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# Surface Phytoplankton from 1982 Cruises in Frobisher Bay

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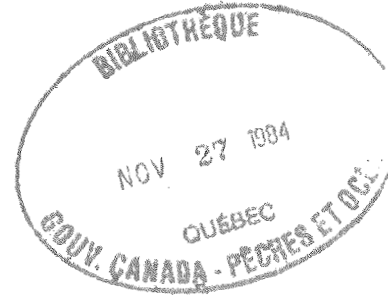
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Le titre exact paraît au haut du résumé de chaque rapport.

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## ABSTRACT

Hsiao, Stephen I. C. and Nadia Pinkewycz. 1984. Surface phytoplankton from 1982 cruises in Frobisher Bay. Can. Data Rep. Fish. Aquat. Sci. 482: v + 46 p.

Surface phytoplankton collections made during Frobisher Bay cruises in August and September 1982 are tabulated quantitatively. A total of 77 species representing 34 genera were collected. The Bacillariophyta consisted of 56 species (18 Centrales and 38 Pennales), the Chlorophyta of 8 species, the Pyrrophyta of 5 species, the Chrysophyta of 4 species, the Euglenophyta of 3 species and the Cryptophyta of 1 species. The diatoms were the largest group in terms of the number of species and cells. Among them, centric diatoms had fewer species but a greater abundance of cells than the pennate diatoms.

Key words: Arctic, surface marine phytoplankton, species composition, abundance and standing stock.

## RESUME

Hsiao, Stephen I. C. and Nadia Pinkewycz. 1984. Surface phytoplankton from 1982 cruises in Frobisher Bay. Can. Data Rep. Fish. Aquat. Sci. 482: v + 46 p.

Des données provenant d'échantillons de phytoplancton de surface, recueillis dans la baie de Frobisher au cours des mois d'août et septembre 1982, sont présentées sous forme de tableaux quantitatifs. Au total, 77 espèces représentant 34 genres de phytoplancton ont été recueillies. Le phytoplancton était regroupé par espèce de la façon suivante: 56 espèces de Bacillariophytes (dont 18 de forme centrique et 38 de forme pennée), 8 espèces de Chlorophytes, 5 espèces de Pyrrophytes, 4 espèces de Chrysophytes, 3 espèces d'Euglenophytes et 1 espèce de Cryptophyte. Les diatomées forment le groupe le plus important en termes d'espèces et de cellules. Parmi elles, les diatomées de forme centrique affichaient un nombre réduit d'espèces bien que l'abondance des cellules ait été comparativement supérieure à celle des diatomées de forme pennée.

## ACKNOWLEDGEMENTS

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## INTRODUCTION

Surface phytoplankton samples were taken on Arctic Biological Station cruises in Frobisher Bay during the summer of 1982. Two cruises were made (Fig. 1), one on 17-18 August (Stations 2-21) and one on 8 September (Stations 22-39). The samples from Station 1 were used for comparison with the samples from the cruises.

The data presented in this report deal primarily with species composition, abundance and standing stock of surface phytoplankton in upper Frobisher Bay.

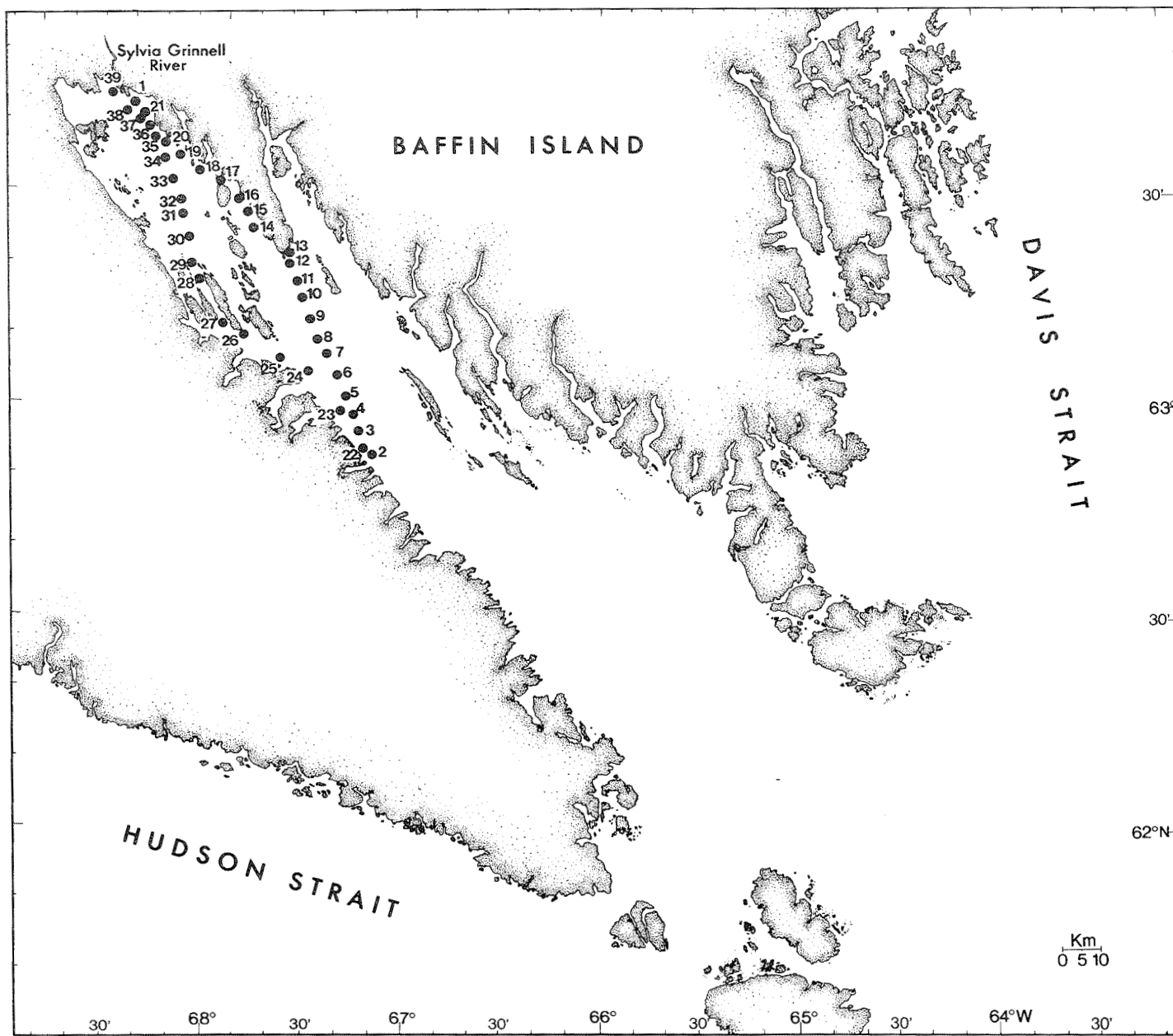


Fig. 1. Station locations in the upper Frobisher Bay.

## MATERIALS AND METHODS

Surface waters containing natural populations of phytoplankton were collected with a plastic bucket. One litre of surface water from each station was filtered on board through Millipore HA type 47 mm-diameter filters. The filters were placed in petrislides, and kept frozen in a dry-ice box for later pigment analysis. Chlorophyll a was analyzed using a spectrophotometric technique according to the method of Strickland and Parsons (1972), and estimated by the equations of Jeffrey and Humphrey (1975).

Samples of 125 mL were preserved immediately with neutral formalin at a final concentration of 2% in Boston round polyethylene bottles. The preserved phytoplankton were quantitatively analyzed for species composition and abundance. The techniques for preparing permanent slides of cleaned diatoms for species identification were described by Foy and Hsiao (1976). The species were identified with the aid of a Leitz phase-contrast compound microscope. The cells were enumerated by the method of Hsiao (1979) with the aid of a Leitz inverted microscope.

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- Jeffrey, S. W. and G. F. Humphrey. 1975. New spectrophotometric equations for determining chlorophylls a, b, c<sub>1</sub> and c<sub>2</sub> in higher plants, algae and natural phytoplankton. Biochem. Physiol. Pflanzen 167: 191-194.
- Strickland, J. D. H. and T. R. Parsons. 1972. A practical handbook of seawater analysis. Fish. Res. Board Can. Bull. 167: 1-310.

Table 1. Phytoplankton stations from 1982 Frobisher Bay cruises.

Station	Dates of collections	Time (AST)	North Latitude	West Longitude
1	20 Aug.	1000	63°42.8'	68°30.8'
	4 Sept.	1215	63°42.8'	68°30.8'
2	17 Aug.	1930	62°54'	67°13'
3	17 Aug.	2000	62°56.8'	67°15.9'
4	17 Aug.	2030	62°59.6'	67°18.5'
5	17 Aug.	2100	63°02.7'	67°21'
6	17 Aug.	2130	63°05.1'	67°23.9'
7	17 Aug.	2150	63°07.9'	67°24.8'
8	17 Aug.	2210	63°10.6'	67°28.9'
9	17 Aug.	2230	63°13.3'	67°31.6'
10	17 Aug.	2250	63°16'	67°34'
11	17 Aug.	2310	63°19'	67°36.6'
12	17 Aug.	2335	63°21.4'	67°39'
13	17 Aug.	2353	63°23.9'	67°41.7'
14	18 Aug.	0700	63°26.1'	67°51.9'
15	18 Aug.	0730	63°28.1'	67°55.3'
16	18 Aug.	0810	63°29.4'	67°57.6'
17	18 Aug.	0840	63°32.3'	68°03.1'
18	18 Aug.	0910	63°33.7'	68°10.9'
19	18 Aug.	0940	63°36.3'	68°17.8'
20	18 Aug.	1010	63°38.2'	68°23'
21	18 Aug.	1040	63°41.7'	68°29.1'
22	8 Sept.	0939	62°55'	67°12'
23	8 Sept.	1005	63°08'	67°22.7'
24	8 Sept.	1057	63°5.6'	67°32.4'
25	8 Sept.	1142	63°6.9'	67°43.7'
26	8 Sept.	1220	63°10.3'	67°55.3'
27	8 Sept.	1310	63°13.7'	68°0.6'
28	8 Sept.	1356	63°18'	68°6.2'
29	8 Sept.	1430	63°20.7'	68°9.8'
30	8 Sept.	1500	63°23.9'	68°13.3'
31	8 Sept.	1528	63°27.1'	68°15.7'
32	8 Sept.	1602	63°29.7'	68°17.1'
33	8 Sept.	1633	63°32.3'	68°19.4'
34	8 Sept.	1648	63°35.3'	68°21.6'
35	8 Sept.	1700	63°38.6'	68°24.4'
36	8 Sept.	1717	63°40.3'	68°26.2'
37	8 Sept.	1729	63°41'	68°28.2'
38	8 Sept.	1740	63°42.9'	68°30.7'
39	8 Sept.	1750	63°43.8'	68°31.3'

Table 2. Phytoplankton taxa found in the surface water during the 1982 Frobisher Bay cruises.

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Bacillariophyta

Centrales

Chaetoceros affinis Lauder  
C. convolutus Castracane  
C. debilis Cleve  
C. decipiens Cleve  
C. externum Gran  
C. furcellatus Bailey  
C. ingolfianus Ostenfeld  
C. lauderi Ralfs  
C. septentrionalis Oestrup  
C. socialis Lauder  
C. wighamii Brightwell  
Coscinodiscus lacustris Grunow  
C. polyacanthus var. intermedia Grunow  
Melosira arctica Dickie  
M. roeseana Rabenhorst  
Thalassiosira decipiens (Grunow) Joergensen  
T. gravida Cleve  
T. nordenskioldii Cleve

Pennales

Amphora terroris Ehrenberg  
Cocconeis distans Gregory  
C. scutellum Ehrenberg  
C. scutellum var. parva (Grunow) Cleve  
Cylindrotheca closterium (Ehrenberg) Reimann et Lewin  
Cymbella affinis Kuetzing  
C. angustata (Wm. Smith) Cleve  
C. leptoceros (Ehrenberg) Kuetzing  
Diploneis bomboides (Schmidt) Cleve  
D. incurvata (Gregory) Cleve  
D. smithii (Brébisson) Cleve  
Eunotia veneris (Kuetzing) De Toni  
Fragilaria pinnata Ehrenberg  
F. islandica Grunow  
Grammatophora arctica Cleve  
Gyrosigma Hassall  
Licmophora dalmatica (Kuetzing) Grunow  
Navicula agrestis Hustedt  
N. capitata Ehrenberg  
N. crassirostris Grunow  
N. delicatula Cleve  
N. digitoradiata (Gregory) Ralfs  
N. gastrum (Ehrenberg) Kuetzing  
N. granii (E. Joergensen) Gran

Table 2. (Continued).

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N. humerosa Brébisson  
N. imperfecta Cleve  
N. kariana Grunow  
N. peregrina (Ehrenberg) Kuetzing  
N. protracta (Grunow) Cleve  
N. transitans Cleve  
N. valida Cleve et Grunow  
Nitzschia angustata Grunow  
N. frigida Grunow  
N. grunowii Hasle  
N. seriata Cleve  
Opephora martyi Héribaud  
Pinnularia Ehrenberg  
Rhabdonema arcuatum (Lyngbye) Kuetzing  
Stauroneis quadripedis (Cleve-Euler) Hendey  
Synedra tabulata (Agardh) Kuetzing

## Chlorophyta

Carteria cordiformis (Carter) Dill  
Chlamydomonas ballenyana Kol et Flint  
C. marina Cohn  
C. plethora Butcher  
C. pulsatilla Wohlenweber  
C. tetraolaris Wohlenweber  
Closterium lineatum Ehrenberg  
Cosmarium Corda  
Trochiscia multispinosa (Moebius) Lemmermann

## Chrysophyta

Dinobryon balticum (Schuett) Lemmermann  
D. cylindricum Imhof  
Phaeocystis pouchetii (Hariot) Lagerheim  
Salpingoeca natans Groentved

## Cryptophyta

Chroomonas placoidea Butcher

## Euglenophyta

Euglena proxima Dangeard  
E. schmitzii Gojdics  
E. viridis Ehrenberg

## Pyrrophyta

Goniaulax monilata Howell  
Peridinium diabolus Cleve  
P. punctulatum Paulsen  
Prorocentrum micans Ehrenberg  
P. rampii Sournia

Table 3. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 1 during August and September 1982.

Date	August 20	September 4
Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	2.54	1.54
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	9,980	17,280
Bacillariophyta	9,540	16,900
Centrales	9,380	16,760
<u>Chaetoceros affinis</u>	1,440	1,100
<u>C. decipiens</u>	680	1,300
<u>C. furcellatus</u>	5,360	11,700
<u>C. septentrionalis</u>	40	220
<u>C. wighamii</u>	580	1,460
<u>Thalassiosira sp.</u>	80	--
<u>T. decipiens</u>	1,200	980
Pennales	160	140
<u>Diploneis bomboides</u>	--	20
<u>Fragilaria pinnata</u>	20	--
<u>Navicula sp.</u>	20	--
<u>N. granii</u>	60	--
<u>N. transitans</u>	20	20
<u>Nitzschia grunowii</u>	--	20
<u>N. seriata</u>	40	80
Chlorophyta	420	240
<u>Chlamydomonas ballenyana</u>	220	160
<u>C. pulsatilla</u>	200	60
<u>Cosmarium sp.</u>	--	20
Chrysophyta	--	120
<u>D. cylindricum</u>	--	120
Euglenophyta	20	--
<u>Euglena proxima</u>	20	--
Pyrrophyta	--	20
<u>Peridinium diabolus</u>	--	20

Table 4. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 2, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	8.57
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	80,200
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Bacillariophyta	72,600
Centrales	68,700
<u>Chaetoceros affinis</u>	16,300
<u>C. decipiens</u>	10,100
<u>C. externum</u>	3,700
<u>C. furcellatus</u>	20,000
<u>C. lauderi</u>	100
<u>C. septentrionalis</u>	4,800
<u>C. socialis</u>	1,400
<u>C. wighami</u>	7,300
<u>Coscinodiscus lacustris</u>	100
<u>Thalassiosira decipiens</u>	800
<u>T. gravida</u>	300
<u>T. nordenskiöldii</u>	3,800
Pennales	3,900
<u>Cocconeis distans</u>	100
<u>Cylindrotheca closterium</u>	100
<u>Fragilaria sp.</u>	600
<u>Navicula peregrina</u>	500
<u>N. valida</u>	300
<u>Nitzschia angustata</u>	1,300
<u>N. frigida</u>	400
<u>N. seriata</u>	600
Chlorophyta	1,700
<u>Chlamydomonas plethora</u>	1,000
<u>C. pulsatilla</u>	200
<u>C. tetraolaris</u>	200
<u>Closterium lineatum</u>	300
Chrysophyta	200
Unidentified	200
Cryptophyta	4,200
<u>Chroomonas placoidea</u>	4,200
Euglenophyta	100
<u>Euglena schmitzii</u>	100
Pyrrophyta	1,400
<u>Goniaulax sp.</u>	300
<u>G. monilata</u>	100
<u>Prorocentrum rampii</u>	1,000

Table 5. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 3, August 17, 1982.

Chlorophyll a (mg·m <sup>-3</sup> )	6.19
Total phytoplankters (cells·L <sup>-1</sup> )	85,200
<hr/>	
Bacillariophyta	71,800
Centrales	63,100
<u>Chaetoceros affinis</u>	15,300
<u>C. decipiens</u>	12,800
<u>C. externum</u>	3,100
<u>C. furcellatus</u>	12,800
<u>C. lauderi</u>	200
<u>C. septentrionalis</u>	2,100
<u>C. socialis</u>	1,000
<u>C. wighami</u>	7,600
<u>Coscinodiscus lacustris</u>	200
<u>C. polyacanthus var. intermedia</u>	100
<u>Thalassiosira spp.</u>	800
<u>T. decipiens</u>	3,500
<u>T. gravida</u>	200
<u>T. nordenskioldii</u>	3,400
Pennales	8,700
<u>Cylindrotheca closterium</u>	100
<u>Cymbella affinis</u>	200
<u>C. leptoceros</u>	100
<u>Navicula sp.</u>	100
<u>N. capitata</u>	200
<u>N. granii</u>	400
<u>N. peregrina</u>	300
<u>Nitzschia angustata</u>	500
<u>N. frigida</u>	200
<u>N. seriata</u>	2,300
<u>Stauroneis quadripedis</u>	4,300
Chlorophyta	2,400
<u>Chlamydomonas plethora</u>	500
<u>C. pulsatilla</u>	200
<u>C. tetraolaris</u>	1,600
<u>Trochiscia multispinosa</u>	100
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	10,600
<u>Chroomonas placoidea</u>	10,600
Pyrrophyta	300
<u>Goniaulax sp.</u>	200
<u>G. monilata</u>	100

Table 6. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 4, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	4.66
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	57,800
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Bacillariophyta	41,400
Centrales	30,600
<u>Chaetoceros affinis</u>	7,600
<u>C. convolutus</u>	100
<u>C. decipiens</u>	7,500
<u>C. externum</u>	1,600
<u>C. furcellatus</u>	5,700
<u>C. septentrionalis</u>	3,900
<u>C. socialis</u>	100
<u>C. wighami</u>	1,500
<u>Coscinodiscus lacustris</u>	700
<u>C. polyacanthus var. intermedia</u>	100
<u>Thalassiosira sp.</u>	500
<u>T. decipiens</u>	700
<u>T. gravida</u>	300
<u>T. nordenskioldii</u>	300
Pennales	10,800
<u>Cylindrotheca closterium</u>	100
<u>Cymbella angustata</u>	100
<u>Fragilaria islandica</u>	700
<u>Navicula sp.</u>	200
<u>N. capitata</u>	200
<u>N. granii</u>	2,900
<u>N. peregrina</u>	100
<u>Nitzschia angustata</u>	900
<u>N. frigida</u>	1,400
<u>Stauroneis quadripedis</u>	4,200
Chlorophyta	3,300
<u>Carteria cordiformis</u>	300
<u>Chlamydomonas plethora</u>	1,900
<u>C. pulsatilla</u>	1,000
<u>Trochiscia multispinosa</u>	100
Chrysophyta	500
Unidentified	500
Cryptophyta	12,100
<u>Chroomonas placoidea</u>	12,100
Pyrrophyta	500
<u>Goniaulax sp.</u>	100
<u>Peridinium diabolus</u>	100
<u>P. punctulatum</u>	200
<u>Prorocentrum micans</u>	100

Table 7. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 5, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	7.37
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	27,500
<hr/>	
Bacillariophyta	21,400
Centrales	20,500
<u>Chaetoceros affinis</u>	2,800
<u>C. decipiens</u>	2,000
<u>C. externum</u>	5,600
<u>C. furcellatus</u>	2,700
<u>C. ingolfianus</u>	100
<u>C. septentrionalis</u>	4,500
<u>C. wighami</u>	200
<u>Coscinodiscus lacustris</u>	900
<u>Thalassiosira decipiens</u>	900
<u>T. grvida</u>	400
<u>T. nordenskiöldii</u>	400
Pennales	900
<u>Cocconeis distans</u>	100
<u>Cylindrotheca closterium</u>	200
<u>Cymbella affinis</u>	100
<u>Navicula crassirostris</u>	200
<u>N. peregrina</u>	100
<u>Nitzschia angustata</u>	200
Chlorophyta	700
<u>Chlamydomonas plethora</u>	200
<u>C. pulsatilla</u>	500
Chrysophyta	400
Dinobryon sp.	200
<u>Phaeocystis pouchetii</u>	100
<u>Salpingoeca natans</u>	100
Cryptophyta	4,400
<u>Chroomonas placoidea</u>	4,400
Euglenophyta	100
<u>Euglena schmitzii</u>	100
Pyrrophyta	500
<u>Peridinium diabolus</u>	100
<u>P. punctulatum</u>	100
<u>Prorocentrum rampii</u>	300

Table 8. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 6, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	7.06
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	40,900
<hr/>	
Bacillariophyta	35,100
Centrales	31,600
<u>Chaetoceros affinis</u>	5,400
<u>C. decipiens</u>	3,800
<u>C. externum</u>	4,000
<u>C. furcellatus</u>	9,100
<u>C. septentrionalis</u>	4,000
<u>C. socialis</u>	1,200
<u>C. wighami</u>	1,000
<u>Coscinodiscus lacustris</u>	600
<u>Thalassiosira decipiens</u>	1,700
<u>T. grvida</u>	800
Pennales	3,500
<u>Cocconeis distans</u>	300
<u>Cylindrotheca closterium</u>	300
<u>Licmophora dalmatica</u>	100
<u>Navicula crassirostris</u>	200
<u>N. granii</u>	1,700
<u>N. imperfecta</u>	100
<u>N. peregrina</u>	100
<u>Nitzschia angustata</u>	400
<u>N. frigida</u>	200
<u>N. seriata</u>	100
Chlorophyta	1,100
<u>Carteria cordiformis</u>	600
<u>Chlamydomonas plethora</u>	100
<u>C. pulsatilla</u>	400
Chrysophyta	300
<u>Dinobryon sp.</u>	200
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	3,200
<u>Chroomonas placoidea</u>	3,200
Pyrrophyta	1,200
<u>Goniaulax sp.</u>	400
<u>G. monilata</u>	200
<u>Peridinium diabolus</u>	100
<u>Prorocentrum rampii</u>	500

Table 9. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 7, August 17, 1982.

Chlorophyll a ( $\text{mg} \cdot \text{m}^{-3}$ )	7.79
Total phytoplankters ( $\text{cells} \cdot \text{L}^{-1}$ )	40,900
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Bacillariophyta	33,900
Centrales	29,200
<u>Chaetoceros affinis</u>	4,000
<u>C. decipiens</u>	1,800
<u>C. externum</u>	3,600
<u>C. furcellatus</u>	8,500
<u>C. ingolfianus</u>	100
<u>C. septentrionalis</u>	3,200
<u>C. socialis</u>	900
<u>C. wighami</u>	1,400
<u>Coscinodiscus lacustris</u>	500
<u>Thalassiosira decipiens</u>	3,100
<u>T. gravida</u>	1,900
<u>T. nordenskiöldii</u>	200
Pennales	4,700
<u>Cocconeis distans</u>	200
<u>Cylindrotheca closterium</u>	300
<u>Cymbella affinis</u>	100
<u>Navicula capitata</u>	1,400
<u>N. granii</u>	300
<u>N. peregrina</u>	400
<u>Nitzschia angustata</u>	400
<u>N. frigida</u>	500
<u>N. seriata</u>	800
<u>Stauroneis quadripedis</u>	300
Chlorophyta	1,600
<u>Carteria cordiformis</u>	100
<u>Chlamydomonas plethora</u>	200
<u>C. pulsatilla</u>	1,300
Chrysophyta	500
<u>Dinobryon sp.</u>	500
Cryptophyta	4,600
<u>Chroomonas placoidea</u>	4,600
Euglenophyta	200
<u>Euglena schmitzii</u>	200
Pyrrophyta	100
<u>Goniaulax sp.</u>	100

Table 10. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 8, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	7.38
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	21,300
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Bacillariophyta	16,600
Centrales	14,500
<u>Chaetoceros affinis</u>	1,900
<u>C. decipiens</u>	1,600
<u>C. externum</u>	700
<u>C. furcellatus</u>	4,500
<u>C. lauderi</u>	400
<u>C. septentrionalis</u>	3,300
<u>C. socialis</u>	600
<u>C. wighami</u>	400
<u>Coscinodiscus lacustris</u>	300
<u>Thalassiosira decipiens</u>	500
<u>T. gravida</u>	100
<u>T. nordenskiöldii</u>	200
Pennales	2,100
<u>Navicula granii</u>	1,500
<u>N. peregrina</u>	100
<u>Nitzschia angustata</u>	500
Chlorophyta	1,400
<u>Carteria cordiformis</u>	100
<u>Chlamydomonas pulsatilla</u>	1,300
Chrysophyta	200
<u>Dinobryon sp.</u>	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	2,100
<u>Chroomonas placoidea</u>	2,100
Euglenophyta	300
<u>Euglena schmitzii</u>	300
Pyrrophyta	700
<u>Goniaulax sp.</u>	300
<u>G. monilata</u>	100
<u>Peridinium punctulatum</u>	100
<u>Prorocentrum rampii</u>	200

Table 11. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 9, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	5.73
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	49,100
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Bacillariophyta	44,000
Centrales	41,800
<u>Chaetoceros affinis</u>	2,700
<u>C. decipiens</u>	4,000
<u>C. externum</u>	900
<u>C. furcellatus</u>	27,600
<u>C. septentrionalis</u>	3,900
<u>C. socialis</u>	900
<u>C. wighami</u>	400
<u>Coscinodiscus lacustris</u>	400
<u>Thalassiosira decipiens</u>	600
<u>T. gravida</u>	100
<u>T. nordenskioldii</u>	300
Pennales	2,200
<u>Cocconeis distans</u>	200
<u>Diploneis incurvata</u>	100
<u>Navicula granii</u>	800
<u>N. peregrina</u>	100
<u>Nitzschia angustata</u>	700
<u>N. seriata</u>	300
Chlorophyta	1,200
<u>Carteria cordiformis</u>	100
<u>Chlamydomonas pulsatilla</u>	1,100
Chrysophyta	300
<u>Dinobryon sp.</u>	300
Cryptophyta	3,400
<u>Chroomonas placoidea</u>	3,400
Pyrrophyta	200
<u>Goniaulax sp.</u>	100
<u>Peridinium punctulatum</u>	100

Table 12. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 10, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	4.90
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	41,800
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Bacillariophyta	32,900
Centrales	31,400
<u>Chaetoceros affinis</u>	7,200
<u>C. decipiens</u>	2,500
<u>C. externum</u>	1,100
<u>C. furcellatus</u>	13,200
<u>C. septentrionalis</u>	3,300
<u>C. socialis</u>	200
<u>C. wighamii</u>	900
<u>Coscinodiscus lacustris</u>	100
<u>Thalassiosira decipiens</u>	2,500
<u>T. nordenskiöldii</u>	400
Pennales	1,500
<u>Cocconeis distans</u>	300
<u>Navicula peregrina</u>	100
<u>Nitzschia angustata</u>	500
<u>N. seriata</u>	400
<u>Synedra tabulata</u>	200
Chlorophyta	2,700
<u>Carteria cordiformis</u>	700
<u>Chlamydomonas pulsatilla</u>	1,900
<u>Closterium lineatum</u>	100
Chrysophyta	200
<u>Dinobryon sp.</u>	200
Cryptophyta	5,400
<u>Chroomonas placoidea</u>	5,400
Euglenophyta	100
<u>Euglena schmitzii</u>	100
Pyrrophyta	500
<u>Goniaulax sp.</u>	100
<u>Peridinium diabolus</u>	200
<u>Prorocentrum micans</u>	100
<u>P. rampii</u>	100

Table 13. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 11, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	4.87
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	22,600
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Bacillariophyta	17,600
Centrales	16,200
<u>Chaetoceros affinis</u>	2,200
<u>C. decipiens</u>	1,300
<u>C. externum</u>	1,500
<u>C. furcellatus</u>	6,900
<u>C. septentrionalis</u>	1,700
<u>C. socialis</u>	700
<u>C. wighami</u>	1,500
<u>Thalassiosira decipiens</u>	400
Pennales	1,400
<u>Cocconeis distans</u>	300
<u>C. scutellum</u>	100
<u>Grammatophora arctica</u>	100
<u>Navicula agrestis</u>	300
<u>N. grani</u>	400
<u>N. peregrina</u>	200
Chlorophyta	1,000
<u>Carteria cordiformis</u>	200
<u>Chlamydomonas marina</u>	100
<u>C. pulsatilla</u>	700
Chrysophyta	300
<u>Dinobryon sp.</u>	100
<u>Phaeocystis pouchetii</u>	200
Cryptophyta	3,600
<u>Chroomonas placoidea</u>	3,600
Pyrrophyta	100
<u>Goniaulax sp.</u>	100

Table 14. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 12, August 17, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	5.72
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	24,000
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Bacillariophyta	19,400
Centrales	18,100
<u>Chaetoceros affinis</u>	1,300
<u>C. decipiens</u>	1,200
<u>C. externum</u>	2,700
<u>C. furcellatus</u>	8,700
<u>C. septentrionalis</u>	1,900
<u>C. socialis</u>	200
<u>C. wighami</u>	700
<u>Thalassiosira decipiens</u>	1,300
<u>T. gravis</u>	100
Pennales	1,300
<u>Cocconeis scutellum</u>	200
<u>Cylindrotheca closterium</u>	100
<u>Meridion sp.</u>	300
<u>Navicula peregrina</u>	300
<u>N. valida</u>	300
<u>Rhabdonema arcuatum</u>	100
Chlorophyta	1,000
<u>Carteria cordiformis</u>	200
<u>Chlamydomonas pulsatilla</u>	800
Cryptophyta	3,400
<u>Chroomonas placoidea</u>	3,400
Pyrrophyta	200
<u>Goniaulax sp.</u>	100
<u>G. monilata</u>	100

Table 15. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 13, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	4.61
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	38,500
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Bacillariophyta	31,200
Centrales	28,900
<u>Chaetoceros affinis</u>	6,800
<u>C. decipiens</u>	3,500
<u>C. externum</u>	1,100
<u>C. furcellatus</u>	12,500
<u>C. septentrionalis</u>	2,200
<u>C. socialis</u>	100
<u>C. wighami</u>	1,300
<u>Coscinodiscus lacustris</u>	500
<u>Thalassiosira decipiens</u>	700
<u>T. gravida</u>	200
Pennales	2,300
<u>Cocconeis distans</u>	200
<u>Navicula granii</u>	1,100
<u>N. peregrina</u>	100
<u>N. valida</u>	300
<u>Pinnularia</u> sp.	200
<u>Rhabdonema arcuatum</u>	100
<u>Stauroneis</u> sp.	200
<u>Synedra tabulata</u>	100
Chlorophyta	2,300
<u>Carteria cordiformis</u>	200
<u>Chlamydomonas pulsatilla</u>	2,100
Chrysophyta	200
<u>Phaeocystis pouchetii</u>	200
Cryptophyta	4,800
<u>Chroomonas placoidea</u>	4,800

Table 16. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 14, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	5.16
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	51,000
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Bacillariophyta	45,200
Centrales	44,100
<u>Chaetoceros affinis</u>	5,300
<u>C. decipiens</u>	3,800
<u>C. externum</u>	3,500
<u>C. furcellatus</u>	25,400
<u>C. septentrionalis</u>	2,900
<u>C. socialis</u>	200
<u>C. wighami</u>	1,600
<u>Coscinodiscus lacustris</u>	200
<u>Thalassiosira decipiens</u>	300
<u>T. gravida</u>	100
<u>T. nordenskiöldii</u>	800
Pennales	1,100
<u>Cocconeis distans</u>	100
<u>Navicula agrestis</u>	300
<u>N. granii</u>	400
<u>N. peregrina</u>	200
<u>N. valida</u>	100
Chlorophyta	1,400
<u>Carteria cordiformis</u>	400
<u>Chlamydomonas pulsatilla</u>	1,000
Chrysophyta	100
<u>Dinobryon sp.</u>	100
Cryptophyta	4,100
<u>Chroomonas placoidea</u>	4,100
Pyrrophyta	200
<u>Goniaulax sp.</u>	100
<u>Peridinium punctulatum</u>	100

Table 17. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 15, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	3.58
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	22,900
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Bacillariophyta	17,900
Centrales	17,500
<u>Chaetoceros affinis</u>	900
<u>C. decipiens</u>	3,700
<u>C. externum</u>	400
<u>C. furcellatus</u>	8,000
<u>C. septentrionalis</u>	2,200
<u>C. wighami</u>	200
<u>Coscinodiscus lacustris</u>	300
<u>Thalassiosira decipiens</u>	1,600
<u>T. nordenskiöldii</u>	200
Pennales	400
<u>Cylindrotheca closterium</u>	200
<u>Navicula peregrina</u>	200
Chlorophyta	2,800
<u>Chlamydomonas pulsatilla</u>	2,800
Chrysophyta	200
<u>Dinobryon</u> sp.	200
Cryptophyta	1,700
<u>Chroomonas placoidea</u>	1,700
Pyrrophyta	300
<u>Goniaulax</u> sp.	100
<u>G. monilata</u>	100
<u>Prorocentrum rampii</u>	100

Table 18. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 16, August 18, 1982.

Chlorophyll <u>a</u> ( $\text{mg}\cdot\text{m}^{-3}$ )	3.21
<u>Total phytoplankters</u> ( $\text{cells}\cdot\text{L}^{-1}$ )	12,800
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Bacillariophyta	
Centrales	10,900
<u>Chaetoceros affinis</u>	1,200
<u>C. decipiens</u>	1,600
<u>C. externum</u>	1,600
<u>C. furcellatus</u>	3,500
<u>C. septentrionalis</u>	800
<u>Coscinodiscus lacustris</u>	700
<u>Thalassiosira decipiens</u>	1,300
<u>T. nordenskioldii</u>	200
Pennales	500
<u>Cocconeis distans</u>	100
<u>Fragilaria islandica</u>	200
<u>Navicula protracta</u>	100
<u>N. valida</u>	100
Chlorophyta	200
<u>Chlamydomonas pulsatilla</u>	200
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	1,000
<u>Chroomonas placoidea</u>	1,000
Pyrrophyta	100
<u>Prorocentrum rampii</u>	100

Table 19. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 17, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	3.31
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	19,100
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Bacillariophyta	18,000
Centrales	16,300
<u>Chaetoceros affinis</u>	2,500
<u>C. borealis</u>	200
<u>C. decipiens</u>	1,500
<u>C. furcellatus</u>	7,400
<u>C. septentrionalis</u>	600
<u>Coscinodiscus lacustris</u>	500
<u>Thalassiosira decipiens</u>	900
<u>T. gravida</u>	800
<u>T. nordenskiöldii</u>	1,900
Pennales	1,700
<u>Cocconeis scutellum</u>	200
<u>Navicula granii</u>	900
<u>N. peregrina</u>	200
<u>N. valida</u>	300
<u>Nitzschia frigida</u>	100
Chlorophyta	700
<u>Carteria cordiformis</u>	200
<u>Chlamydomonas pulsatilla</u>	500
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	100
<u>Chroomonas placoidea</u>	100
Euglenophyta	100
<u>Euglena viridis</u>	100
Pyrrophyta	100
<u>Goniaulax sp.</u>	100

Table 20. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 18, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	5.03
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	42,400
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Bacillariophyta	42,000
Centrales	40,400
<u>Chaetoceros affinis</u>	9,700
<u>C. decipiens</u>	5,100
<u>C. furcellatus</u>	14,600
<u>C. ingolfianus</u>	100
<u>C. septentrionalis</u>	1,100
<u>C. wighami</u>	2,500
<u>Thalassiosira decipiens</u>	1,600
<u>T. gravida</u>	2,000
<u>T. nordenskiöldii</u>	3,700
Pennales	1,600
<u>Cocconeis scutellum</u>	100
<u>Licmophora dalmatica</u>	100
<u>Navicula granii</u>	600
<u>N. peregrina</u>	300
<u>N. protracta</u>	100
<u>Nitzschia frigida</u>	400
Chlorophyta	200
<u>Carteria cordiformis</u>	200
Chrysophyta	100
<u>Dinobryon</u> sp.	100
Pyrrophyta	100
<u>Prorocentrum rampii</u>	100

Table 21. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 19, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	4.99
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	26,800
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Bacillariophyta	26,100
Centrales	22,600
<u>Chaetoceros affinis</u>	6,100
<u>C. decipiens</u>	2,700
<u>C. furcellatus</u>	6,000
<u>C. septentrionalis</u>	700
<u>C. wighami</u>	2,800
<u>Coscinodiscus lacustris</u>	200
<u>Thalassiosira decipiens</u>	700
<u>T. gravida</u>	1,100
<u>T. nordenskiöldii</u>	2,300
Pennales	3,500
<u>Cocconeis scutellum</u>	300
<u>Fragilaria islandica</u>	400
<u>Licmophora dalmatica</u>	300
<u>Navicula agrestis</u>	100
<u>N. granii</u>	2,300
<u>N. peregrina</u>	100
Chlorophyta	300
<u>Carteria cordiformis</u>	200
<u>Chlamydomonas pulsatilla</u>	100
Chrysophyta	200
<u>Phaeocystis pouchetii</u>	200
Euglenophyta	100
<u>Euglena schmitzii</u>	100
Pyrrophyta	100
<u>Peridinium diabolus</u>	100

Table 22. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 20, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	5.41
<u>Total phytoplankters (<math>\text{cells}\cdot\text{L}^{-1}</math>)</u>	<u>29,600</u>
Bacillariophyta	29,400
Centrales	28,800
<u>Chaetoceros affinis</u>	7,600
<u>C. decipiens</u>	5,000
<u>C. furcellatus</u>	4,900
<u>C. septentrionalis</u>	1,000
<u>C. wighami</u>	2,800
<u>Melosira arctica</u>	400
<u>Thalassiosira gravida</u>	4,000
<u>T. nordenskiöldii</u>	3,100
Pennales	600
<u>Cocconeis scutellum</u>	100
<u>Navicula agrestis</u>	100
<u>N. peregrina</u>	200
<u>Nitzschia seriata</u>	200
Chlorophyta	100
<u>Closterium sp.</u>	100
Chrysophyta	100
<u>Salpingoeca natans</u>	100

Table 23. Species composition, abundance and standing stock of surface phytoplankton in Frobisher Bay at Station 21, August 18, 1982.

Chlorophyll a ( $\text{mg}\cdot\text{m}^{-3}$ )	4.33
Total phytoplankters ( $\text{cells}\cdot\text{L}^{-1}$ )	19,300
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Bacillariophyta	18,600
Centrales	17,700
<u>Chaetoceros affinis</u>	4,900
<u>C. decipiens</u>	1,200
<u>C. furcellatus</u>	5,500
<u>C. septentrionalis</u>	200
<u>C. wighami</u>	300
<u>Coscinodiscus lacustris</u>	300
<u>Thalassiosira decipiens</u>	1,200
<u>T. grvida</u>	1,800
<u>T. nordenskiöldii</u>	2,300
Pennales	900
<u>Diploneis smithii</u>	100
<u>Fragilaria islandica</u>	100
<u>Navicula peregrina</u>	200
<u>N. protracta</u>	300
<u>Nitzschia frigida</u>	200
Chlorophyta	200
<u>Chlamydomonas pulsatilla</u>	200
Chrysophyta	200
<u>Phaeocystis pouchetii</u>	200
Pyrrophyta	300
<u>Peridinium diabolus</u>	100
<u>Prorocentrum micans</u>	100
<u>P. rampii</u>	100

Table 24. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 22, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	120
Bacillariophyta	20
Pennales	20
<u>Cylindrotheca closterium</u>	20
Chlorophyta	60
<u>Chlamydomonas pulsatilla</u>	60
Chrysophyta	20
<u>Dinobryon balticum</u>	10
<u>Phaeocystis pouchetii</u>	10
Euglenophyta	10
<u>Euglena schmitzii</u>	10
Pyrrophyta	10
<u>Prorocentrum</u> sp.	10

Table 25. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 23, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	4,600
Bacillariophyta	2,300
Centrales	1,400
<u>Chaetoceros externum</u>	300
<u>C. furcellatus</u>	400
<u>C. septentrionalis</u>	300
<u>Coscinodiscus lacustris</u>	100
<u>Thalassiosira decipiens</u>	100
<u>T. gravida</u>	200
Pennales	900
<u>Cylindrotheca closterium</u>	200
<u>Fragilaria islandica</u>	100
<u>Licmophora dalmatica</u>	100
<u>Navicula agrestis</u>	200
<u>N. capitata</u>	100
<u>N. protracta</u>	100
<u>Nitzschia frigida</u>	100
Chlorophyta	1,200
<u>Carteria cordiformis</u>	100
<u>Chlamydomonas pulsatilla</u>	1,100
Cryptophyta	800
<u>Chroomonas placoidea</u>	800
Pyrrophyta	300
<u>Goniaulax monilata</u>	100
<u>Prorocentrum micans</u>	100
<u>P. rampii</u>	100

Table 26. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 24, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	2,800
Bacillariophyta	1,300
Centrales	600
<u>Chaetoceros affinis</u>	100
<u>C. furcellatus</u>	100
<u>C. septentrionalis</u>	200
<u>Thalassiosira decipiens</u>	100
<u>T. gravida</u>	100
Pennales	700
<u>Navicula agrestis</u>	300
<u>Nitzschia frigida</u>	100
<u>Opephora martyi</u>	300
Chlorophyta	700
<u>Chlamydomonas pulsatilla</u>	700
Chrysophyta	700
<u>Phaeocystis pouchetii</u>	600
<u>Salpingoeca natans</u>	100
Pyrrophyta	100
<u>Prorocentrum rampii</u>	100

Table 27. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 25, September 8, 1982.

Total phytoplankters (cells·L <sup>-1</sup> )	6,600
Bacillariophyta	5,600
Centrales	3,600
<u>Chaetoceros decipiens</u>	300
<u>C. externum</u>	300
<u>C. furcellatus</u>	1,800
<u>C. septentrionalis</u>	200
<u>C. socialis</u>	100
<u>Coscinodiscus lacustris</u>	200
<u>Melosira roeseana</u>	400
<u>Thalassiosira decipiens</u>	300
Pennales	2,000
<u>Cocconeis scutellum</u>	100
<u>Navicula agrestis</u>	400
<u>N. capitata</u>	100
<u>N. kariana</u>	100
<u>N. protracta</u>	100
<u>Opephora martyi</u>	1,200
Chlorophyta	100
<u>Chlamydomonas marina</u>	100
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	700
<u>Chroomonas placoidea</u>	700
Pyrrophyta	100
<u>Prorocentrum rampii</u>	100

Table 28. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 26, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	<u>1,100</u>
Bacillariophyta	800
Centrales	700
<u>Chaetoceros decipiens</u>	100
<u>C. externum</u>	100
<u>C. furcellatus</u>	300
<u>C. septentrionalis</u>	100
<u>Thalassiosira decipiens</u>	100
Pennales	100
<u>Cocconeis scutellum var. parva</u>	100
Chlorophyta	100
<u>Chlamydomonas pulsatilla</u>	100
Pyrrophyta	200
<u>Goniaulax monilata</u>	100
<u>Prorocentrum rampii</u>	100

Table 29. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 27, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	13,200
Bacillariophyta	12,600
Centrales	5,800
<u>Chaetoceros affinis</u>	1,200
<u>C. externum</u>	400
<u>C. furcellatus</u>	3,100
<u>C. septentrionalis</u>	600
<u>Coscinodiscus lacustris</u>	100
<u>Thalassiosira decipiens</u>	100
<u>T. gravida</u>	300
Pennales	6,800
<u>Navicula delicatula</u>	100
<u>N. granii</u>	6,200
<u>N. valida</u>	100
<u>Nitzschia frigida</u>	200
<u>Opephora martyi</u>	100
<u>Pinnularia sp.</u>	100
Chlorophyta	300
<u>Chlamydomonas pulsatilla</u>	200
<u>Closterium sp.</u>	100
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	100
<u>Chroomonas placoidea</u>	100
Pyrrophyta	100
<u>Prorocentrum micans</u>	100

Table 30. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 28, September 8, 1982.

Total phytoplankters (cells·L <sup>-1</sup> )	6,200
Bacillariophyta	2,600
Centrales	2,400
<u>Chaetoceros decipiens</u>	300
<u>C. externum</u>	200
<u>C. furcellatus</u>	1,200
<u>C. septentrionalis</u>	200
<u>Thalassiosira decipiens</u>	200
<u>T. gravida</u>	200
<u>T. nordenskiöldii</u>	100
Pennales	200
<u>Diploneis incurvata</u>	100
<u>Nitzschia frigida</u>	100
Chlorophyta	300
<u>Chlamydomonas pulsatilla</u>	300
Chrysophyta	300
<u>Dinobryon sp.</u>	100
<u>Phaeocystis pouchetii</u>	200
Cryptophyta	2,900
<u>Chroomonas placoidea</u>	2,900
Pyrrophyta	100
<u>Prorocentrum micans</u>	100

Table 31. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 29, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	6,100
Bacillariophyta	4,500
Centrales	4,000
<u>Chaetoceros affinis</u>	700
<u>C. externum</u>	200
<u>C. furcellatus</u>	2,200
<u>C. septentrionalis</u>	300
<u>Thalassiosira decipiens</u>	600
Pennales	500
<u>Cocconeis scutellum</u>	100
<u>Navicula valida</u>	200
<u>Nitzschia seriata</u>	100
<u>Pinnularia sp.</u>	100
Chlorophyta	200
<u>Chlamydomonas pulsatilla</u>	200
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	1,200
<u>Chroomonas placoidea</u>	1,200
Euglenophyta	100
<u>Euglena viridis</u>	100

Table 32. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 30, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	20,500
Bacillariophyta	18,600
Centrales	18,600
<u>Chaetoceros affinis</u>	6,400
<u>C. externum</u>	200
<u>C. furcellatus</u>	7,700
<u>C. septentrionalis</u>	1,000
<u>C. wighamii</u>	900
<u>Thalassiosira decipiens</u>	700
<u>T. nordenskiöldii</u>	1,700
Chlorophyta	100
<u>Chlamydomonas pulsatilla</u>	100
Cryptophyta	1,500
<u>Chroomonas placoidea</u>	1,500
Euglenophyta	200
<u>Euglena schmitzii</u>	100
<u>E. viridis</u>	100
Pyrrophyta	100
<u>Peridinium diabolus</u>	100

Table 33. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 31, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	14,700
Bacillariophyta	12,800
Centrales	12,100
<u>Chaetoceros affinis</u>	2,100
<u>C. decipiens</u>	100
<u>C. externum</u>	900
<u>C. furcellatus</u>	5,800
<u>C. septentrionalis</u>	800
<u>C. wighami</u>	600
<u>Coscinodiscus lacustris</u>	200
<u>Thalassiosira decipiens</u>	800
<u>T. gravida</u>	100
<u>T. nordenskiöldii</u>	700
Pennales	700
<u>Cylindrotheca closterium</u>	100
<u>Navicula digitoradiata</u>	200
<u>N. peregrina</u>	100
<u>Opephora martyi</u>	300
Chlorophyta	200
<u>Chlamydomonas pulsatilla</u>	200
Chrysophyta	200
<u>Phaeocystis pouchetii</u>	200
Cryptophyta	1,300
<u>Chroomonas placoidea</u>	1,300
Euglenophyta	100
<u>Euglena schmitzii</u>	100
Pyrrophyta	100
<u>Peridinium diabolus</u>	100

Table 34. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 32, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	<u>7,100</u>
Bacillariophyta	5,400
Centrales	5,100
<u>Chaetoceros affinis</u>	700
<u>C. decipiens</u>	900
<u>C. furcellatus</u>	2,500
<u>C. septentrionalis</u>	200
<u>C. wighami</u>	600
<u>Thalassiosira decipiens</u>	100
<u>T. gravida</u>	100
Pennales	300
<u>Grammatophora arctica</u>	100
<u>Navicula peregrina</u>	100
<u>Opephora martyi</u>	100
Chlorophyta	1,500
<u>Carteria cordiformis</u>	100
<u>Chlamydomonas pulsatilla</u>	1,300
<u>Closterium sp.</u>	100
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Euglenophyta	100
<u>Euglena schmitzii</u>	100

Table 35. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 33, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	4,900
Bacillariophyta	2,300
Centrales	2,100
<u>Chaetoceros affinis</u>	700
<u>C. furcellatus</u>	500
<u>C. septentrionalis</u>	100
<u>C. wighami</u>	400
<u>Thalassiosira decipiens</u>	400
Pennales	200
<u>Licmophora dalmatica</u>	100
<u>Pinnularia sp.</u>	100
Chlorophyta	1,600
<u>Carteria cordiformis</u>	300
<u>Chlamydomonas pulsatilla</u>	1,300
Chrysophyta	200
<u>Dinobryon sp.</u>	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	600
<u>Chroomonas placoidea</u>	600
Pyrrophyta	200
<u>Prorocentrum rampii</u>	200

Table 36. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 34, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	6,000
Bacillariophyta	4,800
Centrales	4,000
<u>Chaetoceros affinis</u>	1,300
<u>C. debilis</u>	1,000
<u>C. furcellatus</u>	500
<u>C. septentrionalis</u>	300
<u>Coscinodiscus lacustris</u>	100
<u>Thalassiosira decipiens</u>	500
<u>T. gravida</u>	200
<u>T. nordenskiöldii</u>	100
Pennales	800
<u>Cocconeis scutellum</u>	100
<u>Navicula agrestis</u>	200
<u>N. gastrum</u>	100
<u>N. humerosa</u>	100
<u>Nitzschia seriata</u>	300
Chlorophyta	700
<u>Chlamydomonas pulsatilla</u>	700
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	400
<u>Chroomonas placoidea</u>	400

Table 37. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 35, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	13,200
Bacillariophyta	11,700
Centrales	10,200
<u>Chaetoceros affinis</u>	2,500
<u>C. decipiens</u>	500
<u>C. furcellatus</u>	4,600
<u>C. septentrionalis</u>	200
<u>C. wighamii</u>	400
<u>Coscinodiscus lacustris</u>	200
<u>Thalassiosira decipiens</u>	800
<u>T. gravida</u>	200
<u>T. nordenskiöldii</u>	800
Pennales	1,500
<u>Cocconeis scutellum</u>	100
<u>Grammatophora arctica</u>	1,100
<u>Navicula peregrina</u>	100
<u>Nitzschia frigida</u>	100
<u>Pinnularia sp.</u>	100
Chlorophyta	700
<u>Chlamydomonas pulsatilla</u>	700
Cryptophyta	300
<u>Chroomonas placoidea</u>	300
Pyrrophyta	500
<u>Prorocentrum micans</u>	300
<u>P. rampii</u>	200

Table 38. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 36, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	53,700
Bacillariophyta	48,300
Centrales	45,500
<u>Chaetoceros affinis</u>	12,300
<u>C. debilis</u>	2,800
<u>C. decipiens</u>	2,900
<u>C. furcellatus</u>	15,600
<u>C. septentrionalis</u>	1,500
<u>C. wighami</u>	4,500
<u>Coscinodiscus lacustris</u>	200
<u>Thalassiosira decipiens</u>	3,200
<u>T. gravida</u>	300
<u>T. nordenskiöldii</u>	2,200
Pennales	2,800
<u>Cocconeis distans</u>	100
<u>C. scutellum</u>	300
<u>Cymbella leptoceros</u>	100
<u>Navicula agrestis</u>	300
<u>N. humerosa</u>	100
<u>N. imperfecta</u>	100
<u>N. valida</u>	100
<u>Nitzschia frigida</u>	100
<u>N. seriata</u>	900
<u>Opephora martyi</u>	200
<u>Pinnularia sp.</u>	500
Chlorophyta	2,600
<u>Chlamydomonas pulsatilla</u>	2,500
<u>Closterium sp.</u>	100
Chrysophyta	700
<u>Phaeocystis pouchetii</u>	700
Cryptophyta	1,300
<u>Chroomonas placoidea</u>	1,300
Pyrrophyta	800
<u>Goniaulax sp.</u>	100
<u>Peridinium diabolus</u>	300
<u>Prorocentrum rampii</u>	400

Table 39. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 37, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	30,200
Bacillariophyta	25,300
Centrales	24,600
<u>Chaetoceros affinis</u>	9,000
<u>C. decipiens</u>	1,000
<u>C. furcellatus</u>	6,600
<u>C. septentrionalis</u>	2,900
<u>C. wighami</u>	1,200
<u>Coscinodiscus lacustris</u>	200
<u>Thalassiosira decipiens</u>	2,700
<u>T. gravis</u>	200
<u>T. nordenskiöldii</u>	800
Pennales	700
<u>Diploneis smithii</u>	100
<u>Nitzschia seriata</u>	100
<u>Opephora martyi</u>	300
<u>Pinnularia sp.</u>	200
Chlorophyta	3,800
<u>Carteria cordiformis</u>	200
<u>Chlamydomonas pulsatilla</u>	3,700
Cryptophyta	600
<u>Chroomonas placoidea</u>	600
Pyrrophyta	400
<u>Goniaulax monilata</u>	100
<u>Peridinium diabolus</u>	100
<u>Prorocentrum rampii</u>	200

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Table 40. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 38, September 8, 1982.

<u>Total phytoplankters (cells·L<sup>-1</sup>)</u>	<u>13,500</u>
Bacillariophyta	11,300
Centrales	9,400
<u>Chaetoceros affinis</u>	1,600
<u>C. decipiens</u>	500
<u>C. externum</u>	300
<u>C. furcellatus</u>	1,800
<u>C. septentrionalis</u>	300
<u>C. wighami</u>	1,000
<u>Thalassiosira decipiens</u>	2,100
<u>T. gravida</u>	1,000
<u>T. nordenskiöldii</u>	800
Pennales	1,900
<u>Amphora sp.</u>	100
<u>A. terroris</u>	100
<u>Diploneis smithii</u>	200
<u>Eunotia veneris</u>	100
<u>Licmophora dalmatica</u>	200
<u>Navicula agrestis</u>	200
<u>Nitzschia frigida</u>	300
<u>N. seriata</u>	300
<u>Pinnularia sp.</u>	400
Chlorophyta	1,900
<u>Carteria cordiformis</u>	200
<u>Chlamydomonas pulsatilla</u>	1,700
Cryptophyta	200
<u>Chroomonas placoidea</u>	200
Pyrrophyta	100
<u>Prorocentrum rampii</u>	100

Table 41. Species composition and abundance of surface phytoplankton in Frobisher Bay at Station 39, September 8, 1982.

Total phytoplankters (cells·L <sup>-1</sup> )	18,200
Bacillariophyta	16,600
Centrales	14,400
<u>Chaetoceros affinis</u>	2,800
<u>C. decipiens</u>	600
<u>C. externum</u>	100
<u>C. furcellatus</u>	5,300
<u>C. septentrionalis</u>	300
<u>C. socialis</u>	300
<u>C. wighami</u>	1,100
<u>Coscinodiscus lacustris</u>	600
<u>Thalassiosira decipiens</u>	1,600
<u>T. grvida</u>	1,000
<u>T. nordenskioldii</u>	700
Pennales	2,200
<u>Cocconeis scutellum</u>	100
<u>Fragilaria islandica</u>	100
<u>Gyrosigma</u> sp.	200
<u>Navicula agrestis</u>	100
<u>N. gastrum</u>	200
<u>N. imperfecta</u>	200
<u>N. peregrina</u>	200
<u>N. protracta</u>	100
<u>Nitzschia frigida</u>	500
<u>N. seriata</u>	400
<u>Opephora martyi</u>	100
Chlorophyta	600
<u>Chlamydomonas pulsatilla</u>	600
Chrysophyta	100
<u>Phaeocystis pouchetii</u>	100
Cryptophyta	600
<u>Chroomonas placoidea</u>	600
Pyrrophyta	300
<u>Goniaulax monilata</u>	100
<u>Prorocentrum rampii</u>	200