

Plankton Monitoring in the Western Isles Region of the Bay of Fundy during 1999-2000

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**Plankton Monitoring in the Western Isles Region of the
Bay of Fundy during 1999-2000**

by

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ABSTRACT

Martin, J.L., LeGresley, M.M., and Strain, P.M. 2006. Plankton monitoring in the Western Isles region of the Bay of Fundy during 1999-2000. Can. Tech. Rep. Fish. Aquat. Sci. 2629: iv + 88 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 1987-98 published previously. Samples were collected for phytoplankton distribution and abundance as well as plant nutrients (ammonia, nitrate, phosphate and silicate) at five locations – Brandy Cove, Lime Kiln Bay, Deadmans Harbour, the Wolves Islands and mid-Passamaquoddy Bay. 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.

Dominant species ($>10^3$ cells·L $^{-1}$) during the 2-yr period were *Chaetoceros socialis*, *Chaetoceros* spp., *Dactyliosolen fragilissimus*, *Ditylum brightwellii*, *Eucampia zodiacus*, *Guinardia delicatula*, *Leptocylindrus danicus*, *Pseudo-nitzschia delicatissima* group, *Skeletonema costatum* and *Mesodinium rubrum*. *M. rubrum* and the *P. delicatissima* group have been observed at concentrations $>10,000$ cells·L $^{-1}$ during all of the past 14 yr. *Alexandrium fundyense* (the organism responsible for producing paralytic shellfish toxins) concentrations exceeded 10^4 cells·L $^{-1}$ in all but 2 yr during the 1988-96 period, cell densities were 8.2 and 6.7×10^3 cells·L $^{-1}$ in 1997 and 1998, respectively, and the highest concentrations observed during 1999 were 3.2×10^3 cells·L $^{-1}$ in late July, while the highest densities recorded for 2000 were 2.5×10^3 cells·L $^{-1}$.

During the 2 yr, the lowest temperature (1.0°C) was measured at Brandy Cove while the highest temperature was recorded at the mid-Passamaquoddy site (17.0°C), both occurring in 1999. Lowest salinities (21.19 psu) were measured at Brandy Cove. Nitrate values ranged from 0.09-12.10 µM; ammonia from 0.04-8.10 µM; nitrite from 0.05-0.68 µM; phosphate levels ranged from 0.29-1.26 µM and silicate from 0.30-19.7 µM.

RÉSUMÉ

Martin, J.L., LeGresley, M.M., and Strain, P.M. 2006. Monitoring in the Western Isles region of the Bay of Fundy during 1999-2000. Can. Tech. Rep. Fish. Aquat. Sci. 2629: iv + 88 p.

Un programme de surveillance a été lancé en mai 1987 pour étudier les populations phytoplanctoniques 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 1987-98. Les échantillons d'eau pour l'analyse de phytoplancton et de nutriments (silicates, phosphates, nitrates, nitrite et ammoniac) ont été prélevés à cinq emplacements (Brandy Cove, Lime Kiln, Deadmans Harbour, près des îles Wolves et mi-baie Passamaquoddy). Le phytoplancton a été identifié et dénombré et les autres paramètres tels que la profondeur du secchi, le profil de la température, de la fluorescence et de la salinité en profondeur 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 5m et 15m à Lime Kiln commençant en juin 2000.

Les espèces principales ($>10^3$ cellules·L $^{-1}$) pendant ces deux années étaient *Chaetoceros socialis*, *Chaetoceros* spp., *Dactyliosolen fragilissimus*, *Ditylum brightwellii*, *Eucampia zodiacus*, *Guinardia delicatula*, *Leptocylindrus danicus*, le complexe *Pseudo-nitzschia delicatissima*, *Skeletonema costatum*, *Thalassiosira* spp. et *Mesodinium rubrum*. Le complexe *Pseudo-nitzschia delicatissima* et *M. rubrum* ont été observés pendant les 14 dernières années en concentrations $>10\,000$ cellules·L $^{-1}$. Tandis que l'*Alexandrium fundyense*, l'organisme responsable de l'intoxication paralysante par les mollusques (IPM) atteignait un niveau élevé ($>10^4$ cellules·L $^{-1}$) à chaque année sauf deux pour la période 1988-96, les concentrations maximales en 1997 et 1998 n'étaient que de 8.2×10^3 et de 6.7×10^3 cellules·L $^{-1}$, tandis qu'en 1999 et 2000 les concentrations les plus élevées n'atteignaient que 3.2×10^3 et 2.5×10^3 cellules·L $^{-1}$ respectivement.

Pendant ces deux années, la température minimale (1.0°C) a été observée à Brandy Cove tandis que la température maximale (17.0°C) a été notée à notre station mi-baie Passamaquoddy ces deux extrêmes survenant en 1999. Les salinités minimales (21.19) ont eu lieu à Brandy Cove. La teneur en nitrates variait de 0.09 à 12.1 µM; d'ammoniac de 0.04 à 8.1; de nitrite de 0.05 à 0.068 µM; de phosphate de 0.29 à 1.26 µM et de silicates de 0.30 à 19.7 µM.

INTRODUCTION

A phytoplankton monitoring program was initiated in the Western Isles region 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). Incidences of fish mortalities, especially those held captive in net pens, had also been increasing. 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 since little detailed work had been published since studies by Gran and Braarud (1935); to identify harmful algal species that could potentially cause harm to the aquaculture industry; to provide an early warning to the aquaculture industries by sorting and identifying samples soon after collection; and to determine patterns and trends in phytoplankton populations. Another purpose of the study was to determine whether there were environmental changes, such as changing trends in phytoplankton populations or nutrient loads, as a result of the salmon industry. In addition, it 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 either of the following methods: neurotoxins, gill damage (mechanically or through the production of hemolytic substances) or asphyxiation (oxygen depletion). 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, and heavy mortality can occur within hours. The salmonid mariculture industry in southwest New Brunswick consisted of more than 90 active farms which could, during the sampling period, potentially be impacted by HABs.

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 have 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).

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 that were declared closed to harvesting and unsafe for human consumption 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 located 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). Subsequent studies showed that cod, pollock, flounder and salmon could potentially be affected (White 1981). 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 could be affected by harmful algal blooms in Grand Manan Basin. Suggested modes of action include potentially decreased 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). This report presents results from analyses of phytoplankton, plant nutrients, temperature and salinity during the 2 yr, 1999 and 2000.

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 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 an 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 estuary), 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 was added in mid-Passamaquoddy Bay in 1998 following observations of brick-red patches of water (Fig. 1).

Sampling was conducted during the 2 yr, 1999 and 2000, aboard the research vessel, CCGS PANDALUS III. Weekly samples were collected from May 13 to the end of September in 1999 and from May 12 to the end of October in 2000. Biweekly sampling was conducted in the month of October 1999 and monthly during all other months in 1999 and 2000.

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

Phytoplankton and nutrient samples were collected at the surface by bucket from all four stations, and at depths of 10 m, 25 m, and 50 m with a Niskin bottle at station #16. In late June of 2000, additional depths of 5 m and 15 m were sampled, but are not included in this report. 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 phytoplankton identification and scanning electron microscopy (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 for nitrate+nitrite (subsequently referred to as nitrate), nitrite, ammonia, phosphate and silicate were frozen immediately and later measured using a Technicon Autoanalyzer II as described by Strain and Clement (1996).

Samples and data were recorded according to date, location and depth; as well, 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}) with the $\ddot{\text{U}}\text{termohl}$ technique using a Nikon inverted microscope (Sournia 1978). Further identification was done using either a JEOL JSM-5600 scanning electron microscope (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. fraudulenta*, *P. multiseries*, *P. pungens*, *P. seriata* and *P. subpacifica*. *Alexandrium fundyense* cells included all its life cycle stages, and when different stages in its life cycle were observed, they were recorded separately. 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.

RESULTS

There were a total of 29 and 30 sample days in 1999 and 2000, respectively.

PHYTOPLANKTON

Numbers of samples analyzed for phytoplankton density were 224 in 1999 and 281 in 2000. During the 2 yr, 153 species of phytoplankton and smaller zooplankton were identified. In addition other groups where species were not identified were classed as armoured flagellates, unarmoured dinoflagellates, centrale diatoms, ciliates, copepods, flagellates 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.

1999
<i>Chaetoceros debilis</i>
<i>Chaetoceros socialis</i> *
<i>Chaetoceros</i> spp.
<i>Dactyliosolen fragilissimus</i>
<i>Ditylum brightwellii</i>
<i>Eucampia zodiacus</i> *
<i>Guinardia delicatula</i>
<i>Leptocylindrus danicus</i> *
<i>Mesodinium rubrum</i>
<i>Pseudo-nitzschia delicatissima</i> group
<i>Skeletonema costatum</i>
<i>Thalassiosira gravida</i>
<i>Thalassiosira</i> spp.

2000
Armoured dinoflagellate
<i>Ceratium lineatum</i>
<i>Cerataulina pelagica</i> *
<i>Chaetoceros socialis</i> *
<i>Chaetoceros</i> spp.
<i>Dactyliosolen fragilissimus</i>
<i>Detonula confervacea</i>
<i>Dictyocha speculum</i> *
<i>Ditylum brightwellii</i>
<i>Eucampia zodiacus</i>
<i>Gonyaulax spinifera</i>
<i>Guinardia delicatula</i> *
<i>Helicostomella</i> sp.
<i>Heterocapsa triquetra</i> *
<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 trochoidea</i>
<i>Skeletonema costatum</i> *
<i>Thalassionema nitzschoides</i>
<i>Thalassiosira</i> spp.
Tintinnids
Unarmoured dinoflagellate

* levels greater than 100,000 cells·L⁻¹

Dominant species during the 2 yr were: *Chaetoceros socialis*, *Guinardia delicatula*, *Ditylum brightwellii*, *Eucampia zodiacus*, *Leptocylindrus danicus*, *Pseudo-nitzschia delicatissima* group, *Skeletonema costatum*, and *Mesodinium rubrum*. The three species with concentrations greater than 100,000 cells·L⁻¹ in 1999 were *C. socialis* (3.40×10^5), *E. zodiacus* (1.14×10^5) and *L. danicus* (2.45×10^5). In 2000, there were seven species observed at concentrations greater than 100,000 cells·L⁻¹: *C. socialis* (2.06×10^5), *C. pelagica* (1.15×10^5), *Dictyocha speculum* (1.12×10^5), *G. delicatula* (1.17×10^5), *Heterocapsa triquetra* (1.64×10^5), *S. costatum* (1.95×10^5) and *M. rubrum* (1.04×10^5).

Interestingly, no dinoflagellates were observed at concentrations greater than 10,000 cells·L⁻¹ during 1999. In 2000, there were four different dinoflagellate species (*Ceratium lineatum*, *Gonyaulax spinifera*, *Heterocapsa triquetra*, and *Scrippsiella trochoidea*) observed at levels greater than 10,000 cells·L⁻¹, as well as unidentified armoured and unarmoured dinoflagellates. *A. fundyense*, a dinoflagellate that is responsible for producing paralytic shellfish toxins in the Bay of Fundy, is observed annually, with the intensity of the bloom varying greatly from year to year. During most years, blooms are initiated in late May to early June, with highest numbers observed in mid-July. *A. fundyense* was observed at concentrations greater than 10,000 cells·L⁻¹ during most of the 9 yr from 1988-96 but during 1997 and 1998, the highest concentrations were less than 10,000 cells·L⁻¹. These concentrations persisted through 1999 and 2000, with the highest concentrations observed in 1999 being 3.2×10^3 on July 27 at Deadmans Harbour (Fig. 2) and 2.5×10^3 in 2000 on May 23 in Passamaquoddy Bay. During 2000, the highest values of *A. fundyense* from Deadmans Harbour and the Wolves Islands were observed on June 26 with 1.52×10^3 and 1.84×10^3 cells·L⁻¹, respectively. This is several weeks earlier than the maximum cell density observed during most years. Figure 3 shows concentrations of *A. fundyense* from all four locations since 1988. From 1995-2000,

the maximum concentrations during the bloom decreased.

Additional samples for phytoplankton enumeration were collected during the late summer of 1999 when fish farmers in mid and northern Passamaquoddy Bay observed abnormalities with fish behaviour. *C. socialis* was the dominant organism in the area from Aug. 24 through Oct. 10 and represented up to 93% of the total algal population on Sept. 7. The highest concentration (3.4×10^5) was observed at Brandy Cove on Aug. 24. The *C. socialis* bloom was initially overlapped by *L. danicus* during late August, and later in September it overlapped and was followed by high concentrations of *E. zodiacus*.

Most of the high density counts of *M. rubrum* for both 1999 and 2000 were located within inner Passamaquoddy Bay. These numbers are not reported within this manuscript as that area was not part of this study.

There were new species observed during 1999-2000. In 1999, the three new species to the areas included *Eucampia groenlandica*, *Pleurosigma formosum*, and *Synedra* sp. The 10 new species observed in 2000 included *Amphidinium* cf. *carterae*, *Amphidinium* cf. *sphenoides*, *Gyrodinium* cf. *spirale*, *Chaetoceros radicans*, *Coscinodiscus wailesii*, *Detonula confervacea*, *Tabellaria* spp., *Thalassiothrix* sp., *Litostomatea* sp., and *Polyasterias problematica*.

Although there are a number of *Pseudonitzschia* species in the Bay of Fundy (Kaczmarska et al. 2005), the *Pseudonitzschia* species have been grouped into two groups because of difficulty in differentiating 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. multiseries*, *P. fraudulenta*, *P. subpacifica* and *P. pungens*.

Table 2 shows the number of species observed on each sample day during the 2-yr period, 1999-2000. Highest numbers of organisms observed in any one sample day during the years 1993-2000 were: 62 (1993), 66 (1994), 65 (1995), 64 (1996), 68 (1997), 72 (1998), 76 (1999) and 90 (2000). During 1999 and 2000, there were a number of days that more than 70 species were observed in a given sample and in 2000, there were 90 species detected on Aug. 28. This trend

contributed to the degree of difficulty in analyzing samples and increased analysis time per sample.

SALINITY

Salinity results are in Appendix 2. Lowest values during the 2 yr were measured at Station #17 (21.19 psu) on Apr. 11, 2000. Highest salinity values were measured at #16, the Wolves with 33.39 psu at 50 m on Nov. 9, 1999.

TEMPERATURE

Temperature values measured during 1999-2000 are in Appendix 2. Surface water temperature was highest in the 2 yr at station 25 or mid-Passamaquoddy Bay (17°C) on Sept. 14, 1999 and lowest (1.0°C) at station 17 or Brandy Cove on Feb. 9, 1999.

Water temperatures in Passamaquoddy Bay ranged from 1.0 (Feb. 9) to 17.0°C (Sept. 14) in 1999 at Stations #17 and #25, respectively (Appendix 3). For the three other sample sites, the range was from 1.7 - 15.5°C (Station #15), 1.8 - 14.8°C (Station #3), and 2.2 - 14.5°C (Station #16). Lowest values for the 1993-96 period were -1.5, -1.0 and -0.2 and the lowest value during 1997-98 was 0.4. Therefore, the low temperatures were comparable with those in 1997-98 and warmer than those measured in 1993-96. The highest temperature in the 1993-96 period was 15.0 at Station #17 on Aug. 4, 1994 and the highest temperature recorded in the 1997-98 sampling was 15.5, also at Station #17. Figure 4 shows temperature results from Brandy Cove and Deadmans Harbour from 1988 through 2000.

NUTRIENTS

Nutrient results are shown in Appendix 2. Nitrate values were between 0.09 (Station #15, Aug. 24, 1999) and 12.08 μM (Station #25, Feb. 14, 2000). Nitrite ranged from 0.053 (Station #25, June 27, 2000) to 0.68 μM (Station #3, Dec. 19, 2000). Ammonia values ranged from 0.00 (Station 16 – 25 m, Oct. 10, 2000) to 8.15 (Station #16 – 0 m, June 15, 1999). Phosphate ranged from 0.29 (Station #25, July 25, 2000) to 1.26 μM (Station #16 – 50 m, Aug. 24, 1999). Silicate values ranged from 0.30 (Station #16 – 0 m, July 31, 2000) to 19.66 μM (Station #17, Ap. 11, 2000). Nitrate levels for Lime Kiln Bay and The Wolves are plotted on Fig. 5. Surface ($z = 0$ m) ammonia, phosphate, and silicate, values for selected stations from 1999-2000 are shown on Fig. 6-8.

Table 2. Number of species observed on each day of sampling during 1999-2000.

Date (1999)	Number of species	Date (2000)	Number of species
13/01	37	19/01	47
09/02	34	14/02	32
18/03	32	14/03	34
13/04	40	11/04	44
04/05	47	02/05	55
		11/05	41
18/05	51	16/05	60
25/05	51	23/05	63
01/06	64	30/05	67
08/06	71	06/06	69
15/06	81	13/06	66
21/06	65	20/06	72
29/06	70	27/06	76
06/07	60	04/07	60
13/07	53	11/07	47
20/07	51	17/07	54
27/07	68	25/07	62
03/08	74	31/07	69
10/08	68	08/08	70
17/08	74	15/08	71
24/08	70	22/08	83
31/08	64	28/08	90
18/09	76	05/09	79
07/09	74	13/09	78
21/09	72	18/09	84
28/09	68	25/09	78
05/10	60	03/10	76
18/10	54	10/10	74
		24/10	77
09/11	55	14/11	74
14/12	54	19/12	56

DISCUSSION

PHYTOPLANKTON

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 unsafe levels of toxins in shellfish, resulting in closure of shellfish harvesting areas at some time during the year – generally during the summer months. Shellfish are monitored for toxins at regular intervals by the Canadian Food Inspection Agency. 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 20 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 due to high PSP levels and a need to have a better understanding of toxin depuration 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. Certain regions, such as Passamaquoddy Bay, would be potential sites for mussel culture as the numbers of *A. fundyense* tend to be lower than in the 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 (White 1977). Also, in the mid-1980s, PSP toxins were detected in mackerel and implicated in whale mortalities (Haya et al. 1990). However, results from the monitoring program indicate that the 1990s and the year 2000 have been years with low concentrations of *A. fundyense*. 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 1 million cells·L⁻¹ were observed. A number of factors and methods 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 northern Passamaquoddy Bay during late August of 1999 and 2000. During the 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 exceeded 1 million cells·L⁻¹. During these events, salmon exhibited symptoms of stress associated with low 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 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 2000 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 St. Croix River; therefore, the mid-Passamaquoddy Bay site would be a better location to study northern Passamaquoddy Bay blooms. As a result, this site was added to the regular sampling program. 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 farms increased in 1996-97.

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) (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 sampling. Further culture and SEM work continues on these strains of *Pseudo-nitzschia* to determine which species occurs at a particular time or, if they co-exist, at what proportions they exist in nature. Kaczmarcka et al. (2005) have documented the diversity of the genus in the Bay of Fundy and have characterized seven species (*Pseudo-nitzschia americana*, *Pseudo-nitzschia fraudulenta*, *Pseudo-nitzschia multiseries*, *Pseudo-nitzschia pungens*, and *Pseudo-nitzschia subpacifica*) that are present in the Bay of Fundy.

P. pseudodelicatissima was only observed at densities great enough to produce levels of domoic acid above regulatory levels during 1988 and 1995. During both episodes, the *P. pseudo-delicatissima* from the later August/September blooms (concentrations exceeding 1 million cells·L⁻¹ in 1988 and 1995) were associated with domoic acid production (when shellfish exceeded the regulatory limit for domoic acid). In addition, analyses of large quantities of cells collected in plankton tows from the May/June *P. delicatissima* group blooms did not produce detectable levels of domoic acid. Highest concentrations observed in the 2-yr period of this study were 9.52×10^4 cells·L⁻¹ at the surface at the Wolves Islands (station 16) on Aug. 10, 1999 and during 2000, 1.02×10^4 cells·L⁻¹ were detected at a depth of 10 m at the same location on Sept. 25.

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. During the 1999-2000 blooms of *Chaetoceros socialis*, *Mesodinium rubrum*, *Eucampia zodiacus*

and *Skeletonema costatum*, we were able to continue to work cooperatively with the salmon aquaculture industry to study the blooms. In addition, we routinely work with the Canadian Food Inspection Agency and notify them of increased numbers of *A. fundyense* (PSP) and the *Pseudo-nitzschia delicatissima* group of cells (ASP).

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, 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 the southwest New Brunswick region of the Bay of Fundy, this tends to be 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 waters be monitored, at minimum, on a weekly basis and authorized personnel notified of water discoloration for research and advice on mitigation techniques. From the results of these observations, phytoplankton identification 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.

NUTRIENTS

In general terms, the nutrient data showed typical seasonal cycles for inshore temperate waters. Nitrate, phosphate and silicate were highest in the winter, were depleted by the spring bloom, and were 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.

Maximum winter nitrate concentrations in the surface layer ($z = 0$ m) exhibited a very small range in the region, from 11.3 μM at Brandy Cove to 12.1 μM at Passamaquoddy Bay. The minimum summer

concentrations were also reasonably uniform, varying from 0.09 μM at Deadmans to 0.26 μM at Brandy Cove, but there are some differences in the time periods over which nitrate levels stay very low. Figure 5 compares 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 1999. 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 5 also shows interannual differences in these trends: minimum nitrate concentrations were higher and less persistent in the summer of 2000 than the summer of 1999. Figure 5 also shows time series for nitrate concentrations as a function of depth. At Lime Kiln Bay, for which sub-surface data are available only for the latter part of 2000, there is very little difference in concentrations at the different depths; this uniformity of values is due to the intense tidal mixing of this station. At The Wolves, 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. 6) 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 and Deadmans Harbour (1-2 μM) than elsewhere, with higher values usually found in Lime Kiln Bay and Brandy Cove (not shown). However, even at the Wolves one level of 8.2 μM was found in June, 1999. Because of the susceptibility of ammonia samples to contamination, the possibility that this is an artifact cannot be ruled out. 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 level were $\sim 0.1 \mu\text{M}$; typical winter levels $\sim 0.25 \mu\text{M}$. Higher concentrations (up to 0.67 μM at The Wolves and 0.68 μM at Lime Kiln Bay) were seen at all stations in the fall of 2000 than at any other period during these 2 yr.

The seasonal trends in phosphate (Fig. 7) were similar to those for nitrate. Winter maxima varied from 1.00 μM at Passamaquoddy to 1.20 μM at Lime Kiln Bay; summer minima from 0.29 at Passamaquoddy to 0.43 μM at Brandy Cove. However, summer concentrations of phosphate do not become close to zero as they do for nitrate.

Summer silicate minima (0.30 μM at The Wolves to 1.20 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. 8). Maximum values at Deadmans Harbour, The Wolves and Lime Kiln Bay were 10.8, 11.0 and 11.2 μM , respectively, but reached values of 15.0 and 19.7 μM 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.

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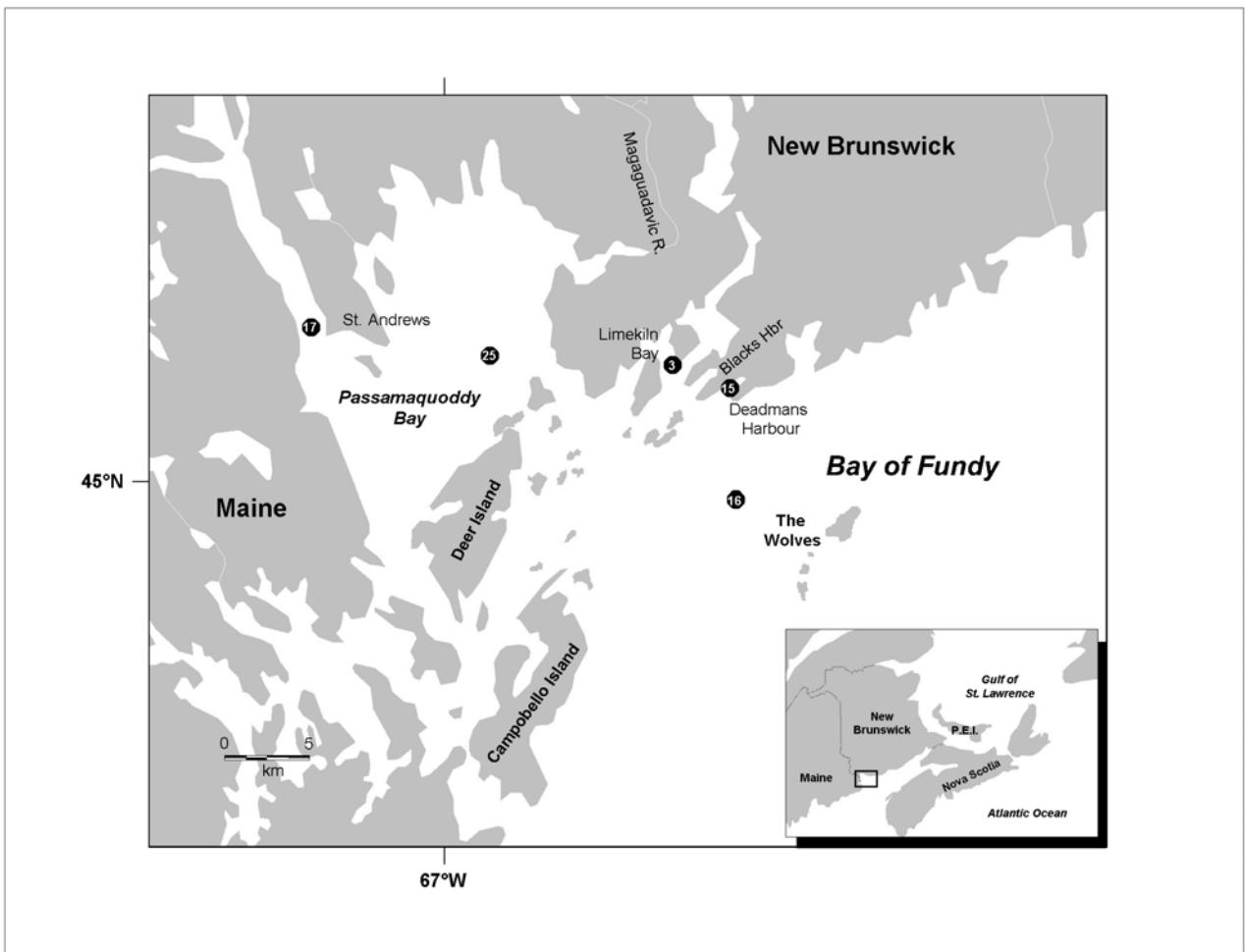


Fig. 1. Map showing sampling stations Brandy Cove (#17), Lime Kiln (#3), Deadmans Harbour (#15), the Wolves Islands (#16) and mid-Passamaquoddy Bay (#25).

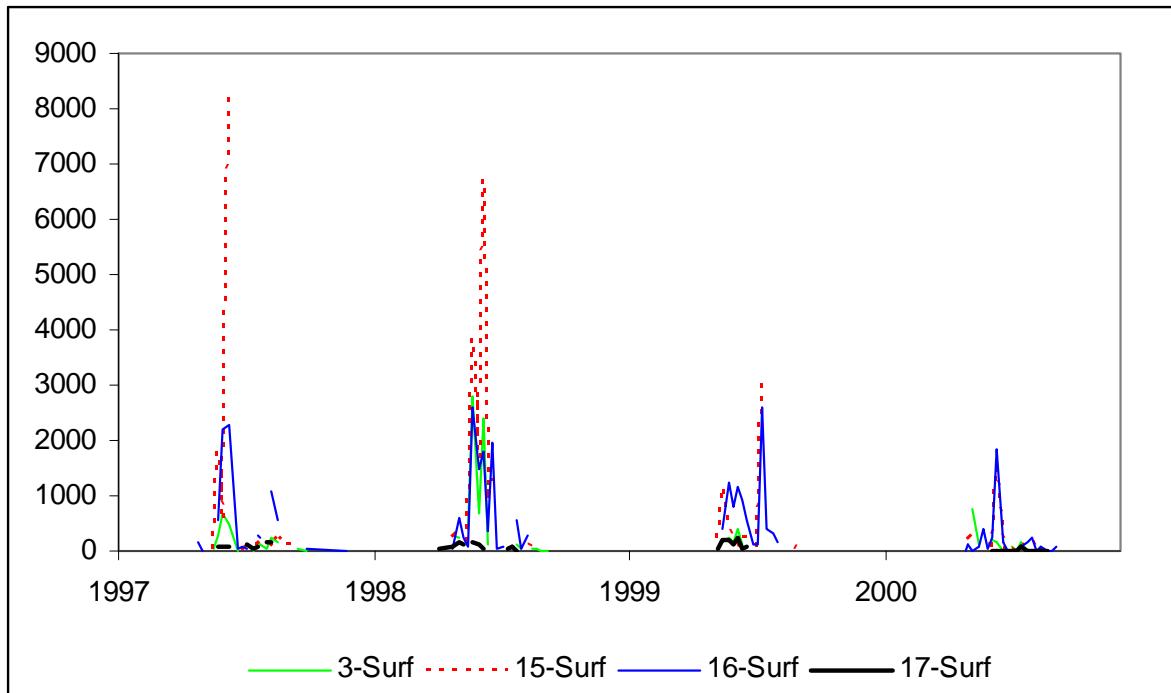


Fig. 2. *A. fundyense* concentrations 1997-2000.

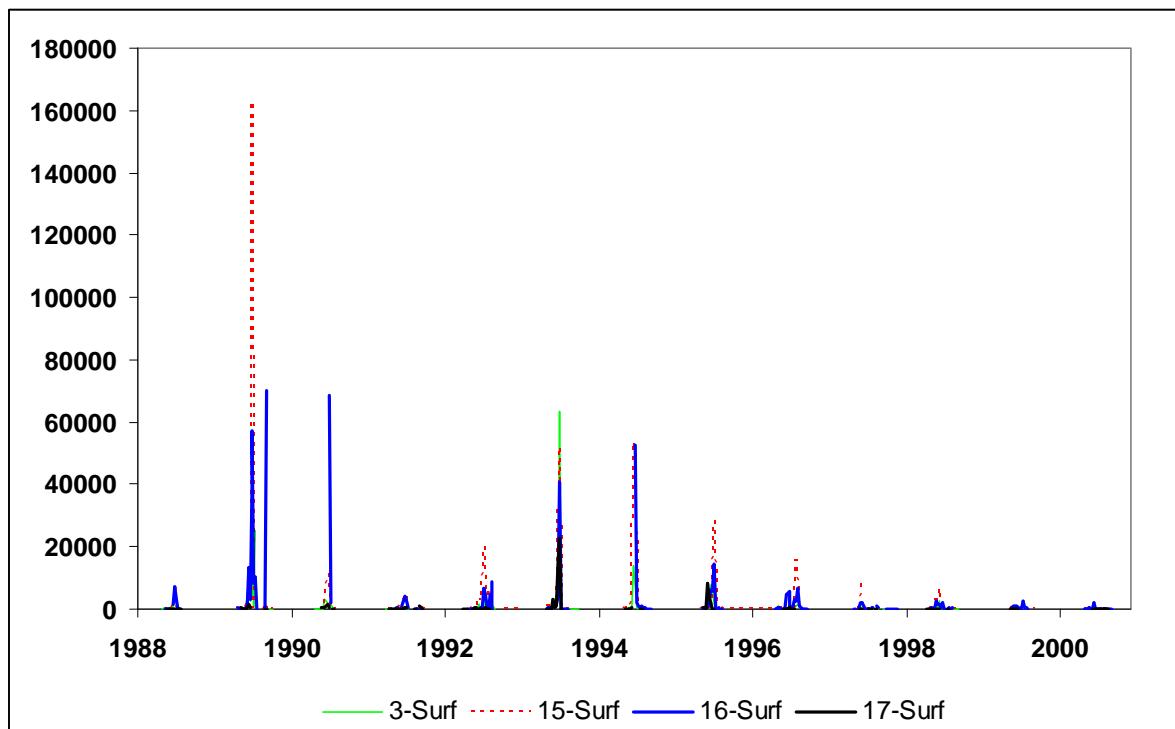


Fig. 3. *A. fundyense* concentrations 1988-2000.

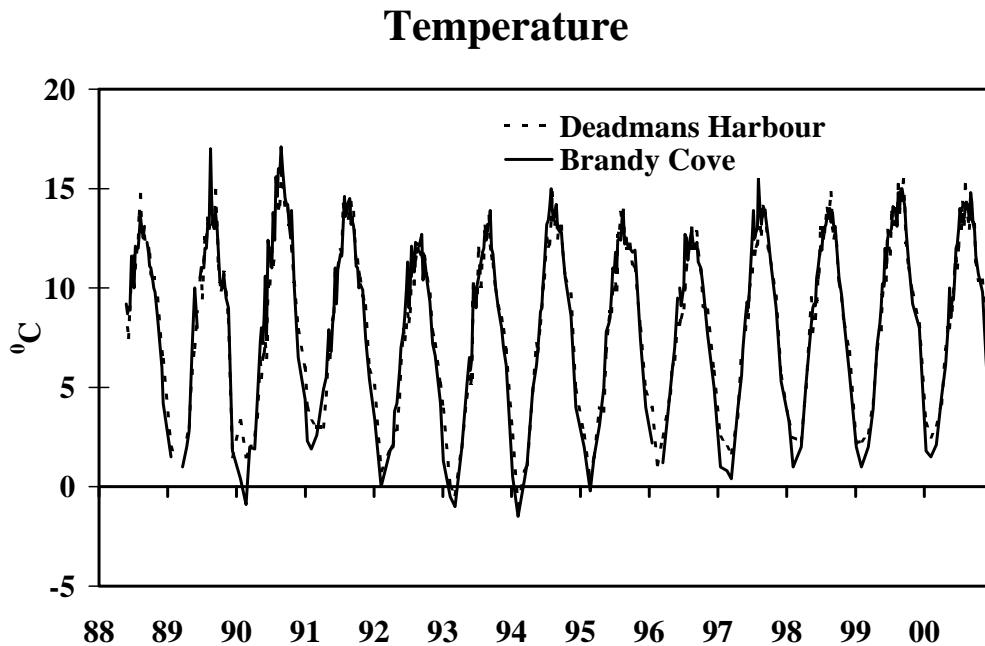


Fig. 4. Surface temperatures from Deadmans Harbour (Station 15) and Brandy Cove (Station 17) (1988-2000).

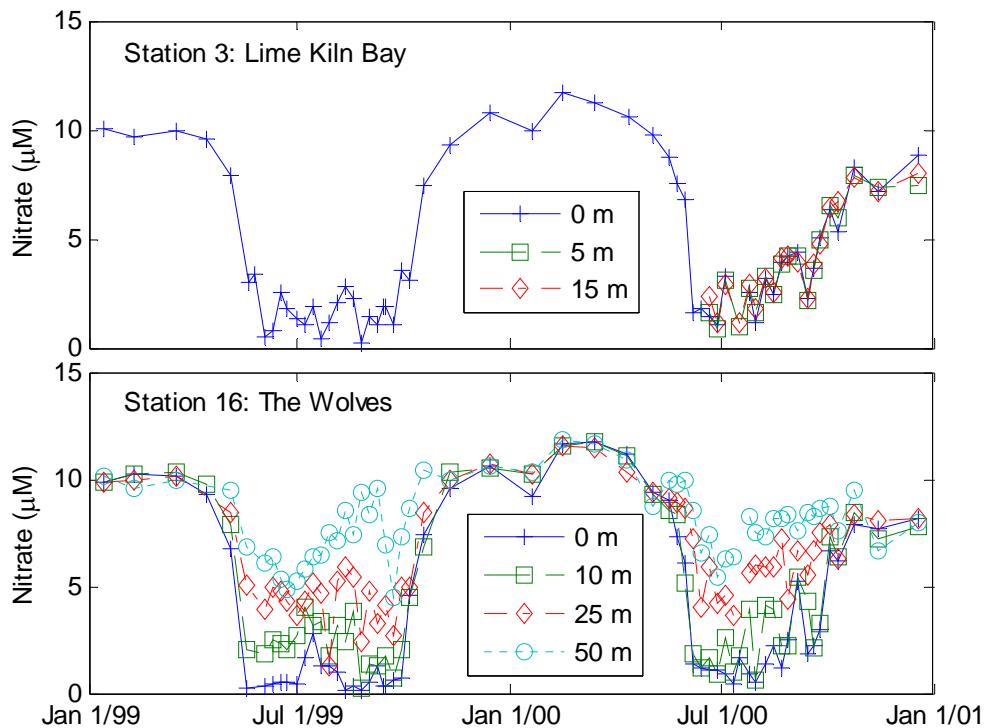


Fig. 5. Nitrate levels at Lime Kiln Bay (station 3) and The Wolves (station 16) for 1999-2000.

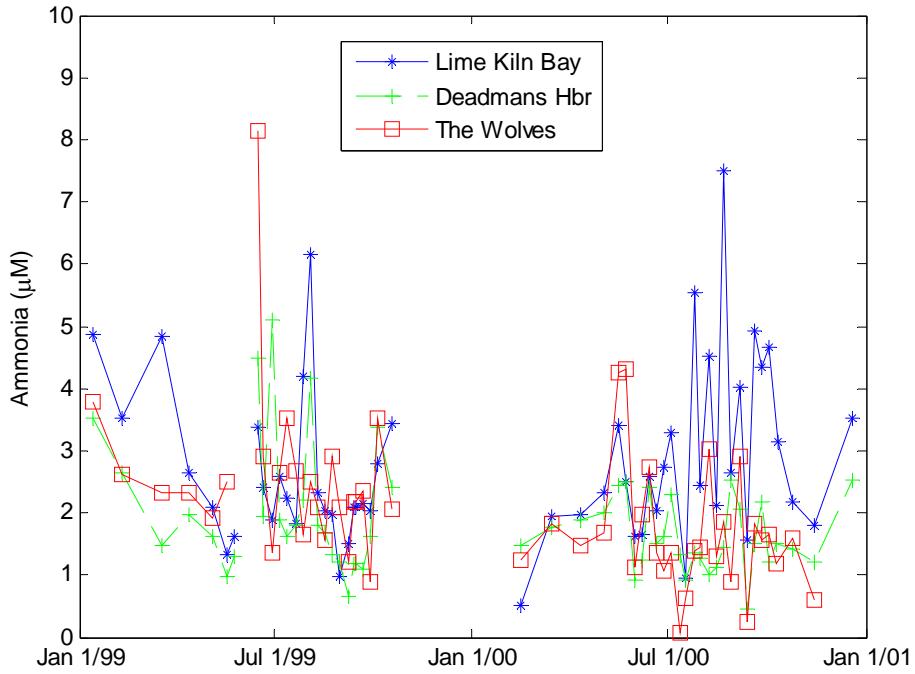


Fig. 6. Surface ($z = 0 \text{ m}$) ammonia levels at Lime Kiln Bay (station 3), Deadmans Harbour (station 15) and The Wolves (station 16) during 1999-2000.

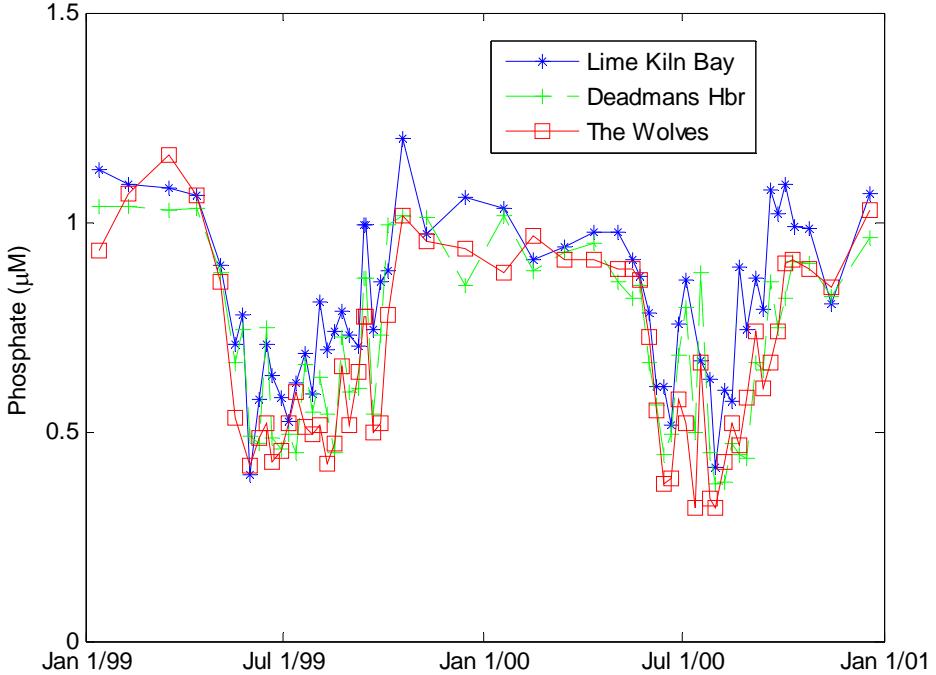


Fig. 7. Surface ($z = 0 \text{ m}$) phosphate levels at Lime Kiln Bay (station 3), Deadmans Harbour (station 15) and The Wolves (station 16) during 1999-2000.

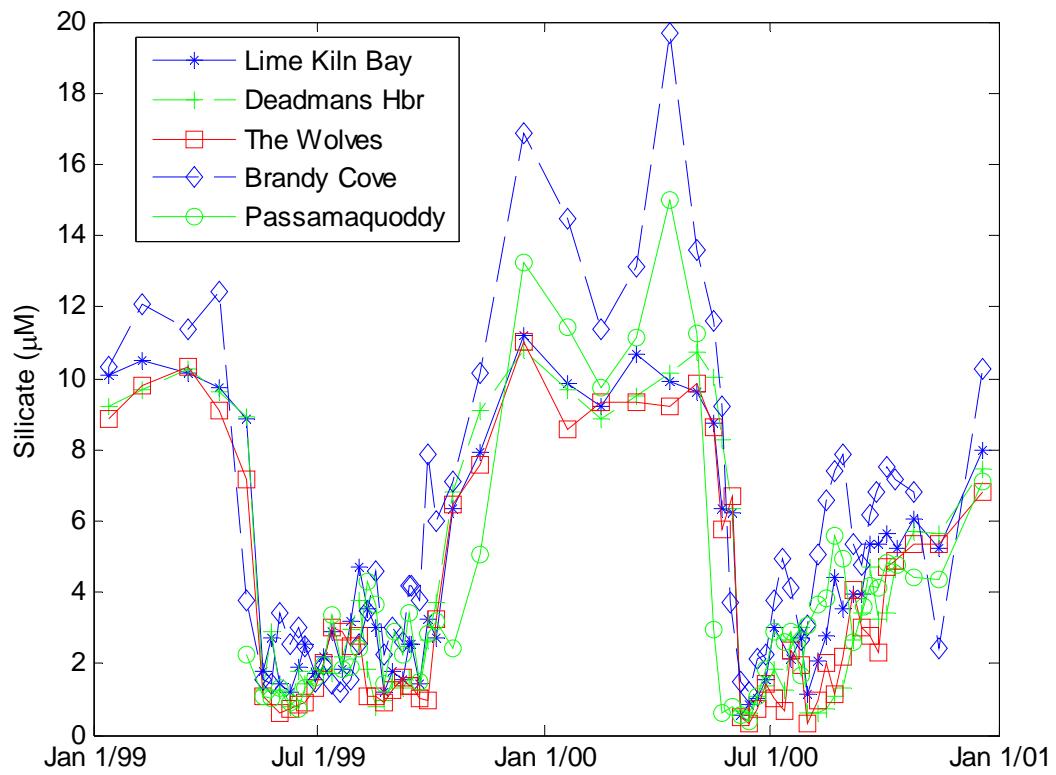


Fig. 8. Surface ($z = 0$ m) silicate levels at Lime Kiln Bay (station 3), Deadmans Harbour (station 15), The Wolves (station 16), Brandy Cove (station 17) and Passamaquoddy Bay (station 25) during 1999-2000.

Appendix 1. Species observed during 1999 and 2000.

Dinoflagellates

Alexandrium fundyense
Alexandrium fundyense (cyst)
Alexandrium fundyense (duplet)
Alexandrium ostenfeldii
Alexandrium spp.
Amphidinium cf. *carterae*
Amphidinium cf. *sphenoides*
Amylax triacantha
 Armoured dinoflagellate
Ceratium arcticum
Ceratium furca
Ceratium fusus
Ceratium horridum
Ceratium kofoidii
Ceratium lineatum
Ceratium longipes
Ceratium macroceros
Ceratium minutum
Ceratium spp.
Ceratium tripos
Dinophysis acuminata
Dinophysis acuta
Dinophysis fortii
Dinophysis norvegica
Dinophysis pulchella
Dinophysis spp.
Dinophysis tripos
Gonyaulax digitale
Gonyaulax sp.
Gonyaulax spinifera
Gyrodinium aureolum
Gyrodinium cf. *spirale*
Gyrodinium spp.
Heterocapsa triquetra
Minuscula bipes
Phalacroma rotundatum
Prorocentrum micans
Prorocentrum minimum
Prorocentrum sp.
Protoperidinium brevipes
Protoperidinium conicum
Protoperidinium denticulatum

Protoperidinium depressum
Protoperidinium ovatum
Protoperidinium spp.
Scrippsiella sp.
Scrippsiella trochoidea
 Unarmoured dinoflagellate

Diatoms

Achnanthes sp.
Actinoptychus senarius
Asterionella formosa
Asterionellopsis glacialis
Asterionellopsis kariana
Bacillaria paxillifer
 Centrale diatom
Cerataulina pelagica
Chaetoceros borealis
Chaetoceros compressus
Chaetoceros concavicornis
Chaetoceros constrictus
Chaetoceros convolutus
Chaetoceros convolutus var. *trisetosa*
Chaetoceros debilis
Chaetoceros decipiens
Chaetoceros diadema
Chaetoceros didymus
Chaetoceros furcellatus
Chaetoceros ingolfianus
Chaetoceros laciniosus
Chaetoceros lorenzianus
Chaetoceros radicans
Chaetoceros similis
Chaetoceros simplex
Chaetoceros socialis
Chaetoceros spp.
Chaetoceros spp. (phaeoceros)
Chaetoceros subtilis
Chaetoceros teres
Corethron criophilum
Coscinodiscus centralis
Coscinodiscus spp.
Coscinodiscus wailesii
Cylindrotheca closterium
Dactyliosolen fragilissimus

Diatoms (continued)

Detonula conservacea
Detonula pumila
Ditylum brightwellii
Eucampia groenlandica
Eucampia sp.
Eucampia zodiacus
Fragilaria spp.
Grammatophora marina
Guinardia delicatula
Guinardia flaccida
Guinardia striata
Gyrosigma balticum
Gyrosigma fasciola
Gyrosigma tenuissimum
Helicotheca tamesis
Lauderia annulata
Leptocylindrus danicus
Leptocylindrus mediterraneus
Leptocylindrus minimus
Licmophora abbreviata
Melosira ambigua
Melosira monolithiformis
Melosira spp.
Navicula sp.
Odontella aurita
Odontella regia
Odontella sinensis
Paralia marina
 Pennate diatom
Pleurosigma / Gyrosigma
Pleurosigma angulatum
Pleurosigma angulatum var. *strigosa*
Pleurosigma formosum
Porosira glacialis
Proboscia alata
Pseudo-nitzschia sp.
Pseudo-nitzschia delicatissima group
Pseudo-nitzschia seriata group
Rhabdonema spp.
Rhizosolenia hebetata
Rhizosolenia imbricata

Rhizosolenia setigera
Rhizosolenia spp.
Skeletonema costatum
Stephanopyxis turris
Synedra sp.
Tabellaria spp.
Thalassionema nitzschioides
Thalassiosira auguste-lineata
Thalassiosira baltica
Thalassiosira decipiens
Thalassiosira gravida
Thalassiosira nordenskioeldii
Thalassiosira oestrupii
Thalassiosira spp.
Thalassiothrix longissima
Thalassiothrix sp.
Triceratium alternans

Others

Brachionus spp.
 Ciliate
 Copepoda
Dictyocha fibula
Dictyocha speculum
Dinobryon spp.
Ebria tripartita
 Eutreptia / Eutreptiella
Favella sp.
 Flagellate
Helicostomella sp.
 Litostomatea
Mesodinium rubrum
Notholca spp.
Parafavella sp.
 Pollen
Polyasterias problematica
Ptychocylis sp.
Salpingella sp.
 Tintinnids
Tintinnopsis campanula

Appendix 2. Phytoplankton densities as number of cells·L⁻¹ in 1999-2000.

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
13-Jan-99								
Armoured dinoflagellate		20					60	
<i>Dinophysis acuminata</i>				20				
<i>Gyrodinium cf. spirale</i>		20			20			
<i>Protoperidinium</i> spp.					20		20	
Unarmoured dinoflagellate						20		
<i>Actinptychus senarius</i>				100	80		160	
<i>Asterionellopsis glacialis</i>							20	
<i>Chaetoceros debilis</i>				40	20			
<i>Chaetoceros decipiens</i>				20				
<i>Chaetoceros socialis</i>	260		40		120	20	80	
<i>Chaetoceros</i> spp.						20		
<i>Corethron criophilum</i>							20	
<i>Coscinodiscus</i> spp.				40	40	200	20	
<i>Cylindrotheca closterium</i>	420	300	920	360	340	380	440	
<i>Ditylum brightwellii</i>	20	40	20	40	40	20	20	
<i>Eucampia zodiacus</i>	460	140	140	260	300	40	100	
<i>Guinardia delicatula</i>	20	20		40	20			
<i>Leptocylindrus minimus</i>	20	20						
<i>Licmophora abbreviata</i>							20	
<i>Navicula</i> sp.	60	100	140	40	40	160	60	
<i>Paralia marina</i>						20	20	
Pennate		20	40		20		20	
<i>Pleurosigma / Gyrosigma</i>		20		20	20			
<i>Pleurosigma angulatum</i>			40	20				
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	20							
<i>Pseudo-nitzschia</i> sp.			20					
<i>Pseudo-nitzschia delicatissima</i> group	360	620	580	500	60	200	420	
<i>Pseudo-nitzschia seriata</i> group		40	20	40	20	40		
<i>Skeletonema costatum</i>		20	40	20		40	20	
<i>Thalassionema nitzschiooides</i>						20		
<i>Thalassiosira baltica</i>			40					
<i>Thalassiosira</i> spp.		20	20	100	40	160	60	
Copepoda				40				
<i>Dictyocha speculum</i>				20		20		
Flagellate	20			20				
<i>Mesodinium rubrum</i>		20		80	20	40	1700	
Tintinnids						20	100	
09-Feb-99								
Armoured dinoflagellate					40			
<i>Ceratium fusus</i>				20				
<i>Ceratium tripos</i>					20			
<i>Gyrodinium cf. spirale</i>				20	20			
Unarmoured dinoflagellate			40	20	20			
<i>Asterionellopsis glacialis</i>						20		
<i>Chaetoceros debilis</i>			20					
<i>Chaetoceros socialis</i>						140		
<i>Chaetoceros</i> spp.						20		
<i>Corethron criophilum</i>		40			40			
<i>Coscinodiscus</i> spp.					20	20		
<i>Cylindrotheca closterium</i>	20	60	60	380	280	180	120	
<i>Dactyliosolen fragilissimus</i>						20		
<i>Ditylum brightwellii</i>		20		40	20	40	40	
<i>Guinardia delicatula</i>				20		20	20	
<i>Gyrosigma fasciola</i>				20			20	
<i>Leptocylindrus minimus</i>				20		20		
<i>Navicula</i> sp.		40		60	20	40	60	
<i>Paralia marina</i>					40			
Pennate	20				20		60	
<i>Pleurosigma / Gyrosigma</i>		20						
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>						160		
<i>Pseudo-nitzschia delicatissima</i> group	340	300	100	240	280	160	20	
<i>Pseudo-nitzschia seriata</i> group				20		20		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
				60	60		20	
<i>Skeletonema costatum</i>		20						

09-Feb-99 (continued)

<i>Thalassionema nitzschiooides</i>							40	
<i>Thalassiosira</i> spp.			40	20		80	40	
<i>Dicyochea speculum</i>			40		20			
<i>Dinobryon</i> spp.							20	
Flagellate		20	20	20	20			
<i>Mesodinium rubrum</i>	20	40	100					
Pollen					40			
<i>Salpingella</i> sp.					20			
Tintinnids			20					

18-Mar-99

Armoured dinoflagellate					20			
<i>Ceratium arcticum</i>					20	20	20	
<i>Ceratium tripos</i>				20				
<i>Gyrodinium</i> cf. <i>spirale</i>			40		20			
<i>Actinopytchus senarius</i>	20							
<i>Asterionellopsis glacialis</i>				20		20		
<i>Chaetoceros debilis</i>	20			20	20	20	20	20
<i>Chaetoceros decipiens</i>	20							
<i>Chaetoceros</i> spp.	60		20	60	20	20	20	20
<i>Corethron criophilum</i>			20	40				
<i>Coscinodiscus</i> spp.			20	20	60	20		
<i>Cylindrotheca closterium</i>	140		80	260	180	140	80	
<i>Ditylum brightwellii</i>	40		40	40	20	60		
<i>Fragilaria</i> spp.						20		
<i>Grammatophora marina</i>	20				20			
<i>Leptocylindrus minimus</i>			20			20		
<i>Licmophora abbreviata</i>	20							
<i>Navicula</i> sp.	40		40	20	60	120	120	
<i>Odontella aurita</i>	40							
Pennate	20					20		
<i>Pleurosigma</i> / <i>Gyrosigma</i>				40	40			
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>						60		
<i>Pseudo-nitzschia delicatissima</i> group	480		280	280	200	60	120	
<i>Rhizosolenia hebetaria</i>						20		
<i>Skeletonema costatum</i>	120		20	80	20	20	20	
<i>Thalassiosira</i> spp.			20	20	20	20	40	
<i>Triceratium alternans</i>	20							
<i>Dinobryon</i> spp.						20		
Flagellate	20							
<i>Mesodinium rubrum</i>	140		240	40			80	
Pollen					20			
Tintinnids						20		

13-Apr-99

<i>Alexandrium fundyense</i>				20				
<i>Alexandrium ostenfeldii</i>				20				
Armoured dinoflagellate		20					60	
<i>Dinophysis</i> spp.			20					
<i>Gyrodinium</i> cf. <i>spirale</i>		40		60				
Unarmoured dinoflagellate			20					
<i>Asterionellopsis glacialis</i>			20					
<i>Chaetoceros compressus</i>	20	100	40	40			20	
<i>Chaetoceros debilis</i>	200	260	140	60		60	100	
<i>Chaetoceros decipiens</i>							40	
<i>Chaetoceros ingolfianus</i>		40					80	
<i>Chaetoceros similis</i>				20				
<i>Chaetoceros socialis</i>				20				
<i>Chaetoceros</i> spp.	100	220	200	80			120	
<i>Corethron criophilum</i>				20			20	
<i>Coscinodiscus</i> spp.		20	20			20	20	
<i>Cylindrotheca closterium</i>	420	360	620	260		20	320	
<i>Ditylum brightwellii</i>	40	40	40	40		40		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Eucampia zodiacus</i>	20			20				
13-Apr-99 (continued)								
<i>Gyrosigma fasciola</i>						20		
<i>Leptocylindrus minimus</i>	40	160	20	40			20	
<i>Melosira</i> spp.	20						20	
<i>Navicula</i> sp.	60					40	20	
<i>Pleurosigma / Gyrosigma</i>						20		
<i>Porosira glacialis</i>	60	60			20			
<i>Proboscia alata</i>					20			
<i>Pseudo-nitzschia delicatissima</i> group	1960	2700	3140	760		260	240	
<i>Rhizosolenia hebetata</i>	40							
<i>Skeletonema costatum</i>	240	140	520	120		120	100	
<i>Thalassiosira auguste-lineata</i>						20		
<i>Thalassiosira decipiens</i>	60		40			20	280	
<i>Thalassiosira gravida</i>	20		60					
<i>Thalassiosira nordenskioeldii</i>	20	180	80			20	120	
<i>Thalassiosira</i> spp.	80	100	200	260			140	
<i>Dictyocha speculum</i>		20					20	
<i>Dinobryon</i> spp.						60		
Flagellate	40		20				80	
<i>Mesodinium rubrum</i>		260	120			320	440	
<i>Salpingella</i> sp.	20	20						
Tintinnids	100			20		240	20	
04-May-99								
<i>Alexandrium fundyense</i>		40						
<i>Alexandrium ostenfeldii</i>	40		160					
Armoured dinoflagellate	80		260				160	
<i>Ceratium lineatum</i>	20							
<i>Ceratium longipes</i>		20	40				40	
<i>Gyrodinium</i> cf. <i>spirale</i>	180	200	140			40	40	
<i>Protoperidinium ovatum</i>	20		20					
<i>Protoperidinium</i> spp.	20						160	
Unarmoured dinoflagellate	260	100						
<i>Asterionellopsis glacialis</i>		40				40	40	
<i>Chaetoceros compressus</i>	20	20	80					
<i>Chaetoceros constrictus</i>		20						
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>			20					
<i>Chaetoceros debilis</i>	280	180	680			2160	3800	
<i>Chaetoceros decipiens</i>	20	20				40	120	
<i>Chaetoceros ingolfianus</i>	20	20	140			400	320	
<i>Chaetoceros laciniatus</i>	20	20						
<i>Chaetoceros similis</i>		20				40		
<i>Chaetoceros simplex</i>	40	220				160	80	
<i>Chaetoceros</i> spp.	240	160	240			1000	840	
<i>Corethron criophilum</i>			20				40	
<i>Coscinodiscus</i> spp.	20	20				40		
<i>Cylindrotheca closterium</i>	80	180	160			320	320	
<i>Dactyliosolen fragilissimus</i>							40	
<i>Ditylum brightwellii</i>	60	40	40			80	120	
<i>Eucampia zodiacus</i>			20					
<i>Leptocylindrus danicus</i>		20					240	
<i>Leptocylindrus minimus</i>		40	20				280	
<i>Melosira</i> spp.		20						
<i>Navicula</i> sp.	40	20	20			120		
Pennate						80	40	
<i>Pleurosigma / Gyrosigma</i>						40		
<i>Pleurosigma angulatum</i>	20							
<i>Porosira glacialis</i>	40					40		
<i>Pseudo-nitzschia delicatissima</i> group	420	700	700			720	1480	
<i>Rhizosolenia hebetata</i>	40	20						
<i>Skeletonema costatum</i>	900	600	960			600	1360	
<i>Thalassionema nitzschiooides</i>	20		20					
<i>Thalassiosira auguste-lineata</i>		20				80		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Thalassiosira gravida</i>			100				200	200
<i>Thalassiosira nordenskioeldii</i>	100	140	400				600	4040
04-May-99 (continued)								
<i>Thalassiosira</i> spp.	2500	2280	4260			22760	21240	
Copepoda	20							
<i>Dicyochea speculum</i>	40	20	20			40		
Flagellate	20		180					
<i>Mesodinium rubrum</i>	1740	1220	1140			920	1640	
Tintinnids	400	140	260				320	
18-May-99								
<i>Alexandrium ostenfeldii</i>			40					
<i>Amylax triacantha</i>							40	
Armoured dinoflagellate			160	160	400		80	40
<i>Ceratium longipes</i>							40	
<i>Dinophysis acuta</i>			40					
<i>Gyrodinium cf. spirale</i>	40	360	280	240			520	360
<i>Protoperidinium</i> spp.	240					40		
Unarmoured dinoflagellate		40					80	
<i>Achnanthes</i> sp.		40						
<i>Actinoptychus senarius</i>						40		
<i>Asterionellopsis glacialis</i>	40	40	40	80				
<i>Chaetoceros compressus</i>	40	40	40	80		40		40
<i>Chaetoceros debilis</i>	4080	880	920	2080	1200	800	2240	2680
<i>Chaetoceros decipiens</i>			120				120	40
<i>Chaetoceros diadema</i>							80	40
<i>Chaetoceros furcellatus</i>	1400	520	120	720	480	800	560	760
<i>Chaetoceros ingolfianus</i>		40	40	240			40	40
<i>Chaetoceros laciniatus</i>		80	40				160	
<i>Chaetoceros socialis</i>				160		320		
<i>Chaetoceros</i> spp.	1040	520	600	3760	1200	480	920	2720
<i>Corethron criophilum</i>			40					
<i>Coscinodiscus</i> spp.					80			
<i>Cylindrotheca closterium</i>	240	240	200	400	320	240	560	160
<i>Dactyliosolen fragilissimus</i>				160			40	40
<i>Ditylum brightwellii</i>	40	80	160	240		120	80	
<i>Eucampia zodiacus</i>			40					
<i>Leptocylindrus danicus</i>		160					320	
<i>Leptocylindrus minimus</i>	80	120	120			80	240	440
<i>Navicula</i> sp.	40			160		40		40
<i>Paralia marina</i>							40	
Pennate	40		40					
<i>Pleurosigma / Gyrosigma</i>	40	80						
<i>Pleurosigma angulatum</i>	40	40				80	280	
<i>Porosira glacialis</i>		80	40				40	40
<i>Pseudo-nitzschia delicatissima</i> group	440	2080	1360	720	320	640	1120	1960
<i>Pseudo-nitzschia seriata</i> group					80		80	160
<i>Rhizosolenia hebetata</i>	40							
<i>Rhizosolenia</i> spp.						40		
<i>Skeletonema costatum</i>	80	800	760	1200	320	360		
<i>Stephanopyxis turris</i>							40	
<i>Thalassionema nitzschioides</i>		80				80		
<i>Thalassiosira auguste-lineata</i>	200		80			40		
<i>Thalassiosira decipiens</i>	8840	9480	8240				880	840
<i>Thalassiosira gravida</i>	440	640	400	240	160	240	240	480
<i>Thalassiosira nordenskioeldii</i>	2960	2920	2000	960	240	1000	1880	2320
<i>Thalassiosira</i> spp.	15240	1960	1800	61120	30320	29680	2240	1760
Copepoda	40					80		
<i>Dicyochea speculum</i>	40	40	40				80	
Flagellate	80	80	320	80			40	
<i>Mesodinium rubrum</i>	360	920	1640	80		40	2760	2960
Tintinnids	80	400	800			40	520	80

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
25-May-99								
<i>Alexandrium fundyense</i>	80	240				60		
<i>Alexandrium fundyense</i> (duplet)		40				20		
<i>Alexandrium ostenfeldii</i>	40							
Armoured dinoflagellate	160	160				60	120	
<i>Ceratium fusus</i>	40							
<i>Ceratium longipes</i>	40					40		
<i>Dinophysis</i> spp.		120				20		
<i>Gyrodinium</i> cf. <i>spirale</i>	320	480				460	400	
<i>Heterocapsa triquetra</i>	80	80						
<i>Protoperidinium denticulatum</i>		40						
<i>Protoperidinium</i> spp.	40	120				20	40	
<i>Scrippsiella trochoidea</i>		80				20		
Unarmoured dinoflagellate	640	560				140	120	
<i>Chaetoceros compressus</i>	80	40				40	200	
<i>Chaetoceros debilis</i>	640	480				2240	2560	
<i>Chaetoceros decipiens</i>	40					100		
<i>Chaetoceros furcellatus</i>	80					160	1880	
<i>Chaetoceros laciniatus</i>	40					200	440	
<i>Chaetoceros</i> spp.	760	320				340	2080	
<i>Corethron criophilum</i>		40						
<i>Coscinodiscus</i> spp.						20	40	
<i>Cylindrotheca closterium</i>	1240	440				100	600	
<i>Dactyliosolen fragilissimus</i>	40					20	120	
<i>Ditylum brightwellii</i>	40	120				40		
<i>Eucampia zodiacus</i>	80						120	
<i>Grammatophora marina</i>		40						
<i>Leptocylindrus danicus</i>	320	80				360	2600	
<i>Leptocylindrus minimus</i>	40					180	160	
<i>Navicula</i> sp.	40	40				20		
<i>Odontella aurita</i>							40	
<i>Pleurosigma</i> / <i>Gyrosigma</i>	40	40						
<i>Pleurosigma angulatum</i>	40					120	80	
<i>Porosira glacialis</i>						20	40	
<i>Pseudo-nitzschia delicatissima</i> group	2000	1360					1720	
<i>Pseudo-nitzschia seriata</i> group	40							
<i>Rhizosolenia hebetata</i>	120	40						
<i>Skeletonema costatum</i>	280	160						
<i>Thalassiosira auguste-lineata</i>		120				40	40	
<i>Thalassiosira baltica</i>		40						
<i>Thalassiosira decipiens</i>	2920	600				580	360	
<i>Thalassiosira gravida</i>	280	160				300	160	
<i>Thalassiosira nordenskioeldii</i>	1520	600				1400	2080	
<i>Thalassiosira oestrupii</i>	40							
<i>Thalassiosira</i> spp.	4680	4800				1100	1320	
<i>Brachionus</i> sp.	120							
Copepoda						20	40	
<i>Dictyocha speculum</i>	280	80					160	
Flagellate	920	1720				40	480	
<i>Mesodinium rubrum</i>	5680	5600				2820	3920	
<i>Ptychocylis</i> sp.		120						
Tintinnids	2640	2440				960	600	
01-Jun-99								
<i>Alexandrium fundyense</i>	160	1160	400	80		200	160	
<i>Alexandrium fundyense</i> (duplet)		160				40		
<i>Alexandrium ostenfeldii</i>				80				
<i>Amylax triacantha</i>				80				
Armoured dinoflagellate	400	1000	480		40	40	120	360
<i>Ceratium</i> spp.			80					
<i>Dinophysis acuminata</i>	40							
<i>Dinophysis</i> spp.						40		
<i>Gyrodinium</i> cf. <i>spirale</i>	520	560	480	1200	240	20	520	160
<i>Heterocapsa triquetra</i>	160	520	160					

ORGANISM	3	15	16-0m	16-10m 80	16-25m	16-50m	17	25
<i>Protoperidinium depressum</i>								
01-Jun-99 (continued)								
<i>Protoperidinium</i> spp.	40		160			40	40	
<i>Scrippsiella trochoidea</i>	80	40					80	
Unarmoured dinoflagellate	360	520	960			80	560	
<i>Cerataulina pelagica</i>	40		80			120	120	
<i>Chaetoceros compressus</i>		40		320				40
<i>Chaetoceros constrictus</i>								
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>		80			20			
<i>Chaetoceros debilis</i>	560	560	400	880	600	120	400	720
<i>Chaetoceros decipiens</i>	160	120		240		20		
<i>Chaetoceros furcellatus</i>		40	80	160	240	120	40	
<i>Chaetoceros ingolfianus</i>							40	
<i>Chaetoceros laciniatus</i>	360	200	400	80	80			80
<i>Chaetoceros simplex</i>								
<i>Chaetoceros</i> spp.	440	800	1680	3280	960	340	320	1160
<i>Chaetoceros</i> spp. (phaeoceros)				80				
<i>Chaetoceros teres</i>							40	
<i>Corethron criophillum</i>		40	80	80	80	20		40
<i>Cylindrotheca closterium</i>	200	200	320	960	440	120	320	80
<i>Dactyliosolen fragilissimus</i>	120							160
<i>Ditylum brightwellii</i>		40				20		
<i>Eucampia zodiacus</i>				160			40	40
<i>Grammatophora marina</i>		40						
<i>Guinardia delicatula</i>	480	40	160		40	20	80	
<i>Gyrosigma fasciola</i>						20		
<i>Leptocylindrus danicus</i>	480	280		880		20	2440	7480
<i>Leptocylindrus minimus</i>		40		80	80		400	80
<i>Licmophora abbreviata</i>		40						
<i>Navicula</i> sp.	80	40		80	80	100	80	
<i>Paralia marina</i>						100		
Pennate				80	40	20		
<i>Pleurosigma / Gyrosigma</i>						20	80	
<i>Pleurosigma angulatum</i>		80		160		80	280	40
<i>Porosira glacialis</i>		120						
<i>Pseudo-nitzschia delicatissima</i> group	520	720	80	1120	720	100	920	160
<i>Pseudo-nitzschia seriata</i> group		200	160	80			80	40
<i>Skeletonema costatum</i>				160	40	60		
<i>Stephanopyxis turris</i>					40			40
<i>Thalassiosira auguste-lineata</i>	120	80	80	400	160		40	
<i>Thalassiosira baltica</i>					40			
<i>Thalassiosira gravida</i>	40	40		400			440	640
<i>Thalassiosira nordenskioeldii</i>	1280	800	3760	2960	2640	420	480	840
<i>Thalassiosira</i> spp.	4240	2280	5520	45720	12560	4100	1240	920
<i>Brachionus</i> sp.		40		80			160	
Copepoda		40	40					
<i>Dictyocha speculum</i>	80	120	320			20		120
<i>Dinobryon</i> spp.							40	
Flagellate	80	160	80	160	40		40	520
<i>Helicostomella</i> sp.		40	40					
<i>Mesodinium rubrum</i>	2000	2920	9200	240	80	180	2400	640
<i>Parafavella</i> sp.		40						
Pollen	120	40					40	40
<i>Ptychocylis</i> sp.		40						
Tintinnids	720	1520	1280	320	200	20	800	
08-Jun-99								
<i>Alexandrium fundyense</i>	260	400	1240	160		200	880	
<i>Alexandrium fundyense</i> (duplet)	20		200	40				
<i>Amylax triacantha</i>							40	
Armoured dinoflagellate	160	240	2720	80		20	560	1400
<i>Ceratium longipes</i>								80
<i>Ceratium macroceros</i>								40
<i>Ceratium</i> spp.		40		40				

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
Tintinnids	600	440	1200	120	80	60	720	1320

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
15-Jun-99								
<i>Alexandrium fundyense</i>	160	220	800	80			120	720
<i>Alexandrium fundyense</i> (duplet)	40	20	40					
Armoured dinoflagellate	120	240	600	80	60		80	1360
<i>Ceratium fusus</i>	40	20	40					
<i>Ceratium horridum</i>		20					120	
<i>Ceratium longipes</i>			40			20	40	
<i>Ceratium</i> spp.	40	80						40
<i>Ceratium tripos</i>	80							
<i>Dinophysis acuminata</i>	80	220	800				40	240
<i>Dinophysis acuta</i>		20	40					
<i>Dinophysis norvegica</i>			120				80	
<i>Dinophysis</i> spp.		40					40	
<i>Gyrodinium cf. spirale</i>	80	60	80	160	40		160	200
<i>Heterocapsa triquetra</i>	120	40	320	80				920
<i>Minuscula bipes</i>							160	
<i>Protoperidinium brevipes</i>	40	20						160
<i>Protoperidinium depressum</i>		20	200	40				40
<i>Protoperidinium</i> spp.	120	160	240	80			160	680
<i>Scrippsiella trochoidea</i>	40	20	160				40	280
Unarmoured dinoflagellate			60	120	40		200	200
<i>Asterionellopsis glacialis</i>					40			
<i>Cerataulina pelagica</i>	1880	80	200	280	40	40	8800	2400
<i>Chaetoceros borealis</i>			40					
<i>Chaetoceros compressus</i>				160	40	40		
<i>Chaetoceros constrictus</i>	40	60						80
<i>Chaetoceros convolutus</i>			40					
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>		20						
<i>Chaetoceros debilis</i>	1040	980	1080	2040	160	320	160	40
<i>Chaetoceros decipiens</i>					20	20		
<i>Chaetoceros furcellatus</i>					20	40		
<i>Chaetoceros laciniosus</i>		80	480	160	20		40	
<i>Chaetoceros simplex</i>						40	120	
<i>Chaetoceros socialis</i>				400				
<i>Chaetoceros</i> spp.	880	800	2240	11280	580	340	800	440
<i>Chaetoceros</i> spp. (<i>phaeoceros</i>)		60		40				
<i>Chaetoceros teres</i>	160	20	40	240	20			160
<i>Corethron criophilum</i>	80	40				20		
<i>Coscinodiscus</i> spp.	40			40	80	120		
<i>Cylindrotheca closterium</i>	560	220	360	840	420	520	1520	120
<i>Dactyliosolen fragilissimus</i>	40			40			40	40
<i>Ditylum brightwellii</i>	160					60		
<i>Eucampia groenlandica</i>							40	
<i>Guinardia delicatula</i>	200	340	200	640		80	520	520
<i>Helicotheca tamesis</i>	40							
<i>Leptocylindrus danicus</i>	9960	1020	1760	4200	1160	560	15960	70140
<i>Leptocylindrus mediterraneus</i>								40
<i>Leptocylindrus minimus</i>	200		80			40	1000	240
<i>Licmophora abbreviata</i>		20					200	
<i>Navicula</i> sp.	80		40			120	120	
<i>Odontella aurita</i>						20		
<i>Odontella regia</i>						80		
<i>Paralia marina</i>					40	80		
Pennate		120		80	80		40	
<i>Pleurosigma / Gyrosigma</i>	40	20				20	120	
<i>Pleurosigma angulatum</i>	240			40	20	100	1200	80
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	40		40		20			40
<i>Porosira glacialis</i>	40							
<i>Proboscia alata</i>	40							40
<i>Pseudo-nitzschia delicatissima</i> group	440	80	560	440	60	80	560	120
<i>Pseudo-nitzschia seriata</i> group	400	180	80	120		40		480
<i>Rhizosolenia hebetata</i>								40
<i>Rhizosolenia imbricata</i>			40					

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Navicula</i> sp.		40			40	20	40	
Pennate	40				20			

21-Jun-99 (continued)

<i>Pleurosigma / Gyrosigma</i>			80			80		
<i>Pleurosigma angulatum</i>	40						200	
<i>Pseudo-nitzschia delicatissima</i> group		160	40	320			280	40
<i>Pseudo-nitzschia seriata</i> group	200	40			40		120	80
<i>Rhizosolenia imbricata</i>	120				60		40	
<i>Skeletonema costatum</i>								40
<i>Stephanopyxis turris</i>	80	40		640	20		40	
<i>Thalassiosira baltica</i>			120			20		
<i>Thalassiosira nordenskioeldii</i>								
<i>Thalassiosira oestrupii</i>				80	40	20		40
<i>Thalassiosira</i> spp.	40	40			40		1520	
<i>Brachionus</i> sp.					20			
Copepoda		160	40	80			20	40
<i>Dictyocha speculum</i>	280	160	280	160	20		40	240
<i>Ebria tripartita</i>								880
<i>Favella</i> sp.								160
Flagellate	320		160	240			80	1200
<i>Helicostomella</i> sp.	40	240	80				280	880
<i>Mesodinium rubrum</i>	1960	2320	1440	6960			9440	4720
Pollen						20	160	
Tintinnids	80	200	240	1280	120		960	600

29-Jun-99

<i>Alexandrium fundyense</i>	120	240	920				40	80
<i>Amylax triacantha</i>				20				40
Armoured dinoflagellate	200	400	220	40	100		360	360
<i>Ceratium fusus</i>	40		60					
<i>Ceratium horridum</i>			60					
<i>Ceratium lineatum</i>		40	20					
<i>Ceratium longipes</i>	160	20	40	20	40		120	
<i>Ceratium</i> spp.			40					
<i>Ceratium tripos</i>		60	60					
<i>Dinophysis acuminata</i>	80		280	40	20	40	120	1120
<i>Dinophysis acuta</i>	160		40					
<i>Dinophysis norvegica</i>	80		160	20				80
<i>Dinophysis pulchella</i>		100						
<i>Dinophysis</i> spp.				20				40
<i>Gonyaulax spinifera</i>		40						
<i>Gyrodinium</i> cf. <i>spirale</i>	40	60	140	180				160
<i>Heterocapsa triquetra</i>		560	720					880
<i>Minuscula bipes</i>								40
<i>Prorocentrum</i> sp.		20						
<i>Protoperdinium brevipes</i>		20						
<i>Protoperdinium depressum</i>	40		20					40
<i>Protoperdinium</i> spp.	160	40	40			20	160	360
<i>Scirpsiella trochoidea</i>		60					40	160
Unarmoured dinoflagellate		40	100				40	400
<i>Asterionellopsis glacialis</i>				80	20			
<i>Cerataulina pelagica</i>	520	260	160	40	160		440	120
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>			20					
<i>Chaetoceros debilis</i>	200		40	100	60			40
<i>Chaetoceros furcellatus</i>						20		
<i>Chaetoceros ingolfianus</i>				20				
<i>Chaetoceros socialis</i>	1000		360	4140	280	60	2560	440
<i>Chaetoceros</i> spp.	520	160	140	220	380	100	240	240
<i>Chaetoceros teres</i>	40		20					
<i>Corethron criophilum</i>			40	40		40		80
<i>Coscinodiscus</i> spp.						60		760
<i>Cylindrotheca closterium</i>	600	200	460	420	1100	120	1360	400
<i>Dactyliosolen fragilissimus</i>		20		120			10040	1720
<i>Ditylum brightwellii</i>				20				

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Fragilaria</i> spp.							40	
<i>Guinardia delicatula</i>	7600	1140	1160	500	480	60	51770	24520
<i>Guinardia flaccida</i>							120	

29-Jun-99 (continued)

<i>Leptocylindrus danicus</i>		60	20				360	1200
<i>Leptocylindrus minimus</i>	280	140	40				7360	2600
<i>Licmophora abbreviata</i>		20						
<i>Melosira</i> spp.					20			
<i>Navicula</i> sp.	120				120	40	40	
<i>Paralia marina</i>			20					
Pennate			20		40			
<i>Pleurosigma / Gyrosigma</i>							40	
<i>Pleurosigma angulatum</i>	560			40	20		640	400
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				20			200	80
<i>Proboscia alata</i>							40	
<i>Pseudo-nitzschia</i> sp.							40	
<i>Pseudo-nitzschia delicatissima</i> group	80		20	120		20		160
<i>Pseudo-nitzschia seriata</i> group							120	200
<i>Rhizosolenia</i> spp.					20			
<i>Skeletonema costatum</i>					20			
<i>Stephanopyxis turris</i>	40		60				240	40
<i>Thalassionema nitzschiooides</i>							40	
<i>Thalassiosira gravida</i>							40	
<i>Thalassiosira oestrupii</i>	40		60					
<i>Thalassiosira</i> spp.					20		120	200
Copepoda		240	80	60	20		40	120
<i>Dictyocha speculum</i>	160	160	400	80			320	160
Flagellate	40	140	140				40	
<i>Helicostomella</i> sp.	120	1020	80				80	800
<i>Mesodinium rubrum</i>	4440	1620	5500	200	20	20	5240	18400
<i>Parafavella</i> sp.							40	
Pollen	40		140	20			40	
Tintinnids	520	480	420	600	520	20	520	240

06-Jul-99

<i>Alexandrium fundyense</i>	260	560					80	20
<i>Alexandrium fundyense</i> (duplet)		40						
Armoured dinoflagellate	720	460	40	20			280	20
<i>Ceratium arcticum</i>			20					
<i>Ceratium fusus</i>	40		120	20				
<i>Ceratium lineatum</i>		20						
<i>Ceratium longipes</i>	40	80	140		20			40
<i>Ceratium tripos</i>		20	20					
<i>Dinophysis acuminata</i>	20	200	20			20	40	60
<i>Dinophysis acuta</i>		20						
<i>Dinophysis norvegica</i>		20					120	
<i>Dinophysis pulchella</i>	260		40					
<i>Dinophysis</i> spp.		140					40	
<i>Gonyaulax spinifera</i>		20						60
<i>Gyrodinium</i> cf. <i>spirale</i>	40	100	40				320	20
<i>Heterocapsa triquetra</i>	280	220						20
<i>Minuscula bipes</i>		20						
<i>Prorocentrum micans</i>							20	
<i>Protoperidinium brevipes</i>						20		
<i>Protoperidinium</i> spp.		60				20	200	80
<i>Scrippsiella trochoidea</i>	80	20	20	20				
Unarmoured dinoflagellate	40	40	140		20		160	80
<i>Asterionellopsis glacialis</i>						20		
<i>Cerataulina pelagica</i>		20		40	40			
<i>Chaetoceros constrictus</i>			20					
<i>Chaetoceros debilis</i>	40		20	20			120	
<i>Chaetoceros furcellatus</i>						20		
<i>Chaetoceros simplex</i>				20	40			
<i>Chaetoceros socialis</i>	65130	2600	4900	3940	200	480	1760	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros</i> spp.		140		80	100	140	240	
<i>Corethron criophilum</i>			20		20			
<i>Coscinodiscus</i> spp.				20		20		
<i>Cylindrotheca closterium</i>	160	260	360	920	580	160	320	
06-Jul-99 (continued)								
<i>Dactyliosolen fragilissimus</i>	40			220	240	20	6800	60
<i>Ditylum brightwellii</i>						20		
<i>Guinardia delicatula</i>	68470	8600	7260	2880	2700	880	80160	21160
<i>Guinardia flaccida</i>	160		80				280	420
<i>Leptocylindrus danicus</i>	40	60	440		180		2000	4920
<i>Leptocylindrus minimus</i>	360	140	140	60	20	20	760	20
<i>Licmophora abbreviata</i>							40	
<i>Navicula</i> sp.	40		40	40	60		40	
<i>Pleurosigma angulatum</i>	80			20	20		120	
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>			20		20			
<i>Pseudo-nitzschia delicatissima</i> group		60	20	20	20	20	120	
<i>Pseudo-nitzschia seriata</i> group						40	80	
<i>Rhizosolenia imbricata</i>				20		20		
<i>Rhizosolenia</i> spp.	40							
<i>Stephanopyxis turris</i>	40		60					
<i>Thalassionema nitzschiooides</i>					40	60		
<i>Thalassiosira oestrupii</i>		60	100	60				40
<i>Thalassiosira</i> spp.							40	
Copepoda		20	20	20			80	320
<i>Dictyocha speculum</i>	120	240	160	20			200	500
<i>Ebria tripartita</i>		60	100					
<i>Favella</i> sp.		20						
Flagellate		160	80					
<i>Helicostomella</i> sp.		140	60			320	2460	
<i>Mesodinium rubrum</i>	9080	1120	3300			20	3520	4460
Pollen		20	60		20			
Tintinnids	240	200	640	320	140	120	240	160
13-Jul-99								
<i>Alexandrium fundyense</i>			120					
<i>Alexandrium fundyense</i> (duplet)			20					
Armoured dinoflagellate		20	60	20		240	40	
<i>Ceratium fusus</i>			40				40	
<i>Ceratium longipes</i>	80	60	100		20		80	
<i>Ceratium tripos</i>			60					
<i>Dinophysis acuminata</i>	160		60	20		20	80	160
<i>Dinophysis acuta</i>			20				40	
<i>Dinophysis norvegica</i>			40					
<i>Dinophysis</i> spp.							40	
<i>Gonyaulax spinifera</i>			20					
<i>Gyrodinium</i> cf. <i>spirale</i>	40		180	60		200		
<i>Heterocapsa triquetra</i>			20					
<i>Protoperdinium</i> spp.	160		120	100			40	40
Unarmoured dinoflagellate			40	20			360	
<i>Asterionellopsis glacialis</i>						20		
<i>Cerataulina pelagica</i>	80		40	20				
<i>Chaetoceros compressus</i>				20			40	
<i>Chaetoceros debilis</i>			20	20			320	
<i>Chaetoceros simplex</i>		20						
<i>Chaetoceros socialis</i>	51770	8600	6680	11460	4760	2720	327320	7560
<i>Chaetoceros</i> spp.	160	60	180	120	160		280	120
<i>Corethron criophilum</i>		60		20				
<i>Coscinodiscus</i> spp.				20	20		80	
<i>Cylindrotheca closterium</i>	400	360	360	300	440	100	560	560
<i>Dactyliosolen fragilissimus</i>	240	180	160	1980	480	120	40	200
<i>Ditylum brightwellii</i>			20	20				
<i>Guinardia delicatula</i>	68470	45090	16480	7500	6640	2820	1640	10480
<i>Guinardia flaccida</i>	160		80	100			360	440
<i>Leptocylindrus danicus</i>	200	220	4400				131930	23280

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Leptocylindrus minimus</i>	80	140	160		40		240	200
<i>Licmophora abbreviata</i>								40
<i>Navicula</i> sp.	40	20		60	20	80	80	160
<i>Paralia marina</i>				20				40
<i>Pleurosigma / Gyrosigma</i>	40							40
13-Jul-99 (continued)								
<i>Pleurosigma angulatum</i>	360	40	120	80	20		360	360
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				20	20			
<i>Pseudo-nitzschia delicatissima</i> group	40	60	80	20	40	40	40	40
<i>Pseudo-nitzschia seriata</i> group					20			
<i>Rhizosolenia hebetata</i>							80	
<i>Rhizosolenia imbricata</i>					60		280	
<i>Skeletonema costatum</i>	40			20				
<i>Thalassiosira gravida</i>			20				40	
<i>Thalassiosira oestrupii</i>			100		80			80
<i>Thalassiosira</i> spp.								
Copepoda	40	20	40	40			80	
<i>Dictyocha speculum</i>	120	60	80				80	200
Flagellate		60	80	20				40
<i>Helicostomella</i> sp.		80	100				160	120
<i>Mesodinium rubrum</i>	2160	1340	1420	100	20	20	240	2920
<i>Notholca</i> sp.								200
Pollen	80	40	20	20			40	
Tintinnids	440	120	300	160	100	60	360	80
20-Jul-99								
<i>Alexandrium fundyense</i>		80	120					80
Armoured dinoflagellate		180	400	80			320	
<i>Ceratium fusus</i>		20	40					
<i>Ceratium longipes</i>		40	80	80			320	240
<i>Dinophysis acuminata</i>		20	40	320				
<i>Dinophysis acuta</i>		20						
<i>Dinophysis norvegica</i>		60	40	160				
<i>Dinophysis pulchella</i>		20						
<i>Gonyaulax spinifera</i>			40					
<i>Gyrodinium</i> cf. <i>spirale</i>		60	480	80			320	
<i>Heterocapsa triquetra</i>			80					
<i>Minuscula bipes</i>			80					
<i>Prorocentrum micans</i>		60						
<i>Protoperidinium depressum</i>			40					
<i>Protoperidinium</i> spp.	160		80	160	80		160	
Unarmoured dinoflagellate		20	240				160	
<i>Cerataulina pelagica</i>			40					
<i>Chaetoceros compressus</i>						40		
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>			40					
<i>Chaetoceros debilis</i>	80				40	40	480	
<i>Chaetoceros simplex</i>			80					
<i>Chaetoceros socialis</i>	52640	760	9200	26720	7560	5920	91360	1120
<i>Chaetoceros</i> spp.	160	40	120	800	400	80	320	
<i>Corethron criophilum</i>		20	40	80		40		
<i>Cylindrotheca closterium</i>	240	180	200	1360	800	280	960	
<i>Ditylum brightwellii</i>			40		40	40		
<i>Guinardia delicatula</i>	43420	53560	60120	45200	27720	13920	8640	2880
<i>Guinardia flaccida</i>	160			1360	80		1920	720
<i>Gyrosigma fasciola</i>							160	
<i>Leptocylindrus danicus</i>	113560	76820	36740	1840	14200	7960	188710	2E+05
<i>Leptocylindrus minimus</i>	480	160	80		200	160	160	
<i>Navicula</i> sp.	80	20	40		40			
<i>Paralia marina</i>				80				
<i>Pleurosigma / Gyrosigma</i>	80		80	80			80	
<i>Pleurosigma angulatum</i>		80		40				
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				80				
<i>Pseudo-nitzschia delicatissima</i> group	80		120	80	120			
<i>Pseudo-nitzschia seriata</i> group	80					160		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Rhizosolenia imbricata</i>				80				
<i>Rhizosolenia setigera</i>	160				40		320	
<i>Rhizosolenia</i> spp.				40	80		160	
<i>Skeletonema costatum</i>				40				
<i>Thalassiosira oestrupii</i>				40	120			
<i>Thalassiosira</i> spp.	80			120		40		160
20-Jul-99 (continued)								
Copepoda	80	120						
<i>Dictyocha speculum</i>	80	100	120	160	40		480	80
Flagellate	80	200	40					
<i>Helicostomella</i> sp.	80					320	3200	
<i>Mesodinium rubrum</i>	5600	620	2200	480	80	40	23520	19040
Pollen	80	20			40		320	
Tintinnids	480	200	320	320	240	80	160	400
27-Jul-99								
<i>Alexandrium fundyense</i>	440	3200	2600	40			360	
<i>Alexandrium fundyense</i> (duplet)			40					
<i>Alexandrium ostenfeldii</i>		40						
<i>Amylax triacantha</i>		120		40			40	40
Armoured dinoflagellate	4560	8000	2440	1520	480		360	1800
<i>Ceratium fusus</i>	360	160	40	240	140		40	
<i>Ceratium kofoidii</i>	40	320						
<i>Ceratium lineatum</i>	40	1200	80	80		20		
<i>Ceratium longipes</i>	240	720	80	400			160	240
<i>Ceratium macroceros</i>				40				
<i>Ceratium minutum</i>						40		
<i>Ceratium tripos</i>	240	400	120	80			40	
<i>Dinophysis acuminata</i>	1720	4480	360	760	60		80	
<i>Dinophysis acuta</i>			40	200	20		40	
<i>Dinophysis norvegica</i>	280	360	40	360			40	80
<i>Dinophysis pulchella</i>		80						40
<i>Dinophysis rotundata</i>		80	40					
<i>Dinophysis</i> spp.	40	80	120	80	80			
<i>Gonyaulax digitale</i>							40	
<i>Gonyaulax spinifera</i>	120	880	640				360	
<i>Gyrodinium</i> cf. <i>spirale</i>	1080	3280	1120	520	240		40	240
<i>Heterocapsa triquetra</i>	520	2760	6360	120			160	
<i>Minuscula bipes</i>							40	
<i>Prorocentrum micans</i>	40	320	120				40	
<i>Protoperidinium brevipes</i>		40						
<i>Protoperidinium</i> spp.	200	1320	440	200	160		200	160
<i>Scrippsiella trochoidea</i>	2440	7040	3720	80			40	1040
Unarmoured dinoflagellate	1480	2800	1080	160			40	160
<i>Asterionellopsis glacialis</i>						40		
<i>Cerataulina pelagica</i>	200			40	20			
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>			120					
<i>Chaetoceros furcellatus</i>						20		
<i>Chaetoceros lorenzianus</i>						20		
<i>Chaetoceros socialis</i>	1040				20	100	165330	680
<i>Chaetoceros</i> spp.	80	40	80		40	100	200	80
<i>Corethron criophilum</i>			80	120	20		40	
<i>Cylindrotheca closterium</i>	160		560	160	20	80		160
<i>Dactyliosolen fragilissimus</i>				5080	10960	5840		
<i>Ditylum brightwellii</i>			80	200			80	
<i>Guinardia delicatula</i>	2880	1280	1400	2160	2840	7800	1040	2280
<i>Guinardia flaccida</i>	40		80			40	320	200
<i>Leptocylindrus danicus</i>	16160	2680	800				68470	1E+05
<i>Leptocylindrus mediterraneus</i>	40		40	40				
<i>Leptocylindrus minimus</i>	80	40			40	40	120	
<i>Navicula</i> sp.						60	80	40
<i>Paralia marina</i>						60		
Pennate				40	20			
<i>Pleurosigma / Gyrosigma</i>	80		40		240			

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Pleurosigma angulatum</i>	440					40	80	80
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				80		40		
<i>Pseudo-nitzschia delicatissima</i> group	40	160	8960	3520	140	500		
<i>Pseudo-nitzschia seriata</i> group	40		200		20		40	
<i>Rhizosolenia hebetata</i>							360	
<i>Rhizosolenia imbricata</i>			120				920	80
<i>Rhizosolenia</i> spp.				40			40	

27-Jul-99 (continued)

<i>Skeletonema costatum</i>	40	120			40			
<i>Thalassiosira auguste-lineata</i>			40		20			
<i>Thalassiosira gravida</i>			40					
<i>Thalassiosira oestrupii</i>	160	80	360	200	320	60		80
<i>Thalassiosira</i> spp.	160	200	200	40	40			
<i>Brachionus</i> sp.				80				
Copepoda		80			20		80	
<i>Dictyocha speculum</i>	80	160	240	240	500		40	200
<i>Favella</i> sp.			120				40	
Flagellate		160	240	40				
<i>Helicostomella</i> sp.	80	3880	80			1000	360	
<i>Mesodinium rubrum</i>	3480	8960	3000	1040	240	120	7040	2360
Tintinnids	1760	1840	400	960	220	20	920	360

03-Aug-99

<i>Alexandrium fundyense</i>		400	20					
<i>Alexandrium fundyense</i> (cyst)			20					
<i>Alexandrium fundyense</i> (duplet)			40					
<i>Amylax triacantha</i>		80		20				
Armoured dinoflagellate	140	320	7680	360	100		160	440
<i>Ceratium fusus</i>	280	40	40	40	20			200
<i>Ceratium kofoidii</i>	20	80						40
<i>Ceratium lineatum</i>	280	240	120					680
<i>Ceratium longipes</i>	80	160	400	60	20			240
<i>Ceratium</i> spp.		40						40
<i>Ceratium tripos</i>	100	40	200	20				160
<i>Dinophysis acuminata</i>	120	200	200	300		20		
<i>Dinophysis acuta</i>	20				20			
<i>Dinophysis norvegica</i>	100	40		200			40	
<i>Dinophysis pulchella</i>			80					
<i>Dinophysis rotundata</i>	40		200					
<i>Dinophysis</i> spp.	80							
<i>Gonyaulax digitale</i>	120	400	2880					80
<i>Gonyaulax</i> sp.			720					
<i>Gonyaulax spinifera</i>	400	1320	1400					120
<i>Gyrodinium aureolum</i>			80					
<i>Gyrodinium</i> cf. <i>spirale</i>	200	120	960	140	20		80	40
<i>Heterocapsa triquetra</i>	20	40	3200					40
<i>Prorocentrum micans</i>	100		200		20			80
<i>Protoperidinium</i> spp.	120	160	160	160			40	
<i>Scirippsiella</i> sp.	20		760	80				1160
<i>Scirippsiella trochoidea</i>	40	280	9160				40	
Unarmoured dinoflagellate	120		80	180				120
<i>Cerataulina pelagica</i>	20			20			40	
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>					20			
<i>Chaetoceros debilis</i>	40		120				80	
<i>Chaetoceros laciniatus</i>			40					
<i>Chaetoceros lorenzianus</i>	20							
<i>Chaetoceros simplex</i>						40		
<i>Chaetoceros socialis</i>	4360	1560	1480	960	160	140	1720	10
<i>Chaetoceros</i> spp.	40	120	560	20	180	60		
<i>Corethron criophilum</i>					40		80	
<i>Coscinodiscus</i> spp.	20				20		40	
<i>Cylindrotheca closterium</i>	80	600	640	420	620	60	40	
<i>Dactyliosolen fragilissimus</i>	20			60	480	180	240	40
<i>Ditylum brightwellii</i>					40	20		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Guinardia delicatula</i>	60	80		340	400	420	560	
<i>Guinardia flaccida</i>							120	80
<i>Gyrosigma tenuissimum</i>						20		
<i>Lauderia annulata</i>							80	
<i>Leptocylindrus danicus</i>	140	280	200				3200	600
<i>Leptocylindrus mediterraneus</i>				80				
<i>Leptocylindrus minimus</i>		40		20		20	200	
<i>Licmophora abbreviata</i>		160	40					

03-Aug-99 (continued)

<i>Navicula</i> sp.	20			20		20	40	
<i>Paralia marina</i>	20					60		
<i>Pleurosigma / Gyrosigma</i>	40	40	120			20	40	
<i>Pleurosigma angulatum</i>	80	80		60		20		40
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				140	40			
<i>Pseudo-nitzschia</i> sp.	20							
<i>Pseudo-nitzschia delicatissima</i> group	120	1160	10320	1820	2960	1780	40	
<i>Pseudo-nitzschia seriata</i> group		280	1040	120				
<i>Rhizosolenia hebetata</i>							160	
<i>Rhizosolenia imbricata</i>	20						840	160
<i>Rhizosolenia</i> spp.		40	80		20			
<i>Skeletonema costatum</i>			680	60	280	120		
<i>Thalassionema nitzschiooides</i>						20		
<i>Thalassiosira auguste-lineata</i>				120				
<i>Thalassiosira oestrupii</i>	140	840	3640	820	260	100		80
<i>Thalassiosira</i> spp.			120		100		40	
Copepoda	120	80				20	40	40
<i>Dictyocha speculum</i>	160	80	720	320	20		200	1640
<i>Ebria tripartita</i>								40
<i>Favella</i> sp.		20					40	
Flagellate								
<i>Helicostomella</i> sp.	100	40					80	1840
<i>Mesodinium rubrum</i>	1860	560	1240	240			1880	12280
Pollen					20			
Tintinnids	360	320	120	440	180	80	120	

10-Aug-99

<i>Alexandrium fundyense</i>	160		320		80		40	
Armoured dinoflagellate	960	800	3840	2080		20		760
<i>Ceratium fusus</i>	800	320	1120	640	80	20		
<i>Ceratium kofoidii</i>				160				
<i>Ceratium lineatum</i>	640	640	960				160	
<i>Ceratium longipes</i>	480	160		320			40	
<i>Ceratium</i> spp.					80		80	
<i>Ceratium tripos</i>	160		320	160	160	20		
<i>Dinophysis acuminata</i>			480		80			
<i>Dinophysis norvegica</i>			160	320				
<i>Dinophysis pulchella</i>			160					
<i>Gonyaulax digitale</i>			960				1360	
<i>Gonyaulax spinifera</i>	320	640	2880				600	
<i>Gyrodinium</i> cf. <i>spirale</i>	160	320	800	480	80		80	
<i>Heterocapsa triquetra</i>		160	320	160			240	
<i>Prorocentrum micans</i>		160	160	160			440	
<i>Protoperdinium</i> spp.	320	480	480	480		160	40	
<i>Scrippsiella</i> sp.		160	1600	320			400	
<i>Scrippsiella trochoidea</i>	480	640	3680	1120			80	120
Unarmoured dinoflagellate		480	800		80			
<i>Asterionellopsis glacialis</i>		160	320					
<i>Cerataulina pelagica</i>	320			640	160		480	
<i>Chaetoceros compressus</i>		480	160	640				
<i>Chaetoceros debilis</i>	2240	320	640	960				
<i>Chaetoceros decipiens</i>		160						
<i>Chaetoceros didymus</i>			160	160				
<i>Chaetoceros ingolfianus</i>	160		320					
<i>Chaetoceros lorenzianus</i>	1440	800	960	640	80	20	160	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros socialis</i>	112640	46080	69600	63200	17280	1320	62080	1960
<i>Chaetoceros</i> spp.	13440	4800	12320	7680	960	420	160	40
<i>Corethron criophilum</i>	160		320	960	160	80		40
<i>Coscinodiscus</i> spp.		160				40		
<i>Cylindrothecea closterium</i>	640	480	640	160	720	100	160	
<i>Dactyliosolen fragilissimus</i>	640	2240	1280	2400	400	240	560	360
<i>Ditylum brightwellii</i>	2240	800	2400	480	80	40		
<i>Guinardia delicatula</i>	800	1600	1920	320	400	160	800	40
<i>Guinardia flaccida</i>							80	

10-Aug-99 (continued)

<i>Lauderia annulata</i>			160	80		80		
<i>Leptocylindrus danicus</i>	160	320					23680	
<i>Leptocylindrus mediterraneus</i>	160							
<i>Leptocylindrus minimus</i>	1120	2080		160		80	320	200
<i>Paralia marina</i>					20			
Pennate			480				80	
<i>Pleurosigma / Gyrosigma</i>	640	320	800					
<i>Pleurosigma angulatum</i>	320			160				
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				640	240	140		
<i>Pseudo-nitzschia</i> sp.					20		80	
<i>Pseudo-nitzschia delicatissima</i> group	37440	20960	95184	81830	13920	7360	480	640
<i>Pseudo-nitzschia seriata</i> group	7360	8480	4640	3520	560	80		
<i>Rhizosolenia hebetata</i>			160	80				
<i>Rhizosolenia imbricata</i>							160	
<i>Rhizosolenia setigera</i>	320				20			
<i>Rhizosolenia</i> spp.	160				80		3760	
<i>Skeletonema costatum</i>	4160	1120	5600	4640	2800	780	400	
<i>Stephanopyxis turris</i>			320					
<i>Thalassionema nitzschiooides</i>			320	640	480			
<i>Thalassiosira auguste-lineata</i>	320		160	160				
<i>Thalassiosira baltica</i>	160							
<i>Thalassiosira gravida</i>		160			80			
<i>Thalassiosira oestrupii</i>	3360	1600	3840	4320	1120	40		320
<i>Thalassiosira</i> spp.	960		2080	1760	160	40	80	
Copepoda	320		160	160			80	40
<i>Dictyocha speculum</i>	480	320	160	800	320			400
Flagellate						80		
<i>Helicostomella</i> sp.			160	480	80			40
<i>Mesodinium rubrum</i>	4320	6080	2080	480		20	4320	1960
Pollen						20	80	
Tintinnids	640	640	1920	320	240	20	1280	840

17-Aug-99

<i>Alexandrium fundyense</i>			160					
<i>Amylax triacantha</i>		160						
Armoured dinoflagellate	1600	960	1280			320	520	
<i>Ceratium fusus</i>	160	480	160				40	
<i>Ceratium lineatum</i>	1280	160	800				160	400
<i>Ceratium longipes</i>	320		160	160		40	120	
<i>Ceratium tripos</i>			320	80			280	
<i>Dinophysis acuminata</i>					80		40	
<i>Dinophysis norvegica</i>	160						80	
<i>Dinophysis pulchella</i>							40	
<i>Dinophysis rotundata</i>						160	240	
<i>Gonyaulax digitale</i>	320	1280	640				480	80
<i>Gonyaulax spinifera</i>								
<i>Gyrodinium cf. spirale</i>	320	320	160	160				
<i>Heterocapsa triquetra</i>			160					
<i>Prorocentrum micans</i>		160	160			160	280	
<i>Protoperidinium</i> spp.			320				240	
<i>Scrippsiella</i> sp.		160						
<i>Scrippsiella trochoidea</i>	320	480	2240			320	600	
Unarmoured dinoflagellate							40	
<i>Actinopycthus senarius</i>					160		80	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Asterionellopsis glacialis</i>	320	480	1920	880	760	280		
<i>Cerataulina pelagica</i>			160	80			480	
<i>Chaetoceros compressus</i>		640	640	160	200	240		
<i>Chaetoceros constrictus</i>					40			
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>		160						
<i>Chaetoceros debilis</i>	1280	3840	5120	3520	480	320	160	
<i>Chaetoceros decipiens</i>							40	
<i>Chaetoceros ingolfianus</i>	160	320		80				
<i>Chaetoceros laciniatus</i>		640						
<i>Chaetoceros lorenzianus</i>	160	800	160	720	240	360		80
17-Aug-99 (continued)								
<i>Chaetoceros simplex</i>					40			
<i>Chaetoceros socialis</i>	77440	130240	106880	111040	7960	7520	79360	2080
<i>Chaetoceros</i> spp.	800	4800	4000	5840	2240	880	160	240
<i>Chaetoceros subtilis</i>					40			
<i>Corethron criophylum</i>		160	160	240	200		160	40
<i>Coscinodiscus</i> spp.					80	40		
<i>Cylindrotheca closterium</i>	480	160	960	320	400	120	160	40
<i>Dactyliosolen fragilissimus</i>	3040	6080	5920	2240	1080	680	800	3680
<i>Ditylum brightwellii</i>	1280	2080	4160	3600	600	160	160	80
<i>Eucampia zodiacus</i>						160		
<i>Guinardia delicatula</i>	640	480	1920	480	600	280	800	400
<i>Guinardia flaccida</i>			160	80			160	200
<i>Lauderia annulata</i>				160				
<i>Leptocylindrus danicus</i>	320		320				120	
<i>Leptocylindrus mediterraneus</i>	160							
<i>Leptocylindrus minimus</i>	160	480	1760	1040	120	200	480	
<i>Navicula</i> sp.					40	40		
Pennate		160		400				
<i>Pleurosigma / Gyrosigma</i>		160				160		
<i>Pleurosigma angulatum</i>	160			80				80
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				320	200	240		
<i>Proboscia alata</i>					40			
<i>Pseudo-nitzschia</i> sp.				80			160	
<i>Pseudo-nitzschia delicatissima</i> group	480	160	320	400	2640	1080	160	
<i>Pseudo-nitzschia seriata</i> group		160	640	320	320	240		80
<i>Rhizosolenia imbricata</i>				80	80	80	5120	280
<i>Rhizosolenia setigera</i>				80				
<i>Rhizosolenia</i> spp.			160					
<i>Skeletonema costatum</i>	320	160	3360	2080	280	1000	160	
<i>Stephanopyxis turris</i>				80	40			
<i>Thalassionema nitzschiooides</i>		480		480	240	160		
<i>Thalassiosira auguste-lineata</i>				160	80			
<i>Thalassiosira gravida</i>			160					
<i>Thalassiosira oestrupii</i>		1440	960	1520	720	680	160	200
<i>Thalassiosira</i> spp.	320	1120	1600	360	320			
<i>Triceratium alternans</i>				40				
Copepoda	320	320	160	80		40		80
<i>Dictyocha speculum</i>	320		480		40			440
<i>Favella</i> sp.		320						
<i>Helicostomella</i> sp.	160	2720	320				800	
<i>Mesodinium rubrum</i>	5920	1920	960		40		16800	71810
Pollen						160		
Tintinnids	640		480	320	160		640	120
24-Aug-99								
<i>Alexandrium fundyense</i>				160				
Armoured dinoflagellate	480	320	280	160		20		640
<i>Ceratium fusus</i>			40	240	80			
<i>Ceratium kofoidii</i>	480	80	120	240				
<i>Ceratium lineatum</i>			160	40	1280	80		
<i>Ceratium</i> spp.	320	80					80	
<i>Ceratium tripos</i>	800	720	400	80	80			80
<i>Dinophysis acuminata</i>				160				

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Dinophysis norvegica</i>			80					
<i>Gonyaulax spinifera</i>							240	
<i>Gyrodinium cf. spirale</i>	160	560	200	160	80		80	80
<i>Heterocapsa triquetra</i>				80				
<i>Protorcentrum micans</i>		80	240	80				160
<i>Protoperidinium</i> spp.	160		80	320				240
<i>Scrippsiella</i> sp.				80			320	80
<i>Scrippsiella trochoidea</i>	160		40	160	80			320
Unarmoured dinoflagellate	480	320	320	240				
<i>Asterionellopsis glacialis</i>	1600	320	280	1360	2080	40	80	80
<i>Cerataulina pelagica</i>			80	240			1600	160
24-Aug-99 (continued)								
<i>Chaetoceros compressus</i>	480	80	80	320		20		
<i>Chaetoceros constrictus</i>			360				240	
<i>Chaetoceros debilis</i>	9280	3280	3240	12480	5680	160	160	720
<i>Chaetoceros decipiens</i>	160		280					80
<i>Chaetoceros didymus</i>		80						
<i>Chaetoceros laciniatus</i>		80	480	80	80			240
<i>Chaetoceros lorenzianus</i>	160		40	320				
<i>Chaetoceros simplex</i>						80		
<i>Chaetoceros socialis</i>	59520	8000	8360	31760	18560	80	340680	16160
<i>Chaetoceros</i> spp.	9120	3040	5840	7120	4400	340	640	1040
<i>Chaetoceros subtilis</i>				80				
<i>Corethron criophilum</i>			80	160			80	
<i>Coscinodiscus</i> spp.			80		80			
<i>Cylindrotheca closterium</i>	800		40	240	800	20	1680	80
<i>Dactyliosolen fragilissimus</i>		80	120				12480	8480
<i>Ditylum brightwellii</i>	9920	8000	5360	8640	6240	160	80	160
<i>Eucampia zodiacus</i>	160	80		160	80		160	
<i>Guinardia delicatula</i>	1120		200	960	560	160	2240	880
<i>Guinardia flaccida</i>		80	80	400		60	1200	
<i>Guinardia striata</i>	320							
<i>Lauderia annulata</i>				80			160	
<i>Leptocylindrus danicus</i>	113560	100200	105210	123580	28640	620	8480	10000
<i>Leptocylindrus minimus</i>	320	80	40		80	60	400	80
<i>Navicula</i> sp.						20		80
Pennate							160	
<i>Pleurosigma / Gyrosigma</i>			40	80	80	100		
<i>Pleurosigma angulatum</i>	160				160			
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>					40			
<i>Proboscia alata</i>				80				
<i>Pseudo-nitzschia delicatissima</i> group	160			240		300	560	
<i>Pseudo-nitzschia seriata</i> group	640		160	240	320	160		160
<i>Rhizosolenia hebetata</i>						20	160	
<i>Rhizosolenia imbricata</i>							960	400
<i>Rhizosolenia setigera</i>		80		160	160			
<i>Rhizosolenia</i> spp.	160	80		80	320			
<i>Skeletonema costatum</i>	35200	75150	10840	9360	6720	1440	560	1200
<i>Stephanopyxis turris</i>	160				160			80
<i>Thalassionema nitzschiooides</i>			80					
<i>Thalassiosira auguste-lineata</i>	320		120					
<i>Thalassiosira gravida</i>	160		120	160	80			160
<i>Thalassiosira oestrupii</i>		80	120	800	240	60		160
<i>Thalassiosira</i> spp.	4640	2000	1320	2480	2640		160	400
<i>Triceratium alternans</i>						20		
Copepoda	160			80				
<i>Dicyocha speculum</i>	160			80			80	160
<i>Favella</i> sp.		160	320	160				800
Flagellate	160						80	
<i>Helicostomella</i> sp.	320		120	160			80	
<i>Mesodinium rubrum</i>	7840	720	1800	320	160		6960	5680
Pollen						20		
Tintinnids	1280	80	320	320	240		560	320

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
31-Aug-99								
Armoured dinoflagellate	160	160	720	800			240	
<i>Ceratium fusus</i>			160					
<i>Ceratium kofoidii</i>		480	640	320			160	
<i>Ceratium lineatum</i>		320	480	480	240	40	320	400
<i>Ceratium longipes</i>						40		
<i>Ceratium</i> spp.		320						
<i>Ceratium tripos</i>	160		320	160			160	
<i>Dinophysis acuminata</i>				160				
<i>Dinophysis fortii</i>							80	
<i>Gyrodinium</i> cf. <i>spirale</i>		480	1040	480	80			
<i>Prorocentrum micans</i>	160		80	320			80	
31-Aug-99 (continued)								
<i>Protoperdinium</i> spp.	160		240			40		240
<i>Scrippsiella</i> sp.			1280	640				
<i>Scrippsiella trochoidea</i>	320						80	
Unarmoured dinoflagellate		160	480	160				
<i>Asterionellopsis glacialis</i>	3520	2080	1280	2080	960	1080		400
<i>Cerataulina pelagica</i>	480		160			40	480	80
<i>Chaetoceros compressus</i>			160	320	160	40		160
<i>Chaetoceros constrictus</i>	640	1920	320					
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>		320						
<i>Chaetoceros debilis</i>	8000	9920	7200	7840	3520	1280	800	800
<i>Chaetoceros decipiens</i>	960	960	800					80
<i>Chaetoceros didymus</i>		480	560	480	80	40		
<i>Chaetoceros ingolfianus</i>	320	320		160				
<i>Chaetoceros laciniatus</i>	160	160	800				160	
<i>Chaetoceros lorenzianus</i>		480		1120	400	40		80
<i>Chaetoceros socialis</i>	106560	61120	34080	50720	10240	320	59040	35680
<i>Chaetoceros</i> spp.	6880	9600	5440	9920	3920	1440	640	800
<i>Corethron criophilum</i>	160	160	320		80	40	320	
<i>Coscinodiscus</i> spp.	160		80		80	40		
<i>Cylindrotheca closterium</i>	1120	640	720	320	560	200	2080	960
<i>Dactyliosolen fragilissimus</i>	10240		480	3040	2320	1280	45440	11040
<i>Ditylum brightwellii</i>	30720	33440	16880	24000	13440	2880	2400	960
<i>Eucampia zodiacus</i>	160	480					320	1760
<i>Guinardia delicatula</i>	960	640	400	640	560	200	2240	1920
<i>Guinardia flaccida</i>	640		80	160			1120	2480
<i>Guinardia striata</i>			80					
<i>Leptocylindrus danicus</i>		2080	1120				1600	8400
<i>Leptocylindrus minimus</i>	800	320				40	1920	160
<i>Odontella regia</i>	160	160						
<i>Paralia marina</i>	160							
<i>Pleurosigma / Gyrosigma</i>					120			
<i>Pleurosigma angulatum</i>							80	
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	160		320	80			160	
<i>Proboscia alata</i>				240		200	640	
<i>Pseudo-nitzschia delicatissima</i> group			320	400	320	120	160	160
<i>Pseudo-nitzschia seriata</i> group					80	40	160	240
<i>Rhizosolenia imbricata</i>					160			
<i>Rhizosolenia setigera</i>					160			
<i>Rhizosolenia</i> spp.		160	80	640			160	
<i>Skeletonema costatum</i>	1440	5280	4880	9440	6400	4000	5920	640
<i>Stephanopyxis turris</i>			80					
<i>Thalassionema nitzschiooides</i>	480	320	80		240	120		80
<i>Thalassiosira auguste-lineata</i>			320					
<i>Thalassiosira baltica</i>					160			
<i>Thalassiosira gravida</i>	1600	2240	720	1600	400		160	80
<i>Thalassiosira oestrupii</i>		320	320	320	320	120		240
<i>Thalassiosira</i> spp.	2400	3200	2480	5440	1680	520	160	240
<i>Dictyocha speculum</i>				160	80		160	320
Flagellate								80
<i>Helicostomella</i> sp.	160	320		320				

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Mesodinium rubrum</i>	2880	480	3040	800	640		4320	6080
Pollen						40		
Tintinnids	160	160	1120	160	240		480	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
07-Sep-99								
Armoured dinoflagellate		800	240	480	320			
<i>Ceratium fusus</i>				160	80		160	160
<i>Ceratium kofoidii</i>	160		80	320				1440
<i>Ceratium lineatum</i>	80	880	1360	480				1760
<i>Ceratium</i> spp.				80				160
<i>Ceratium tripos</i>	160	560	240	160	80		160	960
<i>Dinophysis acuminata</i>								160
<i>Dinophysis fortii</i>							160	
<i>Dinophysis norvegica</i>								160
<i>Dinophysis</i> spp.								640
<i>Gyrodinium</i> cf. <i>spirale</i>	80		160	1120	240			1600
<i>Heterocapsa triquetra</i>			80					
<i>Minuscula bipes</i>			80					
<i>Prorocentrum micans</i>	80	400	160	160				1280
<i>Prorocentrum minimum</i>				80				
<i>Protoperidinium</i> spp.	560	240	400	320				1280
<i>Scrippsiella</i> sp.	160	720						
<i>Scrippsiella trochoidea</i>			80	240				320
Unarmoured dinoflagellate				160	160	80		
<i>Actinoptychus senarius</i>	80							
<i>Asterionellopsis glacialis</i>	1840	720	720	2080	2960	1200		
<i>Cerataulina pelagica</i>			160				160	
<i>Chaetoceros compressus</i>	1920	480	160	960	560			160
<i>Chaetoceros debilis</i>	3920	1040	4400	5280	2640	880	160	1600
<i>Chaetoceros decipiens</i>	1920		640	320	720	400		320
<i>Chaetoceros didymus</i>	160		800	1120	560	80		
<i>Chaetoceros ingolfianus</i>				80	320			
<i>Chaetoceros laciniatus</i>	240			160	160			
<i>Chaetoceros lorenzianus</i>	480	720	1040	4000	1920			
<i>Chaetoceros similis</i>					80			
<i>Chaetoceros simplex</i>						160		
<i>Chaetoceros socialis</i>	167000	6720	6640	26880	20640	400	42400	1E+05
<i>Chaetoceros</i> spp.	9520	6560	3600	14240	7200	720	160	1440
<i>Corethron criophilum</i>	160		240	160				320
<i>Coscinodiscus</i> spp.				160	240	160		
<i>Cylindrotheca closterium</i>	1040	320	240		1040	240	2720	1280
<i>Dactyliosolen fragilissimus</i>			80		640	320	66240	7840
<i>Ditylum brightwellii</i>	20480	8160	13280	31680	28000	3200	1760	3680
<i>Eucampia zodiacus</i>	240			720	1120	880	80	3200
<i>Guinardia delicatula</i>	320	160	80	320	880	480	320	320
<i>Guinardia flaccida</i>	400			240	160	240	160	960
<i>Guinardia striata</i>	80				160	80		160
<i>Lauderia annulata</i>				160	160	80		
<i>Leptocylindrus danicus</i>					160			480
<i>Leptocylindrus mediterraneus</i>	80	80	320			480		
<i>Leptocylindrus minimus</i>	240				160		80	7840
<i>Licmophora abbreviata</i>			80					
<i>Odontella sinensis</i>				160	160	80		
<i>Paralia marina</i>	80							
<i>Pleurosigma / Gyrosigma</i>					160			
<i>Pleurosigma angulatum</i>	80							
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>						160		
<i>Proboscia alata</i>						160		
<i>Pseudo-nitzschia delicatissima</i> group	320			80			80	160
<i>Pseudo-nitzschia seriata</i> group	80	560	800	1760	720		800	800
<i>Rhizosolenia setigera</i>				240				160
<i>Rhizosolenia</i> spp.	80	80	80					
<i>Skeletonema costatum</i>			80	560	320	1120	1760	1120
<i>Stephanopyxis turris</i>			80		320	160		
<i>Synedra</i> sp.					80			
<i>Thalassionema nitzschiooides</i>						160	320	480
<i>Thalassiosira auguste-lineata</i>	80			720	800	560		

ORGANISM	3	15	16-0m	16-10m 160	16-25m	16-50m	17	25
<i>Thalassiosira baltica</i>								
07-Sep-99 (continued)								
<i>Thalassiosira decipiens</i>			80					
<i>Thalassiosira gravida</i>	880	240	2320	2880	1200	320		
<i>Thalassiosira nordenskioeldii</i>			80					
<i>Thalassiosira oestrupii</i>	80	80		320	160	160		
<i>Thalassiosira</i> spp.	1280	160	1360	3520	2880	400		
<i>Triceratium alternans</i>					80			
Copepoda			80				160	160
<i>Dictyocha speculum</i>			480	320	160			800
<i>Favella</i> sp.		80						
Flagellate		80	80				160	
<i>Helicostomella</i> sp.	160	320						160
<i>Mesodinium rubrum</i>	4160	2560	1920	1280	320		6880	27040
Tintinnids	480	320	240	960	720	240	640	1440
13-Sep-99								
<i>Alexandrium fundyense</i>		40		80				
Armoured dinoflagellate		560	2960	1120	80		80	
<i>Ceratium fusus</i>				80	80			
<i>Ceratium kofoidii</i>			400	720			240	
<i>Ceratium lineatum</i>	320	360	560	1280	160		400	760
<i>Ceratium tripos</i>	320	80	80	160	80			160
<i>Dinophysis acuminata</i>		80	160				40	
<i>Dinophysis fortii</i>							320	
<i>Dinophysis</i> spp.						80		
<i>Gonyaulax spinifera</i>			80					
<i>Gyrodinium</i> cf. <i>spirale</i>	160	160	480	560	160	60	160	240
<i>Heterocapsa triquetra</i>				80				
<i>Prorocentrum micans</i>		240	80		80		80	240
<i>Protoperidinium</i> spp.		40	560		80			160
<i>Scrippsiella</i> sp.			960	640				40
<i>Scrippsiella trochoidea</i>		80	880	160				
Unarmoured dinoflagellate	160	40	560	160	160	20	80	40
<i>Actinopytchus senarius</i>						40		
<i>Asterionellopsis glacialis</i>	480	280	560	320	1360	220		
<i>Cerataulina pelagica</i>				80			80	
<i>Chaetoceros compressus</i>	1440	720	1520	3280	3600	20		40
<i>Chaetoceros constrictus</i>					80			
<i>Chaetoceros debilis</i>	6400	1360	1600	5840	6720	540	80	320
<i>Chaetoceros decipiens</i>		120				60		
<i>Chaetoceros diadema</i>				80				
<i>Chaetoceros didymus</i>				320	400			
<i>Chaetoceros ingolfianus</i>				160	720			
<i>Chaetoceros laciniatus</i>	480	400	720	480	560	20		
<i>Chaetoceros lorenzianus</i>	2240	520	800	960	1280	40	160	200
<i>Chaetoceros similis</i>					80			
<i>Chaetoceros socialis</i>	60160	18000	25280	28480	7840	400	68960	27960
<i>Chaetoceros</i> spp.	7360	4600	6960	10400	6720	660	240	280
<i>Corethron criophilum</i>	160					40	80	40
<i>Coscinodiscus</i> spp.	160	40		160	80	40		
<i>Cylindrotheeca closterium</i>	960	80	400	480	640	160	2640	1440
<i>Dactyliosolen fragilissimus</i>		40	80	160		20	560	160
<i>Ditylum brightwellii</i>		40				20	400	120
<i>Eucampia zodiacus</i>	2400	1000	1040	1760	1840	420	8480	7480
<i>Guinardia delicatula</i>	160	40		160	160	140	80	80
<i>Guinardia flaccida</i>	480	280	80		160	100	1120	920
<i>Guinardia striata</i>					160			
<i>Gyrosigma tenuissimum</i>						20		
<i>Lauderia annulata</i>		360	80	160	720			40
<i>Leptocylindrus danicus</i>				480		20		40
<i>Leptocylindrus mediterraneus</i>		360	1040	1200	560	20		40
<i>Leptocylindrus minimus</i>						20	480	160
<i>Navicula</i> sp.			40					

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Odontella sinensis</i>	640	80	240	80	400	100	80	
<i>Paralia marina</i>					20			

13-Sep-99 (continued)

<i>Pleurosigma / Gyrosigma</i>					20	80	40	
<i>Pleurosigma angulatum</i>							40	
<i>Proboscia alata</i>	160			80	80		40	
<i>Pseudo-nitzschia</i> sp.								
<i>Pseudo-nitzschia delicatissima</i> group	40	240		80	20	160		
<i>Pseudo-nitzschia seriata</i> group	640	520	400	1120	880	440	560	40
<i>Rhizosolenia setigera</i>	160			80			40	
<i>Rhizosolenia</i> spp.							40	
<i>Skeletonema costatum</i>	160			240	160	120	320	
<i>Stephanopyxis turris</i>	160		80	400		20	80	40
<i>Thalassionema nitzschiooides</i>				160	160	40		
<i>Thalassiosira auguste-lineata</i>	640	440	160	1600	480	200		40
<i>Thalassiosira baltica</i>				160	80	120		
<i>Thalassiosira decipiens</i>		40			720			
<i>Thalassiosira gravida</i>	8960	2920	4560	5360	3680	720	160	320
<i>Thalassiosira nordenskioeldii</i>	160				160	40	80	40
<i>Thalassiosira oestrupii</i>								
<i>Thalassiosira</i> spp.	1920	320	640	880	320	300		80
<i>Triceratium alternans</i>					160			
Copepoda	160				80			
<i>Dictyocha speculum</i>		40	80	80			240	
Flagellate		40						
<i>Helicostomella</i> sp.	160			160				
<i>Mesodinium rubrum</i>	960	400	3040	320		20	880	1720
Tintinnids		200	800	400			400	120

21-Sep-99

<i>Alexandrium fundyense</i>		200						
Armoured dinoflagellate	160	240	360	480	40			40
<i>Ceratium fusus</i>					40			
<i>Ceratium kofoidii</i>			280	1600				
<i>Ceratium lineatum</i>	360	1000	1560	1760	80	40	160	600
<i>Ceratium tripos</i>	40	40	120	80			160	80
<i>Dinophysis acuminata</i>				80			400	
<i>Dinophysis fortii</i>				160				
<i>Dinophysis</i> spp.			200				40	
<i>Gonyaulax digitale</i>			40					
<i>Gonyaulax spinifera</i>		120	40					
<i>Gyrodinium</i> cf. <i>spirale</i>	240	480	480	800		200	320	880
<i>Heterocapsa triquetra</i>	40	160	40					
<i>Minuscula bipes</i>		40	40		40			
<i>Prorocentrum micans</i>	120	520	40	160		40		240
<i>Prorocentrum minimum</i>		1080						
<i>Protoperidinium</i> spp.	240	200	160	160	80		160	240
<i>Scrippsiella</i> sp.	240	1320	120	80			320	
<i>Scrippsiella trochoidea</i>				80			40	
Unarmoured dinoflagellate	40	840	120		40	40		
<i>Actinptychus senarius</i>					40	480		
<i>Asterionellopsis glacialis</i>	80				40	360		
<i>Cerataulina pelagica</i>					40			
<i>Chaetoceros compressus</i>	680	1160	600	800	680	400		240
<i>Chaetoceros constrictus</i>	160		120					
<i>Chaetoceros debilis</i>	2520	960	1400	3200	1920	1000	800	600
<i>Chaetoceros decipiens</i>		40					120	
<i>Chaetoceros diadema</i>					40			
<i>Chaetoceros didymus</i>	40				40			
<i>Chaetoceros ingolfianus</i>	80			640	240			
<i>Chaetoceros laciniatus</i>	160	200	80	80				
<i>Chaetoceros lorenzianus</i>	400	120	80	320		80	160	120
<i>Chaetoceros socialis</i>	46760	4440	7600	10240	9520	4320	125760	2E+05
<i>Chaetoceros</i> spp.	3520	5520	1360	2560	2480	2080	320	640

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Corethron criophilum</i>		120			40			40
<i>Coscinodiscus</i> spp.	80		120		80	120		
<i>Cylindrotheca closterium</i>	280	400	240	80	560	120	2080	280
21-Sep-99 (continued)								
<i>Dactyliosolen fragilissimus</i>	200	80					120	
<i>Detonula pumila</i>		40						
<i>Ditylum brightwellii</i>	80		200	80	400	80	480	80
<i>Eucampia zodiacus</i>	5720	800	9120	9840	6240	1920	20160	85170
<i>Guinardia delicatula</i>	40	80	80	80	80	40	320	
<i>Guinardia flaccida</i>	80		80			40	1120	200
<i>Guinardia striata</i>	120				40			
<i>Gyrosigma tenuissimum</i>						40		
<i>Lauderia annulata</i>	720	160	520	800	640	200	320	280
<i>Leptocylindrus mediterraneus</i>	200	280	2960	2240	1960	560		160
<i>Leptocylindrus minimus</i>			80			40	480	240
<i>Navicula</i> sp.						40		
<i>Odontella regia</i>	800	40	40					
<i>Odontella sinensis</i>				400	280	880		
<i>Pleurosigma / Gyrosigma</i>			80	80	200	80	160	
<i>Pleurosigma angulatum</i>	40	40		80				
<i>Pleurosigma formosum</i>							160	
<i>Pseudo-nitzschia delicatissima</i> group	80		80	80	80	240	800	
<i>Pseudo-nitzschia seriata</i> group	280	440	640	560	560	400	800	320
<i>Rhizosolenia</i> spp.							160	
<i>Skeletonema costatum</i>		80		80			160	
<i>Stephanopyxis turris</i>	40	120	240	240	280	120		80
<i>Thalassionema nitzschiooides</i>	40				200			
<i>Thalassiosira auguste-lineata</i>	600	80	760	800	360	640		
<i>Thalassiosira baltica</i>			40					
<i>Thalassiosira gravida</i>	10720	680	9320	10080	3720	2880	640	1320
<i>Thalassiosira nordenskioeldii</i>	120							
<i>Thalassiosira oestrupii</i>				80				
<i>Thalassiosira</i> spp.	120		80	240	120	320		
Copepoda	160							
<i>Dictyocha speculum</i>		40	280	400	40		160	80
<i>Favella</i> sp.		80						
Flagellate	80		240	320				360
<i>Mesodinium rubrum</i>	6680	2160	1960	640	80		1440	3840
Tintinnids	160	280	280	160	40	40	480	320
28-Sep-99								
Armoured dinoflagellate		40	120	80	80			
<i>Ceratium fusus</i>				40				
<i>Ceratium kofoidii</i>		40		320			160	
<i>Ceratium lineatum</i>	400	960	240	1080	80			520
<i>Ceratium longipes</i>						20		
<i>Ceratium tripos</i>		40		40	80			40
<i>Dinophysis acuminata</i>				80				160
<i>Gonyaulax digitale</i>				40				
<i>Gonyaulax spinifera</i>			40					
<i>Gyrodinium</i> cf. <i>spirale</i>	400	160	80	320			160	240
<i>Heterocapsa triquetra</i>		80						
<i>Prorocentrum micans</i>		40	280	200	80		80	40
<i>Protoperidinium ovatum</i>								40
<i>Protoperidinium</i> spp.		40		40				
<i>Scrippsiella</i> sp.	80		480					
<i>Scrippsiella trochoidea</i>			40	40				
Unarmoured dinoflagellate	120		360					
<i>Actinptychus senarius</i>				80	80	240		
<i>Asterionellopsis glacialis</i>				40		40		
<i>Cerataulina pelagica</i>			240					
<i>Chaetoceros compressus</i>	240	80	400	400	240	20		
<i>Chaetoceros constrictus</i>		40	160					40
<i>Chaetoceros debilis</i>	2080	1320	2080	1040	640	420		200

ORGANISM	3	15	16-0m	16-10m	40	16-25m	16-50m	17	25
<i>Chaetoceros decipiens</i>									
<i>Chaetoceros didymus</i>	80					160	40		
<i>Chaetoceros ingolfianus</i>				80					
<i>Chaetoceros laciniatus</i>	160			120					
28-Sep-99 (continued)									
<i>Chaetoceros lorenzianus</i>	400	600	600	320	240	160	120		
<i>Chaetoceros socialis</i>	19440	6480	14080	3720	3040	580	22160	43420	
<i>Chaetoceros</i> spp.	720	520	1280	640	1360	800		120	
<i>Corethron criophilum</i>				80		20			
<i>Coscinodiscus</i> spp.	160	120		160				80	
<i>Cylindrotheca closterium</i>	240	80		120	80	20	880	40	
<i>Dactyliosolen fragilissimus</i>			280	160		60	80		
<i>Ditylum brightwellii</i>	560	240	920	560	880	140		160	
<i>Eucampia zodiacus</i>	9200	15600	17640	17640	10320	3020	11200	68470	
<i>Guinardia delicatula</i>				80			320		
<i>Guinardia flaccida</i>					160			40	
<i>Gyrosigma tenuissimum</i>						80			
<i>Lauderia annulata</i>	1040	960	1160	1160	560	220	80	280	
<i>Leptocylindrus mediterraneus</i>	240	1080	2040	1640	720	120		1240	
<i>Leptocylindrus minimus</i>			40				160		
<i>Navicula</i> sp.								40	
<i>Odontella regia</i>	2080	280	360		160	320		360	
<i>Odontella sinensis</i>				360	1120	720			
<i>Paralia marina</i>						20		40	
Pennate						20			
<i>Pleurosigma / Gyrosigma</i>	160			320	160	40		80	
<i>Pleurosigma angulatum</i>	80						80		
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>						60			
<i>Pseudo-nitzschia</i> sp.							80		
<i>Pseudo-nitzschia delicatissima</i> group			40		80		320	120	
<i>Pseudo-nitzschia seriata</i> group	160	280	480	120	160	220	80	120	
<i>Skeletonema costatum</i>						200		320	
<i>Stephanopyxis turris</i>	480	520	960	280	240	120		120	
<i>Thalassionema nitzschiooides</i>			40						
<i>Thalassiosira auguste-lineata</i>	240	80	200			80			
<i>Thalassiosira baltica</i>					80				
<i>Thalassiosira gravida</i>	6960	4960	6680	4120	4880	1500	560	1440	
<i>Thalassiosira oestrupii</i>		40		40					
<i>Thalassiosira</i> spp.	160		40	120	160	80			
<i>Triceratium alternans</i>						40			
Copepoda				80		20			
<i>Dictyocha speculum</i>	80	120	80	240	80			40	
<i>Favella</i> sp.					80				
Flagellate			80		80				
<i>Mesodinium rubrum</i>	1200	4240	1040	240			5600	1320	
Tintinnids	80	200		40			320	80	
05-Oct-99									
Armoured dinoflagellate			80					40	
<i>Ceratium fusus</i>								40	
<i>Ceratium kofoidii</i>			80	80	20				
<i>Ceratium lineatum</i>	400		360	640	140	20	40	360	
<i>Ceratium tripos</i>	80		120		100			40	
<i>Dinophysis acuminata</i>							80	240	
<i>Dinophysis</i> spp.							40		
<i>Gyrodinium cf. spirale</i>		160	160	480	40		200	160	
<i>Prorocentrum micans</i>	80	80			60			40	
<i>Protoperidinium</i> spp.		80						40	
<i>Scrippsiella</i> sp.			40						
<i>Actinptychus senarius</i>			400	640	300	60			
<i>Asterionellopsis glacialis</i>				160		40			
<i>Chaetoceros compressus</i>		80	40		20				
<i>Chaetoceros debilis</i>	240	320	840	1600	480	640	80	240	
<i>Chaetoceros didymus</i>						40			

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros laciniatus</i>	80							
<i>Chaetoceros lorenzianus</i>	160	720	400	160	420	360	400	
<i>Chaetoceros socialis</i>	7600	8960	8600	5840	1000	740	12680	90180
<i>Chaetoceros</i> spp.	240	240	600	880	580	360	40	80
<i>Chaetoceros</i> spp. (phaeoceros)			40					

05-Oct-99 (continued)

<i>Corethron criophilum</i>			80		20	60		40
<i>Coscinodiscus centralis</i>					20			
<i>Coscinodiscus</i> spp.	160	80	160	720	40			40
<i>Cylindrotheca closterium</i>	240	240	80	160	120	60	120	360
<i>Dactyliosolen fragilissimus</i>					60	20		
<i>Detonula pumila</i>	80		400					
<i>Ditylum brightwellii</i>	320	320	240	320	320	280	40	
<i>Eucampia zodiacus</i>	27200	26240	8880	20240	10760	5080	17640	98530
<i>Guinardia delicatula</i>			40	80	60	20		
<i>Guinardia flaccida</i>	80						40	
<i>Guinardia striata</i>			80					
<i>Gyrosigma tenuissimum</i>					20			
<i>Lauderia annulata</i>	1520	1360	1200	1200	1680	460	120	80
<i>Leptocylindrus mediterraneus</i>	80	80		480	120		120	1240
<i>Leptocylindrus minimus</i>				160	20		120	
<i>Licmophora abbreviata</i>						80		
<i>Navicula</i> sp.							40	
<i>Odontella regia</i>		80				120		40
<i>Odontella sinensis</i>	80	800		800	440	760	120	40
<i>Paralia marina</i>						20		
Pennate			80			40		
<i>Pleurosigma / Gyrosigma</i>	80	80	40	400	140	20	80	120
<i>Pleurosigma angulatum</i>							40	
<i>Pseudo-nitzschia</i> sp.			40					
<i>Pseudo-nitzschia delicatissima</i> group		80		240	80	20	80	40
<i>Pseudo-nitzschia seriata</i> group	240		280	400	140	300	80	40
<i>Skeletonema costatum</i>						40		
<i>Stephanopyxis turris</i>	400	320	240	1680	860	320		120
<i>Thalassionema nitzschiooides</i>					20	60		
<i>Thalassiosira auguste-lineata</i>		80				20		
<i>Thalassiosira baltica</i>						20	40	
<i>Thalassiosira gravida</i>	2560	3520	2240	3520	2460	1540	640	2080
<i>Thalassiosira nordenskioeldii</i>	80							
<i>Thalassiosira</i> spp.		80	120	160	40	140	40	
Copepoda			120	160	40			
<i>Dicyocha speculum</i>		160	120	160	20			40
Flagellate			40	80				
<i>Mesodinium rubrum</i>	3680	1040	960	240	20		1200	1120
Tintinnids	240					20	40	40

18-Oct-99

Armoured dinoflagellate			20		20	20		40
<i>Ceratium fusus</i>	20		20					
<i>Ceratium kofoidii</i>			20				320	
<i>Ceratium lineatum</i>	160	400	240	320	200			880
<i>Ceratium minutum</i>				20				
<i>Ceratium</i> spp.			20					
<i>Ceratium tripos</i>	20	20	20	20			40	40
<i>Dinophysis acuminata</i>			20				40	
<i>Dinophysis fortii</i>				20			200	
<i>Gyrodinium cf. spirale</i>	20		40	80	20	20	520	560
<i>Heterocapsa triquetra</i>	20	40						
<i>Prorocentrum micans</i>	60	100	20		20	20	160	40
<i>Protoperidinium</i> spp.			20				40	
Unarmoured dinoflagellate		20	40				120	
<i>Actinptychus senarius</i>	20		20	140	80	40	40	
<i>Asterionellopsis glacialis</i>						20		
<i>Cerataulina pelagica</i>		20					40	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros compressus</i>							40	
<i>Chaetoceros debilis</i>	100	20				200	440	
<i>Chaetoceros lorenzianus</i>	20		20				80	
<i>Chaetoceros socialis</i>	340			40	240	300	1040	25000
<i>Chaetoceros spp.</i>					40			40
<i>Corethron criophilum</i>	20			20	60	20		
18-Oct-99 (continued)								
<i>Coscinodiscus spp.</i>	80	180	60	140	180	100	80	200
<i>Cylindrotheca closterium</i>	260	140	140	200	260	260	80	640
<i>Dactyliosolen fragilissimus</i>				60				
<i>Ditylum brightwellii</i>	20			20		60	160	200
<i>Eucampia zodiacus</i>	10000	520	740	2480	2860	3440	17040	66800
<i>Guinardia delicatula</i>	60	100	40	20	40		80	120
<i>Guinardia flaccida</i>				60			40	160
<i>Guinardia striata</i>		20		20		40		120
<i>Lauderia annulata</i>	40				20	20	40	240
<i>Leptocylindrus mediterraneus</i>							40	560
<i>Leptocylindrus minimus</i>		40	40	20		20	40	360
<i>Melosira ambigua</i>				20				
<i>Navicula</i> sp.							40	
<i>Odontella sinensis</i>	20				20	180	120	
<i>Paralia marina</i>		20	20			20		
Pennate					20	20		
<i>Pleurosigma / Gyrosigma</i>	80				140	140	120	600
<i>Pseudo-nitzschia</i> sp.	60				40			
<i>Pseudo-nitzschia delicatissima</i> group		20	40			20		
<i>Pseudo-nitzschia seriata</i> group		20				20	80	440
<i>Skeletonema costatum</i>		20						
<i>Stephanopyxis turris</i>	80	20	100	80	120	120		640
<i>Thalassiosira gravida</i>		20		40	20	40	520	1640
<i>Thalassiosira</i> spp.	100		20	40		20	200	
<i>Triceratium alternans</i>							40	
Copepoda		40	60					
<i>Dictyocha fibula</i>	20	20	40					
<i>Dictyocha speculum</i>	180	200	300	200	160	20	40	40
Flagellate	40	240					40	
<i>Mesodinium rubrum</i>	1100	600	1740	140		20	3440	1440
Tintinnids	180		200	340	60	40	80	120
09-Nov-99								
Armoured dinoflagellate	40	40						
<i>Ceratium fusus</i>					20			
<i>Ceratium kofoidii</i>					40			
<i>Ceratium lineatum</i>		80		60				
<i>Ceratium</i> spp.	40							
<i>Gyrodinium cf. spirale</i>			240	20	60			
<i>Prorocentrum micans</i>	40		80			20		
<i>Protoperdinium</i> spp.	40	40						
<i>Actinoptychus senarius</i>	240	40		80	80	120	20	600
<i>Asterionellopsis glacialis</i>					20			
<i>Chaetoceros debilis</i>	320	40		180	80	80	60	480
<i>Chaetoceros lorenzianus</i>	40			20	20	20		40
<i>Chaetoceros simplex</i>							40	
<i>Chaetoceros socialis</i>	4760	1120	560	1520	1580	360	2300	14840
<i>Chaetoceros</i> spp.	80	40	160		40	20		
<i>Chaetoceros</i> spp. (phaeoceros)					40	20		
<i>Corethron criophilum</i>		80	80	20	60	40	40	40
<i>Coscinodiscus</i> spp.	120	80	80	120	20	20	40	
<i>Cylindrotheca closterium</i>	520	320	800	240	300	280	200	400
<i>Dactyliosolen fragilissimus</i>			80	40	120		120	40
<i>Ditylum brightwellii</i>	80	40	80			60	40	
<i>Eucampia zodiacus</i>	21720	15120	30240	9200	10920	4760	10040	1E+05
<i>Grammatophora marina</i>							20	
<i>Guinardia delicatula</i>	1080	160	480	240	80	120	140	1960

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Guinardia flaccida</i>	280			80			20	120
<i>Guinardia striata</i>		80		20	40			40
<i>Gyrosigma fasciola</i>	40							
<i>Lauderia annulata</i>				20		20		
<i>Leptocylindrus danicus</i>	40					20		1000
<i>Leptocylindrus minimus</i>	240	40	160	60		20		200
<i>Navicula</i> sp.	120	40		20	80	40	20	

09-Nov-99 (continued)

<i>Odontella regia</i>		40			20			
<i>Odontella sinensis</i>			80				20	
<i>Paralia marina</i>				20		20	20	40
Pennate						60		120
<i>Pleurosigma / Gyrosigma</i>				80			20	40
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>			240		20			
<i>Pseudo-nitzschia</i> sp.		40			20			
<i>Pseudo-nitzschia delicatissima</i> group				20				
<i>Pseudo-nitzschia seriata</i> group	800	80	560	240	180	40	40	1400
<i>Rhizosolenia setigera</i>					20			
<i>Rhizosolenia</i> spp.							20	
<i>Skeletonema costatum</i>		40						40
<i>Stephanopyxis turris</i>	160	200	160	40	160	200	160	160
<i>Thalassionema nitzschiooides</i>		40	240			20	20	
<i>Thalassiosira baltica</i>		40	40			20		
<i>Thalassiosira gravida</i>	160	80	240	80	20	20	180	80
<i>Thalassiosira</i> spp.	80	40	160	40	200	200	20	120
Copepoda				80	20			
<i>Dicyclocha fibula</i>					20			
<i>Dicyclocha speculum</i>		40	160	20	40	20		40
Flagellate	40							
<i>Mesodinium rubrum</i>	160	280	880	20	40		440	840
<i>Salpingella</i> sp.						20		
Tintinnids		80		20		20	20	

14-Dec-99

<i>Alexandrium ostenfeldii</i>							20	
Armoured dinoflagellate							20	
<i>Ceratium fusus</i>			40					
<i>Ceratium lineatum</i>					20			
<i>Gyrodinium cf. spirale</i>		60					20	
<i>Heterocapsa triquetra</i>						20		
<i>Prorocentrum micans</i>				20				
<i>Protoperidinium</i> spp.			20					
Unarmoured dinoflagellate							20	
<i>Actinoptychus senarius</i>		40		180		360		80
<i>Asterionella formosa</i>							20	
<i>Chaetoceros debilis</i>							40	
<i>Chaetoceros simplex</i>							20	40
<i>Chaetoceros socialis</i>		20	80				20	
<i>Chaetoceros</i> spp.							20	
<i>Corethron criophilum</i>		20	20			20	80	
<i>Coscinodiscus</i> spp.	60	20	20	100	60	120		60
<i>Cylindrotheaca closterium</i>	140	100	100	300	40	40	120	120
<i>Dactyliosolen fragilissimus</i>				60		40		
<i>Ditylum brightwellii</i>	60	100	160	240	100	120	20	60
<i>Eucampia</i> sp.							20	
<i>Eucampia zodiacus</i>	420		420	340	160	220	260	2300
<i>Guinardia delicatula</i>	40	140		20	20	40	40	80
<i>Guinardia flaccida</i>	40					20	20	
<i>Gyrosigma tenuissimum</i>					20			
<i>Lauderia annulata</i>				20				
<i>Leptocylindrus minimus</i>				20		20		
<i>Licmophora abbreviata</i>	20							
<i>Melosira ambigua</i>			20					
<i>Melosira moniliformis</i>	20							

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Melosira</i> spp.							20	20
<i>Navicula</i> sp.	40		20	20	60	80	40	20
<i>Odontella regia</i>						20		
<i>Odontella sinensis</i>		20		40	20			
<i>Paralia marina</i>				20		20		
Pennate		40			60	20		
<i>Pleurosigma / Gyrosigma</i>						40		
<i>Pseudo-nitzschia delicatissima</i> group							20	
14-Dec-99 (continued)								
<i>Pseudo-nitzschia seriata</i> group					20			
<i>Rhizosolenia imbricata</i>					20			
<i>Rhizosolenia setigera</i>						20	20	20
<i>Skeletonema costatum</i>	20				40	20	20	20
<i>Stephanopyxis turris</i>		60		20			60	60
<i>Thalassionema nitzschiooides</i>	20	20	20		120	60		
<i>Thalassiosira baltica</i>			40			20		
<i>Thalassiosira gravida</i>					20		20	
<i>Thalassiosira</i> spp.	20	60	20	20		20		
<i>Triceratium alternans</i>					20			
Copepoda			20				20	
<i>Dicyochea fibula</i>						20		
<i>Dicyochea speculum</i>							20	
<i>Dinobryon</i> spp.							40	20
<i>Mesodinium rubrum</i>	40	60		20		20	20	20
Tintinnids	20							80

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
19-Jan-00								
<i>Alexandrium fundyense</i>	20							
Armoured dinoflagellate	20	20	20					
<i>Ceratium fusus</i>			60					
<i>Ceratium lineatum</i>				20				
<i>Ceratium</i> spp.			20					
<i>Ceratium tripos</i>	20					20		
<i>Gyrodinium</i> cf. <i>spirale</i>					20	20	20	
<i>Heterocapsa triquetra</i>						20		
<i>Prorocentrum micans</i>			20	20				
<i>Actinoptychus senarius</i>	120			380		80		
<i>Asterionella formosa</i>							80	
Centrale diatom		100	40		40			
<i>Chaetoceros decipiens</i>	20							
<i>Chaetoceros socialis</i>		20						
<i>Chaetoceros</i> spp.	40	20						
<i>Coscinodiscus</i> spp.	20	60	60	60	100	160	40	40
<i>Cylindrotheca closterium</i>		160	140	260	240	200	200	120
<i>Ditylum brightwellii</i>	80	20	40	140	60	80	80	80
<i>Eucampia zodiacus</i>				20	20			
<i>Guinardia delicatula</i>	20			20				
<i>Gyrosigma tenuissimum</i>			20					
<i>Lauderia annulata</i>	20							
<i>Leptocylindrus minimus</i>	20						20	
<i>Licmophora abbreviata</i>		80						
<i>Melosira</i> spp.		20	60				20	
<i>Navicula</i> sp.	40	60	60	40	20	80	20	40
<i>Odontella sinensis</i>		20						
<i>Paralia marina</i>	40			60				
Pennate diatom	40	320	60	40	40	20	40	20
<i>Pleurosigma angulatum</i>		20	20	20				
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	20				60			
<i>Pseudo-nitzschia delicatissima</i> group						220		
<i>Rhizosolenia setigera</i>				20				
<i>Rhizosolenia</i> spp.	20							
<i>Skeletonema costatum</i>					40	20	20	
<i>Stephanopyxis turris</i>		20		20		20	20	
<i>Tabellaria</i> spp.							20	
<i>Thalassionema nitzschiooides</i>		80	40		40	160		40
<i>Thalassiosira gravida</i>				40	20			
<i>Thalassiosira</i> spp.	60	20	40		40	20		
<i>Dictyocha fibula</i>			40			20		
<i>Dictyocha speculum</i>		20	60			20		
<i>Dinobryon</i> spp.						20		
<i>Eutreptia</i> / <i>Eutreptiella</i>			20	20				
<i>Mesodinium rubrum</i>	20		180	40	40		1060	580
Pollen	20		20			60	20	
Tintinnids			20	60	40	20	80	
14-Feb-00								
<i>Amphidinium</i> cf. <i>carterae</i>	20	20						
Armoured dinoflagellate	20							
<i>Dinophysis acuminata</i>			20					
<i>Gyrodinium</i> cf. <i>spirale</i>	20	40		20	20			
<i>Prorocentrum micans</i>						20		
Unarmoured dinoflagellate							20	
Centrale diatom							20	
<i>Chaetoceros</i> spp.		20	20		20			
<i>Coscinodiscus</i> spp.	40	100	40	100		20	20	20
<i>Cylindrotheca closterium</i>	80	20	200	180	200	300	220	160

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Ditylum brightwellii</i>		20		60	40	20	20	20
14-Feb-00 (continued)								
<i>Guinardia delicatula</i>	20				60			20
<i>Licmophora abbreviata</i>	20							
<i>Melosira</i> spp.					40			
<i>Navicula</i> sp.		60		60	80	40	80	60
<i>Odontella aurita</i>						20	20	
<i>Odontella regia</i>	20					20		
<i>Paralia marina</i>						20		
Pennate diatom	40	20		80	20	120	40	
<i>Pleurosigma angulatum</i>	20			40		20		
<i>Pseudo-nitzschia delicatissima</i> group							100	
<i>Rhizosolenia setigera</i>					20		60	
<i>Skeletonema costatum</i>	80	20		20	20			20
<i>Stephanopyxis turris</i>					20			
<i>Thalassionema nitzschioides</i>						20		
<i>Thalassiosira auguste-lineata</i>				20				
<i>Thalassiosira</i> spp.	40	80		20	100	140	20	
<i>Dictyocha speculum</i>			20				20	
<i>Eutreptia / Eutreptiella</i>				80	20			
<i>Mesodinium rubrum</i>	40	60			20		340	60
Pollen							20	
Tintinnids		20	20	40	40	20		
14-Mar-00								
Armoured dinoflagellate					20			20
<i>Dinophysis norvegica</i>								20
<i>Gyrodinium cf. spirale</i>	120	240	20	20			40	200
<i>Procentrum micans</i>	20							20
Unarmoured dinoflagellate								
<i>Asterionellopsis glacialis</i>	20			20	20			
Centrale diatom					20			
<i>Chaetoceros ingolfianus</i>						20		
<i>Chaetoceros</i> spp.	60				20			60
<i>Coscinodiscus</i> spp.				20				
<i>Cylindrotheca closterium</i>	80	80		180	60	160	40	20
<i>Ditylum brightwellii</i>			20	20	20	20		20
<i>Gyrosigma fasciola</i>	40							20
<i>Melosira ambigua</i>								20
<i>Melosira</i> spp.				20			20	
<i>Navicula</i> sp.			40	20		60	40	
<i>Paralia marina</i>					20			
Pennate diatom	40	80		20	60	80		20
<i>Pseudo-nitzschia delicatissima</i> group							20	
<i>Rhizosolenia setigera</i>			20		40		20	
<i>Rhizosolenia</i> spp.						20		
<i>Skeletonema costatum</i>		20	20	20	80	20		20
<i>Tabellaria</i> spp.		20					20	
<i>Thalassionema nitzschioides</i>				40			20	
<i>Thalassiosira auguste-lineata</i>		20						
<i>Thalassiosira gravida</i>						20		20
<i>Thalassiosira</i> spp.				20				
<i>Triceratium alternans</i>				20				
<i>Dictyocha speculum</i>	20			20				
<i>Dinobryon</i> spp.						20		
<i>Eutreptia / Eutreptiella</i>	20	20						40
<i>Mesodinium rubrum</i>	260	20	20	180	80	40	580	1360
Pollen		20						
Tintinnids		40		60	60		20	1080

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
11-Apr-00								
Armoured dinoflagellate			40				20	160
<i>Gyrodinium</i> cf. <i>spirale</i>	60	20		40	20	20		440
<i>Protoperidinium</i> spp.	20							
Unarmoured dinoflagellate				40				300
<i>Achnanthes</i> sp.		20						
<i>Actinptychus senarius</i>					80	60		
<i>Asterionella formosa</i>							400	80
<i>Asterionellopsis kariana</i>					20	20		
Centrale diatom				20				20
<i>Chaetoceros ingolfianus</i>	40	20		20				20
<i>Chaetoceros</i> spp.	80		60	100				60
<i>Corethron criophilum</i>					40			
<i>Coscinodiscus</i> spp.	20	20	60		20			20
<i>Cylindrotheca closterium</i>	80	60	40	200	220	60	40	60
<i>Ditylum brightwellii</i>		20	20					
<i>Fragilaria</i> spp.						40		
<i>Grammatophora marina</i>			20					
<i>Licmophora abbreviata</i>			20		20			
<i>Melosira</i> spp.	20	20		40	20			
<i>Navicula</i> sp.	60			80	20	40		
<i>Odontella aurita</i>		20					20	
<i>Odontella regia</i>	20							
<i>Paralia marina</i>		40			20	20		
Pennate diatom				80	140	20	60	260
<i>Pleurosigma</i> / <i>Gyrosigma</i>			20		20			
<i>Pleurosigma angulatum</i>	20					20		
<i>Pseudo-nitzschia delicatissima</i> group							380	20
<i>Rhizosolenia hebetata</i>		20	60					
<i>Rhizosolenia setigera</i>	40		20					
<i>Rhizosolenia</i> spp.				40	20	20		
<i>Skeletonema costatum</i>	20		20	60	40			20
<i>Thalassionema nitzschiooides</i>				20				
<i>Thalassiosira nordenskioeldii</i>	20							
<i>Thalassiosira</i> spp.	20	20		40	20			20
Ciliate			20					
Copepoda	20			20				
<i>Dinobryon</i> spp.							20	60
<i>Eutreptia</i> / <i>Eutreptiella</i>			80					920
Litostomatea	60	220	80	40				120
<i>Mesodinium rubrum</i>	1180	1080	1200	40	20		100	8440
<i>Parafavella</i> sp.					20			
Pollen	20	20			40			
<i>Ptychocylis</i> sp.			20					
Tintinnids	260	1680	200		20	20	20	900
02-May-00								
<i>Alexandrium fundyense</i>		60						20
<i>Alexandrium ostenfeldii</i>		20	20				20	
<i>Amphidinium</i> cf. <i>carterae</i>	20	20				20		
Armoured dinoflagellate		20		20			60	
<i>Ceratium fusus</i>						20		
<i>Ceratium longipes</i>	40	40	40	20	20	60	20	60
<i>Ceratium</i> spp.		20						
<i>Dinophysis acuminata</i>							20	
<i>Dinophysis norvegica</i>		20						
<i>Dinophysis</i> spp.		40			40			40
<i>Gyrodinium</i> cf. <i>spirale</i>	100	200	40	40	40	80	60	
<i>Heterocapsa triquetra</i>	20	60	40					60
<i>Protoperidinium</i> spp.		20						20

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Scrippsiella</i> sp.		40						
02-May-00 (continued)								
Unarmoured dinoflagellate	20	80		40	20	60		
<i>Achnanthes</i> sp.		20						
<i>Actinoptychus senarius</i>	40			20		20		
Centrale diatom			20				20	
<i>Chaetoceros convolutus</i>				20			20	
<i>Chaetoceros debilis</i>	40		20	20			20	20
<i>Chaetoceros decipiens</i>			20				40	
<i>Chaetoceros socialis</i>								20
<i>Chaetoceros</i> spp.	80	20	60	20	20		140	80
<i>Chaetoceros</i> spp. (phaeoceros)					40			
<i>Coscinodiscus</i> spp.	20	80		120		80	20	80
<i>Coscinodiscus wailesii</i>				40				
<i>Cylindrotheca closterium</i>	100	20	20	60	40	60	80	40
<i>Ditylum brightwellii</i>								40
<i>Grammatophora marina</i>				20				
<i>Guinardia striata</i>	20							
<i>Gyrosigma fasciola</i>							20	
<i>Leptocylindrus minimus</i>	20							
<i>Licmophora abbreviata</i>		20						
<i>Melosira</i> spp.					40			20
<i>Navicula</i> sp.	20	20			20		20	40
<i>Paralia marina</i>						20		
Pennate diatom	20			20		60	160	
<i>Pleurosigma angulatum</i>								20
<i>Pseudo-nitzschia seriata</i> group								20
<i>Rhizosolenia hebetata</i>							20	
<i>Rhizosolenia setigera</i>			20					
<i>Skeletonema costatum</i>	20		20		20			20
<i>Thalassionema nitzschiooides</i>								20
<i>Thalassiosira gravida</i>			20					
<i>Thalassiosira nordenskioeldii</i>							20	20
<i>Thalassiosira</i> spp.	120	40	40	20		20	100	400
Copepoda				20	20			20
<i>Dictyocha speculum</i>				40	40			
<i>Dinobryon</i> spp.							60	20
<i>Eutreptia / Eutreptiella</i>			40	80			60	180
Litostomatea	460	740	20	20			560	900
<i>Mesodinium rubrum</i>	1420	680	740	560	100	100	540	1240
Pollen	20							
<i>Ptychocylis</i> sp.			280					40
Tintinnids	640	1080	20	220	20		200	1120
11-May-00								
<i>Alexandrium fundyense</i>			20					
<i>Amphidinium</i> cf. <i>carterae</i>			60					
Armoured dinoflagellate			100					
<i>Ceratium lineatum</i>							20	
<i>Ceratium longipes</i>			20				20	
<i>Ceratium</i> spp.			40					
<i>Gyrodinium</i> cf. <i>spirale</i>			20				40	
<i>Heterocapsa triquetra</i>			40					
<i>Protoperdinium</i> spp.							20	
Centrale diatom			20					
<i>Chaetoceros compressus</i>							20	
<i>Chaetoceros constrictus</i>							60	
<i>Chaetoceros convolutus</i>							20	
<i>Chaetoceros debilis</i>			40				80	60
<i>Chaetoceros ingolfianus</i>			20				80	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros similis</i>							40	
<i>Chaetoceros simplex</i>	80						160	40
<i>Chaetoceros</i> spp.	840	80	240	560	400	160	3120	8680
<i>Chaetoceros teres</i>		20					160	80
23-May-00 (continued)								
<i>Corethron criophilum</i>	80							
<i>Coscinodiscus</i> spp.	720	100	80		80	20	80	80
<i>Cylindrotheca closterium</i>	160	60	160	280	480	20	240	120
<i>Ditylum brightwellii</i>			40	40		20		80
<i>Leptocylindrus minimus</i>				120			80	120
<i>Licmophora abbreviata</i>	40	20						
<i>Melosira ambigua</i>							80	
<i>Melosira</i> spp.							20	
<i>Navicula</i> sp.					40			
<i>Paralia marina</i>					40			
Pennate diatom	40					240	20	
<i>Pleurosigma / Gyrosigma</i>								40
<i>Pleurosigma angulatum</i>	80			80		80	20	80
<i>Pseudo-nitzschia delicatissima</i> group							80	80
<i>Skeletonema costatum</i>	40	20	80		80			
<i>Stephanopyxis turris</i>	40		40					
<i>Thalassiosira auguste-lineata</i>					80			
<i>Thalassiosira gravida</i>	40		80	200			20	
<i>Thalassiosira nordenskioeldii</i>	200	60	360					480
<i>Thalassiosira</i> spp.	16400	1160	11120	13880	13840	2560	31680	9160
<i>Brachionus</i> spp.							240	
Copepoda							20	
<i>Dictyocha speculum</i>		140					40	
<i>Dinobryon</i> spp.							80	
<i>Eutreptia / Eutreptiella</i>	120	200	40				160	960
<i>Helicostomella</i> sp.							40	
Litostomatea	2080	360	40					760
<i>Mesodinium rubrum</i>	3120	6480	1640	280	80		480	4760
Pollen	40						80	40
<i>Ptychocylis</i> sp.		20	40					
Tintinnids	440	960	240	120				640
30-May-00								
<i>Alexandrium fundyense</i>	120	280	100				80	40
<i>Alexandrium fundyense</i> (duplet)			20					
<i>Alexandrium ostenfeldii</i>	40						40	
<i>Amphidinium</i> cf. <i>carterae</i>				80				
Armoured dinoflagellate	60	40	320				80	80
<i>Ceratium lineatum</i>	20							
<i>Ceratium longipes</i>	100	200	120					80
<i>Ceratium</i> spp.							20	
<i>Dinophysis acuta</i>								
<i>Dinophysis norvegica</i>	20							
<i>Dinophysis</i> spp.	20							
<i>Gyrodinium</i> cf. <i>spirale</i>	160	280	240					160
<i>Heterocapsa triquetra</i>	40	80	240					120
<i>Prorocentrum micans</i>		80						
<i>Protoperdinium brevipes</i>				80			80	
<i>Protoperdinium ovatum</i>	20							
<i>Protoperdinium</i> spp.							80	
<i>Scrippsiella trochoidea</i>			80				80	
Unarmoured dinoflagellate	20	40	60					
<i>Cerataulina pelagica</i>	20							
<i>Chaetoceros compressus</i>			40				400	320
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>	40							

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros debilis</i>	80	160	120	240	80		960	1440
<i>Chaetoceros decipiens</i>	40	80	20	240			320	320
<i>Chaetoceros furcellatus</i>			80	240	640	180	1040	160
<i>Chaetoceros ingolfianus</i>	160	400	20	400	320		1040	320
<i>Chaetoceros laciniatus</i>						80	520	
30-May-00 (continued)								
<i>Chaetoceros similis</i>			40					
<i>Chaetoceros simplex</i>							40	
<i>Chaetoceros socialis</i>			20					
<i>Chaetoceros spp.</i>	140	840	200	1120	560	80	14720	4960
<i>Chaetoceros teres</i>				80				
<i>Corethron criophilum</i>	20							
<i>Coscinodiscus spp.</i>	100	40	60	80		40	80	
<i>Coscinodiscus wailesii</i>			40					
<i>Cylindrotheca closterium</i>	120	80	40	240	640		560	600
<i>Ditylum brightwellii</i>	20		20	320	160			40
<i>Eucampia zodiacus</i>					80			
<i>Fragilaria spp.</i>						20		
<i>Guinardia delicatula</i>		240	280			160	80	
<i>Lauderia annulata</i>						20		
<i>Leptocylindrus minimus</i>	80						160	360
<i>Licmophora abbreviata</i>					80	20		
<i>Navicula</i> sp.	20				160	40		
Pennate diatom						60		
<i>Pleurosigma angulatum</i>						20		
<i>Porosira glacialis</i>			40					
<i>Pseudo-nitzschia delicatissima group</i>			120				200	
<i>Rhizosolenia setigera</i>					80			
<i>Skeletonema costatum</i>	20		60	160	80			240
<i>Stephanopyxis turris</i>			20	160			160	280
<i>Thalassiosira auguste-lineata</i>	60		140	160	400		80	160
<i>Thalassiosira gravida</i>	380		160	240	80	20	160	360
<i>Thalassiosira nordenskioeldii</i>	220		300		80		400	1800
<i>Thalassiosira</i> spp.	11560	41440	6480	70560	33600	2740	25040	9320
<i>Thalassiothrix longissima</i>				80				
Copepoda	20							
<i>Dictyocha speculum</i>	40	40	160					
<i>Dinobryon</i> spp.			20					
<i>Ebria tripartita</i>			20					
<i>Eutreptia / Etreptiella</i>		320	240				80	240
<i>Helicostomella</i> sp.							880	120
Litostomatea			40	80				
<i>Mesodinium rubrum</i>	1000	520	2460	1200	160		1200	4360
Pollen	20		20	80				
<i>Ptychocylis</i> sp.	20		20					
Tintinnids	200	480	380	160				
06-Jun-00								
<i>Alexandrium fundyense</i>			400	160			120	
<i>Alexandrium fundyense</i> (duplet)			80					
<i>Alexandrium ostenfeldii</i>				160				
Armoured dinoflagellate			80	160			240	
<i>Ceratium longipes</i>						20	40	
<i>Dinophysis acuminata</i>					80			80
<i>Dinophysis acuta</i>							160	
<i>Dinophysis norvegica</i>								160
<i>Gonyaulax spinifera</i>				160				
<i>Gyrodinium cf. spirale</i>	320						160	360
<i>Heterocapsa triquetra</i>		80	80	160			80	
<i>Protoperidinium</i> spp.			80					80

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Scrippsiella trochoidea</i>			80				320	40
Unarmoured dinoflagellate					20			
<i>Actinoptychus senarius</i>			80				80	
<i>Asterionellopsis glacialis</i>				160				
<i>Chaetoceros borealis</i>	320	80	80		160	80	320	640
06-Jun-00 (continued)								
<i>Chaetoceros constrictus</i>		80						
<i>Chaetoceros debilis</i>	1120	1040	640	640	400	140	1120	1720
<i>Chaetoceros decipiens</i>			240			40	80	
<i>Chaetoceros diadema</i>							80	
<i>Chaetoceros didymus</i>							160	
<i>Chaetoceros furcellatus</i>	640		160		400	100	240	200
<i>Chaetoceros ingolfianus</i>	800	480	160		80		480	320
<i>Chaetoceros laciniatus</i>	160	160	320					80
<i>Chaetoceros lorenzianus</i>				160				
<i>Chaetoceros similis</i>							160	
<i>Chaetoceros simplex</i>							80	
<i>Chaetoceros</i> spp.	640	880	1040	1280	400	200	1520	2080
<i>Chaetoceros</i> spp. (phaeoceros)							80	
<i>Chaetoceros teres</i>		240						40
<i>Coscinodiscus</i> spp.		160	80			40	160	40
<i>Coscinodiscus wailesii</i>							80	
<i>Cylindrotheca closterium</i>	1440	960	640	960	800	280	960	520
<i>Detonula confervacea</i>					80			
<i>Ditylum brightwellii</i>	160		80		160			280
<i>Eucampia zodiacus</i>			80					
<i>Guinardia delicatula</i>	960	480	80	160		60		160
<i>Lauderia annulata</i>				160				
<i>Leptocylindrus danicus</i>			80					
<i>Leptocylindrus mediterraneus</i>					80			
<i>Leptocylindrus minimus</i>		80	480					160
<i>Licmophora abbreviata</i>								40
<i>Navicula</i> sp.							80	
<i>Paralia marina</i>		80				60		
Pennate diatom		80			160	40		
<i>Pleurosigma angulatum</i>	160	80				100	320	200
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				160				
<i>Porosira glacialis</i>			160					
<i>Pseudo-nitzschia delicatissima</i> group	160	80	240		80			40
<i>Rhizosolenia hebetata</i>					20			
<i>Skeletonema costatum</i>	320	720	240	640	240	60		200
<i>Stephanopyxis turris</i>	160		560	320	80	20	160	960
<i>Thalassiosira auguste-lineata</i>		160	160	160			160	80
<i>Thalassiosira baltica</i>						80		
<i>Thalassiosira gravida</i>	1440	560	1520	480	160	40	80	720
<i>Thalassiosira nordenskioeldii</i>	1920	960	2000			40	160	720
<i>Thalassiosira</i> spp.	60640	50720	36640	80000	52640	51840	42240	15720
<i>Thalassiothrix longissima</i>	160			80				40
<i>Brachionus</i> spp.								
Copepoda						20	40	
<i>Dicyochea speculum</i>								40
<i>Eutreptia / Eutreptiella</i>			160	160	80	20		40
<i>Favella</i> sp.								40
<i>Helicostomella</i> sp.	160							440
<i>Mesodinium rubrum</i>	1440	2400	4160	2720	80		2240	3520
Pollen			160		80		80	120
Tintinnids			160	480		20	160	120

13-Jun-00

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Alexandrium fundyense</i>		180	40	240	80			80
<i>Alexandrium fundyense</i> (duplet)				80				
<i>Alexandrium ostenfeldii</i>	80	20		80				
<i>Amphidinium</i> cf. <i>carterae</i>				240		20		
<i>Amphidinium</i> cf. <i>sphenoides</i>							40	
Armoured dinoflagellate	160	700	320	80	160			80
<i>Ceratium horridum</i>			80				40	
13-Jun-00 (continued)								
<i>Ceratium lineatum</i>		40					20	
<i>Ceratium longipes</i>		120	120			20		
<i>Ceratium tripos</i>			40					
<i>Dinophysis acuminata</i>	40							
<i>Dinophysis acuta</i>		20						
<i>Dinophysis norvegica</i>		20				20		
<i>Gyrodinium</i> cf. <i>spirale</i>	120	60	120	480	400	220	360	320
<i>Heterocapsa triquetra</i>	80	400	20				20	160
<i>Minuscula bipes</i>		40						
<i>Protoperidinium brevipes</i>	120		20	80			60	
<i>Protoperidinium</i> spp.	80	80	100	80		60	40	200
<i>Scrippsiella trochoidea</i>		60	100		80			100
Unarmoured dinoflagellate	120	80	160	240	160	280	300	200
<i>Actinoptychus senarius</i>			240					
<i>Asterionellopsis glacialis</i>		40						
<i>Chaetoceros compressus</i>	80	20	80	160	80	180	540	340
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>		40		80				
<i>Chaetoceros debilis</i>	400	120	60	560	80	480	1620	100
<i>Chaetoceros decipiens</i>		20	40			20	180	
<i>Chaetoceros furcellatus</i>	40							
<i>Chaetoceros ingolfianus</i>	80					220	160	
<i>Chaetoceros laciniatus</i>		40	60				240	
<i>Chaetoceros socialis</i>		80					260	
<i>Chaetoceros</i> spp.	440	120	140	1280	1280	360	680	800
<i>Corethron criophilum</i>		20						
<i>Coscinodiscus</i> spp.	120			80	80		60	
<i>Cylindrotheca closterium</i>	1640	400	140	4960	2320	1340	1280	280
<i>Detonula confervacea</i>								100
<i>Ditylum brightwellii</i>	120	20		240	80	20	120	
<i>Guinardia delicatula</i>	7120	8440	10240	30080	3520	1220	240	220
<i>Leptocylindrus danicus</i>					40			
<i>Leptocylindrus minimus</i>	160	280	60	480	160	20	260	60
<i>Navicula</i> sp.					80		40	
Pennate diatom					80	20		
<i>Pleurosigma angulatum</i>	80						100	
<i>Porosira glacialis</i>		20					40	
<i>Pseudo-nitzschia delicatissima</i> group	40	40	40	160	80		100	40
<i>Pseudo-nitzschia seriata</i> group	40	140	20					
<i>Rhizosolenia hebetata</i>					80			20
<i>Skeletonema costatum</i>	40	20	60	80	80	80	220	
<i>Stephanopyxis turris</i>	120	60	80	160	240	120	480	40
<i>Thalassionema nitzschiooides</i>				160			20	
<i>Thalassiosira auguste-lineata</i>	160	60	100	560	480	260	80	
<i>Thalassiosira baltica</i>		80						
<i>Thalassiosira gravida</i>	40	280	200	160	160	240	380	60
<i>Thalassiosira nordenskioeldii</i>	80	40	60		80	100	160	20
<i>Thalassiosira</i> spp.	6640	2360	3680	20640	34000	9840	2160	220
<i>Brachionus</i> spp.		80						
Copepoda	80	80		80			20	20
<i>Dictyocha speculum</i>	80	100	40	80				60
<i>Ebria tripartita</i>		40						

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Eutreptia / Eutreptiella</i>	80	40		80		20	20	60
Flagellate							20	
<i>Helicostomella</i> sp.			20				160	1560
Litostomatea	40							
<i>Mesodinium rubrum</i>	2400	2940	880	1040	560	140	1240	1500
<i>Parafavella</i> sp.				80	80			
Pollen			20				640	20
Tintinnids	440	660	440	80		20	260	460
20-Jun-00								
<i>Alexandrium fundyense</i>	200	20	240	640			20	140
<i>Alexandrium fundyense</i> (duplet)	40							
<i>Amphidinium</i> cf. <i>carterae</i>				160				
Armoured dinoflagellate	240	80	160					120
<i>Ceratium horridum</i>	40	20	120					
<i>Ceratium lineatum</i>								
<i>Ceratium longipes</i>	40	60	40	80	160			40
<i>Ceratium</i> spp.							20	
<i>Ceratium tripos</i>				40				
<i>Dinophysis norvegica</i>				20				
<i>Dinophysis</i> spp.		20			80			
<i>Gyrodinium</i> cf. <i>spirale</i>	120	20	100	640	240	560	300	
<i>Heterocapsa triquetra</i>	40	160	360					140
<i>Minuscula bipes</i>				80				
<i>Protoperdinium brevipes</i>	80			20				40
<i>Protoperdinium depressum</i>	80							
<i>Protoperdinium</i> spp.	160	40	200			80	20	120
<i>Scrippsiella</i> sp.					480			
<i>Scrippsiella trochoidea</i>	80			20	240			60
Unarmoured dinoflagellate	40	80			320	480	240	160
<i>Asterionellopsis glacialis</i>						40		40
<i>Chaetoceros compressus</i>	80			60	1760	80	200	380
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>	40	40	20					
<i>Chaetoceros debilis</i>	1280	60	60	1200	320	40	2720	1540
<i>Chaetoceros decipiens</i>	40				240	80	80	160
<i>Chaetoceros ingolfianus</i>	40				320	160	200	100
<i>Chaetoceros laciniatus</i>	40	20	20	160	80	40	80	60
<i>Chaetoceros lorenzianus</i>							20	
<i>Chaetoceros socialis</i>	600	60	100				1580	200
<i>Chaetoceros</i> spp.	720	20	320	6400	960	720	360	160
<i>Chaetoceros</i> spp. (phaeoceros)								
<i>Chaetoceros teres</i>							20	
<i>Corethron criophilum</i>					80	80		
<i>Coscinodiscus</i> spp.	40				80	80	80	
<i>Coscinodiscus walesii</i>							40	
<i>Cylindrotheca closterium</i>	2000	1540	980	9600	2320	560	1680	640
<i>Dactyliosolen fragilissimus</i>	80							
<i>Detonula confervacea</i>								
<i>Ditylum brightwellii</i>	120	20	60	880		40	40	20
<i>Eucampia zodiacus</i>				80				
<i>Guinardia delicatula</i>	32000	9840	11320	28080	1760	240	400	3600
<i>Lauderia annulata</i>								
<i>Leptocylindrus danicus</i>	40				160			20
<i>Leptocylindrus minimus</i>	560	260	40	160	160		140	100
<i>Licmophora abbreviata</i>	40							
<i>Melosira ambigua</i>			20					
<i>Navicula</i> sp.						80	40	20
<i>Paralia marina</i>								20
Pennate diatom			20					
<i>Pleurosigma angulatum</i>	240						420	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				80				
<i>Porosira glacialis</i>	40						20	
<i>Pseudo-nitzschia delicatissima</i> group	40	140	20	400	160		180	40
<i>Pseudo-nitzschia seriata</i> group	120			1600				
<i>Rhizosolenia hebetata</i>		20	20	80				
<i>Skeletonema costatum</i>				160			100	
<i>Stephanopyxis turris</i>	960	140	80	1520		240	220	260
<i>Thalassionema nitzschioides</i>			40					
<i>Thalassiosira auguste-lineata</i>	360	40	180	800	480	80	20	
20-Jun-00 (continued)								
<i>Thalassiosira gravida</i>	2240	40	40	240	800	200		100
<i>Thalassiosira nordenskioeldii</i>	160	40	20					
<i>Thalassiosira</i> spp.	4480	460	1920	26880	20240	16480	580	180
<i>Brachionus</i> spp.				80			20	
Copepoda	40	20		80			40	60
<i>Dictyocha speculum</i>		20	100					20
<i>Dinobryon</i> spp.							20	
<i>Eutreptia / Eutreptiella</i>		20	20	1360	160			40
Flagellate				40				
<i>Helicostomella</i> sp.	240	200	1000				140	760
<i>Mesodinium rubrum</i>	1120	1440	1420	4560		160	2100	3500
Pollen	160	40	140				60	80
Tintinnids	200	320	520	960	240	40	480	860
27-Jun-00								
<i>Alexandrium fundyense</i>	160	1520	1840	40	20			
<i>Amphidinium</i> cf. <i>carterae</i>				120				
<i>Amphidinium</i> cf. <i>sphenoides</i>						120		
<i>Amylax triacantha</i>	40		40					
Armoured dinoflagellate	80	920	1640	160	20		160	120
<i>Ceratium furca</i>		80						
<i>Ceratium horridum</i>			40	160			40	60
<i>Ceratium lineatum</i>		80	80	40		40		20
<i>Ceratium longipes</i>	40	40	320	80		40		
<i>Ceratium</i> spp.			40					
<i>Ceratium tripos</i>		40	80					
<i>Dinophysis acuminata</i>			40	80			120	
<i>Dinophysis acuta</i>				40			40	80
<i>Dinophysis norvegica</i>	40	80	160	40			40	
<i>Dinophysis</i> spp.			120	80			100	
<i>Gonyaulax spinifera</i>							20	
<i>Gyrodinium</i> cf. <i>spirale</i>			480	160	380	2120	440	
<i>Heterocapsa triquetra</i>	80	2240	4120	160				20
<i>Minuscula bipes</i>		40	40	40				
<i>Protoperdinium brevipes</i>	40			120				
<i>Protoperdinium conicum</i>								
<i>Protoperdinium depressum</i>		40	40	40				
<i>Protoperdinium</i> spp.	80		560	200		40		80
<i>Scirpsiella</i> sp.				40				
<i>Scirpsiella trochoidea</i>	40	200	320					
Unarmoured dinoflagellate	280	40	520	440	60	480	40	
<i>Actinoptychus senarius</i>					20			
<i>Asterionellopsis glacialis</i>						40		
Centrale diatom				80				
<i>Cerataulina pelagica</i>		40		200			240	100
<i>Chaetoceros compressus</i>	160	80	520	680	460	1040	160	
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>	120	40	40					
<i>Chaetoceros debilis</i>	320		160	40	240	480	4320	
<i>Chaetoceros decipiens</i>				80	40	200	40	
<i>Chaetoceros ingolfianus</i>			160	80	160	240		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros laciniatus</i>			40				80	
<i>Chaetoceros simplex</i>							320	
<i>Chaetoceros socialis</i>	2640	2400	4640	800	160		8480	20
<i>Chaetoceros</i> spp.	360	160	1400	1920	1400	1560	160	
<i>Corethron criophilum</i>		40			20			
<i>Coscinodiscus</i> spp.				120		60	80	
<i>Cylindrotheca closterium</i>	1120	800	1160	1400	1580	800	5640	40
<i>Dactyliosolen fragilissimus</i>		40						
<i>Detonula conservacea</i>						20		
<i>Ditylum brightwellii</i>		80						
27-Jun-00 (continued)								
<i>Guinardia delicatula</i>	68470	17640	5080	7560	800	160	1880	1580
<i>Guinardia flaccida</i>								
<i>Lauderia annulata</i>					20	40		
<i>Leptocylindrus danicus</i>	40	40					80	
<i>Leptocylindrus minimus</i>	1720	80	200	120	140	40	400	
<i>Navicula</i> sp.				40	40			
Pennate diatom								
<i>Pleurosigma angulatum</i>		80					40	
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>							40	
<i>Porosira glacialis</i>			160					
<i>Pseudo-nitzschia delicatissima</i> group		80	80	80	80		160	
<i>Pseudo-nitzschia seriata</i> group	80			120		80		
<i>Rhizosolenia imbricata</i>				40				
<i>Skeletonema costatum</i>					40		80	
<i>Stephanopyxis turris</i>	280		160	200	140	360	320	
<i>Thalassionema nitzschiooides</i>							80	
<i>Thalassiosira auguste-lineata</i>			40	160	100	80		
<i>Thalassiosira gravida</i>	40		40		140	80		
<i>Thalassiosira nordenskioeldii</i>		40	80					
<i>Thalassiosira</i> spp.	240	280	2400	1160	7440	9960		
<i>Brachionus</i> spp.			40	40				
Copepoda	40	200	80	200		40		480
<i>Dicyochea speculum</i>	120	320	1040	520	20			
<i>Ebria tripartita</i>		40						
<i>Eutreptia / Eutreptiella</i>	40	840	280	600			40	
Flagellate		40	280					
<i>Helicostomella</i> sp.	280	1560	1200	40			280	13120
Litostomatea			40	80		40		
<i>Mesodinium rubrum</i>	8400	2280	8880	1640	40		6400	7880
Pollen	160	120	40		20		200	40
Tintinnids	400	560	2200	400	100	240	640	320
04-Jul-00								
<i>Alexandrium fundyense</i>			160		20		20	20
<i>Alexandrium ostenfeldii</i>				40				
<i>Amylax triacantha</i>								20
Armoured dinoflagellate	80	40	240	80			40	40
<i>Ceratium fusus</i>		20						
<i>Ceratium horridum</i>			80					
<i>Ceratium lineatum</i>	80		240		20		20	
<i>Ceratium longipes</i>	220	80	480	200			20	40
<i>Ceratium</i> spp.		40				20		
<i>Ceratium tripos</i>			160					20
<i>Dinophysis acuminata</i>		80	80		20			60
<i>Dinophysis acuta</i>				40				
<i>Dinophysis norvegica</i>	20		400	80	20		20	180
<i>Dinophysis</i> spp.		40						60
<i>Gyrodinium</i> cf. <i>spirale</i>	20	40	240		60		220	
<i>Heterocapsa triquetra</i>			640	80				

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
Unarmoured dinoflagellate			240		160		80	
<i>Cerataulina pelagica</i>	40			320			160	1400
<i>Chaetoceros compressus</i>	160	1040		1920	640			
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>							40	
<i>Chaetoceros debilis</i>							280	
<i>Chaetoceros decipiens</i>	80			160				
<i>Chaetoceros simplex</i>							280	80
<i>Chaetoceros socialis</i>	29200	75280	206240	131360	160	9480	1600	
<i>Chaetoceros</i> spp.	200	240	160			80		
<i>Coscinodiscus</i> spp.						40	80	
<i>Cylindrotheca closterium</i>	120	80	160	960	100	1280	160	
<i>Dactyliosolen fragilissimus</i>						40		
11-Jul-00 (continued)								
<i>Guinardia delicatula</i>	80	240	320			1840	12960	
<i>Guinardia flaccida</i>							80	
<i>Leptocylindrus danicus</i>			240					
<i>Leptocylindrus minimus</i>	40					1520	40	
<i>Licmophora abbreviata</i>						40		
<i>Navicula</i> sp.			80					
Pennate diatom					160			
<i>Pleurosigma angulatum</i>						40	80	
<i>Pseudo-nitzschia delicatissima</i> group							80	
<i>Skeletonema costatum</i>							40	
<i>Stephanopyxis turris</i>		160					40	
<i>Thalassionema nitzschiooides</i>					320	20		
<i>Thalassiosira oestrupii</i>		80						
<i>Thalassiosira</i> spp.						20	40	
Copepoda				480		20	40	40
<i>Dictyocha speculum</i>	80	240		320			200	
<i>Ebria tripartita</i>				160			120	
<i>Eutreptia / Etreptiella</i>	120						160	
<i>Helicostomella</i> sp.	80					120	1400	
<i>Mesodinium rubrum</i>	400		320			1480	7600	
Pollen						40	40	
Tintinnids	40	1040	480	320	20	480	320	
17-Jul-00								
<i>Alexandrium fundyense</i>	80	40						
<i>Alexandrium ostenfeldii</i>								
<i>Amphidinium</i> cf. <i>carterae</i>		120						
Armoured dinoflagellate	240	360	40	80	40	40		
<i>Ceratium fusus</i>	40		20		80			
<i>Ceratium lineatum</i>	40	40	40				40	
<i>Ceratium longipes</i>	200	160	60	100	240	80	160	
<i>Ceratium tripos</i>	160	160	80	160		40	80	
<i>Dinophysis acuminata</i>	120	120	20				40	
<i>Dinophysis acuta</i>		40	40				40	
<i>Dinophysis norvegica</i>	160	80	80	100				
<i>Dinophysis</i> spp.	80	40	20	40				
<i>Gonyaulax digitale</i>	80							
<i>Gonyaulax spinifera</i>		40						
<i>Gyrodinium</i> cf. <i>spirale</i>	80	360	120	20			160	
<i>Heterocapsa triquetra</i>	600	640	300				160	
<i>Minuscula bipes</i>			20					
<i>Protoperidinium depressum</i>			20					
<i>Protoperidinium</i> spp.	200	320	100	160	120	40	40	
<i>Scrippsiella trochoidea</i>	40	40						
Unarmoured dinoflagellate	320	360	100	60	40		80	120
Centrale diatom								
<i>Cerataulina pelagica</i>		200		80		40	2960	2200

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros compressus</i>		80		20		40		
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>		40						40
<i>Chaetoceros debilis</i>								
<i>Chaetoceros decipiens</i>								
<i>Chaetoceros simplex</i>		40		20			1280	80
<i>Chaetoceros socialis</i>	14880	17920	5240	2680	54600	22040	38400	31280
<i>Chaetoceros</i> spp.	40		20	40	40	40	80	
<i>Corethron criophilum</i>							40	
<i>Coscinodiscus</i> spp.							40	
<i>Cylindrothecea closterium</i>	560	800	380	300	320	200	1200	360
<i>Eucampia zodiacus</i>								
<i>Guinardia delicatula</i>	80	200		20	40	80	18640	4520
<i>Guinardia flaccida</i>								40
17-Jul-00 (continued)								
<i>Leptocylindrus minimus</i>	40	80					10080	160
<i>Licmophora abbreviata</i>								
<i>Melosira</i> spp.					20			
<i>Navicula</i> sp.	120	120	20			40	40	
<i>Pleurosigma angulatum</i>	160	160				40	80	400
<i>Pseudo-nitzschia delicatissima</i> group		80				40	320	
<i>Pseudo-nitzschia seriata</i> group								
<i>Skeletonema costatum</i>	40	80	60			40	2080	40
<i>Thalassiosira</i> spp.					40		80	
<i>Copepoda</i>	80	40			100	40	40	
<i>Dictyocha speculum</i>	400	720	260		360	80		
<i>Ebria tripartita</i>		40			120	40		
<i>Eutreptia / Etreptiella</i>	120	200	60		40	40		
<i>Litostomatea</i>			880	300	40			400
<i>Mesodinium rubrum</i>	45360	12560	22720		340		40	2560 13880
<i>Notholca</i> spp.							40	
Pollen				40			80	240
Tintinnids	4440	4640	1900	960	920	400	320	2680
25-Jul-00								
<i>Alexandrium fundyense</i>								
<i>Amphidinium</i> cf. <i>carterae</i>					80			
<i>Amylax triacantha</i>							80	
<i>Armoured dinoflagellate</i>	320				120		20	80 40
<i>Ceratium fusus</i>		40	240	40	20			
<i>Ceratium horridum</i>		80	80					
<i>Ceratium lineatum</i>		120						120
<i>Ceratium longipes</i>			80		40			
<i>Ceratium</i> spp.		40						
<i>Ceratium tripos</i>		200	160					280
<i>Dinophysis acuminata</i>		40						80 240
<i>Dinophysis acuta</i>		40	80					
<i>Dinophysis fortii</i>		40						
<i>Dinophysis norvegica</i>		120	640	40				
<i>Dinophysis rotundata</i>			80					
<i>Gyrodinium</i> cf. <i>spirale</i>		40				20		160 40
<i>Heterocapsa triquetra</i>	160							80 120
<i>Minuscula bipes</i>								160
<i>Prorocentrum micans</i>		40						
<i>Protoperidinium depressum</i>					40			40
<i>Protoperidinium</i> spp.	160	320	160	360	20		80	
<i>Scrippsiella trochoidea</i>					20			
Unarmoured dinoflagellate	800	80						280
<i>Actinoptychus senarius</i>								
<i>Asterionellopsis glacialis</i>							20	
Centrale diatom						20	60	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Cerataulina pelagica</i>	22560	440	2000	3960	240	80	74340	15480
<i>Chaetoceros debilis</i>	800	40					80	
<i>Chaetoceros lorenzianus</i>								
<i>Chaetoceros simplex</i>				40	20		1440	440
<i>Chaetoceros socialis</i>	168320	45440	53360	4440	240		1200	40
<i>Chaetoceros</i> spp.	640	40		120		20	240	40
<i>Corethron criophylum</i>					40		160	
<i>Coscinodiscus</i> spp.					20	20		
<i>Cylindrotheca closterium</i>	1600	240	240	1040	160	140	400	
<i>Ditylum brightwellii</i>							80	
<i>Eucampia zodiacus</i>								
<i>Fragilaria</i> spp.								
<i>Grammatophora marina</i>		40						
<i>Guinardia delicatula</i>	6560	80	240	3440	540	380	20800	2520
25-Jul-00 (continued)								
<i>Guinardia flaccida</i>			80	80			400	200
<i>Gyrosigma balticum</i>		40						
<i>Leptocylindrus minimus</i>	480			160			7280	1760
<i>Licmophora abbreviata</i>		40						
<i>Navicula</i> sp.		80		40	40	40	160	
<i>Paralia marina</i>					40			
Pennate diatom								
<i>Pleurosigma angulatum</i>		80			20		160	
<i>Pseudo-nitzschia delicatissima</i> group					20		240	40
<i>Rhabdonema</i> spp.						20		
<i>Skeletonema costatum</i>				40	60		2560	
<i>Thalassionema nitzschiooides</i>	160			40	20	40		
<i>Thalassiosira</i> spp.				120	40	60		
Copepoda	640	120					20	80
<i>Dictyocha speculum</i>	320	160	160		20	40	240	200
<i>Ebria tripartita</i>			160	120	40			320
<i>Eutreptia / Eutreptiella</i>				40				
<i>Helicostomella</i> sp.							160	240
Litostomatea	40	40	20	200	80		80	120
<i>Mesodinium rubrum</i>	4000	10440	1020	1440		180	13920	13680
Pollen								40
Tintinnids	640	280		240	140	80	960	320
31-Jul-00								
<i>Alexandrium fundyense</i>	160		80	320			80	480
<i>Amphidinium</i> cf. <i>carterae</i>					40			
<i>Amylax triacantha</i>	80							
Armoured dinoflagellate	6640	1920	1360	4480		40	120	15360
<i>Ceratium fusus</i>	80	160		240			40	
<i>Ceratium lineatum</i>	80		240	80				
<i>Ceratium longipes</i>	480	480		80				
<i>Ceratium tripos</i>	80	640	720	1040	40		40	80
<i>Dinophysis acuminata</i>	320	960	80	640				
<i>Dinophysis acuta</i>	400			80				
<i>Dinophysis norvegica</i>	80	560	80	880	80		40	
<i>Dinophysis</i> spp.	80							
<i>Gonyaulax digitale</i>							1200	
<i>Gonyaulax spinifera</i>		80	240				320	
<i>Gyrodinium</i> cf. <i>spirale</i>	720	720	1040	320			200	320
<i>Heterocapsa triquetra</i>	14720	58720	1120	21600				12240
<i>Minuscula bipes</i>		80				40		
<i>Prorocentrum micans</i>							160	
<i>Prorocentrum minimum</i>								
<i>Protoperdinium brevipes</i>							80	
<i>Protoperdinium depressum</i>					80			

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Protoperidinium</i> spp.			720	560	40	20	40	160
<i>Scrippsiella</i> sp.				160				
<i>Scrippsiella trochoidea</i>	160	80	160	160				960
Unarmoured dinoflagellate	160	1600	720	1600			280	2000
<i>Asterionellopsis glacialis</i>	240			80				
Centrale diatom						40		
<i>Cerataulina pelagica</i>	14800	10800	10080	13440	1480	840	#####	12640
<i>Chaetoceros compressus</i>		160						
<i>Chaetoceros debilis</i>				80	240		20	40
<i>Chaetoceros decipiens</i>							40	
<i>Chaetoceros furcellatus</i>						20		
<i>Chaetoceros simplex</i>					40	20	5040	240
<i>Chaetoceros socialis</i>	27600	17280	27200	13280	320	80		160
<i>Chaetoceros</i> spp.	160		240	80	80	40	320	160
<i>Corethron criophilum</i>	80	80				20		80
31-Jul-00 (continued)								
<i>Cylindrotheca closterium</i>	1600	1600	1280	2320	2440	1180	840	560
<i>Dactyliosolen fragilissimus</i>	160							
<i>Ditylum brightwellii</i>	80	240		240				
<i>Eucampia zodiacus</i>					40		80	
<i>Guinardia delicatula</i>	800	80	80	480	600	380	800	560
<i>Guinardia flaccida</i>	160		80		40			
<i>Gyrosigma tenuissimum</i>								
<i>Leptocylindrus minimus</i>	320	240	1200	80	120	60	6560	400
<i>Navicula</i> sp.	80							
<i>Paralia marina</i>						40		
Pennate diatom				80	40		40	
<i>Pleurosigma / Gyrosigma</i>		80	80					
<i>Pleurosigma angulatum</i>	400			80	40		80	
<i>Pseudo-nitzschia delicatissima</i> group	560	1440	1280	1360	40	60	400	160
<i>Rhizosolenia imbricata</i>					40			
<i>Skeletonema costatum</i>	57040	145290	136940	130260	8280	3080	81830	2480
<i>Thalassionema nitzschiooides</i>	320		160	80	40	20		
<i>Thalassiosira auguste-lineata</i>		160						
<i>Thalassiosira baltica</i>				80				
<i>Thalassiosira gravida</i>	80							
<i>Thalassiosira</i> spp.	1200	400	3760	1520	2200	240	80	
<i>Brachionus</i> spp.	80							
Copepoda			80	80			120	
<i>Dictyocha speculum</i>	240	640	480	1120	80	20	120	880
<i>Ebria tripartita</i>		80		80			40	640
<i>Eutreptia / Eutreptiella</i>	160							
Flagellate				80				
<i>Helicostomella</i> sp.		160					80	
Litostomatea	400	640	640	160				160
<i>Mesodinium rubrum</i>	2560	800	2480		240	100	2400	16000
Pollen			240				40	80
<i>Polyasterias problematica</i>				80				
Tintinnids	1680	1120	960	3360	240	120	680	3040
08-Aug-00								
<i>Alexandrium fundyense</i>		160	160					40
<i>Amphidinium</i> cf. <i>carterae</i>								
<i>Amylax triacantha</i>						20		
Armoured dinoflagellate	800	4240	2080	80	40	40		1080
<i>Ceratium fusus</i>	160	160	320		40		20	200
<i>Ceratium lineatum</i>	240	480	400	240	40		80	440
<i>Ceratium longipes</i>	160	160	240	160	60		40	160
<i>Ceratium</i> spp.		80						
<i>Ceratium tripos</i>		720	320	160	120		120	600

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Dinophysis acuminata</i>	480		160	80			20	360
<i>Dinophysis norvegica</i>	80	320	400	320	40		120	
<i>Dinophysis</i> spp.			160					80
<i>Gonyaulax digitale</i>			80					
<i>Gonyaulax spinifera</i>	80	4480	480				20	400
<i>Gyrodinium cf. spirale</i>	1200	320	400	240	20		340	
<i>Heterocapsa triquetra</i>	6000	163660	38880	720	20			6600
<i>Prorocentrum minimum</i>				80				200
<i>Protoperidinium depressum</i>	160		160	80				
<i>Protoperidinium</i> spp.	720	800	240	240	40		80	80
<i>Scrippsiella</i> sp.			80					
<i>Scrippsiella trochoidea</i>		320	160	80			40	40
Unarmoured dinoflagellate	2000	2400	3200	480	20		300	200
<i>Actinoptychus senarius</i>						60		
<i>Asterionellopsis glacialis</i>	160		160	480	120	60		
Centrale diatom								
08-Aug-00 (continued)								
<i>Cerataulina pelagica</i>	400	80	160	400	60	240	40	
<i>Chaetoceros compressus</i>	160		160	320	200			
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>					20			
<i>Chaetoceros debilis</i>	400	400	320	320	160			80
<i>Chaetoceros decipiens</i>	80	320	160		120			80
<i>Chaetoceros lorenzianus</i>				160				
<i>Chaetoceros simplex</i>	80		400			20	180	40
<i>Chaetoceros socialis</i>	21040	6000	16480	880		600		
<i>Chaetoceros</i> spp.	640	1520	640	1360	320	100		40
<i>Corethron criophilum</i>	80	160		320		40	60	80
<i>Coscinodiscus centralis</i>			80					
<i>Coscinodiscus</i> spp.				80	120	80		
<i>Cylindrotheca closterium</i>	1440	240	640	1200	1460	720	460	40
<i>Dactyliosolen fragilissimus</i>		80		400	220	160	40	
<i>Ditylum brightwellii</i>		160	80	80	60	20		
<i>Eucampia zodiacus</i>	80							
<i>Guinardia delicatula</i>	480			240	200	200	160	
<i>Guinardia flaccida</i>	240			160		40		
<i>Gyrosigma tenuissimum</i>	80							
<i>Leptocylindrus danicus</i>	160							
<i>Leptocylindrus minimus</i>	1600	480	400	80	100	80	60	
<i>Navicula</i> sp.					40		20	
<i>Odontella regia</i>							20	
<i>Paralia marina</i>					20			
Pennate diatom				80		20		
<i>Pleurosigma / Gyrosigma</i>								
<i>Pleurosigma angulatum</i>	320				20		80	
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	320	80		240	120	20		
<i>Pseudo-nitzschia delicatissima</i> group	1920	400	880	400	360	40	40	
<i>Pseudo-nitzschia seriata</i> group		80	160	80				
<i>Skeletonema costatum</i>	66800	116900	195390	131920	51770	7960	660	
<i>Thalassionema nitzschioides</i>	80	80	480	80	40	60	20	
<i>Thalassiosira baltica</i>					40			
<i>Thalassiosira gravida</i>				80				
<i>Thalassiosira oestrupii</i>				80			40	
<i>Thalassiosira</i> spp.	400		2720	5040	1480	280		
Copepoda		400	80	240		20	20	40
<i>Dictyocha speculum</i>	640	480	1840	560	220		240	3960
<i>Ebria tripartita</i>	240	80	160		20	20	120	3120
<i>Eutreptia / Eutreptiella</i>	160		80					
Flagellate	80	80	160					
<i>Helicostomella</i> sp.	240	80	80			120	280	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Mesodinium rubrum</i>	2480	8720	4720		20		6240	5320
Pollen	80						20	
Tintinnids	160	1200	1120	240	120	60	600	680
15-Aug-00								
<i>Alexandrium fundyense</i>		240	240					
<i>Amphidinium cf. carterae</i>			160					
<i>Amylax triacantha</i>		80	80					
<i>Ceratium fusus</i>	400	560	800				240	
<i>Ceratium lineatum</i>	720	1040	240			40	60	80
<i>Ceratium longipes</i>	400	160	240					
<i>Ceratium spp.</i>		80	80				20	
<i>Ceratium tripos</i>	560	1920	240				200	
<i>Dinophysis acuminata</i>	400	400	560				120	
<i>Dinophysis acuta</i>							20	
<i>Dinophysis fortii</i>								
<i>Dinophysis norvegica</i>	1040	800	240	40			20	200
<i>Gonyaulax spinifera</i>	2240	12320	240					80
15-Aug-00 (continued)								
<i>Gyrodinium aureolum</i>			80					
<i>Gyrodinium cf. spirale</i>	3040	6800	2560		40		140	680
<i>Heterocapsa triquetra</i>	10800	8320	11280					840
<i>Prorocentrum micans</i>	80	80						80
<i>Prorocentrum minimum</i>								
<i>Protoperidinium</i> spp.	640	1200					20	40
<i>Scrippsiella</i> sp.	1280	4000	400					
<i>Scrippsiella trochoidea</i>	1920	4240	400					360
Unarmoured dinoflagellate	17120	15760	9280		40		280	920
<i>Actinoptychus senarius</i>					160	80		
<i>Asterionellopsis glacialis</i>	80		160	120	80			40
Centrale diatom					40	80		
<i>Cerataulina pelagica</i>	80		240	20				
<i>Chaetoceros compressus</i>		80	160	80	80	60		
<i>Chaetoceros constrictus</i>				20				
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>			80					
<i>Chaetoceros debilis</i>	800	1200	1280	40	40			160
<i>Chaetoceros decipiens</i>			80	20	40	20	20	
<i>Chaetoceros ingolfianus</i>		160	400					
<i>Chaetoceros laciniatus</i>		160	80					
<i>Chaetoceros lorenzianus</i>		80			40			40
<i>Chaetoceros simplex</i>			80				360	40
<i>Chaetoceros socialis</i>	2720	2560	1440	140				480
<i>Chaetoceros</i> spp.	720	2640	1360	400	200	160	60	360
<i>Corethron criophilum</i>			80		40	20	20	40
<i>Coscinodiscus</i> spp.	80				280	20		
<i>Cylindrotheca closterium</i>	400	160	880	80	640	460	240	160
<i>Dactyliosolen fragilissimus</i>					40			200
<i>Detonula confervacea</i>						20		
<i>Ditylum brightwellii</i>	240		80	40				
<i>Eucampia zodiacus</i>								40
<i>Guinardia delicatula</i>	240	80	80	120	40	60	20	320
<i>Gyrosigma tenuissimum</i>					80			
<i>Lauderia annulata</i>								
<i>Leptocylindrus danicus</i>					100			
<i>Leptocylindrus minimus</i>	640	400	480	40	40	40	60	
<i>Navicula</i> sp.							20	
<i>Paralia marina</i>						40	20	40
Pennate diatom							20	40
<i>Pleurosigma angulatum</i>						80	20	
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				20	40	60		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Pseudo-nitzschia delicatissima</i> group	320	480	1440	180	80	20		240
<i>Pseudo-nitzschia seriata</i> group	160	160	80			20		
<i>Skeletonema costatum</i>	29280	168670	98112	8440	15280	8780	60	10080
<i>Thalassionema nitzschiooides</i>			80			60		
<i>Thalassiosira auguste-lineata</i>	320	80	80	20	80	20		40
<i>Thalassiosira baltica</i>			80	40				
<i>Thalassiosira</i> spp.	320		320	120	240	260	40	
Copepoda		160		60	40		20	
<i>Dictyocha speculum</i>	1120	480	1600	200	80	20	80	440
<i>Ebria tripartita</i>								
<i>Eutreptia / Eutreptiella</i>	800	80	160	20				
Litostomatea	240	320	80		40			40
<i>Mesodinium rubrum</i>	1760	5040	1040		80		960	2680
Pollen							20	
Tintinnids	2480	1360	2000		80	20	340	640
Tintinnids sp a	22320							
Armoured dinoflagellate	3280	6240	960	60	120	40	20	440

ORGANISM 22-Aug-00	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Alexandrium ostenfeldii</i>							40	
<i>Alexandrium</i> spp.				120				
<i>Amphidinium</i> cf. <i>carterae</i>			160	40				
<i>Amylax triacantha</i>							40	
Armoured dinoflagellate	80		1760	160			60	800
<i>Ceratium fusus</i>	200	80		120	80	20	20	800
<i>Ceratium kofoidii</i>				40				
<i>Ceratium lineatum</i>	440	80	2880	920			60	1320
<i>Ceratium longipes</i>	80	240	160	240				160
<i>Ceratium macroceros</i>							40	
<i>Ceratium minutum</i>							20	160
<i>Ceratium</i> spp.			160	40				
<i>Ceratium tripos</i>	160	240	800	280		20		1120
<i>Dinophysis acuminata</i>			640	200		20		80
<i>Dinophysis acuta</i>		80						200
<i>Dinophysis norvegica</i>	80	240		720			40	920
<i>Dinophysis</i> spp.								80
<i>Gonyaulax digitale</i>		240						
<i>Gonyaulax spinifera</i>		160	320					
<i>Gyrodinium</i> cf. <i>spirale</i>	360	1280	1600	1240	80		100	
<i>Heterocapsa triquetra</i>		320	1920	40				80
<i>Prorocentrum micans</i>								120
<i>Prorocentrum minimum</i>								40
<i>Protoperdinium brevipes</i>			160					
<i>Protoperdinium</i> spp.		80		120				40
<i>Scrippsiella</i> sp.			480	80				
<i>Scrippsiella trochoidea</i>	40		480	120			200	17280
Unarmoured dinoflagellate	80	640	1760	80			80	280
<i>Actinoptychus senarius</i>	40						40	
<i>Asterionellopsis glacialis</i>	80	320	480	880	440	160		
Centrale diatom				40			60	
<i>Cerataulina pelagica</i>	120		480				20	
<i>Chaetoceros compressus</i>	80	800	480	720	40	60		
<i>Chaetoceros constrictus</i>	40	80						40
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>	40						40	
<i>Chaetoceros debilis</i>	1240	3360	4800	1360	280	200		
<i>Chaetoceros decipiens</i>	120	160	320	120		60	40	
<i>Chaetoceros diadema</i>							40	
<i>Chaetoceros furcellatus</i>							20	
<i>Chaetoceros ingolfianus</i>	400	2480	1120	40			20	
<i>Chaetoceros laciniatus</i>	40	240	320	40	40			40
<i>Chaetoceros lorenzianus</i>	280	160	160					20
<i>Chaetoceros radicans</i>					40	60		
<i>Chaetoceros simplex</i>					40		220	80
<i>Chaetoceros socialis</i>	1520	7200	15040			40		840
<i>Chaetoceros</i> spp.	2280	11680	7200	14080	960	580	20	120
<i>Chaetoceros teres</i>						20		
<i>Corethron criophilum</i>				120	40	20		
<i>Coscinodiscus</i> spp.				120		40		
<i>Cylindrotheca closterium</i>	240	320	960	480	520	1140	140	80
<i>Dactyliosolen fragilissimus</i>	40			40	40			240
<i>Detonula confervacea</i>			320		40		40	
<i>Ditylum brightwellii</i>	120	240	480		40			20
<i>Eucampia zodiacus</i>	320	160		40			160	
<i>Guinardia delicatula</i>	840	400	1280	520		380	20	40
<i>Helicotheca tamesis</i>	40							
<i>Lauderia annulata</i>	40			40				
<i>Leptocylindrus danicus</i>			80	640	160		60	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Leptocylindrus minimus</i>	560	2560	480	360	80	80	20	80
22-Aug-00 (continued)								
<i>Navicula</i> sp.						40		
<i>Odontella sinensis</i>	80							
<i>Paralia marina</i>						20		
Pennate diatom							80	
<i>Pleurosigma angulatum</i>	80				40			
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	80	80		160		40		
<i>Pseudo-nitzschia</i> sp.							20	
<i>Pseudo-nitzschia delicatissima</i> group	560	2320	3040	560	320	60		
<i>Pseudo-nitzschia seriata</i> group	80	560	1600	800		80		40
<i>Rhizosolenia setigera</i>								
<i>Skeletonema costatum</i>	9720	108550	85120	121910	18120	18840	220	200
<i>Thalassionema nitzschiooides</i>	40	160		240	120	100		
<i>Thalassiosira auguste-lineata</i>	40	240	960	40	40			
<i>Thalassiosira baltica</i>					40			
<i>Thalassiosira gravida</i>		80	160					
<i>Thalassiosira oestrupii</i>	40			160	240		40	
<i>Thalassiosira</i> spp.			160	120	440	60	40	
Copepoda	80		160			20		280
<i>Dicytiocha speculum</i>	120	720	800	400	40	20	140	16160
<i>Eutreptia</i> / <i>Eutreptiella</i>			160	160				40
<i>Helicostomella</i> sp.			160					160
<i>Mesodinium rubrum</i>	840	400	2560	200		20	820	17960
Pollen	40							
Tintinnids	360	240	1920	200		20	100	200
28-Aug-00								
<i>Alexandrium fundyense</i>			80					80
<i>Alexandrium fundyense</i> (cyst)			80					
<i>Amphidinium</i> cf. <i>carterae</i>					160			
Armoured dinoflagellate	160	640	2640	240				
<i>Ceratium fusus</i>		400	80	320	160		20	640
<i>Ceratium kofoidii</i>		160						
<i>Ceratium lineatum</i>	1920	1680		1680	720		40	1360
<i>Ceratium longipes</i>	160		80	80			20	
<i>Ceratium macroceros</i>	320							
<i>Ceratium minutum</i>							240	
<i>Ceratium</i> spp.		160		80				
<i>Ceratium tripos</i>	800	320		80	240		40	800
<i>Dinophysis acuminata</i>		240		80	160			80
<i>Dinophysis acuta</i>			80					
<i>Dinophysis norvegica</i>	160	160		80	560		20	480
<i>Dinophysis</i> spp.			80					
<i>Gonyaulax spinifera</i>			240					
<i>Gyrodinium</i> cf. <i>spirale</i>		400	160	400	80		180	
<i>Heterocapsa triquetra</i>		720	2160	720				320
<i>Prorocentrum micans</i>		80	80					
<i>Prorocentrum minimum</i>		240	160					160
<i>Protoperidinium</i> spp.			80	160			20	160
<i>Scrippsiella</i> sp.	160		960					7520
<i>Scrippsiella trochoidea</i>	160	1200	2480	400	80		220	3760
Unarmoured dinoflagellate		320	2640	240	240		40	400
<i>Actinoptychus senarius</i>					640	160		
<i>Asterionellopsis glacialis</i>	1760	160	640	1200	2400	2160		
Centrale diatom								
<i>Cerataulina pelagica</i>	480	80		160			20	320
<i>Chaetoceros compressus</i>	160	2080	560	560	880	160		
<i>Chaetoceros constrictus</i>			400	400				
<i>Chaetoceros convolutus</i> var. <i>trisetosa</i>			160		80			

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros debilis</i>	6560	6800	7680	7040	6960	3200	20	80
<i>Chaetoceros decipiens</i>	160	80	240		400	80	40	320
28-Aug-00 (continued)								
<i>Chaetoceros diadema</i>	160		160	160	240	160		
<i>Chaetoceros didymus</i>			80		80			
<i>Chaetoceros ingolfianus</i>		560	80					
<i>Chaetoceros laciniatus</i>	320	1520	1040	880	880			
<i>Chaetoceros lorenzianus</i>	1120	1600	1040	1360	2560			
<i>Chaetoceros radicans</i>				320				
<i>Chaetoceros simplex</i>				160			360	240
<i>Chaetoceros socialis</i>	36320	23120	22080	15440	14720		320	1120
<i>Chaetoceros spp.</i>	3200	8560	6640	13920	14320	10400	100	480
<i>Corethron criophilum</i>			80	160		80	160	
<i>Coscinodiscus spp.</i>					160	160		80
<i>Cylindrotheca closterium</i>	2400	880	800	1120	1440	1520	500	400
<i>Dactyliosolen fragilissimus</i>		240		400	80	80	80	80
<i>Detonula conservacea</i>					560	160		
<i>Ditylum brightwellii</i>	160	640	1040	960	720	240		
<i>Eucampia zodiacus</i>	320	240	160	400				
<i>Guinardia delicatula</i>	6880	5360	3840	4880	3120	1440	300	880
<i>Guinardia flaccida</i>		80						
<i>Guinardia striata</i>			80					
<i>Gyrosigma tenuissimum</i>				80				
<i>Helicothea tamesis</i>					160			
<i>Lauderia annulata</i>								
<i>Leptocylindrus danicus</i>	160	240	240	1680	560	1200	20	80
<i>Leptocylindrus minimus</i>	2240	4480	2800	1360	2320	560	100	240
<i>Navicula</i> sp.						20		
<i>Odontella regia</i>					80			
<i>Odontella sinensis</i>					160			
<i>Paralia marina</i>			80					
Pennate diatom					320		20	
<i>Pleurosigma / Gyrosigma</i>			160				20	
<i>Pleurosigma angulatum</i>	160							
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	160	80		320	160	240	40	
<i>Pseudo-nitzschia</i> sp.								
<i>Pseudo-nitzschia delicatissima</i> group	2400	3360	6720	3920	4320	1600	20	
<i>Pseudo-nitzschia seriata</i> group	2880	6320	6320	6080	7600	880	20	
<i>Rhizosolenia hebetata</i>			80					
<i>Rhizosolenia setigera</i>					80	80	80	
<i>Skeletonema costatum</i>	10560	1040	1200	1680	1920	6080	480	
<i>Stephanopyxis turris</i>		240		80	80			
<i>Thalassionema nitzschiooides</i>	800	400	320	1200	880	320	60	80
<i>Thalassiosira auguste-lineata</i>				80				
<i>Thalassiosira baltica</i>				80	160			
<i>Thalassiosira gravida</i>		240	800		80			
<i>Thalassiosira oestrupii</i>		160						
<i>Thalassiosira</i> spp.		80	400	560	320	320		160
<i>Thalassiothrix</i> sp.							160	
<i>Triceratium alternans</i>					80			
Copepoda								
<i>Dicyocha speculum</i>	4960	1680	160	2480	1200		1380	76820
<i>Ebria tripartita</i>		320	80	320			100	400
<i>Eutreptia / Eutreptiella</i>	160		80	400			80	880
Flagellate						40		
<i>Helicostomella</i> sp.							320	
Litostomatea		80	240				20	
<i>Mesodinium rubrum</i>	4640	9920	4960	960	160	240	480	80160
Tintinnids	160	240	2880	640	80		420	1280

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
05-Sep-00								
<i>Alexandrium fundyense</i>								
<i>Amphidinium cf. carterae</i>				40				
<i>Amylax triacantha</i>							40	
Armoured dinoflagellate	80	160	120		40			
<i>Ceratium fusus</i>	400	80	200	120	80		280	
<i>Ceratium lineatum</i>	800	720	240	600	120		160	960
<i>Ceratium longipes</i>		80				40		
<i>Ceratium minutum</i>			40				40	80
<i>Ceratium tripos</i>		160	280	80			120	480
<i>Dinophysis acuminata</i>	80	80				40		
<i>Dinophysis acuta</i>		80	40					40
<i>Dinophysis norvegica</i>	160	240	120	80			40	360
<i>Dinophysis spp.</i>		40						
<i>Gyrodinium cf. spirale</i>			40	40			280	
<i>Prorocentrum micans</i>							40	40
<i>Prorocentrum minimum</i>	80	80	160					
<i>Protoperidinium spp.</i>		80			40			
<i>Scrippsiella sp.</i>							120	
<i>Scrippsiella trochoidea</i>	160	120	40				160	840
Unarmoured dinoflagellate			120				120	
<i>Actinoptychus senarius</i>		80	280	80	360			
<i>Asterionellopsis glacialis</i>	80		40	240	520	1640	80	
Centrale diatom				80	40			
<i>Cerataulina pelagica</i>	640	120		80	120	80	320	40
<i>Chaetoceros compressus</i>			40	80		40		
<i>Chaetoceros constrictus</i>							40	
<i>Chaetoceros debilis</i>	1680	2080	720	1040	1120	680		40
<i>Chaetoceros decipiens</i>	240	240	40					
<i>Chaetoceros diadema</i>					120			
<i>Chaetoceros didymus</i>							80	
<i>Chaetoceros laciniosus</i>	80	40		80	40			80
<i>Chaetoceros lorenzianus</i>	1520	1480	640	1040	1400	720		40
<i>Chaetoceros simplex</i>		80			40		200	200
<i>Chaetoceros socialis</i>	4240	12560	1040	1280	360		560	240
<i>Chaetoceros spp.</i>	240	1000	480	600	1480	1320	280	120
<i>Corethron criophilum</i>	80			80	80		40	40
<i>Coscinodiscus spp.</i>	80	120	120	40	80	160		80
<i>Cylindrotheca closterium</i>	640	280	360	680	1240	1320	440	240
<i>Dactyliosolen fragilissimus</i>	240	320	80	40	400	120	280	1320
<i>Detonula confervacea</i>				120			40	
<i>Ditylum brightwellii</i>	320	80	200	520	440	160		
<i>Eucampia zodiacus</i>	1680	1080	120	40	40			360
<i>Guinardia delicatula</i>	24880	17440	4040	4040	4280	5440	3600	4200
<i>Guinardia flaccida</i>	80	80	40			80		360
<i>Lauderia annulata</i>	80	120				80	80	40
<i>Leptocylindrus danicus</i>	160	800	120	200	200	160		160
<i>Leptocylindrus mediterraneus</i>				40				
<i>Leptocylindrus minimus</i>	960	1120	440	120	120	80	280	
<i>Licmophora abbreviata</i>							40	
<i>Navicula sp.</i>								
<i>Odontella sinensis</i>					40			
<i>Paralia marina</i>					40	40		
Pennate diatom					40		40	
<i>Pleurosigma / Gyrosigma</i>							40	
<i>Pleurosigma angulatum</i>	80							
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	80	80	80		200	80	120	
<i>Pseudo-nitzschia</i> sp.		120		40			120	120
<i>Pseudo-nitzschia delicatissima</i> group	1360	2880	1240	920	2200	1040		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Pseudo-nitzschia seriata</i> group	1840	7200	2200	3200	2360	2080	200	320
05-Sep-00 (continued)								
<i>Rhizosolenia hebetata</i>								
<i>Rhizosolenia setigera</i>	160		40	120	40			
<i>Rhizosolenia</i> spp.				40				
<i>Skeletonema costatum</i>	480	120	240	280	440	800	2160	120
<i>Stephanopyxis turris</i>				40	80	40		
<i>Thalassionema nitzschioides</i>	1280	360	240	480	640	880	160	440
<i>Thalassiosira gravida</i>					80			
<i>Thalassiosira oestrupii</i>				40	40			
<i>Thalassiosira</i> spp.	80			160	240	200	240	
<i>Triceratium alternans</i>						80		
Copepoda			120				40	80
<i>Dictyocha speculum</i>	19840	4800		760	1080	240	120	25200 #####
<i>Ebria tripartita</i>	80	200		40				160
<i>Eutreptia / Eutreptiella</i>			160		40		40	
<i>Helicostomella</i> sp.							40	80
Litostomatea	80							
<i>Mesodinium rubrum</i>	3360	1520	1280			80	7520	46760
Pollen				40				
Tintinnids	240	160	160	40	40		560	280
<i>Tintinnopsis campanula</i>								80
13-Sep-00								
<i>Amphidinium</i> cf. <i>carterae</i>					80			
Armoured dinoflagellate		40	40	160	80	40	80	640
<i>Ceratium fusus</i>	80		480	240	80	20	80	400
<i>Ceratium kofoidii</i>			80					
<i>Ceratium lineatum</i>	1040	720	1200	400	160		160	3360
<i>Ceratium longipes</i>			40					120
<i>Ceratium minutum</i>								120
<i>Ceratium</i> spp.			80			20		
<i>Ceratium tripos</i>	160	240	240		320		160	960
<i>Dinophysis acuminata</i>	160			80				
<i>Dinophysis acuta</i>	80			80				
<i>Dinophysis norvegica</i>	80	80	280	80				280
<i>Dinophysis</i> spp.			40		80			80
<i>Gonyaulax spinifera</i>		40						
<i>Gyrodinium</i> cf. <i>spirale</i>			40			80		
<i>Heterocapsa triquetra</i>	200		440	80				80
<i>Prorocentrum micans</i>			80	80				80
<i>Prorocentrum minimum</i>	160		120					
<i>Protoperdinium</i> spp.			40		80			40
<i>Scrippsiella</i> sp.			40			40		
<i>Scrippsiella trochoidea</i>	280		120	80		80	80	3120
Unarmoured dinoflagellate			80					200
<i>Actinoptychus senarius</i>	160		80		480	160		40
Centrale diatom				160			40	
<i>Cerataulina pelagica</i>	480	120	40		160	40	1760	440
<i>Chaetoceros debilis</i>	400	120	40	80	80	20	120	
<i>Chaetoceros decipiens</i>				160			80	
<i>Chaetoceros didymus</i>								
<i>Chaetoceros lorenzianus</i>	1440	320	240	80	640	220	200	520
<i>Chaetoceros simplex</i>	160	80	240	80	80	40	2400	1480
<i>Chaetoceros socialis</i>	7760	2120	1400	80		20	3120	120
<i>Chaetoceros</i> spp.		40		240		140	40	160
<i>Corethron criophilum</i>		40	40	320	160	60		40
<i>Coscinodiscus</i> spp.	80	40	40		320	40	40	40
<i>Cylindrotheca closterium</i>	480	240	640	1520	1520	200	800	680
<i>Dactyliosolen fragilissimus</i>	9440	2240	2760	2000	5200	740	12200	46760

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Detonula confervacea</i>		200		1120		80		
<i>Ditylum brightwellii</i>	320	120	480	160	240	60	160	240
13-Sep-00 (continued)								
<i>Eucampia zodiacus</i>	6000	960					960	560
<i>Guinardia delicatula</i>	68470	56780	73480	76820	45840	8640	#####	#####
<i>Guinardia flaccida</i>	160	480	40	80	640		1160	1280
<i>Guinardia striata</i>		40	40					
<i>Gyrosigma tenuissimum</i>								
<i>Lauderia annulata</i>	80				80		80	80
<i>Leptocylindrus danicus</i>		840	160				920	240
<i>Leptocylindrus minimus</i>		120	320	80			240	600
<i>Licmophora abbreviata</i>							40	
<i>Navicula</i> sp.					80			
<i>Odontella regia</i>		40			80		100	
<i>Odontella sinensis</i>		80	120		80			
<i>Paralia marina</i>		160						
Pennate diatom		40				20		
<i>Pleurosigma / Gyrosigma</i>			40		80		120	40
<i>Pleurosigma angulatum</i>	80	200						
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	320	160	240	160	320	40	80	80
<i>Pseudo-nitzschia</i> sp.		40			80		1160	320
<i>Pseudo-nitzschia delicatissima</i> group	2400	2080	1560	4800	2160	280	120	360
<i>Pseudo-nitzschia seriata</i> group	4160	1840	4560	5120	2880	740	480	640
<i>Rhizosolenia hebetata</i>								
<i>Rhizosolenia setigera</i>	160	120	280	320	160	40	40	320
<i>Skeletonema costatum</i>	480	160	200	240	320	180	1160	240
<i>Stephanopyxis turris</i>					80	20		
<i>Thalassionema nitzschiooides</i>	1760	1120	600	2480	880	580	400	1000
<i>Thalassiosira baltica</i>						20		
<i>Thalassiosira gravida</i>					80		40	
<i>Thalassiosira oestrupii</i>					80			
<i>Thalassiosira</i> spp.		40			80	560	240	560
<i>Triceratium alternans</i>						20		120
Copepoda	240				80		20	
<i>Dictyocha fibula</i>					160			
<i>Dictyocha speculum</i>	2640	560	560	3520	1120	120	600	160
<i>Ebria tripartita</i>			80	160	80		40	360
<i>Eutreptia / Eutreptiella</i>			120				40	80
Litostomatea					80			80
<i>Mesodinium rubrum</i>	7200	9200	3720		400	20	600	#####
Pollen							40	40
Tintinnids	800	320	520	160	80	20	160	240
<i>Tintinnopsis campanula</i>								40
18-Sep-00								
<i>Alexandrium fundyense</i>			80				80	
<i>Amphidinium</i> cf. <i>carterae</i>				80				
Armoured dinoflagellate	120		320	80	40	20	200	4400
<i>Ceratium fusus</i>	200	40	720	560	40	20	40	720
<i>Ceratium kofoidii</i>	40		80					240
<i>Ceratium lineatum</i>	960		400	2000			720	38560
<i>Ceratium longipes</i>				80				80
<i>Ceratium minutum</i>								1920
<i>Ceratium</i> spp.				80				80
<i>Ceratium tripos</i>	240		320	480			40	4560
<i>Dinophysis acuminata</i>	40		80				40	240
<i>Dinophysis acuta</i>	80							
<i>Dinophysis norvegica</i>		80		240			80	
<i>Gonyaulax digitale</i>								1280
<i>Gonyaulax spinifera</i>		40					40	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Gyrodinium cf. spirale</i>	120		160				1520	160
<i>Heterocapsa triquetra</i>	40			80				
<i>Prorocentrum micans</i>	40	160	80	160			40	240
18-Sep-00 (continued)								
<i>Prorocentrum minimum</i>			2400	800			80	400
<i>Protoperidinium</i> spp.	40				40			800
<i>Scrippsiella trochoidea</i>	160						200	11200
Unarmoured dinoflagellate			880				680	320
<i>Actinoptychus senarius</i>	160	400		240	280	360		
<i>Asterionellopsis glacialis</i>		120		160	40	20		
Centrale diatom								
<i>Cerataulina pelagica</i>	520	480	480	240	80	20	280	240
<i>Chaetoceros compressus</i>					40			
<i>Chaetoceros debilis</i>		320	1200	1280	40	20	120	
<i>Chaetoceros decipiens</i>	80		400	160		80		
<i>Chaetoceros laciniatus</i>			40					
<i>Chaetoceros lorenzianus</i>	80	640	640	560	160		40	
<i>Chaetoceros simplex</i>	40	240		400	80		1240	160
<i>Chaetoceros socialis</i>	520	7440	5120	6640	40			
<i>Chaetoceros</i> spp.	120	120	880	800	40	60	120	160
<i>Corethron criophilum</i>	40	40	160	400	80		80	80
<i>Coscinodiscus</i> spp.	40	200	240	240	200	80		80
<i>Cylindrotheca closterium</i>	80	320	720	1760	520	160	160	80
<i>Dactyliosolen fragilissimus</i>	4320	6520	5600	18800	1400	840	4080	5440
<i>Detonula confervacea</i>				17680	520	160		
<i>Ditylum brightwellii</i>	200	1440	6240	6720	600	340	120	
<i>Eucampia zodiacus</i>	3360	2240		80	80		1760	320
<i>Guinardia delicatula</i>	40	360	960	480	240	220	280	240
<i>Guinardia flaccida</i>	280	1000		80		200	40	1560
<i>Guinardia striata</i>	120	320	1280	1360	80	160		160
<i>Gyrosigma balticum</i>			40					
<i>Helicothecea tamesis</i>					40			
<i>Lauderia annulata</i>				160			200	
<i>Leptocylindrus danicus</i>	560	6080	10560				5000	3440
<i>Leptocylindrus mediterraneus</i>					40			
<i>Leptocylindrus minimus</i>	320	840		160	440	60	640	160
<i>Licmophora abbreviata</i>	40							
<i>Melosira</i> spp.								
<i>Navicula</i> sp.						40		
<i>Odontella regia</i>			40			20		
<i>Odontella sinensis</i>	80			560	120	20	40	
<i>Paralia marina</i>					80			
Pennate diatom					80			
<i>Pleurosigma / Gyrosigma</i>		40				20	40	
<i>Pleurosigma angulatum</i>	40					20		
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	120		80	320	80	40	40	
<i>Porosira glacialis</i>				80			40	
<i>Pseudo-nitzschia</i> sp.		160					1240	
<i>Pseudo-nitzschia delicatissima</i> group	680	1960	8960	9200	880	340	160	80
<i>Pseudo-nitzschia seriata</i> group	200	2440	15680	19040	1400	400	560	80
<i>Rhizosolenia setigera</i>	480	200	400	1360	120	80	160	
<i>Skeletonema costatum</i>	360	560	6640	7360	1800	680	120	
<i>Thalassionema nitzschiooides</i>	2120	2400	1440	6640	2080	720	640	19280
<i>Thalassiosira baltica</i>				80			80	
<i>Thalassiosira gravida</i>		40			40	20		
<i>Thalassiosira oestrupii</i>		40		80		20		
<i>Thalassiosira</i> spp.	120		2560	1840	320	180	240	80
<i>Triceratium alternans</i>					40	20		
Copepoda		160		160		20	80	320

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Leptocylindrus danicus</i>	560	32160	49040	45920	40	40	2640	4560
<i>Leptocylindrus mediterraneus</i>					20			
<i>Leptocylindrus minimus</i>	160				40	40	220	
<i>Navicula</i> sp.	80							
<i>Odontella regia</i>		80						
25-Sep-00 (continued)								
<i>Odontella sinensis</i>	400		240	160	160		40	
<i>Paralia marina</i>				40	20			
Pennate diatom	80	80						
<i>Pleurosigma / Gyrosigma</i>	80		160					
<i>Pleurosigma angulatum</i>					40			
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>		80		800	40	40		
<i>Pseudo-nitzschia</i> sp.	80				40		100	80
<i>Pseudo-nitzschia delicatissima</i> group	4480	3200	6160	10240	1080	240		80
<i>Pseudo-nitzschia seriata</i> group	9920	18400	21920	59040	3760	960	100	160
<i>Rhizosolenia hebetata</i>					80	100		
<i>Rhizosolenia setigera</i>	1200	640	640	480	40	20	80	
<i>Rhizosolenia</i> spp.					40			
<i>Skeletonema costatum</i>	1840	2560	4640	9120	1120	420	100	
<i>Thalassionema nitzschiooides</i>	9760	7200	13360	22400	3840	960	560	14160
<i>Thalassiosira gravida</i>	80				40			
<i>Thalassiosira</i> spp.	160	160	1760	4800	360	80	160	
<i>Triceratium alternans</i>						20		
Copepoda		160		160			60	320
<i>Dictyocha fibula</i>		80					120	
<i>Dictyocha speculum</i>	480	160		480		20	2400	
<i>Ebria tripartita</i>							400	
<i>Eutreptia / Eutreptiella</i>		80					80	
Flagellate							80	
Litostomatea							40	80
<i>Mesodinium rubrum</i>	320	3120					480	15840
Pollen								
Tintinnids	400	240	240	480	40		260	880
03-Oct-00								
<i>Amphidinium</i> cf. <i>carterae</i>				20				
Armoured dinoflagellate			40	20		40	20	480
<i>Ceratium fusus</i>	80	80	80	20		40	20	320
<i>Ceratium lineatum</i>	560	80	240	40			240	6400
<i>Ceratium longipes</i>			40		20		20	160
<i>Ceratium tripos</i>	200		200	100	140		160	2080
<i>Dinophysis acuminata</i>			80				400	
<i>Dinophysis norvegica</i>								320
<i>Gonyaulax spinifera</i>	40							
<i>Cyrodinium</i> cf. <i>spirale</i>		160					100	240
<i>Heterocapsa triquetra</i>								
<i>Prorocentrum micans</i>		80	80				40	560
<i>Prorocentrum minimum</i>	40		240					
<i>Protoperdinium</i> spp.								
<i>Scirpsiella trochoidea</i>			80				60	7120
Unarmoured dinoflagellate		160	40					160
<i>Actinoptychus senarius</i>	200		240	380	660	620	300	240
<i>Asterionellopsis glacialis</i>			40					
<i>Bacillaria Paxillifer</i>					20			
Centrale diatom		80			40	20		
<i>Cerataulina pelagica</i>	200	880	200				160	
<i>Chaetoceros compressus</i>								80
<i>Chaetoceros debilis</i>		880	40	60				400
<i>Chaetoceros decipiens</i>	200			40		20	40	
<i>Chaetoceros furcellatus</i>						20		

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Chaetoceros lorenzianus</i>	120	480	40			20	100	2960
<i>Chaetoceros similis</i>					20			
<i>Chaetoceros simplex</i>	280	480	160	40	60	20	240	640
<i>Chaetoceros socialis</i>	520	1440					120	
<i>Chaetoceros</i> spp.	80	240	40	20		20		320
<i>Corethron criophilum</i>	160	320	160	40	60	20	220	320
03-Oct-00 (continued)								
<i>Coscinodiscus</i> spp.	80	80	120	40	20	80	40	
<i>Cylindrotheca closterium</i>	2120	3120	1880	220	520	580	260	
<i>Dactyliosolen fragilissimus</i>	280	320	480	80	360	120	3320	
<i>Detonula conservacea</i>	20200			600	320	1100		
<i>Ditylum brightwellii</i>	2080	9440	1040	500	600	320	120	80
<i>Eucampia zodiacus</i>	480	400					200	2800
<i>Guinardia delicatula</i>	920	1760	560	20	120	100		
<i>Guinardia flaccida</i>	160	160	120	60	100	80	320	400
<i>Guinardia striata</i>	600	5520	840	40	120	100	100	160
<i>Gyrosigma fasciola</i>								
<i>Gyrosigma tenuissimum</i>	40							
<i>Helicotheca tamesis</i>		80	40		20	60		
<i>Lauderia annulata</i>	80						160	240
<i>Leptocylindrus danicus</i>		60120	1880	60				43440
<i>Leptocylindrus minimus</i>	200	80	40				140	80
<i>Navicula</i> sp.					40	20		
<i>Odontella regia</i>	40							
<i>Odontella sinensis</i>	80		80		20	20	20	80
<i>Paralia marina</i>			40		40	40	20	
Pennate diatom				40	40			
<i>Pleurosigma / Gyrosigma</i>								
<i>Pleurosigma angulatum</i>	40		40				20	
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	40	320		20	20	40		
<i>Pseudo-nitzschia</i> sp.	80		80				20	
<i>Pseudo-nitzschia delicatissima</i> group	2320	6320	1080	160	440	480	140	320
<i>Pseudo-nitzschia seriata</i> group	1360	4800	720	40	300	360	60	880
<i>Rhizosolenia hebetata</i>					20			
<i>Rhizosolenia imbricata</i>							20	
<i>Rhizosolenia setigera</i>	360	320	120	120	100	60	360	320
<i>Skeletonema costatum</i>	1280	1040	800	260	440	340	380	240
<i>Stephanopyxis turris</i>		80						
<i>Thalassionema nitzschiooides</i>	7360	5840	6080	2620	5480	3760	2860	9680
<i>Thalassiosira baltica</i>					40	40		
<i>Thalassiosira oestrupii</i>					20			
<i>Thalassiosira</i> spp.	360	720	40	80	120	80	340	80
<i>Triceratium alternans</i>						40		
Copepoda		80		60				
<i>Dictyocha fibula</i>				40	20			
<i>Dictyocha speculum</i>	120	80	200	20	40		100	560
<i>Ebria tripartita</i>							20	160
<i>Eutreptia / Eutreptiella</i>			40				20	
Flagellate						20		
<i>Helicostomella</i> sp.	40							
<i>Mesodinium rubrum</i>	3000	640	960	20		40	1400	6080
Tintinnids	1880	880	640	220	60	60	420	560
10-Oct-00								
Armoured dinoflagellate		40		100			20	60
<i>Ceratium fusus</i>	60	80	40	20	120	20	20	60
<i>Ceratium kofoidii</i>			40					100
<i>Ceratium lineatum</i>	80	160	40	40	40		40	680
<i>Ceratium longipes</i>	20		20				20	20
<i>Ceratium macroceros</i>	20							20

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Ceratium minutum</i>				20				
<i>Ceratium</i> spp.								
<i>Ceratium tripos</i>	160	400	60	20	120	80	80	460
<i>Dinophysis acuminata</i>			20					20
<i>Dinophysis norvegica</i>								120
<i>Dinophysis tripos</i>	60		40	60			80	320
<i>Gyrodinium cf. spirale</i>		40						
10-Oct-00 (continued)								
<i>Heterocapsa triquetra</i>				40				
<i>Prorocentrum micans</i>	60						60	100
<i>Protoperidinium</i> spp.								80
<i>Scrippsiella trochoidea</i>							40	260
Unarmoured dinoflagellate	20		20		20			40
<i>Actinptychus senarius</i>	440	400	620	520	740	980	260	120
<i>Asterionellopsis glacialis</i>		40		60	60	20		
Centrale diatom					20			
<i>Cerataulina pelagica</i>	40							100
<i>Chaetoceros constrictus</i>							20	
<i>Chaetoceros debilis</i>							260	380
<i>Chaetoceros decipiens</i>				20			60	
<i>Chaetoceros lorenzianus</i>	40	40					60	220
<i>Chaetoceros simplex</i>	80	120		40	20	40	160	120
<i>Chaetoceros socialis</i>	20						20	500
<i>Chaetoceros</i> spp.		40					100	320
<i>Corethron criophilum</i>	260	320	200	120	280	120	300	260
<i>Coscinodiscus</i> spp.	20	400	120	200	260	180	80	40
<i>Cylindrotheca closterium</i>	320	2000	460	640	720	820	40	
<i>Dactyliosolen fragilissimus</i>		40	60		180		20	40
<i>Detonula confervacea</i>	320	3600		100		20	1820	4580
<i>Ditylum brightwellii</i>	240	1120	100	140	100	200	60	80
<i>Eucampia zodiacus</i>							20	1520
<i>Guinardia delicatula</i>	120	600	60	80	100		60	20
<i>Guinardia flaccida</i>					60		160	
<i>Guinardia striata</i>	120	720	40			100		40
<i>Gyrosigma fasciola</i>	20							
<i>Gyrosigma tenuissimum</i>		40						20
<i>Helicotheca tamesis</i>	20			20	20	20	20	
<i>Lauderia annulata</i>								60
<i>Leptocylindrus danicus</i>			20				40	
<i>Leptocylindrus minimus</i>	20	40	20		20		60	
<i>Navicula</i> sp.	60							60
<i>Odontella sinensis</i>	100	40	80	20	40	180		20
<i>Paralia marina</i>	60					20		
Penate diatom		40	20			60		
<i>Pleurosigma / Gyrosigma</i>			20					
<i>Pleurosigma angulatum</i>	40	80						
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>	140	40	40	120	160	100		
<i>Pseudo-nitzschia</i> sp.				20	20			
<i>Pseudo-nitzschia delicatissima</i> group	1160	2840	280	200	200	140	220	140
<i>Pseudo-nitzschia seriata</i> group	60	840	40	80	20	20	20	80
<i>Rhizosolenia hebetata</i>				20				
<i>Rhizosolenia setigera</i>	100	80		120	60	60		60
<i>Rhizosolenia</i> spp.	20					20		
<i>Skeletonema costatum</i>	640	1400	220	160	180	60	220	40
<i>Thalassionema nitzschiooides</i>	1500	5520	1540	1680	2440	4340	1780	2820
<i>Thalassiosira ballica</i>			60					
<i>Thalassiosira gravida</i>							20	
<i>Thalassiosira oestrupii</i>		80					20	
<i>Thalassiosira</i> spp.	340	280	100	80	320	300	640	280

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Triceratium alternans</i>						20		
Copepoda	40	80				20	20	
<i>Dictyocha fibula</i>	60	200	260	140	160	20	40	
<i>Dictyocha speculum</i>		600	40	100	80	40		60
<i>Ebria tripartita</i>				20	20			
<i>Eutreptia / Eutreptiella</i>				20			20	
<i>Helicostomella</i> sp.								
<i>Mesodinium rubrum</i>	560	520	240	60	80		20	160
10-Oct-00 (continued)								
Pollen						20	20	
Tintinnids	1480	2240	380	420	260	160	360	1020
24-Oct-00								
<i>Alexandrium fundyense</i>							80	
<i>Alexandrium ostenfeldii</i>								
<i>Amphidinium</i> cf. <i>carterae</i>								
Armoured dinoflagellate	20	40			100		20	
<i>Ceratium fusus</i>	80	40		40	100	20		80
<i>Ceratium kofoidi</i>			40				20	320
<i>Ceratium lineatum</i>	520	100	100	200	260		900	2240
<i>Ceratium longipes</i>		40						
<i>Ceratium tripos</i>	240	40	60		80		100	320
<i>Dinophysis norvegica</i>					40		20	
<i>Dinophysis tripos</i>					20			
<i>Gonyaulax digitale</i>	20							
<i>Gonyaulax spinifera</i>								
<i>Gyrodinium</i> cf. <i>spirale</i>	20	20	120	40	60		60	
<i>Prorocentrum micans</i>		20		120	80		40	480
<i>Protoperidinium depressum</i>			20					
<i>Protoperidinium</i> spp.	40	20	40	80			40	
<i>Scrippsiella trochoidea</i>		20	20					80
Unarmoured dinoflagellate		60	40	40			40	80
<i>Actinopycthus senarius</i>	700	1260	700	1120	680	300	120	640
<i>Asterionellopsis glacialis</i>	60	140			220	160		
Centrale diatom					80			
<i>Chaetoceros constrictus</i>	20							
<i>Chaetoceros debilis</i>	1080	260	120	480	540	140	1600	3120
<i>Chaetoceros decipiens</i>		40	20	40	80			
<i>Chaetoceros lorenzianus</i>		40			40		40	80
<i>Chaetoceros simplex</i>	60	140	20		100	20	520	
<i>Chaetoceros socialis</i>	5280	140	60	240		20	4940	8080
<i>Chaetoceros</i> spp.	20	140			20		80	160
<i>Chaetoceros subtilis</i>	20							
<i>Corethron criophilum</i>	220	440	180	280	440	160	40	320
<i>Coscinodiscus</i> spp.	60	20	100	200	20	60	60	160
<i>Cylindrotheca closterium</i>	140	280	80	400	120	180	120	480
<i>Dactyliosolen fragilissimus</i>					40			
<i>Detonula conservacea</i>				40				
<i>Detonula pumila</i>								
<i>Ditylum brightwellii</i>	200	640	220	520	500	120	140	
<i>Eucampia zodiacus</i>	7880	980	1000	3120	2400	400	5160	24960
<i>Fragilaria</i> spp.					20			
<i>Grammatophora marina</i>		20						
<i>Guinardia delicatula</i>	380	1460	740	720	540	160	20	
<i>Guinardia flaccida</i>		60	20					60
<i>Guinardia striata</i>	20	60	60	40	20			140
<i>Helicotheca tamesis</i>		20					20	
<i>Lauderia annulata</i>				40				
<i>Leptocylindrus danicus</i>		80						
<i>Leptocylindrus minimus</i>	20	60	20			20	20	

ORGANISM	3	15	16-0m	16-10m	16-25m	16-50m	17	25
<i>Actinoptychus senarius</i>	180	220			760	420	80	140
<i>Asterionellopsis glacialis</i>					20			
Centrale diatom	60		80			20		
<i>Chaetoceros</i> spp.								
<i>Corethron criophilum</i>	20			20			40	
<i>Coscinodiscus</i> spp.	40	80		20			20	20
<i>Cylindrotheca closterium</i>	240	40	180	140	60	160	980	320
<i>Detonula conservacea</i>				60				
<i>Ditylum brightwellii</i>	60		60	100	100	60		20
<i>Eucampia zodiacus</i>	40		40		20		20	380
<i>Grammatophora marina</i>			60				20	
19-Dec-00 (continued)								
<i>Guinardia delicatula</i>	140		100	120	40	60	20	480
<i>Guinardia flaccida</i>	40						120	
<i>Guinardia striata</i>							20	
<i>Gyrosigma fasciola</i>						20	20	
<i>Gyrosigma tenuissimum</i>						20		
<i>Helicotheca tameis</i>						20		
<i>Lauderia annulata</i>								
<i>Leptocylindrus minimus</i>	40	20			20		20	80
<i>Melosira</i> spp.					40		20	
<i>Navicula</i> sp.	20	20	40	60	20	120	20	60
<i>Odontella regia</i>		40						
<i>Odontella sinensis</i>	20			60	20	40		
<i>Paralia marina</i>		40	60		20	20		
Pennate diatom	120		80	40		40	60	20
<i>Pleurosigma / Gyrosigma</i>			20				20	
<i>Pleurosigma angulatum</i>		80		60	40			
<i>Pleurosigma angulatum</i> var. <i>strigosa</i>				60	60	20	40	
<i>Pseudo-nitzschia delicatissima</i> group	100		100	20	20	20	40	20
<i>Pseudo-nitzschia seriata</i> group							60	60
<i>Rhabdonema</i> spp.						20		
<i>Rhizosolenia hebetata</i>								
<i>Rhizosolenia imbricata</i>						40		
<i>Rhizosolenia setigera</i>				40	60		80	220
<i>Skeletonema costatum</i>					80	20		
<i>Thalassionema nitzschiooides</i>	60	60		140	160	100		40
<i>Thalassiosira baltica</i>								80
<i>Thalassiosira gravida</i>								
<i>Thalassiosira</i> spp.	20	20	40	80	60	20	120	200
Copepoda		20						20
<i>Dictyocha fibula</i>								
<i>Dictyocha speculum</i>	20			20		20		
<i>Dinobryon</i> spp.							20	
Litostomatea							20	20
<i>Mesodinium rubrum</i>	360	80	240	20			340	2420
Pollen		40	20		20		20	20
Tintinnids	80	200	60	20			160	300

Appendix 3. Plant nutrient, temperature and salinity data during 1999-2000.

Date mm/dd/yy	Temp. Surface	Temp. Bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrates Surface	Ammonia Surface	Nitrite Surface
Station 3									
01/13/99	2.0	2.8	31.64	31.94	10.07	1.126	10.08	4.86	0.28
02/09/99	1.8	2.4	31.12	31.51	10.52	1.092	9.63	3.53	0.19
03/18/99	2.4	2.2	31.33	31.37	10.16	1.080	10.00	4.83	0.20
04/13/99	4.1	3.8	31.34	31.35	9.72	1.064	9.55	2.64	0.25
05/04/99	6.7	5.5	30.20	30.62	8.87	0.899	7.89	2.09	0.25
05/18/99	7.1	6.4	31.70	31.42	1.81	0.711	3.02	1.32	0.16
05/25/99	7.9	7.1	30.78	30.92	2.74	0.780	3.37	1.63	0.18
06/01/99	9.0	7.8	31.04	31.21	1.43	0.397	0.49		0.09
06/08/99	10.3	7.9	31.12	31.34	1.22	0.577	0.83		0.13
06/15/99	9.5	9.0	31.41	31.44	1.89	0.708	2.59	3.37	0.26
06/21/99	11.9	9.0	31.55	31.56	2.52	0.632	1.83	2.41	0.20
06/29/99	10.8	9.8	31.48	31.56	1.75	0.583	1.38	1.89	0.13
07/06/99	12.8	10.5	31.53	31.61	2.20	0.525	1.11	2.60	0.16
07/13/99	11.1	10.5	31.76	31.79	2.87	0.617	1.94	2.24	0.17
07/20/99	13.2	11.0	31.72	31.87	1.87	0.686	0.43	1.83	0.13
07/27/99	13.0	12.0	31.63	31.69	3.19	0.592	1.17	4.21	0.19
08/03/99	14.3	12.6	31.68	31.82	4.72	0.809	2.06	6.16	0.26
08/10/99	12.8	11.7	31.99	32.06	3.56	0.696	2.87	2.31	0.19
08/17/99	14.0	12.3	31.83	32.02	3.02	0.740	2.30	2.04	0.24
08/24/99	14.2	12.8	31.81	31.95	1.22	0.788	0.24	1.97	0.11
08/31/99	14.1	12.8	32.10	32.18	1.77	0.731	1.43	0.99	0.13
09/07/99	14.0	13.2	32.44	32.30	1.53	0.707	1.10	1.50	0.10
09/14/99	13.9	12.9	32.38	32.43	2.53	0.995	1.89	2.09	0.22
09/21/99	14.8	13.6	32.72	32.26	1.45	0.744	1.02	2.14	0.23
09/28/99	13.5	13.0	32.27	32.33	3.24	0.859	3.52	2.03	0.31
10/05/99	12.8	12.6	32.27	32.42	2.72	0.885	3.13	2.80	0.33
10/18/99	11.1	11.1	32.37	32.38	6.36	1.201	7.45	3.45	0.38
11/09/99	10.0	10.3	33.02	33.06	7.90	0.972	9.34		0.34
12/14/99	8.5	8.6	30.90	32.30	11.17	1.058	10.75		0.23
01/19/00	2.8	2.6	32.29	32.25	9.85	1.032	10.00		0.20
02/14/00	2.1	2.1	32.20	32.23	9.21	0.910	11.67	0.52	0.21
03/14/00	3.0	2.8	31.16	31.68	10.67	0.942	11.25	1.94	0.15
04/11/00	5.0	3.9	30.95	31.44	9.94	0.977	10.58	1.98	0.19
05/02/00	6.0	5.0	30.67	31.21	9.62	0.976	9.74	2.33	0.26
05/16/00	7.3	6.2	30.52	30.85	8.77	0.912	8.79	3.42	0.28
05/23/00	8.0	6.8	30.46	31.02	6.33	0.870	7.59	2.49	0.27
05/30/00	8.9	6.7	29.89	30.99	6.21	0.785	6.79	1.62	0.24
06/06/00	8.5	8.1	31.19	31.18	0.58	0.609	1.64	1.66	0.14
06/13/00	9.7	8.1	31.35	31.36	0.83	0.607	1.79	2.58	0.12
06/20/00	10.2	8.3	31.44	31.59	1.02	0.515	1.46	2.02	0.11
06/27/00	12.0	9.8	31.46	31.54	1.53	0.757	1.04	2.73	0.14
07/04/00	10.3	9.9	31.61	31.66	3.01	0.863	3.31	3.28	0.12
07/17/00	13.0	12.1	31.34	31.38	2.13	0.671		0.95	0.11
07/25/00	14.0	11.7	31.50	31.68	2.72	0.625	2.58	5.53	0.33
07/31/00	13.5	12.8	31.64	31.67	1.16	0.416	1.16	2.43	0.15
08/08/00	14.8	11.9	31.85	31.97	2.07	0.600	3.18	4.53	0.28

Date mm/dd/yy	Temp. Surface	Temp. Bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrates Surface	Ammonia Surface	Nitrite Surface
08/15/00	14.0	13.3	31.76	31.81	2.80	0.572	2.42	2.12	0.25
08/22/00	14.3	12.8	31.88	32.07	4.43	0.894	3.97	7.51	0.36
08/28/00	13.5	13.0	32.21	32.21	3.51	0.744	4.17	2.64	0.32
09/05/00	13.7	13.0	32.16	32.24	3.96	0.865	4.36	4.02	0.42
09/13/00	14.1	13.3	31.42	32.41	3.96	0.792	2.24	1.55	0.27
09/19/00	14.2	13.2	32.34	32.37	5.34	1.075	3.65	4.92	0.38
09/25/00	13.2	12.8	32.44	32.45	5.33	1.019	5.06	4.34	0.41
10/03/00	13.0	12.4	32.54	32.58	5.64	1.088	6.38	4.65	0.46
10/10/00	12.0	11.9	32.53	32.51	5.24	0.990	5.29	3.13	0.46
10/24/00	11.4	11.0	32.74	32.76	6.05	0.984	8.25	2.19	0.43
11/14/00	10.2	10.2	32.59	32.59	5.23	0.804	7.18	1.79	0.28
12/19/00	5.3	6.3	31.98	32.27	7.97	1.069	8.81	3.52	0.68
Station 15									
01/13/99	2.2	2.6	31.97	32.01	9.21	1.036	9.47	3.52	0.18
02/09/99	2.3	2.9	31.59	31.70	9.70	1.038	9.75	2.65	0.17
03/18/99	2.7	2.5	31.37	31.62	10.28	1.029	10.14	1.49	0.18
04/13/99	4.2	3.6	31.34	31.42	9.60	1.031	9.27	1.96	0.23
05/04/99	7.0				8.91	0.878	7.94	1.62	0.23
05/18/99	8.0	5.7	31.39	31.45	1.25	0.666	0.95	0.97	0.12
05/25/99	7.9	7.2	30.63	30.74	2.90	0.742	3.59	1.29	0.18
06/01/99	9.6	8.1	31.05	31.13	1.26	0.488	0.57		0.11
06/08/99	10.1	6.8	30.98	31.53	0.79	0.473	0.41		0.12
06/15/99	10.5	8.8	31.23	31.39	1.76	0.749	1.35	4.50	0.34
06/21/99	10.4	8.5	31.53	31.60	1.44	0.483	1.35	1.95	0.16
06/29/99	12.9	9.4	31.33	31.60	1.55	0.458	0.43	5.10	0.13
07/06/99	12.0	10.8	31.60	31.59	1.82	0.492	0.96	1.90	0.14
07/13/99	11.7	10.0	31.75	31.80	1.74	0.451	0.57	1.63	0.10
07/20/99	13.8	10.6	32.02	31.88	2.18	0.661	0.31	1.79	0.08
07/27/99	13.2	12.5	31.55	31.63	2.93	0.547	0.81	2.22	0.14
08/03/99	13.2	10.8	31.93	32.07	3.78	0.631	1.95	4.16	0.22
08/10/99	13.8	11.6	31.65	32.08	1.83	0.542	0.54	1.81	0.10
08/17/99	13.2	12.0	31.89	32.06	0.80	0.451	0.32	1.68	0.09
08/24/99	15.2	13.7	31.54	31.76	0.99	0.726	0.09	1.32	0.07
08/31/99	13.8	11.8	31.55	32.34	1.47	0.596	0.91	1.20	0.11
09/07/99	14.8	13.0	32.41	32.31	1.33	0.604	0.78	0.65	0.09
09/14/99	14.4	12.7	32.28	32.43	1.61	0.869	0.29	1.17	0.11
09/21/99	15.5	13.7	31.64	32.28	1.28	0.543	0.31	1.09	0.10
09/28/99	14.0	12.7	32.13	32.51	2.65	0.729	1.61	1.62	0.22
10/05/99	12.3	12.3	32.46	32.50	3.73	0.995	3.79	3.38	0.34
10/18/99	11.0	11.0	32.02	32.00	6.84	1.015	7.68	2.40	0.32
11/09/99	9.8	9.6	33.10	33.09	9.12	1.011	9.98		0.35
12/14/99	8.2	8.7	31.08	32.34	10.80	0.847	9.01		0.13
01/19/00	3.2	2.9	32.69	32.35	9.69	1.016	10.19		0.18
02/14/00	2.5	1.6	32.31	32.27	8.86	0.885	11.36	1.47	0.14
03/14/00	3.1	2.8	31.79	31.85	9.49	0.926	11.81	1.76	0.13
04/11/00	4.2	3.7	30.97	31.52	10.12	0.949	11.06	1.88	0.18
05/02/00	6.9	4.8	29.68	31.40	10.73	0.859	9.62	2.01	0.27
05/16/00	8.0	5.6	29.70	31.27	10.05	0.817	8.06	2.44	0.29

Date mm/dd/yy	Temp. Surface	Temp. Bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrates Surface	Ammonia Surface	Nitrite Surface
Station 15									
05/23/00	8.0	7.2	30.09	30.47	8.25	0.850	8.31	2.51	0.25
05/30/00	9.0	6.4	29.44	30.19	6.34	0.664	5.63	0.93	0.23
06/06/00	8.9	6.9	31.10	31.43	0.66	0.562	1.53	1.24	0.11
06/13/00	9.8	8.0	31.06	31.36	0.61	0.443	1.20	2.41	0.10
06/20/00	11.0	7.8	31.44	31.59	1.08	0.492	1.39	1.50	0.10
06/27/00	11.5				1.35	0.684	0.64	1.62	0.11
07/04/00	11.0	9.1	31.58	30.73	1.85	0.797	1.66	2.30	0.09
07/11/00	12.1	10.1	31.67	31.76	1.23	0.498	0.22	1.34	0.08
07/17/00	13.0	12.0	31.32	31.48	2.69	0.880		0.93	0.11
07/25/00	13.0	11.6	31.71	31.69	3.00	0.448	1.58	1.37	0.19
07/31/00	14.3	12.2	31.63	31.70	0.59	0.374	0.57	1.26	0.07
08/08/00	13.2	11.7	31.90	32.00	0.63	0.380	0.67	1.00	0.11
08/15/00	15.2	13.4	31.72	31.80	0.73	0.471	0.37	1.12	0.10
08/22/00	14.2	12.5	32.03	32.19	1.09	0.444	0.68	1.46	0.13
08/28/00	13.5	12.5	32.18	32.24	1.29	0.435	1.30	2.54	0.19
09/05/00	13.0	12.5	32.27	32.30	2.64	0.665	2.54	2.05	0.26
09/13/00	14.0	13.6	32.10	32.51	3.44	0.649	1.70	0.45	0.20
09/19/00	13.5	12.7	32.38	32.50	4.68	0.858	3.22	1.51	0.33
09/25/00	13.3	12.7	32.44	32.51	3.25	0.746	3.05	2.18	0.29
10/03/00	13.2	12.1	32.61	32.69	3.44	0.821	3.64	1.20	0.31
10/10/00	11.3	11.7	32.51	32.49	4.65	0.905	5.06	1.52	0.49
10/24/00	10.4	11.1	32.83	32.84	5.71	0.901	7.67	1.43	0.40
11/14/00	10.4	13.6	32.10	32.51	5.64	0.823	7.03	1.20	0.26
12/19/00	5.1	6.6	31.63	32.32	7.48	0.963	7.05	2.52	0.57
Station 17									
01/13/99	2.0	2.8	30.95	31.55	10.30	0.910	9.52	5.03	0.19
02/09/99	1.0	2.0	29.58	30.60	12.05	0.915	9.44	3.35	0.18
03/18/99	2.0	1.7	29.34	30.45	11.38	1.110	9.30	2.41	0.21
04/13/99	3.9	3.7	27.78	30.03	12.42	1.014	8.67	2.83	0.22
05/04/99	7.2	5.7	28.47	30.35	3.79	0.605	2.35	2.53	0.21
05/18/99	8.2	7.8	30.16	30.17	1.55	0.639	0.99	2.61	0.16
05/25/99	9.0	8.1	30.52	30.76	1.45	0.655	1.44	1.73	0.13
06/01/99	10.2	8.8	29.78	30.67	3.45	0.661	1.42		0.20
06/08/99	10.3	8.7	30.31	31.18	2.55	0.585	1.28		0.17
06/15/99	12.0	11.2	30.14	30.22	3.04	0.650	2.16	3.50	0.22
06/21/99	11.0	9.7	31.09	31.32	2.47	0.531	1.57		0.19
06/29/99	12.5	11.9	30.67	30.86	1.48	0.570	0.64	1.90	0.09
07/06/99	12.8	11.4	31.14	31.38	1.97	0.524	0.84	5.00	0.12
07/13/99	12.8	11.9	30.99	31.48	1.42	0.541	0.86	3.59	0.11
07/20/99	13.0	12.5	31.35	31.43	1.20	0.514	0.61	1.55	0.08
07/27/99	14.1	12.2	30.60	31.80	1.56	0.624	0.78	3.67	0.11
08/03/99	14.0	13.7	30.89	31.12	2.57	0.610	0.90	2.15	0.13
08/10/99	14.0	13.0	30.99	31.65	3.48	0.736	1.55	3.02	0.16
08/17/99	13.1	13.4	31.28	31.58	4.59	0.812	3.07	2.42	0.23
08/24/99	14.8	13.7	29.42	31.72	2.23	0.789	0.26	1.95	0.09
08/31/99	14.0	13.9	28.61	31.64	3.01	0.878	1.54	2.11	0.13
09/07/99	15.0	14.1	30.29	32.04	2.61	0.780	1.23	0.77	0.11

Date mm/dd/yy	Temp. Surface	Temp. Bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrates Surface	Ammonia Surface	Nitrite Surface
09/14/99	15.0	14.5	31.78	31.80	4.17	1.015	2.23	2.96	0.27
09/21/99	14.5	14.0	30.29	31.95	3.77	0.760	2.16	3.97	0.30
09/28/99	14.1	13.7	29.73	31.60	7.85	0.921	3.82	3.85	0.42
10/05/99	12.9	12.9	26.81	31.63	5.98	0.883	3.88	3.29	0.33
10/18/99	11.4	11.7	30.88	31.92	7.13	1.133	6.25	3.57	0.35
11/09/99	9.2	9.5	30.93	31.71	10.16	0.958	8.33		0.38
12/14/99	8.0	8.0	24.26	31.56	16.86	0.921	9.70		0.31
01/19/00	1.8	2.8	29.95	30.79	14.45	0.950	10.19		0.20
02/14/00	1.5	1.8	30.74	31.13	11.35	0.953	11.28	1.11	0.18
03/14/00	2.1	2.7	28.30	30.79	13.13	0.821	11.14	2.56	0.16
04/11/00	4.6	4.3	21.19	30.53	19.66	0.619	8.32	4.75	0.24
05/02/00	6.1	5.2	27.62	29.60	13.60	0.850	8.37	3.86	0.22
05/16/00	8.1	6.5	26.75	30.06	11.62	0.754	7.12	4.01	0.25
05/23/00	10.0	7.1	25.78	30.35	9.19	0.600	4.60	3.78	0.24
05/30/00	8.5	7.5	28.99	30.34	3.74	0.622	3.05	2.94	0.22
06/06/00	9.5	8.5	29.03	30.17	1.49	0.617	1.95	3.99	0.15
06/13/00	9.4	8.8	29.89	30.59	1.22	0.537	1.57	2.64	0.14
06/20/00	10.5	9.3	29.43	30.82	2.12	0.590	1.87	2.52	0.16
06/27/00	12.0	9.5	30.50	31.36	2.23	0.711	1.65	3.75	0.18
07/04/00	12.2	11.7	29.65	30.04	3.76	0.813	2.96	3.30	0.17
07/11/00	13.0	10.6	30.62	31.44	4.96	0.862	3.88	3.51	0.28
07/17/00	14.0	12.2	30.20	30.93	4.10	0.718	2.29	2.11	0.24
07/25/00	13.3	11.6	30.96	31.57	2.67	0.518	1.43	2.97	0.15
07/31/00	13.7	13.5	30.33	30.42	3.08	0.431	1.81	3.19	0.21
08/08/00	13.5	12.4	31.20	31.75	5.07	0.670	3.77	3.36	0.29
08/15/00	14.0	13.4	30.89	31.14	6.59	0.725	4.70	2.81	0.33
08/22/00	14.0	13.1	30.66	31.59	7.40	0.810	5.37	3.33	0.44
08/28/00	14.2	13.5	30.58	31.78	7.86	0.807	5.46	2.49	0.49
09/05/00	13.4	13.3	31.50	31.84	5.36	0.832	5.37	2.71	0.48
09/13/00	14.8	13.1	31.85	32.23	4.77	0.780	2.11	1.67	0.21
09/19/00	14.3	13.4	31.41	31.99	6.19	0.924	3.61	2.18	0.33
09/25/00	13.3	13.1	31.24	32.05	6.79	0.989	4.61	4.25	0.37
10/03/00	12.9	12.6	31.94	32.00	7.49	1.077	6.81	2.96	0.50
10/10/00	11.6	11.9	31.43	31.44	7.14	1.071	6.96	2.59	0.67
10/24/00	10.7	10.9	31.94	32.30	6.79	1.048	8.61	4.68	0.58
11/14/00	9.8	9.6	31.81	32.02	2.45	0.772	3.77	2.68	0.26
12/19/00	3.6	6.0	30.57	32.08	10.29	1.046	8.26	3.94	0.50
Station 25									
05/04/99	6.5	5.1	30.65	30.86	2.27	0.642	2.02	1.78	0.16
05/18/99	8.0	6.4	31.13	31.36	1.07	0.609	1.77	1.26	0.12
05/25/99	8.5	7.0	31.05	31.17	1.03	0.650	1.23	1.00	0.12
06/01/99	10.8	7.7	30.86	31.30	1.29	0.464	1.06		0.15
06/08/99	13.0	8.1	29.95	31.37	0.88	0.355	0.26		0.09
06/15/99	12.8	8.7	30.87	31.47	0.74	0.377	0.47	3.30	0.12
06/21/99	13.6	9.0	31.04	31.53	1.32	0.376	0.32	1.44	0.08
06/29/99	12.0	9.8	31.13	31.61	1.60	0.464	1.19	1.94	0.13
07/06/99	14.0	10.2	31.08	31.69	1.97	0.442	0.41	1.91	0.07
07/13/99	11.1	10.5	31.77	31.78	3.36	0.636	2.79	1.96	0.20

Date mm/dd/yy	Temp. Surface	Temp. Bottom	Salinity Surface	Salinity Bottom	Silicate Surface	Phosphate Surface	Nitrates Surface	Ammonia Surface	Nitrite Surface
07/20/99	15.3	10.9	31.43	31.88	1.83	0.408	0.31	1.31	0.06
07/27/99	14.4	11.9	31.63	31.73	1.90	0.466	1.03	2.08	0.14
08/03/99	15.2	12.0	31.55	31.90	2.41	0.470	0.20	1.77	0.08
08/10/99	15.0	12.0	31.73	32.02	4.28	0.555	0.85	1.69	0.14
08/17/99	16.0	12.0	31.38	32.10	3.68	0.444	0.23	1.81	0.09
08/24/99	17.0	12.3	29.20	32.04	1.45	0.609	0.27	1.85	0.10
08/31/99	14.5	12.7	32.29	32.21	2.91	0.804	1.53	1.64	0.13
09/07/99	14.2	12.9	32.30	32.32	2.25	0.704	1.42	2.21	0.12
09/13/99	14.0	13.0	32.29	32.39	3.43	0.986	2.55	2.48	0.26
09/21/99	15.1	13.4	32.41	32.32	1.49	0.553	0.33	1.06	0.11
09/28/99	13.9	13.2	32.17	32.25	2.81	0.790	2.82	2.09	0.27
10/05/99	12.9	12.7	31.25	32.24	3.18	0.930	2.40	2.73	0.25
10/18/99	11.5	11.6	32.27	32.59	2.45	0.972	3.34	1.94	0.23
11/09/99	9.3	10.2	32.12	32.62	5.06	0.835	5.28		0.31
12/14/99	7.4	8.4	27.84	32.34	13.23	0.991	9.69		0.30
01/19/00	1.5	3.9	31.86	32.22	11.41	0.997	9.92		0.21
02/14/00	2.0	2.5	32.07	32.24	9.76	0.850	12.08	0.85	0.16
03/14/00	3.0	2.8	30.98	31.55	11.15	0.995	11.42	1.35	0.13
04/11/00	5.3	4.0	28.15	31.13	15.02	0.800	9.84	2.09	0.16
05/02/00	6.1	5.3	28.89	30.92	11.27	0.923	9.11	2.29	0.23
05/16/00	10.0	6.3	28.38	30.65	2.98	0.383	1.38	2.33	0.11
05/23/00	9.0	6.5	29.87	31.07	0.59	0.562	1.31	2.37	0.10
05/30/00	10.1	6.9	30.05	31.06	0.78	0.448	1.28	1.63	0.13
06/06/00	8.8	7.7	31.06	31.19	0.55	0.579	1.85	0.76	0.14
06/13/00	10.4	8.0	30.81	31.36	0.36	0.443	1.09	0.68	0.08
06/20/00	13.2	8.6	30.56	31.44	1.10	0.497	1.28	1.44	0.10
06/27/00	13.8	9.3	30.60	31.57	1.84	0.572	0.19	1.73	0.05
07/04/00	12.0	9.7	31.36	31.63	2.91	0.704	1.71	1.39	0.08
07/11/00	13.6	10.2	30.92	31.68	2.58	0.478	0.34	4.13	0.11
07/17/00	12.0	10.7	31.59	31.66	2.89	0.575	2.73	2.39	0.19
07/25/00	16.3	11.3	31.27	31.73	1.66	0.289	0.57	1.25	0.07
07/31/00	15.0	12.0	31.52	31.74	3.07	0.423	1.02	1.23	0.16
08/08/00	15.5	11.9	31.57	31.95	3.67	0.423	0.83	1.80	0.15
08/15/00	13.5	12.7	31.87	31.88	3.83	0.673	3.70	3.50	0.29
08/22/00	15.3	12.6	31.87	32.04	5.56	0.654	1.48	2.63	0.24
08/28/00	14.3	12.6	31.88	32.18	4.96	0.686	3.28	2.28	0.34
09/05/00	13.5	12.8	32.13	32.24	2.58	0.788	3.44	1.33	0.38
09/13/00	14.1	12.9	29.46	32.30	3.62	0.671	0.64	0.38	0.10
09/19/00	14.6	12.9	32.03	32.38	4.19	0.688	0.73	0.67	0.14
09/25/00	13.7	12.7	32.24	32.44	4.14	0.779	3.25	1.59	0.29
10/03/00	13.5	12.3	32.38	32.56	4.81	0.890	4.19	0.56	0.39
10/10/00	12.0	12.0	32.25	32.53	4.77	0.884	6.38	2.11	0.56
10/24/00	11.5	11.1	32.59	32.70	4.42	0.835	6.71	1.00	0.50
11/14/00	10.2	10.0	32.58	32.62	4.34	0.778	6.93	2.07	0.33
12/19/00	4.8	5.9	31.82	32.21	7.10	0.918	6.39	4.15	0.48