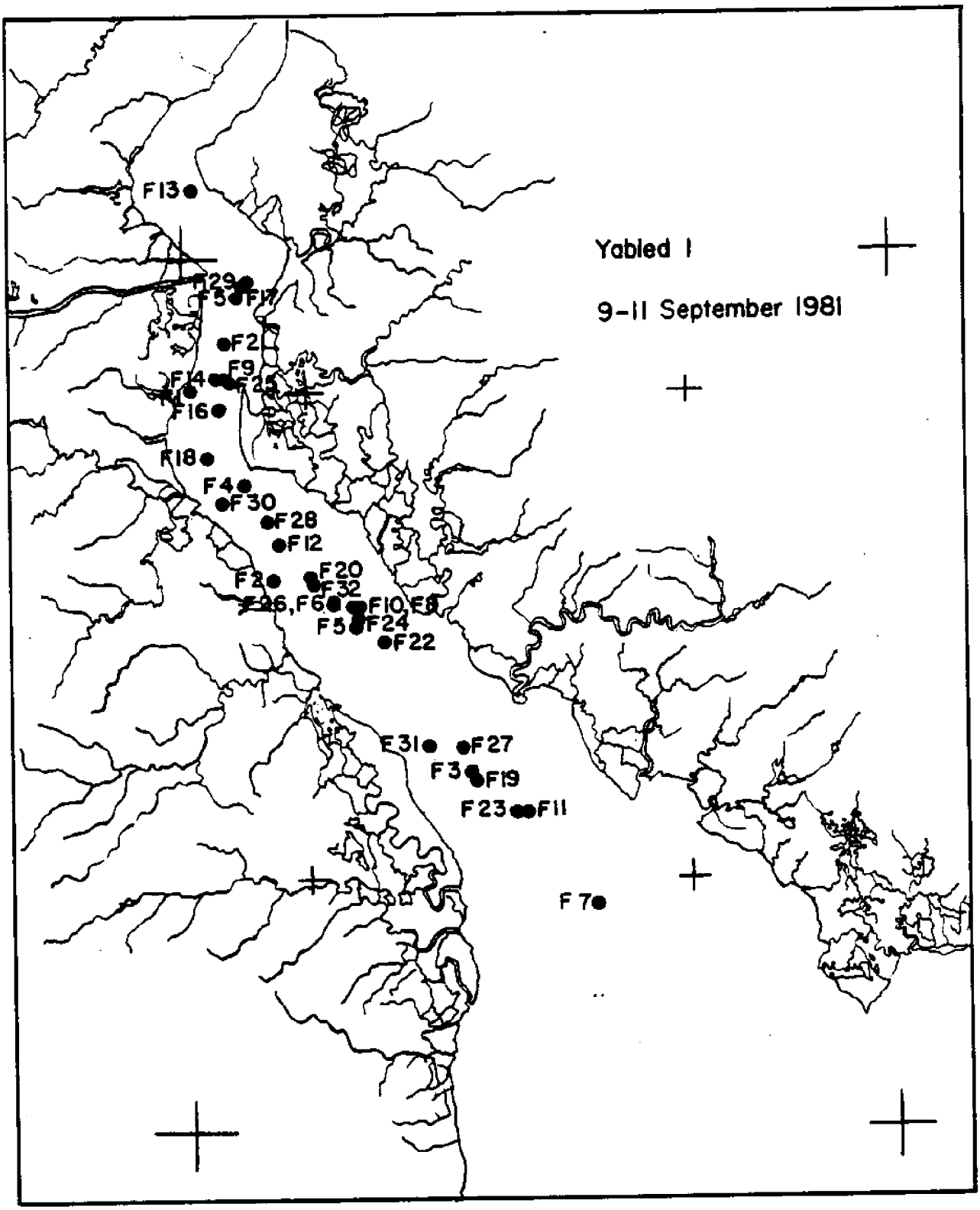
38.5°


Yabled I
9-11 September 1981
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Cruise Report

Yabled-2
19-21 November 1981

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: T. M. Church
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: C. Culberson, J. Scudlark, J. Tramontano, A. Frake, S. Pike, J. Pennock, R. Stumpf, D. Kieber, A. Terchunian, J. Scibek, G. Fernandez, T. Pfeiffer

Supporting Agency: Office of Sea Grant

Cruise Summary:

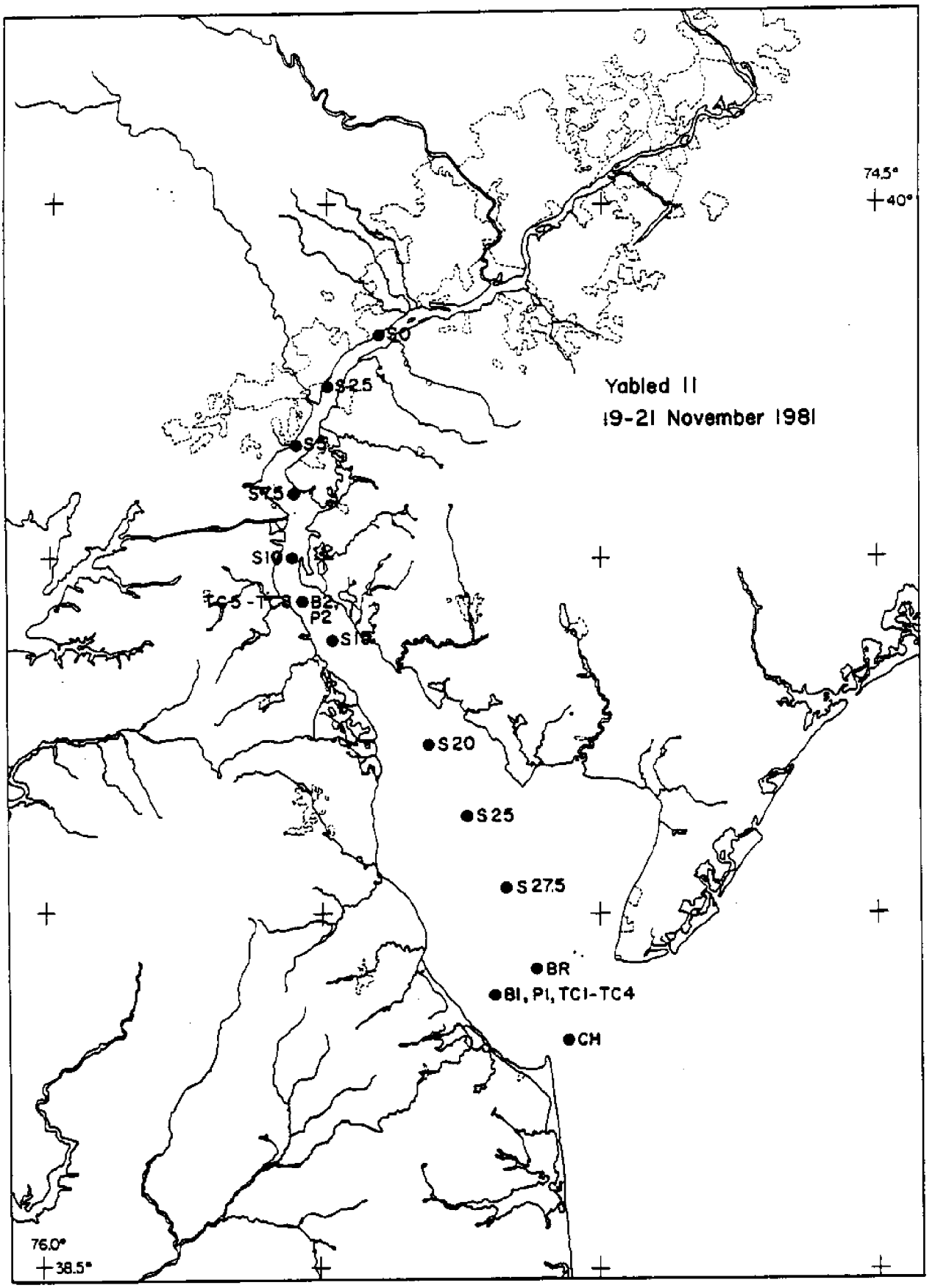
This cruise was designed to study chemical fluxes across the sediment-water interface. Fluxes were determined directly aboard ship by measuring chemical concentrations as a function of time in the water above incubated box cores. As an independent calculation of the flux, gravity cores were taken, sectioned, and squeezed for pore water analysis at each box core location. After coring, a time series of water column chemistry was measured at each box core station using a peristaltic pump. The box core and gravity core results will be given in a separate report.

The R/V Cape Henlopen departed Lewes on 19 November at 0535 hours and returned on 21 November at 1730 hours. A box core and gravity core were taken on 19 November, and the ship anchored for 8 hours over the location of these cores for periodic sampling. During the night of the 19th, the ship cruised between the Chesapeake and Delaware Canal and Ship John Light collecting surface water samples for R. Stumpf. J. Pennock took 2 Shipek grabs during this period.

A second box core and gravity core were taken on 20 November. After coring, the ship anchored for 10 hours for periodic water sampling. The ship then steamed north to Marcus Hook, Pa., the approximate location of $0^{o}/_{oo}$ salinity. J. Scibek collected surface and bottom water samples between salinities 8 and $0^{o}/_{oo}$ as the ship steamed north. Two Shipek grabs were taken on the evening of 20 November.

The salinity gradient stations S0, S2.5, S5, S7.5, S10, S15, S20, S25, S27.5, BR, and CH were sampled on 21 November 1981. Station locations are shown on the following chart.

The parameters measured at each station are listed in the following tables. Continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples were taken at some stations but are not listed. In addition, surface temperature, salinity, chlorophyll-a, and water turbidity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded for the entire cruise with a quantum meter.


74.5°
40°
S0
S2.5
S5
S7.5
S10
TC5-TC8
B2,
P2
S15
S20
S25
S27.5
BR
BI, PI, TC1-TC4
CH
Yabled II
19-21 November 1981
76.0°
38.5°

Cruise Report

Yabled-3
6-8 January 1982

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: J. H. Sharp
College of Marine Studies
University of Delaware
Lewes, Delaware

Participants: C. Culberson, P. Underhill, J. Scudlark, A. Frake, J. Tramontano, S. Pike, J. Pennock, D. Burrage, G. Fernandez, J. Scibek, D. Kieber, M. Fleisher, T. Pfeiffer

Supporting Agency: Office of Sea Grant

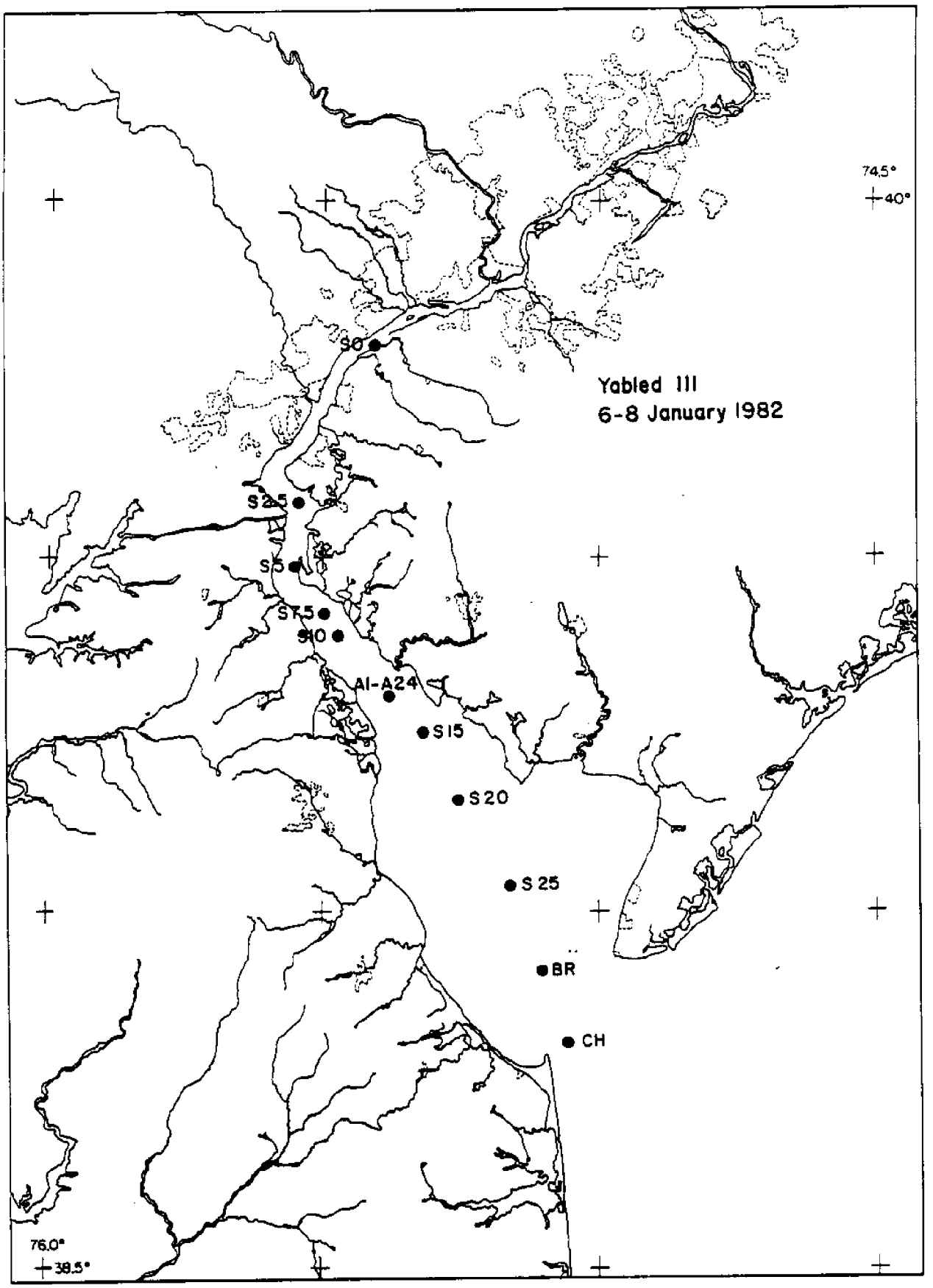
Cruise Summary:

This cruise was designed to study the effects of tidal currents on water column chemistry during a 24 hour anchor station.

The R/V Cape Henlopen departed Lewes at 1759 hours on 6 January and proceeded to station CH at the mouth of Delaware Bay to collect seawater for the end member of an estuarine mixing experiment. The ship then steamed north to Woodland Beach and anchored. At this station a CTD profile was made every hour with surface and bottom samples collected for chemical analysis every third hour. Current profiles were also measured.

The salinity gradient stations S0, S2.5, S5, S7.5, S10, S15, S20, S25, BR, and CH were sampled on 8 January 1982. Station locations are shown on the following chart.

The parameters measured at each station are listed in the following tables. Continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples were taken at some stations but are not listed. In addition, surface temperature, salinity, chlorophyll-a, and water turbidity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.


74.5°
40°
S0
Yabled III
6-8 January 1982
S2.5
S5
ST.5
S10
AI-A24
S15
S20
S 25
BR
CH
76.0°
38.5°

Cruise Report

Yabled-4
9 March 1982

Area: Delaware Bay

Vessel: R/V Wolverine

Chief Scientist: J. Pennock
College of Marine Studies
University of Delaware
Lewes, Delaware

Participants: S. Pike

Supporting Agency: Office of Sea Grant

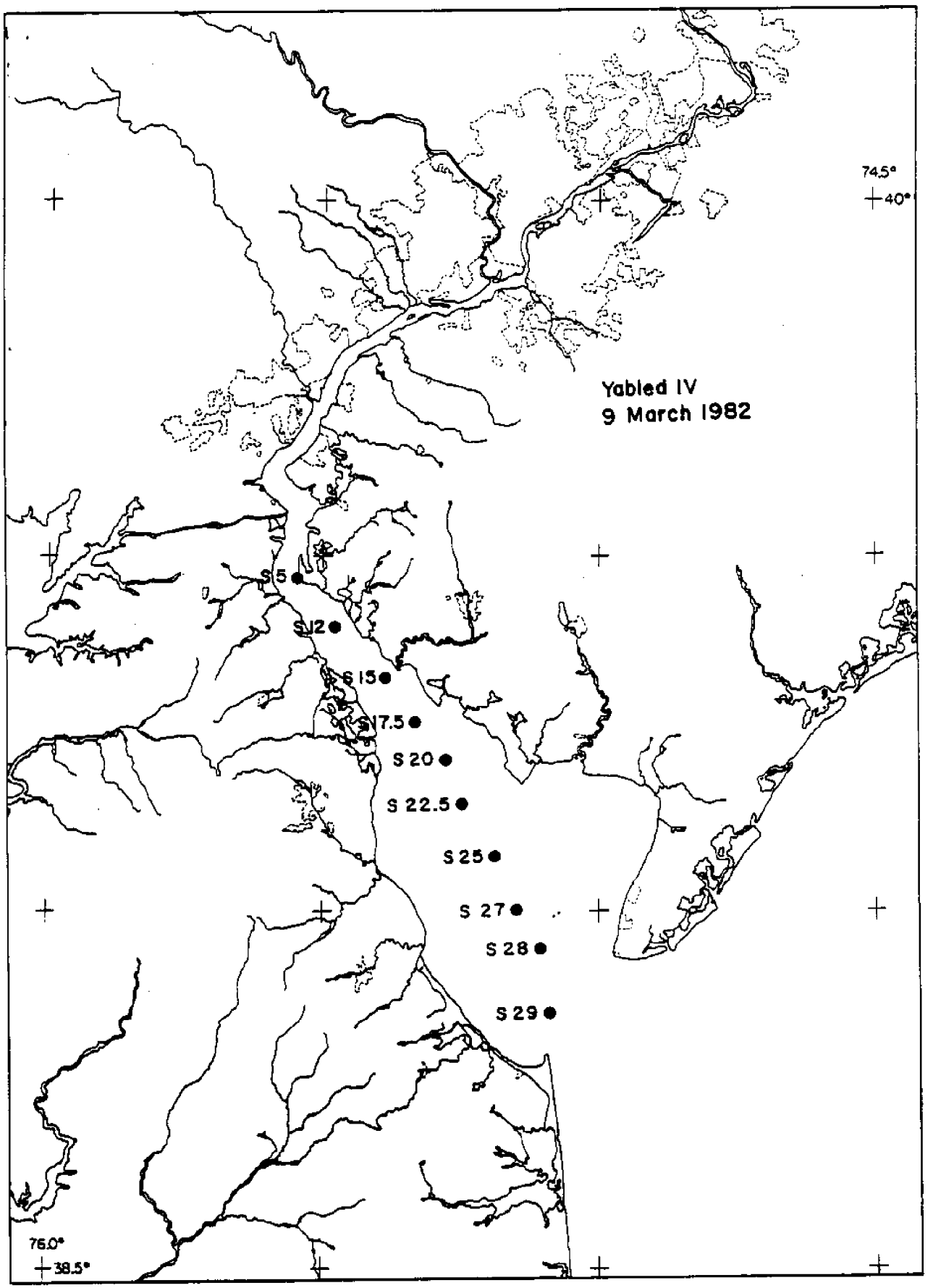
Cruise Summary:

This cruise was designed to provide data on the development of the spring phytoplankton bloom in lower Delaware Bay.

The R/V Wolverine departed Lewes at 0455 hours on 9 March and proceeded to Artificial Island. Salinity gradient stations S5, S12, S15, S17.5, S20, S23, S25, S27, S28, and S29 were sampled on the return trip to Lewes. The Wolverine returned to Lewes at 1730 hours on 9 March. Station locations are shown on the following chart.

Surface samples were collected at each station using 5 liter Niskin bottles. Temperature, conductivity, and salinity profiles were measured at each station with a Beckman Electrodeless Induction Salinometer. Light profiles were taken with a Digital Scalar Irradiance meter.

The parameters measured at each station are listed in the following tables.


74.5°
40°
Yabled IV
9 March 1982
S 5
S 12
S 15
S 17.5
S 20
S 22.5
S 25
S 27
S 28
S 29
76.0°
38.5°

Cruise Report

Yabled-5
17-19 March 1982

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: C. H. Culberson
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: T. Church, J. Sharp, E. Maurmeyer, J. Scudlark, J. Tramontano, A. Frake, S. Pike, J. Pennock, J. Scibek, R. Stumpf, D. Kieber, L. Cifuentes, K. LeCato, T. Pfeiffer

Supporting Agency: Office of Sea Grant

Cruise Summary:

This cruise was a detailed study of the areal extent of the spring phytoplankton bloom in Delaware Bay. It consisted of the normal salinity gradient survey down the length of the bay, plus 4 cross bay transects in the lower bay. A small boat was used to sample shallow nearshore areas. Station locations are shown on the following chart.

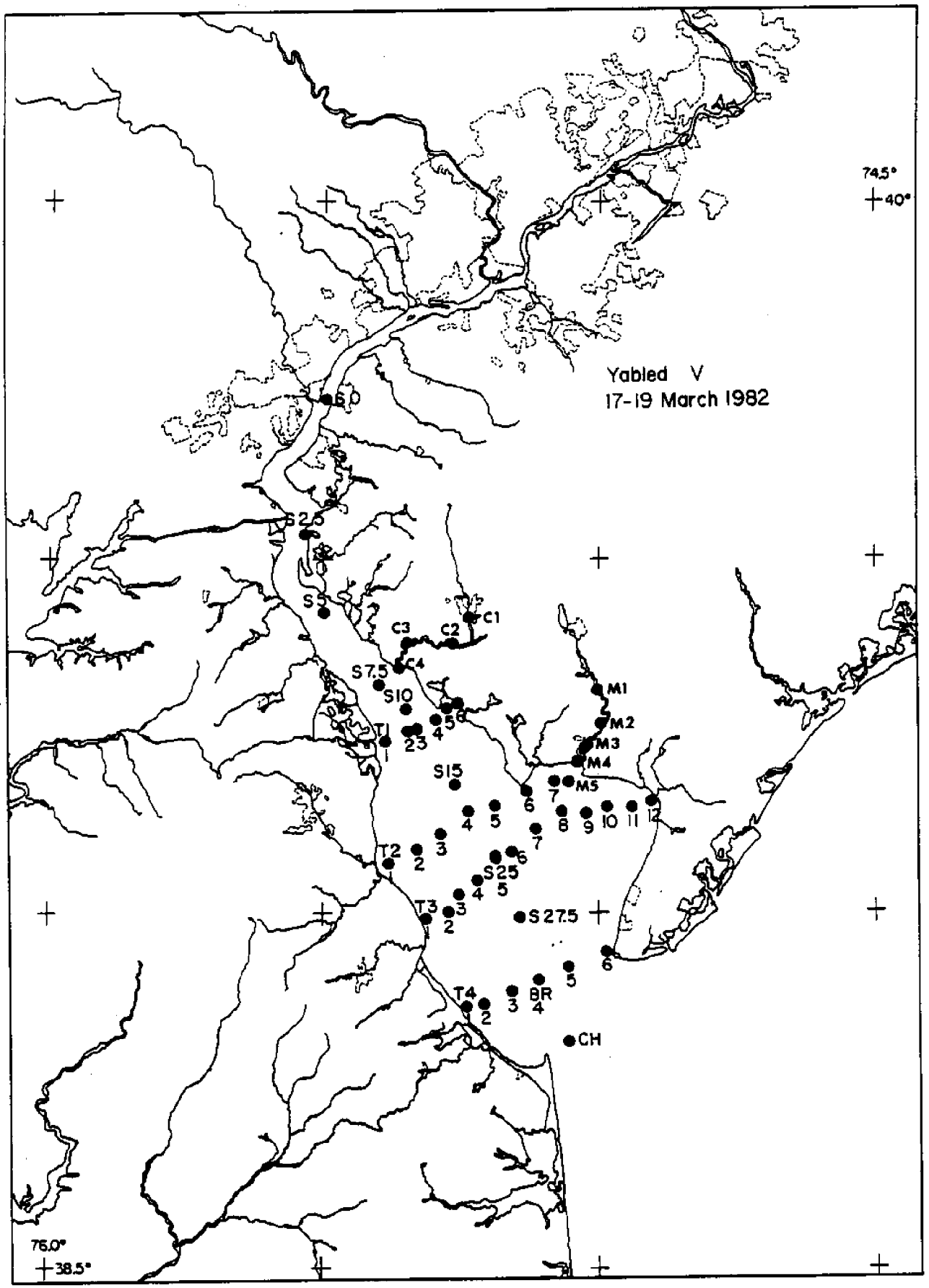
The R/V Cape Henlopen departed Lewes at 0000 hours on 17 March and proceeded to station T1-3. The Boston Whaler was deployed from the ship at 0630 and sampled stations T1-1, -2, -4, -5, and -6. Stations T1-3 and S10 were occupied by the ship. A land based whaler then delivered 4 samples, stations C1 to C4, from the Cohansey river to the ship, and the Cape Henlopen proceeded upbay and sampled salinity gradient stations S7.5, S5, S2.5, and S0. Surface and bottom samples at salinities of 8, 7, 6, 5, 4, 3, 2, and 1 $^{o}/_{oo}$ were collected for J. Scibek. The ship anchored overnight near Miah Mull Shoal.

On 18 March, 6 stations of transect 2 were occupied by the whaler, while station T2-4 was occupied by the ship. The land based whaler sampled 5 stations, M1 to M5, in the Maurice River and Maurice River Cove and delivered them to the ship. The Cape Henlopen then completed the salinity gradient survey by occupying stations S15, S20, S25, S27.5, BR, and CH. The ship returned to Lewes for supplies.

The R/V Cape Henlopen departed Lewes at 0400 hours on 19 March to begin transect 3. Upon arrival at station T3-8 the whaler was deployed to sample stations T3-9, -10, -11, and -12. Upon return of the whaler, the ship occupied stations T3-7, -6, -5, -4, -3, and -2. Station T3-1 was occupied by

the whaler. The ship proceeded to transect 4 and sampled all stations on this transect with the exception of T4-1 which was sampled from the whaler. The Cape Henlopen returned to Lewes at 1743.

The parameters measured at each station are listed in the following tables. Fluorescence, continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples, ^{15}N uptake, ammonia regeneration, α-keto acids, XAD-8 extractions, hydrolyzable hexosamines, and particulate humic acids were mesured at many stations but are not listed. In addition, surface temperature, salinity, and water turbidity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.


Yabled V
17-19 March 1982
74.5°
40°
76.0°
38.5°
B
S2.5
S
C1
C2
C3
C4
S7.5
S10
T1
S15
T2
S25
T3
S27.5
T4
BR
CH
M1
M2
M3
M4
M5

Cruise Report

Yabled-6
2-5 May 1982

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: J. H. Sharp
College of Marine Studies
University of Delaware
Lewes, Delaware

Participants: C. Culberson, J. Tramontano, J. Scudlark, A. Frake, S. Pike, J. Pennock, R. Stumpf, D. Kieber, S. Rumer, T. Bunting, M. Curtis, G. Reynolds, T. Pfeiffer

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of three parts: (1) a salinity gradient survey down the length of the Delaware River and Bay; (2) transects across the entrance of the bay between Cape Henlopen and Cape May; and (3) a 26 hour anchor station at the entrance to the bay. Station locations are shown on the following chart.

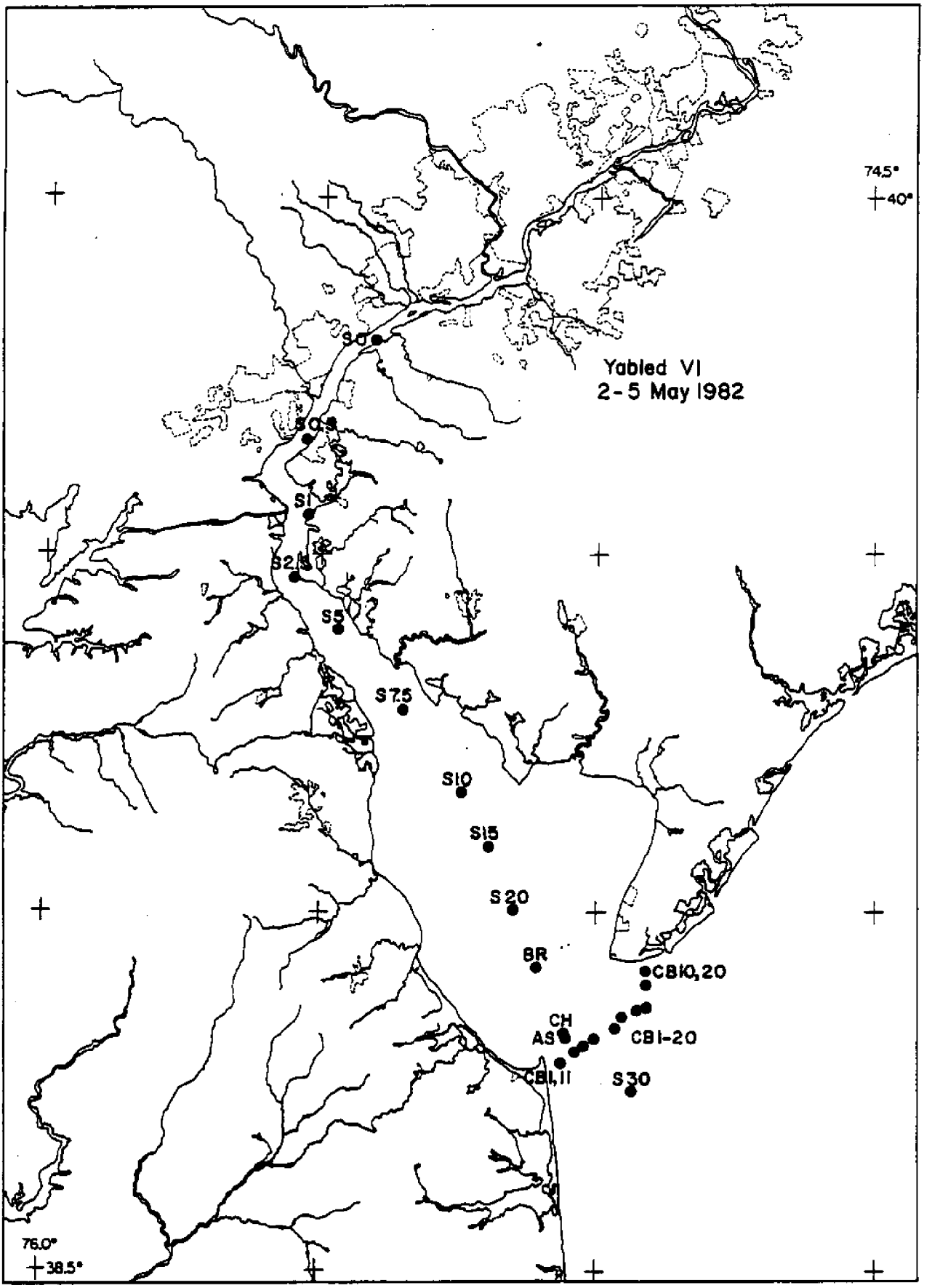
The R/V Cape Henlopen departed Lewes at 1817 hours on 2 May and proceeded to Marcus Hook, Pa. Four stations were sampled on the trip upbay by R. Stumpf for seston and size fraction analyses. The ship anchored overnight near Marcus Hook. Sampling of the salinity gradient stations began at 0618 on 3 May, and stations S0, S0.5, S1, S2.5, S5, S7.5, S10, S15, S20, BR, CH and S30 were occupied. The Cape Henlopen anchored overnight at Harbor Refuge.

The first cross bay transect was sampled at maximum flood tide, beginning at 0336 hours on 4 May. This transect consisted of 10 stations, designated CB1 to CB10. The even numbered stations were sampled at 2 depths for complete chemical analysis, while the odd numbered stations consisted of vertical CTD profiles.

Upon completion of the transect, the ship returned to station AS for a 26 hour anchor station. At this station, a vertical CTD profile and current profile were taken every hour (stations AS1 - AS27). Surface and deep samples for chemical analysis were taken every third hour.

On 5 May, following the anchor station, a second cross bay transect (CB11 - CB20) was conducted at maximum ebb tide. Sampling locations and the sampling scheme were the same as those for the first transect. The ship returned to Lewes at 1435 hours on 5 May.

The parameters measured at each station are listed in the following tables. Continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples were measured at many stations but are not listed. In addition, surface temperature, salinity, and water turbidity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.


74.5°
40°
Yabled VI
2-5 May 1982
S0
S0.5
S1
S2.5
S5
S7.5
S10
S15
S20
BR
CB10,20
CH
AS
CB1-20
CB1,11
S30
76.0°
38.5°

Cruise Report

Yabled-6.5 ('Pennock 1')
21-24 June 1982

Area: Delaware Bay

Vessel: R/V Wolverine
Small boat

Chief Scientist: J. Pennock
College of Marine Studies
University of Delaware
Lewes, Delaware

Participants: R. Smith (21 June),
S. Pike (22 June),
M. Pennock (24 June)

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

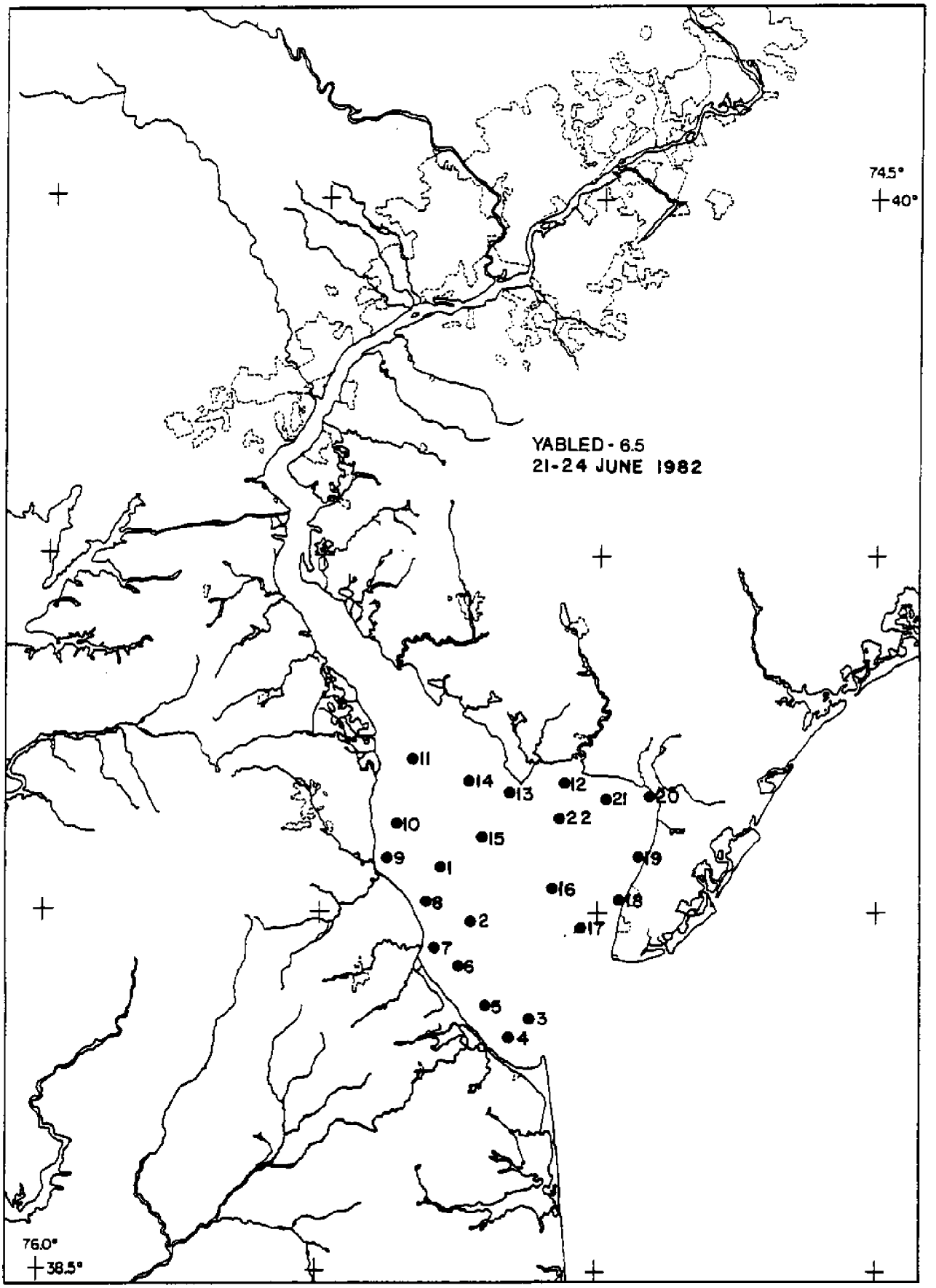
Cruise Summary:

Data for this cruise were collected on 3 dates: from the R/V Wolverine on 21 June, and from a small boat on 22 and 24 June.

The purpose of the cruise was to increase sampling frequency in lower Delaware Bay and to focus on primary production in the shoal areas during the summer season. Data were collected for inorganic nutrients, chlorophyll, primary production, salinity, and the underwater light field. Station positions are shown on the following chart.

Surface samples were collected at each station using 5 liter Niskin bottles. Light profiles were taken with a Digital Scalar Irradiance meter.

The parameters measured at each station are listed in the following tables. This cruise was originally called 'Pennock 1'.


YABLED - 6.5
21-24 JUNE 1982
74.5°
40°
76.0°
38.5°
11
14
13
12
21
20
22
10
15
9
1
19
16
8
18
2
17
7
6
5
3
4

Cruise Report

Yabled-7
17-22 July 1982

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: R. B. Biggs
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: T. Church, C. Culberson, J. Tramontano, J. Scudlark, A. Frake, S. Pike, R. Stumpf, J. Pennock, D. Kieber, S. Guest, G. Reynolds, T. Pfeiffer, R. Dickerson, M. Fleisher, L. Smith (University of Maryland, Horn Point), S. Murray, C. Olsen and I. L. Larsen (Oak Ridge National Laboratory).

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of several major parts: (1) measurements of water column chemistry in the Delaware River and Bay; (2) radioisotope measurements on sediments; and (3) benthic flux measurements across the sediment-water interface.

Water Column Chemistry

The salinity gradient survey during this cruise consisted of 5 parts designed to study diurnal changes in water chemistry:

(1) stations L10 to L0 ($10^{o}/_{oo}$ - $0^{o}/_{oo}$) were sampled between 1251 and 1745 on 17 July;

(2) stations D10 to D0 were sampled between 0001 and 0513 on 18 July;

(3) stations P1 to P6 were sampled by small boat between 0930 and 1220 on 18 July;

(4) an anchor station (stations AS1-AS24) was occupied from 0646 on 18 July to 0536 on 19 July; and

(5) stations S0 through CH were sampled between 0606 and 1846 on 20 July.

Five cross bay transects were conducted in addition to the salinity gradient survey:

(1) stations T1-1, -2, -4, -5, -6 of transect T1 were sampled by small boat, while station T1-3 was occupied by the Cape Henlopen;

(2) stations T3-2 through T3-8 of transect T3 were occupied by the R/V Cape Henlopen, while stations T3-9 through T3-12 were sampled from the small boat;

(3) the odd numbered stations on transect T4 were sampled for complete chemical analysis, while the even numbered stations consisted of vertical CTD profiles; and

(4) the two transects at the bay mouth (CB1-CB10, maximum flood; CB11-CB20, maximum ebb) were occupied by the R/V Cape Henlopen. On these transects even numbered stations were sampled at 2 depths for complete chemical analysis, while the odd number stations consisted of vertical CTD profiles.

The parameters measured at each station are listed in the following tables. Continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples were measured at many stations but are not listed. In addition, surface temperature, salinity, and water turbidity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter. Station locations are shown on the following chart.

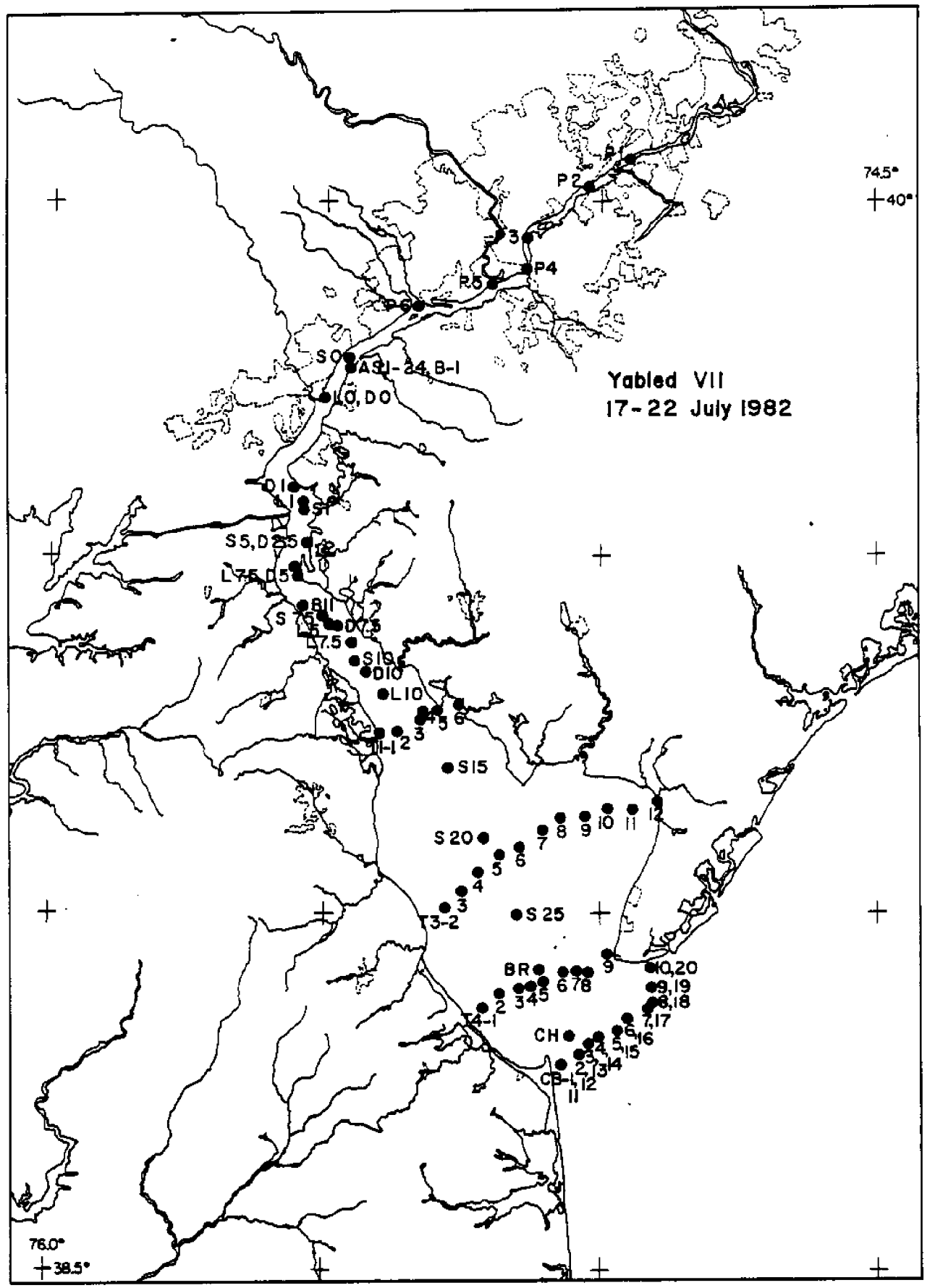
Radioisotope Measurements on Sediments

Shipek grabs and gravity cores were collected at 10 stations. The cores were sectioned on board at 2 cm intervals to a depth of 20 cm, and at 4 cm intervals to the bottom of each core. The grab samples were sectioned at 1 cm intervals to obtain intact surface sediment samples. The sediment samples were analyzed by gamma ray spectrometry for man-induced radionuclides (Cs-137, Cs-134, Co-60, etc.) and natural radionuclide activity (Pb, U, Th). Box cores, BC1 and BC2, were sectioned on board at approximately 3 cm intervals to the bottom of each core. Each depth increment was subdivided into 4 subsamples to be analyzed for (1) trace metals, (2) radionuclide activity, (3) pollen, and (4) an archive sample.

The radioisotope measurements were concentrated in the area between Wilmington, Delaware and Ship John Light. The Salem nuclear power plant is located in this stretch of the river. The radioisotope measurements are not listed in this report. Contact Dr. T. M. Church (College of Marine Studies, University of Delaware, Newark, Delaware) for details of the measurements.

Benthic Flux Measurements

Fluxes were determined directly aboard ship by measuring chemical concentrations as a function of time in the water above incubated box cores. As an independent calculation of the flux, gravity cores were taken, sectioned, and squeezed for pore water analysis at each box core location. As a further check, pore water concentration profiles in one box core were measured directly using equilibration cells ('peepers') containing dialysis membranes by L. Smith. The benthic flux measurements will be given in a separate report.


Yabled VII
17-22 July 1982
74.5°
40°
76.0°
38.5°
P2
P4
P5
P6
S0
A3-24, B-1
L0, D0
D1
S5, D5
L7.5, D5
B11
D7.5
L7.5
S10
D10
L10
S15
S20
S25
T3-2
BR
T4-1
CH
CB-1
11

Cruise Report

Yabled-8
22-24 September 1982

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: J. H. Sharp
College of Marine Studies
University of Delaware
Lewes, Delaware

Participants: C. Culberson, J. Tramontano, J. Scudlark, A. Frake, S. Pike, S. Guest, J. Pennock, S. Murray, T. Pfeiffer, B. Howell, R. Coffin, J. Compeau, D. Kieber, K. Fleming, J. Vessels

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of three parts: (1) a salinity gradient survey along the length of the Delaware River and Bay; (2) a series of transects across the width of the bay; and (3) bethic flux measurements across the sediment-water interface.

The R/V Cape Henlopen departed Lewes at 0100 hours on 22 September. The salinity gradient stations, CH through S0, were sampled beginning 0752 on the 22nd and ending at 2100. A gravity core was taken for J. Compeau, and the ship anchored overnight at Marcus Hook, Pa.

On 23 September, two box cores, BC1 and BC2, were taken for benthic flux measurements. The box cores were sealed with water over them and transferred to a temperature controlled room ashore the evening of the 23rd. Fluxes across the sediment-water interface were determined by measuring chemical concentrations as a function of time in the water above the incubated box cores. As an independent calculation of the flux, gravity cores were taken, sectioned, and squeezed for pore water analysis at each box core location. The results of the benthic flux measurements will be given in a separate report.

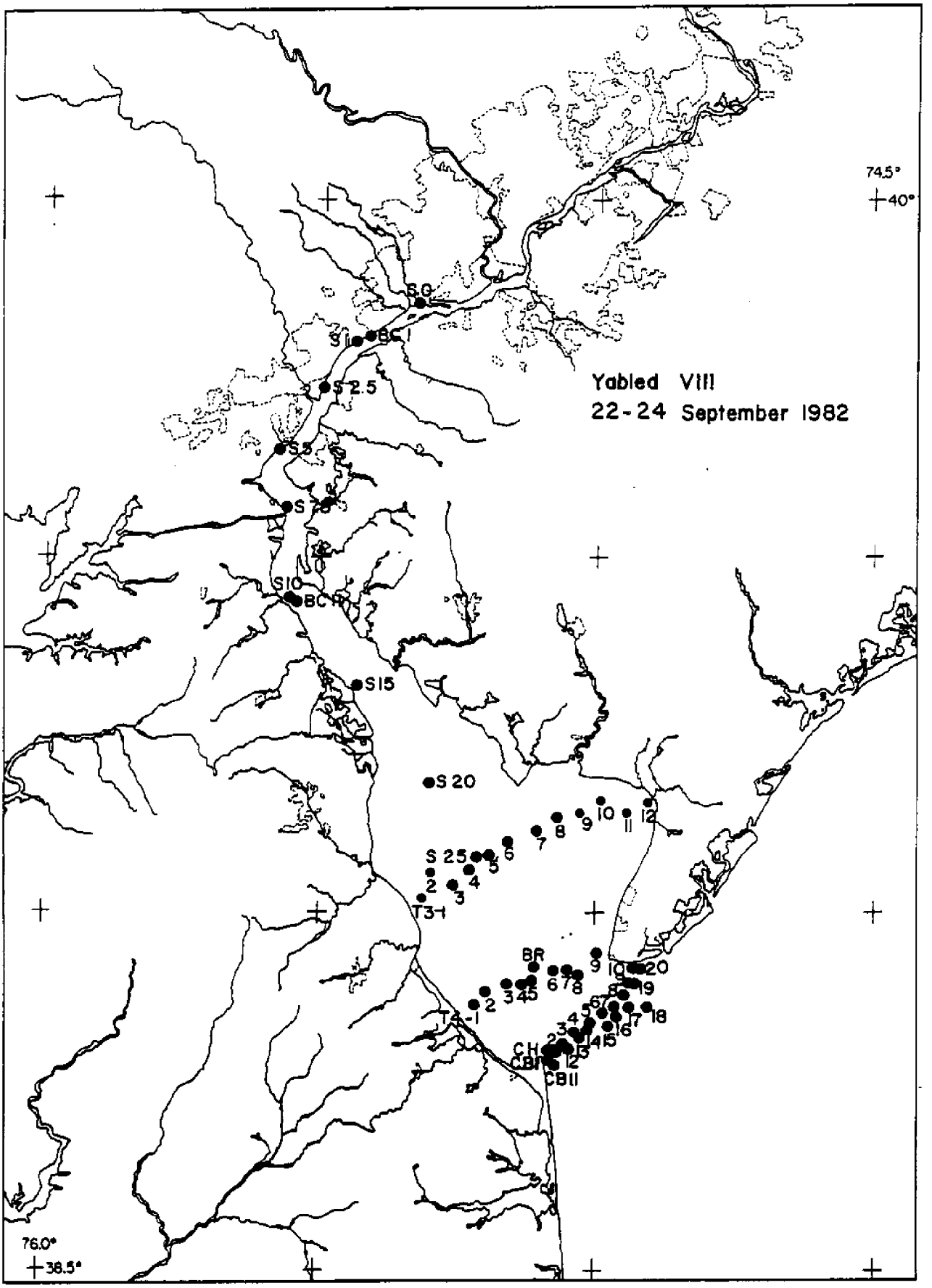
The first transect across the entrance of the bay was sampled at maximum ebb tide, beginning at 1723 hours on 23 September. This transect consisted of 10 stations, designated CB1 to CB10. The even numbered stations were sampled at 2 depths for complete chemical analysis, while the odd numbered stations consisted of vertical CTD profiles. The second bay mouth transect at maximum flood, stations CB11 to CB20, began at 2331 hours on the 23rd.

Transect T3 was occupied between 0902 and 1204 on 24 September. Stations T3-1 and T3-9 through T3-12 were sampled by small boat, while the remaining stations were occupied by the R/V Cape Henlopen.

Transect T4 was occupied between 1344 and 1521 on 24 September by the Cape Henlopen. The odd numbered stations were sampled for complete chemical analysis at one or two depths, while the even numbered stations consisted of vertical CTD profiles.

The parameters measured at each station are listed in the following tables. Continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples, ^{15}N uptake, α-keto acids, plankton taxonomy, and bacterial counts were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following chart.


Yabled VIII
22-24 September 1982
74.5°
40°
76.0°
38.5°
S.0
S1
BC1
S 2.5
S3
S5
S10
BC10
S15
S 20
S 25
T3-1
T4-1
BR
CH
CB10
CB11

Cruise Report

Yabled-8.5 ('Bi-State')
13-15 October 1982

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: J. H. Sharp
College of Marine Studies
University of Delaware
Lewes, Delaware

Participants:

University of Delaware

R. Biggs, S. Pike, A. Frake, J. Scudlark, S. Guest, T. Pfeiffer

Rutgers University

H. Haskin, W. Canzonier, J. Compeau

Stevens Institute of Technology

R. Hires

New Jersey Marine Science Consortium

R. Stevens

Lehigh University

K. Thompson, M. Kubic

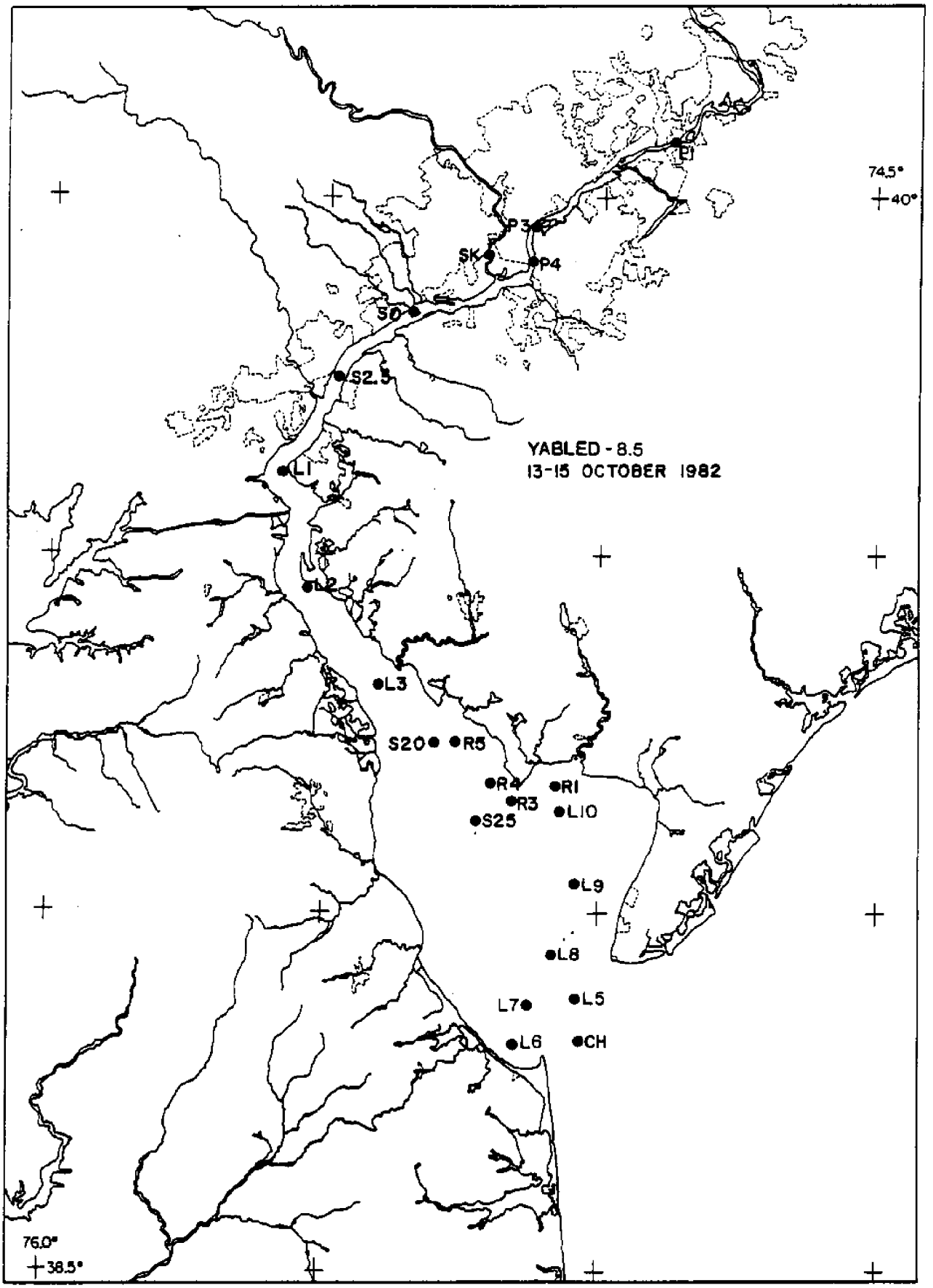
Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise was devoted to an intercalibration of methods between investigators participating in the Delaware Bay Project. Emphasis was on intercalibration of biological parameters.

The parameters (salinity, oxygen, chlorophyll-a, seston, productivity, nutrients) measured at each station are listed in the following tables. Plankton tows, epibenthic sled tows, and gravity cores for mercury were taken at many stations, but the results are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following chart. This cruise was originally called 'Bi-State'.


P1
74.5°
40°
P3
SK
P4
S0
S2.5
YABLED - 8.5
13-15 OCTOBER 1982
L1
L3
S20
R5
R4
R1
R3
L10
S25
L9
L8
L7
L5
L6
CH
76.0°
38.5°

Cruise Report

Yabled-9
17-19 November 1982

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: T. M. Church
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: R. Biggs, R. Stumpf, A. Frake, S. Ackelson, S. Guest, A. Masse, L. Cifuentes, J. Tramontano, R. Coffin, J. Pennock, D. Kieber, S. Pike, G. Chin Leo, T. Pfeiffer, B. Howell, S. Murray, D. Murphy, R. Towne, E. Rickmann, A. Hankins, T. Eveleigh, W. Weiss

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of two parts: (1) a salinity gradient survey along the length of the Delaware River and Bay, and (2) deployment of sediment traps.

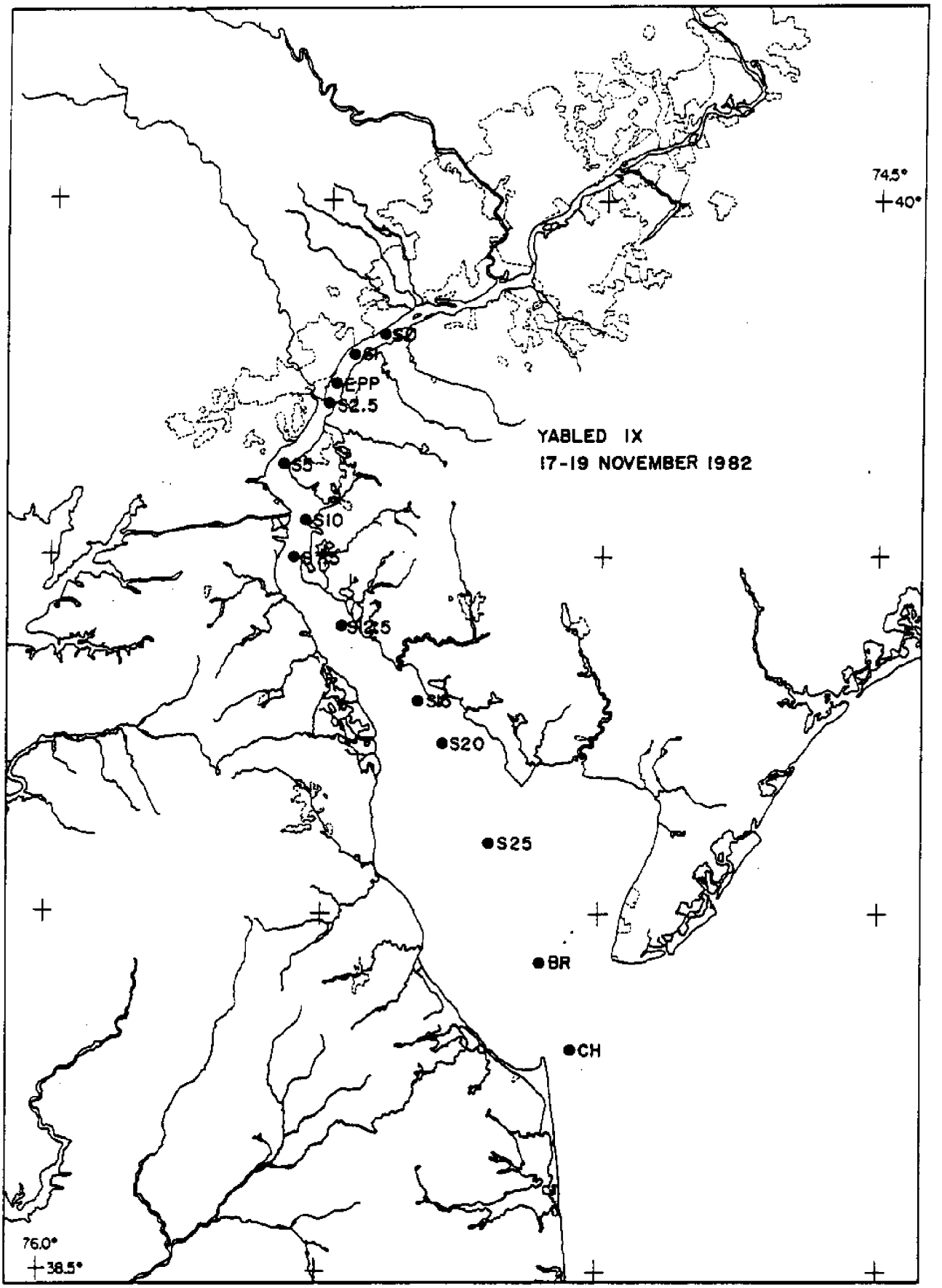
The salinity gradient stations, CH through SO, were sampled beginning 0728 on the 17th and ending at 2104. This series included station EMP at the Edgemoor Power Plant.

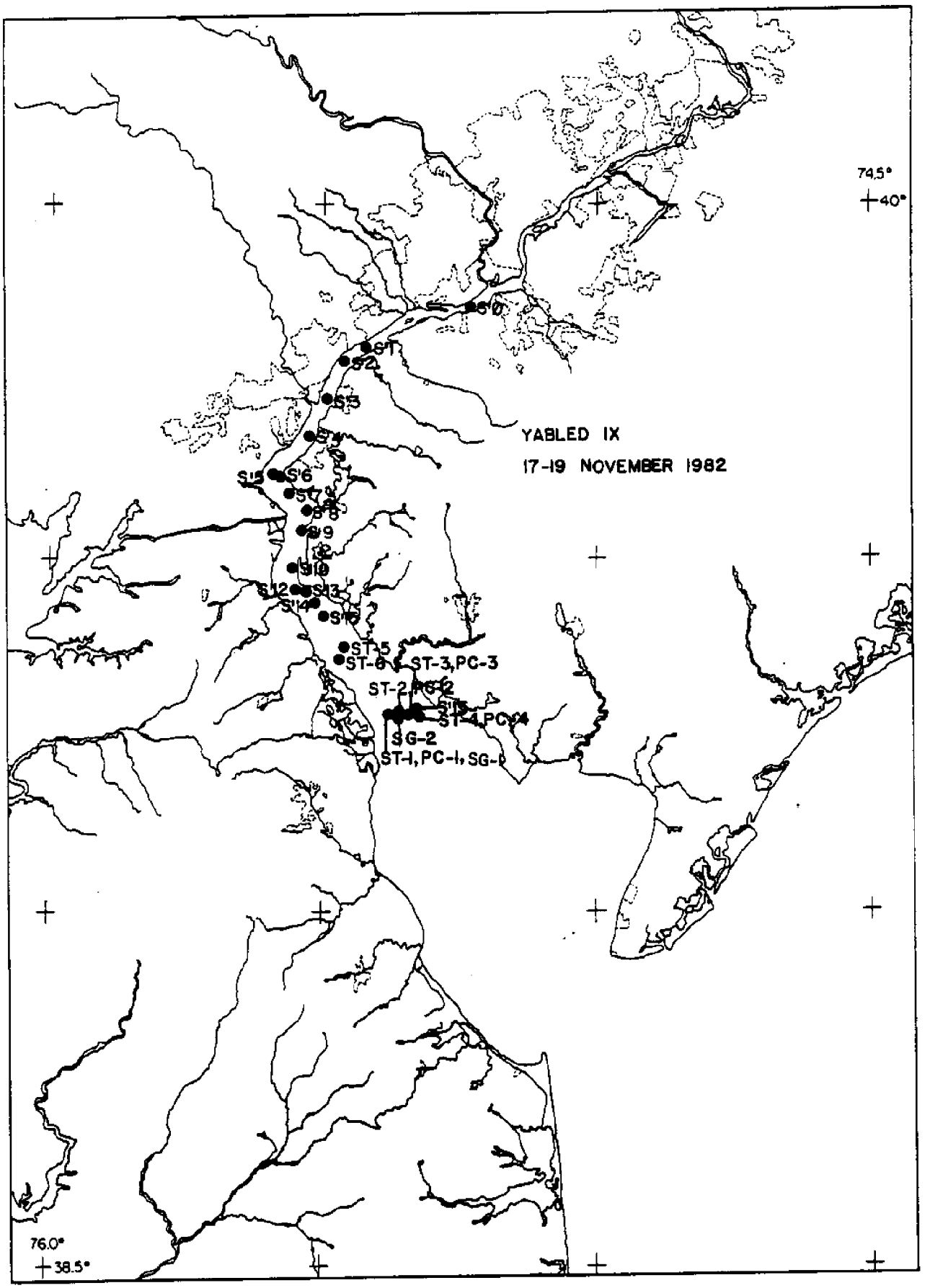
On 18 November, 6 sediment traps were deployed between 0108 and 0219; 4 gravity cores for pollen analysis were taken between 1100 and 1200 hours. A second set of salinity gradient stations, S'15 through S'0, were occupied between 1258 and 1738. These stations were sampled every 1 $^{o}/_{oo}$ for humic acids, particulate carbon, and particulate nitrogen.

The sediment traps were retrieved between 0715 and 0823 on 19 November. Two Shipek grabs were taken between 0827 and 0844. The R/V Cape Henlopen returned to Lewes at 1330.

The parameters measured at each station are listed in the following tables. Continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) water samples, ^{15}N uptake, α-keto acids, plankton taxonomy, bacterial counts, amino acids, ^{14}C amino acid uptake, and ^{14}C methylamine uptake were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following charts.


74.5°
40°
S0
S1
EPP
S2.5
YABLED IX
17-19 NOVEMBER 1982
S5
S10
S15
S20
S25
BR
CH
76.0°
38.5°


74.5°
40°
YABLED IX
17-19 NOVEMBER 1982
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
ST-1, PC-1, SG-1
SG-2
ST-2, PC-2
ST-3, PC-3
ST-4, PC-4
ST-5
ST-6
76.0°
38.5°

Cruise Report

Yabled-10
4-7 January 1983

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: C. H. Culberson
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: R. Biggs, T. Church, S. Seitzinger (Philadelphia Academy of Natural Sciences), B. Howell, S. Murray, R. Towne, J. Pennock, R. Coffin, D. Murphy, A. Frake, S. Pike, S.-H. Lin, T. Pfeiffer, S. Guest, A. Hankins, M. Hartman

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of several parts: (1) measurements of water column chemistry in the Delaware River and Bay; (2) deployment of sediment traps; and (3) benthic flux measurements of chemical exchange across the sediment-water interface.

The measurements of water column chemistry consisted of the following:

(1) A salinity gradient survey for stations SO to CH, conducted between 0905 and 2048 hours on 5 January. In addition to the routine chemical measurements, this series also included vertical CTD profiles every $1^{o}/_{oo}$ salinity for salinities less than $16^{o}/_{oo}$.

(2) A cross bay transect, stations T1-1 through T1-6, sampled between 1010 and 1140 on 6 January. On this transect, station T1-3 was occupied by the R/V Cape Henlopen, while the remaining stations were sampled by small boat.

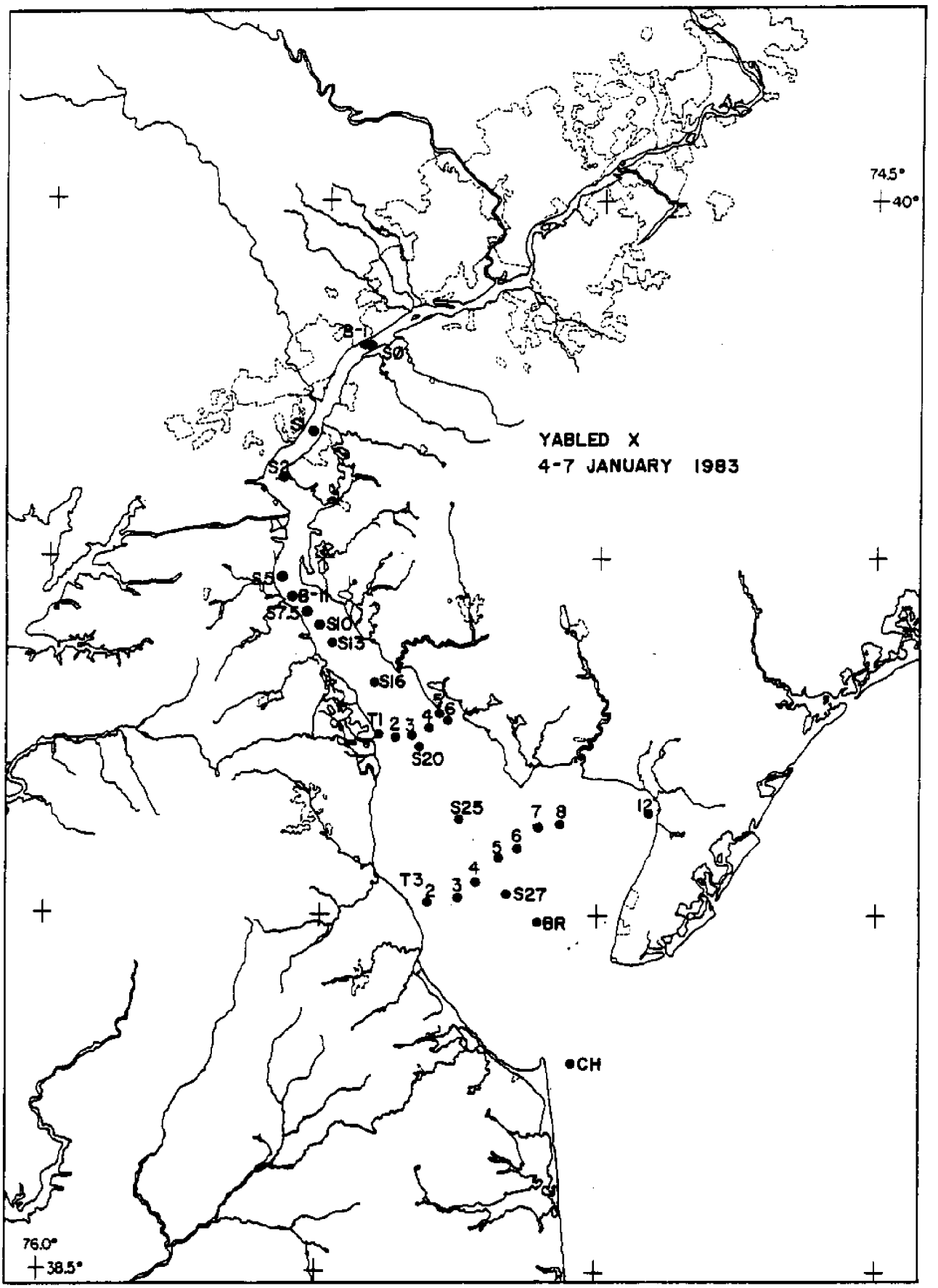
(3) A cross bay transect, stations T3-2 through T3-12, sampled between 0750 and 1324 on 7 January. On this transect, station T3-12 was sampled by small boat, while the remaining stations were sampled from the R/V Cape Henlopen.

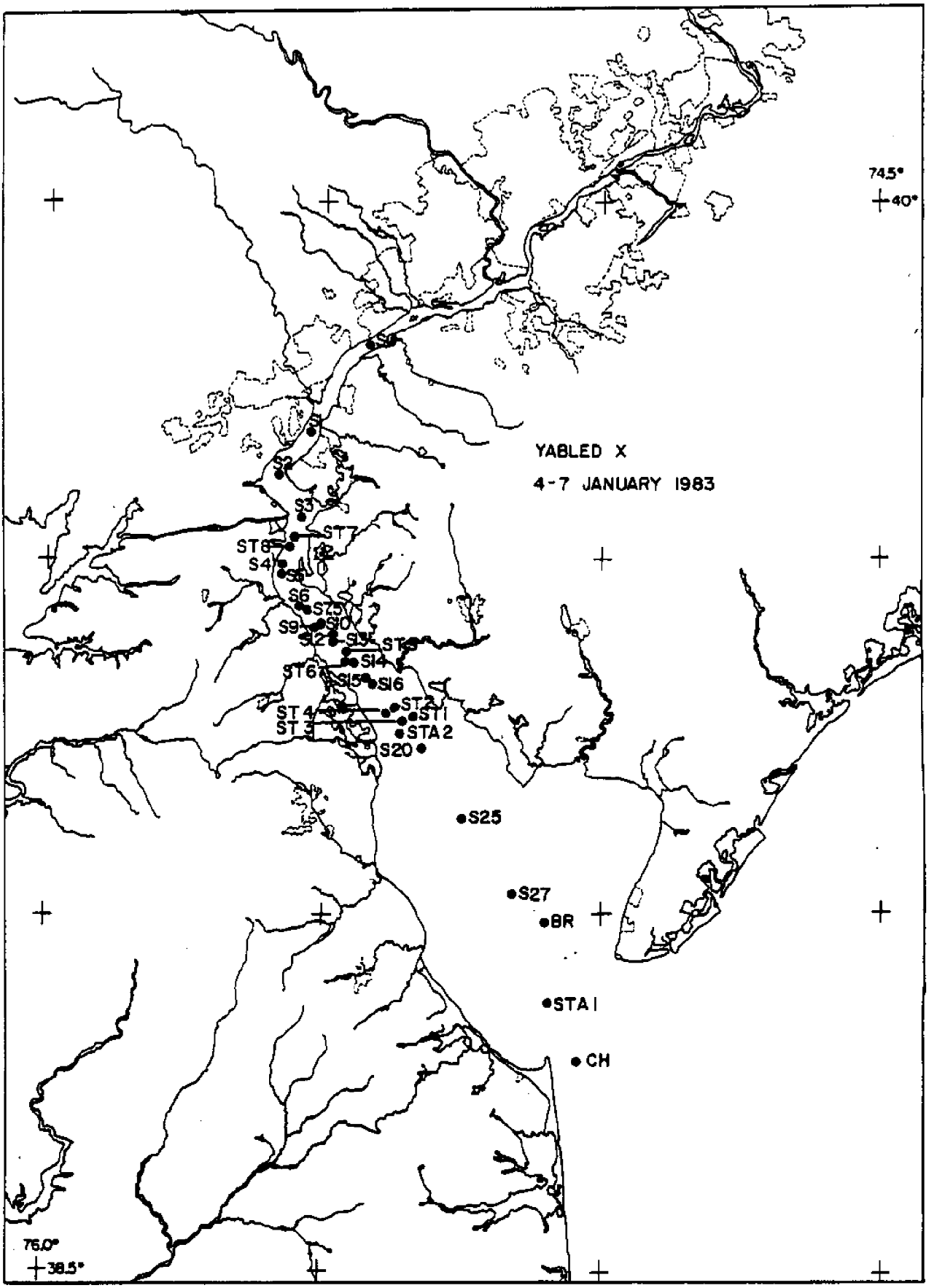
Eight sediment traps were deployed the afternoon and evening of 4 January. Gravity cores were taken at the positions of sediment traps ST-5 through ST-8. The sediment traps were retrieved between 0730 and 1025 on the 6th.

Three different techniques were employed to study benthic fluxes: incubated box cores; pore water analysis of gravity cores; and incubated gravity cores. Box cores were taken at locations B-I (5 January) and B-II (6 January) on the following chart. The box cores were sealed with water over them and transferred to a temperature controlled room ashore. Fluxes across the sediment-water interface were determined by measuring chemical concentrations as a function of time in the water above the incubated box cores. As an independent calculation of the flux, gravity cores were taken, sectioned, and squeezed for pore water analysis at both box core locations. Dr. Sybil Seitzinger (Philadelphia Academy of Natural Sciences) took several gravity cores for the measurement of inorganic nitrogen fluxes across the sediment-water interface. These cores were returned to Philadelphia for analysis. The results for the benthic flux measurements will be given in a separate report.

The parameters measured at each station are listed in the following tables. Plankton taxonomy, bacterial counts, amino acids, ^{14}C amino acid uptake, and ^{14}C methylamine uptake were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following charts.


YABLED X
4-7 JANUARY 1983
74.5°
40°
76.0°
38.5°
B-1
SØ
S2
S5
S7.5
S8-11
S10
S13
S16
T1
2
3
4
6
S20
S25
7
8
12
6
5
4
T3
2
3
S27
6R
CH


YABLED X
4-7 JANUARY 1983
74.5°
40°
76.0°
38.5°
S1
S2
S3
ST7
ST8
S4
S5
S6
S25
S9
S10
S12
S13
ST5
S14
ST6
S15
S16
ST2
ST4
ST1
ST3
STA2
S20
S25
S27
BR
STA1
CH

Cruise Report

Yabled-11
8-11 March 1983

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: J. H. Sharp
College of Marine Studies
University of Delaware
Lewes, Delaware

Participants: C. Culberson, J. Tramontano, M. Hartman, S. Guest, R. Coffin, A. Frake, S. Pike, D. Murphy, R. Stumpf, S. Moss, K. Young, B. Howell, J. Smullen, T. Pfeiffer, E. Ward

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of two parts: (1) measurements of water column chemistry in the Delaware River and Bay and (2) the deployment of sediment traps.

The measurements of water column chemistry, designed to determine the extent of the spring phytoplankton bloom, consisted of the following:

(1) A salinity gradient survey for stations CH to S0, conducted between 0640 and 2207 hours on 8 March.

(2) A cross bay transect, stations T3-12 through T3-1, sampled between 0710 and 1522 on 9 March. On this transect, stations T3-1 and T3-9 to T3-12 were sampled by small boat, while the remaining stations were sampled from the R/V Cape Henlopen.

(3) A cross bay transect, stations T4-1 through T4-9, sampled by the R/V Cape Henlopen between 1637 and 1857 on 9 March. The even numbered stations on this transect consisted of vertical CTD profiles; no chemical parameters were measured at these stations.

(4) A transect, stations CB1 to CB10, between Capes Henlopen and May at the entrance to Delaware Bay. These stations were occupied by the R/V Cape Henlopen at maximum ebb tide between 2110 and 2231 hours on 10 March. The even numbered stations were sampled for complete chemical analysis, while the odd numbered stations consisted of vertical CTD profiles.

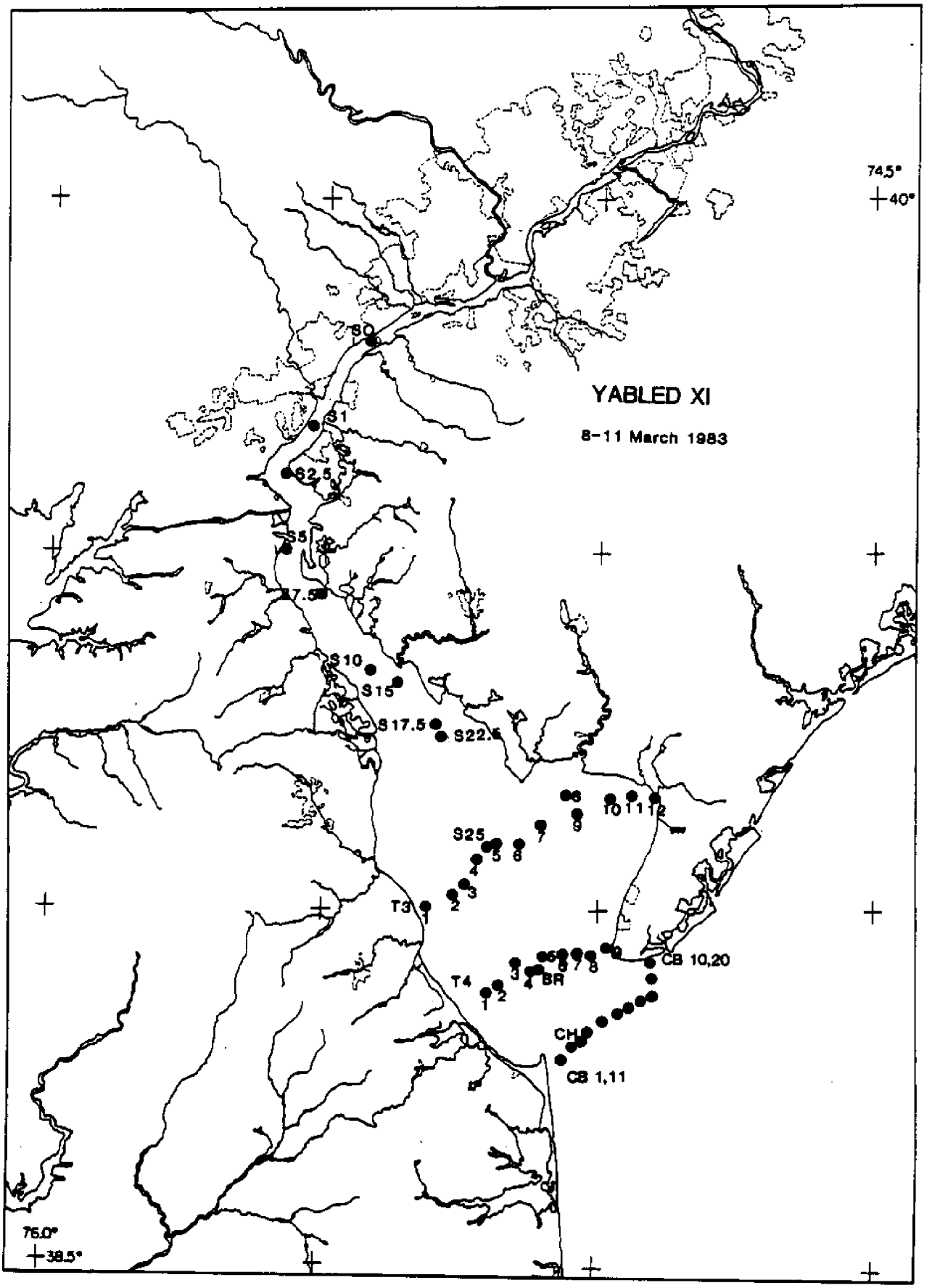
(5) A second transect at maximum flood tide, stations CB11 to CB20, at the entrance to the bay, occupied by the R/V Cape Henlopen between 0343 and 0509 on 11 March.

(6) A survey of the optical properties of the water column, stations S0' through CH', along the length of the river and bay conducted between 0655 and 1713 hours on 10 March. During this survey, upwelling and downwelling radiances were measured with a submersible optical sensor at each of 7 narrow wavelengths; simultaneously, water samples were taken and analyzed on board for continuous beam attenuation spectra from 400 to 800 nanometers for unfiltered and filtered (1 micron) subsamples.

Eight sediment traps were deployed during 8 March and retrieved on 10 March. Gravity cores were taken at the position of each sediment trap.

The parameters measured at each station are listed in the following tables. Plankton taxonomy, bacterial counts, bacterial productivity, amino acids, ^{14}C amino acid uptake, and optical parameters were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following chart.


YABLED XI
8-11 March 1983
74.5°
40°
S0
S1
S2.5
S5
S10
S15
S17.5
S22.5
S25
T3
T4
BR
CB 10,20
CH
CB 1,11
76.0°
38.5°

Cruise Report

Yabled-12
28-31 March 1983

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientists: R. B. Biggs and T. M. Church
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: C. Culberson, S. Seitzinger (Philadelphia Academy of Natural Sciences), F. Webster, R. Stumpf, S.-H. Lin, S. Murray, M. Hartman, M. Fleisher, S. Pike, A. Frake, D. Murphy, R. Coffin, S. Guest, G. Lawrence, M. Curtis, D. Kieber, T. Pfeiffer

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of several parts: (1) measurements of water column chemistry in the Delaware River and Bay; (2) the deployment of sediment traps; and (3) benthic flux measurements of chemical exchange across the sediment-water interface.

The measurements of water column chemistry, designed to determine the extent of the spring phytoplankton bloom, consisted of the following:

(1) A salinity gradient survey for stations CH to SO, conducted between 0728 and 2014 hours on 28 March.

(2) A cross bay transect, stations T3-12 through T3-2, sampled between 1646 and 2030 on 30 March. On this transect, stations T3-9 to T3-12 were sampled by small boat, while the remaining stations were sampled from the R/V Cape Henlopen.

(3) A cross bay transect, stations T4-1 through T4-9, sampled by the R/V Cape Henlopen between 2147 and 2335 on 30 March. The even numbered stations on this transect consisted of vertical CTD profiles; no chemical parameters were measured at these stations.

(4) A transect, stations CB1 to CB10, between Capes Henlopen and May at the entrance to Delaware Bay. These stations were occupied by the R/V Cape Henlopen at maximum flood tide between 0830 and 0957 hours on 31 March. Even numbered stations were sampled for complete chemical analysis, while the odd numbered stations consisted of vertical CTD profiles.

(5) A second transect at maximum ebb tide, stations CB11 to CB20, at the entrance to the bay, occupied by the R/V Cape Henlopen between 1440 and 1603 on 31 March.

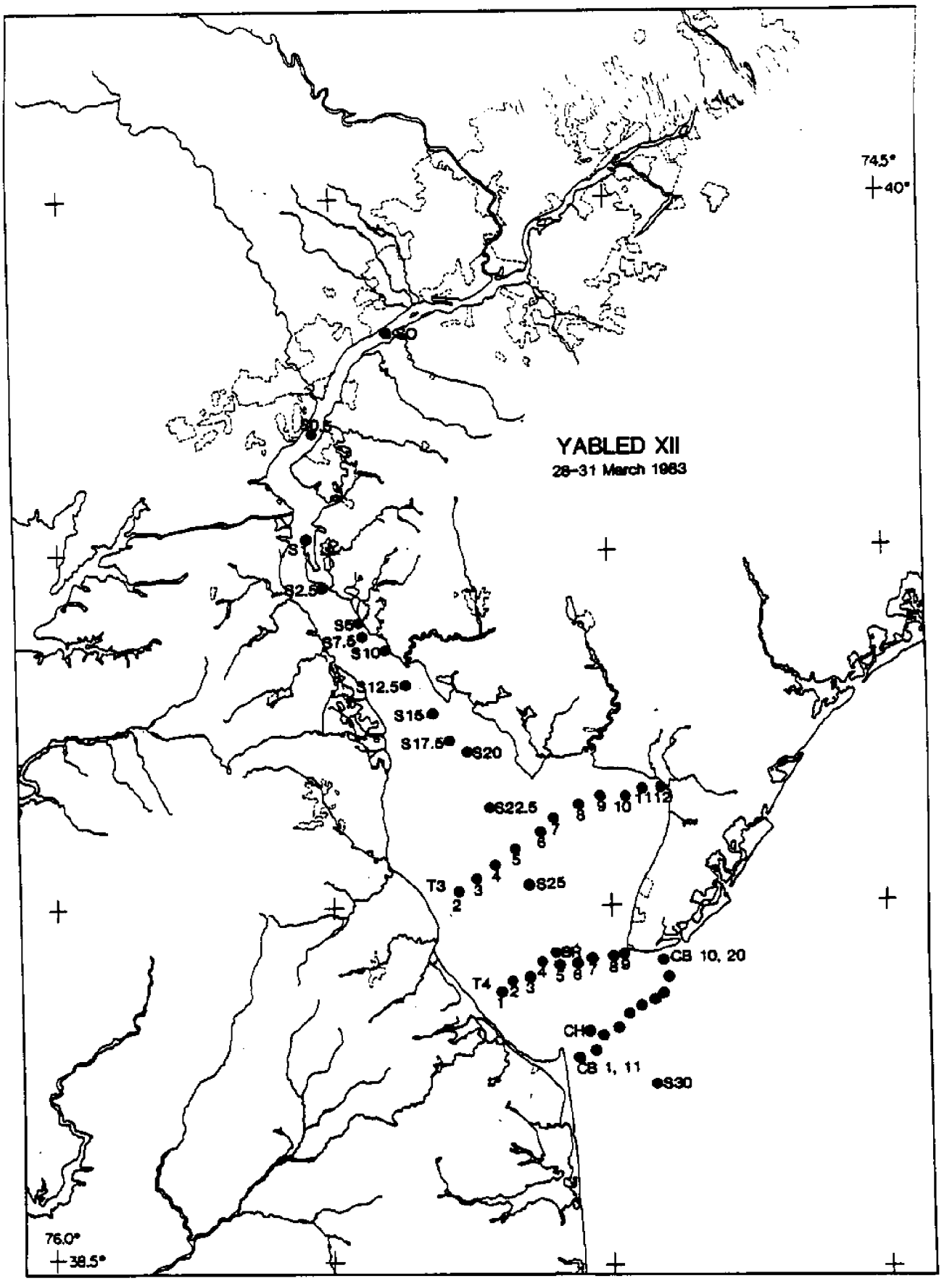
(6) An underway CTD survey of the surface temperature and salinity at the entrance to the bay which was conducted between 1615 and 1900 on 31 March.

Four sediment traps were deployed on 28 March. Attemps to recover these traps were unsuccessful.

Three different techniques were employed to study benthic fluxes: incubated box cores; pore water analysis of gravity cores; and incubated gravity cores. Box cores were taken at locations B-II (29 March) and B-III (30 March) on the following chart. The box cores were sealed with water over them and transferred to a temperature controlled room ashore. Fluxes across the sediment-water interface were determined by measuring chemical concentrations as a function of time in the water above the incubated box cores. As an independent calculation of the flux, gravity cores were taken, sectioned, and squeezed for pore water analysis at both box core locations. Dr. Sybil Seitzinger (Philadelphia Academy of Natural Sciences) took several gravity cores for the measurement of inorganic nitrogen fluxes across the sediment-water interface. These cores were returned to Philadelphia for analysis. The results of the benthic flux measurements will be given in a separate report.

The parameters measured at each station are listed in the following tables. Plankton taxonomy, bacterial counts, bacterial productivity, amino acids, ^{14}C amino acid uptake, α-keto acids, light profiles, and continuous beam attenuation spectra from 400 to 800 nanometers were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following chart.


YABLED XII
28-31 March 1983
74.5°
40°
S0
S0.5
S
S2.5
S5
S7.5
S10
S12.5
S15
S17.5
S20
S22.5
T3
S25
T4
CB 10, 20
CH
CB 1, 11
S30
76.0°
38.5°

Cruise Report

Yabled-13
10-11 May 1983

Area: Delaware River and Bay

Vessel: R/V Cape Henlopen

Chief Scientist: C. H. Culberson
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: S. Guest, S.-H. Lin, B. Howell, S. Murray, J. Scudlark, S. Pike, A. Frake, D. Murphy, J. Pennock, S. Haimbach, J. Smullen, P. Koeb

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise was designed to determine the extent of the spring phytoplankton bloom and consisted of the following parts:

(1) A salinity gradient survey for stations CH to S0, conducted between 0754 and 1823 hours on 10 May. Shipek grabs were taken at each station.

(2) A cross bay transect, stations T3-12 through T3-1, sampled between 0711 and 1155 on 11 May. On this transect, stations T3-1, and T3-9 to T3-12 were sampled by small boat, while the remaining stations were sampled from the R/V Cape Henlopen.

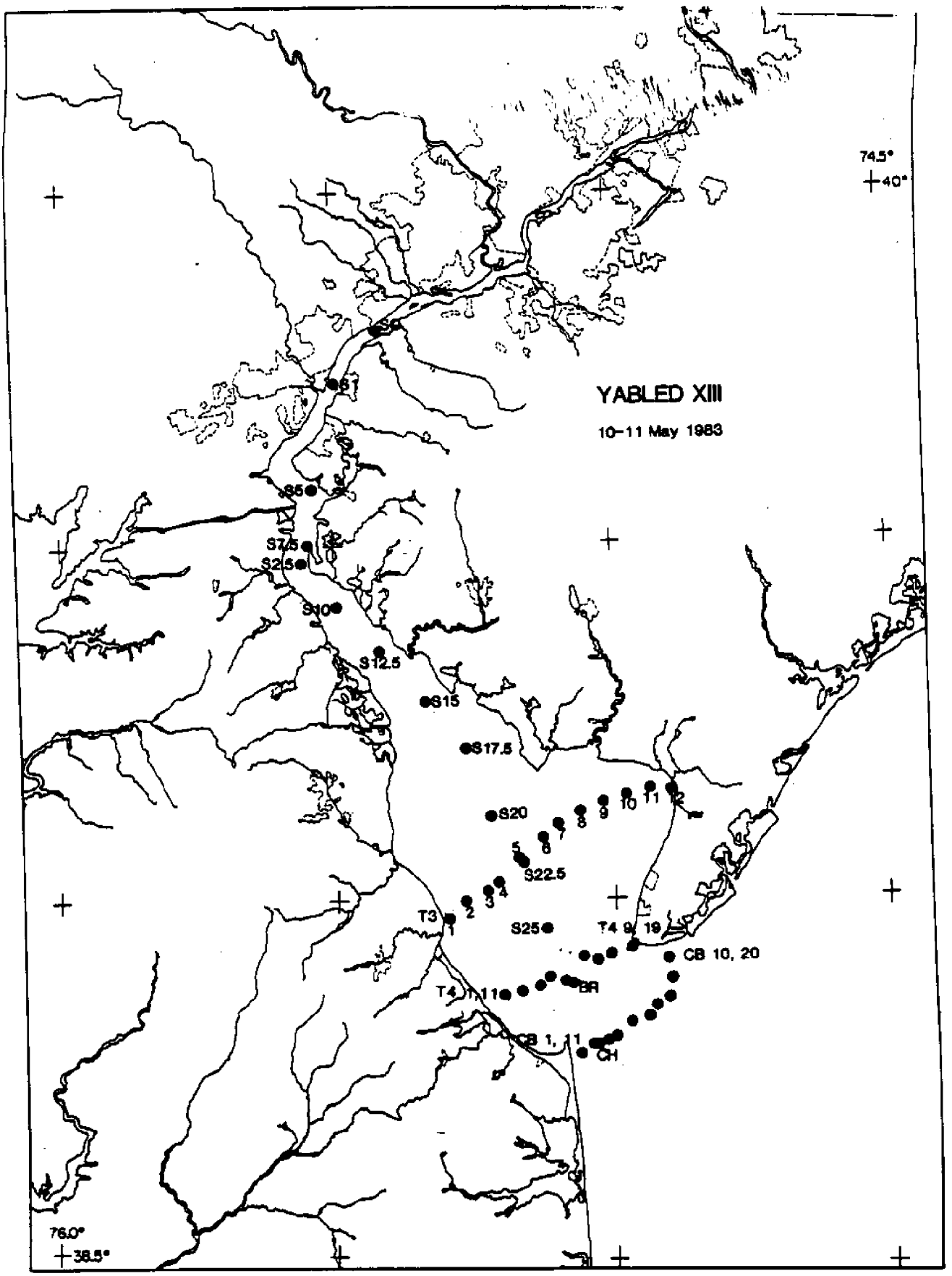
(3) A cross bay transect, stations T4-1 through T4-9, sampled by the R/V Cape Henlopen between 1310 and 1525 during the ebb tide on 11 May. The even numbered stations on this transect consisted of vertical CTD profiles; no chemical parameters were measured at these stations.

(4) A second cross bay transect at T4, stations T4-11 through T4-19, during the flood tide from 1833 to 2026 on 11 May.

(5) A transect, stations CB10 to CB1, between Capes May and Henlopen at the entrance to Delaware Bay. These stations were occupied by the R/V Cape Henlopen between 1620 and 1737 on 11 May. Stations CB2 and CB10 were the only stations of this transect sampled for chemical analysis, the remaining stations consisted of vertical CTD profiles.

The parameters measured at each station are listed in the following tables. Plankton taxonomy, bacterial counts, and light profiles were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following chart.


YABLED XIII
10–11 May 1983
74.5°
40°
76.0°
38.5°
S5
S7.5
S25
S10
S12.5
S15
S17.5
S20
S22.5
S25
T3
T4
CB 10, 20
BR
CH

Cruise Report

Yabled-14
19-21 July 1983

Area: Delaware River and Bay
Middle Atlantic Bight

Vessel: R/V Cape Henlopen

Chief Scientist: T. M. Church
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: C. Culberson, R. Biggs, S. Seitzinger (Philadelphia Academy of Natural Sciences), S. Murray, M. Hartman, M. Fleisher, J. Bird (Florida State University), S.-H. Lin, R. Stumpf, B. Howell, D. Murphy, R. Coffin, A. Frake, S. Pike, K. Tice, M. Letavic, T. Pfeiffer, J. Smullen, D. Kieber

Supporting Agency: Office of Sea Grant and
The Delaware River and Bay Authority

Cruise Summary:

This cruise consisted of several parts: (1) measurements of water column chemistry in the Delaware River and Bay; (2) the retrieval of sediment traps; and (3) benthic flux measurements of chemical exchange across the sediment-water interface.

The measurements of water column chemistry consisted of the following:

(1) A salinity gradient survey for stations CH to SO, conducted between 0649 and 2236 hours on 19 July.

(2) A cross bay transect, stations T3-12 through T3-1, sampled between 1611 and 2120 on 20 July. On this transect, stations T3-1 and T3-9 to T3-12 were sampled by small boat, while the remaining stations were sampled from the R/V Cape Henlopen.

(3) A line of stations, YT6 to YT4, extending southeast from the entrance to the bay. Stations in this series ending in P consisted only of vertical CTD profiles. These stations were occupied from 0651 to 1235 hours on 21 July.

(4) A second line of stations, YT1 to YT3, extending east from Rehoboth Beach, Delaware was occupied between 1054 and 1432 on 21 July. This series of stations was along a line of current meters operated by Dr. R. Garvine of the College of Marine Studies.

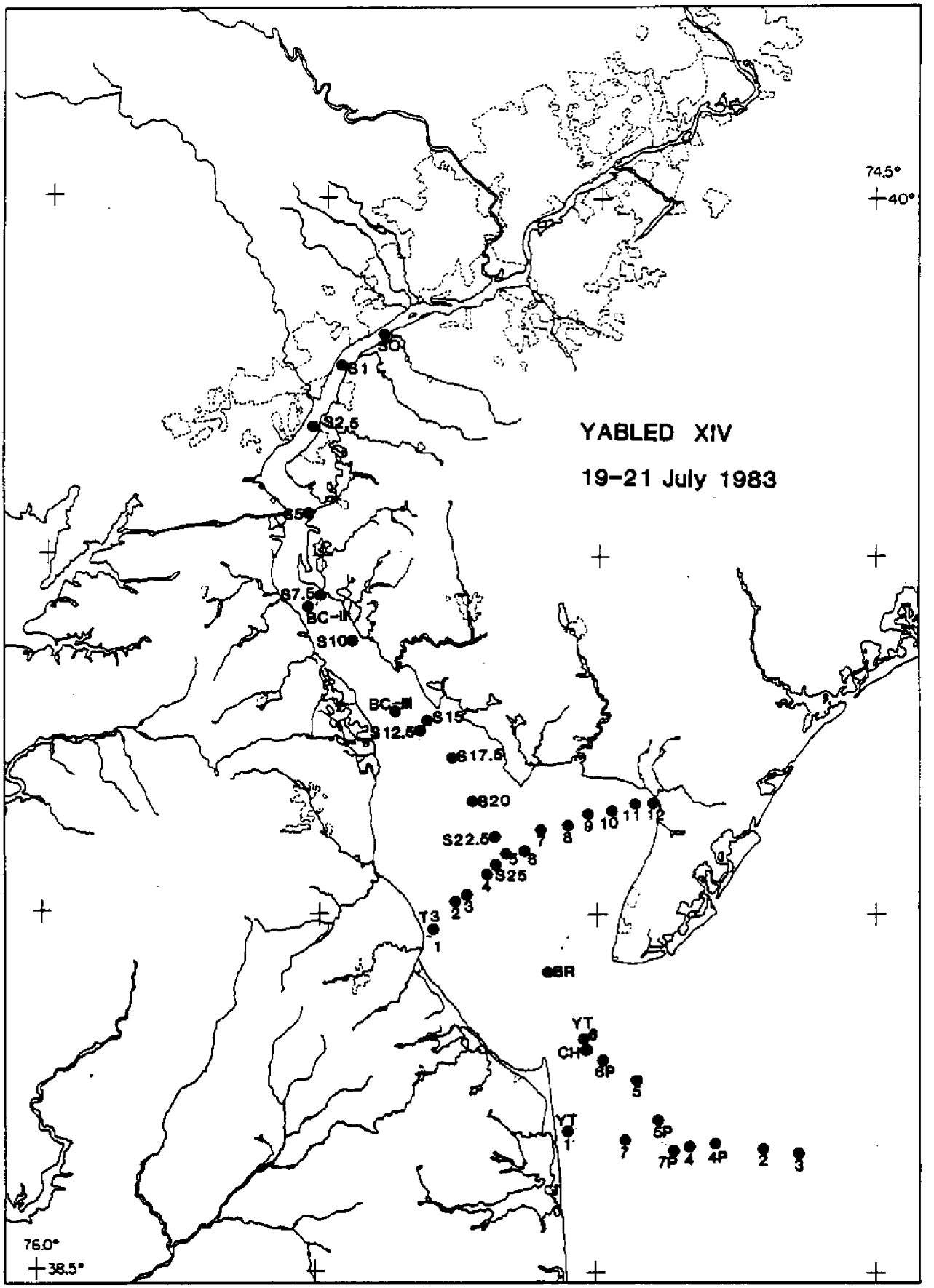
Four sediment traps, deployed on a previous cruise, were recovered on the 19th and 20th of July. Gravity cores were taken at each sediment trap location.

Three different techniques were employed to study benthic fluxes: incubated box cores; pore water analysis of gravity cores; and incubated gravity cores. Box cores were taken at locations BC-II (20 July) and BC-III (20 July) on the following chart. The box cores were sealed with water over them and transferred to a temperature controlled room ashore. Fluxes across the sediment-water interface were determined by measuring chemical concentrations as a function of time in the water above the incubated box cores. As an independent calculation of the flux, gravity cores were taken, sectioned, and squeezed for pore water analysis at both box core locations. Dr. Sybil Seitzinger (Philadelphia Academy of Natural Sciences) took several gravity cores for the measurement of inorganic nitrogen fluxes across the sediment-water interface. These cores were returned to Philadelphia for analysis. The results for the benthic flux measurements will be given in a separate report.

The parameters measured at each station are listed in the following tables. Plankton taxonomy, bacterial counts, bacterial productivity, amino acids, ^{14}C amino acid uptake, ^{14}C glucose uptake, exoprotease activity, and light profiles were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

J. Bird collected surface water samples for As, Ge, and Sn during the cruise. The results of his measurements are not listed in the data report.

Station locations are shown on the following chart.


YABLED XIV
19-21 July 1983
74.5°
40°
76.0°
38.5°
S0
S1
S2.5
S5
S7.5
BC-II
S10
BC-III
S15
S12.5
S17.5
S20
S22.5
S25
T3
BR
YT
CH
8P
5P
7P
4P

Cruise Report

Yabled-15
28 April - 2 May 1984

Area: Delaware River and Bay
Middle Atlantic Bight

Vessel: R/V Cape Henlopen

Chief Scientist: T. M. Church
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: C. Culberson, R. Biggs, J. Pennock, E. Sholkovitz and D. Mann (Woods Hole Oceanographic Institution), T. Hoering (Carnegie Institute), T. Pfeiffer, S. Pike, A. Frake, S. Guest, S. Murray, R. Coffin, L. Cifuentes, M. Hartman, C. King, A. Masse, B. Howell

Supporting Agency: Office of Sea Grant

Cruise Summary:

This cruise consisted of several parts: (1) measurements of water column chemistry in the Delaware River and Bay, and the mid-Atlantic Bight; (2) sediment sampling; and (3) radionuclide sampling along the salinity gradient.

The measurements of water column chemistry consisted of the following:

(1) A salinity gradient survey for stations RCH to RSO, conducted on 28 and 29 April. Radionuclide samples were taken at these stations.

(2) A small boat survey, stations ME1 to ME5, conducted on 28 April. The purpose of this survey was to measure the influence of marsh derived lignin on $\delta^{15}N$ and $\delta^{13}C$ during a transect from marsh to bay.

(3) A second salinity gradient survey for stations SO to CH, conducted between 0643 and 1616 on 30 April.

(4) A line of stations, OS1 to OS5, occupied on 1-2 May and extending east from the entrance to the bay.

(5) A series of stations, PT1 to PT19, designed to define the shape of the Delaware River plume south of the entrance to the bay. These stations were occupied on 2 May. Complete chemical anlayses were performed at stations PT10 through PT18 of this series. The remaining stations were vertical CTD profiles.

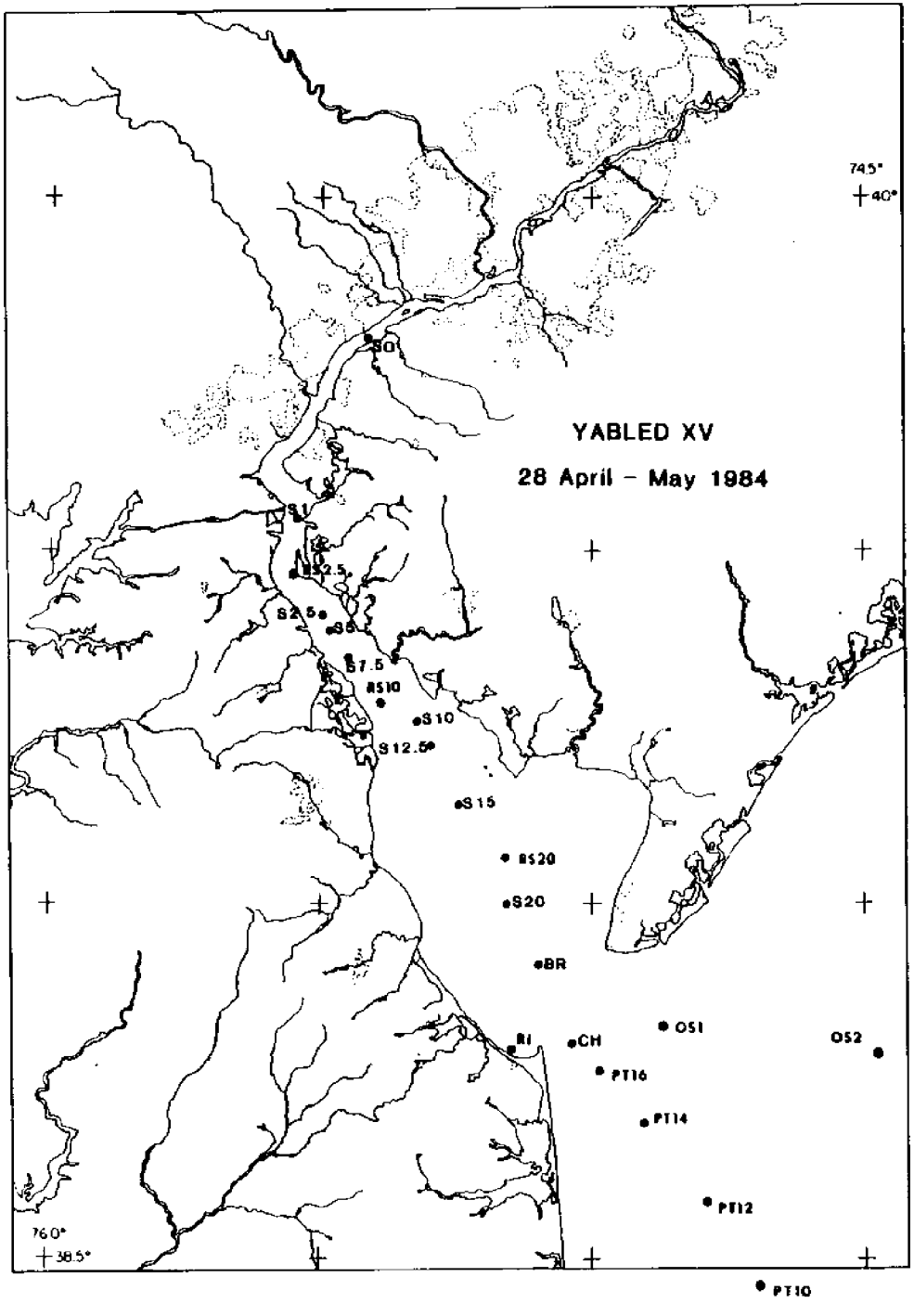
Sediment sampling during this cruise consisted of vibracores for pollen stratigraphy; Shipek grabs to measure $\delta^{15}N$ and trace metals in surface sediments; and gravity cores for benthic nutrient flux measurements and for radionuclide stratigraphy. Contact Drs. R. B. Biggs and T. M. Church of the College of Marine Studies for details of the sediment sampling.

Radionuclide samples for U, Th, Po, Pb, and Ra were taken during the RCH to RSO salinity gradient survey on 28-29 April, and on the OS offshore transect on 2 May.

The parameters measured at each station are listed in the following tables. Plankton taxonomy, bacterial counts, ^{14}C and ^{3}H amino acid uptake, $^{13}C/^{14}C$ and $^{15}N/^{14}N$ ratios in lignin, dissolved combined amino acids, dissolved free amino acids, and particulate amino acids were measured at many stations but are not listed. Isotope dilution experiments with ^{15}N and ^{33}P, to measure water column remineralization of NH_4 and PO_4, were performed at stations RS20 and RS12.5. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Dr. E. Sholkovitz collected samples for plutonium and the rare earth elements during the cruise. The results of these measurements are not given in the data report.

Station locations are shown on the following chart.


YABLED XV
28 April - May 1984
74.5°
40°
S0
S1
S2.5
S2.5
S5
S7.5
S10
S10
S12.5
S15
S20
S20
BR
RI
CH
PT16
PT14
PT12
PT10
OS1
OS2
OS3
OS4
OS5
74°
39°
76.0°
38.5°

Cruise Report

Yabled-16
16-19 July 1984

Area: Delaware River and Bay
Middle Atlantic Bight

Vessel: R/V Cape Henlopen

Chief Scientist: T. M. Church
College of Marine Studies
University of Delaware
Newark, Delaware

Participants: J. Sharp, R. Biggs, S. Murray, J. Tramontano, P. Salevan, A. Frake, S. Pike, R. Coffin, L. Cifuentes, B. Howell, D. McCann, C. Sarabun (Applied Physics Laboratory, Johns Hopkins University), S.-L. Huang, S. Church, A. Masse, J. Scudlark

Supporting Agency: Office of Sea Grant

Cruise Summary:

This cruise consisted of two parts: (1) measurements of water column chemistry in the Delaware River and Bay, and the mid-Atlantic Bight; and (2) radionuclide sampling along the salinity gradient.

The measurements of water column chemistry consisted of the following:

(1) A salinity gradient survey for stations RS30 to RS0, conducted on 16 and 17 July. Radionuclide samples were taken at these stations.

(2) A second salinity gradient survey for stations S0 to CH, conducted between 0607 and 1451 on 18 July.

(3) A small boat survey, stations MB1 to MB6, of the Great Salt Marsh and Canary Creek at Lewes, Delaware was conducted on 16 July. The purpose of this survey was to measure the influence of marsh derived lignin on $\delta^{15}N$ and $\delta^{13}C$ during a transect from marsh to bay.

(4) A line of stations, OS1 to OS6, occupied on 19 July and extending east from the entrance to the bay. Radionuclide samples were taken at some of these stations.

Radionuclide samples were taken during the RS30 to RS0 salinity gradient survey on 16-17 July, and on the OS offshore transect on 19 July.

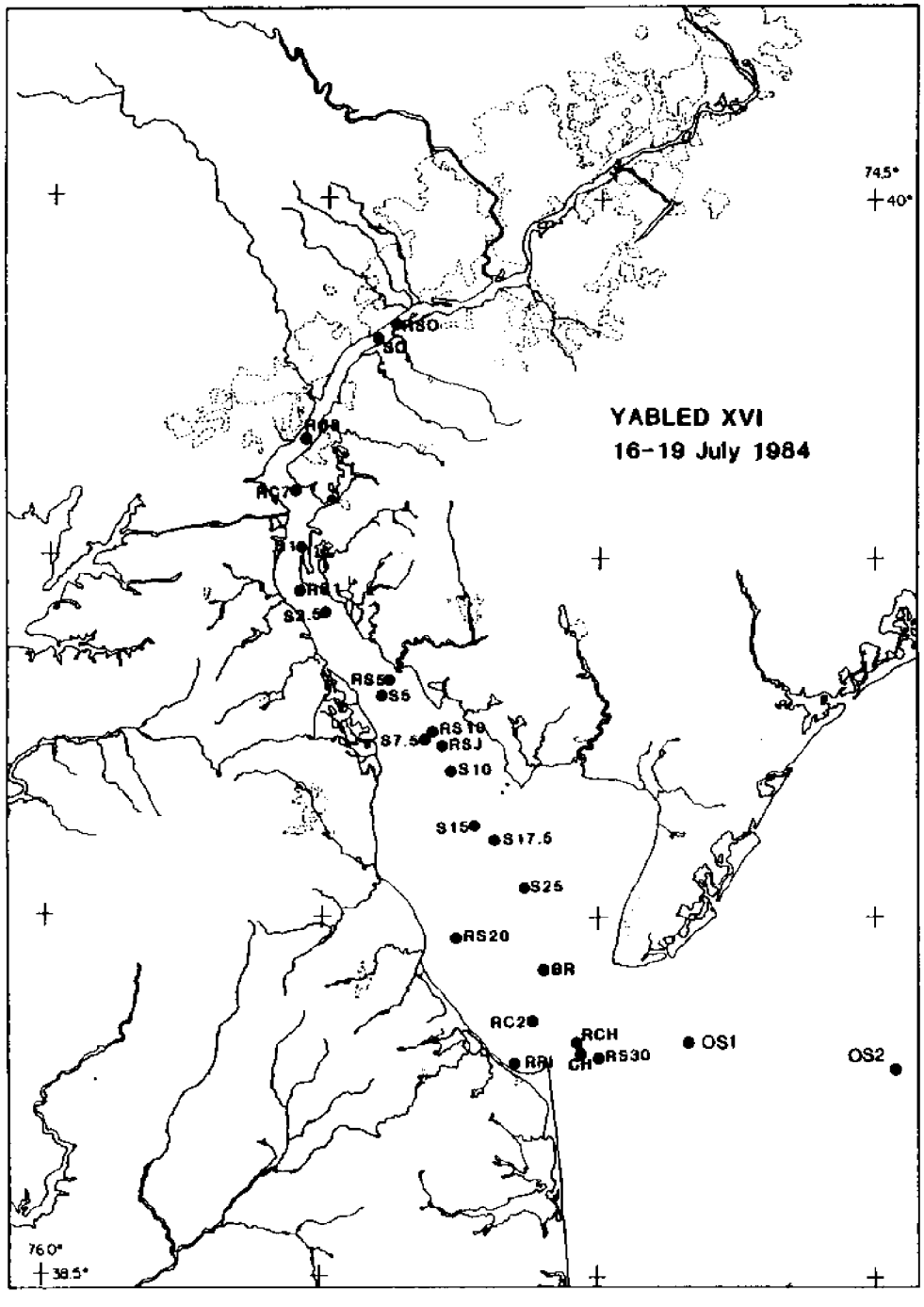
Gravity cores for benthic nutrient flux measurements and for radiochronology; and Shipek grabs for the determination of $\delta^{15}N$ and trace metals in surface sediments were taken at stations RS20, RC2, RRI, RSJ, RS5, RS1, RC7, RC8, and S25.

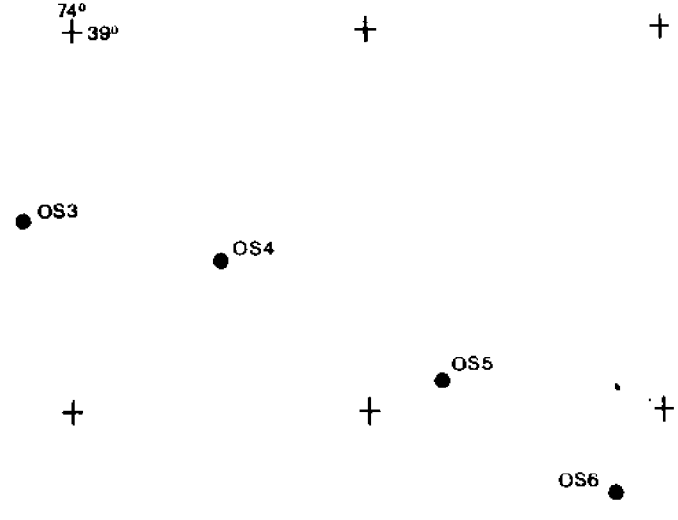
R. Biggs and C. Sarabun conducted 200 KHz acoustic profiling of the water column to resolve concentrations of particulates and strong density gradients.

A current meter was deployed at Loran coordinates 27039X, 42567Y at 2150 hours on 18 July for Dr. R Garvine of the College of Marine Studies.

The parameters measured at each station are listed in the following tables. Bacterial counts, $^{13}C/^{14}C$ and $^{15}N/^{14}N$ ratios in lignin, dissolved combined amino acids, dissolved free amino acids, and particulate amino acids were measured at many stations but are not listed. In addition, surface temperature and salinity were continuously recorded during the cruise. Light energy in the visible spectrum was recorded and integrated for the entire cruise with a quantum meter.

Station locations are shown on the following chart.


YABLED XVI
16-19 July 1984
74.5°
40°
RSO
SO
RC7
S10
RS5
S5
S7.5
RS19
RSJ
S10
S15
S17.5
S25
RS20
BR
RC2
RCH
RS30
OS1
OS2
76.0°
38.5°


74°
39°
OS3
OS4
OS5
OS6

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
CH	1	31.574	.	22.62	214.5	96	8.090	2156	0.86	1.63	0.35	4.83	4.35	186	31	0.42
BR	1	30.795	.	22.41	234.5	104	8.170	2108	0.46	0.23	0.16	0.92	1.80	194	13	0.62
S25	1	27.813	.	22.44	242.0	105	8.310	1949	0.32	0.60	0.16	0.85	1.71	244	31	0.40
S20	1	22.100	.	22.61	231.0	97	8.050	1651	1.29	39.40	1.81	2.28	8.91	282	19	0.35
S20	8	26.147	.	22.80	221.0	96	8.210	1870	.	.	.	.	.	.	.	.
S15	1	15.248	.	23.37	239.5	98	7.870	1340	1.79	73.00	2.91	0.17	11.00	370	10	0.21
S10	1	10.414	.	24.02	247.5	100	7.790	1117	1.71	60.60	2.40	1.50	6.76	346	18	0.34
S5	1	4.934	.	23.86	227.0	89	7.490	869	1.71	156.00	3.24	6.02	1.49	354	59	0.45
S2.5	1	2.456	.	23.81	209.0	80	7.310	781	1.96	173.00	2.33	8.31	4.26	391	118	0.51
SO	1	0.622	9273	23.85	146.0	56	6.930	699	2.49	174.00	4.53	3.83	5.07	405	131	0.23
F1	1	8.284	.	23.31	221.5	87	7.480	1007	2.14	105.00	2.49	0.17	2.21	.	35	.
F1	11	8.227C	.	23.43C	223.5	88	.	.	.	.	.	.	.	.	.	.
F2	1	12.621	.	23.80	228.5	93	7.670	1219	1.96	82.50	2.26	1.17	13.60	.	25	.
F3	1	16.772	.	22.54	237.5	97	7.860	1404	3.46	61.50	2.92	0.24	11.90	.	23	.
F4	1	12.598	.	23.25	226.0	91	7.680	1213	1.98	81.10	2.55	1.28	6.72	.	31	.
F4	7	14.207	.	23.22	216.5	88	7.710	1282	1.77	75.00	2.54	0.38	22.90	.	35	.
F5	1	6.917	.	23.24	235.5	92	7.580	952	1.55	109.00	3.37	0.20	1.58	.	30	.
F6	1	12.491	.	23.78	258.0	105	7.870	1218	1.85	80.80	2.18	1.32	6.85	.	34	.
F7	1	17.294	.	23.75	257.5	108	7.990	1427	1.85	58.30	2.76	0.81	11.50	.	29	.
F8	1	12.016	.	23.73	244.0	99	7.800	1186	1.77	85.70	2.85	0.20	5.29	.	26	.
F9	1	7.223	.	23.78	231.5	92	7.570	959	1.53	114.00	3.20	0.13	1.58	.	32	.
F10	1	12.661	.	23.54	251.0	102	7.850	1213	1.70	81.00	2.88	0.26	5.97	.	29	.
F10	11	17.317	.	22.97	216.0	89	7.780	1426	2.12	59.80	2.94	0.42	15.50	.	31	.
F11	1	17.290	.	23.06	254.5	105	7.990	1423	1.48	56.10	2.40	0.23	9.43	.	40	.
F12	1	12.572	.	23.45	244.5	99	7.820	1212	1.67	74.60	2.86	0.30	5.71	.	52	.
F13	1	7.024	.	23.37	223.0	87	7.500	947	1.76	115.00	2.84	0.26	2.20	.	46	.
F14	1	12.243	.	23.55	230.0	93	7.690	1196	1.84	79.20	2.93	0.26	5.71	.	43	.
F15	1	17.770	.	22.73	236.5	98	7.900	1448	1.59	55.50	2.79	0.61	10.80	.	34	.
F16	1	11.872	.	23.96	235.0	96	7.710	1181	1.78	85.30	2.98	0.23	5.36	.	25	.
F17	1	7.281	.	23.02	243.0	95	7.660	966	1.48	108.00	3.14	0.26	1.85	.	39	.
F18	1	12.277	.	23.60	232.5	94	7.690	1198	1.70	83.70	2.98	0.23	5.97	.	38	.
F19	1	16.672	.	22.55	235.0	96	7.860	1404	1.78	62.20	2.85	0.57	11.40	.	10	.
F20	1	13.988	.	23.18	224.0	91	7.710	1274	1.81	70.50	2.94	0.19	8.11	.	42	.
F20	5	13.880	.	23.19	225.5	92	7.720	1270	1.89	75.80	2.92	0.42	8.20	.	44	.
F21	1	7.356	.	23.16	221.0	87	7.490	969	1.59	107.00	2.92	0.49	2.03	.	36	.
F22	1	12.888	.	23.04	226.5	91	7.680	1226	1.78	79.00	2.87	0.26	6.58	.	38	.
F23	1	17.408	.	22.52	225.0	92	7.840	1431	1.73	57.70	2.95	0.91	11.40	.	38	.
F24	1	12.079	.	23.07	227.5	91	7.680	1187	1.76	83.90	2.87	0.15	5.36	.	28	.
F25	1	7.276	.	23.07	221.0	86	7.480	962	1.62	86.90	3.02	0.26	1.55	.	40	.
F26	1	12.648	.	23.00	227.0	91	7.700	1213	1.84	81.60	2.67	0.23	6.06	.	37	.
F27	1	17.076	.	22.46	232.0	95	7.850	1420	1.65	59.80	2.65	0.49	10.40	.	38	.
F28	1	12.040	.	23.10	241.0	97	7.770	1190	1.51	85.50	2.03	0.26	5.71	.	35	.
F28	7	14.287	.	23.13	221.0	90	7.710	1289	1.76	73.00	2.99	0.42	8.38	.	32	.
F29	1	7.170	.	22.91	236.5	92	7.590	963	1.59	108.00	3.10	0.30	1.85	.	42	.
F30	1	12.432	.	23.43	250.5	101	7.810	1210	1.76	78.50	2.09	0.34	6.01	.	49	.
F31	1	16.921	.	22.80	237.5	98	7.870	1417	1.70	56.30	2.67	0.42	11.50	.	35	.
F32	1	13.509	.	23.19	227.0	92	7.710	1250	1.84	74.60	2.78	0.49	7.50	.	36	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
CH	1	42.7	6.20	0.45	22.7	2.2	5.2	24.99	167.0	76.1	.	.
BR	1	45.4	5.60	0.48	17.9	2.0	3.8	21.62	108.0	35.5	.	.
S25	1	29.0	5.43	0.47	16.6	2.3	2.5	16.35	57.2	28.6	.	250
S20	1	24.6	3.52	0.27	.	1.2	4.9	11.59	35.2	31.2	.	150
S20	8	.	.	.	.	.	.	.	.	.	.	.
S15	1	24.0	5.02	0.54	10.5	1.2	8.0	10.33	39.3	50.2	0.35	130
S10	1	38.0	6.47	0.76	8.8	1.2	12.0	23.02	43.9	77.9	1.20	100
S5	1	75.9	10.80	1.23	7.2	1.4	20.5	32.03	60.5	84.1	2.20	.
S2.5	1	68.4	12.30	1.49	9.3	1.2	22.0	34.84	51.9	112.0	2.30	.
S0	1	65.2	10.60	1.53	10.5	1.9	14.9	33.63	79.9	106.0	.	60
F1	1	109.0	16.50	2.68	.	.	77.8	40.70	.	.	.	.
F1	11	.	.	.	.	.	.	.	.	.	.	.
F2	1	57.5	9.65	1.50	.	.	30.8	17.94	.	.	2.70	50
F3	1	24.9	3.87	0.55	.	.	9.3	9.51	.	.	1.40	100
F4	1	37.9	7.36	0.95	.	.	18.5	11.01	36.5	67.6	1.80	60
F4	7	40.0	5.58	0.70	.	.	.	19.98	.	.	.	.
F5	1	51.2	10.70	1.18	.	.	19.6	31.40	.	.	2.00	70
F6	1	46.0	8.10	0.79	.	.	14.4	18.35	.	.	1.40	82
F7	1	17.2	4.62	0.55	.	.	7.5	11.83	.	.	0.75	130
F8	1	43.4	6.59	0.77	.	.	13.6	17.40	.	.	1.20	80
F9	1	82.1	13.40	1.61	.	.	31.0	33.44	.	.	2.60	50
F10	1	93.3	17.00	0.66	.	.	9.8	15.50	51.9	104.0	1.10	120
F10	11	36.5	6.19	2.62	.	.	.	13.05	.	.	.	.
F11	1	16.8	3.05	0.33	.	.	6.4	11.01	.	.	.	.
F12	1	31.1	7.04	0.54	.	.	9.2	11.01	.	.	.	.
F13	1	276.0	29.60	4.21	.	.	106.7	47.30	.	.	.	.
F14	1	34.8	5.97	0.85	.	.	.	12.23	.	.	.	.
F15	1	31.7	4.59	0.39	.	.	6.6	5.71	.	.	.	.
F16	1	41.1	5.06	0.59	.	.	11.3	5.30	.	.	.	.
F17	1	45.7	6.49	0.81	.	.	.	13.46	.	.	.	.
F18	1	21.7	3.87	0.47	.	.	4.9	4.89	.	.	.	.
F19	1	24.9	3.63	0.36	.	.	5.3	2.73	.	.	.	.
F20	1	48.2	7.74	1.22	.	.	26.9	8.97	.	.	.	.
F20	5	83.2	14.30	1.08	.	.	24.2	8.70	.	.	.	.
F21	1	83.8	12.50	2.76	.	.	41.1	25.55	.	.	.	.
F22	1	32.3	5.86	0.72	.	.	13.8	5.87	.	.	.	.
F23	1	26.2	4.12	0.45	.	.	7.2	4.62	.	.	.	.
F24	1	19.0	4.99	0.65	.	.	12.3	8.97	.	.	.	.
F25	1	43.7	8.37	1.04	.	.	17.0	23.65	.	.	.	.
F26	1	44.7	6.11	0.80	.	.	13.1	12.23	.	.	.	.
F27	1	50.2	6.11	0.59	.	.	9.6	8.16	.	.	1.30	90
F28	1	68.1	6.93	0.68	.	.	8.8	13.86	51.9	55.6	1.60	100
F28	7	89.4	9.45	1.61	.	.	.	12.23	.	.	.	.
F29	1	56.1	11.70	1.54	.	.	24.1	40.27	.	.	2.80	50
F30	1	54.0	8.77	0.99	.	.	16.1	19.03	.	.	1.90	70
F31	1	35.6	6.56	0.71	.	.	16.3	13.32	.	.	1.50	125
F32	1	27.5	5.37	0.62	.	.	16.5	7.34	.	.	1.50	60

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar) Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
CH	1	27.3	41.2	.	.	0.64	14.65	15.89	.	15.3	0.42	0.376	.
BR	1	21.8	39.4	.	.	0.85	14.14	17.31	.	13.8	0.41	0.396	.
S25	1	12.7	60.9	.	.	0.17	16.35	15.89	.	7.6	0.17	0.198	.
S20	1	29.1	60.9	.	.	0.90	28.45	23.60	.	21.4	0.63	0.241	.
S20	8	.	.	.	.	.	.	.	.	.	.	.	.
S15	1	21.8	41.2	.	.	0.68	30.66	31.47	.	36.7	0.77	0.338	.
S10	1	45.5	34.0	.	.	0.25	38.84	37.61	.	58.1	1.22	0.579	.
S5	1	56.4	41.2	.	.	0.85	40.03	39.03	.	85.7	1.10	1.038	.
S2.5	1	1301.5	53.7	.	.	0.42	48.04	45.01	.	94.8	0.87	1.289	.
S0	1	2149.7	220.2	.	.	2.19	53.83	44.69	.	122.4	0.84	0.285	.
F1	1	20.0	14.3	.	.	0.17	37.31	35.56	.	73.4	1.20	0.956	.
F1	11	.	.	.	.	.	.	.	.	.	.	.	.
F2	1	10.9	64.5	.	.	2.70	40.20	69.08	.	119.3	1.67	0.767	.
F3	1	1.8	48.3	.	.	0.46	28.28	21.87	.	38.2	0.82	0.034	.
F4	1	16.4	26.9	.	.	0.17	39.52	37.45	.	47.4	1.02	0.584	.
F4	7	.	.	.	.	.	.	.	.	.	.	.	.
F5	1	85.6	21.5	.	.	0.17	39.18	37.45	.	82.6	1.03	1.327	.
F6	1	14.6	21.5	.	.	0.17	39.69	32.57	.	50.5	1.00	0.430	.
F7	1	10.9	35.8	.	.	0.68	30.49	22.82	.	33.6	0.62	0.256	.
F8	1	18.2	17.9	.	.	0.17	39.69	31.63	.	52.0	1.02	.	.
F9	1	34.6	25.1	.	.	0.41	40.89	39.34	.	64.2	1.04	0.912	.
F10	1	18.2	26.9	.	.	0.17	38.33	31.95	.	45.9	0.96	0.236	.
F10	11	.	.	.	.	.	.	.	.	.	.	.	.
F11	1	12.7	37.6	.	.	0.63	28.96	24.23	.	30.6	0.25	0.034	.
F12	1	16.4	68.0	.	.	0.08<	36.29	35.25	.	48.9	0.88	0.478	.
F13	1	23.7	71.6	.	.	0.92	39.01	36.35	.	82.6	1.09	1.134	.
F14	1	36.4	60.9	.	.	0.92	42.42	36.67	.	48.9	1.18	0.454	.
F15	1	9.1	43.0	.	.	0.46	34.07	25.34	.	29.1	0.64	0.256	.
F16	1	69.2	71.6	.	.	0.29	39.01	37.14	.	9.2	0.87	0.140	.
F17	1	80.1	26.9	.	.	0.68	35.43	37.77	.	73.4	1.99	1.014	.
F18	1	30.9	14.3	.	.	0.76	42.25	39.34	.	55.1	1.02	0.024<	.
F19	1	12.7	44.8	.	.	0.51	38.33	26.12	.	32.1	0.61	0.145	.
F20	1	9.1	16.1	.	.	0.08<	37.82	32.42	.	42.8	0.95	0.241	.
F20	5	.	.	.	.	.	.	.	.	.	.	.	.
F21	1	71.0	19.7	.	.	0.34	36.80	35.25	.	70.4	1.03	1.207	.
F22	1	21.8	57.3	.	.	0.83	34.07	34.62	.	45.9	0.93	0.285	.
F23	1	7.3	34.0	.	.	0.78	37.82	26.59	.	1.5<	0.41	0.034	.
F24	1	10.9	16.1	.	.	0.66	36.46	33.05	.	48.9	1.09	0.241	.
F25	1	30.9	23.3	.	.	.	.	.	.	.	.	.	.
F26	1	7.3	9.0	.	.	0.15	36.46	32.26	.	47.4	0.92	0.285	.
F27	1	9.1	50.1	.	.	0.51	35.09	24.23	.	1.5	0.17	0.251	.
F28	1	16.4	17.9	.	.	0.75	35.60	34.62	.	47.4	0.96	0.352	.
F28	7	.	.	.	.	.	.	.	.	.	.	.	.
F29	1	262.1	43.0	.	.	0.49	36.63	36.82	.	78.0	1.08	1.477	.
F30	1	16.4	71.6	.	.	0.66	36.80	34.62	.	50.5	0.98	0.401	.
F31	1	12.7	69.8	.	.	0.68	36.29	26.59	.	1.5<	0.26	0.227	.
F32	1	7.3	21.5	.	.	0.63	36.29	35.56	.	50.5	0.93	0.381	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston) Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
CH	1	.	9.2	.	.	.	0.39	.	0.048	.	.
BR	1	.	11.2	106	.	.	1.33	0.94	0.030	.	.
S25	1	.	20.1	75	.	.	1.05	1.88	.	.	.
S20	1	.	9.5	75	.	.	0.68	0.41	0.018	.	.
S20	8	.	.	.	.	.	.	.	.	.	.
S15	1	.	7.1	81	.	.	0.72	3.79	0.008	.	.
S10	1	.	10.6	129	.	.	0.95	1.97	0.009	.	.
S5	1	.	15.5	141	.	.	0.66	1.88	0.012	.	.
S2.5	1	.	19.9	165	.	.	1.13	2.95	0.016	.	.
S0	1	.	18.6	181	.	.	0.82	2.63	0.033	.	.
F1	1	.	.	.	.	.	.	.	.	.	.
F1	11	.	.	.	.	.	.	.	.	.	.
F2	1	.	.	.	.	.	.	.	.	.	.
F3	1	.	.	.	.	.	.	.	.	.	.
F4	1	.	.	.	.	.	.	.	.	.	.
F4	7	.	.	.	.	.	.	.	.	.	.
F5	1	.	.	.	.	.	.	.	.	.	.
F6	1	.	.	.	.	.	.	.	.	.	.
F7	1	.	.	.	.	.	.	.	.	.	.
F8	1	.	.	.	.	.	.	.	.	.	.
F9	1	.	.	.	.	.	.	.	.	.	.
F10	1	.	.	.	.	.	.	.	.	.	.
F10	11	.	.	.	.	.	.	.	.	.	.
F11	1	.	.	.	.	.	.	.	.	.	.
F12	1	.	.	.	.	.	.	.	.	.	.
F13	1	.	.	.	.	.	.	.	.	.	.
F14	1	.	.	.	.	.	.	.	.	.	.
F15	1	.	.	.	.	.	.	.	.	.	.
F16	1	.	.	.	.	.	.	.	.	.	.
F17	1	.	.	.	.	.	.	.	.	.	.
F18	1	.	.	.	.	.	.	.	.	.	.
F19	1	.	.	.	.	.	.	.	.	.	.
F20	1	.	.	.	.	.	.	.	.	.	.
F20	6	.	.	.	.	.	.	.	.	.	.
F21	1	.	.	.	.	.	.	.	.	.	.
F22	1	.	.	.	.	.	.	.	.	.	.
F23	1	.	.	.	.	.	.	.	.	.	.
F24	1	.	.	.	.	.	.	.	.	.	.
F25	1	.	.	.	.	.	.	.	.	.	.
F26	1	.	.	.	.	.	.	.	.	.	.
F27	1	.	.	.	.	.	.	.	.	.	.
F28	1	.	.	.	.	.	.	.	.	.	.
F28	7	.	.	.	.	.	.	.	.	.	.
F29	1	.	.	.	.	.	.	.	.	.	.
F30	1	.	.	.	.	.	.	.	.	.	.
F31	1	.	.	.	.	.	.	.	.	.	.
F32	1	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
CH	1	CTD	09/09/81	0620	38 48.9 N	75 3.5 W	-3.0	21.8
BR	1	CTD	09/09/81	0734	38 55.1 N	75 5.6 W	9.1	15.0
S25	1	CTD	09/09/81	0914	39 3.8 N	75 10.1 W	26.4	13.4
S20	1	CTD	09/09/81	1037	39 10.6 N	75 15.8 W	41.3	9.9
S20	8	CTD	09/09/81	1037	39 10.6 N	75 15.8 W	41.3	9.9
S15	1	CTD	09/09/81	1215	39 19.8 N	75 24.9 W	62.5	16.3
S10	1	CTD	09/09/81	1334	39 24.7 N	75 30.2 W	75.0	7.8
S5	1	CTD	09/09/81	1529	39 35.4 N	75 33.3 W	97.3	9.0
S2.5	1	CTD	09/09/81	1638	39 40.7 N	75 31.3 W	109.6	13.7
S0	1	CTD	09/09/81	1815	39 47.5 N	75 24.9 W	126.5	13.4
F1	1	CTD	09/10/81	0719	39 30.3 N	75 33.9 W	87.4	15.5
F1	11	CTD	09/10/81	0719	39 30.3 N	75 33.9 W	87.4	15.5
F2	1	CTD	09/10/81	0827	39 23.8 N	75 31.4 W	75.0	9.3
F3	1	CTD	09/10/81	0938	39 18.2 N	75 23.5 W	58.9	13.3
F4	1	CTD	09/10/81	1058	39 26.7 N	75 32.3 W	79.7	10.8
F4	7	CTD	09/10/81	1058	39 26.7 N	75 32.3 W	79.7	10.8
F5	1	CTD	09/10/81	1150	39 32.5 N	75 32.5 W	91.7	17.7
F6	1	CTD	09/10/81	1302	39 23.3 N	75 29.0 W	71.9	9.3
F7	1	CTD	09/10/81	1412	39 14.1 N	75 18.5 W	48.8	13.7
F8	1	CTD	09/10/81	1544	39 23.0 N	75 28.0 W	70.5	11.1
F9	1	CTD	09/10/81	1646	39 29.9 N	75 33.1 W	86.9	11.0
F10	1	CTD	09/10/81	1755	39 22.8 N	75 28.1 W	70.3	15.2
F10	11	CTD	09/10/81	1755	39 22.8 N	75 28.1 W	70.3	15.2
F11	1	CTD	09/10/81	1853	39 16.8 N	75 21.4 W	55.2	16.1
F12	1	CTD	09/10/81	1950	39 25.4 N	75 30.8 W	76.5	12.8
F13	1	CTD	09/10/81	2049	39 36.2 N	75 33.9 W	99.0	14.0
F14	1	CTD	09/10/81	2139	39 29.9 N	75 33.5 W	86.7	13.1
F15	1	CTD	09/10/81	2338	39 22.5 N	75 28.1 W	69.9	10.6
F16	1	CTD	09/10/81	2334	39 29.3 N	75 33.3 W	85.9	9.8
F17	1	CTD	09/11/81	0004	39 32.7 N	75 32.3 W	92.2	17.4
F18	1	CTD	09/11/81	0040	39 27.6 N	75 33.5 W	82.4	14.2
F19	1	CTD	09/11/81	0146	39 17.8 N	75 22.6 W	57.6	14.5
F20	1	CTD	09/11/81	0304	39 24.0 N	75 29.2 W	73.0	9.1
F20	5	CTD	09/11/81	0304	39 24.0 N	75 29.2 W	73.0	9.1
F21	1	CTD	09/11/81	0403	39 30.8 N	75 32.8 W	88.6	13.0
F22	1	CTD	09/11/81	0506	39 21.8 N	75 27.1 W	67.3	14.1
F23	1	CTD	09/11/81	0546	39 17.0 N	75 21.6 W	55.6	15.1
F24	1	CTD	09/11/81	0635	39 23.1 N	75 28.1 W	70.7	11.1
F25	1	CTD	09/11/81	0725	39 30.3 N	75 32.9 W	87.7	12.5
F26	1	CTD	09/11/81	0820	39 23.3 N	75 29.0 W	71.9	11.2
F27	1	CTD	09/11/81	0902	39 19.0 N	75 24.0 W	60.5	16.5
F28	1	CTD	09/11/81	0955	39 25.6 N	75 31.0 W	77.0	10.7
F28	7	CTD	09/11/81	0955	39 25.6 N	75 31.0 W	77.0	10.7
F29	1	CTD	09/11/81	1042	39 32.9 N	75 32.2 W	92.6	14.2
F30	1	CTD	09/11/81	1138	39 26.4 N	75 32.8 W	79.8	11.6
F31	1	CTD	09/11/81	1238	39 19.3 N	75 24.8 W	61.6	14.4
F32	1	CTD	09/11/81	1337	39 24.1 N	75 29.5 W	73.5	11.6

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
SO	1	0.165	2534	10.23	212.5	61	6.920	714	2.35	179.00	6.92	38.80	33.10	458	66	.
S2.5	1	2.643	.	10.06	272.5	79	7.130	804	1.94	188.00	13.60	14.10	28.90	451	111	.
S5	1	5.856	.	9.59	310.5	91	7.400	950	1.64	161.00	11.40	11.10	30.10	414	45	.
S7.5	1	7.781	.	9.66	315.0	93	7.490	1037	1.78	146.00	9.17	9.08	30.90	389	40	.
S10	1	10.184	.	9.92	315.5	96	7.590	1153	1.62	111.00	7.72	8.24	30.10	399	41	.
S15	1	14.917	.	9.47	313.5	97	7.690	1373	1.83	97.30	4.56	7.61	27.40	347	43	.
S15	11	17.569	.	9.54	305.5	96	7.720	1500	1.86	80.60	3.40	6.93	26.60	.	44	.
S20	1	20.707	.	9.32	306.0	98	7.760	1645	1.83	56.50	2.45	6.68	23.90	310	32	.
S20	15	24.299	.	9.58	295.0	97	7.790	1811	1.83	37.70	2.01	6.65	20.90	286	40	.
S25	1	25.205	.	9.45	298.0	98	7.810	1856	1.78	40.30	1.97	7.05	20.20	271	28	.
S25	12	25.316	.	9.45	297.0	98	7.810	1862	1.86	42.60	2.05	7.18	19.90	276	33	.
S27.5	1	29.222	.	9.99	287.0	98	7.820	2042	1.56	23.50	2.01	7.93	16.40	232	27	.
BR	2	30.001	.	9.82	283.0	97	7.820	2078	1.48	17.80	1.53	6.86	14.60	236	14	.
CH	2	31.384	.	10.30	274.0	96	7.830	2156	1.32	10.20	1.02	6.30	11.30	188	13	.
CH	27	31.393	.	10.35	274.0	96	7.840	2156	1.35	9.94	0.97	6.49	11.00	192	14	.

samples collected by trace metal clean peristaltic pump
negative depth is height above bottom

TC1	-1	30.165	.	.	281.0	.	7.820	2089	1.46	20.50	2.08	7.91	16.60	.	21	.
TC1	-2	30.158	.	.	280.5	.	7.820	2090	1.49	20.50	1.98	7.69	16.50	.	21	.
TC1	-3	30.185	.	.	280.5	.	7.830	2092	1.44	20.20	1.99	7.72	16.20	.	17	.
TC2	-1	30.693	.	.	276.5	.	7.830	2119	1.49	16.70	1.65	7.38	14.40	.	20	.
TC2	-2	30.706	.	.	278.0	.	7.830	2120	1.36	16.20	1.64	7.35	14.40	.	17	.
TC2	-3	30.700	.	.	277.0	.	7.840	2117	1.41	16.30	1.65	7.38	14.30	.	21	.
TC3	-1	30.800	.	.	276.5	.	7.830	2123	1.38	15.50	1.52	7.44	14.00	.	49	.
TC3	-2	30.811	.	.	276.0	.	7.830	2125	1.36	14.90	1.52	7.44	14.00	.	30	.
TC3	-3	30.815	.	.	276.0	.	7.830	2124	1.41	15.40	1.50	7.26	14.10	.	34	.
TC4	-1	30.388	.	.	281.0	.	7.820	2099	1.49	18.20	1.93	7.75	17.00	.	25	.
TC4	-2	30.306	.	.	282.0	.	7.820	2099	1.46	18.40	1.94	7.72	15.70	.	54	.
TC4	-3	30.235	.	.	282.5	.	7.830	2096	1.60	19.20	1.96	7.72	15.80	.	44	.
TC5	-1	15.947	.	.	.	.	.	.	1.71	91.90	4.02	7.29	26.90	.	36	.
TC5	-2	15.921	.	.	304.0	.	7.690	1422	1.84	92.50	3.83	7.16	25.80	.	45	.
TC5	-3	15.741	.	.	305.5	.	7.690	1414	1.84	91.10	4.16	7.20	27.20	.	51	.
TC6	-1	11.164	.	.	309.5	.	7.620	.	1.76	119.00	6.35	8.16	25.00	.	22	.
TC6	-2	11.119	.	.	311.0	.	7.610	1208	1.87	138.00	7.45	8.41	29.10	.	8	.
TC6	-3	10.784	.	.	317.0	.	7.610	1185	1.92	140.00	7.74	8.79	30.20	.	11	.
TC7	-1	12.557	.	.	309.0	.	7.640	1263	1.97	117.00	6.35	7.91	29.50	.	32	.
TC7	-2	12.437	.	.	307.5	.	7.630	1263	1.89	128.00	6.48	8.29	29.50	.	38	.
TC7	-3	12.572	.	.	308.5	.	7.640	1265	1.76	125.00	6.43	8.22	29.50	.	36	.
TC8	-1	15.199	.	.	304.5	.	7.670	1389	2.38	108.00	4.74	7.94	29.10	.	42	.
TC8	-2	15.528	.	.	307.0	.	7.690	1386	2.32	98.50	4.40	7.50	28.00	.	47	.
TC8	-3	15.484	.	.	305.5	.	7.700	1397	2.02	104.00	4.26	7.41	27.30	.	18	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
SO	1	100.0	12.00	1.89	16.3	1.5	21.9	9.25	13.8	16.0	.	.
S2.5	1	108.0	13.40	2.87	15.7	1.3	51.4	7.44	5.1	6.7	.	.
S5	1	78.3	8.14	1.22	9.6	1.1	36.8	5.34	6.0	7.9	4.30	50
S7.5	1	108.0	10.90	1.46	7.1	0.7	36.5	4.93	5.4	7.7	4.30	50
S10	1	56.7	6.08	0.87	8.2	1.1	24.5	3.62	5.5	6.0	.	.
S15	1	54.7	4.88	0.65	8.1	0.7	17.4	2.11	3.4	3.7	1.10	50
S15	11	54.8	5.72	0.96	5.5	0.7	.	1.96	.	.	.	.
S20	1	33.3	3.33	0.47	6.1	0.6	19.4	1.85	3.9	3.5	.	.
S20	15	33.2	4.00	0.48	.	.	.	1.85	.	.	.	.
S25	1	42.0	4.73	0.53	6.2	0.7	14.5	1.97	6.8	4.9	.	.
S25	12	44.1	3.89	0.61	.	.	.	1.75	.	.	.	.
S27.5	1	43.6	4.69	0.68	10.3	0.8	11.3	1.56	8.4	4.2	.	.
BR	2	53.4	7.61	0.78	6.3	0.8	19.6	2.19	4.2	4.4	.	.
CH	2	41.5	4.10	0.50	4.0	0.6	12.1	1.44	6.8	3.0	.	.
CH	27	54.7	6.11	0.62	.	.	.	1.85	.	.	.	.
		samples collected by trace metal clean peristaltic pump negative depth is height above bottom										
TC1	-1	.	.	.	.	.	.	2.61	.	.	1.00	130
TC1	-2	.	.	.	.	.	.	2.26	.	.	.	.
TC1	-3	.	.	.	.	.	.	2.16	.	.	.	.
TC2	-1	.	.	.	.	.	.	2.01	.	.	1.40	130
TC2	-2	.	.	.	.	.	.	1.76	.	.	.	.
TC2	-3	.	.	.	.	.	.	1.66	.	.	.	.
TC3	-1	.	.	.	.	.	.	2.06	.	.	.	.
TC3	-2	.	.	.	.	.	.	1.66	.	.	.	.
TC3	-3	.	.	.	.	.	.	1.66	.	.	.	.
TC4	-1	.	.	.	.	.	.	2.61	.	.	.	.
TC4	-2	.	.	.	.	.	.	2.16	.	.	.	.
TC4	-3	.	.	.	.	.	.	2.16	.	.	.	.
TC5	-1	.	.	.	.	.	.	2.71	.	.	3.20	.
TC5	-2	.	.	.	.	.	.	2.75	.	.	.	.
TC5	-3	.	.	.	.	.	.	2.28	.	.	.	.
TC6	-1	.	.	.	.	.	.	3.82	.	.	3.10	.
TC6	-2	.	.	.	.	.	.	.	.	.	.	.
TC6	-3	.	.	.	.	.	.	3.54	.	.	.	.
TC7	-1	.	.	.	.	.	.	5.34	.	.	.	.
TC7	-2	.	.	.	.	.	.	.	.	.	.	.
TC7	-3	.	.	.	.	.	.	4.12	.	.	.	.
TC8	-1	.	.	.	.	.	.	4.52	.	.	.	.
TC8	-2	.	.	.	.	.	.	.	.	.	.	.
TC8	-3	.	.	.	.	.	.	4.02	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar) Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
SO	1	2521.0	189.8	.	96.7	2.10	58.43	31.16	.	127.0	0.27	0.676	.
S2.5	1	1873.0	77.0	.	35.8	1.43	77.17	34.62	.	166.7	1.49	2.896	.
S5	1	351.3	35.8	.	9.0	1.07	58.60	30.37	.	110.1	0.63	2.075	.
S7.5	1	145.6	43.0	.	17.9	0.49	40.55	26.44	.	91.8	0.63	.	.
S10	1	65.5	32.2	.	9.0	0.25	39.35	26.59	.	76.5	0.85	1.834	.
S15	1	38.2	59.1	.	12.5	0.17	23.68	19.99	.	79.5	.	.	.
S15	11	.	.	.	.	.	.	.	.	.	.	.	.
S20	1	34.6	85.9	.	30.4	0.51	28.28	18.88	.	59.7	.	.	.
S20	15	30.9	94.9	.	48.3	0.90	25.72	16.05	.	50.5	.	.	.
S25	1	5.5	53.7	.	41.2	0.56	24.70	17.15	.	44.4	.	0.869	.
S25	12	18.2	64.5	.	41.2	0.83	20.44	15.11	.	48.9	.	0.579	.
S27.5	1	23.7	30.4	.	17.9	0.51	16.35	13.06	.	39.8	.	0.483	.
BR	2	18.2	.	.	17.9	0.08	11.24	11.17	.	30.6	.	0.820	.
CH	2	29.1	39.4	.	44.8	0.17	7.16	8.18	.	22.9	0.44	0.434	.
CH	27	7.3	26.9	.	.	.	.	.	.	.	.	.	.
		samples collected by trace metal clean peristaltic pump negative depth is height above bottom											
TC1	-1	43.7	62.7	.	68.0	0.59	11.75	12.90	.	38.2	.	0.338	.
TC1	-2	25.5	59.1	.	68.0	0.51	11.58	11.96	.	32.1	.	0.145	.
TC1	-3	25.5	.	.	59.1	0.51	11.93	11.65	.	33.6	.	0.241	.
TC2	-1	45.5	39.4	.	26.9	0.25	10.05	11.33	.	36.7	.	0.772	.
TC2	-2	30.9	32.2	.	26.9	0.08	10.39	10.23	.	33.6	0.50	0.434	.
TC2	-3	25.5	32.2	.	26.9	0.17	9.37	11.33	.	32.1	0.52	0.048	.
TC3	-1	32.8	59.1	.	35.8	0.29	11.24	10.54	.	30.6	.	0.048	.
TC3	-2	25.5	41.2	.	30.4	0.08	7.50	9.76	.	24.5	0.69	0.145	.
TC3	-3	21.8	35.8	.	17.9	0.08	8.01	10.86	.	27.5	0.44	0.386	.
TC4	-1	38.2	39.4	.	17.9	0.68	12.61	14.01	.	58.1	0.92	0.097	.
TC4	-2	32.8	.	.	9.0	0.08	7.84	11.02	.	39.8	0.42	0.048	.
TC4	-3	30.9	35.8	.	5.4	0.14	9.37	11.33	.	33.6	0.49	0.097	.
TC5	-1	40.0	59.1	.	41.2	0.49	37.31	22.50	.	56.6	.	0.338	.
TC5	-2	29.1	66.3	.	64.5	.	37.99	21.56	.	56.6	.	0.869	.
TC5	-3	40.0	77.0	.	66.3	0.68	36.63	21.56	.	59.7	.	0.869	.
TC6	-1	52.8	69.8	.	41.2	0.46	32.54	23.60	.	68.8	1.13	1.448	.
TC6	-2	52.8	68.0	.	66.3	0.39	35.78	23.92	.	73.4	1.02	1.255	.
TC6	-3	71.0	66.3	.	41.2	0.51	29.98	23.60	.	79.5	0.71	0.965	.
TC7	-1	40.0	120.0	.	85.9	0.49	31.52	24.23	.	70.4	0.77	1.448	.
TC7	-2	32.8	44.8	.	30.4	.	25.89	23.76	.	68.8	0.85	1.207	.
TC7	-3	45.5	35.8	.	35.8	0.34	34.07	24.86	.	78.0	0.71	2.220	.
TC8	-1	14.6	60.9	.	41.2	0.44	35.43	23.29	.	65.8	0.89	0.627	.
TC8	-2	16.4	66.3	.	.	0.78	37.82	24.39	.	76.5	.	0.483	.
TC8	-3	16.4	64.5	.	34.0	0.54	26.92	23.60	.	82.6	0.90	0.531	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston) Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
S0	1	.	30.4	306	0.22	1.01	0.85	6.12	0.033	.	0.63
S2.5	1	.	36.6	269	0.06	0.26	0.45	3.95	0.006	.	0.37
S5	1	.	30.8	291	0.12	0.72	0.41	7.49	0.003	.	0.28
S7.5	1	.	37.1	273	0.23	1.04	0.43	3.48	0.000	.	0.49
S10	1	.	27.7	233	0.14	0.57	0.33	3.36	0.000	.	0.39
S15	1	.	7.0	200	0.03	0.21	0.14	3.98	0.009	.	0.12
S15	11	.	.	.	.	.	.	.	.	.	.
S20	1	.	.	.	.	.	.	.	.	.	.
S20	15	.	.	.	.	.	.	.	.	.	.
S25	1	.	21.8	248	.	.	.	3.23	.	.	.
S25	12	.	.	.	.	.	.	.	.	.	.
S27.5	1	.	2.4	191	0.02	0.13	0.05	6.46	0.002	.	0.03
BR	2	.	16.9	225	0.04	0.82	0.35	1.99	0.001	.	0.26
CH	2	.	.	.	.	.	.	.	.	.	.
CH	27	.	.	.	.	.	.	.	.	.	.

samples collected by trace metal clean peristaltic pump
negative depth is height above bottom

TC1	-1	.	.	.	.	.	.	.	.	.	.
TC1	-2	.	.	.	.	.	.	.	.	.	.
TC1	-3	.	.	.	.	.	.	.	.	.	.
TC2	-1	.	.	.	.	.	.	.	.	.	.
TC2	-2	.	.	.	.	.	.	.	.	.	.
TC2	-3	.	.	.	.	.	.	.	.	.	.
TC3	-1	.	.	.	.	.	.	.	.	.	.
TC3	-2	.	.	.	.	.	.	.	.	.	.
TC3	-3	.	.	.	.	.	.	.	.	.	.
TC4	-1	.	.	.	.	.	.	.	.	.	.
TC4	-2	.	.	.	.	.	.	.	.	.	.
TC4	-3	.	.	.	.	.	.	.	.	.	.
TC5	-1	.	.	.	.	.	.	.	.	.	.
TC5	-2	.	.	.	.	.	.	.	.	.	.
TC5	-3	.	.	.	.	.	.	.	.	.	.
TC6	-1	.	.	.	.	.	.	.	.	.	.
TC6	-2	.	.	.	.	.	.	.	.	.	.
TC6	-3	.	.	.	.	.	.	.	.	.	.
TC7	-1	.	.	.	.	.	.	.	.	.	.
TC7	-2	.	.	.	.	.	.	.	.	.	.
TC7	-3	.	.	.	.	.	.	.	.	.	.
TC8	-1	.	.	.	.	.	.	.	.	.	.
TC8	-2	.	.	.	.	.	.	.	.	.	.
TC8	-3	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
SO	1	CTD	11/21/81	0623	39 48.7 N	75 23.6 W	129.0	13.8
S2.5	1	CTD	11/21/81	0735	39 44.2 N	75 30.1 W	116.3	18.9
S5	1	CTD	11/21/81	0827	39 39.1 N	75 33.2 W	105.5	14.9
S7.5	1	CTD	11/21/81	0912	39 35.0 N	75 33.4 W	96.7	15.7
S10	1	CTD	11/21/81	0956	39 30.0 N	75 33.5 W	86.9	14.4
S15	1	CTD	11/21/81	1056	39 22.9 N	75 28.5 W	70.9	11.6
S15	11	CTD	11/21/81	1056	39 22.9 N	75 28.5 W	70.9	11.6
S20	1	CTD	11/21/81	1220	39 13.8 N	75 17.8 W	47.9	16.9
S20	15	CTD	11/21/81	1220	39 13.8 N	75 17.8 W	47.9	16.9
S25	1	CTD	11/21/81	1317	39 7.8 N	75 13.6 W	35.3	11.8
S25	12	CTD	11/21/81	1317	39 7.8 N	75 13.6 W	35.3	11.8
S27.5	1	CTD	11/21/81	1419	38 2.4 N	75 9.8 W	-89.6	12.0
BR	2	CTD	11/21/81	1539	38 55.5 N	75 5.8 W	9.9	15.2
CH	2	CTD	11/21/81	1705	38 49.0 N	75 2.8 W	-2.9	31.2
CH	27	CTD	11/21/81	1705	38 49.0 N	75 2.8 W	-2.9	31.2
			samples collected by trace metal clean peristaltic pump negative depth is height above bottom					
TC1	-1	Pump	11/19/81	1130	38 52.8 N	75 10.8 W	11.6	8.9
TC1	-2	Pump	11/19/81	1140	38 52.8 N	75 10.8 W	11.6	8.9
TC1	-3	Pump	11/19/81	1150	38 52.8 N	75 10.8 W	11.6	8.9
TC2	-1	Pump	11/19/81	1445	38 52.8 N	75 10.8 W	11.6	.
TC2	-2	Pump	11/19/81	1455	38 52.8 N	75 10.8 W	11.6	.
TC2	-3	Pump	11/19/81	1504	38 52.8 N	75 10.8 W	11.6	.
TC3	-1	Pump	11/19/81	1623	38 52.8 N	75 10.8 W	11.6	.
TC3	-2	Pump	11/19/81	1630	38 52.8 N	75 10.8 W	11.6	.
TC3	-3	Pump	11/19/81	1638	38 52.8 N	75 10.8 W	11.6	.
TC4	-1	Pump	11/19/81	1955	38 52.8 N	75 10.8 W	11.6	.
TC4	-2	Pump	11/19/81	2002	38 52.8 N	75 10.8 W	11.6	.
TC4	-3	Pump	11/19/81	2011	38 52.8 N	75 10.8 W	11.6	.
TC5	-1	Pump	11/20/81	0819	39 26.3 N	75 32.7 W	79.6	13.6
TC5	-2	Pump	11/20/81	0824	39 26.3 N	75 32.7 W	79.6	13.6
TC5	-3	Pump	11/20/81	0836	39 26.3 N	75 32.7 W	79.6	13.6
TC6	-1	Pump	11/20/81	1150	39 26.3 N	75 32.7 W	79.6	.
TC6	-2	Pump	11/20/81	1158	39 26.3 N	75 32.7 W	79.6	.
TC6	-3	Pump	11/20/81	1203	39 26.3 N	75 32.7 W	79.6	.
TC7	-1	Pump	11/20/81	1430	39 26.3 N	75 32.7 W	79.6	.
TC7	-2	Pump	11/20/81	1440	39 26.3 N	75 32.7 W	79.6	.
TC7	-3	Pump	11/20/81	1446	39 26.3 N	75 32.7 W	79.6	.
TC8	-1	Pump	11/20/81	1723	39 26.3 N	75 32.7 W	79.6	.
TC8	-2	Pump	11/20/81	1730	39 26.3 N	75 32.7 W	79.6	.
TC8	-3	Pump	11/20/81	1738	39 26.3 N	75 32.7 W	79.6	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S0	1	-0.003	642	3.43	358.5	87	7.070	692	2.82	105.00	1.41	48.40	77.30	447	39	.
S2.5	1	1.426	.	3.22	361.5	88	7.160	795	1.92	118.00	1.14	71.30	69.60	413	36	.
S5	1	5.009	.	3.17	384.5	95	7.450	961	1.63	118.00	1.32	62.00	59.40	414	21	.
S7.5	1	8.835	.	2.98	386.5	98	7.620	1129	1.58	111.00	1.45	40.00	47.00	314	60	.
S7.5	11	10.768	.	3.06	383.5	99	7.670	1213	1.58	111.00	1.54	40.50	46.80	391	65	.
S10	1	10.258	.	3.00	386.5	99	7.670	1189	1.39	105.00	1.52	40.30	48.90	313	57	.
S10	12	13.052	.	2.91	382.5	99	7.720	1315	1.53	95.20	1.54	32.60	41.40	322	65	.
S15	1	14.782	.	2.89	382.5	101	7.760	1394	1.50	91.10	1.59	25.40	38.00	283	42	.
S15	12	21.597	.	2.94	368.5	102	7.860	1707	1.39	63.70	1.28	12.60	24.60	253	47	.
S20	1	20.506	.	2.94	373.5	102	7.860	1654	1.37	67.50	1.34	14.00	27.30	232	33	.
S20	6	21.457	.	2.89	371.0	102	7.860	1696	1.24	63.90	1.12	11.60	23.30	221	30	.
S25	1	25.211	.	3.02	367.5	104	7.920	1868	1.24	45.50	1.07	6.52	18.50	186	21	.
S25	11	26.033	.	3.05	363.0	103	7.920	1905	1.18	42.70	0.93	5.55	16.50	176	32	.
BR	1	29.110	.	3.43	356.0	104	7.960	2049	0.92	23.50	0.54	1.51	8.62	187	10	.
BR	11	29.261	.	3.48	353.0	104	7.960	2061	0.95	23.50	0.56	1.59	8.84	168	9	.
CH	1	30.772	.	4.06	348.0	105	8.010	2138	0.63	9.80	0.19	0.65	2.82	163	9	.
CH	28	30.789	.	4.08	348.0	105	8.010	2138	0.68	10.00	0.25	0.60	3.26	161	10	.
AS1	1	12.334	.	3.20	383.5	100	7.710	1286	1.35	101.00	1.44	33.40	39.10	280	35	.
AS1	11	16.317	.	2.91	379.0	101	7.770	1467	1.32	90.10	1.59	23.40	34.20	282	50	.
AS4	1	9.089	.	3.27	386.0	99	7.640	1139	1.32	113.00	1.54	49.00	49.40	293	11	.
AS4	10	13.658	.	3.09	382.5	100	7.730	1348	1.40	98.30	1.61	31.60	40.60	261	48	.
AS6	1	9.526	.	3.29	385.0	99	7.650	1156	1.32	112.00	1.56	46.80	47.70	288	40	.
AS6	11	12.552	.	3.13	382.5	100	7.720	1297	1.35	99.90	1.62	35.40	42.40	332	38	.
AS9	1	12.669	.	3.16	383.0	100	7.710	1299	1.37	103.00	1.59	35.30	41.60	297	34	.
AS9	12	16.618	.	2.95	378.5	101	7.770	1480	1.37	87.30	1.56	22.60	34.80	243	42	.
AS12	1	16.494	.	3.03	378.0	101	7.770	1470	1.30	86.30	1.54	22.70	32.90	246	68	.
AS12	12	18.782	.	2.95	374.5	101	7.800	1576	1.30	77.20	1.44	17.70	30.70	236	36	.
AS15	1	11.519	.	3.51	384.5	100	7.700	1248	1.37	107.00	1.62	38.50	45.40	249	43	.
AS15	10	15.201	.	3.03	379.0	100	7.750	1414	1.42	94.40	1.58	26.70	37.20	234	31	.
AS18	1	9.647	.	3.39	384.0	99	7.650	1166	1.42	108.00	1.51	45.70	44.70	275	44	.
AS18	11	12.534	.	3.18	381.0	99	7.710	1295	1.40	100.00	1.60	35.40	43.40	240	23	.
AS21	1	11.145	.	3.31	383.0	99	7.680	1231	1.45	107.00	1.55	41.20	44.10	285	24	.
AS21	10	16.501	.	3.03	377.0	101	7.760	1477	1.45	87.30	1.54	23.70	34.20	253	25	.
AS24	1	14.974	.	3.09	380.5	101	7.750	1407	1.60	93.40	1.59	27.70	38.90	286	27	.
AS24	11	18.002	.	3.05	375.0	101	7.800	1544	1.75	80.20	1.50	20.00	33.80	355	17	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	121.0	19.10	4.35	29.1	3.7	52.3	5.70	1.1	1.3	.	.
S2.5	1	216.0	32.80	9.06	11.7	2.4	139.8	6.40	0.3	0.7	.	.
S5	1	178.0	30.90	4.27	14.6	1.7	90.8	4.20	0.6	0.8	.	.
S7.5	1	88.3	12.80	2.07	10.6	0.9	50.2	3.01	0.9	1.8	.	.
S7.5	11	171.0	16.80	2.00	13.4	1.7	53.6	3.02	.	.	.	.
S10	1	53.9	6.87	0.92	3.1	1.0	22.4	2.31	1.3	2.3	.	.
S10	12	55.6	9.34	1.41	.	.	36.4	3.27	.	.	.	.
S15	1	31.4	6.25	0.95	6.2	0.8	23.2	3.02	2.9	3.7	.	.
S15	12	45.8	4.81	0.55	14.2	1.0	10.9	5.06	.	.	.	.
S20	1	30.1	5.35	0.53	13.9	1.1	10.2	4.11	5.0	6.5	.	.
S20	6	42.3	6.01	0.88	19.9	0.7	95.2	4.93	.	.	.	.
S25	1	28.7	4.60	0.33	15.6	1.0	6.2	6.27	10.4	8.2	.	.
S25	11	17.9	3.67	0.38	10.9	1.0	7.8	6.17	.	.	.	.
BR	1	27.3	4.58	0.43	14.2	0.8	5.1	10.90	2.1	1.0	.	.
BR	11	66.0	9.53	1.05	5.1	0.9	18.7	13.70	.	.	.	.
CH	1	34.5	5.98	0.53	10.2	1.1	5.8	14.90	20.4	10.7	.	.
CH	28	29.5	6.05	0.61	3.6	1.1	7.8	16.60	.	.	.	.
AS1	1	72.5	4.52	0.82	.	.	21.3	1.71	.	.	.	.
AS1	11	118.0	12.00	1.79	.	.	30.8	3.62	.	.	.	.
AS4	1	33.5	5.07	0.80	.	.	61.9	1.41	.	.	.	.
AS4	10	57.4	8.60	1.55	.	.	22.0	2.61	.	.	.	.
AS6	1	43.0	5.41	0.89	.	.	16.1	1.51	.	.	.	.
AS6	11	59.9	9.30	1.14	.	.	23.1	2.31	.	.	.	.
AS9	1	33.7	4.29	0.51	.	.	9.9	2.31	.	.	.	.
AS9	12	93.0	9.78	1.73	.	.	33.9	3.82	.	.	.	.
AS12	1	32.1	6.04	0.81	.	.	17.3	3.07	.	.	.	.
AS12	12	26.0	4.47	0.62	.	.	17.2	3.72	.	.	.	.
AS16	1	31.4	4.35	0.54	.	.	9.6	2.28	.	.	.	.
AS16	10	63.3	9.94	1.93	.	.	39.1	3.47	.	.	.	.
AS18	1	84.0	6.26	0.97	.	.	18.2	2.11	.	.	.	.
AS18	11	60.4	7.80	1.02	.	.	20.6	2.26	.	.	.	.
AS21	1	41.4	6.02	0.70	.	.	13.3	1.96	.	.	.	.
AS21	10	88.7	13.80	1.90	.	.	11.1	2.81	.	.	.	.
AS24	1	32.6	5.77	0.66	.	.	13.6	1.86	.	.	.	.
AS24	11	48.3	5.42	0.88	.	.	18.6	3.87	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar) Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
SO	1	2177.0	376.0	.	320.5	9.74	60.31	42.02	.	175.9	4.36	2.790	.
S2.5	1	2320.8	268.6	.	261.4	5.80	70.36	30.37	.	133.1	1.19	3.557	.
S5	1	622.5	125.3	.	211.3	4.67	75.98	31.00	.	189.7	1.78	2.486	.
S7.5	1	251.2	107.4	.	111.0	1.12	67.80	27.54	.	166.7	1.56	2.896	.
S7.5	11	.	.	.	.	.	.	.	.	.	.	.	.
S10	1	294.9	53.7	.	68.0	0.85	61.16	22.98	.	111.7	1.29	2.915	.
S10	12	.	.	.	57.3	0.66	48.72	22.98	.	104.0	1.29	1.289	.
S15	1	98.3	107.4	.	60.9	0.08<	.	16.21	.	81.1	1.36	1.762	.
S15	12	29.1	53.7	.	46.6	0.14	.	13.69	.	58.1	0.84	1.337	.
S20	1	30.9	71.6	.	7.2	0.36	21.12	17.78	.	56.6	0.85	0.970	.
S20	6	34.6	71.6	.	48.3	0.14	29.81	17.31	.	74.9	.	0.294	.
S25	1	16.4	35.8	.	7.2	0.08<	18.74	13.22	.	41.3	0.35	0.246	.
S25	11	16.4	35.8	.	43.0	0.15	22.66	10.39	.	45.9	.	0.048<	.
BR	1	10.9	35.8	.	46.6	0.08<	19.59	14.16	.	47.4	.	0.048<	.
BR	11	21.8	35.8	.	14.3	0.08<	18.40	10.54	.	27.5	.	0.048<	.
CH	1	.	.	.	.	.	.	.	.	.	.	.	.
CH	28	9.1	.	.	25.1	0.29	15.16	8.81	.	19.9	0.35	0.203	.
AS1	1	125.6	53.7	.	46.6	0.85	54.68	37.30	.	156.0	.	2.838	.
AS1	11	65.5	107.4	.	112.8	0.39	48.72	41.39	.	119.3	.	2.437	.
AS4	1	464.2	143.2	.	75.2	1.17	54.68	27.70	.	117.8	1.57	3.977	.
AS4	10	260.3	107.4	.	121.8	0.36	48.72	27.07	.	131.5	.	1.197	.
AS6	1	405.9	71.6	.	111.0	0.53	51.79	26.28	.	130.0	1.15	2.133	.
AS6	11	142.0	71.6	.	48.3	0.15	43.95	21.87	.	96.4	0.94	0.927	.
AS9	1	169.3	53.7	.	21.5	0.08<	38.67	22.03	.	96.4	1.06	0.763	.
AS9	12	101.9	71.6	.	84.2	0.17	38.50	19.67	.	94.8	1.41	0.632	.
AS12	1	43.7	71.6	.	35.8	0.25	40.20	29.27	.	67.3	1.66	0.907	.
AS12	12	29.1	71.6	.	17.9	0.36	39.01	23.29	.	65.8	.	0.478	.
AS15	1	182.0	53.7	.	26.9	0.80	53.15	36.19	.	84.1	.	1.544	.
AS15	10	194.8	71.6	.	.	0.31	46.17	25.18	.	76.5	.	1.153	.
AS18	1	349.5	53.7	.	9.0	0.75	53.49	26.75	.	99.4	.	1.409	.
AS18	11	132.9	89.5	.	17.9	0.73	49.06	21.72	.	78.0	.	0.835	.
AS21	1	192.9	107.4	.	84.2	1.44	41.74	26.28	.	100.9	.	1.636	.
AS21	10	132.9	.	.	.	0.08<	15.67	17.15	.	56.6	1.61	0.980	.
AS24	1	87.4	53.7	.	0.0	0.08<	28.11	14.79	.	41.3	0.85	1.409	.
AS24	11	40.0	.	.	30.4	0.08<	27.77	15.26	.	70.4	0.85	0.840	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston)									
		Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
S0	1	.	8.9	185	0.12	0.77	0.84	4.91	0.051	.	0.48
S2.5	1	.	25.8	28	0.15	0.92	1.23	5.12	0.009	.	0.56
S5	1	.	28.8	251	0.07	0.47	1.39	3.58	0.006	.	0.41
S7.5	1	.	43.9	345	0.37	1.13	0.16	5.01	0.026	.	0.61
S7.5	11	.	26.9	237	1.17	0.69	1.72	3.46	0.006	.	0.51
S10	1	.	27.5	276	0.24	0.99	0.39	4.09	0.040	.	0.58
S10	12	.	28.2	285	0.13	1.77	0.61	5.07	0.005	.	0.62
S15	1	.	19.3	244	0.15	0.70	0.36	2.34	0.007	.	0.57
S15	12	.	44.3	202	1.60	2.33	19.89	4.85	0.083	.	0.96
S20	1	.	20.0	232	0.18	0.69	0.24	3.33	0.011	.	0.54
S20	6	.	3.3	68	0.02	0.07	0.10	1.79	0.001	.	0.05
S25	1	.	6.6	130	0.03	0.71	0.34	2.03	0.014	.	0.26
S25	11	.	6.6	110	0.02	0.66	0.17	2.12	0.004	.	0.16
BR	1	.	8.4	136	0.00	0.16	0.25	2.34	0.000	.	0.12
BR	11	.	18.2	273	0.17	0.71	0.42	4.25	0.005	.	0.32
CH	1	.	11.3	153	0.01	0.66	0.24	2.32	0.000	.	0.24
CH	28	.	7.6	113	0.00	1.37	0.25	1.56	0.000	.	0.19
AS1	1	.	.	.	.	.	.	.	.	.	.
AS1	11	.	.	.	.	.	.	.	.	.	.
AS4	1	.	.	.	.	.	.	.	.	.	.
AS4	10	.	.	.	.	.	.	.	.	.	.
AS6	1	.	.	.	.	.	.	.	.	.	.
AS6	11	.	.	.	.	.	.	.	.	.	.
AS9	1	.	.	.	.	.	.	.	.	.	.
AS9	12	.	.	.	.	.	.	.	.	.	.
AS12	1	.	.	.	.	.	.	.	.	.	.
AS12	12	.	.	.	.	.	.	.	.	.	.
AS15	1	.	.	.	.	.	.	.	.	.	.
AS15	10	.	.	.	.	.	.	.	.	.	.
AS18	1	.	.	.	.	.	.	.	.	.	.
AS18	11	.	.	.	.	.	.	.	.	.	.
AS21	1	.	.	.	.	.	.	.	.	.	.
AS21	10	.	.	.	.	.	.	.	.	.	.
AS24	1	.	.	.	.	.	.	.	.	.	.
AS24	11	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
SO	1	CTD	01/08/82	0623	39 48.0 N	75 24.3 W	127.6	12.5
S2.5	1	CTD	01/08/82	0830	39 34.0 N	75 32.7 W	94.6	11.2
S5	1	CTD	01/08/82	0929	39 28.9 N	75 33.1 W	84.9	15.6
S7.5	1	CTD	01/08/82	1016	39 24.8 N	75 30.0 W	74.9	15.4
S7.5	11	CTD	01/08/82	1016	39 24.8 N	75 30.0 W	74.9	15.4
S10	1	CTD	01/08/82	1116	39 23.2 N	75 28.3 W	71.1	14.9
S10	12	CTD	01/08/82	1116	39 23.2 N	75 28.3 W	71.1	14.9
S15	1	CTD	01/08/82	1255	39 14.8 N	75 18.9 W	50.2	16.2
S15	12	CTD	01/08/82	1255	39 14.8 N	75 18.9 W	50.2	16.2
S20	1	CTD	01/08/82	1341	39 8.6 N	75 14.3 W	37.0	9.4
S20	6	CTD	01/08/82	1341	39 8.6 N	75 14.3 W	37.0	9.4
S25	1	CTD	01/08/82	1436	39 2.2 N	75 9.1 W	23.2	13.9
S25	11	CTD	01/08/82	1436	39 2.2 N	75 9.1 W	23.2	13.9
BR	1	CTD	01/08/82	1540	38 55.3 N	75 5.5 W	9.4	14.0
BR	11	CTD	01/08/82	1540	38 55.3 N	75 5.5 W	9.4	14.0
CH	1	CTD	01/08/82	1657	38 49.4 N	75 3.0 W	-2.1	31.8
CH	28	CTD	01/08/82	1657	38 49.4 N	75 3.0 W	-2.1	31.8
AS1	1	CTD	01/06/82	2238	39 17.9 N	75 23.0 W	58.1	13.3
AS1	11	CTD	01/06/82	2238	39 17.9 N	75 23.0 W	58.1	13.3
AS4	1	CTD	01/07/82	0134	39 17.9 N	75 23.0 W	58.1	13.1
AS4	10	CTD	01/07/82	0134	39 17.9 N	75 23.0 W	58.1	13.1
AS6	1	CTD	01/07/82	0333	39 17.9 N	75 23.0 W	58.1	13.8
AS6	11	CTD	01/07/82	0333	39 17.9 N	75 23.0 W	58.1	13.8
AS9	1	CTD	01/07/82	0626	39 17.9 N	75 23.0 W	58.1	.
AS9	12	CTD	01/07/82	0626	39 17.9 N	75 23.0 W	58.1	.
AS12	1	CTD	01/07/82	0928	39 17.9 N	75 23.0 W	58.1	14.7
AS12	12	CTD	01/07/82	0928	39 17.9 N	75 23.0 W	58.1	14.7
AS15	1	CTD	01/07/82	1304	39 17.9 N	75 23.0 W	58.1	13.8
AS15	10	CTD	01/07/82	1304	39 17.9 N	75 23.0 W	58.1	13.8
AS18	1	CTD	01/07/82	1626	39 17.9 N	75 23.0 W	58.1	13.3
AS18	11	CTD	01/07/82	1626	39 17.9 N	75 23.0 W	58.1	13.3
AS21	1	CTD	01/07/82	1851	39 17.9 N	75 23.0 W	58.1	14.2
AS21	10	CTD	01/07/82	1851	39 17.9 N	75 23.0 W	58.1	14.2
AS24	1	CTD	01/07/82	2149	39 17.9 N	75 23.0 W	58.1	.
AS24	11	CTD	01/07/82	2149	39 17.9 N	75 23.0 W	58.1	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S5	1	5.971	.	2.70D	.	.	.	.	1.43	97.90	1.22	61.10	83.30	.	.	.
S12	1	11.497	.	2.30D	.	.	.	.	0.96	72.10	1.27	38.80	55.70	.	.	.
S15	1	14.387	.	2.30D	.	.	.	.	0.42	68.10	1.25	27.20	41.30	.	.	.
S17.5	1	15.847	.	2.33D	.	.	.	.	0.21	55.20	1.15	17.70	27.60	.	.	.
S20	1	20.380	.	2.35D	.	.	.	.	0.19	42.30	0.84	6.84	10.50	.	.	.
S23	1	22.075	.	2.42D	.	.	.	.	0.13	34.80	0.72	2.76	4.20	.	.	.
S25	1	24.068	.	2.81D	.	.	.	.	0.05	24.40	0.56	0.23	0.89	.	.	.
S27	1	26.495	.	2.52D	.	.	.	.	0.11	12.80	0.37	0.00	0.61	.	.	.
S28	1	27.801	.	2.47D	.	.	.	.	0.00	6.76	0.26	0.72	3.87	.	.	.
S29	1	28.695	.	2.37D	.	.	.	.	0.05	5.31	0.20	0.23	0.51	.	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S5	1	.	.	.	.	.	.	5.34	2.3	7.8	8.75	40
S12	1	.	.	.	.	.	.	21.10	29.2	33.3	2.96	50
S15	1	.	.	.	.	.	.	27.40	41.0	52.6	3.21	80
S17.5	1	.	.	.	.	.	.	39.50	45.6	55.4	3.10	85
S20	1	.	.	.	.	.	.	38.70	67.8	57.0	2.18	110
S23	1	.	.	.	.	.	.	35.70	74.0	47.5	1.72	120
S25	1	.	.	.	.	.	.	30.60	55.0	28.0	1.40	150
S27	1	.	.	.	.	.	.	16.00	23.7	10.9	1.06	225
S28	1	.	.	.	.	.	.	15.20	19.0	6.5	0.86	300
S29	1	.	.	.	.	.	.	7.46	15.3	7.2	0.95	285

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
S5	1	Wire	03/09/82	0950	39 28.2 N	75 33.2 W	83.6	.
S12	1	Wire	03/09/82	1045	39 24.1 N	75 28.3 W	73.3	.
S15	1	Wire	03/09/82	1140	39 19.5 N	75 24.0 W	61.4	.
S17.5	1	Wire	03/09/82	1220	39 16.0 N	75 20.3 W	53.1	.
S20	1	Wire	03/09/82	1250	39 12.5 N	75 17.0 W	45.2	.
S23	1	Wire	03/09/82	1335	39 8.7 N	75 14.3 W	37.2	.
S25	1	Wire	03/09/82	1405	39 4.6 N	75 10.6 W	28.1	.
S27	1	Wire	03/09/82	1453	39 0.2 N	75 7.9 W	19.1	.
S28	1	Wire	03/09/82	1535	38 56.3 N	75 5.7 W	11.2	.
S29	1	Wire	03/09/82	1636	38 51.4 N	75 4.7 W	2.6	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S0	1	0.073	1430	5.88	300.5	77	6.980	719	2.67	115.00	1.82	85.00	124.00	361	40	.
S2.5	1	2.690	.	5.72	361.0	94	7.297	784	1.96	99.10	1.37	68.50	101.00	341	55	.
S5	1	5.219	.	5.66	377.5	100	7.518	901	1.42	95.10	1.39	58.10	89.10	336	37	.
S5	11	11.261	.	4.67	399.5	107	7.971	1190	0.81	70.90	1.43	30.70	53.10	266	45	.
S7.5	1	8.015	.	5.26	400.5	107	7.836	1033	1.12	89.10	1.54	43.30	72.40	293	98	.
S7.5	15	18.209	.	4.27	425.5	119	8.254	1523	0.46	45.80	0.99	7.60	22.40	220	49	.
S10	1	10.214	.	4.91	413.0	111	8.017	1143	0.92	77.50	1.49	32.70	47.80	266	35	.
S10	12	19.039	.	4.23	430.0	120	8.280	1565	0.25	43.00	0.97	5.68	6.02	222	52	.
S15	1	17.341	.	4.51	444.0	124	8.403	1477	0.53	49.40	1.05	5.87	10.30	428	38	.
S15	10	25.027	.	4.09	403.5	117	8.286	1869	0.51	16.40	0.45	1.16	1.98	195	42	.
S25	1	22.267	.	5.13	445.5	130	8.446	1736	0.13	23.80	0.65	0.56	0.43	234	34	.
S25	10	26.738	.	4.24	380.5	112	8.241	1960	0.10	8.39	0.33	1.10	1.59	200	19	.
S27.5	1	26.195	.	6.00	379.0	116	8.289	1940	0.18	2.76	0.37	2.23	0.52	189	22	.
S27.5	10	28.004	.	4.05C	337.5	100	8.169	2023	0.18	1.32	0.25	1.06	0.42	167	21	.
BR	1	29.241	.	5.71	360.5	112	8.111	2084	0.46	2.39	0.19	5.55	1.89	148	14	.
BR	15	30.184	.	3.74	355.5	106	8.055	2127	0.28	1.50	0.13	1.38	0.99	138	22	.
CH	1	27.626	.	5.31	376.5	115	8.218	2006	0.18	6.50	0.28	1.03	0.52	184	26	.
CH	23	30.478	.	3.76	364.5	109	8.075	2147	0.20	0.48	0.06	0.59	0.69	152	10	.
T1-1	1	13.394	.	5.80B	377.0	106	7.948	1337	0.36	68.20	1.81	10.50	32.80	319	41	.
T1-2	1	10.850	.	4.70B	410.5	110	8.021	1165	0.31	81.80	1.46	30.10	45.80	294	37	.
T1-3	1	11.520	.	4.69	415.0	112	8.071	1194	0.38	77.00	1.40	26.20	39.80	276	33	.
T1-3	7	16.098	.	4.39	432.0	119	8.249	1417	0.41	58.20	1.14	11.60	17.20	262	22	.
T1-4	1	13.072	.	4.60B	451.5	123	8.279	1265	0.36	74.70	1.49	14.70	27.90	284	22	.
T1-5	1	13.016	.	5.20B	468.5	129	8.388	1254	0.41	72.10	1.68	3.30	17.60	288	20	.
T1-6	1	14.497	.	5.60B	452.5	127	8.468	1336	0.79	53.90	1.34	0.20	1.55	289	27	.
T2-1	1	18.301	.	6.30B	379.0	111	8.517	1602	0.46	17.00	0.45	0.78	1.81	287	48	.
T2-2	1	20.103	.	4.90B	439.0	126	8.530	1635	0.10	30.40	0.77	1.00	1.07	258	35	.
T2-3	1	16.973	.	4.90B	468.5	132	8.494	1468	0.10	48.50	1.08	5.33	8.64	237	26	.
T2-4	1	19.167	.	4.42	449.0	126	8.439	1577	0.61	37.20	0.81	1.87	3.10	228	31	.
T2-4	11	25.577	.	4.11	397.0	116	8.273	1895	0.41	14.00	0.39	1.50	0.86	195	32	.
T2-5	1	17.418	.	5.00B	486.0	137	8.656	1497	0.10	36.70	1.02	0.37	1.29	291	30	.
T2-6	1	19.325	.	4.70B	482.0	137	8.586	1585	0.10	34.50	0.93	0.24	0.60	254	26	.
T2-7	1	18.533	.	5.20B	434.5	124	8.614	1559	0.20	23.80	0.83	0.43	0.64	297	41	.
T3-1	1	21.689	.	8.10B	422.5	132	8.610	1735	0.07	11.90	0.37	0.10<	0.77	227	12	.
T3-2	1	20.337	.	5.92	461.5	136	8.506	1642	0.07	.	0.79	1.08	1.38	261	.	.
T3-3	1	20.282	.	5.83	461.5	135	8.500	1634	0.12	33.00	0.82	1.15	1.38	225	13	.
T3-3	12	28.366	.	3.99	353.0	105	8.116	2043	0.10	5.38	0.20	1.71	0.56	.	10	.
T3-4	1	19.137	.	5.55C	466.5	135	8.493	1579	0.12	38.30	0.84	2.93	4.94	237	10	.
T3-4	9	26.018	.	4.29	387.5	114	8.249	1928	0.10	12.50	0.34	0.99	0.39	.	10	.
T3-5	1	18.041	.	5.44	464.0	133	8.490	1528	0.15	43.40	0.94	4.93	8.17	230	22	.
T3-5	11	26.103	.	4.42	389.0	115	8.269	1931	0.15	11.10	0.35	1.02	0.47	.	17	.
T3-6	1	20.038	.	5.54	455.0	132	8.507	1626	0.02	38.50	0.82	2.11	3.70	228	15	.
T3-6	5	25.480	.	4.51	398.0	117	8.307	1900	0.05	13.50	0.39	0.74	0.26	.	20	.
T3-7	1	23.351	.	5.78	417.5	125	8.453	1798	0.07	21.50	0.55	0.27	0.34	217	18	.
T3-8	1	21.802	.	5.26	420.5	123	8.551	1724	0.08	22.90	0.68	0.40	0.34	248	17	.
T3-9	1	20.949	.	5.80B	396.5	117	8.553	1686	0.12	22.00	0.64	0.77	0.39	275	17	.
T3-10	1	19.856	.	6.40B	388.0	115	8.595	1631	0.05	21.20	0.68	0.53	0.43	272	20	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	158.0	16.60	.	19.7	2.6	27.3	1.81	1.1	1.3	.	.
S2.5	1	115.0	19.60	3.17	23.0	2.5	46.8	9.04	4.5	9.8	5.30	.
S5	1	130.0	16.80	2.32	14.1	2.0	30.9	13.87	13.7	21.8	3.90	40
S5	11	215.0	26.60	3.62	17.0	2.2	54.2	54.76	.	.	.	.
S7.5	1	91.5	13.50	1.88	25.9	3.7	22.2	25.49	34.4	32.1	2.70	50
S7.5	15	253.0	31.90	2.73	18.5	2.2	37.9	82.72	.	.	.	.
S10	1	105.0	21.80	2.41	.	.	24.6	41.94	89.2	65.8	1.90	.
S10	12	221.0	26.30	2.15	15.2	1.0	26.2	53.01	.	.	.	.
S15	1	110.0	17.80	1.35	13.5	2.4	13.2	51.85	98.5	63.4	1.90	.
S15	10	98.4	15.20	1.03	13.1	2.6	8.0	28.54	.	.	.	.
S25	1	112.0	15.70	0.33	24.9	2.0	4.1	24.08	98.9	23.6	0.65	200
S25	10	77.8	7.04	0.57	19.1	1.3	3.3	15.53	.	.	.	.
S27.5	1	27.9	5.23	0.60	16.1	2.0	1.5	12.60	36.1	7.3	0.49	330
S27.5	10	34.5	5.20	0.39	10.9	1.8	1.4	9.73	.	.	.	.
BR	1	39.3	4.61	0.20	24.7	1.7	1.7	3.29	35.0	5.7	0.39	.
BR	15	31.3	4.26	0.38	21.1	1.8	3.1	8.50	.	.	.	.
CH	1	22.1	3.87	0.24	17.5	2.2	1.6	4.36	23.4	3.8	.	375
CH	23	96.2	7.45	0.86	21.8	2.1	5.6	11.51	.	.	.	.
T1-1	1	253.0	35.80	3.37	48.8	4.7	56.0	60.58	15.9	101.7	.	25
T1-2	1	94.5	14.80	1.96	26.1	6.0	20.9	38.45	3.4	4.4	3.40	60
T1-3	1	99.1	13.30	1.87	43.3	.	19.5	48.35	90.3	78.2	2.10	50
T1-3	7	153.0	17.80	1.87	.	.	19.4	63.65	.	.	.	.
T1-4	1	143.0	18.30	2.07	18.6	6.8	14.4	55.34	69.0	67.1	2.30	65
T1-5	1	192.0	46.40	2.31	21.8	1.3	20.0	66.41	73.6	109.7	3.70	50
T1-6	1	263.0	34.00	2.47	28.2	3.6	37.4	100.48	45.2	93.4	5.30	40
T2-1	1	378.0	65.10	3.12	73.0	9.0	77.6	109.51	17.7	95.7	13.80	25
T2-2	1	190.0	25.80	1.14	14.5	1.8	13.0	43.11	81.0	50.4	1.70	90
T2-3	1	159.0	23.20	1.32	26.0	2.6	13.6	42.52	87.3	61.9	1.80	85
T2-4	1	117.0	14.90	0.92	13.7	2.2	7.6	42.53	129.5	59.1	1.30	100
T2-4	11	49.1	7.16	0.48	21.6	1.9	4.6	17.06	.	.	.	.
T2-5	1	149.0	28.50	1.28	33.4	3.7	14.1	66.18	102.0	50.7	1.40	75
T2-6	1	242.0	23.90	1.08	.	.	10.8	60.58	38.2	51.3	3.60	85
T2-7	1	165.0	23.40	1.60	57.0	4.9	19.7	62.33	31.2	35.8	3.10	85
T3-1	1	121.0	20.30	1.30	26.8	2.3	16.9	34.37	3.1	8.4	2.00	80
T3-2	1	95.6	12.50	1.22	19.4	1.7	12.5	41.94	13.3	4.0	.	75
T3-3	1	81.4	7.60	0.77	23.8	1.9	7.7	33.20	136.2	47.3	0.75	110
T3-3	12	50.9	8.00	.	65.0	2.9	5.0	16.44	.	.	.	.
T3-4	1	187.0	19.90	1.02	44.5	3.0	8.4	37.28	170.5	49.5	.	90
T3-4	9	46.0	7.39	.	.	.	3.2	16.03	.	.	.	.
T3-5	1	190.0	26.30	1.16	35.2	4.8	9.2	33.20	213.4	58.4	0.72	75
T3-5	11	53.7	8.07	.	.	.	4.2	12.18	.	.	.	.
T3-6	1	101.0	17.00	0.82	23.9	1.8	8.0	31.46	115.7	37.0	0.80	125
T3-6	5	61.0	9.59	.	9.1	1.5	6.3	20.35	.	.	.	.
T3-7	1	92.2	19.60	1.15	23.6	1.7	8.7	31.46	85.9	25.3	.	175
T3-8	1	159.0	22.10	1.03	22.7	2.5	7.2	45.83	55.9	30.7	1.40	110
T3-9	1	143.0	20.10	2.96	47.1	3.3	9.4	36.70	38.3	24.1	1.70	110
T3-10	1	208.0	25.10	1.00	39.9	3.6	9.2	25.48	24.1	17.3	1.90	90

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar) Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
S0	1	5298.7	537.2	.	257.8	8.23	69.51	46.27	.	200.4	1.60	0.907	.
S2.5	1	2044.1	198.8	.	93.1	1.97	70.70	36.51	.	232.5	1.84	1.240	.
S5	1	1643.7	277.5	.	137.9	.	71.38	36.67	.	203.4	2.18	1.544	.
S5	11	1365.2	118.2	.	30.4	0.14	29.47	20.77	.	73.4	0.55	0.043	.
S7.5	1	544.2	91.3	.	78.8	0.49	51.62	35.25	.	134.6	2.14	0.290	.
S7.5	15	69.2	107.4	.	3.6<	0.08<	23.85	18.10	.	41.3	0.68	0.068	.
S10	1	211.1	.	.	23.3	0.95	.	28.80	.	105.5	1.94	0.338	.
S10	12	27.3	75.2	.	46.6	0.08<	20.27	15.74	.	35.2	0.18	0.097	.
S15	1	36.4	159.4	.	30.4	0.08<	23.85	14.64	.	27.5	0.46	0.106	.
S15	10	18.2	168.3	.	3.6<	0.14	.	14.48	.	.	0.09<	0.058	.
S25	1	21.8	34.0	.	30.4	0.08<	21.29	.	.	30.6	0.71	0.039	.
S25	10	23.7	.	.	28.6	0.32	17.04	14.32	.	18.4	.	0.352	.
S27.5	1	74.6	.	.	26.9	0.36	11.93	20.14	.	.	0.71	0.338	.
S27.5	10	16.4	46.6	.	35.8	0.44	13.29	14.64	.	.	0.74	0.236	.
BR	1	40.0	.	.	25.1	0.08<	10.90	9.28	.	15.3	.	0.092	.
BR	15	.	.	.	35.8	0.27	13.29	10.70	.	27.5	0.64	0.179	.
CH	1	32.8	75.2	.	57.3	0.15	.	12.43	.	27.5	0.64	0.241	.
CH	23	12.7	21.5	.	48.3	0.25	8.86	13.06	.	.	1.02	0.111	.
T1-1	1	10.9	.	.	191.6	0.08<	17.38	15.74	.	39.8	0.10	0.039	.
T1-2	1	101.9	.	.	60.9	0.39	36.80	21.40	.	64.2	0.42	0.333	.
T1-3	1	96.5	.	.	60.9	.	35.78	18.25	.	53.5	1.29	0.449	.
T1-3	7	.	.	.	.	.	.	.	.	.	.	.	.
T1-4	1	45.5	.	.	37.6	0.08<	27.09	20.30	.	33.6	.	0.111	.
T1-5	1	32.8	.	.	84.2	0.08<	24.53	22.03	.	30.6	0.29	0.256	.
T1-6	1	45.5	.	.	68.0	0.25	23.85	11.17	.	26.0	.	0.222	.
T2-1	1	51.0	.	.	150.4	0.68	23.85	30.53	.	19.9	1.92	0.217	.
T2-2	1	16.4	.	.	120.0	0.24	23.68	22.50	.	26.0	1.79	0.193	.
T2-3	1	45.5	.	.	7.2	0.17	26.75	19.20	.	29.1	0.85	0.048	.
T2-4	1	40.0	.	.	68.0	0.08<	19.59	9.13	.	29.1	0.83	0.333	.
T2-4	11	21.8	.	.	26.9	0.34	14.31	13.85	.	15.3	0.94	0.381	.
T2-5	1	.	.	.	60.9	.	22.32	.	.	16.8	.	0.285	.
T2-6	1	27.3	.	.	128.9	0.14	19.93	12.90	.	30.6	0.73	0.458	.
T2-7	1	234.8	.	.	75.2	0.56	17.04	75.85	.	24.5	0.31	0.179	.
T3-1	1	16.4	.	.	35.8	0.08<	7.33	7.87	.	6.1	.	0.034	.
T3-2	1	30.9	.	.	14.3	0.22	17.21	14.16	.	9.2	.	0.241	.
T3-3	1	34.6	.	.	51.9	0.51	23.85	.	.	16.8	0.66	0.183	.
T3-3	12	32.8	.	.	85.9	0.08<	14.48	9.91	.	21.4	.	0.058	.
T3-4	1	7.3	.	.	7.2	0.08<	17.38	9.60	.	26.0	.	0.024<	.
T3-4	9	30.9	.	.	64.5	0.27	18.06	12.90	.	26.0	.	0.246	.
T3-5	1	10.9	.	.	30.4	0.08<	21.29	.	.	30.6	0.71	0.039	.
T3-5	11	23.7	.	.	28.6	0.32	17.04	14.32	.	18.4	.	0.352	.
T3-6	1	58.2	.	.	102.1	0.27	21.47	15.26	.	18.4	.	0.024<	.
T3-6	5	21.8	.	.	51.9	0.31	19.08	15.11	.	50.5	1.04	0.043	.
T3-7	1	18.2	.	.	23.3	0.32	18.91	15.74	.	13.8	.	0.299	.
T3-8	1	107.4	.	.	34.0	0.08<	11.24	13.38	.	12.2	0.38	0.203	.
T3-9	1	94.7	.	.	114.6	0.29	17.21	18.25	.	13.8	0.59	0.024	.
T3-10	1	60.1	.	.	89.5	0.19	19.93	18.73	.	15.3	0.52	0.227	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston)								
		Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
S0	1	.	19.3	428	0.29	1.51	1.29	6.33	0.027	.	0.84
S2.5	1	.	19.1	269	0.09	0.38	0.48	4.14	0.003	.	0.34
S5	1	.	15.8	281	0.17	0.92	0.50	3.80	0.013	.	0.42
S5	11	.	21.1	194	0.07	0.31	0.33	3.50	0.005	.	0.22
S7.5	1	.	17.5	254	0.18	0.79	0.21	4.94	0.028	.	0.50
S7.5	15	.	16.6	481	0.12	0.82	0.29	3.23	0.004	.	0.25
S10	1	.	23.3	261	0.18	0.84	0.39	4.82	0.026	.	0.56
S10	12	.	14.2	183	0.07	0.56	0.61	3.71	0.000	.	0.28
S15	1	.	9.6	126	0.06	0.51	0.00	5.20	0.003	.	0.18
S15	10	.	8.0	125	0.10	0.21	0.21	3.50	0.000	.	0.11
S25	1	.	7.8	96	0.04	0.00	0.67	2.58	0.033	.	0.12
S25	10	.	7.6	100	0.08	1.56	0.32	3.48	0.003	.	0.12
S27.5	1	.	6.9	91	0.01	0.00	0.45	4.92	0.047	.	0.20
S27.5	10	.	6.2	94	0.05	0.00	0.23	2.71	0.035	.	0.06
BR	1	.	12.0	143	0.14	11.49	1.37	5.90	0.038	.	0.05
BR	15	.	10.6	135	0.09	0.08	0.34	3.19	0.004	.	0.20
CH	1	.	9.5	100	0.09	0.00	2.23	2.58	0.012	.	0.04
CH	23	.	7.3	62	0.00	0.30	0.08	1.93	0.000	.	0.12
T1-1	1	.	14.6	197	0.06	0.27	0.27	4.40	0.006	.	0.20
T1-2	1	.	30.9	408	0.23	1.11	0.64	10.26	0.036	.	1.13
T1-3	1	.	25.1	286	0.19	1.32	0.46	7.59	0.013	.	0.61
T1-3	7	.	20.0	171	0.08	0.30	0.38	5.25	0.028	.	0.35
T1-4	1	.	29.1	346	0.25	1.37	0.48	4.39	0.031	.	0.67
T1-5	1	.	27.3	268	0.31	2.69	0.00	10.16	0.006	.	0.31
T1-6	1	.	14.7	212	0.08	0.72	0.33	3.99	0.010	.	0.27
T2-1	1	.	14.8	212	0.06	0.36	0.28	3.98	0.002	.	0.17
T2-2	1	.	15.3	234	.	.	.	8.57	.	.	.
T2-3	1	.	10.6	198	0.11	0.49	0.12	4.34	0.002	.	0.21
T2-4	1	.	9.6	158	0.09	0.00	0.91	5.15	0.017	.	0.13
T2-4	11	.	5.5	168	0.10	0.00	0.68	3.61	0.047	.	0.11
T2-5	1	.	11.1	163	0.07	0.36	0.00	0.05	0.000	.	0.26
T2-6	1	.	5.3	101	0.05	0.58	0.04	5.14	0.008	.	0.12
T2-7	1	.	.	.	.	.	.	.	.	.	.
T3-1	1	.	16.6	246	0.19	1.62	0.47	5.63	0.076	.	0.50
T3-2	1	.	19.8	224	0.15	0.98	0.08	9.32	0.072	.	0.34
T3-3	1	.	11.6	76	0.11	0.00	0.25	5.17	0.002	.	0.13
T3-3	12	.	10.0	146	0.03	0.00	0.32	2.35	0.009	.	0.04
T3-4	1	.	12.0	175	0.06	1.55	0.24	5.18	0.002	.	0.17
T3-4	9	.	8.6	105	0.00	0.00	0.80	.	0.007	.	0.00
T3-5	1	.	14.6	188	0.04	0.00	0.49	8.20	0.017	.	0.29
T3-5	11	.	8.2	145	0.00	2.84	0.67	2.06	0.000	.	0.04
T3-6	1	.	8.6	139	0.00	0.00	0.48	4.97	0.006	.	0.08
T3-6	5	.	9.8	141	0.00	0.00	1.28	4.38	0.000	.	0.00
T3-7	1	.	10.2	132	0.00	0.00	0.61	4.03	0.073	.	0.02
T3-8	1	.	11.8	124	0.00	0.48	0.33	3.16	0.032	.	0.25
T3-9	1	.	10.4	143	0.03	0.00	1.04	3.43	0.046	.	0.06
T3-10	1	.	9.8	162	0.04	0.00	2.81	3.91	0.030	.	0.03

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
SO	1	CTD	03/17/82	1931	39 42.8 N	75 30.0 W	113.9	11.7
S2.5	1	CTD	03/17/82	1713	39 31.5 N	75 32.3 W	90.1	13.7
S5	1	CTD	03/17/82	1559	39 24.8 N	75 30.3 W	75.2	13.9
S5	11	CTD	03/17/82	1559	39 24.8 N	75 30.3 W	75.2	13.9
S7.5	1	CTD	03/17/82	1427	39 19.1 N	75 23.9 W	60.6	18.1
S7.5	15	CTD	03/17/82	1427	39 19.1 N	75 23.9 W	60.6	18.1
S10	1	CTD	03/17/82	1019	39 16.7 N	75 20.9 W	54.7	15.0
S10	12	CTD	03/17/82	1019	39 16.7 N	75 20.9 W	54.7	15.0
S15	1	CTD	03/18/82	0709	39 10.5 N	75 15.7 W	41.1	13.5
S15	10	CTD	03/18/82	0709	39 10.5 N	75 15.7 W	41.1	13.5
S25	1	CTD	03/18/82	1312	39 4.3 N	75 10.6 W	27.6	13.2
S25	10	CTD	03/18/82	1312	39 4.3 N	75 10.6 W	27.6	13.2
S27.5	1	CTD	03/18/82	1409	38 59.4 N	75 8.3 W	17.9	13.6
S27.5	10	CTD	03/18/82	1409	38 59.4 N	75 8.3 W	17.9	13.6
BR	1	CTD	03/18/82	1514	38 54.2 N	75 5.9 W	7.8	19.5
BR	15	CTD	03/18/82	1514	38 54.2 N	75 5.9 W	7.8	19.5
CH	1	CTD	03/18/82	1614	38 49.1 N	75 2.7 W	-2.8	29.5
CH	23	CTD	03/18/82	1614	38 49.1 N	75 2.7 W	-2.8	29.5
T1-1	1	Boat	03/17/82	0654	39 13.9 N	75 23.5 W	52.1	.
T1-2	1	Boat	03/17/82	0730	39 14.8 N	75 21.3 W	51.9	.
T1-3	1	CTD	03/17/82	0859	39 15.4 N	75 20.3 W	52.2	10.3
T1-3	7	CTD	03/17/82	0859	39 15.4 N	75 20.3 W	52.2	10.3
T1-4	1	Boat	03/17/82	0915	39 16.2 N	75 18.1 W	52.1	.
T1-5	1	Boat	03/17/82	0850	39 16.8 N	75 16.7 W	52.3	.
T1-6	1	Boat	03/17/82	0820	39 17.5 N	75 15.0 W	52.7	.
T2-1	1	Boat	03/18/82	0700	39 3.7 N	75 22.4 W	36.8	.
T2-2	1	Boat	03/18/82	0745	39 5.2 N	75 19.3 W	35.6	.
T2-3	1	Boat	03/18/82	0835	39 6.5 N	75 16.5 W	35.2	.
T2-4	1	CTD	03/18/82	0809	39 8.0 N	75 13.5 W	35.5	14.5
T2-4	11	CTD	03/18/82	0809	39 8.0 N	75 13.5 W	35.5	14.5
T2-5	1	Boat	03/18/82	0933	39 9.0 N	75 10.6 W	35.8	.
T2-6	1	Boat	03/18/82	1000	39 10.2 N	75 8.3 W	37.1	.
T2-7	1	Boat	03/18/82	1030	39 11.0 N	75 5.2 W	38.0	.
T3-1	1	Boat	03/19/82	1240	38 58.9 N	75 18.0 W	26.2	.
T3-2	1	CTD	03/19/82	1244	39 0.4 N	75 16.0 W	25.9	10.0
T3-3	1	CTD	03/19/82	1210	39 1.3 N	75 14.6 W	25.7	15.5
T3-3	12	CTD	03/19/82	1210	39 1.3 N	75 14.6 W	25.7	15.5
T3-4	1	CTD	03/19/82	1131	39 2.5 N	75 12.5 W	25.8	11.9
T3-4	9	CTD	03/19/82	1131	39 2.5 N	75 12.5 W	25.8	11.9
T3-5	1	CTD	03/19/82	1058	39 4.5 N	75 10.6 W	27.9	13.3
T3-5	11	CTD	03/19/82	1058	39 4.5 N	75 10.6 W	27.9	13.3
T3-6	1	CTD	03/19/82	1014	39 5.2 N	75 8.7 W	28.3	8.4
T3-6	5	CTD	03/19/82	1014	39 5.2 N	75 8.7 W	28.3	8.4
T3-7	1	CTD	03/19/82	0941	39 6.7 N	75 6.4 W	30.3	4.3
T3-8	1	CTD	03/19/82	0813	39 8.0 N	75 3.5 W	32.4	4.0
T3-9	1	Boat	03/19/82	0845	39 8.3 N	75 1.1 W	33.1	.
T3-10	1	Boat	03/19/82	0802	39 8.6 N	74 58.5 W	34.2	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
T3-11	1	19.225	.	6.80B	358.0	107	8.581	1624	0.13	16.80	0.70	0.87	0.73	285	22	.
T3-12	1	18.224	.	7.60B	343.5	104	8.397	1614	0.18	5.87	0.41	1.22	1.07	355	29	.
T4-1	1	25.589	.	8.30B	369.0	119	8.457	1927	0.12	0.05	0.06	0.05	1.38	213	19	.
T4-2	1	23.627	.	6.02	418.5	126	8.407	1814	0.17	19.10	0.54	0.43	0.60	211	9	.
T4-2	5	26.083	.	6.00	399.5	122	8.359	1941	0.12	6.71	0.26	0.49	0.34	.	13	.
T4-3	1	25.139	.	5.72	400.0	121	8.335	1890	0.17	14.10	0.41	0.46	0.43	210	13	.
T4-3	12	29.818	.	3.88	356.0	106	8.069	2124	0.25	1.80	0.12	1.18	0.52	.	12	.
T4-4	1	27.578	.	5.53	372.0	114	8.211	2021	0.17	4.42	0.21	0.65	0.82	198	18	.
T4-4	14	30.135	.	3.86	357.5	107	8.055	2142	0.30	1.09	0.09	0.90	0.52	.	11	.
T4-5	1	29.062	.	4.99	369.0	112	8.133	2091	0.10	3.55	0.12	0.46	0.69	157	15	.
T4-5	10	29.713	.	4.24	358.5	108	8.078	2122	0.20	1.62	0.10	0.86	0.52	.	10	.
T4-6	1	28.589	.	5.40	349.0	107	8.123	2068	0.25	2.08	0.14	1.52	0.77	164	11	.
C1	1	0.203	3698	8.30B	306.5	84	6.762	489	9.20	220.00	2.85	46.40	116.00	391	115	.
C2	1	2.241	.	7.10B	350.0	94	7.220	661	1.53	143.00	2.12	12.20	104.00	365	46	.
C3	1	4.509	.	6.30B	349.5	94	7.250	821	1.42	112.00	2.30	12.70	95.60	355	62	.
C4	1	10.741	.	5.20B	411.0	112	7.967	1147	0.48	75.90	1.90	15.20	44.20	312	42	.
M1	1	-0.023	1011	7.10B	336.5	89	6.561	140	1.50	113.00	0.72	24.50	52.20	400	52	.
M2	1	3.266	.	6.90B	332.5	90	7.028	432	0.71	74.70	1.09	11.70	78.00	398	33	.
M3	1	9.160	.	6.40B	334.5	93	7.807	884	0.28	45.40	0.85	5.39	37.20	361	25	.
M4	1	15.611	.	6.40B	370.5	107	8.463	1353	0.20	26.20	0.74	0.75	1.98	301	14	.
M5	1	17.311	.	6.80B	403.0	119	8.580	1466	0.20	22.90	0.74	0.53	1.72	286	14	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
T3-11	1	371.0	45.60	2.15	43.9	5.4	26.0	60.94	22.5	31.3	3.80	60
T3-12	1	254.0	33.40	2.67	48.5	3.5	33.1	32.88	9.0	30.8	8.20	30
T4-1	1	97.0	15.00	0.91	17.2	1.9	10.1	17.47	13.6	9.3	1.60	150
T4-2	1	49.1	7.99	0.40	17.6	1.7	1.1	12.74	51.4	16.1	0.72	.
T4-2	5	109.0	12.90	.	.	.	6.0	20.35	.	.	.	.
T4-3	1	50.6	5.66	0.35	14.1	1.5	1.9	8.36	53.9	11.2	0.43	280
T4-3	12	50.9	8.00	.	.	.	3.3	17.47	.	.	.	.
T4-4	1	36.6	4.45	0.39	11.0	1.8	2.3	8.22	38.8	12.0	0.60	280
T4-4	14	.	.	.	10.2	1.0	3.2	7.81	.	.	.	.
T4-5	1	27.5	4.31	0.32	8.1	1.0	2.1	4.93	59.0	14.0	0.43	310
T4-5	10	45.1	6.85	.	.	.	4.0	5.75	.	.	.	.
T4-6	1	70.5	12.40	0.59	33.1	1.9	7.9	8.77	56.4	20.8	0.74	180
C1	1	181.0	27.30	5.13	48.2	7.6	25.9	6.58	.	8.2	.	40
C2	1	159.0	26.00	2.98	.	.	27.1	13.15	.	41.3	.	40
C3	1	179.0	20.20	2.23	33.5	3.3	27.3	13.56	.	21.4	.	40
C4	1	259.0	24.40	2.75	34.5	4.9	46.9	58.25	.	88.9	.	40
M1	1	118.0	16.20	1.43	42.0	5.0	13.6	4.82	.	1.9	.	60
M2	1	146.0	20.90	2.52	30.4	3.7	38.2	14.39	.	13.0	.	30
M3	1	167.0	28.40	2.43	35.1	4.0	30.4	36.99	.	65.0	.	40
M4	1	234.0	36.00	2.44	81.4	6.0	34.1	70.68	.	74.1	.	40
M5	1	138.0	21.00	1.26	76.8	5.7	18.4	49.71	.	34.6	.	60

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
T3-11	1	16.4	.	.	84.2	0.19	9.71	17.47	.	19.9	0.04<	0.024<	.
T3-12	1	20.0	.	.	53.7	0.41	10.05	22.35	.	22.9	0.04<	0.072	.
T4-1	1	23.7	.	.	162.9	0.08<	16.70	11.33	.	330.4	0.67	0.193	.
T4-2	1	23.7	.	.	39.4	0.25	19.25	16.37	.	18.4	.	0.256	.
T4-2	5	36.4	.	.	121.8	0.10	10.56	17.31	.	18.4	1.46	0.024<	.
T4-3	1	25.5	.	.	53.7	0.20	7.84	12.27	.	22.9	1.11	0.193	.
T4-3	12	29.1	.	.	5.4	0.42	12.10	10.86	.	26.0	0.67	0.024<	.
T4-4	1	40.0	.	.	25.1	0.08<	10.90	9.28	.	15.3	1.24	0.092	.
T4-4	14	.	.	.	35.8	0.27	13.29	10.70	.	27.5	0.64	0.179	.
T4-5	1	38.2	.	.	66.3	0.22	13.80	.	.	33.6	.	0.338	.
T4-5	10	36.4	.	.	37.6	0.10	12.44	14.79	.	33.6	0.91	0.338	.
T4-6	1	.	.	.	60.9	0.12	12.95	10.70	.	27.5	0.82	0.130	.
C1	1	2093.3	1149.6	.	662.5	10.35	25.21	33.99	.	195.8	0.62	2.042	.
C2	1	2781.3	651.8	.	431.5	6.07	29.30	38.40	.	151.4	0.36	0.531	.
C3	1	1492.6	508.5	.	265.0	3.09	79.05	33.05	.	143.8	0.33	0.420	.
C4	1	140.2	257.8	.	128.9	0.51	30.32	22.66	.	62.7	0.04	0.338	.
M1	1	961.1	2551.6	.	1756.6	7.53	18.74	16.21	.	100.9	1.51	2.399	.
M2	1	1498.1	1428.9	.	641.0	2.97	12.44	20.46	.	143.8	1.79	0.647	.
M3	1	318.5	290.1	.	488.8	2.55	27.09	33.83	.	32.1	1.26	0.024<	.
M4	1	10.9	84.2	.	60.9	0.24	11.58	29.74	.	16.8	0.04<	0.106	.
M5	1	14.6	367.1	.	77.0	.	14.14	15.11	.	22.9	0.04<	0.024<	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston)								
		Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
T3-11	1	.	43.1	534	0.37	2.47	0.66	1.57	0.113	.	0.51
T3-12	1	.	13.7	287	0.17	0.81	0.22	8.87	0.000	.	0.30
T4-1	1	.	12.6	193	0.39	11.07	0.57	4.02	0.011	.	0.36
T4-2	1	.	21.5	182	0.09	0.00	3.20	9.62	0.042	.	0.31
T4-2	5	.	8.7	122	0.17	0.21	0.56	2.98	0.013	.	0.13
T4-3	1	.	9.8	110	0.04	0.00	0.83	3.98	0.047	.	0.15
T4-3	12	.	8.7	114	0.00	0.00	1.28	2.04	0.025	.	0.17
T4-4	1	.	13.3	119	0.00	0.21	0.02	1.78	0.075	.	0.20
T4-4	14	.	10.2	112	0.00	0.00	0.03	1.85	0.023	.	0.00
T4-5	1	.	19.3	458	0.66	26.35	1.07	0.00	0.028	.	0.00
T4-5	10	.	10.6	160	0.00	1.08	0.58	0.73	0.002	.	0.03
T4-6	1	.	11.8	201	0.18	6.67	0.63	1.98	0.013	.	0.19
C1	1	.	14.0	1729	.	.	.	23.07	.	.	.
C2	1	.	7.5	348	0.06	0.48	0.47	0.31	0.016	.	0.31
C3	1	.	14.6	342	0.10	0.53	0.22	5.20	0.021	.	0.32
C4	1	.	21.7	238	0.21	0.80	0.29	5.59	0.000	.	0.27
M1	1	.	4.2	734	0.17	0.44	0.76	8.76	0.082	.	0.96
M2	1	.	11.6	335	0.09	0.61	0.41	2.12	0.027	.	0.47
M3	1	.	12.4	249	0.14	0.73	0.31	2.66	0.004	.	0.27
M4	1	.	12.9	185	0.11	0.72	0.23	3.00	0.013	.	0.25
M5	1	.	8.7	195	0.04	0.52	0.02	4.94	0.007	.	0.14

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
T3-11	1	Boat	03/19/82	0736	39 9.1 N	74 56.1 W	35.9	.
T3-12	1	Boat	03/19/82	0710	39 9.4 N	74 53.6 W	37.6	.
T4-1	1	Boat	03/19/82	1625	38 51.5 N	75 13.4 W	14.7	.
T4-2	1	CTD	03/19/82	1631	38 52.2 N	75 11.7 W	12.5	7.3
T4-2	5	CTD	03/19/82	1631	38 52.2 N	75 11.7 W	12.5	7.3
T4-3	1	CTD	03/19/82	1558	38 53.2 N	75 8.7 W	9.2	15.8
T4-3	12	CTD	03/19/82	1558	38 53.2 N	75 8.7 W	9.2	15.8
T4-4	1	CTD	03/19/82	1528	38 54.2 N	75 5.8 W	7.7	19.3
T4-4	14	CTD	03/19/82	1528	38 54.2 N	75 5.8 W	7.7	19.3
T4-5	1	CTD	03/19/82	1458	38 55.3 N	75 2.7 W	8.9	15.3
T4-5	10	CTD	03/19/82	1458	38 55.3 N	75 2.7 W	8.9	15.3
T4-6	1	CTD	03/19/82	1423	38 56.5 N	74 59.0 W	12.7	9.5
C1	1	Boat	03/17/82	0835	39 25.2 N	75 13.9 W	.	.
C2	1	Boat	03/17/82	0858	39 22.9 N	75 15.8 W	.	.
C3	1	Boat	03/17/82	0925	39 23.0 N	75 20.8 W	.	.
C4	1	Boat	03/17/82	0950	39 20.6 N	75 21.6 W	.	.
M1	1	Boat	03/18/82	0825	39 19.0 N	74 59.9 W	.	.
M2	1	Boat	03/18/82	0900	39 16.2 N	74 59.2 W	.	.
M3	1	Boat	03/18/82	0920	39 14.2 N	75 1.5 W	.	.
M4	1	Boat	03/18/82	0945	39 12.8 N	75 2.6 W	.	.
M5	1	Boat	03/18/82	1020	39 11.0 N	75 3.4 W	.	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S0	1	-0.033	427	15.08	209.0	67	6.840	506	1.85	77.10	2.27	30.90	68.00	331	28	0.24
S0.5	1	-0.014	575	15.09	238.0	76	6.950	500	1.67	94.00	2.92	32.80	59.00	300	53	0.03
S1	1	0.266	4641	15.83	252.0	82	7.050	518	1.74	106.00	4.43	24.50	65.70	247	11	0.00
S2.5	1	2.275	.	14.48	264.5	84	7.188	602	1.56	100.00	4.03	20.80	63.40	246	5	.
S2.5	12	3.333	.	14.23	263.0	84	7.239	651	1.56	92.30	3.84	19.60	58.20	248	59	0.08
S5	1	5.794	.	14.41	293.5	96	7.678	779	1.22	79.60	3.12	15.50	48.50	239	22	0.15
S5	9	8.644	.	13.62	290.0	95	7.946	937	0.91	64.90	2.44	11.60	36.40	240	23	0.29
S7.5	1	8.415	.	14.57	351.0	117	8.317	927	0.44	63.40	2.06	6.28	28.70	219	33	0.39
S7.5	12	15.940	.	12.69	338.0	113	8.364	1349	0.20	32.20	1.06	2.21	10.40	180	42	0.37
S10	1	14.110	.	14.05	374.5	127	8.481	1252	0.12	37.50	1.29	1.70	13.80	224	6	0.46
S10	11	21.423	.	11.78	351.0	119	8.379	1663	0.17	10.80	0.44	0.71	1.57	178	25	.
S15	1	16.912	.	13.67	440.5	151	8.645	1412	0.17	16.20	0.83	0.26	2.79	218	22	0.41
S15	11	23.422	.	11.67	366.0	125	8.386	1776	0.10	.	0.30	0.83	0.35	189	.	0.50
S20	1	21.257	.	13.78C	.	.	.	1659	0.12	7.71	0.53	0.42	1.09	229	13	0.54
S20	9	25.621	.	11.31	350.0	121	8.306	1896	0.12	0.65	0.07	0.64	0.35	180	11	0.28
BR	1	24.621	.	11.93C	377.5	131	8.423	1850	0.12	0.05<	0.05	0.38	0.35	173	12	0.37
BR	11	29.520	.	10.08	293.5	101	8.073	2085	0.17	0.05<	0.03	0.35	0.96	154	12	0.26
CH	1	27.310	.	11.81	364.0	128	8.286	1977	0.07	0.05<	0.04	0.64	0.52	152	10	0.46
CH	29	30.476	.	9.89	301.0	104	8.056	2135	0.15	0.52	0.02	0.38	0.79	125	9	0.59
S30	1	30.145	.	11.04	329.5	116	8.131	2118	0.15	0.11	0.03	0.93	0.52	124	10	0.28
S30	14	32.225	.	8.40	270.0	91	7.949	2224	0.38	0.11	0.05	0.67	1.79	100	9	0.28
CB2	1	26.026	.	12.12C	356.0	125	8.345	1933	0.05	0.02	0.08	0.07	0.49	172	12	0.48
CB2	22	30.765	.	9.79C	297.5	102	8.063	2143	0.13	0.07	0.02	0.10<	0.82	127	9	0.37
CB4	1	30.516	.	10.56C	304.0	106	8.072	2128	0.08	0.05<	0.02	0.10<	0.47	129	9	0.42
CB4	9	30.557	.	10.49C	303.5	106	8.074	2129	0.07	0.05<	0.02	0.10<	0.58	123	9	0.47
CB6	1	31.119	.	9.85C	305.0	105	8.066	2164	0.12	0.05<	0.04	0.10<	0.35	117	9	0.38
CB6	6	31.118	.	9.86C	305.0	105	8.067	2165	0.13	0.05<	0.02	0.11	0.25	121	9	0.43
CB8	1	31.271	.	9.74C	303.0	105	8.052	2168	0.16	0.00	0.02	0.10<	0.46	113	8	0.38
CB8	9	31.270	.	9.75C	303.5	105	8.057	2171	0.17	0.05<	0.02	0.10<	0.66	118	9	0.41
CB10	1	31.420	.	9.93C	287.5	100	7.989	2171	0.25	0.01	0.02	0.28	0.98	107	8	0.29
CB10	7	31.417	.	9.94C	288.0	100	7.991	2173	0.20	0.02	0.02	0.08	1.80	98	9	0.35
CB12	1	28.992	.	11.74C	326.0	116	8.212	2061	0.13	0.00	0.01	0.03	0.39	167	11	0.44
CB12	26	31.541	.	9.43C	291.0	100	8.034	2184	0.23	0.01	0.01	0.03	1.11	126	9	0.40
CB14	1	29.955	.	11.24C	304.5	108	8.098	2100	0.14	0.05<	0.01	0.12	0.28	152	10	0.35
CB14	7	29.970	.	11.21C	305.0	108	8.098	2098	0.15	0.05<	0.01	0.10<	0.40	136	17	0.34
CB16	1	30.416	.	11.15C	290.0	103	8.039	2121	0.22	0.02	0.01	0.04	0.81	136	9	0.27
CB16	6	30.567	.	10.96C	289.5	102	8.029	2124	0.19	0.03	0.01	0.00	0.90	140	11	0.37
CB18	1	30.058	.	11.40C	287.5	102	8.042	2096	0.25	0.02	0.01	0.14	0.86	145	9	0.29
CB18	6	30.765	.	10.89C	286.5	101	8.015	2116	0.20	0.02	0.03	0.01	0.84	125	9	0.45
CB20	1	28.952	.	12.40C	298.5	108	8.123	2051	0.12	0.05<	0.01	0.22	0.73	154	10	0.29
CB20	6	29.593	.	11.54C	290.5	103	8.070	2079	0.12	0.00	0.01	0.06	0.93	148	10	0.45
AS1	1	28.786	.	10.88	329.5	115	8.203	2049	0.09	0.04	0.02	0.62	0.77	154	10	0.35
AS1	24	31.476	.	9.24	289.5	99	8.028	2181	0.19	0.01	0.03	0.74	0.87	106	8	0.36
AS4	1	26.902	.	11.83	372.5	131	8.349	1955	0.06	0.02	0.03	0.57	0.78	167	11	0.32
AS4	27	31.350	.	9.41	292.5	100	8.034	2174	0.17	0.03	0.02	0.59	0.69	123	8	0.32
AS7	1	24.134	.	14.28	407.5	148	8.514	1818	0.08	0.61	0.17	0.78	0.75	181	12	0.30
AS7	24	30.646	.	9.99	296.0	102	8.056	2140	0.15	0.13	0.02	0.63	0.93	119	8	0.31

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
SO	1	88.6	8.69	1.60	22.1	2.7	7.8	11.10	22.9	30.9	.	.
SO.5	1	112.0	14.30	2.33	27.4	2.5	18.9	24.50	34.3	57.8	4.00	50
S1	1	131.0	14.90	3.43	33.1	2.8	41.6	13.20	18.5	29.6	4.20	25
S2.5	1	132.0	16.50	2.48	11.0	1.6	37.1	6.85	8.7	11.1	3.30	30
S2.5	12	160.0	19.80	3.17	14.0	1.5	58.8	10.10	.	.	.	.
S5	1	134.0	7.83	1.15	21.5	1.5	15.6	10.50	39.8	29.1	1.80	50
S5	9	180.0	13.00	1.67	24.2	2.1	26.5	18.70	.	.	.	.
S7.5	1	93.5	14.40	1.36	19.9	2.3	13.3	23.90	111.1	71.6	1.60	70
S7.5	12	122.0	26.30	1.70	22.4	2.0	22.7	42.50	.	.	.	.
S10	1	171.0	14.40	1.39	39.5	2.4	12.0	40.00	177.4	101.5	1.50	80
S10	11	165.0	19.70	1.26	17.1	2.3	15.7	45.40	.	.	.	.
S15	1	128.0	12.70	0.89	49.1	2.8	8.3	48.90	166.5	77.3	1.20	90
S15	11	173.0	12.90	0.68	38.1	2.9	6.2	39.00	.	.	.	.
S20	1	78.3	13.00	0.46	36.4	2.9	2.7	24.90	136.0	43.4	0.82	140
S20	9	73.0	12.60	0.54	24.9	2.5	5.5	30.30	.	.	.	.
BR	1	88.1	10.60	0.51	31.5	1.6	2.6	16.70	53.1	17.0	0.80	130
BR	11	69.5	11.30	0.69	17.1	1.2	9.9	14.20	.	.	.	.
CH	1	104.0	8.04	0.39	34.2	2.0	3.1	13.10	65.8	19.1	0.65	250
CH	29	79.6	6.34	0.48	26.8	1.5	5.1	8.63	.	.	.	.
S30	1	42.4	2.86	0.22	32.5	1.4	1.3	5.03	51.9	10.9	0.46	450
S30	14	50.8	4.52	0.35	30.3	1.3	2.4	6.78	.	.	.	.
CB2	1	56.7	10.90	0.44	23.5	2.0	3.2	14.70	69.6	24.9	.	.
CB2	22	74.3	6.95	0.36	21.4	1.0	3.5	6.99	.	.	.	.
CB4	1	28.2	3.96	0.37	10.7	1.2	4.0	5.62	38.8	12.5	.	.
CB4	9	90.4	9.13	0.50	21.4	1.8	5.6	6.03	.	.	.	.
CB6	1	79.1	4.87	0.58	17.7	1.4	6.8	5.89	38.9	10.2	.	.
CB6	6	73.7	5.63	0.49	25.7	1.2	7.1	6.03	.	.	.	.
CB8	1	61.6	3.78	0.52	12.1	0.9	6.8	4.52	32.5	8.5	.	.
CB8	9	61.2	5.15	0.63	14.9	1.0	11.7	5.21	.	.	.	.
CB10	1	33.1	3.70	0.41	18.6	0.9	5.7	3.70	21.9	14.1	.	.
CB10	7	55.5	3.87	0.59	9.0	1.1	9.4	4.11	.	.	.	.
CB12	1	49.6	8.75	0.41	15.3	1.4	4.4	8.04	53.7	20.0	0.60	230
CB12	26	42.2	4.87	0.39	12.3	1.0	5.8	4.79	.	.	.	.
CB14	1	49.9	8.64	0.55	16.6	1.2	8.1	7.40	57.4	18.3	0.77	230
CB14	7	53.2	9.99	0.56	20.9	1.2	8.1	7.50	.	.	.	.
CB16	1	42.5	7.63	0.62	9.0	1.3	10.9	4.73	50.0	17.1	0.79	240
CB16	6	71.4	11.40	0.82	18.1	1.1	18.6	5.55	.	.	.	.
CB18	1	42.0	8.19	0.57	7.7	1.1	7.3	5.75	58.5	18.5	0.72	230
CB18	6	55.4	9.69	0.56	7.0	1.0	15.5	5.24	.	.	.	.
CB20	1	88.3	15.50	1.03	10.6	1.3	15.9	11.50	48.3	35.0	1.70	130
CB20	6	101.0	17.10	1.43	10.9	1.4	18.4	12.30	.	.	.	.
AS1	1	79.1	10.00	0.38	26.9	1.4	3.0	11.60	.	.	.	.
AS1	24	135.0	8.00	0.33	14.0	1.0	4.1	3.49	.	.	.	.
AS4	1	135.0	10.80	0.61	21.5	1.9	4.9	17.10	119.4	37.4	.	200
AS4	27	107.0	6.94	0.32	28.5	1.9	3.3	3.70	.	.	.	.
AS7	1	131.0	13.70	0.48	19.5	1.2	3.4	25.10	.	.	.	200
AS7	24	62.9	8.48	0.41	8.9	1.2	3.4	9.45	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar) Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
S0	1	2120.6	1462.9	.	1357.3	8.91	54.51	.	.	139.2	2.25	3.378	.
S0.5	1	2348.1	447.7	.	512.1	4.33	58.94	45.32	.	143.8	2.30	1.641	.
S1	1	1849.4	204.1	.	94.9	2.27	36.63	44.38	.	108.6	2.27	2.317	.
S2.5	1	875.5	195.2	.	120.0	4.16	52.81	41.39	.	131.5	3.01	1.689	.
S2.5	12	562.5	141.5	.	94.9	0.41	35.78	30.84	.	120.8	1.25	1.062	.
S5	1	511.5	198.8	.	137.9	0.64	22.15	27.70	.	79.5	1.54	1.207	.
S5	9	34.6	93.1	.	141.5	2.05	23.85	29.90	.	50.5	2.64	0.483	.
S7.5	1	340.4	130.7	.	134.3	1.22	20.78	34.15	.	56.6	2.54	0.676	.
S7.5	12	18.2	98.5	.	41.2	1.73	18.40	32.57	.	33.6	.	0.531	.
S10	1	54.6	214.9	.	21.5	0.64	15.67	23.45	.	13.8	1.32	0.531	.
S10	11	10.9	168.3	.	23.3	0.51	11.24	16.84	.	12.2	0.51	0.531	.
S15	1	20.0	120.0	.	25.1	0.17<	10.90	22.19	.	3.1	0.74	0.145	.
S15	11	43.7	59.1	.	10.7	1.05	9.37	20.93	.	10.7	0.54	0.627	.
S20	1	27.3	313.4	.	177.3	1.04	11.24	19.36	.	7.6	0.78	0.290	.
S20	9	41.9	48.3	.	96.7	1.80	10.22	18.57	.	19.9	0.66	0.627	.
BR	1	.	.	.	.	.	.	.	.	.	.	.	.
BR	11	.	.	.	.	.	.	.	.	.	.	.	.
CH	1	.	.	.	.	.	.	.	.	.	.	.	.
CH	29	.	.	.	.	.	.	.	.	.	.	.	.
S30	1	49.1	.	.	84.2	0.07	6.13	9.28	.	19.9	1.27	0.193	.
S30	14	.	.	.	84.2	1.49	5.11	6.92	.	35.2	0.84	0.338	.
CB2	1	89.2	.	.	12.5	0.32	4.60	11.02	.	12.2	1.81	0.164	.
CB2	22	52.8	.	.	26.9	1.00	6.64	6.92	.	32.1	0.93	0.005	.
CB4	1	23.7	.	.	68.0	0.08<	5.79	17.00	.	22.9	1.66	1.260	.
CB4	9	21.8	.	.	12.5	0.32	5.28	7.55	.	21.4	0.43	0.121	.
CB6	1	29.1	.	.	53.7	0.08<	3.58	7.24	.	18.4	1.08	0.401	.
CB6	6	21.8	.	.	39.4	0.07	5.62	7.40	.	19.9	0.73	0.309	.
CB8	1	36.4	.	.	53.7	0.08<	4.60	7.71	.	18.4	1.05	0.029	.
CB8	9	67.3	.	.	66.3	0.08<	3.92	6.77	.	18.4	0.61	0.352	.
CB10	1	74.6	.	.	25.1	0.53	5.79	9.28	.	36.7	1.61	0.183	.
CB10	7	81.9	.	.	23.3	0.08<	3.58	7.08	.	19.9	0.42	0.125	.
CB12	1	196.6	.	.	66.3	0.08<	6.64	9.91	.	19.9	0.66	0.458	.
CB12	26	1.8	.	.	37.6	0.08<	5.45	7.24	.	26.0	0.57	.	.
CB14	1	72.8	.	.	80.6	0.08<	6.81	10.23	.	27.5	1.81	0.304	.
CB14	7	103.8	.	.	111.0	0.76	6.98	8.97	.	24.5	0.60	0.352	.
CB16	1	9.1	.	.	71.6	0.08<	8.69	8.03	.	15.3	0.82	0.010<	.
CB16	6	7.3	.	.	75.2	0.41	8.52	18.10	.	13.8	.	0.150	.
CB18	1	41.9	.	.	265.0	0.08<	3.58	11.17	.	13.8	2.20	0.130	.
CB18	6	41.9	.	.	75.2	1.09	5.45	9.28	.	10.7	0.44	0.010	.
CB20	1	58.2	.	.	69.8	0.08<	5.62	16.37	.	65.8	5.03	1.052	.
CB20	6	111.0	.	.	132.5	0.48	7.67	11.65	.	10.7	0.50	.	.
AS1	1	105.6	.	.	28.6	0.75	6.98	12.43	.	21.4	1.55	0.531	.
AS1	24	21.8	.	.	30.4	0.17	5.62	6.92	.	13.8	0.40	0.434	.
AS4	1	69.2	.	.	43.0	0.78	5.96	8.03	.	10.7	0.35	0.434	.
AS4	27	34.6	.	.	.	0.63	7.16	7.71	.	19.9	1.30	0.338	.
AS7	1	69.2	.	.	46.6	0.10	8.52	28.80	.	30.6	1.81	0.391	.
AS7	24	12.7	.	.	5.4	0.36	4.26	7.55	.	18.4	0.68	0.251	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston)								
		Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
S0	1	.	12.4	483	0.19	1.28	1.34	3.21	0.024	.	0.94
S0.5	1	.	38.8	442	0.52	2.05	1.49	7.89	0.068	.	2.84
S1	1	.	22.8	305	0.28	1.04	1.15	4.85	0.000	.	0.48
S2.5	1	.	26.0	376	.	.	.	6.91	.	.	.
S2.5	12	.	.	.	.	.	.	.	.	.	.
S5	1	.	28.9	326	0.47	0.72	0.64	7.16	0.000	.	0.51
S5	9	.	42.6	380	.	.	.	9.68	.	.	.
S7.5	1	.	33.9	300	.	.	.	11.04	.	.	.
S7.5	12	.	28.2	262	0.25	2.28	0.33	6.12	0.241	.	0.61
S10	1	.	15.1	138	0.21	0.29	0.07	3.56	0.032	.	0.75
S10	11	.	26.4	197	0.20	0.81	0.51	5.51	0.062	.	0.61
S15	1	.	12.0	69	0.17	0.64	0.00	3.87	0.013	.	1.20
S15	11	.	16.2	95	0.23	0.76	0.01	2.86	0.002	.	0.25
S20	1	.	9.3	64	0.06	1.10	0.23	2.70	0.000	.	1.14
S20	9	.	9.3	72	0.18	0.58	1.12	2.30	0.084	.	2.35
BR	1	.	16.0	110	0.16	0.98	0.00	2.84	0.018	.	0.13
BR	11	.	16.7	187	0.32	0.57	0.11	3.48	0.020	.	0.24
CH	1	.	9.8	86	0.10	0.36	0.00	2.63	0.031	.	5.32
CH	29	.	12.4	136	0.16	2.55	0.25	2.56	0.015	.	1.33
S30	1	.	20.6	97	0.16	1.48	0.64	4.37	0.013	.	0.34
S30	14	.	14.0	123	0.16	0.79	0.37	3.08	.	.	0.10
CB2	1	.	11.5	91	0.10	0.05	0.01	3.55	0.050	.	2.27
CB2	22	.	13.3	114	0.11	0.61	0.00	3.28	0.123	.	0.14
CB4	1	.	14.0	110	0.10	0.55	0.00	2.85	0.016	.	0.17
CB4	9	.	11.6	119	0.11	0.42	0.00	2.62	0.015	.	2.62
CB6	1	.	11.8	122	0.10	0.42	0.01	2.05	0.001	.	0.19
CB6	6	.	11.5	134	0.07	0.33	0.05	.	0.011	.	0.17
CB8	1	.	16.9	134	0.09	0.68	0.25	2.74	0.100	.	0.87
CB8	9	.	9.3	120	0.05	0.42	0.14	1.82	0.077	.	0.11
CB10	1	.	13.5	181	0.10	0.48	0.06	2.59	0.000	.	0.37
CB10	7	.	14.9	172	0.08	0.56	0.14	2.92	0.024	.	0.26
CB12	1	.	13.7	109	0.10	0.47	0.21	1.13	0.000	.	0.54
CB12	26	.	14.9	134	0.15	1.21	0.01	2.13	0.010	.	0.27
CB14	1	.	30.2	283	0.28	1.80	0.72	7.99	0.036	.	1.49
CB14	7	.	10.7	122	0.09	0.46	0.06	1.80	0.005	.	0.17
CB16	1	.	21.5	202	0.15	1.04	0.46	5.23	0.011	.	0.46
CB16	6	.	12.6	175	0.11	0.90	0.20	2.00	0.013	.	0.21
CB18	1	.	12.4	142	0.10	0.62	0.05	.	0.007	.	0.18
CB18	6	.	15.5	141	0.08	0.76	0.26	2.14	0.006	.	0.38
CB20	1	.	26.2	215	0.15	0.90	0.37	3.69	0.017	.	1.75
CB20	6	.	16.6	174	0.14	0.98	0.26	3.33	0.043	.	0.25
AS1	1	.	.	.	.	.	.	.	.	.	.
AS1	24	.	.	.	.	.	.	.	.	.	.
AS4	1	.	.	.	.	.	.	.	.	.	.
AS4	27	.	.	.	.	.	.	.	.	.	.
AS7	1	.	.	.	.	.	.	.	.	.	.
AS7	24	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
S0	1	CTD	05/03/82	0626	39 48.1 N	75 24.3 W	127.7	13.0
S0.5	1	CTD	05/03/82	0749	39 39.4 N	75 32.3 W	106.8	.
S1	1	CTD	05/03/82	0841	39 33.3 N	75 32.1 W	93.4	.
S2.5	1	CTD	05/03/82	0925	39 28.1 N	75 33.6 W	83.3	15.5
S2.5	12	CTD	05/03/82	0925	39 28.1 N	75 33.6 W	83.3	15.5
S5	1	CTD	05/03/82	1012	39 23.4 N	75 29.0 W	72.0	14.4
S5	9	CTD	05/03/82	1012	39 23.4 N	75 29.0 W	72.0	14.4
S7.5	1	CTD	05/03/82	1109	39 16.8 N	75 21.6 W	55.3	15.7
S7.5	12	CTD	05/03/82	1109	39 16.8 N	75 21.6 W	55.3	15.7
S10	1	CTD	05/03/82	1242	39 10.1 N	75 15.4 W	40.2	14.3
S10	11	CTD	05/03/82	1242	39 10.1 N	75 15.4 W	40.2	14.3
S15	1	CTD	05/03/82	1342	39 5.4 N	75 11.4 W	29.9	14.6
S15	11	CTD	05/03/82	1342	39 5.4 N	75 11.4 W	29.9	14.6
S20	1	CTD	05/03/82	1448	38 59.8 N	75 8.6 W	18.8	14.8
S20	9	CTD	05/03/82	1448	38 59.8 N	75 8.6 W	18.8	14.8
BR	1	CTD	05/03/82	1541	38 55.3 N	75 5.9 W	9.6	14.6
BR	11	CTD	05/03/82	1541	38 55.3 N	75 5.9 W	9.6	14.6
CH	1	CTD	05/03/82	1651	38 49.5 N	75 3.2 W	-1.9	33.2
CH	29	CTD	05/03/82	1651	38 49.5 N	75 3.2 W	-1.9	33.2
S30	1	CTD	05/03/82	1741	38 45.1 N	74 56.2 W	-14.4	21.8
S30	14	CTD	05/03/82	1741	38 45.1 N	74 56.2 W	-14.4	21.8
CB2	1	CTD	05/04/82	0404	38 47.9 N	75 2.3 W	-5.1	29.4
CB2	22	CTD	05/04/82	0404	38 47.9 N	75 2.3 W	-5.1	29.4
CB4	1	CTD	05/04/82	0431	38 49.3 N	74 59.8 W	-5.5	11.1
CB4	9	CTD	05/04/82	0431	38 49.3 N	74 59.8 W	-5.5	11.1
CB6	1	CTD	05/04/82	0457	38 50.8 N	74 56.8 W	-9.4	11.0
CB6	6	CTD	05/04/82	0457	38 50.8 N	74 56.8 W	-9.4	11.0
CB8	1	CTD	05/04/82	0519	38 52.1 N	74 54.4 W	-13.2	11.2
CB8	9	CTD	05/04/82	0519	38 52.1 N	74 54.4 W	-13.2	11.2
CB10	1	CTD	05/04/82	0544	38 55.1 N	74 54.4 W	-15.4	10.6
CB10	7	CTD	05/04/82	0544	38 55.1 N	74 54.4 W	-15.4	10.6
CB12	1	CTD	05/05/82	1129	38 47.8 N	75 2.0 W	-5.4	29.5
CB12	26	CTD	05/05/82	1129	38 47.8 N	75 2.0 W	-5.4	29.5
CB14	1	CTD	05/05/82	1151	38 49.3 N	74 59.6 W	-5.8	9.6
CB14	7	CTD	05/05/82	1151	38 49.3 N	74 59.6 W	-5.8	9.6
CB16	1	CTD	05/05/82	1213	38 50.9 N	74 56.7 W	-9.5	10.2
CB16	6	CTD	05/05/82	1213	38 50.9 N	74 56.7 W	-9.5	10.2
CB18	1	CTD	05/05/82	1231	38 52.1 N	74 54.2 W	-13.4	9.7
CB18	6	CTD	05/05/82	1231	38 52.1 N	74 54.2 W	-13.4	9.7
CB20	1	CTD	05/05/82	1254	38 55.2 N	74 54.2 W	-15.7	9.2
CB20	6	CTD	05/05/82	1254	38 55.2 N	74 54.2 W	-15.7	9.2
AS1	1	CTD	05/04/82	0748	38 48.9 N	75 2.8 W	-3.1	29.9
AS1	24	CTD	05/04/82	0748	38 48.9 N	75 2.8 W	-3.1	29.9
AS4	1	CTD	05/04/82	1057	38 48.9 N	75 2.7 W	-3.1	31.1
AS4	27	CTD	05/04/82	1057	38 48.9 N	75 2.7 W	-3.1	31.1
AS7	1	CTD	05/04/82	1403	38 48.9 N	75 2.7 W	-3.1	30.6
AS7	24	CTD	05/04/82	1403	38 48.9 N	75 2.7 W	-3.1	30.6

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
AS10	1	24.411	.	13.33	436.5	156	8.537	1829	0.07	0.10	0.10	0.58	0.86	176	14	0.39
AS10	24	30.688	.	9.98	296.5	103	8.057	2143	0.15	0.03	0.03	0.65	2.30	123	10	0.15
AS13	1	29.905	.	11.26	324.5	115	8.163	2108	0.15	0.09	0.03	0.20	0.68	143	10	0.25
AS13	25	31.337	.	9.47	294.0	101	8.045	2182	0.23	0.05	0.03	0.22	1.11	121	9	0.23
AS16	1	28.549	.	11.21	330.0	116	8.225	2047	0.07	0.02	0.04	0.12	0.58	185	11	0.52
AS16	25	31.305	.	9.81	298.0	103	8.056	2184	0.20	0.04	0.02	0.03	0.74	132	9	0.45
AS19	1	24.616	.	12.53	384.5	135	8.477	1838	0.05	0.15	0.08	0.13	0.67	197	13	0.32
AS19	25	30.618	.	10.17	298.0	103	8.070	2137	0.11	0.02	0.02	0.15	1.10	124	9	0.30
AS22	1	25.555	.	12.30	360.5	127	8.404	1885	0.07	0.09	0.06	0.13	0.50	205	11	0.37
AS22	26	30.597	.	10.18	297.5	103	8.067	2133	0.11	0.03	0.02	0.03	0.59	117	10	0.32
AS25	1	29.226	.	11.04	315.0	110	8.156	2067	0.09	0.02	0.02	0.18	0.41	132	10	0.35
AS25	28	31.045	.	9.97	297.0	103	8.059	2154	0.16	.	0.01	0.03	0.62	122	.	0.29

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
AS10	1	61.5	11.90	0.54	22.1	2.6	3.9	23.70	.	.	0.80	200
AS10	24	69.4	6.02	0.39	9.3	1.3	4.5	9.94	.	.	.	.
AS13	1	53.9	4.02	0.33	21.9	1.7	1.7	4.83	.	.	.	.
AS13	26	74.9	5.07	0.24	19.0	2.2	5.1	6.06	.	.	.	.
AS16	1	55.1	10.50	0.42	18.3	1.4	4.0	13.40	.	.	.	.
AS16	25	37.2	6.62	0.29	14.8	1.2	3.5	5.45	.	.	.	.
AS19	1	82.5	11.80	0.49	23.2	2.2	4.2	23.30	.	.	.	.
AS19	25	60.8	8.38	0.42	17.9	1.0	4.6	9.15	.	.	.	.
AS22	1	65.2	11.70	0.45	16.7	1.9	2.9	16.30	.	.	.	.
AS22	26	55.9	9.12	0.54	13.4	1.1	7.6	9.25	.	.	.	.
AS25	1	33.7	6.87	0.29	15.5	1.3	2.7	6.16	.	.	.	.
AS25	28	39.5	7.77	0.41	18.8	1.0	6.8	5.96	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
AS10	1	36.4	.	.	35.8	1.22	6.47	15.74	.	12.2	1.41	0.294	.
AS10	24	14.6	.	.	23.3	0.17	5.79	10.86	.	30.6	0.42	0.478	.
AS13	1	74.6	.	.	10.7	0.15	3.75	11.49	.	12.2	1.78	0.154	.
AS13	25	30.9	.	.	25.1	1.20	4.26	7.40	.	15.3	0.60	0.208	.
AS16	1	92.8	.	.	53.7	1.00	5.45	11.17	.	12.2	1.31	0.164	.
AS16	25	5.5	.	.	43.0	0.20	5.11	7.55	.	15.3	0.61	0.164	.
AS19	1	69.2	.	.	87.7	0.17	10.22	22.35	.	58.1	.	0.709	.
AS19	25	3.6	.	.	5.4	0.63	5.79	9.60	.	15.3	0.68	0.468	.
AS22	1	60.1	.	.	48.3	0.61	7.33	22.66	.	32.1	.	0.487	.
AS22	26	1.8	.	.	7.2	0.81	4.43	6.61	.	42.8	0.91	0.391	.
AS25	1	.	.	.	.	.	.	.	.	.	.	.	.
AS25	28	.	.	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
AS10	1	CTD	05/04/82	1656	38 48.9 N	75 2.8 W	-3.1	29.9
AS10	24	CTD	05/04/82	1656	38 48.9 N	75 2.8 W	-3.1	29.9
AS13	1	CTD	05/04/82	1953	38 48.9 N	75 2.8 W	-3.1	30.5
AS13	25	CTD	05/04/82	1953	38 48.9 N	75 2.8 W	-3.1	30.5
AS16	1	CTD	05/04/82	2256	38 48.9 N	75 2.7 W	-3.1	30.2
AS16	25	CTD	05/04/82	2256	38 48.9 N	75 2.7 W	-3.1	30.2
AS19	1	CTD	05/05/82	0155	38 48.9 N	75 2.7 W	-3.1	30.3
AS19	25	CTD	05/05/82	0155	38 48.9 N	75 2.7 W	-3.1	30.3
AS22	1	CTD	05/05/82	0459	38 48.9 N	75 2.8 W	-3.1	30.0
AS22	26	CTD	05/05/82	0459	38 48.9 N	75 2.8 W	-3.1	30.0
AS25	1	CTD	05/05/82	0756	38 48.9 N	75 2.8 W	-3.1	31.3
AS25	28	CTD	05/05/82	0756	38 48.9 N	75 2.8 W	-3.1	31.3

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
1	1	26.000D	.	.	.	.	.	.	0.50	13.90	1.00	4.59	7.75	.	.	.
1	8	26.000D	.	.	.	.	.	.	0.49	12.70	0.96	4.46	6.95	.	.	.
2	1	27.000D	.	.	.	.	.	.	0.44	11.10	0.89	3.01	6.36	.	.	.
2	12	29.000D	.	.	.	.	.	.	0.41	3.69	0.39	2.98	4.03	.	.	.
3	1	26.815	.	.	.	.	.	.	0.41	9.17	0.76	2.52	5.92	.	.	.
3	12	30.000D	.	.	.	.	.	.	0.42	1.96	0.23	2.43	3.60	.	.	.
4	1	27.265	.	.	.	.	.	.	0.45	8.15	0.73	2.49	5.83	.	.	.
5	1	26.741	.	.	.	.	.	.	0.48	8.85	0.75	2.77	5.99	.	.	.
6	1	25.900	.	.	.	.	.	.	0.56	10.80	1.03	2.71	8.47	.	.	.
7	1	24.636	.	.	.	.	.	.	0.44	13.50	1.69	3.51	10.30	.	.	.
8	1	24.210	.	.	.	.	.	.	0.50	17.20	1.27	3.29	8.43	.	.	.
9	1	23.380	.	.	.	.	.	.	0.59	19.50	1.30	3.32	8.97	.	.	.
10	1	22.830	.	.	.	.	.	.	0.46	14.90	1.25	4.06	6.77	.	.	.
11	1	16.583	.	.	.	.	.	.	0.88	40.90	1.14	2.67	14.60	.	.	.
12	1	15.532	.	.	.	.	.	.	0.82	33.60	2.48	7.95	17.90	.	.	.
13	1	14.421	.	.	.	.	.	.	0.84	52.20	0.86	4.94	11.40	.	.	.
14	1	14.484	.	.	.	.	.	.	0.95	59.70	0.95	2.90	16.50	.	.	.
15	1	19.116	.	.	.	.	.	.	0.54	25.00	0.77	2.62	8.72	.	.	.
16	1	23.924	.	.	.	.	.	.	0.30	18.80	0.98	1.98	3.32	.	.	.
17	1	26.639	.	.	.	.	.	.	0.48	10.10	1.06	4.60	4.42	.	.	.
18	1	24.447	.	.	.	.	.	.	0.22	15.20	2.69	5.25	4.08	.	.	.
19	1	21.568	.	.	.	.	.	.	0.20	22.90	5.52	8.09	9.74	.	.	.
20	1	19.077	.	.	.	.	.	.	0.26	33.50	10.50	19.00	25.90	.	.	.
21	1	18.192	.	.	.	.	.	.	0.31	49.20	2.52	2.99	6.29	.	.	.
22	1	20.190	.	.	.	.	.	.	0.23	41.70	1.08	0.15	1.79	.	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
1	1	.	.	.	.	.	.	4.10	.	.	.	60
1	8	.	.	.	.	.	.	3.70	.	.	.	.
2	1	.	.	.	.	.	.	6.58	.	.	.	100
2	12	.	.	.	.	.	.	2.56	.	.	.	.
3	1	.	.	.	.	.	.	4.82	38.3	49.9	.	140
3	12	.	.	.	.	.	.	2.51	.	.	.	.
4	1	.	.	.	.	.	.	4.73	39.3	50.6	2.00	90
5	1	.	.	.	.	.	.	3.84	33.6	49.1	2.09	75
6	1	.	.	.	.	.	.	7.95	34.0	98.5	4.42	35
7	1	.	.	.	.	.	.	13.43	.	.	2.69	45
8	1	.	.	.	.	.	.	6.03	44.4	74.4	3.06	50
9	1	.	.	.	.	.	.	8.22	.	.	3.68	45
10	1	.	.	.	.	.	.	5.44	83.0	115.4	2.47	65
11	1	.	.	.	.	.	.	5.77	85.7	126.7	2.66	60
12	1	.	.	.	.	.	.	7.24	45.4	95.9	4.46	20
13	1	.	.	.	.	.	.	3.22	38.0	53.5	3.40	40
14	1	.	.	.	.	.	.	3.32	80.8	59.2	1.74	60
15	1	.	.	.	.	.	.	4.39	124.8	83.4	1.42	85
16	1	.	.	.	.	.	.	7.40	.	.	3.30	50
17	1	.	.	.	.	.	.	4.52	62.8	64.0	2.22	80
18	1	.	.	.	.	.	.	8.22	107.1	106.1	2.04	50
19	1	.	.	.	.	.	.	11.51	.	.	2.61	45
20	1	.	.	.	.	.	.	14.80	104.4	205.5	4.03	35
21	1	.	.	.	.	.	.	14.59	130.4	146.4	2.31	50
22	1	.	.	.	.	.	.	12.33	178.6	158.0	1.81	70

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
1	1	Wire	06/21/82	.	39 4.0 N	75 17.0 W	31.8	.
1	8	Wire	06/21/82	.	39 4.0 N	75 17.0 W	31.8	.
2	1	Wire	06/21/82	.	38 58.8 N	75 12.8 W	20.5	.
2	12	Wire	06/21/82	.	38 58.8 N	75 12.8 W	20.5	.
3	1	Wire	06/21/82	.	38 51.0 N	75 6.8 W	5.1	.
3	12	Wire	06/21/82	.	38 51.0 N	75 6.8 W	5.1	.
4	1	Boat	06/22/82	0655	38 49.3 N	75 9.2 W	8.8	.
5	1	Boat	06/22/82	0730	38 52.1 N	75 11.7 W	12.5	.
6	1	Boat	06/22/82	0815	38 54.8 N	75 14.0 W	17.3	.
7	1	Boat	06/22/82	0845	38 56.7 N	75 16.7 W	22.4	.
8	1	Boat	06/22/82	0935	39 1.2 N	75 18.0 W	29.0	.
9	1	Boat	06/22/82	1005	39 3.9 N	75 22.3 W	36.9	.
10	1	Boat	06/22/82	1055	39 7.4 N	75 20.2 W	39.6	.
11	1	Boat	06/22/82	1135	39 12.4 N	75 19.5 W	46.7	.
12	1	Boat	06/24/82	0700	39 10.8 N	75 2.9 W	37.5	.
13	1	Boat	06/24/82	0745	39 10.1 N	75 8.4 W	37.0	.
14	1	Boat	06/24/82	0815	39 11.2 N	75 12.9 W	40.7	.
15	1	Boat	06/24/82	0910	39 5.8 N	75 8.6 W	29.3	.
16	1	Boat	06/24/82	0950	39 2.2 N	75 5.0 W	21.7	.
17	1	Boat	06/24/82	1015	38 58.6 N	75 1.5 W	15.2	.
18	1	Boat	06/24/82	1115	39 1.1 N	74 57.0 W	21.6	.
19	1	Boat	06/24/82	1150	38 4.5 N	74 55.4 W	28.3	.
20	1	Boat	06/24/82	1230	39 9.5 N	74 53.8 W	37.7	.
21	1	Boat	06/24/82	1300	39 8.7 N	74 58.7 W	34.3	.
22	1	Boat	06/24/82	1340	39 7.8 N	75 3.6 W	32.0	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
P1	1	-0.002	449	28.70B	169.5	70	7.228	930	2.50	71.60	8.83	5.68	36.30	.	.	.
P2	1	-0.013	444	27.60B	147.0	60	7.095	826	3.17	79.50	7.38	16.00	36.00	.	.	.
P3	1	0.015	553	26.90B	92.0	37	6.927	832	3.76	81.10	7.61	36.40	34.80	.	.	.
P4	1	0.013	705	27.00B	79.5	32	6.952	869	3.81	97.60	8.46	29.90	34.90	.	.	.
P5	1	.	736	27.30B	111.0	45	6.997	853	3.87	124.00	7.17	6.74	22.10	.	.	.
P6	1	0.020	718	27.90B	152.5	62	7.103	820	2.85	140.00	0.68	0.45	14.10	.	.	.
S0	1	0.027	766	28.15	142.0	58	7.113	814	2.93	133.00	0.89	1.30	8.68	333	34	0.33
S0	10	0.026	756	28.16	141.5	58	7.116	825	2.93	137.00	0.83	1.33	9.20	334	39	0.16
S1	1	1.014	15358	28.45	155.5	65	7.149	801	2.61	143.00	1.42	5.11	37.90	338	16	0.17
S1	11	1.400	21293	28.43	160.0	67	7.166	792	2.50	142.00	1.26	4.39	39.60	358	25	0.12
S2.5	1	2.917	.	28.52	163.5	69	7.208	860	2.39	133.00	1.17	1.56	47.60	342	29	0.10
S2.5	12	3.271	.	28.45	167.0	70	7.220	884	2.34	127.00	1.26	1.34	51.50	337	22	0.16
S5	1	5.052	.	28.28	174.5	74	7.293	954	1.67	74.00	1.17	0.30	42.80	311	43	0.83
S5	10	5.381	.	28.37	172.5	73	7.282	974	1.43	114.00	0.95	0.38	34.80	330	24	0.96
S7.5	1	8.017	.	28.05	178.0	76	7.390	1087	2.18	98.40	1.48	0.10<	49.10	286	20	0.24
S7.5	12	10.199	.	27.83	182.0	79	7.490	1184	2.07	88.20	2.21	0.10<	41.70	264	18	0.19
S10	1	10.298	.	27.79	191.5	83	7.554	1187	2.07	84.90	2.64	0.10<	40.60	262	17	0.19
S10	10	11.820	.	27.56	189.5	82	7.603	1259	1.51	78.50	2.08	0.12	26.20	260	25	0.58
S15	1	16.301	.	27.07	225.5	100	7.962	1454	1.21	52.50	2.07	0.28	18.00	285	19	0.41
S15	8	17.392	.	26.69	219.5	97	7.960	1507	1.29	48.50	2.14	0.88	16.40	293	21	0.15
S20	1	20.618	.	25.79	263.0	116	8.155	1660	0.50	30.40	1.46	0.38	6.72	252	20	0.39
S20	12	23.773	.	24.07	227.5	99	8.070	1814	0.52	16.50	1.00	2.76	4.88	246	34	0.32
S25	1	25.594	.	23.81	253.5	111	8.128	1897	0.27	8.85	0.65	1.88	2.61	224	13	0.38
S25	10	26.408	.	23.04	240.5	105	8.085	1938	0.32	8.26	0.58	2.27	3.51	223	11	0.38
BR	1	26.940	.	23.11	231.5	101	8.038	1958	0.46	7.67	0.68	2.30	4.36	185	13	0.47
BR	11	29.763	.	19.60	222.0	93	7.984	2097	0.40	1.82	0.23	1.84	3.85	158	11	0.35
CH	1	30.833	.	18.62	235.5	97	7.993	2141	0.45	1.27	0.12	0.76	4.02	162	13	0.35
CH	28	31.165	.	16.66	231.5	92	7.962	2161	0.50	0.57	0.09	1.10	3.85	133	9	0.18
L10	1	9.477	.	28.16	234.0	101	7.791	1147	1.79	82.10	1.77	0.11	41.90	288	19	.
L10	10	11.464	.	26.55	203.0	86	7.661	1236	1.49	77.20	1.50	0.18	30.40	.	24	.
L7.5	1	7.538	.	27.83	204.0	87	7.519	1055	1.97	98.00	1.98	0.43	45.00	309	22	.
L7.5	7	8.880	.	26.96	190.0	80	7.471	1116	1.90	87.60	2.09	0.64	41.40	.	6	.
L5	1	4.162	.	27.69	186.5	78	7.312	908	2.18	119.00	1.49	1.75	51.20	328	28	.
L5	10	5.004	.	27.45	182.0	76	7.312	945	1.82	113.00	1.27	1.08	43.40	.	40	.
L2.5	2	2.082	.	27.73	169.0	70	7.199	821	2.33	134.00	1.04	3.92	49.90	327	33	.
L2.5	10	2.253	.	27.71	168.5	70	7.192	829	2.23	128.00	1.03	4.02	49.20	.	38	.
L1	1	0.965	14786	27.76	160.5	66	7.152	788	2.51	154.00	0.85	8.00	41.80	304	51	.
L1	7	1.280	19432	27.69	159.5	65	7.134	795	2.41	153.00	0.94	7.33	45.00	.	9	.
L0	1	0.027	.	27.88	158.0	65	7.142	799	2.90	156.00	0.51	2.22	20.40	344	72	.
L0	8	0.028	.	27.70	139.0	57	7.079	803	2.82	.	0.47	2.65	23.60	.	.	.
D10	2	11.658	.	27.01	212.0	91	7.721	1243	1.59	74.50	1.94	0.18	35.00	264	3	.
D10	9	14.144	.	26.48	213.5	92	7.816	1354	1.33	62.60	1.92	0.75	26.40	.	5	.
D7.5	1	7.981	.	27.42	200.5	85	7.512	1077	2.03	93.00	2.04	0.31	41.40	290	29	.
D7.5	6	8.407	.	27.30	199.5	85	7.546	1140	1.90	85.40	2.22	0.50	49.50	.	32	.
D5	1	5.006	.	27.61	184.0	77	7.319	942	2.15	113.00	1.74	1.72	47.10	306	23	.
D5	5	5.083	.	27.61	184.0	77	7.327	948	2.18	111.00	1.74	0.98	40.60	.	4	.
D2.5	1	2.325	.	27.85	170.5	71	7.209	836	2.28	125.00	1.09	4.03	49.30	284	22	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
P1	1	.	.	.	.	.	6.9	15.53	48.2	82.9	2.20	70
P2	1	.	.	.	.	.	36.8	31.46	106.0	163.0	2.20	85
P3	1	.	.	.	.	.	27.7	39.61	147.0	211.0	2.10	100
P4	1	.	.	.	.	.	17.4	52.43	150.0	217.0	2.10	95
P5	1	.	.	.	.	.	5.9	32.23	99.3	115.0	1.60	125
P6	1	.	.	.	.	.	17.4	31.46	88.1	90.4	1.50	130
S0	1	58.9	11.10	1.91	13.3	2.2	15.8	22.14	38.9	87.0	.	.
S0	10	102.0	16.80	2.47	10.6	1.6	18.8	22.14	.	.	.	.
S1	1	87.4	14.20	2.39	12.4	1.3	55.2	7.12	16.1	39.1	3.10	25
S1	11	201.0	14.80	3.17	14.7	1.3	69.9	8.63	.	.	.	.
S2.5	1	239.0	11.60	2.17	7.2	0.8	56.2	7.81	8.9	41.6	.	35
S2.5	12	.	.	3.55	18.1	1.0	102.3	9.19	.	.	.	.
S5	1	94.0	9.76	1.32	39.4	2.6	35.5	5.09	31.8	62.1	3.20	.
S5	10	111.0	12.70	3.02	20.0	1.2	77.7	7.84	.	.	.	.
S7.5	1	35.4	5.70	0.99	15.1	1.1	24.3	7.40	38.2	92.7	3.60	50
S7.5	12	40.9	6.29	1.04	33.7	1.0	26.6	4.93	.	.	.	.
S10	1	96.2	5.53	0.74	36.5	1.7	14.3	5.96	59.1	58.7	1.80	80
S10	10	120.0	12.90	2.11	23.1	1.2	57.5	6.30	.	.	.	.
S15	1	160.0	15.80	1.18	29.4	1.6	21.3	9.32	139.0	133.0	4.00	90
S15	8	73.5	15.10	1.69	35.1	1.3	36.5	8.02	.	.	.	.
S20	1	129.0	14.70	1.16	28.9	1.2	11.5	11.51	131.0	133.0	2.00	120
S20	12	199.0	11.50	1.13	38.4	1.7	16.8	5.34	.	.	.	.
S25	1	233.0	12.50	0.80	40.8	2.6	6.5	9.45	158.0	47.9	1.60	.
S25	10	129.0	8.09	0.85	57.2	2.3	13.5	7.40	.	.	.	.
BR	1	118.0	6.47	0.39	53.9	1.9	6.6	7.60	357.0	77.7	0.50	.
BR	11	167.0	7.59	0.73	51.8	1.8	27.5	4.11	.	.	.	.
CH	1	124.0	4.80	0.32	79.1	1.9	2.4	4.42	264.0	33.5	0.27	.
CH	28	133.1	9.11	0.92	25.4	1.2	17.3	4.93	.	.	.	.
L10	1	56.9	7.87	0.78	.	.	14.6	7.67	74.6	152.0	1.50	.
L10	10	113.0	10.50	2.33	.	.	53.4	6.85	.	.	.	.
L7.5	1	35.5	5.09	0.93	.	.	26.2	5.55	71.5	135.0	2.00	.
L7.5	7	175.0	7.99	1.64	.	.	48.4	3.17	.	.	.	.
L5	1	.	12.70	1.33	.	.	46.4	3.56	32.4	97.2	2.50	.
L5	10	166.0	14.50	3.98	.	.	98.4	7.13	.	.	.	.
L2.5	2	103.0	.	3.36	.	.	90.7	8.63	11.8	90.3	6.80	.
L2.5	10	148.0	14.90	4.41	.	.	103.5	8.47	.	.	.	.
L1	1	72.6	9.29	2.78	.	.	53.2	8.50	26.0	97.8	4.60	.
L1	7	118.0	12.20	3.74	.	.	78.0	8.22	.	.	.	.
L0	1	53.8	9.34	1.50	.	.	16.6	19.22	55.2	113.0	3.10	.
L0	8	56.2	7.80	1.51	.	.	18.5	21.56	.	.	.	.
D10	2	44.8	6.28	0.82	.	.	16.7	3.95	.	.	.	.
D10	9	108.0	7.69	1.37	.	.	30.4	5.55	.	.	.	.
D7.5	1	64.3	11.70	1.45	.	.	36.8	3.70	.	.	.	.
D7.5	6	123.0	15.50	2.18	.	.	56.0	5.48	.	.	.	.
D5	1	255.0	21.50	4.91	.	.	142.6	7.81	.	.	.	.
D5	5	180.0	30.70	4.81	.	.	159.5	7.40	.	.	.	.
D2.5	1	.	23.20	4.28	.	.	100.7	6.99	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar) Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
P1	1	.	.	.	.	.	.	.	.	.	.	.	.
P2	1	.	.	.	.	.	.	.	.	.	.	.	.
P3	1	.	.	.	.	.	.	.	.	.	.	.	.
P4	1	.	.	.	.	.	.	.	.	.	.	.	.
P5	1	.	.	.	.	.	.	.	.	.	.	.	.
P6	1	.	.	.	.	.	.	.	.	.	.	.	.
S0	1	42.6	164.7	.	87.7	0.27	31.52	36.04	.	39.8	0.59	0.637	.
S0	10	40.0	191.6	.	.	.	.	34.78	.	.	0.37	0.497	.
S1	1	108.8	238.2	.	77.0	0.17	27.43	32.10	.	35.2	0.41	0.637	.
S1	11	95.9	222.0	.	34.0	0.25	25.55	28.48	.	59.7	0.57	0.603	.
S2.5	1	140.2	109.2	.	94.9	0.19	24.53	28.80	.	47.4	0.72	0.502	.
S2.5	12	94.7	41.2	.	39.4	0.10	21.12	32.73	.	50.5	0.73	0.526	.
S5	1	149.8	98.5	.	.	0.10	21.98	19.51	.	32.1	1.37	0.183	.
S5	10	209.9	68.0	.	43.0	0.12	21.29	19.99	.	53.5	0.93	0.265	.
S7.5	1	199.0	66.3	.	62.7	0.49	20.61	15.11	.	48.9	1.29	0.352	.
S7.5	12	207.5	78.8	.	25.1	0.07<	20.95	12.90	.	39.8	1.21	0.333	.
S10	1	35.3	137.9	.	19.7	0.12	14.99	25.49	.	32.1	1.00	0.647	.
S10	10	16.4	179.1	.	7.2	0.08	12.95	21.72	.	29.1	0.85	0.444	.
S15	1	26.2	91.3	.	48.3	0.14	14.31	20.61	.	18.4	0.75	0.685	.
S15	8	25.5	166.5	.	175.5	0.07<	13.80	19.20	.	19.9	0.70	0.555	.
S20	1	3.6	64.5	.	48.3	0.22	10.22	18.73	.	7.6	0.55	0.261	.
S20	12	10.4	23.3	.	28.6	0.19	13.12	21.09	.	18.4	0.52	0.280	.
S25	1	15.8	80.6	.	30.4	0.25	8.18	18.57	.	15.3	0.71	0.304	.
S25	10	12.4	41.2	.	19.7	0.29	8.18	16.84	.	9.2	0.49	.	.
BR	1	.	.	.	.	.	.	.	.	.	.	.	.
BR	11	.	.	.	.	.	.	.	.	.	.	.	.
CH	1	26.9	43.0	.	50.1	0.34	8.52	7.87	.	4.6	0.22	0.135	.
CH	28	6.0	26.9	.	5.4	0.41	8.35	7.40	.	9.2	0.49	0.193	.
L10	1	40.0	120.0	.	87.7	0.14	16.01	32.42	.	33.6	1.75	0.405	.
L10	10	26.2	64.5	.	46.6	0.25	17.72	25.18	.	35.2	1.23	0.492	.
L7.5	1	201.7	73.4	.	1.8	0.17	16.87	34.46	.	47.4	1.19	0.343	.
L7.5	7	258.1	82.4	.	41.2	0.20	16.18	34.78	.	38.2	0.61	0.087	.
L5	1	195.9	193.4	.	136.1	0.07<	23.51	64.83	.	102.5	2.65	0.454	.
L5	10	208.2	35.8	.	17.9	0.15	15.33	37.93	.	45.9	0.88	0.039	.
L2.5	2	101.8	48.3	.	14.3	0.19	16.35	35.88	.	55.1	3.71	0.193<	.
L2.5	10	96.5	59.1	.	16.1	0.32	17.21	39.34	.	61.2	0.35	0.116	.
L1	1	93.2	139.7	.	1.8	0.17	19.25	45.48	.	39.8	3.96	0.526	.
L1	7	44.4	26.9	.	1.8	0.25	19.25	44.06	.	38.2	4.61	0.179	.
L0	1	112.3	669.7	.	576.6	0.44	20.61	53.98	.	47.4	0.95	1.868	.
L0	8	23.7	9.0	.	12.5	0.07<	20.78	38.87	.	33.6	0.69	0.430	.
D10	2	28.2	236.4	.	84.2	0.07<	.	25.49	.	45.9	2.32	0.357	.
D10	9	24.2	69.8	.	19.7	0.07<	.	20.14	.	27.5	1.83	0.328	.
D7.5	1	161.1	102.1	.	137.9	0.49	13.46	.	.	85.7	0.52	0.367	.
D7.5	6	227.9	68.0	.	55.5	0.10	12.95	.	.	45.9	0.93	0.222	.
D5	1	70.8	336.6	.	204.1	0.29	12.95	43.59	.	52.0	0.81	1.593	.
D5	5	192.6	71.6	.	12.5	0.22	11.58	35.41	.	73.4	1.40	0.174	.
D2.5	1	124.5	121.8	.	143.2	0.20	16.01	39.66	.	39.8	0.66	0.183	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston)								
		Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
P1	1	.	84.5	246	0.37	1.03	0.31	14.54	2.255	.	0.78
P2	1	.	75.4	381	0.69	2.48	2.99	9.30	0.126	.	1.21
P3	1	.	87.4	377	0.60	2.39	2.61	8.39	0.130	.	0.92
P4	1	.	165.8	546	.	.	.	31.92	.	.	.
P5	1	.	151.1	148	0.91	17.07	11.38	9.13	0.155	.	1.14
P6	1	.	60.4	246	0.38	1.08	1.47	11.54	0.041	.	0.91
S0	1	.	53.3	269	0.33	2.05	0.94	4.98	0.027	.	0.28
S0	10	.	117.0	598	0.56	3.43	1.32	11.24	0.198	.	1.05
S1	1	.	30.6	284	0.34	1.35	0.62	3.03	0.119	.	0.41
S1	11	.	25.1	199	0.08	0.37	0.37	2.99	0.008	.	0.25
S2.5	1	.	23.7	178	0.11	0.43	0.31	2.62	0.008	.	0.21
S2.5	12	.	30.0	189	0.07	0.29	0.35	2.30	0.008	.	0.21
S5	1	.	28.6	233	0.30	1.03	3.36	5.91	0.044	.	0.31
S5	10	.	30.0	198	0.08	0.34	0.36	2.56	0.025	.	0.21
S7.5	1	.	22.2	211	0.21	1.05	0.30	3.75	0.022	.	0.38
S7.5	12	.	26.6	236	0.31	0.82	0.37	4.29	0.063	.	0.33
S10	1	.	18.4	136	0.04	0.00	0.02	.	0.014	.	0.17
S10	10	.	22.4	163	0.07	0.31	0.26	2.47	0.005	.	0.19
S15	1	.	25.1	208	0.26	0.92	0.28	3.48	0.024	.	0.38
S15	8	.	28.4	229	0.22	0.81	0.21	3.86	0.009	.	0.32
S20	1	.	34.0	107	0.04	0.00	0.10	.	0.017	.	0.16
S20	12	.	.	.	.	.	.	.	.	.	.
S25	1	.	27.3	116	0.11	1.20	0.24	3.35	0.081	.	0.26
S25	10	.	30.6	168	0.00	0.00	0.00	.	0.056	.	0.00
BR	1	.	28.2	126	0.11	1.28	0.18	1.72	0.002	.	0.25
BR	11	.	9.8	92	0.07	0.34	0.11	1.34	0.015	.	0.15
CH	1	.	26.6	125	0.15	0.30	0.24	1.90	0.291	.	0.32
CH	28	.	18.7	163	.	.	0.39	.	0.012	.	0.25
L10	1	.	.	.	.	.	.	.	.	.	.
L10	10	.	.	.	.	.	.	.	.	.	.
L7.5	1	.	.	.	.	.	.	.	.	.	.
L7.5	7	.	.	.	.	.	.	.	.	.	.
L5	1	.	.	.	.	.	.	.	.	.	.
L5	10	.	.	.	.	.	.	.	.	.	.
L2.5	2	.	.	.	.	.	.	.	.	.	.
L2.5	10	.	.	.	.	.	.	.	.	.	.
L1	1	.	.	.	.	.	.	.	.	.	.
L1	7	.	.	.	.	.	.	.	.	.	.
L0	1	.	.	.	.	.	.	.	.	.	.
L0	8	.	.	.	.	.	.	.	.	.	.
D10	2	.	.	.	.	.	.	.	.	.	.
D10	9	.	.	.	.	.	.	.	.	.	.
D7.5	1	.	.	.	.	.	.	.	.	.	.
D7.5	6	.	.	.	.	.	.	.	.	.	.
D5	1	.	.	.	.	.	.	.	.	.	.
D5	5	.	.	.	.	.	.	.	.	.	.
D2.5	1	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
P1	1	Boat	07/16/82	0930	40 5.0 N	74 51.6 W	190.3	.
P2	1	Boat	07/16/82	1005	40 0.8 N	75 2.1 W	172.9	.
P3	1	Boat	07/16/82	1040	39 57.0 N	75 8.2 W	160.8	.
P4	1	Boat	07/16/82	1105	39 54.2 N	75 7.8 W	155.6	.
P5	1	Boat	07/16/82	1130	39 52.7 N	75 11.9 W	148.1	.
P6	1	Boat	07/18/82	1220	39 51.0 N	75 19.6 W	136.2	.
S0	1	CTD	07/20/82	0623	39 46.5 N	75 27.6 W	121.8	14.7
S0	10	CTD	07/20/82	0623	39 46.5 N	75 27.6 W	121.8	14.7
S1	1	CTD	07/20/82	0749	39 33.8 N	75 32.6 W	94.2	13.6
S1	11	CTD	07/20/82	0749	39 33.8 N	75 32.6 W	94.2	13.6
S2.5	1	CTD	07/20/82	0840	39 28.8 N	75 33.5 W	84.6	15.6
S2.5	12	CTD	07/20/82	0840	39 28.8 N	75 33.5 W	84.6	15.6
S5	1	CTD	07/20/82	1247	39 31.2 N	75 32.3 W	89.6	14.8
S5	10	CTD	07/20/82	1247	39 31.2 N	75 32.3 W	89.6	14.8
S7.5	1	CTD	07/20/82	1337	39 25.2 N	75 31.0 W	76.4	14.3
S7.5	12	CTD	07/20/82	1337	39 25.2 N	75 31.0 W	76.4	14.3
S10	1	CTD	07/20/82	1416	39 21.3 N	75 26.8 W	66.2	13.3
S10	10	CTD	07/20/82	1416	39 21.3 N	75 26.8 W	66.2	13.3
S15	1	CTD	07/20/82	1519	39 12.3 N	75 17.0 W	44.9	10.9
S15	8	CTD	07/20/82	1519	39 12.3 N	75 17.0 W	44.9	10.9
S20	1	CTD	07/20/82	1607	39 6.4 N	75 12.1 W	32.0	15.4
S20	12	CTD	07/20/82	1607	39 6.4 N	75 12.1 W	32.0	15.4
S25	1	CTD	07/20/82	1703	39 0.1 N	75 8.5 W	19.2	13.0
S25	10	CTD	07/20/82	1703	39 0.1 N	75 8.5 W	19.2	13.0
BR	1	CTD	07/20/82	1748	38 55.3 N	75 5.9 W	9.6	15.1
BR	11	CTD	07/20/82	1748	38 55.3 N	75 5.9 W	9.6	15.1
CH	1	CTD	07/20/82	1846	38 49.5 N	75 3.1 W	-1.9	30.7
CH	28	CTD	07/20/82	1846	38 49.5 N	75 3.1 W	-1.9	30.7
L10	1	CTD	07/17/82	1300	39 18.5 N	75 23.7 W	59.5	14.3
L10	10	CTD	07/17/82	1300	39 18.5 N	75 23.7 W	59.5	14.3
L7.5	1	CTD	07/17/82	1400	39 22.5 N	75 27.5 W	69.4	11.0
L7.5	7	CTD	07/17/82	1400	39 22.5 N	75 27.5 W	69.4	11.0
L5	1	CTD	07/17/82	1453	39 24.4 N	75 29.8 W	74.2	12.9
L5	10	CTD	07/17/82	1453	39 24.4 N	75 29.8 W	74.2	12.9
L2.5	2	CTD	07/17/82	1544	39 28.3 N	75 33.6 W	83.7	12.9
L2.5	10	CTD	07/17/82	1544	39 28.3 N	75 33.6 W	83.7	12.9
L1	1	CTD	07/17/82	1638	39 34.5 N	75 32.6 W	95.5	9.8
L1	7	CTD	07/17/82	1638	39 34.5 N	75 32.6 W	95.5	9.8
L0	1	CTD	07/17/82	1745	39 43.0 N	75 30.0 W	114.2	13.8
L0	8	CTD	07/17/82	1745	39 43.0 N	75 30.0 W	114.2	13.8
D10	2	CTD	07/18/82	0022	39 20.4 N	75 25.7 W	64.0	13.3
D10	9	CTD	07/18/82	0022	39 20.4 N	75 25.7 W	64.0	13.3
D7.5	1	CTD	07/18/82	0115	39 23.9 N	75 29.0 W	72.7	9.5
D7.5	6	CTD	07/18/82	0115	39 23.9 N	75 29.0 W	72.7	9.5
D5	1	CTD	07/18/82	0214	39 28.0 N	75 33.2 W	83.3	8.9
D5	5	CTD	07/18/82	0214	39 28.0 N	75 33.2 W	83.3	8.9
D2.5	1	CTD	07/18/82	0258	39 31.3 N	75 32.5 W	89.6	15.3

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
D2.5	9	2.397	.	27.87	170.0	70	7.206	835	2.26	123.00	1.11	3.69	48.90	.	9	.
D1	1	0.924	14172	27.88	160.5	66	7.150	785	2.46	135.00	0.94	8.86	38.40	294	37	.
D1	7	0.963	14687	27.89	160.0	66	7.144	792	2.51	132.00	0.92	9.50	22.90	.	27	.
DO	1	0.023	845	27.72	128.0	52	7.058	809	2.77	134.00	0.66	3.52	19.30	327	30	.
DO	11	0.027	952	27.74	123.0	50	7.039	810	2.92	138.00	0.72	3.05	21.80	.	23	.
AS1	1	.	669	27.48	145.0	59	7.085	820	2.74	131.00	0.60	1.60	14.20	334	48	.
AS2	1	0.034	690	27.01	153.0	62	7.108	817	2.72	135.00	0.46	1.40	11.50	331	34	.
AS3	1	0.020	752	27.67	169.5	69	7.147	818	2.21	132.00	0.26	0.24	6.05	323	56	.
AS4	1	0.041	1014	27.86	172.0	70	7.171	805	2.49	140.00	0.37	1.45	8.16	344	35	.
AS5	2	0.044	1172	27.89	199.0	81	7.281	805	2.03	139.00	0.41	0.61	7.11	331	17	.
AS6	1	0.058	1338	27.99	195.0	80	7.272	802	2.33	138.00	0.49	1.58	10.30	336	41	.
AS7	1	0.074	1513	28.35	198.0	82	7.286	791	2.76	135.00	0.61	3.25	13.70	307	39	.
AS8	1	0.057	1257	28.76	208.5	87	7.338	790	2.49	137.00	0.53	2.75	10.90	321	53	.
AS9	2	0.024	803	28.53	223.0	92	7.377	806	2.54	137.00	0.23	0.64	5.56	312	20	.
AS10	2	0.028	715	28.77	218.0	91	7.323	825	2.27	127.00	0.38	0.61	4.91	348	35	.
AS11	1	0.023	708	29.14	234.0	98	7.423	826	2.43	131.00	0.53	0.69	5.86	338	27	.
AS12	1	0.018	703	28.86	206.5	86	7.321	822	2.62	132.00	0.52	0.69	8.24	308	27	.
AS13	1	0.018	738	28.67	205.5	85	7.289	822	2.38	131.00	0.46	0.54	6.90	313	110	.
AS14	1	0.020	723	28.23	188.0	77	7.231	811	2.65	140.00	0.38	0.93	7.85	355	51	.
AS15	1	0.027	760	28.41	209.0	86	7.305	808	2.38	133.00	0.26	0.74	4.26	336	32	.
AS16	1	0.052	1083	28.58	212.0	88	7.330	798	2.43	134.00	0.34	1.04	4.91	323	47	.
AS17	1	0.062	1180	28.75	217.5	90	7.378	797	2.46	139.00	0.46	2.20	5.64	388	32	.
AS18	1	0.045	1224	29.13	236.0	99	7.481	805	2.38	131.00	0.34	1.40	2.14	466	44	.
AS19	1	0.073	1553	28.41	189.5	78	7.258	801	2.65	139.00	0.60	3.31	9.63	299	46	.
AS20	1	0.088	1709	28.07	147.5	61	7.126	794	2.70	145.00	0.83	4.55	16.10	312	29	.
AS21	1	0.078	1501	28.07	159.0	65	7.160	793	2.68	143.00	0.77	4.95	13.10	314	34	.
AS22	1	0.037	779	28.12	179.0	74	7.210	822	2.59	134.00	0.29	2.21	7.55	343	34	.
AS23	1	0.039	752	27.95	166.0	68	7.170	808	2.65	139.00	0.34	1.91	8.42	358	21	.
AS24	1	0.021	735	27.93	159.0	65	7.147	813	2.70	137.00	0.52	2.01	2.31	303	34	.
T1-1	1	13.773	.	30.408	194.5	89	7.487	1451	2.01	55.10	1.60	2.60	31.00	391	34	0.46
T1-2	1	10.774	.	28.508	222.0	97	7.754	1217	1.84	51.40	2.12	0.17	39.60	309	24	0.40
T1-3	1	12.848	.	27.69	212.0	93	7.781	1298	1.90	70.40	2.65	0.35	30.30	282	35	0.00
T1-3	12	14.752	.	26.72	195.0	85	7.762	1381	1.05	61.10	1.25	0.64	13.30	273	56	0.73
T1-4	1	13.062	.	28.208	214.0	95	7.748	1305	1.16	66.40	0.96	0.35	17.20	314	33	0.67
T1-5	1	13.031	.	28.408	214.5	95	7.599	1301	1.07	32.30	0.82	0.61	26.00	431	40	0.70
T1-6	1	13.863	.	30.708	222.0	103	7.755	1470	1.46	69.40	1.70	0.61	24.40	310	27	0.60
T3-2	1	24.728	.	24.22	211.5	93	8.042	1843	0.63	15.70	0.96	3.69	5.97	196	27	0.49
T3-3	1	24.944	.	23.37	221.5	96	8.052	1859	0.51	11.90	0.91	3.04	4.89	194	36	0.34
T3-3	12	27.248	.	21.99	211.0	91	8.006	1966	0.55	5.61	0.57	3.69	4.46	173	18	0.30
T3-4	1	23.423	.	24.05	225.5	98	8.072	1788	0.48	17.10	0.99	2.55	4.31	198	27	0.36
T3-4	9	25.001	.	23.27	222.5	97	8.056	1863	0.42	11.70	0.64	2.42	3.59	182	35	0.41
T3-5	1	25.496	.	23.12	226.0	98	8.068	1889	0.39	11.20	0.74	3.12	4.20	191	30	0.35
T3-5	13	26.076	.	22.83	219.0	95	8.044	1912	0.45	8.93	0.71	3.28	4.33	188	45	0.35
T3-6	1	24.997	.	23.44	221.0	96	8.063	1866	0.37	11.00	0.64	3.15	3.74	189	21	0.41
T3-7	2	24.267	.	23.82	219.5	96	8.068	1827	0.42	11.70	0.91	3.64	5.25	201	20	0.36
T3-8	1	21.773	.	26.50	249.5	112	8.201	1702	0.36	16.40	1.03	2.55	4.98	173	21	0.47
T3-9	1	21.222	.	26.608	252.0	113	8.216	1673	0.37	12.80	0.99	0.76	4.42	181	19	0.54
T3-10	1	19.576	.	27.208	224.5	101	7.977	1567	0.66	24.60	1.36	1.93	6.78	213	24	0.55

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
D2.5	9	122.0	12.50	3.91	.	.	97.6	6.58	.	.	.	.
D1	1	215.0	16.00	4.69	.	.	88.3	7.81	.	.	.	.
D1	7	154.0	23.40	5.06	.	.	131.6	8.63	.	.	.	.
DO	1	44.8	6.33	2.91	.	.	19.8	15.21	.	.	.	.
DO	11	204.0	18.40	2.38	.	.	65.2	23.02	.	.	.	.
AS1	1	63.3	8.29	1.67	19.3	2.3	14.8	26.80	.	.	.	.
AS2	1	98.1	10.70	3.18	11.2	2.2	44.3	29.51	.	.	.	.
AS3	1	185.0	25.50	3.43	15.4	2.1	80.4	35.73	.	.	.	.
AS4	1	92.4	20.50	2.73	13.5	1.8	43.6	35.54	.	.	.	.
AS5	2	9.2	20.10	2.53	.	.	36.2	36.12	.	.	.	.
AS6	1	66.7	18.90	2.39	12.2	2.7	28.7	32.62	.	.	.	.
AS7	1	72.3	11.40	1.77	12.6	1.8	24.3	30.87	.	.	.	.
AS8	1	60.1	13.90	1.80	12.5	2.1	22.4	27.18	.	.	.	.
AS9	2	125.0	20.20	2.86	13.1	2.6	35.8	38.45	.	.	.	.
AS10	2	112.0	18.00	2.11	13.6	2.2	27.1	32.62	.	.	.	.
AS11	1	88.3	11.60	2.04	15.6	1.8	25.5	33.20	73.7	143.0	.	.
AS12	1	78.3	17.20	2.00	11.2	1.6	24.6	32.62	.	.	.	.
AS13	1	77.8	15.80	2.05	13.2	2.3	16.3	29.13	.	.	.	.
AS14	1	103.0	24.20	2.95	14.4	2.3	46.1	32.04	.	.	.	.
AS15	1	126.0	14.70	3.86	12.0	2.0	46.9	34.17	.	.	.	.
AS16	1	124.0	22.50	3.55	13.4	2.3	58.6	34.17	.	.	.	.
AS17	1	88.2	16.70	3.08	10.7	1.7	42.2	32.62	.	.	.	.
AS18	1	63.8	13.20	2.33	14.7	2.1	26.7	30.29	.	.	.	.
AS19	1	48.3	10.10	1.41	16.1	2.6	18.5	13.56	.	.	.	.
AS20	1	40.1	8.41	1.34	15.1	2.5	20.5	9.66	.	.	.	.
AS21	1	49.9	9.81	1.73	14.4	2.3	25.4	13.36	.	.	.	.
AS22	1	60.1	14.20	2.50	16.8	2.2	32.8	25.05	.	.	.	.
AS23	1	64.0	12.30	2.24	13.6	2.2	26.4	18.06	.	.	.	.
AS24	1	57.2	12.20	2.47	15.7	2.4	32.0	22.14	.	.	.	.
T1-1	1	116.0	14.90	1.62	22.3	1.8	27.0	14.29	22.0	93.3	4.47	50
T1-2	1	63.6	9.60	1.01	16.4	1.8	19.9	10.89	11.7	24.9	2.21	55
T1-3	1	94.3	6.12	0.69	26.6	3.3	10.5	5.34	22.9	78.4	.	.
T1-3	12	112.0	5.61	0.70	10.0	1.4	14.6	2.88	.	.	.	.
T1-4	1	64.6	9.90	1.10	12.8	1.4	20.6	6.58	9.8	15.5	2.33	65
T1-5	1	173.0	21.60	2.10	34.7	2.2	29.8	28.54	6.4	19.0	3.72	45
T1-6	1	73.5	7.07	.	18.8	1.3	19.7	6.80	10.3	35.0	4.11	40
T3-2	1	190.0	17.90	1.76	54.0	1.8	30.6	6.78	116.0	113.0	.	.
T3-3	1	68.0	5.64	0.67	25.8	1.6	8.4	4.80	307.0	67.0	0.45	100
T3-3	12	446.0	13.30	1.13	71.1	1.7	19.0	4.73	.	.	.	.
T3-4	1	40.5	6.15	0.77	29.1	1.4	9.1	4.83	211.0	73.3	0.69	80
T3-4	9	114.0	9.87	1.01	42.9	1.6	14.8	4.93	.	.	.	.
T3-5	1	38.8	5.15	0.61	59.6	2.0	5.5	4.83	140.0	68.3	1.00	100
T3-5	13	140.0	9.81	0.96	63.0	1.6	14.3	5.07	.	.	.	.
T3-6	1	131.0	8.15	0.84	62.7	1.7	11.6	5.75	199.0	81.5	0.83	100
T3-7	2	131.0	13.20	1.19	72.2	1.9	18.2	6.03	96.4	98.0	2.10	100
T3-8	1	135.0	11.30	1.15	59.1	1.1	12.4	9.32	143.0	97.6	1.60	100
T3-9	1	92.6	15.50	1.51	55.6	2.7	12.3	14.18	69.5	54.5	1.80	80
T3-10	1	284.0	20.20	1.92	46.1	2.0	23.1	15.89	124.0	97.0	1.50	60

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
D2.5	9	79.4	43.0	.	46.6	0.49	10.73	44.22	.	56.6	0.71	0.265	.
D1	1	211.7	508.5	.	186.2	0.48	18.91	42.17	.	39.8	0.29	0.154	.
D1	7	140.0	37.6	.	9.0	0.25	16.52	39.97	.	41.3	0.32	0.309	.
DO	1	74.3	168.3	.	3.6	0.37	22.83	42.80	.	36.7	0.50	0.391	.
DO	11	47.1	60.9	.	1.8	0.29	21.64	43.75	.	30.6	0.34	0.097	.
AS1	1	83.7	225.6	.	114.6	0.27	26.92	53.98	.	44.4	2.99	0.169	.
AS2	1	52.8	220.2	.	62.7	0.08	27.26	43.43	.	33.6	2.22	0.463	.
AS3	1	58.2	182.6	.	82.4	0.07<	23.34	43.12	.	41.3	1.49	0.425	.
AS4	1	74.6	148.6	.	68.0	0.12	23.51	35.41	.	39.8	0.84	0.647	.
AS5	2	200.2	125.3	.	43.0	0.15	29.81	37.30	.	30.6	1.17	0.290	.
AS6	1	160.2	141.5	.	25.1	0.34	28.28	34.15	.	27.5	1.05	0.241	.
AS7	1	112.9	111.0	.	26.9	0.25	25.55	34.94	.	35.2	0.44	0.265	.
AS8	1	43.7	91.3	.	10.7	0.15	28.79	35.88	.	32.1	0.45	0.159	.
AS9	2	29.1	114.6	.	12.5	0.07<	25.55	32.73	.	27.5	0.34	0.063	.
AS10	2	32.8	102.1	.	7.2	0.24	25.89	32.57	.	16.8	0.36	0.183	.
AS11	1	25.5	118.2	.	5.4	0.07	18.23	48.63	.	19.9	0.35	0.150	.
AS12	1	.	.	.	5.4	0.20	20.61	60.11	.	53.5	1.81	0.053	.
AS13	1	54.6	118.2	.	7.2	0.15	19.59	43.59	.	36.7	1.03	0.048	.
AS14	1	40.0	94.9	.	12.5	0.07<	18.74	40.13	.	35.2	0.76	0.261	.
AS15	1	76.4	102.1	.	10.7	0.37	21.47	33.99	.	41.3	0.64	0.082	.
AS16	1	43.7	107.4	.	9.0	0.20	20.78	35.72	.	36.7	0.85	0.304	.
AS17	1	52.8	87.7	.	30.4	0.10	24.02	36.67	.	33.6	0.76	0.265	.
AS18	1	107.4	94.9	.	10.7	0.07<	25.04	38.71	.	29.1	0.68	0.058	.
AS19	1	67.3	132.5	.	10.7	0.27	23.51	39.81	.	33.6	0.53	0.290	.
AS20	1	45.5	164.7	.	32.2	0.66	34.07	34.31	.	48.9	0.45	0.294	.
AS21	1	49.1	91.3	.	10.7	0.31	27.77	44.06	.	39.8	0.28	0.125	.
AS22	1	25.5	111.0	.	10.7	0.29	28.96	38.40	.	32.1	0.66	0.261	.
AS23	1	34.6	94.9	.	39.4	0.59	30.83	.	.	47.4	0.44	.	.
AS24	1	34.6	98.5	.	75.2	0.58	32.37	36.98	.	41.3	2.21	5.864	.
T1-1	1	120.1	234.6	.	229.2	0.22	20.61	27.85	.	45.9	1.09	0.671	.
T1-2	1	56.4	351.0	.	299.0	0.07<	25.55	37.77	.	41.3	1.45	0.487	.
T1-3	1	40.0	506.7	.	351.0	0.34	21.29	40.92	.	59.7	2.19	0.767	.
T1-3	12	30.9	259.6	.	125.3	0.10	17.89	27.07	.	29.1	1.25	0.425	.
T1-4	1	40.0	408.3	.	333.1	0.24	18.57	25.49	.	26.0	1.07	0.145	.
T1-5	1	40.0	370.7	.	123.6	0.14	22.15	25.97	.	27.5	0.72	0.164	.
T1-6	1	367.7	413.6	.	220.2	0.78	22.15	23.92	.	32.1	1.15	0.164	.
T3-2	1	7.3	51.9	.	30.4	0.22	8.35	14.95	.	24.5	0.92	0.111	.
T3-3	1	12.7	62.7	.	19.7	0.14	11.24	15.26	.	13.8	0.85	0.169	.
T3-3	12	5.5	39.4	.	28.6	0.19	11.24	12.75	.	7.6	0.71	0.174	.
T3-4	1	7.3	73.4	.	28.6	0.20	16.70	17.15	.	7.6	0.41	0.217	.
T3-4	9	7.3	39.4	.	16.1	0.15	10.90	13.85	.	7.6	0.48	0.188	.
T3-5	1	10.9	60.9	.	16.1	0.10	10.73	13.85	.	6.1	0.80	0.179	.
T3-5	13	7.3	53.7	.	14.3	0.07	9.71	11.96	.	6.1	0.88	0.053	.
T3-6	1	10.9	68.0	.	34.0	0.15	10.22	14.32	.	6.1	1.14	0.154	.
T3-7	2	7.3	73.4	.	62.7	0.15	10.56	16.21	.	9.2	0.78	0.125	.
T3-8	1	14.6	103.9	.	80.6	0.22	12.27	20.14	.	10.7	0.82	0.314	.
T3-9	1	14.6	102.1	.	39.4	0.07<	8.18	17.31	.	3.1	0.57	0.145	.
T3-10	1	10.9	77.0	.	114.6	0.27	17.21	21.40	.	6.1	0.67	0.338	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston)								
		Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
D2.5	9	.	.	.	.	.	.	.	.	.	.
D1	1	.	.	.	.	.	.	.	.	.	.
D1	7	.	.	.	.	.	.	.	.	.	.
DO	1	.	.	.	.	.	.	.	.	.	.
DO	11	.	.	.	.	.	.	.	.	.	.
AS1	1	.	.	.	.	.	.	.	.	.	.
AS2	1	.	.	.	.	.	.	.	.	.	.
AS3	1	.	.	.	.	.	.	.	.	.	.
AS4	1	.	.	.	.	.	.	.	.	.	.
AS5	2	.	.	.	.	.	.	.	.	.	.
AS6	1	.	.	.	.	.	.	.	.	.	.
AS7	1	.	.	.	.	.	.	.	.	.	.
AS8	1	.	.	.	.	.	.	.	.	.	.
AS9	2	.	.	.	.	.	.	.	.	.	.
AS10	2	.	.	.	.	.	.	.	.	.	.
AS11	1	.	.	.	.	.	.	.	.	.	.
AS12	1	.	.	.	.	.	.	.	.	.	.
AS13	1	.	.	.	.	.	.	.	.	.	.
AS14	1	.	.	.	.	.	.	.	.	.	.
AS15	1	.	.	.	.	.	.	.	.	.	.
AS16	1	.	.	.	.	.	.	.	.	.	.
AS17	1	.	.	.	.	.	.	.	.	.	.
AS18	1	.	.	.	.	.	.	.	.	.	.
AS19	1	.	.	.	.	.	.	.	.	.	.
AS20	1	.	.	.	.	.	.	.	.	.	.
AS21	1	.	.	.	.	.	.	.	.	.	.
AS22	1	.	.	.	.	.	.	.	.	.	.
AS23	1	.	.	.	.	.	.	.	.	.	.
AS24	1	.	.	.	.	.	.	.	.	.	.
T1-1	1	.	29.7	234	0.25	0.82	0.17	3.96	0.034	.	0.26
T1-2	1	.	23.5	208	0.20	1.15	0.21	4.37	0.030	.	0.41
T1-3	1	.	27.1	186	0.24	0.91	0.41	4.21	.	.	0.27
T1-3	12	.	48.1	345	0.00	0.06	0.85	9.98	0.031	.	0.19
T1-4	1	.	44.0	270	0.26	1.62	0.80	7.03	0.012	.	0.45
T1-5	1	.	25.7	174	0.19	0.60	0.47	3.27	0.036	.	0.26
T1-6	1	.	29.7	179	0.19	0.94	0.68	5.11	0.008	.	0.34
T3-2	1	.	20.2	218	0.12	0.53	0.48	3.30	0.008	.	0.30
T3-3	1	.	23.3	162	0.12	0.69	0.13	2.30	0.014	.	0.17
T3-3	12	.	20.2	156	.	.	0.17	.	0.014	.	0.24
T3-4	1	.	25.8	168	0.15	0.46	2.09	2.72	0.020	.	0.29
T3-4	9	.	22.4	143	0.15	0.20	0.10	.	0.033	.	0.38
T3-5	1	.	28.0	152	0.14	0.82	0.14	2.48	0.022	.	0.30
T3-5	13	.	20.6	131	0.10	0.13	1.53	.	0.039	.	0.21
T3-6	1	.	22.6	160	0.12	0.90	0.24	2.64	0.020	.	0.25
T3-7	2	.	29.3	182	.	.	.	.	.	.	.
T3-8	1	.	24.2	133	.	.	0.20	.	0.013	.	0.21
T3-9	1	.	28.0	129	0.04	0.39	0.43	.	0.010	.	0.27
T3-10	1	.	21.3	145	0.09	0.72	0.43	.	0.005	.	0.14

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
D2.5	9	CTD	07/18/82	0258	39 31.3 N	75 32.5 W	89.6	15.3
D1	1	CTD	07/18/82	0354	39 36.1 N	75 33.8 W	98.8	10.7
D1	7	CTD	07/18/82	0354	39 36.1 N	75 33.8 W	98.8	10.7
D0	1	CTD	07/18/82	0513	39 43.5 N	75 29.9 W	115.1	15.0
D0	11	CTD	07/18/82	0513	39 43.5 N	75 29.9 W	115.1	15.0
AS1	1	CTD	07/18/82	0646	39 46.1 N	75 27.4 W	121.5	9.0
AS2	1	CTD	07/18/82	0748	39 46.1 N	75 27.4 W	121.5	10.0
AS3	1	CTD	07/18/82	0846	39 46.1 N	75 27.4 W	121.5	10.0
AS4	1	CTD	07/18/82	0949	39 46.1 N	75 27.4 W	121.5	10.4
AS5	2	CTD	07/18/82	1042	39 46.1 N	75 27.4 W	121.5	11.0
AS6	1	CTD	07/18/82	1136	39 46.1 N	75 27.4 W	121.5	10.9
AS7	1	CTD	07/18/82	1236	39 46.1 N	75 27.4 W	121.5	10.6
AS8	1	CTD	07/18/82	1338	39 46.1 N	75 27.4 W	121.5	9.4
AS9	2	CTD	07/18/82	1435	39 46.1 N	75 27.4 W	121.5	9.3
AS10	2	CTD	07/18/82	1537	39 46.1 N	75 27.4 W	121.5	9.0
AS11	1	CTD	07/18/82	1636	39 46.1 N	75 27.4 W	121.5	10.5
AS12	1	CTD	07/18/82	1740	39 46.1 N	75 27.4 W	121.5	9.0
AS13	1	CTD	07/18/82	1841	39 46.1 N	75 27.4 W	121.5	10.0
AS14	1	CTD	07/18/82	1935	39 46.1 N	75 27.4 W	121.5	10.0
AS15	1	CTD	07/18/82	2035	39 46.1 N	75 27.4 W	121.5	10.0
AS16	1	CTD	07/18/82	2133	39 46.1 N	75 27.4 W	121.5	10.5
AS17	1	CTD	07/18/82	2236	39 46.1 N	75 27.4 W	121.5	11.3
AS18	1	CTD	07/18/82	2341	39 46.1 N	75 27.4 W	121.5	10.8
AS19	1	CTD	07/19/82	0034	39 46.1 N	75 27.4 W	121.5	.
AS20	1	CTD	07/19/82	0137	39 46.1 N	75 27.4 W	121.5	9.6
AS21	1	CTD	07/19/82	0238	39 46.1 N	75 27.4 W	121.5	9.1
AS22	1	CTD	07/19/82	0339	39 46.1 N	75 27.4 W	121.5	8.9
AS23	1	CTD	07/19/82	0441	39 46.1 N	75 27.4 W	121.5	9.0
AS24	1	CTD	07/19/82	0536	39 46.1 N	75 27.4 W	121.5	8.7
T1-1	1	Boat	07/19/82	1625	39 14.9 N	75 23.9 W	54.0	.
T1-2	1	Boat	07/19/82	1635	39 15.3 N	75 22.4 W	53.5	.
T1-3	1	CTD	07/19/82	1628	39 15.9 N	75 20.1 W	52.8	15.3
T1-3	12	CTD	07/19/82	1628	39 15.9 N	75 20.1 W	52.8	15.3
T1-4	1	Boat	07/19/82	1600	39 16.7 N	75 19.5 W	53.8	.
T1-5	1	Boat	07/19/82	1545	39 17.2 N	75 18.1 W	53.8	.
T1-6	1	Boat	07/19/82	1525	39 17.5 N	75 15.5 W	52.9	.
T3-2	1	CTD	07/21/82	0634	39 0.4 N	75 16.3 W	26.2	9.0
T3-3	1	CTD	07/21/82	0710	39 2.0 N	75 15.0 W	27.1	14.4
T3-3	12	CTD	07/21/82	0710	39 2.0 N	75 15.0 W	27.1	14.4
T3-4	1	CTD	07/21/82	0746	39 3.4 N	75 13.0 W	27.6	12.0
T3-4	9	CTD	07/21/82	0746	39 3.4 N	75 13.0 W	27.6	12.0
T3-5	1	CTD	07/21/82	0817	39 4.6 N	75 10.5 W	28.0	14.9
T3-5	13	CTD	07/21/82	0817	39 4.6 N	75 10.5 W	28.0	14.9
T3-6	1	CTD	07/21/82	0838	39 5.5 N	75 8.3 W	28.7	8.0
T3-7	2	CTD	07/21/82	0909	39 6.7 N	75 6.0 W	30.2	7.0
T3-8	1	CTD	07/21/82	1226	39 8.1 N	75 3.7 W	32.5	5.6
T3-9	1	Boat	07/21/82	1156	39 8.2 N	75 1.2 W	32.9	.
T3-10	1	Boat	07/21/82	1132	39 8.7 N	74 58.6 W	34.3	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
T3-11	1	18.992	.	27.10B	198.5	89	7.651	1412	0.66	36.90	5.15	12.30	15.90	329	52	0.64
T3-12	1	18.984	.	26.60B	214.0	95	7.492	1391	0.77	42.30	9.53	25.60	37.70	382	48	0.72
T4-1	1	27.611	.	23.47C	242.5	107	8.096	1972	0.43	4.10	0.41	1.72	7.05	202	13	0.48
T4-3	1	27.776	.	23.01C	249.5	110	8.078	1981	0.44	5.69	0.56	2.03	4.54	190	17	0.44
T4-3	14	29.270	.	20.29C	224.5	95	7.997	2056	0.46	2.86	0.34	2.11	4.27	168	13	0.31
T4-5	1	30.094	.	19.36C	236.0	98	8.001	2092	0.41	1.78	0.25	1.34	4.50	161	11	0.34
T4-5	16	30.719	.	18.34C	228.5	94	7.978	2121	0.49	1.20	0.16	1.41	4.29	146	11	0.29
T4-7	1	30.006	.	20.57C	203.0	86	7.909	2084	0.66	2.25	0.41	3.82	5.87	152	11	0.27
T4-7	9	30.045	.	20.44C	204.0	87	7.908	2088	0.76	2.45	0.41	3.72	5.92	172	11	0.21
T4-9	1	31.458	.	16.60C	224.5	89	7.912	2167	0.52	0.10	0.02	0.41	4.81	134	9	0.29
CB2	1	30.446	.	18.18C	234.5	96	7.983	2108	0.51	1.44	0.18	1.20	3.60	.	11	.
CB2	28	30.896	.	17.04C	231.5	93	7.966	2132	0.48	0.83	0.11	1.10	3.22	.	10	.
CB4	2	31.337	.	16.19C	254.5	101	8.022	2155	0.30	0.13	0.01	0.26	0.98	.	9	.
CB4	7	31.343	.	16.21C	255.5	101	8.022	2155	0.31	1.47	0.01	0.24	0.92	.	8	.
CB6	1	31.299	.	16.87C	255.5	102	8.037	2153	0.32	0.36	0.01	0.29	1.25	.	8	.
CB6	8	31.298	.	16.85C	255.5	102	8.036	2154	0.32	0.04	0.01	0.29	1.39	.	9	.
CB8	1	31.269	.	16.81C	251.5	101	8.039	2151	0.32	0.00	0.01	0.28	1.80	.	9	.
CB8	7	31.269	.	16.83C	251.0	100	8.036	2155	0.35	0.03	0.01	0.18	4.04	.	9	.
CB10	1	31.334	.	17.40C	231.0	93	7.857	2151	0.49	0.00	0.01	0.19	4.57	.	11	.
CB12	2	30.213	.	18.47C	237.0	97	8.004	2101	0.50	1.04	0.17	1.04	4.58	.	12	.
CB12	27	31.384	.	15.23C	240.5	93	7.984	2162	0.44	0.15	0.03	0.48	2.10	.	12	.
CB14	1	31.190	.	17.34C	243.0	98	7.995	2147	0.49	0.39	0.05	0.29	2.86	.	10	.
CB14	7	31.196	.	17.30C	242.5	98	7.994	2148	0.50	0.33	0.05	0.27	3.05	.	11	.
CB16	1	31.208	.	17.73C	238.0	97	7.988	2150	0.58	0.31	0.05	0.28	3.32	.	10	.
CB16	6	31.219	.	17.68C	237.5	97	7.992	2150	0.51	0.69	0.04	0.34	3.25	.	12	.
CB18	1	30.724	.	18.70C	211.5	87	7.898	2120	0.68	1.79	0.24	1.91	5.73	.	10	.
CB18	5	30.762	.	18.58C	211.0	87	7.893	2123	0.77	1.71	0.24	1.86	6.47	.	10	.
CB20	1	28.463	.	21.64C	213.0	92	7.892	2003	0.83	7.43	0.96	3.94	7.52	.	11	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
T3-11	1	213.0	19.40	1.83	70.9	2.2	20.3	15.89	57.8	82.1	3.30	35
T3-12	1	167.0	22.90	3.07	54.3	1.7	48.8	15.21	105.0	95.7	1.90	30
T4-1	1	140.0	12.40	1.22	58.4	2.3	15.8	10.14	57.3	63.8	2.20	.
T4-3	1	163.0	19.50	0.75	26.6	1.1	5.3	8.85	192.0	88.6	1.00	.
T4-3	14	81.6	8.82	0.71	43.6	1.9	10.7	4.38	.	.	.	.
T4-5	1	21.0	4.11	0.43	36.9	2.0	3.2	5.24	200.0	43.7	.	.
T4-5	16	92.1	6.96	0.76	31.8	1.5	15.6	4.42	.	.	.	.
T4-7	1	155.0	5.84	0.54	67.8	2.0	8.9	3.29	68.2	31.0	.	.
T4-7	9	109.0	6.66	0.65	16.9	1.3	12.0	3.59	.	.	.	.
T4-9	1	26.0	3.42	0.37	23.4	2.1	3.1	2.88	63.2	28.0	.	.
CB2	1	.	4.53	0.40	50.4	2.2	0.5	4.93	45.8	30.9	1.40	200
CB2	28	36.4	3.57	0.42	32.3	1.7	26.8	3.90	.	.	.	.
CB4	2	56.0	5.17	0.31	11.4	1.2	1.5	3.39	24.6	11.0	1.00	320
CB4	7	49.8	3.35	0.31	20.3	1.3	1.1	3.59	.	.	.	.
CB6	1	18.5	2.96	0.27	18.4	1.0	0.4	3.19	21.5	9.0	0.95	400
CB6	8	20.0	3.10	0.28	28.5	1.2	.	2.98	.	.	.	.
CB8	1	39.4	3.99	0.31	25.1	1.3	1.8	2.54	.	.	0.71	400
CB8	7	.	.	0.34	24.0	1.5	1.3	2.59	.	.	.	.
CB10	1	51.2	3.47	0.32	41.4	1.7	1.0	2.88	56.9	30.2	1.10	290
CB12	2	52.6	7.10	0.50	24.5	1.3	4.4	5.86	.	.	0.70	225
CB12	27	58.1	6.92	0.50	18.7	1.3	6.0	4.01	.	.	.	.
CB14	1	35.3	3.25	0.35	27.4	1.1	2.6	4.01	.	.	0.94	250
CB14	7	24.7	3.27	0.33	39.6	1.6	2.3	3.90	.	.	.	.
CB16	1	25.6	3.23	0.29	28.8	0.9	0.8	3.39	.	.	0.38	325
CB16	6	30.7	3.64	0.26	.	.	1.9	3.39	.	.	.	.
CB18	1	51.7	4.43	0.43	13.9	1.2	4.1	3.08	.	.	0.95	200
CB18	5	30.6	5.19	0.51	24.9	1.2	6.7	2.78	.	.	.	.
CB20	1	117.0	13.30	1.11	39.1	1.6	20.2	7.40	.	.	2.35	80

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
T3-11	1	18.2	141.5	.	146.8	0.25	23.00	25.97	.	12.2	0.66	0.111	.
T3-12	1	61.9	111.0	.	91.3	0.34	25.04	28.64	.	32.1	2.30	0.444	.
T4-1	1	18.2	94.9	.	386.8	0.54	9.71	12.90	.	19.9	0.92	0.188	.
T4-3	1	18.2	53.7	.	48.3	0.15	8.18	11.49	.	7.6	0.44	0.034	.
T4-3	14	52.8	39.4	.	16.1	0.10	6.98	9.60	.	12.2	0.47	0.106	.
T4-5	1	21.8	32.2	.	26.9	0.24	.	10.07	.	6.1	0.60	0.338	.
T4-5	16	34.6	5.4	.	44.8	0.32	5.45	6.61	.	7.6	0.58	0.097	.
T4-7	1	23.7	182.6	.	173.7	0.34	7.67	.	.	10.7	0.77	0.516	.
T4-7	9	5.5	103.9	.	60.9	0.49	9.71	6.77	.	10.7	0.73	0.077	.
T4-9	1	147.4	340.2	.	50.1	0.53	8.18	5.98	.	13.8	1.00	0.174	.
CB2	1	29.1	66.3	.	16.1	0.07<	1.19	8.97	.	12.2	0.60	0.048	.
CB2	28	.	.	.	.	.	.	.	.	.	.	.	.
CB4	2	54.6	96.7	.	48.3	0.07<	2.90	7.55	.	10.7	2.38	0.053	.
CB4	7	27.3	9.0	.	10.7	0.14	5.28	7.87	.	12.2	0.68	0.116	.
CB6	1	32.8	.	.	32.2	0.63	4.43	7.71	.	10.7	1.24	0.106	.
CB6	8	52.8	23.3	.	23.3	0.71	3.24	7.55	.	9.2	0.57	0.034	.
CB8	1	34.6	.	.	23.3	0.07<	5.45	9.13	.	9.2	1.15	0.092	.
CB8	7	36.4	.	.	14.3	0.07<	4.77	8.50	.	9.2	0.48	0.043	.
CB10	1	43.7	51.9	.	35.8	0.20	3.41	13.06	.	10.7	0.98	0.082	.
CB12	2	207.5	295.5	.	89.5	0.22	6.30	10.54	.	9.2	0.40	0.072	.
CB12	27	71.0	73.4	.	28.6	0.25	5.62	7.24	.	10.7	0.57	0.024<	.
CB14	1	142.0	94.9	.	59.1	0.07<	6.64	8.34	.	13.8	0.62	0.043	.
CB14	7	36.4	26.9	.	19.7	.	5.96	8.18	.	15.3	.	.	.
CB16	1	30.9	25.1	.	9.0	0.19	5.79	9.44	.	6.1	0.67	0.087	.
CB16	6	60.1	25.1	.	9.0	0.27	5.79	8.66	.	13.8	0.61	0.097	.
CB18	1	32.8	71.6	.	28.6	0.37	7.67	10.07	.	10.7	0.68	0.063	.
CB18	5	60.1	26.9	.	17.9	0.34	7.16	12.27	.	15.3	0.59	0.130	.
CB20	1	32.8	39.4	.	37.6	0.25	9.37	15.11	.	10.7	0.36	0.024<	.

STA	DEPTH (m)	Particulate Metals (micromole/g-seston)									
		Al	Mn	Fe	Co	Ni	Cu	Zn	Cd	Ba	Pb
T3-11	1	.	28.2	143	0.09	0.33	0.63	.	0.007	.	0.30
T3-12	1	.	28.4	249	0.22	0.80	1.32	3.61	0.000	.	0.31
T4-1	1	.	22.6	165	0.08	0.00	0.07	.	0.038	.	0.25
T4-3	1	.	18.3	102	0.14	2.95	0.35	2.29	0.034	.	0.11
T4-3	14	.	20.2	159	0.13	0.64	0.29	.	0.008	.	0.27
T4-5	1	.	26.0	151	0.15	0.85	0.41	1.96	0.034	.	0.35
T4-5	16	.	20.2	239	.	.	.	.	.	.	.
T4-7	1	.	19.1	190	0.12	1.79	0.78	2.09	0.013	.	0.35
T4-7	9	.	24.6	176	.	.	0.24	.	0.037	.	0.41
T4-9	1	.	13.7	159	0.09	0.40	0.13	1.91	0.025	.	0.31
CB2	1	.	.	.	.	.	.	.	.	.	.
CB2	28	.	.	.	.	.	.	.	.	.	.
CB4	2	.	.	.	.	.	.	.	.	.	.
CB4	7	.	.	.	.	.	.	.	.	.	.
CB6	1	.	.	.	.	.	.	.	.	.	.
CB6	8	.	.	.	.	.	.	.	.	.	.
CB8	1	.	.	.	.	.	.	.	.	.	.
CB8	7	.	.	.	.	.	.	.	.	.	.
CB10	1	.	.	.	.	.	.	.	.	.	.
CB12	2	.	.	.	.	.	.	.	.	.	.
CB12	27	.	.	.	.	.	.	.	.	.	.
CB14	1	.	.	.	.	.	.	.	.	.	.
CB14	7	.	.	.	.	.	.	.	.	.	.
CB16	1	.	.	.	.	.	.	.	.	.	.
CB16	6	.	.	.	.	.	.	.	.	.	.
CB18	1	.	.	.	.	.	.	.	.	.	.
CB18	5	.	.	.	.	.	.	.	.	.	.
CB20	1	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
T3-11	1	Boat	07/21/82	1111	39 9.0 N	74 56.3 W	35.7	.
T3-12	1	Boat	07/21/82	1045	39 8.4 N	74 53.6 W	37.6	.
T4-1	1	CTD	07/21/82	1923	38 52.1 N	75 12.5 W	13.6	5.4
T4-3	1	CTD	07/21/82	1948	38 53.5 N	75 8.6 W	9.4	16.7
T4-3	14	CTD	07/21/82	1948	38 53.5 N	75 8.6 W	9.4	16.7
T4-5	1	CTD	07/21/82	2018	38 54.2 N	75 5.7 W	7.6	19.7
T4-5	16	CTD	07/21/82	2018	38 54.2 N	75 5.7 W	7.6	19.7
T4-7	1	CTD	07/21/82	2035	38 55.1 N	75 2.3 W	8.6	13.2
T4-7	9	CTD	07/21/82	2035	38 55.1 N	75 2.3 W	8.6	13.2
T4-9	1	CTD	07/21/82	2105	38 56.4 N	74 58.8 W	12.7	11.6
CB2	1	CTD	07/22/82	0817	38 47.9 N	75 2.2 W	-5.1	29.7
CB2	28	CTD	07/22/82	0817	38 47.9 N	75 2.2 W	-5.1	29.7
CB4	2	CTD	07/22/82	0839	38 49.4 N	74 59.8 W	-5.5	11.4
CB4	7	CTD	07/22/82	0839	38 49.4 N	74 59.8 W	-5.5	11.4
CB6	1	CTD	07/22/82	0906	38 50.8 N	74 57.0 W	-9.1	12.0
CB6	8	CTD	07/22/82	0906	38 50.8 N	74 57.0 W	-9.1	12.0
CB8	1	CTD	07/22/82	0927	38 52.3 N	74 54.4 W	-13.2	12.0
CB8	7	CTD	07/22/82	0927	38 52.3 N	74 54.4 W	-13.2	12.0
CB10	1	CTD	07/22/82	0951	38 55.3 N	74 54.3 W	-15.7	.
CB12	2	CTD	07/22/82	1414	38 47.6 N	75 1.9 W	-5.8	29.0
CB12	27	CTD	07/22/82	1414	38 47.6 N	75 1.9 W	-5.8	29.0
CB14	1	CTD	07/22/82	1436	38 49.3 N	74 59.7 W	-5.7	10.3
CB14	7	CTD	07/22/82	1436	38 49.3 N	74 59.7 W	-5.7	10.3
CB16	1	CTD	07/22/82	1500	38 50.7 N	74 56.7 W	-9.5	9.0
CB16	6	CTD	07/22/82	1500	38 50.7 N	74 56.7 W	-9.5	9.0
CB18	1	CTD	07/22/82	1523	38 52.3 N	74 54.2 W	-13.5	8.7
CB18	5	CTD	07/22/82	1523	38 52.3 N	74 54.2 W	-13.5	8.7
CB20	1	CTD	07/22/82	1547	38 55.3 N	74 54.3 W	-15.7	6.0

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
SO	1	0.464	6783	21.95	177.0	65	7.150	873	2.45	171.00	2.58	2.09	7.02	337	.	0.31
SO	12	0.673	8979	22.07	175.5	65	7.164	877	2.45	166.00	1.70	1.91	8.22	359	30	0.33
S1	1	1.314	19931	21.85	195.0	72	7.257	888	2.18	163.00	1.50	3.11	11.10	386	42	0.18
S1	11	1.428	21730	21.77	196.0	72	7.252	893	2.24	158.00	1.50	3.44	11.50	371	89	0.38
S2.5	1	2.741	.	21.62	212.0	78	7.354	927	2.07	145.00	1.17	7.62	15.60	380	53	0.13
S2.5	13	3.335	.	21.74	211.0	79	7.339	947	1.96	134.00	1.06	4.20	16.70	371	87	0.26
S5	1	5.238	.	21.49	221.0	83	7.436	1014	1.68	134.00	1.00	1.47	21.10	340	47	0.43
S5	11	5.357	.	21.56	221.5	83	7.429	1017	1.78	136.00	1.03	1.32	20.80	370	.	0.34
S7.5	1	8.442	.	21.98	223.5	86	7.525	1145	1.80	106.00	1.11	0.14	23.90	313	69	0.46
S7.5	13	8.543	.	21.92	221.5	85	7.506	1149	1.94	109.00	1.24	0.06	23.90	329	55	0.40
S10	1	10.089	.	21.30	230.0	88	7.609	1212	2.02	94.50	0.65	0.98	24.10	315	45	0.42
S10	9	13.739	.	21.55	218.0	86	7.623	1364	2.12	75.70	0.88	0.03	23.20	308	54	0.47
S15	1	16.878	.	20.91	225.0	89	7.724	1502	1.95	66.30	1.25	0.74	20.40	306	20	0.44
S15	14	19.581	.	21.22	213.5	87	7.766	1610	1.80	44.40	1.53	2.24	16.20	284	43	0.41
S20	1	22.948	.	20.65	225.0	92	7.894	1765	1.41	31.30	1.61	3.81	11.70	253	37	0.48
S20	12	25.059	.	20.65	214.0	89	7.928	1860	1.20	21.40	1.44	5.02	8.66	.	30	0.50
S25	1	27.821	.	20.08	222.0	92	7.984	1989	0.86	8.06	0.77	5.38	5.79	213	19	0.46
S25	11	27.860	.	20.07	222.5	93	7.984	1991	0.87	6.83	0.79	5.45	5.83	204	31	0.34
BR	1	29.875	.	19.72	218.5	92	7.963	2081	0.79	2.26	0.50	4.75	6.63	191	12	0.33
BR	14	30.744	.	19.56	213.5	90	7.960	2119	0.78	1.74	0.35	4.33	6.32	181	12	0.51
CH	1	31.051	.	19.34	.	.	7.977	2137	0.74	3.72	0.27	3.42	6.05	196	15	0.37
CH	26	31.365	.	19.29	.	.	7.996	2153	0.72	2.33	0.19	2.85	5.08	148	12	0.28
T3-1	1	28.331	.	18.30B	232.0	94	7.835	2008	1.42	5.91	1.07	6.85	16.70	237	23	0.47
T3-2	1	28.084	.	19.40	222.5	92	7.908	1997	1.96	8.28	1.18	8.53	11.40	212	18	0.11
T3-3	1	26.874	.	19.49C	233.5	96	7.940	1943	1.12	14.30	1.18	6.54	10.60	198	17	0.38
T3-3	9	28.057	.	19.60	200.5	83	7.898	2054	1.15	7.42	0.87	8.35	9.64	196	19	0.37
T3-4	1	24.757	.	19.64	247.0	100	7.968	1857	1.30	19.20	1.40	3.57	10.60	221	30	0.54
T3-4	8	26.378	.	19.34	226.0	92	7.916	1925	1.24	15.60	1.35	6.94	10.60	216	23	0.28
T3-5	1	24.786	.	19.88	244.0	99	7.972	1854	1.22	20.80	1.39	3.82	10.60	227	61	0.44
T3-5	10	27.473	.	19.69	220.0	91	7.935	1976	1.10	9.47	1.03	6.33	8.95	204	19	0.42
T3-6	1	25.392	.	19.66	228.5	93	7.946	1884	1.25	17.00	1.35	5.22	8.59	250	32	0.24
T3-7	1	25.093	.	19.10	248.0	100	7.974	1871	1.18	19.30	1.20	4.77	7.59	229	20	0.43
T3-8	1	23.797	.	18.87	232.5	92	7.875	1817	1.40	22.60	1.43	7.25	9.34	357	45	0.12
T3-9	1	22.616	.	18.50B	234.5	92	7.800	1785	1.43	24.80	1.88	7.95	12.20	266	32	0.28
T3-10	1	21.905	.	18.20B	232.5	90	7.768	1761	1.35	20.10	2.11	11.60	11.30	283	44	0.36
T3-11	1	22.667	.	18.10B	.	.	.	1780	1.51	17.10	1.74	10.40	12.50	291	52	0.39
T3-12	1	21.209	.	17.20B	237.5	90	7.411	1788	1.27	16.40	1.75	16.00	28.90	511	68	0.32
T4-1	1	29.760	.	19.09C	252.5	104	7.971	2075	0.73	3.89	0.89	5.04	8.95	180	18	0.37
T4-3	1	30.041	.	19.53C	231.5	97	7.976	2091	0.89	3.89	0.57	5.22	7.77	186	19	0.27
T4-3	14	30.787	.	19.41C	213.0	89	7.956	2145	0.87	1.63	0.36	5.26	6.82	179	16	0.31
T4-5	1	30.650	.	19.74C	238.0	100	7.996	2123	0.79	1.67	0.40	3.88	6.36	171	16	0.31
T4-7	1	29.991	.	19.45C	233.0	97	7.954	2088	0.81	2.93	0.55	5.78	7.50	186	13	0.42
T4-7	10	30.250	.	19.31C	223.0	93	7.939	2105	0.88	4.76	0.60	5.93	7.86	184	13	0.34
T4-9	1	31.220	.	19.29C	221.0	93	7.947	2153	0.96	2.37	0.33	4.86	6.82	188	17	0.33
T4-9	8	31.211	.	19.25C	221.0	93	7.948	2153	0.93	1.50	0.30	4.67	6.64	182	18	0.38
CB2	1	30.797	.	19.44C	220.5	92	7.979	2124	0.78	2.00	0.32	4.07	5.36	.	12	.
CB2	16	31.384	.	19.39C	222.0	93	8.003	2154	0.82	0.97	0.20	3.42	5.74	.	11	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
SO	1	51.2	8.47	1.35	16.2	2.9	18.3	8.43	57.5	36.3	.	.
SO	12	108.0	12.10	2.68	11.9	1.6	54.6	9.59	.	.	.	.
S1	1	69.9	9.57	1.55	16.8	2.2	30.5	4.63	21.1	27.1	2.10	.
S1	11	118.0	19.80	3.10	13.2	1.4	64.9	7.40	.	.	.	.
S2.5	1	88.0	8.91	1.69	12.0	1.2	46.9	6.13	22.6	29.8	2.60	.
S2.5	13	269.0	29.00	6.98	6.5	1.1	189.1	11.20	.	.	.	.
S5	1	106.0	11.70	2.08	.	.	50.2	3.42	15.6	22.1	2.90	.
S5	11	358.0	25.00	5.15	8.8	1.0	142.2	7.18	.	.	.	.
S7.5	1	247.0	7.53	1.29	15.9	1.1	30.6	2.68	10.6	22.5	2.80	.
S7.5	13	278.0	14.20	2.07	9.8	1.1	44.9	3.11	.	.	.	.
S10	1	78.8	7.65	1.42	11.2	0.9	31.1	3.70	14.3	23.3	3.00	.
S10	9	265.0	10.60	1.51	10.0	0.8	60.6	2.82	.	.	.	.
S15	1	80.4	5.94	1.13	18.6	0.9	22.3	3.49	29.4	24.6	1.20	.
S15	14	187.0	12.70	1.68	8.6	0.9	51.5	3.84	.	.	.	.
S20	1	37.3	3.38	0.38	20.1	1.0	5.3	3.49	73.2	33.5	0.70	.
S20	12	109.0	9.81	0.87	24.8	1.4	21.6	4.32	.	.	.	.
S25	1	59.8	4.61	0.49	30.4	1.4	3.7	4.00	31.3	37.6	1.60	.
S25	11	118.0	6.80	0.50	22.1	1.4	5.7	3.08	.	.	.	.
BR	1	67.2	3.42	0.39	9.2	1.0	4.3	3.29	27.5	19.4	0.86	.
BR	14	107.0	5.82	0.82	31.0	1.1	16.9	3.98	.	.	.	.
CH	1	56.6	4.31	0.31	22.0	1.2	0.7	2.67	17.8	13.4	.	.
CH	26	53.8	2.98	0.29	22.3	1.7	3.2	3.21	.	.	.	.
T3-1	1	130.0	15.20	2.38	24.7	1.6	43.9	16.40	18.5	34.8	.	50
T3-2	1	130.0	9.91	0.96	27.3	1.4	16.9	5.83	38.0	39.9	1.70	.
T3-3	1	69.1	4.73	0.47	25.4	1.2	3.1	5.34	73.6	46.1	0.97	90
T3-3	9	.	.	1.17	.	.	27.7	4.11	.	.	.	.
T3-4	1	56.6	5.71	0.47	21.4	1.2	2.1	7.29	87.6	53.5	1.00	100
T3-4	8	50.7	4.93	0.50	20.9	0.9	4.0	3.29	.	.	.	.
T3-5	1	54.2	4.99	0.50	16.0	1.2	2.5	6.78	97.4	53.4	0.90	125
T3-5	10	67.6	6.47	0.67	.	.	12.3	3.59	.	.	.	.
T3-6	1	43.5	4.73	0.58	15.7	1.3	8.5	3.90	65.7	38.8	.	.
T3-7	1	99.0	6.84	0.61	13.6	1.1	7.0	8.63	92.5	61.4	1.10	100
T3-8	1	91.2	7.73	0.91	22.2	1.2	17.1	4.73	36.4	44.0	2.00	95
T3-9	1	167.0	14.70	1.64	.	.	39.6	6.13	19.1	32.4	2.90	40
T3-10	1	262.0	15.70	2.04	19.4	1.2	44.9	7.81	19.6	37.9	3.50	45
T3-11	1	522.0	34.50	3.80	.	.	83.4	11.20	.	.	5.10	35
T3-12	1	.	.	4.61	14.5	1.3	84.7	14.70	8.2	47.0	8.90	25
T4-1	1	75.5	9.48	1.23	21.3	1.6	21.8	11.20	101.0	124.0	1.80	70
T4-3	1	89.2	5.77	0.54	14.0	1.1	6.0	5.14	120.0	61.2	0.76	150
T4-3	14	.	.	0.49	18.4	0.9	9.5	2.98	.	.	.	.
T4-5	1	117.0	7.72	0.49	21.5	1.4	4.5	5.24	134.0	70.0	0.71	180
T4-7	1	85.0	5.64	0.54	23.8	1.3	7.9	5.89	99.3	61.4	0.92	125
T4-7	10	135.0	8.10	0.81	22.9	1.2	15.0	5.07	.	.	.	.
T4-9	1	155.0	11.00	0.85	16.8	1.1	14.9	5.62	207.0	174.0	1.50	85
T4-9	8	160.0	8.95	0.99	21.1	1.6	22.2	5.96	.	.	.	.
CB2	1	.	.	.	10.4	0.9	1.4	2.98	79.8	31.4	0.65	.
CB2	16	29.8	2.98	.	20.4	0.7	4.7	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
S0	1	CTD	09/22/82	1812	39 50.9 N	75 19.5 W	136.3	17.1
S0	12	CTD	09/22/82	1812	39 50.9 N	75 19.5 W	136.3	17.1
S1	1	CTD	09/22/82	1732	39 48.2 N	75 25.9 W	125.8	15.8
S1	11	CTD	09/22/82	1732	39 48.2 N	75 25.9 W	125.8	15.8
S2.5	1	CTD	09/22/82	1640	39 44.1 N	75 31.3 W	115.8	16.8
S2.5	13	CTD	09/22/82	1640	39 44.1 N	75 31.3 W	115.8	16.8
S5	1	CTD	09/22/82	1540	39 38.7 N	75 34.6 W	104.0	15.0
S5	11	CTD	09/22/82	1540	39 38.7 N	75 34.6 W	104.0	15.0
S7.5	1	CTD	09/22/82	1453	39 33.7 N	75 34.1 W	95.6	16.7
S7.5	13	CTD	09/22/82	1453	39 33.7 N	75 34.1 W	95.6	16.7
S10	1	CTD	09/22/82	1350	39 26.0 N	75 33.7 W	80.2	13.1
S10	9	CTD	09/22/82	1350	39 26.0 N	75 33.7 W	80.2	13.1
S15	1	CTD	09/22/82	1240	39 19.2 N	75 25.9 W	62.2	17.7
S15	14	CTD	09/22/82	1240	39 19.2 N	75 25.9 W	62.2	17.7
S20	1	CTD	09/22/82	1121	39 11.1 N	75 17.9 W	43.5	15.7
S20	12	CTD	09/22/82	1121	39 11.1 N	75 17.9 W	43.5	15.7
S25	1	CTD	09/22/82	1022	39 4.5 N	75 12.0 W	28.7	14.6
S25	11	CTD	09/22/82	1022	39 4.5 N	75 12.0 W	28.7	14.6
BR	1	CTD	09/22/82	0912	38 55.3 N	75 6.3 W	9.8	15.4
BR	14	CTD	09/22/82	0912	38 55.3 N	75 6.3 W	9.8	15.4
CH	1	CTD	09/22/82	0802	38 48.3 N	75 4.4 W	-4.4	30.6
CH	26	CTD	09/22/82	0802	38 48.3 N	75 4.4 W	-4.4	30.6
T3-1	1	Boat	09/24/82	1141	38 58.9 N	75 17.9 W	26.1	.
T3-2	1	CTD	09/24/82	1204	39 0.7 N	75 16.9 W	27.2	9.0
T3-3	1	CTD	09/24/82	1144	39 1.9 N	75 15.1 W	27.1	13.1
T3-3	9	CTD	09/24/82	1144	39 1.9 N	75 15.1 W	27.1	13.1
T3-4	1	CTD	09/24/82	1121	39 3.0 N	75 12.8 W	26.8	12.4
T3-4	8	CTD	09/24/82	1121	39 3.0 N	75 12.8 W	26.8	12 4
T3-5	1	CTD	09/24/82	1053	39 4.6 N	75 10.8 W	28.2	13.3
T3-5	10	CTD	09/24/82	1053	39 4.6 N	75 10.8 W	28.2	13.3
T3-6	1	CTD	09/24/82	1030	39 5.7 N	75 8.8 W	29.2	15.1
T3-7	1	CTD	09/24/82	1006	39 6.6 N	75 5.6 W	29.9	11.6
T3-8	1	CTD	09/24/82	0907	39 7.7 N	75 3.4 W	31.8	5.0
T3-9	1	Boat	09/24/82	0851	39 8.2 N	75 1.2 W	32.9	.
T3-10	1	Boat	09/24/82	0824	39 8.6 N	74 58.4 W	34.2	.
T3-11	1	Boat	09/24/82	0759	39 9.0 N	74 56.1 W	35.7	.
T3-12	1	Boat	09/24/82	0734	39 9.3 N	74 53.8 W	37.4	.
T4-1	1	CTD	09/24/82	1521	38 52.1 N	75 12.5 W	13.6	5.5
T4-3	1	CTD	09/24/82	1455	38 53.5 N	75 8.8 W	9.6	16.7
T4-3	14	CTD	09/24/82	1455	38 53.5 N	75 8.8 W	9.6	16.7
T4-5	1	CTD	09/24/82	1435	38 54.2 N	75 5.8 W	7.7	18.7
T4-7	1	CTD	09/24/82	1413	38 55.2 N	75 2.4 W	8.7	13.0
T4-7	10	CTD	09/24/82	1413	38 55.2 N	75 2.4 W	8.7	13.0
T4-9	1	CTD	09/24/82	1347	38 56.5 N	74 58.9 W	12.7	11.1
T4-9	8	CTD	09/24/82	1347	38 56.5 N	74 58.9 W	12.7	11.1
CB2	1	CTD	09/23/82	1736	38 47.8 N	75 2.4 W	-5.2	20.8
CB2	16	CTD	09/23/82	1736	38 47.8 N	75 2.4 W	-5.2	20.8

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
CB4	1	31.345	.	19.51C	230.0	97	8.006	2152	0.86	1.95	0.24	3.39	6.10	.	11	.
CB4	8	31.360	.	19.53C	230.0	97	8.006	2152	0.80	1.23	0.20	3.12	7.42	.	8	.
CB6	1	31.642	.	19.45C	227.0	96	8.004	2165	0.87	0.60	0.15	3.15	6.13	.	12	.
CB6	7	31.668	.	19.46C	227.0	96	8.004	2172	0.89	0.56	0.15	3.21	6.53	.	12	.
CB8	1	31.649	.	19.48C	219.5	93	7.993	2168	0.93	0.55	0.15	4.37	6.26	.	12	.
CB8	6	31.647	.	19.50C	220.5	93	7.991	2173	0.96	0.57	0.16	4.60	6.97	.	12	.
CB10	1	31.143	.	19.43C	237.5	100	8.001	2148	0.87	2.69	0.32	3.09	6.02	.	13	.
CB12	1	30.326	.	19.31C	227.5	95	7.973	2101	0.82	3.54	0.48	4.81	6.91	.	13	.
CB12	22	31.142	.	19.43C	216.5	91	7.970	2147	0.80	7.85	0.27	4.16	5.89	.	13	.
CB14	1	31.293	.	19.39C	226.0	95	7.987	2152	0.81	3.42	0.26	3.65	6.37	.	13	.
CB14	9	31.332	.	19.41C	225.0	95	7.983	2170	0.85	1.45	0.26	3.74	6.45	.	12	.
CB16	1	31.646	.	19.19C	230.5	97	8.038	2171	0.64	0.64	0.12	1.63	6.15	.	11	.
CB16	6	31.655	.	19.19C	230.5	97	8.038	2174	0.63	0.77	0.11	1.69	5.55	.	12	.
CB18	1	31.662	.	19.19C	235.0	99	8.049	2174	0.62	1.35	0.09	1.04	5.67	.	12	.
CB18	6	31.659	.	19.19C	235.5	99	8.049	2174	0.63	1.65	0.10	1.07	5.62	.	11	.
CB20	1	31.589	.	18.96C	236.0	98	7.987	2178	0.81	0.60	0.15	2.32	5.25	.	13	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
CB4	1	35.8	4.12	.	21.9	1.2	7.0	4.73	141.0	50.2	.	.
CB4	8	35.9	4.00	.	25.8	1.0	6.7	.	.	.	.	.
CB6	1	85.7	7.00	.	28.8	0.9	14.2	5.04	147.0	51.0	.	.
CB6	7	75.3	11.50	.	11.5	1.3	.	.	.	.	.	.
CB8	1	.	.	.	22.3	0.9	.	4.62	122.0	46.3	.	.
CB8	6	88.6	10.90	.	21.6	1.1	27.1	.	.	.	.	.
CB10	1	86.4	9.51	.	23.9	1.7	16.3	6.99	165.0	61.4	.	.
CB12	1	38.2	3.86	.	33.3	1.2	3.1	2.88	.	.	.	.
CB12	22	45.6	3.10	.	26.5	1.3	2.1	.	.	.	.	.
CB14	1	78.6	6.36	.	22.0	1.5	5.5	4.22	.	.	.	.
CB14	9	73.3	6.50	.	38.0	1.7	9.6	.	.	.	.	.
CB16	1	81.1	5.07	.	20.7	1.1	5.1	3.70	.	.	.	.
CB16	6	102.0	7.64	.	17.1	1.2	8.0	.	.	.	.	.
CB18	1	68.4	6.89	.	22.9	1.6	5.1	4.32	.	.	.	.
CB18	6	69.4	6.48	.	20.3	1.2	5.3	.	.	.	.	.
CB20	1	91.1	9.22	.	.	.	11.5	6.27	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
CB4	1	CTD	09/23/82	1758	38 49.4 N	75 0.0 W	-5.2	11.7
CB4	8	CTD	09/23/82	1758	38 49.4 N	75 0.0 W	-5.2	11.7
CB6	1	CTD	09/23/82	1817	38 50.9 N	74 57.3 W	-8.7	11.2
CB6	7	CTD	09/23/82	1817	38 50.9 N	74 57.3 W	-8.7	11.2
CB8	1	CTD	09/23/82	1835	38 52.4 N	74 54.7 W	-12.9	8.5
CB8	6	CTD	09/23/82	1835	38 52.4 N	74 54.7 W	-12.9	8.5
CB10	1	CTD	09/23/82	1909	38 55.3 N	74 53.7 W	-16.4	5.5
CB12	1	CTD	09/23/82	2345	38 47.9 N	75 2.5 W	-5.0	26.5
CB12	22	CTD	09/23/82	2345	38 47.9 N	75 2.5 W	-5.0	26.5
CB14	1	CTD	09/24/82	0003	38 49.6 N	74 59.9 W	-5.2	13.0
CB14	9	CTD	09/24/82	0003	38 49.6 N	74 59.9 W	-5.2	13.0
CB16	1	CTD	09/24/82	0024	38 50.8 N	74 57.2 W	-8.8	10.5
CB16	6	CTD	09/24/82	0024	38 50.8 N	74 57.2 W	-8.8	10.5
CB18	1	CTD	09/24/82	0045	38 52.1 N	74 54.1 W	-13.6	10.7
CB18	6	CTD	09/24/82	0045	38 52.1 N	74 54.1 W	-13.6	10.7
CB20	1	CTD	09/24/82	0108	38 55.2 N	74 54.4 W	-15.5	8.6

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
P1	1	0.016	.	19.57C	230.5	81	.	.	2.19	91.10	4.19	17.40	2.77	.	.	.
P3	1	0.044	.	19.43C	70.0	24	.	.	3.69	123.00	19.40	34.80	8.71	.	.	.
P4	1	0.073	.	19.44C	57.0	20	.	.	.	132.00	16.70	38.40	13.50	.	.	.
SK	1	.	.	20.05C	76.5	.	.	.	9.98	160.00	4.97	61.80	94.70	.	.	.
SO	1	0.176	.	19.87C	169.5	60	.	.	2.30	192.00	2.82	4.96	14.30	.	.	.
S2.5	1	0.597	.	19.69C	217.0	76	.	.	1.99	156.00	1.06	7.98	18.10	.	.	.
L1	1	2.677	.	19.39C	233.0	83	.	.	1.76	141.00	1.21	5.22	24.10	.	.	.
L2	1	4.935	.	19.35C	236.0	85	.	.	1.65	106.00	1.62	0.20	29.30	.	.	.
L3	1	9.308	.	18.78C	238.0	87	.	.	1.78	69.80	0.74	0.73	29.40	.	.	.
S20	1	21.768	.	18.13C	245.0	95	.	.	1.79	39.20	1.32	3.77	20.10	.	.	.
S25	1	26.649	.	18.19C	242.0	97	.	.	1.33	16.10	1.52	6.39	11.80	.	.	.
L8	1	28.457	.	17.99C	235.0	94	.	.	1.03	8.92	1.80	6.95	10.20	.	.	.
L5	1	29.601	.	18.37C	230.0	94	.	.	1.09	6.15	1.30	6.95	7.25	.	.	.
CH	1	30.648	.	18.45C	228.0	94	.	.	1.09	3.80	0.80	6.06	7.17	.	.	.
L6	1	30.689	.	18.21C	221.5	91	.	.	1.07	4.41	0.97	6.14	8.58	.	.	.
L7	1	30.651	.	18.39C	218.0	89	.	.	1.07	3.76	0.81	6.57	7.89	.	.	.
L9	1	26.465	.	17.69C	243.5	96	.	.	0.93	13.60	1.56	5.36	11.10	.	.	.
L10	1	25.772	.	17.38C	246.5	96	.	.	1.07	20.10	1.09	3.13	5.42	.	.	.
R1	1	24.052	.	.	246.0	.	.	.	1.56	28.50	1.22	4.10	11.90	.	.	.
R3	1	26.187	.	18.05C	242.5	96	.	.	1.27	19.30	1.34	5.44	10.10	.	.	.
R4	1	25.469	.	18.03C	243.0	96	.	.	1.39	22.50	1.41	5.28	13.80	.	.	.
R5	1	22.708	.	18.05C	245.0	95	.	.	1.71	35.10	1.36	4.07	19.30	.	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
P1	1	.	.	.	.	.	.	29.60	68.4	38.7	1.23	.
P3	1	.	.	.	.	.	.	15.70	36.0	29.7	1.69	.
P4	1	.	.	.	.	.	.	11.70	46.9	32.7	1.23	.
SK	1	.	.	.	.	.	.	10.30	10.3	10.2	1.32	.
SO	1	.	.	.	.	.	.	11.10	19.2	26.3	2.00	.
S2.5	1	.	.	.	.	.	.	6.54	15.0	21.3	2.29	.
L1	1	.	.	.	.	.	.	7.24	17.3	19.5	1.87	.
L2	1	.	.	.	.	.	.	2.47	2.3	2.7	2.18	.
L3	1	.	.	.	.	.	.	1.87	9.1	9.5	1.66	.
S20	1	.	.	.	.	.	.	1.40	16.3	15.4	1.22	.
S25	1	.	.	.	.	.	.	3.13	28.3	11.6	0.77	.
L8	1	.	.	.	.	.	.	4.73	.	.	.	.
L5	1	.	.	.	.	.	.	3.08	38.7	22.4	0.88	.
CH	1	.	.	.	.	.	.	2.86	29.3	11.8	0.72	.
L6	1	.	.	.	.	.	.	3.10	.	.	.	.
L7	1	.	.	.	.	.	.	2.82	.	.	.	.
L9	1	.	.	.	.	.	.	5.82	.	.	1.56	.
L10	1	.	.	.	.	.	.	6.17	18.2	24.0	2.30	.
R1	1	.	.	.	.	.	.	6.25	38.0	17.3	.	.
R3	1	.	.	.	.	.	.	4.07	25.3	13.3	0.84	.
R4	1	.	.	.	.	.	.	2.65	29.6	14.6	0.78	.
R5	1	.	.	.	.	.	.	2.68	15.1	18.8	1.42	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
P1	1	CTD	10/14/82	0707	40 4.9 N	74 51.8 W	190.0	14.1
P3	1	CTD	10/14/82	1014	39 57.4 N	75 7.8 W	161.8	14.2
P4	1	CTD	10/14/82	1105	39 54.4 N	75 7.2 W	156.4	14.6
SK	1	CTD	10/14/82	1232	39 54.7 N	75 12.4 W	.	11.6
SO	1	CTD	10/14/82	1351	39 50.4 N	75 20.8 W	134.1	16.4
S2.5	1	CTD	10/14/82	1506	39 44.4 N	75 29.5 W	116.9	14.5
L1	1	CTD	10/14/82	1602	39 36.5 N	75 34.4 W	99.8	9.8
L2	1	CTD	10/14/82	1702	39 26.8 N	75 32.2 W	79.8	10.1
L3	1	CTD	10/14/82	1819	39 19.1 N	75 24.5 W	61.1	16.7
S20	1	CTD	10/15/82	1139	39 14.1 N	75 17.9 W	48.4	16.7
S25	1	CTD	10/15/82	1243	39 7.3 N	75 13.0 W	34.1	15.9
L8	1	CTD	10/15/82	1847	38 56.4 N	75 4.7 W	11.1	17.3
L5	1	CTD	10/15/82	1433	38 52.3 N	75 2.2 W	3.6	12.0
CH	1	CTD	10/15/82	1509	38 49.1 N	75 2.1 W	-3.2	32.9
L6	1	CTD	10/15/82	2039	38 49.1 N	75 8.7 W	8.2	5.9
L7	1	CTD	10/15/82	1943	38 51.6 N	75 7.0 W	5.7	16.4
L9	1	CTD	10/15/82	1750	39 1.6 N	75 2.1 W	20.6	12.5
L10	1	CTD	10/15/82	0727	39 8.1 N	75 3.6 W	32.5	.
R1	1	Boat	10/15/82	0845	39 10.5 N	75 4.8 W	37.0	.
R3	1	CTD	10/15/82	0951	39 8.9 N	75 10.0 W	35.4	7.5
R4	1	CTD	10/15/82	1027	39 10.6 N	75 12.0 W	39.2	6.9
R5	1	CTD	10/15/82	1115	39 14.3 N	75 16.1 W	47.7	7.5

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
EMP	1	1.166	.	12.09C	246.0	74	7.143	888	2.29	183.00	8.36	16.00	.	.	96	.
SO	1	0.434	5909	11.43	219.5	65	7.027	870	2.37	186.00	8.52	20.60	23.10	354	96	0.47
SO	10	0.438	5851	11.48	216.5	64	7.017	864	2.77	178.00	8.26	20.90	22.90	328	49	0.39
S1	1	0.986	14363	11.63	239.0	71	7.128	881	2.18	192.00	8.77	14.50	25.90	372	69	0.43
S1	11	1.037	15155	11.57	240.5	71	7.130	880	2.31	191.00	8.73	15.00	26.30	357	77	0.50
S2.5	1	2.468	.	11.22	281.0	84	7.337	939	1.80	180.00	6.75	14.00	27.60	353	115	0.42
S2.5	10	2.742	.	11.17	285.0	85	7.364	948	1.92	177.00	6.24	15.10	27.70	357	64	0.44
S5	1	4.687	.	10.72	303.5	90	7.516	1021	1.45	140.00	3.61	12.00	25.90	339	38	0.47
S5	12	5.179	.	10.57	307.0	91	7.536	1034	1.44	136.00	3.00	11.30	26.00	327	30	0.39
S7.5	1	7.886	.	10.44	320.0	97	7.696	1142	1.25	113.00	1.31	8.30	24.10	335	67	0.43
S7.5	8	10.513	.	10.62	308.0	95	7.721	1240	1.33	100.00	0.78	7.02	22.20	306	58	0.41
S10	1	9.412	.	10.68	317.5	97	7.724	1214	1.31	99.40	0.94	6.96	23.50	318	44	0.37
S10	8	11.259	.	10.60	307.5	95	7.749	1279	1.33	93.70	0.73	6.93	21.80	303	48	0.44
S12.5	1	13.184	.	10.51	309.5	97	7.830	1365	1.35	84.60	0.52	5.65	19.30	296	31	0.47
S12.5	8	16.112	.	10.25	307.0	97	7.921	1482	1.24	69.60	0.39	5.06	14.80	288	35	0.49
S15	1	16.979C	.	10.26	309.0	99	7.956	1475	1.21	67.60	0.40	4.67	14.50	274	37	0.42
S15	14	18.795	.	10.05	302.0	97	8.002	1594	1.04	51.50	0.33	3.51	9.83	273	30	0.45
S20	1	22.871	.	10.08	311.5	103	8.133	1776	0.61	27.20	0.31	1.67	2.88	234	37	0.59
S20	12	25.023	.	10.30C	295.0	99	8.127	1868	0.48	16.40	0.35	2.80	1.32	225	25	0.57
S25	1	28.913	.	11.32	291.0	102	8.079	2033	0.40	6.06	0.58	2.05	0.77	174	33	0.45
S25	10	29.076	.	11.29	287.5	101	8.058	2039	0.42	9.07	0.63	1.93	0.77	187	30	0.55
BR	1	30.345	.	11.76	271.0	97	7.960	2091	0.66	5.82	0.81	5.00	3.80	167	10	0.44
BR	10	30.368	.	11.81	270.0	97	7.954	2095	0.67	4.98	0.78	4.58	3.90	163	12	0.26
CH	1	30.728	.	11.87	268.5	97	7.955	2122	0.67	8.62	0.85	4.32	3.71	173	11	0.40
CH	23	30.732	.	11.82	268.5	97	7.954	2121	0.70	5.26	0.85	4.11	3.67	153	10	0.33

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
EMP	1	.	.	.	.	.	55.9	7.95	4.0	7.2	.	.
SO	1	32.5	7.38	1.70	9.7	1.7	28.0	8.22	5.1	8.6	.	.
SO	10	54.7	14.90	3.26	10.2	2.0	49.8	11.10	.	.	.	.
S1	1	108.0	16.40	3.13	12.6	1.6	62.5	8.22	4.2	7.1	.	.
S1	11	219.0	32.30	5.32	11.1	1.3	163.0	11.70	.	.	.	.
S2.5	1	67.9	11.00	1.92	8.2	1.6	39.1	8.14	3.4	10.9	.	.
S2.5	10	104.0	13.40	2.94	9.5	1.4	60.3	9.45	.	.	.	.
S5	1	93.3	10.40	1.85	9.3	1.3	43.7	7.95	5.5	10.7	.	.
S5	12	105.0	10.70	2.13	10.5	1.2	46.7	7.83	.	.	.	.
S7.5	1	47.0	6.95	0.81	10.6	1.1	18.1	6.99	11.5	13.1	2.22	.
S7.5	8	119.0	12.00	1.90	15.2	0.8	54.1	6.85	.	.	.	.
S10	1	146.0	7.15	0.87	5.9	1.1	18.1	5.34	10.7	12.6	2.23	.
S10	8	69.4	8.44	1.39	14.3	1.0	34.0	5.76	.	.	.	.
S12.5	1	45.0	6.00	1.01	17.5	1.0	23.0	5.55	9.6	12.9	2.45	.
S12.5	8	36.2	5.37	0.75	14.3	1.0	16.8	6.37	.	.	.	.
S15	1	28.5	4.27	0.52	7.0	1.0	10.3	6.48	14.9	14.0	1.62	.
S15	14	47.2	5.71	0.82	4.7	1.0	17.7	12.80	.	.	.	.
S20	1	80.2	6.98	0.75	20.7	1.6	12.4	16.70	40.7	43.5	1.57	.
S20	12	48.5	7.43	0.83	24.1	1.5	14.0	17.90	.	.	.	.
S25	1	50.8	7.02	0.63	15.0	1.3	11.0	13.40	32.2	27.1	1.34	.
S25	10	69.9	6.51	0.67	9.7	1.1	12.2	14.30	.	.	.	.
BR	1	75.0	4.05	0.49	10.8	0.9	10.2	4.52	16.4	9.7	1.96	.
BR	10	63.7	7.42	0.85	14.6	0.7	19.8	5.21	.	.	.	.
CH	1	88.5	4.01	0.55	5.7	0.8	12.1	5.59	25.5	12.1	0.83	.
CH	23	64.4	4.67	0.59	8.1	0.9	12.7	5.92	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
EMP	1	CTD	11/17/82	2104	39 44.1 N	75 29.9 W	116.2	13.8
SO	1	CTD	11/17/82	2019	39 47.9 N	75 24.8 W	126.9	16.4
SO	10	CTD	11/17/82	2019	39 47.9 N	75 24.8 W	126.9	16.4
S1	1	CTD	11/17/82	1919	39 46.0 N	75 28.1 W	120.6	13.4
S1	11	CTD	11/17/82	1919	39 46.0 N	75 28.1 W	120.6	13.4
S2.5	1	CTD	11/17/82	1828	39 41.9 N	75 30.4 W	112.1	13.8
S2.5	10	CTD	11/17/82	1828	39 41.9 N	75 30.4 W	112.1	13.8
S5	1	CTD	11/17/82	1721	39 37.1 N	75 34.5 W	101.4	15.5
S5	12	CTD	11/17/82	1721	39 37.1 N	75 34.5 W	101.4	15.5
S7.5	1	CTD	11/17/82	1600	39 29.0 N	75 33.3 W	85.7	11.0
S7.5	8	CTD	11/17/82	1600	39 29.0 N	75 33.3 W	85.7	11.0
S10	1	CTD	11/17/82	1533	39 28.4 N	75 33.4 W	83.9	10.0
S10	8	CTD	11/17/82	1533	39 28.4 N	75 33.4 W	83.9	10.0
S12.5	1	CTD	11/17/82	1436	39 23.7 N	75 29.0 W	72.4	10.8
S12.5	8	CTD	11/17/82	1436	39 23.7 N	75 29.0 W	72.4	10.8
S15	1	CTD	11/17/82	1354	39 20.8 N	75 25.8 W	64.7	16.8
S15	14	CTD	11/17/82	1354	39 20.8 N	75 25.8 W	64.7	16.8
S20	1	CTD	11/17/82	1243	39 13.6 N	75 17.5 W	47.4	15.0
S20	12	CTD	11/17/82	1243	39 13.6 N	75 17.5 W	47.4	15.0
S25	1	CTD	11/17/82	1135	39 5.7 N	75 11.3 W	30.4	14.2
S25	10	CTD	11/17/82	1135	39 5.7 N	75 11.3 W	30.4	14.2
BR	1	CTD	11/17/82	1015	38 55.4 N	75 5.8 W	9.7	14.8
BR	10	CTD	11/17/82	1015	38 55.4 N	75 5.8 W	9.7	14.8
CH	1	CTD	11/17/82	0902	38 49.1 N	75 2.5 W	-2.9	28.9
CH	23	CTD	11/17/82	0902	38 49.1 N	75 2.5 W	-2.9	28.9

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S0	1	0.109	1712	5.98	268.0	69	7.034	884	2.51	144.00	0.93	57.60	66.40	418	41	0.34
S1	1	1.053	15978	5.78	310.5	80	7.184	929	2.02	143.00	2.05	53.30	58.70	397	43	0.42
S2	1	2.277	.	5.42	332.0	86	7.300	972	1.70	125.00	2.76	43.10	52.10	367	34	0.35
S2	9	2.298	.	5.41	333.0	86	7.300	974	1.73	137.00	2.69	44.20	51.40	360	47	0.40
S5	1	5.450	.	5.37	352.5	93	7.503	1093	1.23	123.00	2.58	26.80	36.00	365	47	0.51
S5	9	6.632	.	5.37	353.0	94	7.549	1144	1.38	110.00	2.15	23.20	37.60	314	47	0.33
S7.5	1	8.096	.	5.36	355.5	95	7.613	1204	1.29	106.00	1.81	19.40	33.70	301	37	0.37
S7.5	8	11.795	.	5.24	351.0	96	7.691	1346	1.31	92.40	1.31	13.60	26.00	274	54	0.37
S10	1	10.767	.	5.42	355.0	97	7.684	1308	1.24	96.80	1.45	13.50	27.70	318	30	0.34
S10	8	13.227	.	5.15	350.5	97	7.729	1405	1.13	83.10	1.13	11.40	23.60	254	29	0.33
S13	1	13.496	.	5.09	353.5	97	7.745	1415	1.00	85.00	1.18	10.50	22.10	252	36	0.48
S13	11	14.953	.	5.10	350.0	97	7.767	1474	1.13	53.00	0.98	9.68	20.30	273	21	0.22
S16	1	16.601	.	5.03	354.5	100	7.819	1541	0.96	70.50	0.76	7.14	15.20	246	24	0.40
S16	13	19.637	.	5.11	347.5	100	7.867	1666	0.83	49.60	0.53	4.52	8.95	224	20	0.42
S20	1	20.116	.	5.09	350.5	101	7.886	1686	0.75	51.00	0.59	4.37	10.70	223	22	0.48
S20	9	22.683	.	5.18	348.0	102	7.931	1786	0.75	41.00	0.50	2.52	5.62	225	18	0.23
S25	1	25.718	.	5.46	349.5	105	7.989	1914	0.42	22.00	0.34	1.05	1.56	203	26	0.42
S25	6	26.097	.	5.47	348.0	105	7.993	1932	0.42	21.70	0.35	1.49	4.43	236	31	0.32
S27	1	27.078	.	5.63C	350.5	107	8.021	1973	0.27	14.90	0.22	1.05	0.84	210	9	0.49
S27	7	27.916	.	5.85	338.0	104	7.999	2011	0.37	12.10	0.25	1.75	1.08	222	7	0.40
BR	1	29.175	.	6.21	329.5	104	8.007	2067	0.38	7.34	0.20	1.59	1.02	167	8	0.22
BR	10	30.203	.	6.56	323.5	103	8.018	2117	0.41	3.96	0.13	1.49	2.36	147	8	0.31
CH	2	30.146	.	6.56	327.0	104	8.018	2113	0.40	4.31	0.15	0.13	0.79	146	10	0.24
CH	21	31.543	.	6.90	325.0	105	8.068	2182	0.34	0.58	0.06	0.15	0.45	144	9	0.27
T1-1	1	15.675	.	3.70B	361.5	98	7.746	1549	1.18	71.40	0.62	9.34	22.80	255	41	0.29
T1-2	1	16.588	.	4.40B	.	.	.	1542	1.00	71.10	0.79	8.75	17.60	214	27	0.34
T1-3	1	15.493	.	5.10	355.5	99	7.796	1504	1.03	79.90	0.88	10.10	19.20	248	38	0.29
T1-3	12	21.608	.	5.15	346.0	101	7.904	1744	0.71	47.20	0.53	3.19	7.69	194	34	0.34
T1-4	1	17.836	.	4.20B	352.0	98	7.826	1590	0.94	63.90	0.68	7.04	15.30	218	28	0.42
T1-5	1	17.102	.	3.80B	359.0	98	7.783	1559	1.01	66.20	0.58	6.62	18.20	252	.	0.36
T1-6	1	17.944	.	3.80B	355.0	98	7.744	1607	1.02	58.40	0.53	5.74	18.70	256	29	0.30
T3-2	1	27.012	.	5.61	344.0	105	7.990	1969	0.37	16.80	0.26	0.10<	0.96	175	19	0.30
T3-3	1	26.628	.	5.99	351.0	108	8.011	1957	0.39	18.80	0.30	0.10<	1.58	173	18	0.32
T3-3	14	28.781	.	5.98	326.0	102	7.989	2054	0.41	10.10	0.20	0.14	0.99	162	35	0.33
T3-4	1	24.797	.	5.38	356.0	107	7.996	1885	0.45	26.50	0.38	0.30	2.89	196	21	0.37
T3-4	11	27.429	.	5.71	336.0	103	7.988	1998	0.39	13.70	0.26	0.01	1.19	167	15	0.32
T3-5	1	25.965	.	5.54	353.5	107	8.009	1932	0.30	21.80	0.27	0.10<	1.04	174	20	0.39
T3-5	12	27.367	.	5.57	339.0	104	7.996	1991	0.34	15.90	0.28	0.10<	0.76	176	28	0.37
T3-6	1	25.977	.	5.39	359.0	108	8.032	1936	0.28	20.90	0.36	0.10<	0.64	190	.	0.33
T3-7	1	25.101	.	5.07	362.5	108	8.035	1899	0.21	23.50	0.43	0.10<	0.51	193	13	0.36
T3-8	1	22.823	.	4.59	362.0	105	7.989	1806	0.27	34.80	0.49	0.10<	1.59	229	20	0.32
T3-12	1	22.012	.	3.10B	353.0	98	7.772	1815	0.39	30.70	0.23	0.91	10.30	305	16	0.29

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	82.7	12.10	2.65	13.7	1.5	33.0	5.43	1.1	2.4	3.33	.
S1	1	85.6	16.70	3.80	11.5	1.4	64.8	5.23	0.7	2.1	4.96	.
S2	1	94.6	12.30	3.11	10.2	1.1	56.3	4.22	0.9	2.4	4.08	.
S2	8	71.6	9.20	2.62	8.6	0.9	52.3	3.92	.	.	.	.
S5	1	48.0	.	1.30	6.7	1.2	26.8	3.42	2.6	3.6	2.49	.
S5	9	.	.	2.16	5.5	0.6	41.2	4.02	.	.	.	.
S7.5	1	71.5	6.82	1.68	5.3	0.6	39.3	3.96	3.1	4.0	2.27	.
S7.5	8	118.0	15.50	2.85	5.8	0.6	71.1	5.93	.	.	.	.
S10	1	65.5	9.20	1.63	6.2	0.8	37.5	5.02	4.5	5.7	2.18	.
S10	8	73.7	6.51	1.71	4.9	0.5	43.9	5.02	.	.	.	.
S13	1	.	.	0.69	8.4	0.7	17.4	4.32	6.6	7.5	1.99	.
S13	11	.	.	1.44	6.2	0.6	34.9	4.93	.	.	.	.
S16	1	36.1	5.11	0.74	7.1	0.8	14.5	6.37	11.0	10.4	1.77	.
S16	13	68.8	8.07	1.14	5.1	0.7	22.7	8.63	.	.	.	.
S20	1	27.6	3.77	0.51	4.6	0.8	8.6	6.99	13.3	11.9	.	.
S20	9	41.2	5.39	0.70	4.3	0.9	10.2	11.10	.	.	.	.
S25	1	31.1	5.66	0.45	5.2	0.7	6.8	11.90	24.0	13.8	.	.
S25	6	41.2	6.74	0.59	5.3	0.8	9.2	12.80	.	.	.	.
S27	1	25.0	4.90	.	7.5	1.2	5.2	11.40	20.3	11.6	.	.
S27	7	32.1	5.29	0.53	5.1	0.7	8.5	10.00	.	.	.	.
BR	1	31.4	5.58	0.43	4.8	0.8	7.1	9.79	23.9	7.0	.	.
BR	10	41.2	6.53	0.47	4.0	0.6	6.9	12.80	.	.	.	.
CH	2	20.2	3.16	0.22	5.0	0.7	2.6	6.90	16.7	5.1	.	.
CH	21	32.5	5.46	0.33	4.3	0.7	3.5	13.10	.	.	.	.
T1-1	1	76.7	8.22	1.32	5.6	0.7	28.1	3.70	5.8	9.8	3.24	.
T1-2	1	42.5	4.94	0.77	4.6	0.8	17.7	4.93	11.8	12.8	2.08	.
T1-3	1	25.0	3.96	0.50	4.0	0.8	10.0	4.25	11.5	9.5	.	.
T1-3	12	37.0	4.27	0.55	5.5	0.8	9.1	7.26	.	.	.	.
T1-4	1	33.3	5.06	0.63	5.2	0.7	12.3	4.42	13.3	12.0	1.49	.
T1-5	1	34.4	3.91	0.61	5.6	0.7	12.7	3.29	8.3	9.2	1.77	.
T1-6	1	127.0	14.50	1.95	4.2	0.7	41.2	6.53	2.4	9.4	5.54	.
T3-2	1	71.9	11.40	1.16	4.8	0.5	22.4	14.10	55.1	39.1	.	.
T3-3	1	43.6	7.46	0.58	4.9	0.7	9.1	10.20	46.3	35.5	1.07	.
T3-3	14	40.7	8.38	0.48	4.1	0.5	7.2	10.30	.	.	.	.
T3-4	1	37.2	6.15	0.67	5.5	0.8	9.5	12.00	52.7	31.4	1.16	.
T3-4	11	44.9	6.65	0.69	3.0	0.6	10.4	9.04	.	.	.	.
T3-5	1	38.2	5.32	0.51	4.7	0.7	6.7	12.00	53.7	28.0	0.93	.
T3-5	12	35.8	6.13	0.68	8.1	0.7	7.5	11.30	.	.	.	.
T3-6	1	42.8	7.59	0.67	3.9	0.8	10.1	14.40	45.5	29.0	1.11	.
T3-7	1	83.2	11.90	1.19	4.0	0.7	22.5	20.50	48.3	46.2	1.54	.
T3-8	1	150.0	18.50	2.29	5.3	0.8	51.2	20.00	46.3	48.4	.	.
T3-12	1	255.0	29.60	4.73	4.3	0.6	93.6	15.60	5.3	37.9	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
S0	1	CTD	01/05/83	0911	39 47.9 N	75 24.6 W	127.1	12.5
S1	1	CTD	01/05/83	1025	39 40.4 N	75 31.4 W	109.0	10.9
S2	1	CTD	01/05/83	1110	39 35.8 N	75 34.0 W	98.4	11.0
S2	9	CTD	01/05/83	1110	39 35.8 N	75 34.0 W	98.4	11.0
S5	1	CTD	01/05/83	1244	39 28.4 N	75 33.7 W	83.9	11.8
S5	9	CTD	01/05/83	1244	39 28.4 N	75 33.7 W	83.9	11.8
S7.5	1	CTD	01/05/83	1345	39 24.9 N	75 30.9 W	75.9	9.9
S7.5	8	CTD	01/05/83	1345	39 24.9 N	75 30.9 W	75.9	9.9
S10	1	CTD	01/05/83	1420	39 23.8 N	75 29.5 W	73.1	11.2
S10	8	CTD	01/05/83	1420	39 23.8 N	75 29.5 W	73.1	11.2
S13	1	CTD	01/05/83	1506	39 22.4 N	75 28.0 W	69.7	13.6
S13	11	CTD	01/05/83	1506	39 22.4 N	75 28.0 W	69.7	13.6
S16	1	CTD	01/05/83	1607	39 18.6 N	75 23.8 W	59.8	15.6
S16	13	CTD	01/05/83	1607	39 18.6 N	75 23.8 W	59.8	15.6
S20	1	CTD	01/05/83	1700	39 14.3 N	75 19.0 W	49.5	10.8
S20	9	CTD	01/05/83	1700	39 14.3 N	75 19.0 W	49.5	10.8
S25	1	CTD	01/05/83	1801	39 7.8 N	75 13.9 W	35.4	8.4
S25	6	CTD	01/05/83	1801	39 7.8 N	75 13.9 W	35.4	8.4
S27	1	CTD	01/05/83	1900	39 1.5 N	75 9.4 W	22.1	10.6
S27	7	CTD	01/05/83	1900	39 1.5 N	75 9.4 W	22.1	10.6
BR	1	CTD	01/05/83	1953	38 54.8 N	75 5.7 W	8.6	13.2
BR	10	CTD	01/05/83	1953	38 54.8 N	75 5.7 W	8.6	13.2
CH	2	CTD	01/05/83	2048	38 48.1 N	75 2.2 W	-4.8	27.7
CH	21	CTD	01/05/83	2048	38 48.1 N	75 2.2 W	-4.8	27.7
T1-1	1	Boat	01/06/83	1140	39 13.9 N	75 22.7 W	51.5	.
T1-2	1	Boat	01/06/83	1158	39 14.5 N	75 20.9 W	51.1	.
T1-3	1	CTD	01/06/83	1119	39 15.1 N	75 19.4 W	51.1	13.4
T1-3	12	CTD	01/06/83	1119	39 15.1 N	75 19.4 W	51.1	13.4
T1-4	1	Boat	01/06/83	1100	39 15.8 N	75 18.1 W	51.4	.
T1-5	1	Boat	01/06/83	1037	39 16.6 N	75 16.5 W	51.9	.
T1-6	1	Boat	01/06/83	1010	39 16.7 N	75 15.4 W	51.5	.
T3-2	1	CTD	01/07/83	1324	39 0.2 N	75 15.9 W	25.5	9.0
T3-3	1	CTD	01/07/83	1259	39 1.4 N	75 14.3 W	25.6	17.1
T3-3	14	CTD	01/07/83	1259	39 1.4 N	75 14.3 W	25.6	17.1
T3-4	1	CTD	01/07/83	1223	39 3.1 N	75 12.4 W	26.7	13.4
T3-4	11	CTD	01/07/83	1223	39 3.1 N	75 12.4 W	26.7	13.4
T3-5	1	CTD	01/07/83	1137	39 4.3 N	75 10.2 W	27.4	13.8
T3-5	12	CTD	01/07/83	1137	39 4.3 N	75 10.2 W	27.4	13.8
T3-6	1	CTD	01/07/83	1102	39 5.5 N	75 8.3 W	28.7	6.7
T3-7	1	CTD	01/07/83	1037	39 6.8 N	75 6.1 W	30.4	5.3
T3-8	1	CTD	01/07/83	1005	39 8.0 N	75 3.6 W	32.4	3.0
T3-12	1	Boat	01/07/83	0750	39 9.4 N	74 53.8 W	37.5	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
SO	1	0.006	777	6.15	341.0	88	7.155	685	2.14	112.00	1.96	46.30	101.00	267	50	0.41
SO	8	0.008	770	6.16	341.0	88	7.151	678	2.15	116.00	1.96	45.90	98.30	293	87	0.40
S1	1	0.710	11423	6.04	346.0	90	7.152	675	2.16	107.00	1.73	59.50	97.50	302	72	0.41
S1	7	1.327	20878	5.99	347.5	90	7.165	695	1.89	101.00	1.72	56.20	92.50	285	83	0.20
S2.5	1	2.121	.	5.91	356.5	93	7.254	727	1.57	100.00	1.66	49.10	85.40	274	20	0.35
S2.5	13	4.079	.	5.72	358.0	94	7.332	823	1.54	99.70	1.58	41.20	81.20	272	42	0.38
S5	1	5.312	.	5.64	369.0	98	7.499	884	1.06	91.20	.	35.80	21.80	263	64	0.50
S5	9	10.664	.	5.29	380.0	103	7.847	1172	0.78	75.30	0.95	24.80	39.50	248	64	0.55
S7.5	1	6.622	.	5.84	370.5	99	7.600	963	0.73	91.70	1.59	32.10	64.60	273	44	0.49
S7.5	12	14.861	.	5.06	393.0	109	8.070	1392	0.29	59.20	1.08	12.30	22.50	238	37	0.42
S10	1	10.093	.	5.62	386.0	105	7.893	1152	0.59	78.40	1.32	24.40	46.30	261	32	0.38
S10	14	20.230	.	4.92	406.0	117	8.207	1665	0.04	40.10	0.73	4.88	4.29	217	21	0.60
S15	1	14.091	.	5.50	416.0	116	8.179	1352	0.06	65.10	0.75	10.00	15.70	250	40	0.34
S15	10	19.926	.	5.08	406.0	117	8.221	1650	0.06	40.10	0.74	3.40	5.02	246	35	0.31
S17.5	1	17.658	.	5.47	425.0	122	8.299	1536	0.04	33.60	0.64	2.86	5.20	241	20	0.47
S17.5	8	18.533	.	5.30	420.0	120	8.295	1580	0.06	44.70	0.82	2.66	4.58	226	24	0.52
S22.5	1	25.700	.	5.10	391.0	117	8.220	1934	0.05	13.30	0.40	3.60	1.08	201	19	0.47
S22.5	13	25.685	.	5.12	391.0	117	8.222	1934	0.03	13.60	0.40	0.84	0.63	178	21	0.56
S25	1	25.532	.	5.54	376.5	114	8.247	1925	0.07	10.10	0.28	2.51	0.57	199	23	0.56
S25	11	26.374	.	5.19	378.5	114	8.200	1966	0.04	11.10	0.35	1.37	0.96	189	18	0.64
BR	1	29.820	.	5.11	342.5	105	8.016	2125	0.21	5.17	0.01	5.13	0.75	137	12	0.44
BR	11	29.851	.	5.10	342.0	105	8.010	2125	0.21	6.19	0.17	1.99	1.39	152	11	.
CH	2	31.084	.	5.40	330.5	103	7.946	2177	0.52	2.66	0.16	2.09	1.29	141	8	0.29
CH	25	31.117	.	5.36	332.0	104	7.957	2176	0.36	1.86	0.15	1.82	1.65	141	11	0.36
T3-1	1	21.278	.	5.30B	381.5	111	8.319	1728	0.08	8.68	0.16	0.52	0.56	238	30	0.56
T3-2	1	21.531	.	5.94	448.5	133	8.439	1725	0.05	25.80	0.64	0.46	0.42	190	25	0.39
T3-2	5	24.682	.	5.34	380.5	114	8.229	1879	0.02	8.60	0.43	0.61	0.39	169	21	0.64
T3-3	1	22.063	.	5.63	413.0	122	8.341	1752	0.06	22.90	0.50	0.88	1.84	192	24	0.41
T3-3	12	29.074	.	4.92	345.5	105	8.032	2087	0.16	5.06	0.22	1.22	0.44	151	19	0.34
T3-4	1	24.432	.	6.14	376.5	114	8.271	1866	0.12	10.60	0.36	1.00	0.23	194	31	0.47
T3-4	8	26.635	.	5.20	369.5	111	8.153	1971	0.03	7.21	0.36	1.14	0.31	161	27	0.46
T3-5	1	24.423	.	6.43	376.0	115	8.267	1867	0.04	8.64	0.37	1.21	3.35	202	46	0.58
T3-5	9	27.791	.	5.05	364.0	110	8.118	2029	0.05	7.00	0.31	0.95	0.52	169	33	0.50
T3-6	1	26.906	.	5.37	369.0	112	8.183	1989	0.02	6.18	0.29	0.42	0.45	151	13	0.38
T3-6	5	27.445	.	5.18	369.0	112	8.162	2012	0.01	4.72	0.28	0.37	0.36	153	11	0.43
T3-7	1	25.661	.	5.79	351.5	107	8.241	1936	0.06	8.51	0.34	0.65	0.30	196	17	0.47
T3-7	4	25.857	.	5.73	353.0	107	8.228	1943	0.06	8.59	0.34	0.72	0.38	205	26	0.39
T3-8	1	25.707	.	5.93	345.5	105	8.211	1933	0.06	5.50	0.33	0.78	0.48	212	26	0.44
T3-8	3	25.700	.	5.95	344.5	105	8.210	1935	0.05	6.27	0.23	0.77	0.30	207	32	0.28
T3-9	1	25.067	.	.	336.5	.	8.225	1912	0.05	6.11	0.34	0.26	0.43	191	22	0.50
T3-10	1	24.044	.	.	330.5	.	8.237	1868	0.11	7.57	0.35	0.61	0.38	200	22	0.42
T3-11	1	22.971	.	.	323.5	.	8.251	1825	0.14	8.03	0.38	1.32	0.50	312	46	0.51
T3-12	1	21.173	.	.	323.5	.	8.140	1756	0.13	1.42	0.13	0.81	1.57	259	25	0.59
T4-1	1	25.808	.	6.14	393.5	121	8.293	1930	0.09	7.66	0.28	0.51	0.72	178	15	0.74
T4-1	4	25.885	.	6.30	384.0	118	8.283	1941	0.19	2.89	0.21	0.15	0.59	177	18	0.57
T4-3	1	24.440	.	5.98	427.0	129	8.338	1876	0.09	13.00	0.43	0.11	0.41	187	15	0.44
T4-3	13	30.381	.	5.34	331.5	103	7.985	2146	0.28	3.52	0.17	1.06	0.65	128	13	0.43

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	40.0	8.90	1.72	17.4	2.0	8.7	1.80	4.6	3.1	.	.
S0	8	48.7	5.93	1.76	19.4	2.3	8.0	2.21	.	.	.	.
S1	1	60.3	10.10	2.74	.	.	22.0	2.21	1.9	2.1	.	.
S1	7	98.8	13.50	3.30	12.4	1.8	23.7	2.76	.	.	.	.
S2.5	1	78.0	9.47	2.17	11.3	1.4	21.0	3.13	2.9	3.5	.	.
S2.5	13	144.0	27.20	3.91	8.2	1.1	20.1	7.82	.	.	.	.
S5	1	164.0	13.10	1.43	11.9	1.3	16.0	5.34	10.6	13.0	.	.
S5	9	140.0	17.40	2.22	11.4	1.5	29.1	29.20	.	.	.	.
S7.5	1	73.8	10.30	2.18	20.2	2.3	31.1	12.00	10.4	22.2	.	.
S7.5	12	152.0	16.40	2.53	11.4	1.5	35.1	45.90	.	.	.	.
S10	1	85.3	21.70	1.56	13.8	1.4	17.9	20.50	20.3	51.2	3.40	.
S10	14	108.0	19.30	1.48	12.1	1.5	18.3	47.60	.	.	.	.
S15	1	111.0	25.40	1.43	12.9	1.7	11.6	36.60	64.7	101.0	2.80	.
S15	10	134.0	21.70	1.34	14.7	1.5	14.2	41.00	.	.	.	.
S17.5	1	91.7	18.50	1.10	14.7	1.8	10.3	49.10	132.0	95.3	1.40	.
S17.5	8	102.0	21.10	.	13.0	1.6	10.4	43.20	.	.	.	.
S22.5	1	55.5	7.77	0.91	17.0	1.8	10.3	39.60	113.0	53.5	0.82	.
S22.5	13	116.0	19.00	1.24	.	.	12.7	41.50	.	.	.	.
S25	1	95.6	13.10	0.54	9.6	1.7	4.4	23.90	40.3	20.0	0.82	.
S25	11	70.4	11.80	.	17.2	1.4	3.9	23.00	.	.	.	.
BR	1	73.8	17.70	0.36	13.4	1.2	5.8	8.03	25.1	12.9	.	.
BR	11	41.3	4.15	0.46	10.6	1.4	3.0	8.03	.	.	.	.
CH	2	61.0	5.62	0.58	16.0	1.6	6.8	6.94	23.2	17.8	.	.
CH	25	82.0	6.59	0.77	.	.	9.3	8.49	.	.	.	.
T3-1	1	335.0	30.10	3.08	15.7	1.8	15.9	76.20	29.0	99.5	5.00	.
T3-2	1	101.0	18.50	0.96	22.6	1.6	8.5	38.60	59.7	46.4	.	.
T3-2	5	92.1	17.50	1.21	11.7	1.7	13.2	36.10	.	.	.	.
T3-3	1	147.0	20.90	1.18	.	.	11.8	52.70	.	.	1.70	.
T3-3	12	72.2	9.17	0.76	23.1	1.6	7.1	21.50	.	.	.	.
T3-4	1	65.6	7.38	0.82	14.1	2.0	5.6	22.00	.	.	0.70	.
T3-4	8	75.3	11.30	0.54	23.4	1.8	4.2	19.50	.	.	.	.
T3-5	1	87.2	13.20	0.69	20.5	1.6	4.9	16.10	41.6	18.6	0.75	.
T3-5	9	58.5	7.38	0.65	18.6	1.1	4.8	18.10	.	.	.	.
T3-6	1	66.2	11.40	0.55	16.6	1.0	4.0	25.60	.	.	.	.
T3-6	5	51.2	7.19	0.57	13.2	1.6	3.5	24.40	.	.	.	.
T3-7	1	67.4	10.30	0.54	14.7	1.4	4.1	20.20	24.5	21.9	.	.
T3-7	4	74.0	11.30	0.82	12.6	1.8	6.8	27.40	.	.	.	.
T3-8	1	78.3	10.80	0.56	13.2	1.4	4.6	25.90	37.2	15.0	.	.
T3-8	3	84.9	10.10	0.52	24.5	1.8	4.0	24.40	.	.	.	.
T3-9	1	67.1	8.30	0.48	17.9	1.3	6.5	13.60	32.4	15.9	0.86	.
T3-10	1	.	.	0.87	20.3	1.4	4.5	10.50	23.3	12.1	0.81	.
T3-11	1	139.0	23.00	0.96	19.8	1.7	6.4	8.10	17.1	12.6	1.20	.
T3-12	1	196.0	35.40	1.91	15.7	2.2	26.2	48.80	22.5	60.3	4.30	.
T4-1	1	105.0	13.60	1.15	10.0	1.7	14.7	30.70	24.3	39.7	2.80	.
T4-1	4	167.0	22.50	1.97	.	.	31.6	41.80	.	.	.	.
T4-3	1	110.0	11.10	0.61	18.5	1.3	4.8	23.60	44.8	25.3	1.00	.
T4-3	13	47.1	5.53	0.80	19.2	1.5	7.5	10.80	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
SO	1	4059.1	.	.	626.7	7.64	71.55	56.65	.	229.4	3.11	1.014	.
SO	8	.	.	.	.	.	.	.	.	.	.	.	.
S1	1	2147.9	.	.	250.7	5.43	71.55	44.06	.	260.0	4.18	3.330	.
S1	7	.	.	.	.	.	.	.	.	.	.	.	.
S2.5	1	2056.9	.	.	125.3	4.24	76.66	56.65	.	305.9	4.63	2.510	.
S2.5	13	.	.	.	.	.	.	.	.	.	.	.	.
S5	1	1419.8	.	.	53.7	1.53	56.22	47.21	.	198.8	4.36	1.834	.
S5	9	.	.	.	.	.	.	.	.	.	.	.	.
S7.5	1	819.1	.	.	17.9	0.51	56.22	42.49	.	122.4	2.05	0.627	.
S7.5	12	.	.	.	.	.	.	.	.	.	.	.	.
S10	1	400.5	.	.	53.7	0.17<	46.00	37.77	.	91.8	3.11	0.579	.
S10	14	.	.	.	.	.	.	.	.	.	.	.	.
S15	1	127.4	.	.	53.7	0.51	34.07	25.18	.	76.5	2.67	0.193	.
S15	10	.	.	.	.	.	.	.	.	.	.	.	.
S17.5	1	72.8	.	.	35.8	0.17	30.66	28.33	.	153.0	3.74	0.338	.
S17.5	8	.	.	.	.	.	.	.	.	.	.	.	.
S22.5	1	18.2	.	.	17.9	0.17<	18.74	22.03	.	30.6	2.22	0.386	.
S22.5	13	.	.	.	.	.	.	.	.	.	.	.	.
S25	1	18.2	.	.	17.9	0.17<	13.63	11.02	.	30.6	2.94	0.338	.
S25	11	.	.	.	.	.	.	.	.	.	.	.	.
BR	1	54.6	.	.	35.8	0.17<	13.63	12.59	.	.	3.74	0.338	.
BR	11	.	.	.	.	.	.	.	.	.	.	.	.
CH	2	36.4	.	.	35.8	0.17<	11.93	11.02	.	30.6	1.25	0.145	.
CH	25	.	.	.	.	.	.	.	.	.	.	.	.
T3-1	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-2	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-2	5	.	.	.	.	.	.	.	.	.	.	.	.
T3-3	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-3	12	.	.	.	.	.	.	.	.	.	.	.	.
T3-4	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-4	8	.	.	.	.	.	.	.	.	.	.	.	.
T3-5	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-5	9	.	.	.	.	.	.	.	.	.	.	.	.
T3-6	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-6	5	.	.	.	.	.	.	.	.	.	.	.	.
T3-7	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-7	4	.	.	.	.	.	.	.	.	.	.	.	.
T3-8	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-8	3	.	.	.	.	.	.	.	.	.	.	.	.
T3-9	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-10	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-11	1	.	.	.	.	.	.	.	.	.	.	.	.
T3-12	1	.	.	.	.	.	.	.	.	.	.	.	.
T4-1	1	.	.	.	.	.	.	.	.	.	.	.	.
T4-1	4	.	.	.	.	.	.	.	.	.	.	.	.
T4-3	1	.	.	.	.	.	.	.	.	.	.	.	.
T4-3	13	.	.	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
SO	1	CTD	03/08/83	2207	39 47.4 N	75 26.1 W	124.8	14.8
SO	8	CTD	03/08/83	2207	39 47.4 N	75 26.1 W	124.8	14.8
S1	1	CTD	03/08/83	2105	39 39.3 N	75 32.0 W	107.0	10.9
S1	7	CTD	03/08/83	2105	39 39.3 N	75 32.0 W	107.0	10.9
S2.5	1	CTD	03/08/83	2034	39 36.7 N	75 34.4 W	100.1	16.2
S2.5	13	CTD	03/08/83	2034	39 36.7 N	75 34.4 W	100.1	16.2
S5	1	CTD	03/08/83	1855	39 29.1 N	75 33.4 W	85.6	12.6
S5	9	CTD	03/08/83	1855	39 29.1 N	75 33.4 W	85.6	12.6
S7.5	1	CTD	03/08/83	1823	39 25.5 N	75 31.4 W	77.2	15.7
S7.5	12	CTD	03/08/83	1823	39 25.5 N	75 31.4 W	77.2	15.7
S10	1	CTD	03/08/83	1724	39 20.7 N	75 25.9 W	64.6	18.8
S10	14	CTD	03/08/83	1724	39 20.7 N	75 25.9 W	64.6	18.8
S15	1	CTD	03/08/83	1652	39 18.1 N	75 22.6 W	58.1	13.8
S15	10	CTD	03/08/83	1652	39 18.1 N	75 22.6 W	58.1	13.8
S17.5	1	Wire	03/08/83	1610	39 14.0 N	75 18.1 W	48.4	.
S17.5	8	Wire	03/08/83	1610	39 14.0 N	75 18.1 W	48.4	.
S22.5	1	CTD	03/08/83	1210	39 9.3 N	75 14.8 W	38.5	16.4
S22.5	13	CTD	03/08/83	1210	39 9.3 N	75 14.8 W	38.5	16.4
S25	1	CTD	03/08/83	1130	39 5.2 N	75 11.4 W	29.6	14.6
S25	11	CTD	03/08/83	1130	39 5.2 N	75 11.4 W	29.6	14.6
BR	1	CTD	03/08/83	1012	38 55.2 N	75 5.8 W	9.4	15.1
BR	11	CTD	03/08/83	1012	38 55.2 N	75 5.8 W	9.4	15.1
CH	2	CTD	03/08/83	0918	38 48.6 N	75 2.5 W	-3.8	28.6
CH	25	CTD	03/08/83	0918	38 48.6 N	75 2.5 W	-3.8	28.6
T3-1	1	Boat	03/09/83	1255	38 59.0 N	75 18.4 W	26.8	1.5
T3-2	1	CTD	03/09/83	1242	39 0.2 N	75 16.3 W	25.9	8.4
T3-2	5	CTD	03/09/83	1242	39 0.2 N	75 16.3 W	25.9	8.4
T3-3	1	CTD	03/09/83	1413	39 1.2 N	75 14.5 W	25.5	16.2
T3-3	12	CTD	03/09/83	1413	39 1.2 N	75 14.5 W	25.5	16.2
T3-4	1	CTD	03/09/83	1454	39 3.9 N	75 12.9 W	28.4	11.8
T3-4	8	CTD	03/09/83	1454	39 3.9 N	75 12.9 W	28.4	11.8
T3-5	1	CTD	03/09/83	1522	39 4.7 N	75 11.1 W	28.5	13.1
T3-5	9	CTD	03/09/83	1522	39 4.7 N	75 11.1 W	28.5	13.1
T3-6	1	CTD	03/09/83	0906	39 5.1 N	75 8.3 W	27.9	7.3
T3-6	5	CTD	03/09/83	0906	39 5.1 N	75 8.3 W	27.9	7.3
T3-7	1	CTD	03/09/83	0833	39 6.4 N	75 6.1 W	29.7	6.3
T3-7	4	CTD	03/09/83	0833	39 6.4 N	75 6.1 W	29.7	6.3
T3-8	1	CTD	03/09/83	0748	39 7.8 N	75 3.6 W	32.0	5.6
T3-8	3	CTD	03/09/83	0748	39 7.8 N	75 3.6 W	32.0	5.6
T3-9	1	Boat	03/09/83	1015	39 8.2 N	75 1.0 W	32.9	.
T3-10	1	Boat	03/09/83	0930	39 8.6 N	74 58.8 W	34.1	.
T3-11	1	Boat	03/09/83	0909	39 9.0 N	74 56.5 W	35.6	3.0
T3-12	1	Boat	03/09/83	0843	39 9.4 N	74 53.8 W	37.5	.
T4-1	1	CTD	03/09/83	1647	38 52.1 N	75 12.0 W	12.9	6.0
T4-1	4	CTD	03/09/83	1647	38 52.1 N	75 12.0 W	12.9	6.0
T4-3	1	CTD	03/09/83	1723	38 53.5 N	75 8.7 W	9.5	18.0
T4-3	13	CTD	03/09/83	1723	38 53.5 N	75 8.7 W	9.5	18.0

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
T4-5	2	28.161	.	5.44	371.5	114	8.132	2042	0.09	5.69	0.26	0.33	0.27	155	13	0.43
T4-5	16	30.836	.	5.55	323.0	101	7.943	2157	0.45	3.00	0.19	1.53	1.05	144	13	0.37
T4-7	1	30.349	.	5.77	324.0	102	7.951	2136	0.42	5.73	0.19	1.46	1.25	170	8	0.43
T4-7	9	30.407	.	5.91	319.5	100	7.939	2149	0.35	4.16	0.17	1.45	1.05	160	13	0.42
T4-9	1	30.568	.	5.82	321.5	101	7.928	2141	0.39	3.94	0.14	1.52	1.46	141	12	0.36
T4-9	8	30.614	.	5.77	323.0	101	7.927	2146	0.44	2.78	0.16	1.81	1.57	136	7	0.38
CB2	1	27.235	.	5.73C	375.0	115	8.182	1991	0.15	7.11	0.24	1.15	0.43	.	12	.
CB2	26	31.032	.	5.41C	327.5	102	7.948	2163	0.56	4.74	0.15	2.49	1.11	.	13	.
CB4	1	27.641	.	5.45C	365.5	112	8.132	2014	0.18	8.49	0.28	1.07	3.03	.	11	.
CB4	8	30.485	.	5.37C	333.5	104	7.954	2142	0.55	6.26	0.20	3.33	2.07	.	11	.
CB6	1	30.521	.	5.36C	327.5	102	7.921	2147	0.63	3.43	0.22	3.93	2.66	.	11	.
CB6	5	30.528	.	5.34C	327.5	102	7.924	2149	0.63	8.23	0.23	4.08	4.41	.	12	.
CB8	1	30.430	.	5.27C	331.0	103	7.927	2143	0.70	4.61	0.25	4.58	3.00	.	9	.
CB8	6	30.424	.	5.28C	330.5	102	7.926	2147	0.67	6.43	0.24	4.62	3.09	.	12	.
CB10	1	30.205	.	5.72C	324.5	101	7.914	2134	0.60	4.96	0.23	4.16	2.80	.	10	.
CB12	1	27.706	.	5.70C	360.5	111	8.122	2022	0.21	7.96	0.27	1.37	0.80	.	11	.
CB12	24	30.883	.	5.48C	324.5	101	7.952	2163	0.48	3.97	0.16	2.12	1.24	.	12	.
CB14	1	30.584	.	5.34C	330.0	102	7.947	2153	0.56	4.60	0.21	3.11	2.11	.	11	.
CB14	8	30.686	.	5.34C	330.0	103	7.946	2160	0.53	4.41	0.17	2.83	1.79	.	12	.
CB16	1	30.795	.	5.07C	331.5	102	7.936	2166	0.64	4.88	0.21	3.98	3.17	.	13	.
CB16	8	30.823	.	5.07C	331.5	102	7.936	2169	0.62	4.50	0.21	3.73	2.97	.	11	.
CB18	1	30.700	.	4.96C	330.0	102	7.929	2164	0.66	4.95	0.23	4.12	3.04	.	13	.
CB18	6	30.752	.	4.96C	330.0	102	7.930	2171	0.66	7.40	0.24	4.56	2.85	.	9	.
CB20	1	30.439	.	5.04	328.0	101	7.919	2160	0.73	4.50	0.26	5.69	3.88	.	8	.
S'0	1	-0.013C	.	6.50	.	.	.	.	.	.	.	.	.	338	.	.
S'1	1	2.503C	.	5.96C	.	.	.	.	.	.	.	.	.	265	.	.
S'5	1	5.419C	.	5.80	.	.	.	.	.	.	.	.	.	241	.	.
S'7.5	1	7.411C	.	5.72C	.	.	.	.	.	.	.	.	.	235	.	.
S'10	1	12.029C	.	5.61C	.	.	.	.	.	.	.	.	.	216	.	.
S'12.5	1	11.549C	.	5.94C	.	.	.	.	.	.	.	.	.	247	.	.
S'15	1	16.567C	.	5.69C	.	.	.	.	.	.	.	.	.	208	.	.
S'17.5	1	19.757C	.	5.82C	.	.	.	.	.	.	.	.	.	195	.	.
S'20	1	25.302C	.	5.63C	.	.	.	.	.	.	.	.	.	223	.	.
S'25	1	28.090C	.	5.42C	.	.	.	.	.	.	.	.	.	148	.	.
BR'	1	29.381C	.	5.63C	.	.	.	.	.	.	.	.	.	165	.	.
CH'	1	29.066C	.	5.77	.	.	.	.	.	.	.	.	.	136	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
T4-5	2	40.4	5.97	0.44	22.9	1.7	3.8	11.40	22.7	18.8	1.20	.
T4-5	16	67.4	6.63	0.71	19.5	1.3	8.1	7.56	.	.	.	.
T4-7	1	.	.	0.55	15.4	1.1	8.1	5.55	14.2	12.5	.	.
T4-7	9	119.0	15.50	1.54	.	.	26.0	9.49	.	.	.	.
T4-9	1	68.5	7.04	0.83	16.2	1.3	11.1	5.56	13.5	14.2	.	.
T4-9	8	168.0	9.77	1.30	15.5	1.4	20.7	6.48	.	.	.	.
CB2	1	70.1	12.10	.	15.3	1.4	.	14.00	.	.	.	.
CB2	26	72.9	8.91	.	.	.	.	7.41	.	.	.	.
CB4	1	51.9	6.85	.	13.7	1.5	.	9.73	.	.	.	.
CB4	8	60.4	6.83	.	10.7	1.0	.	5.86	.	.	.	.
CB6	1	.	.	.	9.5	0.9	.	6.02	.	.	.	.
CB6	5	103.0	11.30	.	15.1	0.9	.	6.17	.	.	.	.
CB8	1	56.8	7.25	.	11.9	1.0	.	5.09	.	.	.	.
CB8	6	104.0	8.38	.	12.6	1.1	.	5.71	.	.	.	.
CB10	1	146.0	24.10	.	7.7	0.9	.	7.18	.	.	.	.
CB12	1	70.7	12.10	.	8.8	1.1	.	44.90	.	.	.	.
CB12	24	59.1	7.37	.	8.0	1.1	.	22.00	.	.	.	.
CB14	1	60.0	7.66	.	10.1	1.1	.	21.00	.	.	.	.
CB14	8	.	.	.	7.8	1.0	.	24.40	.	.	.	.
CB16	1	56.9	6.66	.	8.4	1.1	.	17.10	.	.	.	.
CB16	8	71.0	7.86	.	6.7	1.0	.	21.00	.	.	.	.
CB18	1	77.1	7.51	.	9.4	1.0	.	18.60	.	.	.	.
CB18	6	84.1	13.30	.	7.9	1.2	.	22.50	.	.	.	.
CB20	1	71.8	8.89	.	8.3	1.0	.	17.60	.	.	.	.
S'0	1	40.0	7.34	.	21.3	2.7	.	2.25	.	.	.	.
S'1	1	151.1	11.13	.	12.5	1.4	.	5.89	.	.	.	.
S'5	1	78.4	8.18	.	14.0	1.2	.	8.57	.	.	.	.
S'7.5	1	126.9	8.63	.	18.2	0.9	.	14.36	.	.	.	.
S'10	1	156.8	9.43	.	19.5	0.9	.	19.21	.	.	.	.
S'12.5	1	134.2	9.09	.	17.2	1.2	.	23.60	.	.	.	.
S'15	1	160.2	14.97	.	19.5	1.3	.	29.01	.	.	.	.
S'17.5	1	91.1	20.70	.	19.5	1.5	.	30.48	.	.	.	.
S'20	1	71.1	15.09	.	11.3	1.3	.	18.19	.	.	.	.
S'25	1	42.3	9.73	.	16.4	1.3	.	16.72	.	.	.	.
BR'	1	59.3	6.65	.	16.3	1.2	.	8.18	.	.	.	.
CH'	1	56.3	7.87	.	17.0	1.6	.	10.03	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
T4-5	2	CTD	03/09/83	1751	38 54.3 N	75 5.8 W	7.9	19.0
T4-5	16	CTD	03/09/83	1751	38 54.3 N	75 5.8 W	7.9	19.3
T4-7	1	CTD	03/09/83	1825	38 55.1 N	75 2.3 W	8.6	12.9
T4-7	9	CTD	03/09/83	1825	38 55.1 N	75 2.3 W	8.6	12.9
T4-9	1	CTD	03/09/83	1857	38 55.9 N	74 59.1 W	11.6	10.8
T4-9	8	CTD	03/09/83	1857	38 55.9 N	74 59.1 W	11.6	10.8
CB2	1	CTD	03/10/83	2122	38 47.7 N	75 2.0 W	-5.6	30.7
CB2	26	CTD	03/10/83	2122	38 47.7 N	75 2.0 W	-5.6	30.7
CB4	1	CTD	03/10/83	2137	38 49.3 N	74 59.6 W	-5.8	11.7
CB4	8	CTD	03/10/83	2137	38 49.3 N	74 59.6 W	-5.8	11.7
CB6	1	CTD	03/10/83	2155	38 50.7 N	74 56.7 W	-9.5	9.0
CB6	5	CTD	03/10/83	2155	38 50.7 N	74 56.7 W	-9.5	9.0
CB8	1	CTD	03/10/83	2212	38 52.4 N	74 54.1 W	-13.7	9.8
CB8	6	CTD	03/10/83	2212	38 52.4 N	74 54.1 W	-13.7	9.8
CB10	1	CTD	03/10/83	2231	38 55.2 N	74 54.2 W	-15.7	7.0
CB12	1	CTD	03/11/83	0356	38 47.8 N	75 2.2 W	-5.3	27.5
CB12	24	CTD	03/11/83	0356	38 47.8 N	75 2.2 W	-5.3	27.5
CB14	1	CTD	03/11/83	0413	38 49.4 N	74 59.8 W	-5.5	12.3
CB14	8	CTD	03/11/83	0413	38 49.4 N	74 59.8 W	-5.5	12.3
CB16	1	CTD	03/11/83	0431	38 50.7 N	74 56.8 W	-9.4	11.9
CB16	8	CTD	03/11/83	0431	38 50.7 N	74 56.8 W	-9.4	11.9
CB18	1	CTD	03/11/83	0448	38 52.3 N	74 54.3 W	-13.4	10.0
CB18	6	CTD	03/11/83	0448	38 52.3 N	74 54.3 W	-13.4	10.0
CB20	1	CTD	03/11/83	0509	38 55.1 N	74 54.5 W	-15.2	10.5
S'0	1	CTD	03/10/83	0806	39 47.9 N	75 24.5 W	127.3	14.1
S'1	1	CTD	03/10/83	0941	39 38.7 N	75 33.0 W	105.2	16.5
S'5	1	CTD	03/10/83	1021	39 33.6 N	75 32.5 W	93.8	15.5
S'7.5	1	CTD	03/10/83	1134	39 26.2 N	75 32.3 W	79.0	13.5
S'10	1	CTD	03/10/83	1236	39 19.3 N	75 24.3 W	61.2	16.2
S'12.5	1	CTD	03/10/83	1339	39 16.1 N	75 20.8 W	53.6	12.7
S'15	1	CTD	03/10/83	1422	39 10.7 N	75 16.2 W	41.7	11.0
S'17.5	1	CTD	03/10/83	1448	39 7.5 N	75 13.4 W	34.6	10.5
S'20	1	CTD	03/10/83	1506	39 5.6 N	75 11.5 W	30.3	14.8
S'25	1	CTD	03/10/83	1541	39 0.8 N	75 9.2 W	20.8	13.8
BR'	1	CTD	03/10/83	1623	38 55.4 N	75 5.9 W	9.8	14.9
CH'	1	CTD	03/10/83	1713	38 49.1 N	75 2.6 W	-2.8	29.8

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S0	1	-0.029	457	7.53	323.5	87	.	446	1.43	86.10	1.85	24.10	72.70	383	36	0.11
S0.5	1	-0.026	438	7.58	321.5	86	.	497	1.58	78.50	1.59	26.00	78.30	323	36	0.29
S1	1	0.888	14029	7.11	335.0	89	7.221	623	1.51	98.20	1.55	32.40	84.70	302	49	0.36
S1	8	0.876	13819	7.09	335.0	89	7.210	616	1.57	98.90	1.56	32.90	84.70	297	21	0.35
S2.5	1	2.083	.	6.96	340.0	91	7.303	690	1.49	100.00	1.69	31.20	86.70	319	32	0.39
S2.5	8	2.082	.	6.95	341.0	91	7.302	692	1.59	95.50	1.67	31.90	80.40	294	31	0.37
S5	1	5.457	.	6.84	348.0	95	7.537	885	1.31	88.80	1.62	29.10	70.30	289	47	0.42
S5	10	7.150	.	6.50	346.5	95	7.578	972	1.35	83.20	1.69	28.00	67.40	270	31	0.35
S7.5	1	7.206	.	6.81	349.0	96	7.627	972	1.30	86.60	1.63	28.20	60.00	266	13	0.32
S7.5	8	7.907	.	6.56	348.0	96	7.655	1012	1.23	64.10	1.57	26.80	62.70	254	26	0.37
S10	1	9.662	.	6.59	353.0	98	7.804	1102	0.95	74.50	1.53	24.80	48.60	246	18	0.31
S10	9	10.528	.	6.36	350.5	98	7.808	1146	0.91	73.40	1.45	23.20	47.30	253	17	0.38
S12.5	1	12.642	.	6.30	355.0	100	7.940	1247	0.67	59.20	1.39	16.90	37.40	241	24	0.37
S12.5	10	13.149	.	6.26	353.5	100	7.940	1273	0.73	36.40	1.34	17.20	35.50	239	26	0.36
S15	1	15.091	.	6.50	376.0	108	8.116	1370	0.20	55.30	1.18	11.30	26.60	231	26	0.30
S15	12	16.742	.	6.10	357.0	103	8.079	1454	0.19	45.00	1.03	8.84	19.20	220	36	0.50
S17.5	1	16.589	.	6.60	385.5	113	8.190	1446	0.09	44.80	1.04	7.98	20.00	230	10	0.60
S17.5	14	19.135	.	6.09	357.5	105	8.142	1571	0.04	38.70	0.83	4.08	10.20	202	9	0.61
S20	1	18.589	.	6.11	371.5	109	8.187	1543	0.08	38.90	0.74	3.92	10.90	244	8	0.56
S20	8	20.935	.	6.04	358.5	106	8.172	1660	0.04	29.70	0.67	1.90	4.32	205	14	0.54
S22.5	1	22.894	.	6.29	385.0	116	8.278	1763	0.02	18.30	0.50	0.14	0.56	207	14	0.53
S22.5	6	23.368	.	6.21	373.5	113	8.233	1786	0.01	18.00	0.47	0.28	0.82	184	16	0.69
S25	1	26.907	.	6.06	351.5	108	8.171	1969	0.01	2.47	0.20	0.20	0.30	168	23	0.48
S25	9	27.014	.	6.03	343.5	106	8.149	1972	0.02	2.73	0.18	0.28	0.43	176	23	0.51
BR	1	29.178	.	6.00	330.5	103	8.003	2072	0.19	1.96	0.12	0.65	1.17	121	11	0.47
BR	10	29.559	.	5.93	325.0	102	7.978	2085	0.19	3.12	0.12	1.16	1.38	148	13	0.50
CH	1	29.696	.	5.93	329.0	103	7.994	2099	0.16	2.92	0.10	0.73	1.12	115	.	0.37
CH	25	29.796	.	5.88	328.0	103	7.992	2102	0.14	1.20	0.09	0.65	1.21	146	19	0.41
S30	1	28.937	.	6.12	346.5	108	8.073	2066	0.09	0.01	0.08	0.25	0.62	167	11	0.31
S30	11	30.485	.	5.98	318.5	100	7.999	2139	0.21	0.70	0.04	0.46	0.64	125	12	0.24
S30	26	31.535	.	5.99	320.5	102	8.003	2191	0.32	0.11	0.02	0.30	0.60	140	8	0.30
S30	42	31.807	.	6.05	320.5	102	8.000	2193	0.30	2.97	0.02	0.31	0.86	124	9	0.38
T3-2	1	22.410	.	6.19	393.5	118	8.274	1747	0.08	16.30	0.42	0.22	0.48	190	22	0.45
T3-2	7	22.807	.	6.30	386.0	117	8.262	1771	0.10	14.10	0.30	0.42	0.56	184	16	0.54
T3-3	1	23.390	.	6.31	383.0	116	8.241	1791	0.06	17.80	0.44	0.13	1.62	181	32	0.40
T3-3	12	26.871	.	6.13	337.0	104	8.100	1966	0.09	5.51	0.19	0.68	0.55	150	20	0.52
T3-4	1	19.976	.	6.27	389.5	115	8.243	1627	0.08	32.40	0.65	1.40	7.23	181	22	0.40
T3-4	11	23.847	.	6.15	361.5	110	8.186	1817	0.07	17.30	0.41	0.42	1.25	171	15	0.43
T3-5	1	20.400	.	6.25	384.5	114	8.250	1638	0.07	33.60	0.67	0.97	5.25	181	20	0.37
T3-5	11	23.359	.	6.16	363.0	110	8.193	1793	0.08	17.20	0.43	0.41	1.16	162	24	0.40
T3-6	1	20.972	.	6.32	402.5	120	8.330	1670	0.05	24.30	0.66	0.51	0.40	190	22	0.42
T3-6	3	21.215	.	6.27	387.0	116	8.285	1723	0.06	20.60	0.54	0.26	0.60	182	20	0.46
T3-7	1	20.947	.	6.39	418.0	125	8.422	1675	0.07	21.80	0.61	0.35	0.46	179	27	0.42
T3-8	1	18.753	.	6.49	385.0	114	8.309	1565	0.03	34.60	0.64	0.25	1.33	192	23	0.40
T3-9	1	18.017	.	8.008	362.0	110	8.156	1523	0.05	27.40	0.30	0.42	0.26	268	28	0.50
T3-10	1	16.857	.	8.108	379.5	115	8.231	1455	0.05	26.40	0.49	0.54	0.60	226	45	0.56
T3-11	1	.	.	8.508	359.0	.	7.977	1516	0.07	17.70	0.23	0.24	0.68	244	44	0.57

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	95.4	6.93	2.53	25.3	2.9	28.9	2.94	3.7	6.3	.	.
S0.5	1	109.0	10.30	3.57	.	.	46.4	3.50	3.0	6.4	.	.
S1	1	184.0	18.60	6.40	21.0	1.5	96.1	4.97	1.1	3.4	.	.
S1	8	.	.	7.89	20.9	1.7	152.0	5.89	.	.	.	.
S2.5	1	294.0	19.60	4.89	15.8	1.3	116.0	6.44	1.4	5.4	.	.
S2.5	8	320.0	26.20	7.98	19.8	1.4	161.0	8.10	.	.	.	.
S5	1	94.0	8.66	2.09	11.4	0.9	27.3	7.85	10.4	18.2	.	.
S5	10	152.0	13.70	3.57	12.4	0.7	64.5	13.90	.	.	.	.
S7.5	1	175.0	9.28	2.23	11.7	0.8	39.8	11.10	15.3	26.5	.	.
S7.5	8	250.0	14.80	4.12	11.5	0.9	82.4	17.70	.	.	.	.
S10	1	178.0	9.93	2.31	23.5	0.9	31.4	14.50	39.9	51.8	.	.
S10	9	141.0	20.70	2.98	15.2	0.9	17.9	20.10	.	.	.	.
S12.5	1	226.0	11.60	2.11	15.4	1.0	31.5	22.20	52.4	83.5	.	.
S12.5	10	160.0	14.90	2.63	22.0	0.9	45.4	36.10	.	.	.	.
S15	1	95.1	12.40	1.60	20.1	1.0	16.7	35.20	95.1	98.8	.	.
S15	12	169.0	14.50	1.95	19.7	0.9	25.6	38.80	.	.	.	.
S17.5	1	159.0	10.50	1.55	30.1	1.2	15.4	35.20	104.0	98.3	.	.
S17.5	14	168.0	13.10	1.76	32.4	1.1	21.1	43.20	.	.	.	.
S20	1	135.0	9.57	1.42	25.7	1.1	14.0	42.50	.	.	.	.
S20	8	243.0	15.20	1.55	40.5	1.3	19.5	44.00	.	.	.	.
S22.5	1	201.0	11.70	0.87	27.2	1.3	8.2	29.30	86.7	70.8	.	.
S22.5	6	162.0	8.85	0.82	33.6	1.0	8.8	29.30	.	.	.	.
S25	1	98.9	7.44	0.64	40.1	0.9	7.6	22.00	48.9	33.1	.	.
S25	9	137.0	8.52	1.09	32.1	1.2	14.5	32.20	.	.	.	.
BR	1	.	.	0.62	29.2	0.9	9.0	11.00	30.3	24.8	.	.
BR	10	439.0	17.10	2.48	24.6	0.8	52.7	20.30	.	.	.	.
CH	1	152.0	6.32	0.66	18.2	0.8	10.0	18.00	32.4	22.8	.	.
CH	25	250.0	11.80	1.61	28.6	0.8	32.2	26.40	.	.	.	.
S30	1	93.4	3.77	0.45	51.2	0.9	3.3	3.24	.	.	.	.
S30	11	86.9	3.69	0.63	19.9	0.8	3.2	12.10	.	.	.	.
S30	26	43.4	2.23	0.32	27.7	0.7	1.7	5.67	.	.	.	.
S30	42	87.4	2.38	0.33	21.2	0.8	2.3	5.56	.	.	.	.
T3-2	1	123.0	15.30	1.31	22.0	1.5	12.0	37.10	90.9	71.7	.	.
T3-2	7	261.0	24.40	2.48	.	.	34.6	60.60	.	.	.	.
T3-3	1	72.9	9.43	0.85	29.3	1.2	10.0	17.60	62.0	37.7	.	.
T3-3	12	263.0	13.60	1.98	36.8	1.4	29.8	25.60	.	.	.	.
T3-4	1	147.0	12.40	1.38	28.6	1.5	11.6	30.80	81.6	86.9	.	.
T3-4	11	153.0	16.20	1.52	28.4	1.0	18.9	29.30	.	.	.	.
T3-5	1	123.0	11.70	1.15	27.2	1.2	12.9	33.70	87.7	62.7	.	.
T3-5	11	184.0	22.10	2.55	33.4	1.2	32.3	45.90	.	.	.	.
T3-6	1	138.0	11.10	1.17	24.8	1.1	10.5	32.20	63.9	47.1	.	.
T3-6	3	146.0	16.20	2.07	34.5	1.1	28.6	48.40	.	.	.	.
T3-7	1	331.0	24.90	2.44	45.2	1.3	33.8	73.30	66.4	65.8	.	.
T3-8	1	372.0	20.00	2.62	24.5	1.1	33.5	52.70	68.5	70.6	.	.
T3-9	1	385.0	29.60	3.44	15.3	1.7	58.4	58.60	86.6	62.0	.	35
T3-10	1	428.0	27.50	2.80	20.6	1.7	44.7	29.60	67.3	52.3	.	35
T3-11	1	438.0	33.20	5.35	35.0	1.5	105.0	50.90	33.2	61.0	.	25

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
S0	1	CTD	03/28/83	2013	39 47.7 N	75 24.6 W	127.0	8.7
S0.5	1	CTD	03/28/83	1859	39 39.0 N	75 32.4 W	106.2	10.0
S1	1	CTD	03/28/83	1741	39 29.1 N	75 33.2 W	85.9	13.2
S1	8	CTD	03/28/83	1741	39 29.1 N	75 33.2 W	85.9	13.2
S2.5	1	CTD	03/28/83	1702	39 26.2 N	75 31.9 W	78.7	12.6
S2.5	8	CTD	03/28/83	1702	39 26.2 N	75 31.9 W	78.7	12.6
S5	1	CTD	03/28/83	1604	39 22.3 N	75 27.7 W	69.3	14.3
S5	10	CTD	03/28/83	1604	39 22.3 N	75 27.7 W	69.3	14.3
S7.5	1	CTD	03/28/83	1539	39 22.5 N	75 27.5 W	69.4	11.2
S7.5	8	CTD	03/28/83	1539	39 22.5 N	75 27.5 W	69.4	11.2
S10	1	CTD	03/28/83	1451	39 20.1 N	75 24.8 W	62.9	13.6
S10	9	CTD	03/28/83	1451	39 20.1 N	75 24.8 W	62.9	13.6
S12.5	1	CTD	03/28/83	1402	39 18.0 N	75 22.5 W	57.9	13.6
S12.5	10	CTD	03/28/83	1402	39 18.0 N	75 22.5 W	57.9	13.6
S15	1	CTD	03/28/83	1300	39 15.6 N	75 19.8 W	52.1	16.8
S15	12	CTD	03/28/83	1300	39 15.6 N	75 19.8 W	52.1	16.8
S17.5	1	CTD	03/28/83	1153	39 13.6 N	75 17.8 W	47.5	17.7
S17.5	14	CTD	03/28/83	1153	39 13.6 N	75 17.8 W	47.5	17.7
S20	1	CTD	03/28/83	1125	39 11.4 N	75 16.1 W	42.8	12.2
S20	8	CTD	03/28/83	1125	39 11.4 N	75 16.1 W	42.8	12.2
S22.5	1	CTD	03/28/83	1036	39 8.0 N	75 12.7 W	35.1	9.2
S22.5	6	CTD	03/28/83	1036	39 8.0 N	75 12.7 W	35.1	9.2
S25	1	CTD	03/28/83	0947	39 2.2 N	75 8.7 W	23.0	12.8
S25	9	CTD	03/28/83	0947	39 2.2 N	75 8.7 W	23.0	12.8
BR	1	CTD	03/28/83	0842	38 55.6 N	75 6.0 W	10.2	14.6
BR	10	CTD	03/28/83	0842	38 55.6 N	75 6.0 W	10.2	14.6
CH	1	CTD	03/28/83	0731	38 48.9 N	75 2.7 W	-3.1	29.8
CH	25	CTD	03/28/83	0731	38 48.9 N	75 2.7 W	-3.1	29.8
S30	1	CTD	03/31/83	1140	38 44.7 N	74 55.3 W	-15.8	48.1
S30	11	CTD	03/31/83	1140	38 44.7 N	74 55.3 W	-15.8	48.1
S30	26	CTD	03/31/83	1140	38 44.7 N	74 55.3 W	-15.8	48.1
S30	42	CTD	03/31/83	1140	38 44.7 N	74 55.3 W	-15.8	48.1
T3-2	1	CTD	03/30/83	2030	39 0.6 N	75 16.3 W	26.4	10.2
T3-2	7	CTD	03/30/83	2030	39 0.6 N	75 16.3 W	26.4	10.2
T3-3	1	CTD	03/30/83	2004	39 1.5 N	75 14.4 W	25.9	16.1
T3-3	12	CTD	03/30/83	2004	39 1.5 N	75 14.4 W	25.9	16.1
T3-4	1	CTD	03/30/83	1938	39 3.0 N	75 12.3 W	26.5	14.8
T3-4	11	CTD	03/30/83	1938	39 3.0 N	75 12.3 W	26.5	14.8
T3-5	1	CTD	03/30/83	1916	39 4.2 N	75 10.4 W	27.3	15.0
T3-5	11	CTD	03/30/83	1916	39 4.2 N	75 10.4 W	27.3	15.0
T3-6	1	CTD	03/30/83	1840	39 5.4 N	75 7.8 W	28.3	5.5
T3-6	3	CTD	03/30/83	1840	39 5.4 N	75 7.8 W	28.3	5.5
T3-7	1	CTD	03/30/83	1817	39 6.7 N	75 6.1 W	30.2	5.0
T3-8	1	CTD	03/30/83	1645	39 7.9 N	75 3.5 W	32.2	5.0
T3-9	1	Boat	03/30/83	.	39 8.2 N	75 1.2 W	32.9	.
T3-10	1	Boat	03/30/83	.	39 8.6 N	74 58.5 W	34.2	.
T3-11	1	Boat	03/30/83	.	39 9.0 N	74 56.3 W	35.7	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
T3-12	1	8.562	.	7.508	317.5	91	7.147	1008	0.34	3.83	0.14	3.33	20.80	620	39	0.51
T4-1	1	26.411	.	6.25	370.5	114	8.201	1947	0.05	1.85	0.14	0.15	0.53	173	11	0.45
T4-3	1	27.813	.	6.11	343.5	107	8.092	2013	0.12	2.19	0.15	0.41	0.59	163	11	0.35
T4-3	13	29.410	.	6.01	327.0	102	8.012	2090	0.20	1.18	0.09	0.59	1.28	152	9	0.38
T4-5	1	29.190	.	6.08	333.0	104	8.022	2078	0.18	1.15	0.10	0.41	0.94	155	11	0.53
T4-5	15	29.388	.	6.11	330.5	104	8.007	2083	0.22	1.15	0.07	0.47	0.89	151	9	0.47
T4-7	1	28.334	.	6.18	328.0	102	7.992	2031	0.16	1.83	0.09	0.62	0.98	153	10	0.41
T4-7	10	29.250	.	6.15	333.5	105	8.001	2078	0.19	2.20	0.08	0.46	0.94	157	12	0.50
T4-9	1	27.484	.	6.11	334.0	104	8.016	1988	0.19	2.70	0.13	0.37	1.09	150	9	0.41
T4-9	6	30.409	.	6.11	339.5	107	8.007	2130	0.28	0.55	0.04	0.09	1.11	130	10	0.34
CB2	1	29.631	.	6.04C	331.0	104	8.025	2100	0.16	0.57	0.06	0.35	0.73	.	9	.
CB2	28	29.634	.	6.05C	328.5	103	8.021	2096	0.19	0.87	0.06	0.42	0.71	.	11	.
CB4	1	29.954	.	5.97C	329.0	103	8.018	2113	0.17	0.41	0.06	0.40	0.70	.	11	.
CB4	9	29.949	.	5.97C	327.5	103	8.020	2112	0.19	0.35	0.05	0.53	1.88	.	10	.
CB6	1	30.197	.	5.93C	334.0	105	8.027	2131	0.15	0.15	0.04	0.19	0.69	.	10	.
CB6	8	30.203	.	5.92C	332.5	104	8.028	2126	0.15	0.08	0.04	0.10	0.70	.	11	.
CB8	1	30.829	.	6.06C	343.0	109	8.052	2158	0.12	0.45	0.01	0.05	0.31	.	11	.
CB8	7	30.786	.	6.06C	344.5	109	8.052	2159	0.13	0.05<	0.02	0.10	0.36	.	9	.
CB10	1	31.135	.	6.05	340.0	108	8.016	2165	0.22	0.81	0.02	0.07	0.92	.	8	.
CB12	1	27.710	.	6.18C	352.0	109	8.115	2013	0.07	2.76	0.13	0.31	0.47	.	11	.
CB12	23	30.098	.	6.02C	328.0	103	8.019	2117	0.15	0.34	0.05	0.29	1.29	.	10	.
CB14	1	29.566	.	6.18C	339.5	107	8.028	2094	0.14	1.22	0.08	0.47	0.83	.	11	.
CB14	8	29.590	.	6.18C	340.5	107	8.025	2094	0.14	0.93	0.08	0.80	1.53	.	9	.
CB16	1	29.704	.	6.20C	344.5	109	8.033	2096	0.14	3.16	0.05	0.14	0.91	.	8	.
CB16	6	29.891	.	6.19C	343.0	108	8.034	2107	0.15	0.84	0.05	0.22	0.47	.	10	.
CB18	1	30.056	.	6.25C	340.0	108	8.028	2073	0.13	3.65	0.06	0.57	0.60	.	13	.
CB18	6	30.059	.	6.18C	343.5	108	8.029	2116	0.13	1.41	0.04	0.58	1.89	.	11	.
CB20	1	28.708	.	6.26	337.0	106	8.012	2051	.	2.12	.	.	.	.	9	.
CB20	7	30.475	.	6.15C	337.0	107	7.997	2138	0.19	1.24	0.03	0.16	1.10	.	13	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
T3-12	1	579.0	43.20	7.01	34.0	1.2	179.0	20.90	4.9	14.4	.	.
T4-1	1	.	.	0.90	32.5	1.2	6.7	19.50	.	.	.	.
T4-3	1	105.0	5.29	0.75	28.6	0.8	5.9	15.60	.	.	.	.
T4-3	13	93.9	9.27	1.15	14.3	0.9	15.5	17.60	.	.	.	.
T4-5	1	67.2	3.86	0.54	19.5	0.8	4.5	8.18	.	.	.	.
T4-5	15	55.7	6.26	0.87	23.4	0.9	11.0	9.49	.	.	.	.
T4-7	1	77.2	8.22	1.00	12.9	0.7	10.2	12.20	.	.	.	.
T4-7	10	99.3	6.34	1.50	26.5	0.9	23.9	14.20	.	.	.	.
T4-9	1	57.2	5.16	0.87	14.3	1.2	9.1	11.40	.	.	.	.
T4-9	6	80.5	4.11	0.55	34.9	0.9	6.7	6.94	.	.	.	.
CB2	1	140.0	6.32	.	31.7	0.8	9.6	10.70	29.3	19.7	.	.
CB2	28	70.0	8.46	.	5.2	0.9	12.2	11.90	.	.	.	.
CB4	1	46.2	6.37	.	26.7	0.8	5.7	11.70	.	.	.	.
CB4	9	55.1	3.79	.	11.0	0.5	9.8	12.50	.	.	.	.
CB6	1	77.7	6.47	.	23.2	1.1	8.5	7.98	.	.	.	.
CB6	8	34.8	3.52	.	10.5	0.8	4.3	8.68	.	.	.	.
CB8	1	75.0	3.65	.	24.1	0.7	5.8	6.60	.	.	.	.
CB8	7	42.3	2.72	.	14.8	1.1	4.0	7.52	.	.	.	.
CB10	1	86.7	2.53	.	29.4	0.9	2.4	3.82	.	.	.	.
CB12	1	65.7	4.42	.	28.2	1.1	4.8	13.20	43.1	21.0	.	.
CB12	23	89.0	8.78	.	40.8	1.5	10.9	13.90	.	.	.	.
CB14	1	101.0	6.55	.	39.2	1.1	7.6	11.40	48.1	32.0	.	.
CB14	8	109.0	5.71	.	25.8	1.0	10.3	9.49	.	.	.	.
CB16	1	105.0	4.62	.	34.2	1.1	5.1	8.80	38.1	23.6	.	.
CB16	6	66.5	6.16	.	40.6	1.4	5.4	8.80	.	.	.	.
CB18	1	118.0	5.54	.	19.4	0.8	8.1	7.99	43.9	29.7	.	.
CB18	6	48.0	4.23	.	47.4	1.3	6.2	8.56	.	.	.	.
CB20	1	144.0	9.57	.	42.0	1.0	13.3	11.90	51.7	29.4	.	.
CB20	7	208.0	10.30	.	29.9	1.1	30.6	18.50	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
T3-12	1	Boat	03/30/83	.	39 9.5 N	74 53.5 W	37.9	.
T4-1	1	CTD	03/30/83	2147	38 52.2 N	75 12.0 W	12.9	6.7
T4-3	1	CTD	03/30/83	2217	38 53.7 N	75 8.7 W	9.8	17.5
T4-3	13	CTD	03/30/83	2217	38 53.7 N	75 8.7 W	9.8	17.5
T4-5	1	CTD	03/30/83	2243	38 54.4 N	75 5.6 W	7.9	19.1
T4-5	15	CTD	03/30/83	2243	38 54.4 N	75 5.6 W	7.9	19.1
T4-7	1	CTD	03/30/83	2307	38 55.1 N	75 2.2 W	8.6	13.1
T4-7	10	CTD	03/30/83	2307	38 55.1 N	75 2.2 W	8.6	13.1
T4-9	1	CTD	03/30/83	2334	38 55.6 N	74 58.9 W	11.3	8.0
T4-9	6	CTD	03/30/83	2334	38 55.6 N	74 58.9 W	11.3	8.0
CB2	1	CTD	03/31/83	0841	38 47.8 N	75 2.0 W	-5.4	31.1
CB2	28	CTD	03/31/83	0841	38 47.8 N	75 2.0 W	-5.4	31.1
CB4	1	CTD	03/31/83	0858	38 49.4 N	74 59.7 W	-5.6	13.1
CB4	9	CTD	03/31/83	0858	38 49.4 N	74 59.7 W	-5.6	13.1
CB6	1	CTD	03/31/83	0917	38 50.7 N	74 56.9 W	-9.2	12.0
CB6	8	CTD	03/31/83	0917	38 50.7 N	74 56.9 W	-9.2	12.0
CB8	1	CTD	03/31/83	0934	38 52.4 N	74 54.3 W	-13.4	9.4
CB8	7	CTD	03/31/83	0934	38 52.4 N	74 54.3 W	-13.4	9.4
CB10	1	CTD	03/31/83	0957	38 55.2 N	74 54.2 W	-15.7	8.0
CB12	1	CTD	03/31/83	1451	38 47.4 N	75 1.8 W	-6.2	28.6
CB12	23	CTD	03/31/83	1451	38 47.4 N	75 1.8 W	-6.2	28.6
CB14	1	CTD	03/31/83	1511	38 49.3 N	74 59.6 W	-5.8	11.3
CB14	8	CTD	03/31/83	1511	38 49.3 N	74 59.6 W	-5.8	11.3
CB16	1	CTD	03/31/83	1528	38 50.7 N	74 56.7 W	-9.5	10.3
CB16	6	CTD	03/31/83	1528	38 50.7 N	74 56.7 W	-9.5	10.3
CB18	1	CTD	03/31/83	1546	38 52.4 N	74 54.1 W	-13.7	.
CB18	6	CTD	03/31/83	1546	38 52.4 N	74 54.1 W	-13.7	.
CB20	1	CTD	03/31/83	1607	38 55.1 N	74 54.3 W	-15.5	.
CB20	7	CTD	03/31/83	1607	38 55.1 N	74 54.3 W	-15.5	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
SO	1	-0.015	368	16.19	258.0	84	7.043	527	1.21	78.30	1.74	13.20	62.10	229	46	0.21
S1	1	-0.009	365	16.41	265.0	87	7.112	513	1.15	77.80	1.88	10.40	60.30	213	41	0.21
S2.5	1	-0.015	414	16.00	291.5	95	7.255	465	1.26	94.50	1.98	15.20	47.90	220	.	0.34
S5	1	0.016	899	15.60	289.5	93	7.265	451	1.30	75.40	1.85	11.80	52.60	240	63	0.23
S7.5	1	0.351	5759	15.61	286.0	92	7.291	477	1.41	81.90	2.16	7.85	69.80	233	84	0.22
S7.5	7	0.349	5842	15.58	285.5	92	7.278	483	1.38	81.90	2.12	8.38	67.90	234	73	0.20
S10	1	2.695	.	15.33	283.5	92	7.402	621	1.48	65.60	1.97	9.02	69.20	239	70	0.26
S10	9	4.887	.	14.68	275.5	90	7.453	760	1.53	67.30	2.02	8.02	68.90	223	55	0.24
S12.5	1	5.296C	.	14.97C	.	.	.	.	.	.	.	.	.	.	.	.
S12.5	13	11.654	.	13.93	264.5	88	7.740	1145	1.24	32.20	0.92	6.14	55.00	202	55	0.28
S15	1	7.800	.	14.86	291.0	97	7.705	936	1.48	55.40	1.62	6.23	52.10	249	52	0.40
S15	11	18.330	.	12.70	255.5	87	7.936	1503	0.47	33.20	1.00	3.44	33.80	179	50	0.51
S17.5	1	11.515	.	14.24	294.5	99	7.924	1137	0.95	51.70	1.62	4.79	32.80	226	48	0.52
S17.5	10	20.959	.	11.83	259.5	88	7.998	1640	0.23	24.90	0.76	2.17	7.31	165	75	0.39
S20	1	15.061	.	13.51	323.5	109	8.142	1323	0.35	39.00	1.17	2.08	21.60	227	41	0.47
S20	10	24.420	.	11.36	269.5	92	8.031	1821	0.10	14.80	0.53	0.87	2.73	144	35	0.49
S22.5	1	18.069	.	12.70	334.0	113	8.242	1490	0.06	27.90	1.00	0.02	7.97	204	37	0.51
S22.5	9	23.923	.	11.65	282.0	100	8.121	1792	0.05	14.40	0.55	0.15	0.80	167	34	0.43
S25	1	21.080	.	12.48	326.0	112	8.268	1657	0.05	18.10	0.60	0.03	0.27	.	26	0.48
S25	11	28.507	.	10.32	279.0	96	8.032	2033	0.16	6.05	0.23	0.31	0.55	.	12	0.43
BR	1	25.156C	.	11.77C	.	.	.	.	.	.	.	.	.	.	.	.
BR	15	30.968	.	9.27C	278.5	95	7.988	2160	0.33	1.34	0.08	0.24	1.00	.	8	0.33
CH	1	30.027	.	10.05	298.0	103	8.038	2108	0.14	1.82	0.14	0.14	1.41	.	7	0.62
CH	23	32.104	.	8.72	276.5	94	7.968	2212	0.38	0.08	0.03	0.55	1.29	.	6	0.36
T3-1	1	20.372	.	13.108	331.5	115	8.325	1624	0.09	16.90	0.52	0.19	0.95	183	21	0.54
T3-2	1	21.163	.	12.93C	364.0	126	8.365	1650	0.40	15.80	0.71	0.07	0.99	145	13	0.18
T3-2	6	23.316	.	11.72	304.5	104	8.151	1762	0.05	16.40	0.57	0.20	1.16	128	13	0.61
T3-3	1	21.206	.	12.69	350.5	121	8.307	1647	0.05	21.60	0.63	0.13	1.18	170	22	0.54
T3-3	14	28.796	.	10.10	263.0	90	7.988	2042	0.15	9.34	0.23	0.76	1.30	.	9	0.51
T3-4	1	21.003	.	12.69	330.0	114	8.222	1633	0.06	24.90	0.76	0.02	3.42	139	18	0.52
T3-4	14	26.727	.	10.78	269.5	92	8.024	1942	0.16	15.70	0.38	0.74	1.47	111	18	0.43
T3-5	1	20.713	.	12.80	330.0	114	8.271	1635	0.05	17.80	0.64	0.03	1.19	168	21	0.55
T3-5	12	24.078	.	11.75	297.0	102	8.133	1786	0.07	13.90	0.52	0.08	1.06	154	21	0.44
T3-6	1	19.345	.	13.00	348.0	120	8.297	1550	0.07	24.90	0.90	0.11	2.74	174	20	0.65
T3-6	6	21.885	.	12.34	314.5	108	8.203	1685	0.05	12.80	0.67	0.05<	1.33	149	14	0.49
T3-7	1	19.283	.	12.94	341.0	117	8.302	1556	0.10	23.40	0.88	0.69	2.33	175	33	0.50
T3-8	1	17.206	.	13.26	329.0	112	8.294	1446	0.03	29.40	0.75	0.14	1.10	226	14	0.46
T3-9	1	14.745	.	14.00B	343.0	117	8.372	1335	0.04	34.40	1.01	0.08	1.37	217	22	0.52
T3-10	1	12.798	.	14.30B	331.5	112	8.230	1259	0.26	40.00	0.74	0.09	3.86	232	23	0.56
T3-11	1	12.269	.	14.50B	288.5	98	7.922	1255	0.32	40.10	0.40	0.16	9.81	281	33	0.82
T3-12	1	11.106	.	14.40B	238.5	80	7.464	1268	0.45	38.40	0.64	5.25	26.40	341	42	0.85
T4-1	1	22.133	.	14.27	307.0	110	8.298	1717	0.08	7.32	0.49	0.09	0.98	184	13	0.57
T4-3	2	22.072	.	13.36	356.5	126	8.316	1701	0.03	18.00	0.70	0.05<	0.96	168	9	0.55
T4-3	14	29.570	.	9.97	276.0	95	8.009	2095	0.20	4.66	0.17	0.43	1.06	112	8	0.38
T4-5	1	24.342	.	12.30	320.0	112	8.186	1825	0.07	11.90	0.50	0.07	1.00	149	9	0.49
T4-5	15	29.452	.	10.17	281.5	97	8.020	2088	0.20	4.35	0.15	0.27	0.85	183	8	0.43
T4-7	1	20.737	.	14.06	345.0	122	8.313	1641	0.06	18.20	0.60	0.07	1.06	170	11	0.57

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	102.0	12.40	2.26	24.2	2.3	15.8	18.80	121.0	58.3	1.25	.
S1	1	145.0	21.30	3.22	14.6	1.7	37.4	24.70	75.8	67.7	1.96	.
S2.5	1	111.0	13.20	2.01	26.5	1.8	22.6	19.50	70.6	49.0	1.88	.
S5	1	163.0	14.60	3.90	.	.	64.6	14.40	20.0	32.5	3.96	.
S7.5	1	177.0	16.90	4.61	19.7	2.0	87.0	7.88	10.9	22.7	4.90	.
S7.5	7	205.0	16.80	4.57	17.1	1.5	79.9	8.12	.	.	.	.
S10	1	124.0	7.99	1.87	19.3	1.2	28.0	5.15	20.9	26.2	2.94	.
S10	9	224.0	20.10	4.61	19.5	1.0	85.9	12.00	.	.	.	.
S12.5	1	.	.	.	.	.	.	.	.	.	1.83	.
S12.5	13	581.0	54.80	7.75	24.4	0.6	223.0	16.50	53.7	43.1	.	.
S15	1	142.0	5.92	1.54	19.5	1.0	22.2	6.48	35.3	37.0	2.45	.
S15	11	195.0	14.30	1.80	23.4	1.3	22.8	8.80	.	.	.	.
S17.5	1	91.4	10.30	1.44	32.9	1.2	18.6	7.41	90.0	84.8	2.09	.
S17.5	10	133.0	12.30	1.39	23.8	1.3	15.6	9.49	.	.	.	.
S20	1	80.2	10.00	1.32	29.8	1.3	10.7	11.70	207.0	135.0	1.47	.
S20	10	89.1	9.01	1.00	28.0	1.4	9.6	8.03	.	.	.	.
S22.5	1	72.5	9.74	0.91	25.5	1.6	8.1	11.60	290.0	114.0	0.92	.
S22.5	9	65.4	6.88	0.87	22.7	1.7	7.3	8.95	.	.	.	.
S25	1	77.9	12.20	0.64	28.6	1.4	6.5	6.94	144.0	63.3	1.17	.
S25	11	67.8	6.16	0.72	46.5	1.0	6.9	4.05	.	.	.	.
BR	1	.	.	.	.	.	.	.	.	.	0.76	.
BR	15	75.0	5.69	0.64	38.6	1.2	6.9	4.28	56.1	26.8	.	.
CH	1	45.9	4.30	0.63	33.2	1.2	2.7	4.86	98.0	26.0	0.61	.
CH	23	75.4	8.30	0.39	34.3	0.8	5.8	4.17	.	.	.	.
T3-1	1	.	.	3.03	24.9	1.3	59.3	46.30	82.3	147.0	4.43	.
T3-2	1	169.0	7.74	0.63	30.8	1.3	5.2	6.48	111.0	69.6	1.44	.
T3-2	6	39.0	6.21	1.02	26.5	1.1	11.6	12.50	.	.	.	.
T3-3	1	149.0	8.59	0.71	18.2	1.4	6.6	11.80	184.0	72.5	0.98	.
T3-3	14	141.0	5.90	0.62	36.0	0.9	7.4	4.63	.	.	.	.
T3-4	1	82.2	10.80	1.06	19.3	1.2	6.5	8.49	172.0	66.2	0.93	.
T3-4	14	276.0	23.30	3.13	30.9	1.7	55.4	19.90	.	.	.	.
T3-5	1	132.0	7.67	0.54	27.1	1.5	6.2	5.55	155.0	59.5	0.96	.
T3-5	12	108.0	12.80	0.81	22.5	1.3	10.0	7.87	.	.	.	.
T3-6	1	113.0	12.50	1.16	29.2	1.6	10.6	14.60	187.0	99.5	1.35	.
T3-6	6	103.0	14.20	1.09	30.8	1.5	13.1	9.73	.	.	.	.
T3-7	1	119.0	19.90	1.35	32.3	1.9	14.0	19.50	198.0	118.0	1.51	.
T3-8	1	147.0	20.80	1.56	23.8	1.4	22.8	34.70	152.0	116.0	.	.
T3-9	1	155.0	19.30	1.74	24.6	1.6	20.5	36.60	173.0	126.0	1.78	100
T3-10	1	180.0	31.70	2.27	27.9	1.6	32.2	48.80	121.0	115.0	2.42	60
T3-11	1	.	.	3.75	22.4	1.7	58.8	41.00	42.3	107.0	5.23	50
T3-12	1	866.0	59.30	7.14	31.6	1.9	151.0	37.00	26.4	70.4	6.44	25
T4-1	1	138.0	19.70	1.26	38.8	3.0	18.2	18.60	85.6	71.8	2.09	.
T4-3	2	63.5	8.46	0.49	29.0	0.9	4.4	5.40	99.1	33.1	0.76	.
T4-3	14	93.8	8.20	0.95	10.2	0.7	16.6	5.86	.	.	.	.
T4-5	1	103.0	9.49	0.44	14.6	1.1	4.3	4.75	138.0	40.7	0.67	.
T4-5	15	102.0	12.30	0.82	27.3	0.9	11.5	5.90	.	.	.	.
T4-7	1	87.6	10.50	0.81	15.9	1.4	8.9	8.80	176.0	91.3	1.08	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
S0	1	CTD	05/10/83	1823	39 48.0 N	75 24.8 W	126.9	14.8
S1	1	CTD	05/10/83	1738	39 44.0 N	75 29.6 W	116.1	14.9
S2.5	1	CTD	05/10/83	1652	39 38.5 N	75 33.3 W	104.6	13.5
S5	1	CTD	05/10/83	1615	39 34.6 N	75 32.7 W	95.7	11.3
S7.5	1	CTD	05/10/83	1529	39 29.4 N	75 33.0 W	86.4	10.9
S7.5	7	CTD	05/10/83	1529	39 29.4 N	75 33.0 W	86.4	10.9
S10	1	CTD	05/10/83	1437	39 24.7 N	75 30.0 W	74.8	12.2
S10	9	CTD	05/10/83	1437	39 24.7 N	75 30.0 W	74.8	12.2
S12.5	1	CTD	05/10/83	1346	39 20.6 N	75 25.5 W	64.2	15.9
S12.5	13	CTD	05/10/83	1346	39 20.6 N	75 25.5 W	64.2	15.9
S15	1	CTD	05/10/83	1255	39 16.9 N	75 20.9 W	55.0	14.5
S15	11	CTD	05/10/83	1255	39 16.9 N	75 20.9 W	55.0	14.5
S17.5	1	CTD	05/10/83	1208	39 12.9 N	75 16.8 W	45.8	13.2
S17.5	10	CTD	05/10/83	1208	39 12.9 N	75 16.8 W	45.8	13.2
S20	1	CTD	05/10/83	1119	39 8.0 N	75 13.1 W	35.3	13.7
S20	10	CTD	05/10/83	1119	39 8.0 N	75 13.1 W	35.3	13.7
S22.5	1	CTD	05/10/83	1030	39 3.8 N	75 9.6 W	26.2	14.2
S22.5	9	CTD	05/10/83	1030	39 3.8 N	75 9.6 W	26.2	14.2
S25	1	CTD	05/10/83	0937	38 58.8 N	75 7.0 W	16.2	16.4
S25	11	CTD	05/10/83	0937	38 58.8 N	75 7.0 W	16.2	16.4
BR	1	CTD	05/10/83	0850	38 53.7 N	75 4.6 W	6.2	22.3
BR	15	CTD	05/10/83	0850	38 53.7 N	75 4.6 W	6.2	22.3
CH	1	CTD	05/10/83	0754	38 49.0 N	75 2.3 W	-3.2	30.3
CH	23	CTD	05/10/83	0754	38 49.0 N	75 2.3 W	-3.2	30.3
T3-1	1	Boat	05/11/83	1155	38 58.9 N	75 18.0 W	26.2	.
T3-2	1	CTD	05/11/83	1132	39 0.0 N	75 15.8 W	25.1	8.7
T3-2	6	CTD	05/11/83	1132	39 0.0 N	75 15.8 W	25.1	8.7
T3-3	1	CTD	05/11/83	1110	39 1.4 N	75 14.0 W	25.4	17.2
T3-3	14	CTD	05/11/83	1110	39 1.4 N	75 14.0 W	25.4	17.2
T3-4	1	CTD	05/11/83	1043	39 2.9 N	75 12.3 W	26.3	15.0
T3-4	14	CTD	05/11/83	1043	39 2.9 N	75 12.3 W	26.3	15.0
T3-5	1	CTD	05/11/83	1018	39 4.2 N	75 10.0 W	27.1	15.1
T3-5	12	CTD	05/11/83	1018	39 4.2 N	75 10.0 W	27.1	15.1
T3-6	1	CTD	05/11/83	0952	39 5.4 N	75 7.7 W	28.3	6.0
T3-6	6	CTD	05/11/83	0952	39 5.4 N	75 7.7 W	28.3	6.0
T3-7	1	CTD	05/11/83	0924	39 6.7 N	75 6.1 W	30.2	4.0
T3-8	1	CTD	05/11/83	0823	39 8.0 N	75 3.4 W	32.4	4.0
T3-9	1	Boat	05/11/83	0837	39 8.2 N	75 1.2 W	32.9	5.0
T3-10	1	Boat	05/11/83	0809	39 8.7 N	74 58.6 W	34.3	4.3
T3-11	1	Boat	05/11/83	0745	39 9.0 N	74 56.1 W	35.7	.
T3-12	1	Boat	05/11/83	0711	39 8.9 N	74 53.5 W	36.8	2.5
T4-1	1	CTD	05/11/83	1310	38 52.5 N	75 12.2 W	13.3	7.0
T4-3	2	CTD	05/11/83	1345	38 53.0 N	75 8.2 W	8.4	16.6
T4-3	14	CTD	05/11/83	1345	38 53.0 N	75 8.2 W	8.4	16.6
T4-5	1	CTD	05/11/83	1412	38 54.0 N	75 5.7 W	7.3	17.8
T4-5	15	CTD	05/11/83	1412	38 54.0 N	75 5.7 W	7.3	17.8
T4-7	1	CTD	05/11/83	1446	38 54.8 N	75 2.3 W	8.0	12.2

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
T4-7	10	28.351	.	10.66	286.5	99	8.049	2033	0.16	10.40	0.20	0.21	0.90	131	13	0.37
T4-9	1	18.350	.	14.11	308.0	108	8.184	1597	0.14	20.60	0.27	0.15	0.76	220	13	0.54
T4-9	9	23.424	.	12.39	284.0	99	8.097	1798	0.19	12.20	0.29	0.49	0.69	182	10	0.46
T4-11	1	22.434	.	14.14	352.5	127	8.356	1737	0.05	10.40	0.57	0.09	0.59	176	16	0.48
T4-13	1	23.004	.	13.84	344.0	123	8.269	1762	0.05	14.50	0.48	0.09	0.49	170	16	0.47
T4-13	13	29.526	.	10.08	280.5	97	8.010	2098	0.22	4.42	0.14	0.35	0.66	137	11	0.38
T4-15	1	27.062	.	11.42	314.5	110	8.130	1966	0.05	7.23	0.29	0.02	0.59	151	10	0.47
T4-15	15	30.165	.	10.00	285.5	98	8.013	2129	0.15	2.43	0.05	0.22	1.37	138	13	0.45
T4-17	1	26.932	.	11.78	299.0	105	8.083	1962	0.08	7.23	0.14	0.19	0.39	150	10	0.47
T4-17	9	27.760	.	11.54	301.5	106	8.072	2006	0.08	5.16	0.14	0.16	0.55	148	13	0.46
T4-19	1	31.618	.	10.19	305.5	107	8.037	2203	0.18	0.24	0.01	0.25	0.41	136	14	0.44
CB2	1	23.138	.	13.95	343.5	123	8.295	1755	0.05	15.00	0.55	0.30	0.74	167	8	0.49
CB2	23	31.035	.	9.62	286.5	99	8.004	2164	0.24	1.93	0.05	0.25	0.81	121	8	0.44
CB10	2	31.582	.	10.31C	306.5	107	8.038	2202	0.20	0.22	0.02	0.10	0.86	132	8	0.40
CB10	7	31.602	.	10.25C	306.5	107	8.039	2205	0.22	1.22	0.01	0.14	0.97	119	9	0.45

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
T4-7	10	119.0	8.22	0.88	24.3	1.0	11.6	5.87	.	.	.	.
T4-9	1	268.0	28.30	4.49	27.5	2.0	47.1	39.80	128.0	164.0	2.78	.
T4-9	9	524.0	47.10	3.10	13.4	0.7	88.3	36.60	.	.	.	.
T4-11	1	88.6	11.90	0.89	31.3	1.9	12.3	19.00	.	.	.	.
T4-13	1	43.8	4.89	0.30	22.9	1.1	4.0	5.25	.	.	.	.
T4-13	13	95.3	8.89	1.10	25.0	0.8	25.1	9.20	.	.	.	.
T4-15	1	36.9	3.71	0.41	24.1	1.2	3.5	5.21	.	.	.	.
T4-15	15	94.0	9.03	1.16	24.8	1.0	21.3	7.41	.	.	.	.
T4-17	1	71.7	9.62	0.77	30.4	1.4	7.9	6.37	.	.	.	.
T4-17	9	93.6	12.00	1.15	14.1	1.3	20.5	7.99	.	.	.	.
T4-19	1	107.0	9.03	0.54	19.9	1.0	8.3	4.28	.	.	.	.
CB2	1	81.7	7.12	0.65	33.5	1.9	3.3	4.17	.	.	.	.
CB2	23	76.9	8.78	0.94	22.2	1.1	13.6	6.48	.	.	.	.
CB10	2	.	.	0.65	13.8	0.9	11.0	5.25	.	.	.	.
CB10	7	100.0	11.00	1.04	23.9	1.1	23.6	5.87	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
T4-7	10	CTD	05/11/83	1446	38 54.8 N	75 2.3 W	8.0	12.2
T4-9	1	CTD	05/11/83	1525	38 56.1 N	74 58.4 W	12.5	11.7
T4-9	9	CTD	05/11/83	1525	38 56.1 N	74 58.4 W	12.5	11.7
T4-11	1	CTD	05/11/83	1833	38 52.5 N	75 12.8 W	14.2	.
T4-13	1	CTD	05/11/83	1908	38 53.8 N	75 8.9 W	10.1	16.5
T4-13	13	CTD	05/11/83	1908	38 53.8 N	75 8.9 W	10.1	16.5
T4-15	1	CTD	05/11/83	1931	38 54.6 N	75 5.9 W	8.4	19.2
T4-15	15	CTD	05/11/83	1931	38 54.6 N	75 5.9 W	8.4	19.2
T4-17	1	CTD	05/11/83	2000	38 55.2 N	75 2.5 W	8.7	13.3
T4-17	9	CTD	05/11/83	2000	38 55.2 N	75 2.5 W	8.7	13.3
T4-19	1	CTD	05/11/83	2026	38 56.2 N	74 58.5 W	12.6	13.4
CB2	1	CTD	05/11/83	1729	38 47.8 N	75 2.1 W	-5.4	28.8
CB2	23	CTD	05/11/83	1729	38 47.8 N	75 2.1 W	-5.4	28.8
CB10	2	CTD	05/11/83	1620	38 55.2 N	74 54.4 W	-15.5	9.0
CB10	7	CTD	05/11/83	1620	38 55.2 N	74 54.4 W	-15.5	9.0

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S0	1	0.345	5454	27.97	171.0	70	7.143	720	2.05	152.00	1.60	1.48	3.16	294	12	0.11
S0	10	0.439	6877	27.98	167.0	69	7.122	713	2.06	157.00	1.89	1.87	4.16	300	31	0.09
S1	1	1.139	17424	28.11	170.0	70	7.125	717	2.17	149.00	2.71	6.45	4.34	296	13	0.01
S1	13	1.158	17798	27.99	165.5	68	7.104	709	2.03	154.00	2.61	5.26	4.75	293	14	0.06
S2.5	1	2.117	.	27.96	184.0	76	7.193	741	1.76	141.00	2.49	7.23	7.19	280	25	0.11
S2.5	13	2.828	.	27.96	184.0	76	7.191	779	1.75	132.00	2.18	5.39	9.54	275	9	0.05
S5	1	5.791	.	27.82	183.5	77	7.266	907	1.84	109.00	2.21	0.80	16.60	262	32	0.00
S5	13	5.862	.	27.82	183.0	77	7.266	918	1.81	103.00	2.32	1.42	16.20	270	27	0.08
S7.5	1	6.703	.	27.92	202.0	86	7.412	951	1.75	97.70	2.44	0.47	17.80	248	16	0.21
S7.5	12	10.388	.	27.40	170.5	73	7.367	1140	1.82	66.80	2.49	1.51	17.60	235	10	0.14
S10	1	9.902	.	27.72	201.5	87	7.503	1103	1.77	67.40	2.66	0.32	19.50	232	23	0.20
S10	12	13.545	.	26.98	175.0	76	7.489	1284	1.91	52.90	2.60	2.55	18.60	213	32	0.12
S12.5	1	13.711	.	27.23	205.0	89	7.669	1288	1.68	22.30	2.35	0.63	17.40	213	62	0.43
S12.5	12	20.270	.	25.97	174.5	77	.	1597	1.44	15.00	1.55	3.90	10.00	184	30	0.30
S15	1	13.963	.	27.18	202.5	88	7.646	1296	1.67	45.10	2.38	1.61	16.90	214	26	0.26
S15	11	19.806	.	26.03	174.5	77	7.738	1577	1.52	24.90	1.56	4.18	9.67	179	28	0.21
S17.5	1	17.186	.	26.70	194.5	86	7.711	1442	1.54	36.00	1.94	2.04	12.70	198	38	0.28
S17.5	9	22.114	.	25.53	177.0	79	7.813	1686	1.35	16.30	1.17	4.72	7.91	179	31	0.29
S20	2	20.523	.	26.36	211.5	94	7.902	1605	1.08	22.30	1.17	1.42	6.25	202	25	0.48
S20	8	25.170	.	24.80	188.0	84	7.911	1832	0.92	5.08	0.50	4.98	5.28	175	17	0.38
S22.5	1	23.889	.	25.68	228.5	103	8.017	1767	0.60	7.47	0.51	0.56	5.03	191	16	0.54
S22.5	9	26.228	.	24.86	209.0	94	7.978	1877	0.56	1.98	0.23	2.69	4.24	173	22	0.57
S25	1	25.703	.	25.13	252.5	114	8.108	1853	0.23	0.73	0.15	0.22	3.38	167	52	0.51
S25	9	26.838	.	24.49	202.5	91	7.966	1912	0.58	1.04	0.19	3.14	4.81	168	29	0.49
BR	1	27.121	.	23.99	198.0	88	7.937	1915	0.57	1.36	0.25	3.89	4.49	165	13	0.48
BR	11	29.944	.	20.88	187.5	80	7.912	2086	0.62	0.20	0.12	3.20	3.11	136	9	0.39
CH	1	30.362	.	22.46	226.5	100	8.092	2119	0.15	0.02	0.02	0.18	0.98	136	8	0.34
CH	21	30.779	.	18.02	213.5	87	7.969	2138	0.33	0.01	0.04	0.53	3.38	153	10	0.40
T3-1	1	24.849	.	26.908	231.0	107	7.979	1806	0.48	0.77	0.31	2.59	17.50	255	25	0.72
T3-2	1	25.869	.	25.98	212.0	97	7.913	1839	0.82	1.86	0.48	5.20	14.60	229	19	0.63
T3-2	6	27.279	.	23.60	185.0	82	7.874	1929	0.91	0.91	0.35	3.71	7.22	181	18	0.31
T3-3	1	26.479	.	25.12	287.0	130	8.155	1882	0.31	0.38	0.08	1.96	5.61	189	11	0.48
T3-3	13	28.664	.	22.23	158.0	69	7.828	2010	0.86	0.93	0.18	6.15	6.22	170	18	0.33
T3-4	1	26.166	.	25.10	240.5	109	8.043	1874	0.50	2.18	0.25	1.94	4.18	197	15	0.43
T3-4	12	26.869	.	24.56	218.0	98	7.995	1906	0.55	2.07	0.16	2.66	3.26	184	13	0.45
T3-5	1	26.820	.	24.58	206.5	93	7.969	1901	0.70	1.32	0.21	3.53	5.18	185	15	0.41
T3-6	1	25.769	.	25.73	240.0	109	8.053	1854	0.62	2.25	0.27	2.47	5.35	198	16	0.42
T3-7	1	24.693	.	26.65	254.0	117	8.086	1795	0.73	4.24	0.39	1.47	6.79	223	29	0.46
T3-8	2	23.599	.	28.16	276.0	129	8.154	1752	0.93	5.93	0.55	3.65	8.40	240	22	0.44
T3-9	1	21.909	.	28.208	366.5	170	8.348	1667	0.57	9.95	0.83	.	8.18	295	26	0.81
T3-10	1	20.227	.	28.608	206.5	96	7.707	1520	1.11	11.40	1.18	9.68	11.80	289	18	0.63
T3-11	1	18.873	.	28.708	188.5	87	7.358	1321	1.26	12.40	1.96	21.20	22.30	351	23	0.55
T3-12	1	16.040	.	29.408	187.0	86	7.275	1582	0.85	8.04	3.17	25.10	24.50	692	49	1.03
YT1	2	29.681	.	22.66	189.5	84	7.890	2063	0.86	0.24	0.11	2.83	7.08	162	11	0.55
YT1	5	29.880	.	21.09	157.0	67	7.807	2084	0.77	0.22	0.11	4.33	5.84	133	6	0.44
YT2	1	30.326	.	25.82	232.0	109	8.143	2120	0.09	0.13	0.01	0.13	0.66	133	6	0.26
YT2	17	31.619	.	11.57	245.5	88	7.928	2203	0.34	0.02	0.01	0.60	0.20	138	7	0.43

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	57.7	8.16	0.98	17.5	2.2	9.0	9.03	113.0	95.5	.	.
S0	10	76.8	8.03	1.00	17.4	2.1	12.4	8.80	.	.	.	.
S1	1	136.0	11.80	1.52	16.0	1.9	30.3	8.65	51.9	85.0	.	.
S1	13	133.0	15.60	2.57	19.3	2.0	51.3	8.03	.	.	.	.
S2.5	1	221.0	12.30	1.64	15.9	1.6	32.3	3.71	63.9	101.0	.	.
S2.5	13	232.0	18.40	4.47	25.9	1.2	122.0	9.72	.	.	.	.
S5	1	230.0	14.30	2.10	12.6	1.3	71.3	5.34	35.4	81.1	3.74	.
S5	13	241.0	11.80	2.88	14.3	1.1	64.0	6.02	.	.	.	.
S7.5	1	97.0	6.18	0.86	23.0	1.3	17.4	7.18	84.8	102.0	.	.
S7.5	12	239.0	26.30	3.79	15.3	1.0	106.0	4.33	.	.	.	.
S10	1	48.9	6.58	0.70	25.3	1.5	11.3	4.94	79.5	141.0	2.11	.
S10	12	289.0	12.20	2.30	22.8	1.1	63.8	4.32	.	.	.	.
S12.5	1	42.1	6.52	0.70	25.4	1.6	12.1	4.78	140.0	108.0	0.95	.
S12.5	12	156.0	5.19	0.61	19.4	1.2	12.4	2.32	.	.	.	.
S15	1	40.0	6.13	0.66	15.5	1.3	11.5	4.78	115.0	87.0	1.17	.
S15	11	98.7	5.47	0.57	12.9	1.1	11.6	2.47	.	.	.	.
S17.5	1	59.2	4.83	0.50	23.4	1.7	4.4	3.24	72.7	58.2	.	.
S17.5	9	125.0	5.83	0.53	30.2	1.6	9.6	2.47	.	.	.	.
S20	2	65.8	5.79	0.58	19.3	1.8	6.5	5.09	125.0	107.0	.	.
S20	8	81.2	4.51	0.52	26.3	1.3	10.7	2.78	.	.	.	.
S22.5	1	108.0	7.87	0.75	25.9	1.9	5.1	8.33	200.0	139.0	1.01	.
S22.5	9	80.4	7.02	0.71	24.1	1.5	8.5	4.60	.	.	.	.
S25	1	130.0	11.80	0.89	25.3	2.7	4.7	17.50	174.0	100.0	1.01	.
S25	9	43.3	5.71	0.63	27.0	1.3	7.1	4.78	.	.	.	.
BR	1	60.9	4.34	0.42	33.3	1.8	3.7	3.70	129.0	62.8	0.64	.
BR	11	66.7	3.56	0.33	25.4	1.2	4.9	1.94	.	.	.	.
CH	1	46.6	1.81	0.14	23.7	0.9	1.2	0.92	17.1	4.4	0.34	.
CH	21	30.6	3.08	0.21	24.4	1.0	1.4	3.24	.	.	.	.
T3-1	1	113.0	11.20	1.18	50.3	3.8	11.8	9.11	62.2	129.0	.	.
T3-2	1	92.4	9.06	0.79	35.8	1.5	9.1	6.63	150.0	130.0	.	.
T3-2	6	79.6	4.57	0.57	20.5	1.4	6.8	2.93	.	.	.	.
T3-3	1	96.4	7.35	0.65	31.4	1.9	4.3	6.48	98.2	51.8	.	.
T3-3	13	82.5	3.14	0.37	26.7	1.0	5.6	1.47	.	.	.	.
T3-4	1	104.0	7.31	0.60	24.3	1.3	5.5	6.64	190.0	110.0	.	.
T3-4	12	144.0	5.12	0.61	25.9	1.5	6.2	5.40	.	.	.	.
T3-5	1	36.4	4.48	0.54	35.3	1.7	6.3	4.48	128.0	81.7	.	.
T3-6	1	150.0	8.43	0.83	32.6	1.6	8.9	9.03	111.0	78.6	.	.
T3-7	1	132.0	9.22	0.87	32.2	1.9	8.0	12.70	181.0	127.0	.	.
T3-8	2	121.0	13.20	1.05	29.0	1.7	11.0	13.30	225.0	181.0	.	.
T3-9	1	133.0	21.10	1.28	.	.	9.8	28.20	253.0	203.0	1.78	.
T3-10	1	142.0	8.05	0.71	34.9	1.7	7.9	6.48	24.3	22.0	1.63	.
T3-11	1	88.5	8.43	0.80	29.8	2.7	9.0	6.23	21.3	20.2	1.94	.
T3-12	1	360.0	46.40	4.33	32.8	2.2	81.4	33.70	50.2	192.0	5.56	.
YT1	2	.	.	1.49	23.8	0.9	11.2	7.08	149.0	72.3	0.98	.
YT1	5	68.2	2.41	0.39	19.6	1.0	5.2	2.43	.	.	.	.
YT2	1	31.3	0.79	0.28	27.7	0.8	0.3	0.40	12.6	3.3	0.52	.
YT2	17	55.9	7.48	0.07	23.4	1.6	1.8	7.96	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
SO	1	CTD	07/19/83	2236	39 48.0 N	75 24.5 W	127.3	14.2
SO	10	CTD	07/19/83	2236	39 48.0 N	75 24.5 W	127.3	14.2
S1	1	CTD	07/19/83	2122	39 45.8 N	75 28.4 W	120.1	16.9
S1	13	CTD	07/19/83	2122	39 45.8 N	75 28.4 W	120.1	16.9
S2.5	1	CTD	07/19/83	2018	39 39.8 N	75 31.8 W	107.8	17.0
S2.5	13	CTD	07/19/83	2018	39 39.8 N	75 31.8 W	107.8	17.0
S5	1	CTD	07/19/83	1912	39 32.7 N	75 32.6 W	92.1	16.9
S5	13	CTD	07/19/83	1912	39 32.7 N	75 32.6 W	92.1	16.9
S7.5	1	CTD	07/19/83	1734	39 26.0 N	75 31.9 W	78.4	15.1
S7.5	12	CTD	07/19/83	1734	39 26.0 N	75 31.9 W	78.4	15.1
S10	1	CTD	07/19/83	1702	39 22.8 N	75 28.0 W	70.2	15.6
S10	12	CTD	07/19/83	1702	39 22.8 N	75 28.0 W	70.2	15.6
S12.5	1	CTD	07/19/83	1418	39 15.7 N	75 20.1 W	52.5	14.2
S12.5	12	CTD	07/19/83	1418	39 15.7 N	75 20.1 W	52.5	14.2
S15	1	CTD	07/19/83	1319	39 16.1 N	75 20.0 W	53.1	14.9
S15	11	CTD	07/19/83	1319	39 16.1 N	75 20.0 W	53.1	14.9
S17.5	1	CTD	07/19/83	1141	39 13.5 N	75 17.3 W	47.1	16.0
S17.5	9	CTD	07/19/83	1141	39 13.5 N	75 17.3 W	47.1	16.0
S20	2	CTD	07/19/83	1046	39 9.3 N	75 14.0 W	38.0	12.0
S20	8	CTD	07/19/83	1046	39 9.3 N	75 14.0 W	38.0	12.0
S22.5	1	CTD	07/19/83	1005	39 5.9 N	75 11.3 W	30.7	12.8
S22.5	9	CTD	07/19/83	1005	39 5.9 N	75 11.3 W	30.7	12.8
S25	1	CTD	07/19/83	0910	39 3.0 N	75 9.3 W	24.7	12.8
S25	9	CTD	07/19/83	0910	39 3.0 N	75 9.3 W	24.7	12.8
BR	1	CTD	07/19/83	0759	38 54.9 N	75 5.6 W	8.7	14.5
BR	11	CTD	07/19/83	0759	38 54.9 N	75 5.6 W	8.7	14.5
CH	1	CTD	07/19/83	0652	38 49.0 N	75 1.5 W	-3.9	27.2
CH	21	CTD	07/19/83	0652	38 49.0 N	75 1.5 W	-3.9	27.2
T3-1	1	Boat	07/20/83	2120	38 58.9 N	75 18.0 W	26.2	.
T3-2	1	CTD	07/20/83	2036	39 0.3 N	75 15.9 W	25.6	9.6
T3-2	6	CTD	07/20/83	2036	39 0.3 N	75 15.9 W	25.6	9.6
T3-3	1	CTD	07/20/83	2008	39 1.6 N	75 14.5 W	26.1	16.2
T3-3	13	CTD	07/20/83	2008	39 1.6 N	75 14.5 W	26.1	16.2
T3-4	1	CTD	07/20/83	1939	39 3.2 N	75 12.4 W	26.9	15.7
T3-4	12	CTD	07/20/83	1939	39 3.2 N	75 12.4 W	26.9	15.7
T3-5	1	CTD	07/20/83	1912	39 4.4 N	75 10.3 W	27.6	15.8
T3-6	1	CTD	07/20/83	1844	39 5.5 N	75 7.9 W	28.5	7.0
T3-7	1	CTD	07/20/83	1816	39 7.1 N	75 6.4 W	31.0	6.8
T3-8	2	CTD	07/20/83	1712	39 8.0 N	75 3.4 W	32.4	5.5
T3-9	1	Boat	07/20/83	1715	39 8.2 N	75 1.2 W	32.9	.
T3-10	1	Boat	07/20/83	1656	39 8.7 N	74 58.6 W	34.3	.
T3-11	1	Boat	07/20/83	1634	39 9.0 N	74 56.3 W	35.7	.
T3-12	1	Boat	07/20/83	1611	39 9.4 N	74 53.7 W	37.6	.
YT1	2	CTD	07/21/83	1059	38 41.4 N	75 3.5 W	-16.9	10.8
YT1	5	CTD	07/21/83	1059	38 41.4 N	75 3.5 W	-16.9	10.8
YT2	1	CTD	07/21/83	1351	38 40.1 N	74 42.3 W	-36.0	20.2
YT2	17	CTD	07/21/83	1351	38 40.1 N	74 42.3 W	-36.0	20.2

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
YT3	1	30.124	.	25.85	229.5	107	8.173	2115	0.11	0.05<	0.01	0.63	0.79	137	5	0.29
YT3	17	31.571	.	11.31	223.0	80	7.873	2203	0.41	0.05<	0.01	.	0.33	142	6	0.39
YT3	24	31.904	.	9.67	169.0	59	7.703	2220	0.61	0.36	0.04	1.28	0.51	130	6	0.36
YT4	2	29.935	.	21.41	227.5	98	8.009	2089	0.45	0.14	0.03	0.34	2.02	141	6	0.31
YT4	20	31.485	.	12.51	193.0	71	7.827	2196	0.51	0.01	0.03	0.94	0.46	131	7	0.51
YT5	1	30.066	.	22.50	241.5	107	8.065	2096	0.24	0.05<	0.01	0.33	0.88	132	10	0.31
YT5	16	31.102	.	15.15	198.5	77	7.888	2168	0.47	1.38	0.03	0.52	0.79	125	10	0.36
YT5	33	31.619	.	11.99	166.5	61	7.749	2207	0.74	0.06	0.06	2.58	2.04	123	10	0.31
YT6	2	30.485	.	20.29	224.5	95	8.036	2118	0.35	0.26	0.03	0.46	1.37	120	6	0.30
YT6	15	30.809	.	17.39	195.0	79	7.912	2142	0.65	0.07	0.06	2.13	1.92	119	10	0.23
YT6	22	31.261	.	14.41	174.5	67	7.813	2173	0.67	0.10	0.05	2.51	2.17	111	8	0.29
YT7	2	29.258	.	23.00	226.5	100	8.006	2049	0.40	0.14	0.05	1.20	3.94	159	7	0.68
YT7	9	30.035	.	19.58	147.0	61	7.796	2102	1.04	0.36	0.16	6.11	6.79	134	5	0.11

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
YT3	1	18.7	0.77	0.33	.	.	0.3	0.22	18.8	3.1	0.28	.
YT3	17	35.6	3.19	.	21.2	1.1	1.2	4.63	.	.	.	.
YT3	24	44.9	2.81	0.17	28.2	1.4	1.3	8.42	.	.	.	.
YT4	2	32.2	2.40	0.42	17.7	0.5	1.0	2.43	43.0	15.1	.	.
YT4	20	45.4	3.57	0.08	21.8	1.3	1.7	5.79	.	.	.	.
YT5	1	36.0	1.61	0.18	.	.	0.6	0.85	21.9	3.7	0.37	.
YT5	16	43.7	2.63	0.26	26.4	0.7	1.2	3.98	.	.	.	.
YT5	33	47.0	2.70	0.29	13.1	0.8	2.0	5.28	.	.	.	.
YT6	2	28.7	1.72	0.16	18.2	1.1	0.8	2.22	86.6	16.7	0.39	.
YT6	15	53.8	2.39	0.23	27.7	0.9	2.2	1.58	.	.	.	.
YT6	22	42.1	2.02	0.38	11.0	0.8	4.0	2.78	.	.	.	.
YT7	2	59.7	2.89	0.39	24.8	1.4	2.5	4.17	141.0	39.6	0.61	.
YT7	9	57.5	2.69	0.53	29.0	1.2	7.3	1.62	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
YT3	1	CTD	07/21/83	1432	38 39.9 N	74 38.9 W	-40.4	28.8
YT3	17	CTD	07/21/83	1432	38 39.9 N	74 38.9 W	-40.4	28.8
YT3	24	CTD	07/21/83	1432	38 39.9 N	74 38.9 W	-40.4	28.8
YT4	2	CTD	07/21/83	1234	38 40.4 N	74 50.8 W	-26.0	26.3
YT4	20	CTD	07/21/83	1234	38 40.4 N	74 50.8 W	-26.0	26.3
YT5	1	CTD	07/21/83	0847	38 45.9 N	74 56.0 W	-13.6	38.5
YT5	16	CTD	07/21/83	0847	38 45.9 N	74 56.0 W	-13.6	38.5
YT5	33	CTD	07/21/83	0847	38 45.9 N	74 56:0 W	-13.6	38.5
YT6	2	CTD	07/21/83	0703	38 48.6 N	75 1.8 W	-4.2	26.9
YT6	15	CTD	07/21/83	0703	38 48.6 N	75 1.8 W	-4.2	26.9
YT6	22	CTD	07/21/83	0703	38 48.6 N	75 1.8 W	-4.2	26.9
YT7	2	CTD	07/21/83	1140	38 40.5 N	74 57.2 W	-20.6	16.1
YT7	9	CTD	07/21/83	1140	38 40.5 N	74 57.2 W	-20.6	16.1

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
S0	1	-0.026	433	12.62	271.0	82	7.080	570	1.97	71.00	3.06	20.60	69.20	273	36	0.78
S1	1	0.047	1365	12.69	298.0	90	7.243	589	1.80	80.00	2.79	23.00	71.40	.	.	.
S2.5	1	2.795	.	12.53	282.0	87	7.285	710	1.62	80.90	2.66	13.40	68.40	.	.	.
S2.5	11	5.989	.	12.21	280.0	87	7.444	866	1.50	68.40	2.40	11.80	53.10	.	.	.
S5	1	5.760	.	12.42	281.5	88	7.453	853	1.28	67.60	2.43	12.10	52.80	240	36	1.29
S5	10	7.265	.	12.24	282.0	88	7.538	932	1.48	65.20	2.22	11.10	49.90	.	31	.
S7.5	1	7.874	.	12.41	290.5	92	7.661	958	1.26	59.20	2.01	9.99	45.60	.	.	.
S7.5	8	8.934	.	12.16	288.0	91	7.719	1017	1.18	54.40	1.88	9.73	40.70	.	.	.
S10	1	12.639	.	12.12	308.5	100	8.054	1216	0.50	43.80	1.45	5.70	26.50	220	15	0.97
S10	12	15.418	.	11.73C	307.5	100	8.139	1368	0.25	33.40	1.12	3.43	15.40	.	22	.
S12.5	1	12.885	.	12.12	313.0	101	8.098	1227	0.48	40.50	1.44	5.58	24.30	.	.	.
S12.5	14	16.034	.	11.67	308.0	101	8.158	1403	0.14	29.90	0.97	2.81	13.90	.	.	.
S15	1	17.029	.	11.76	320.5	106	8.209	1459	0.09	26.40	0.92	1.58	11.80	197	35	0.79
S15	7	17.876	.	11.50	303.0	100	8.173	1503	0.11	21.30	0.75	1.75	8.49	194	38	0.77
S20	1	20.905	.	11.73	312.5	106	8.215	1668	0.13	13.50	0.56	0.93	4.53	.	21	.
S20	10	23.163	.	10.95	291.5	98	8.135	1785	0.13	8.35	0.37	1.58	2.80	.	18	.
BR	1	21.820	.	11.58	309.5	105	8.200	1711	0.08	9.14	0.47	0.96	3.52	175	12	0.83
BR	9	26.366	.	10.06	278.0	94	8.032	1946	0.16	2.64	0.18	2.05	2.67	.	9	.
CH	1	23.043	.	11.74	308.0	105	8.184	1774	0.11	7.94	0.39	1.31	3.14	156	12	0.88
CH	22	28.159	.	9.24	286.5	97	7.970	2083	0.27	0.89	0.09	1.56	2.36	116	9	0.72
ME1	1	.	.	12.10B	.	.	.	.	.	.	.	.	.	160	.	.
ME2	1	.	.	12.00B	.	.	.	.	.	.	.	.	.	156	.	.
ME3	1	.	.	11.60B	.	.	.	.	.	.	.	.	.	154	.	.
ME4	1	.	.	12.80B	.	.	.	.	.	.	.	.	.	173	.	.
ME5	1	.	.	11.20B	.	.	.	.	.	.	.	.	.	146	.	.
RI	1	22.834	.	12.47C	286.0	99	8.147	1779	0.24	4.66	0.21	1.88	4.47	198	.	.
RCH	2	25.459	.	10.87C	297.5	101	8.107	1907	0.10	3.15	0.15	1.37	2.06	149	.	.
RBR	2	23.864	.	10.91C	307.0	104	8.175	1820	0.05	5.14	0.23	0.95	1.29	151	.	.
RS20	1	20.451	.	11.37C	328.0	110	8.290	1650	0.07	14.00	0.53	0.53	3.44	171	.	.
RS15	1	16.040	.	11.53C	348.0	113	8.314	1404	0.10	33.20	0.90	1.38	13.30	168	.	.
RS12.5	1	13.105	.	11.31C	302.0	96	8.069	1238	0.48	42.20	1.18	6.32	26.00	190	.	.
RS10	1	10.814	.	12.41C	314.5	101	7.987	1124	0.66	42.90	1.45	6.26	30.40	205	.	.
RS7.5	1	8.025	.	12.50C	295.5	94	7.720	961	1.27	55.20	1.91	10.80	45.60	215	.	.
RS5	1	5.888	.	12.21C	293.0	91	7.557	852	1.49	58.70	2.21	12.90	52.90	216	.	.
RS2.5	1	2.118	.	12.72C	291.0	89	7.279	676	1.60	89.20	2.55	14.80	67.60	247	.	.
RS1	1	0.312	5228	12.54C	297.5	90	7.247	611	1.74	85.50	2.73	22.20	70.80	251	.	.
RS0	1	-0.029	400	12.59C	274.0	83	7.105	578	2.00	71.90	2.53	21.40	49.90	263	.	.
OS1	1	29.203	.	10.20	301.5	104	8.008	2090	0.14	1.23	0.09	0.93	1.75	.	.	.
OS1	11	29.948	.	9.10	303.0	102	7.992	2120	0.15	0.50	0.06	0.49	1.24	.	.	.
OS2	1	30.386	.	10.02	325.0	112	8.094	2146	0.08	0.76	0.01	0.16	0.70	.	.	.
OS2	21	31.987	.	6.85	322.0	105	7.992	2230	0.26	0.05<	0.01	0.07	0.44	.	.	.
OS3	2	32.301	.	9.51	328.0	113	8.103	2247	0.12	0.23	0.00	0.20	1.63	.	.	.
OS3	27	32.549	.	6.26	297.0	96	7.916	2258	0.45	0.12	0.02	0.20	0.60	.	.	.
OS3	44	32.553	.	6.22	290.0	93	7.893	2262	0.49	0.09	0.01	0.14	0.70	.	.	.
OS4	1	32.458	.	8.74	336.5	114	8.074	2266	0.17	0.16	0.00	0.11	0.87	.	.	.
OS4	26	32.849	.	7.19	318.0	105	7.989	2283	0.50	2.20	0.08	0.33	2.56	.	.	.
OS4	49	33.282	.	7.23	283.0	94	7.918	2294	0.83	4.80	0.21	1.29	4.86	.	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
S0	1	66.3	12.83	1.21	20.4	2.1	9.3	13.27	58.2	47.1	.	.
S1	1	.	.	.	.	.	12.3	.	37.0	32.4	.	.
S2.5	1	.	.	.	.	.	35.5	.	22.2	37.9	.	.
S2.5	11	.	.	.	.	.	106.9	.	.	.	.	.
S5	1	106.4	14.97	2.09	13.3	1.2	33.3	8.03	14.9	24.1	.	.
S5	10	.	.	.	.	.	72.4	.	.	.	.	.
S7.5	1	.	.	.	.	.	22.6	.	23.1	28.7	.	.
S7.5	8	.	.	.	.	.	44.3	.	.	.	.	.
S10	1	99.4	11.18	1.18	14.2	1.3	12.2	14.36	84.6	65.6	.	.
S10	12	.	.	.	.	.	15.2	.	.	.	.	.
S12.5	1	.	.	.	.	.	9.3	.	74.3	47.2	.	.
S12.5	14	.	.	.	.	.	10.8	.	.	.	.	.
S15	1	70.6	8.59	0.89	10.0	2.1	7.9	13.12	102.3	55.1	.	.
S15	7	67.0	6.80	0.83	14.9	1.5	8.3	12.97	.	.	.	.
S20	1	.	.	.	.	.	4.0	.	34.2	14.3	.	.
S20	10	.	.	.	.	.	5.7	.	.	.	.	.
BR	1	50.7	5.07	0.51	14.2	1.6	3.1	5.72	43.3	15.1	.	.
BR	9	.	.	.	.	.	5.1	.	.	.	.	.
CH	1	44.1	5.33	0.46	15.5	2.2	2.9	3.09	24.8	8.9	.	.
CH	22	28.3	3.74	0.21	14.8	2.0	2.9	.	.	.	.	.
ME1	1	74.7	5.06	.	.	.	.	4.02	.	.	.	.
ME2	1	66.6	5.41	.	.	.	.	5.41	.	.	.	.
ME3	1	105.6	11.80	.	.	.	.	6.33	.	.	.	.
ME4	1	116.7	12.71	.	.	.	.	12.73	.	.	.	.
ME5	1	61.6	4.87	.	.	.	.	4.86	.	.	.	.
RI	1	164.3	16.60	.	.	.	36.1	.	.	.	.	.
RCH	2	28.4	2.64	.	.	.	8.3	2.27	15.4	9.7	.	.
RBR	2	57.1	6.78	.	.	.	17.0	.	.	.	.	.
RS20	1	56.3	7.06	.	.	.	2.4	4.26	46.5	15.7	.	.
RS15	1	60.7	8.98	.	.	.	3.5	.	.	.	.	.
RS12.5	1	66.5	5.36	.	.	.	6.3	10.50	.	.	.	.
RS10	1	82.0	11.28	.	.	.	13.1	13.43	71.8	67.5	.	.
RS7.5	1	72.1	9.27	.	.	.	15.1	7.64	.	.	.	.
RS5	1	77.8	12.38	.	.	.	27.6	.	.	.	.	.
RS2.5	1	157.8	25.11	.	.	.	49.0	.	.	.	.	.
RS1	1	68.8	13.69	.	.	.	23.9	11.35	20.6	34.3	.	.
RSO	1	42.4	9.24	.	.	.	7.9	.	.	.	.	.
OS1	1	.	.	.	.	.	.	1.60	.	.	.	.
OS1	11	.	.	.	.	.	.	6.00	.	.	.	.
OS2	1	.	.	.	.	.	.	0.70	.	.	.	.
OS2	21	.	.	.	.	.	.	9.89	.	.	.	.
OS3	2	.	.	.	.	.	.	0.47	.	.	.	.
OS3	27	.	.	.	.	.	.	11.65	.	.	.	.
OS3	44	.	.	.	.	.	.	13.33	.	.	.	.
OS4	1	.	.	.	.	.	.	0.86	.	.	.	.
OS4	26	.	.	.	.	.	.	2.59	.	.	.	.
OS4	49	.	.	.	.	.	.	0.33	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
S0	1	.	.	.	.	.	.	.	.	.	.	.	.
S1	1	.	.	.	.	.	.	.	.	.	.	.	.
S2.5	1	.	.	.	.	.	.	.	.	.	.	.	.
S2.5	11	.	.	.	.	.	.	.	.	.	.	.	.
S5	1	.	.	.	.	.	.	.	.	.	.	.	.
S5	10	.	.	.	.	.	.	.	.	.	.	.	.
S7.5	1	.	.	.	.	.	.	.	.	.	.	.	.
S7.5	8	.	.	.	.	.	.	.	.	.	.	.	.
S10	1	.	.	.	.	.	.	.	.	.	.	.	.
S10	12	.	.	.	.	.	.	.	.	.	.	.	.
S12.5	1	.	.	.	.	.	.	.	.	.	.	.	.
S12.5	14	.	.	.	.	.	.	.	.	.	.	.	.
S15	1	.	.	.	.	.	.	.	.	.	.	.	.
S15	7	.	.	.	.	.	.	.	.	.	.	.	.
S20	1	.	.	.	.	.	.	.	.	.	.	.	.
S20	10	.	.	.	.	.	.	.	.	.	.	.	.
BR	1	.	.	.	.	.	.	.	.	.	.	.	.
BR	9	.	.	.	.	.	.	.	.	.	.	.	.
CH	1	.	.	.	.	.	.	.	.	.	.	.	.
CH	22	.	.	.	.	.	.	.	.	.	.	.	.
ME1	1	.	.	.	.	.	.	.	.	.	.	.	.
ME2	1	.	.	.	.	.	.	.	.	.	.	.	.
ME3	1	.	.	.	.	.	.	.	.	.	.	.	.
ME4	1	.	.	.	.	.	.	.	.	.	.	.	.
ME5	1	.	.	.	.	.	.	.	.	.	.	.	.
RI	1	.	.	.	43.0	1.78	24.87	45.79	.	33.6	0.93	0.864	.
RCH	2	.	.	.	46.6	.	.	.	.	29.1	.	.	.
RBR	2	.	.	.	.	.	.	.	.	.	.	.	.
RS20	1	.	.	.	60.9	1.76	28.45	19.83	.	19.9	0.46	0.811	.
RS15	1	.	.	.	35.8	0.54	25.89	21.87	.	71.9	0.36	0.285	.
RS12.5	1	.	.	.	73.4	0.76	29.81	24.23	.	84.1	0.48	0.208	.
RS10	1	.	.	.	51.9	0.37	30.15	25.34	.	61.2	0.55	0.241	.
RS7.5	1	.	.	.	82.4	1.07	39.01	28.17	.	117.8	0.80	0.246	.
RS5	1	.	.	.	102.1	0.87	44.12	31.63	.	191.2	0.77	0.430	.
RS2.5	1	.	.	.	182.6	1.00	46.34	40.13	.	351.8	0.90	0.627	.
RS1	1	.	.	.	232.8	0.54	44.12	41.39	.	171.3	0.61	0.907	.
RS0	1	.	.	.	542.6	1.49	38.84	33.68	.	180.5	0.97	0.584	.
OS1	1	.	.	.	.	.	.	.	.	.	.	.	.
OS1	11	.	.	.	.	.	.	.	.	.	.	.	.
OS2	1	.	.	.	.	.	.	.	.	.	.	.	.
OS2	21	.	.	.	.	.	.	.	.	.	.	.	.
OS3	2	.	.	.	.	.	.	.	.	.	.	.	.
OS3	27	.	.	.	.	.	.	.	.	.	.	.	.
OS3	44	.	.	.	.	.	.	.	.	.	.	.	.
OS4	1	.	.	.	.	.	.	.	.	.	.	.	.
OS4	26	.	.	.	.	.	.	.	.	.	.	.	.
OS4	49	.	.	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
SO	1	CTD	04/30/84	0643	38 48.0 N	75 24.5 W	127.3	13.2
S1	1	CTD	04/30/84	0828	38 34.7 N	75 32.7 W	95.9	9.8
S2.5	1	CTD	04/30/84	0948	38 24.7 N	75 30.5 W	75.2	12.6
S2.5	11	CTD	04/30/84	0948	38 24.7 N	75 30.5 W	75.2	12.6
S5	1	CTD	04/30/84	1033	38 23.9 N	75 29.5 W	73.2	15.0
S5	10	CTD	04/30/84	1033	38 23.9 N	75 29.5 W	73.2	15.0
S7.5	1	CTD	04/30/84	1114	38 21.6 N	75 27.1 W	66.9	13.0
S7.5	8	CTD	04/30/84	1114	38 21.6 N	75 27.1 W	66.9	13.0
S10	1	CTD	04/30/84	1226	38 15.7 N	75 20.0 W	52.4	16.4
S10	12	CTD	04/30/84	1226	38 15.7 N	75 20.0 W	52.4	16.4
S12.5	1	CTD	04/30/84	1301	38 14.1 N	75 18.2 W	48.6	16.4
S12.5	14	CTD	04/30/84	1301	38 14.1 N	75 18.2 W	48.6	16.4
S15	1	CTD	04/30/84	1342	38 8.5 N	75 14.2 W	36.8	9.1
S15	7	CTD	04/30/84	1342	38 8.5 N	75 14.2 W	36.8	9.1
S20	1	CTD	04/30/84	1447	38 59.9 N	75 8.7 W	19.0	12.7
S20	10	CTD	04/30/84	1447	38 59.9 N	75 8.7 W	19.0	12.7
BR	1	CTD	04/30/84	1531	38 55.0 N	75 5.8 W	9.0	13.7
BR	9	CTD	04/30/84	1531	38 55.0 N	75 5.8 W	9.0	13.7
CH	1	CTD	04/30/84	1627	38 48.7 N	75 2.0 W	-3.9	27.9
CH	22	CTD	04/30/84	1627	38 48.7 N	75 2.0 W	-3.9	27.9
ME1	1	Boat	04/28/84	0850	38 48.2 N	75 11.3 W	.	.
ME2	1	Boat	04/28/84	0911	38 47.8 N	75 10.4 W	.	.
ME3	1	Boat	04/28/84	0935	38 47.4 N	75 9.2 W	.	.
ME4	1	Boat	04/28/84	1010	38 47.6 N	75 8.8 W	.	.
ME5	1	Boat	04/28/84	1030	38 47.6 N	75 6.1 W	.	.
RI	1	CTD	04/28/84	1146	38 47.7 N	75 8.8 W	9.5	4.0
RCH	2	CTD	04/28/84	1439	38 48.8 N	75 2.3 W	-3.5	29.4
RBR	2	CTD	04/28/84	1618	38 55.4 N	75 6.0 W	9.8	14.0
RS20	1	CTD	04/28/84	1738	39 3.8 N	75 9.7 W	26.2	14.5
RS15	1	CTD	04/28/84	1926	39 8.7 N	75 13.5 W	36.7	12.3
RS12.5	1	CTD	04/28/84	2057	39 14.7 N	75 18.6 W	49.8	10.2
RS10	1	CTD	04/29/84	1033	39 16.8 N	75 23.1 W	56.4	6.0
RS7.5	1	CTD	04/29/84	1311	39 21.6 N	75 26.4 W	66.4	9.9
RS5	1	CTD	04/29/84	1432	39 23.8 N	75 28.7 W	72.3	9.5
RS2.5	1	CTD	04/29/84	1614	39 27.8 N	75 32.9 W	83.2	9.8
RS1	1	CTD	04/29/84	1851	39 34.5 N	75 32.5 W	95.5	7.4
RSO	1	CTD	04/29/84	2140	39 48.5 N	75 23.7 W	128.8	14.7
OS1	1	CTD	05/02/84	0038	38 49.7 N	74 52.3 W	-15.9	14.5
OS1	11	CTD	05/02/84	0038	38 49.7 N	74 52.3 W	-15.9	14.5
OS2	1	CTD	05/01/84	2202	38 47.5 N	74 28.5 W	-50.5	25.0
OS2	21	CTD	05/01/84	2202	38 47.5 N	74 28.5 W	-50.5	25.0
OS3	2	CTD	05/01/84	1924	38 45.6 N	74 4.5 W	-85.4	52.7
OS3	27	CTD	05/01/84	1924	38 45.6 N	74 4.5 W	-85.4	52.7
OS3	44	CTD	05/01/84	1924	38 45.6 N	74 4.5 W	-85.4	52.7
OS4	1	CTD	05/01/84	1507	38 38.6 N	73 36.6 W	-127.2	60.8
OS4	26	CTD	05/01/84	1507	38 38.6 N	73 36.6 W	-127.2	60.8
OS4	49	CTD	05/01/84	1507	38 38.6 N	73 36.6 W	-127.2	60.8

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
OS5	2	32.751	.	8.88	344.0	118	8.053	2276	0.26	0.78	0.01	0.11	3.47	73	5	0.54
OS5	18	33.577	.	8.42C	292.0	99	7.966	2315	0.70	5.34	0.27	0.69	4.59	.	.	.
OS5	29	34.707	.	11.73C	281.0	104	8.073	2376	0.45	3.64	0.18	0.65	2.95	.	.	.
OS5	160	35.244	.	12.65	250.0	94	8.051	2397	0.52	7.00	0.10	0.05	3.39	.	.	.
PT10	1	29.064	.	11.84	316.0	113	8.077	2076	0.05	0.05<	0.02	0.09	1.77	122	.	.
PT11	2	28.564	.	11.85	314.5	112	8.081	2058	0.05	0.10	0.06	0.10	2.69	119	.	.
PT12	3	28.209	.	11.40	309.0	108	8.061	2044	0.06	1.09	0.11	0.33	2.45	118	.	.
PT13	1	28.308	.	11.46	317.0	112	8.065	2045	0.07	1.27	0.11	0.31	1.87	117	.	.
PT14	1	27.087	.	11.97	292.0	103	8.026	1986	0.15	4.41	0.20	1.83	2.35	129	.	.
PT15	2	26.973	.	11.11	293.5	102	8.036	1980	0.16	3.69	0.21	1.88	2.40	126	.	.
PT16	2	28.381	.	10.42	297.0	102	8.005	2046	0.17	2.27	0.13	1.25	2.04	118	.	.
PT17	2	26.172	.	11.99	296.0	104	8.055	1938	0.18	4.60	0.20	2.00	2.35	134	.	.
PT18	2	24.585	.	12.46	297.0	104	8.098	1858	0.12	6.74	0.29	2.05	3.98	167	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
OS5	2	18.4	1.39	.	8.4	1.3	.	2.04	.	.	.	.
OS5	18	.	.	.	.	.	.	1.16	.	.	.	.
OS5	29	.	.	.	.	.	.	0.37	.	.	.	.
OS5	160	.	.	.	.	.	.	0.07	.	.	.	.
PT10	1	39.2	3.27	.	.	.	0.8	1.88	.	.	.	.
PT11	2	34.9	2.19	.	.	.	1.3	2.99	.	.	.	.
PT12	3	37.4	2.44	.	.	.	1.6	3.11	.	.	.	.
PT13	1	29.4	3.30	.	.	.	1.8	3.08	.	.	.	.
PT14	1	26.7	1.85	.	.	.	1.8	1.37	.	.	.	.
PT15	2	30.8	3.36	.	.	.	1.7	2.06	.	.	.	.
PT16	2	.	.	.	.	.	2.4	3.38	.	.	.	.
PT17	2	30.4	3.84	.	.	.	2.9	2.36	.	.	.	.
PT18	2	32.9	4.23	.	.	.	4.8	2.08	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
OS5	2	.	.	.	.	.	.	.	.	.	.	.	.
OS5	18	.	.	.	.	.	.	.	.	.	.	.	.
OS5	29	.	.	.	.	.	.	.	.	.	.	.	.
OS5	160	.	.	.	.	.	.	.	.	.	.	.	.
PT10	1	.	.	.	32.2	0.92	17.55	25.49	.	71.9	1.36	0.671	.
PT11	2	.	.	.	43.0	0.44	14.82	21.56	.	26.0	1.63	0.304	.
PT12	3	.	.	.	35.8	0.68	17.04	22.35	.	39.8	1.41	0.319	.
PT13	1	.	.	.	19.7	0.56	15.33	20.93	.	21.4	1.20	0.232	.
PT14	1	.	.	.	16.1	0.73	19.42	21.40	.	29.1	1.06	0.309	.
PT15	2	.	.	.	12.5	0.93	22.15	18.10	.	19.9	0.84	0.666	.
PT16	2	.	.	.	3.6	1.19	19.25	16.52	.	41.3	1.40	0.666	.
PT17	2	.	.	.	3.6	0.61	18.23	18.10	.	44.4	0.57	0.130	.
PT18	2	.	.	.	12.5	0.48	18.06	26.59	.	26.0	0.73	0.319	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
OS5	2	CTD	05/01/84	1304	38 28.4 N	73 19.7 W	-155.3	190.4
OS5	18	CTD	05/01/84	1304	38 28.4 N	73 19.7 W	-155.3	190.4
OS5	29	CTD	05/01/84	1304	38 28.4 N	73 19.7 W	-155.3	190.4
OS5	160	CTD	05/01/84	1304	38 28.4 N	73 19.7 W	-155.3	190.4
PT10	1	CTD	05/02/84	1129	38 27.6 N	74 41.4 W	-53.0	30.6
PT11	2	CTD	05/02/84	1206	38 31.1 N	74 44.4 W	-45.2	29.6
PT12	3	CTD	05/02/84	1250	38 34.7 N	74 47.3 W	-37.3	27.1
PT13	1	CTD	05/02/84	1330	38 38.6 N	74 51.2 W	-28.2	26.8
PT14	1	CTD	05/02/84	1406	38 41.4 N	74 54.1 W	-21.5	24.3
PT15	2	CTD	05/02/84	1444	38 42.1 N	74 54.6 W	-20.0	21.9
PT16	2	CTD	05/02/84	1535	38 46.0 N	74 59.0 W	-10.4	22.0
PT17	2	CTD	05/02/84	1603	38 47.8 N	75 1.2 W	-5.9	21.2
PT18	2	CTD	05/02/84	1627	38 47.7 N	75 2.3 W	-5.4	28.5

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
SO	1	-0.004	.	25.50	137.5	54	6.995	634	3.18	119.00	1.57	9.81	76.30	287	9	1.04
SO	13	-0.007	.	25.54	134.0	53	6.990	634	3.21	121.00	1.80	8.40	77.90	289	56	0.25
S1	1	1.223	.	26.19	184.0	73	7.252	809	2.77	121.00	0.29	9.94	43.10	.	.	.
S1	11	1.290	.	25.93	181.5	72	7.231	816	2.91	128.00	0.30	8.03	48.20	.	.	.
S2.5	1	2.185C	.	26.05	188.5	76	.	853	2.80	125.00	0.33	8.74	48.90	216	8	0.30
S2.5	12	5.318C	.	25.71	176.0	71	.	968	2.86	113.00	0.51	10.90	45.90	.	.	.
S5	1	5.570	.	25.58	198.5	80	7.411	978	2.64	106.00	0.49	8.22	45.70	210	11	0.34
S5	13	10.059	.	25.19	188.0	78	7.417	1135	2.46	86.30	0.72	8.59	36.80	183	15	0.61
S7.5	1	7.770	.	25.27	209.0	85	.	1050	2.55	92.60	0.65	8.22	44.00	.	.	.
S7.5	9	15.577	.	24.07	185.0	77	7.544	1338	2.14	56.50	1.09	12.30	34.00	.	.	.
S10	1	11.023	.	24.79	216.0	89	7.585	1160	2.33	59.50	0.87	7.88	42.50	184	16	0.44
S10	10	18.655	.	23.08	184.5	77	7.587	1467	1.82	43.20	1.08	12.60	29.70	.	.	.
S15	1	15.407	.	24.09	214.5	89	7.669	1317	2.01	56.10	1.06	10.30	34.20	162	2	0.65
S15	8	23.234	.	21.25	176.0	73	7.650	1673	1.45	19.60	0.92	13.60	20.10	124	12	0.38
S17.5	1	19.016	.	23.10	222.0	93	7.788	1474	1.42	37.70	1.00	6.64	24.60	.	.	.
S17.5	10	25.030	.	20.11C	195.0	80	7.786	1786	0.91	13.00	0.73	8.00	13.40	.	.	.
S25	1	23.062	.	21.76	291.5	122	8.159	1675	0.24	12.20	0.67	0.40	12.80	.	.	.
S25	8	26.890	.	19.28	232.0	95	7.932	1891	0.37	5.26	0.50	3.49	7.04	.	.	.
BR	2	26.137	.	20.09	300.0	124	8.151	1844	0.09	1.71	0.33	0.45	6.03	134	12	0.43
BR	13	30.739	.	13.87	219.0	82	7.814	2140	0.63	0.76	0.17	2.42	3.48	79	9	0.44
CH	1	28.280	.	17.83	267.0	107	7.978	1976	0.27	3.17	0.30	1.08	5.50	110	9	0.50
CH	28	31.768	.	10.85	229.5	81	7.815	2203	0.59	2.50	0.04	0.90	2.77	.	.	.
MB1	1	.	.	21.50B	.	.	.	.	.	.	.	.	.	179	.	.
MB2	1	.	.	21.20B	.	.	.	.	.	.	.	.	.	151	.	.
MB3	1	.	.	20.60B	.	.	.	.	.	.	.	.	.	133	.	.
MB4	1	.	.	19.90B	.	.	.	.	.	.	.	.	.	138	.	.
MB5	1	.	.	19.90B	.	.	.	.	.	.	.	.	.	113	.	.
MB6	1	.	.	18.60B	.	.	.	.	.	.	.	.	.	89	.	.
RRI	2	26.019	.	21.66	248.5	105	7.866	1855	0.64	6.87	0.37	17.00	17.50	148	.	.
RS30	2	30.549	.	15.65	248.5	97	7.871	1748	0.50	4.24	0.18	.	3.10	78	10	0.37
RS30	14	31.770	.	10.87	217.5	77	7.786	1831	0.68	1.52	0.26	.	3.88	77	9	0.34
RCH	2	30.423C	.	15.11C	.	.	.	.	.	.	.	.	.	.	.	.
RS20	1	23.660	.	22.65	336.5	143	8.179	1702	0.44	11.00	0.81	14.80	15.60	142	.	.
RS10	1	6.670	.	25.66	197.5	81	7.416	1016	1.93	76.20	0.35	17.20	25.10	194	.	.
RS5	1	5.522C	.	26.03	194.0	79	7.399	990	2.59	106.00	0.54	13.00	42.20	193	.	.
RS5B	6	.	.	.	188.0	.	7.441	1162	2.41	72.90	0.84	15.90	39.20	183	.	.
RS1	1	.	.	26.56	188.0	.	7.276	862	2.65	123.00	0.30	11.30	46.60	229	.	.
OS1	1	31.626	.	15.35	275.5	107	7.954	2185	.	0.86	.	.	.	.	.	.
OS1	14	32.040	.	10.16	250.5	88	7.869	2213	.	0.32	.	.	.	.	.	.
OS2	1	30.631	.	20.32	252.5	107	8.084	2129	.	0.05<	.	.	.	.	.	.
OS2	12	31.599	.	11.25C	270.0	97	7.951	2190	.	0.89	.	.	.	.	.	.
OS2	17	32.188	.	8.05	252.5	84	7.847	2230	.	1.02	.	.	.	.	.	.
OS3	1	31.081	.	20.16	250.0	106	7.995	2154	.	0.44	.	.	.	.	.	.
OS3	21	32.549	.	6.27C	301.0	97	7.940	2251	.	0.29	.	.	.	.	.	.
OS3	46	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
OS4	1	30.558	.	22.05	239.0	105	8.087	2130	.	0.07	.	.	.	.	.	.
OS4	17	32.385	.	6.13C	293.0	94	7.929	2240	.	0.26	.	.	.	.	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
SO	1	20.2	5.33	0.77	17.9	2.9	10.4	2.67	15.3	12.5	.	.
SO	13	24.4	6.24	0.78	19.1	3.4	12.4	3.10	.	.	.	.
S1	1	.	.	.	.	.	79.1	7.43	6.6	29.6	.	.
S1	11	.	.	.	.	.	89.3	8.36	.	.	.	.
S2.5	1	56.9	8.19	1.76	8.7	1.2	39.6	4.42	10.5	31.6	.	.
S2.5	12	.	.	.	.	.	227.6	12.08	.	.	.	.
S5	1	56.0	8.10	1.28	9.6	1.3	29.8	4.18	17.1	28.2	.	.
S5	13	342.9	19.14	6.98	9.3	1.2	96.5	3.13	.	.	.	.
S7.5	1	.	.	.	.	.	13.8	3.72	23.1	28.4	.	.
S7.5	9	.	.	.	.	.	15.6	1.24	.	.	.	.
S10	1	51.9	6.57	0.71	14.1	1.0	13.4	4.03	37.3	45.8	.	.
S10	10	.	.	.	.	.	10.3	1.50	.	23.0	.	.
S15	1	30.8	2.84	0.26	18.5	1.1	4.8	4.50	58.7	39.9	.	.
S15	8	88.2	7.21	0.86	7.3	1.0	2.4	2.02	.	.	.	.
S17.5	1	.	.	.	.	.	3.7	6.62	106.5	69.8	1.02	.
S17.5	10	.	.	.	.	.	17.7	3.72	.	.	.	.
S25	1	.	.	.	.	.	4.8	58.97	348.4	189.7	1.21	.
S25	8	.	.	.	.	.	10.1	2.95	.	.	.	.
BR	2	75.1	12.95	0.66	16.3	1.5	3.8	27.11	148.9	70.6	1.06	.
BR	13	57.4	3.41	0.44	11.2	0.8	5.4	3.83	.	.	.	.
CH	1	51.9	5.27	0.55	17.2	1.3	3.8	19.05	181.0	68.1	0.83	.
CH	28	.	.	.	.	.	2.9	3.48	.	.	.	.
MB1	1	94.3	14.92	.	.	.	10.7	18.07	.	.	.	.
MB2	1	84.3	11.00	.	.	.	10.1	20.51	.	.	.	.
MB3	1	85.0	8.12	.	.	.	11.5	21.49	.	.	.	.
MB4	1	94.6	8.95	.	.	.	14.5	15.14	.	.	.	.
MB5	1	73.7	7.72	.	.	.	10.6	17.09	.	.	.	.
MB6	1	89.8	14.52	.	.	.	17.0	14.16	.	.	.	.
RRI	2	.	.	.	.	.	11.3	.	.	.	.	.
RS30	2	25.7	3.40	0.35	20.3	1.5	2.6	4.55	55.7	35.8	0.93	.
RS30	14	61.6	9.48	1.02	6.5	1.3	6.4	2.88	.	.	.	.
RCH	2	44.3	6.95	.	.	.	.	6.51	.	.	.	.
RS20	1	85.4	17.49	.	.	.	5.8	53.38	.	.	.	.
RS10	1	10.4	2.45	.	.	.	13.6	3.26	.	.	.	.
RS5	1	30.3	5.92	.	.	.	14.2	4.34	.	.	.	.
RS5B	6	45.2	6.13	.	.	.	18.6	2.02	.	.	.	.
RS1	1	56.5	10.27	.	.	.	30.8	4.88	.	.	.	.
OS1	1	.	.	.	.	.	.	1.86	.	.	.	.
OS1	14	.	.	.	.	.	.	3.02	.	.	.	.
OS2	1	.	.	.	.	.	.	0.24	.	.	.	.
OS2	12	.	.	.	.	.	.	1.12	.	.	.	.
OS2	17	.	.	.	.	.	.	4.50	.	.	.	.
OS3	1	.	.	.	.	.	.	0.31	.	.	.	.
OS3	21	.	.	.	.	.	.	8.06	.	.	.	.
OS3	46	.	.	.	.	.	.	.	.	.	.	.
OS4	1	.	.	.	.	.	.	0.18	.	.	.	.
OS4	17	.	.	.	.	.	.	2.05	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
S0	1	99.7	.	.	709.1	0.20	38.33	41.23	.	90.2	0.32	0.598	.
S0	13	.	.	.	.	.	.	.	.	.	.	.	.
S1	1	65.0	.	.	50.1	0.12	34.58	35.72	.	143.8	1.74	1.163	.
S1	11	.	.	.	.	.	.	.	.	.	.	.	.
S2.5	1	76.6	.	.	82.4	0.29	33.73	33.99	.	143.8	0.68	0.492	.
S2.5	12	.	.	.	.	.	.	.	.	.	.	.	.
S5	1	56.1	.	.	16.1	0.14	34.24	28.80	.	87.2	0.73	5.463	.
S5	13	.	.	.	.	.	.	.	.	.	.	.	.
S7.5	1	34.9	.	.	1.8	0.08	35.60	23.92	.	85.7	0.45	0.208	.
S7.5	9	.	.	.	.	.	.	.	.	.	.	.	.
S10	1	28.9	.	.	84.2	0.80	34.07	22.19	.	62.7	0.59	0.256	.
S10	10	.	.	.	.	.	.	.	.	.	.	.	.
S15	1	41.7	.	.	39.4	0.71	31.69	22.50	.	114.7	0.81	0.425	.
S15	8	.	.	.	.	.	.	.	.	.	.	.	.
S17.5	1	51.3	.	.	1.8	0.32	29.98	18.10	.	48.9	0.50	0.212	.
S17.5	10	.	.	.	.	.	.	.	.	.	.	.	.
S25	1	20.2	.	.	7.2	0.64	21.47	13.53	.	21.4	0.46	0.294	.
S25	8	.	.	.	.	.	.	.	.	.	.	.	.
BR	2	18.4	.	.	.	0.07	19.93	.	.	24.5	0.10	0.058	.
BR	13	.	.	.	.	.	.	.	.	.	.	.	.
CH	1	13.5	.	.	25.1	0.15	22.15	.	.	35.2	0.50	0.275	.
CH	28	.	.	.	.	.	.	.	.	.	.	.	.
MB1	1	.	.	.	.	.	.	.	.	.	.	.	.
MB2	1	.	.	.	.	.	.	.	.	.	.	.	.
MB3	1	.	.	.	.	.	.	.	.	.	.	.	.
MB4	1	.	.	.	.	.	.	.	.	.	.	.	.
MB5	1	.	.	.	.	.	.	.	.	.	.	.	.
MB6	1	.	.	.	.	.	.	.	.	.	.	.	.
RR1	2	72.4	.	.	10.7	1.02	18.40	10.86	.	24.5	0.40	0.164	.
RS30	2	.	.	.	.	0.14	12.44	.	.	20.2	.	0.193	.
RS30	14	.	.	.	.	.	.	.	.	.	.	.	.
RCH	2	.	.	.	.	.	.	.	.	.	.	.	.
RS20	1	38.6	.	.	48.3	1.53	25.72	42.65	.	15.3	0.44	0.700	.
RS10	1	18.4	.	.	16.1	0.19	28.96	23.76	.	81.1	0.56	0.068	.
RS5	1	21.1	.	.	34.0	0.36	34.41	25.18	.	217.2	0.62	0.338	.
RS5B	6	.	.	.	.	.	.	.	.	.	.	.	.
RS1	1	56.2	.	.	25.1	0.24	32.54	37.45	.	85.7	0.47	0.328	.
OS1	1	.	.	.	.	0.08	6.13	6.29	.	5.5	0.23	0.203	.
OS1	14	.	.	.	.	.	.	.	.	.	.	.	.
OS2	1	.	.	.	.	0.14	8.01	6.61	.	3.7	0.29	0.290	.
OS2	12	.	.	.	.	0.10	5.45	4.72	.	2.4	0.30	.	.
OS2	17	.	.	.	.	0.15	6.13	7.71	.	8.1	0.30	0.372	.
OS3	1	.	.	.	.	0.31	7.67	8.34	.	9.5	0.30	.	.
OS3	21	.	.	.	.	0.10	4.60	3.30	.	7.5	0.25	0.174	.
OS3	46	.	.	.	.	0.07	5.79	3.93	.	9.3	0.24	0.236	.
OS4	1	.	.	.	.	0.14	10.22	12.27	.	12.8	0.36	0.217	.
OS4	17	.	.	.	.	0.08	4.77	5.04	.	4.1	0.23	0.323	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
SO	1	CTD	07/18/84	0607	39 48.3 N	75 24.1 W	128.1	.
SO	13	CTD	07/18/84	0607	39 48.3 N	75 24.1 W	128.1	.
S1	1	CTD	07/18/84	0812	39 30.0 N	75 33.0 W	87.2	.
S1	11	CTD	07/18/84	0812	39 30.0 N	75 33.0 W	87.2	.
S2.5	1	CTD	07/18/84	0901	39 25.2 N	75 31.1 W	76.5	.
S2.5	12	CTD	07/18/84	0901	39 25.2 N	75 31.1 W	76.5	.
S5	1	CTD	07/18/84	0958	39 18.8 N	75 24.1 W	60.3	.
S5	13	CTD	07/18/84	0958	39 18.8 N	75 24.1 W	60.3	.
S7.5	1	CTD	07/18/84	1029	39 14.8 N	75 19.4 W	50.6	.
S7.5	9	CTD	07/18/84	1029	39 14.8 N	75 19.4 W	50.6	.
S10	1	CTD	07/18/84	1053	39 12.4 N	75 17.2 W	45.2	.
S10	10	CTD	07/18/84	1053	39 12.4 N	75 17.2 W	45.2	.
S15	1	CTD	07/18/84	1138	39 7.6 N	75 13.4 W	34.8	.
S15	8	CTD	07/18/84	1138	39 7.6 N	75 13.4 W	34.8	.
S17.5	1	CTD	07/18/84	1205	39 5.5 N	75 11.8 W	30.3	.
S17.5	10	CTD	07/18/84	1205	39 5.5 N	75 11.8 W	30.3	.
S25	1	CTD	07/18/84	1257	39 2.0 N	75 7.8 W	22.2	.
S25	8	CTD	07/18/84	1257	39 2.0 N	75 7.8 W	22.2	.
BR	2	CTD	07/18/84	1408	38 55.1 N	75 5.6 W	9.1	.
BR	13	CTD	07/18/84	1408	38 55.1 N	75 5.6 W	9.1	.
CH	1	CTD	07/18/84	1458	38 48.9 N	75 2.3 W	-3.4	.
CH	28	CTD	07/18/84	1458	38 48.9 N	75 2.3 W	-3.4	.
MB1	1	Boat	07/16/84	.	38 48.2 N	75 11.8 W	.	.
MB2	1	Boat	07/16/84	.	38 48.3 N	75 11.5 W	.	.
MB3	1	Boat	07/16/84	.	38 47.9 N	75 10.9 W	.	.
MB4	1	Boat	07/16/84	.	38 47.4 N	75 9.6 W	.	.
MB5	1	Boat	07/16/84	.	38 47.5 N	75 8.0 W	.	.
MB6	1	Boat	07/16/84	.	38 47.9 N	75 6.5 W	.	.
RRI	2	CTD	07/16/84	1820	38 47.7 N	75 8.7 W	9.4	.
RS30	2	CTD	07/16/84	1003	38 47.9 N	75 0.3 W	-6.5	.
RS30	14	CTD	07/16/84	1003	38 47.9 N	75 0.3 W	-6.5	.
RCH	2	CTD	07/16/84	1252	38 49.1 N	75 1.9 W	-3.3	.
RS20	1	CTD	07/16/84	1450	38 57.9 N	75 12.7 W	19.2	.
RS10	1	CTD	07/17/84	1035	39 14.5 N	75 18.9 W	49.7	.
RS5	1	CTD	07/17/84	1136	39 18.0 N	75 23.0 W	58.2	.
RS5B	6	CTD	07/17/84	1237	39 18.0 N	75 23.0 W	58.2	.
RS1	1	CTD	07/17/84	1430	39 26.7 N	75 32.9 W	80.3	.
OS1	1	CTD	07/19/84	2208	38 49.5 N	74 50.1 W	-19.1	16.9
OS1	14	CTD	07/19/84	2208	38 49.5 N	74 50.1 W	-19.1	16.9
OS2	1	CTD	07/19/84	2020	38 47.4 N	74 27.9 W	-51.4	.
OS2	12	CTD	07/19/84	2020	38 47.4 N	74 27.9 W	-51.4	.
OS2	17	CTD	07/19/84	2020	38 47.4 N	74 27.9 W	-51.4	.
OS3	1	CTD	07/19/84	1756	38 45.1 N	74 4.9 W	-84.9	.
OS3	21	CTD	07/19/84	1756	38 45.1 N	74 4.9 W	-84.9	.
OS3	46	CTD	07/19/84	1756	38 45.1 N	74 4.9 W	-84.9	.
OS4	1	CTD	07/19/84	1551	38 41.9 N	73 44.9 W	-114.3	.
OS4	17	CTD	07/19/84	1551	38 41.9 N	73 44.9 W	-114.3	.

STA	DEPTH (m)	SALINITY (ppt)	CL (uM)	TEMP (C)	O2 (uM)	% O2 SAT	pH (25C)	ALK (ueq/L)	PO4 (uM)	NO3 (uM)	NO2 (uM)	NH4 (uM)	SI (uM)	DOC (uM)	DON (uM)	DOP (uM)
OS4	24	32.557	.	5.93C	242.5	77	7.814	2249	.	3.29	.	.	.	.	.	.
OS4	50	32.971	.	6.81	243.5	80	7.816	2265	.	9.14	.	.	.	.	.	.
OS5	1	30.785	.	23.13	235.0	105	8.132	2147	.	0.14	.	.	.	.	.	.
OS5	21	34.103	.	15.52C	298.0	118	8.131	2327	.	0.05<	.	.	.	.	.	.
OS5	34	33.963	.	10.21	313.0	111	8.078	2320	.	0.46	.	.	.	.	.	.
OS5	95	35.121	.	12.57	225.0	85	8.013	2371	.	9.42	.	.	.	.	.	.
OS6	1	30.851	.	23.41	230.0	104	8.154	2153	0.07	0.28	0.02	0.64	1.13	78	7	0.39
OS6	30	34.916	.	15.69C	290.0	116	8.143	2374	0.13	0.12	0.03	0.49	1.64	.	.	.
OS6	44	34.797	.	12.45	278.0	104	8.073	2364	0.25	3.50	0.17	0.17	2.51	.	.	.
OS6	64	35.130	.	12.69	239.0	90	8.042	2375	0.49	7.68	0.07	0.06	3.30	.	.	.
OS6	170	35.607	.	13.21C	173.5	66	7.963	2397	0.90	14.50	0.03	0.18	5.95	.	.	.
OS6	261	35.321	.	10.34C	137.0	49	7.834	2382	1.48	23.60	0.02	0.15	11.60	.	.	.
OS6	988	34.951	.	4.21	269.0	84	7.859	2362	1.18	17.70	0.02	0.15	10.10	.	.	.

STA	DEPTH (m)	PC (uM)	PN (uM)	PP (uM)	HUMIC ACID C (uM)	HUMIC ACID N (uM)	SESTON (mg/L)	Chl-a (ug/L)	APROD (mmol C/ sq m/day)	VPROD (umol C/ L/day)	LIGHT ATTEN -K(/m)	SECCHI DEPTH (cm)
OS4	24	.	.	.	.	.	.	2.04	.	.	.	.
OS4	50	.	.	.	.	.	.	.	.	.	.	.
OS5	1	.	.	.	.	.	.	0.14	.	.	.	.
OS5	21	.	.	.	.	.	.	0.29	.	.	.	.
OS5	34	.	.	.	.	.	.	0.61	.	.	.	.
OS5	95	.	.	.	.	.	.	.	.	.	.	.
OS6	1	10.1	0.58	0.02	8.3	0.4	.	0.17	.	.	.	.
OS6	30	.	.	.	.	.	.	0.31	.	.	.	.
OS6	44	.	.	.	.	.	.	0.62	.	.	.	.
OS6	64	.	.	.	.	.	.	0.18	.	.	.	.
OS6	170	.	.	.	.	.	.	.	.	.	.	.
OS6	261	.	.	.	.	.	.	.	.	.	.	.
OS6	988	.	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	0.4 Micrometer Filtered Dissolved Metals (nanomolar)											
		Mn	Fe-A	Fe-C	Fe-E	Co	Ni	Cu	Zn-A	Zn-E	Cd	Pb	As
OS4	24	.	.	.	.	0.02	5.11	.	.	.	0.55	0.319	.
OS4	50	.	.	.	.	0.64	5.96	5.04	.	7.2	0.61	0.294	.
OS5	1	.	.	.	.	0.14	8.01	13.85	.	11.8	0.28	0.179	.
OS5	21	.	.	.	.	0.31	9.20	10.39	.	11.9	0.20	.	.
OS5	34	.	.	.	.	0.02	3.75	4.72	.	4.6	0.14	0.174	.
OS5	95	.	.	.	.	.	.	.	.	.	.	.	.
OS6	1	.	.	.	.	0.03	7.67	12.75	.	13.9	0.28	0.333	.
OS6	30	.	.	.	.	0.29	.	7.40	.	8.3	0.24	0.193	.
OS6	44	.	.	.	.	0.14	3.58	3.46	.	6.3	0.08	0.193	.
OS6	64	.	.	.	.	.	.	.	.	.	.	.	.
OS6	170	.	.	.	.	.	.	.	.	.	.	.	.
OS6	261	.	.	.	.	.	.	.	.	.	.	.	.
OS6	988	.	.	.	.	.	.	.	.	.	.	.	.

STA	DEPTH (m)	CAST TYPE	DATE (mm/dd/yy)	LOCAL TIME	LATITUDE (deg min)	LONGITUDE (deg min)	DISTANCE TO CAPES (km)	WATER DEPTH (m)
OS4	24	CTD	07/19/84	1551	38 41.9 N	73 44.9 W	-114.3	.
OS4	50	CTD	07/19/84	1551	38 41.9 N	73 44.9 W	-114.3	.
OS5	1	CTD	07/19/84	1347	38 32.3 N	73 22.8 W	-149.1	.
OS5	21	CTD	07/19/84	1347	38 32.3 N	73 22.8 W	-149.1	.
OS5	34	CTD	07/19/84	1347	38 32.3 N	73 22.8 W	-149.1	.
OS5	95	CTD	07/19/84	1347	38 32.3 N	73 22.8 W	-149.1	.
OS6	1	CTD	07/19/84	0800	38 23.3 N	73 5.0 W	-178.5	.
OS6	30	CTD	07/19/84	0800	38 23.3 N	73 5.0 W	-178.5	.
OS6	44	CTD	07/19/84	0800	38 23.3 N	73 5.0 W	-178.5	.
OS6	64	CTD	07/19/84	0736	38 23.2 N	73 5.6 W	-177.7	.
OS6	170	CTD	07/19/84	0736	38 23.2 N	73 5.6 W	-177.7	.
OS6	261	CTD	07/19/84	0736	38 23.2 N	73 5.6 W	-177.7	.
OS6	988	CTD	07/19/84	0736	38 23.2 N	73 5.6 W	-177.7	.