

Phytoplankton, picophytoplankton, nanophytoplankton and bacterioplankton monitoring in the Western Isles Region of the Bay of Fundy during 2001-2002

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**Phytoplankton, Picophytoplankton, Nanophytoplankton and Bacterioplankton Monitoring
in the Western Isles Region of the Bay of Fundy during 2001-2002**

by

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ABSTRACT

Martin, J. L., M.M. LeGresley and W.K.W. Li. 2014. Phytoplankton, picophytoplankton, nanophytoplankton and bacterioplankton monitoring in the western Isles region of the Bay of Fundy during 2001-2002. Can. Tech. Rep. Fish. Aquat. Sci. 3075: vii + 108 p.

A monitoring program was initiated in May 1987 to study phytoplankton populations in the Western Isles region of the Bay of Fundy, southwest New Brunswick. This report provides another 2 yr of data to add to the results from 1987-2000 published previously. Samples were collected for phytoplankton distribution and abundance as well as plant nutrients (ammonia, nitrite, nitrate, phosphate and silicate) at five locations – Brandy Cove, Lime Kiln Bay, Deadmans Harbour, the Wolves Islands and mid Passamaquoddy Bay. From May to October, 2001, measurements of the picoplankton (including the cyanobacterium, *Synechococcus*, the nanophytoplankton, and the heterotrophic bacterioplankton) were also made at these five locations. Additional parameters measured included secchi depth, and depth profiles for fluorescence, temperature and salinity. Samples were collected at the surface from all locations and additional discrete depths of 10 m, 25 m, and 50 m at the Wolves Islands, and 5 m and 15 m depths were initiated in Lime Kiln as of June 2000.

Species observed at concentrations $\geq 10,000 \text{ cells} \cdot \text{L}^{-1}$ during both 2001 and 2002 were: *Alexandrium fundyense*, *Asterionellopsis glacialis*, *Chaetoceros debilis*, *Chaetoceros* spp., *Cylindrotheca closterium*, *Dactyliosolen fragilissimus*, *Dictyocha speculum*, *Ditylum brightwellii*, *Guinardia delicatula*, *Heterocapsa triquetra*, *Leptocylindrus danicus*, *Leptocylindrus minimus*, *Mesodinium rubrum*, *Pseudo-nitzschia delicatissima* group, *Pseudo-nitzschia seriata* group, *Skeletonema costatum*, *Thalassiosira nordenskioeldii* and *Thalassiosira* spp. There were seven species that occurred at concentrations greater than $100,000 \text{ cells} \cdot \text{L}^{-1}$ in 2001 and in 2002, there were eleven. *M. rubrum* and the *P. delicatissima* group have been observed at concentrations $> 10,000 \text{ cells} \cdot \text{L}^{-1}$ during all of the past 16 yr. Highest concentrations of *A. fundyense* (the organism responsible for producing paralytic shellfish toxins) observed during 2001 were $6.78 \times 10^4 \text{ cells} \cdot \text{L}^{-1}$ on July 17 while the highest densities recorded for 2002 were $1.52 \times 10^5 \text{ cells} \cdot \text{L}^{-1}$ on July 23.

During the 2 yr, the lowest temperature (0.8°C) was measured at Brandy Cove in 2002 while the highest temperature was recorded at the mid-Passamaquoddy Bay site (16.2°C) in 2002. Lowest salinities (24.64 psu) were measured at Brandy Cove. Silicate values ranged from 0.02 to $14.37 \mu\text{M}$; phosphate levels ranged from 0.26 to $1.56 \mu\text{M}$; ammonia ranged between 0.46 to $6.61 \mu\text{M}$; nitrate values were between 0.02 and $10.81 \mu\text{M}$ and nitrite values were between 0.04 and $0.87 \mu\text{M}$.

RÉSUMÉ

Martin, J.L., M.M. LeGresley and W.K.W. Li. 2014. Phytoplankton, picophytoplankton, nanophytoplankton and bacterioplankton monitoring in the Western Isles region of the Bay of Fundy during 2001-2002. Can. Tech. Rep. Fish. Aquat. Sci. 3075: vii + 108 p.

Un programme de surveillance a été lancé en mai 1987 pour étudier le phytoplancton de la région ouest de la Baie de Fundy, au sud-ouest du Nouveau-Brunswick. Ce rapport ajoute deux années de données aux résultats déjà publiés des années 1987-2000. Les échantillons d'eau pour la distribution et l'abondance de phytoplancton et de nutriments (silicate, phosphate, nitrate, nitrite et ammoniac) ont été prélevés à cinq emplacements (Brandy Cove, la baie Lime Kiln, Deadmans Harbour, près des îles Wolves et mi-baie Passamaquoddy). En plus, de mai à octobre 2001, le picoplancton (ce qui inclue la cyanobactérie, *Synechococcus*, le nanophytoplankton et le bactérioplancton hétérotrophe) a été analysé. Des paramètres additionnels tels que la profondeur du secchi, le profil en profondeur de la température, de la fluorescence et de la salinité ont été mesurés aussi. Aux cinq emplacements, les échantillons ont été prélevés à la surface ainsi qu'à 10 m, 25 m et 50 m aux îles Wolves et à 5 m et 15 m à la baie Lime Kiln commençant en juin 2000.

Les espèces principales ($\geq 10,000 \text{ cellules} \cdot \text{L}^{-1}$) pendant les deux années 2001-2002 étaient: *Alexandrium fundyense*, *Asterionellopsis glacialis*, *Chaetoceros debilis*, *Chaetoceros* spp., *Cylindrotheca closterium*, *Dactyliosolen fragilissimus*, *Dictyocha speculum*, *Ditylum brightwellii*, *Guinardia delicatula*, *Heterocapsa triquetra*, *Leptocylindrus danicus*, *Leptocylindrus minimus*, *Mesodinium rubrum*, complexe *Pseudo-nitzschia delicatissima*, complexe *Pseudo-nitzschia seriata*, *Skeletonema costatum*, *Thalassiosira nordenskioeldii* et

Thalassiosira spp. En 2001, sept espèces ont été observé en concentrations $>100\,000$ cellules•L⁻¹ tandis qu'en 2002 on en rencontre onze espèces. Le complexe *P. delicatissima* et *M. rubrum* ont été observés en concentrations $>10\,000$ cellules•L⁻¹ pendant les 16 dernières années. Les concentrations maximales d'*Alexandrium fundyense* (l'organisme responsable de l'intoxication paralysante par les mollusques) atteignaient 6.78×10^4 cellules•L⁻¹ le 17 juin, 2001 et 1.52×10^5 cellules•L⁻¹ le 23 juillet, 2002.

Pendant ces deux années, la température minimale (0.8°C) a été observée à Brandy Cove tandis que la température maximale (16.2°C) a été notée à la station mi-baie Passamaquoddy ces deux extrêmes survenant en 2002. La salinité minimale (24.67) a eu lieu à Brandy Cove. La teneur en silicate variait de 0.02 à 14.37 µM; en nitrate de 0.02 à 10.81 µM; en phosphate de 0.24 à 1.56 µM; en ammoniac de 0.46 à 6.61 µM; et en nitrite de 0.04 à 0.87 µM.

INTRODUCTION

A phytoplankton monitoring program was introduced in the southwestern New Brunswick portion of the Bay of Fundy in 1987. The study was initiated due to growing concerns that the incidents involving harmful algal blooms (HABs) seemed to be increasing in intensity, frequency and geographic distribution throughout the world (Anderson 1989; Smayda 1990; Hallegraeff 1993, 2010; Fu et al. 2012). Incidences such as fish mortalities, especially those held captive in net pens, have also been growing. Some of these increases can be attributed to increased awareness both in the scientific and public communities, as well as the increased use of inshore coastal waters for aquaculture, tourism and other activities.

The purposes of the phytoplankton study when it was initiated were to: establish baseline data on phytoplankton populations because little detailed work had been published since earlier studies by Gran and Braarud (1935); identify harmful algal species that could potentially cause harm to the aquaculture industry; provide an early warning to the industries by sorting and identifying samples soon after collection; and determine patterns and trends in phytoplankton populations. The intent was also to determine whether there are environmental changes as a result of the Atlantic salmon (*Salmo salar*) aquaculture industry. In addition, the monitoring could provide an early warning to regulatory agencies such as the Canadian Food Inspection Agency (CFIA) for the occurrences of species that produce toxins resulting in shellfish toxicities and closures of shellfish beds to harvesting.

HABs have been known to affect fish through neurotoxins, gill damage (mechanically or through the production of hemolytic substances) or altering dissolved oxygen levels (Anderson et al. 2001). Farmed fish are particularly vulnerable to harmful phytoplankton blooms because they do not have the luxury of being able to swim away to avoid blooms. Adverse effects can include mortality or loss of growth. Due to the economic consequences, monitoring can give fish farmers warning so they can adjust harvesting schedules, delay the entry of smolts and/or modify feeding schedules (Chang et al. 2005).

Although the majority of phytoplankton species occur in the environment without causing adverse effects, there are a few that are known to cause harm. For example, in the Bay of Fundy, *Alexandrium fundyense* and *Pseudo-nitzschia pseudodelicatissima* are species responsible for

producing toxins associated with the syndromes paralytic shellfish poisoning (PSP) and amnesic shellfish poisoning (ASP or domoic acid poisoning). In these cases, shellfish that had been feeding on harmful species accumulate toxins with no obvious effects to the shellfish themselves. The toxins are then stored in their tissues and when the shellfish are eaten by vertebrate consumers, including humans, illness and, in some cases death, can result. PSP toxins and resulting shellfish toxicity have been around in the Bay of Fundy for hundreds of years (Prakash et al. 1971, Martin and Richard 1996) and both our studies and PSP shellfish toxicity results show that *A. fundyense* occurs annually (Martin and White 1988; Martin et al. 1999, 2001, 2006a).

Domoic acid was first detected in shellfish in the Bay of Fundy in 1988 and the causative species was determined to be *P. pseudodelicatissima* (Martin et al. 1990; Haya et al. 1991). During this event, the shellfish harvesting areas affected were located in Passamaquoddy Bay. It was not until 1995 that shellfish beds were closed again in the Bay of Fundy as a result of unacceptable levels of domoic acid and, in this case, the areas affected were outside Passamaquoddy Bay (Martin et al. 1998).

A. fundyense has not only been responsible for human illnesses as a result of PSP, but it has also affected fisheries. For example, in 1976 and 1979, hundreds of tonnes of Atlantic herring, *Clupea harengus harengus*, died from PSP toxins that the herring had accumulated through the food chain (White 1980). Atlantic salmon (*Salmo salar*) in net pens were affected by PSP toxins in the Bay of Fundy in 2003 and 2004 (Martin et al. 2006b; 2008; Burridge et al. 2010). In 1987, 14 humpback whales died after feeding on mackerel (*Scomber scombrus*) that had eaten zooplankton that in turn had fed on *A. fundyense* (MacKenzie 1988; Haya et al. 1990). There has been the suggestion that right whales feeding on contaminated zooplankton in Grand Manan Basin could potentially experience a decrease in respiratory capabilities, feeding behaviour and reproductive condition (Durbin et al. 2002).

Results from the earlier years of the monitoring program have been published previously (Wildish et al. 1988, 1990; Martin et al. 1995, 1999, 2001, 2006a). This report presents results from analyses of phytoplankton, plant nutrients, temperature and salinity during the 2 yr, 2001 and 2002.

In 2001, the phytoplankton monitoring program was expanded to encompass measurements

of (i) picophytoplankton - including the cyanobacterium *Synechococcus*, (ii) nanophytoplankton and (iii) heterotrophic bacterioplankton. This document also reports the time series of these measurements from May to October, 2001 at the 5 stations: Brandy Cove, mid Passamaquoddy Bay, Deadmans Harbour, Lime Kiln Bay and the Wolves Islands.

MATERIALS AND METHODS

The number of sampling sites in the southwest New Brunswick area of the Bay of Fundy has changed since the program started in 1987. Initially, 12 sites were sampled with 10 located in the Letang area, where the majority of the aquaculture sites were located at that time, and the remaining two sites located in Harbour de Lute (Campobello Island), in close proximity to another aquaculture site. The following year, the number of sampling sites expanded to 18, with additional sites in Passamaquoddy Bay around Deer Island, Deadmans Harbour and the offshore site at the Wolves Islands. In 1992, sampling was reduced, due to financial constraints, to the four stations that continue to be monitored today (Fig. 1). These include: Brandy Cove (#17 – a brackish site influenced by the Saint Croix River), Lime Kiln Bay (#3 – Letang estuary where a number of aquaculture sites are located), Deadmans Harbour (#15 – an open bay with offshore influence), and the Wolves Islands (#16 – an offshore indicator site). An extra sampling site (#25) was added in mid-Passamaquoddy Bay in 1999 following observations of brick-red patches of water.

Sampling was conducted during the 2 yr, 2001 and 2002, aboard the research vessel, PANDALUS III. Weekly samples were collected from May 1 to October 2 in 2001 and from May 16 to September 24 in 2002. Biweekly sampling was conducted in the month of October and monthly during all other months during both years.

A Seabird Model 25 was used to collect vertical profiles of temperature, salinity and fluorescence at each site. Salinity results are reported on the Practical Salinity Scale (PSU) (1980).

Phytoplankton, small zooplankton, microbial plankton and nutrient samples were collected at the surface by bucket from all five stations and at depths of 10 m, 25 m, and 50 m with a Niskin bottle at station #16. During the summer months a 10 m vertical plankton haul was made with a 20- μm mesh net, 0.3 m in diameter. A subsample

was preserved with formalin:acetic acid (1:1 by volume) for further identification and examination by scanning electron microscope (SEM). In addition, a live sample was taken for identification and culture of selected organisms. Live phytoplankton samples were immediately iced for the return trip to the laboratory.

Samples collected for ammonia, nitrate, nitrite, phosphate and silicate content were frozen immediately and later analysed at the Bedford Institute of Oceanography using a Technicon Autoanalyzer II as described by Strain and Clement (1996).

Sample information was recorded including date, location, depth; and an independent identification number was assigned at the time of collection. Information was entered, maintained and accessed in a database. Individual net haul results and individual depth profiles from the Seabird profiler were stored separately.

Water samples (250 mL) were immediately preserved with 5 mL formalin:acetic acid. Later, 50-mL subsamples were settled in Zeiss counting chambers for 16 h. All phytoplankton greater than 5 μm were identified and enumerated (as cells•L⁻¹) using a Nikon inverted microscope. Further identification was done using either a JEOL JSM-5600 SEM or a Hitachi S-2400 SEM. Sample preparation for SEM was as follows: samples were rinsed with 250 mL distilled water (prefiltered 1.3 μm) onto a 3- μm (Poretics) polycarbonate filter using a 25-mm Millipore vacuum filtration apparatus. Diatoms were cleaned with the permanganate oxidation method (Hasle and Fryxell 1970) while samples with thin walls and/or unarmoured dinoflagellates were dehydrated in a series of ethanol solutions (20, 50, 70, 85, 95%) prepared with distilled water and absolute ethanol for a minimum of 10 min at each step, finishing with three rinses of 100% ethanol. For the final drying step, three changes of hexamethyldisilazane (HMDS) were used (Bray et al. 1993; Kaczmarska et al. 2000), a minimum of 10 min each, allowing the last rinse to evaporate slowly at room temperature. Filters were mounted on stubs, and then coated with gold-palladium in a Hummer sputtering system.

For species identification purposes, the *P. delicatissima* group included species of both *P. pseudodelicatissima* and *P. delicatissima*; the *P. seriata* group included the species *P. multiseries*, *P. pungens* and *P. seriata*. *Alexandrium fundyense* cells included all its life cycle stages, and if different

stages in its life cycle were observed, they were recorded separately as well. Its life cycle stages include: duplets or triplets (asexually dividing cells) that are observed early in the bloom, fusing (sexual division where two cells fuse together), planozygotes (large cells formed from the fusing cells) and cysts or resting spores.

Microbial plankton were placed into cryogenic vials, preserved in paraformaldehyde (1%) and stored at -80°C. Flow cytometric analyses of phytoplankton and bacterioplankton were performed using standard protocols (Li and Dickie 2001). Phytoplankton were detected by autofluorescence from cellular chlorophyll. Cells of equivalent spherical diameter (ESD) less than 2 µm were classified as picophytoplankton. In this size category, some cells also emitted orange fluorescence - indicating presence of phycoerythrin: these cells were designated as *Synechococcus* (cyanobacteria). Cells of ESD greater than 2 µm but less than 20 µm were classified as nanophytoplankton. Additionally, a distinction was made between small nanophytoplankton (less than 10 µm) and large nanophytoplankton (greater than 10 µm).

Bacterioplankton were detected by green fluorescence after staining with the DNA-binding fluorochrome SYBR Green 1.

RESULTS

There were a total of 31 and 28 sample days in 2001 and 2002, respectively.

PHYTOPLANKTON (including small zooplankton)

Numbers of samples analyzed for phytoplankton density were 236 in 2001 and 202 in 2002. During the 2 yr, 171 species of phytoplankton and smaller zooplankton were identified in addition to a listing of groups where species were not identified such as armoured dinoflagellates, unarmoured dinoflagellates, centric and pennate diatoms, ciliates, copepods and tintinnids (Appendix 1). Identification and enumeration results for phytoplankton are listed in Appendix 2. Organisms that were observed at concentrations greater than 10,000 cells•L⁻¹ during the 2 yr are listed in alphabetical order in Table 1.

Table 1. Organisms detected at levels greater than 10,000 cells•L⁻¹. * levels greater than 100,000 cells•L⁻¹, ** greater than 1,000,000 cells•L⁻¹

2001

- Alexandrium fundyense*
- Asterionellopsis glacialis* *
- Ceratium lineatum*
- Chaetoceros contortus*
- Chaetoceros debilis*
- Chaetoceros* spp. (Hyalochaete)
- Cylindrotheca closterium*
- Dactyliosolen fragilissimus*
- Dictyocha speculum*
- Ditylum brightwellii*
- Guinardia delicatula**
- Heterocapsa triquetra**
- Leptocylindrus danicus**
- Leptocylindrus minimus*
- Mesodinium rubrum*
- Phaeocystis pouchetii*
- Pseudo-nitzschia delicatissima* group*
- Pseudo-nitzschia seriata* group
- Rhizosolenia* spp.
- Scrippsiella trochoidea*
- Skeletonema costatum**
- Thalassiosira nordenskioeldii**
- Thalassiosira* sp. (tiny)
- Thalassiosira* spp. *

2002

- Alexandrium fundyense**
- Armoured dinoflagellate
- Asterionellopsis glacialis*
- Cerataulina pelagica*
- Chaetoceros debilis**
- Chaetoceros furcellatus*
- Chaetoceros socialis**
- Chaetoceros* spp. (Hyalochaete)*
- Cylindrotheca closterium*
- Dactyliosolen fragilissimus**
- Detonula confervacea*
- Dictyocha speculum*
- Dinobryon* spp.
- Ditylum brightwellii*
- Ebria tripartita*
- Eucampia zodiacus**
- Eutreptiella* sp.
- Guinardia delicatula*
- Gyrodinium aureolum*
- Heterocapsa triquetra*

<i>Leptocylindrus danicus</i> **
<i>Leptocylindrus minimus</i> *
<i>Mesodinium rubrum</i>
<i>Pseudo-nitzschia delicatissima</i> group
<i>Pseudo-nitzschia seriata</i> group*
<i>Scrippsiella</i> sp.
<i>Skeletonema costatum</i>
<i>Thalassiosira gravida</i>
<i>Thalassiosira nordenskioeldii</i> *
<i>Thalassiosira</i> spp.*
Tintinnida
Unarmoured dinoflagellate

Species observed at concentrations $\geq 10\,000 \text{ cells} \cdot \text{L}^{-1}$ during both 2001 and 2002 were: *Alexandrium fundyense*, *Asterionellopsis glacialis*, *Chaetoceros debilis*, *Chaetoceros* spp., *Cylindrotheca closterium*, *Dactyliosolen fragilissimus*, *Dictyocha speculum*, *Ditylum brightwellii*, *Guinardia delicatula*, *Heterocapsa triquetra*, *Leptocylindrus danicus*, *Leptocylindrus minimus*, *Mesodinium rubrum*, *Pseudo-nitzschia delicatissima* group, *Pseudo-nitzschia seriata* group, *Skeletonema costatum*, *Thalassiosira nordenskioeldii* and *Thalassiosira* spp. Note that *M. rubrum* was also observed at concentrations high enough to discolour the water at locations not included in our five sampling sites. There were seven species that occurred at concentrations greater than $100,000 \text{ cells} \cdot \text{L}^{-1}$ in 2001. In 2002, there were 11 species observed at concentrations greater than $100,000 \text{ cells} \cdot \text{L}^{-1}$ and one with numbers greater than one million – *L. danicus* ($1.19 \times 10^6 \text{ cells} \cdot \text{L}^{-1}$ on Sept. 3). These numbers from 2002 were the highest observed since sampling was initiated in 1988 (Table 2). Additionally, the highest concentrations of *Chaetoceros* spp., *C. socialis*, *Thalassiosira* spp. and *T. nordenskioeldii* were found at depths in some instances.

The intensity of the *A. fundyense* blooms (the PSP toxin producer) was observed at concentrations greater than $10,000 \text{ cells} \cdot \text{L}^{-1}$ during the 4 yr 1993-96 but during 1997 and 1998, the highest concentrations observed were 8200 and 6720 $\text{cells} \cdot \text{L}^{-1}$. These low concentrations persisted through 1999 and 2000 with 3.2×10^3 and $2.5 \times 10^3 \text{ cells} \cdot \text{L}^{-1}$, respectively. Although *A. fundyense* cells are observed annually, the intensity of the bloom varies greatly from year to year. During most years, blooms are initiated in late May to early June with highest numbers observed in mid-July. In 2001, cells were first observed at Brandy Cove, mid-Passamaquoddy Bay, Deadmans Harbour, and Lime Kiln Bay on May 1 and also at the Wolves Islands on May 7. Highest

concentrations ($6.8 \times 10^4 \text{ cells} \cdot \text{L}^{-1}$) were detected on July 17 at Deadmans Harbour (Fig. 2). Where sampling was conducted at discrete depths at the Wolves, few cells were detected at depth as is consistent with other *A. fundyense* studies in the Bay of Fundy (Martin et al. 2005). Cells persisted in the region throughout the fall and into mid-October of 2001. During 2002, *A. fundyense* was detected on February 12 at the Wolves Islands and numbers began to increase in mid-April with highest concentrations ($1.52 \times 10^5 \text{ cells} \cdot \text{L}^{-1}$) observed on July 23 at Deadmans Harbour (Fig. 2). Cells persisted through late September. Figure 3 shows *A. fundyense* concentrations from the four continuously monitored stations since 1988 with highest numbers observed in 1989, a decreasing trend from 1996-2000 and cells beginning to be more abundant again in 2001-02.

Table 2. Number of species $\geq 10,000$ and $100,000 \text{ cells} \cdot \text{L}^{-1}$ (1988-2002).

Year	greater than 10,000	greater than 100,000
1988	11	1
1989	17	6
1990	19	6
1991	16	3
1991	16	3
1992	9	1
1993	12	3
1994	15	4
1995	13	3
1996	12	2
1997	12	3
1998	11	3
1999	12	3
2000	25	7
2001	24	7
2002	33	11

Although there are a number of *Pseudo-nitzschia* species in the Bay of Fundy (Kaczmarcka et al. 2005), the *Pseudo-nitzschia* species have been sorted into 2 groups because of difficulty in differentiating them with the light microscope. The *P. delicatissima* group refers to a number of different species that are difficult to differentiate without the use of an electron microscope because of their small size in width (1.5-2.0 μm). They include *P. pseudodelicatissima* and *P. delicatissima*. The *P. seriata* group includes *P. fraudulenta*, *P. multiseries*, *P. pungens*, *P. seriata* and *P. subpacifica*.

Table 3. Greatest number of species observed on any one sampling day during each year (1988-2002). * Only Lime Kiln Bay was sampled in 1987. **Passamaquoddy Bay sampling site was added in 1999.

Year	Date of maximum species count	Maximum species count from all 5 stations**	Maximum species count from 4 stations
1987*	1987-06-30		40
1988	1988-09-21		65
1989	1989-06-28		79
1990	1990-09-04		72
1991	1991-07-09		59
1992	1992-06-24		53
1993	1993-08-10		61
1994	1994-08-30		66
1995	1995-09-20		65
1996	1996-06-25		63
1997	1997-10-01		68
1998	1998-09-08		69
1999	1999-06-15	78	74
2000	2000-08-28	87	84
2001	2001-06-26	95	94
2002	2002-08-27	90	88

The highest numbers of species observed on any one sample day during each year are shown in Table 3. The high number of species also contributed to the degree of difficulty in analyzing samples and increased analysis time per sample.

PICOPLANKTON

In general, a similar pattern of seasonal variation was observed in the picophytoplankton (Fig. 4) - including the cyanobacterium *Synechococcus* (Fig. 5), the small nanophytoplankton (Fig. 6), the large nanophytoplankton (Fig. 7), and the heterotrophic bacterioplankton (Fig. 8). The abundance of cells in each of these groups increased from spring to summer. With some exceptions, maximum values were reached in mid-September near the autumn equinox. The order of magnitude in abundance ($\text{cells}\cdot\text{mL}^{-1}$) were: 10^6 for bacterioplankton, 10^4 for picophytoplankton and *Synechococcus*, 10^3 for small nanophytoplankton and 10^2 for large nanophytoplankton. For all cell groups, the abundances were higher at Brandy Cove and mid-Passamaquoddy Bay than at the other 3 stations: Deadmans Harbour, Lime Kiln Bay and the Wolves Islands.

At Lime Kiln Bay, there was no systematic variation of cell abundance with depth (Fig. 9), suggesting a well-mixed water column to 15 m. On the other hand, at the Wolves Islands, cell abundances were systematically lower at depths greater than 10 m (Fig. 9), suggesting water stratification (to varying degrees) through the period of observation.

The seasonal dynamics of phytoplankton and bacterioplankton are well-described for the Bedford Basin, Nova Scotia (Li and Dickie, 2001). From the present data, it appears that the phytoplankton in the southwest New Brunswick part of the Bay of Fundy undergo a similar seasonal cycle. The increase of phytoplankton (including *Synechococcus*) from spring to the autumn equinox is parallel between Bedford Basin and Brandy Cove (Fig. 10). On the other hand, bacteria are less abundant in the Bay of Fundy than in the highly eutrophic Bedford Basin (Fig. 10).

SALINITY

Salinity results for the 2 yr period are presented in Appendix 3. Lowest values were

measured at the surface at Brandy Cove (24.67 psu) on April 16, 2002. Highest salinity values were measured at #16, the Wolves with 33.19 psu near the bottom on October 9, 2002. Salinity values ranged from 26.85-32.91 in 2001 and 24.67-33.19 psu in 2002.

TEMPERATURE

Appendix 3 shows surface water temperature results for Lime Kiln Bay (#3), Deadmans Harbour (#15), the Wolves (#16), Brandy Cove (#17) and mid Passamaquoddy Bay (#25) and also at depths for the Wolves from 2001-02. Temperatures ranged from 2.5 (Deadmans Harbour, February 13) to 15.1°C (mid-Passamaquoddy Bay, September 18) in 2001 and 0.8 (Brandy Cove, February 12) to 16.2°C (mid-Passamaquoddy Bay, August 20) in 2002. Figure 11 shows temperature results from the Wolves Islands and Brandy Cove between 1988-2002.

NUTRIENT ANALYSES

Nutrient results are located in Appendix 3. Silicate values ranged from 0.02 (Station #25 - mid Passamaquoddy Bay, July 10, 2001) to 14.37 µM (Station #17 - Brandy Cove, March 12, 2002). Phosphate ranged from 0.26 (Station #16- the Wolves, July 9, 2002) to 1.56 µM (Station #16- the Wolves, September 24, 2001). Ammonia levels ranged from 0.46 (Station #16 – the Wolves, August 20, 2002) to 6.61 µM (Station #17- Brandy Cove, July 24, 2001). Nitrate + nitrite ranged from 0.02 (Station #16 - the Wolves, June 19, 2001) to 10.81 (Station #15 – Deadmans Harbour, December 5, 2002). Nitrite values were between 0.04 (Station #15 – Deadmans Harbour, July 17, 2001) to 0.87 (Station #17 – Brandy Cove, October 9, 2002).

Nitrate, ammonia and silicate values for Lime Kiln Bay and the Wolves are plotted on Figures 12-14.

Maximum winter nitrate concentrations in the surface layer ($z = 0$ m) for the 2 yr exhibited a very small range in the region, from 10.25 µM at Lime Kiln to 10.81 µM at Deadmans Harbour. The minimum summer concentrations were also reasonably uniform, varying from 0.02 µM at The Wolves to 1.05 µM at Lime Kiln, but there are some differences in the time periods over which nitrate levels stayed very low. Figure 12 show plots of nitrate levels at Lime Kiln Bay and the Wolves. The lowest values at Lime Kiln Bay never persisted for

more than a single sample: these low values may have depended on the stage of the tide at the time of sampling. At the Wolves, very low values persisted for longer periods, especially in the summer of 2001. The other stations exhibited similar summer behaviour to that seen at the Wolves, although the minimum concentrations were slightly higher at Brandy Cove than at the Wolves. Figure 12 also shows interannual differences in these trends. Data from samples collected at depth at the Wolves indicate that summer concentrations increase with increasing depth, with nitrate concentrations almost always greater than 5 µM at 50 m, showing that stratification is well established at this site further offshore in the summer.

Ammonia concentrations (Fig. 13) are not available for as complete a time series as the other nutrients, but the data available did not show a clear seasonal pattern. In general, surface concentrations were lower at the Wolves, Deadmans Harbour and mid-Passamaquoddy Bay (1-2 µM) than elsewhere, with higher values usually found in Lime Kiln Bay and Brandy Cove (not shown). Highest ammonia values were detected at Brandy Cove on July 21, 2001. The rapid fluctuations in ammonia concentrations in Lime Kiln Bay may indicate the importance of local ammonia sources and the stage of the tide in determining the ambient concentrations.

Nitrite concentrations (not shown) were low, and exhibited similar patterns throughout the region. Once again, concentrations were lower in summer than in winter, but the differences were small: typical summer levels were ~0.1 µM; typical winter levels ~ 0.25 µM. Higher concentrations (up to 0.53 µM at Deadmans Harbour and 0.87 µM at Brandy Cove) were seen at all stations in the fall of 2002 than at any other period during these 2 yr.

The seasonal trends in phosphate were similar to those for nitrate. Winter maxima varied from 1.17 µM at Brandy Cove to 1.56 µM at Deadmans Harbour; summer minima from 0.26 at Deadmans Harbour to 0.46 µM at Lime Kiln Bay. However, summer concentrations of phosphate do not become close to zero as they do for nitrate.

Summer silicate minima (0.02 µM at mid-Passamaquoddy Bay to 0.85 µM at Brandy Cove), like those of nitrate, were also very low, but not as uniform. Winter maxima for silicate varied over a wide range (Fig. 14). Maximum values at Deadmans Harbour, the Wolves and Lime Kiln Bay were 9.77, 9.77 and 10.59 µM, respectively, and values of 10.55 and 14.37 µM were measured at Passamaquoddy and

Brandy Cove. These higher values may be due to local river inputs. Dalziel et al. (1998) reported very variable silicate river concentrations for local rivers: they measured values as high as 10 µM in the St. Croix and Magaguadavic Rivers, and as high as 39 µM in the Digdeguash River.

DISCUSSION

In general terms, the nutrient results showed typical seasonal cycles for inshore temperate waters. Nitrate, phosphate and silicate were highest in the winter, were depleted by the spring phytoplankton blooms, and then replenished by vertical mixing that accompanied the breakdown of stratification in the late fall. However, there are some features of these distributions that are specific to the Bay of Fundy, and there are differences between the different monitoring stations.

The majority of phytoplankton and smaller zooplankton occur in the Bay of Fundy without causing adverse effects. Prior to 1988, the species of major concern was *A. fundyense*, which is responsible for producing PSP toxins which can result in unsafe levels of toxins in shellfish. It was a well established fact that shellfish harvesting areas would be closed to harvesting at some time during the year – generally during the summer months (Prakash et al. 1971). Shellfish are monitored for toxins at regular intervals by the CFIA (through a program initiated in 1944 that is now one of the longest continuous datasets of its kind in the world). Records indicate that shellfish in the Bay of Fundy become toxic every year. This is not surprising as the presence of very few cells in a plankton net haul or as few as 200 cells•L⁻¹ can result in PSP toxins at a detectable level in shellfish from an adjacent area. Unfortunately, in the early stages of setting up the monitoring program, the wild blue mussel (*Mytilus edulis*) industry was closed to harvesting in 1944 and has never reopened. Data from this monitoring program, as well as toxin uptake and depuration studies, indicate that during a good part of the year it would be possible to harvest mussels that would be safe for consumption and below the regulatory limit for harvesting. In recent years, a carefully regulated cultured blue mussel industry has been established through the Integrated Multi-Trophic Aquaculture (IMTA) program (Haya et al. 2004; Lander et al. 2012). Certain regions, such as Passamaquoddy Bay are potential sites for mussel culture as the numbers of *A. fundyense* tend to be lower than in other areas more exposed to offshore waters and higher concentrations of *A. fundyense* cells.

Fish kills were experienced in the late 1970s as a result of PSP toxins that had gone through the food chain and ultimately killed hundreds of tonnes of herring held captive in herring weirs. Also, in the mid-1980s, PSP toxins were detected in mackerel and implicated in whale mortalities. However, results from the monitoring program indicate that the mid to late 1990s have been years with low concentrations of *A. fundyense*, although in 2001-02 the numbers tend to reflect an increasing trend again. Results from the monitoring program indicate that numbers since 1987 have been considerably lower than the high concentrations observed in the late 1970s and in 1980 when concentrations as high as one million cells•L⁻¹ were observed (Martin and White 1988). A number of parameters such as environmental data, phytoplankton community structure, and trend analyses are being examined to further understand this pattern.

Red tides caused by the organism *M. rubrum* were observed in Passamaquoddy Bay during late summer in 2001 and 2002. During these red-water events, brick-red patches of cells were observed drifting through some salmon farms. *M. rubrum* concentrations observed in water samples collected from waters with discolouration during the two years exceeded one million cells•L⁻¹ and resulted in the salmon aquaculture industry being impacted by algal blooms again in northern Passamaquoddy Bay when low level mortalities were observed (Martin et al. 2007). Although red tides of *M. rubrum* had been observed in this area in previous years, the number of aquaculture operations in the area was minimal; however, numbers of sites increased in the fall of 1997 as a result of sites relocating from the Lime Kiln Bay area.

Prior to the expansion of the aquaculture industry into the Passamaquoddy Bay area, it was perceived that *M. rubrum* blooms and associated red water in the area were not toxic and did not cause harm. However, as a result of the high concentrations that have drifted through the net pens in the region, it has been suggested that *M. rubrum* may contribute to stress and mortalities through secondary effects such as asphyxiation due to oxygen depletion (Martin et al. 2001), or perhaps excess oxygen (R.H. Peterson, St. Andrews, NB, pers. commun.). Affected salmon exhibited symptoms of stress associated with low or excess oxygen resulting from a combination of the red tide, decreased currents and elevated temperatures. Oceanographic processes controlling phytoplankton dynamics in the area indicate that upper Passamaquoddy Bay waters are suitable for high primary production and the generation of red

tides as a result of the area being shallow, warm, having low flushing rates and showing stratification in August (Trites and Garrett 1983; Fred Page, Biological Station, 531 Brandy Cove Road, St. Andrews, NB E5B 2L9, pers. commun.). This phenomenon of water discolouration as a result of high concentrations of *M. rubrum* has been observed in both the presence and absence of aquaculture – for example, red-water sightings prior to 2001 were observed during 1975, '77, '79, '89, '93, '98, '99, and 2000 (White et al. 1977; Jennifer Martin, Biological Station, 531 Brandy Cove Road, St. Andrews, NB E5B 2L9, pers. commun.). Although results from the Brandy Cove monitoring site indicate that *M. rubrum* occurs annually in the region, it was found that it rarely forms dense aggregates in the Saint Croix River; therefore, the mid-Passamaquoddy Bay site has been better suited to studying northern Passamaquoddy Bay blooms.

Species that have been observed in the Bay of Fundy that have been known to cause problems elsewhere in Canada or the world include: *Dinophysis* spp. (Fernández et al. 1998), *Prorocentrum* spp. (Lawrence et al. 1998; Levasseur et al. 2003) (diarrhetic shellfish toxins); *C. convolutus*, *C. concavicornis* (Horner et al. 1990, 1997), *Gyrodinium aureolum* (Dahl and Tangen 1990, 1993; Romdhane et al. 1998) and *L. minimus* (Clément and Lembeye 1993; Albright 1993) (salmon mortalities). Although these species are known to occur each year in the Fundy region, there have not been any documented incidents of harmful effects to date.

The *P. delicatissima* group of cells, which includes *P. pseudodelicatissima* and *P. delicatissima*, has been observed at concentrations greater than 10,000 cells•L⁻¹ during each year of the sampling. Records from 1987-2002 show that concentrations exceeding one million chains of cells•L⁻¹ in 1988 and 1995 were associated with domoic acid production (when shellfish exceeded the regulatory limit for domoic acid). Highest concentrations observed in the 2-yr period of this study were 1.97 x 10⁵ cells•L⁻¹ at the surface at Deadmans Harbour on September 13, 2001. The next highest value observed was 1.89 x 10⁵ cells•L⁻¹ at the surface at the Wolves on September 24, 2001.

Although our measurements of the microbial plankton were limited to only 6 months in 2001, they nevertheless confirm 2 general tenets: namely that small cells are the numerical dominants in most planktonic ecosystems, and that the picoplanktonic *Synechococcus* is apparently ubiquitous outside of

polar seas. The remarkable seasonal coherence of picophytoplankton variation across coastal sites in the Maritimes region (Bay of Fundy, Bedford Basin) strengthens the suggestion that water temperature may be strongly driving the annual cycle of picophytoplankton abundance (Li et al. 2006).

Unfortunately we are unable to predict phytoplankton densities from year to year. We are, however, able to provide an early warning to industry and regulatory agencies of the progress of a particular bloom. Results have shown that it is important to understand that every species is unique and information particular to one species cannot be applied to another – especially when trying to determine mitigation measures. Monitoring indicates wide interannual variation in density of populations and the necessity to monitor, at the very least weekly, in order to provide an early warning. In addition, as industries expand and new industries are introduced, environmental monitoring is essential.

In the future, should fish pens be located in areas prone to red tides, we recommend monitoring during the period when red tides are common. For this particular region, this is generally in late summer. For areas with little historical data, if water discoloration is observed, monitoring should be initiated. Identification of the causative organism is essential as every species is unique and behavioral patterns can differ according to species and geographic location. As the upper Passamaquoddy Bay is susceptible to red tides, it is recommended that if net pens are located in these waters that phytoplankton be monitored, at minimum, on a weekly basis and authorized personnel notified of water discoloration for research and advice on mitigation techniques. Results of the monitoring program indicate that phytoplankton is an essential component to be measured. Additional knowledge of the physical oceanography of the area would contribute towards better understanding events such as bloom initiation, transport and decay.

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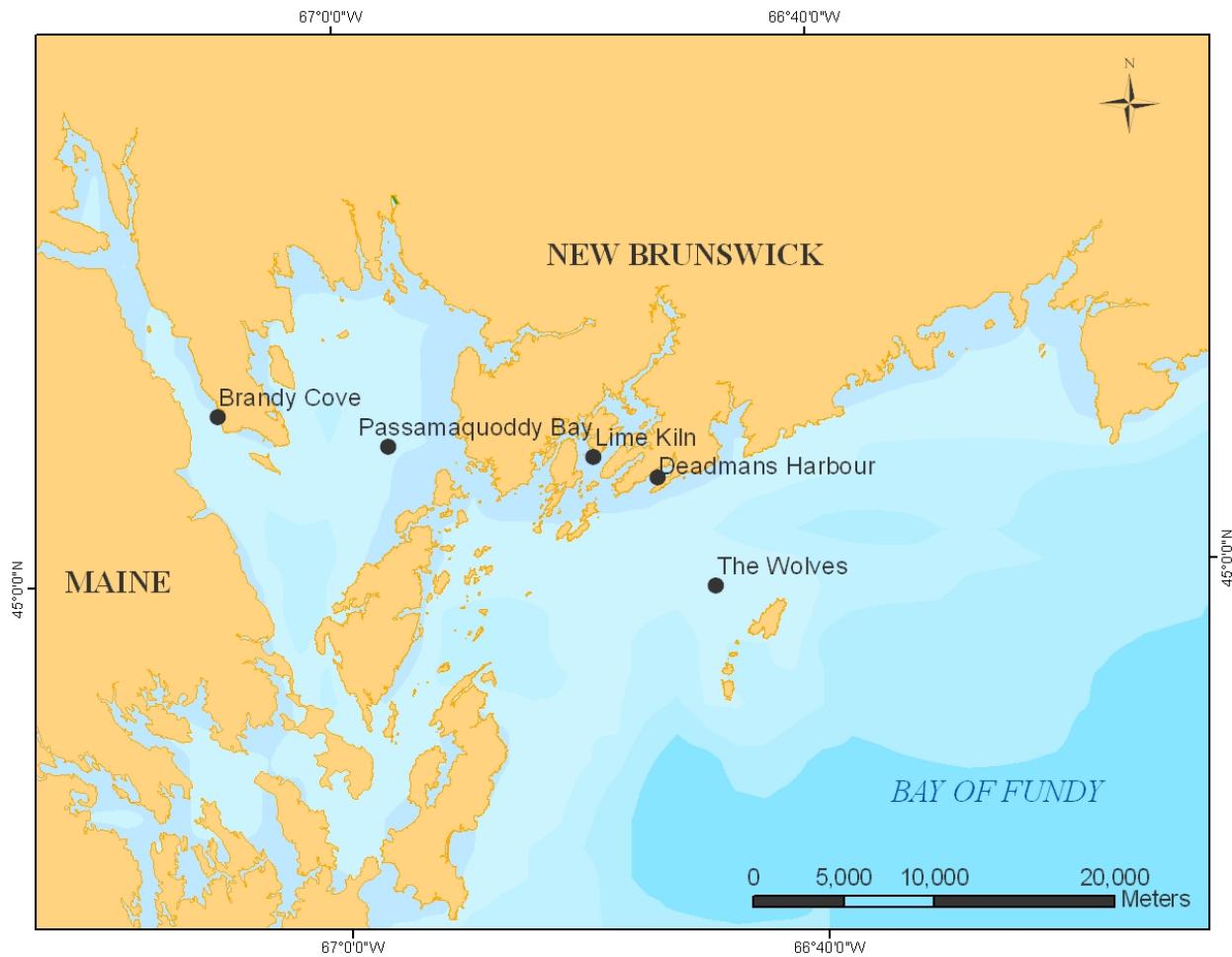


Fig. 1. Map showing the five sampling stations: Brandy Cove (#17), Passamaquoddy Bay (#25), Lime Kiln Bay (#3), Deadmans Harbour (#15) and The Wolves (#16).

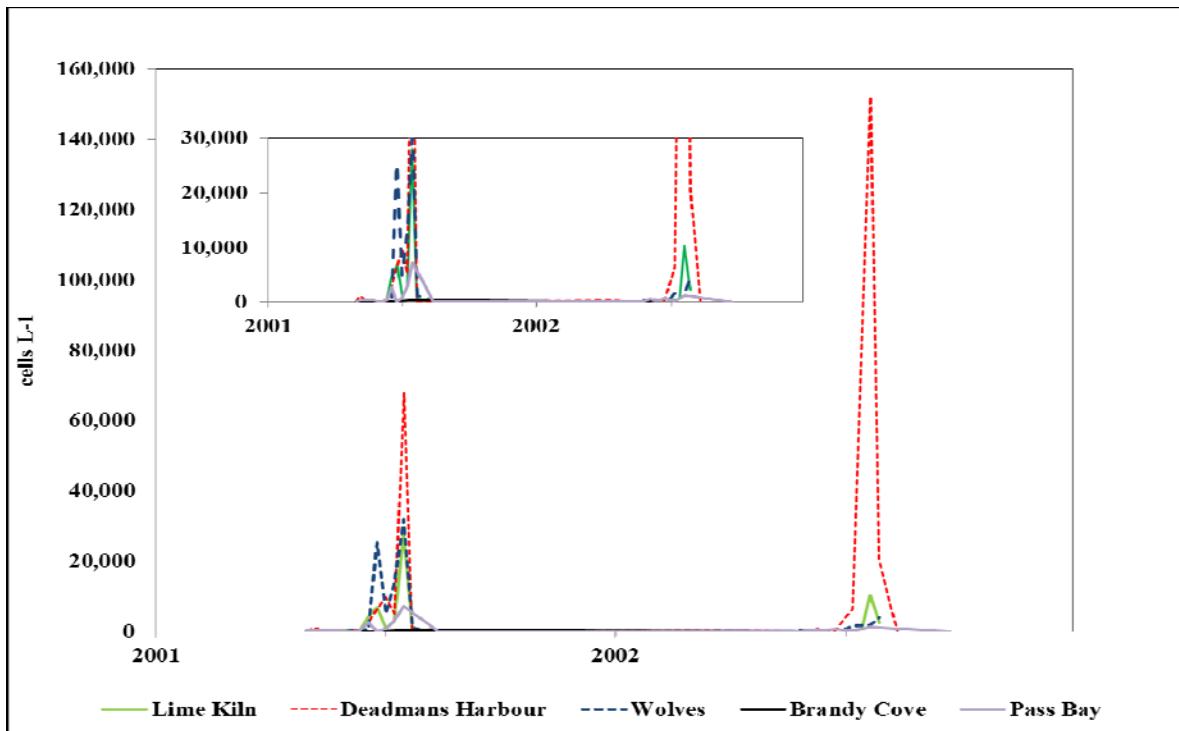


Fig. 2. *Alexandrium fundyense* concentrations (in cells•L⁻¹) from the 5 stations (2001-02). Insert map shows expanded scale.

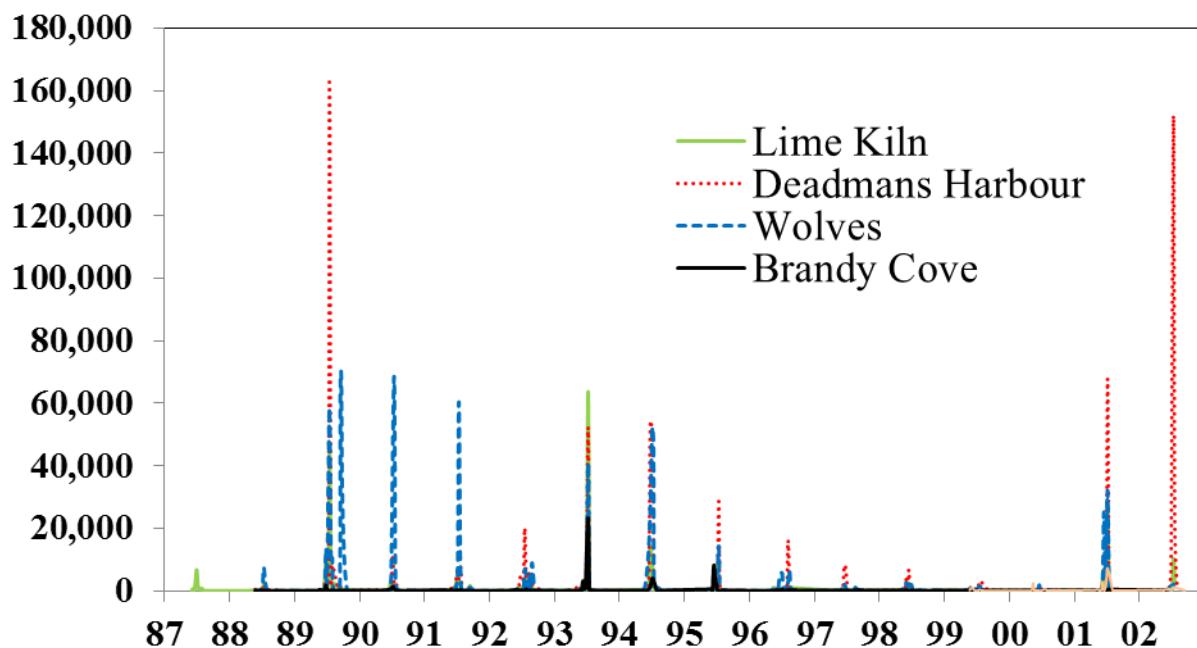


Fig. 3. *Alexandrium fundyense* concentrations (in cells•L⁻¹) from the 4 stations (1988-2002).

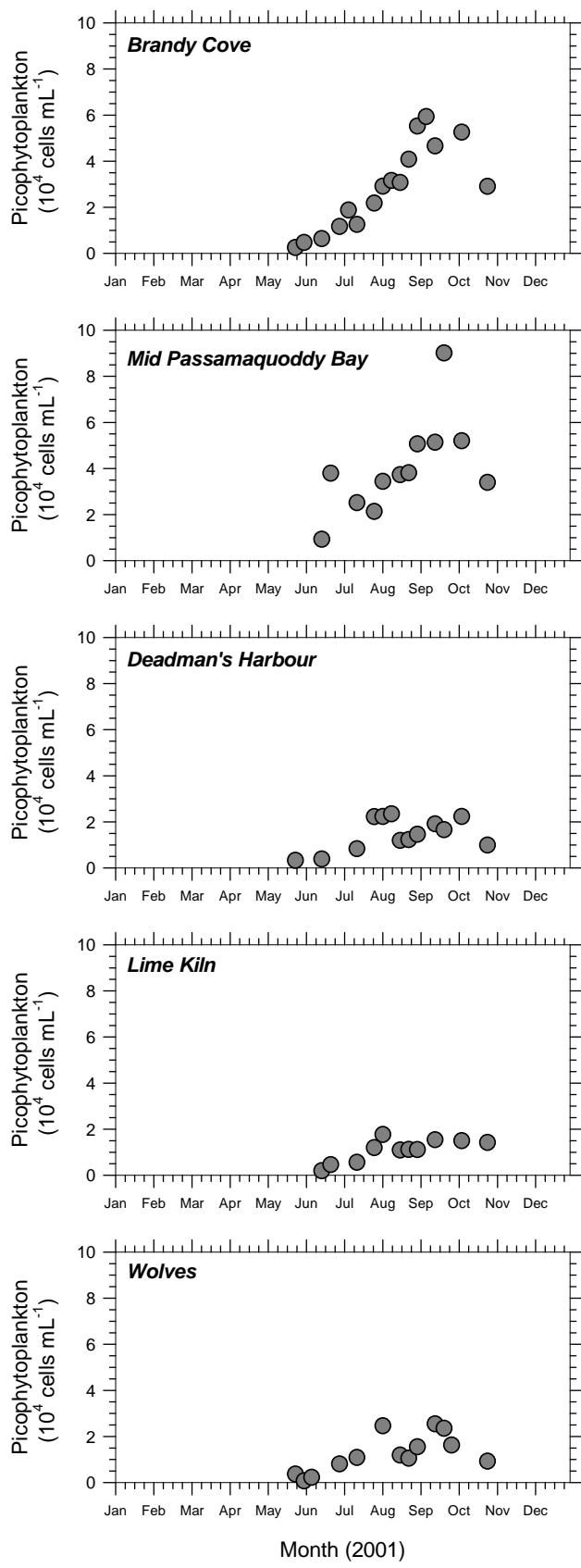


Fig. 4. Picophytoplankton ($<2 \mu\text{m}$ ESD) at $z = 0 \text{ m}$ in 2001.

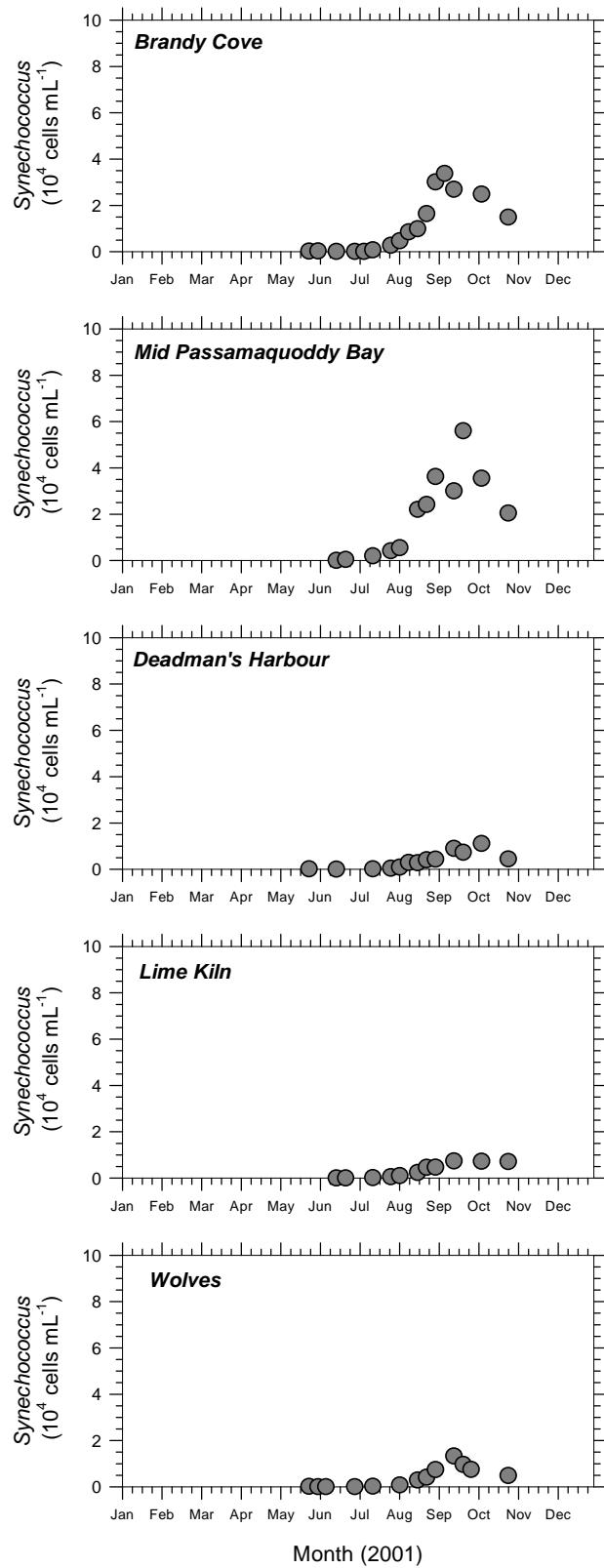


Fig. 5. *Synechococcus* at $z = 0$ m in 2001.

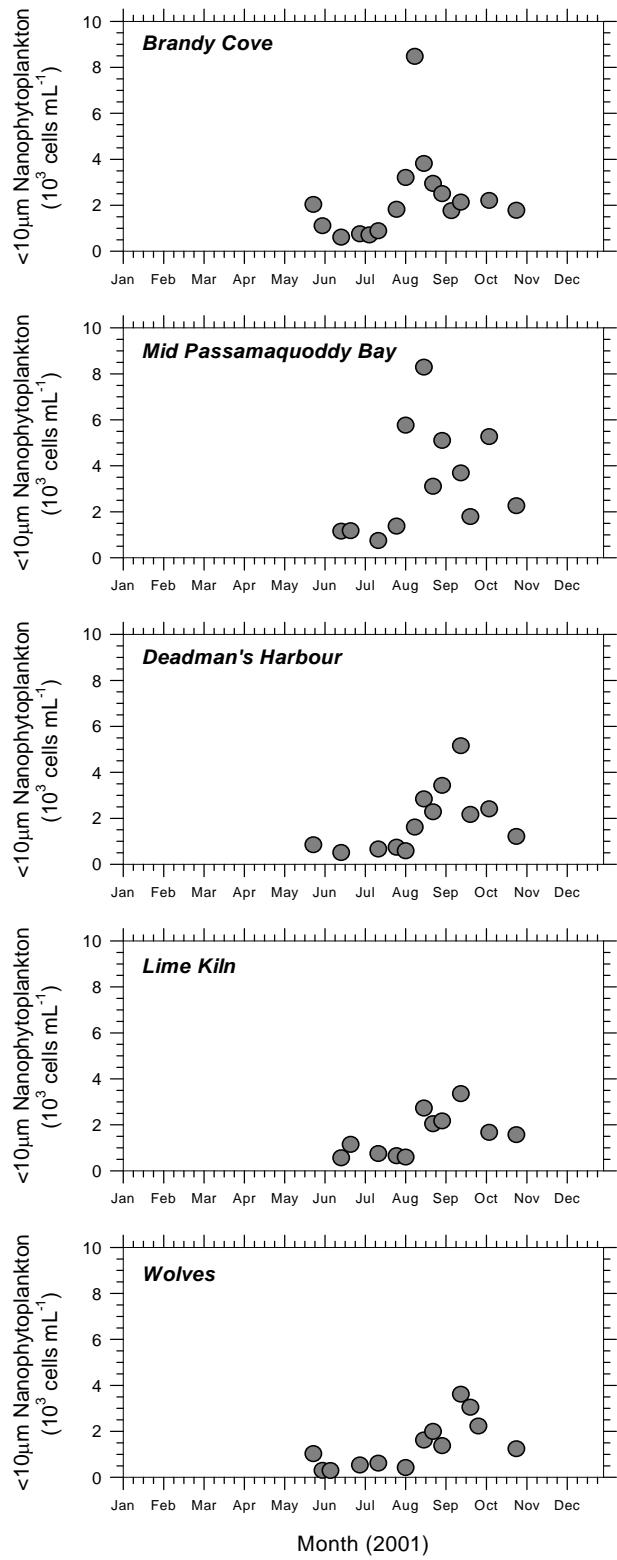


Fig. 6. Small nanophytoplankton ($>2 \mu\text{m}$, $<10 \mu\text{m}$ ESD) at $z = 0 \text{ m}$ in 2001.

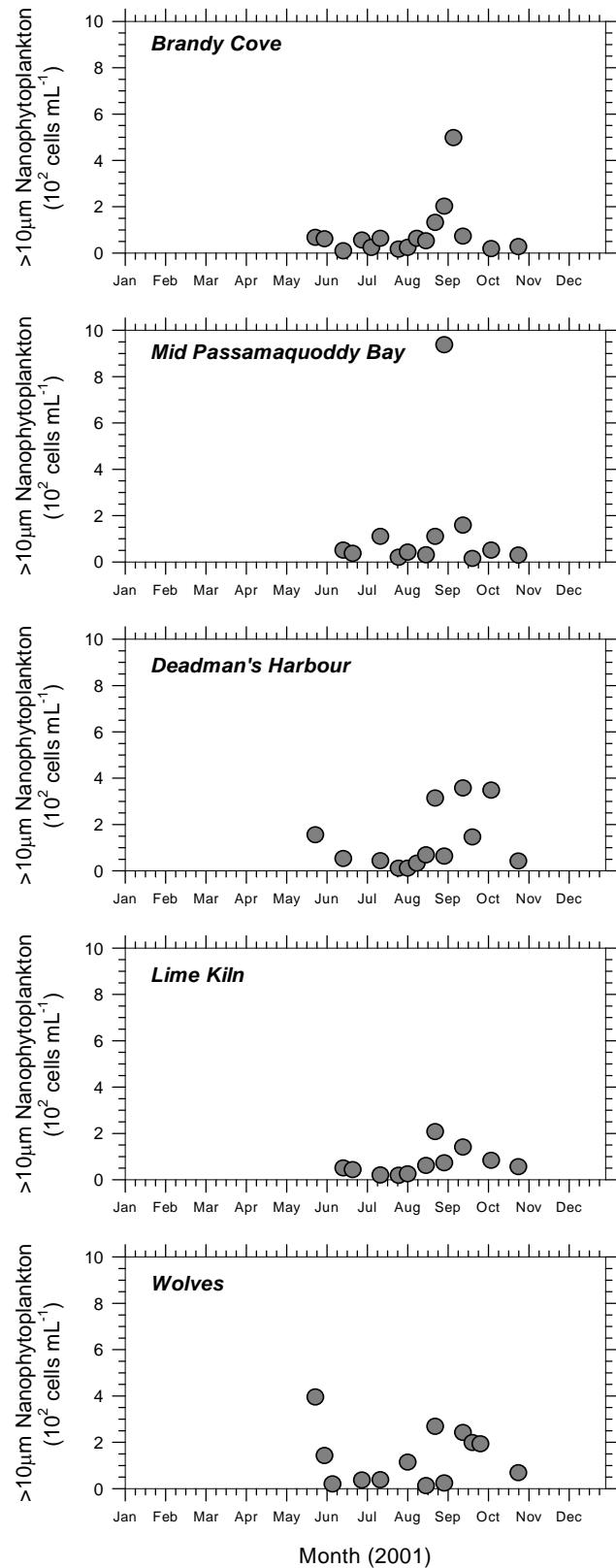


Fig. 7. Large nanophytoplankton ($>10 \mu\text{m}$, $<20 \mu\text{m}$ ESD) at $z = 0 \text{ m}$ in 2001.

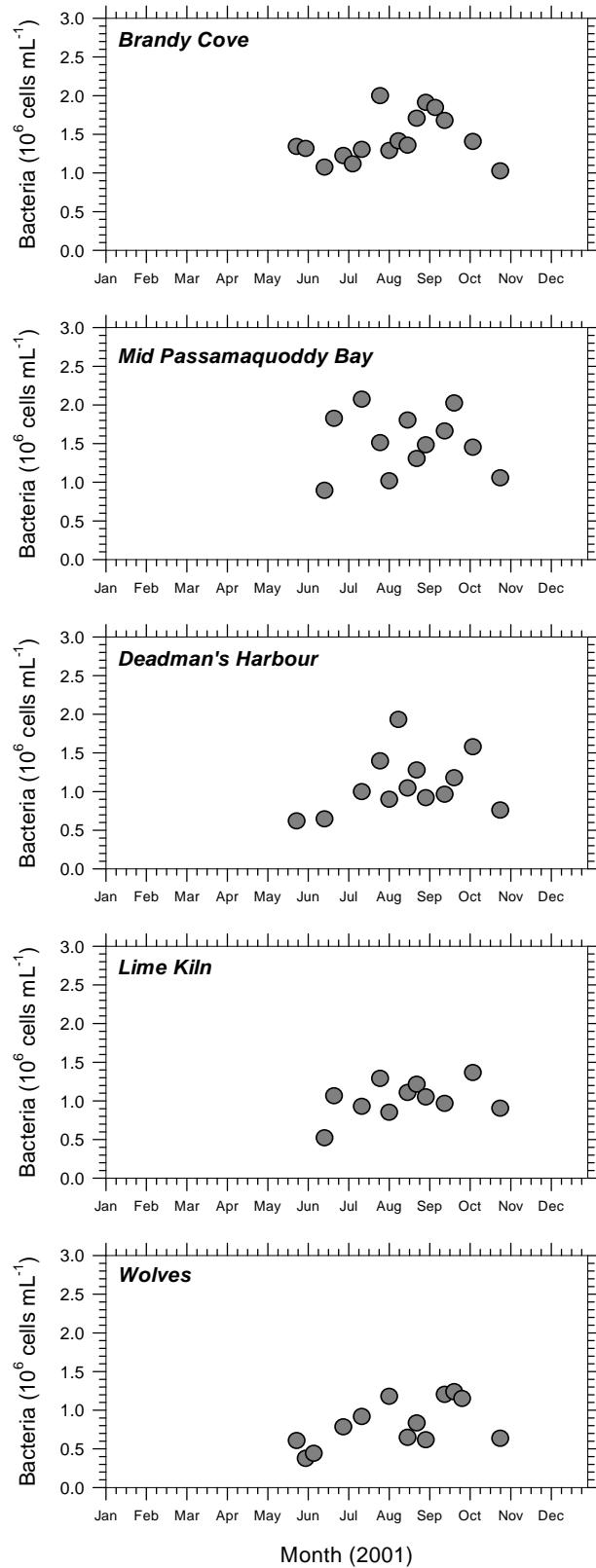
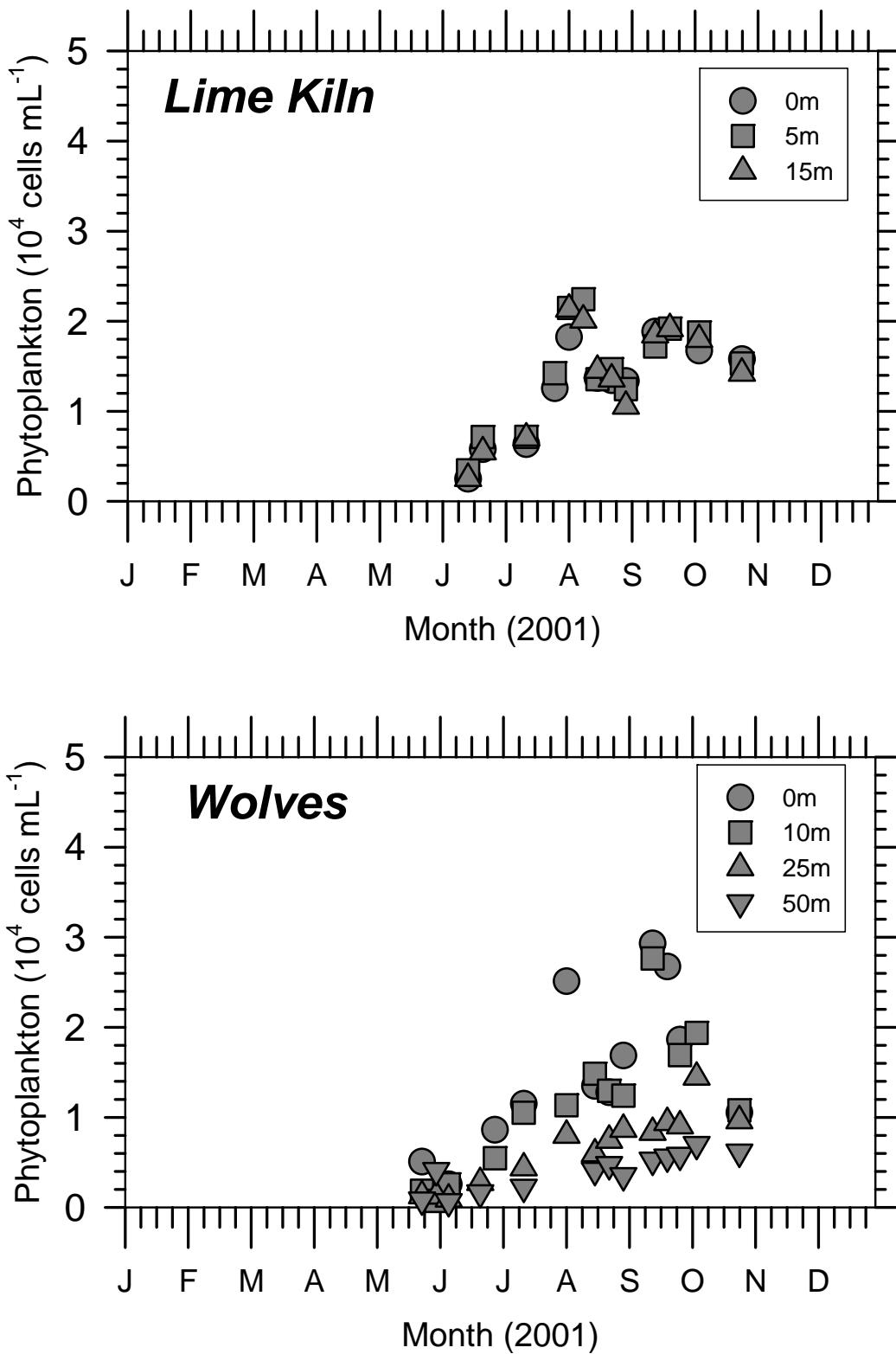


Fig. 8. Bacterioplankton at $z = 0\text{m}$ in 2001.

Fig. 9. Depth variation of phytoplankton ($<20 \mu\text{m}$ ESD) in 2001.



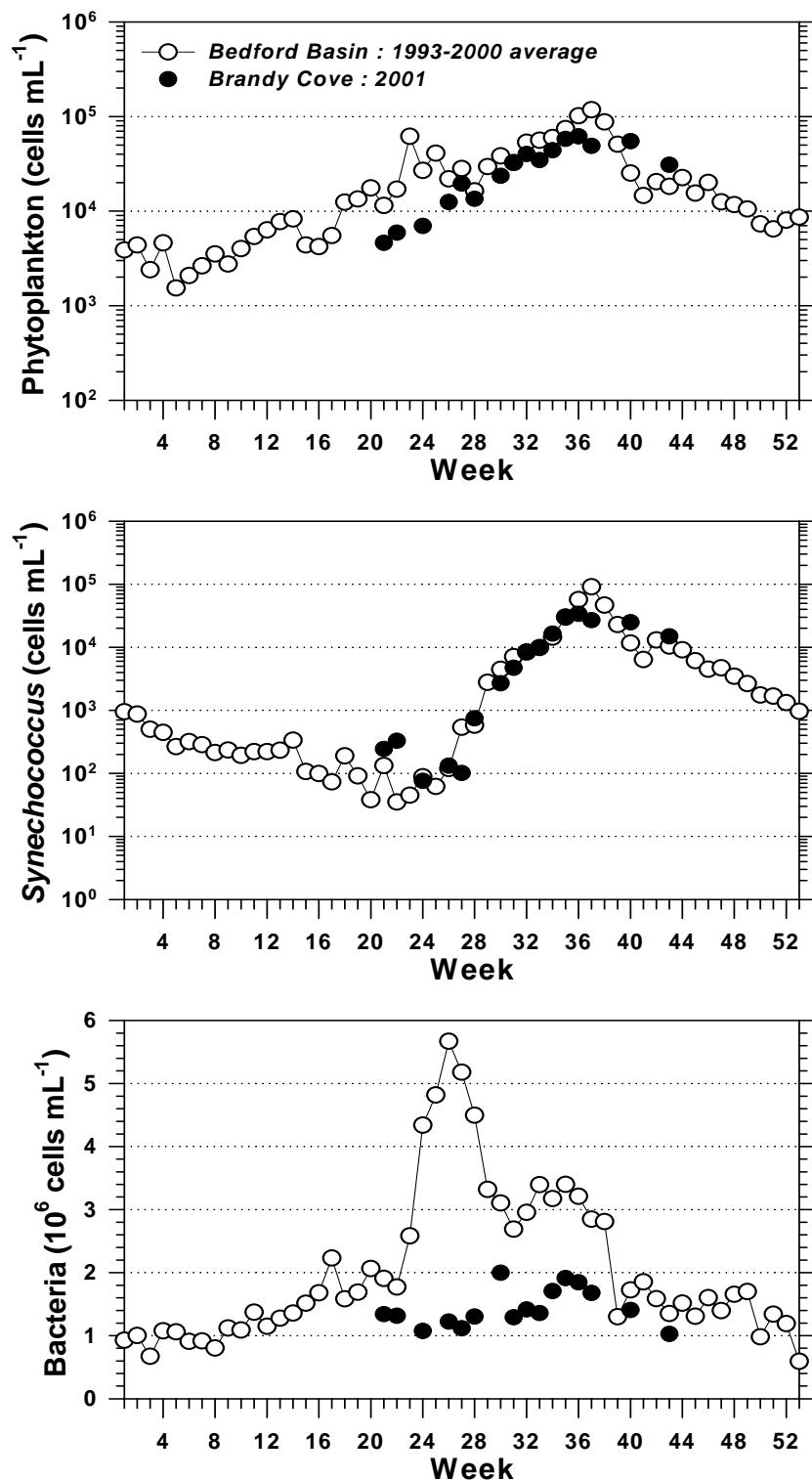


Fig. 10. Seasonal variations of phytoplankton (<20 μm ESD), *Synechococcus*, and bacterioplankton in Brandy Cove during 2001 compared to average values in Bedford Basin, Nova Scotia.

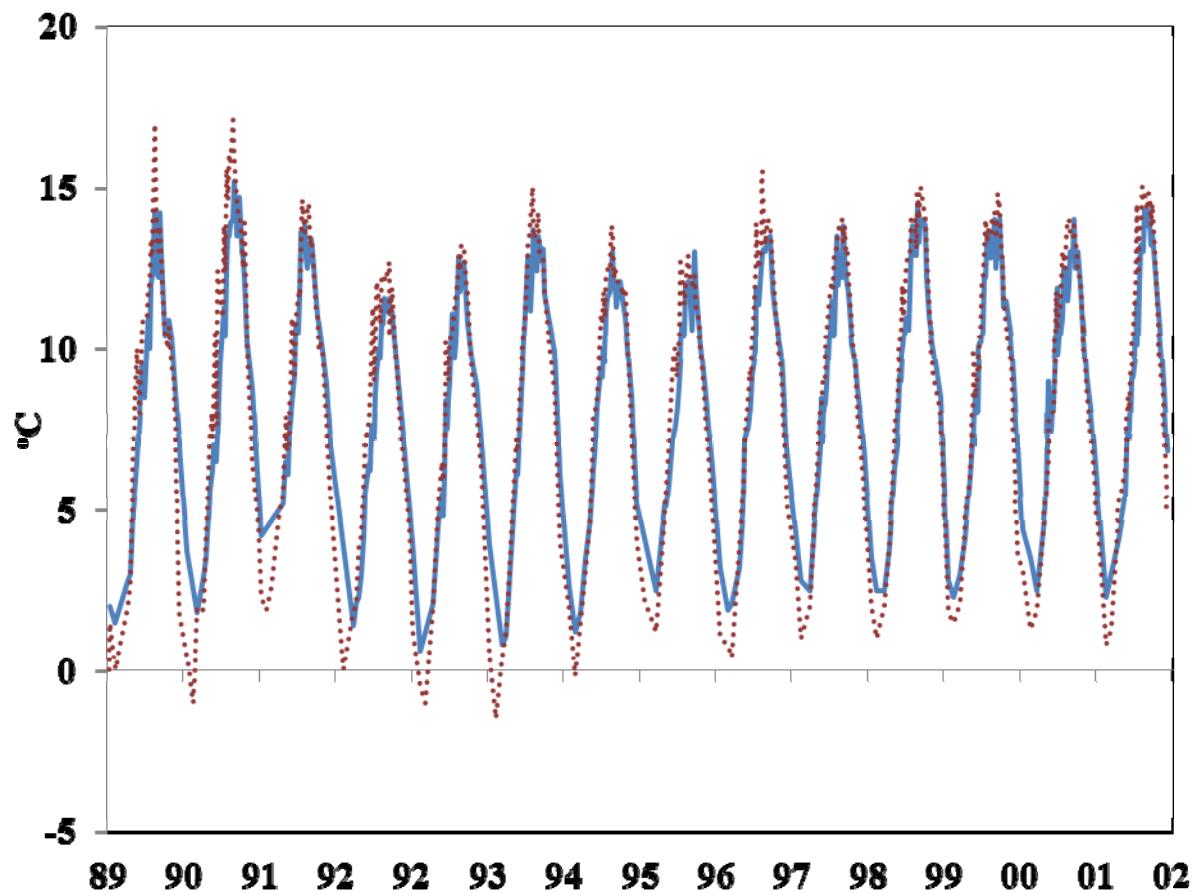


Fig. 11. Temperatures from Brandy Cove (-----) and the Wolves (—) by year (1988-2002).

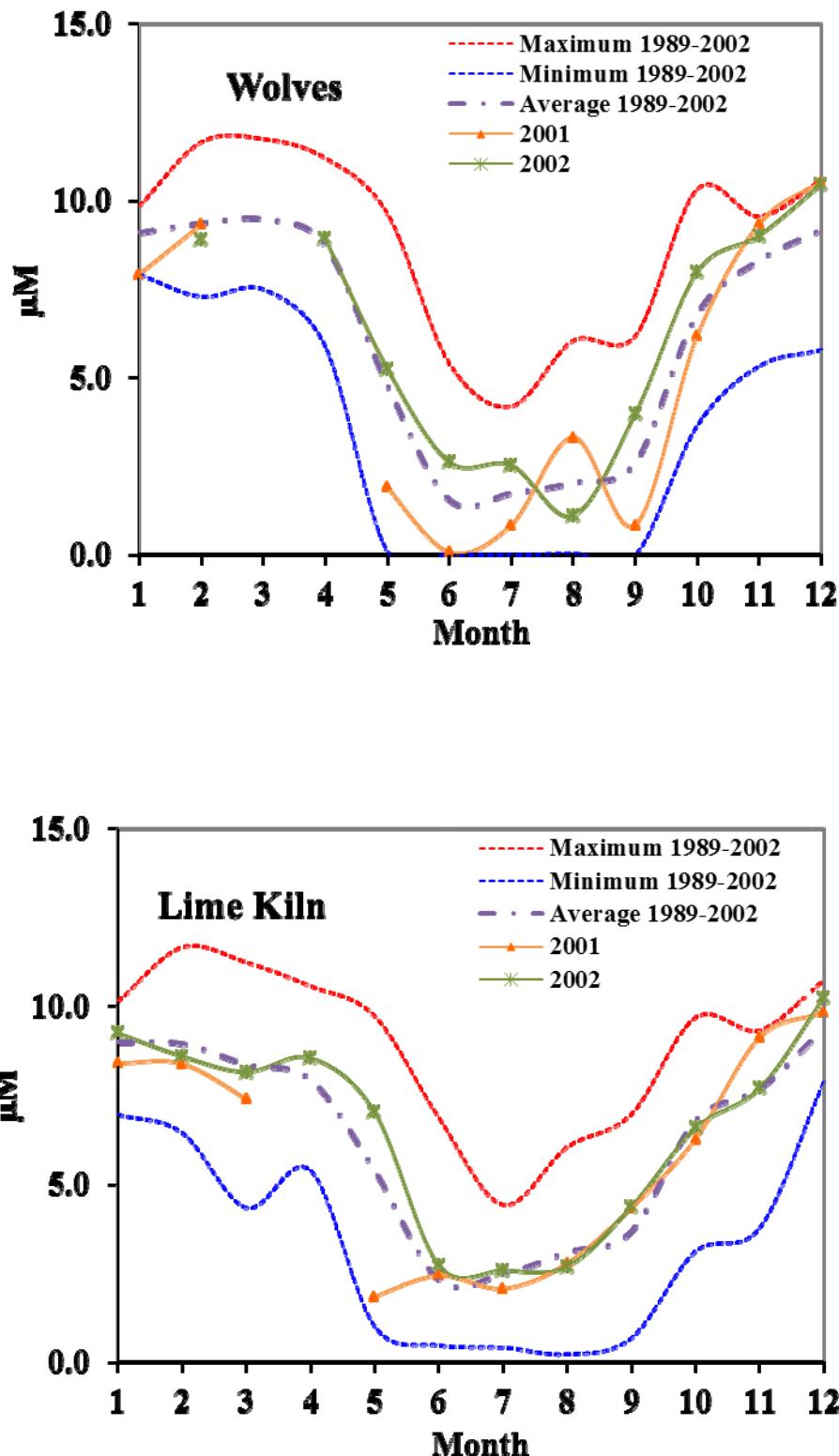


Fig. 12. Nitrate values from Lime Kiln Bay and The Wolves by month.

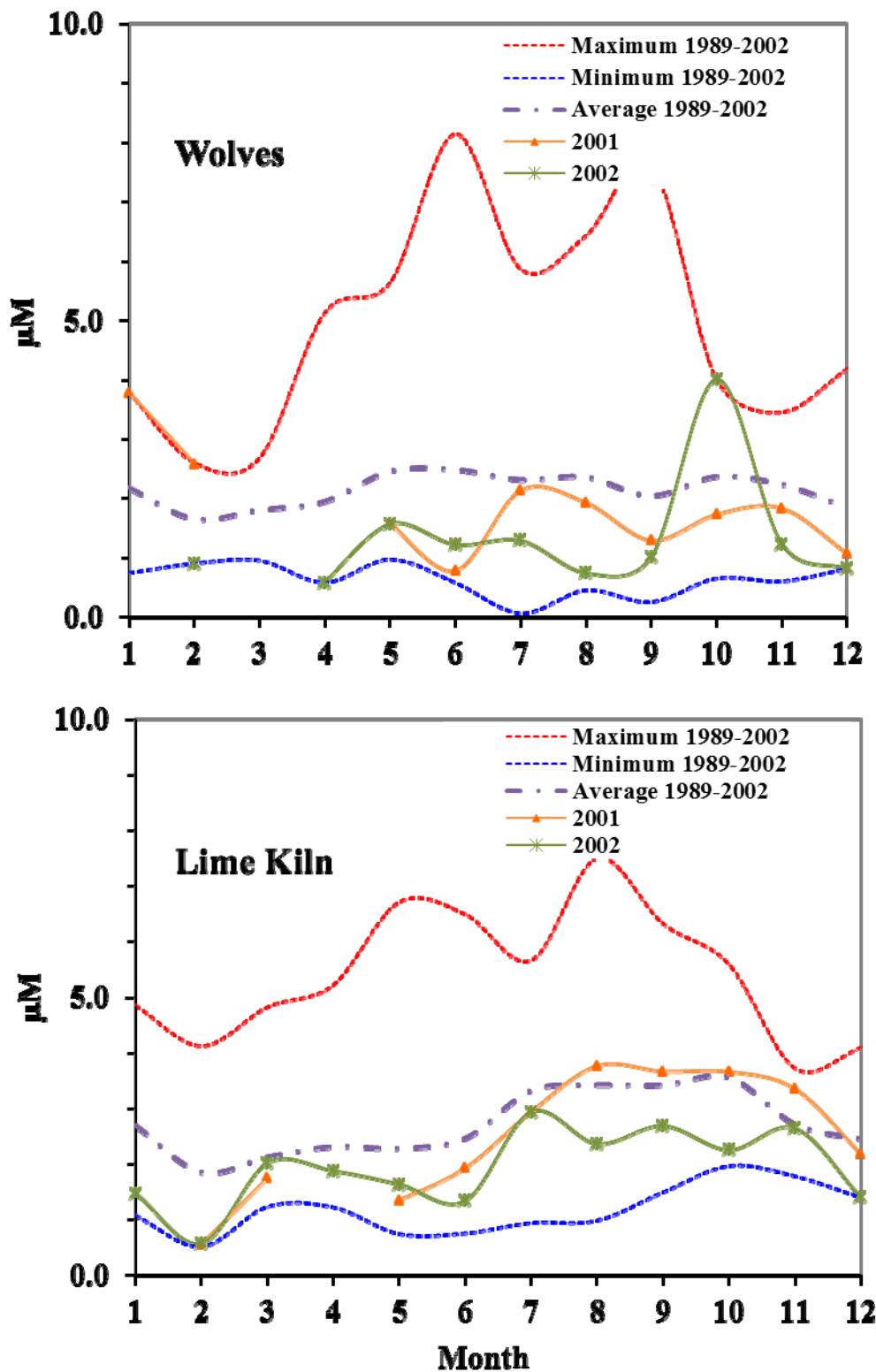


Fig. 13. Ammonia values from Lime Kiln Bay and The Wolves by month.

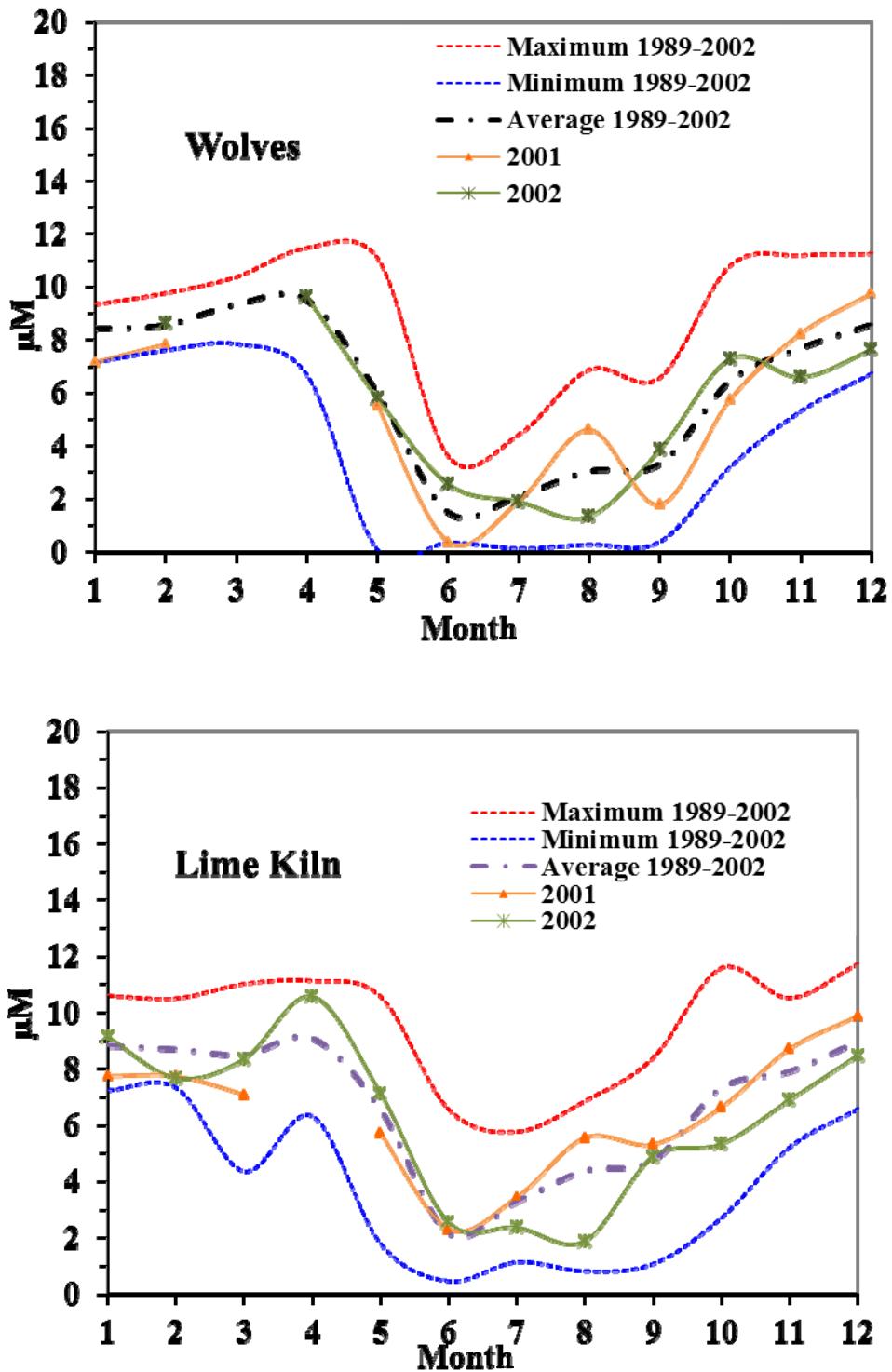


Fig. 14. Silicate values from Lime Kiln Bay and The Wolves by month.

Appendix 1. Species observed during 2001 and 2002.

Species (2001-2002)	Authority
<i>Achnanthes</i> sp.	Bory
<i>Actinoptychus senarius</i>	(Ehrenberg)
<i>Alexandrium fundyense</i>	Balech
<i>Alexandrium ostenfeldii</i>	(Paulsen) Balech & Tangen
<i>Alexandrium pseudogonyaulax</i>	(Biecheler) Horiguchi,Yuki & Fukuyo
<i>Alexandrium</i> spp.	(Biecheler) Horiguchi,Yuki & Fukuyo
<i>Amphidinium carterae</i>	Hurlburt
<i>Amphidinium sphenoides</i>	Wulff
<i>Amylax triacantha</i>	(Jorgensen) Sournia
<i>Apedinella spinifera</i>	(Throndsen) Throndsen
Armoured dinoflagellate	
<i>Asterionellopsis glacialis</i>	(Castracane) Round
<i>Asteroplanus karianus</i>	(Grunow) C. Gardner & R.M. Crawford
<i>Attheya longicornis</i>	Crawford & Gardner
<i>Attheya septentrionalis</i>	(Ostrup) Crawford
<i>Aulacoseira ambigua</i>	(Grunow) Simonsen
<i>Aulacoseira granulata</i>	(Ehrenberg) Simonsen
<i>Bacillaria paxillifera</i>	(O.F. Muller) Hendey
<i>Biddulphia alternans</i>	(J.W.Bailey) Van Heurck
<i>Brachionus</i> spp.	Pallas
Centrale diatom	
<i>Cerataulina pelagica</i>	(Cleve) Hendey
<i>Ceratium arcticum</i>	(Ehrenberg) Cleve
<i>Ceratium furca</i>	(Ehrenberg) Clarapede & Lachmann
<i>Ceratium fusus</i>	(Ehrenberg) Dujardin
<i>Ceratium horridum</i>	(Ehrenberg) Vanhoffen
<i>Ceratium kofoidii</i>	Jorgensen
<i>Ceratium lineatum</i>	(Ehrenberg) Cleve
<i>Ceratium longipes</i>	(Bailey) Gran
<i>Ceratium</i> spp.	Schrink
<i>Ceratium tripos</i>	(O.F. Muller) Nitzsch
<i>Chaetoceros affinis</i>	Lauder
<i>Chaetoceros atlanticus</i>	Cleve
<i>Chaetoceros borealis</i>	Bailey
<i>Chaetoceros constrictus</i>	Gran
<i>Chaetoceros contortus</i>	Schütt
<i>Chaetoceros convolutus</i>	Castracane
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	J.F. Brunel
<i>Chaetoceros convolutus/concavicornis</i>	J.F. Brunel
<i>Chaetoceros danicus</i>	Cleve
<i>Chaetoceros debilis</i>	Cleve
<i>Chaetoceros decipiens</i>	Cleve
<i>Chaetoceros diadema</i>	(Ehrenberg) Gran
<i>Chaetoceros didymus</i>	Ehrenberg
<i>Chaetoceros furcellatus</i>	Bailey
<i>Chaetoceros ingolfianus</i>	Ostenfeld
<i>Chaetoceros laciniatus</i>	Schutt
<i>Chaetoceros lorenzianus</i>	Grunow

Species (2001-2002)

Species (2001-2002)	Authority
<i>Chaetoceros pseudobrevis</i>	Pavillard
<i>Chaetoceros radicans</i>	Schutt
<i>Chaetoceros similis</i>	Cleve
<i>Chaetoceros simplex</i>	Ostenfeld
<i>Chaetoceros socialis</i>	Lauder
<i>Chaetoceros sp. (filiformis)</i>	Lauder
<i>Chaetoceros spp.</i>	Ehrenberg
<i>Chaetoceros spp. (phaeoceros)</i>	Gran
<i>Chaetoceros subtilis</i>	Cleve
<i>Chaetoceros teres</i>	Cleve
<i>Chryschromulina parkeae</i>	Green & Leadbeater
<i>Commation cryoporinum</i>	Thomsen & Larsen
<i>Copepoda</i>	Milnes-Edwards
<i>Corethron hystrix</i>	Hensen
<i>Coscinodiscus spp.</i>	Ehrenberg
<i>Cylindrotheca closterium</i>	(Ehrenberg) Lewin & Reimann
<i>Cylindrotheca gracilis</i>	(Brebisson In Kutzing) Grunow
<i>Dactyliosolen fragilissimus</i>	(Bergon) Hasle
<i>Detonula confervacea</i>	(Cleve) Gran
<i>Dictyocha fibula</i>	Ehrenberg
<i>Dictyocha speculum</i>	Ehrenberg
<i>Dinobryon spp.</i>	Ehrenberg
<i>Dinophysis acuminata</i>	Claparede & Lachmann
<i>Dinophysis acuta</i>	Ehrenberg
<i>Dinophysis fortii</i>	Pavillard
<i>Dinophysis norvegica</i>	Claparede & Lachmann
<i>Dinophysis pulchella</i>	(Lebour) Balech
<i>Dinophysis rotundata</i>	Claparede & Lachmann
<i>Dinophysis spp.</i>	Ehrenberg
<i>Dissodinium pseudolunula</i>	Swift ex Elbrachter and Drebes
<i>Ditylum brightwellii</i>	(West) Grunow
<i>Ebria tripartita</i>	(Schumann) Lemmermann
<i>Eucampia spp.</i>	Ehrenberg
<i>Eucampia zodiacus</i>	Ehrenberg
<i>Eutintinnus sp.</i>	Ostenfeld
<i>Etreptiella spp.</i>	A. da Cunha
<i>Favella spp.</i>	Jorgensen
<i>Fragilaria spp.</i>	Lyngbye
<i>Gonyaulax digitale</i>	(Pouchet) Kofoed
<i>Gonyaulax spinifera</i>	(Claparede & Lachmann) Diesing
<i>Gonyaulax spp.</i>	(Claparede & Lachmann) Diesing
<i>Grammatophora marina</i>	(Lyngbye) Kutzing
<i>Grammatophora spp.</i>	Ehrenberg
<i>Guinardia delicatula</i>	(Cleve) Hasle
<i>Guinardia flaccida</i>	(Castracane) Peragallo
<i>Guinardia striata</i>	(Stolterfoth) Hasle
<i>Gyrodinium aureolum</i>	Hulbert
<i>Gyrodinium spp.</i>	Kofoed & Swezy
<i>Gyrosigma fasciola</i>	(Ehrenberg) Griffith & Henfrey

Species (2001-2002)	Authority
<i>Gyrosigma littorale</i>	(W. Smith) Griffith & Henfrey
<i>Gyrosigma tenuissimum</i>	(W. Smith) Griffith & Henfrey
<i>Helicostomella</i> spp.	Jorgensen
<i>Helicotheca tamesis</i>	(Shrubsole) Ricard
<i>Heterocapsa triquetra</i>	(Ehrenberg) Stein
<i>Laboea</i> sp.	Lohmann
<i>Lauderia annulata</i>	Cleve
<i>Leptocylindrus danicus</i>	Cleve
<i>Leptocylindrus mediterraneus</i>	(H. Peragallo) Hasle
<i>Leptocylindrus minimus</i>	Gran
<i>Licmophora</i> spp.	Agardh
<i>Litostomatea</i>	Small & Lynn
<i>Mediopyxis helysia</i>	Kuhn, Hargraves & Halliger
<i>Melosira moniliformis</i>	(Muller) Agardh
<i>Melosira</i> spp.	C.A. Agardh.
<i>Membraneis challengerii</i>	(Grunow) Paddock
<i>Mesodinium rubrum</i>	(Lohmann) Hamburgen & Bruddebock
<i>Navicula distans</i>	(W. Smith) Ralfs
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>	Heimdal
<i>Neodenticula seminae</i>	(R. Simonsen & T. Kanaya) F. Akiba & Y. Yanagisawa
<i>Notholca</i> spp.	Gosse
<i>Odontella aurita</i>	(Lyngbye) Agardh
<i>Odontella obtusa</i>	(Kutzing) Hustedt
<i>Odontella regia</i>	(M. Schultze) Ostenfeld
<i>Odontella sinensis</i>	(Greville) Grunow
<i>Odontella</i> spp.	Gray
<i>Parafavella</i> spp.	Kofoid & Campbell
<i>Paralia sulcata</i>	(Ehrenberg) Cleve
Pennate diatom	
<i>Phaeocystis pouchetii</i>	(Hariot) Lagerheim 1893
<i>Pleurosigma / Gyrosigma</i>	
<i>Pleurosigma angulatum</i>	(Quek) W. Smith
<i>Pleurosigma strigosum</i>	W. Smith
<i>Polykrikos</i> sp.	Butschli
<i>Porosira glacialis</i>	(Grunow) Jorgensen
<i>Preperidinium meuneri</i>	(Pavillard) Elbrachter
<i>Proboscia alata</i>	(Brightwell) Sundstrom
<i>Proboscia eumorpha</i>	Takahashi, Jordan & Priddle
<i>Prorocentrum micans</i>	Ehrenberg
<i>Prorocentrum minimum</i>	(Pavillard) Schiller
<i>Prorocentrum</i> sp. (small)	
<i>Prorocentrum</i> spp.	Ehrenberg
<i>Protoperidinium bipes</i>	Paulsen (Balech)
<i>Protoperidinium brevipes</i>	(Paulsen) Balech
<i>Protoperidinium conicum</i>	(Gran) Balech
<i>Protoperidinium denticulatum</i>	(Gran & Braarud) Balech
<i>Protoperidinium depressum</i>	(Bailey) Balech
<i>Protoperidinium excentricum</i>	(Paulsen) Balech
<i>Protoperidinium ovatum</i>	Pouchet
Species (2001-2002)	Authority

<i>Protoperidinium punctulatum</i>	(Paulsen) Balech
<i>Protoperidinium</i> spp.	Bergh
<i>Protoperidinium steinii</i>	(Jorgensen) Balech
<i>Pseudo-nitzschia americana</i>	Hasle
<i>Pseudo-nitzschia delicatissima</i> group	Hasle
<i>Pseudo-nitzschia seriata</i> group	Hasle
<i>Ptychocylis</i> spp.	Brandt
<i>Rhabdonema</i> spp.	Kutzing
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	(Hensen) Gran
<i>Rhizosolenia imbricata</i>	Brightwell
<i>Rhizosolenia pungens</i>	Cleve-Euler
<i>Rhizosolenia setigera</i>	Brightwell
<i>Rhizosolenia</i> spp.	Brightwell
<i>Salpingella</i> spp.	Jorgensen
<i>Scrippsiella</i> sp.	Balech ex Loeblich III
<i>Scrippsiella trochoidea</i>	(Stein)Loeblich
<i>Skeletonema costatum</i>	(Greville) Cleve
<i>Staurastrum</i> spp.	Meyen ex Ralfs
<i>Stephanopyxis turris</i>	(Greville & Arnott) Ralfs
<i>Tabellaria</i> spp.	Ehrenberg
<i>Thalassionema nitzschiooides</i>	(Grunow) Grunow ex Hustedt
<i>Thalassiosira auguste-lineata</i>	(C.A. Schmidt) Fryxell & Hasle
<i>Thalassiosira baltica</i>	(Grunow) Ostenfeld
<i>Thalassiosira bioculata</i> var. <i>exigua</i>	(Grunow) Hustedt
<i>Thalassiosira gravida</i>	Cleve
<i>Thalassiosira nordenskioeldii</i>	Cleve
<i>Thalassiosira oestrupii</i>	(Ostenfeld) Hasle
<i>Thalassiosira punctigera</i>	(Castracane) Hasle
<i>Thalassiosira</i> sp. (small)	Meunier
<i>Thalassiosira</i> spp.	Cleve
<i>Tintinnida</i>	Kofoid & Campbell
<i>Tintinnopsis campanula</i>	Ehrenberg
Unarmoured dinoflagellate	

Lifestages

- Alexandrium fundyense* (cyst)
- Alexandrium fundyense* (duplet)
- Alexandrium fundyense* (fusing)
- Alexandrium fundyense* (planozygote)
- Alexandrium fundyense* (quadruplet)
- Alexandrium fundyense* (triplet)

Appendix 2. Phytoplankton densities as number of cells•L⁻¹ in 2001-2002.

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
9-Jan-01								
<i>Actinptychus senarius</i>	20		40	80	200	160		160
<i>Amphidinium carterae</i>				20				
Armoured dinoflagellate		40		20				
<i>Asterionellopsis glacialis</i>	80	20				20		20
<i>Aulacoseira granulata</i>							20	
Centric diatom	20			80	20	60		40
<i>Ceratium fusus</i>	20		20					
<i>Ceratium lineatum</i>			20		20			
<i>Chaetoceros simplex</i>				20				
<i>Chaetoceros</i> spp. (Hyalochaete)								20
<i>Corethron hystrix</i>	20					20		
<i>Coscinodiscus</i> spp.		20	60	20	20	40	20	100
<i>Cylindrotheca closterium</i>	220	100	200	900	500	440	760	440
<i>Dactyliosolen fragilissimus</i>							20	
<i>Dictyocha fibula</i>					40			60
<i>Dictyocha speculum</i>	20	20	20		20		60	
<i>Dinophysis acuminata</i>		20						
<i>Dinophysis norvegica</i>								20
<i>Ditylum brightwellii</i>	100	40	80	120	220	80	60	120
<i>Eucampia zodiacus</i>			20					
<i>Guinardia delicatula</i>	140	140	80	380	40	140	60	100
<i>Guinardia flaccida</i>								100
<i>Guinardia striata</i>				20				
<i>Gyrodinium</i> spp.		40						
<i>Gyrosigma fasciola</i>						20		
<i>Laboea</i> sp.			20				60	20
<i>Leptocylindrus minimus</i>		40		20				40
<i>Licmophora</i> spp.					20			
<i>Melosira</i> spp.			20					
<i>Mesodinium rubrum</i>	700	340	780		80		840	860
<i>Navicula distans</i>	100	80	20		20	40	60	40
<i>Odontella aurita</i>					40			
<i>Paralia sulcata</i>		20		20				
Pennate diatom	80	20	100	240	120	140	240	120
<i>Pleurosigma / Gyrosigma</i>			20	40	80	120		
<i>Pleurosigma angulatum</i>	60					60		20
<i>Pleurosigma strigosum</i>	60	40	80					20
<i>Prorocentrum micans</i>					20	20		
<i>Protoperidinium</i> spp.		20				20	20	20
<i>Pseudo-nitzschia delicatissima</i> group	40	20	60	320		80	160	160
<i>Pseudo-nitzschia seriata</i> group								40
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>		20	40	80				
<i>Rhizosolenia imbricata</i>			20					
<i>Rhizosolenia setigera</i>	60	20			20	40		120
<i>Rhizosolenia</i> spp.								20
<i>Scrippsiella trochoidea</i>				20				
<i>Stephanopyxis turris</i>				20			20	
<i>Tabellaria</i> spp.							40	
<i>Thalassionema nitzschiooides</i>	140	60	80	60	20	140	40	80
<i>Thalassiosira</i> sp. (tiny)				20				
<i>Thalassiosira</i> spp.		20		200	60		160	20
Tintinnida	20			20	40	80		20
Unarmoured dinoflagellate	20	20						
13-Feb-01								
<i>Actinptychus senarius</i>	20	20	40		80			100
<i>Alexandrium pseudogonyaulax</i>							20	
<i>Amphidinium carterae</i>					20		20	
<i>Asterionellopsis glacialis</i>	20			40		20		

13-Feb-01 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Aulacoseira ambigua</i>							40	
<i>Aulacoseira granulata</i>		20					20	
<i>Biddulphia alternans</i>							20	
Centric diatom				20	60		120	20
<i>Ceratium fusus</i>	20							
<i>Chaetoceros debilis</i>			20					
<i>Chaetoceros similis</i>	20							
<i>Chaetoceros</i> spp. (Hyalochaete)	20	20					20	
<i>Corethron hystrix</i>	40	40	20			20		
<i>Coscinodiscus</i> spp.			60	40	40	40		20
<i>Cylindrotheca closterium</i>	200	260	460	140	440	360	420	200
<i>Dictyocha speculum</i>					40		40	
<i>Ditylum brightwellii</i>	40	120	60	40	20		60	100
<i>Eutreptiella</i> sp.		40						
<i>Guinardia delicatula</i>	80	40	20	20		20	80	
<i>Gyrodinium</i> spp.				20				40
<i>Gyrosigma fasciola</i>		20	20					
<i>Gyrosigma tenuissimum</i>	20							
<i>Helicostomella</i> spp.				20				
<i>Leptocylindrus minimus</i>	40	60	40		20			120
<i>Licmophora</i> spp.	20							
<i>Melosira</i> spp.						20		
<i>Mesodinium rubrum</i>	20	160	200				300	140
<i>Navicula distans</i>	60	40	40		20	100	100	60
<i>Odontella aurita</i>				20				20
<i>Paralia sulcata</i>			20					40
Pennate diatom	80	140	160	60	140	240	220	100
<i>Pleurosigma / Gyrosigma</i>	20			40				
<i>Pleurosigma angulatum</i>			20		40	20		40
<i>Pleurosigma strigosum</i>						40		20
<i>Porosira glacialis</i>								60
<i>Pseudo-nitzschia delicatissima</i> group	200	620	160	40	140	180	400	700
<i>Rhizosolenia hebetula f. semispina</i>			20		20	40	20	
<i>Rhizosolenia imbricata</i>								20
<i>Rhizosolenia setigera</i>	80	20	20				20	20
<i>Rhizosolenia</i> spp.					20	40		
<i>Skeletonema costatum</i>		80	40					40
<i>Tabellaria</i> spp.			60					
<i>Thalassionema nitzschiooides</i>		60		20	20			60
<i>Thalassiosira baltica</i>		20						
<i>Thalassiosira gravida</i>	20							
<i>Thalassiosira nordenskioldii</i>				40		20		
<i>Thalassiosira punctigera</i>			20		20			
<i>Thalassiosira</i> sp. (tiny)						40		
<i>Thalassiosira</i> spp.	100	140		60	40	20	60	100
Tintinnida			20		40	40		40
Unarmoured dinoflagellates		20						20
20-Mar-01								
<i>Actinoptychus senarius</i>		20						
<i>Alexandrium ostenfeldii</i>			20				80	
<i>Amphidinium carterae</i>				40	20			
<i>Amphidinium sphenoides</i>					20			
Armoured dinoflagellate			20					
<i>Asterionellopsis glacialis</i>	80	40		40	80			
<i>Aulacoseira ambigua</i>				40	20	40		
Centric diatom						80		
<i>Ceratium lineatum</i>	80							
<i>Chaetoceros atlanticus</i>						20		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
20-Mar-01 (continued)								
<i>Chaetoceros constrictus</i>			20					
<i>Chaetoceros debilis</i>			40	120			240	40
<i>Chaetoceros pseudocrinitus</i>		20						
<i>Chaetoceros similis</i>							80	
<i>Chaetoceros simplex</i>	80			40				160
<i>Chaetoceros</i> spp. (Hyalochaete)	2320	480	840	1000	620	140	1520	3800
<i>Commation cryoporinum</i>	80			40				
<i>Coscinodiscus</i> spp.		20			20	20		
<i>Cylindrotheca closterium</i>	400	140	120	480	1460	1100	160	400
<i>Dictyocha speculum</i>	160	40	240	120	60	60	240	40
<i>Ditylum brightwellii</i>			40		80	80	160	40
<i>Eutreptiella</i> sp.	80		20	40				
<i>Guinardia delicatula</i>				80	60			40
<i>Gyrodinium</i> spp.			220	360	20		160	
<i>Gyrosigma fasciola</i>						40		
<i>Laboea</i> sp.				80				
<i>Leptocylindrus danicus</i>								40
<i>Leptocylindrus minimus</i>		20	160	40	80	60	80	320
<i>Licmophora</i> spp.						20		
<i>Mesodinium rubrum</i>	800		200	80		100	4000	
<i>Navicula distans</i>	160	40		40		60	80	40
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>				40	220	100		
<i>Odontella aurita</i>				40		40		
<i>Odontella obtusa</i>							80	
<i>Paralia sulcata</i>						20		
Pennate diatom	720	20	20	120	220	80	240	40
<i>Phaeocystis pouchetii</i>	160			40	60			360
<i>Pleurosigma / Gyrosigma</i>				40				
<i>Pleurosigma angulatum</i>	160							
<i>Porosira glacialis</i>					20			
<i>Pseudo-nitzschia delicatissima</i> group	4080	3340	1240	2200	1100	260	4000	6440
<i>Pseudo-nitzschia seriata</i> group	80							
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>		20		120	20		80	40
<i>Rhizosolenia setigera</i>	80	20	20					
<i>Skeletonema costatum</i>	160	60				40		
<i>Tabellaria</i> spp.				80				
<i>Thalassionema nitzschioides</i>			20		40		160	
<i>Thalassiosira anguste-lineata</i>		20	20	40				
<i>Thalassiosira gravida</i>							40	
<i>Thalassiosira nordenskioeldii</i>	320	160	400	480	220		800	320
<i>Thalassiosira</i> sp. (tiny)		40		120	140	20	160	
<i>Thalassiosira</i> spp.	40960	2820	6560	35800	24280	6080	38960	32320
Tintinnida	80			40	20		960	
Unarmoured dinoflagellate			20	160			80	
1-May-01								
<i>Alexandrium fundyense</i>	160	80					40	160
<i>Alexandrium ostenfeldii</i>		80			40			80
<i>Amphidinium carterae</i>				40	40	20		
<i>Amphidinium sphenoides</i>				80				
Armoured dinoflagellate	200		200	240	40	80	40	320
<i>Aulacoseira ambigua</i>					40			
<i>Brachionus</i> spp.				40				
Centric diatom						100		
<i>Cerataulina pelagica</i>				40				
<i>Ceratium lineatum</i>					80			
<i>Ceratium longipes</i>			40					
<i>Chaetoceros contortus</i>			40			20		
<i>Chaetoceros debilis</i>	480	640	120	1200		20	280	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
1-May-01 (continued)								
<i>Chaetoceros furcellatus</i>								80
<i>Chaetoceros pseudocrinitus</i>	80						40	
<i>Chaetoceros socialis</i>		80						
<i>Chaetoceros</i> spp. (Hyalochaete)	240	400	40	1400	440	300	760	480
<i>Chaetoceros</i> spp. (Phaeoceros)					40	60		
<i>Commatium cryoporinum</i>				120	80			
<i>Corethron hystrix</i>						20		
<i>Coscinodiscus</i> spp.		80			40	40	40	
<i>Cylindrotheca closterium</i>	40	80		280	160	40	40	
<i>Dactyliosolen fragilissimus</i>	80	80						80
<i>Dictyocha speculum</i>	40	80	120	160	40		80	
<i>Dinophysis acuminata</i>								80
<i>Ditylum brightwellii</i>	40				40	40		80
<i>Eucampia zodiacus</i>				40	80	40	20	
<i>Eutreptiella</i> sp.	40					40		160
<i>Guinardia delicatula</i>	40			40				
<i>Gyrodinium</i> spp.	160	400	120	360	320	60	40	480
<i>Gyrosigma fasciola</i>	80							
<i>Heterocapsa triquetra</i>				40				
<i>Laboea</i> sp.								80
<i>Leptocylindrus danicus</i>				40	40			
<i>Leptocylindrus minimus</i>					40			
<i>Membraneis challengerii</i>						120		
<i>Mesodinium rubrum</i>	1280	320	160	80			640	1680
<i>Navicula distans</i>				80	40	80	120	160
<i>Navicula transits var. derasa f. delicatula</i>						20		
<i>Neodenticula seminae</i>						40		
<i>Paralia sulcata</i>	40							
Pennate diatom	40				160			80
<i>Phaeocystis pouchetii</i>	6440	16880	1320	20960	8040	4120	18000	3440
<i>Porosira glacialis</i>				40				
<i>Protoperidinium</i> spp.	40	160	120		40			320
<i>Protoperidinium steinii</i>			40					
<i>Pseudo-nitzschia delicatissima</i> group	6560	2800	2080	7280	1840	280	2160	7360
<i>Pseudo-nitzschia seriata</i> group			160			120		
<i>Ptychocylis</i> spp.			40					
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	40				80	160	40	
<i>Rhizosolenia setigera</i>	40				80			
<i>Skeletonema costatum</i>			40					
<i>Stephanopyxis turris</i>		80		200				
<i>Thalassionema nitzschioides</i>	80				40		120	80
<i>Thalassiosira anguste-lineata</i>	40	80	120					
<i>Thalassiosira baltica</i>		80						
<i>Thalassiosira gravida</i>			40		80			
<i>Thalassiosira nordenskioeldii</i>	16840	37440	10760	182030	22280	27744	4280	14000
<i>Thalassiosira punctigera</i>		80				20		
<i>Thalassiosira</i> sp. (tiny)						20		
<i>Thalassiosira</i> spp.	160	480	280	160	120	80	520	240
Tintinnida	280	240	160		120			320
Unarmoured dinoflagellate	120		120	160	80		320	640
7-May-01								
<i>Alexandrium fundyense</i>		1120	160	240	80	160		220
<i>Alexandrium fundyense</i> (duplet)		160						
<i>Alexandrium ostenfeldii</i>	160		160	240				100
<i>Apedinella radians</i>				80				
Armoured dinoflagellate	80	1600	640	480	80	80	20	240
<i>Aulacoseira ambigua</i>		160						
Centric diatom	80						20	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
7-May-01 (continued)								
<i>Ceratium longipes</i>	160							20
<i>Chaetoceros atlanticus</i>								60
<i>Chaetoceros debilis</i>								20
<i>Chaetoceros decipiens</i>	80	160		80			20	20
<i>Chaetoceros pseudocrinitus</i>							20	
<i>Chaetoceros similis</i>	80							
<i>Chaetoceros socialis</i>							20	
<i>Chaetoceros spp. (Hyalochaete)</i>	400			1760	400	480	80	
<i>Chaetoceros spp. (Phaeoceros)</i>					80			
<i>Commation cryoporinum</i>					160	160		20
<i>Copepoda</i>	160							20
<i>Corethron hystrix</i>							20	
<i>Coscinodiscus spp.</i>				80				
<i>Cylindrotheca closterium</i>				80		880	40	
<i>Dactyliosolen fragilissimus</i>								60
<i>Dictyocha speculum</i>	80		160	80				40
<i>Dinophysis acuminata</i>								20
<i>Dinophysis norvegica</i>		160						
<i>Dinophysis spp.</i>				80				
<i>Eutreptiella sp.</i>	80					80		
<i>Gonyaulax spinifera</i>								20
<i>Grammatophora marina</i>	80							
<i>Guinardia delicatula</i>				80				
<i>Gyrodinium spp.</i>	160	1280	480	960	240	400	180	220
<i>Heterocapsa triquetra</i>		480	160	80				40
<i>Laboea sp.</i>	240	160		400	80			120
<i>Lauderia annulata</i>							20	
<i>Leptocylindrus danicus</i>								60
<i>Leptocylindrus minimus</i>			160				20	60
<i>Licmophora spp.</i>				80	80			
<i>Membraneis challengerii</i>						160		
<i>Mesodinium rubrum</i>	640	2240	1600	560			20	1600
<i>Navicula distans</i>							100	
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>	160			400	80	80		
<i>Neodenticula seminae</i>						80		
<i>Paralia sulcata</i>	80							
Pennate diatom		160		80		80	20	
<i>Phaeocystis pouchetii</i>	7280	24640	32960	20800	9600	22560	6480	1460
<i>Porosira glacialis</i>			160	80				
<i>Protoperidinium denticulatum</i>		320						
<i>Protoperidinium spp.</i>	240		160		240		20	80
<i>Pseudo-nitzschia delicatissima</i> group	6880	6880	9920	5200	2560	4400	4720	3160
<i>Pseudo-nitzschia seriata</i> group				160	160	320		20
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	80	160	320		80			
<i>Rhizosolenia</i> spp.					80			
<i>Stephanopyxis turris</i>				320				40
<i>Thalassiosira anguste-lineata</i>	560	480	1280	960		80		
<i>Thalassiosira nordenskioeldii</i>	27840	36960	25120	349112	37120	12240	820	1540
<i>Thalassiosira punctigera</i>						80		
<i>Thalassiosira</i> spp.	400	320	1440	80		80	20	60
Tintinnida	320	1920	160	1760	80	160		1040
Unarmoured dinoflagellate	80	1280	160	880	80	80	80	540
15-May-01								
<i>Achnanthes</i> sp.								20
<i>Alexandrium fundyense</i>	240	160		160				
<i>Alexandrium ostenfeldii</i>		80		40				20
<i>Amphidinium sphenoides</i>				80	80	40	60	
<i>Apedinella radians</i>					120			

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
15-May-01 (continued)								
Armoured dinoflagellate		80		200	200	60	80	20
<i>Asterionellopsis glacialis</i>			160	80	40	80		
<i>Aulacoseira ambigua</i>				40	40			
Centric diatom						20		
<i>Ceratium horridum</i>				40				
<i>Ceratium longipes</i>		240		40	40			20
<i>Chaetoceros atlanticus</i>				40				
<i>Chaetoceros constrictus</i>				200				
<i>Chaetoceros contortus</i>			960	1000	840			
<i>Chaetoceros convolutus</i>		80						
<i>Chaetoceros convolutus f. trisetosa</i>		80						
<i>Chaetoceros debilis</i>	320	80	80				40	
<i>Chaetoceros decipiens</i>	80			240				
<i>Chaetoceros didymus</i>			80					
<i>Chaetoceros laciniosus</i>		80						
<i>Chaetoceros radicans</i>					80			
<i>Chaetoceros</i> spp. (Hyalochaete)	320	240	880	1160	1000	80	40	40
<i>Chaetoceros</i> spp. (Phaeoceros)				40	40			
<i>Commation cryoporinum</i>		80				20	80	
Copepoda								20
<i>Coscinodiscus</i> spp.		800	80	160	40	20	40	20
<i>Cylindrotheca closterium</i>	560	800	240	40	200	160	40	40
<i>Dactyliosolen fragilissimus</i>	80	80		120	120			
<i>Dictyocha speculum</i>		240		40	120			
<i>Dinobryon</i> spp.							40	
<i>Dinophysis acuminata</i>			80	40				
<i>Dinophysis norvegica</i>				40	40			
<i>Dinophysis</i> spp.				40				
<i>Ditylum brightwellii</i>		80			80	40	40	
<i>Eucampia zodiacus</i>		160			120			
<i>Eutreptiella</i> sp.					40		40	
<i>Fragilaria</i> spp.						20		
<i>Gyrodinium</i> spp.	240	240	80	720	480	40	80	40
<i>Gyrosigma fasciola</i>							40	
<i>Heterocapsa triquetra</i>		80		120	80			
<i>Laboea</i> sp.	160	320					120	20
<i>Lauderia annulata</i>								20
<i>Leptocylindrus minimus</i>								20
<i>Licmophora</i> spp.	160	80	80	40				
<i>Melosira moniliformis</i>						20		
<i>Melosira</i> spp.					40			
<i>Membraneis challengerii</i>						20		
<i>Mesodinium rubrum</i>	800	1360		680	240		520	240
<i>Navicula distans</i>			80			20	40	40
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>		80		120	80	20		
<i>Neodenticula seminae</i>						20		
<i>Odontella aurita</i>		80						
<i>Parafavella</i> spp.					40			
Pennate diatom			160	40	80	40		
<i>Phaeocystis pouchetii</i>	14720	21680	1200	2280	8920	4040	19160	19800
<i>Porosira glacialis</i>		80		40	40	40		20
<i>Preperidinium meunieri</i>			240	280				
<i>Proboscia alata</i>			160					
<i>Prorocentrum</i> sp. (small)					40			
<i>Protoperidinium brevipes</i>					40			
<i>Protoperidinium depressum</i>		80		80				
<i>Protoperidinium</i> spp.								
<i>Pseudo-nitzschia delicatissima</i> group	5760	5200	1760	1440	400	600	2600	2580

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
15-May-01 (continued)								
<i>Pseudo-nitzschia seriata</i> group	80			240		120		
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>			160		120			20
<i>Rhizosolenia</i> spp.			80					
<i>Skeletonema costatum</i>	80	240	240		40		40	
<i>Stephanopyxis turris</i>		80	160	40	80			60
<i>Tabellaria</i> spp.				120				
<i>Thalassionema nitzschiooides</i>			80		40		40	
<i>Thalassiosira anguste-lineata</i>	400	240		280	480	40		80
<i>Thalassiosira baltica</i>	80							
<i>Thalassiosira gravida</i>	80							
<i>Thalassiosira nordenskioeldii</i>	17760	24720	12800	168776	111556	2200	80	1880
<i>Thalassiosira punctigera</i>	160	240		40	280			
<i>Thalassiosira</i> sp. (tiny)					80			
<i>Thalassiosira</i> spp.	560	1280	14560	960	600		80	460
Tintinnida	160	1120		240	120	60		80
Unarmoured dinoflagellate		240		200	80	80		40
22-May-01								
<i>Actinoptychus senarius</i>								40
<i>Alexandrium fundyense</i>		320	240					460
<i>Alexandrium fundyense</i> (duplet)		80						
<i>Alexandrium ostenfeldii</i>					40			80
<i>Amphidinium carterae</i>					40			
<i>Amphidinium sphenoides</i>					120	40		
Armoured dinoflagellate	160	880	800			20		280
<i>Asterionellopsis glacialis</i>		80	80	160	40	40		
<i>Brachionus</i> spp.		80						
Centric diatom				80		20	40	
<i>Ceratium fusus</i>				80				
<i>Ceratium longipes</i>				480				40
<i>Chaetoceros borealis</i>						40		
<i>Chaetoceros contortus</i>	3040	1760	1600	1200	1840	20		
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>								40
<i>Chaetoceros debilis</i>	320	80		80		20	40	160
<i>Chaetoceros decipiens</i>			80	80				
<i>Chaetoceros diadema</i>						20		
<i>Chaetoceros laciniosus</i>				160				80
<i>Chaetoceros pseudocrinitus</i>		80						
<i>Chaetoceros simplex</i>				80			40	160
<i>Chaetoceros socialis</i>		320	80	80				40
<i>Chaetoceros</i> spp. (Hyalochaece)	3680	1280	1040	1200	1200	300	80	120
<i>Chaetoceros</i> spp. (Phaeoceros)				160	40	140		
<i>Commation cryoporinum</i>					200	40		
Copepoda	160	160						40
<i>Coscinodiscus</i> spp.	160	160	240			60		
<i>Cylindrotheca closterium</i>	320	400	400	960	360	180	80	120
<i>Dactyliosolen fragilissimus</i>	320	400	160	320		20		80
<i>Dictyocha speculum</i>				160	80		80	160
<i>Dinophysis norvegica</i>		80	80					
<i>Eucampia zodiacus</i>		80	80					
<i>Eutreptiella</i> sp.		160	320		40			520
<i>Guinardia delicatula</i>		480						40
<i>Gyrodinium</i> spp.	160	400	320	80	320		40	40
<i>Heterocapsa triquetra</i>		80						40
<i>Laboea</i> sp.	480	1840	160	80				560
<i>Leptocylindrus minimus</i>		80	320	320			40	200
<i>Licmophora</i> spp.						20		
<i>Mesodinium rubrum</i>	480	2480	800				1160	3120
<i>Navicula distans</i>	480		80			40		40

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
22-May-01 (continued)					400	20		
<i>Navicula transians</i> var. <i>derasa</i> f. <i>delicatula</i>						60		
<i>Neodenticula seminae</i>						40		
<i>Paralia sulcata</i>							40	
Pennate diatom		240		160		40	40	
<i>Phaeocystis pouchetii</i>	960			1280	3320	580	10320	1160
<i>Pleurosigma angulatum</i>							40	
<i>Porosira glacialis</i>		160					40	
<i>Proboscia alata</i>				80				40
<i>Protoperidinium bipes</i>								
<i>Protoperidinium depressum</i>				160				200
<i>Protoperidinium</i> spp.								
<i>Pseudo-nitzschia delicatissima</i> group	8320	5200	4880	3120	400	140	2360	4640
<i>Pseudo-nitzschia seriata</i> group	160					20		
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>		160	80		160	40		320
<i>Rhizosolenia</i> spp.	160					40		
<i>Scrippsiella trochoidea</i>								120
<i>Skeletonema costatum</i>	160	800	640	480	80	40		
<i>Stephanopyxis turris</i>			240		40			80
<i>Thalassiosira anguste-lineata</i>	160	320	640	80	200	20		
<i>Thalassiosira baltica</i>			80					
<i>Thalassiosira gravida</i>			560					
<i>Thalassiosira norenskioeldii</i>	12640	20160	34000	8480	3640	240	120	3600
<i>Thalassiosira punctigera</i>	320	80		160		20		40
<i>Thalassiosira</i> sp. (tiny)					200	60		
<i>Thalassiosira</i> spp.	43200	1040	1280	1760	53756	560	120	560
Tintinnida	640	2160	640		200	40	200	1640
Unarmoured dinoflagellate	800	80	480		40		80	160
30-May-01								
<i>Alexandrium fundyense</i>			80	880	40		40	120
<i>Alexandrium fundyense</i> (duplet)				80				
<i>Alexandrium fundyense</i> (quadruplet)				80				
<i>Alexandrium ostenfeldii</i>			120					
<i>Alexandrium pseudogonyaulax</i>				80				
<i>Amphidinium carterae</i>				160				
Armoured dinoflagellate			320	960	80	40	40	360
<i>Asterionellopsis glacialis</i>		200	880	80	280			
<i>Brachionus</i> spp.				160				
<i>Ceratium horridum</i>			40					
<i>Ceratium lineatum</i>				80				
<i>Ceratium longipes</i>			40					40
<i>Chaetoceros borealis</i>					20			
<i>Chaetoceros constrictus</i>		40		40	40			80
<i>Chaetoceros contortus</i>		3600	35840	2080	960			360
<i>Chaetoceros debilis</i>		80		80		200		120
<i>Chaetoceros decipiens</i>					120		200	40
<i>Chaetoceros furcellatus</i>						20		
<i>Chaetoceros laciniosus</i>		120					40	1240
<i>Chaetoceros pseudocrinitus</i>		200						920
<i>Chaetoceros simplex</i>		80						
<i>Chaetoceros</i> spp. (Hyalochaete)		1080	8720	2280	300	240		3160
<i>Chaetoceros</i> spp. (Phaeoceros)				40				
<i>Commation cryoporinum</i>		80	320	280	60			40
Copepoda						40		
<i>Corethron hystrix</i>					20			
<i>Coscinodiscus</i> spp.				160				80
<i>Cylindrotheca closterium</i>		200	1200	400	120	80		40
<i>Dactyliosolen fragilissimus</i>					120		120	320
<i>Detonula confervacea</i>						20		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
30-May-01 (continued)								
<i>Dictyocha speculum</i>			80					40
<i>Dinobryon</i> spp.				80				
<i>Dinophysis acuminata</i>								80
<i>Dinophysis norvegica</i>					240			
<i>Dinophysis</i> spp.								40
<i>Eucampia zodiacus</i>				160				
<i>Eutreptiella</i> sp.		720		480				160
<i>Fragilaria</i> spp.							40	
<i>Guinardia delicatula</i>								40
<i>Guinardia flaccida</i>				80				
<i>Gyrodinium</i> spp.		120		720		80		40
<i>Heterocapsa triquetra</i>		120						
<i>Laboea</i> sp.				560			80	40
<i>Leptocylindrus danicus</i>		240		800		120		400
<i>Leptocylindrus minimus</i>		480					560	2680
<i>Licmophora</i> spp.				80				
<i>Membraneis challengerii</i>					120			
<i>Mesodinium rubrum</i>	440		1920		80		1120	1400
<i>Navicula distans</i>			80		40	20		
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>					40	20		
<i>Neodenticula seminae</i>					40			
Pennate diatom					80	20		
<i>Phaeocystis pouchetii</i>						80	120	
<i>Pleurosigma / Gyrosigma</i>						20		
<i>Pleurosigma angulatum</i>							120	
<i>Protoperidinium conicum</i>			80					
<i>Protoperidinium depressum</i>			160					
<i>Protoperidinium</i> spp.	40		720		40		40	120
<i>Pseudo-nitzschia delicatissima</i> group	1400		4800		1040		280	760
<i>Pseudo-nitzschia seriata</i> group								80
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>		120		160		40		80
<i>Rhizosolenia imbricata</i>							40	160
<i>Rhizosolenia</i> spp.					40		40	
<i>Scrippsiella</i> sp.		40						
<i>Scrippsiella trochoidea</i>		40		80				
<i>Skeletonema costatum</i>		80			80		60	
<i>Stephanopyxis turris</i>		40			40			240
<i>Thalassionema nitzschioides</i>						60		
<i>Thalassiosira anguste-lineata</i>				240		160	260	
<i>Thalassiosira baltica</i>							40	
<i>Thalassiosira gravida</i>		80		240		40		
<i>Thalassiosira nordenskioeldii</i>		5120	642952	169356		18200		1400
<i>Thalassiosira punctigera</i>				80		160	40	
<i>Thalassiosira</i> sp. (tiny)					40		20	
<i>Thalassiosira</i> spp.		2000		1600		480		560
Tintinnida		160		1440		40	60	80
Unarmoured dinoflagellate		200		320		40	20	40
4-Jun-01								
<i>Alexandrium fundyense</i>	160		80				20	80
<i>Alexandrium fundyense</i> (duplet)			20					20
Armoured dinoflagellate	80		240				40	40
<i>Asterionellopsis glacialis</i>	1120		320					20
Centric diatom		80						
<i>Ceratium longipes</i>		80					20	
<i>Chaetoceros constrictus</i>							40	
<i>Chaetoceros contortus</i>	1600		2880				120	560
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>			80					40
<i>Chaetoceros debilis</i>	80		160				460	280
4-Jun-01 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m

<i>Chaetoceros decipiens</i>	80		60	80
<i>Chaetoceros diadema</i>			40	240
<i>Chaetoceros laciniatus</i>	640		160	120
<i>Chaetoceros pseudocrinitus</i>	160		40	240
<i>Chaetoceros simplex</i>	80	320	20	40
<i>Chaetoceros socialis</i>		160		
<i>Chaetoceros spp.</i> (Hyalochaete)	1360	2080	980	1080
<i>Commation cryoporinum</i>				40
<i>Copepoda</i>	80		60	
<i>Corethron hystrix</i>	80			
<i>Coscinodiscus spp.</i>	160	80	60	
<i>Cylindrotheca closterium</i>	640	720	200	120
<i>Dactyliosolen fragilissimus</i>	160	80	20	40
<i>Dictyocha speculum</i>		80	40	120
<i>Dinophysis acuminata</i>			20	
<i>Dinophysis norvegica</i>				40
<i>Dinophysis spp.</i>		80		
<i>Eucampia zodiacus</i>				40
<i>Eutreptiella sp.</i>	80	240	60	40
<i>Guinardia delicatula</i>	160	80		160
<i>Gyrodinium spp.</i>			20	
<i>Gyrosigma fasciola</i>			20	
<i>Helicostomella spp.</i>			20	
<i>Laboea sp.</i>	240		300	40
<i>Leptocylindrus danicus</i>			20	
<i>Leptocylindrus minimus</i>	240	240	1220	880
<i>Licmophora spp.</i>	80	80		
<i>Mesodinium rubrum</i>	5280	400	2620	2760
<i>Navicula distans</i>	80		20	
<i>Odontella aurita</i>			20	
<i>Paralia sulcata</i>			20	
Pennate diatom	80	80		
<i>Pleurosigma angulatum</i>			100	
<i>Porosira glacialis</i>			20	
<i>Proboscia alata</i>				280
<i>Protoperidinium brevipes</i>			20	
<i>Protoperidinium spp.</i>	160	240	40	
<i>Pseudo-nitzschia delicatissima</i> group	4000	8320	2060	3600
<i>Pseudo-nitzschia seriata</i> group	80			
<i>Rhabdonema spp.</i>			20	
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	160	80	80	
<i>Rhizosolenia setigera</i>	80			
<i>Rhizosolenia spp.</i>	80			
<i>Skeletonema costatum</i>	400	400		
<i>Stephanopyxis turris</i>	160	80	100	160
<i>Thalassiosira anguste-lineata</i>	240			40
<i>Thalassiosira gravida</i>	80			40
<i>Thalassiosira nordenskioeldii</i>	1840	9760	1640	3280
<i>Thalassiosira punctigera</i>			20	
<i>Thalassiosira</i> sp. (tiny)	80			
<i>Thalassiosira</i> spp.	5760	3440	920	2200
Tintinnida	880	640	380	360
Unarmoured dinoflagellate	80		80	
12-Jun-01				
<i>Alexandrium fundyense</i>	260	440	420	80
<i>Alexandrium fundyense</i> (duplet)	60	120	20	40
<i>Amphidinium carterae</i>	80			
<i>Amphidinium sphenoides</i>			20	

12-Jun-01 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Amylax triacantha</i>								40
Armoured dinoflagellate	80	160	320				560	360
<i>Asterionellopsis glacialis</i>		400	160	2480	1020	300	160	40
<i>Attheya longicornis</i>			80					
<i>Brachionus</i> spp.			40	40				40
<i>Ceratium fusus</i>							80	
<i>Ceratium horridum</i>			120	200				
<i>Ceratium longipes</i>	40	320						40
<i>Chaetoceros affinis</i>								40
<i>Chaetoceros atlanticus</i>			40	40				
<i>Chaetoceros constrictus</i>		40	80					
<i>Chaetoceros contortus</i>	2680	6760	7040	15840	1080	40	2080	2560
<i>Chaetoceros convolutus</i>			40	160				40
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	80			160			80	
<i>Chaetoceros debilis</i>	120	120	40	160			2560	1720
<i>Chaetoceros decipiens</i>			40	40				
<i>Chaetoceros diadema</i>					160	20	20	80
<i>Chaetoceros furcellatus</i>					240			
<i>Chaetoceros laciniosus</i>	280	440	720	640	40		1600	3720
<i>Chaetoceros pseudocrinitus</i>	160	200	200					1120
<i>Chaetoceros radicans</i>				80	20		80	
<i>Chaetoceros similis</i>	80		40					
<i>Chaetoceros simplex</i>	520	1040	800	160	60	60	560	40
<i>Chaetoceros</i> spp. (Hyalochaete)	2320	2480	5160	22560	1280	220	10480	9280
<i>Chaetoceros</i> spp. (Phaeoceros)	40			80	60	40		40
<i>Chaetoceros teres</i>			40	320			80	40
<i>Commation cryoporinum</i>				160		20	80	
Copepoda	80		160		20		80	160
<i>Corethron hystrix</i>			40	160	20			
<i>Coscinodiscus</i> spp.	40	40		160	40		80	40
<i>Cylindrotheca closterium</i>	680	920	1320	3120	1260	160	560	440
<i>Dactyliosolen fragilissimus</i>				240	100		240	320
<i>Dictyocha speculum</i>	40	360	160	160	20		160	80
<i>Dinophysis acuminata</i>				160				80
<i>Dinophysis acuta</i>		40						
<i>Dinophysis norvegica</i>				40				
<i>Dinophysis</i> spp.		40						
<i>Ditylum brightwellii</i>					80	20		
<i>Ebria tripartita</i>								40
<i>Eucampia zodiacus</i>	40						80	80
<i>Eutreptiella</i> sp.	160	120	200					80
<i>Favella</i> spp.		40						
<i>Guinardia delicatula</i>				80			240	160
<i>Gyrodinium</i> spp.	80	80	320	160			80	
<i>Helicostomella</i> spp.				40	20			120
<i>Heterocapsa triquetra</i>	40	40	200					
<i>Laboea</i> sp.	240	40	640				560	280
<i>Leptocylindrus danicus</i>	40	200	240	2480	580		800	440
<i>Leptocylindrus minimus</i>	760	720	520	880	80		10880	11040
<i>Membraneis challengerii</i>				80	40			
<i>Mesodinium rubrum</i>	960	320	1720	240	60		13600	4120
<i>Navicula distans</i>		40	40	160	60	40		
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>				160		20		
<i>Neodenticula seminae</i>						20		
<i>Paralia sulcata</i>							40	
Pennate diatom					80		20	1360
<i>Pleurosigma angulatum</i>						20	60	80
<i>Porosira glacialis</i>						20		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
12-Jun-01 (continued)								
<i>Proboscia alata</i>								40
<i>Prorocentrum</i> sp. (small)				80				
<i>Protoperidinium bipes</i>			40				80	40
<i>Protoperidinium brevipes</i>								40
<i>Protoperidinium depressum</i>	80	80	40					40
<i>Protoperidinium</i> spp.	40	80	80	60			80	80
<i>Pseudo-nitzschia delicatissima</i> group	4360	10360	2760	7200	2040	720	14080	8280
<i>Pseudo-nitzschia seriata</i> group		120			120		80	
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>			40				160	80
<i>Rhizosolenia imbricata</i>			40					
<i>Rhizosolenia</i> spp.			40					
<i>Salpingella</i> spp.							80	
<i>Scrippsiella</i> sp.	40							
<i>Skeletonema costatum</i>	80	320		160	80	20	80	40
<i>Stephanopyxis turris</i>	40			480	60		80	160
<i>Thalassionema nitzschiooides</i>					20			
<i>Thalassiosira anguste-lineata</i>				80	60			
<i>Thalassiosira gravida</i>					80			
<i>Thalassiosira nordenskioeldii</i>	880	2440	1480	1200				320
<i>Thalassiosira punctigera</i>					60			40
<i>Thalassiosira</i> sp. (tiny)				240	160	80		
<i>Thalassiosira</i> spp.	560	1120	1640	32160	3560	160	1200	400
Tintinnida	320	400	360		100	40	1200	640
Unarmoured dinoflagellate			40	80	20		160	120
19-Jun-01								
<i>Alexandrium fundyense</i>	4280	2360	540	6240			80	2680
<i>Alexandrium fundyense</i> (duplet)	400	80	40	640				40
<i>Alexandrium fundyense</i> (triplet)	40							
<i>Alexandrium ostenfeldii</i>	80		40					
<i>Amphidinium carterae</i>				160				
<i>Amphidinium sphenoides</i>						80		
Armoured dinoflagellate	440	800	880	2080	160			1000
<i>Asterionellopsis glacialis</i>	40		80	1120	2480	920		80
Centric diatom					80	40		
<i>Cerataulina pelagica</i>				160			80	
<i>Ceratium furca</i>							40	
<i>Ceratium fusus</i>							40	
<i>Ceratium horridum</i>		400	120	640				160
<i>Ceratium lineatum</i>								40
<i>Ceratium longipes</i>	80	160	120	480			160	400
<i>Ceratium</i> spp.		40						40
<i>Chaetoceros atlanticus</i>			40					
<i>Chaetoceros constrictus</i>							800	
<i>Chaetoceros contortus</i>	440	880	2520	25760	13120	620	400	
<i>Chaetoceros convolutus</i>			40					
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>		200	160				80	
<i>Chaetoceros debilis</i>	120	80	120		160		3040	360
<i>Chaetoceros diadema</i>						180		
<i>Chaetoceros filiformis</i>							720	
<i>Chaetoceros furcellatus</i>			40	160	480	180	80	40
<i>Chaetoceros laciniatus</i>	360	40	560	1120		20	1760	1320
<i>Chaetoceros lorenzianus</i>							80	
<i>Chaetoceros pseudocrinitus</i>		40	240					
<i>Chaetoceros radicans</i>						80	80	
<i>Chaetoceros similis</i>	40	120		160				
<i>Chaetoceros simplex</i>	40	40			160	100	720	40
<i>Chaetoceros socialis</i>				160				
<i>Chaetoceros</i> spp. (Hyalochaete)	1600	2560	3880	38080	9600	4080	10880	2080

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
19-Jun-01 (continued)						60		
<i>Chaetoceros</i> spp. (<i>Phaeoceros</i>)					80		160	
<i>Chaetoceros teres</i>						120		
<i>Commation cryporinum</i>	40			120				
Copepoda			120	160		20		40
<i>Corethron hystrix</i>						20		
<i>Coscinodiscus</i> spp.	40	40						40
<i>Cylindrotheca closterium</i>	360	520	800	9280	6560	1220	1440	440
<i>Dactyliosolen fragilissimus</i>		120	80		400		240	160
<i>Detonula confervacea</i>	40							
<i>Dictyocha speculum</i>	80	760	320	320	80	20	320	320
<i>Dinophysis acuminata</i>			80	160				200
<i>Dinophysis acuta</i>								40
<i>Dinophysis fortii</i>	40							40
<i>Dinophysis norvegica</i>								40
<i>Ditylum brightwellii</i>						20		
<i>Ebria tripartita</i>							80	240
<i>Eucampia zodiacus</i>	80			160	80			40
<i>Eutreptiella</i> sp.	1160	6840	200	5440				80
<i>Gonyaulax spinifera</i>		40						
<i>Guinardia delicatula</i>	280		120	480			1120	280
<i>Guinardia flaccida</i>					80			
<i>Gyrodinium</i> spp.	240	560	600	1120	80	20	80	120
<i>Helicostomella</i> spp.								200
<i>Heterocapsa triquetra</i>	840	640	1120	1120	80		80	600
<i>Laboea</i> sp.	40	40	320	800				40
<i>Leptocylindrus danicus</i>	680	520	1240	3200	1040	40	1280	2200
<i>Leptocylindrus minimus</i>	1040	2000	1400	5120	160		8640	4480
<i>Licmophora</i> spp.						20		
<i>Mesodinium rubrum</i>	1040	120	1960	4000	160		2400	2400
<i>Navicula distans</i>				160	80	20		
<i>Parafavella</i> spp.			40					
Pennate diatom					160			
<i>Pleurosigma angulatum</i>					80		80	
<i>Prorocentrum minimum</i>			80					
<i>Prorocentrum</i> sp. (small)				160				
<i>Protoperdinium bipes</i>	40			1120				40
<i>Protoperdinium brevipes</i>	40		40	160				
<i>Protoperdinium conicum</i>								40
<i>Protoperdinium denticulatum</i>								40
<i>Protoperdinium depressum</i>								120
<i>Protoperdinium</i> spp.	200	280	240	320			320	320
<i>Pseudo-nitzschia delicatissima</i> group	11560	10480	10440	37920	10800	800	14400	3280
<i>Pseudo-nitzschia seriata</i> group	200			320	80	40		120
<i>Ptychocylis</i> spp.		40	40					40
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	40							40
<i>Rhizosolenia imbricata</i>		40				20		40
<i>Scrippsiella</i> sp.	520	720	120	320			80	
<i>Scrippsiella trochoidea</i>	600	1000	80	640				480
<i>Skeletonema costatum</i>	80	40	120		240	120	240	
<i>Stephanopyxis turris</i>	120		80	1280	720	40	1200	80
<i>Thalassionema nitzschiooides</i>	40							
<i>Thalassiosira anguste-lineata</i>				320				
<i>Thalassiosira gravida</i>					80			
<i>Thalassiosira nordenskioeldii</i>	280	280	320	2400	1120	1440	560	
<i>Thalassiosira</i> sp. (tiny)						20		
<i>Thalassiosira</i> spp.	80	40	120	4480	4000	1740	1120	40
Tintinnida	360	200	600	1920	160	160	560	1360
Unarmoured dinoflagellate	120	40	400	480			80	80

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
26-Jun-01								
<i>Alexandrium fundyense</i>	6720	6600	25160	1680	160		100	80
<i>Alexandrium fundyense</i> (duplet)	400	360	440	160	80			
<i>Alexandrium fundyense</i> (quadruplet)	40		80					
<i>Alexandrium fundyense</i> (triplet)			80					
<i>Alexandrium ostenfeldii</i>			160					
<i>Amphidinium carterae</i>	40			80	80			
<i>Amphidinium sphenoides</i>					320			
<i>Amylax triacantha</i>							20	
Armoured dinoflagellate	1520	6320	2960	480			40	400
<i>Asterionellopsis glacialis</i>		120			640	320		
<i>Attheya septentrionalis</i>			400					
<i>Brachionus</i> spp.		40	40					80
Centric diatom					80	20		
<i>Cerataulina pelagica</i>	40				240		160	80
<i>Ceratium horridum</i>	80	40		320	80			240
<i>Ceratium lineatum</i>								80
<i>Ceratium longipes</i>	120			560	160	40	40	960
<i>Ceratium tripos</i>					80			
<i>Chaetoceros atlanticus</i>				80		20	20	
<i>Chaetoceros contortus</i>		80	520	2080	2960	160	20	
<i>Chaetoceros convolutus</i>	80						40	
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>		160	120				20	
<i>Chaetoceros debilis</i>	160	40	40	160	320	60	1500	2080
<i>Chaetoceros decipiens</i>					80			80
<i>Chaetoceros furcellatus</i>					160	80	20	
<i>Chaetoceros laciniosus</i>	120	40	40	80	80		180	240
<i>Chaetoceros pseudocrinitus</i>		40						240
<i>Chaetoceros similis</i>					160			
<i>Chaetoceros simplex</i>		80	80			20	60	
<i>Chaetoceros</i> spp. (Hyalochaete)	2160	680	1240	15200	9200	360	520	2880
<i>Chaetoceros</i> spp. (Phaeoceros)	40			400	320	40		
<i>Chaetoceros teres</i>				160				320
<i>Commation cryoporinum</i>					240			
Copepoda	40				80		20	160
<i>Corethron hystrix</i>								80
<i>Coscinodiscus</i> spp.					240		20	
<i>Cylindrotheca closterium</i>	240	440	280	2960	9040	1360	660	640
<i>Dactyliosolen fragilissimus</i>	80		40	320	80		240	80
<i>Dictyocha speculum</i>	160	360	120	160	160	80	80	880
<i>Dinophysis acuminata</i>	40	40		640	80		80	1440
<i>Dinophysis norvegica</i>				80			60	80
<i>Dinophysis</i> spp.								80
<i>Ebria tripartita</i>		120						240
<i>Eucampia zodiacus</i>					80		20	
<i>Eutintinnus</i> sp.		40						
<i>Eutreptiella</i> sp.	1360	5320	4080	240			20	320
<i>Gonyaulax spinifera</i>	40							
<i>Guinardia delicatula</i>	80	40	280			80	520	880
<i>Gyrodinium</i> spp.	80	120		320	80		40	400
<i>Helicostomella</i> spp.	120	40					20	80
<i>Heterocapsa triquetra</i>	5320	35320	600	240				720
<i>Laboea</i> sp.			160	160			180	320
<i>Leptocylindrus danicus</i>	240	880	560	3440	960	80	380	4240
<i>Leptocylindrus minimus</i>	960	1640	560	160	80		400	160
<i>Mesodinium rubrum</i>	2800	1880		1120		80	3300	3920
<i>Navicula distans</i>	80	40			80	140		
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>					80			
<i>Parafavella</i> spp.		40						

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
26-Jun-01 (continued)								
<i>Paralia sulcata</i>						60		
<i>Phaeocystis pouchetii</i>	40		120					
<i>Pleurosigma / Gyrosigma</i>					80	20		
<i>Pleurosigma angulatum</i>	40					20		
<i>Prorocentrum minimum</i>	40						180	240
<i>Prorocentrum</i> sp. (small)				80				
<i>Protoperidinium bipes</i>	40			80				
<i>Protoperidinium brevipes</i>				80				80
<i>Protoperidinium depressum</i>				160	80			240
<i>Protoperidinium</i> spp.	160	160	120	320	80		40	240
<i>Pseudo-nitzschia delicatissima</i> group	2960	3680	2200	20000	9280	820	1100	240
<i>Pseudo-nitzschia seriata</i> group	80	40		400	80		60	
<i>Ptychocylis</i> spp.	40							
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>						20		
<i>Rhizosolenia imbricata</i>			40	400	160			80
<i>Rhizosolenia</i> spp.				80	240			
<i>Salpingella</i> spp.				80				
<i>Scrippsiella</i> sp.	280	80	1280					
<i>Scrippsiella trochoidea</i>	720	560	4960	160			20	
<i>Skeletonema costatum</i>	40		160				140	
<i>Stephanopyxis turris</i>	80			480	240	60	120	80
<i>Thalassionema nitzschiooides</i>					160	20		
<i>Thalassiosira gravida</i>							20	
<i>Thalassiosira nordenskioeldii</i>	40		40		160		20	160
<i>Thalassiosira punctigera</i>						20	20	
<i>Thalassiosira</i> sp. (tiny)					240			
<i>Thalassiosira</i> spp.				240	320	40	20	
Tintinnida	680	5760	80	320	640	160	580	1360
Unarmoured dinoflagellate	80	120	160	80	160		100	560
3-Jul-01								
<i>Actinoptychus senarius</i>						40		
<i>Alexandrium fundyense</i>	800	9680	4960	280	20			760
<i>Alexandrium fundyense</i> (cyst)					20			
<i>Alexandrium fundyense</i> (duplet)	20	640	480					40
<i>Alexandrium fundyense</i> (triplet)			40					
<i>Amphidinium carterae</i>	40							80
<i>Amphidinium sphenoides</i>				20				
<i>Amylax triacantha</i>						20		
Armoured dinoflagellate		400	480	80	20		20	520
<i>Asterionellopsis glacialis</i>	20	40		480	80	100	60	160
<i>Brachionus</i> spp.			40					
Centric diatom						20		
<i>Cerataulina pelagica</i>	20	40	80	80	80		220	240
<i>Ceratium fusus</i>					20			
<i>Ceratium horridum</i>					20			
<i>Ceratium lineatum</i>		40						80
<i>Ceratium longipes</i>	100	200	200	40	60			480
<i>Ceratium tripos</i>						20		
<i>Chaetoceros contortus</i>	40	200	880	800	100	20		
<i>Chaetoceros convolutus</i>	40	40	80					40
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	60	40					20	
<i>Chaetoceros debilis</i>	120	80	600	520	20		1360	2320
<i>Chaetoceros decipiens</i>		40						
<i>Chaetoceros furcellatus</i>		40	40					
<i>Chaetoceros laciniosus</i>		80	200				40	200
<i>Chaetoceros lorenzianus</i>				40				
<i>Chaetoceros pseudocrinitus</i>				40				
<i>Chaetoceros simplex</i>		80				40	120	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
3-Jul-01 (continued)								
<i>Chaetoceros socialis</i>	120							40
<i>Chaetoceros</i> spp. (Hyalochaete)	920	2000	4000	14840	1900	700	460	6480
<i>Chaetoceros</i> spp. (Phaeoceros)			120	120	220	120		80
<i>Chaetoceros teres</i>	100	80	40	80			40	320
<i>Commation cryoporinum</i>					20	20		
Copepoda	20		40		20			120
<i>Corethron hystrix</i>				40				40
<i>Coscinodiscus</i> spp.					20	20		
<i>Cylindrotheca closterium</i>	300	1120	1200	6080	4240	560	1020	400
<i>Dactyliosolen fragilissimus</i>	180	80	200	160	20		600	240
<i>Detonula confervacea</i>						40		
<i>Dictyocha speculum</i>	40	80	320	160	60		380	1440
<i>Dinophysis acuminata</i>	20	80					20	1400
<i>Dinophysis norvegica</i>								320
<i>Dinophysis</i> spp.				40				
<i>Ditylum brightwellii</i>					40			
<i>Ebria tripartita</i>								40
<i>Eucampia zodiacus</i>					20		40	
<i>Eutreptiella</i> sp.	40	520	480	200				
<i>Favella</i> spp.								40
<i>Guinardia delicatula</i>	200	120	80	520	140		2060	1840
<i>Guinardia flaccida</i>					40			
<i>Gyrodinium</i> spp.	20	120	40	240	40	20	120	40
<i>Helicostomella</i> spp.	20						120	2240
<i>Heterocapsa triquetra</i>		3440	4520	480		20		360
<i>Laboea</i> sp.	80	40	80	80			140	480
<i>Leptocylindrus danicus</i>	140	720	640	2680	500	60	60	240
<i>Leptocylindrus minimus</i>	200	640	600			20	500	
<i>Membraneis challengerii</i>					40			
<i>Mesodinium rubrum</i>	640	440	280	280		40	1060	3520
<i>Navicula distans</i>					20	80	20	
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>					20			
<i>Parafavella</i> spp.								40
<i>Paralia sulcata</i>					20			
Pennate diatom							40	
<i>Pleurosigma / Gyrosigma</i>							20	
<i>Pleurosigma angulatum</i>	20						140	
<i>Proboscia alata</i>				40				
<i>Prorocentrum minimum</i>				40				
<i>Protoperidinium brevipes</i>	20		120					80
<i>Protoperidinium depressum</i>						20		80
<i>Protoperidinium</i> spp.	20	80	40	40	20	20		160
<i>Pseudo-nitzschia delicatissima</i> group	8200	18440	13440	85544	4320	520	720	720
<i>Pseudo-nitzschia seriata</i> group		80	40	680	20	20	40	80
<i>Ptychocylis</i> spp.					20			
<i>Rhizosolenia imbricata</i>		80	40				60	40
<i>Rhizosolenia</i> spp.				40	40			40
<i>Scrippsiella</i> sp.		320	320					40
<i>Scrippsiella trochoidea</i>	20	480	240				20	
<i>Skeletonema costatum</i>	40	40	160	80	20		120	
<i>Stephanopyxis turris</i>		40		280	60			
<i>Thalassiosira anguste-lineata</i>			40					
<i>Thalassiosira gravida</i>				40				
<i>Thalassiosira nordenskioeldii</i>	20	40	40					
<i>Thalassiosira</i> sp. (tiny)					20			
<i>Thalassiosira</i> spp.				40	600	60	20	480
Tintinnida	260	160	480	480	200	260	700	3800
Unarmoured dinoflagellate		80	80	40		20	200	160

10-Jul-01	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Alexandrium fundyense</i>	2800	5120	13520	400			240	2960
<i>Alexandrium fundyense</i> (cyst)				80				
<i>Alexandrium fundyense</i> (duplet)	200	320	880	80			40	280
<i>Alexandrium fundyense</i> (planozygote)	40	200	800					40
<i>Alexandrium fundyense</i> (triplet)								80
<i>Amphidinium carterae</i>				320			40	
<i>Amphidinium sphenooides</i>				80				
<i>Amylax triacantha</i>			80					
<i>Apedinella radians</i>				80				
Armoured dinoflagellate	40	600	1440	160	40	40	120	360
<i>Asterionellopsis glacialis</i>				80	120	40	40	
<i>Brachionus</i> spp.				80				
Centric diatom					40			
<i>Cerataulina pelagica</i>		80	160	320			520	80
<i>Ceratium fusus</i>				80				40
<i>Ceratium horridum</i>			160					
<i>Ceratium lineatum</i>		40						80
<i>Ceratium longipes</i>	120	480	1120	400		20		360
<i>Ceratium tripos</i>			80					
<i>Chaetoceros contortus</i>		80	160	880	240	60	40	
<i>Chaetoceros convolutus</i>		80	40					160
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	40	40					40	
<i>Chaetoceros debilis</i>	160	800	120	240	200		1440	1480
<i>Chaetoceros laciniosus</i>		40	80					
<i>Chaetoceros simplex</i>							120	
<i>Chaetoceros socialis</i>	560	1280	960	80			80	920
<i>Chaetoceros</i> spp. (Hyalochaete)	600	1960	1720	17920	6760	1120	1400	16800
<i>Chaetoceros</i> spp. (Phaeoceros)	120	40		240	40	20		
<i>Chaetoceros teres</i>	120	80	40	240			80	160
<i>Commation cryoporinum</i>						40		
Copepoda	40	80		160				
<i>Corethron hystrix</i>						20	40	40
<i>Cylindrotheca closterium</i>	960	1600	720	6320	4840	2520	1600	480
<i>Dactyliosolen fragilissimus</i>			40	720			1360	360
<i>Detonula confervacea</i>	40							
<i>DictyoCHA speculum</i>	400	280	920	1360	200		640	1240
<i>Dinobryon</i> spp.							80	
<i>Dinophysis acuminata</i>	240	400	840	240				1880
<i>Dinophysis acuta</i>		40	40					
<i>Dinophysis norvegica</i>	40	120	120	80			40	160
<i>Dinophysis pulchella</i>								80
<i>Dinophysis</i> spp.							40	
<i>Ebria tripartita</i>	400	80	40					40
<i>Eucampia zodiacus</i>							80	
<i>Eutreptiella</i> sp.	40	80	80					
<i>Favella</i> spp.			40					40
<i>Gonyaulax spinifera</i>		40	40					
<i>Guinardia delicatula</i>	1280	400	360	800	360	160	8840	4640
<i>Gyrodinium</i> spp.	120	160	160	400	80		240	560
<i>Helicostomella</i> spp.	240	120	280				80	800
<i>Heterocapsa triquetra</i>	320	6120	8040	240			40	1520
<i>Laboea</i> sp.		200	200	480			40	160
<i>Lauderia annulata</i>								40
<i>Leptocylindrus danicus</i>	80	320	440	1280	920	160		40
<i>Leptocylindrus minimus</i>		80	80	80	40		1400	
<i>Licmophora</i> spp.				80				
<i>Mesodinium rubrum</i>	2880	1120	10200	560			4280	7320
<i>Navicula distans</i>	40				40	20		40

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
10-Jul-01 (continued)						20		
<i>Navicula transiens</i> var. <i>derasa</i> f. <i>delicatula</i>		80	40					
<i>Parafavella</i> spp.				80				
<i>Paralia sulcata</i>			40		80			
Pennate diatom				120		20		
<i>Pleurosigma angulatum</i>	160	40		80			320	320
<i>Proboscia alata</i>		80				40		
<i>Proboscia eumorpha</i>				40				
<i>Prorocentrum minimum</i>	40							40
<i>Protoperidinium bipes</i>		40						
<i>Protoperidinium brevipes</i>			200	80				40
<i>Protoperidinium depressum</i>		40	40					80
<i>Protoperidinium</i> spp.	120	120	320	160		20		160
<i>Pseudo-nitzschia delicatissima</i> group	2880	3600	1240	36160	7040	3020	2080	360
<i>Ptychocylis</i> spp.				80	40			
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>			40		40			
<i>Rhizosolenia imbricata</i>	40	40		560			160	160
<i>Scrippsiella</i> sp.	40	80	520					200
<i>Scrippsiella trochoidea</i>	40	120	680					40
<i>Skeletonema costatum</i>	40	120					320	
<i>Stephanopyxis turris</i>								40
<i>Thalassionema nitzschioides</i>							40	
<i>Thalassiosira nordenskioeldii</i>	40							
<i>Thalassiosira</i> sp. (tiny)				240	80	20	40	
<i>Thalassiosira</i> spp.					200	60	840	
Tintinnida	720	1600	2480	2400	840	220	560	1200
Unarmoured dinoflagellate	40	200	600	400	80		320	1240
17-Jul-01								
<i>Alexandrium fundyense</i>	28080	67840	31880	1420	400	20	400	7200
<i>Alexandrium fundyense</i> (cyst)			40	40		20		
<i>Alexandrium fundyense</i> (duplet)	720	1840	1320	80			80	240
<i>Alexandrium fundyense</i> (fusing)	80	80	160	20				40
<i>Alexandrium fundyense</i> (planozygote)	1360	5360	400	20	80			280
<i>Alexandrium fundyense</i> (quadruplet)	80	160	80					
<i>Alexandrium fundyense</i> (triplet)			160					120
<i>Amphidinium carterae</i>				80	160			
<i>Apedinella radians</i>					40			
Armoured dinoflagellate		960	1080	80	480	80	640	880
<i>Asterionellopsis glacialis</i>				40	80	60		
<i>Brachionus</i> spp.		80						80
<i>Cerataulina pelagica</i>			120		80		4800	
<i>Ceratium arcticum</i>			40					
<i>Ceratium fusus</i>	80	160						80
<i>Ceratium lineatum</i>	160	480		40				
<i>Ceratium longipes</i>	640	1200	880	360	240			720
<i>Ceratium tripos</i>		80						
<i>Chaetoceros borealis</i>				40				
<i>Chaetoceros contortus</i>	80		40	320	440			
<i>Chaetoceros convolutus</i>			40				80	
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	160							
<i>Chaetoceros debilis</i>	80		120	40	360		3360	
<i>Chaetoceros decipiens</i>			40					
<i>Chaetoceros radicans</i>					280			
<i>Chaetoceros simplex</i>			40		40		320	
<i>Chaetoceros socialis</i>	2800		3760	5280	240			
<i>Chaetoceros</i> spp. (Hyalochaete)	640	400	600	11840	11040	560	6960	3120
<i>Chaetoceros</i> spp. (Phaeoceros)				80	200	20		
<i>Chaetoceros teres</i>			40				80	
Copepoda		80	40	80	120			160

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
17-Jul-01 (continued)								
<i>Corethron hystrix</i>		80					80	
<i>Coscinodiscus</i> spp.				40				
<i>Cylindrotheca closterium</i>	1520	80	1280	4520	8440	1420	4880	120
<i>Dactyliosolen fragilissimus</i>					40	40	6800	160
<i>Detonula confervacea</i>		80					40	
<i>Dictyocha speculum</i>	1200	2080	520	200	120	20	3360	680
<i>Dinophysis acuminata</i>	1040	2400	1840	560	80	20	240	400
<i>Dinophysis norvegica</i>	240	560	200	160				160
<i>Dinophysis pulchella</i>					40			
<i>Dinophysis</i> spp.					40		80	
<i>Ebria tripartita</i>				120		80	80	120
<i>Eutreptiella</i> sp.	320	160			40			
<i>Favella</i> spp.								40
<i>Gonyaulax digitale</i>				40				40
<i>Gonyaulax spinifera</i>		480		280				240
<i>Guinardia delicatula</i>	720			800	560	840	40	156984
<i>Guinardia flaccida</i>		80			40			
<i>Gyrodinium</i> spp.	80	960	40	120	200	20	720	80
<i>Helicostomella</i> spp.	320	720	120				3040	1520
<i>Heterocapsa triquetra</i>	37120	100880	13600	200	480	20	1120	44960
<i>Laboea</i> sp.	400	640	440	120			1360	280
<i>Lauderia annulata</i>				40				
<i>Leptocylindrus danicus</i>					80	80		80
<i>Leptocylindrus minimus</i>	80					40		3040
<i>Membraneis challengerii</i>							20	80
<i>Mesodinium rubrum</i>	6320	10160	1520	640	240			20080
<i>Navicula distans</i>	80						20	15040
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>					40	40	60	
<i>Parafavella</i> spp.		80				40		
<i>Paralia sulcata</i>							20	
Pennate diatom		640						320
<i>Pleurosigma angulatum</i>							80	
<i>Polykrikos</i> spp.								440
<i>Protoperidinium bipes</i>					40			
<i>Protoperidinium brevipes</i>	400	880	400	160	120			160
<i>Protoperidinium</i> spp.	80	560	160	80	80			280
<i>Pseudo-nitzschia delicatissima</i> group	3840		2800	68204	15120	1660	880	40
<i>Pseudo-nitzschia seriata</i> group						40		240
<i>Ptychocylis</i> spp.	80	80						
<i>Rhizosolenia imbricata</i>					80		160	40
<i>Rhizosolenia</i> spp.					40			
<i>Scrippsiella</i> sp.		1200	240	40				360
<i>Scrippsiella trochoidea</i>	1360	2560	480					760
<i>Skeletonema costatum</i>		80			80		160	
<i>Stephanopyxis turris</i>				40				
<i>Thalassiosira gravida</i>							80	
<i>Thalassiosira</i> sp. (tiny)					40	20		
<i>Thalassiosira</i> spp.					40	20	1440	40
Tintinnida	1680	3040	2240	2200	880	40	3600	3000
Unarmoured dinoflagellate	720		40	280	200		3040	1320
24-Jul-01								
<i>Alexandrium fundyense</i>	400	140	1300	40				
<i>Alexandrium fundyense</i> (cyst)		20						
<i>Alexandrium fundyense</i> (duplet)				20				
<i>Alexandrium fundyense</i> (planozygote)	40	80	340		80			
<i>Amphidinium carterae</i>					40			
<i>Amphidinium sphenoides</i>						80		
<i>Amylax triacantha</i>	120	20						

	3-0m	15-0m	16-0m	16-10m 40	16-25m	16-50m	17-0m	25-0m
24-Jul-01 (continued)								
<i>Apedinella radians</i>								
Armoured dinoflagellate	120	500	320	840	120	20	240	160
<i>Asterionellopsis glacialis</i>								
<i>Brachionus</i> spp.		20	20					
Centric diatom					20	20		
<i>Cerataulina pelagica</i>	120	20				20	720	
<i>Ceratium fusus</i>		20	180	200	20			80
<i>Ceratium kofoidii</i>			20					
<i>Ceratium lineatum</i>	80	60	40	120				
<i>Ceratium longipes</i>	40	140	320	440	20			400
<i>Ceratium tripos</i>		40	60	80				80
<i>Chaetoceros contortus</i>		40	20					
<i>Chaetoceros convolutus</i>							80	
<i>Chaetoceros debilis</i>	40	160	60	40			2880	80
<i>Chaetoceros decipiens</i>							80	
<i>Chaetoceros laciniosus</i>		20					160	
<i>Chaetoceros simplex</i>	40	20			20		4160	80
<i>Chaetoceros socialis</i>	1520	220	480				720	
<i>Chaetoceros</i> spp. (Hyalochaete)	160	120	140	120	40	20	8240	80
<i>Commation cryporinum</i>				20				
Copepoda	80	320	120	80		20		80
<i>Corethron hystrix</i>			20			20		
<i>Cylindrotheca closterium</i>	840	400	740	2560	3240	600	4720	160
<i>Dactyliosolen fragilissimus</i>	80		40		40	20	2320	80
<i>Dictyocha speculum</i>	480	420	620	1200	140	40	2400	2080
<i>Dinophysis acuminata</i>	320	180	460	400	60		160	1520
<i>Dinophysis acuta</i>			40					80
<i>Dinophysis norvegica</i>	80	20	220	240				80
<i>Dinophysis pulchella</i>			20					80
<i>Ebria tripartita</i>		40	80	320	60		80	160
<i>Eutreptiella</i> sp.	120	140	40	320	20			80
<i>Favella</i> spp.							80	
<i>Gonyaulax digitale</i>	40		20					
<i>Gonyaulax spinifera</i>	160	20	60					
<i>Guinardia delicatula</i>	5600	560	1000	3000	1020	480	16640	13440
<i>Guinardia flaccida</i>				40			80	
<i>Gyrodinium</i> spp.	80	60	140	120	40		1360	560
<i>Helicostomella</i> spp.	40	620	60				320	400
<i>Heterocapsa triquetra</i>	5560	4740	10160	120	20		800	8080
<i>Laboea</i> sp.	80		240	80			160	720
<i>Lauderia annulata</i>							80	
<i>Leptocylindrus danicus</i>		20						
<i>Leptocylindrus minimus</i>	120		60		60		9040	160
<i>Licmophora</i> spp.			20	40			80	
<i>Mesodinium rubrum</i>	4600	5880	6560	1320	40		7920	38640
<i>Navicula distans</i>	80					20	80	160
<i>Parafavella</i> spp.		20						
<i>Paralia sulcata</i>						20		
Pennate diatom				40				
<i>Pleurosigma angulatum</i>	120	20					80	
<i>Prorocentrum minimum</i>								80
<i>Protoperidinium brevipes</i>		40	20					
<i>Protoperidinium depressum</i>			20					
<i>Protoperidinium punctulatum</i>								160
<i>Protoperidinium</i> spp.	80	80	200	120	20		80	160
<i>Pseudo-nitzschia delicatissima</i> group	1440	1000	600	480	1120	540	7040	80
<i>Pseudo-nitzschia seriata</i> group	40						400	
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>						20		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
24-Jul-01 (continued)					60			
<i>Rhizosolenia imbricata</i>						400		
<i>Scrippsiella</i> sp.	200	140	180					320
<i>Scrippsiella trochoidea</i>	80	20	60				80	
<i>Skeletonema costatum</i>	520	20	20	80			6320	
<i>Stephanopyxis turris</i>							80	
<i>Thalassionema nitzschiooides</i>				80		40		
<i>Thalassiosira nordenskioeldii</i>				40				
<i>Thalassiosira</i> spp.				40	80		1360	
Tintinnida	1240	2000	500	6000	280	140	720	480
Unarmoured dinoflagellate	440	100	80	640	40		1040	1280
31-Jul-01								
<i>Actinoptychus senarius</i>	80							
<i>Alexandrium fundyense</i>	40	20	360					
<i>Amylax triacantha</i>			80					80
Armoured dinoflagellate	160	300	560				200	400
<i>Asterionellopsis glacialis</i>							160	80
<i>Cerataulina pelagica</i>	80							
<i>Ceratium fusus</i>		20						
<i>Ceratium lineatum</i>	20	40	320				40	240
<i>Ceratium longipes</i>	120	140	120				40	80
<i>Ceratium</i> spp.			80					
<i>Ceratium tripos</i>		40	40					
<i>Chaetoceros convolutus</i>								80
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>			40					80
<i>Chaetoceros debilis</i>	100						40	80
<i>Chaetoceros decipiens</i>								80
<i>Chaetoceros laciniatus</i>								320
<i>Chaetoceros lorenzianus</i>								80
<i>Chaetoceros simplex</i>	100	60	40				2440	2080
<i>Chaetoceros socialis</i>	20		120					80
<i>Chaetoceros</i> spp. (Hyalochaete)							160	400
<i>Chaetoceros teres</i>	20							
Copepoda	100	60					160	80
<i>Corethron hystrix</i>			40				40	80
<i>Cylindrotheca closterium</i>	540	420	400				5360	1520
<i>Dactyliosolen fragilissimus</i>	40		40				120	400
<i>Dictyocha speculum</i>	460	640	1960				2440	34560
<i>Dinophysis acuminata</i>	140	260	600				320	400
<i>Dinophysis norvegica</i>	40	40	560					80
<i>Dinophysis pulchella</i>			40					
<i>Dinophysis</i> spp.		20						
<i>Ebria tripartita</i>	100	140	560					480
<i>Gonyaulax spinifera</i>		20	80					
<i>Guinardia delicatula</i>	3180	3060	7000				1480	2160
<i>Guinardia flaccida</i>		40	280					
<i>Gyrodinium</i> spp.	120	120	640					
<i>Helicostomella</i> spp.	20	140					1480	1280
<i>Heterocapsa triquetra</i>	620	720	16800				120	14160
<i>Laboea</i> sp.	400	100	160				40	80
<i>Leptocylindrus minimus</i>		20					6720	3680
<i>Mesodinium rubrum</i>	5800	6240	4400				6200	29520
<i>Navicula distans</i>							40	
<i>Pleurosigma angulatum</i>							40	
<i>Prorocentrum micans</i>	20							
<i>Protoperidinium bipes</i>							80	
<i>Protoperidinium brevipes</i>	20	20	120					80
<i>Protoperidinium</i> spp.	20	60	160				40	80
<i>Pseudo-nitzschia delicatissima</i> group	300	400	360				4960	3600

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
31-Jul-01 (continued)							120	80
<i>Pseudo-nitzschia seriata</i> group								80
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>								80
<i>Rhizosolenia imbricata</i>		40					400	1040
<i>Rhizosolenia</i> spp.							200	80
<i>Scrippsiella</i> sp.	40	40	120					80
<i>Scrippsiella trochoidea</i>	20		280				40	240
<i>Skeletonema costatum</i>	120	20					5640	2560
<i>Thalassiosira oestrupii</i>	20							
<i>Thalassiosira</i> sp. (tiny)	20		120				280	960
<i>Thalassiosira</i> spp.	20							
Tintinnida	520	520	1360				840	240
Unarmoured dinoflagellate	80	160	1480				120	560
7-Aug-01								
<i>Actinopytchus senarius</i>			40					
<i>Alexandrium fundyense</i>	560	80	80					
<i>Amphidinium carterae</i>				60	20	20		
<i>Amylax triacantha</i>	80	80	40				289	160
Armoured dinoflagellate	2400	240	160	60	20	60	1445	1760
<i>Asterionellopsis glacialis</i>	40	40		20			289	80
Centric diatom						40		
<i>Cerataulina pelagica</i>	160			40				80
<i>Ceratium fusus</i>	40		120	20				320
<i>Ceratium horridum</i>				40				
<i>Ceratium lineatum</i>	40	200	160	80				1200
<i>Ceratium longipes</i>	80		120	80				240
<i>Ceratium tripos</i>			160	20				
<i>Chaetoceros contortus</i>		40						80
<i>Chaetoceros debilis</i>	40	80		20				
<i>Chaetoceros filiformis</i>							867	
<i>Chaetoceros laciniatus</i>								240
<i>Chaetoceros lorenzianus</i>								800
<i>Chaetoceros simplex</i>	80		120	120		20	9248	560
<i>Chaetoceros socialis</i>	400	40						
<i>Chaetoceros</i> spp. (Hyalochaete)	280		40		20		1156	1040
<i>Chaetoceros</i> spp. (Phaeoceros)								80
<i>Chaetoceros teres</i>								400
<i>Commation cryoporinum</i>				40				
Copepoda	120	160		60				
<i>Corethron hystrix</i>	40				20	20	578	320
<i>Cylindrotheeca closterium</i>	360	320	320	1220	1240	1020	13872	880
<i>Dactyliosolen fragilissimus</i>					20	60	4046	
<i>Dictyocha speculum</i>	360	640	960	500	360	40	5780	38800
<i>Dinophysis acuminata</i>	200	200	1200	180	20		289	3440
<i>Dinophysis acuta</i>								320
<i>Dinophysis norvegica</i>	80		600	340	20			560
<i>Dinophysis</i> spp.	40							
<i>Ditylum brightwellii</i>				20				
<i>Ebria tripartita</i>	160	200	440	160	140		2023	6560
<i>Eutreptiella</i> sp.	320	80		40	40			80
<i>Fragilaria</i> spp.	40							
<i>Gonyaulax digitale</i>	80							
<i>Gonyaulax spinifera</i>	120	440		40			289	
<i>Guinardia delicatula</i>	9960	680	720	1160	500	500	1156	720
<i>Guinardia flaccida</i>				20		20		
<i>Gyrodinium</i> spp.	40	200	160	240	40			
<i>Helicostomella</i> spp.	200	960	200	20			578	2560
<i>Heterocapsa triquetra</i>	240	160	320	20			867	160
<i>Laboea</i> sp.	1360	240	640	600			289	880

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
7-Aug-01 (continued)								
<i>Lauderia annulata</i>							289	480
<i>Leptocylindrus danicus</i>							2023	240
<i>Leptocylindrus minimus</i>	40		80		20		8092	240
<i>Mesodinium rubrum</i>	10720	10600	5120	1260	160	20	22831	45952
<i>Navicula distans</i>						20		
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>						20	20	
<i>Paralia sulcata</i>		40					20	
Pennate diatom					40			867
<i>Pleurosigma / Gyrosigma</i>								80
<i>Pleurosigma angulatum</i>	160							240
<i>Polykrikos</i> spp.		40						
<i>Prorocentrum minimum</i>		40						
<i>Protoperidinium brevipes</i>						40		80
<i>Protoperidinium punctulatum</i>								240
<i>Protoperidinium</i> spp.	200	120	40	140	20		289	240
<i>Pseudo-nitzschia delicatissima</i> group	1360	2000	3800	2340	1420	680	129472	76872
<i>Pseudo-nitzschia seriata</i> group								3200
<i>Rhizosolenia imbricata</i>		40		60			4624	6400
<i>Scrippsiella</i> sp.	520		120					
<i>Scrippsiella trochoidea</i>	40	40						80
<i>Skeletonema costatum</i>	360	400	120	60	20		103462	7280
<i>Thalassionema nitzschioides</i>					40	20		
<i>Thalassiosira oestrupii</i>			120					
<i>Thalassiosira</i> sp. (tiny)							3757	
<i>Thalassiosira</i> spp.	40	80		20	40		7225	240
Tintinnida	2040	1080	1000	440	240	140	3179	880
Unarmoured dinoflagellate	1920	760	480	640	80	80	1156	320
14-Aug-01								
<i>Alexandrium fundyense</i>	40	80			20			40
<i>Alexandrium fundyense</i> (planozygote)					20			
<i>Amphidinium carterae</i>					20			
<i>Amylax triacantha</i>	200							80
Armoured dinoflagellate	840	2000	200	60	20	80	1440	560
<i>Asterionellopsis glacialis</i>		80			80	80	640	40
Centric diatom				80	40			
<i>Cerataulina pelagica</i>	240						1120	
<i>Ceratium fusus</i>				20				
<i>Ceratium horridum</i>				40				40
<i>Ceratium lineatum</i>	280	160	80					520
<i>Ceratium longipes</i>	40	240						
<i>Ceratium tripos</i>			80	20				80
<i>Chaetoceros contortus</i>	40	80		20			160	920
<i>Chaetoceros debilis</i>	160	480		20			160	
<i>Chaetoceros decipiens</i>							320	200
<i>Chaetoceros didymus</i>							160	
<i>Chaetoceros laciniosus</i>		160		40			800	840
<i>Chaetoceros lorenzianus</i>	80						800	
<i>Chaetoceros simplex</i>	280	1840		100	60	40	4000	200
<i>Chaetoceros socialis</i>		1200		20			160	40
<i>Chaetoceros</i> spp. (Hyalochaete)	200	160	40	100		20	1920	560
<i>Chaetoceros teres</i>								40
<i>Commation cryoporinum</i>					80	20		
Copepoda	80	80		20			160	80
<i>Corethron hystrix</i>	120		80	100	80	40	160	40
<i>Coscinodiscus</i> spp.				20				
<i>Cylindrotheca closterium</i>	240	960	80	900	1700	920	3520	160
<i>Dactyliosolen fragilissimus</i>	40		40	20	40	20	2720	80
<i>Dictyocha speculum</i>	2880	1760	720	1000			3040	1880

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
14-Aug-01 (continued)								
<i>Dinophysis acuminata</i>	240	720		180	40	20	320	200
<i>Dinophysis norvegica</i>	160	160		180			160	40
<i>Dinophysis pulchella</i>	40							
<i>Dinophysis</i> spp.				80	20			40
<i>Ditylum brightwellii</i>				40	40			
<i>Ebria tripartita</i>	680	1600		80	740	20	1600	680
<i>Eucampia zodiacus</i>						20		
<i>Eutreptiella</i> sp.	560			40	120		160	
<i>Favella</i> spp.								40
<i>Gonyaulax digitale</i>								280
<i>Gonyaulax spinifera</i>	80	240						80
<i>Grammatophora</i> spp.		80						
<i>Guinardia delicatula</i>	5480	2560	1040	1520	180	260	160	
<i>Guinardia flaccida</i>				60				
<i>Gyrodinium</i> spp.	120			200	60	80	160	200
<i>Helicostomella</i> spp.	40	240					640	1040
<i>Heterocapsa triquetra</i>	200	320		40	100	20	320	400
<i>Laboea</i> sp.	440			80	260		160	80
<i>Lauderia annulata</i>							320	80
<i>Leptocylindrus danicus</i>				20			17120	7360
<i>Leptocylindrus minimus</i>	120	320	160		40	20	2880	40
<i>Licmophora</i> spp.		560						
<i>Mesodinium rubrum</i>	41040	4240	8360	240	20		18720	7320
<i>Navicula distans</i>					20			
<i>Navicula transiens</i> var. <i>derasa f. delicatula</i>				40	20			
<i>Paralia sulcata</i>				40				
Pennate diatom	40	80	40		40		320	
<i>Pleurosigma / Gyrosigma</i>		40						
<i>Pleurosigma angulatum</i>		240						
<i>Pleurosigma strigosum</i>		40						40
<i>Prorocentrum minimum</i>		40						
<i>Protoperidinium brevipes</i>			80					
<i>Protoperidinium depressum</i>		40						
<i>Protoperidinium punctulatum</i>		80		20				
<i>Protoperidinium</i> spp.	120	160		40	40	80		120
<i>Pseudo-nitzschia delicatissima</i> group	8760	58000	15680	22760	9280	2740	3360	480
<i>Pseudo-nitzschia seriata</i> group							3200	2320
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>								40
<i>Rhizosolenia imbricata</i>	40	80	160	100	20	60	3840	840
<i>Rhizosolenia setigera</i>								40
<i>Rhizosolenia</i> spp.	40			200			2560	1280
<i>Salpingella</i> spp.					20			
<i>Scrippsiella</i> sp.	40	480	40					320
<i>Scrippsiella trochoidea</i>								40
<i>Skeletonema costatum</i>	13720	160320	880	220	160		6240	640
<i>Thalassionema nitzschioides</i>				120	60	20		
<i>Thalassiosira</i> sp. (tiny)				40	40		160	
<i>Thalassiosira</i> spp.	200			80	660	100	20	1440
Tintinnida	1120	480	360	320	80	300	2240	1800
Unarmoured dinoflagellate	680	320	40	260	60	20	480	240
21-Aug-01								
<i>Actinopychus senarius</i>							60	
<i>Alexandrium fundyense</i>				120	40	20		80
<i>Amphidinium sphenoides</i>							20	
<i>Amylax triacantha</i>					40			
Armoured dinoflagellate	280			400	200	40	20	193
<i>Asterionellopsis glacialis</i>						20	100	800
<i>Aulacoseira ambigua</i>					40			

21-Aug-01 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Biddulphia alternans</i>						20		
Centric diatom		40				20		
<i>Cerataulina pelagica</i>	80	80	40				965	240
<i>Ceratium fusus</i>	80	120		80	20			240
<i>Ceratium lineatum</i>	160		40	120	40	20	193	1520
<i>Ceratium longipes</i>	240	200	40	80	20	20		80
<i>Ceratium tripos</i>	40			40	20			80
<i>Chaetoceros contortus</i>				40	20	20	193	
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>		40	40					
<i>Chaetoceros danicus</i>			40					
<i>Chaetoceros debilis</i>		80		120		40		
<i>Chaetoceros decipiens</i>								80
<i>Chaetoceros laciniatus</i>								80
<i>Chaetoceros lorenzianus</i>	40					20	193	
<i>Chaetoceros radicans</i>						20		
<i>Chaetoceros simplex</i>	80	80			80	20	965	80
<i>Chaetoceros socialis</i>	240	440						
<i>Chaetoceros</i> spp. (Hyalochaete)	120	200	120	120	140	60	193	320
<i>Commation cryoporinum</i>					20	60		
Copepoda	40	80	40	160				80
<i>Corethron hystrix</i>	80	80	120	120	100	40	193	240
<i>Coscinodiscus</i> spp.					20	20		
<i>Cylindrotheca closterium</i>	360	320	400	600	1500	500	579	240
<i>Dactyliosolen fragilissimus</i>	80	280	200	400	100	420	2316	160
<i>Detonula confervacea</i>		40						
<i>Dictyocha speculum</i>	640	320	440	1400	360	20	965	3520
<i>Dinophysis acuminata</i>	200	40	40	240	20		965	720
<i>Dinophysis norvegica</i>		80		120	20			
<i>Dinophysis pulchella</i>				120	60			
<i>Ditylum brightwellii</i>	320		520	360	100	20	386	
<i>Ebria tripartita</i>	200	40	120	320	80	120	965	480
<i>Eucampia zodiacus</i>								80
<i>Eutreptiella</i> sp.		40	40	680	120		1351	80
<i>Gonyaulax digitale</i>	80	40						
<i>Gonyaulax spinifera</i>			200					
<i>Guinardia delicatula</i>	88436	91852	63460	66472	69360	53176	965	6960
<i>Guinardia flaccida</i>	320				60			80
<i>Gyrodinium</i> spp.	80	40	160	360	120	20	386	160
<i>Helicostomella</i> spp.	80	40		40				640
<i>Heterocapsa triquetra</i>	80							
<i>Laboea</i> sp.	320	200	200	480			579	240
<i>Lauderia annulata</i>							579	
<i>Leptocylindrus danicus</i>	3160	400		320	140	100	92061	60112
<i>Leptocylindrus minimus</i>	240	200	280	80	60		2123	320
<i>Licmophora</i> spp.	40					20		
<i>Mesodinium rubrum</i>	1520	1280	5840	920	100	80	13896	36704
<i>Navicula distans</i>		80			20			
<i>Navicula transiens</i> var. <i>derasa</i> f. <i>delicatula</i>				80	40	40		
<i>Paralia sulcata</i>	40							
Pennate diatom		40			20			
<i>Pleurosigma / Gyrosigma</i>				40	40			
<i>Pleurosigma angulatum</i>	160	80						400
<i>Proboscia alata</i>						40		80
<i>Prorocentrum minimum</i>					40			
<i>Protoperidinium conicum</i>					20			80
<i>Protoperidinium depressum</i>				80				
<i>Protoperidinium</i> spp.		40		80	20	20		
<i>Pseudo-nitzschia delicatissima</i> group	880	160	480	680	2940	1220		80

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
21-Aug-01 (continued)								
<i>Pseudo-nitzschia seriata</i> group			280	40		80	13317	240
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	80				20		193	
<i>Rhizosolenia imbricata</i>	280		40	40	180	840	193	1280
<i>Rhizosolenia setigera</i>		80			20	20	193	
<i>Rhizosolenia</i> spp.	160	440			40	120	14475	
<i>Scrippsiella</i> sp.			40	40				
<i>Scrippsiella trochoidea</i>	80		40				193	1040
<i>Skeletonema costatum</i>	7360	1400	200	240	400	220	386	240
<i>Thalassionema nitzschioides</i>					40	40		
<i>Thalassiosira anguste-lineata</i>					160			
<i>Thalassiosira gravida</i>	80				120			
<i>Thalassiosira oestrupii</i>								80
<i>Thalassiosira punctigera</i>							20	
<i>Thalassiosira</i> sp. (tiny)						20		
<i>Thalassiosira</i> spp.	560	400	440	1640	1700	20		
Tintinnida	40	240		600	140	160	386	320
Unarmoured dinoflagellate	40	120	280	360	140	100	386	
28-Aug-01								
<i>Actinoptychus senarius</i>					20			
<i>Alexandrium fundyense</i>	200		220	20				
<i>Alexandrium fundyense</i> (duplet)			20					
<i>Amylax triacantha</i>								120
Armoured dinoflagellate	240	320	660	80	20	120	772	1400
<i>Asterionellopsis glacialis</i>					20			
Centric diatom	120		20				193	40
<i>Cerataulina pelagica</i>	80	40		20				120
<i>Ceratium fusus</i>	120					20		200
<i>Ceratium lineatum</i>	160	80						3120
<i>Ceratium longipes</i>	120			20		20		120
<i>Ceratium tripos</i>							193	120
<i>Chaetoceros debilis</i>	120							
<i>Chaetoceros decipiens</i>							386	
<i>Chaetoceros laciniosus</i>							193	160
<i>Chaetoceros simplex</i>			20	60	40			40
<i>Chaetoceros</i> spp. (Hyalochaete)	40	160		20	20		193	200
<i>Chaetoceros teres</i>	40							
<i>Commation cryporinum</i>			60	60		20		
Copepoda		40		20		20	579	280
<i>Corethron hystrix</i>	200	400	220	100	120	60	193	240
<i>Coscinodiscus</i> spp.			20	80	20	20		
<i>Cylindrotheca closterium</i>	320	480	300	1080	900	740	193	
<i>Cylindrotheca gracilis</i>	40							
<i>Dactyliosolen fragilissimus</i>	160	400	60	20	160		5211	80
<i>Dictyocha speculum</i>	1080	1920	180	60	80	20	1158	6440
<i>Dinophysis acuminata</i>	320	160	20			40		1400
<i>Dinophysis norvegica</i>	40							160
<i>Dinophysis</i> spp.	40							
<i>Ditylum brightwellii</i>	120	80	20	60		40	193	
<i>Ebria tripartita</i>	320	400	40	40	60		386	2320
<i>Eucampia zodiacus</i>	120	40						
<i>Eutreptiella</i> sp.	40	120			20			160
<i>Gonyaulax spinifera</i>		200						40
<i>Gonyaulax</i> spp.		120						
<i>Guinardia delicatula</i>	280	320	80	20	120	140	1737	480
<i>Guinardia flaccida</i>	400		80				193	80
<i>Gyrodinium</i> spp.	40		40	40	100	40	1158	320
<i>Helicostomella</i> spp.	160	80					1351	1200
<i>Heterocapsa triquetra</i>		120						

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
28-Aug-01 (continued)								
<i>Laboea</i> sp.	80		20	20			1158	40
<i>Lauderia annulata</i>	40						386	120
<i>Leptocylindrus danicus</i>	11560	6000	40	60	160	340	200334	415000
<i>Leptocylindrus minimus</i>	80	40	20		40	80	772	120
<i>Licmophora</i> spp.		40						
<i>Mesodinium rubrum</i>	5560	1240	60		20	20	91482	22160
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>					20	20		
Pennate diatom	80	160	20	20	20			193
<i>Pleurosigma / Gyrosigma</i>				20				
<i>Pleurosigma angulatum</i>	120							
<i>Pleurosigma strigosum</i>	120					20	20	
<i>Polykrikos</i> spp.			120					
<i>Proboscia alata</i>								80
<i>Protoperidinium depressum</i>					20	20		40
<i>Protoperidinium</i> spp.							193	120
<i>Pseudo-nitzschia delicatissima</i> group	200	400	2180	4400	4760	3600		40
<i>Pseudo-nitzschia seriata</i> group	80	40	20		20		7334	400
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	80	40					193	40
<i>Rhizosolenia imbricata</i>	160	80			60	80	2316	760
<i>Rhizosolenia setigera</i>	120						386	200
<i>Rhizosolenia</i> spp.		80		20				40
<i>Scrippsiella</i> sp.		560						
<i>Scrippsiella trochoidea</i>	320		160				965	4840
<i>Skeletonema costatum</i>	40	80	160	100	60	80		
<i>Thalassionema nitzschioides</i>	40			60	60	80		40
<i>Thalassiosira gravida</i>						20		
<i>Thalassiosira oestrupii</i>								80
<i>Thalassiosira</i> sp. (tiny)			40	120				
<i>Thalassiosira</i> spp.			40	20			40	
Tintinnida	600	920	20	80	120	120	1544	400
Unarmoured dinoflagellate	320	200	100	20	40	60		80
4-Sep-01								
<i>Actinptychus senarius</i>	240			640	80	120		
<i>Amylax triacantha</i>								80
Armoured dinoflagellate	160	80	320	160	160		320	480
<i>Asterionellopsis glacialis</i>	560	480	80	1600	560	40		
<i>Aulacoseira ambigua</i>					40	20		
Centric diatom		320			120	40		80
<i>Cerataulina pelagica</i>	1120	80	240			20	400	
<i>Ceratium fusus</i>			120	160				320
<i>Ceratium lineatum</i>		80	200				960	4000
<i>Ceratium longipes</i>			160					80
<i>Ceratium tripos</i>	160	240	120		40			240
<i>Chaetoceros contortus</i>		160	40					
<i>Chaetoceros decipiens</i>		160						
<i>Chaetoceros laciniatus</i>							80	
<i>Chaetoceros lorenzianus</i>					40			
<i>Chaetoceros simplex</i>	240	160	120	960	200	40	960	160
<i>Chaetoceros socialis</i>			800					
<i>Chaetoceros</i> spp. (Hyalochaete)	80	400	120	160	120		240	320
<i>Commation cryoporinum</i>				240	120	20		
Copepoda	160	320		240			80	
<i>Corethron hystrix</i>	160	480	40	480	240	60	640	240
<i>Coscinodiscus</i> spp.						20		
<i>Cylindrotheca closterium</i>	1520	1600	1080	5920	3360	1260	80	80
<i>Dactyliosolen fragilissimus</i>	160		280			40	160	
<i>Detonula confervacea</i>	160		40			20		
<i>Dictyocha speculum</i>	400	400	360	560	240	20	160	5200

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
4-Sep-01 (continued)								
<i>Dinophysis acuminata</i>		80		240		20		480
<i>Dinophysis norvegica</i>				80				80
<i>Dinophysis pulchella</i>					40			
<i>Dinophysis</i> spp.		80						
<i>Ditylum brightwellii</i>	80	320	120	240	40	20	160	80
<i>Ebria tripartita</i>	80	320	200	880	520	20	80	720
<i>Eucampia zodiacus</i>								240
<i>Eutreptiella</i> sp.	240	80	40	960	360		80	80
<i>Gonyaulax spinifera</i>			40					
<i>Guinardia delicatula</i>	160	320	80	80	200	140	560	240
<i>Guinardia flaccida</i>							80	640
<i>Gyrodinium</i> spp.				80	160		80	240
<i>Helicostomella</i> spp.			40				80	160
<i>Helicotheca tamesis</i>					40			
<i>Heterocapsa triquetra</i>	80		40					
<i>Laboea</i> sp.	80	80	80	320			640	
<i>Lauderia annulata</i>							560	80
<i>Leptocylindrus danicus</i>	12400	1200	1240	8800	21960	4400	626248	829992
<i>Leptocylindrus minimus</i>		80	200	80	40		480	
<i>Licmophora</i> spp.		240						
<i>Mesodinium rubrum</i>	3120	11840	1800	560			15760	11440
<i>Navicula distans</i>						40	80	
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>					120			
<i>Notholca</i> spp.							40	
<i>Paralia sulcata</i>							40	
Pennate diatom	320	400	120	880	160	20	80	
<i>Pleurosigma / Gyrosigma</i>					40	40		
<i>Pleurosigma angulatum</i>	240	80				40		
<i>Pleurosigma strigosum</i>				80				
<i>Polykrikos</i> spp.	80						80	
<i>Proboscia alata</i>			40					80
<i>Prorocentrum micans</i>		80					80	
<i>Prorocentrum minimum</i>	80	80						
<i>Protoperidinium bipes</i>				80				
<i>Protoperidinium</i> spp.			240	80	40			800
<i>Pseudo-nitzschia delicatissima</i> group	5120	480	2520	25440	7640	4720	160	80
<i>Pseudo-nitzschia seriata</i> group					40	20		80
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>							400	
<i>Rhizosolenia imbricata</i>							800	
<i>Rhizosolenia setigera</i>	240				40		480	
<i>Rhizosolenia</i> spp.							1040	240
<i>Scrippsiella</i> sp.			40					
<i>Scrippsiella trochoidea</i>	400	160	80	160			960	15120
<i>Skeletonema costatum</i>	1600	5520	4160	8160	3560	60		
<i>Thalassionema nitzschioides</i>		160		80	40	40		
<i>Thalassiosira baltica</i>					40			
<i>Thalassiosira oestrupii</i>			40					
<i>Thalassiosira punctigera</i>				80				
<i>Thalassiosira</i> sp. (tiny)		960		3600	920	240		
<i>Thalassiosira</i> spp.	400	240	680	4960	1160	20	320	
Tintinnida	160	560	320	640	120	40	1280	480
<i>Tintinnopsis campanula</i>								80
Unarmoured dinoflagellate	320	400	440	320	160	20	400	80
13-Sep-01								
<i>Actinoptychus senarius</i>		578			772	640		640
<i>Amylax triacantha</i>								320
Armoured dinoflagellate	578			2312	579	80	1040	8640
<i>Asterionellopsis glacialis</i>	11849	36414	16184	43350	11580	1160	80	160

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
13-Sep-01 (continued)								
<i>Scrippsiella</i> sp.			1156					
<i>Scrippsiella trochoidea</i>			3468	2312			960	11200
<i>Skeletonema costatum</i>	41038	202300	116178	195942	41302	4960	320	
<i>Thalassionema nitzschiooides</i>					579	120	160	320
<i>Thalassiosira anguste-lineata</i>				578				
<i>Thalassiosira</i> sp. (tiny)	289	12138		26588	11194	440	80	
<i>Thalassiosira</i> spp.	14450	32946	28322	46240	5790	720	320	
<i>Tintinnida</i>	2312	4046	1156	1156	579	80	1040	
Unarmoured dinoflagellate	289	9826	4624	1734	193	40	480	800
18-Sep-01								
<i>Actinoptychus senarius</i>				1156			80	
<i>Alexandrium fundyense</i>			160					
<i>Amphidinium carterae</i>			80					
<i>Amphidinium sphenoides</i>				289	768			
Armoured dinoflagellate	160	320	1920		576		120	460
<i>Asterionellopsis glacialis</i>	21840	64736	7120	25432	29088	6400	40	200
Centric diatom							40	
<i>Cerataulina pelagica</i>	560	320	480	867		40	400	
<i>Ceratium fusus</i>	80	160						20
<i>Ceratium lineatum</i>	720	480	720		192		520	580
<i>Ceratium longipes</i>		160						
<i>Ceratium tripos</i>	80		160					40
<i>Chaetoceros constrictus</i>		1120						140
<i>Chaetoceros contortus</i>	560	3200	1200	1445	384	40		
<i>Chaetoceros debilis</i>	2560	2720	1600	867	192			40
<i>Chaetoceros decipiens</i>	80						160	20
<i>Chaetoceros diadema</i>		320				80		
<i>Chaetoceros didymus</i>	80						40	20
<i>Chaetoceros laciniatus</i>			80					
<i>Chaetoceros lorenzianus</i>							40	
<i>Chaetoceros radicans</i>				192				
<i>Chaetoceros simplex</i>	240	320		289	192	280	280	60
<i>Chaetoceros socialis</i>	720	800						
<i>Chaetoceros</i> spp. (Hyalochaete)	1760	2400	1040	3179	2304	160	800	140
<i>Commation cryoporinum</i>	80			289		80		
Copepoda	160	160	160					
<i>Corethron hystrix</i>		160	80				200	
<i>Cylindrotheca closterium</i>	1440	1600	400	7803	8256	760	560	320
<i>Dactyliosolen fragilissimus</i>	960	160			4992	440	3200	
<i>Detonula confervacea</i>	1200							
<i>Dictyocha speculum</i>	480	960	400	1156	960	80	200	400
<i>Dinophysis acuminata</i>	80	320	80				40	180
<i>Dinophysis norvegica</i>	160		80					
<i>Ditylum brightwellii</i>	12080	15200	35840	22253	8832	1200	120	240
<i>Ebria tripartita</i>	240	800	320		576		120	480
<i>Eucampia zodiacus</i>			160				40	
<i>Eutreptiella</i> sp.			80				360	20
<i>Fragilaria</i> spp.	80							
<i>Gonyaulax</i> spp.								500
<i>Grammatophora marina</i>								20
<i>Guinardia delicatula</i>	480	960	720	2890	1344	160	880	
<i>Guinardia flaccida</i>	160	160	80				1280	120
<i>Guinardia striata</i>	80	160		289				
<i>Gyrodinium</i> spp.	320	800	2160	578	1344		80	
<i>Gyrosigma fasciola</i>	80							
<i>Helicostomella</i> spp.	240						40	60
<i>Helicotheca tamesis</i>	80							
<i>Heterocapsa triquetra</i>	160		560					

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
18-Sep-01 (continued)								
<i>Laboea</i> sp.	320		160				280	20
<i>Lauderia annulata</i>				289			360	
<i>Leptocylindrus danicus</i>		160	2480	3179	384			
<i>Leptocylindrus mediterraneus</i>							40	
<i>Leptocylindrus minimus</i>	400	960	320	867				
<i>Mesodinium rubrum</i>	3040	18560	2000	867		200	6920	360
<i>Navicula distans</i>	80					40	40	
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>				1156				
<i>Notholca</i> spp.							200	
<i>Odontella sinensis</i>	80	160						
<i>Paralia sulcata</i>							40	
Pennate diatom			80	867	192		400	
<i>Pleurosigma / Gyrosigma</i>	80	160		289	384	40		120
<i>Pleurosigma angulatum</i>	160							
<i>Pleurosigma strigosum</i>	240		160				40	20
<i>Polykrikos</i> spp.			80					
<i>Prorocentrum micans</i>			80				40	700
<i>Prorocentrum minimum</i>				578				
<i>Protoperidinium bipes</i>				289			40	
<i>Protoperidinium</i> spp.	160	320	560	289	192		80	60
<i>Pseudo-nitzschia delicatissima</i> group	54912	118496	136944	97682	57024	20240	120	540
<i>Pseudo-nitzschia seriata</i> group	400	320				80	40	
<i>Rhizosolenia imbricata</i>	160		240				880	
<i>Rhizosolenia setigera</i>	320						320	
<i>Rhizosolenia</i> spp.	80					40	520	
<i>Scrippsiella</i> sp.			320					
<i>Scrippsiella trochoidea</i>	160	160	1440	578			80	140
<i>Skeletonema costatum</i>	35280	18400	63000	76874	31104	11400	200	880
<i>Thalassionema nitzschiooides</i>	80		80	289	1536	80	80	40
<i>Thalassiosira anguste-lineata</i>				289				
<i>Thalassiosira gravida</i>		160						
<i>Thalassiosira nordenskioeldii</i>							40	
<i>Thalassiosira oestrupii</i>	80		80					100
<i>Thalassiosira</i> sp. (tiny)	2240	3040		4913	2880	120		40
<i>Thalassiosira</i> spp.	1360		6400	23120	14976	1520	200	20
Tintinnida	320		160	1156	384	40	400	300
Unarmoured dinoflagellate	160	480	2560	1156	192		80	20
24-Sep-01								
<i>Actinptychus senarius</i>	480	640		400		1760	160	
<i>Amphidinium sphenoides</i>		160	320	800	960			
Armoured dinoflagellate	160	320	960			80	80	960
<i>Asterionellopsis glacialis</i>	39360	220448	32480	187848	73440	22240	160	80
<i>Biddulphia alternans</i>						240		
Centric diatom							40	160
<i>Cerataulina pelagica</i>	1440	1280	480	400	1440	80		
<i>Ceratium fusus</i>				80	160		80	400
<i>Ceratium lineatum</i>	3360	1280	4160	80	160		2280	32160
<i>Ceratium longipes</i>	160						40	160
<i>Ceratium</i> spp.								160
<i>Ceratium tripos</i>	160		320	80	160		40	80
<i>Chaetoceros constrictus</i>	160							
<i>Chaetoceros contortus</i>			160					
<i>Chaetoceros debilis</i>	2720	11360	4960	3840	2400	160		
<i>Chaetoceros decipiens</i>	640		160					
<i>Chaetoceros laciniatus</i>				480		160		
<i>Chaetoceros lorenzianus</i>		160					80	40
<i>Chaetoceros radicans</i>						320		
<i>Chaetoceros similis</i>					80			

24-Sep-01 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Chaetoceros simplex</i>			160					
<i>Chaetoceros socialis</i>		4000	4160					
<i>Chaetoceros</i> spp. (Hyalochaete)	480	3360	6240	1840	1600	160	280	
Copepoda		480					120	240
<i>Corethron hystrix</i>	160	160		80			160	
<i>Cylindrotheca closterium</i>	2720	480	160	2480	9120	3760	480	
<i>Dactyliosolen fragilissimus</i>	480	320		400			120	
<i>Detonula confervacea</i>			480					
<i>Dictyocha speculum</i>	1440			480	640	80	600	3520
<i>Dinophysis acuminata</i>	320			80				4800
<i>Dinophysis norvegica</i>		160					40	560
<i>Dinophysis pulchella</i>				80				
<i>Dinophysis</i> spp.								80
<i>Ditylum brightwellii</i>	8800	22080	34240	12720	14240	3760	200	
<i>Ebria tripartita</i>	320	160	320		320		40	960
<i>Eucampia zodiacus</i>	160						360	
<i>Eutreptiella</i> sp.	960		320	640	160			80
<i>Gonyaulax spinifera</i>							120	
<i>Guinardia delicatula</i>	800	640	160	80	800	400	520	
<i>Guinardia flaccida</i>			320			80	2160	880
<i>Guinardia striata</i>	160	320			160			
<i>Gyrodinium</i> spp.	320	160	1120		480	80	120	160
<i>Helicostomella</i> spp.	160						40	160
<i>Helicotheca tamesis</i>				240		80		
<i>Heterocapsa triquetra</i>		480	480	80				
<i>Laboea</i> sp.	160			160			160	240
<i>Lauderia annulata</i>							40	80
<i>Leptocylindrus danicus</i>		160	1920	800	1120	400	40	
<i>Leptocylindrus minimus</i>	640	800	800		320			
<i>Licmophora</i> spp.		320						
<i>Melosira</i> spp.							80	
<i>Mesodinium rubrum</i>	14880	3840	4640	240			1760	20160
<i>Navicula distans</i>	160					80		
<i>Paralia sulcata</i>					160			
Pennate diatom	480			160	160	480	80	
<i>Pleurosigma / Gyrosigma</i>			160					
<i>Pleurosigma angulatum</i>								80
<i>Pleurosigma strigosum</i>	160				160	480	120	160
<i>Polykrikos</i> spp.							120	
<i>Preperidinium meuneri</i>				80				
<i>Prorocentrum micans</i>		160	160					80
<i>Prorocentrum minimum</i>	160							
<i>Protoperidinium</i> spp.	320	320	960				40	400
<i>Pseudo-nitzschia delicatissima</i> group	20480	125424	188704	192048	46560	20960	680	
<i>Pseudo-nitzschia seriata</i> group			320	160	160	800	40	
<i>Rhizosolenia imbricata</i>							840	
<i>Rhizosolenia setigera</i>	320						320	
<i>Rhizosolenia</i> spp.							240	
<i>Scrippsiella</i> sp.		160						
<i>Scrippsiella trochoidea</i>	160		160	80			280	2800
<i>Skeletonema costatum</i>	2080	5280	2880	2560	9440	1360		80
<i>Tabellaria</i> spp.							40	
<i>Thalassionema nitzschioides</i>		160	160	480	960	640	40	
<i>Thalassiosira anguste-lineata</i>		960	160	160	320	80		
<i>Thalassiosira baltica</i>					320			
<i>Thalassiosira gravida</i>				160	160			
<i>Thalassiosira oestrupii</i>							40	
<i>Thalassiosira</i> sp. (tiny)	480	160	2560	12000		960		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
24-Sep-01 (continued)								
<i>Thalassiosira</i> spp.	800	160	800	720	2400	2320	40	
Tintinnida	320		160	160	320	80	600	
<i>Tintinnopsis campanula</i>								80
Unarmoured dinoflagellate	480	160	480	80		160	40	
2-Oct-01								
<i>Actinoptychus senarius</i>	640		240	920	200	480		80
<i>Alexandrium fundyense</i>								80
<i>Amphidinium carterae</i>				40		40		
<i>Amphidinium sphenoides</i>		80	40	680	200	280		
Armoured dinoflagellate	160	400	560	200			60	80
<i>Asterionellopsis glacialis</i>	127160	67048	44508	36080	21120	11720	80	40
<i>Biddulphia alternans</i>				40				
Centric diatom						40	20	200
<i>Cerataulina pelagica</i>	160	160	200	360	200		100	
<i>Ceratium fusus</i>			40	80	40		20	40
<i>Ceratium lineatum</i>	320	320	1720	1360	760		660	5760
<i>Ceratium longipes</i>							20	
<i>Ceratium tripos</i>				120		40		120
<i>Chaetoceros contortus</i>		80						
<i>Chaetoceros debilis</i>	2160	11520	2000	880	640		20	
<i>Chaetoceros decipiens</i>							20	
<i>Chaetoceros lorenzianus</i>							20	
<i>Chaetoceros pseudocrinitus</i>				200				
<i>Chaetoceros radicans</i>					160		80	
<i>Chaetoceros similis</i>							140	
<i>Chaetoceros simplex</i>								80
<i>Chaetoceros socialis</i>		400						
<i>Chaetoceros</i> spp. (Hyalochaete)	800	4480	400	520	120	160	40	80
<i>Commation cryoporinum</i>					80	120		
Copepoda			40		80	40		40
<i>Corethron hystrix</i>	160			80			120	
<i>Coscinodiscus</i> spp.				80	40			
<i>Cylindrotheca closterium</i>	800	640	280	5160	4080	1360	500	160
<i>Dactyliosolen fragilissimus</i>	80		80	560	240	80	20	
<i>Dictyocha speculum</i>	320		360	600	240	80	200	4560
<i>Dinophysis acuminata</i>				120			40	320
<i>Ditylum brightwellii</i>	160		160	160	240	160	40	
<i>Ebria tripartita</i>		80		40	40	40		320
<i>Eucampia zodiacus</i>							640	
<i>Eutreptiella</i> sp.	160			560	80		80	
<i>Gonyaulax spinifera</i>			40					
<i>Grammatophora marina</i>							20	
<i>Guinardia delicatula</i>	400	80	480	120	320	80	760	160
<i>Guinardia flaccida</i>			40	40	40		120	1000
<i>Guinardia striata</i>		160	160	160				
<i>Gyrodinium</i> spp.			40	120	120		100	
<i>Helicostomella</i> spp.	160		80					
<i>Heterocapsa triquetra</i>		240	160	80				
<i>Laboea</i> sp.	240	80	120	40			240	
<i>Lauderia annulata</i>							20	
<i>Leptocylindrus danicus</i>	240	160	1640	40	680	440	20	
<i>Leptocylindrus minimus</i>	320	3360	200	160	40			40
<i>Licmophora</i> spp.							20	
<i>Membraneis challengerii</i>					40	40		
<i>Mesodinium rubrum</i>	12400	5440	9000	480	200		1420	12280
<i>Navicula distans</i>		80			40		20	
<i>Notholca</i> spp.							20	
<i>Odontella sinensis</i>				120	80		40	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
2-Oct-01 (continued)								
<i>Paralia sulcata</i>					80			
Pennate diatom				80	40	40	120	
<i>Pleurosigma / Gyrosigma</i>		320		80	80	80		
<i>Pleurosigma angulatum</i>				80				40
<i>Pleurosigma strigosum</i>							60	
<i>Polykrikos</i> spp.	80		160					
<i>Prorocentrum micans</i>			120		40			
<i>Prorocentrum minimum</i>			40					160
<i>Prorocentrum</i> sp. (small)				40				
<i>Protoperidinium conicum</i>		80	80					
<i>Protoperidinium punctulatum</i>			120					
<i>Protoperidinium</i> spp.				40				40
<i>Pseudo-nitzschia delicatissima</i> group	2080	1120	240	1760	2280	5400	300	
<i>Pseudo-nitzschia seriata</i> group	720	800	40	120	40	200		
<i>Rhizosolenia imbricata</i>	480	80	80		120		340	
<i>Rhizosolenia setigera</i>	80				40		300	40
<i>Rhizosolenia</i> spp.	160						320	
<i>Scrippsiella</i> sp.		240						
<i>Scrippsiella trochoidea</i>		80	120	40				760
<i>Skeletonema costatum</i>	240		160		200		60	
<i>Thalassionema nitzschioides</i>	640	400	680	1200	640	760	40	80
<i>Thalassiosira punctigera</i>				40	40			
<i>Thalassiosira</i> sp. (tiny)	80	160	640	2440	520	440		
<i>Thalassiosira</i> spp.	480		40	80	320	240	100	
Tintinnida	480	160	680	160	280	160	60	40
<i>Tintinnopsis campanula</i>								80
Unarmoured dinoflagellate	80		40	120		120	20	40
15-Oct-01								
<i>Actinoptychus senarius</i>	4160	1920	120	2320	2601	1200	480	760
<i>Alexandrium fundyense</i>								80
<i>Amphidinium carterae</i>				240				
<i>Amphidinium sphenoides</i>				400	867			
<i>Amylax triacantha</i>								80
Armoured dinoflagellate	80	160	160	480	578		80	40
<i>Asterionellopsis glacialis</i>	80920	81496	48000	160320	173400	12640	80	920
<i>Biddulphia alternans</i>	320					40		
Centric diatom	160	80				40	160	
<i>Cerataulina pelagica</i>		80	120		289		560	
<i>Ceratium fusus</i>	80						240	
<i>Ceratium lineatum</i>	2400	2560	1600	4480	1445	40	19680	26012
<i>Ceratium</i> spp.				160			80	
<i>Ceratium tripos</i>	80	160						40
<i>Chaetoceros contortus</i>			40					
<i>Chaetoceros debilis</i>	1520	1920	520	2720		40	240	200
<i>Chaetoceros decipiens</i>		80						40
<i>Chaetoceros lorenzianus</i>							80	
<i>Chaetoceros radicans</i>				80	867			
<i>Chaetoceros similis</i>							80	
<i>Chaetoceros</i> spp. (Hyalochaete)	1600	1040	200	720	3757	120	160	40
Copepoda				320			160	120
<i>Corethron hystrix</i>		80					80	
<i>Coscinodiscus</i> spp.		320			289	80		40
<i>Cylindrotheca closterium</i>	4320	1040	1600	9280	17340	3360	560	880
<i>Dactyliosolen fragilissimus</i>	640	480	160	160	2023	520	80	
<i>Detonula confervacea</i>	1440							280
<i>Dictyocha speculum</i>	2240	720	1040	16960	6936	120	30720	75140
<i>Dinophysis acuminata</i>	240		280	640	289		480	1440
<i>Dinophysis norvegica</i>			40					40

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
15-Oct-01 (continued)				80				
<i>Dinophysis pulchella</i>								
<i>Ditylum brightwellii</i>	240						160	
<i>Ebria tripartita</i>	80		40	240			80	
<i>Eucampia zodiacus</i>							320	440
<i>Eutreptiella</i> sp.	160		480	400	867	40	240	40
<i>Guinardia delicatula</i>	1040	880	240	960	1445	80	13600	800
<i>Guinardia flaccida</i>	240	560	80	480	1445		80	40
<i>Guinardia striata</i>	2800	1680	760	2160	2601	120		
<i>Gyrodinium</i> spp.	160		80	80	289		80	80
<i>Gyrosigma tenuissimum</i>				80				
<i>Helicostomella</i> spp.				40				80
<i>Helicotheca tamesis</i>				40			40	
<i>Heterocapsa triquetra</i>			120	80	289			
<i>Laboea</i> sp.	240	80	40	720			80	440
<i>Leptocylindrus danicus</i>	1280	6160	7080	17760	26588	720		80
<i>Leptocylindrus mediterraneus</i>			40					
<i>Leptocylindrus minimus</i>	1520	10800	560	1680	5780	440		280
<i>Mesodinium rubrum</i>	10640	9680	4320	1120		240	9760	14160
<i>Navicula distans</i>	160							
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>				160	578	80		
<i>Odontella sinensis</i>	560	480	80	480	867	80		
<i>Paralia sulcata</i>			80	80				
Pennate diatom	160	80					160	40
<i>Pleurosigma / Gyrosigma</i>							160	
<i>Pleurosigma angulatum</i>	160						80	
<i>Pleurosigma strigosum</i>	240		80	80		80		
<i>Prorocentrum micans</i>	80							
<i>Protoperidinium</i> spp.			40	160				
<i>Pseudo-nitzschia delicatissima</i> group	160	80		80	578	320	80	40
<i>Pseudo-nitzschia seriata</i> group	480	160	80	80	867		80	80
<i>Rhizosolenia imbricata</i>	80	240		240			960	
<i>Rhizosolenia setigera</i>	160						1680	40
<i>Rhizosolenia</i> spp.			80					
<i>Scrippsiella trochoidea</i>	80		40		289		160	160
<i>Skeletonema costatum</i>	2240	400	40	320	578	80		40
<i>Thalassionema nitzschioides</i>	3200	3040	1200	2880	3468	1240	80	360
<i>Thalassiosira anguste-lineata</i>				80			40	
<i>Thalassiosira baltica</i>				80				
<i>Thalassiosira gravida</i>				80				
<i>Thalassiosira punctigera</i>	240	80			289	40		
<i>Thalassiosira</i> sp. (tiny)	720	240	880	9520	19363	320		
<i>Thalassiosira</i> spp.	320	240		320	867	120	80	
Tintinnida	480	640	200	1200		80	160	
Unarmoured dinoflagellate	80		40	240			240	40
23-Oct-01								
<i>Actinptychus senarius</i>	1440	520	580	2320	1600	2600	380	
<i>Amphidinium carterae</i>			20					
<i>Amphidinium sphenoides</i>				240	120			
<i>Amylax triacantha</i>								20
Armoured dinoflagellate	120		80	800	160			20
<i>Asterionellopsis glacialis</i>	640	300	80	640	920	160	20	
<i>Biddulphia alternans</i>					40	40		
Centric diatom			20		120	120		
<i>Cerataulina pelagica</i>	80		20	80	200		20	
<i>Ceratium fusus</i>					40			
<i>Ceratium lineatum</i>	4720	100	2820	8800	4480	120	1160	3540
<i>Ceratium longipes</i>				160				
<i>Chaetoceros debilis</i>	40		120				60	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
23-Oct-01 (continued)								
<i>Chaetoceros decipiens</i>						40		
<i>Chaetoceros didymus</i>							20	
<i>Chaetoceros laciniosus</i>							20	
<i>Chaetoceros lorenzianus</i>							60	
<i>Chaetoceros similis</i>							20	20
<i>Chaetoceros simplex</i>				80			20	
<i>Chaetoceros socialis</i>	40							
<i>Chaetoceros</i> spp. (Hyalochaete)			40	80	120	120	60	
<i>Commation cryoporinum</i>			40	160	80			
Copepoda	80	20	80					
<i>Corethron hystrix</i>	40						20	
<i>Coscinodiscus</i> spp.	40	80	40	80				20
<i>Cylindrotheca closterium</i>	920	160	720	4080	2240	2800	300	20
<i>Dactyliosolen fragilissimus</i>	80	80	40	800	120	120	80	20
<i>Detonula conservacea</i>							20	
<i>Dictyocha speculum</i>	240	80	120	720	320	120	820	120
<i>Dinophysis acuminata</i>	400	20	200	560	240			140
<i>Dinophysis rotundata</i>								20
<i>Ditylum brightwellii</i>			20	80			40	
<i>Ebria tripartita</i>	80			80	40			
<i>Eucampia zodiacus</i>					40		40	
<i>Eutreptiella</i> sp.	40		60	480	280			120
<i>Guinardia delicatula</i>	680	160	260	880	880	840	3540	280
<i>Guinardia flaccida</i>	80	160	20			160		
<i>Guinardia striata</i>	320	80	660	640	280	240	40	
<i>Gyrodinium</i> spp.	80	20	80	400	80	80	60	
<i>Gyrosigma fasciola</i>	40							
<i>Helicostomella</i> spp.	80							
<i>Helicotheca tamesis</i>		20	20					
<i>Heterocapsa triquetra</i>			20					
<i>Laboea</i> sp.	160	20	1600				120	
<i>Lauderia annulata</i>				80				
<i>Leptocylindrus danicus</i>	3400	760	1260	1760	2880	840	60	80
<i>Leptocylindrus mediterraneus</i>			20					
<i>Leptocylindrus minimus</i>	920	660	240	800	200		120	
<i>Mesodinium rubrum</i>	2880	120	940	1200	240		1280	260
<i>Navicula distans</i>	40	20	20			40	20	
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>						40		
<i>Odontella sinensis</i>	200	100	20	80	160	80	80	
<i>Paralia sulcata</i>			20			40		
Pennate diatom			60	80	160	120		
<i>Pleurosigma / Gyrosigma</i>			40					
<i>Pleurosigma angulatum</i>		40						20
<i>Pleurosigma strigosum</i>					80	40	20	
<i>Polykrikos</i> spp.	40		20	240				
<i>Prorocentrum micans</i>	40						20	
<i>Prorocentrum</i> sp. (small)				80				
<i>Protoperidinium punctulatum</i>			20					
<i>Protoperidinium</i> spp.	40		80	80	80		20	80
<i>Pseudo-nitzschia delicatissima</i> group	40	20	100	480		120		
<i>Pseudo-nitzschia seriata</i> group		60	60		240	80	40	
<i>Rhizosolenia imbricata</i>	80	80	40		120		180	
<i>Rhizosolenia setigera</i>	240	20	20	80		40	380	
<i>Rhizosolenia</i> spp.	40	20					20	
<i>Scrippsiella trochoidea</i>								60
<i>Skeletonema costatum</i>	480	40	60	160	160	160	80	
<i>Thalassionema nitzschioides</i>	600	560	400	1840	1720	2040	260	100
<i>Thalassiosira anguste-lineata</i>					80	40		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
23-Oct-01 (continued)								
<i>Thalassiosira punctigera</i>	40		60				80	
<i>Thalassiosira</i> sp. (tiny)	40	100	140	9200	5800	2680	20	
<i>Thalassiosira</i> spp.	40			320	80	40		
Tintinnida	360	20	600	480	200	120	140	20
Unarmoured dinoflagellate	40				80		80	
29-Oct-01								
<i>Actinoptychus senarius</i>	800	1020	1260	1360	960	1680	360	440
Armoured dinoflagellate	80	20	120	120	180		60	80
<i>Asterionellopsis glacialis</i>	120	180	40	520	80	40	80	
<i>Asteroplatus karianus</i>							20	
<i>Biddulphia alternans</i>							40	
Centric diatom					40			160
<i>Cerataulina pelagica</i>	40	20	60	80				
<i>Ceratium fusus</i>	20		40					
<i>Ceratium lineatum</i>	3280	2620	2580	2360	1580		740	37572
<i>Ceratium</i> spp.								680
<i>Chaetoceros debilis</i>	120							120
<i>Chaetoceros similis</i>	20							40
<i>Chaetoceros</i> spp. (Hyalochaete)		20		40	60		100	
<i>Commation cryoporinum</i>	20		20	80	20	80		
Copepoda	20	60	20	40			60	
<i>Corethron hystrix</i>	20				40		20	
<i>Coscinodiscus</i> spp.		20	20	40	40	120	80	40
<i>Cylindrotheca closterium</i>	700	200	280	2760	1000	2400	200	400
<i>Dactyliosolen fragilissimus</i>	100	100	40	160	120	140	40	
<i>Detonula confervacea</i>	100						140	
<i>Dictyocha speculum</i>	100	120	20	240	80		480	320
<i>Dinophysis acuminata</i>	40	60	120		100		100	1040
<i>Dinophysis fortii</i>					40	20		
<i>Ditylum brightwellii</i>	40	40			40	20	120	
<i>Ebria tripartita</i>							20	40
<i>Eucampia zodiacus</i>								440
<i>Eutreptiella</i> sp.	20			80	40			
<i>Gonyaulax spinifera</i>		20						
<i>Grammatophora marina</i>							20	
<i>Guinardia delicatula</i>	460	180	300	360	180	300	900	1040
<i>Guinardia flaccida</i>				160		140	20	
<i>Guinardia striata</i>	80	40	20	320	160	320	80	80
<i>Gyrodinium</i> spp.		100	60	160	160		240	120
<i>Helicostomella</i> spp.	20		20					320
<i>Helicotheca tamesis</i>		20	20	40	20			
<i>Heterocapsa triquetra</i>		20		40				
<i>Laboea</i> sp.	40	60	160		20		80	6240
<i>Leptocylindrus danicus</i>	20	40	140		20	120		80
<i>Leptocylindrus minimus</i>	120	160	40	40	20		20	120
<i>Mediopyxis helysia</i>				40				
<i>Membraneis challengerii</i>				40		20		
<i>Mesodinium rubrum</i>	960	1300	3060	360	100	20	800	15160
<i>Navicula distans</i>	20	20			60	20		40
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>				80	20	20		
<i>Odontella regia</i>					20			
<i>Odontella sinensis</i>	200	140	120	560	140	120	80	
<i>Parafavella</i> spp.			20					
<i>Paralia sulcata</i>	40	20		40	20	40	20	
Pennate diatom		20			40	20	100	
<i>Pleurosigma / Gyrosigma</i>	60		40	40		40	20	40
<i>Pleurosigma angulatum</i>			20					
<i>Pleurosigma strigosum</i>	20	20						

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
29-Oct-01 (continued)								
<i>Polykrikos</i> spp.	20	120		80	60		40	480
<i>Prorocentrum micans</i>				40				40
<i>Prorocentrum minimum</i>	20							40
<i>Protoperidinium punctulatum</i>					20			40
<i>Protoperidinium</i> spp.	20			40			20	40
<i>Protoperidinium steinii</i>					60			
<i>Pseudo-nitzschia delicatissima</i> group	20	40	20	120	40	60		
<i>Pseudo-nitzschia seriata</i> group		20	40	240	140	240	100	40
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>				40	60			
<i>Rhizosolenia imbricata</i>	60	60	40	120	80	60	20	80
<i>Rhizosolenia setigera</i>	80	60				120	280	200
<i>Rhizosolenia</i> spp.					60		40	
<i>Scrippsiella trochoidea</i>				20	40			
<i>Skeletonema costatum</i>	60	20	60	120	40	60	20	
<i>Thalassionema nitzschiooides</i>	320	540	360	1760	820	1060	140	240
<i>Thalassiosira anguste-lineata</i>					20			
<i>Thalassiosira baltica</i>			20	40				
<i>Thalassiosira gravida</i>						20		
<i>Thalassiosira punctigera</i>	20	140		120	20	60	40	120
<i>Thalassiosira</i> sp. (tiny)	100	180	120	3040	2720	2260		
<i>Thalassiosira</i> spp.	60		40	40	20	40		40
Tintinnida	120	80	20		60	80	300	1560
Unarmoured dinoflagellate	20	20	20	80	40		120	80
13-Nov-01								
<i>Actinopycthus senarius</i>	720	840	1060				420	340
Armoured dinoflagellate				40				20
<i>Asterionellopsis glacialis</i>			60					
<i>Biddulphia alternans</i>	20							
Centric diatom			80	20			20	
<i>Ceratium lineatum</i>	420	220	860				240	960
<i>Ceratium</i> spp.	60							
<i>Chaetoceros debilis</i>	20	40						
<i>Chaetoceros laciniosus</i>				20				
<i>Chaetoceros similis</i>				60			60	80
<i>Chaetoceros simplex</i>	40	20						
<i>Chaetoceros</i> spp. (Hyalochaete)	20		20					20
<i>Commation cryoporinum</i>						20		
Copepoda	20							
<i>Corethron hystrix</i>	20							20
<i>Coscinodiscus</i> spp.	40						40	40
<i>Cylindrotheca closterium</i>	660	240	280				80	180
<i>Dactyliosolen fragilissimus</i>			20					40
<i>Dictyocha speculum</i>	200	80	260				240	260
<i>Dinophysis acuminata</i>	40							
<i>Ditylum brightwellii</i>		40	40				20	
<i>Ebria tripartita</i>								20
<i>Eucampia zodiacus</i>								40
<i>Eutreptiella</i> sp.		20	20					
<i>Guinardia delicatula</i>	140	40					80	240
<i>Guinardia flaccida</i>	60		20					
<i>Gyrodinium</i> spp.	20						80	20
<i>Helicostomella</i> spp.		20						
<i>Helicotheca tamesis</i>		60	40					
<i>Heterocapsa triquetra</i>			20					
<i>Laboea</i> sp.	40						100	20
<i>Leptocylindrus danicus</i>			20					
<i>Leptocylindrus mediterraneus</i>	20							
<i>Leptocylindrus minimus</i>	20	20					20	20

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
13-Nov-01 (continued)								
<i>Licmophora</i> spp.	20							
<i>Melosira</i> spp.		20						
<i>Mesodinium rubrum</i>	360	80	500				1480	1520
<i>Navicula distans</i>	20						20	
<i>Odontella regia</i>		20						
<i>Odontella sinensis</i>	40		20				20	
<i>Paralia sulcata</i>	40	60						
Pennate diatom	20							
<i>Pleurosigma strigosum</i>			20					80
<i>Polykrikos</i> spp.								40
<i>Protoperidinium punctulatum</i>								20
<i>Protoperidinium</i> spp.								20
<i>Pseudo-nitzschia delicatissima</i> group	60	20					60	
<i>Pseudo-nitzschia seriata</i> group		20					40	
<i>Rhizosolenia setigera</i>	140	20	20				80	160
<i>Skeletonema costatum</i>	40	120	20					20
<i>Thalassionema nitzschioides</i>	160	200	260				160	200
<i>Thalassiosira punctigera</i>		120	40				20	
<i>Thalassiosira</i> spp.	100	20	20					
Tintinnida	20	40	40				180	
Unarmoured dinoflagellate	40						20	
11-Dec-01								
<i>Actinoptychus senarius</i>		480	80	220	680	100	620	460
<i>Amphidinium carterae</i>	40							
Armoured dinoflagellate	40	20		80	40			
<i>Asterionellopsis glacialis</i>	20	60	60	20		80	20	
Centric diatom	100	140		60		60		180
<i>Ceratium lineatum</i>	20		40	20			20	160
<i>Ceratium longipes</i>							20	
<i>Chaetoceros convolutus / concavicornis</i>							20	
<i>Chaetoceros debilis</i>							20	120
<i>Chaetoceros decipiens</i>	20	20			20			20
<i>Chaetoceros laciniosus</i>							20	60
<i>Chaetoceros similis</i>								60
<i>Chaetoceros simplex</i>					20		40	
<i>Chaetoceros</i> spp. (Hyalochaete)	40			20			40	20
<i>Chaetoceros</i> spp. (Phaeoceros)			20					
<i>Commation cryporinum</i>				20				20
<i>Corethron hystrix</i>			20	20	20	40	40	20
<i>Coscinodiscus</i> spp.	140	60	60	20	120		20	40
<i>Cylindrotheca closterium</i>	420	240	500	1260	400	580	860	320
<i>Dactyliosolen fragilissimus</i>			20					20
<i>Dictyocha fibula</i>			20					
<i>Dictyocha speculum</i>	20	20	60	100	120		140	540
<i>Dinophysis acuminata</i>								20
<i>Ditylum brightwellii</i>	80	80	80	20	100	40	120	400
<i>Ebria tripartita</i>			20		20			
<i>Eutreptiella</i> sp.	20			60		20		
<i>Guinardia delicatula</i>	20	40	40	20		20	40	200
<i>Guinardia striata</i>			20					
<i>Gyrodinium</i> spp.		20	40	20				80
<i>Helicotheca tamesis</i>				20	20	20		
<i>Laboea</i> sp.		40					80	
<i>Lauderia annulata</i>								40
<i>Leptocylindrus danicus</i>							20	
<i>Leptocylindrus minimus</i>	20							
<i>Licmophora</i> spp.	40	20						
<i>Mediopyxis helysia</i>						20		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
11-Dec-01 (continued)								
<i>Melosira moniliformis</i>			20					
<i>Mesodinium rubrum</i>	940	1140	320	140	120		540	1280
<i>Navicula distans</i>	20	100		20	40	40	40	20
<i>Navicula transiens</i> var. <i>derasa</i> f. <i>delicatula</i>				40		20		
<i>Odontella regia</i>			20					
<i>Odontella sinensis</i>	20	20	20	20		20		
<i>Paralia sulcata</i>				40		20		
Pennate diatom	20	20		100	20	40	60	80
<i>Pleurosigma / Gyrosigma</i>				60	60		20	20
<i>Pleurosigma angulatum</i>					20			
<i>Polykrikos</i> spp.								20
<i>Protoperidinium</i> spp.								20
<i>Pseudo-nitzschia delicatissima</i> group	40	40	40	40	20			20
<i>Pseudo-nitzschia seriata</i> group						60		
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	20			40				
<i>Rhizosolenia imbricata</i>								20
<i>Rhizosolenia setigera</i>	220	60	60		80		140	440
<i>Rhizosolenia</i> spp.	20		40	20			20	
<i>Scrippsiella trochoidea</i>					20			
<i>Skeletonema costatum</i>		20	20		20		20	20
<i>Thalassionema nitzschioides</i>	80	120	100	180	100	160	100	420
<i>Thalassiosira baltica</i>								80
<i>Thalassiosira punctigera</i>	120		120	100	160	80	120	620
<i>Thalassiosira</i> sp. (tiny)				80	40	100		
<i>Thalassiosira</i> spp.	60	60		20	40	20	120	100
Tintinnida	80	80		100	20		180	200
Unarmoured dinoflagellate	40		60		20			40
23-Jan-02								
<i>Actinoptychus senarius</i>							80	60
<i>Amphidinium carterae</i>		20					40	
Armoured dinoflagellate							40	20
<i>Asterionellopsis glacialis</i>								100
<i>Asteroplanus karianus</i>								20
Centric diatom							40	
<i>Chaetoceros contortus</i>	20							
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	20							
<i>Chaetoceros debilis</i>						20		
<i>Chaetoceros simplex</i>								20
<i>Chaetoceros</i> spp. (Hyalochaete)						40		
<i>Corethron hystrix</i>	40					40		
<i>Coscinodiscus</i> spp.	40					20		20
<i>Cylindrotheca closterium</i>	860					340		1180
<i>Dictyocha speculum</i>	20					40		60
<i>Ditylum brightwellii</i>	80					20		40
<i>Eutreptiella</i> sp.	20					40		
<i>Guinardia delicatula</i>	40							
<i>Gyrodinium</i> spp.	40					40		80
<i>Helicotheca tamesis</i>	20							
<i>Laboea</i> sp.							20	
<i>Leptocylindrus minimus</i>	20							20
<i>Mesodinium rubrum</i>	300					580		680
<i>Navicula distans</i>	20					20		40
<i>Navicula transiens</i> var. <i>derasa</i> f. <i>delicatula</i>	20							
Pennate diatom	80						200	220
<i>Pleurosigma angulatum</i>	40							20
<i>Pleurosigma strigosum</i>	20							
<i>Pseudo-nitzschia delicatissima</i> group	100							60
<i>Rhizosolenia setigera</i>	20							

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
23-Jan-02 (continued)								
<i>Skeletonema costatum</i>	60							140
<i>Thalassionema nitzschioides</i>								60
<i>Thalassiosira anguste-lineata</i>								20
<i>Thalassiosira punctigera</i>							20	100
<i>Thalassiosira</i> sp. (tiny)	60							
<i>Thalassiosira</i> spp.	120						60	180
Tintinnida	60						180	100
Unarmoured dinoflagellate	40							
12-Feb-02								
<i>Actinopycthus senarius</i>		20						
<i>Alexandrium fundyense</i>			20					
<i>Amphidinium carterae</i>	40						20	
Armoured dinoflagellate			20					
<i>Asterionellopsis glacialis</i>	40			40			20	20
<i>Aulacoseira ambigua</i>								40
<i>Biddulphia alternans</i>		20						
Centric diatom	20	40	40					
<i>Chaetoceros simplex</i>								40
<i>Commation cryoporinum</i>							20	
Copepoda	20							
<i>Corethron hystrix</i>	40		20	144				20
<i>Coscinodiscus</i> spp.								40
<i>Cylindrotheca closterium</i>	180	660	360	576	1152		120	400
<i>Dictyocha speculum</i>		20	20	144			40	20
<i>Ditylum brightwellii</i>		60	80	144				
<i>Eutreptiella</i> sp.							20	
<i>Gyrodinium</i> spp.	20		20			144	60	
<i>Gyrosigma fasciola</i>	20							
<i>Gyrosigma tenuissimum</i>		20						
<i>Laboea</i> sp.			20					20
<i>Leptocylindrus minimus</i>			40					
<i>Licmophora</i> spp.		20						
<i>Mesodinium rubrum</i>	20		200				1200	120
<i>Navicula distans</i>	100	120	80		144		20	80
<i>Navicula transitis</i> var. <i>derasa</i> f. <i>delicatula</i>			60					
<i>Paralia sulcata</i>		40					20	
Pennate diatom	100	200	20	144	144	288	20	100
<i>Pleurosigma / Gyrosigma</i>		40						
<i>Pleurosigma angulatum</i>	40		20				20	
<i>Prorocentrum micans</i>	20							
<i>Pseudo-nitzschia delicatissima</i> group	60	180	80			144	20	100
<i>Rhizosolenia hebetula</i> f. <i>semispina</i>		40				144		20
<i>Rhizosolenia setigera</i>			20			144		
<i>Skeletonema costatum</i>	40	20	80		144		40	100
<i>Staurastrum</i> spp.								20
<i>Thalassionema nitzschioides</i>		20			144		60	
<i>Thalassiosira punctigera</i>							20	40
<i>Thalassiosira</i> spp.	20		60			144	20	20
Tintinnida	40	20	20	144			560	60
Unarmoured dinoflagellate							20	20
12-Mar-02								
Armoured dinoflagellate	40	40					20	
Centric diatom	80	40						
<i>Chaetoceros</i> spp. (Hyalochaete)	40						20	
Copepoda								
<i>Coscinodiscus</i> spp.		40						
<i>Cylindrotheca closterium</i>	460	40					20	
<i>Ditylum brightwellii</i>	40	20						

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
12-Mar-02 (continued)								
<i>Eutreptiella</i> sp.	20						20	
<i>Grammatophora marina</i>								
<i>Gyrodinium</i> spp.		20						
<i>Laboea</i> sp.							80	
<i>Mesodinium rubrum</i>	240	460					1320	
<i>Navicula distans</i>	100							
Pennate diatom	280						140	
<i>Pleurosigma angulatum</i>	20						20	
<i>Pseudo-nitzschia delicatissima</i> group	20	20						
<i>Skeletonema costatum</i>	60	20						
<i>Thalassiosira</i> spp.	100							
Tintinnida		20					100	
Unarmoured dinoflagellate							20	
16-Apr-02								
<i>Actinopycthus senarius</i>						144		
<i>Alexandrium fundyense</i>	20	320	140					
<i>Alexandrium ostenfeldii</i>		80	20					
Armoured dinoflagellate	140	360	60				20	20
<i>Asterionellopsis glacialis</i>	40							
<i>Aulacoseira ambigua</i>	20							40
Centric diatom							20	
<i>Chaetoceros convolutus / concavicornis</i>	20			144				
<i>Chaetoceros debilis</i>			20					120
<i>Chaetoceros decipiens</i>	20			144				
<i>Chaetoceros pseudocrinitus</i>	20							
<i>Chaetoceros simplex</i>		40					20	120
<i>Chaetoceros</i> spp. (Hyalochaete)	120	40					40	80
<i>Commation cryoporinum</i>	20		20					20
Copepoda	40							20
<i>Corethron hystrix</i>			20	144				
<i>Coscinodiscus</i> spp.	20	40	20					
<i>Cylindrotheca closterium</i>	180	200	200	720	288	576	80	100
<i>Dictyocha speculum</i>	20			144				20
<i>Dinobryon</i> spp.		40						60
<i>Ditylum brightwellii</i>	20	80	40					
<i>Eutreptiella</i> sp.	20		20		288			20
<i>Fragilaria</i> spp.	60		20					
<i>Guinardia delicatula</i>	20							
<i>Gyrodinium</i> spp.	60	480	180		144			20
<i>Laboea</i> sp.	160		160	144			20	40
<i>Leptocylindrus minimus</i>	20	40						
<i>Licmophora</i> spp.	20						20	20
<i>Melosira moniformis</i>	80	40					40	20
<i>Mesodinium rubrum</i>	2740	5120	2780	432	288		900	980
<i>Navicula distans</i>	20	40				432	60	
<i>Odontella obtusa</i>	20						20	
<i>Odontella</i> spp.							60	
<i>Paralia sulcata</i>	20		20		144			
Pennate diatom		120	320	144			260	40
<i>Porosira glacialis</i>			20					
<i>Protoperidinium</i> spp.		40						
<i>Pseudo-nitzschia delicatissima</i> group	80	40	120		144			60
<i>Ptychocylis</i> spp.		40			144			
<i>Rhizosolenia hebetata f. semispina</i>	20							
<i>Scrippsiella trochoidea</i>	20							
<i>Skeletonema costatum</i>	240	320	240		144	144	20	
<i>Thalassionema nitzschiooides</i>		80						
<i>Thalassiosira anguste-lineata</i>		40						

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
16-Apr-02 (continued)								
<i>Thalassiosira gravida</i>	60	40						
<i>Thalassiosira nordenskioeldii</i>		80	40	144				20
<i>Thalassiosira</i> spp.	100	200	80	1008	432	288	60	420
Tintinnida	1120	3400	1760	144			220	20
Unarmoured dinoflagellate	40	40	340				60	20
16-May-02								
<i>Actinoptychus senarius</i>						576		
<i>Alexandrium fundyense</i>	80							
<i>Alexandrium ostenfeldii</i>								160
<i>Amphidinium carterae</i>				20				
<i>Amylax triacantha</i>				20				
<i>Apedinella radians</i>								160
Armoured dinoflagellate	80	180	120	288				80
<i>Asterionellopsis glacialis</i>		60	40		144			400
<i>Aulacoseira ambigua</i>	80		20			144	40	
<i>Bacillaria paxillifera</i>							40	
Centric diatom	80		20	144			80	
<i>Ceratium lineatum</i>						144		
<i>Chaetoceros constrictus</i>			20					
<i>Chaetoceros contortus</i>			40				40	
<i>Chaetoceros convolutus</i>				144				
<i>Chaetoceros convolutus / concavicornis</i>			20					
<i>Chaetoceros debilis</i>	400	80	40	144	144	144	480	1360
<i>Chaetoceros decipiens</i>	80							80
<i>Chaetoceros diadema</i>						288	40	
<i>Chaetoceros furcellatus</i>								80
<i>Chaetoceros laciniatosus</i>		20						
<i>Chaetoceros simplex</i>			80				200	480
<i>Chaetoceros</i> spp. (Hyalochaete)	240	100	80		1296	432	1040	3760
<i>Chaetoceros teres</i>	80	40					40	480
<i>Chryschromulina parkeae</i>								3280
<i>Commation cryoporinum</i>			20				40	80
Copepoda							40	
<i>Coscinodiscus</i> spp.		20	40					
<i>Cylindrotheca closterium</i>	1120	440	500		1152	720	400	1520
<i>Dactyliosolen fragilissimus</i>							40	
<i>Dictyocha speculum</i>		20	80			144		240
<i>Dinobryon</i> spp.							40	
<i>Dinophysis</i> spp.				144				
<i>Ditylum brightwellii</i>	80	20			144	144	40	80
<i>Eutreptiella</i> sp.	160	620	6160	3744	288	144		80
<i>Fragilaria</i> spp.		180	40				160	
<i>Grammatophora marina</i>			20				80	
<i>Gyrodinium</i> spp.	480	380	300	720	576		480	80
<i>Gyrosigma fasciola</i>							40	
<i>Heterocapsa triquetra</i>				144				160
<i>Laboea</i> sp.	240	20	120	288				80
<i>Leptocylindrus minimus</i>		720	60	120	432		80	480
<i>Licmophora</i> spp.			760	220			920	320
<i>Melosira moniliformis</i>	320	2900	760				2920	80
<i>Mesodinium rubrum</i>	11680	940	5560	1728		144	560	1200
<i>Navicula distans</i>								160
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>								80
<i>Odontella aurita</i>		20	80				240	
<i>Odontella obtusa</i>	80	860	60				200	160
<i>Odontella</i> spp.		240					200	
Pennate diatom	200		180	288			680	880
<i>Pleurosigma / Gyrosigma</i>		20						80

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
			40				40	160
16-May-02 (continued)								
<i>Porosira glacialis</i>			20					
<i>Prorocentrum</i> spp.								80
<i>Protoperidinium bipes</i>			20					
<i>Protoperidinium</i> spp.			20					
<i>Pseudo-nitzschia delicatissima</i> group	400	220	220	432	288	288	120	7680
<i>Rhabdonema</i> spp.							80	
<i>Scrippsiella trochoidea</i>			20		144			
<i>Skeletonema costatum</i>	400	60	120			144	360	1360
<i>Thalassionema nitzschiooides</i>	80	40						
<i>Thalassiosira anguste-lineata</i>	80	20	40	288	288	144	80	
<i>Thalassiosira bioculata</i> var. <i>exigua</i>			40					
<i>Thalassiosira gravida</i>	80	60	100			144	120	320
<i>Thalassiosira nordenskioeldii</i>	2160	40	360	288	432		2000	18240
<i>Thalassiosira punctigera</i>	80	20						
<i>Thalassiosira</i> sp. (tiny)			60	144				
<i>Thalassiosira</i> spp.	11600	1720	880	4896	12672	17136	5360	14880
Tintinnida	7520	220	540	720	144		440	400
Unarmoured dinoflagellate	80							
21-May-02								
<i>Achnanthes</i> sp.			20					
<i>Actinopychus senarius</i>	120							
<i>Alexandrium fundyense</i>	100	80				144		200
<i>Alexandrium fundyense</i> (duplet)	20							
<i>Amphidinium carterae</i>			20					
<i>Amphidinium sphenoides</i>	40	100	600		144		160	193
<i>Apedinella radians</i>			80					
Armoured dinoflagellate	40		120	144			80	772
<i>Asterionellopsis glacialis</i>	80							
<i>Brachionus</i> spp.	40							
Centric diatom			60					
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>			80	40				386
<i>Chaetoceros debilis</i>	160	340	760	432	144		1120	2895
<i>Chaetoceros decipiens</i>	40			144	144		240	193
<i>Chaetoceros diadema</i>	40	20		144	144	144	320	
<i>Chaetoceros laciniatus</i>								193
<i>Chaetoceros pseudocrinitus</i>							80	
<i>Chaetoceros simplex</i>	200	200	120				80	386
<i>Chaetoceros socialis</i>			40				320	193
<i>Chaetoceros</i> spp. (Hyalochaete)	160	140	320	2448	432		2640	8299
<i>Chaetoceros teres</i>	40	20					240	
<i>Chrysotrichulina parkeae</i>	120						160	
<i>Commation cryoporinum</i>			20	144	144		480	193
Copepoda							80	
<i>Corethron hystrix</i>								193
<i>Coscinodiscus</i> spp.	80	20						
<i>Cylindrotheca closterium</i>	280	760	1160	2304	1152		480	386
<i>Dactyliosolen fragilissimus</i>	40							
<i>Dictyocha speculum</i>	80	140	240					193
<i>Dinophysis acuminata</i>			80					
<i>Ditylum brightwellii</i>					144		80	193
<i>Eucampia zodiacus</i>	120							
<i>Eutreptiella</i> sp.	240	1700	3280	576				193
<i>Fragilaria</i> spp.			20					
<i>Gyrodinium</i> spp.	360	220	1480	432		144	1840	1930
<i>Gyrosigma fasciola</i>	40							
<i>Heterocapsa triquetra</i>	120	60	40					
<i>Laboea</i> sp.			80					
<i>Lauderia annulata</i>	200							

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
21-May-02 (continued)								
<i>Leptocylindrus minimus</i>	720	120	240				160	772
<i>Licmophora</i> spp.		20				144	160	
<i>Melosira moniliformis</i>							80	
<i>Melosira</i> spp.		60	40					
<i>Mesodinium rubrum</i>	1640	1080	2120	288			1920	13703
<i>Navicula transiens</i> var. <i>derasa</i> f. <i>delicatula</i>							80	772
<i>Odontella</i> spp.		40						
Pennate diatom	120	200	80				160	
<i>Porosira glacialis</i>		20	80					
<i>Prorocentrum minimum</i>	40							
<i>Protoperidinium bipes</i>			40		144			193
<i>Protoperidinium denticulatum</i>							80	
<i>Protoperidinium</i> spp.								386
<i>Pseudo-nitzschia delicatissima</i> group	440	1300	2160	2448	432	288	1280	4246
<i>Ptychocylis</i> spp.		20	40					
<i>Rhabdonema</i> spp.		20						
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>			80					
<i>Rhizosolenia</i> spp.			40					
<i>Skeletonema costatum</i>	120	20				144	80	193
<i>Thalassionema nitzschioides</i>		20	80					
<i>Thalassiosira anguste-lineata</i>		60	680	144				386
<i>Thalassiosira gravida</i>		220	440					772
<i>Thalassiosira nordenskioeldii</i>	2400	1280	4160	2880	864	144	20960	14475
<i>Thalassiosira</i> sp. (tiny)	40				144			
<i>Thalassiosira</i> spp.	5360	1960	2040	16848	9216	3024	4960	772
Tintinnida	6640	920	80	432			2000	
Unarmoured dinoflagellate		200	960	144			880	772
28-May-02								
<i>Alexandrium fundyense</i>		80	289				80	40
<i>Alexandrium ostenfeldii</i>			289					289
<i>Amphidinium sphenoides</i>	80		289	193	432	144	160	1156
Armoured dinoflagellate	80		289				80	1445
<i>Asterionellopsis glacialis</i>	240						80	
Centric diatom	80			193				289
<i>Chaetoceros contortus</i>				193				
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	240	200	289				240	578
<i>Chaetoceros debilis</i>	1440	1040	1734	4053	144	144	2080	9826
<i>Chaetoceros decipiens</i>	240	80		1158		144		
<i>Chaetoceros diadema</i>	160						80	289
<i>Chaetoceros furcellatus</i>	2640				288		320	2023
<i>Chaetoceros laciniosus</i>		40						867
<i>Chaetoceros pseudocrinitus</i>				386				867
<i>Chaetoceros simplex</i>							560	
<i>Chaetoceros socialis</i>	1040						400	867
<i>Chaetoceros</i> spp. (Hyalochaete)	2720	80	1156	10808	576	1008	1200	9248
<i>Chaetoceros teres</i>	80	80	289	772			240	1156
<i>Chrysotrichomulina parkeae</i>	160							
<i>Commation cryporinum</i>				193		144		578
<i>Corethron hystrix</i>					144			
<i>Coscinodiscus</i> spp.		40						
<i>Cylindrotheca closterium</i>	1280	800	2312	1930	1152	432	1200	1156
<i>Dactyliosolen fragilissimus</i>					144			
<i>Dictyocha speculum</i>	160		578	193				289
<i>Ditylum brightwellii</i>					144			
<i>Eucampia zodiacus</i>	240	80	289					
<i>Eutreptiella</i> sp.	240	120	2312	579				289
<i>Gyrodinium</i> spp.	640	520	2890	1351	288		880	578
<i>Gyrosigma fasciola</i>		40						

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
28-May-02 (continued)								
<i>Laboea</i> sp.	80		578				80	289
<i>Leptocylindrus danicus</i>			578					289
<i>Leptocylindrus minimus</i>	640	400	1156	579			160	578
<i>Licmophora</i> spp.		40						
<i>Melosira moniliformis</i>	80							289
<i>Melosira</i> spp.								
<i>Mesodinium rubrum</i>	2400	1840	4335				3120	3468
<i>Navicula distans</i>	320	40			144	144		
<i>Navicula transitans</i> var. <i>derasa f. delicatula</i>	160						160	
Pennate diatom	80	200	867			144	160	
<i>Pleurosigma angulatum</i>							320	
<i>Pleurosigma strigosum</i>								289
<i>Porosira glacialis</i>	400	80	867	579				289
<i>Protoperidinium bipes</i>								289
<i>Protoperidinium</i> spp.								289
<i>Pseudo-nitzschia delicatissima</i> group	3120	3680	5780	5790	1152		1760	3179
<i>Ptychocylis</i> spp.		40	289					
<i>Rhizosolenia hebetata f. semispina</i>						144		
<i>Skeletonema costatum</i>	80	80					240	
<i>Thalassionema nitzschioides</i>							80	
<i>Thalassiosira anguste-lineata</i>	80	160	1734	1737			80	
<i>Thalassiosira gravida</i>	80	480	4335	4246	288		240	2601
<i>Thalassiosira nordenskioeldii</i>	30240	5440	36992	17756	576	1296	3680	33813
<i>Thalassiosira</i> sp. (tiny)					144			
<i>Thalassiosira</i> spp.	17120	4800	16762	186694	37570	13248	720	2023
Tintinnida	640	6240	3757	1351	288		1120	3179
Unarmoured dinoflagellate			1156	965	288		480	289
4-Jun-02								
<i>Achnanthes</i> sp.		160						
<i>Alexandrium fundyense</i>	240	160	160					480
<i>Alexandrium fundyense</i> (duplet)	80							
<i>Alexandrium ostenfeldii</i>		160						
<i>Alexandrium pseudogonyaulax</i>		160						
<i>Amphidinium carterae</i>			160					
<i>Amphidinium sphenooides</i>	240	160	480	1158	1008		40	640
<i>Apedinella radians</i>							40	
Armoured dinoflagellate	80		160				40	
<i>Asterionellopsis glacialis</i>					144		40	
<i>Brachionus</i> spp.		160						
Centric diatom				193				
<i>Chaetoceros contortus</i>					144		40	800
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	160	160	320				40	160
<i>Chaetoceros debilis</i>	2880	2240	2400	1158	720	432	2840	12480
<i>Chaetoceros decipiens</i>	160		640	386				
<i>Chaetoceros diadema</i>				193	144			320
<i>Chaetoceros furcellatus</i>		320	160	386		144	840	25760
<i>Chaetoceros laciniatus</i>		640	480				120	1760
<i>Chaetoceros pseudocrinitus</i>							80	
<i>Chaetoceros simplex</i>							80	
<i>Chaetoceros socialis</i>							160	
<i>Chaetoceros</i> spp. (Hyalochaete)	1920	1280	5280	6948	2304	432	1760	49600
<i>Chaetoceros teres</i>	320	160	160				40	160
<i>Chryschromulina parkeae</i>	160							
<i>Corethron hystrix</i>	80							
<i>Coscinodiscus</i> spp.	80	160	480	193				
<i>Cylindrotheca closterium</i>	1120	1600	1920	3667	144		800	480
<i>Cylindrotheca gracilis</i>			160					
<i>Dactyliosolen fragilissimus</i>			480					

	3-0m	15-0m	16-0m 160	16-10m	16-25m	16-50m	17-0m 40	25-0m 320
4-Jun-02 (continued)								
<i>Dictyocha speculum</i>			160					
<i>Ditylum brightwellii</i>			160					
<i>Eucampia</i> spp.			160					640
<i>Eucampia zodiacus</i>	240			193	432			160
<i>Eutreptiella</i> sp.	160	4480	1120	1544				480
<i>Guinardia delicatula</i>	80							
<i>Gyrodinium</i> spp.	160	640	960	1158	288	144	200	800
<i>Laboea</i> sp.								320
<i>Lauderia annulata</i>	320							
<i>Leptocylindrus danicus</i>			160	160				
<i>Leptocylindrus minimus</i>	640	480	480	193			440	480
<i>Licmophora</i> spp.			320					
<i>Mesodinium rubrum</i>	17920	42880	2400	1351			760	5760
<i>Navicula distans</i>	80				144			
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>							40	
Pennate diatom	160	160						80
<i>Porosira glacialis</i>	80	320	1120					
<i>Protoperidinium brevipes</i>								160
<i>Pseudo-nitzschia delicatissima</i> group	3200	12000	17440	2123	1152	576	2000	4960
<i>Ptychocylis</i> spp.								160
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>				193				320
<i>Rhizosolenia</i> spp.			320					
<i>Scrippsiella trochoidea</i>		160	160					160
<i>Skeletonema costatum</i>							40	
<i>Thalassionema nitzschioides</i>			160	386			40	
<i>Thalassiosira anguste-lineata</i>	560	320	1280				40	480
<i>Thalassiosira gravida</i>	80	1440	3520	1544	1008		120	3200
<i>Thalassiosira nordenskioeldii</i>	17760	22880	36320	30056	1440	288	3320	16640
<i>Thalassiosira punctigera</i>			160					
<i>Thalassiosira</i> spp.	12320	5920	14880	156060	65892	3024	1240	4000
Tintinnida	3920	23840	1120				3120	480
Unarmoured dinoflagellate	160	480	320	193	144	144	160	320
11-Jun-02								
<i>Alexandrium fundyense</i>	375	640			432			
<i>Alexandrium fundyense</i> (triplet)					144			
<i>Amphidinium sphenoides</i>	1875	1760	1000	2702	720	144	360	3680
<i>Apedinella radians</i>	125	160	500	193				
Armoured dinoflagellate	625	480	500		144		40	640
<i>Asterionellopsis glacialis</i>	750	160	500					
Centric diatom	1000						80	
<i>Chaetoceros contortus</i>	125		250		144		1000	800
<i>Chaetoceros convolutus</i> / <i>concavicornis</i>				386				160
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	125	640	500				120	320
<i>Chaetoceros debilis</i>	1250	2560	2250	2316	1440		248540	8160
<i>Chaetoceros decipiens</i>			160		144		160	320
<i>Chaetoceros furcellatus</i>				386	720		200	2720
<i>Chaetoceros laciniatus</i>	250	160	2000				320	480
<i>Chaetoceros pseudocrinitus</i>							680	
<i>Chaetoceros radicans</i>				193				
<i>Chaetoceros simplex</i>			160				160	
<i>Chaetoceros socialis</i>							440	
<i>Chaetoceros</i> spp. (Hyalochaete)	2500	2720	5000	3860	2016	576	4040	9600
<i>Chaetoceros</i> spp. (Phaeoceros)			160	250				
<i>Chaetoceros teres</i>			160				160	480
<i>Commation cryporinum</i>			160	250				
Copepoda							40	
<i>Corethron hystrix</i>					144			
<i>Coscinodiscus</i> spp.	125		250					160

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
18-Jun-02 (continued)								
<i>Chaetoceros radicans</i>				144	144		640	
<i>Chaetoceros simplex</i>							480	
<i>Chaetoceros socialis</i>								
<i>Chaetoceros</i> spp. (Hyalochaete)	3360	2960	280	144	1008		9040	13520
<i>Chaetoceros</i> spp. (Phaeoceros)	160	80						
<i>Chaetoceros teres</i>							160	
<i>Commation cryoporinum</i>				40			160	80
Copepoda	320							
<i>Corethron hystrix</i>		80	40	144				
<i>Cylindrotheca closterium</i>	12000	2640	1160	1584	1152	576	4560	2160
<i>Dactyliosolen fragilissimus</i>				144			160	160
<i>Dictyocha speculum</i>	320	160	120	144			160	160
<i>Ditylum brightwellii</i>	640	80		144	144			80
<i>Eucampia zodiacus</i>		240					560	160
<i>Eutreptiella</i> sp.		160	51760	3600	432		80	640
<i>Grammatophora marina</i>						144		
<i>Guinardia delicatula</i>				144			160	80
<i>Gyrodinium</i> spp.	960	560	2800	720	576		560	320
<i>Heterocapsa triquetra</i>		240	80					80
<i>Laboea</i> sp.	480	560	400	432				
<i>Leptocylindrus danicus</i>					432		1440	3600
<i>Leptocylindrus mediterraneus</i>					288			
<i>Leptocylindrus minimus</i>	3360	960	160	144	144		3200	4480
<i>Licmophora</i> spp.			80					400
<i>Mesodinium rubrum</i>	8320	560	2120	432			8480	17680
<i>Navicula distans</i>						144		
<i>Parafavella</i> spp.	160							
Pennate diatom				288	288		160	
<i>Pleurosigma angulatum</i>	160						160	80
<i>Pleurosigma strigosum</i>								80
<i>Porosira glacialis</i>	480	160	40		288			240
<i>Protoperidinium bipes</i>		80						160
<i>Protoperidinium</i> spp.	160							
<i>Pseudo-nitzschia delicatissima</i> group	15680	12240	1800	1296	1728		5840	8720
<i>Pseudo-nitzschia seriata</i> group					288			
<i>Ptychocylis</i> spp.		160	160					
<i>Rhizosolenia</i> spp.					144			
<i>Scrippsiella trochoidea</i>							80	80
<i>Skeletonema costatum</i>							720	
<i>Thalassionema nitzschioides</i>						144		
<i>Thalassiosira anguste-lineata</i>		320	40				160	160
<i>Thalassiosira gravida</i>	2560	2320	80	864	720		4560	1600
<i>Thalassiosira nordenskioeldii</i>	20800	25920	2360	4608	4032		1840	1280
<i>Thalassiosira</i> sp. (tiny)				144				
<i>Thalassiosira</i> spp.	5760	9040	440	8496	34848	432	1040	1760
Tintinnida	800	1680	1920	720	576	576	1360	640
Unarmoured dinoflagellate	480	240	1440	432			240	320
25-Jun-02								
<i>Actinoptichus senarius</i>	80							
<i>Alexandrium fundyense</i>		160				144		640
<i>Alexandrium ostenfeldii</i>			40					
<i>Alexandrium pseudogonyaulax</i>	80							
<i>Amphidinium sphenoides</i>	1440	800	1120	2880	2016	288	1375	1280
<i>Amylax triacantha</i>	160							160
Armoured dinoflagellate	240	320	80	144		144	125	160
<i>Asterionellopsis glacialis</i>	80				144			
<i>Aulacoseira ambigua</i>								
Centric diatom			80					

25-Jun-02 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Cerataulina pelagica</i>			40	288	288		375	640
<i>Chaetoceros contortus</i>		160	600	1728	576		2125	800
<i>Chaetoceros convolutus / concavicornis</i>	80			144				
<i>Chaetoceros convolutus f. trisetosa</i>	160	640	280				875	160
<i>Chaetoceros danicus</i>			40					
<i>Chaetoceros debilis</i>	1600	1600	1120	864	720		15625	2400
<i>Chaetoceros decipiens</i>			40	288	144			
<i>Chaetoceros furcellatus</i>		160			576			
<i>Chaetoceros lacinius</i>	800	2080	160	288			750	
<i>Chaetoceros pseudocrinitus</i>			200					160
<i>Chaetoceros radicans</i>					144			
<i>Chaetoceros simplex</i>		160					125	
<i>Chaetoceros socialis</i>	480		440		144		2875	960
<i>Chaetoceros spp. (Hyalochaete)</i>	1840	2080	2440	2592	2160	144	6250	5280
<i>Chaetoceros teres</i>			40					
<i>Corethron hystrix</i>			80	288		144		
<i>Coscinodiscus spp.</i>	80							
<i>Cylindrotheca closterium</i>	10080	3680	1240	864	576	576	14750	1600
<i>Dactyliosolen fragilissimus</i>	320	320	240				625	640
<i>Dictyocha speculum</i>	240	320	40		432		500	1120
<i>Dinophysis acuminata</i>				144				160
<i>Ditylum brightwellii</i>	80	640	80	144				160
<i>Ebria tripartita</i>				144				800
<i>Eucampia zodiacus</i>	1200	1760	680	2448	1584		1500	1600
<i>Eutreptiella sp.</i>	80			720	720	144		
<i>Favella spp.</i>		160						
<i>Guinardia delicatula</i>			160					640
<i>Gyrodinium spp.</i>	480	160	120	432			500	160
<i>Helicostomella spp.</i>				144				
<i>Heterocapsa triquetra</i>	160							800
<i>Laboea sp.</i>				144			125	320
<i>Leptocylindrus danicus</i>	1680	800	2240	1728	1728		7750	36320
<i>Leptocylindrus mediterraneus</i>			40					160
<i>Leptocylindrus minimus</i>	7520	2400	4840	1872	8784		23750	53600
<i>Licmophora spp.</i>	160							
<i>Mesodinium rubrum</i>	3840	4320	2640	576	144		3250	9440
<i>Navicula distans</i>	160		40				125	
<i>Navicula transitans var. derasa f. delicatula</i>							125	
Pennate diatom	160	320	120			144	500	
<i>Phaeocystis pouchetii</i>				144			500	320
<i>Pleurosigma angulatum</i>	80			40				
<i>Pleurosigma strigosum</i>			80	288	144		125	
<i>Porosira glacialis</i>	320	640		40			125	
<i>Protoperidinium spp.</i>				144			125	800
<i>Pseudo-nitzschia americana</i>							125	
<i>Pseudo-nitzschia delicatissima</i> group	12080	21760	4600	2448	3600	576	11375	3520
<i>Pseudo-nitzschia seriata</i> group								480
<i>Ptychocylis spp.</i>				144				
<i>Rhizosolenia setigera</i>	160							
<i>Scrippsiella sp.</i>								160
<i>Skeletonema costatum</i>	240		120				625	
<i>Thalassionema nitzschioides</i>		160					125	
<i>Thalassiosira anguste-lineata</i>	240	160	200		144		125	160
<i>Thalassiosira gravida</i>	6800	12800	3720	3456	2736	288	9750	4160
<i>Thalassiosira nordenskioeldii</i>	8080	15360	4040	25632	10512			160
<i>Thalassiosira punctigera</i>		160						
<i>Thalassiosira sp. (tiny)</i>				80				
<i>Thalassiosira spp.</i>	5440	6720	3960	28512	16272	720	875	960

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
25-Jun-02 (continued)								
Tintinnida	1360	320	160	864	144	144	2875	1440
Unarmoured dinoflagellate	240	320	80				250	320
2-Jul-02								
<i>Alexandrium fundyense</i>	240		400	193				
<i>Amphidinium carterae</i>			40					
<i>Amphidinium sphenooides</i>		320	280	4632	4608	144		
<i>Amylax triacantha</i>	320		40					289
Armoured dinoflagellate	800	800	240	386				578
<i>Asterionellopsis glacialis</i>	160	4160	80	579				
<i>Cerataulina pelagica</i>	800	160	280	1737	144		7200	3757
<i>Chaetoceros contortus</i>	480	160	40	2702	432	144	2560	1734
<i>Chaetoceros convolutus / concavicornis</i>							160	
<i>Chaetoceros convolutus f. trisetosa</i>	160	960						
<i>Chaetoceros debilis</i>	1760	320	280	1158	144		320	867
<i>Chaetoceros decipiens</i>	640			193				160
<i>Chaetoceros furcellatus</i>			120	193	432			
<i>Chaetoceros laciniosus</i>	160		160					320
<i>Chaetoceros pseudocrinitus</i>				193				
<i>Chaetoceros radicans</i>				772	144			
<i>Chaetoceros simplex</i>							320	
<i>Chaetoceros socialis</i>	1600			560			28320	6358
<i>Chaetoceros</i> spp. (Hyalochaete)	9440	3520	960	10036	1872	288	5600	5780
<i>Chaetoceros</i> spp. (Phaeoceros)			160					
<i>Commation cryporinum</i>					144			
Copepoda								289
<i>Corethron hystrix</i>	160			772				
<i>Coscinodiscus</i> spp.							160	
<i>Cylindrotheca closterium</i>	8960	1920	960	7913	2448		15680	2023
<i>Dactyliosolen fragilissimus</i>	480	320	80	1158	576		1920	6936
<i>Detonula confervacea</i>	3040							
<i>Dictyocha speculum</i>	160	480	80	772			640	289
<i>Dinobryon</i> spp.	800	11360		1930				
<i>Dinophysis acuminata</i>								289
<i>Dinophysis fortii</i>			80					
<i>Ditylum brightwellii</i>	320	800	40	386	576	144		289
<i>Ebria triparita</i>		160	120	579			160	2023
<i>Eucampia zodiacus</i>	3200	6080	360	4246	576		1120	1156
<i>Eutreptiella</i> sp.	640		200	579		144		289
<i>Gonyaulax spinifera</i>							160	
<i>Guinardia delicatula</i>	960	160	320	1351			3360	5491
<i>Gyrodinium</i> spp.	320	320		965	144			
<i>Helicostomella</i> spp.	320		160	193			640	1734
<i>Heterocapsa triquetra</i>			40					
<i>Leptocylindrus danicus</i>	160	1600	640	2702	1728	144	160	4335
<i>Leptocylindrus minimus</i>	17440	12160	7760	8878	4320	144	20160	92480
<i>Mesodinium rubrum</i>	5280		2680				8000	26010
<i>Navicula distans</i>	320				144			
Pennate diatom		160	40				800	
<i>Pleurosigma angulatum</i>	320		40	193				
<i>Pleurosigma strigosum</i>	160	160						
<i>Porosira glacialis</i>	1120		40	193			160	
<i>Protoperidinium bipes</i>		160	40	386				289
<i>Protoperidinium brevipes</i>							160	
<i>Protoperidinium</i> spp.	160	480	120					2023
<i>Pseudo-nitzschia delicatissima</i> group	25760	63002	9360	17756	2592	288	6400	5491
<i>Pseudo-nitzschia seriata</i> group	320		160					1156
<i>Ptychocylis</i> spp.				193				
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	480							

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
2-Jul-02 (continued)								
<i>Skeletonema costatum</i>	160	800					1280	289
<i>Thalassionema nitzschiooides</i>			40	193				
<i>Thalassiosira anguste-lineata</i>	480	320	80	772				
<i>Thalassiosira gravida</i>	3680	4320	3400	7720	1584	144	800	1445
<i>Thalassiosira nordenskioeldii</i>	960	2720	840	3088	6192			
<i>Thalassiosira punctigera</i>					144			
<i>Thalassiosira</i> spp.	7680	1760	1240	30056	12672	1008	960	578
Tintinnida	1280		400	965	720		800	289
Unarmoured dinoflagellate	320		40		432			289
9-Jul-02								
<i>Alexandrium fundyense</i>	320	6360	1600		288			160
<i>Alexandrium fundyense</i> (duplet)	160	560	240					
<i>Alexandrium fundyense</i> (planozygote)		40						
<i>Amphidinium sphenoides</i>		120	80	2448	2016	432		
<i>Amylax triacantha</i>		200						
<i>Apedinella radians</i>			80					
Armoured dinoflagellate	1920	760	1280	1872	144			2080
<i>Asterionellopsis glacialis</i>	12320	360	320	4176	2304	1152		
<i>Brachionus</i> spp.		4320	560					
Centric diatom					432			
<i>Cerataulina pelagica</i>	9600	440	880	5904	1584	576	75140	31520
<i>Chaetoceros contortus</i>	640	160	160	288	288	288		480
<i>Chaetoceros convolutus</i>				144	144			
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>		200	80					
<i>Chaetoceros debilis</i>	480	40					289	
<i>Chaetoceros decipiens</i>				144				
<i>Chaetoceros furcellatus</i>	160				432			
<i>Chaetoceros radicans</i>				432	1008	144		
<i>Chaetoceros similis</i>	320							
<i>Chaetoceros simplex</i>							578	
<i>Chaetoceros socialis</i>	9440		80				38148	4320
<i>Chaetoceros</i> spp. (Hyalochaete)	4160	1640	3600	9792	1872	576	6069	1760
Copepoda		720	80				289	320
<i>Corethron hystrix</i>	160	40	80	144				
<i>Coscinodiscus</i> spp.	160							
<i>Cylindrotheca closterium</i>	1440	480	560	4176	4752	432	2601	320
<i>Dactyliosolen fragilissimus</i>	2560	1240	1680	1440	1296	432	17629	7040
<i>Detonula confervacea</i>	1600							
<i>Dictyocha speculum</i>	480	320	640	1584			289	160
<i>Dinobryon</i> spp.	320		800	720				
<i>Dinophysis acuminata</i>		40		288				960
<i>Dinophysis fortii</i>		40						
<i>Dinophysis norvegica</i>							160	
<i>Dinophysis</i> spp.	160							
<i>Ditylum brightwellii</i>	2720	1600	1360	2448	576	864	289	160
<i>Ebria tripartita</i>	320		80	288	576		578	320
<i>Eucampia zodiacus</i>	1920	280	560	864	2016	864		160
<i>Eutreptiella</i> sp.		120	80				289	320
<i>Gonyaulax spinifera</i>		80						
<i>Guinardia delicatula</i>	1440	280	480	864	288	144	28322	9120
<i>Gyrodinium</i> spp.	160	400	1760	288	1008	432		160
<i>Helicostomella</i> spp.	640		720					640
<i>Heterocapsa triquetra</i>	800	5560	240					1440
<i>Laboea</i> sp.			640	144				
<i>Leptocylindrus danicus</i>		480	1280	1440	1008	720		
<i>Leptocylindrus mediterraneus</i>		120	80					
<i>Leptocylindrus minimus</i>	1120	840	4240	2160	2592	1152	24276	231680
<i>Mediopyxis helysia</i>						144		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
9-Jul-02 (continued)								
<i>Mesodinium rubrum</i>	2720	4960	2880				1734	68800
<i>Navicula distans</i>				144				
<i>Notholca</i> spp.		40						
Pennate diatom			160				289	
<i>Pleurosigma / Gyrosigma</i>				144				
<i>Pleurosigma angulatum</i>	320	40						
<i>Pleurosigma strigosum</i>							289	
<i>Porosira glacialis</i>	320	80	480		432			
<i>Prorocentrum minimum</i>		120	80					
<i>Prorocentrum</i> sp. (small)				288				
<i>Protoperidinium bipes</i>		320	400	1440				320
<i>Protoperidinium conicum</i>				144				
<i>Protoperidinium ovatum</i>					144			
<i>Protoperidinium</i> spp.	320	560	1120	144	144			2240
<i>Pseudo-nitzschia americana</i>				288				
<i>Pseudo-nitzschia delicatissima</i> group	16000	9000	30240	72000	15696	4464	1445	1600
<i>Pseudo-nitzschia seriata</i> group				288			289	160
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>							289	
<i>Rhizosolenia setigera</i>	320							
<i>Scrippsiella</i> sp.	480							
<i>Scrippsiella trochoidea</i>	480	520	80					
<i>Skeletonema costatum</i>	1120	280	240		288			160
<i>Thalassionema nitzschioides</i>	320	40	160	144	576	144		
<i>Thalassiosira anguste-lineata</i>	160	280	80		144	288		
<i>Thalassiosira gravida</i>	5120			3744	3168	1728	578	
<i>Thalassiosira nordenskioeldii</i>					144			
<i>Thalassiosira punctigera</i>				144	288	576		
<i>Thalassiosira</i> spp.	2240	120	480	8208	8784	3888	867	480
Tintinnida	960	280	1040	2160	576	432		800
Unarmoured dinoflagellate	480	80	720	720				640
16-Jul-02								
<i>Alexandrium fundyense</i>	640							
<i>Amphidinium sphenoides</i>			480	576	432	144		
<i>Apedinella radians</i>	160							
Armoured dinoflagellate	480	965	2400	288	144	144	320	578
<i>Asterionellopsis glacialis</i>	1120	193	320	1008				160
<i>Brachionus</i> spp.	160							
Centric diatom				288	144	144		
<i>Cerataulina pelagica</i>	43360	8492	20000	7344	3312	288	26080	2601
<i>Chaetoceros contortus</i>	320	2509	960	288	288			
<i>Chaetoceros convolutus</i> / <i>concavicornis</i>	320	193			144			
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	160	193	320				160	
<i>Chaetoceros debilis</i>		193						
<i>Chaetoceros furcellatus</i>						144		
<i>Chaetoceros laciniosus</i>	160		160					
<i>Chaetoceros radicans</i>				1440	144			
<i>Chaetoceros similis</i>							960	
<i>Chaetoceros simplex</i>							160	
<i>Chaetoceros socialis</i>	71200	41881	12640	1584	288		48640	35836
<i>Chaetoceros</i> spp. (Hyalochaete)	4000	18721	5280	5472	1728	2304	2560	578
<i>Chaetoceros teres</i>	160							
Copepoda		386					289	
<i>Corethron hystrix</i>	160	193	160				320	
<i>Cylindrotheca closterium</i>	4480	2702	5600	3456	720	432	2080	578
<i>Dactyliosolen fragilissimus</i>	6720	7141	6720	1872	1152	1872	28480	11271
<i>Detonula confervacea</i>	640							
<i>Dictyocha speculum</i>	640	193	1600				480	867
<i>Dinobryon</i> spp.		579	640					

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
16-Jul-02 (continued)								
<i>Dinophysis acuminata</i>		193						3468
<i>Dinophysis norvegica</i>								289
<i>Dinophysis pulchella</i>	320							2312
<i>Dinophysis</i> spp.			160					
<i>Ditylum brightwellii</i>	3680	2509	4000	144	432	288	320	289
<i>Ebria tripartita</i>	1120	193	1760	144			1120	5202
<i>Eucampia zodiacus</i>	320		800	864	432	144	960	
<i>Eutreptiella</i> sp.	1440	193	800				320	
<i>Fragilaria</i> spp.		579					160	
<i>Gonyaulax spinifera</i>								289
<i>Guinardia delicatula</i>	11040	4246	5600	1728	1728	1440	34720	15606
<i>Gyrodinium</i> spp.		193		144				
<i>Helicostomella</i> spp.	480	579	2080					289
<i>Heterocapsa triquetra</i>	480		480				160	2312
<i>Leptocylindrus danicus</i>		772	960	1296	288			289
<i>Leptocylindrus mediterraneus</i>			960				160	
<i>Leptocylindrus minimus</i>	5120	965	8640	1296	1440	576	32960	26010
<i>Licmophora</i> spp.		386	160					
<i>Mesodinium rubrum</i>	9600	3474	4800				1760	58378
<i>Navicula distans</i>					144	288		
Pennate diatom			320					867
<i>Pleurosigma angulatum</i>			160				160	
<i>Pleurosigma strigosum</i>		193	320				160	289
<i>Porosira glacialis</i>				288	144			
<i>Prorocentrum</i> spp.					288			
<i>Protoperidinium bipes</i>			160				160	
<i>Protoperidinium brevipes</i>			160					
<i>Protoperidinium ovatum</i>					144			
<i>Protoperidinium</i> spp.	1120	579	480					3179
<i>Pseudo-nitzschia americana</i>						144		
<i>Pseudo-nitzschia delicatissima</i> group	2080	7913	17280	6192	2736	2016	800	5202
<i>Pseudo-nitzschia seriata</i> group	640	386	640	288	288		1600	1156
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>			579					
<i>Rhizosolenia imbricata</i>		160						
<i>Rhizosolenia setigera</i>				288				
<i>Scrippsiella</i> sp.			320					
<i>Scrippsiella trochoidea</i>			320					289
<i>Skeletonema costatum</i>	160		160			144	320	289
<i>Thalassionema nitzschiooides</i>			320		288	144		
<i>Thalassiosira angustie-lineata</i>	160		320	144				
<i>Thalassiosira gravida</i>			160	576		144	320	
<i>Thalassiosira punctigera</i>				144	144	288		
<i>Thalassiosira</i> spp.	160		480	864	432	576	1280	
Tintinnida	640	386	480	432	144	288	320	
Unarmoured dinoflagellate				144				
23-Jul-02						144		
<i>Actinoptychus senarius</i>								
<i>Alexandrium fundyense</i>	10320	152014	1760	864				1120
<i>Alexandrium fundyense</i> (duplet)	720	5202	160					
<i>Alexandrium fundyense</i> (fusing)		578						
<i>Alexandrium fundyense</i> (planozygote)		578						
<i>Amphidinium carterae</i>	160	160			144			
<i>Amphidinium sphenoides</i>			240	144				
Armoured dinoflagellate	2400	14720	1600	1152	144			1920
<i>Asterionellopsis glacialis</i>	80				144	144	480	
<i>Brachionus</i> spp.	160		80					
Centric diatom			80		144	144	480	
<i>Cerataulina pelagica</i>			80			144		

23-Jul-02 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Ceratium lineatum</i>					144			
<i>Chaetoceros contortus</i>					144	144		
<i>Chaetoceros convolutus</i>					144			
<i>Chaetoceros convolutus / concavicornis</i>					144			
<i>Chaetoceros convolutus f. trisetosa</i>	80		720					
<i>Chaetoceros debilis</i>	400		240	576				
<i>Chaetoceros decipiens</i>	80							
<i>Chaetoceros laciniatus</i>			240					
<i>Chaetoceros simplex</i>	80		80				160	320
<i>Chaetoceros socialis</i>	31360	320	2800	288	432	288	30880	60320
<i>Chaetoceros spp. (Hyalochaete)</i>	2800	480	6160	11520	4320	1584	320	160
<i>Copepoda</i>					144			160
<i>Corethron hystrix</i>	240		240	288	144			320
<i>Cylindrotheca closterium</i>	2720	3840	4080	3456	1440		2880	480
<i>Dactyliosolen fragilissimus</i>	720		640	864	2016	288	7520	2400
<i>Dictyocha speculum</i>	160	160	800	432	288		1440	5280
<i>Dinobryon spp.</i>	320	320	160					
<i>Dinophysis acuminata</i>			480	432				1120
<i>Dinophysis pulchella</i>	240							
<i>Ditylum brightwellii</i>	560		400	1008	864	432	800	640
<i>Ebria tripartita</i>	160		80	432				
<i>Eucampia zodiacus</i>	160				144			
<i>Eutreptiella</i> sp.	320	4800	1920	1440			800	320
<i>Favella</i> spp.	80			144				
<i>Gonyaulax spinifera</i>	240							
<i>Guinardia delicatula</i>	2880		2080	1872	2160	1728	32640	28160
<i>Guinardia flaccida</i>								160
<i>Gyrodinium</i> spp.	320	160	400	1008	432			
<i>Helicostomella</i> spp.	1600		560		288		160	480
<i>Heterocapsa triquetra</i>	8240	65920	4480	864	288			1120
<i>Laboea</i> sp.		160	320	288				
<i>Leptocylindrus danicus</i>			80		432	432		
<i>Leptocylindrus mediterraneus</i>	480	480	560					160
<i>Leptocylindrus minimus</i>			160				320	
<i>Licmophora</i> spp.	80							
<i>Membraneis challengerii</i>					144			
<i>Mesodinium rubrum</i>	8000	4480	5600				19840	21760
<i>Navicula distans</i>	80						160	
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>			160					
<i>Parafavella</i> spp.			80	144				
Pennate diatom	80		160	288			160	160
<i>Pleurosigma angulatum</i>	240		80				160	
<i>Pleurosigma strigosum</i>		160	160	432	288		320	160
<i>Prorocentrum minimum</i>			480				144	
<i>Protoperidinium bipes</i>			80		288			
<i>Protoperidinium conicum</i>				144	144			
<i>Protoperidinium</i> spp.	240		720			144		640
<i>Pseudo-nitzschia delicatissima</i> group	4000	640	5280	6624	2448	576	2240	640
<i>Pseudo-nitzschia seriata</i> group	80		160	432	144		800	480
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>							160	
<i>Scrippsiella</i> sp.	880	16320	320					
<i>Scrippsiella trochoidea</i>	1200	2240	640					
<i>Skeletonema costatum</i>			240				800	
<i>Thalassionema nitzschiooides</i>	80			144				
<i>Thalassiosira gravida</i>			80					480
<i>Thalassiosira nordenskioeldii</i>						144		
<i>Thalassiosira</i> spp.	240		160	144	288	576	2400	320
Tintinnida	640	1120	1600	3600	576		160	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
23-Jul-02 (continued)								
Unarmoured dinoflagellate	400	1280	1680	864	144		160	320
30-Jul-02								
<i>Actinoptychus senarius</i>					144			
<i>Alexandrium fundyense</i>	2320	20480	4000	288				
<i>Alexandrium fundyense</i> (duplet)	80	160	80					
<i>Alexandrium fundyense</i> (fusing)		160						
<i>Alexandrium fundyense</i> (planozygote)		960	240					
<i>Alexandrium ostenfeldii</i>			80					
<i>Amphidinium carterae</i>			160	144				
<i>Amphidinium sphenoides</i>	160	320			288			
<i>Amylax triacantha</i>	320							
<i>Apedinella radians</i>	160		80	720				
Armoured dinoflagellate	12640	4480	5360	2016	432			
<i>Asterionellopsis glacialis</i>					144			
<i>Cerataulina pelagica</i>	160				144	144		
<i>Ceratium lineatum</i>	160							
<i>Ceratium longipes</i>	160							
<i>Chaetoceros convolutus / concavicornis</i>		160				144		
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	160	320	80					
<i>Chaetoceros debilis</i>	480	160	160	576	288	144		
<i>Chaetoceros decipiens</i>	160							
<i>Chaetoceros laciniosus</i>	320	480	80					
<i>Chaetoceros socialis</i>	76320	1760				144		
<i>Chaetoceros</i> spp. (Hyalochaete)	5760	10240	8480	10944	13104	3168		
<i>Chaetoceros</i> spp. (Phaeoceros)		160						
<i>Corethron hystrix</i>	160		80	144		288		
<i>Cylindrotheca closterium</i>	3360	1600	3120	2448	1152	1584		
<i>Dactyliosolen fragilissimus</i>	1280	160		144	288			
<i>Dictyocha speculum</i>	800	160	240	288	144			
<i>Dinobryon</i> spp.	160							
<i>Dinophysis acuminata</i>	2720		320		144			
<i>Dinophysis pulchella</i>			240					
<i>Dissodinium pseudolunula</i>	160							
<i>Ditylum brightwellii</i>	4480		80	288				
<i>Ebria tripartita</i>	160							
<i>Eucampia zodiacus</i>		160	80					
<i>Eutreptiella</i> sp.	960	1280	880	3312	576			
<i>Favella</i> spp.	480	160	240					
<i>Gonyaulax digitale</i>			2160					
<i>Gonyaulax spinifera</i>	640		240					
<i>Guinardia delicatula</i>	17280	640	960	1440	1008	1008		
<i>Gyrodinium aureolum</i>		800	160					
<i>Gyrodinium</i> spp.		960	400	144	432			
<i>Helicostomella</i> spp.	3840		80					
<i>Heterocapsa triquetra</i>	20480	16960	9840	432	288			
<i>Laboea</i> sp.	320		320	1440				
<i>Leptocylindrus danicus</i>		160			144	144		
<i>Leptocylindrus mediterraneus</i>	160		160					
<i>Leptocylindrus minimus</i>	480		80	144				
<i>Membraneis challengerii</i>					144			
<i>Mesodinium rubrum</i>	4960	320	1920	576		144		
<i>Navicula distans</i>						144		
<i>Navicula transitans</i> var. <i>derasa</i> f. <i>delicatula</i>	480	160				288		
<i>Parafavella</i> spp.				144				
Pennate diatom		320		720	2160			
<i>Pleurosigma strigosum</i>	960	160		144	288	144		
<i>Prorocentrum minimum</i>				288				
<i>Prorocentrum</i> spp.				288				

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
30-Jul-02 (continued)								
<i>Protoperidinium excentricum</i>				432				
<i>Protoperidinium</i> spp.	960		160	288	288			
<i>Pseudo-nitzschia americana</i>				144	144			
<i>Pseudo-nitzschia delicatissima</i> group	5600	1600	2320	3456	3312	1152		
<i>Pseudo-nitzschia seriata</i> group						144		
<i>Scrippsiella</i> sp.	4000	4160	880					
<i>Scrippsiella trochoidea</i>	1280	4000	8000					
<i>Skeletonema costatum</i>	480		160					
<i>Thalassionema nitzschioides</i>	160				144			
<i>Thalassiosira anguste-lineata</i>	160							
<i>Thalassiosira gravida</i>	160				144			
<i>Thalassiosira punctigera</i>				144				
<i>Thalassiosira</i> spp.				432	288	144		
Tintinnida		800		20016	432	432		
Unarmoured dinoflagellate	2400	3520	320	2016	144			
13-Aug-02								
<i>Actinoptychus senarius</i>					144			40
<i>Alexandrium fundyense</i>		160						
<i>Amphidinium carterae</i>		80	80					
<i>Amphidinium sphenoides</i>	80	80	240					
<i>Apedinella radians</i>			80	144				
Armoured dinoflagellate	160	2800	1840	288	144	144		240
<i>Asterionellopsis glacialis</i>		80	80	144	144			
<i>Cerataulina pelagica</i>	80			144				
<i>Ceratium longipes</i>							60	
<i>Chaetoceros contortus</i>	80		80				20	
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	160	80	80					
<i>Chaetoceros debilis</i>	3360	880	1360	1872	1152	288	160	
<i>Chaetoceros decipiens</i>	80							
<i>Chaetoceros laciniatus</i>	880	2640	2400	576		144	80	20
<i>Chaetoceros radicans</i>				288				
<i>Chaetoceros simplex</i>	560						960	80
<i>Chaetoceros socialis</i>	50400	23840	25760	720			80	
<i>Chaetoceros</i> spp. (Hyalochaete)	28800	26880	18240	53856	38304	13824	160	380
Copepoda	80							20
<i>Corethron hystrix</i>	480		400	288		144	160	160
<i>Cylindrotheca closterium</i>	1920	880	1840	720	720	288	1360	100
<i>Dactyliosolen fragilissimus</i>	880	1360	720	144	288		1040	140
<i>Dictyocha speculum</i>	640	160	240	1008	288		880	42480
<i>Dinophysis acuminata</i>			320					1380
<i>Dinophysis pulchella</i>								20
<i>Ditylum brightwellii</i>	5840	1120	1040	720	576	432	2400	460
<i>Ebria tripartita</i>			160				80	1340
<i>Eucampia zodiacus</i>			80	144			160	
<i>Eutreptiella</i> sp.	240	4320	1520	288		144	1360	100
<i>Favella</i> spp.		80						
<i>Gonyaulax digitalis</i>	80							60
<i>Gonyaulax spinifera</i>		320						
<i>Guinardia delicatula</i>	8560	6880	3760	1872	1008	720	3680	240
<i>Guinardia striata</i>			80					
<i>Gyrodinium aureolum</i>		80	480					
<i>Gyrodinium</i> spp.	160	160	480	432	432		80	60
<i>Helicostomella</i> spp.	80		480				144	120
<i>Helicotheca tamesis</i>					144			
<i>Heterocapsa triquetra</i>	80	3200	4240		144			40
<i>Laboea</i> sp.			80		144			
<i>Leptocylindrus mediterraneus</i>					288			
<i>Leptocylindrus minimus</i>	720	880	800				1920	80

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
13-Aug-02 (continued)								
<i>Licmophora</i> spp.	80		80				80	
<i>Mediopyxis helysia</i>		80	80	144				
<i>Melosira</i> spp.		80						
<i>Membraneis challengerii</i>						576		
<i>Mesodinium rubrum</i>	1120	560	3680			144	23120	2680
<i>Navicula distans</i>							80	
<i>Paralia sulcata</i>		80						
Pennate diatom	240		160		288		80	
<i>Pleurosigma angulatum</i>	240							20
<i>Pleurosigma strigosum</i>	800	320	160	288	432			
<i>Prorocentrum minimum</i>			80					
<i>Protoperidinium bipes</i>		80						
<i>Protoperidinium brevipes</i>			80				20	
<i>Protoperidinium</i> spp.	160		80				80	80
<i>Pseudo-nitzschia americana</i>	80			432				40
<i>Pseudo-nitzschia delicatissima</i> group	3200	1280	1760	2592	3312	2160	80	40
<i>Pseudo-nitzschia seriata</i> group	560	160		144				60
<i>Rhabdonema</i> spp.								20
<i>Rhizosolenia imbricata</i>							80	60
<i>Rhizosolenia</i> spp.							160	
<i>Scrippsiella</i> sp.	160	1440	1360					
<i>Scrippsiella trochoidea</i>		320	1200					20
<i>Skeletonema costatum</i>	4000	4480	5600	2736	576	1584		20
<i>Stephanopyxis turris</i>	80							
<i>Thalassionema nitzschioides</i>	80	240	400	576		432		20
<i>Thalassiosira anguste-lineata</i>	80							
<i>Thalassiosira gravida</i>	640		80				2720	40
<i>Thalassiosira</i> sp. (tiny)	80							
<i>Thalassiosira</i> spp.	240		80	576	288	144		
Tintinnida	480	640	400	144	144	144	320	240
Unarmoured dinoflagellate	160	480	160	144			80	220
20-Aug-02					576			
<i>Actinoptychus senarius</i>								
<i>Alexandrium pseudogonyaulax</i>			160					
<i>Alexandrium</i> spp.			320					
<i>Amphidinium carterae</i>			320					
<i>Amphidinium sphenoides</i>	867	2560	4640	579	864		160	
<i>Amylax triacantha</i>								80
<i>Apedinella radians</i>		160	160				160	
Armoured dinoflagellate	1734	3040	4480		144			1560
<i>Asterionellopsis glacialis</i>	578	2720	2720	965	144			
<i>Brachionus</i> spp.							80	
Centric diatom							800	
<i>Cerataulina pelagica</i>	289	320		193			480	160
<i>Ceratium horridum</i>								40
<i>Ceratium lineatum</i>		320	160					80
<i>Chaetoceros contortus</i>	578		160	193				
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>		320	480					
<i>Chaetoceros debilis</i>	4046	800	1760	579		144		
<i>Chaetoceros decipiens</i>					144			
<i>Chaetoceros diadema</i>	1734			5018	3312	576		
<i>Chaetoceros laciniatus</i>	2890	4320	2240					
<i>Chaetoceros simplex</i>	289		960				7360	240
<i>Chaetoceros socialis</i>	67626	29440	50560				3680	40
<i>Chaetoceros</i> spp. (Hyalochaete)	56644	29120	86720	62918	29088	8640	1280	280
Copepoda								240
<i>Corethron hystrix</i>	1156		960			144	320	160
<i>Coscinodiscus</i> spp.				193			160	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
20-Aug-02 (continued)								
<i>Cylindrotheaca closterium</i>	1734	1600	4480	1351	1152	288	2240	360
<i>Dactyliosolen fragilissimus</i>	3757	2560	5440	1158	432		21120	760
<i>Dictyocha speculum</i>	289	320	640	965		144	480	2880
<i>Dinophysis acuminata</i>	578		160	193			160	3120
<i>Dinophysis pulchella</i>			160					760
<i>Ditylum brightwellii</i>	2023	2240	5120	4632	1584	288	6720	2200
<i>Ebria tripartita</i>							640	2160
<i>Eucampia zodiacus</i>			160					640
<i>Eutreptiella</i> sp.	1156	320		193			480	440
<i>Favella</i> spp.	289	800						160
<i>Gonyaulax spinifera</i>								40
<i>Guinardia delicatula</i>	9537	6400	4960	2316	2016	288	11360	160
<i>Guinardia flaccida</i>							160	
<i>Guinardia striata</i>	289	960	1280	193				
<i>Gyrodinium aureolum</i>		320	320					120
<i>Gyrodinium</i> spp.	289	480	640	579	144		960	40
<i>Helicostomella</i> spp.	867	640	2240					1520
<i>Heterocapsa triquetra</i>	1445	6400	4640	193			160	480
<i>Laboea</i> sp.	578	1920	1280					160
<i>Leptocylindrus danicus</i>			160		579		160	640
<i>Leptocylindrus mediterraneus</i>			160					
<i>Leptocylindrus minimus</i>	5780	2560	7040	1158		144	28960	360
<i>Licmophora</i> spp.	289		320					
<i>Mediopyxis helsingia</i>			160	193	144			
<i>Membraneis challengerii</i>						432		
<i>Mesodinium rubrum</i>	9248	6240	2880	193	144		7840	36680
<i>Paralia sulcata</i>			160					
Pennate diatom		320	480	193				
<i>Pleurosigma strigosum</i>	289		480		288	144		280
<i>Polykrikos</i> spp.			480	160				
<i>Prorocentrum micans</i>								40
<i>Prorocentrum minimum</i>				160				120
<i>Protoperidinium bipes</i>				160				40
<i>Protoperidinium brevipes</i>		160						
<i>Protoperidinium</i> spp.	480		320					40
<i>Pseudo-nitzschia americana</i>				1351	288	144	800	
<i>Pseudo-nitzschia delicatissima</i> group	867	160	1120	3281	3456	1152	320	240
<i>Pseudo-nitzschia seriata</i> group	2023	160	800	772			960	49120
<i>Rhizosolenia imbricata</i>							160	240
<i>Rhizosolenia setigera</i>			160					
<i>Scrippsiella</i> sp.	2312	2880	2080				320	360
<i>Scrippsiella trochoidea</i>		320	2240					
<i>Skeletonema costatum</i>	31501	18400	49600	17756	2880	864	1120	80
<i>Thalassionema nitzschioides</i>	289	480	160	1158	1152	720	160	
<i>Thalassiosira anguste-lineata</i>	289	160	160					
<i>Thalassiosira gravida</i>	578		320	386		288	2400	280
<i>Thalassiosira</i> sp. (tiny)	289				1440	288		
<i>Thalassiosira</i> spp.	3757	480	1600	4439	1440	576		
Tintinnida	578	2240	2720	965		144	800	2920
<i>Tintinnopsis campanula</i>								40
Unarmoured dinoflagellate	289	480	1600	772				120
27-Aug-02								
<i>Amphidinium carterae</i>		160	480	772			160	250
<i>Amphidinium sphenoides</i>	160	1600	3920	2895	1728			
<i>Amylax triacantha</i>			80					
Armoured dinoflagellate	560	2080	4240	965	288	144	160	1375
<i>Asterionellopsis glacialis</i>	800	640	80			288	160	
<i>Aulacoseira ambigua</i>				193				

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
27-Aug-02 (continued)								
<i>Protoperidinium</i> spp.	400		320	193			160	875
<i>Pseudo-nitzschia americana</i>		160		1737	1152	288	480	
<i>Pseudo-nitzschia delicatissima</i> group	640	1280	640	5597	2736	432	160	125
<i>Pseudo-nitzschia seriata</i> group	4000	8960	10960	6369	3024	432	10080	14250
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>							160	
<i>Rhizosolenia imbricata</i>				80			144	320
<i>Rhizosolenia setigera</i>							800	375
<i>Rhizosolenia</i> spp.								375
<i>Scrippsiella</i> sp.	240	320	2080					
<i>Scrippsiella trochoidea</i>		80	160	1760	193			375
<i>Skeletonema costatum</i>	14960	13280	1680	1351	1152	144	1120	
<i>Thalassionema nitzschiooides</i>		160	80	193	288	288		
<i>Thalassiosira anguste-lineata</i>	240	960	240	386	720			
<i>Thalassiosira gravida</i>	1600	1120	1680	579	1152	144	8000	875
<i>Thalassiosira punctigera</i>							160	
<i>Thalassiosira</i> sp. (tiny)				193				
<i>Thalassiosira</i> spp.	240	480	320	965	432	720	160	
Tintinnida	880	960	2960	2123	432		1280	3500
Unarmoured dinoflagellate	400	480	2160	1737	144	144	800	500
3-Sep-02								
<i>Actinoptychus senarius</i>						288	480	
<i>Amphidinium carterae</i>	578	1734	320		144			160
<i>Amphidinium sphenoides</i>	1156	4624	2160	864	720			
<i>Amylax triacantha</i>								80
<i>Apedinella radians</i>	289		80	144				
Armoured dinoflagellate	7514	8092	1600	2304	288	144		1600
<i>Asterionellopsis glacialis</i>	1734	578	320			144		
<i>Brachionus</i> spp.				144				
Centric diatom			80			144		
<i>Cerataulina pelagica</i>	3468	3468	80	720	576	144	960	160
<i>Ceratium lineatum</i>	867	1156	1040	288				240
<i>Chaetoceros contortus</i>				288	144			
<i>Chaetoceros debilis</i>	3757	4624	960	144	432	288	160	80
<i>Chaetoceros decipiens</i>	289			144			160	160
<i>Chaetoceros didymus</i>								80
<i>Chaetoceros laciniatus</i>	578	1156						
<i>Chaetoceros similis</i>			80			144		
<i>Chaetoceros simplex</i>	1156	1156					5920	1360
<i>Chaetoceros socialis</i>	50864	55488	10000	144			800	
<i>Chaetoceros</i> spp. (Hyalochaete)	5202	4624	560	1584	432		800	560
<i>Commation cryoporinum</i>					288	288		
Copepoda			80	144				80
<i>Corethron hystrix</i>	1156					144	1120	400
<i>Cylindrotheca closterium</i>	2601	2312	160	1728	2736	144	320	80
<i>Dactyliosolen fragilissimus</i>	5491	2312	320		1728	432	39360	115600
<i>Detonula conservacea</i>			880					
<i>Dictyocha speculum</i>				720				80
<i>Dinophysis acuminata</i>		2312	720	288			160	640
<i>Dinophysis pulchella</i>							160	80
<i>Ditylum brightwellii</i>	1445	4624	240	144	864	144	640	160
<i>Ebria tripartita</i>				1584			1600	560
<i>Eucampia zodiacus</i>							800	720
<i>Eutreptiella</i> sp.	1156	578		1008			160	
<i>Favella</i> spp.	289		80					80
<i>Gonyaulax spinifera</i>							160	320
<i>Guinardia delicatula</i>	6069	3468	800	1008	1008	720	10240	5280
<i>Guinardia flaccida</i>							160	80
<i>Guinardia striata</i>	4046	2312	560	576	1008		480	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
3-Sep-02 (continued)								
<i>Gyrodinium aureolum</i>	3179	10982	10320	288				3360
<i>Gyrodinium</i> spp.	1445	1156	2720	432			160	480
<i>Helicostomella</i> spp.	867	578	1440				160	480
<i>Heterocapsa triquetra</i>	2023	2890	400	144				720
<i>Laboea</i> sp.			320	144	432		480	
<i>Lauderia annulata</i>				144			2240	560
<i>Leptocylindrus danicus</i>	4913	1156	1600	1008	1296		115040	1193200
<i>Leptocylindrus mediterraneus</i>	289		160	144				
<i>Leptocylindrus minimus</i>	8670	6936	560	720	1152	144	960	
<i>Mesodinium rubrum</i>	31501	65892	16080	2160	144		11040	20320
Pennate diatom	2601	578				144		
<i>Pleurosigma strigosum</i>	289			144				160
<i>Polykrikos</i> spp.				240	144		160	
<i>Prorocentrum minimum</i>					288			320
<i>Protoperdinium bipes</i>		578	160	432				
<i>Protoperdinium brevipes</i>			80	144				
<i>Protoperdinium conicum</i>				144				
<i>Protoperdinium</i> spp.		578	480	144				240
<i>Pseudo-nitzschia americana</i>				432				
<i>Pseudo-nitzschia delicatissima</i> group	2023	1156		27648	6336	864		
<i>Pseudo-nitzschia seriata</i> group	79764	231200	484400	167328	11664	1008	3040	880
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	289							80
<i>Rhizosolenia imbricata</i>							1760	
<i>Rhizosolenia setigera</i>			80		144		320	
<i>Rhizosolenia</i> spp.				144			800	80
<i>Scrippsiella</i> sp.	1445	2312	960	144				400
<i>Scrippsiella trochoidea</i>	289		160	1152				
<i>Skeletonema costatum</i>	10115	1734	240			144		80
<i>Thalassionema nitzschiooides</i>	1156				144	144		
<i>Thalassiosira anguste-lineata</i>	289		480	432	576			
<i>Thalassiosira gravida</i>	4335	7514	880	432	576		6400	1280
<i>Thalassiosira</i> spp.	1734	1734	560	864	864			
Tintinnida	1445	11560	5040	288	288		1760	320
Unarmoured dinoflagellate	4624	16762	7120	144	144		320	720
10-Sep-02								
<i>Amphidinium carterae</i>	578		867	193				160
<i>Amphidinium sphenoides</i>		2601	2601	386	867	144		80
Armoured dinoflagellate	289	1734	6647	193	289		80	480
<i>Asterionellopsis glacialis</i>	1156	578	1445	1351	867	576		80
<i>Biddulphia alternans</i>						144		
Centric diatom							80	
<i>Cerataulina pelagica</i>	578	867	289	386	289	288	320	
<i>Ceratium lineatum</i>	578	2312	1445				80	1040
<i>Ceratium longipes</i>								80
<i>Chaetoceros contortus</i>		578			578			
<i>Chaetoceros debilis</i>	1734	4335	867	1351	2023			80
<i>Chaetoceros decipiens</i>		289		193				
<i>Chaetoceros didymus</i>				193				
<i>Chaetoceros laciniatus</i>	289	1156		193	289			
<i>Chaetoceros lorenzianus</i>	289						240	
<i>Chaetoceros simplex</i>	289	2023	2601	386	578		2000	400
<i>Chaetoceros socialis</i>	39882	65314	32368	7527	4624	288		
<i>Chaetoceros</i> spp. (Hyalochaete)	2601	6936	3468	2316	2890	288	240	160
<i>Commation cryporinum</i>			289					
Copepoda		289	289					
<i>Corethron hystrix</i>	578	1156		193	867		640	400
<i>Coscinodiscus</i> spp.			289					80
<i>Cylindrotheca closterium</i>	4046	2601	1734	1737	1734	1152	400	320

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
10-Sep-02 (continued)								
<i>Dactyliosolen fragilissimus</i>	2890	2890	578	1158	1445	1728	2640	17840
<i>Dictyocha speculum</i>		289					160	720
<i>Dinophysis acuminata</i>	289	289	1156				160	1040
<i>Ditylum brightwellii</i>	1156	2601	1445	1158	867	1296	400	160
<i>Ebria tripartita</i>							80	720
<i>Eucampia zodiacus</i>	1445	867		772	578		720	1440
<i>Eutreptiella</i> sp.		1156	2312		289		160	640
<i>Gonyaulax spinifera</i>			289					
<i>Guinardia delicatula</i>	1445	7803	2312	579	1734	1584	3600	1920
<i>Guinardia flaccida</i>							320	640
<i>Guinardia striata</i>		289					640	560
<i>Gyrodinium aureolum</i>	3179	5780	13872	386	578			560
<i>Gyrodinium</i> spp.	289	1445	289	386			160	480
<i>Gyrosigma tenuissimum</i>							80	
<i>Helicostomella</i> spp.	289	289						240
<i>Heterocapsa triquetra</i>	289	867	1445					
<i>Laboea</i> sp.							160	
<i>Lauderia annulata</i>	289	867	578	579			400	
<i>Leptocylindrus danicus</i>	76874	46818	40749	22774	47974	7920	72320	158960
<i>Leptocylindrus mediterraneus</i>		289						
<i>Leptocylindrus minimus</i>	578	867	289	193			1600	800
<i>Melosira</i> spp.								80
<i>Mesodinium rubrum</i>	6358	4335	14739		289		4080	10000
<i>Navicula distans</i>							80	
Pennate diatom	3757	2312	1445					
<i>Pleurosigma / Gyrosigma</i>						288		
<i>Pleurosigma angulatum</i>	289							80
<i>Pleurosigma strigosum</i>	578	289		386				240
<i>Polykrikos</i> spp.								80
<i>Prorocentrum minimum</i>	289	289	289	193	289		240	1600
<i>Protoperidinium bipes</i>		289	289					
<i>Protoperidinium</i> spp.	289	289	578					
<i>Pseudo-nitzschia americana</i>	1156	578		1544	3757	864	1360	160
<i>Pseudo-nitzschia delicatissima</i> group	12138	578	2312	31845	32946	19152	80	320
<i>Pseudo-nitzschia seriata</i> group	92480	168776	154904	67936	79186	56160	1840	3440
<i>Rhizosolenia imbricata</i>							80	
<i>Rhizosolenia setigera</i>		289		193			240	160
<i>Scrippsiella trochoidea</i>								1280
<i>Skeletonema costatum</i>	5202	4046	2312	1544	2601	864		240
<i>Thalassionema nitzschioides</i>						1008		80
<i>Thalassiosira anguste-lineata</i>		578	289		289			
<i>Thalassiosira gravida</i>	4335	8959	4624	5404	4046	1008	320	240
<i>Thalassiosira nordenskioeldii</i>				193				
<i>Thalassiosira</i> sp. (tiny)				193				
<i>Thalassiosira</i> spp.	289	289	289	772	1156		80	
Tintinnida	578			193			80	240
Unarmoured dinoflagellate	1156	1156	1445	386		144		160
17-Sep-02						144		
<i>Actinoptychus senarius</i>	579		480	2448	1296	576		40
<i>Amphidinium carterae</i>		578	80		144			40
<i>Amphidinium sphenoides</i>			80		288			
Armoured dinoflagellate	193	1156	1040	288	288		40	960
<i>Asterionellopsis glacialis</i>	193		160	288	288			
<i>Biddulphia alternans</i>						144		
Centric diatom							80	40
<i>Cerataulina pelagica</i>		578	80	144		144		80
<i>Ceratium lineatum</i>		1734	720	144				2280
<i>Chaetoceros contortus</i>		578	160	288	432	576		

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
17-Sep-02 (continued)								
<i>Chaetoceros convolutus</i> f. <i>trisetosa</i>	193							
<i>Chaetoceros debilis</i>	965	1156	160	1152	864	144		
<i>Chaetoceros decipiens</i>				144		144		
<i>Chaetoceros didymus</i>			80					
<i>Chaetoceros laciniatus</i>		578						
<i>Chaetoceros lorenzianus</i>							40	
<i>Chaetoceros simplex</i>	386		160	144			200	
<i>Chaetoceros socialis</i>	2895	13294	720	1296	288			
<i>Chaetoceros</i> spp. (<i>Hyalochaete</i>)	579	1156	720	432	288	432		
<i>Commation cryoporinum</i>			160					
Copepoda					288			280
<i>Corethron hystrix</i>	1158	1734	480	288	432	1008	360	920
<i>Coscinodiscus</i> spp.			80				40	120
<i>Cylindrotheca closterium</i>	3088	2890	1760	432	1872	1152	120	
<i>Dactyliosolen fragilissimus</i>	193			1728	432	432	880	
<i>Detonula confervacea</i>	13317	63002	6560	288		144	14480	4000
<i>Dictyocha speculum</i>	579		320					2000
<i>Dinophysis acuminata</i>	193	1156	560				40	2600
<i>Dinophysis pulchella</i>			80					400
<i>Ditylum brightwellii</i>	1158	1734	640	576	432	576	80	
<i>Ebria tripartita</i>								1000
<i>Eucampia zodiacus</i>	579				144		880	760
<i>Eutreptiella</i> sp.	193	578	1760	144				200
<i>Gonyaulax</i> spp.								40
<i>Guinardia delicatula</i>	772	1734	160	864	1152	864	2280	800
<i>Guinardia flaccida</i>	193				144		480	800
<i>Guinardia striata</i>					144		40	
<i>Gyrodinium aureolum</i>	579	5780	3040	144				280
<i>Gyrodinium</i> spp.		578	960	288	288	576	120	600
<i>Helicostomella</i> spp.								760
<i>Heterocapsa triquetra</i>		578	320					160
<i>Laboea</i> sp.			160					360
<i>Lauderia annulata</i>	1158	578		576	288			
<i>Leptocylindrus danicus</i>	193		240	7488	14832	10224	1440	
<i>Leptocylindrus mediterraneus</i>			80					
<i>Leptocylindrus minimus</i>		1156	240	432	432	144	600	440
<i>Mesodinium rubrum</i>	1544	1156	6400				1480	3520
Pennate diatom	386		400	720	576			
<i>Pleurosigma / Gyrosigma</i>			80		288			
<i>Pleurosigma angulatum</i>							80	
<i>Pleurosigma strigosum</i>	193		80	144			40	80
<i>Polykrikos</i> spp.								40
<i>Prorocentrum micans</i>								200
<i>Prorocentrum minimum</i>			400	144		144		9520
<i>Protoperidinium bipes</i>		2890						160
<i>Protoperidinium</i> spp.	193	578	80			432		240
<i>Pseudo-nitzschia americana</i>	579	5780	960	1728	720	720	40	
<i>Pseudo-nitzschia delicatissima</i> group	3860	4624	1840	27648	33264	9216	80	
<i>Pseudo-nitzschia seriata</i> group	78937	189006	22080	45504	55728	49824	680	560
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>								40
<i>Rhizosolenia imbricata</i>					144		80	
<i>Rhizosolenia setigera</i>		578		144			600	
<i>Rhizosolenia</i> spp.						288		80
<i>Scrippsiella trochoidea</i>	386		160					760
<i>Skeletonema costatum</i>	772		240			576	240	
<i>Thalassionema nitzschiooides</i>	193	578	160	576	720	1008		
<i>Thalassiosira anguste-lineata</i>				288	144			
<i>Thalassiosira baltica</i>		578						

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
8-Oct-02 (continued)								
<i>Helicostomella</i> spp.	160						240	80
<i>Laboea</i> sp.	240	175	160					
<i>Lauderia annulata</i>		35	80					
<i>Leptocylindrus danicus</i>	240	35		288	432	288		
<i>Leptocylindrus minimus</i>	400	105	80	144	288		80	
<i>Mesodinium rubrum</i>	1360	875	2800		144	144	560	9360
Pennate diatom							40	80
<i>Pleurosigma / Gyrosigma</i>	160	35						80
<i>Pleurosigma angulatum</i>		80	70					
<i>Prorocentrum micans</i>				144				80
<i>Prorocentrum minimum</i>	160						40	240
<i>Protoperidinium conicum</i>				144				
<i>Protoperidinium punctulatum</i>	80							
<i>Protoperidinium</i> spp.		280	320	144	144			160
<i>Pseudo-nitzschia americana</i>						144		
<i>Pseudo-nitzschia delicatissima</i> group	4000	1470	400	8928	10800	4896	120	
<i>Pseudo-nitzschia seriata</i> group	33920	97685	40160	36432	39888	40320	2120	6320
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>							160	
<i>Rhizosolenia setigera</i>		35	80	144	144			
<i>Rhizosolenia</i> spp.				144		144		
<i>Scrippsiella trochoidea</i>	240							880
<i>Skeletonema costatum</i>		70						
<i>Thalassionema nitzschioides</i>	160							
<i>Thalassiosira baltica</i>		35						
<i>Thalassiosira gravida</i>		35		144		144		
<i>Thalassiosira</i> spp.	80		160		720			
Tintinnida	320	35	240		144	144	120	160
Unarmoured dinoflagellate				144				
22-Oct-02								
<i>Actinoptichus senarius</i>	80						320	240
Armoured dinoflagellate								160
<i>Ceratium lineatum</i>	120							400
<i>Ceratium longipes</i>	40							
<i>Chaetoceros decipiens</i>						40		
<i>Chaetoceros</i> spp. (Hyalochaete)	40							
Copepoda	40					40		
<i>Corethron hystrix</i>	80						160	160
<i>Coscinodiscus</i> spp.	160							80
<i>Cylindrotheca closterium</i>	240						200	160
<i>Detonula confervacea</i>							40	
<i>Dictyocha speculum</i>	40							80
<i>Dinophysis acuminata</i>	40					40		80
<i>Dinophysis pulchella</i>							40	
<i>Ditylum brightwellii</i>						40		80
<i>Eucampia zodiacus</i>	82080						178320	109840
<i>Guinardia delicatula</i>	120						520	720
<i>Guinardia flaccida</i>	160						280	240
<i>Gyrodinium aureolum</i>								80
<i>Gyrodinium</i> spp.	280						280	560
<i>Gyrosigma fasciola</i>								80
<i>Helicostomella</i> spp.	40							
<i>Heterocapsa triquetra</i>								80
<i>Laboea</i> sp.							80	160
<i>Leptocylindrus minimus</i>	80							
<i>Mesodinium rubrum</i>	320						760	1040
Pennate diatom	40						80	80
<i>Pleurosigma angulatum</i>	40							
<i>Protoperidinium</i> spp.	40						40	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
22-Oct-02 (continued)								
<i>Pseudo-nitzschia americana</i>								80
<i>Pseudo-nitzschia delicatissima</i> group	160						40	320
<i>Pseudo-nitzschia seriata</i> group	240						320	240
<i>Thalassiosira</i> sp. (tiny)	40							
<i>Thalassiosira</i> spp.	120							160
Tintinnida	480						40	400
5-Nov-02								
<i>Actinptychus senarius</i>	420							200
<i>Biddulphia alternans</i>	20							
<i>Ceratium lineatum</i>	100						40	280
<i>Chaetoceros simplex</i>							40	
<i>Chaetoceros</i> spp. (Hyalochaete)							40	
Copepoda							40	
<i>Corethron hystrix</i>	120						40	120
<i>Coscinodiscus</i> spp.	60						80	
<i>Cylindrotheca closterium</i>	4640						1600	1920
<i>Dictyocha speculum</i>	20						80	40
<i>Ditylum brightwellii</i>								40
<i>Eucampia zodiacus</i>	10520						30240	21680
<i>Guinardia delicatula</i>	320						640	1240
<i>Guinardia striata</i>	40							
<i>Gyrodinium</i> spp.	380						1000	560
<i>Helicostomella</i> spp.	40							
<i>Laboea</i> sp.	40						160	
<i>Leptocylindrus minimus</i>	100						40	40
<i>Mesodinium rubrum</i>	500						1040	200
<i>Navicula distans</i>	60							
<i>Odontella sinensis</i>	20						40	40
<i>Paralia sulcata</i>								
Pennate diatom	60						80	160
<i>Pleurosigma / Gyrosigma</i>	20							
<i>Pleurosigma angulatum</i>	20						40	
<i>Polykrikos</i> spp.	40							
<i>Prorocentrum micans</i>	20							
<i>Protoperidinium depressum</i>								40
<i>Protoperidinium</i> spp.							40	
<i>Pseudo-nitzschia delicatissima</i> group	1160						520	600
<i>Pseudo-nitzschia seriata</i> group								160
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>								40
<i>Rhizosolenia</i> spp.							40	
<i>Thalassionema nitzschioides</i>	80						80	
<i>Thalassiosira baltica</i>	100							
<i>Thalassiosira punctigera</i>	100							
<i>Thalassiosira</i> spp.							40	40
Tintinnida	100						160	200
Unarmoured dinoflagellate	100							
12-Nov-02								
<i>Actinptychus senarius</i>	180	260	600	2016	2304	288	120	
<i>Amphidinium carterae</i>			40					35
<i>Amphidinium sphenoides</i>	20			288				
Armoured dinoflagellate	60	40	80		144	144	40	35
<i>Biddulphia alternans</i>								35
Centric diatom							432	80
<i>Ceratium lineatum</i>	220	100	280	576		432	100	700
<i>Chaetoceros simplex</i>			40					
Copepoda	20			144	144			35
<i>Corethron hystrix</i>	40	20	40				80	105
<i>Coscinodiscus</i> spp.	20						20	

	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
12-Nov-02 (continued)								
<i>Cylindrothecea closterium</i>	1900	640	3480	1584	2592	1008	2560	1925
<i>Dictyocha speculum</i>	120	60	160		432		20	140
<i>Ditylum brightwellii</i>							40	35
<i>Eucampia zodiacus</i>	4960	1480	11240	11376	18576	9360	9720	31780
<i>Eutreptiella</i> sp.	40							
<i>Guinardia delicatula</i>	880	180	840	576	864	1440	500	1575
<i>Guinardia flaccida</i>			120				220	
<i>Gyrodinium aureolum</i>			40					
<i>Gyrodinium</i> spp.	140	80	40	576	144	288	320	175
<i>Heterocapsa triquetra</i>				144				
<i>Laboea</i> sp.							20	70
<i>Leptocylindrus minimus</i>	60	60	120				80	105
<i>Mesodinium rubrum</i>	1180	380	3520	576	144	144	1140	2205
<i>Navicula distans</i>	40	20		144	432			35
<i>Odontella sinensis</i>			20		144	144		70
<i>Paralia sulcata</i>							20	70
Pennate diatom	40		40				60	35
<i>Pleurosigma / Gyrosigma</i>	40	20	40					
<i>Pleurosigma angulatum</i>			20					
<i>Polykrikos</i> spp.					144			
<i>Prorocentrum micans</i>							20	
<i>Prorocentrum</i> spp.				40				
<i>Protoperidinium depressum</i>							20	
<i>Protoperidinium</i> spp.	40				144		144	
<i>Pseudo-nitzschia americana</i>								35
<i>Pseudo-nitzschia delicatissima</i> group	660	100	240	720	1152	288	340	175
<i>Pseudo-nitzschia seriata</i> group		40	40					
<i>Rhizosolenia setigera</i>	20	20	40					35
<i>Rhizosolenia</i> spp.					144			
<i>Scrippsiella trochoidea</i>			40					
<i>Skeletonema costatum</i>	20						20	
<i>Thalassionema nitzschioides</i>		20	80		144		20	35
<i>Thalassiosira anguste-lineata</i>	20							
<i>Thalassiosira baltica</i>	20	20	120					70
<i>Thalassiosira gravida</i>				144				
<i>Thalassiosira punctigera</i>	60		40		144	288	20	70
<i>Thalassiosira</i> spp.	40		40	576		288	40	
Tintinnida	120	40	120	144		144	80	
Unarmoured dinoflagellate	20		120	144			20	140
3-Dec-02								
<i>Actinptychus senarius</i>	160	120		720	1296		120	20
Armoured dinoflagellate	40			144				20
<i>Asterionellopsis glacialis</i>	20							
Centric diatom		60			144		40	80
<i>Cerataulina pelagica</i>								20
<i>Ceratium lineatum</i>	20	20	20				20	40
<i>Chaetoceros convolutus</i>		20						
<i>Chaetoceros decipiens</i>		20						
<i>Chaetoceros simplex</i>	20							20
<i>Commation cryoporinum</i>	20						20	
Copepoda		20						
<i>Corethron hystrix</i>	40	40	100				80	
<i>Coscinodiscus</i> spp.	60							
<i>Cylindrothecea closterium</i>	580	840	820	1152	720	288	660	460
<i>Dictyocha fibula</i>				144				
<i>Dictyocha speculum</i>	40	20	20					40
<i>Dinobryon</i> spp.							20	
<i>Ditylum brightwellii</i>	40	40			144		40	80

3-Dec-02 (continued)	3-0m	15-0m	16-0m	16-10m	16-25m	16-50m	17-0m	25-0m
<i>Eucampia zodiacus</i>	180	100	200	720	864	432	520	400
<i>Eutreptiella</i> sp.								20
<i>Grammatophora marina</i>							40	
<i>Guinardia delicatula</i>	360	240	280	288		432	280	420
<i>Guinardia flaccida</i>								20
<i>Guinardia striata</i>			40					20
<i>Gyrodinium aureolum</i>			40					
<i>Gyrodinium</i> spp.	20	20	20				40	20
<i>Heterocapsa triquetra</i>	20							
<i>Laboea</i> sp.	20	20						20
<i>Leptocylindrus danicus</i>			20					
<i>Leptocylindrus mediterraneus</i>				20				
<i>Leptocylindrus minimus</i>	40	40	40					20
<i>Mesodinium rubrum</i>	640	340	1020	144			380	340
<i>Navicula distans</i>	60	60		144			60	60
<i>Odontella sinensis</i>			60	20	144			40
<i>Parafavella</i> spp.						144		
<i>Paralia sulcata</i>				40			40	
Pennate diatom	40	100	80	144			20	20
<i>Pleurosigma / Gyrosigma</i>	40							20
<i>Pleurosigma angulatum</i>			20	20			20	
<i>Prorocentrum minimum</i>			20	20				
<i>Pseudo-nitzschia americana</i>								20
<i>Pseudo-nitzschia delicatissima</i> group	180	240	220	576	288	288	140	200
<i>Pseudo-nitzschia seriata</i> group	20				288		20	60
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>			20	20				
<i>Rhizosolenia imbricata</i>								20
<i>Rhizosolenia setigera</i>	20					144		
<i>Skeletonema costatum</i>	20	20						
<i>Thalassionema nitzschiooides</i>			20					20
<i>Thassiosira baltica</i>				40				
<i>Thassiosira gravida</i>	20							
<i>Thassiosira punctigera</i>	20			40				
<i>Thassiosira</i> spp.	40	60	20		432	144	20	40
Tintinnida	220	180	180	576	144		60	100
Unarmoured dinoflagellate	20						20	

Appendix 3. Plant nutrient, temperature and salinity data from 2001-2002.

Date	Temp. Surface	Temp. bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrate Surface	Ammonia Surface	Nitrite Surface
Station #3									
9-Jan-01	4.1	4.0	31.88	31.95	7.76	0.993	8.41		0.30
13-Feb-01	2.9	2.7	32.04	32.05	7.76	1.023	8.40	0.56	0.23
20-Mar-01	3.3				7.10	0.935	7.40	1.76	0.27
1-May-01	5.1	3.9	30.88	31.00	3.62	0.460	1.08	0.75	0.06
7-May-01	6.5	3.8	28.66	31.07	7.94	0.505	1.18	1.69	0.08
15-May-01	6.6	3.9	29.62	31.01	6.29	0.620	2.37	1.56	0.15
22-May-01	7.2	4.3	30.08	30.85	5.13	0.547	2.76	1.43	0.16
4-Jun-01	6.9	6.6	30.77	30.79	2.57	0.804	3.39	2.01	0.15
12-Jun-01	9.0	8.1	30.82	30.93	2.71	0.818	2.76	2.01	0.18
19-Jun-01	10.4	7.4	30.74	31.10	1.69	0.960	1.21	1.78	0.10
26-Jun-01	11.9	8.5	30.49	31.01					
3-Jul-01	9.5	8.1	31.30	31.37	2.82	0.824	2.80	2.71	0.22
10-Jul-01	10.9	9.6	31.26	31.46	3.04	0.728	2.24	3.44	0.24
17-Jul-01	12.0	10.2	31.31	31.33	3.00	0.610	1.31	2.08	0.17
24-Jul-01	13.2	10.4	31.48	31.54	3.94	0.664	2.00	3.15	0.19
31-Jul-01	11.7	10.6	31.68	31.70	4.48	0.662	2.04	3.35	0.20
7-Aug-01	14.0	12.1	31.62	31.70	5.90	0.855	2.62	5.19	0.31
14-Aug-01	14.4	11.7	31.68	31.77	5.90	0.885	3.09	4.05	0.36
21-Aug-01	12.7	12.1	31.87	31.88	4.30	0.645	2.01	1.80	0.18
28-Aug-01	14.2	11.6	31.96	32.11	6.20	0.924	3.43	4.05	0.24
4-Sep-01	13.0	11.8	32.07	32.14	6.45	0.954	4.27	3.43	0.28
13-Sep-01	13.3	12.3	32.20	32.20	5.52	1.044	4.52	3.73	0.29
18-Sep-01	12.5	12.0	32.27	32.28	4.52	0.948	4.24	3.48	0.30
24-Sep-01	13.0	12.0	32.25	32.31	4.85	1.235	4.38	4.05	0.31
2-Oct-01	13.2				4.78	1.100	4.41	4.46	0.40
15-Oct-01	11.9	11.7	32.38	32.37	6.33	1.082	5.86	3.28	0.36
23-Oct-01	11.3	11.0	32.36	32.39	7.80	1.124	7.30	3.66	0.45
29-Oct-01	10.8	10.7	32.41	32.41	7.70	1.108	7.56	3.27	0.48
13-Nov-01	8.9	8.9	32.52	32.51	8.72	1.131	9.14	3.36	0.45
11-Dec-01	8.0	7.6	32.61	32.60	9.89	1.083	9.84	2.19	0.35
23-Jan-02	4.1	3.9	32.48	32.48	9.14	1.050	9.25	1.48	0.15
12-Feb-02	1.9	2.7	32.35	32.35	7.68	0.967	8.61	0.57	0.12
12-Mar-02	2.8	3.2		31.85	8.36	0.904	8.17	2.02	0.19
16-Apr-02	4.6	4.5	29.64	30.80	10.59	0.902	8.56	1.88	0.28
16-May-02	6.2	5.7	30.79	30.81	7.94	0.890	7.53	1.66	0.23
21-May-02	7.2	6.0	31.01	31.34	7.96	0.882	7.31	1.95	0.25
28-May-02	7.0	6.6	31.54	31.58	5.53	0.802	6.26	1.31	0.22
4-Jun-02	8.0	6.5	31.36	31.73	4.36	0.880	4.53	1.70	0.24
11-Jun-02	8.1	7.7	31.17	31.39	2.06	0.573	1.60	0.76	0.14
18-Jun-02	9.0	8.4	31.06	31.18	1.00	0.885	1.05	1.34	0.13
25-Jun-02	9.5	8.7	31.68	31.74	2.83	0.678	3.72	1.57	0.19
2-Jul-02	11.0	9.7	31.69	31.76	1.39	0.573	2.04	2.06	0.21
9-Jul-02	11.2				1.51	0.512	1.54	1.87	0.17
16-Jul-02	12.2	10.7	31.66	31.86	2.73	0.780	3.36	3.04	0.25
23-Jul-02	12.5	10.7	31.56	31.71	3.42	0.811	3.69	4.21	0.24
30-Jul-02	14.0				2.86	0.745	2.33	3.55	0.23
13-Aug-02	13.1	11.8	32.04	32.13	3.30	0.810	4.28	1.58	0.32
20-Aug-02	13.5	12.7	32.19	32.17	0.83	0.680	1.56	1.74	0.20
27-Aug-02	14.5				1.56	0.774	2.26	3.78	0.26

Date	Temp. Surface	Temp. bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrate Surface	Ammonia Surface	Nitrite Surface
Station #3 (continued)									
3-Sep-02	14.5	13.8	32.23	32.24	2.83	0.813	1.79	2.24	0.22
10-Sep-02	14.0	13.3	32.39	32.42		5.95	0.994	5.42	3.51
17-Sep-02	13.2				5.93	1.052	5.92	2.34	0.58
24-Sep-02	13.5	13.2	32.52	32.52	5.80	1.011	6.70	2.54	0.60
9-Oct-02	12.1	12.4	32.63	32.64	4.89	0.942	6.48	1.97	0.56
22-Oct-02	11.2	11.3	32.70	32.71	5.54	0.968	7.20	1.81	0.33
5-Nov-02	9.2	9.7	32.93	32.92	8.27		8.21	3.49	0.36
12-Nov-02	9.6	9.6	32.40	32.84	8.49		10.25	1.40	0.23
5-Dec-02	5.8	6.9	32.47	32.60					
Station #15									
9-Jan-01	4.5	4.3	31.94	31.94	7.26	0.970	8.07	1.31	0.35
13-Feb-01	2.5	2.2	32.03	32.02	7.67	1.029	8.45	1.59	0.34
20-Mar-01	3.1				7.37	0.915	7.46	1.23	0.15
1-May-01	5.0	3.9	30.46	30.92	5.67	0.438	0.97	0.83	0.07
7-May-01	7.6	4.5	26.85	30.06	8.55	0.270	0.72	2.08	0.07
15-May-01	6.0	4.5	28.99	30.07	7.78	0.653	3.26	2.44	0.13
22-May-01	7.5	4.7	29.51	30.66	5.56	0.520	1.32	0.86	0.12
4-Jun-01	6.7	6.3	30.42	30.87	2.09	0.734	1.59	2.41	0.13
12-Jun-01	10.2	6.9	30.92	31.09	0.98	0.571	0.38	0.99	0.12
19-Jun-01	11.5	7.4	30.33	31.07	1.05	0.516	0.04	1.08	0.05
26-Jun-01	10.8	7.5	30.79	31.24					
3-Jul-01	9.3	7.8	31.33	30.91	1.82	0.672	1.86	2.18	0.20
10-Jul-01	10.4	9.2	31.30	31.35	0.92	0.513	0.54	1.16	0.11
17-Jul-01	12.1	9.3	31.17	31.45	1.90	0.412	0.05	0.63	0.04
24-Jul-01	12.5	9.3	31.38	31.61	2.98	0.572	1.04	3.50	0.14
31-Jul-01	11.3	10.1	31.67	31.72	4.44	0.663	2.61	1.57	0.23
7-Aug-01	13.6	10.3	31.63	31.83	4.10	0.629	1.36	3.34	0.19
14-Aug-01	14.1	11.0	31.70	31.84	3.36	0.655	1.19	2.75	0.14
21-Aug-01	12.6	11.5	31.85	31.93	4.32	0.642	1.39	1.03	0.17
28-Aug-01	14.2	11.4	32.07	32.09	5.45	0.704	3.24	2.18	0.21
4-Sep-01	13.3	11.5	32.02	32.16	4.78	0.770	2.82	3.72	0.22
13-Sep-01	14.0	12.2	32.20	32.21	0.76	0.636	0.12	0.79	0.07
18-Sep-01	13.2	11.8	32.25	32.28	2.46	0.816	2.10	2.02	0.29
24-Sep-01	13.3	11.8	32.28	32.31	2.18	1.211	0.67	0.96	0.14
2-Oct-01	13.3				1.93	0.740	1.00	1.25	0.20
15-Oct-01	12.2	11.5	32.33	32.42	6.12	1.010	5.68	2.33	0.41
23-Oct-01	11.2	11.0	32.43	32.45	7.68	1.030	7.46	1.70	0.42
29-Oct-01	10.9	10.5	32.44	32.44	7.24	1.032	7.40	1.36	0.47
13-Nov-01	8.1	9.0	32.60	32.60	8.36	1.031	8.96	1.63	0.39
11-Dec-01	7.8	7.7	32.67	32.67	9.71	1.042	10.04	1.76	0.31
12-Feb-02	1.2	2.4	32.31	32.33	7.10	0.920	7.87	0.54	0.13
12-Mar-02	2.8	3.3	31.93	32.05	8.72	0.974	8.66	1.02	0.16
16-Apr-02	4.3	4.2	28.79	29.77	11.93	0.918	9.57	1.61	0.23
16-May-02	5.4	5.4	30.11	30.95	8.83	0.846	8.01	1.28	0.20
21-May-02	7.1	6.0	31.17	31.34	7.07	0.759	6.99	1.08	0.22
28-May-02	8.6	6.1	31.55	31.62	5.54	0.680	4.19	1.06	0.22
4-Jun-02	7.4	6.4	31.56	31.72	1.99	0.648	0.59	0.73	0.11
11-Jun-02	8.1	7.2	31.25	31.47	1.65	0.554	1.32	1.11	0.12
18-Jun-02	9.2	7.8	30.96	31.30	1.35	0.989	0.37	1.37	0.11

Date	Temp. Surface	Temp. bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrate Surface	Ammonia Surface	Nitrite Surface
Station #15 (continued)									
25-Jun-02	9.3	7.8	31.65	31.84	2.54	0.584	2.78	1.02	0.18
2-Jul-02	11.5	9.2	31.64	31.83	0.30	0.295	0.20	0.58	0.07
9-Jul-02	11.9				0.63	0.390	0.35	1.52	0.12
16-Jul-02	11.3	10.2	31.77	31.89	0.85	0.462	0.81	0.95	0.15
23-Jul-02	14.2	11.3	31.12	31.36	3.64	0.802	1.66	1.64	0.19
30-Jul-02	14.2				2.57	0.718	1.77	2.96	0.19
13-Aug-02	15.5	11.6	32.43	32.22	0.44	0.468	0.17	1.28	0.11
20-Aug-02	14.8	13.2	32.11	32.13	0.52	0.431	0.08	0.75	0.09
27-Aug-02	14.0				0.92	0.514	1.17	0.87	0.18
3-Sep-02	14.5	13.5	32.22	32.25	0.84	0.461	0.07	0.50	0.06
10-Sep-02	14.1	13.2	32.41	32.43					
17-Sep-02	13.5	12.6	32.45	32.54	4.04	0.719	4.09	1.22	0.33
24-Sep-02	13.3	12.8	32.53	32.63					
9-Oct-02	12.2	12.3	32.66	32.65	7.02	0.986	6.29	2.49	0.53
12-Nov-02	10.0	9.6	32.66	32.93	7.57	0.757	7.95	2.16	0.33
5-Dec-02	6.3	6.9		32.71	8.33		10.81	1.21	0.24
Station #17									
9-Jan-01	3.1	3.2	31.23	31.62	9.54	1.084	8.67	3.41	0.41
13-Feb-01	1.3	2.0	31.29	31.76	9.37	1.018	8.65	2.18	0.38
20-Mar-01	1.9				7.19	1.021	6.68	2.08	0.31
1-May-01	5.3	4.0	28.50	30.33	8.82	0.543	1.38	3.17	0.08
7-May-01	6.0	5.1	28.14	29.65	7.94	0.566	2.04	3.19	0.13
15-May-01	6.5	5.7	28.46	29.97	6.02	0.454	2.00	2.00	0.10
22-May-01	7.8	6.4	28.83	29.83	9.20	0.621	2.71	1.78	0.16
30-May-01	7.9	6.4	29.79	30.62	6.79	0.644	3.09	2.74	0.15
4-Jun-01	8.1	6.9	29.95	30.48	6.52	1.130	3.46	2.96	0.19
12-Jun-01	9.2	7.3	29.99	30.69	3.66	0.779	2.70	2.46	0.18
19-Jun-01	11.8	9.1	29.66	30.28	2.32	0.692	1.47	2.26	0.17
26-Jun-01	10.6	9.5	30.15	30.56					
3-Jul-01	11.2				3.58	0.781	3.42	3.27	0.25
10-Jul-01	11.2	10.4	30.57	30.80	3.54	0.710	2.90	2.88	0.27
17-Jul-01	13.0	11.2	30.07	30.82	2.83	0.604	0.31	0.97	0.08
24-Jul-01	12.8	12.0	30.64	30.68	2.42	0.541	1.01	6.61	0.21
30-Jul-01	12.5	11.5	30.97	31.35	4.43	0.685	2.22	5.32	0.20
7-Aug-01	13.5	12.9	31.06	31.27	4.52	0.666	1.19	4.03	0.13
14-Aug-01	14.0	12.2	31.25	31.67	4.77	0.730	1.56	3.87	0.15
21-Aug-01	14.0	13.4	30.96	31.18	4.96	0.840	1.87	2.30	0.21
28-Aug-01	13.6	12.5	31.29	31.76	5.58	0.790	2.11	1.76	0.19
4-Sep-01	13.4	13.3	31.37	31.38	6.28	0.776	2.49	2.05	0.21
13-Sep-01	13.8	12.9	31.62	31.99	5.53	0.754	2.31	3.48	0.17
18-Sep-01	13.3	13.0	31.58	31.71	8.15	0.975	3.90	3.13	0.28
24-Sep-01	13.1	12.3	31.86	32.17	11.34		4.81	3.76	0.34
2-Oct-01	12.3				10.00	1.172	5.82	3.29	0.39
15-Oct-01	12.2	12.0	31.65	31.97					
23-Oct-01	10.5	11.2	31.28	32.18	8.00	0.970	6.41	3.05	0.41
29-Oct-01	10.8	10.7	31.54	31.98	9.93	1.112	8.02	2.57	0.52
13-Nov-01	8.6	8.7	31.89	31.90	9.45	1.078	8.68	2.34	0.50
11-Dec-01	7.0	7.3	32.11	32.10	10.81	1.109	10.59	1.23	0.47
23-Jan-02	3.2	3.1	31.62	31.68	11.44	1.122	10.59	2.02	0.21

Date	Temp. Surface	Temp. bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrate Surface	Ammonia Surface	Nitrite Surface
Station #17 (continued)									
12-Feb-02	0.8	1.5	31.85	31.99	8.80	0.953	8.34	1.13	0.14
12-Mar-02	1.3	2.9	28.55	30.65	14.37	0.933	8.91	2.08	0.16
16-Apr-02	5.1	4.4	24.67	30.41	13.11	0.659	5.94	1.95	0.20
16-May-02	6.3	6.1	28.27	30.63	8.94	0.819	6.80	1.65	0.24
21-May-02	7.1	6.2	30.34	30.92	6.57	0.788	5.82	1.66	0.20
28-May-02	8.5	7.8	29.81	30.19	6.15	0.719	5.33	1.99	0.21
4-Jun-02	8.1	7.5	31.31	31.41	4.82	0.752	5.36	1.89	0.25
11-Jun-02	9.3	8.9	30.41	30.62	2.98	0.803	3.93	1.27	0.21
18-Jun-02	9.3	8.5	31.04	31.39	1.07	0.692	1.95	2.37	0.16
25-Jun-02	10.5	10.6	30.45	30.60	1.03	0.822	1.43	1.06	0.14
2-Jul-02	12.0	10.0	30.88	31.55	0.85	0.335	1.51	2.27	0.14
9-Jul-02	14.5				1.14	0.320	0.35	2.67	0.11
16-Jul-02	12.3	11.3	30.58	31.36	2.97	0.587	1.79	1.35	0.17
23-Jul-02	13.5	11.9	30.34	31.33	4.86	0.778	3.47	2.57	0.22
13-Aug-02	15.0	13.7	30.82	31.18	7.51	0.930	4.75	2.07	0.38
20-Aug-02	15.0	14.3	31.01	31.44	6.05	0.811	3.56	1.50	0.34
27-Aug-02	14.3				5.12	0.848	3.49	1.56	0.31
3-Sep-02	14.6	13.6	31.55	31.98	4.83	0.766	2.11	1.58	0.21
10-Sep-02	14.8	14.0	31.78	31.86					
17-Sep-02	13.8	13.4	31.34	31.85	7.06	0.875	4.65	2.41	0.37
24-Sep-02	14.5	13.5	30.81	32.01	8.42	0.992	5.86	2.33	0.57
9-Oct-02	12.2	12.7		31.68	6.54	1.075	7.13	1.48	0.87
22-Oct-02	10.5	11.0	30.83	31.64	3.03	0.892	4.27	1.71	0.63
5-Nov-02	9.0	9.2		32.42	4.56	0.977	5.82	1.90	0.38
12-Nov-02	9.0	9.2		32.51	5.71	0.531	6.61	2.09	0.29
5-Dec-02	4.9	6.1	29.95	31.64	11.21		9.64	1.58	0.24
Station #25									
9-Jan-01	3.8	3.8	31.96	31.96	7.78	1.028	8.28	1.41	0.30
13-Feb-01	3.0	2.8	32.01	32.02	7.44	0.986	8.25	0.75	0.33
20-Mar-01	3.6				4.58	0.699	4.89	1.67	0.20
1-May-01	5.9	3.7	28.76	30.92	5.05	0.386	0.26	2.27	0.06
7-May-01	7.7	4.3	29.27	30.71	5.56	0.374	0.35	1.78	0.08
15-May-01	5.9	4.6	29.93	30.75	7.90	0.671	3.40	1.38	0.19
22-May-01	9.1	5.3	29.73	29.47	6.26	0.454	0.32	0.83	0.10
30-May-01	10.9	5.9	29.95	30.77	2.12	0.297	0.00	0.84	0.05
4-Jun-01	6.9	6.3	30.81	30.49	3.83	1.014	3.32	2.48	0.20
12-Jun-01	9.6	6.9	30.12	30.99	0.99	0.501	0.48	1.44	0.10
19-Jun-01	10.7	7.6	29.01	30.97	0.63	0.514	0.35	0.93	0.09
26-Jun-01	11.9	8.3	30.50	31.06					
3-Jul-01	11.0	8.7	30.94	31.00	1.23	0.592	1.15	2.09	0.17
10-Jul-01	11.3	9.1	30.97	31.36	0.02	0.542	0.15	1.19	0.08
17-Jul-01	12.9	9.6	31.00	31.40	1.36	0.396	0.06	1.46	0.05
24-Jul-01	12.2	10.3	31.23	31.52	2.95	0.496	0.82	1.57	0.14
31-Jul-01	13.6	10.5	31.22	31.72	5.11	0.785	3.16	2.56	0.26
7-Aug-01	13.7	11.2	31.50	31.79	2.86	0.517	0.52	3.20	0.09
14-Aug-01	14.5	11.6	31.49	31.81	2.10	0.486	0.46	2.85	0.09
21-Aug-01	12.8	11.7	31.78	31.94	4.36	0.651	1.89	2.06	0.15
28-Aug-01	13.6	11.7	31.81	32.07	3.12	0.589	0.88	1.35	0.11
4-Sep-01	14.1	12.0	31.83	32.10	2.72	0.690	0.39	3.02	0.23

Date	Temp. Surface	Temp. bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphat e Surface	Nitrate Surface	Ammoni a Surface	Nitrite Surface
Station #25 (continued)									
13-Sep-01	14.3	12.1	32.06	32.22	4.72	0.738	1.06	1.72	0.16
18-Sep-01	15.1	12.0	32.21	32.29	5.76	0.778	2.28	1.56	0.23
24-Sep-01	13.8	11.9	32.15	32.32	8.05	1.293	3.50	2.22	0.32
2-Oct-01	13.1				4.85	0.860	5.32	1.55	0.34
15-Oct-01	12.0	11.5	32.29	32.35	6.98	1.026	5.78	1.50	0.33
23-Oct-01	11.3	11.1	32.20	32.35	7.86	1.030	6.60	1.57	0.45
29-Oct-01	10.9	10.8	32.26	32.37	8.54	1.068	7.28	1.70	0.51
13-Nov-01			9.3	32.40	32.51	7.99	1.002	8.10	2.43
11-Dec-01	7.3	7.9	32.35	32.62	9.83	1.000	9.91	1.32	0.50
23-Jan-02	4.3	4.0	32.49	32.50	10.55	1.132	10.32	1.27	0.18
12-Feb-02	1.3	2.4	32.27	31.78	9.67	1.064	9.65	0.82	0.15
16-Apr-02	5.8	4.2	29.06	31.13	7.69	0.610	5.14	0.89	0.14
16-May-02	6.5	5.8	30.40	31.16	1.57	0.365	0.72	1.07	0.12
21-May-02	9.2	6.0	30.44	31.28	4.20	0.308	0.35	1.44	0.08
28-May-02	7.3	6.7	31.10	31.47	1.95	0.537	2.57	1.34	0.15
4-Jun-02	9.5	7.1	31.08	31.58	0.50	0.668	0.38	0.57	0.08
11-Jun-02	8.6	7.6	31.56	30.80	2.15	0.734	3.43	1.70	0.17
18-Jun-02	9.3	8.2	31.28	31.44	1.20	0.921	1.61	1.98	0.18
25-Jun-02	10.3	8.8	31.28	31.63	1.22	0.501	1.59	1.02	0.14
2-Jul-02	11.8	9.4	31.24	31.80	0.31	0.328	0.32	0.78	0.08
9-Jul-02	14.1				0.27	0.281	0.20	0.96	0.11
16-Jul-02	13.0	10.4	31.12	31.82	0.96	0.351	0.38	0.61	0.10
23-Jul-02	14.0	10.9	31.34	31.74	2.78	0.582	1.97	1.36	0.18
13-Aug-02	14.0	12.0	31.84	32.02	4.88	0.754	3.79	1.55	0.32
20-Aug-02	16.2	12.5	31.58	32.15	3.03	0.396	0.08	1.07	0.08
27-Aug-02	15.1				1.85	0.541	0.62	1.25	0.12
3-Sep-02	15.2	13.0	31.79	32.24	1.24	0.463	0.04	0.52	0.06
10-Sep-02	14.3	13.1	32.30	32.38					
17-Sep-02	14.3				6.25	0.775	3.40	1.60	0.32
24-Sep-02	13.8	13.0	32.24	32.51	6.43	0.797	5.17	1.43	0.53
9-Oct-02	12.5	12.6	32.40	32.59	2.85	0.774	3.33	1.27	0.50
22-Oct-02	11.2	11.5	32.67	32.73	3.31	0.816	4.53	0.67	0.40
5-Nov-02	9.5	9.9	32.87	32.88	5.14	0.933	6.99	1.64	0.33
12-Nov-02	9.5	9.6	32.41	32.84	5.90		7.49	1.60	0.32
5-Dec-02	5.9	7.3	32.39	32.51	8.75		10.62	1.28	0.21

Date	Depth	Temp.	Salinity	Silicate	Phosphate	Nitrate	Ammonia	Nitrite
Station #16 (continued)								
29-Oct-01	0 m	10.9	32.48	6.59	1.065	7.32	0.66	0.37
29-Oct-01	10 m	10.7	32.48	6.31	0.997	7.24	0.08	0.35
29-Oct-01	25 m	10.7	32.48	6.30	0.994	7.27	0.22	0.34
29-Oct-01	50 m	10.4	32.57	7.91	1.011	8.01	0.65	0.35
13-Nov-01	0 m	9.1	32.58	8.26	1.055	9.36	1.84	0.39
13-Nov-01	10 m	9.4	32.59					
13-Nov-01	25 m	9.4	32.58					
13-Nov-01	50 m	9.6	32.91					
11-Dec-01	0 m	7.8	32.75	9.77	1.033	10.54	1.08	0.31
11-Dec-01	10 m	8.3	32.75	9.67	1.062	10.59	0.37	0.31
11-Dec-01	25 m	8.3	32.77	9.06	0.978	10.03	0.94	0.30
11-Dec-01	50 m	8.4	32.80	9.47	1.037	10.31	0.47	0.26
12-Feb-02	0 m	2.3	32.44	8.65	1.037	8.91	0.91	0.15
12-Feb-02	10 m	3.5	32.44	7.16	0.936	7.57	0.87	0.12
12-Feb-02	25 m	3.4	32.44	6.76	0.888	7.09	1.12	0.16
12-Feb-02	50 m	3.5	32.44	8.82	1.029	9.04	1.43	0.15
16-Apr-02	0 m	4.1	30.91	9.63	0.937	8.93	0.59	0.19
16-Apr-02	10 m	4.2	31.34	9.03	0.952	8.59	0.45	0.19
16-Apr-02	25 m	4.1	31.56	8.52	0.866	7.99	1.33	0.23
16-Apr-02	50 m	3.8	31.79	8.52	0.944	7.91	0.78	0.22
16-May-02	0 m	5.3	31.72	8.45	0.879	8.47	1.27	0.21
16-May-02	10 m	5.4	30.95	8.21	0.831	8.30	0.57	0.20
16-May-02	25 m	5.3	31.45	7.70	0.881	8.46	0.59	0.21
16-May-02	50 m	5.3	31.80	7.96	0.919	8.96	0.72	0.21
21-May-02	0 m	6.9	31.14	6.76	0.766	6.67	1.42	0.21
21-May-02	10 m	5.7	31.37	7.33	0.857	8.07	0.87	0.21
21-May-02	25 m	5.4	31.83	7.75	0.923	8.70	0.76	0.21
21-May-02	50 m	5.3	32.14	8.06	0.977	9.67	0.52	0.19
28-May-02	0 m	7.5	31.61	2.20	0.427	0.65	2.04	0.11
28-May-02	10 m	6.4	31.66	3.93	0.596	3.58	0.31	0.17
28-May-02	25 m	5.7	31.95	7.06	0.859	8.23	0.94	0.23
28-May-02	50 m	5.7	31.97	7.25	0.878	8.50	1.00	0.22
4-Jun-02	0 m	7.2	32.10	2.06	0.868	0.57	0.59	0.10
4-Jun-02	10 m	6.8	31.69	2.64	0.805	2.50	0.39	0.15
4-Jun-02	25 m	6.0	31.83	6.72	1.051	7.87	0.66	0.22
4-Jun-02	50 m	6.1	32.17	6.97	1.100	9.18	0.69	0.23
11-Jun-02	0 m	7.5	31.31	1.34	0.584	0.52	0.87	0.08
11-Jun-02	10 m	7.3	31.59	2.28	0.731	2.98	0.48	0.15
11-Jun-02	25 m	6.6	31.86	4.46	0.931	6.22	0.77	0.21
11-Jun-02	50 m	6.3	32.20	6.30	1.003	8.12	1.45	0.22
18-Jun-02	0 m	9.1	31.11	3.62	0.768	4.82	1.92	0.23
18-Jun-02	10 m	7.9	31.28	3.69	0.795	5.30	0.95	0.22
18-Jun-02	25 m	7.2	31.78	3.80	0.902	5.75	1.20	0.22
18-Jun-02	50 m	6.8	32.24	6.02	1.060	8.36	1.05	0.23
25-Jun-02	0 m	9.1	31.75	3.25	1.026	4.59	1.53	0.21
25-Jun-02	10 m	8.3	31.87	3.87	1.123	5.46	0.98	0.22
25-Jun-02	25 m	8.0	31.94	4.27	0.827	5.99	1.13	0.21
25-Jun-02	50 m	7.2	32.33	6.62	1.009	9.27	0.91	0.22
2-Jul-02	0 m	9.8	31.89	1.89	0.583	3.36	1.04	0.22
2-Jul-02	10 m	9.0	31.91	1.93	0.591	3.53	0.63	0.18
2-Jul-02	25 m	8.1	32.01	4.50	0.818	6.92	1.22	0.23
2-Jul-02	50 m	7.6	32.34	7.65	1.008	9.28	0.99	0.20
9-Jul-02	0 m	11.5		0.14	0.264	0.09	0.86	0.07
9-Jul-02	10 m			1.02	0.463	1.97	0.70	0.16

Date	Depth	Temp.	Salinity	Silicate	Phosphate	Nitrate	Ammonia	Nitrite
Station #16 (continued)								
9-Jul-02	25 m			2.41	0.660	4.49	1.23	0.21
9-Jul-02	50 m			4.71	0.803	6.79	2.24	0.23
16-Jul-02	0 m	10.1	32.01	2.55	0.611	3.80	1.41	0.20
16-Jul-02	10 m	9.3	32.12	4.37	0.794	6.11	1.29	0.21
16-Jul-02	25 m	9.0	32.17	4.29	0.766	5.95	1.52	0.21
16-Jul-02	50 m	8.7	32.31	5.74	0.882	6.63	1.26	0.20
23-Jul-02	0 m	12.0	31.42	2.64	0.617	3.20	1.64	0.21
23-Jul-02	10 m	10.9	31.70	2.46	0.601	3.05	0.61	0.18
23-Jul-02	25 m	10.1	32.03	4.84	0.859	6.09	1.20	0.24
23-Jul-02	50 m	9.0	32.38	5.91	0.936	7.68	0.99	0.20
30-Jul-02	0 m	13.2		2.30	0.566	2.24	1.52	0.16
30-Jul-02	10 m			3.11	0.680	3.49	0.82	0.23
30-Jul-02	25 m			3.42	0.714	4.19	0.85	0.24
30-Jul-02	50 m			6.15	0.946	7.29	1.14	0.24
13-Aug-02	0 m	13.0	32.11	2.32	0.610	2.13	0.71	0.21
13-Aug-02	10 m	11.4	32.20	3.69	0.695	4.60	0.56	0.26
13-Aug-02	25 m	11.0	32.28	4.90	0.784	6.00	0.44	0.27
13-Aug-02	50 m			6.17	0.845	7.29	0.51	0.28
20-Aug-02	0 m	14.3	32.08	0.29	0.273	0.20	0.46	0.08
20-Aug-02	10 m	12.3	32.19	1.88	0.707	3.63	0.51	0.30
20-Aug-02	25 m	11.2	32.35	5.45	0.941	7.26	0.92	0.34
20-Aug-02	50 m	10.1	32.64	7.76	1.003	8.85	0.66	0.29
27-Aug-02	0 m	13.8		1.42	0.488	1.00	1.07	0.16
27-Aug-02	10 m			2.33	0.629	3.11	0.87	0.24
27-Aug-02	25 m			3.67	0.712	4.74	1.20	0.27
27-Aug-02	50 m			7.38	1.009	8.61	1.04	0.28
3-Sep-02	0 m	14.3	32.29	0.80	0.445	0.05	1.34	0.06
3-Sep-02	10 m	13.0	32.31	2.55	0.570	1.91	0.77	0.19
3-Sep-02	25 m	11.7	32.50	6.20	0.899	6.79	1.23	0.32
3-Sep-02	50 m	10.5	32.87	8.56	0.993	9.54	0.75	0.24
10-Sep-02	0 m	13.8	32.48					
10-Sep-02	10 m	12.6	32.50					
10-Sep-02	25 m	12.3	32.58	5.69	0.868	6.25	0.75	0.31
10-Sep-02	50 m	11.4	32.79					
17-Sep-02	0 m	13.2	32.57	5.63	0.703	6.19	0.65	0.39
17-Sep-02	10 m	12.4	32.61	5.15	0.752	5.89	0.87	0.38
17-Sep-02	25 m	12.3	32.64	6.07	0.914	6.75	0.75	0.36
17-Sep-02	50 m	11.5	32.82					
24-Sep-02	0 m	13.6	32.62	5.16	0.781	5.72	1.07	0.42
24-Sep-02	10 m	12.7	32.66	5.49	0.819	6.33	0.39	0.40
24-Sep-02	25 m	12.3	32.74	6.68	0.935	7.34	0.50	0.40
24-Sep-02	50 m	11.8	32.87					
9-Oct-02	0 m	12.1	32.86	7.30	0.960	8.00	4.01	0.43
9-Oct-02	10 m	12.2	32.86	7.45	0.935	8.11	0.32	0.42
9-Oct-02	25 m	12.1	32.92	7.46	0.919	8.33	0.35	0.41
9-Oct-02	50 m	11.9	33.03	8.58	1.069	9.50	0.38	0.32
12-Nov-02	0 m	9.6	32.97	6.60	0.810	9.03	1.24	0.31
12-Nov-02	10 m	9.8	32.97	6.64	0.939	8.90	1.08	0.29
12-Nov-02	25 m	9.8	32.99	6.58	0.877	8.79	1.03	0.28
12-Nov-02	50 m	9.8	33.00	6.07	0.784	8.05	1.59	0.24
5-Dec-02	0 m	6.8	32.76	7.63		10.47	0.82	0.19
5-Dec-02	10 m	8.0	32.76	8.71		9.91	0.55	0.17
5-Dec-02	25 m	8.1	32.79	7.76		10.26	0.33	0.17
5-Dec-02	50 m	8.2	32.83	7.67		10.19	0.47	0.17