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Phytoplankton Species Composition and Abundance Along the Pacific Coast of Canada, 1979 - 1989

Volume 2: 1985 - 1989



J.R. Forbes and R.E. Waters

Institute of Ocean Sciences
Department of Fisheries and Oceans
Sidney, B.C.

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Canadian Data Report Of Hydrography and Ocean Sciences

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Abstract

Forbes, J.R., and R.E. Waters. 1993. Phytoplankton species composition and abundance along the Pacific coast of Canada, 1979 - 1989. Volume 2: 1985 - 1989. Can. Data Rep. Hydrogr. Ocean Sci. 117 (Vol. 2): 247p.

Phytoplankton species composition and abundance data from samples collected in coastal waters of British Columbia from 1979 to 1989 are presented. Data from two cruises in the subarctic Pacific Ocean are also provided. We include data on associated water properties (salinity, temperature, chlorophyll, inorganic nutrients, particulate organic nitrogen and particulate organic carbon) as available. Results for 1979 to 1984 and details of sampling and analytical procedures are given in volume 1. Results from 1985 to 1989 are presented in volume 2.

Key words: phytoplankton, taxonomy, distribution, water properties

Résumé

Forbes, J.R., and R.E. Waters. 1993. Phytoplankton species composition and abundance along the Pacific coast of Canada, 1979 - 1989. Volume 2: 1985 - 1989. Can. Data Rep. Hydrogr. Ocean Sci. 117 (Vol. 2): 247p.

On présente des données sur la composition en espèces et sur l'abondance du phytoplancton résultant de l'analyse d'échantillons prélevés dans les eaux côtières de la Colombie-Britannique de 1979 à 1989. Il y a également des données recueillis au cours de deux expéditions dans la région subarctique de l'océan Pacifique. S'ajoutent les données existantes sur les propriétés connexes de l'eau (salinité, température, teneur en chlorophylle, matières nutritives inorganique, azote organique en particules et carbone organique en particules). Dans le volume 1, on donne les résultats des analyses de 1979 à 1984 ainsi que des détails sur les méthodes d'échantillonnage et d'analyse. Les résultats des analyses de 1985 à 1989 sont présentés dans le volume 2.

Mot-clés: phytoplancton, taxonomie, distribution, propriétés de l'eau

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We thank fellow taxonomists who contributed to the data set: Merelene Austin, Judy Akerman and Rowan Haigh. Leslie Brown, Patricia Smith and Dr. F.J.R. (Max) Taylor provided assistance with some taxonomic problems. Access to the Northeast Pacific Culture Collection facilitated work with live material. We also appreciate the assistance of staff of the Ocean Environment and Fisheries section, along with numerous students and contractors, who were involved with sampling or analysis of associated water samples. Samples were collected from the C.S.S. *Parizeau*, C.S.S. *Vector*, C.S.S. *John P. Tully*, C.S.S. *Revisor*, F.P.V. *Walker Rock*, M.V. *Ocean King* and M.V. *Bastion City*. We thank personnel of these vessels for their assistance.

Introduction

The Ocean Environment and Fisheries section of the Institute of Ocean Sciences has been involved in continuing studies of the control by oceanographic processes of the planktonic ecosystem over the continental shelf of British Columbia. As part of this work, we have collected phytoplankton samples to determine the species composition and abundance of the phytoplankton community. In addition, a number of short term projects have included collection of phytoplankton samples in both nearshore waters and oceanic waters of the subarctic Pacific. This report provides detailed data on the abundance and species composition of photoautotrophic plankton samples collected from 1979 to 1989 (Vol.1: 1979-1984; Vol. 2: 1985-1989), together with associated physical and chemical data. Obligately heterotrophic taxa have been excluded.

Some of these data have been published previously in conjunction with reports on specific cruises or projects (Hill et al. 1982a, b, Hill et al. 1983, Denman et al. 1985, Forbes et al. 1988, Forbes et al. 1990a, b). However, this report will enable the complete set of data to be archived in one place and available for comparison. In addition, there have been a number of changes in nomenclature and corrections to the data.

Data collected with the phytoplankton samples varied according to changing research objectives. Generally included were temperature, salinity and chlorophyll *a*. Concentrations of dissolved inorganic nitrogen (nitrate plus nitrate), phosphorus (orthophosphate) and silicon (reactive silicate), as well as dissolved oxygen and radioactive carbon uptake rates, were frequently determined.

Detailed descriptions of methods employed, including details of precision and accuracy, and taxonomic references consulted are available in Vol. 1. Briefly, samples were generally collected in Niskin or Go-Flo bottles attached to a rosette sampler, or from a shipboard seawater loop. Phytoplankton samples were preserved with Lugol's iodine solution (Throndsen 1978) and identification and enumeration was by the inverted microscope method (Hasle 1978). Salinity samples were analyzed using a conductance instrument (Guildline Autosal 8400A). Chlorophyll was determined by fluorometry (Parsons et al. 1984), inorganic nutrients by segmented flow autoanalysis (Armstrong et al. 1967, Wood et al. 1967, Hager et al. 1968, Slawyk and MacIsaac 1972, Brynjolfson 1973). Particulate organic carbon (POC) and nitrogen (PON) were analyzed by gas chromatography (Perkin Elmer model 240 elemental analyzer).

Table 1 shows the distribution of samples by area and month. Table 2 provides the complete list of taxa included in the data report, together with the abbreviations used in the data records.

Table 1: Distribution of samples by area and month

	April	May	June	July	August	September	October	TOTAL
Strait of Georgia		76	10	63				149
West coast Vancouver Island	5	132	127	118	199	20	18	619
Central and north coasts			14	71	3			88
Subarctic Pacific		42	27					69
TOTAL	5	250	178	252	202	20	18	925

TABLE 2: PHYTOPLANKTON TAXONOMIC LIST (WITH ABBREVIATIONS USED IN DATA RECORDS)

* indicates information listed in text in notes on taxonomy (p. 10)

Tax. ref. no. refers to taxonomic references consulted (p. 19 of Vol. 1)

NEPCC numbers refer to Northeast Pacific Culture Collection accession numbers

	Tax. ref. no.	Abbreviations in data records
Cyanobacteria		
Cyanophyceae		
Chroococcales		
Chroococcaceae		
<i>Synechococcus</i> spp.	63	<i>synechococ</i> spp.
Nostocales		
Oscillatoriaceae		
<i>Oscillatoria</i> spp.	63	<i>oscillator</i> spp.
Nostocaceae		
<i>Anabaena</i> spp.	63	<i>anabaena</i> spp.
<i>Nostoc</i> sp.	63	<i>nostoc</i> sp.
Chrysophyta		
Chrysophyceae		
Ochromonadales		
Ochromonadaceae		
<i>Ochromonas</i> spp.	4	<i>ochromonas</i> spp.
Dinobryaceae		
<i>Dinobryon</i> spp.		
<i>Dinobryon divergens</i>	63	<i>dinobryon divergens</i>
<i>Dinobryon sertularia</i>	63	<i>dinobryon sertularia</i>
<i>Dinobryon sueicum</i>	50	<i>dinobryon sueicum</i>
Dictyochales		
Dictyochaceae		
<i>Dictyocha fibula</i>	18	<i>dictyocha fibula</i>
<i>Dictyocha speculum</i> (formerly <i>Distephanus</i>)	18	<i>dictyocha speculum</i>
Chromulinales		
Pedinellaceae		
<i>Chrysophyceae</i> NEPCC sp. 223		<i>pedinellac</i> sp.223
<i>Chrysophyceae</i> NEPCC sp. 239		<i>pedinellac</i> sp.239
<i>Apedinella spinifera</i>	70	<i>apedinella spinifera</i>
<i>Pseudopedinella pyriformis</i>	11	<i>pseudopedi pyriformis</i>
Xanthophyta		
Xanthophyceae		
Mischcoccales		
Pleurochloridaceae		
<i>Meringosphaera mediterranea</i>	14	<i>meringosph mediterranea</i>
Haptophyta		
Haptophyceae		
Isochrysidales		
Gephyrocapsaceae		
<i>Emiliana huxleyi</i>	46	<i>emiliana huxleyi</i>
(formerly <i>Coccolithus</i>)		
<i>Imantonia rotunda</i> *	21, 65	<i>imantonia rotunda</i>

Table 2 cont.

	Dicrateria sp. *	21, 54	dicrateria sp.
Prymnesiales			
Prymnesiaceae			
Corymbellus sp *			corymbellu sp.
Corymbellus aureus	20		corymbellu aureus
Chryschromulina spp. *	59,60		chryschromo spp.
Chryschromulina sp.1			chryschromo sp.1
Prymnesium spp.	6, 41		prymnesium spp.
Phaeocystaceae			
Phaeocystis pouchetii	48		phaeocysti pouchetii
Coccospheerales			
Zygospaeraceae			
Crystallolithus hyalinus	56		crystallol hyalinus
Coccolithaceae			
Coccolithus pelagicus	56		coccolithu pelagicus
Cyclococcolithus leptoporus	45		cyclococco leptoporus
Bacillariophyta			
Bacillariophyceae			
Centrales			
Centrales spp.			centrales spp.
Cymatosiraceae			
Leyanella arenaria *	36		leyanella arenaria
Minutocellus sp.	36		minutocell sp.
Minutocellus scriptus *	36		minutocell scriptus
Corethronaceae			
Corethron criophilum	12, 38		corethron criophilum
Leptocylindraceae			
Detonula pumila (formerly Schroederella delicatula)	12		detonula pumila
Leptocylindrus danicus	12		leptocylin danicus
Leptocylindrus danicus (spores)			leptocylin danicus spores
Leptocylindrus minimus	12		leptocylin minimus
Leptocylindrus mediterraneus (formerly Dactyliosira)	12		leptocylin mediterraneu
Coscinodiscaceae			
Melosira spp.	12, 42		melosira sp.
Melosira moniliformis	12		melosira moniliformis
Paralia sulcata (formerly Melosira)	12		paralia sulcata
Stephanopyxis spp.	12		stephanopy spp.
Stephanopyxis nipponica	12		stephanopy nipponica
Stephanopyxis palmeriana	12		stephanopy palmeriana
Stephanopyxis turris	12		stephanopy turris
Cyclotella sp.? 3 – 5um			cyclotella? sp. 3–5
Cyclotella sp. 2 *			cyclotella sp.
Cyclotella caspia	38		cyclotella caspia
Skeletonema costatum	12		skeletonem costatum
Thalassiosira spp.	12		thalassios spp.
Thalassiosira sp. 1			thalassios sp. 1
Thalassiosira sp. 2			thalassios sp. 2
Thalassiosira aestivalis	12, 28		thalassios aestivalis
Thalassiosira angstii	15		thalassios angstii

Table 2 cont.

<i>Thalassiosira angulata</i>	28	<i>thalassios angulata</i>
<i>Thalassiosira anguste-lineata</i>	12,17	<i>thalassios anguste-line</i>
<i>Thalassiosira baltica</i>	29	<i>thalassios baltica</i>
<i>Thalassiosira binata</i>	32	<i>thalassios binata</i>
<i>Thalassiosira conferta</i>	32	<i>thalassios conferta</i>
<i>Thalassiosira constricta</i>	37	<i>thalassios constricta</i>
<i>Thalassiosira decipiens</i>	30	<i>thalassios decipiens</i>
<i>Thalassiosira eccentrica / T. symmetrica</i>	16	<i>thalassios eccentrica</i> / <i>symmetrica</i>
<i>Thalassiosira elsayedii</i>	15	<i>thalassios elsayedii</i>
<i>Thalassiosira leptopus</i>	33	<i>thalassios leptopus</i>
<i>Thalassiosira lineata</i>	33	<i>thalassios lineata</i>
<i>Thalassiosira mendiolana</i>	16	<i>thalassios mendiolana</i>
<i>Thalassiosira minuscula</i>	27	<i>thalassios minuscula</i>
<i>Thalassiosira nordenskioldii</i>	12, 28	<i>thalassios nordenskiold</i>
<i>Thalassiosira pacifica</i>	19, 28	<i>thalassios pacifica</i>
<i>Thalassiosira pseudonana</i> *	34	<i>thalassios pseudonana</i>
<i>Thalassiosira rotula</i>	12	<i>thalassios rotula</i>
<i>Thalassiosira subtilis</i>	26	<i>thalassios subtilis</i>
<i>Thalassiosira tenera</i>	33	<i>thalassios tenera</i>
<i>Thalassiosira weissflogii</i>	17	<i>thalassios weissflogii</i>
<i>Coscinodiscus spp.</i>	12, 42	<i>coscinodis spp.</i>
<i>Coscinodiscus asteromphalus</i>	42	<i>coscinodis asteromphalu</i>
<i>Coscinodiscus granii</i>	12	<i>coscinodis granii</i>
<i>Coscinodiscus radiatus</i>	12	<i>coscinodis radiatus</i>
<i>Coscinodiscus thorii</i>	42	<i>coscinodis thorii</i>
Leprocyclindraceae		
<i>Lauderia borealis</i>	12	<i>lauderia borealis</i>
Actinodiscaceae		
<i>Actinptychus senarius</i>	12	<i>actinoptyc senarius</i>
<i>Actinptychus splendens</i>	12	<i>actinoptyc splendens</i>
Asterolampraceae		
<i>Asteromphalus sp. 1</i>		<i>asterompha sp. 1</i>
<i>Asteromphalus heptactis</i>	12	<i>asterompha heptactis</i>
Biddulphiaceae		
<i>Biddulphia spp.</i>	12, 42	<i>biddulphia spp.</i>
<i>Biddulphia aurita</i>	12	<i>biddulphia aurita</i>
<i>Biddulphia longicurvis</i>	12	<i>biddulphia longicurvis</i>
<i>Eucampia spp.</i>	12	<i>eucampia spp.</i>
<i>Eucampia zoodiacus</i>	12	<i>eucampia zoodiacus</i>
<i>Hemiaulus membranaceus</i>	12	<i>hemiaulus membranaceus</i>
<i>Cerataulin pelagica</i> (formerly <i>C. bergonii</i>)	12	<i>cerataulin pelagica</i>
<i>Ditylum brightwellii</i>	12	<i>ditylum brightwellii</i>
Chaetoceraceae		
<i>Chaetoceros spp. (cells)</i>	5,12,38,42	<i>chaetocero spp.</i> cells
<i>Chaetoceros spp. (chains)</i>	5,12,38,42	<i>chaetocero spp.</i> chains
<i>Chaetoceros spp. (spores)</i>	12,38,42	<i>chaetocero spp.</i> spores
<i>Chaetoceros sp. a</i>		<i>chaetocero sp.a</i>
<i>Chaetoceros sp. b</i>		<i>chaetocero sp.b</i>
<i>Chaetoceros sp. c</i>		<i>chaetocero sp.c</i>
<i>Chaetoceros sp. d</i>		<i>chaetocero sp.d</i>
<i>Chaetoceros sp. e</i>		<i>chaetocero sp.e</i>

Table 2 cont.

<i>Chaetoceros</i> sp. f		chaetocero sp.f
<i>Chaetoceros</i> sp. gi		chaetocero sp.gi
<i>Chaetoceros</i> sp. gii *		chaetocero sp.gii
<i>Chaetoceros</i> sp. h		chaetocero sp.h
<i>Chaetoceros</i> sp. j		chaetocero sp.j
<i>Chaetoceros</i> sp. k		chaetocero sp.k
<i>Chaetoceros</i> sp. l		chaetocero sp.l
<i>Chaetoceros</i> sp. m		chaetocero sp.m
<i>Chaetoceros</i> sp. n		chaetocero sp.n
<i>Chaetoceros</i> affine	12	chaetocero affine
<i>Chaetoceros</i> affine v. <i>willei</i>	12	chaetocero affine v.willei
<i>Chaetoceros</i> atlanticum	12	chaetocero atlanticum
<i>Chaetoceros</i> boreale	38	chaetocero boreale
<i>Chaetoceros</i> cinctum / <i>C. crucifer</i> *	12 / 19	chaetocero cinctum /crucifer
<i>Chaetoceros</i> compressum	12	chaetocero compressum
<i>Chaetoceros</i> constrictum / <i>C. vanheurckii</i> *	12	chaetocero constrictum /vanheurckii
<i>Chaetoceros</i> convolutum / <i>C. concavicornis</i> *	12	chaetocero convolutum /concavicornis
<i>Chaetoceros</i> curvisetum	12	chaetocero curvisetum
<i>Chaetoceros</i> danicum	12	chaetocero danicum
<i>Chaetoceros</i> debile	12	chaetocero debile
<i>Chaetoceros</i> decipiens	12	chaetocero decipiens
<i>Chaetoceros</i> decipiens f. <i>singularis</i>	12	chaetocero decipiens f.singularis
<i>Chaetoceros</i> densus	38	chaetocero densus
<i>Chaetoceros</i> diadema (formerly <i>C. subsecundus</i>)	12	chaetocero diadema
<i>Chaetoceros</i> didymum	12	chaetocero didymum
<i>Chaetoceros</i> difficile	12	chaetocero difficile
<i>Chaetoceros</i> eibenii	12	chaetocero eibenii
<i>Chaetoceros</i> filiforme	38, 42	chaetocero filiforme
<i>Chaetoceros</i> laciniosum	12	chaetocero laciniosum
<i>Chaetoceros</i> lorenzianum	12	chaetocero lorenzianum
<i>Chaetoceros</i> messanensis	12	chaetocero messanensis
<i>Chaetoceros</i> pelagicum	12	chaetocero pelagicum
<i>Chaetoceros</i> perpusillum	12	chaetocero perpusillum
<i>Chaetoceros</i> peruvianum	12	chaetocero peruvianum
<i>Chaetoceros</i> pseudocrinitum	38, 42	chaetocero pseudocrinit
<i>Chaetoceros</i> radicans	12	chaetocero radicans
<i>Chaetoceros</i> rostratum	42	chaetocero rostratum
<i>Chaetoceros</i> seiracanthum	12	chaetocero seiracanthum
<i>Chaetoceros</i> septentrionale	38, 42	chaetocero septentriona
<i>Chaetoceros</i> simile	12	chaetocero simile
<i>Chaetoceros</i> simplex	42	chaetocero simplex
<i>Chaetoceros</i> sociale	12	chaetocero sociale
<i>Chaetoceros</i> subtile	38, 42	chaetocero subtile
<i>Chaetoceros</i> teres	12	chaetocero teres
<i>Chaetoceros</i> tortissimum	12	chaetocero tortissimum
<i>Chaetoceros</i> vistulae	12	chaetocero vistulae
<i>Chaetoceros</i> vixvisible	42	chaetocero vixvisible
<i>Chaetoceros</i> wighamii	12	chaetocero wighamii
Bacteriastraceae		
<i>Bacteriastrum</i> delicatulum	12, 42	bacteriast delicatulum

Table 2 cont.

Rhizosoleniaceae			
<i>Rhizosolenia</i> spp.	12, 42	<i>rhizosolen</i> spp.	
<i>Rhizosolenia alata</i> f. <i>alata</i>	12	<i>rhizosolen alata</i>	f. <i>alata</i>
<i>Rhizosolenia alata</i> f. <i>curvirostris</i>	12	<i>rhizosolen alata</i>	f. <i>curvirostr</i>
<i>Rhizosolenia alata</i> f. <i>gracillima</i>	12	<i>rhizosolen alata</i>	f. <i>gracillima</i>
<i>Rhizosolenia alata</i> f. <i>indica</i>	12	<i>rhizosolen alata</i>	f. <i>indica</i>
<i>Rhizosolenia bergonii</i>	12	<i>rhizosolen bergonii</i>	
<i>Rhizosolenia delicatula</i>	12	<i>rhizosolen delicatula</i>	
<i>Rhizosolenia fragilissima</i>	12	<i>rhizosolen fragilissima</i>	
<i>Rhizosolenia fragilissima</i> v. 1		<i>rhizosolen fragilissima</i>	v.1
<i>Rhizosolenia hebetata</i> f. <i>hiemalis</i>	12	<i>rhizosolen hebetata</i>	f. <i>hiemalis</i>
<i>Rhizosolenia hebetata</i> f. <i>semispina</i>	12	<i>rhizosolen hebetata</i>	f. <i>semispina</i>
<i>Rhizosolenia setigera</i>	12	<i>rhizosolen setigera</i>	
<i>Rhizosolenia stolterfothii</i>	12	<i>rhizosolen stolterfothi</i>	
<i>Rhizosolenia styliformis</i> v. <i>styliformis</i>	12	<i>rhizosolen styliformis</i>	v. <i>styliformi</i>
Unidentified cylinders *		<i>centrales cylinders</i>	unidentified
Pennales			
Pennales spp.		pennales spp.	
Fragilariaceae			
<i>Fragilaria</i> spp.	42	<i>fragilaria</i> spp.	
<i>Fragilaria lapponica</i>		<i>fragilaria lapponica</i>	
<i>Synedra</i> spp.	42	<i>synedra</i> spp.	
<i>Synedra acus</i>	42	<i>synedra acus</i>	
<i>Asterionella bleakeleyi</i>	42	<i>asterionel bleakeleyi</i>	
<i>Asterionella formosa</i>	42, 63	<i>asterionel formosa</i>	
<i>Asterionella glacialis</i> (formerly <i>A. japonica</i>)	12	<i>asterionel glacialis</i>	
<i>Asterionella kariana</i>	12	<i>asterionel kariana</i>	
<i>Thalassiothrix frauenfeldii</i>	35	<i>thalassiot frauenfeldii</i>	
<i>Thalassiothrix longissima</i>	35	<i>thalassiot longissima</i>	
<i>Thalassionema bacillaris</i>	35	<i>thalassion bacillaris</i>	
<i>Thalassionema nitzschiodes</i>	35	<i>thalassion nitzschoides</i>	
<i>Licmophora</i> sp. 1		<i>licmophora</i> sp.1	
<i>Licmophora abbreviata</i>	12	<i>licmophora abbreviata</i>	
<i>Striatella unipunctata</i>	12	<i>striatella unipunctata</i>	
<i>Denticulopsis seminae</i>	68	<i>denticulop seminae</i>	
Diatomaceae			
<i>Grammatophora</i> spp.	12	<i>grammatoph</i> spp.	
<i>Grammatophora marina</i>	12	<i>grammatoph marina</i>	
Naviculaceae			
<i>Naviculaceae</i> spp.	38	<i>naviculace</i> spp.	
<i>Gyrosigma</i> spp. / <i>Pleurosigma</i> spp.	38	<i>gyrosigma</i> spp.	/pleurosigma
<i>Navicula calida</i>	38	<i>navicula calida</i>	
<i>Navicula wawrikiae</i>	44	<i>navicula wawrikiae</i>	
<i>Pleurosigma angulatum</i>	38	<i>pleurosigm angulatum</i>	
<i>Pleurosigma acutum</i>	39	<i>pleurosigm acutum</i>	
<i>Tropidoneis</i> spp.	38	<i>tropidonei</i> spp.	
<i>Tropidoneis antarctica</i> v. <i>polyplasta</i>	12, 19	<i>tropidonei antarctica</i>	v. <i>polyplasta</i>
<i>Tropidoneis lepidoptera</i>	12	<i>tropidonei lepidoptera</i>	
Cymbellaceae			
<i>Amphora</i> spp.	38	<i>amphora</i> spp.	
<i>Amphora pusio</i> v. <i>parvula</i>	62	<i>amphora</i> <i>pusio</i>	v. <i>parvula</i>

Table 2 cont.

Nitzchiaceae			
<i>Nitzschia</i> spp.	38	<i>nitzschia</i> spp.	
<i>Nitzschia americana</i>	23	<i>nitzschia americana</i>	
<i>Nitzschia bicapitata</i>	23	<i>nitzschia bicapitata</i>	
<i>Nitzschia brevirostris</i>	43	<i>nitzschia brevirostris</i>	
<i>Nitzschia closterium</i>	23	<i>nitzschia closterium</i>	
<i>Nitzschia closterium</i> v. <i>striatula</i>	23	<i>nitzschia closterium</i>	v. <i>striatula</i>
<i>Nitzschia cylindroformis</i> *	31	<i>nitzschia cylindroform</i>	
<i>Nitzschia cylindrus</i>	25, 31	<i>nitzschia cylindrus</i>	
<i>Nitzschia delicatissima</i> (formerly <i>N. acydropila</i>)	24	<i>nitzschia delicatissim</i>	
<i>Nitzschia subraudulenta</i> / <i>N. fraudulenta</i> *	24	<i>nitzschia subraudulen</i>	/fraudulen
<i>Nitzschia granii</i> v. <i>curvata</i>	23	<i>nitzschia granii</i>	v.curvata
<i>Nitzschia heimii</i>	24	<i>nitzschia heimii</i>	
<i>Nitzschia longissima</i>	23	<i>nitzschia longissima</i>	
<i>Nitzschia lineola</i>	24	<i>nitzschia lineola</i>	
<i>Nitzschia norwegica</i>	23	<i>nitzschia norwegica</i>	
<i>Nitzschia pacifica</i> *	12	<i>nitzschia pacifica</i>	
<i>Nitzschia pseudodelicatissima</i> (formerly <i>N. delicatula</i>)	24	<i>nitzschia pseudodelica</i>	
<i>Nitzschia pungens</i> *	24	<i>nitzschia pungens</i>	
<i>Nitzschia seriata</i>	24	<i>nitzschia seriata</i>	
<i>Nitzschia seriata</i> f. <i>obtusa</i> *	24	<i>nitzschia seriata</i>	f. <i>obtusa</i>
<i>Nitzschia subcurvata</i>	23	<i>nitzschia subcurvata</i>	
<i>Nitzschia subpacifica</i>	24	<i>nitzschia subpacifica</i>	
<i>Nitzschia turgidula</i> / <i>N. turgiduloides</i> *	24	<i>nitzschia turgiduloide</i>	/turgidula
Bacillariaceae			
<i>Cylindrotheca fusiformis</i>	64	<i>cylindroth fusiformis</i>	
Chlorophyta			
Chlorophyceae			
Volvocales			
Chlamydomonadaceae			
<i>Carteria</i> spp.	7	<i>carteria</i> spp.	
Chlorococcales			
Oocystaceae			
<i>Ankistrodesmus spiralis</i>	63	<i>ankistrode spiralis</i>	
<i>Ankistrodesmus falcatus</i> v. <i>mirabilis</i>	63	<i>ankistrode falcatus</i>	v. <i>mirabilis</i>
Scenedesmaceae			
<i>Scenedesmus acuminatus</i>	63	<i>scenedesmu acuminatus</i>	
<i>Scenedesmus quadricauda</i> v. <i>longispina</i>	63	<i>scenedesmu quadricauda</i>	
Prasinophyta			
Prasinophyceae			
Pyramimonadales			
Nephroelmidaceae			
<i>Micromonas pusilla</i> ? *	51	<i>micromonas pusilla</i> ?	
(formerly <i>Chromulina pusilla</i>)			
<i>Nephroelmis</i> spp. / <i>Bipedinomonas</i> spp. *	7, 61	<i>nephroelm</i> spp.	/bipedinomona
Polyblepharidaceae			
<i>Tetraselmis</i> spp. / <i>Pyramimonas</i> spp. *	7, 11	<i>tetraselmi</i> spp.	/pyramimonas
<i>Cymbomonas</i> spp.	66	<i>cymbomonas</i> spp.	
Halosphaerales			

Table 2 cont.

Pterospermataceae			
Pterosperma spp. / Pachysphaera spp. *	55, 57	pterosperm spp.	/pachysphaera
Pterosperma cristatum (phycomata) *		pterosperm cristatum	(phycomata)
Halosphaeraceae			
Halosphaera spp.	58	halosphaer spp.	
Euglenophyta			
Euglenophyta spp.	8	euglenophy spp.	
Eutreptiella spp. *	8	eutreptiel spp.	
Pyrrophyta			
Dinophyceae			
Dinophyceae spp. *		dinophycea spp.	
Prorocentrales			
Prorocentraceae			
Prorocentrum spp.	13, 49, 67	prorocentr spp.	
Prorocentrum balticum	49, 67	prorocentr balticum	
Prorocentrum dentatum	49	prorocentr dentatum	
Prorocentrum gracile	49, 67	prorocentr gracile	
Prorocentrum micans	49, 67	prorocentr micans	
Prorocentrum minimum	13, 67	prorocentr minimum	
Prorocentrum nanum	13, 67	prorocentr nanum	
Prorocentrum triestinum	13, 67	prorocentr triestinum	
Prorocentrum vaginulum	67	prorocentr vaginulum	
Dinophysiales			
Dinophysiaceae			
Dinophysis spp. *	13, 49, 67	dinophysis spp.	
Dinophysis acuminata	49, 67	dinophysis acuminata	
Dinophysis infundibulum	67	dinophysis infundibulum	
Dinophysis ovum	49, 67	dinophysis ovum	
Dinophysis parva	67	dinophysis parva	
Dinophysis rotundata	49, 67	dinophysis rotundata	
Gymnodiniales			
Gymnodiniaceae			
'Gonyaulax' rugosum	71	gonyaulax rugosum	
Aureodinium pigmentosum	13	aureodiniu pigmentosum	
Amphidinium spp. *	13, 47, 49, 67	amphidiniu spp.	
Amphidinium sp. m		amphidiniu sp.m	
Amphidinium acutissimum	67	amphidiniu acutissimum	
Amphidinium schroederi	67	amphidiniu schroederi	
Amphidinium stigmaticum	6, 67	amphidiniu stigmaticum	
Cochlodinium spp. *	49, 67	cochlodini spp.	
Cochlodinium citron	65	cochlodini citron	
Gymnodinium spp. *	67	gymnodiniu spp.	
Gymnodinium NEPCC sp. 246		gymnodiniu sp.246	
Gymnodinium sp. r		gymnodiniu sp.r	
Gymnodinium cf. aureolum	40	gymnodiniu cf.aureolum	
Gymnodinium flavum *	71	gymnodiniu flavum	
Gymnodinium gracilentum	10	gymnodiniu gracilentum	
Gymnodinium paulseni	67	gymnodiniu paulseni	
Gymnodinium sanguineum	52	gymnodiniu sanguineum	
Gymnodinium simplex	47, 49	gymnodiniu simplex	
Gymnodinium splendens	49	gymnodiniu splendens	
Gymnodinium vitiligo *	3	gymnodiniu vitiligo	

Table 2 cont.

Gyrodinium spp. *	1, 49, 67	gyrodinium spp.
Katodinium rotundatum (formerly Gymnodinium minutum)	49	katodinium rotundatum
Ptychodiscaceae		
Ptychodiscus noctiluca	13, 67	ptychodisc noctiluca
Peridiniales		
Peridiniaceae		
Peridiniaceae spp. *	13, 49, 67	peridiniac spp.
Ensicalifera sp.	1	ensicalife sp.
Scrippsiella sp. u *		scripsiell sp.u
Scrippsiella trochoidea	67 (fig. c-g)	scripsiell trochoidea
Heterocapsa triquetra	49	heterocaps triquetra
Micracanthodinium sp.	13	microcanth sp.
Gonyaulaceae		
Gonyaulax spp.	49, 67	gonyaulax spp.
Gonyaulax diegensis	67	gonyaulax diegensis
Gonyaulax digitale	1, 67	gonyaulax digitale
Gonyaulax spinifera	1, 67	gonyaulax spinifera
Gonyaulax triacantha (formerly G. diacantha)	67	gonyaulax triacantha
Gonyaulax verior	67	gonyaulax verior
Alexandrium catenella	72	alexandriu catenella
Alexandrium ostenfeldii	2	alexandriu ostenfeldii
Ceratiaceae		
Ceratium spp.	1, 13, 49, 67	ceratium spp.
Ceratium furca	49	ceratium furca
Ceratium fusus	49	ceratium fusus
Ceratium kofoidii	67	ceratium kofoidii
Ceratium lineatum	49	ceratium lineatum
Ceratium longipes	49	ceratium longipes
Ceratium minutum	49	ceratium minutum
Ceratium pentagonum	49	ceratium pentagonum
Ceratium tripos	49	ceratium tripos
Ceratium tripos v. baltica	49	ceratium tripos v.baltica
Chloromonadophyta		
Raphidophyceae		
Heterosigma akashiwo	22	heterosigm akashiwo
Raphidophyceae sp. 1		raphidophy sp.1
Raphidophyceae sp. 2		raphidophy sp.2
Chattonella sp.	53	chattonell sp.
Cryptophyta		
Cryptophyceae		
Cryptomonadales		
Hemiselmidaeae spp.	9	hemiselmid spp.
Hemiselmis spp. *	9	hemiselmis spp.
Cryptomonadaceae		
Cryptomonadaceae spp.	63	cryptomona spp.
Cryptomonas ovata		cryptomona ovata
Protozoa		
Mesodinium rubrum	69	mesodinium rubrum

Units

The following units are used for the tabulated data:

Phytoplankton abundance: $\text{cells.}10\text{mL}^{-1}$

(Note: abundance values are rounded to the nearest whole cell. 10mL^{-1} . Where the concentration was less than 50 cells. L^{-1} , the abundance is omitted and presence is noted with an *.)

Latitude and longitude:	degrees, minutes, tenths of minutes (north and west)
Depth:	m
Temperature:	$^{\circ}\text{C}$
Salinity:	psu
Chlorophyll:	$\mu\text{g.L}^{-1}$
Nitrate, phosphate, silicate:	$\mu\text{g-at.L}^{-1}$
Particulate organic carbon and nitrogen:	$\mu\text{g.L}^{-1}$

Notes on the taxonomy

A number of taxa, particularly of the genus *Chaetoceros*, were unidentified. Drawings of these and of a number of other taxa encountered are included in Waters et al. (1992).

Taxa were identified to the finest level possible by the method used. In some cases, we were not able to identify to species. Difficulty in identification of some taxa, due to small size or similarity in structure, may have resulted in inclusion of these in counts for other taxa. We have restricted this report to photoautotrophic taxa. However, many species of dinoflagellates (Pyrrophyta) may operate in both an autotrophic and a heterotrophic mode. Also, we did not distinguish all species in some genera that include both heterotrophic and autotrophic species.

Listed below are individual cases of clarification on how we handled some of these problems.

Haptophyta

Imantonia rotunda and *Dicrateria* sp.

May include *Phaeocystis* 224 unless flagellar apparatus is visible, and/or *Dicrateria inornata* up to $3.5\mu\text{m}$. *Dicrateria* sp. is probably *D. inornata* and may include *I. rotunda*.

Corymbellus sp.

"Twins"

Chrysochromulina spp. 3 - $6\mu\text{m}$

May include *Emiliania huxleyi* without coccoliths and *Dicrateria* spp. unless flagellar apparatus is visible

Chrysochromulina spp. 6 - 10 μ m

May include *Chrysidalis* spp. unless flagellar apparatus is visible

Chrysochromulina spp. 10 - 15 μ m

May include decalcified *Crystallolithus* unless flagellar apparatus is visible

Bacillariophyta

Leyanella arenaria and *Minutocellus scriptus*

Need transmission electron microscopy to confirm identity

Cyclotella sp. 2

This species is 4 - 10 μ m in diameter

Thalassiosira conferta

Occasionally may have included *Cyclotella* sp. 2 (particularly in Cruise 89-06 samples 28-3 to 30-7, 37-1/3, 37-4, 37-7, 39-3, 39-5, 47-1 and 47-7).

T. pseudonana

Needs transmission electron microscopy to confirm identity; occasionally may have included *Cyclotella* sp. 2 (particularly in Cruise 87-05 samples 51-9, 54-1, 54-5 and 83-7) and/or *T. lineata* (Cruise 89-06).

Chaetoceros sp. gii

May be *C. simplex* v. *calcitrans*

Chaetoceros cinctum / *C. crucifer*

Only distinguishable by means of certain pairs of setae near the end of the chain

C. constrictum / *C. vanheurckii*

Only distinguishable in the resting spore stage

C. convolutum / *C. concavicorne*

Not separable with sufficient confidence for reliable counts of each

Unidentified cylinders

May be a species of *Rhizosolenia*

Nitzschia cylindroformis

Included *N. pseudonana* on occasion, in generally far lower numbers, but estimates were not possible due to the identical girdle view.

N. subraudulenta / *N. fraudulenta*

N. fraudulenta was only rarely identified with absolute certainty, but was often thought to be present on the basis of its shape

N. pacifica

After Cupp (1943) (1988 data only). See Hasle (1965) for details regarding division of *N. pacifica* into *N. subraudulenta* and *N. heimii*.

N. pungens

Includes f. *multiseries* (Forbes and Denman 1991)

N. seriata f. obtusa

Occasionally may include specimens of *N. subpacifica*

N. turgidula / N. turgiduloides

This may include *N. turgiduloides*. The empty frustules that were examined were all closer to *N. turgidula* and were wider ($3\mu\text{m}$) than *N. turgiduloides*, but the length, $40 - 96\mu\text{m}$, was well into the range of the latter

Prasinophyta

Positive identification of *Micromonas pusilla* requires live material

Nephroselmis spp. / *Bipedinomonas* spp.

Transmission electron microscopy is often required to distinguish these taxa. *Mamiella* Moestrup is another possible contributor (recorded in Saanich Inlet, Patricia Smith, pers. comm.)

Tetraselmis spp. and *Pyramimonas* spp. are usually distinguishable, but were generally listed together

Pachysphaera spp. / *Pterosperma* spp.

These cannot be distinguished in the motile stage

Pterosperma cristatum

Counts are of phycomata (cysts).

Euglenophyta

Eutreptiella spp. usually comprises *E. marina* and especially *Eutreptiella* sp. $18 - 28\mu\text{m}$ (as in Waters et al. 1992).

Pyrrophyta

Dinophyceae spp., *Amphidinium* spp., *Cochlodinium* spp., *Gymnodinium* spp., *Gyrodinium* spp. and *Peridiniaceae* spp.

All may include heterotrophic species, decidedly so in cruises 79-04 to 82-02 inclusive, and 88-05 and 88-07

Gymnodinium flavum

As in Wailes (1939)

G. vitiligo / G. estuariale

May be conspecific; it was impossible to be certain whether or not *G. estuariale* was present.

Peridiniaceae spp.

These are plain, without lists and spines; cell shape cf. *Scrippsiella*, *Glenodinium danicum*, *Peridinium nudum*. As noted above, may include heterotrophic species.

Scrippsiella sp. u ($9.5 - 13.5\mu\text{m}$)

May be heterotrophic

Cryptophyta

Hemiselmis spp.

May include *Isoselmis* spp.

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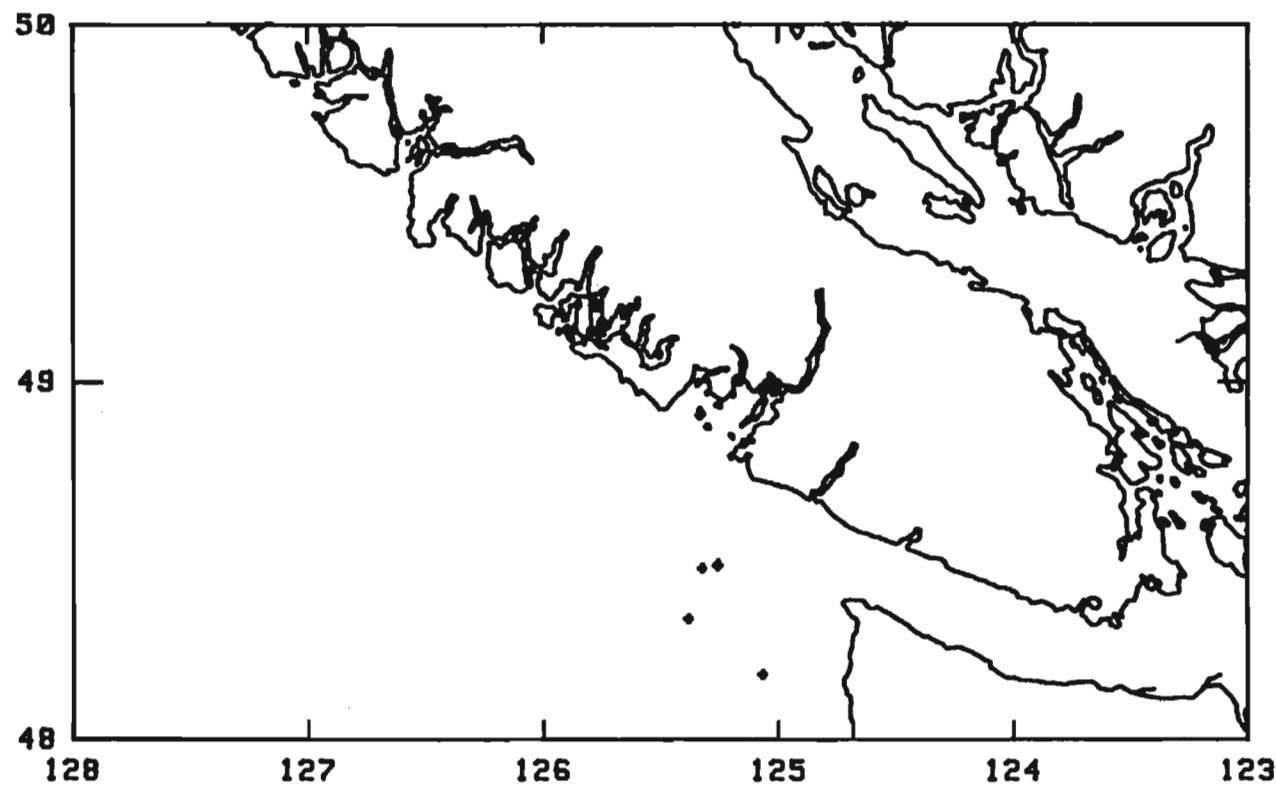
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CRUISE 85-01

7-20 June 1985

Area of operations: Continental shelf off southwest Vancouver Island

Vessel: M.V. Ocean King



CRUISE 85-01

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
1-5	9 June 85	48 29.0	125 15.5	25.0	8.4	32.70	0.2	22.4	1.98	28.6
4-5	10 June 85	48 28.5	125 19.5	25.0	8.4	32.73	1.1	14.6	1.47	23.7
8-5	11 June 85	48 29.0	125 15.5	25.0	8.6	32.22	2.3	10.5	1.12	32.1
11-5	12 June 85	48 20.0	125 23.0	2.0	12.2	32.25	2.6	0.5	0.38	5.1
14-5	13 June 85	48 29.0	125 15.5	25.0	8.2	32.39	0.2	26.3	2.16	47.3
17-5	14 June 85	48 10.6	125 04.0	25.0	8.3	32.83	0.4	17.1	1.61	24.6

CRUISE 85-01

Taxon	Station	1-5	4-5	8-5	11-5	14-5	17-5
<i>ochromonas</i> spp.		588	2964	392	6384	4480	196
<i>dinobryon sueicum</i>			7		9		
<i>dictyocha speculum</i>				2	5		
<i>pedinella</i> sp.239			4		11		
<i>apedinella spinifera</i>						2	
<i>lmantonia rotunda</i>		448	969	2508	4560	6440	252
<i>corymbellu</i> sp.				6	80		
<i>chrysocro</i> sp.1		336	1820	1036	10600	10640	560
<i>chrysocro</i> spp. 3-6		504	1995	1710	12650	8400	336
<i>leyanella arenaria</i>			224	196	57		
<i>minutocell scriptus</i>					84		
<i>corethron criophilum</i>		2	7	5	80		2
<i>detonula pumila</i>			29	19	5		
<i>leptocylin danicus</i>			3	5	7		4
<i>leptocylin minimus</i>			5	5	28	1	2
<i>paralia sulcata</i>						22	
<i>skeletonem costatum</i>		12	86	65	60	80	8
<i>thalassios rotula</i>		1	11	7	10		
<i>thalassios anguste-line</i>		1	4	15	3		
<i>thalassios nordenskiold</i>				5	7		
<i>thalassios pacifica</i>			122	890	304		34
<i>thalassios pseudonana</i>			168	168	84	2408	28
<i>thalassios minuscula</i>		14					
<i>thalassios conferta</i>		6	61	215	895		31
<i>eucampia zodiacus</i>				3	1		
<i>cerataulin pelagica</i>		2					1
<i>chaetocero</i> sp.gi		4	29	35	42	2	18
<i>chaetocero compressum</i>		4	146	260	202		15

Continued	1–5	4–5	8–5	11–5	14–5	17–5	
<i>chaetocero constrictum</i> /vanheurckii		9	5				
<i>chaetocero danicum</i>			4				
<i>chaetocero debile</i>	22	228	360	72	14	20	
<i>chaetocero diadema</i>		2					
<i>chaetocero didymum</i>		11	22				
<i>chaetocero filiforme</i>		7	10	25		2	
<i>chaetocero laciniatum</i>		3					
<i>chaetocero radicans</i>	14	35	500	419		5	
<i>chaetocero septentrionalis</i>			10			6	
<i>chaetocero simile</i>		4					
<i>chaetocero simplex</i>			3	1			
<i>chaetocero sociale</i>	6	44	2000	600			
<i>chaetocero subtile</i>			4			7	
<i>rhizosolen delicatula</i>		4	4	2			
<i>rhizosolen fragilissima</i>		2	5	6			
<i>rhizosolen fragilissima</i> v.1	5	50	155	126	4	36	
<i>rhizosolen setigera</i>		14	2	4			
<i>asterionel glacialis</i>	35	202	310	167		37	
<i>asterionel kariana</i>	3	11	5				
<i>thalassion bacillaris</i>				2			
<i>thalassion nitzschoides</i>	5	79	81	121	8	11	
<i>pleurosigm acutum</i>				1			
<i>amphora pusio</i> v. <i>parvula</i>			65	137			
<i>nitzschia americana</i>	6	36	60	38		1	
<i>nitzschia closterium</i>		7	20		3	2	
<i>nitzschia cylindroformis</i>			8				
<i>nitzschia cylindrus</i>	2						
<i>nitzschia delicatissima</i>	14	180	790	1110	12	26	
<i>nitzschia granulata</i> v. <i>curvata</i>		29	20	91		4	
<i>nitzschia lineola</i>		5	8	208		6	
<i>nitzschia longissima</i>	8	18	50	32	7	10	

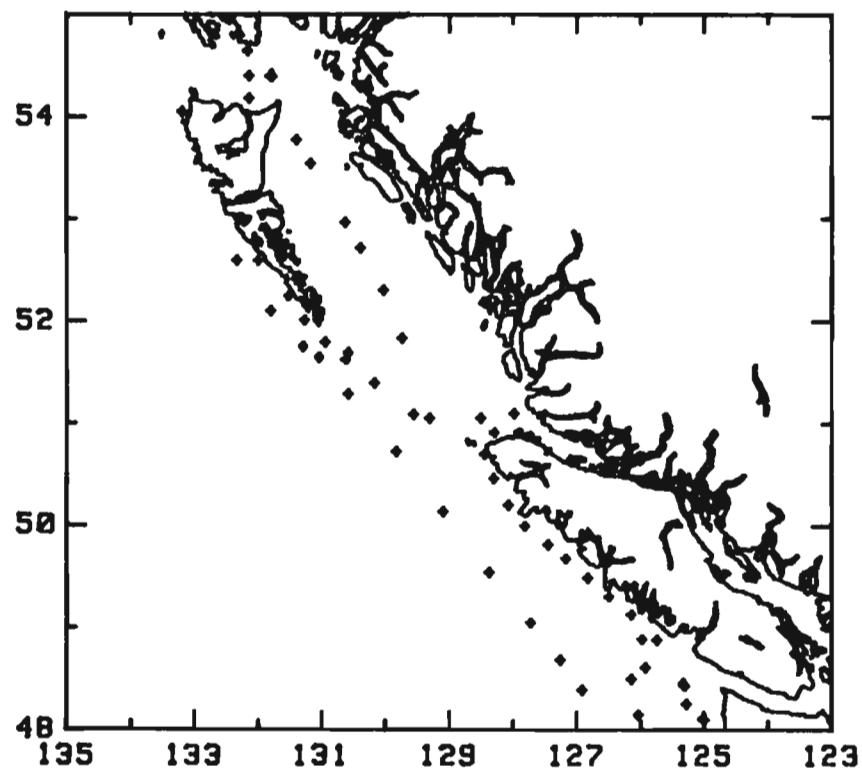
Continued	1–5	4–5	8–5	11–5	14–5	17–5
<i>nitzschia norwegica</i>	2	32	35	56		8
<i>nitzschia seriata</i>	2					
<i>nitzschia seriata f. obtusa</i>		50	168	91	2	10
<i>nitzschia subcurvata</i>			3	6		
<i>cylindroth. fusiformis</i>	2	4	4	20	16	
<i>tetraselmi</i> spp. / <i>pyramimonas</i>		6		1543		
<i>pterosperm</i> spp. / <i>pachysphaer</i>		3		14		
<i>euglenophy</i> spp.				7		
<i>eutreptiel</i> spp.		4	3			
<i>prococentr balticum</i>	8	32	9	53		2
<i>dinophysis</i> spp.				1		
<i>gymnodiniu</i> spp.	33	112	100	127	24	106
<i>gymnodiniu gracilentum</i>	17	83	55	19	11	32
<i>katodinium rotundatum</i>		4	5	175	3	5
<i>peridiniac</i> spp.				60		14
<i>heterocaps triquetra</i>				60		
<i>raphidophy</i> sp.2		4	24			
<i>heterosigm akashiwo</i>				18		
<i>cryptomona</i> spp. 5–10	13	362	850	8428	18	147
<i>cryptomona</i> spp. 11–20	5	18	55	2996		18
<i>hemiselmis</i> spp. 4–6		395	285	2160		
<i>mesodinium rubrum</i>				14		

CRUISE 85-02

24 June – 11 July 1985

Area of operations: British Columbia and northern Washington continental shelf

Vessel: C.S.S. Parizeau



CRUISE 85-02

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
1-5	24 June 85	48 26.0	125 17.0	34.0	8.7	32.36	1.3	19.8	2.08	36.0
1-7		48 26.0	125 17.0	8.7	10.3	31.47	6.2	13.8	1.30	32.8
10-6	25 June 85	48 15.4	125 15.1	40.6	8.0	32.91	0.6	29.7	2.36	46.9
10-8		48 15.4	125 15.1	1.8	10.5	31.55	2.0	10.9	1.06	28.9
19-5	26 June 85	48 06.4	124 59.2	26.6	8.6	32.39	0.7	27.3	2.19	44.0
19-7a		48 06.4	124 59.2	3.9	11.7	31.42	14.8	0.3	0.43	9.0
19-7b		48 06.4	124 59.2	3.9	11.7	31.42	14.8	0.3	0.43	9.0
19-7c		48 06.4	124 59.2	3.9	11.7	31.42	14.8	0.3	0.43	9.0
19-7d		48 06.4	124 59.2	3.9	11.7	31.42	14.8	0.3	0.43	9.0
32-5	27 June 85	48 26.8	125 18.2	32.5	8.3	32.62	2.0	25.2	2.06	40.3
32-8		48 26.8	125 18.2	2.1	10.3	31.55	9.9	12.7	1.03	28.7
54-5	4 July 85	54 38.4	132 08.3	30.7	8.7	31.18	1.7	9.9	1.08	14.6
54-9		54 38.4	132 08.3	2.0	11.1	29.76	0.9	2.0	0.44	4.4
55-7		54 23.3	132 06.5	31.2	8.2	31.51	1.3	13.0	1.18	20.0
55-10		54 23.3	132 06.5	2.4	11.8	30.33	1.1	0.2	0.41	3.9
56-3		54 10.2	132 06.5	19.9	7.3	32.62	0.3	19.3	1.56	33.3
56-5		54 10.2	132 06.5	1.9	9.7	31.15	1.6	6.5	0.74	10.9
57-3		54 23.2	131 46.0	151.7	5.9	33.65	0.3	31.9	2.28	56.9
57-6		54 23.2	131 46.0	53.9	6.9	32.46	0.6	21.6	1.80	34.8
57-10		54 23.2	131 46.0	1.8	12.4	30.17	0.6	0.2	0.28	0.9
57B-3/5		54 23.2	131 46.0	24.4	10.6	30.43	1.9	0.2	0.30	0.9
57B-6/8		54 23.2	131 46.0	6.6	12.0	30.24	1.8	0.2	0.29	0.9
57B-9/10		54 23.2	131 46.0	0.0			0.6	0.2	0.28	0.9
58A-1	5 July 85	54 23.3	131 45.9	28.0	7.0	32.44	0.9	19.0	1.67	28.4
58A-4		54 23.3	131 45.9	6.6	12.0	30.29	1.5	1.8	0.50	3.5
58A-7		54 23.3	131 45.9	1.9	12.1	30.29	1.5	0.2	0.38	1.9
K4a	29 June 85	51 38.0	131 00.0	0.0		31.98	4.3	0.0	0.49	10.9
K4b		51 38.0	131 00.0	0.0		31.98	4.3	0.0	0.49	10.9
K4c		51 38.0	131 00.0	0.0		31.98	4.3	0.0	0.49	10.9
K4d		51 38.0	131 00.0	0.0		31.98	4.3	0.0	0.49	10.9
L2		51 44.4	131 15.5	0.0		32.03	1.9	4.8	0.78	15.5
Q140	30 June 85	52 35.0	132 18.0	0.0		32.45	0.5	3.2	0.73	8.0
Q3		52 14.0	131 29.1	0.0		32.22	1.6	1.4	0.30	7.7

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
Q6	30 June 85	52 05.4	131 45.9	0.0		32.40	0.7	2.0	0.66	6.1
Q87a		52 34.8	131 57.4	0.0		32.43	1.9	2.0	0.61	12.0
Q87b		52 34.8	131 57.4	0.0		32.43	1.9	2.0	0.61	12.0
Q87c		52 34.8	131 57.4	0.0		32.43	1.9	2.0	0.61	12.0
Q87d		52 34.8	131 57.4	0.0		32.43	1.9	2.0	0.61	12.0
Q17A	2 July 85	54 02.6	133 10.1	0.0			2.4	4.1	0.75	12.5
LC4	8 July 85	48 53.2	125 57.0	0.0		31.50	4.3	0.3	0.33	7.5
LC6		48 36.5	125 54.0	0.0			369.7	0.2	1.48	31.7
LC8		48 29.5	126 07.1	0.0			1.0	0.2	0.35	3.9
LB14		48 08.5	126 00.0	0.0			0.5	0.1	0.42	7.3
28/1230	28 June 85	48 23.3	126 52.7	0.0		32.40	0.4	0.2	0.53	5.7
28/1430		48 40.8	127 14.0	0.0		32.10	0.3	0.2	0.46	7.1
28/1700		49 02.9	127 41.7	0.0		32.05	0.5	0.3	0.49	7.3
28/2030		49 32.7	128 20.6	0.0		31.92	1.4	0.2	0.31	1.1
29/0030	29 June 85	50 07.9	129 04.0	0.0		32.35	0.5	2.2	0.63	9.1
29/0430		50 42.9	129 47.5	0.0		31.64	1.2	0.3	0.41	6.8
29/0830		51 17.5	130 34.0	0.0		31.83	2.9	2.7	0.66	14.6
6/0300	6 July 85	53 46.6	131 22.7	0.0		31.59	3.8	0.4	0.55	4.6
6/0430		53 32.5	131 09.0	0.0		31.46	2.5	1.3	0.86	8.0
6/0800		52 57.1	130 35.6	0.0		30.81	0.9	0.2	0.38	2.5
6/0930		52 42.0	130 21.6	0.0			0.8	0.2	0.48	7.1
6/1200		52 17.7	129 59.1	0.0			1.9	0.2	0.56	10.9
6/1530		51 49.3	129 42.2	0.0		31.53	0.9	0.1	0.40	8.2
6/1830		51 40.7	130 33.0	0.0		31.51	1.3	0.7	0.49	8.4
7/0030	7 July 85	51 47.0	130 54.8	0.0		32.06	1.9	3.1	0.70	13.9
7/0230		51 36.7	130 35.2	0.0		31.45	1.0	0.3	0.42	7.5
7/0430		51 23.1	130 08.1	0.0		31.79	0.9	0.0	0.43	10.5
7/0730		51 05.0	129 31.3	0.0		31.85	1.1	0.0	0.44	9.8
7/0930		51 02.7	129 16.3	0.0		31.46	2.4	0.2	0.43	8.7
7/1300		51 02.7	128 28.5	0.0		30.34	2.6	3.2	0.57	7.3
7/1500		51 06.0	127 57.6	0.0		31.94	1.8	17.5	1.47	27.6
7/1630		50 54.7	128 16.4	0.0		30.79	3.4	0.9	0.43	5.9
7/1800		50 42.0	128 25.2	0.0		31.65	1.9	0.2	0.35	4.1
7/1930		50 27.1	128 15.6	0.0		31.70	1.4	0.3	0.42	3.2
7/2100		50 12.2	128 03.1	0.0		32.22	4.0	0.1	0.49	3.4
7/2230		49 59.2	127 46.8	0.0		31.81	0.7	0.0	0.35	2.7

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
8/0000	8 July 85	49 48.4	127 25.3	0.0		31.74	0.9	0.0	0.42	4.3
8/0130		49 40.0	127 08.3	0.0		31.79	0.7	0.1	0.40	3.9
8/0300		49 29.5	126 48.5	0.0		32.19	4.1	0.0	0.24	1.1
8/0430		49 18.5	126 28.7	0.0		32.11	6.3	0.2	0.35	3.4
8/0600		49 08.1	126 07.6	0.0		31.74	3.2	4.9	1.06	15.8
8/0800		48 52.6	125 42.7	0.0		31.78	8.6	0.2	0.27	4.1

CRUISE 85-02

Taxon	Station	1-5	1-7	10-6	10-8	19-5	19-7a	19-7b	19-7c	19-7d
<i>ochromonas</i> spp.		896	868	20	1876	70	2240	1736	2324	3052
<i>dictyocha speculum</i>			4		26		2			6
<i>spedinella sphifera</i>		10			295		690	670	422	325
<i>meringosiph mediterranea</i>			3		2					
<i>imantonia rotunda</i>		980	336	20	2464	30	1176	868	1008	1400
<i>chrysochro</i> sp.1		392	812	100	2408	70	1904	154	1400	1036
<i>chrysochro</i> spp. 3-6		364	2156	50	672	90	392	532	448	504
<i>minutocell scriptus</i>			3528		4592		630	520	2070	2200
<i>detonula pumila</i>			3							
<i>leptocylin danicus</i>		18	48		94		102	108	66	55
<i>leptocylin minimus</i>			11	2	78		66	61	38	36
<i>stephanopy nipponica</i>					6		8	6	3	4
<i>skeletonem costatum</i>		1120	336	22	1570	81	6195	6120	5290	5190
<i>thalassios</i> spp.										22
<i>thalassios aestivalis</i>			2		20		38	51	24	21
<i>thalassios anguste-line</i>					2		23	18	23	
<i>thalassios conferta</i>		163	520	10	1910	12	2080	2000	2740	2940
<i>thalassios eccentrica /symmetrica</i>			18		20		37	38		22
<i>thalassios leptopus</i>							8	10	13	9
<i>thalassios lineata</i>			8		5	2	24	27	21	25
<i>thalassios mendociana</i>			6		28	3	26	31	32	15
<i>thalassios nordenstkiold</i>			10		12	6	12	15	14	11
<i>thalassios pacifica</i>		54	284		775	31	1010	895	141	1485
<i>thalassios pseudonana</i>		308	756	392	3920	924	1820	1512	1652	1204
<i>thalassios rotula</i>		4	60		143	12	222	260	266	230
<i>coccinodis</i> spp.			1							
<i>lauderia borealis</i>		26	34		39	6	26	26	47	52
<i>biddulphi longicrus</i>			2				5	10	5	5
<i>eucampia zooidiacus</i>			32		10		115	96	105	128

Continued	1–5	1–7	10–6	10–8	19–5	19–7a	19–7b	19–7c	19–7d
<i>cerataulin pelagica</i>	4	6		4		2	4	11	16
<i>ditylum brightwellii</i>								5	
<i>chaetocero sp.gi</i>	99	360	20	920	8	998	1271	1130	1010
<i>chaetocero sp.m</i>	22	11		6					
<i>chaetocero compressum</i>	748	356	10	5480	270	82580	84580	114200	110500
<i>chaetocero convolutum /concavicom</i>		12		13					
<i>chaetocero constrictum Vanheurckii</i>	9	177		107		342	326	304	345
<i>chaetocero debile</i>	707	1900	10	1390	31	20610	19980	19570	19390
<i>chaetocero diadema</i>	5	100		295		295	269	171	145
<i>chaetocero didymum</i>	25	66	2	80	8	78	62	58	48
<i>chaetocero eibenii</i>		6			3				
<i>chaetocero filiforme</i>		276		1030		900	1040	1000	1060
<i>chaetocero laciniatum</i>	8	24		130	9	435	477	389	345
<i>chaetocero lorenzianum</i>	20	8		26		148	180	170	136
<i>chaetocero radicans</i>	7935	22000	42	16450	62	133100	129800	157300	160400
<i>chaetocero septentrionalis</i>	18	95		66	6	193	222	120	109
<i>chaetocero simile</i>	5	8		23	22	66	68	42	47
<i>chaetocero simplex</i>	9			4	3				
<i>chaetocero sociale</i>	10	36		105		116	138	212	278
<i>chaetocero subtile</i>						12	20	15	10
<i>rhizosolen alata f.gracillima</i>		2							
<i>rhizosolen bergenii</i>			1						
<i>rhizosolen delicatula</i>	2	8			9	14	14	18	20
<i>rhizosolen fragilissima</i>		4		23	3	12	15	34	63
<i>rhizosolen fragilissima v.1</i>		6	11		7	13	21	8	
<i>rhizosolen setigera</i>	18	28		99	16	134	118	173	165
<i>rhizosolen stolterfothi</i>		4		13			5	1	
<i>pennales spp. 0–20</i>		4			3				5
<i>asterionell glacialis</i>		90	4	102	37	109	126	105	115
<i>asterionell karlana</i>				4					

Continued	1–5	1–7	10–6	10–8	19–5	19–7a	19–7b	19–7c	19–7d
<i>thalassion bacillaris</i>		1							
<i>thalassion nitzschoides</i>	45	294	12	99	50	254	231	350	385
<i>pleurosigm acutum</i>								1	3
<i>tropidonei lepidoptera</i>							2	2	1
<i>nitzschia americana</i>	118	725	15	1060	9	3880	404	3840	3760
<i>nitzschia closterium</i>	14	99	4	132	19	82	82	131	184
<i>nitzschia delicatissim</i>	490	2110	16	1710	25	880	1070	535	625
<i>nitzschia graniv.curvata</i>				7					
<i>nitzschia lineola</i>	72	530	2	745	4	165	1500	1510	1420
<i>nitzschia longissima</i>	81	165	9	198	16	279	264	332	430
<i>nitzschia pungens</i>		48		39		67	70	83	90
<i>nitzschia seriata</i>		8		39	3	128	120	236	295
<i>nitzschia subcurvata</i>	5				36				
<i>cylindroth fusiformis</i>	7	30	4	33		4	9	10	12
<i>nephroselm spp. /bipedinomon</i>		7		12		17	22	15	10
<i>tetraselmi spp. /pyramimonas</i>	9	420		850		520	460	420	510
<i>euteptiel spp.</i>		2				6	12	4	
<i>prorocentr balticum</i>		8		10		17	12	23	23
<i>gymnodiniu spp.</i>	70	64	18	181	19	208	226	218	182
<i>gymnodiniu gracilentum</i>	27	132	7	355	40	166	202	160	132
<i>katodinium rotundatum</i>	71	3444	15	4956	56	1100	970	1160	1380
<i>peridiniac spp.</i>	5	12	2	64	2	226	268	80	84
<i>heterocaps triquetra</i>		4		3		50	60	72	57
<i>raphidophy sp.2</i>	3	15		12	12	44	40	28	43
<i>heterosigm akashiwo</i>		3		18		37	50	30	23
<i>cryptomonad 5–10</i>	236	820	16	203	10	2660	3304	1690	1550
<i>cryptomonad 11–20</i>	108	1350	4	730	3	1480	1270	1120	1320
<i>hemiselmis spp. 4–6</i>	195	1050		1190		1100	1290	1330	1100
<i>mesodinium rubrum</i>		3		5		5	10	4	7

CRUISE 85-02

TAXON	STATION	32-5	32-8	54-5	54-9	55-7	55-10	56-3	56-5
ochromonas spp.			532	672	980	190	1260	476	1064
dictyocha speculum			3	3					4
apedinella spinifera			144	13	2		16		20
imantonia rotunda		10	1232	240	392	420	308	364	364
chrysochro sp.1		20	1260	1316	2996	812	5180	812	7068
chrysochro spp. 3-6		20	1596	46	1960	2576	9120	220	3696
leyanella arenaria							336	420	13440
minutocell scriptus		56	1240	16					
corethron criophilum			3						
leptocylin danicus		10	33	16	9	24			23
leptocylin minimus		15	90	72	4	22	36	10	160
paralia sulcata			16						
stephanopy nipponica			8	4					
skeletonem costatum		805	5000	4950	500	832	52	114	798
thalassios aestivalis			8						
thalassios anguste-line				8					
thalassios conferta		224	1120	94	5	20	4	6	34
thalassios eccentrica /symmetrica		2	6						
thalassios lineata		10	2	10	3		14	2	
thalassios mendiolana			7						
thalassios nordenskiold		7	9	4	2	2			2
thalassios pacifica		56	940	60	12	32	5	4	46
thalassios pseudonana		450	1030	160					
thalassios rotula		3	104	77	2	14			19
coscinodis spp.					1				
lauderia borealis			31				4		
biddulphi longicurvis			7						
eucampia zodiacus		13	11						
cerataulin pelagica		2	14	4	2	2			

Continued	32–5	32–8	54–5	54–9	55–7	55–10	56–3	56–5
<i>chaetocero sp.gi</i>	23	1230	15					8
<i>chaetocero sp.m</i>		6	3		12			
<i>chaetocero compressum</i>	247	2205	74	29	34		4	23
<i>chaetocero convolutum /concavicorn</i>		6	17		24	2		7
<i>chaetocero constrictum /vanheurckii</i>		15	8	6	10			19
<i>chaetocero debile</i>	109	780	19	5	8			
<i>chaetocero diadema</i>		120			4			
<i>chaetocero didyrum</i>	23	118	8		2			
<i>chaetocero filiforme</i>		1010	12		10			15
<i>chaetocero laciniatum</i>	3	207	8					4
<i>chaetocero lorenzianum</i>	7	30	10		2			
<i>chaetocero radicans</i>	2600	14560	105	15	58		10	19
<i>chaetocero septentriona</i>	7	42	4	2	4	3		4
<i>chaetocero simile</i>	10	24						
<i>chaetocero simplex</i>	3	10			4	2		
<i>chaetocero sociale</i>	24	24	70		10			9
<i>chaetocero subtile</i>	4	7	4					12
<i>bacteriast delicatula</i>			1					1
<i>rhizosolen delicatula</i>	3	12	12		6			11
<i>rhizosolen fragilissima</i>		6	5	2		4		4
<i>rhizosolen fragilissima v.1</i>	12		51	38	42	1040	2	655
<i>rhizosolen setigera</i>	12	84	51	5	2			4
<i>rhizosolen stolterfothi</i>		6	32	14	24			30
<i>pennales spp. 0–20</i>			8					
<i>asterionel glacialis</i>	10	78	8					4
<i>asterionel kariana</i>			3					
<i>thalassiot frauenfeldii</i>		1						
<i>thalassion bacillaris</i>	7		4		2			
<i>thalassion nitzschoides</i>	63	183	39	2	18	4	3	15
<i>pleurosigm acutum</i>			1		1			
<i>nitzschia americana</i>	155	1020	58	17	6	10	4	34

Continued	32–5	32–8	54–5	54–9	55–7	55–10	56–3	56–5
<i>nitzschia closterium</i>	36	54	59	3			2	7
<i>nitzschia closterium v. striatula</i>			8					
<i>nitzschia cylindroform</i>					7	16		14
<i>nitzschia delicatissim</i>	238	400	260	46	124	26	2	80
<i>nitzschia lineola</i>	332	262	58	26	14	10	10	68
<i>nitzschia longissima</i>	59	168	62	3	24	2	6	38
<i>nitzschia pungens</i>		9	12					
<i>nitzschia seriata</i>	20	27	12					
<i>nitzschia subcurvata</i>	6		19		2	12		19
<i>nitzschia turgiduloide /turgidula</i>		2				5		
<i>cylindroth fusiformis</i>	13	9		2		2		
<i>nephroelm spp. /bipedinomon</i>								10
<i>tetraselmi spp. /pyramimonas</i>		460				2		4
<i>pterosperm spp. /pachysphaer</i>				2				
<i>eutreptiel spp.</i>		6					2	3
<i>prorocentr baticum</i>			4	3		2		15
<i>gymnodiniu spp.</i>	4	45	105	34	62	24	16	61
<i>gymnodiniu gracilentum</i>	10	32	47	5	8	8	10	57
<i>katodinium rotundatum</i>	13	830					3	23
<i>peridiniac spp.</i>	3	48	5	2	2	10	2	19
<i>heterocaps triquetra</i>		168						
<i>raphidophy sp.2</i>		9	6	7		2		42
<i>heterosigm akashiwo</i>		66	4					
<i>cryptomonas spp. 5–10</i>	16	770	362	560	525	3024	4	2156
<i>cryptomonas spp. 11–20</i>	20	510	60	200	58	230	6	195
<i>hemiselmis spp. 4–6</i>		1040	80	32	125	1120		980
<i>mesodinium rubrum</i>		6		4				

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TAXON	STATION	57-3	57-6	57-10	57B-3/5	57B-6/8	57B-9/10	58A-1	58A-4	58A-7
ochromonas spp.		532	200	812	150	310	170		1110	300
dictyocha speculum		3			4				3	
apedinella spinifera		14		26			49		33	14
imantonia rotunda		280	616	224	10	210	110		392	980
corymbellus aureus							3			
chrysochro sp.1		6272	1988	2520	1400	200	450		560	12880
chrysochro spp. 3-6		2240	5432	10370	2296	1110	3130	6	3976	6954
chrysochro spp. 6-10		70	90	1008	18	54	390		340	
phaeocystis pouchetii							10			
leyanella arenaria						140			308	588
leptocylindrus danicus							12	6		
leptocylindrus minimus		43	4	12	32	7	3		6	12
leptocylindrus mediterraneus								8		
skeletonema costatum		4	16		32			1965		10
thalassiosira conferta					5			20	3	
thalassiosira eccentrica /symmetrica								10		
thalassiosira lineata								62		
thalassiosira mendiolana								8		
thalassiosira nordenskioldii								14		
thalassiosira pacifica		4		3	8	2		282		
thalassiosira rotula								20		
lauderia borealis									2	
cerataulin pelagica		3								
chaetoceros compressum		4			20			120		
chaetoceros convolutum /concavicornis								14		
chaetoceros constrictum /vanheurckii								10		
chaetoceros debile								8		
chaetoceros lorenzianum								4		
chaetoceros perpusillum								8		

Continued	57-3	57-6	57-10	57-a	57-b	57-c	58A-1	58A-4	58A-7
<i>chaetocero radicans</i>	5						74		
<i>chaetocero septentriona</i>							4		
<i>chaetocero simplex</i>							2		
<i>rhizosolen delicatula</i>	5						4		4
<i>rhizosolen fragilissima</i>					3		2		
<i>rhizosolen fragilissima v.1</i>	2200	74	32	116	354	396	8	31	38
<i>rhizosolen setigera</i>							10		
<i>rhizosolen stolterfothi</i>	11	4					2		
<i>asterionel glacialis</i>							2		
<i>thalassion bacillaris</i>							4		
<i>thalassion nitzschoides</i>							2	2	4
<i>nitzschia americana</i>	11	8	2			9		3	
<i>nitzschia closterium</i>	3				5				
<i>nitzschia closterium v. striatula</i>				4					
<i>nitzschia cylindroform</i>	3		3	4					10
<i>nitzschia delicatissim</i>	11	8		7	6	10	12	3	12
<i>nitzschia lineola</i>	8		4	12	14	8	2		2
<i>nitzschia longissima</i>	5						14		
<i>nitzschia pungens</i>							4		
<i>nitzschia seriata</i>							2		
<i>nitzschia subcurvata</i>						13		8	35
<i>nephroselm spp. / bipedinomon</i>			12						18
<i>tetraselmi spp. / pyramimonas</i>		16	12		48				12
<i>prorocentr balticum</i>	3		10		6	21			
<i>gymnodiniu spp.</i>	11	33	32	16	57	99	36	5	
<i>gymnodiniu gracilentum</i>	73	4	2	72		21	8	4	10
<i>katodinium rotundatum</i>				4					
<i>peridiniac spp.</i>	8		8		5	18	6	3	4
<i>ceratium furca</i>					1				
<i>ceratium fusus</i>			1						
<i>ceratium longipes</i>									1

Continued	57-3	57-6	57-10	57-a	57-b	57-c	58A-1	58A-4	58A-7
<i>raphidophy</i> sp.2	32					3			7
<i>cryptomonas</i> spp. 5-10	715	1450	312	765	770	1030	4	930	4116
<i>cryptomonas</i> spp. 11-20	10	8	14	27	14	29	2	16	36
<i>hemiselmis</i> spp. 4-6	36	14	115	95	12	26		56	120
<i>mesodinium rubrum</i>			2			8		4	8

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TAXON	STATION	K4a	K4b	K4c	K4d	L2	LB14	
<i>ochromonas</i> spp.		504	336	728	952	1596	84	
<i>dictyocha speculum</i>		13	15	20	12	15		
<i>pedinellac</i> sp.223						224		
<i>pedinellac</i> sp.239							10	
<i>apedinella spinifera</i>		36	56			13		
<i>imantonia rotunda</i>		1568	1204	252	560	2212	140	
<i>chrysochro</i> sp.1		38420	41270	12710	11970	9063	84	
<i>chrysochro</i> spp. 3-6		2548	3024	4424	3948	2604	224	
<i>chrysochro</i> spp. 6-10		60	120			200		
<i>leyanella arenaria</i>				280	420	1288		
<i>leptocylin danicus</i>		2				7		
<i>leptocylin minimus</i>					4			
<i>skeletonem costatum</i>		6				15		34
<i>thalassios lineata</i>		128	137	146	130	104		
<i>thalassios conferta</i>		162	182	695	615	182	4	
<i>chaetocero</i> sp.gi		50	55	20	15	82		
<i>chaetocero compressum</i>		10	14					
<i>chaetocero convolutum</i> / <i>concavicornis</i>		29	37	8	3	30		
<i>chaetocero constrictum</i> / <i>vanheurckii</i>			5					
<i>chaetocero debile</i>		5						
<i>chaetocero diadema</i>		9	8					
<i>chaetocero lacinosum</i>		4						
<i>chaetocero radicans</i>		4						
<i>chaetocero septentriona</i>					5			
<i>rhizosolen fragilissima</i>		2	7	12	9			
<i>rhizosolen fragilissima</i> v.1		12830	13910	13450	13960	6804		
<i>rhizosolen setigera</i>		3	5					
<i>rhizosolen stolterfothi</i>		115	111	32	27			
<i>pennales</i> spp. 0-20		9	12	4	3	13		

Continued	K4a	K4b	K4c	K4d	L2	LB14
<i>thalassion bacillaris</i>	6				4	
<i>thalassion nitzschoides</i>	81	100	148	128	4	2
<i>pleurosigm acutum</i>			4	3		
<i>nitzschia americana</i>	3	7		4		
<i>nitzschia closterium</i>	2				7	
<i>nitzschia closterium v.striatula</i>						1
<i>nitzschia cylindroform</i>	870	960	675	595	94	
<i>nitzschia delicatissim</i>	147	183	52	44	3	
<i>nitzschia lineola</i>				4		
<i>nitzschia longissima</i>				2		3
<i>nitzschia subcurvata</i>	18	7	6	7	78	
<i>nitzschia turgiduloide /turgidula</i>	276	300	164	143	46	
<i>cylindroth fusiformis</i>			4	4		
<i>denticulop semina</i>					3	
<i>nephroselm spp. /bipedinomon</i>					5	
<i>tetraselmi spp. /pyramimonas</i>	85	68	340	344	142	8
<i>cymbomonas spp.</i>						22
<i>euteptiel spp.</i>			4	2	15	
<i>prorocentr balticum</i>	270	304	244	264	222	23
<i>gymnodiniu spp.</i>	66	33	330	268	167	52
<i>gymnodiniu gracilement</i>	77	65	128	156	59	2
<i>katodinium rotundatum</i>	242	280	360	430	185	
<i>peridiniac spp.</i>	11	11	5	4	7	3
<i>heterocaps triquetra</i>	7	5	4	1	3	2
<i>ceratium furca</i>					2	
<i>raphidophy sp2</i>	30	390	255	295	44	
<i>heterosigm akashiwo</i>						7
<i>cryptomona spp. 5–10</i>	2856	3164	1760	1690	460	146
<i>cryptomona spp. 11–20</i>	1070	930	620	520	2390	12
<i>hemiselmis spp. 4–6</i>	4704	5012	2560	2480	3584	

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TAXON	STATION	Q3	Q6	Q87a	Q87b	Q87c	Q87d	LC4	LC6	LC8
ochromonas spp.		168	100	924	1288	3388	2800	3990	3477	952
dinobryon sueicum								1710	1890	10
dictyocha speculum		4	4	2					10	3
pedinellac sp.223		140	224	196						
pedinellac sp.239				2	5			27	53	12
apedinella spinifera								20	65	5
imantonia rotunda		1008	66	6783	6384	1176	840	3876	6954	896
corymbellu sp.								167	522	
chrysocro sp.1		17330	34	8436	9462	40700	38760	14820	4503	784
chrysocro spp. 3-6		6300	298	12540	14360	7581	8778	16990	9975	1960
chrysocro spp. 6-10		150	100	70	180					
leyanella arenaria						1316	1176			
minutocell scriptus			165					58	73	
corethron criophilum					4					9
leptocylin danicus										10
leptocylin minimus								8	25	
leptocylin mediterraneu										2
skeletonem costatum		7		5						
thalassios pacifica			3					6	18	
thalassios lineata		142	7	45	54	15	26			
thalassios pseudonana								392	980	
thalassios conferta		131	4	33	48	16	14	231	161	248
eucampia zodiacus		5								64
chaetocero sp.gi		95	3	5	6	11	8	800	900	14
chaetocero lorenzianum								9	9	
chaetocero radicans										4
chaetocero septentriona		18			2					
rhizosolen alata f.gracillima								7		
rhizosolen fragilissima v.1		4004	3	94	120	1485	1595			

Continued	Q3	Q6	Q67a	Q67b	Q67c	Q67d	LC4	LC6	LC8
<i>rhizocolea setigera</i>					49	43	11	27	
<i>centrales cylinders unidentified</i>							12		
<i>pennales</i> spp. 0–20			4	10					
<i>asterionel glacialis</i>								4	
<i>thalassion bacilaris</i>	5								
<i>thalassion nitzschoides</i>	40				7	3		4	3
<i>nevicula calida</i>							230	54	
<i>nitzschia</i> spp.									3
<i>nitzschia americana</i>					2				
<i>nitzschia closterium</i>		4	3						
<i>nitzschia closterium</i> v. <i>striatula</i>		4	2						4
<i>nitzschia cylindroform</i>	171	166	142	98	61	52	27	53	30
<i>nitzschia delicatissim</i>	4	11	2	2	3	4	4	5	16
<i>nitzschia granii</i> v. <i>curvata</i>								4	10
<i>nitzschia lineola</i>			3	3		2			
<i>nitzschia longissima</i>	12						7	23	2
<i>nitzschia subcurvata</i>	247	29	36	54	35	43			
<i>nitzschia turgiduloide</i> / <i>turgidula</i>	122	310	9	4	8	2			
<i>cylindroth fusiformis</i>			1	2	1		5	9	8
<i>denticulop semina</i>					2	8			
<i>nephroleim</i> spp. / <i>bipedinomon</i>							2380	1120	28
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	18		9		20	16	1020	970	23
<i>cymbomonas</i> spp.							920	1050	22
<i>pterosperm</i> spp. / <i>pachysphaer</i>					3	10	680	670	10
<i>eutreptiel</i> spp.			4	6			14	45	
<i>prorocentr balticum</i>	40	10		2			33	40	4
<i>prorocentr gracile</i>							3	5	
<i>dinophysis</i> spp.							1	3	
<i>gymnodinium</i> spp.	54	43	15	10	34	25	1230	4040	68
<i>gymnodinium</i> <i>gradientum</i>	161	47	230	264	388	360			4
<i>catodinium</i> <i>rotundatum</i>	36	7	27	43	41	50	3880	1640	2

Continued	Q3	Q6	Q87a	Q87b	Q87c	Q87d	LC4	LC6	LC8
<i>peridiniae</i> spp.	16	8	6	4	2		2880	3880	42
<i>heterocapsa triquetra</i>							6880	3280	4
<i>gonyaulax digitale</i>							86	480	
<i>ceratium furca</i>							2	5	
<i>raphidophy</i> sp.1							12100	91000	
<i>raphidophy</i> sp.2	160	4	290	360	180	265	470	270	
<i>heterosigma akashiwo</i>							388370	363170	8
<i>chattonell</i> sp.							30	30	
<i>cryptomonas</i> spp. 5–10	2100	1120	1970	2050	4984	4536	5120	14310	1610
<i>cryptomonas</i> spp. 11–20	1590	296	980	910	570	680	1020	4047	3240
<i>hemiselmis</i> spp. 4–6	4732	235	1370	1250	440	340	1940	2324	51
<i>mesodinium rubrum</i>							61	14	

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CRUISE 85-02

TAXON	STATION	Q17A	Q140	28/1230	28/1430
ochromonas spp.			57	3724	1988
dictyocha speculum	6				
pedinellac sp.223			364	340	2184
imantonia rotunda	190		280	1568	260
chrysochro sp.1	390		170	4816	1876
chrysochro spp. 3-6	420		460	1232	300
chrysochro spp. 6-10	50		16		
leyanella arenaria				56	
corethron criophilum			2		
skeletonem costatum	9				
thalassios pacifica	3				
thalassios lineata	1		2		2
thalassios conferta	9			11	
chaetocero sp.gi	3				
rhizosolen fragilissima v.1	12				
thalassiot frauenfeldii			4		
nitzschia closterium v.striatula			4	32	
nitzschia cylindroform	11260		290	21	10
nitzschia delicatissim			2	2	
nitzschia lineola			2		
nitzschia subcurvata	3		8	20	3
nitzschia turgiduloide /turgidula	2		52		
nephrolelm spp. /bipedinomon				35	
tetraselmi spp. /pyramimonas				17	26
pterosperm spp. /pachysphaer		6		14	5
eutreptiel spp.				36	
gymnodiniu spp.	5		42	560	51
gymnodiniu gracilentum	2		38	556	10
katodinium rotundatum	12				

Continued	Q17A	Q140	28/1230	28/1430
<i>peridiniac</i> spp.		4	12	
<i>raphidophy</i> sp.2		8		
<i>cryptomonas</i> spp. 5–10	430	228	330	144
<i>cryptomonas</i> spp. 11–20	46	20	27	9
<i>hemiselmis</i> spp. 4–6	130	50	12	43

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TAXON	STATION	28/1700	28/2030	29/0030	29/0430	29/0830	6/0300	6/0430	6/0800	6/0930
ochromonas spp.		1260	588	252	28	644	2604	56	84	280
dinobryon sueicum		9		34	8				6	7
dictyocha speculum			7		2		3			3
pedinella sp.223		400	168	1700		510	400			
apedinella spinifera					11	5	15	7	7	4
meringospha mediterranea		2				7				
imantonia rotunda		1288	560	280	28	644	2548	57	420	280
chrysocro sp.1		1848	4508	266	210	11800	12030	322	182	1680
chrysocro spp. 3-6		840	1876	224	84	6132	4984	2072	252	504
chrysocro spp. 6-10				6						
corethron criophilum				22						
detonula pumila					90			193		
leptocylindrus danicus			10		36			8		
leptocylindrus minimus					9					
paralia sulcata					16					
stephanopy nipponica								1		
skeletonema costatum		1134		6	32			6	7	
thalassios rotula			24		10			1		
thalassios anguste-line			3		10			30		
thalassios nordenskioldii			5					2		
thalassios pacifica			22		8			12		
thalassios lineata					4	24	55			3
thalassios conferta		38			16	129	163	4	11	36
coscinodis spp.								5	1	1
eucampia zoodiacus		4								
cerataulin pelagica		8			12			13		
ditylum brightwellii					2			3		
chaetocero sp.gi		25			18	10	26	5		4
chaetocero sp.m			8							

Continued	28/1700	28/2030	29/0030	29/0430	29/0830	6/0300	6/0430	6/0800	6/0930
<i>chaetocero compressum</i>		854		30			4		
<i>chaetocero convolutum</i> /concavicom				2		5			
<i>chaetocero constrictum</i> /vanheurckli		11		48					
<i>chaetocero debile</i>		119		30	7		17		
<i>chaetocero diadema</i>		35							
<i>chaetocero didymum</i>		5		16			3		
<i>chaetocero filiforme</i>						30			
<i>chaetocero laciniatum</i>		3							
<i>chaetocero lorenzianum</i>		16							
<i>chaetocero radicans</i>		427		150			12		
<i>chaetocero septentriona</i>		8							
<i>chaetocero sociale</i>		402		80			17		
<i>bacteriast delicatula</i>				26			7		
<i>rhizosolen delicatula</i>						6			
<i>rhizosolen fragilissima</i>		67							
<i>rhizosolen fragilissima</i> v.1		227		2	95	1310		11	374
<i>rhizosolen setigera</i>		5		22			5		
<i>rhizosolen stolterfothi</i>		22				4			
<i>asterionel glacialis</i>				4					
<i>thalassiot frauenfeldii</i>				2					
<i>thalassion bacillaris</i>									7
<i>thalassion nitzschoides</i>		13			3	7	15		22
<i>navicula calida</i>	6				4	6		14	22
<i>pleurosigm angulatum</i>							1		
<i>tropidonei lepidoptera</i>				1					
<i>amphora pusio</i> v. <i>parvula</i>							1		
<i>nitzschia</i> spp.			16		51	3			
<i>nitzschia americana</i>		4		34			25		
<i>nitzschia cylindroform</i>	6	58	8		92	217		3	71
<i>nitzschia delicatissim</i>		2740	1	58	34	5	27		4
<i>nitzschia lineola</i>		1080				4			

Continued	28/1700	28/2030	29/0030	29/0430	29/0830	6/0300	6/0430	6/0800	6/0930
<i>nitzschia longissima</i>		11		26			5		
<i>nitzschia norwegica</i>		6							
<i>nitzschia pungens</i>		2		8		4	2		
<i>nitzschia seriata</i>							1		
<i>nitzschia seriata f.obtusa</i>		640							
<i>nitzschia subcurvata</i>		4							
<i>cylindroth fusiformis</i>		5	3	4	3	2	2		4
<i>nephroselm spp. /bipedinomon</i>	56	56							
<i>tetraselmi spp. /pyramimonas</i>	16	200		7	170	350	12	11	14
<i>pterosperm spp. /pachysphaer</i>	3		2				2		
<i>halosphaer spp.</i>			1						
<i>eutreptiel spp.</i>						30			7
<i>prorocentr balticum</i>		13				33	5		11
<i>dinophysis spp.</i>				7			3		
<i>gymnodiniu spp.</i>	24	93	37	8	64	108	22	11	41
<i>gymnodiniu gracilentum</i>	7	5	35	3	12	63	30	1	9
<i>katodinium rotundatum</i>	3	24			20	344	125	7	82
<i>peridiniac spp.</i>		16	9		3	11		4	15
<i>heterocaps triquetra</i>		3				3			4
<i>ceratium furca</i>				4					
<i>raphidophy sp.2</i>			22		10	122			5
<i>cryptomona spp. 5 –10</i>	8	1090	93	49	178	4396	845	338	273
<i>cryptomona spp. 11 –20</i>	2	91	6	16	183	588	95	14	15
<i>hemiselmis spp. 4 –6</i>	11	170	26		455	4312			130
<i>mesodinium rubrum</i>							5		

CRUISE 85-02

Continued	6/1200	6/1530	6/1830	7/0030	7/0230	7/0430	7/0730	7/0930	7/1300
<i>chaetocero filiforme</i>		7					4		8
<i>chaetocero radicans</i>									40
<i>chaetocero sociale</i>									38
<i>rhizosolen fragilissima</i>									30
<i>rhizosolen fragilissima v.1</i>	12	416	332	400	300	220	64	1000	239
<i>rhizosolen stolterfothi</i>				2					
<i>asterionel glacialis</i>									3
<i>thalassiot frauenfeldii</i>				1					
<i>thalassion nitzschoides</i>	6	6	11	15					6
<i>navicula calida</i>	6	256	168	16	73	17	122	8	5
<i>amphora pusio v.parvula</i>		3							
<i>nitzschia spp.</i>	5016		50	10	9	24	82	61	
<i>nitzschia americana</i>									9
<i>nitzschia closterium</i>				1					4
<i>nitzschia closterium v.striatula</i>			8	3	5				
<i>nitzschia cylindroform</i>	530	135	200	120	118	300	71	83	12
<i>nitzschia delicatissim</i>	6	16	37	5	16		3	16	4810
<i>nitzschia graniv.curvata</i>			4		3	5		4	11
<i>nitzschia lineola</i>	3	4							27
<i>nitzschia longissima</i>	3	8	11	3			3		22
<i>nitzschia norwegica</i>		2							10
<i>nitzschia seriata f.obtusa</i>									11
<i>nitzschia subcurvata</i>	360		15	6			10		
<i>cylindroth fusiformis</i>		3		2					6
<i>denticulop semina</i>				2					
<i>nephroselm spp. /bipedinomon</i>	112			56			28		224
<i>tetraselmi spp. /pyramimonas</i>	350	68	325	43	91	17	13	16	46
<i>cymbomonas spp.</i>		8	12	4	6	3	9		3
<i>pterosperm spp. /pachysphaer</i>	4			4		3	7		
<i>eutreptiel spp.</i>	4		4	15	10		10	8	
<i>prorocentr balticum</i>	9	23	46	18	8	7	3		3

Continued	6/1200	6/1530	6/1830	7/0030	7/0230	7/0430	7/0730	7/0930	7/1300
<i>amphidinium</i> spp.		4	6		5				
<i>gymnodinium</i> spp.		148	200	58	191	180	54	4	35
<i>gymnodinium gracilemum</i>	3	23	63	75	6	4	24	4	
<i>katodinium rotundatum</i>		23	109	85	20	17		6	46
<i>peridiniac</i> spp.	4	15		6		8			35
<i>heterocaps triquetra</i>	3	11		9					4
<i>raphidophy</i> sp.2	2	4		6	7	10		8	8
<i>cryptomonas</i> spp. 5–10	484	1180	1490	1880	1125	1840	550	528	362
<i>cryptomonas</i> spp. 11–20	22		610	1250	150	68	42	53	76
<i>hemiselmis</i> spp. 4–6	460	730	1040	1030	46	35	740	88	795
<i>mesodinium rubrum</i>			4						

CRUISE 85-02

TAXON	STATION	7/1500	7/1630	7/1800	7/1930	7/2100	7/2230	8/0000	8/0130	8/0300
ochromonas spp.		560	1792	560	1008	1092	1596	1596	1988	4032
dinobryon sueicum			9	11	4	8	22	8		360
dictyocha speculum		20		4						
pedinellac sp.239			4	5		28	3		6	17
apedinella spinifera		4	15			6				15
imantonia rotunda		1092	2688	840	2688	2100	1484	1540	700	3416
corymbellu sp.						15				
chrysocro sp.1		3444	13000	3584	1904	5985	1176	3192	672	1036
chrysocro spp. 3-6		728	4592	1204	2184	1260	980	4984	1064	2436
leyanella arenaria		3864	10090	504						
minutocell scriptus										71
corethron criophilum				4						2
detonula pumila						5				
leptocylin danicus		3	26	5		73				37
leptocylin minimus		9	37	10		13		6		
skeletonem costatum		1386	6200	758	42	309	11			
thalassios rotula		2	8	14		163	2			12
thalassios anguste-line		41	5			36	3	3		
thalassios aestivalis			4			30				2
thalassios nordenskiold		10	19	23		109				22
thalassios pacifica		153	590	127	84	490	22	8	18	65
thalassios lineata		3								
thalassios pseudonana		84								112
thalassios conferta		207	2010	180	204	635	51	42	36	190
thalassios leptopus			3							
eucampia zodiacus			4	8		109				392
cerataulin pelagica		7								
ditylum brightwellii										2
chaetocero sp.gi		17	20	24	10	218		6		60

Continued	7/1500	7/1630	7/1800	7/1930	7/2100	7/2230	8/0000	8/0130	8/0300
<i>chaetocero sp.m</i>					28				20
<i>chaetocero compressum</i>	78	60	73						
<i>chaetocero convolutum /concavicom</i>		4	3		34	2			7
<i>chaetocero constrictum /vanheurckii</i>		48	77		762	5			12
<i>chaetocero debile</i>	24	50	27	32	327				6
<i>chaetocero diadema</i>					36				
<i>chaetocero didymum</i>			5		24				
<i>chaetocero filiforme</i>		7							15
<i>chaetocero lacinosum</i>	7	7			54				
<i>chaetocero lorenzianum</i>		4	12		38				
<i>chaetocero radicans</i>	150	150	134		1700				
<i>chaetocero septentriona</i>	10	3			40				21
<i>chaetocero simile</i>	6		9		200				5
<i>chaetocero sociale</i>	70	88	80		322				
<i>chaetocero subtile</i>	11								8
<i>bacteriast delicatula</i>			2		9				
<i>rhizosolen alata f.gracilima</i>			14		418				3840
<i>rhizosolen delicatula</i>	4		4		4				17
<i>rhizosolen fragilissima</i>	24	19	8		16				10
<i>rhizosolen fragilissima v.1</i>	122	595	400	180	332	10			22
<i>rhizosolen setigera</i>	2	15	5		9				5
<i>rhizosolen stolterfothi</i>		4	3		8				7
<i>pennales spp. >40</i>									2
<i>asterionel glacialis</i>		17	4		218	2	3		
<i>thalassion bacillaris</i>	4	4	4		17				5
<i>thalassion nitzschoides</i>	18	37	15		145		3	2	
<i>navicula calida</i>				128	109	22	70	29	6
<i>pleurosigm acutum</i>			2						
<i>amphora pusio v.parvula</i>	14	4	23		8	2			
<i>nitzschia spp.</i>			7						
<i>nitzschia americana</i>	10	7	25		252				2

Continued	7/1500	7/1630	7/1800	7/1930	7/2100	7/2230	8/0000	8/0130	8/0300
<i>nitzschia closterium</i>	17	21	18		10				
<i>nitzschia closterium v.striatula</i>					6				2
<i>nitzschia cylindroform</i>	20	26	75	200	202	57	47	16	40
<i>nitzschia delicatissim</i>	3260	9260	7180	132	940	19	8		11
<i>nitzschia granii v.curvata</i>	9	15		8		4		10	
<i>nitzschia lineola</i>	108	100	58		15				17
<i>nitzschia longissima</i>	7	11	9	19	21	3			32
<i>nitzschia norwegica</i>	82	70	47		24				
<i>nitzschia pungens</i>	1	4	8		270				670
<i>nitzschia seriata</i>		4			1035			4	2080
<i>nitzschia seriata f.obtusa</i>	90	300	610	22	127	3			
<i>nitzschia subcurvata</i>				5					
<i>cylindroth fusiformis</i>		3	5		16	5		3	27
<i>nephroselm spp. /bipedinomon</i>	56	112		168	112	28	56		196
<i>tetraselmi spp. /pyramimonas</i>	51	75	13	1630	194	35	14	17	198
<i>cymbomonas spp.</i>		4		8	25	6	3	3	42
<i>pterosperm spp. /pachysphaer</i>	6	7		10		8	3		22
<i>euteptiel spp.</i>	8	15	5	10	12		4		7
<i>prorocentr balticum</i>	7	31	27	4		5		5	25
<i>prorocentr gracile</i>		4							
<i>dinophysis spp.</i>									2
<i>gonyaulax rugosum</i>			2				2		
<i>gymnodiniu spp.</i>	5	266	77		308	92	98	88	177
<i>gymnodiniu gracilentum</i>					34	19		8	2
<i>katodinium rotundatum</i>	11	40	48	161	252	19	56	11	35
<i>peridiniac spp.</i>	34	55	14	7	220	30	17	42	117
<i>heterocaps triquetra</i>	3	75		286	25	3	48	18	37
<i>raphidophy sp.2</i>				5	30				16
<i>heterosigm akashiwo</i>					18				

Continued	7/1500	7/1630	7/1800	7/1930	7/2100	7/2230	8/0000	8/0130	8/0300
<i>cryptomonas spp. 5–10</i>	97	865	800	1090	750	1550	680	1870	1030
<i>cryptomonas spp. 11–20</i>	150	985	555	5660	470	365	226	310	228
<i>hemiselmis spp. 4–6</i>	132	1940	420	960			790	80	228
<i>mesodinium rubrum</i>	2		3		17		3		

CRUISE 85-02

Taxon	Station	8/0430	8/0600	8/0800
ochromonas spp.		6270	1792	6954
dinobryon sueicum		96	174	1550
pedinella sp.239		8	30	16
apedinella spinifera		15	71	13
imantonia rotunda		3990	868	3990
corymbellu sp.			4	
corymbellu aureus			16	
chrysochro sp.1		2688	1400	5814
chrysochro spp. 3-6		9747	6270	5928
minutocell scriptus		80		
detonula pumila				3
leptoclylin danicus		11	5	6
skeletonem costatum			45	10
thalassios rotula		3	6	40
thalassios anguste-line		22	5	3
thalassios pacifica		65	45	94
thalassios pseudonana		112	56	
thalassios conferta		520	605	68
eucampia zodiacus		643	315	126
cerataulin pelagica		8	15	
ditylum brightwellii			5	
chaetocero sp.gi		85	12	18
chaetocero sp.m		27	25	
chaetocero constrictum Vanheurckii		19	33	4
chaetocero danicum		3	11	
chaetocero debile		16	20	2
chaetocero didymum			5	
chaetocero filiforme		30	12	
chaetocero laevisum		5	10	

Continued	8/0430	8/0600	8/0800
<i>chaetocero lorenzianum</i>		30	
<i>chaetocero radicans</i>	8	12	2
<i>chaetocero septentriona</i>	9	11	
<i>chaetocero simile</i>	5	21	2
<i>chaetocero simplex</i>		3	
<i>rhizosolen alata f.gracillima</i>	2810	155	2780
<i>rhizosolen delicatula</i>	51	65	12
<i>rhizosolen fragilissima</i>	6	6	2
<i>rhizosolen fragilissima v.1</i>	63	15	5
<i>rhizosolen setigera</i>	13	4	26
<i>rhizosolen stolterfothi</i>		10	
<i>pennales</i> spp. >40	3		
<i>asterionel glacialis</i>		3	4
<i>thalassion nitzschoides</i>	3	5	4
<i>navicula calida</i>	19	40	48
<i>pleurosigm acutum</i>		3	
<i>tropidonei lepidoptera</i>	2		2
<i>amphora pusio v.parvula</i>			2
<i>nitzschia americana</i>		13	6
<i>nitzschia closterium</i>			1
<i>nitzschia cylindroform</i>	12	7	20
<i>nitzschia delicatissim</i>	12	3	
<i>nitzschia granii v.curvata</i>		5	
<i>nitzschia lineola</i>	6		2
<i>nitzschia longissima</i>	22	35	6
<i>nitzschia norwegica</i>	8	11	
<i>nitzschia pungens</i>	690	65	
<i>nitzschia seriata</i>	6600	795	5
<i>nitzschia seriata f.obtusa</i>			2
<i>cylindroth fusiformis</i>	3		4
<i>nephroselm</i> spp. /bipedinomon	448	196	308

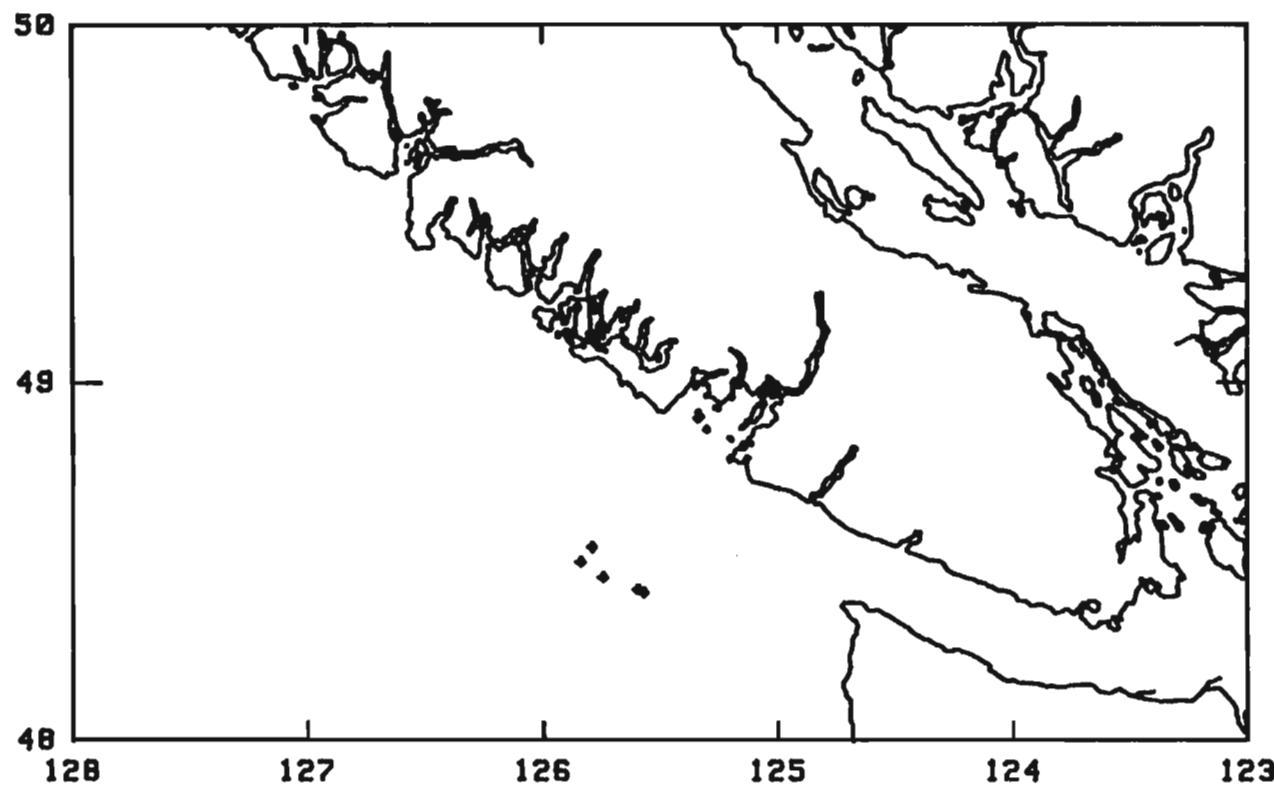
Continued	8/0430	8/0600	8/0800
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	302	274	24
<i>cymbomonas</i> spp.	57	10	58
<i>pterosperm</i> spp. / <i>pachysphaer</i>	11	10	33
<i>eutreptiel</i> spp.	8	5	
<i>prorocentr balticum</i>	8	16	4
<i>prorocentr gracile</i>			1
<i>dinophysis</i> spp.	5	8	
<i>gonyaulax rugosum</i>	6	15	
<i>amphidiniu</i> spp.			1
<i>gymnodiniu</i> spp.	396	165	820
<i>gymnodiniu gracilentum</i>	5		
<i>katodinium rotundatum</i>	68	95	3
<i>peridiniac</i> spp.	130	152	31
<i>heterocaps triquetra</i>	234	310	22
<i>gonyaulax digitale</i>	8	10	
<i>ptychodisc noctiluca</i>			10
<i>ceratium furca</i>		5	3
<i>raphidophy</i> sp.2	16	19	51
<i>heterosigm akashiwo</i>	8	133	14310
<i>cryptomonas</i> spp. 5–10	1650	665	820
<i>cryptomonas</i> spp. 11–20	560	222	1020
<i>hemiselmis</i> spp. 4–6	1420	515	685
<i>mesodinium rubrum</i>		15	6

CRUISE 85-03

21 – 26 October 1985

Area of operations: Continental shelf off southwest Vancouver Island

Vessel: C.S.S. John P. Tully



CRUISE 85-03

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
1-1	23 Oct. 85	48 30.0	125 50.0	0.1		33.35	0.4	14.4	1.30	31.0
1-2		48 30.0	125 50.0	10.0		33.58	0.7	10.8	1.08	27.4
1-3a		48 30.0	125 50.0	30.0		33.58	0.8	10.6	1.14	26.9
1-3b		48 30.0	125 50.0	30.0		33.58	0.8	10.6	1.14	26.9
4-1		48 32.5	125 47.1	0.1		33.31	0.6	17.3	1.51	35.6
4-2		48 32.5	125 47.1	10.0		33.58	0.6	11.8	1.19	28.5
4-3		48 32.5	125 47.1	30.0			0.8	9.3	1.03	25.1
7-1		48 27.4	125 44.3	0.1		33.34	0.7	15.6	1.35	28.4
7-2		48 27.4	125 44.3	10.0		33.56	0.9	8.7	1.17	20.1
7-3		48 27.4	125 44.3	30.0		33.62	0.8	7.8	1.05	17.0
16-1	24 Oct. 85	48 25.3	125 35.5	0.1		33.23	0.6	20.1	1.70	32.7
16-2		48 25.3	125 35.5	10.0		33.40	1.0	17.3	1.50	29.3
16-3		48 25.3	125 35.5	30.0		33.64	1.9	9.4	1.07	18.3
19-1		48 24.8	125 34.0	0.1	10.4	33.21	0.6	20.1	1.67	32.7
19-2a		48 24.8	125 34.0	10.0	9.9	33.43	1.1	17.9	1.53	29.8
19-2b		48 24.8	125 34.0	10.0	9.9	33.43	1.1	17.9	1.53	29.8
19-3a		48 24.8	125 34.0	30.0	9.4	33.53	1.1	12.6	1.36	22.6
19-3b		48 24.8	125 34.0	30.0	9.4	33.53	1.1	12.6	1.36	22.6

CRUISE 85-03

TAXON	STATION	1-1	1-2	1-3a	1-3b	4-1	4-2	4-3
<i>ochromonas</i> spp.		21	125	70	125	95	85	180
<i>dictyocha speculum</i>			2	1	4		8	3
<i>apedinella spinifera</i>				4	2		22	4
<i>imantonia rotunda</i>		11	25	20	50	20	15	25
<i>corymbellus aureus</i>							2	
<i>chrysochro</i> sp.1			20				16	30
<i>chrysochro</i> spp. 3-6		34	410	210	144	344	228	482
<i>chrysochro</i> spp. 6-10					10	24		
<i>corethron criophilum</i>					1	2		
<i>detonula pumila</i>							1	
<i>leptocylin minimus</i>							3	
<i>leptocylin mediterraneus</i>					1		1	1
<i>skeletonem costatum</i>					10			
<i>thalassios rotula</i>			3					
<i>thalassios angusti</i>								1
<i>thalassios anguste-line</i>				2	2	7	1	4
<i>thalassios pacifica</i>		2	2		4	5	3	1
<i>thalassios lineata</i>		3		4	2	2	8	4
<i>thalassios pseudonana</i>		12	11	12	120	10	32	132
<i>thalassios conferta</i>		18	30	34	118	48	102	53
<i>asterompha heptactis</i>		1	2	1	2		3	2
<i>eucampia zodiacus</i>						1	16	1
<i>cerataulin pelagica</i>			6	1	3	1	1	
<i>chaetocero</i> sp.gi		2		5	6	10	13	5
<i>chaetocero</i> sp.m				2				
<i>chaetocero compressum</i>				3				
<i>chaetocero convolutum /concavicom</i>			1	3	1			
<i>chaetocero debile</i>		5	8		2	4	13	7
<i>chaetocero decipiens</i>				3	1	5		

Continued	1–1	1–2	1–3a	1–3b	4–1	4–2	4–3
<i>chaetoceros filiforme</i>		6	3		4		3
<i>rhizosolen delicatula</i>						2	
<i>rhizosolen fragilissima</i>		4	1	7	2		3
<i>rhizosolen setigera</i>		1					1
<i>rhizosolen stolterfothi</i>	2	7	1		5		8
<i>pennales</i> spp. 0–20	1				2	6	3
<i>thalassiot frauenfeldii</i>				1			
<i>thalassion bacillaris</i>				1			
<i>thalassion nitzschoides</i>	6	4	15		14	11	1
<i>pleurosigma acutum</i>					1		
<i>amphora pusio</i> v. <i>parvula</i>							1
<i>nitzschia americana</i>					3		
<i>nitzschia closterium</i>				1	1		
<i>nitzschia cylindroform</i>	10	24	68	64	24	119	44
<i>nitzschia delicatissim</i>		3	2	3		16	2
<i>nitzschia graniv.curvata</i>				1			
<i>nitzschia lineola</i>							1
<i>nitzschia longissima</i>		3	3		2	8	2
<i>nitzschia seriata</i>			1				3
<i>nitzschia subcurvata</i>		3	2	4	2	5	7
<i>cylindroth. fusiformis</i>			1	1	1	2	1
<i>tetraselmi</i> spp. / <i>pyramimonas</i>						11	2
<i>prorocentr balticum</i>					2		1
<i>amphidiniu</i> spp.			1				
<i>gymnodiniu</i> spp.	31	36	50	42	62	105	40
<i>gymnodiniu</i> <i>gracilemum</i>	52	96	84	96	36	329	128
<i>katodinium rotundatum</i>		2		2	4	13	5
<i>peridiniac</i> spp.			3	1	3	7	2
<i>ceratium furca</i>		2		2		1	3
<i>ceratium tripos</i>						1	
<i>raphidophy</i> sp.2		5	2		2	24	13

Continued	1–1	1–2	1–3a	1–3b	4–1	4–2	4–3
<i>cryptomonas</i> spp. 5–10	6	172	138	250	68	765	162
<i>cryptomonas</i> spp. 11–20		16	26	27	10	85	16
<i>mesodinium rubrum</i>			1			11	3

CRUISE 85-03

TAXON	STATION	7-1	7-2	7-3	16-1	16-2	16-3
ochromonas spp.		60	140	130	110	160	65
dictyocha speculum		1	1	1		2	3
apedinella spinifera			4	2		6	
meringosiph mediterranea					1		
imantonia rotunda		15	30	20	15	35	25
chrysochro sp.1		16	28	30		18	12
chrysochro spp. 3-6		153	426	366	236	282	116
chrysochro spp. 6-10					16		
detonula pumila						1	
leptocylin mediterraneus		1					
stephanopy nipponica		3	6				
skeletonem costatum		6		4		4	3
thalassios anguste-line		1			3	3	2
thalassios conferta		72	84	30	60	59	36
thalassios lineata		4		4	3	8	5
thalassios pacifica		3	3	3	1	4	
thalassios pseudonana		28	24	7	9	8	14
thalassios rotula		5			1	3	1
coccinodis spp.						1	
asterompha heptactis		2	1	1	2	1	3
eucampia zodiacus		3	1			3	1
cerataulin pelagica		2	2		1	6	
ditylum brightwellii		2					
chaetocero sp.gi		5	3	2	11	12	8
chaetocero compressum				2		4	1
chaetocero convolutum /concavicornis		1				9	
chaetocero debile			6	1	5	40	
chaetocero decipiens		1				4	2
chaetocero filiforme		4			1	2	2

Continued

	7-1	7-2	7-3	16-1	16-2	16-3
<i>chaetoceros radicans</i>						4
<i>rhizosolen fragilissima</i>	3	3	3		4	1
<i>rhizosolen setigera</i>		1		1	2	
<i>rhizosolen stolterfothi</i>	10	2	3	1	5	2
<i>pennales</i> spp. 0-20	3					
<i>asterionel glacialis</i>				1		
<i>thalassiot frauenfeldii</i>					1	
<i>thalassion bacillaris</i>			1			
<i>thalassion nitzschoides</i>	1		2	6	6	1
<i>amphora pusio</i> v. <i>parvula</i>	2		1	1	3	
<i>nitzschia americana</i>	3				6	
<i>nitzschia cylindroform</i>	100	117	20	23	22	62
<i>nitzschia delicatissim</i>	7		2	9	22	
<i>nitzschia granii</i> v. <i>curvata</i>			1			
<i>nitzschia longissima</i>	1	2	1	3	3	3
<i>nitzschia seriata</i>			1			
<i>nitzschia subcurvata</i>	5	2			2	
<i>cylindroth fusiformis</i>				1	4	
<i>tetraselmi</i> spp. / <i>pyramimonas</i>		12	10			2
<i>cymbomonas</i> spp.			1			
<i>pterosperm</i> spp. / <i>pachysphaer</i>					1	
<i>eutreptiel</i> spp.						2
<i>prorocentr balticum</i>			3		1	
<i>dinophysis</i> spp.				1		
<i>gymnodiniu</i> spp.	92	66	22	84	120	34
<i>gymnodiniu gracilentum</i>	188	309	209	28	124	66
<i>katodinium rotundatum</i>	3	18	4			12
<i>peridiniac</i> spp.		3	2			8
<i>heterocaps triquetra</i>						4
<i>ceratium furca</i>		1				1
<i>ceratium fusus</i>			1			

Continued	7-1	7-2	7-3	16-1	16-2	16-3
<i>raphidophy sp2</i>	5	309	6		2	2
<i>cryptomona</i> spp. 5-10	103	348	144	28	458	216
<i>cryptomona</i> spp. 11-20	10	40	36	4	46	26
<i>mesodinium rubrum</i>		27	16			20

CRUISE 85-03

TAXON	STATION	19-1	19-2a	19-2b	19-3a	19-3b
<i>ochromonas</i> spp.		155	150	75	18	60
<i>dictyocha speculum</i>			2	5	2	3
<i>apedinella spinifera</i>			4		16	3
<i>imantonia rotunda</i>		170	130	25	75	25
<i>corymbellus aureus</i>				5		
<i>chrysochro</i> sp.1		50	40	12	12	
<i>chrysochro</i> spp. 3-6		316	328	68	154	43
<i>phaeocystis pouchetii</i>						31
<i>corethon criophilum</i>			1		1	
<i>detonula pumila</i>			1			
<i>leptocylin mediterraneus</i>		1	1			
<i>skeletonem costatum</i>				3		
<i>thalassios anguste-linea</i>		1	2	4		
<i>thalassios conferta</i>		32	12	48	68	88
<i>thalassios lineata</i>		4	2	2	4	
<i>thalassios pacifica</i>		2	4		3	
<i>thalassios pseudonana</i>		20	18	165	26	68
<i>thalassios rotula</i>				4		3
<i>actinoptyc senarius</i>					1	
<i>asterompha heptactis</i>		1			3	
<i>eucampia zodiacus</i>		1				
<i>cerataulin pelagica</i>		1	2		2	
<i>chaetocero</i> sp.gi		2	16	8	14	7
<i>chaetocero</i> sp.m			3			
<i>chaetocero compressum</i>			5		6	
<i>chaetocero debile</i>			16	6	6	
<i>chaetocero decipiens</i>			2	4	4	
<i>chaetocero didymum</i>					2	
<i>chaetocero filiforme</i>		4	2		3	3

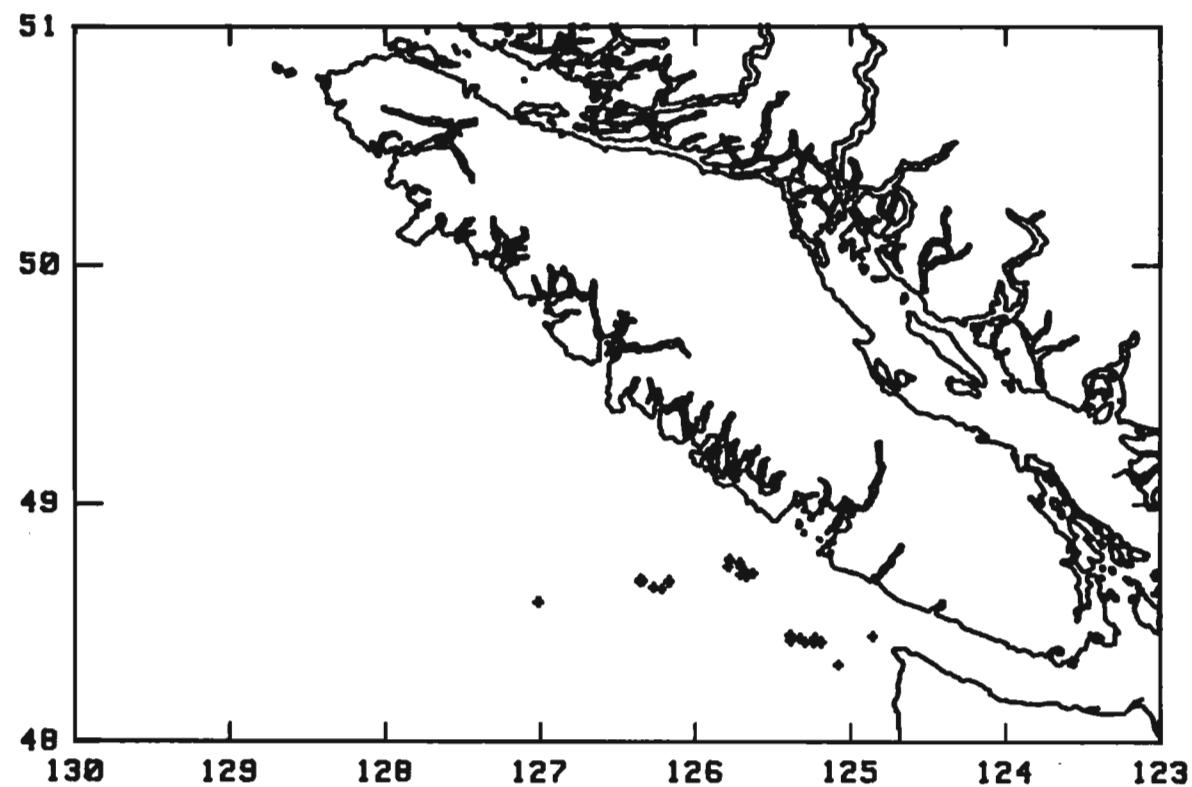
Continued	19-1	19-2a	19-2b	19-3a	19-3b
<i>chaetocero laciniosum</i>		5			
<i>bacteriast delicatula</i>		2			
<i>rhizosolen fragilissima</i>		3		2	
<i>rhizosolen setigera</i>		4	2	1	
<i>rhizosolen stolterfothi</i>		7	5		
<i>pennales</i> spp. 0-20			2		
<i>thalassiot frauenfeldii</i>		1			
<i>thalassion nitzschoides</i>	4	10	12	4	
<i>tropidonei lepidoptera</i>					2
<i>amphora pusio v.parvula</i>		1	2		
<i>nitzschia americana</i>		4	7		
<i>nitzschia cylindroform</i>	32	11	54	86	177
<i>nitzschia delicatissim</i>	4	3	4	8	3
<i>nitzschia longissima</i>	1	1	6	3	7
<i>nitzschia seriata</i>				2	
<i>nitzschia subcurvata</i>	1		2		
<i>cylindroth closterium</i>		1			
<i>tetraselmi</i> spp. / <i>pyramimonas</i>		5	3	11	
<i>cymbomonas</i> spp.				1	
<i>pterosperm</i> spp. / <i>pachysphaer</i>				2	
<i>eutreptiel</i> spp.			2		
<i>prorocentr balticum</i>			2	2	
<i>gymnodinlu</i> spp.	110	26	109	61	58
<i>gymnodiniu gracilentum</i>	18	24	58	131	309
<i>katodinium rotundatum</i>	2		4	15	10
<i>peridiniac</i> spp.	4			10	7
<i>ceratium furca</i>		1			
<i>raphidophy</i> sp.2			6	2	3
<i>cryptomona</i> spp. 5-10	14	75	247	342	660
<i>cryptomona</i> spp. 11-20	2	11	26	108	132
<i>mesodinium rubrum</i>		2		2	14

CRUISE 86-03

9 June – 3 July 1986

Area of operations: West coast of Vancouver Island

Vessel: C.S.S. Parizeau



CRUISE 86-03

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
65-6	20 June 86	48 19.0	125 04.3	9.9	12.6	31.13	7.5	1.3	1.60	10.3
67-8		48 26.3	124 51.2	10.5	12.8	30.55	4.3	2.8	0.66	14.6
69-5	21 June 86	48 24.5	125 11.3	21.9	8.4	32.69	0.6	25.4	2.11	38.4
69-6		48 24.5	125 11.3	10.0	10.0	32.06	2.7	20.0	1.60	37.7
69-B		48 24.5	125 11.3	0.0			3.7	15.6	1.33	34.2
75-6		48 25.6	125 19.4	11.0	9.8	32.17	3.0	20.7	1.67	37.3
81-6	22 June 86	48 24.5	125 14.2	21.2	9.1	32.37	1.9	23.6	1.90	38.8
81-7		48 24.5	125 14.2	11.8	10.6	31.97	4.3	16.6	0.94	34.5
81-B		48 24.5	125 14.2	0.0			4.2	15.6	1.31	33.4
87-7		48 24.5	125 17.6	0.0		32.03	0.8	17.3	1.37	36.6
92-6		48 25.5	125 13.6	19.6	9.6	32.23	2.7	21.4	1.73	36.8
92-7		48 25.5	125 13.6	10.9	11.0	31.93	5.2	14.4	1.17	33.3
99-7	23 June 86	48 26.4	125 23.0	10.0	9.4	32.29	1.8	22.1	1.81	38.1
100-6		48 24.9	125 22.9	10.4	9.6	32.22	5.2	21.6	1.68	38.2
104-6	26 June 86	48 41.4	125 40.1	22.4	10.3	31.76	1.6	15.3	1.53	27.9
104-7		48 41.4	125 40.1	13.3	11.8	31.42	6.0	8.4	0.93	17.9
104-8		48 41.4	125 40.1	0.0			5.1	3.7	0.60	13.4
107-8		48 41.9	125 39.8	12.5	12.9	31.27	12.7	0.2	0.32	6.1
110-3		48 43.5	125 42.0							
113-6	27 June 86	48 42.2	125 37.7	7.9	11.3	31.57	4.0	11.1	1.10	21.7
116-7		48 41.8	125 42.4	10.8	12.1	31.37	6.3	8.0	0.76	16.4
122-6		48 45.7	125 46.5	10.3	13.2	31.20	10.8	0.0	0.26	2.6
125-8	28 June 86	48 44.8	125 42.5	10.1	13.2	31.17	11.1	0.4	0.31	3.3
128-5		48 43.9	125 47.0	20.8	12.0	31.43	5.9	8.1	0.88	17.0
128-6		48 43.9	125 47.0	1.5	12.9	31.14	7.7	0.2	0.32	2.0
128-B		48 43.9	125 47.0	0.0			13.5	0.1	0.27	2.2
133-7	29 June 86	48 40.3	126 21.0	17.0	9.9	32.21	3.3	3.5	0.66	9.6
133-8		48 40.3	126 21.0	7.1	13.3	31.04	1.7	0.0	0.28	2.3
137-2		48 39.8	126 21.1	20.9	10.8	31.95	2.4			
137-3		48 39.8	126 21.1	8.7	13.2	31.06	1.7			
138-7		48 40.1	126 19.8	19.9	9.8	32.17	6.4	5.7	0.82	11.7
144-7	30 June 86	48 38.3	126 15.9	19.5	11.8	31.68	6.8	1.0	0.50	7.1
150-7		48 37.9	126 12.7	20.0	10.5	32.05	2.3	3.4	0.68	9.9
156-6	1 July 86	48 39.7	126 09.8	6.5	13.3	31.07	1.5	10.4	0.97	
159-6		48 39.9	126 09.8	19.5	9.5	32.09	0.9	11.0	1.21	18.4

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
159-7	1 July 86	48 39.9	126 09.8	6.2	13.2	31.05	0.6	0.0	0.40	2.8
160-7		48 34.5	127 00.6	34.7	10.0	32.26	1.0	8.0	0.52	8.7
160-8		48 34.5	127 00.6	11.8	13.8	31.89	0.3	0.0	0.34	6.4

CRUISE 86-03

TAXON	STATION	65-6	67-8	69-5	69-6	69-8	75-6	81-6	81-7	81-8
ochromonas spp.		2964	3078	336	969	741	1995	627	342	
dinobryon sueicum		924	13		12					
dictyocha speculum		7	6		2	5	3		6	9
pedinella sp.223					224		112	112		
apedinella spinifera		196	114	21	360	51	54	7	23	43
meringosiph mediterranea		16				12				
imantonia rotunda		3990	7980	2268	8493		9006	106	5586	6441
corymbellu sp.		70			36	15	67	14	105	232
chrysochro sp.1		741	855				399			456
chrysochro spp. 3-6		5016	7011	2520	3648	7125	1938	7638	1995	7980
chrysochro spp. 6-10						7752				
phaeocysti pouchetii		9747								
minutocell scriptus				56	56		28		84	56
leptocylin danicus		28	30			3			15	3
leptocylin minimus		66	27	18	266	709	106	60	339	462
leptocylin mediterraneu		15	2	2						
paralia sulcata			20							
cyclotell? sp.3-5		924	476	13450	18580	12880	12140	7695	3472	21320
skeletonem costatum		364	64	30	1240	3730	396	462	1980	3828
thalassios spp.						8	3	1	7	8
thalassios rotula		13			3	5	4	1	4	5
thalassios anguste-line		12	2	1	4	10	2	2	4	7
thalassios tenera						12		8		
thalassios aestivalis		27	5		8	18	8	6	30	33
thalassios nordenskiold		19	8		11	20	9	6	18	25
thalassios pacifica		252	32	5	175	478	160	115	458	575
thalassios eccentrica /symmetrica						4	3	3	5	6
coccinodis spp.			1							
lauderia borealis		20	2							

Continued	65-6	67-8	69-5	69-6	69-B	75-6	81-6	81-7	81-B
<i>eucampia zodiacus</i>	16	24							
<i>cerataulin pelagica</i>	6	1						2	
<i>chaetocero sp.d</i>	18								12
<i>chaetocero sp.gi</i>	41	84	5	187	160	40	180	40	141
<i>chaetocero sp.m</i>		7							
<i>chaetocero affine</i>	767	401			8			8	6
<i>chaetocero boreale</i>		6							
<i>chaetocero compressum</i>	1002	153		440	738	170	139	1010	7760
<i>chaetocero convolutum /concavicornis</i>	11	2							
<i>chaetocero debile</i>	5200	435	44	936	1352	294	349	1682	561
<i>chaetocero decipiens f.singularis</i>	7								
<i>chaetocero diadema</i>	351	44		9	5		4	11	12
<i>chaetocero didymum</i>		10						4	
<i>chaetocero filiforme</i>	2632	784	112	280	13110	8094	1652	3640	6156
<i>chaetocero laciniatum</i>	29	8					7	14	
<i>chaetocero lineatum</i>	32	42							
<i>chaetocero lorenzianum</i>	78	52							
<i>chaetocero perpusillum</i>	139				1100	896	190	594	1008
<i>chaetocero radicans</i>	700	100		331	382	85	77	508	383
<i>chaetocero septentriona</i>	108	15		4					
<i>chaetocero simile</i>	16				3	5	3		5
<i>chaetocero simplex</i>		2							
<i>chaetocero sociale</i>	890	135	3	22	15		15	50	10
<i>chaetocero subtile</i>	8	4	2	15	16	24	8	24	6
<i>bacteriast delicatula</i>	152	190							
<i>rhizosolen alata f.alata</i>	5								
<i>rhizosolen alata f.gracillima</i>	160	44							
<i>rhizosolen delicatula</i>	102	177							
<i>rhizosolen fragilissima</i>							1		2
<i>rhizosolen fragilissima v.1</i>	262	13	3	18	71	22	69	86	78
<i>rhizosolen stolterfothi</i>								2	

Continued	65-6	67-8	69-5	69-6	69-B	75-6	81-6	81-7	81-B
<i>centrales cylinders unidentified</i>	174	108	12	102	98	131	107	108	915
<i>pennales</i> spp. >40	2				5				
<i>fragilaria</i> spp.									
<i>asterionel glacialis</i>	58	13		4	10		5	14	3
<i>thalassion bacillaris</i>	9	4		2	5	3	6	15	10
<i>thalassion nitzschoides</i>	60	4	13	24	66	78	87	166	462
<i>leiomphora abbreviata</i>					1				
<i>naviculace</i> spp.	25	24		6			4	9	
<i>pleurosigm acutum</i>	7	2		2				2	1
<i>nitzschia americana</i>	405	332	8	123	71	18	9	78	27
<i>nitzschia brevirostris</i>		27	9	35	30	23		9	27
<i>nitzschia closterium</i>			5	6	9	6	8	8	2
<i>nitzschia closterium</i> v. <i>striatula</i>	26	126							
<i>nitzschia cylindroform</i>								24	
<i>nitzschia delicatissim</i>	158	27	21	36	426	219	110	294	560
<i>nitzschia granii</i> v. <i>curvata</i>	7			12	48	19	27	45	20
<i>nitzschia lineola</i>				2					
<i>nitzschia longissima</i>	127	122	8	19	92	22	48	48	54
<i>nitzschia norwegica</i>			16	41	22	17	2	27	13
<i>nitzschia pungens</i>	14	3							
<i>nitzschia seriata</i> f. <i>obtusa</i>	3								
<i>cylindroth fusiformis</i>	2	3					2		2
<i>nephroselm</i> spp. / <i>bipedinomon</i>		112		28	644	28	140	196	504
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	95	108	11	37	206	27	14	36	202
<i>cymbomonas</i> spp.			5		4			3	4
<i>pterosperm</i> spp. / <i>pachysphaer</i>	20	9	5	14	13	10		6	15
<i>euteptiel</i> spp.			2	36	34	2	9	15	36
<i>prorocentr minimum</i>	103	17	4	36	71	24	16	48	24
<i>dinophysis</i> spp.		2							
<i>gymnodiniu</i> spp.	365	200	36	84	164	36	66	147	420

Continued	65–6	67–8	69–5	69–6	69–B	75–6	81–6	81–7	81–B
<i>gymnodiniu gracilemum</i>	36	11	72	264	294	128	67	390	360
<i>katodinium rotundatum</i>	124	186	2280	1020	296	1420	530	228	695
<i>peridiniac</i> spp.	11	27	2	4	77	11	16	60	212
<i>heterocaps triquetra</i>	7	10	6	5	68	5	2	16	46
<i>gonyaulax digitale</i>					3		3		2
<i>raphidophy</i> sp.1	13	6		78	266	34	43	85	32
<i>raphidophy</i> sp.2	28	12	14	77	20	11	9	21	34
<i>cryptomonas</i> spp. 5–10	2080	3100	1060	1280	1090	890	555	830	1750
<i>cryptomonas</i> spp. 11–20	360	690	1500	690	1050	830	70	860	1310
<i>cryptomonas</i> spp. 21–30	50		4					31	30
<i>hemiselmis</i> spp. 4–6	284	1590	26	64	2160	910	260	680	550
<i>mesodinium rubrum</i>	6		3	2					

CRUISE 86-03

TAXON	STATION	87-7	92-6	92-7	99-7	100-6	104-6	104-7	104-8	107-8
<i>nostoc</i> sp.					8					
<i>ochromonas</i> spp.		588	285	4446	513	1995	1026	2996	3012	1938
<i>dictyocha speculum</i>		2	4	8				7	65	3
<i>apedinella spinifera</i>		15	10	39	14	14		7	27	10
<i>meringosiph mediterranea</i>			7	10						
<i>imantonia rotunda</i>		6048	6042	14710	7068	9975	3990	4984	7752	6042
<i>corymbellu</i> sp.		11	21	214	46	27	4		17	21
<i>chrysochro</i> sp.1				912			2964	1484	2052	2964
<i>chrysochro</i> spp. 3-6		28	4959	5586	4845	7353	1995	700	6612	11630
<i>phaeocysti pouchetii</i>							9177	16300	5928	12080
<i>minutocell scriptus</i>						28				
<i>leptocylin danicus</i>			8				17	4	4	44
<i>leptocylin minimus</i>		106	121	378	183	220	40	36	122	94
<i>leptocylin mediterraneu</i>							12	12		
<i>stephanopy nipponica</i>		1								
<i>cyclotell?</i> sp. 3-5		4004	4902	8550	3080	4088	1008	1596	1988	3192
<i>skeletonem costatum</i>		522	924	2740	460	587		200	234	624
<i>thalassios</i> spp.				18		10		7	4	15
<i>thalassios rotula</i>			2	10	2			6	3	8
<i>thalassios anguste-line</i>			3	2	3	6	5	5	6	2
<i>thalassios tenera</i>			2	4	3	12	10	12	8	6
<i>thalassios aestivalis</i>		6	12	61	12	12		15	21	40
<i>thalassios nordenskiold</i>		4	8	51	8	12	2	20	11	27
<i>thalassios pacifica</i>		80	169	860	125	170	46	308	212	615
<i>thalassios eccentrica /symmetrica</i>				5		3		3	4	7
<i>coscinodis</i> spp.					2				2	10
<i>lauderia borealis</i>										7
<i>eucampia zodiacus</i>			4					18	6	52
<i>cerataulin pelagica</i>						2	9		4	4

<i>ditylum brightwellii</i>		1								
	Continued	87-7	92-6	92-7	99-7	100-6	104-6	104-7	104-8	107-8
chaetocero sp.d		3	4	150	19	36	4	10		
chaetocero sp.gi		38	15	16	33	41	5	10	164	45
chaetocero sp.m									24	
chaetocero affine			8	12	4	6	288	320	550	6320
chaetocero boreale							3			20
chaetocero compressum		101	11	1676	144	77	102	1561	242	400
chaetocero convolutum /concavicorn							15	20	8	24
chaetocero debile		165	922	1980	378	348	279	4428	376	7945
chaetocero decipiens								13		
chaetocero diadema			6	12			71	400	228	308
chaetocero didymum		3	2					9	4	8
chaetocero filiforme		1932	4564	9006	2548	4200	672	672	3416	2912
chaetocero la ciniostum				6		15		30	4	24
chaetocero lineatum								7	56	34
chaetocero lorenzianum							11	132	90	183
chaetocero perpusillum		267	600	1705	400	800	18	22	144	58
chaetocero radicans		58	200	1524	124	154	142	360	112	180
chaetocero septentriona		3					43	29	16	122
chaetocero simile								4	10	12
chaetocero simplex			2			4	2			
chaetocero sociale		5	14	56	28	50	225	420	16	905
chaetocero subtile		5	8	10	18		2	17	16	21
bacteriast delicatula				8			43	224	74	533
rhizosolen alata f.gracillima							12	40	58	428
rhizosolen delicatula							8	45	26	60
rhizosolen fragilissima		1	2	1						1
rhizosolen fragilissima v.1		22	30	154	44	33	10	105	65	62
rhizosolen setigera			2	3				8		6
centrales cylinders unidentified		64	105	323	196	221	100	164	136	250
pennales spp. 21-40							16			



	Continued	87–7	92–6	92–7	99–7	100–6	104–6	104–7	104–8	107–8
pennales spp. >40			2							
asterionel glacialis		4	8	17	3	2	28	53	6	198
thalassiot longissima							9			
thalassion bacillaris		8	14	11		3		19	11	8
thalassion nitzschoides		44	66	396	126	85	25	123	167	62
lichmophora abbreviata							4			
naviculace spp.		7				4	22	81	16	21
pleurosigm acutum				2			2	2	1	1
nitzschia americana		9	18	115	20	6	105	750	296	2540
nitzschia brevirostris				12	3			3		16
nitzschia closterium		4	3							17
nitzschia closterium v.striatula				8949						1710
nitzschia cylindroform		17		33	19	18	5	10	25	
nitzschia delicatissim		105	116	990	172	194	65	278	208	750
nitzschia granliv.curvata		15	12	11	11	24	22	32	21	38
nitzschia lineola				3						4
nitzschia longissima		45	18	115	47	45	31	96	91	360
nitzschia norwegica		5	10	16	28	18		13	10	11
nitzschia pungens							11	27	7	38
nitzschia seriata				3						
nitzschia seriata f.obtusa									9	5
nitzschia subcurvata		3	2							
cylindroth fusiformis			1	7		6	4	9	13	11
scenedesmu acuminatus					10					
scenedesmu quadricauda							3			
nephroselm spp. /bipedinomon			140	141			168			168
tetraselmi spp. /pyramimonas		48	10	214	12	27	196	270	380	1590
cymbomonas spp.				8					12	21
pterosperm spp./pachysphaer		5	7	33	4	16				
eutreptiel spp.		3	60	11	13	2	3	5	20	4
prorocentr gracile								2	30	3

Continued	87-7	92-6	92-7	99-7	100-6	104-6	104-7	104-8	107-8
<i>prorocentr minimum</i>	14	16	42	17	21	2	8	132	22
<i>dinophysis</i> spp.									8
<i>gymnodiniu</i> spp.	24	63	116	57	52	25	128	545	296
<i>gymnodiniu gracilemum</i>	32	32	312	81	101	14	62	340	282
<i>katodinium rotundatum</i>	860	595	362	425	380	151	328	2500	1880
<i>peridiniac</i> spp.		12	44	14		4		84	44
<i>heterocaps triquetra</i>		6	7	4		3	12	78	33
<i>ceratium furca</i>								1	3
<i>ceratium tripos</i>								1	1
<i>raphidophy</i> sp.1	24	152	115		112	2	22	15	10
<i>raphidophy</i> sp.2	9	22	82	24	33	9	11	37	41
<i>heterosigm akashiwo</i>				120					
<i>cryptomona</i> spp. 5-10	825	760	490	1120	925	9177	1680	4760	5985
<i>cryptomona</i> spp. 11-20	39	100	2120	163	164	336	360	224	504
<i>cryptomona</i> spp. 21-30		6	57		4		35	30	47
<i>hemiselmis</i> spp. 4-6	580	570	672	1370	920	910	910	10660	6099
<i>mesodinium rubrum</i>			4					12	9

CRUISE 86-03

Taxon	Station	110-3	113-6	116-7	122-6	125-8	128-5	128-6	128-B
ochromonas spp.		1254	1938	2907	2907	1995	112	784	2052
dinobryon sueicum					12			29	36
dictyocha speculum			1	4	22	21	8	26	25
apedinella spinifera				8	46	33	7	168	228
meringosiph mediterranea					7				
imantonia rotunda		4446	7581	14590	9690	14930	4104	15960	19040
chrysocro sp.1		504	1026	1083	2166	2793	140	812	9576
chrysocro spp. 3-6		3078	7239	3021	10090	19950	1428	5016	14930
phaecocysti pouchetii		6099	8208	12540	2964	3933	4104	10940	
minutocell scriptus		28			224	140		112	
leptocylin danicus			6	5	68	21	16	52	65
leptocylin minimus			73	177	130	96	38	247	361
leptocylin mediterraneu		8	7	2		3	7		
cyclotell? sp. 3-5		980	756	784	6384	1372	672	3705	812
skeletonem costatum		20	131	240	235	279	114	1872	1131
thalassios spp.			3	10	28	13	6	8	7
thalassios rotula			2	10	24	11	12	26	19
thalassios anguste-line			5	4	20	12	15	39	20
thalassios tenera			9		6	7	18		
thalassios aestivalis		4	11	21	79	5	50	160	119
thalassios nordenskiold		2	8	18	62	39	57	212	152
thalassios pacifica		50	132	202	700	438	152	288	300
thalassios eccentrica /symmetrica		2	2	4	10	6	2		2
thalassios mendiolana					5	2		4	
coscinodis spp.		2	1	4		6	9	10	7
lauderia borealis				8				12	
biddulphi longicurvis								1	
eucampia zodiacus			13	19	36	62	8	91	86
cerataulin pelagica		6	3	10	20		10	19	4

Continued	110-3	113-6	116-7	122-6	125-8	128-5	128-6	128-B
<i>ditylum brightwellii</i>	1	1	1		2		1	1
<i>chaetocero sp.gi</i>	16	19	74	46	22	19	176	89
<i>chaetocero sp.m</i>		17	17			9	18	9
<i>chaetocero affine</i>	430	990	2700	3785	3820	912	9840	20000
<i>chaetocero boreale</i>			3	22		4	22	10
<i>chaetocero compressum</i>	154	357	1442	100	40	461	576	1200
<i>chaetocero convolutum /concavicornis</i>	1	14	17	4	39	16	26	42
<i>chaetocero debile</i>	112	722	2394	980	4775	1244	5620	11000
<i>chaetocero decipiens f.singularis</i>						4		3
<i>chaetocero diadema</i>	22	572	250	1088	1205	579	1680	3300
<i>chaetocero didymum</i>		13	20	48	24	869	24	37
<i>chaetocero filiforme</i>	672	1792	2968	5016	1148	224	1708	896
<i>chaetocero laciniatum</i>	3	12	7	70	96	28	57	45
<i>chaetocero lineatum</i>	1		12	80	72	8	70	52
<i>chaetocero lorenzianum</i>	34	167	144	738	1080	139	344	234
<i>chaetocero perpusillum</i>	20	142	75	37	38		113	59
<i>chaetocero radicans</i>	64	231	198	161	48	239	32	52
<i>chaetocero septentriona</i>	5	19	69	99	36	21	135	142
<i>chaetocero simile</i>		4	16		18	21		6
<i>chaetocero sociale</i>	12	260	758	1800	755	120	1300	2100
<i>chaetocero subtile</i>	11	27		25	9	3	30	34
<i>chaetocero wighamii</i>				7				
<i>bacteriast delicatula</i>	36	152	262	494	370	127	256	570
<i>rhizosolen alata f.alata</i>	1	1						
<i>rhizosolen alata f.gracillima</i>	26	31	77	286	130	80	156	247
<i>rhizosolen delicatula</i>	15	55	67	200	63	88	156	169
<i>rhizosolen fragilissima</i>		4	2	2	6		9	7
<i>rhizosolen fragilissima v.1</i>	3	30	52	231	78	44	178	75
<i>rhizosolen setigera</i>		3	16	25	3		52	26
<i>rhizosolen stolterfothi</i>	5							

Continued	110-3	113-6	116-7	122-6	125-8	128-5	128-6	128-B
<i>centrales cylinders unidentified</i>	27	230	266	480	378	196	755	1580
<i>pennales spp. 21-40</i>			5		5		10	
<i>pennales spp. >40</i>						1		3
<i>fragilaria</i> spp.		4						
<i>asterionel glacialis</i>	14	22	75	362	114	48	231	182
<i>thalassiot longissima</i>				1		2		
<i>thalassion bacillaris</i>	1	7	17	22	6	13	26	18
<i>thalassion nitzschoides</i>	24	67	97	97	142	132	72	184
<i>naviculace</i> spp.	18	24	17	26	24	14	30	38
<i>pleurosigm acutum</i>		4	1	1	6		4	
<i>nitzschia americana</i>	190	465	725	3556	930	555	5700	3420
<i>nitzschia brevirostris</i>		7		11	15	4	9	21
<i>nitzschia closterium</i>		5	7			37		
<i>nitzschia closterium v.striatula</i>	54	322	264	3040	1710	62	400	30
<i>nitzschia cylindroform</i>					12	36	23	44
<i>nitzschia delicatissim</i>	82	149	485	1490	1090	384	785	920
<i>nitzschia granii v.curvata</i>	6	3	22	28	33	7	44	
<i>nitzschia lineola</i>				2				12
<i>nitzschia longissima</i>	16	41	75	198	201	36	266	169
<i>nitzschia norwegica</i>		13	5	17	37	5	29	20
<i>nitzschia pungens</i>		7	24	146	72	28	65	188
<i>nitzschia seriata</i>					4	1	5	
<i>nitzschia seriata f.obtusa</i>	3	8	15	36	6		13	78
<i>nitzschia subcurvata</i>								41
<i>cylindroth fusiformis</i>	5	4	9	22	7	5	6	
<i>scenedesmu acuminatus</i>						3		
<i>nephroelm</i> spp. / <i>bipedinomon</i>				342			228	
<i>tetraselm</i> spp. / <i>pyramimonas</i>	10	75	118	530	160		150	150
<i>pterosperm</i> spp. / <i>pachysphaer</i>						8		
<i>eutreptiel</i> spp.	2	1	12	3	6	6		12
<i>prorocentr gracile</i>				2	4		6	6

Continued	110–3	113–6	116–7	122–6	125–8	128–5	128–6	128–8
<i>prorocentr minimum</i>	2	2	5	26	63	69	430	91
<i>dinophysis</i> spp.	1		4	12	34		16	8
<i>cochlodini</i> spp.							4	
<i>gymnodiniu</i> spp.	35	60	304	198	350	200	326	495
<i>gymnodiniu gracilemum</i>	55	31	67	35	104	48	74	67
<i>katodinium rotundatum</i>	130	133	665	790	760	167	1190	780
<i>peridiniac</i> spp.			4	16	25	3	50	102
<i>heterocaps triquetra</i>			35	25	48	3	68	53
<i>gonyaulax digitale</i>				3			10	
<i>ceratium furca</i>							2	2
<i>raphidophy</i> sp.1	34							
<i>raphidophy</i> sp.2	8			11	60	10	29	148
<i>heterosigm akashiwo</i>				12				
<i>cryptomonas</i> spp. 5–10	625	940	1090	1720	740	2010	1820	3140
<i>cryptomonas</i> spp. 11–20	130	270	790	1130	630	250	570	850
<i>cryptomonas</i> spp. 21–30	11		22	115	105	8	75	48
<i>hemiselmis</i> spp. 4–6	740	3248	2268	5244	6099	2268	6099	1820
<i>mesodinium rubrum</i>				4		2	10	21

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TAXON	STATION	133-7	133-8	137-2	137-3	138-7	144-7	150-7	156-6
ochromonas spp.		952	1710	2679	1596	570	969	513	980
dictyocha speculum		7	3	3		1		8	
apedinella spinifera		15			8				
meringosiph mediterranea			5						3
imantonia rotunda		2100	14930	1938	12200	5472	19040	13000	14930
chrysochro sp.1		18920	29690	7809		14360	29750	22910	10030
chrysochro spp. 3-6		10940	10940	3306	15280	3534	9918	6954	1988
minutocell scriptus						57	57		
leptocylin minimus		8					5		
leptocylin mediterraneu		6		9		18	2		
cyclotell? sp. 3-5		588	8208	228	3990	448	224	56	112
skeletonem costatum		44	45	6	23		9	18	
thalassios aestivalis		1							
thalassios nordenskiold		4							08
thalassios pacifica		16	7	4	5	12	9	11	11
thalassios lineata			1	2		1	2	1	1
thalassios pseudonana				336	1539	672	224		140
coscinodis spp.		13	1			1			1
eucampia zodiacus		14					1		
hemialulus membranaceus				2					
chaetocero sp.d		12	9	10		10	3	2	
chaetocero sp.gi		25		6		33	12	22	
chaetocero affine		484	28	15					
chaetocero compressum		332				11	5	15	
chaetocero convolutum /concavicorni		1							
chaetocero debile		102							
chaetocero decipiens f.singularis		5							
chaetocero diadema		18		5					
chaetocero didymum		12							

Continued	133-7	133-8	137-2	137-3	138-7	144-7	150-7	156-6
<i>chaetocero filiforme</i>	224	57	57	1036	114	114		
<i>chaetocero laciniatum</i>	18		6			4		
<i>chaetocero lineatum</i>	5		1	8			3	
<i>chaetocero lorenzianum</i>	36			5				
<i>chaetocero radicans</i>	34						5	
<i>chaetocero septentriona</i>	43				7	3		
<i>chaetocero sociale</i>	63							
<i>chaetocero subtile</i>		8						
<i>bacteriast delicatula</i>	155	10	11	9	14			
<i>rhizosolen alata f.gracillima</i>	12			2				
<i>rhizosolen delicatula</i>	2	8	2		3	5		
<i>rhizosolen fragilissima v.1</i>	39	6				7	4	
<i>centrales cylinders unidentified</i>	262	262	163	61	82	58	81	27
<i>pennales</i> spp. 21-40			3	1	1			
<i>pennales</i> spp. >40								1
<i>asterionel glacialis</i>	3							
<i>thalassiot longissima</i>						1		
<i>thalassion bacillaris</i>	5	2	6				2	
<i>thalassion nitzschoides</i>	50	13	14	2	4	9	5	4
<i>naviculace</i> spp.	11	11	42		5	15	36	7
<i>nitzschia</i> spp.						6	4	
<i>nitzschia americana</i>	760	1150	64	825	46	9	35	7
<i>nitzschia brevirostris</i>	14	4	6				2	
<i>nitzschia closterium</i> v. <i>striatula</i>	266	7	228	5	148	256	181	10
<i>nitzschia cylindroform</i>	610		310		156	44	316	64
<i>nitzschia delicatissim</i>	164	33	57	14	86	30	67	12
<i>nitzschia graniv.v.curvata</i>	5		4			8	5	2
<i>nitzschia longissima</i>	48	8	10	1	22	8	38	3
<i>nitzschia norwegica</i>				9	10			
<i>nitzschia pungens</i>	74				3			
<i>nitzschia seriata</i>	1							

Continued	133–7	133–8	137–2	137–3	138–7	144–7	150–7	156–6
<i>nitzschia seriata f.obtusa</i>	4							
<i>nitzschia subcurvata</i>	82	13	216		160	52	192	13
<i>cylindroth fusiformis</i>	4		2			2		
<i>nephroselm spp. /bipedinomon</i>		57		114	228	57		
<i>tetraselmi spp. /pyramimonas</i>	144	750	70	560	80	410	21	10
<i>pterosperm spp. /pachysphaer</i>	6				8			
<i>euteptiel spp.</i>	9	2			2		2	
<i>prorocentr balticum</i>	34	5	1	2	8	21	7	7
<i>dinophysis spp.</i>		1						
<i>gymnodinu spp.</i>	222	36	328	103	362	308	228	45
<i>gymnodinu gracilentum</i>	188	68	395	7	158	82	190	100
<i>katodinium rotundatum</i>	300	95	262	60	110	820	52	11
<i>peridiniac spp.</i>	3	2	9			2	3	2
<i>ceratium tripos</i>		3						
<i>raphidophy sp.2</i>	118	14	18		11		30	
<i>heterosigm akashiwo</i>			4					88 73
<i>cryptomonas spp. 5–10</i>	3940	3200	5292	1450	2040	5700	4320	2500
<i>cryptomonas spp. 11–20</i>	270	100	308	164	390	672	171	116
<i>cryptomonas spp. 21–30</i>	6	16	10	13		8		
<i>hemiselmis spp. 4–6</i>	2940	7980	1652	1708	3752	8151	3920	2156
<i>mesodinium rubrum</i>	2		4					

CRUISE 86-03

TAXON	STATION	159-6	159-7	160-7	160-8	
ochromonas spp.		112	504	504	1232	
imantonia rotunda		2100	1008	2968	896	
chrysochro sp.1		560	2660	2996		
chrysochro spp. 3-6		784	2100	3668	1064	
leptocylin danicus		2				
cyclotell? sp. 3-5		56	84	56		
skeletonem costatum		7				
thalassios anguste-line					1	
thalassios pacifica		2		6		
thalassios conferta		17	1	10		
coscinodis spp.					1	
chaetocero perpusillum				55		
bacteriast delicatula					2	
rhizosolen alata f.gracillima					35	∞
pennales spp. 21-40				4		
thalassion nitzschoides		12				
naviculace spp.		16		2	1	
nitzschia americana			4			
nitzschia closterium v. striatula				57	13	
nitzschia cylindroform		48		78		
nitzschia delicatissim		4	2	8		
nitzschia granii v.curvata		4	3			
nitzschia longissima		8				
nitzschia pseudodelica				5	2	
nitzschia subcurvata				26	17	
cylindroth fusiformis				2	3	
nephroelm spp. /bipedirionon					57	
tetraselmi spp. /pyramimonas		8	20	11	13	
pterosperm spp. /pachysphaer				3	6	

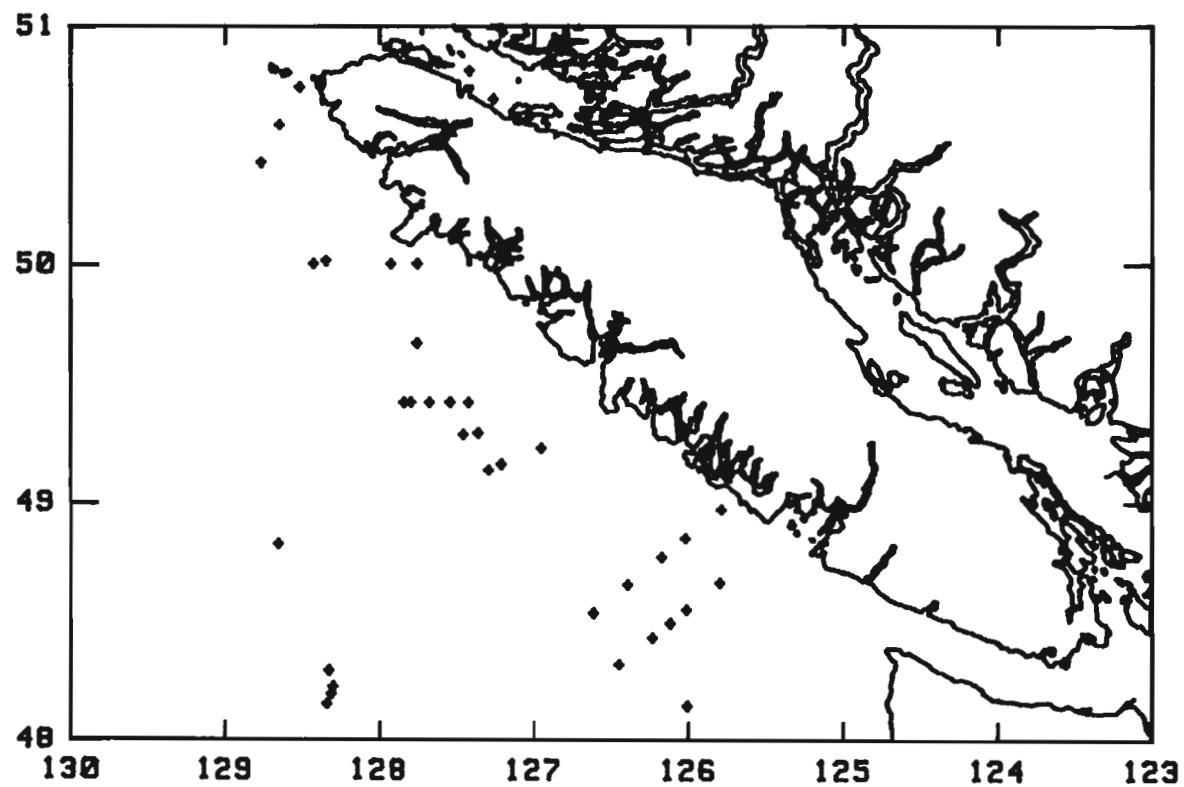
Continued	159-6	159-7	160-7	160-8
<i>halosphaer</i> spp.				5
<i>prorocentr balticum</i>	6			13
<i>gymnodiniu</i> spp.	27	40	354	132
<i>gymnodiniu gracilentum</i>	6	66	480	12
<i>katodinium rotundatum</i>	6	19	6	8
<i>peridiniac</i> spp.		3	10	1
<i>heterocaps triquetra</i>		1		
<i>raphidophy</i> sp.2		12	67	16
<i>heterosigm akashiwo</i>			11	
<i>cryptomona</i> spp. 5-10	395	1840	950	106
<i>cryptomona</i> spp. 11-20	34	80	19	10
<i>hemiselmis</i> spp. 4-6	200	560	336	27

CRUISE 86-04

18 – 29 August 1986

Area of operations: West coast of Vancouver Island

Vessel: C.S.S. Parizeau



CRUISE 86-04

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
4-6	19 Aug. 86	50 44.4	128 30.4	2.0	8.7	32.61	10.8	18.8	1.68	29.1
6-8		50 35.0	128 38.4	8.7	10.2	31.95	1.5	12.1	1.26	19.6
8-9		50 25.5	128 45.5	10.3	11.5	31.59	1.3	7.0	0.88	13.3
9-9		50 00.0	128 25.0	12.3	12.3	31.82	2.6	6.0	0.86	12.3
14-9		50 00.0	127 55.0	10.5	9.3	32.80	10.4	21.4	1.94	37.3
16-8		50 00.0	127 45.0	7.1	11.4	32.24	3.4	11.4	1.18	18.9
17-9		49 40.0	127 45.0	11.5	10.3	32.58	21.0	12.0	1.21	21.8
18-9	20 Aug. 86	49 25.0	127 25.0	12.7	10.6	32.62	8.9	15.4	1.65	26.8
21-9		49 25.0	127 40.0	9.8	10.7	32.23	2.2	9.6	1.11	16.9
23-9		49 25.0	127 50.0	10.5	12.3	32.10	1.8	4.6	0.72	13.9
24-7		49 25.0	127 32.1	14.1	10.9	32.46	7.9	11.7	1.33	19.6
24-8		49 25.0	127 32.1	5.2	11.0	32.46	7.4	11.6	1.32	19.8
24-9		49 25.0	127 32.1	2.2	11.0	32.46	7.2	11.5	1.31	18.8
37-8	21 Aug. 86	49 17.1	127 26.9	5.6	10.7	32.60	15.8	9.4	0.90	14.5
49-6	22 Aug. 86	49 17.4	127 21.3	35.3	8.7	32.73		16.0	1.48	24.8
49-7		49 17.4	127 21.3	13.3	10.6	32.58	14.0	8.8	0.90	14.5
49-8		49 17.4	127 21.3	6.3	11.0	32.52	5.2	8.8	0.99	15.0
49-9		49 17.4	127 21.3	2.2	11.0	32.58	3.9	8.9	0.98	15.6
53-8	23 Aug. 86	48 49.6	128 38.7	18.0	13.8	32.22		0.1	0.44	4.1
55-8		48 19.0	126 26.7	19.9	9.2	32.39	1.7			
58-8		48 25.9	126 13.7	17.4	11.4	32.35	1.5	3.5	0.69	8.6
60-1		48 29.5	126 07.1	13.0	9.7	32.41	1.9			
60-2		48 29.5	126 07.1	5.2	13.2	31.83	2.0			
61-7		48 33.0	126 00.5	2.9	12.1	31.96	5.0	4.3	0.49	7.7
63-6		48 39.9	125 47.4	1.4	10.3	32.50	17.7	9.5	0.86	13.5
71-2	24 Aug. 86	48 58.4	125 47.1	24.8	10.1	31.75	8.7	17.6	1.87	28.3
75-6		48 46.2	126 10.2	17.9	10.5	32.15	11.5	11.3	1.21	16.3
77-8		48 39.2	126 23.4	13.2	12.3	32.26	2.4	2.3	0.58	7.1
79-8		48 32.2	126 36.6	21.5	11.8	32.32	1.6	4.2	0.65	9.4
80-6		49 13.7	126 56.7	11.3	9.5	32.59	6.6	13.1	0.99	14.5
83-7	25 Aug. 86	49 08.1	127 17.2	29.4	12.4	32.21	1.4			
84-7		48 17.5	128 19.3	26.6	10.2	32.39	1.4	8.4	1.12	12.7
84-8		48 17.5	128 19.3	17.5	12.2	32.18	2.6	3.4	0.75	8.3
84-9		48 17.5	128 19.3	2.4	14.8	31.97	0.9	0.1	0.51	6.2
98-8	26 Aug. 86	48 13.5	128 17.6	20.1	12.5	32.13	1.3	2.9	0.66	9.6

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
107-7	27 Aug. 86	48 09.1	128 20.0	31.0	9.6	32.49	1.9	8.3	1.08	14.4
107-8		48 09.1	128 20.0	21.0	11.4	32.30	1.9	4.3	0.78	9.0
107-9		48 09.1	128 20.0	1.9	14.6	31.99	0.8		0.47	7.1
109-7		48 11.6	128 18.3	39.5	11.9	32.22	1.3	1.9	0.65	8.3
121-7	28 Aug. 86	48 08.5	126 00.0	32.8	10.1	32.42	0.7	3.1	0.81	10.1
121-9		48 08.5	126 00.0	6.3	16.6	32.03	0.2	0.0	0.37	5.8
U18/1300	18 Aug. 86	50 22.4	125 38.8	0.0			2.0			
U18/1500		50 26.5	126 00.6	0.0			0.1			
U18/1700		50 30.3	126 32.2	0.0						
U18/1900		50 36.6	127 01.7	0.0			5.1			
U18/2100		50 48.6	127 24.6	0.0			24.6			
U18/2300		50 29.5	126 15.5	0.0			3.8		1.45	
U19/0300	19 Aug. 86	50 41.5	127 15.3	0.0			9.3	5.0	0.69	9.3
U19/1100		50 44.5	128 30.5	0.0			4.1			
U19/2115		50 00.7	128 20.2	0.0			4.7			
U20/1300	20 Aug. 86	49 25.1	127 47.1	0.0			10.9	11.2	1.15	16.9
U24/1100	24 Aug. 86	48 51.0	126 00.8	0.0			3.5			
U25/0500	25 Aug. 86	49 13.6	126 56.8	0.0			3.3			
U25/0700		49 09.5	127 12.2	0.0			3.2			

CRUISE 86-04

Taxon	Station	4-6	6-8	8-9	9-9	14-9	16-8	17-9	18-9	21-9
dinobryon sueicum				10	20					10
dictyocha speculum		2		12	6		9			
pedinella sp.239		2			3	4	10			9
apedinella spinifera		8	4	14	7	21	92	33	14	19
imantonia rotunda	784		1484	56	2268	1036	2660	448	6897	616
corymbellus aureus					7					5
chrysochro spp. 6-10										16
phaecystis pouchetii		51								
minutocell scriptus									57	
detonula pumila		38			4					
leptoclin danicus		63	8	2		6		13	59	7
leptoclin minimus							23		10	2
leptoclin mediterraneus		3				10		14		88
paralia sulcata		7								
stephanopy nipponica		4								
skeletonem costatum	5770		134	5	20	1722	6	1989	897	105
thalassios spp.				1						
thalassios rotula		41				45	1	73	4	3
thalassios angulata		11	3		4					6
thalassios anguste-line		4	3			14	3	11	6	
thalassios nordenskioldi		81	17	6	18	950	33	1000	1100	107
thalassios pacifica		23	31	15	33	145	25	145	150	21
thalassios eccentrica /symmetrica		3	2			5		10	5	
thalassios conferta		82	126	178	550	121	1140	148	560	254
coscinodis spp.			1							
asterompha heptactis						2		1	2	
biddulphi longicurvis		3								
eucampia zodiacus	290			2			30	190	26	
cerataulin pelagica		15			3		7	6	2	4

Continued	4–6	6–8	8–9	9–9	14–9	16–8	17–9	18–9	21–9
<i>ditylum brightwellii</i>	5				7		2	2	
<i>chaetocero sp.b</i>	10	48	160	110	30	500	88	130	112
<i>chaetocero sp.d</i>								12	6
<i>chaetocero sp.m</i>	41					10	30	20	
<i>chaetocero affine</i>					48				
<i>chaetocero boreale</i>	1					2			
<i>chaetocero compressum</i>	133			1100	6030	1080	2190	8190	508
<i>chaetocero convolutum /concavicornis</i>	44				3		6		10
<i>chaetocero constrictum /vanheurckii</i>					200		436	487	82
<i>chaetocero curisetum</i>	25		4		204				
<i>chaetocero danicum</i>	3		1	3	2	2			
<i>chaetocero debile</i>	2520	18	32	29	4780		3025	7500	86
<i>chaetocero decipiens</i>	12							16	
<i>chaetocero decipiens f.singularis</i>	4				2		10		
<i>chaetocero diadema</i>	2						24	91	7
<i>chaetocero didymum</i>	3		8		20		13		6
<i>chaetocero filiforme</i>					57		114	285	
<i>chaetocero laciniatum</i>	384	50	24	22	117	6	72	97	30
<i>chaetocero lorenzianum</i>	10				73		44	94	
<i>chaetocero perpusillum</i>	130	80	22	20	54	52	190	170	22
<i>chaetocero radicans</i>	400	4			2100	10	1820	7200	254
<i>chaetocero seiracanthum</i>	6								
<i>chaetocero septentriona</i>	63	4			17		26		3
<i>chaetocero simile</i>	89	8	26	27	12	12	18	78	4
<i>chaetocero sociale</i>	11120	30		24	90		20		45
<i>chaetocero subtile</i>	7		6	7	3	62		10	6
<i>chaetocero vivibile</i>					5	7	6	5	
<i>bacteriast delicatula</i>					5			6	
<i>rhizosolen alata f.gracillima</i>						1	2		
<i>rhizosolen delicatula</i>	8				3				
<i>rhizosolen fragilissima</i>	10	1							

Continued	4–6	6–8	8–9	9–9	14–9	16–8	17–9	18–9	21–9
<i>rhizosolen fragilissima</i> v.1	17	9	5	7	15		6	14	5
<i>rhizosolen setigera</i>	59	14	3		37	4	43	43	
<i>rhizosolen stolterfothi</i>	4				9	2	8	1	
<i>pennales</i> spp. 21–40									3
<i>fragilaria</i> spp.							5		
<i>asterionel glacialis</i>	31				298	4	292	258	11
<i>thalassiot longissima</i>		15							
<i>thalassion bacillaris</i>	9	7	5	6	5			17	
<i>thalassion nitzschoides</i>	186	34	15	4	114	11	117	143	26
<i>naviculace</i> spp.	3		9	19	26	3	29	59	30
<i>pleurosigm acutum</i>								4	
<i>tropidonei antarctica</i> v. <i>polyplasta</i>			2	22			4		12
<i>tropidonei lepidoptera</i>							2		
<i>nitzschia americana</i>	304	8	2		154	4	160	232	3
<i>nitzschia brevirostris</i>					3	2			
<i>nitzschia closterium</i>	3			3	4	3	5	7	
<i>nitzschia closterium</i> v. <i>striatula</i>				48					112
<i>nitzschia cylindroform</i>	41	540	446	1950	7		13	22	1710
<i>nitzschia delicatissim</i>	198	20	12	22	129	20	147	296	15
<i>nitzschia subfraudulen</i> / <i>fraudulen</i>	48	2			15	10	4	36	
<i>nitzschia granii</i> v. <i>curvata</i>	4	3	4	3	7		11	6	11
<i>nitzschia helmii</i>					14	60			10
<i>nitzschia lineola</i>	210	3	1		11	13	6	63	
<i>nitzschia longissima</i>	48	8	51	48	59	173	62	127	19
<i>nitzschia norwegica</i>					1			12	7
<i>nitzschia pseudodelica</i>									
<i>nitzschia pungens</i>	45				26	28	23	35	
<i>nitzschia seriata</i>	59	7			7	2	6	7	1
<i>nitzschia subcurvata</i>	10			22					15
<i>nitzschia subpacifica</i>	22	6	4	2	75	470	69	390	7
<i>cylindroth fusiformis</i>	4			3	6	37	7	2	

Continued	4–6	6–8	8–9	9–9	14–9	16–8	17–9	18–9	21–9
nephroelm spp. /bipedinomon		57		57		128		114	
tetraselmi spp. /pyramimonas	29	11		4	15	81	22	31	23
cymbomonas spp.		3		55			2	5	5
pterosperm spp. /pachysphaer						6			2
eutreptiel spp.		3	2	4			2		3
prorocentr balticum		3		3		7			6
prorocentr gracile		2			6	73	10	12	
prorocentr minimum	3		3	6		9			
dinophysis spp.						3			
gymnodiniu spp.	19	53	60	158	29	73	28	77	26
gymnodiniu gracilentum		48	5	62	18	61	10	62	26
katodinium rotundatum			6	7	22	33	25	36	15
peridiniac spp.	6	9	10	29	11	60	5	25	7
heterocaps triquetra			6	5		10		14	2
alexandriu catenella		1	1			2			
ceratium furca						4			
ceratium tripos	1								
raphidophy sp.2		15		74		33		8	22
heterosigm akashiwo				12	6	2		83	2
chattonell sp.				10					
cryptomona spp. 5–10	11	680	1150	740	92	69	139	1800	1180
cryptomona spp. 11–20	4	265	460	1470	55	197	84	81	270
cryptomona spp. 21–30		22	10	37	6	8		11	71
hemiselmis spp. 4–6		57	114	57	28			456	171
mesodinium rubrum	4			1		6			4

CRUISE 86-04

Taxon	Station	23-9	24-7	24-8	24-9	37-8	49-6	49-7	49-8	49-9
<i>dinobryon sueicum</i>		5	20		30					
<i>dictyocha speculum</i>		8				2				2
<i>pedinellac</i> sp.239		3		3						
<i>apedinella spinifera</i>		15	4	12		10		16	11	18
<i>imantonia rotunda</i>	2223		5985	3192	5016	3420	112	2280	924	616
<i>corymbellus aureus</i>			5		6	24				
<i>chrysocro sp.1</i>									28	
<i>chrysocro spp. 6-10</i>		8								
<i>minutocell scriptus</i>								28		
<i>corethron criophilum</i>										2
<i>leptocylin danicus</i>		7	110	143	66	40	4	61	54	15
<i>leptocylin minimus</i>		34	30	99	44	60		16	8	17
<i>leptocylin mediterraneus</i>		2					3			
<i>stephanopy nipponica</i>				2		9				
<i>skeletonem costatum</i>		6	1407	1040	663	3120	697	2912	689	1144
<i>thalassios</i> spp.							2			
<i>thalassios sp.1</i>				755						
<i>thalassios rotula</i>			6	34	26	40	18	28	8	9
<i>thalassios angulata</i>		4	3	4						
<i>thalassios anguste-line</i>			3	2	5			13		
<i>thalassios nordenskioldi</i>		23	1455	1240	1310	3210	300	2660	1020	1240
<i>thalassios pacifica</i>		23	205	175	265	220	20	117	44	36
<i>thalassios eccentrica /symmetrica</i>				7		10			5	
<i>thalassios mendiolana</i>				3					4	
<i>thalassios conferta</i>		340	620		630	505	44	910	755	595
<i>asterompha</i> sp.1										1
<i>asterompha heptactis</i>			3			4				
<i>biddulphi longicrus</i>						1				
<i>eucamptia zoodiacus</i>			6	10	21	104	36	44	30	4

Continued	23–9	24–7	24–8	24–9	37–8	49–6	49–7	49–8	49–9
<i>cerataulin pelagica</i>	3	8	3		30	2	12	3	
<i>ditylum brightwellii</i>			9	8	20		3	1	2
<i>chaetocero sp.b</i>	110	790	660	460	570	28	460	90	100
<i>chaetocero sp.d</i>		11	10	7	20		21		16
<i>chaetocero sp.m</i>		65	24	4	37	24	42	28	42
<i>chaetocero affine</i>		21	25						
<i>chaetocero compressum</i>	16	12350	9420	10830	24220	2700	16210	10150	4540
<i>chaetocero convolutum /concavicornis</i>	12	11					5		
<i>chaetocero constrictum /vanheurckii</i>		301	247	363	1214	152	1414	429	39
<i>chaetocero danicum</i>		8	1	2	11		4		3
<i>chaetocero debile</i>	60	627	24	363	4108	506	2548	1234	247
<i>chaetocero decipiens</i>		4	8	6					
<i>chaetocero decipiens f.singularis</i>		5	4	6	47	3	7		4
<i>chaetocero diadema</i>		140	61	38	580	28	182	52	39
<i>chaetocero didymum</i>					28	9	16		
<i>chaetocero filiforme</i>		672	336	280	84		57		
<i>chaetocero lacinosum</i>	4	148	80	22	211	12	28	7	4
<i>chaetocero lorenzianum</i>		60	46	18	80	18	104	12	
<i>chaetocero pelagicum</i>		10			14	6			
<i>chaetocero perpusillum</i>	16	38	30	28			390		
<i>chaetocero radicans</i>		1797	3142	2597	11690	1465	10420	699	324
<i>chaetocero septentriona</i>	5	7	4	6	4			6	12
<i>chaetocero simile</i>	10	60	33	39	66	6	28	14	15
<i>chaetocero sociale</i>	7					4			
<i>chaetocero subtile</i>	7	9	11	10			15		
<i>chaetocero vivisibile</i>		75	65	11	104	4	312	6	
<i>bacteriast delicatula</i>		18	2	4	11	6	47	6	
<i>rhizosolen alata f.alata</i>					1				
<i>rhizosolen alata f.gracillima</i>			3		10				
<i>rhizosolen delicatula</i>		2	3	2	6		9		
<i>rhizosolen fragilissima</i>		7	2	2	14			4	4

Continued	23–9	24–7	24–8	24–9	37–8	49–6	49–7	49–8	49–9
<i>rhizosolen fragilissima</i> v.1	5	93	36	44	93		130	93	28
<i>rhizosolen setigera</i>	2	92	84	169	104	14	62	17	39
<i>rhizosolen stolterfothi</i>			5		14		18	3	5
<i>pennales</i> spp. 0–20						2			
<i>pennales</i> spp. 21–40			4					2	
<i>asterionel glacialis</i>		312	194	196	595	95	444	20	50
<i>thalassion bacillaris</i>		10	20	12	8		11	11	3
<i>thalassion nitzschoides</i>	14	341	374	364	200	70	214	74	20
<i>naviculace</i> spp.	12	44	48	36	35	14	39	42	28
<i>navicula calida</i>								6	
<i>pleurosigm acutum</i>		2	7	3	6	1		2	2
<i>pleurosigm angulatum</i>		1							
<i>tropidonei antarctica</i> v. <i>polyplasta</i>	16	11	24	7	38	3	8	12	18
<i>tropidonei lepidoptera</i>				2					
<i>nitzschia americana</i>	4	165	132	260	1130	36	510	246	143
<i>nitzschia brevirostris</i>			7	15	5	2	14	11	
<i>nitzschia closterium</i>	7	15	2	4	9		13		12
<i>nitzschia closterium</i> v. <i>striatula</i>	15	5		21	10				
<i>nitzschia cylindroform</i>	985	30	8	7	52	47	132	62	132
<i>nitzschia delicatissim</i>	14	230	264	332	1080	40	820	376	220
<i>nitzschia fraudulenta</i>		35	20	40	50	31	100	30	81
<i>nitzschia granii</i> v. <i>curvata</i>	5	6	3	2	13	3		2	
<i>nitzschia heimii</i>		92	89	77	102		104	62	22
<i>nitzschia lineola</i>	1	43	40	33	18	3	10	15	8
<i>nitzschia longissima</i>	20	142	150	147	222	7	214	117	78
<i>nitzschia norwegica</i>		4		6	5				
<i>nitzschia pseudodelica</i>				1			5		
<i>nitzschia pungens</i>		5	13	22	41	6	23	4	
<i>nitzschia seriata</i>	2	6		11	6		4		3
<i>nitzschia subcurvata</i>	2							8	
<i>nitzschia subpacifica</i>	18	1340	1360	1240	1150	13	785	650	415

Continued	23–9	24–7	24–8	24–9	37–8	49–6	49–7	49–8	49–9
<i>cylindroth fusiformis</i>		5	18	11	10		15	7	
<i>nephroelm spp. /bipedinomon</i>					28				28
<i>tetraselmi spp. /pyramimonas</i>	5	7	30	25	65			47	20
<i>cymbomonas spp.</i>					10			5	5
<i>pterosperm spp. /pachysphaer</i>	3		6				5		7
<i>eutreptiel spp.</i>		4	3	2	6			3	
<i>prorocentr gracile</i>	3	4	20	5	12		26	14	38
<i>amphidiniu spp.</i>	2								
<i>gymnodiniu spp.</i>	84	71	95	125	91	25	96	43	30
<i>gymnodiniu gracilentum</i>	40	31	34	18	38	7	44	20	13
<i>katodinium rotundatum</i>	10	86	59	87	20	4	102	38	34
<i>peridiniac spp.</i>		8	80	51	39	4	34	19	12
<i>heterocaps triquetra</i>				2	4				
<i>alexandriu catenella</i>					3				
<i>raphidophy sp.2</i>	21	16	18	7	13		16	26	9
<i>heterosigm akashiwo</i>	3	32	77	77	26		43	39	270
<i>cryptomona spp. 5–10</i>	2570	1760	1220	1350	520	26	1770	1680	625
<i>cryptomona spp. 11–20</i>	430	230	240	330	78	29	440	560	295
<i>cryptomona spp. 21–30</i>	20	21	30	26	12		17	38	29
<i>hemiselmis spp. 4–6</i>	57	616	112	84	140	56	224	56	56
<i>mesodinium rubrum</i>		5	22	5	12				

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TAXON	STATION	53-8	55-8	58-8	60-1	60-2	61-7	63-6	71-2	75-6
<i>solenicola setigera</i>			120				64	2310		990
<i>dinobryon sueicum</i>		20		10		20	160	110		60
<i>dictyocha speculum</i>		4		1			2			2
<i>pedinella sp.239</i>		8	10							
<i>apedinella spinifera</i>		7	12	12		12	7	10		
<i>meringosiph mediterranea</i>		20	10				20			
<i>imantonia rotunda</i>		1596	224	1148	112	1204	3135	1710	112	364
<i>corymbellus aureus</i>		21	12			28		27		35
<i>chrysochro spp. 6-10</i>								112		
<i>corethron criophilum</i>					3					2
<i>leptoclytin danicus</i>		6	6	5	5	15	30	11	10	47
<i>leptoclytin minimus</i>						4	18			5
<i>leptoclytin mediterraneus</i>			8				7	105		6
<i>stephanopytis turris</i>							5	3	4	5
<i>skeletonema costatum</i>		120	26	146	30	10	293	2587	14	2132
<i>thalassios spp.</i>								4	1	3
<i>thalassios rotula</i>		2		5	4		5	214		75
<i>thalassios angulata</i>								3		2
<i>thalassios angusteline</i>			4	2		2	4	5	12	17
<i>thalassios nordenskioldii</i>			18	70	122	20	57	65	4	154
<i>thalassios pacifica</i>		6		14	22	11	78	58	2	45
<i>thalassios eccentrica /symmetrica</i>								4		4
<i>thalassios mendiolana</i>										2
<i>thalassios conferta</i>		196	282	665	131	655	825	280		200
<i>actinoptyc senarius</i>								2	1	
<i>asterompha heptactis</i>			2		1		4	3		
<i>biddulphi longicurvis</i>							41	30	15	22
<i>eucampia zooidiacus</i>		4	7	6		2	768	637	324	831
<i>cerataulin pelagica</i>			4				3		2	12

Continued	53–8	55–8	58–8	60–1	60–2	61–7	63–6	71–2	75–6
<i>ditylum brightwellii</i>						3	12		5
<i>chaetocero sp.b</i>	82	24	64	42	30	260	104		50
<i>chaetocero sp.d</i>		13				16			
<i>chaetocero sp.m</i>	6		6	6		42	130	12	32
<i>chaetocero affine</i>						9		5	
<i>chaetocero boreale</i>						138	2		4
<i>chaetocero compressum</i>	153	22	1550	1520	2080	5460	5305		2058
<i>chaetocero convolutum /concavicornis</i>	8	3	8				2		
<i>chaetocero constrictum /vanheurckii</i>	48	4	7	24	15	2860	2912	68	1320
<i>chaetocero curisetum</i>						117	16		48
<i>chaetocero danicum</i>			2			8	8	3	45
<i>chaetocero debile</i>	390	16	90	36	35	1300	8060		1170
<i>chaetocero decipiens</i>							11		5
<i>chaetocero decipiens f.singularis</i>	10		2	1		56	32		20
<i>chaetocero diadema</i>	6					48	17		78
<i>chaetocero didymum</i>				3		34	97	6	21
<i>chaetocero filiforme</i>							57		
<i>chaetocero laciniatum</i>	34	6	4	4		12	36		82
<i>chaetocero lineatum</i>	2	14				3			
<i>chaetocero lorenzianum</i>	12	2	3			208	122	11	160
<i>chaetocero pelagicum</i>					4		13		
<i>chaetocero perpusillum</i>	14				24	60	30		
<i>chaetocero radicans</i>	6					303	884	2	343
<i>chaetocero septentriona</i>						110	230		200
<i>chaetocero simile</i>				6		16			
<i>chaetocero sodale</i>					12	358	624		1460
<i>chaetocero visavisible</i>	11		8	5	10				35
<i>bacteriast delicatula</i>	30	2		2			6		
<i>rhizosolen alata f.gracillima</i>	6	5		2		5	2		
<i>rhizosolen delicatula</i>						13	12		17
<i>rhizosolen fragilissima</i>		2				10		9	23

Continued	53–8	55–8	58–8	60–1	60–2	61–7	63–6	71–2	75–6
<i>rhizosolen fragilissima</i> v.1	232	22	124	26	252	165	21		
<i>rhizosolen setigera</i>	8	15	7			20	16	3	2
<i>rhizosolen stolterfothi</i>	2	2	1				8		
<i>pennales</i> spp. 0–20						2			
<i>asterionel glacialis</i>	40	3	17	8		4	52	1	143
<i>thalassiot longissima</i>	4								
<i>thalassion bacillaris</i>	20	17	8	3	7			6	
<i>thalassion nitzschoides</i>	122	62	24	30	16	78	74		100
<i>naviculace</i> spp.	27	46	11	6	7	18	27		8
<i>navicula calida</i>					1				
<i>pleurosigm acutum</i>							1		
<i>pleurosigm angulatum</i>								1	
<i>tropidonei antarctica</i> v. <i>polyplasta</i>	12	6	32	34	8	17	12	4	2
<i>tropidonei lepidoptera</i>						3			5
<i>nitzschia</i> spp.	11								
<i>nitzschia americana</i>	13	2	4	2		790	1250	55	910
<i>nitzschia brevirostris</i>		2	4	3		5	5		5
<i>nitzschia closterium</i>	8		1		5		16		4
<i>nitzschia closterium</i> v. <i>striatula</i>	39	82	15	3	17	53	35		
<i>nitzschia cylindroform</i>	115	280	920	230	181	132	46		
<i>nitzschia delicatissim</i>	222	8	40	8	38	442	725	10	364
<i>nitzschia subraudulen</i> / <i>raudulen</i>	7	2	5	4	3	6	120	32	164
<i>nitzschia grani</i> v. <i>curvata</i>			2						
<i>nitzschia heimii</i>	69	8	10		6	11			
<i>nitzschia lineola</i>	5		2		12	12	12	10	
<i>nitzschia longissima</i>	52	22	36	34	40	91	62	19	182
<i>nitzschia pseudodelica</i>	2		5	1					
<i>nitzschia pungens</i>						8	3030	5340	1980
<i>nitzschia seriata</i>						5	10	86	72
<i>nitzschia subcurvata</i>	65	2	3		5				37
<i>nitzschia subpacifica</i>	23	36	50	38	117	220	20	3	4

Continued	53–8	55–8	58–8	60–1	60–2	61–7	63–6	71–2	75–6
<i>nitzschia turgiduloide /turgidula</i>	1								
<i>cylindroth fusiformis</i>	4	2			2	4			2
<i>nephroselm spp. /bipedinomon</i>		57			28	140			
<i>tetraselmi spp. /pyramimonas</i>	9			6	42	19	13		
<i>cymbomonas spp.</i>	12				7				
<i>pterosperm spp. /pachysphaer</i>					15	8			
<i>eutreptiel spp.</i>				3	4	37	12	2	
<i>prorocentr balticum</i>				2	4				
<i>prorocentr gracile</i>	3	7			14			2	
<i>dinophysis spp.</i>						1	2		
<i>gonyaulax rugosum</i>		1						2	
<i>amphidiniu spp.</i>				2					
<i>gymnodiniu spp.</i>	198	192	94	198	294	214	38	66	12
<i>gymnodiniu gracillementum</i>	26	53	66	49	36	106	12	21	22
<i>katodinium rotundatum</i>			14		23	15			
<i>peridiniac spp.</i>	15	18	15	5	28	16	4	12	3
<i>heterocaps triquetra</i>	2				2				
<i>alexandriu catenella</i>					2		3		
<i>ceratium fusus</i>						1	2		4
<i>ceratium tripos</i>	1								
<i>raphidophy sp.2</i>	14	131	130	102	84	44	17		17
<i>heterosigm akashiwo</i>	5	9				8			
<i>chattonell sp.</i>					10				
<i>cryptomona spp. 5–10</i>	312	165	465	760	2010	585	425	6	163
<i>cryptomona spp. 11–20</i>	194	49	131	164	1320	230	160	10	30
<i>cryptomona spp. 21–30</i>	12			5	23	28	11		5
<i>hemiselmis spp. 4–6</i>						56	57		28
<i>mesodinium rubrum</i>			2		19	11		3	

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TAXON	STATION	77-8	79-8	80-6	83-7	84-7	84-8	84-9	96-8	100
<i>solenicola setigera</i>		840	84		520	62	930	115	23	
<i>dinobryon sueicum</i>		50	120	30	50			20		
<i>dictyocha speculum</i>		2	8	5	4			6	8	
<i>pedinella sp.239</i>							8	3	10	
<i>apedinella spinifera</i>		4	7							
<i>meringosiph mediterranea</i>		150	50		20		20	10	30	
<i>imantonia rotunda</i>		9576	3705	5586	3135	168	168	1036	1540	
<i>corymbellus aureus</i>		54	18		35				14	
<i>chrysochro spp. 6-10</i>									28	
<i>centrales spp.</i>					4					
<i>corethron criophitum</i>								4		
<i>leptocylin danicus</i>		8	17	46		7	20		5	
<i>leptocylin minimus</i>				28	11					
<i>leptocylin mediterraneus</i>		15	2	4	124	2	2	18	6	
<i>skeletonem costatum</i>		453	160	669		226	235	9	42	
<i>thalassios spp.</i>				5	3				2	
<i>thalassios rotula</i>			4	7		2	2			
<i>thalassios anguste-line</i>		3	4	2	29		2	4		
<i>thalassios nordenskioldii</i>		56	76	910	39	70	88	14	14	
<i>thalassios pacifica</i>		66	22	152		31	18	7	16	
<i>thalassios eccentrica /symmetrica</i>		1		4					2	
<i>thalassios conferta</i>		980	1120	470	580	298	960		885	
<i>coscinodis spp.</i>							1			
<i>actinoptyc senarius</i>		2				1	2			
<i>asterompha sp.1</i>			1		2					
<i>asterompha heptactis</i>		5	4	3					2	
<i>eucampia zodiacus</i>		80	2	12	7	3		3		
<i>cerataulin pelagica</i>		4	1		11		4			
<i>ditylum brightwellii</i>				2	1		3			

Continued	77–8	79–8	80–6	83–7	84–7	84–8	84–9	98–8
<i>chaetocero sp.b</i>	365	190	395	50	76	60	10	300
<i>chaetocero sp.d</i>	27	20	19	7		7	13	17
<i>chaetocero sp.m</i>	14	16	42	25	6	40	38	
<i>chaetocero boreale</i>	4							
<i>chaetocero compressum</i>	1010	363	8610	143	604	1305	389	324
<i>chaetocero convolutum</i> /concavicornis	70	34		26	4	29	15	8
<i>chaetocero constrictum</i> /vanheurckii	647	96	546	110	72	125	37	36
<i>chaetocero curvisetum</i>	11				3			
<i>chaetocero danicum</i>	5	2	3		1	2		1
<i>chaetocero debile</i>	756	128	43	224	830	1326	572	249
<i>chaetocero decipiens</i>	4				2			2
<i>chaetocero decipiens</i> f. <i>singularis</i>	5	7	4			3	7	
<i>chaetocero diadema</i>	117	34	81	10	29	8	6	32
<i>chaetocero didymum</i>	14	6				7		
<i>chaetocero filiforme</i>	57							
<i>chaetocero laciniatum</i>	123	24	36	22	17	59	48	18
<i>chaetocero lineatum</i>	7	1		1				16
<i>chaetocero lorenzianum</i>	45	14	69	26	19	7	3	
<i>chaetocero pelagicum</i>					11	6		
<i>chaetocero perpusillum</i>	60	40		20			20	4
<i>chaetocero radicans</i>	46	11	1910	14	40	93	20	16
<i>chaetocero seiracanthum</i>	134			8	2	8	7	2
<i>chaetocero septentriona</i>	6			9				
<i>chaetocero simile</i>	5		9			17		
<i>chaetocero sociale</i>	84			16		12	12	
<i>chaetocero subtile</i>						2		
<i>chaetocero vivibile</i>	254	4	18			44	4	11
<i>bacteriast delicatula</i>	106	10	1	125		39	58	18
<i>rhizosolen</i> spp.		5						
<i>rhizosolen alata</i> f. <i>alata</i>				2		1		
<i>rhizosolen alata</i> f. <i>gracillima</i>	22	2		3		2	6	2

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Continued	77–8	79–8	80–6	83–7	84–7	84–8	84–9	98–8
<i>rhizosolen delicatula</i>		6						
<i>rhizosolen fragilissima</i>	25		3		2		2	4
<i>rhizosolen fragilissima</i> v.1	1185	524	66	82	10	125		40
<i>rhizosolen setigera</i>	26		39	19	7	26		7
<i>rhizosolen stolterfothi</i>	2		7				16	3
<i>pennales</i> spp. 0–20	5				2			
<i>fragilaria</i> spp.	7	5						
<i>asterionel glacialis</i>	4	5	246	9	35	55	3	5
<i>thalassiot longissima</i>	8		6	6				3
<i>thalassion bacillaris</i>	45	10	19	30	2	3		
<i>thalassion nitzschoides</i>	525	146	117	249	101	104	40	64
<i>naviculace</i> spp.	61	21	44	34	5	10		52
<i>pleurosigm acutum</i>			2					
<i>tropidonei antarctica</i> v. <i>polyplasta</i>	46	58	14	15	21	40		29
<i>tropidonei lepidoptera</i>	3							
<i>nitzschia</i> spp.	4			7				
<i>nitzschia americana</i>	163	33	390	5	12	2		
<i>nitzschia bicapitata</i>				3				
<i>nitzschia brevirostris</i>		5	4					
<i>nitzschia closterium</i>	70	3				2	17	6
<i>nitzschia closterium</i> v. <i>striatula</i>	305	140	18	168	4	14	26	28
<i>nitzschia cylindroform</i>	400	494	85	252	396	1155		340
<i>nitzschia delicatissim</i>	570	495	346	141	13	117	40	44
<i>nitzschia subraudulen</i> / <i>fraudulen</i>	5	2	37	8	7	5	2	4
<i>nitzschia granii</i> v. <i>curvata</i>				3		2		
<i>nitzschia heimi</i>	20	4	164			3	2	
<i>nitzschia lineola</i>	39	9	30	5		3	6	2
<i>nitzschia longissima</i>	170	65	181	32	23	40	23	43
<i>nitzschia pseudodelica</i>	4	4		3				
<i>nitzschia pungens</i>	41		27					5
<i>nitzschia seriata</i>	16		10			8	2	

Continued	77–8	79–8	80–6	83–7	84–7	84–8	84–9	98–8
<i>nitzschia subcurvata</i>	104	126		136		21	20	4
<i>nitzschia subpacifica</i>	16	15	820	30	10	21	15	32
<i>nitzschia turgiduloide /turgidula</i>	7		18	1				1
<i>cylindroth fusiformis</i>	2	1	5			2		6
<i>nephrolelm spp. /bipedinomon</i>				57			28	28
<i>cymbomonas spp.</i>							7	
<i>pterosperm spp. /pachysphaer</i>				5				
<i>eutreptiel spp.</i>							5	
<i>prorocentr spp.</i>								3
<i>prorocentr gracile</i>	2	3					174	
<i>dinophysis spp.</i>	3							
<i>gonyaulax rugosum</i>							9	
<i>gymnodiniu spp.</i>	246	290	140	312	8	55	117	148
<i>gymnodiniu gracilentum</i>	254	690	326	570	37	48	18	22
<i>katodinium rotundatum</i>	4	34	82	10				10
<i>peridiniac spp.</i>	15	8	4	15	3	22	52	23
<i>heterocaps triquetra</i>							17	
<i>alexandriu catenella</i>							12	
<i>ceratium tripos</i>	1						2	
<i>raphidophy sp.2</i>	50	80		27	10	59		15
<i>heterosigma akashiwo</i>	14	2			2			
<i>cryptomona spp. 5–10</i>	750	1551	755	314	234	202	545	276
<i>cryptomona spp. 11–20</i>	138	720	395	100	160	121	395	45
<i>cryptomona spp. 21–30</i>	10							11
<i>hemiselmis spp. 4–6</i>	448	140	1083	280				
<i>mesodinium rubrum</i>	8		5	2		2		

CRUISE 86-04

TAXON	STATION	107-7	107-8	107-9	109-7	121-7	121-9
<i>solenicola setigera</i>				162	180	62	
<i>dinobryon sueicum</i>			10	20			
<i>dictyocha speculum</i>		5	22	9		3	
<i>pedinella sp.239</i>		4	4				
<i>meringosiph mediterranea</i>		10	20	20			
<i>imantonia rotunda</i>		112	1120	1036	1064	140	140
<i>corymbellus aureus</i>				8			
<i>chrysochro spp. 6-10</i>					20		
<i>corethon criophilum</i>		1	6				
<i>detonula pumila</i>		3					
<i>leptocylus danicus</i>		5	6				
<i>leptocylus mediterraneus</i>		17	2	35	46	28	
<i>skeletonema costatum</i>		446	64	16	4		
<i>thalassios nordenskioldii</i>		80	90	31	12	4	
<i>thalassios pacifica</i>		22	30	7	2		
<i>thalassios conferta</i>		90	595	820	345	115	2
<i>eucampia zodiacus</i>		17	6	12			
<i>cerataulin pelagica</i>				3			
<i>chaetoceros sp.b</i>		18	72	48	86		
<i>chaetoceros sp.d</i>			5				
<i>chaetoceros sp.m</i>			10	6	4		
<i>chaetoceros compressum</i>		898	2390	356	19		4
<i>chaetoceros convolutum /concavicornis</i>		6	36	43	12		
<i>chaetoceros constrictum /vanheurckii</i>		124	25	29			
<i>chaetoceros curvisetum</i>			5	15			
<i>chaetoceros debile</i>		832	876	1080	28	12	
<i>chaetoceros decipiens</i>		2	9				
<i>chaetoceros diadema</i>		30	15	6			
<i>chaetoceros didymum</i>		2	1				

Continued	107-7	107-8	107-9	109-7	121-7	121-9
<i>chaetocero laevisum</i>	9	11	18			
<i>chaetocero lineatum</i>		2		3	2	
<i>chaetocero lorenzianum</i>	8		2		4	
<i>chaetocero perpusillum</i>		12				
<i>chaetocero radicans</i>	49	141	25			
<i>chaetocero seiracanthum</i>			22			
<i>chaetocero septentriona</i>		5				
<i>chaetocero simile</i>	10	15				
<i>chaetocero sociale</i>	28	98				
<i>chaetocero vivibile</i>	15	73	15			
<i>bacteriast delicatula</i>	9	14	432	6		
<i>rhizosolen alata f.gracillima</i>			10	4	24	
<i>rhizosolen delicatula</i>	2					
<i>rhizosolen fragilissima</i>		3				
<i>rhizosolen fragilissima v.1</i>	15	78	122	12	12	
<i>rhizosolen setigera</i>	3	6	3			
<i>rhizosolen stolterfothi</i>	2		12			
<i>asterionel glacialis</i>	45	17				
<i>thalassiot longissima</i>		2	9			
<i>thalassion bacillaris</i>	5	11	5			
<i>thalassion nitzschoides</i>	17	64	52	16	3	1
<i>naviculace spp.</i>	6	62	55	28	3	16
<i>tropidonei antarctica v.polyplasta</i>		34	11	2	4	
<i>nitzschia americana</i>	7				4	
<i>nitzschia closterium</i>		2	17			
<i>nitzschia closterium v.striatula</i>		23	29			
<i>nitzschia cylindroform</i>	264	505	396	740	152	
<i>nitzschia delicatissim</i>	17	61	206		5	
<i>nitzschia subraudulen /raudulen</i>	1	1	5		2	
<i>nitzschia heimii</i>			7			
<i>nitzschia lineola</i>			11			

Continued	107-7	107-8	107-9	109-7	121-7	121-9
<i>nitzschia longissima</i>	15	31	60	6		
<i>nitzschia pseudodelica</i>			11			
<i>nitzschia pungens</i>		3				
<i>nitzschia subcurvata</i>		14	24	3		
<i>nitzschia subpacifica</i>	6	20	13	3		
<i>cylindroth fusiformis</i>		5	3	4		
<i>cymbomonas spp.</i>			6			
<i>pterosperm spp. /pachysphaer</i>			2			
<i>halosphaer spp.</i>	1		16			
<i>prorocentr spp.</i>		2				
<i>prorocentr balticum</i>	6			2		
<i>prorocentr gracile</i>			9			10
<i>amphidiniu spp.</i>			2			
<i>gymnodiniu spp.</i>	75	202	132	172	80	13
<i>gymnodiniu gracilentum</i>	14	21		114	214	
<i>katodinium rotundatum</i>			4			
<i>peridinlac spp.</i>	10	16	18		2	3
<i>raphidophy sp.2</i>	4	51	15	16		
<i>heterosigm akashiwo</i>	1					
<i>cryptomona spp. 5-10</i>	72	362	820	204	105	64
<i>cryptomona spp. 11-20</i>	110	100	164	43	13	5
<i>cryptomona spp. 21-30</i>	3	17	4			
<i>hemiselmis spp. 4-6</i>	28	28	28	28		
<i>mesodinium rubrum</i>	5	2			1	2

CRUISE 86-04

Taxon	Station	U18-1300	U18-1500	U18-1700	U18-1900	U18-2100	U18-2300	U19-0300	U19-1100	U19-2115
<i>dinobryon sueicum</i>										40
<i>dictyocha speculum</i>				2				2	4	3
<i>apedinella spinifera</i>						3		102	82	162
<i>imantonia rotunda</i>	56	84	168	588	2052	28	6042	2850	7980	
<i>corymbellus aureus</i>								20	2	
<i>phaeocystis pouchetii</i>						620				
<i>corethron criophilum</i>		7	4	2				2		
<i>detonula pumila</i>	12	6	15	24	238	38	43	6	14	
<i>leptocylindrus danicus</i>	10	7	76	56	364	67	91	10	139	
<i>leptocylindrus minimus</i>										95
<i>stephanopyxis nipponica</i>					7					2
<i>skeletonema costatum</i>	966	336	2730	1404	7640	901	43880			34
<i>thalassios rotula</i>	4	2	44	38	36	2	117	4		
<i>thalassios angulata</i>				1	15			14		
<i>thalassios angustelineum</i>	1		9		18	3	10			
<i>thalassios nordenstkioldi</i>	47	24	730	60	247	25	710	11	62	
<i>thalassios pacifica</i>	8	8	73	5	13	7	89	18	133	
<i>thalassios eccentrica /symmetrica</i>				20	5	4	22	1	1	
<i>thalassios mendiolana</i>							26			1
<i>thalassios conferta</i>	15	20	34	12	111	48	520	198	424	
<i>coscinodiscus spp.</i>	1		2	1						20
<i>asteromphus heptactis</i>	2									2
<i>biddulphi longicirrus</i>		1		2	18	5		2		
<i>eucampia zodiacus</i>	38	134	592	186	1835	343	520	10	108	
<i>cerataulina pelagica</i>			14	5	25	2	13	4	5	
<i>ditylum brightwellii</i>				3	15	5	10	6	5	
<i>chaetoceros sp.b</i>					130		625	264	3052	
<i>chaetoceros sp.m</i>	8	5	6	3	39	37	48	5	13	
<i>chaetoceros compressum</i>	10	170	118	396	1300	180	1236	68	2490	

Continued	U18–1300	U18–1500	U18–1700	U18–1900	U18–2100	U18–2300	U19–0300	U19–1100	U19–2115
<i>chaetocero convolutum</i> / <i>concavicornis</i>		4	34	24	24	10	18		
<i>chaetocero constrictum</i> / <i>vanheurckii</i>	36	3	14	34	66	24	156	292	25
<i>chaetocero curvisetum</i>				11			130		
<i>chaetocero danicum</i>	3		3	4		7	4		17
<i>chaetocero debile</i>	204	114	7070	585	6110	656	9360	4990	162
<i>chaetocero decipiens</i>				5					
<i>chaetocero decipiens f.singularis</i>									4
<i>chaetocero diadema</i>				28	22	95		58	
<i>chaetocero didymum</i>				10		11		12	
<i>chaetocero filiforme</i>							392	28	868
<i>chaetocero lacinosum</i>	6	6	7	50	253	56	1130	6	32
<i>chaetocero lineatum</i>									6
<i>chaetocero lorenzianum</i>	14			21	26	5	27		16
<i>chaetocero perpusillum</i>				16			95	50	200
<i>chaetocero radicans</i>	96	70	858	860	1056	92	637		70
<i>chaetocero seiracanthum</i>	14				29				
<i>chaetocero septentrionalis</i>	67	20	82	120	262	36	60		4
<i>chaetocero simile</i>	4		5	6	18	6	429	4	18
<i>chaetocero sociale</i>	26		1683	4620	19980	3000	155	494	62
<i>chaetocero subtile</i>	21	17	10	41	25	14	30		35
<i>chaetocero vivibile</i>									16
<i>bacteriast delicatula</i>							20		9
<i>rhizosolen alata</i> f. <i>gracillima</i>									12
<i>rhizosolen delicatula</i>				15	14	62	24	78	30
<i>rhizosolen fragilissima</i>				3	12	48	11	39	5
<i>rhizosolen fragilissima</i> v.1	7		10	4	40		58	25	67
<i>rhizosolen setigera</i>				13	960	51	91		23
<i>rhizosolen stolterfothi</i>							11	5	
<i>fragilaria</i> spp.								7	9
<i>asterionel glacialis</i>	18	12	4	8	48	31		2	6
<i>thalassion bacillaris</i>	8		2	18	6		6	2	15

Continued	U18–1300	U18–1500	U18–1700	U18–1900	U18–2100	U18–2300	U19–0300	U19–1100	U19–2115
<i>thalassion nitzschoides</i>	13	9	104	82	598	256	662	24	533
<i>naviculace</i> spp.	8	8	7	6		6	10	3	4
<i>pleurosigm acutum</i>									3
<i>pleurosigm angulatum</i>			1						
<i>tropidonei antarctica</i> v. <i>polyplasta</i>				4			7	7	38
<i>nitzschia americana</i>	16	10	155	80	1880	117	2040	10	33
<i>nitzschia brevirostris</i>			5			4			
<i>nitzschia closterium</i>	1		9	11	10		80		
<i>nitzschia closterium</i> v. <i>striatula</i>								25	34
<i>nitzschia cylindroform</i>							448	70	34
<i>nitzschia delicatissim</i>	48	13	182	58	545	67	1120	130	40
<i>nitzschia subraudulen</i> / <i>raudulen</i>	118	98	400	186	434	27	312	2	29
<i>nitzschia grani</i> v. <i>curvata</i>							11		
<i>nitzschia heimi</i>									395
<i>nitzschia lineola</i>	18	10	60	10	835	86	860	1	52
<i>nitzschia longissima</i>	66	16	26	29	196	16	330	5	192
<i>nitzschia norwegica</i>							10	12	4
<i>nitzschia pungens</i>	3	5	10	26	350	12	4	3	12
<i>nitzschia seriata</i>	1	2	11	10	30		12	1	
<i>nitzschia subpacifica</i>	12	8	37	27	180	8	117	4	1670
<i>cylindroth fusiformis</i>				1					26
<i>nephroselm</i> spp. / <i>bipedinomon</i>				28			56	84	56
<i>tetraselmi</i> spp. / <i>pyramimonas</i>			11		15		43	710	590
<i>cymbomonas</i> spp.									5
<i>pterosperm</i> spp. / <i>pachysphaer</i>									4
<i>eutreptiel</i> spp.							1	20	7
<i>prorocentr gracile</i>								2	92
<i>prorocentr minimum</i>							9		
<i>dinophysis</i> spp.			2				2		
<i>gymnodiniu</i> spp.	55	10	18	30	37	10	118	98	232
<i>gymnodiniu gracilentum</i>	11			17	6			16	200

Continued	U18–1300	U18–1500	U18–1700	U18–1900	U18–2100	U18–2300	U19–0300	U19–1100	U19–2115
<i>katodinium rotundatum</i>			7				192	495	278
<i>peridiniac</i> spp.	5	2		4	15	5	10	112	54
<i>heterocaps triquetra</i>								4	9
<i>alexandriu catenella</i>	1	2	14	9	2		13		
<i>ceratium furca</i>									2
<i>raphidophy</i> sp.2									250
<i>heterosigm akashiwo</i>								4	11
<i>cryptomonas</i> spp. 5–10	33	90	100	33	125	80	535	930	1120
<i>cryptomonas</i> spp. 11–20	8	31	15	16	71	9	355	850	440
<i>cryptomonas</i> spp. 21–30		4	6		3		11	12	
<i>hemiselmis</i> spp. 4–6			28		28		56	224	
<i>mesodinium rubrum</i>	3	3	6	7	10		26	5	44

CRUISE 86-04

TAXON	STATION	U20-1300	U24-1100	U25-0500	U25-0700
<i>solenicola setigera</i>				480	260
<i>dinobryon sueicum</i>				30	20
<i>dictyocha speculum</i>	2	2	1		
<i>pedinellac</i> sp.239		4			
<i>meringosiph mediterranea</i>					10
<i>imantonia rotunda</i>	4560	1428	1260	364	
<i>corethron criophilum</i>	2	2	1		
<i>leptocylin danicus</i>	12		3		
<i>leptocylin mediterraneu</i>		2	4	20	
<i>skeletonem costatum</i>	2860				7
<i>thalassios rotula</i>	15		4		
<i>thalassios nordenskiold</i>	880	31	16	3	
<i>thalassios pacifica</i>	65	26	9		
<i>thalassios eccentrica /symmetrica</i>			1		
<i>thalassios conferta</i>	760	298	148	32	
<i>coscinodis</i> spp.	1				
<i>asterompha</i> sp.1			1		
<i>eucampta zodiacus</i>	32	18	11	4	
<i>cerataulin pelagica</i>		2			
<i>ditylum brightwellii</i>	9				
<i>chaetocero</i> sp.b	342	68	32	12	
<i>chaetocero</i> sp.m	60	22		6	
<i>chaetocero boreale</i>		13			
<i>chaetocero compressum</i>	24020	570	14	4	
<i>chaetocero convolutum /concavicom</i>		39	14	25	
<i>chaetocero constrictum</i> /vanheurckil	948	296	11		
<i>chaetocero curvisetum</i>	12			2	
<i>chaetocero danicum</i>	3	2			
<i>chaetocero debile</i>	2080	187	56	37	

Continued	U20 – 1300	U24 – 1100	U25 – 0500	U25 – 0700
<i>chaetocero decipiens f.singularis</i>	2	2		
<i>chaetocero diadema</i>	21	65		
<i>chaetocero didymum</i>	13	5		
<i>chaetocero filiforme</i>	56			
<i>chaetocero laciniatum</i>	212	203	16	7
<i>chaetocero lineatum</i>	6		4	3
<i>chaetocero lorenzianum</i>	34	70	10	
<i>chaetocero radicans</i>	2002	31	6	12
<i>chaetocero simile</i>	47			
<i>chaetocero sociale</i>	43	33		
<i>chaetocero subtile</i>	30			
<i>chaetocero vivibile</i>	10			
<i>bacteriast delicatula</i>	12	125	138	132
<i>rhizosolen alata f.gracillima</i>		28		2
<i>rhizosolen delicatula</i>	9	2	2	
<i>rhizosolen fragilissima</i>	8	5		
<i>rhizosolen fragilissima v.1</i>		338	164	84
<i>rhizosolen setigera</i>	71	10	5	
<i>rhizosolen stolterfothi</i>			3	4
<i>asterionel glacialis</i>	630			
<i>thalassiot longissima</i>			4	
<i>thalassion bacillaris</i>	8	7	2	
<i>thalassion nitzschoides</i>	104	182	20	32
<i>naviculace spp.</i>	14	20	22	7
<i>tropidonei antarctica v.polyplasta</i>	12	13	10	2
<i>nitzschia americana</i>	590			
<i>nitzschia brevirostris</i>	12			
<i>nitzschia closterium</i>	12	20		2
<i>nitzschia closterium v.striatula</i>		68	23	2
<i>nitzschia cylindroform</i>	48	190	182	6
<i>nitzschia delicatissim</i>	590	47	18	

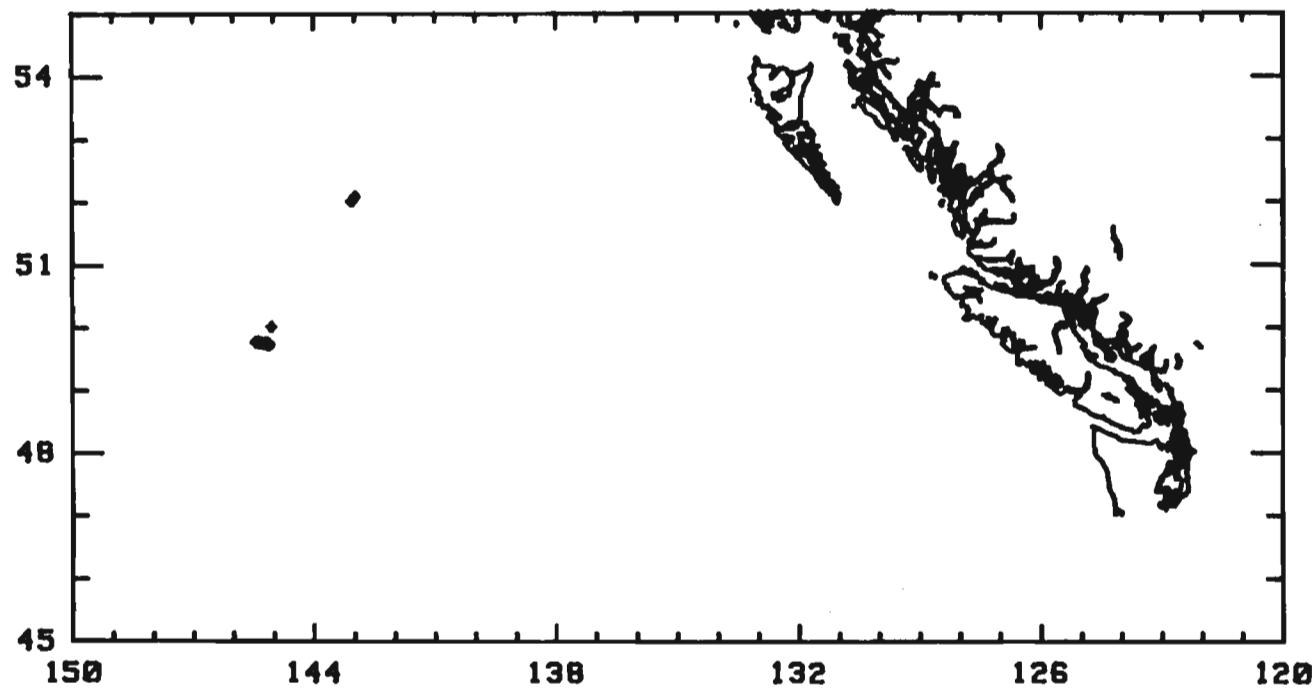
Continued	U20–1300	U24–1100	U25–0500	U25–0700
<i>nitzschia subraudulen /raudulen</i>	72	8	2	1
<i>nitzschia granliv.curvata</i>			2	
<i>nitzschia heimii</i>	16			
<i>nitzschia lineola</i>	60			
<i>nitzschia longissima</i>	36	53	20	12
<i>nitzschia norwegica</i>	13			
<i>nitzschia serata</i>	5	1		
<i>nitzschia subcurvata</i>		2	6	
<i>nitzschia subpacifica</i>	126	4		2
<i>nitzschia turgiduloides /turgidula</i>	12		25	5
<i>cylindroth fusiformis</i>	14	2	3	2
<i>tetraselmi spp. /pyramimonas</i>	110		16	
<i>cymbomonas spp.</i>				5
<i>pterosperm spp. /pachysphaer</i>				2
<i>halosphaer spp.</i>				2
<i>eutreptiel spp.</i>	15		5	
<i>prorocentr spp.</i>				3
<i>prorocentr balticum</i>			3	2
<i>prorocentr gracile</i>	5	13	5	9
<i>gonyaulax rugosum</i>				1
<i>gymnodiniu spp.</i>	66	145	147	102
<i>gymnodiniu gracilentum</i>	30	94	122	26
<i>katodinium rotundatum</i>	48			
<i>peridiniac spp.</i>	12	15	23	20
<i>ceratium tripos</i>			1	
<i>raphidophy sp.2</i>		50		
<i>cryptomona spp. 5–10</i>	366	720	580	262
<i>cryptomona spp. 11–20</i>	394	400	118	27
<i>hemiselmis spp. 4–6</i>	112			

CRUISE 87-04

26 May – 11 June 1987

Area of operations: Subarctic Pacific Ocean (SUPER Project)

Vessel: C.S.S. Parizeau



CRUISE 87-04

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
21-2/5	1 June 87	49 45.0	145 23.3	43.3	6.8	32.53	0.6			
21-6/9		49 45.0	145 23.3	9.8	6.8	32.54	0.5			
24-2/5		49 45.5	145 20.3	45.7	6.8	32.54	0.8			
24-6/9		49 45.5	145 20.3	9.2	7.1	32.54	0.7			
25-2/5	2 June 87	49 44.0	145 17.5	45.1	6.8	32.53	0.8			
25-6/9		49 44.0	145 17.5	10.7	7.0	32.54	0.6			
32-2/5		49 44.5	145 15.5	44.8	6.8	32.53	0.7			
32-6/9		49 44.5	145 15.5	9.8	7.1	32.51	0.7			
52-2/5	3 June 87	49 43.5	145 10.9	46.5	6.8	32.51	0.6			
52-6/9		49 43.5	145 10.9	9.6	7.2	32.51	0.6			
79-2/5	4 June 87	49 43.2	145 08.5	45.6	6.8	32.52	0.7			
79-6/9		49 43.2	145 08.5	11.5	7.4	32.52	0.5			
80-2/5		49 44.6	145 07.2	43.3	6.8	32.52	0.5			
80-6/9		49 44.6	145 07.2	9.4	7.4	32.52	0.5			
81-2/5		49 42.6	145 05.2	47.5	6.8	32.52	0.6			
81-6/9		49 42.6	145 05.2	10.6	7.4	32.52	0.5			
82-2/5		49 42.2	145 04.7	44.6	6.8	32.52	0.6			
82-6/9		49 42.2	145 04.7	10.2	7.5	32.52	0.5			
86-1	5 June 87	50 00.0	145 00.0	20.0		0.5				
88-7	6 June 87	51 59.8	143 01.0	79.2	5.4	32.60	0.2	11.6	1.30	17.1
88-8		51 59.8	143 01.0	53.6	6.6	32.49	0.5	10.5	1.16	15.6
88-9		51 59.8	143 01.0	18.6	7.4	32.48	0.3	9.4	1.09	15.6
88-10		51 59.8	143 01.0	9.4	7.4	32.48	0.4	8.3	1.09	14.4
102-6	7 June 87	52 04.5	142 55.2	74.5	5.9	32.64	0.1	13.8	1.48	20.1
102-8		52 04.5	142 55.2	51.2	6.6	32.51	0.4	10.1	1.09	15.3
102-9		52 04.5	142 55.2	21.2	7.3	32.49	0.4	8.9	1.08	14.7
102-10		52 04.5	142 55.2	10.3	7.3	32.49	0.4	9.0	1.11	15.1

CRUISE 87-04

TAXON	STATION	21-2/5	21-6/9	24-2/5	24-6/9	25-2/5	25-6/9	32-2/5	32-6/9
synechococ spp.		1064	1232	1988	672	532	2.8	700	588
ochromonas spp.		28	56	28				28	28
dinobryon sueicum		5	5			2	7	2	1
pedinellac sp.223		28		28	28				28
pedinellac sp.239		10		9	24	9	8	10	8
meringosiph mediterranea		10	6	10		6	4	10	9
emiliania huxleyi		500	320	510	680	39	610	820	1050
imantonia rotunda		234	438	425	90	55	172	198	148
corymbellu sp.							23		
corymbellu aureus		8							
chrysocro sp.1		28					650		
chrysocro spp. 3-6		270	395	550	595	285	8	760	940
chrysocro spp. 6-10		20	17	27	9	5		11	12
chrysocro spp. 20-25		2				54			3
phaecysti pouchetii		34	12	19		10	16	78	27
crystallo hyalinus		4	4	3	3	3	1	2	12
minutocell scriptus				19					
corethron criophilum		3	12	5	3	1	4	2	5
leptocylin mediterraneu								1	1
thalassios spp.		1			3	1			
thalassios sp.2		4		3	2	2	1	3	1
thalassios conferta			2	3	2		2	5	
asterompha heptactis				2	4	3	3	2	
chaetocero sp.gi				2			1		
chaetocero convolutum /concavicornis		6	11	4	4	6	8	10	7
chaetocero eibenii								3	
rhizosolen alata f.gracillima		7		3		1		2	1
rhizosolen styliformis v.styliformi									1
pennales spp.		3		1	2		3	2	

Continued	21–2/5	21–6/9	24–2/5	24–6/9	25–2/5	25–6/9	32–2/5	32–6/9
<i>thalassiot longissima</i>	2					1		
<i>tropidonei antarctica v.polyplasta</i>								
<i>nitzschia</i> spp.	5	8						
<i>nitzschia closterium v.striatula</i>	4	12				1		
<i>nitzschia cylindroform</i>	176	540	684	206	76	256	510	430
<i>nitzschia delicatissim</i>	1				2	1	1	3
<i>nitzschia longissima</i>	2		1	1		2		
<i>nitzschia subcurvata</i>			14			3		1
<i>nitzschia turgidulode /turgidula</i>	2	2		2		3	2	2
<i>denticulop semina</i>	18	2	5	1	1		11	9
<i>scenedesmu quadricauda</i>				1		3		
<i>nephrolelm</i> spp. / <i>bipedinomon</i>					2			8
<i>pterosperm</i> spp. / <i>pachysphaer</i>	2		2				1	1
<i>halosphaer</i> spp.	2					1	1	2
<i>prorocentr balticum</i>	2		1	2				10
<i>aureodiniu pigmentosum</i>			2	5	2		3	1
<i>amphidiniu</i> sp.m								1
<i>amphidiniu schroederi</i>						1		
<i>gymnodiniu</i> spp. 5–10	4	1				1		
<i>gymnodiniu</i> spp. 10–15	3	1		3			1	
<i>gymnodiniu</i> spp. 15–20		1	1					
<i>gymnodiniu</i> sp.246			1					
<i>gymnodiniu</i> cf. <i>aureolum</i>	1			1		1	1	
<i>gymnodiniu</i> <i>gracilentum</i>	44	35	53	48	12	30	40	66
<i>gymnodiniu</i> <i>paulseni</i>	1					2	8	3
<i>gymnodiniu</i> <i>simplex</i>	6		7	1	2		9	4
<i>katodinium</i> <i>rotundatum</i>				1				
<i>peridiniac</i> spp.	5	3	2	6	1	1	4	3
<i>ceratium</i> <i>tripos</i>			1					
<i>raphidophy</i> sp.2	24	18	142	122	22	58	79	164

Continued	21–2/5	21–6/9	24–2/5	24–6/9	25–2/5	25–6/9	32–2/5	32–6/9
heterosigm akashiwo			2					2
cryptomona spp. 5–10	39	32	49	21	27	41	37	41
cryptomona spp. 10–15	26	28	34	17	14	22	18	35
cryptomona spp. 15–20	2	1	2	2	1		2	1
hemiselmis spp. 4–6	8	10	4		3	5	11	4

CRUISE 87-04

Taxon	Station	52-2/5	52-6/9	79-2/5	79-6/9	80-2/5	80-6/9	81-2/5	81-6/9
synechococ spp.		812	1596	784	504	896	1512	896	616
solenicola setigera					3				
ochromonas spp.		28	56		56	56		28	
pedinellac sp.223					28				
pedinellac sp.239		27	17	28	72	5	18	26	41
meringosiph mediterranea		18	37	12	14		15	7	7
emiliania huxleyi		430	780	600	390	970		350	560
imantonia rotunda		246	365	214	130	214	296	212	248
corymbellu sp.				2					
corymbellu aureus						6			
chrysocro sp.1						28		28	
chrysocro spp. 3-6		665	1050	310	515	645	825	380	375
chrysocro spp. 6-10		12	3	20	7	3		2	2
chrysocro spp. 20-25							5		
phaecysti pouchetii		56	20	13	12	3	16	11	17
crystallo hyalinus			9	7	7	6	2		
corethron criophilum		2	7	7	5	1		1	1
thalassios spp.						1			
thalassios sp.2		2	3		2	3	1	2	2
thalassios conferta		3	2	1	3	3		2	
asterompha sp.1			1						
asterompha heptactis		1	6	1	2	2	2	3	1
chaetocero sp.gi						1			
chaetocero convolutum /concavicornis		20	27	9	15	13	12	5	14
rhizosolen alata f.gracillima		2	1	4	2	2	1	1	
pennales spp.		1	2	4	2			1	
fragilaria lapponica			1						
thalassiot longissima				2					
tropidonei antarctica v.polyplasta		1			2	1	1	1	

Continued	52-2/5	52-6/9	79-2/5	79-6/9	80-2/5	80-6/9	81-2/5	81-6/9
<i>nitzschia cylindroform</i>	594	350	496	396	44	55	428	230
<i>nitzschia delicatissim</i>	2	4	5	7	7	6	2	2
<i>nitzschia heimi</i>	1		3	1				
<i>nitzschia longissima</i>	1	1		2				
<i>nitzschia subcurvata</i>		5	10					
<i>nitzschia turgiduloide /turgidula</i>	9	4		6	1	5		
<i>denticulop semina</i>	10	2	11	5	1		3	9
<i>scenedesmu quadricauda</i>			2	2			1	
<i>nephroselm spp. /bipedinomon</i>	2							
<i>pterosperm spp. /pachysphaer</i>	3	4			2			
<i>halosphaer spp.</i>								3
<i>prorocentr balticum</i>	2	5	1	3		5	1	6
<i>gonyaulax rugosum</i>	1							
<i>aureodiniu pigmentosum</i>	7			5			1	
<i>amphidiniu sp.m</i>							2	
<i>amphidiniu acutissimum</i>	1							
<i>amphidiniu schroederi</i>							1	
<i>gymnodiniu spp. 10-15</i>	3		1					
<i>gymnodiniu spp. 15-20</i>	2	2	1		5		1	
<i>gymnodiniu sp.r</i>						7		
<i>gymnodiniu cf.aureolum</i>			14			1	16	1
<i>gymnodiniu gracilentum</i>	43	12	60	49	47	50	46	16
<i>gymnodiniu paulseni</i>		1	1			1	2	1
<i>gymnodiniu simplex</i>	5	1	4	3	14	3	2	3
<i>peridiniac spp.</i>		1	4		1			
<i>ceratium tripos</i>			1					
<i>raphidophy sp.2</i>	158	178	55	220	71	180		88
<i>heterosigm akashiwo</i>	1							
<i>cryptomona spp. 5-10</i>	50	33	54	97	70	62	75	44
<i>cryptomona spp. 10-15</i>	37	28	20	82	26	20	47	35

Continued	52-2/5	52-6/9	79-2/5	79-6/9	80-2/5	80-6/9	81-2/5	81-6/9
<i>cryptomonas</i> spp. 15-20	2			4	2	2	1	10
<i>hemiselmis</i> spp. 4-6		2		5			3	

CRUISE 87-04

TAXON	STATION	82-2/5	82-6/9	86-1	88-7	88-8	88-9	88-10
<i>synechococcus</i> spp.		420	1344	560	308	2156	1960	1008
<i>ochromonas</i> spp.			28	28			56	28
<i>dinobryon sueicum</i>						2	2	
<i>dictyocha speculum</i>			1		1	5		
<i>pedinellac</i> sp.223		28						
<i>pedinellac</i> sp.239		13	13	17			5	8
<i>meringosiph mediterranea</i>		6		10		1	2	3
<i>emiliania huxleyi</i>		675	2040	460	71	52	116	49
<i>imantonia rotunda</i>		160	495	158			112	123
<i>corymbellus aureus</i>		15						
<i>chrysocro</i> sp.1						28	28	
<i>chrysocro</i> spp. 3-6		92	1150	292	14	18	81	130
<i>chrysocro</i> spp. 6-10		3	4	3				4
<i>chrysocro</i> spp. 20-25		4						
<i>phaeocystis pouchetii</i>		7	24	35				
<i>corethron criophilum</i>		1	7	5				
<i>thalassios</i> spp.		3						
<i>Thalassios</i> sp.2		3	2	1	3	14	3	2
<i>thalassios nordenskioldi</i>					1	1		
<i>thalassios pacifica</i>						1		
<i>thalassios eccentrica /symmetrica</i>						1		
<i>thalassios conferta</i>		5	3	3	2	2	7	11
<i>asterompha heptactis</i>					4			
<i>chaetocero</i> sp.gi					5	1		
<i>chaetocero convolutum /concavicornis</i>		5	17	2	4	3	15	23
<i>rhizosolen alata</i> f.curvirostris							1	
<i>rhizosolen alata</i> f.gracillima		1	1	2	1	4	6	18
<i>thalassiot longissima</i>							1	
<i>tropidionel antarctica</i> v.polyplasta				1				

Continued	82-2/5	82-6/9	86-1	88-7	88-8	88-9	88-10
<i>tropidonea lepidoptera</i>						1	
<i>nitzschia cylindroform</i>	326	42	310	10		450	162
<i>nitzschia delicatissim</i>	2				1	4	12
<i>nitzschia heimii</i>						8	5
<i>nitzschia subcurvata</i>		3				3	5
<i>nitzschia turgiduloide/turgidula</i>	2		4	3	7	29	13
<i>denticulop semina</i>	12		26		4	2	5
<i>pterosperm</i> spp. / <i>pachysphaer</i>	5		3				
<i>halosphaer</i> spp.		2	3			8	
<i>prorocentr balticum</i>		14	1			4	9
<i>prorocentr minimum</i>		1					
<i>aureodiniu pigmentosum</i>					1	2	2
<i>gymnodiniu</i> spp. 15-20	3						
<i>gymnodiniu</i> sp.246	1						
<i>gymnodiniu</i> sp.r		7	1	1	4	1	2
<i>gymnodiniu</i> cf. <i>aureolum</i>	1					3	3
<i>gymnodiniu</i> <i>flavum</i>				1	1		
<i>gymnodiniu</i> <i>gracilemum</i>	19	72		9		20	31
<i>gymnodiniu</i> <i>paulseni</i>			10		44		
<i>gymnodiniu</i> <i>simplex</i>		2	2	2		3	5
<i>peridiniac</i> spp.	1	1			1		1
<i>gonyaulax</i> <i>digitale</i>						1	
<i>ceratium</i> <i>tripos</i>		1					
<i>raphidophy</i> sp.2	13	190	39	2	1	30	17
<i>cryptomon</i> spp. 5-10	20	35	26	7	4	7	11
<i>cryptomon</i> spp. 10-15	16	42	28		3	4	10
<i>cryptomon</i> spp. 15-20	5	4	2			3	1

CRUISE 87-04

TAXON	STATION	102-6	102-8	102-9	102-10
<i>synechococ</i> spp.		196	2184	1232	1232
<i>solenicola setigera</i>		15	2		2
<i>ochromonas</i> spp.		28		28	
<i>dinobryon sueicum</i>				1	
<i>dictyocha speculum</i>		1	3		
<i>pedinellac</i> sp.239				9	2
<i>meringosiph mediterranea</i>			2		
<i>emiliania huxleyi</i>		14	41	30	14
<i>imantonia rotunda</i>		9	18	74	548
<i>chrysochro</i> sp.1				28	
<i>chrysochro</i> spp. 3-6		37	91	83	236
<i>chrysochro</i> spp. 6-10				3	1
<i>phaeocysti pouchetii</i>		1			
<i>corethron criophilum</i>				1	
<i>Thalassios</i> sp.2		2	2	2	2
<i>thalassios nordenskiold</i>				1	1
<i>thalassios pacifica</i>			1		
<i>thalassios conferta</i>			5	8	2
<i>chaetocero</i> sp.gi				2	
<i>chaetocero convolutum /concavicom</i>				10	10
<i>rhizosolen a lata</i> f.curvirostr		1	1		
<i>rhizosolen a lata</i> f.gracillima			1	3	5
<i>rhizosolen styliformis v.styliformi</i>				1	
<i>pennales</i> spp.		2	8	1	1
<i>thalassiot longissima</i>					1
<i>nitzschia cylindroform</i>			2	320	310
<i>nitzschia delicatissim</i>			2	6	7
<i>nitzschia subcurvata</i>			5	1	3
<i>nitzschia turgiduloides /turgidula</i>		2	4	17	12

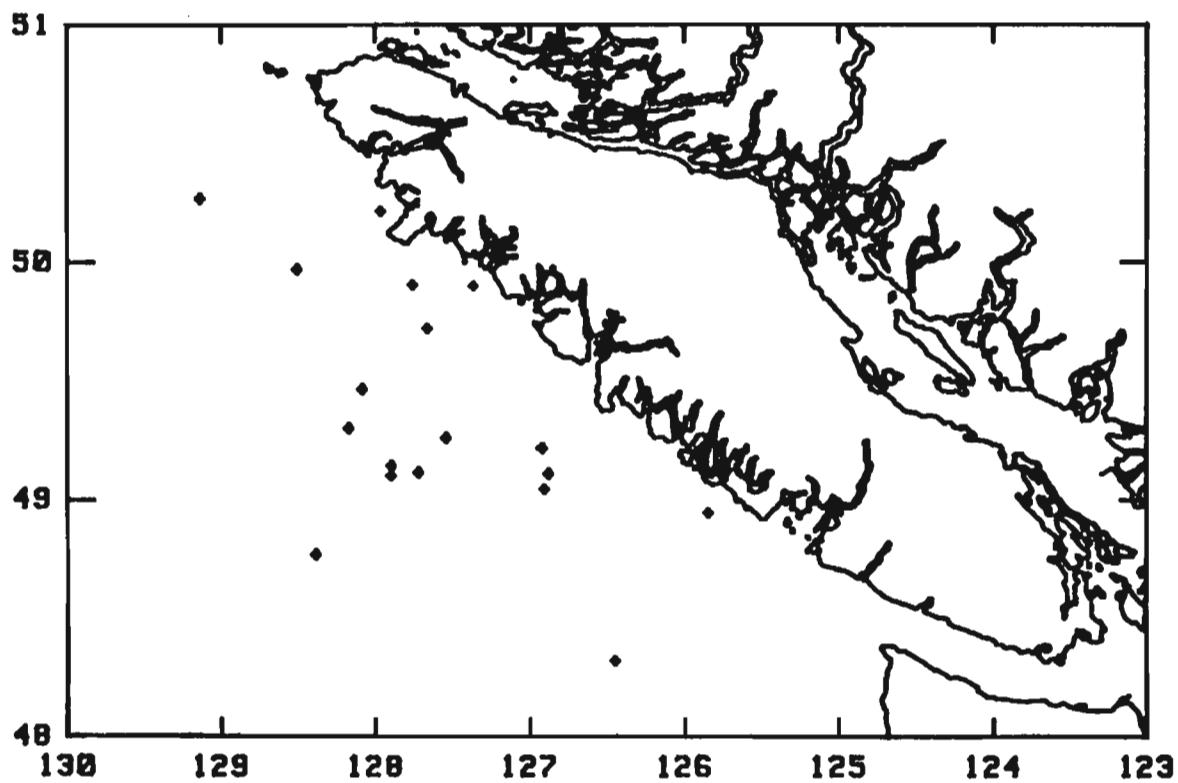
Continued	102-6	102-8	102-9	102-10
<i>denticulop semina</i>	1	3	2	5
<i>scenedesmu quadricauda</i>		1		
<i>prorocentr balticum</i>			5	
<i>prorocentr minimum</i>		1	1	
<i>gonyaulax rugosum</i>		4	1	
<i>aureodinu pigmentosum</i>	2	3		
<i>gymnodinu spp. 5-10</i>		2		
<i>gymnodinu spp. 15-20</i>		3		
<i>gymnodinu sp.r</i>	1		1	2
<i>gymnodinu cf.aureolum</i>		2		
<i>gymnodinu gracilentum</i>	5	141	20	28
<i>gymnodinu simplex</i>	1		2	
<i>peridiniac spp.</i>	1	2		3
<i>raphidophy sp.2</i>	2	11	11	6
<i>heterosigm akashiwo</i>	1			
<i>cryptomona spp. 5-10</i>	6	10	12	28
<i>cryptomona spp. 10-15</i>	2	1	5	2
<i>cryptomona spp. 15-20</i>	2	3	1	1

CRUISE 87-05

13 – 24 July 1987

Area of operations: West coast of Vancouver Island

Vessel: C.S.S. Parizeau



CRUISE 87-05

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
11-8	15 July 87	50 15.8	129 07.9	30.0	8.5	33.28	0.6	21.9	1.66	33.4
11-9		50 15.8	129 07.9	5.0	13.2	32.29	1.1	0.6	0.41	4.6
12-5		50 12.6	127 57.5	18.5	8.2	33.03	0.1	22.8	1.72	37.6
12-8		50 12.6	127 57.5	4.5	10.3	32.36	0.5	13.3	1.25	25.5
17-6		49 57.9	128 30.2	45.1	10.4	32.52	0.6	4.5	0.68	28.5
17-9		49 57.9	128 30.2	11.3	13.8	32.43	0.6		0.35	
20-8	16 July 87	49 54.0	127 45.0	24.9	8.9	32.57	0.3	18.0	1.37	32.2
20-9		49 54.0	127 45.0	11.0	9.9	32.33	0.3	14.6	1.20	29.1
22-4		49 53.8	127 21.5	10.6	9.7	32.59	0.6	23.0	1.65	38.1
25-8		49 43.1	127 39.4	18.1	11.2	32.02	0.8	11.7	1.06	22.8
29-6		49 27.7	128 04.8	39.6	12.6	32.44	1.0	0.9	0.51	5.1
29-9		49 27.7	128 04.8	6.8	13.7	32.43	0.8	0.1	0.40	4.5
35-1/5	17 July 87	49 15.4	127 32.2	32.4	10.3	32.48	1.0	7.3	0.79	12.2
35-6/9		49 15.4	127 32.2	17.9	11.5	32.24	2.0	6.0	0.70	12.2
39-1/5		49 13.0	126 55.0	35.6	8.4	32.80	0.3	18.0	1.35	28.0
39-6/8		49 13.0	126 55.0	11.5	11.2	32.48	3.0	11.1	0.97	25.3
41-1/4	18 July 87	49 18.0	128 10.0	23.7	12.4	32.13	2.4	1.8	0.45	7.0
41-5/9		49 18.0	128 10.0	14.6	12.7	32.14	2.4	1.0	0.41	7.3
44-1/4		49 06.6	127 42.8	30.2	11.2	32.31	2.0	6.8	0.80	17.6
44-5/9		49 06.6	127 42.8	14.2	11.4	32.27	2.8	6.4	0.75	16.9
50-7	19 July 87	49 02.6	126 54.0	29.0	10.4	32.56	0.4	4.0	0.68	11.8
50-9		49 02.6	126 54.0	4.9	12.0	32.24	1.8	5.0	0.67	15.9
51-6		49 06.5	126 52.4	40.5	8.9	32.49	0.1	20.4	1.39	32.1
51-9		49 06.5	126 52.4	5.7	11.0	32.24	2.6	10.8	0.90	22.7
54-1/4		49 13.0	126 55.0	26.9	9.5	32.62	2.8	17.6	1.31	33.3
54-5/9		49 13.0	126 55.0	9.1	10.7	32.52	4.5	14.7	1.15	31.3
56-6		48 19.0	126 26.7	45.7	10.4	32.48	2.0	11.3	0.97	14.5
56-9		48 19.0	126 26.7	6.8	13.3	32.07	2.4	2.0	0.43	10.8
68-1/3	20 July 87	48 56.6	125 50.4	24.1	9.7	32.35	8.0	22.1	1.61	32.9
68-B		48 56.6	125 50.4	10.5	11.8	31.58	1.4	0.4	0.24	4.0
77-1/4	21 July 87	49 06.0	127 53.5	41.8	11.2	32.51	0.9	2.3		3.1
77-6/9		49 06.0	127 53.5	20.5	14.0	32.14	0.8	0.5		1.2
80-2/5		48 46.0	128 23.0	53.5	10.3	32.67	0.3	11.3	1.22	17.7
80-6/8		48 46.0	128 23.0	31.6	13.4	32.62	0.4	0.2	0.48	3.0
80-9		48 46.0	128 23.0	7.2	14.5	32.47	0.2		0.45	2.9

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
83-7	22 July 87	49 08.5	127 53.4	37.8	12.7	32.19	1.1	0.8	0.45	5.1
83-9		49 08.5	127 53.4	9.2	14.1	32.14	0.5	0.2	0.38	3.4

CRUISE 87-05

Taxon	Station	11-8	11-9	12-5	12-8	17-6	17-9	20-8	20-9	22-4
<i>synechococ</i> spp.		1092	1008	196	2604	5586	2268	252	364	560
<i>solenicola setigera</i>		14	3	45	166	55	20	198	66	60
<i>ochromonas</i> spp.		56	112	28	56	28	112	28	56	28
<i>dinobryon sueicum</i>			11			6			14	12
<i>dictyocha speculum</i>					8	1			2	
<i>pedinellac</i> sp.239		1	4				16			
<i>apedinella spinifera</i>			8		11				2	16
<i>meringosiph mediterranea</i>			5	3	7	7	3	5	5	
<i>imantonia rotunda</i>		358	68	14	146	588	128	12	590	381
<i>chrysochro</i> sp.1		390	60							
<i>chrysochro</i> spp. 3-6		190	2492	216	790	725	2716	90	360	625
<i>chrysochro</i> spp. 10-15		14								
<i>phaeocysti pouchetii</i>		13								
<i>crystallo hyalinus</i>		1	1	1	4	1	3			11
<i>leptocylin danicus</i>										144
<i>leptocylin minimus</i>		4								
<i>skeletonem costatum</i>				76	900			90	950	33
<i>thalassios rotula</i>								6		
<i>thalassios angulata</i>								5		1
<i>thalassios anguste-line</i>					2			3		
<i>thalassios nordenskiold</i>								2		
<i>thalassios pacifica</i>				2		2		10	1	1
<i>thalassios conferta</i>		6	14	13	20	61	11	22	13	40
<i>coscinodis asteromphalus</i>					1					
<i>lauderia borealis</i>					1					
<i>asterompha heptactis</i>					2			7		1
<i>biddulphi longicurvis</i>			2							1
<i>eucampia zooidiacus</i>					21			2		
<i>chaetocero</i> sp.b				2	44	16	6	22	34	9

Continued	11–8	11–9	12–5	12–8	17–6	17–9	20–8	20–9	22–4
<i>chaetocero sp.c</i>								43	1280
<i>chaetocero sp.d</i>									5
<i>chaetocero compressum</i>				21			14	15	11
<i>chaetocero convolutum /concavicom</i>					8	8	2		
<i>chaetocero debile</i>					5		3		3
<i>chaetocero didymum</i>						5			
<i>chaetocero filiforme</i>				155			4	14	102
<i>chaetocero lorenzianum</i>					1	9			
<i>chaetocero perpusillum</i>								6	27
<i>chaetocero seriacanthum</i>					2				
<i>chaetocero septentriona</i>									15
<i>chaetocero simile</i>							4		
<i>chaetocero sociale</i>				17			2		320
<i>chaetocero subtile</i>				6					8
<i>chaetocero vkwvisible</i>	1								
<i>bacteriast delicatula</i>					5		1		
<i>rhizosolen alata f.alata</i>					5				
<i>rhizosolen alata f.gracillima</i>				2	45	1130	1		
<i>rhizosolen fragilissima</i>		1					1		
<i>rhizosolen fragilissima v.1</i>	2								
<i>asterionel glacialis</i>	2								
<i>thalassiot sp.</i>	1								
<i>thalassion bacillaris</i>			2						
<i>thalassion nitzschoides</i>							2	4	
<i>pleurosigm acutum</i>					1				
<i>tropidonei antarctica v.polyplasta</i>							1		
<i>nitzschia sp. 20–40</i>							6		4
<i>nitzschia americana</i>		5	1				4	3	15
<i>nitzschia closterium v.striatula</i>				21	12	34			
<i>nitzschia cylindroform</i>	14	12	6	50	59	10	47	5	31
<i>nitzschia delicatissim</i>					15	3	4		12

Continued	11–8	11–9	12–5	12–8	17–6	17–9	20–8	20–9	22–4
<i>alexandriu catenella</i>									2
<i>ceratium fusus</i>							1		
<i>ceratium lineatum</i>						2			
<i>ceratium tripos v. baltica</i>									1
<i>raphidophy sp.2</i>	12	36			13	4		5	
<i>cryptomonas spp. 5–10</i>	430	825	4	153	77	97	34	228	161
<i>cryptomonas spp. 10–15</i>	1050	920	4	63	9	22	27	140	108
<i>cryptomonas spp. 15–20</i>	12	94					6		
<i>hemiselmis spp. 4–6</i>	4		2				14	76	10

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Taxon	Station	25-8	29-6	29-9	35-1/5	35-6/9	39-1/5	39-6/9	41-1/4	41-5/9
<i>synechococ</i> spp.		2884	1540	1428	3108	7068	224	4004	4032	4088
<i>solenicola setigera</i>		27	195	248	127	78	16	58	396	430
<i>ochromonas</i> spp.		140	196	280	308	364		280	644	756
<i>dinobryon sueicum</i>		23	10	15	52	12		48	96	284
<i>dictyocha speculum</i>		21			2	14		25	9	
<i>pedinellac</i> sp.223					80	90				20
<i>pedinellac</i> sp.239			15	13	5	3		12	6	7
<i>apedinella spinifera</i>		83	5		5	36		56	22	65
<i>meringosiph mediterranea</i>		16	12	18	17	23	3	15	36	28
<i>imantonia rotunda</i>		1080	326	268	622	1994		286	524	1072
<i>corymbellu</i> sp.						12				50
<i>corymbellu aureus</i>						23		103	372	478
<i>chrysocro</i> sp.1			320	200	78	124		48	164	204
<i>chrysocro</i> spp. 3-6		965	710	1230	740	1810	66	1590	3472	3892
<i>chrysocro</i> spp. 6-10		1	136	104	22	40			51	60
<i>crystallo l hyalinus</i>							4	8		
<i>leyanella arenaria</i>		448				532		56	196	112
<i>leptocylin danicus</i>				6	62	13	10	232	12	18
<i>leptocylin danicus</i> spores							2			
<i>leptocylin minimus</i>					7			45	12	
<i>leptocylin mediterraneu</i>					5	1				
<i>skeletonem costatum</i>		2040			232	158	6	780	41	155
<i>thalassios pacifica</i>		6			9	14	2	33	3	1800
<i>thalassios conferta</i>		74	12	24	115	175	8	700	460	490
<i>lauderia borealis</i>					4			18	40	19
<i>asterompha</i> sp.1								9		
<i>asterompha heptactis</i>			6	2	1	2			5	5
<i>eucampla zodiacus</i>			3			3		10	2	
<i>cerataulin pelagica</i>									9	

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Continued	25–8	29–6	29–9	35–1/5	35–6/9	39–1/5	39–6/9	41–1/4	41–5/9
<i>chaetocero sp.b</i>	78	3	2	116	210		1080	118	226
<i>chaetocero sp.c</i>	122	15	6	2968	560	116	342	96	102
<i>chaetocero sp.d</i>	6			36	48	4	176		24
<i>chaetocero sp.e</i>							520	210	71
<i>chaetocero sp.f</i>									2
<i>chaetocero compressum</i>	2	21	4		6		3248		
<i>chaetocero convolutum /concavicorn</i>		2	10	4	2			5	4
<i>chaetocero constrictum /vanheurckii</i>			3					22	
<i>chaetocero debile</i>				3			1350		
<i>chaetocero filiforme</i>	31			9			5529	2268	730
<i>chaetocero lorenzianum</i>		1	9					25	
<i>chaetocero perpusillum</i>							340		
<i>chaetocero septentriona</i>		2			2	2		33	6
<i>chaetocero simile</i>	3						10		
<i>chaetocero sociale</i>		3	42	32	5	3	58		
<i>chaetocero subtile</i>	2			28	10		100		15
<i>chaetocero tortissimum</i>							530		135
<i>bacteriad delicatula</i>			2					4	3
<i>rhizosolen alata f.gracilifima</i>	380	560	14	15				486	364
<i>rhizosolen fragilissima</i>							130	1	
<i>rhizosolen fragilissima v.1</i>									10
<i>thalassiot sp.</i>								5	
<i>thalassion nitzschoides</i>		27	3		2	7	17		4
<i>tropidonei antarctica v.polyplasta</i>				2	3			6	3
<i>nitzschia sp.20–40</i>				4	1		25		
<i>nitzschia americana</i>				5	3		150		
<i>nitzschia closterium v.striatula</i>	19	12	27	5	12		66	17	170
<i>nitzschia cylindroform</i>	116	4	13	75	302	11	540	16	160
<i>nitzschia delicatissim</i>	3	21	5	25	33		55	83	55
<i>nitzschia heimii</i>							8		
<i>nitzschia lineola</i>	2		2	5	2		21	35	5

Continued	25–8	29–6	29–9	35–1/5	35–6/9	39–1/5	39–6/9	41–1/4	41–5/9
<i>nitzschia longissima</i>	10			15	3	2	92	12	41
<i>nitzschia pseudodelica</i>		2						9	4
<i>nitzschia pungens</i>								8	8
<i>nitzschia subpacifica</i>							3	7	
<i>nitzschia subcurvata</i>	13	17	8	12	42		12	84	166
<i>nitzschia turgiduloide /turgidula</i>		11	20	22	11			166	35
<i>cylindroth fusiformis</i>	1		2		1		20	18	
<i>nephroselm</i> spp. / <i>bipedinomon</i>	124	5	30	30	20		60	100	100
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	35		9	23	88	8	520	215	60
<i>cymbomonas</i> spp.	2		2		5		9		3
<i>pterosperm</i> spp. / <i>pachysphaer</i>			41						
<i>halosphaer</i> spp.			14				10	18	4
<i>eutreptiel</i> spp.	3						5	3	40
<i>prorocentr balticum</i>	2	8	9	9	5		13	4	15
<i>prorocentr gracile</i>					2		10	5	3
<i>prorocentr minimum</i>	1								
<i>dinophysis</i> spp.								3	2
<i>aureodiniu pigmentosum</i>		12	4	11	2	2		16	5
<i>amphidiniu schroederi</i>								1	13
<i>gymnodiniu</i> spp. 10–15		10	12	8	3	4	11	10	5
<i>gymnodiniu</i> sp.r						4	9		
<i>gymnodiniu</i> cf. <i>aureolum</i>			6	4	3				
<i>gymnodiniu</i> <i>flavum</i>			10		2	3	2		4
<i>gymnodiniu</i> <i>gracilement</i>	40	214	51	17	14	10	43	36	135
<i>gymnodiniu</i> <i>paulseni</i>			7		4	2	10	10	7
<i>gymnodiniu</i> <i>simplex</i>	19	11	29	6	6	1	67	43	75
<i>gymnodiniu</i> <i>vitiligo</i>	13	16	17	40	14	6	40	42	30
<i>katodinium</i> <i>rotundatum</i>	11			15	17		22	8	18
<i>peridiniac</i> spp.	3	25	33	8	17	5	38	45	73
<i>heterocaps</i> <i>triquetra</i>	2				2		6	2	8
<i>alexandriu</i> <i>catenella</i>					4			3	4

Continued	25–8	29–6	29–9	35–1/5	35–6/9	39–1/5	39–6/9	41–1/4	41–5/9
<i>ceratium lineatum</i>								9	3
<i>ceratium tripos v.baltica</i>				1					
<i>raphidophy sp.2</i>	11	6	9					11	21
<i>cryptomonas spp. 5–10</i>	165	232	332	250	520	6	460	1150	860
<i>cryptomonas spp. 10–15</i>	208	21	40	120	395	10	660	730	1060
<i>cryptomonas spp. 15–20</i>		10	6		5		860	15	25
<i>hemiselmis spp. 4–6</i>	5	8	36	42	204	4	102	98	48

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Taxon	Station	44-1/4	44-5/9	50-7	50-9	51-6	51-9	54-1/4	54-5/9	
<i>synechococ</i> spp.		6384	2100	784	1876	728	3304	1988	3780	
<i>solenicola setigera</i>		201	40	70	120	66				
<i>ochromonas</i> spp.		1148	924	28	308	28	700	448	1120	
<i>dinobryon sueicum</i>		120	31	3	49		10	53	68	
<i>dictyocha speculum</i>			4		4		6	3	8	
<i>pedinellac</i> sp.223		60	30							
<i>pedinellac</i> sp.239		7								
<i>apedinella spinifera</i>		13	60	2	17		18	4	11	
<i>meringosiph mediterranea</i>		14		4	21		4	21	48	
<i>imantonia rotunda</i>		2154	2236	310	934	42	1816	1384	2508	
<i>corymbellu</i> sp.		4	4							
<i>corymbellu aureus</i>		78	131		46					
<i>chrysochro</i> sp.1		104	54	13	120					
<i>chrysochro</i> spp. 3-6		4676	1760	64	1130	8	1590	900	2010	
<i>chrysochro</i> spp. 6-10		33	16							
<i>crystallo l hyalinus</i>		12	3	3	6		14	22	17	
<i>leyanella arenaria</i>							84	112	84	
<i>leptocylin danicus</i>			8	3	180	25				
<i>leptocylin minimus</i>		7	23		77		65	60	72	
<i>skeletonem costatum</i>		396	4312	2	1450	2	6160	5180	5796	
<i>thalassios anguste-line</i>			3							
<i>thalassios nordenskioldi</i>					3		3	4	7	
<i>thalassios pacifica</i>		19	12		22		14	21	30	
<i>thalassios pseudonana</i>							952	1820	2184	
<i>thalassios conferta</i>		140	144	12	300	3	137	490	560	
<i>lauderia borealis</i>							6			
<i>asterompha</i> sp.1									2	
<i>asterompha heptactis</i>		3	6							
<i>eucampta zodiacus</i>			7							

Continued	44-1/4	44-5/9	50-7	50-9	51-6	51-9	54-1/4	54-5/9
<i>cerataulin pelagica</i>						3		
<i>chaetocero sp.a</i>						560	102	118
<i>chaetocero sp.b</i>	384	322	3	830		360	600	1270
<i>chaetocero sp.c</i>	1360	1050	30	3976		670	2268	2296
<i>chaetocero sp.d</i>	22	87		122	10	73	85	97
<i>chaetocero sp.f</i>	2	18		14		16	228	472
<i>chaetocero sp.m</i>	4							
<i>chaetocero compressum</i>		32		19		14	39	50
<i>chaetocero convolutum /concavicom</i>		3		10		3		2
<i>chaetocero debile</i>				25		8		5
<i>chaetocero didymum</i>						3	9	12
<i>chaetocero filiforme</i>	1650	840	26	575	2	1810	7866	7125
<i>chaetocero lorenzianum</i>		9						
<i>chaetocero muelleri</i>	170	72	6	51		680	355	370
<i>chaetocero perpusillum</i>		15		121	65	360	115	450
<i>chaetocero septentriona</i>	6		4				5	
<i>chaetocero simile</i>							12	24
<i>chaetocero sociale</i>			4	69			34	41
<i>chaetocero subtile</i>	14	11	2	58		25	131	138
<i>chaetocero tortissimum</i>	108	116	2	360		198	428	1340
<i>chaetocero visvisibile</i>		16		17			15	15
<i>bacteriast delicatula</i>			3				2	4
<i>rhizosolen alata f.gracillima</i>	36	60	181	117	3	4		
<i>rhizosolen fragilissima</i>				3				5
<i>rhizosolen fragilissima v.1</i>	10		1	17		13	4	
<i>thalassion bacillaris</i>							3	6
<i>thalassion nitzechoides</i>							8	11
<i>nitzschia spp.</i>	4	2		12		5		
<i>nitzschia americana</i>	43	16	9	64		47	164	186
<i>nitzschia brevirostris</i>							32	18
<i>nitzschia closterium</i>	2	1				2	4	6

Continued	44–1/4	44–5/9	50–7	50–9	51–6	51–9	54–1/4	54–5/9
<i>nitzschia closterium</i> v. <i>striatula</i>	65	21	8	34		3	4	10
<i>nitzschia cylindroform</i>	158	115	10	52	8	165	51	128
<i>nitzschia delicatissim</i>	47	48	10	86		21	16	32
<i>nitzschia granii</i> v. <i>curvata</i>	3							
<i>nitzschia heimi</i>				10			3	5
<i>nitzschia lineola</i>	6	3					13	10
<i>nitzschia longissima</i>	42	51	3	87		36	104	164
<i>nitzschia pseudodelica</i>				3		2		
<i>nitzschia pungens</i>	7	1		4				1
<i>nitzschia subpacifica</i>			2					
<i>nitzschia subcurvata</i>	156	142	9	312		32	11	17
<i>nitzschia subfraudulen</i> / <i>raudulen</i>				3				
<i>nitzschia turgiduloide</i> / <i>turgidula</i>	38	30	64	84		4	20	28
<i>cylindroth fusiformis</i>	7	6		9				2
<i>nephroselm</i> spp. / <i>bipedinomon</i>	30	50	20	20		40	50	60
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	124	104	10	234		118	76	156
<i>cymbomonas</i> spp.				10				
<i>pterosperm</i> spp. / <i>pachysphaer</i>	11					11		5
<i>halosphaer</i> spp.	2							
<i>prorocentr balticum</i>							1	5
<i>prorocentr gracile</i>		4						
<i>dinophysis</i> spp.					1			
<i>gonyaulax rugosum</i>			4	3				
<i>aureodiniu pigmentosum</i>		7	2	7				
<i>amphidiniu schroederi</i>	3							
<i>cochlodini</i> spp.					1			1
<i>gymnodiniu</i> spp. 10–15	7				5			
<i>gymnodiniu</i> sp.r			3			1		
<i>gymnodiniu</i> cf. <i>aureolum</i>						1		
<i>gymnodiniu</i> <i>gracilentum</i>	94	116	66	69	4	55	5	6
<i>gymnodiniu</i> <i>paulseni</i>			2	3		2		

Continued	44–1/4	44–5/9	50–7	50–9	51–6	51–9	54–1/4	54–5/9
<i>gymnodiniu simplex</i>	26	63	10	23			10	17
<i>gymnodiniu vitiligo</i>	46	23	4	10		13	32	48
<i>katodinium rotundatum</i>	18	16	2	41		10		
<i>peridiniac</i> spp.	42	48	2	16	2	9	18	25
<i>heterocaps triquetra</i>		7		4		2		
<i>alexandriu catenella</i>		2		5		2		
<i>ceratium lineatum</i>		2						
<i>raphidophy</i> sp.2	4	9		14		4		
<i>cryptomona</i> spp. 5–10	980	630	36	325		990	160	480
<i>cryptomona</i> spp. 10–15	990	1910	26	560		1020	262	715
<i>cryptomona</i> spp. 15–20	21	36	2	64		36	20	51
<i>hemiselmis</i> spp. 4–6	62	47		11		51	58	118

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Taxon	Station	56-6	56-9	68-1/3	68-B	77-1/4	77-6/9	80-2/5	80-6/8	80-9
<i>synechococ</i> spp.		756		1344	2800	840	1036	364	4620	1764
<i>solenicola setigera</i>		124	128			274	231	56		3
<i>ochromonas</i> spp.		196	112	168	280	56	224	84	224	112
<i>dinobryon sueicum</i>		37	65		14	2		11		
<i>pedinellac</i> sp.223			60			20		20		
<i>pedinellac</i> sp.239			4		27					3
<i>apedinella spinifera</i>							15			
<i>meringosiph mediterranea</i>				13	12	5	19			10
<i>imantonia rotunda</i>		96	340	269	160	94	86	170	455	170
<i>corymbellu</i> sp.					12					
<i>corymbellu aureus</i>			58	21	4	106	15			2
<i>chrysochro</i> sp.1								80	45	
<i>chrysochro</i> spp. 3-6		205	1020	200	415	84	570	235	1080	455
<i>phaeocysti pouchetii</i>					7524					142
<i>crystallo l hyalinus</i>		3	9	11	4			1	3	2
<i>leyanella arenaria</i>			56		140					56
<i>leptocylin danicus</i>		51	95	494		4	3			
<i>leptocylin danicus</i> spores		198	4		5	3				
<i>leptocylin minimus</i>		11	50							
<i>leptocylin mediterraneu</i>						7				7
<i>skeletonem costatum</i>		12	270	48		7	16			
<i>thalassios rotula</i>				47						
<i>thalassios angulata</i>				12						
<i>thalassios anguste-line</i>				5	18					
<i>thalassios nordenskiold</i>				20						
<i>thalassios pacifica</i>		5	45	65	29					
<i>thalassios eccentrica /symmetrica</i>				8						
<i>thalassios pseudonana</i>			250							
<i>thalassios mendiolana</i>				32						

Continued	56–6	56–9	68–1/3	68–B	77–1/4	77–6/9	80–2/5	80–6/8	80–9
<i>thalassios conferta</i>	48	1320	12	28	18	22	4	18	8
<i>lauderia borealis</i>	12		21						
<i>asterompha sp.1</i>		10							
<i>asterompha heptactis</i>		5		6			4		2
<i>biddulphi longicurvis</i>	17								2
<i>eucampia zodiacus</i>		9	104	14					
<i>chaetocero sp.b</i>	27	560	14	170	12	76			
<i>chaetocero sp.c</i>	910	810		34	8	136			
<i>chaetocero sp.d</i>	7	154		7		49			
<i>chaetocero sp.e</i>	42	400		24					
<i>chaetocero sp.f</i>		27		3					
<i>chaetocero sp.m</i>			30						
<i>chaetocero atlanticum</i>			3						
<i>chaetocero compressum</i>	185	10	162	12		6			
<i>chaetocero convolutum /concavicornis</i>	18	5	16			10	2		5 143
<i>chaetocero constrictum /vanheurckii</i>	282		236						
<i>chaetocero danicum</i>	1	4							
<i>chaetocero debile</i>	45	9	6864			14			
<i>chaetocero decipiens</i>			9						
<i>chaetocero diadema</i>			11						
<i>chaetocero didymum</i>	2		14	14					
<i>chaetocero filiforme</i>	330	510	15	120	4	44			
<i>chaetocero laciniatum</i>			15			3	5		
<i>chaetocero lorenzianum</i>	40	6	45	4					
<i>chaetocero perpusillum</i>	12	143							
<i>chaetocero septentriona</i>	81		12						
<i>chaetocero simile</i>		5	144						
<i>chaetocero sociale</i>	5928	35	316	8	2				
<i>chaetocero subtile</i>	7	82		7					
<i>chaetocero tortissimum</i>		8							
<i>chaetocero vbbvisibile</i>	5	12	11						

Continued	56-6	56-9	68-1/3	68-B	77-1/4	77-6/9	80-2/5	80-6/8	80-9
<i>bacteriast delicatula</i>			12						4
<i>rhizosolen a lata f.alata</i>			6						
<i>rhizosolen a lata f.gracilifima</i>	17	11		11	132	97	8	15	26
<i>rhizosolen fragilissima</i>			7	3					
<i>rhizosolen fragilissima v.1</i>		160	20	12	7	37			
<i>rhizosolen setigera</i>			23						
<i>asterionel glacialis</i>			4						
<i>thalassiot sp.</i>								31	5
<i>thalassion bacillaris</i>	5	9					2		
<i>thalassion nitzschoides</i>			297	31		3		4	
<i>pleurosigm acutum</i>			5						
<i>tropidonei antarctica v.polyplasta</i>			22	5	2		1	7	1
<i>tropidonei lepidoptera</i>								224	
<i>nitzschia</i> sp. 20-40								157	8
<i>nitzschia americana</i>	97	30	162						
<i>nitzschia brevirostris</i>	1								
<i>nitzschia closterium</i>	2	14			2		4	45	4
<i>nitzschia closterium v.striatula</i>					3	26		15	
<i>nitzschia cylindroform</i>		202	32		12	26	17	26	15
<i>nitzschia delicatissim</i>	11		56		36	37	12	59	5
<i>nitzschia heimi</i>		29					3	7	8
<i>nitzschia lineola</i>	6	6	7		2	12		138	11
<i>nitzschia longissima</i>	15	96	45		6	30			2
<i>nitzschia pseudodelica</i>								4	36
<i>nitzschia pungens</i>	26	11	44						
<i>nitzschia seriata</i>			28						
<i>nitzschia seriata f.obtusa</i>	15		92		7				
<i>nitzschia subcurvata</i>	33	134	52		26	25		29	3
<i>nitzschia subfraudulen /fraudulen</i>		4	96						
<i>nitzschia turgiduloide /turgidula</i>	18	11			68	42	9	368	29

Continued	56–6	56–9	68–1/3	68–B	77–1/4	77–6/9	80–2/5	80–6/8	80–9
cylindroth fusiformis	3	8	12	5		2			2
nephroselm spp. /bipedinomon		160		50					
tetraselmi spp. /pyramimonas		410	11	23	4	45	3		
cymbomonas spp.						33	2	3	5
pterosperm spp./pachysphaer		33		31	3	7	6	3	5
halosphaer spp.								5	
eutreptiel spp.		4							
prorocentr balticum	7		5	10		10			11
prorocentr gracile		5		520		3			
prorocentr minimum								2	
prorocentr triestinum								2	
prorocentr vaginulum						1			
dinophysis spp.							1		
gonyaulax rugosum		8							
aureodinu pigmentosum	4	6	6	3	8		2	8	4
amphidinu sp.m								2	
cochlodini spp.				4					
gymnodinu spp. 10–15					4				
gymnodinu sp.r	3	8	11	4					
gymnodinu cf.aureolum	2								2
gymnodinu flavum		3							
gymnodinu gracilentum	6	57	23	17	38	71	28	119	36
gymnodinu simplex		70	5	17	5	15	6	21	22
gymnodinu vitiligo	12	41	37	41	12	20	4	47	32
katodinium rotundatum		12	8	52					
peridiniac spp.	17	42	32	64		26	6	13	
heterocaps triquetra		31	12	69					
alexandrinu catenella		3		4		3			
gonyaulax digitale				2					
ceratium lineatum						2			
raphidophy sp.2				11		11	9	15	

Continued	56-6	56-9	68-1/3	68-B	77-1/4	77-6/9	80-2/5	80-6/8	80-9
<i>cryptomonas spp.</i> 5-10		330	18	11	27	294	8	34	24
<i>cryptomonas spp.</i> 10-15	4	358	38	98	26	250	5	4	8
<i>cryptomonas spp.</i> 15-20		462		40	3	98	2		
<i>hemiselmis spp.</i> 4-6		100	12						

CRUISE 87-05

Taxon	Station 83-7	83-9
<i>synechococ</i> spp.	3080	1008
<i>solenicola setigera</i>	144	216
<i>ochromonas</i> spp.	392	112
<i>dinobryon sueicum</i>	6	14
<i>pedinellac</i> sp.239		4
<i>meringosiph mediterranea</i>	19	5
<i>imantonia rotunda</i>	116	51
<i>corymbellu aureus</i>	36	3
<i>chrysochro</i> sp.1	114	
<i>chrysochro</i> spp. 3-6	215	104
<i>crystallol hyalinus</i>	5	
<i>leyanella arenaria</i>	28	
<i>leptocylin danicus</i>	16	13
<i>skeletonem costatum</i>	96	3
<i>thalassios pacifica</i>	4	
<i>thalassios pseudonana</i>	43	
<i>thalassios conferta</i>	138	10
<i>eucampla zoodiacus</i>		4
<i>chaetocero</i> sp.b	175	43
<i>chaetocero</i> sp.d	44	
<i>chaetocero</i> sp.e	21	
<i>chaetocero compressum</i>	55	
<i>chaetocero convolutum /concavicornis</i>	42	
<i>chaetocero constrictum /vanheurckii</i>		4
<i>chaetocero debile</i>	6	4
<i>chaetocero laciniosum</i>	9	
<i>chaetocero lorenzianum</i>	16	
<i>chaetocero perpusillum</i>	720	
<i>chaetocero septentriona</i>	13	

Continued**83-7****83-9**

<i>chaetocero sociale</i>	42	
<i>chaetocero subtile</i>	11	
<i>chaetocero tortissimum</i>	4	
<i>chaetocero vixibile</i>	3	
<i>bacteriast delicatula</i>	5	
<i>rhizosolen alata f.gracilima</i>	97	54
<i>rhizosolen fragilissima</i>	4	
<i>rhizosolen fragilissima v.1</i>	22	5
<i>thalassion bacillaris</i>	6	
<i>thalassion nitzschoides</i>	9	7
<i>nitzschia sp. 20-40</i>	17	
<i>nitzschia americana</i>	4	
<i>nitzschia closterium</i>	15	
<i>nitzschia closterium v.striatula</i>	53	
<i>nitzschia cylindroform</i>	168	
<i>nitzschia delicatissim</i>	78	10
<i>nitzschia subraudulen /raudulen</i>	3	
<i>nitzschia heimii</i>	10	
<i>nitzschia lineola</i>	6	
<i>nitzschia longissima</i>	34	8
<i>nitzschia pseudodelica</i>	11	5
<i>nitzschia subcurvata</i>	186	5
<i>nitzschia turgiduloide /turgidula</i>	114	8
<i>cylindroth fusiformis</i>	3	2
<i>tetraselmi spp. /pyramimonas</i>		8
<i>pterosperm spp. /pachysphaer</i>	2	2
<i>halosphaer spp.</i>		2
<i>prorocentr balticum</i>		3
<i>prorocentr gracile</i>		2
<i>aureodiniu pigmentosum</i>	6	
<i>amphidiniu acutissimum</i>	3	2

Continued**83-7****83-9**

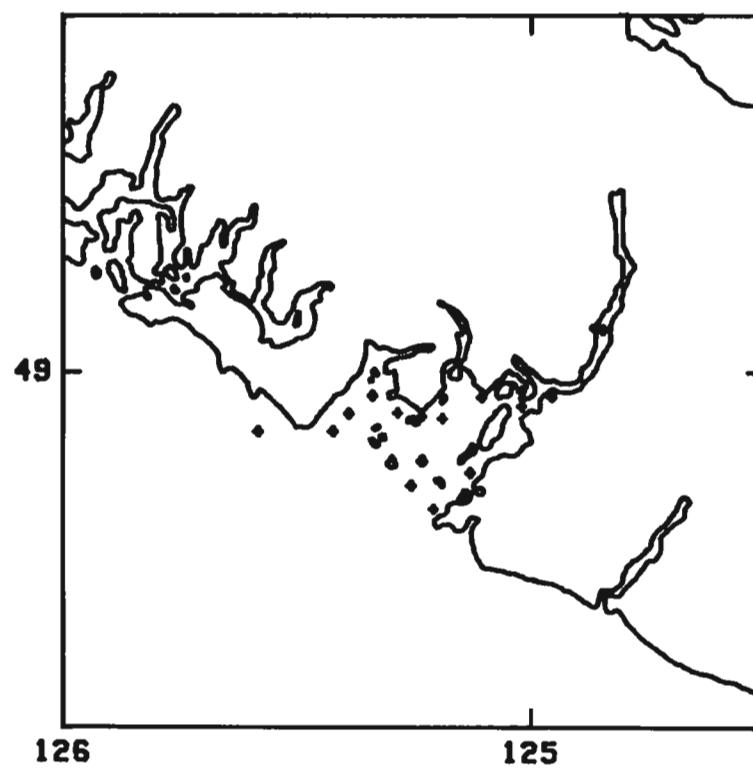
<i>gymnodiniu</i> spp. 10-15	3
<i>gymnodiniu</i> cf/aureolum	8
<i>gymnodiniu gracilellum</i>	132
<i>gymnodiniu paulseni</i>	5
<i>gymnodiniu simplex</i>	2
<i>gymnodiniu simplex</i>	36
<i>gymnodiniu vitiligo</i>	17
<i>peridiniae</i> spp.	4
<i>heterocaps triquetra</i>	21
<i>alexandriu catenella</i>	12
<i>ceratium fusus</i>	5
<i>ceratium lineatum</i>	1
<i>raphidophy</i> sp.2	5
<i>cryptomona</i> spp. 5-10	12
<i>cryptomona</i> spp. 10-15	202
<i>cryptomona</i> spp. 15-20	244
	74
	30

CRUISE 88-05

2 – 13 May 1988

Area of operations: Barkley Sound (MASS Program)

Vessel: C.S.S. Vector



CRUISE 88-05

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
2B-4/5	3 May 88	48 57.1	125 01.3	10.2	9.2	31.46	7.9	10.1	1.20	21.0
4-7	4 May 88	48 57.9	125 06.4	1.3	9.9	29.56	6.0	1.6	0.60	8.7
6-7		48 57.1	125 01.3	1.5	10.2	23.65	6.3	1.0	0.30	24.5
6B-1/3		48 57.1	125 01.3	45.8	8.8	32.11	1.8	17.7	1.80	32.4
6C-4/5		48 57.1	125 01.3	22.0	9.1	31.53	5.2	10.8	1.20	20.3
6B-6/7		48 57.1	125 01.3	0.5	9.9	20.21	4.8	1.0	0.30	24.5
7-3		48 58.4	125 01.3	21.3	9.2	31.45	3.9	10.4	1.00	17.1
7-6		48 58.4	125 01.3	0.6	10.9	23.89	4.9	0.2	0.10	8.1
12-4		48 48.5	125 12.6	2.4	10.1	30.35	28.6	4.4	0.70	9.0
14-4	5 May 88	48 50.5	125 15.4	31.2	9.3	31.51	2.1	9.9	1.20	16.8
14-5		48 50.5	125 15.4	10.7	10.2	30.73	4.9	2.9	0.60	6.7
14-6		48 50.5	125 15.4	2.3	10.4	29.77	5.3	1.8	0.40	6.6
15A-1		48 52.5	125 14.0	87.8	7.9	32.61		27.4	2.50	44.6
15A-2		48 52.5	125 14.0	75.0	8.2	32.43		23.9	2.60	38.6
15A-3		48 52.5	125 14.0	51.0	8.5	32.02		20.5	2.30	33.9
15A-4		48 52.5	125 14.0	31.6	9.1	31.58		11.8	1.40	19.2
15A-5	!	48 52.5	125 14.0	22.5	9.7	31.20		6.4	0.90	10.7
15A-6		48 52.5	125 14.0	11.5	10.0	30.96		4.0	0.70	7.4
15A-7		48 52.5	125 14.0	1.9	10.5	28.25		2.4	0.50	7.1
15B-1/3		48 52.5	125 14.0	31.0	9.2	31.46	2.2	11.8	1.40	19.2
15B-5/7		48 52.5	125 14.0	1.8	10.6	27.47	4.8	2.4	0.50	7.1
17-6		48 56.1	125 11.4	11.6	9.7	31.00	4.4	7.0	0.80	13.5
21-1		48 57.9	125 06.4	94.4	8.1	32.54		26.2	2.40	57.0
21-2		48 57.9	125 06.4	51.0	9.0	31.78		15.3	1.60	28.1
21-3		48 57.9	125 06.4	26.0	9.5	31.35	2.9	7.9	1.00	20.7
21-4		48 57.9	125 06.4	11.5	9.9	31.04	3.8	4.6	0.60	11.8
21-5		48 57.9	125 06.4	1.6	10.4	28.43	6.8	1.4	0.50	10.1
25-5		48 56.3	125 14.0	11.5	9.5	31.02	1.0	5.4	0.70	6.4
27-6		48 56.6	125 17.2	1.5	10.9	26.07	4.5	0.2	0.40	0.2
28-2	6 May 88	48 55.0	125 35.0	49.2	8.9	31.92		15.3	1.50	25.7
28-3		48 55.0	125 35.0	28.8	9.5	31.58	7.7	3.5	0.70	9.5
28-5		48 55.0	125 35.0	9.4	9.7	31.38		1.4	0.60	7.1
31A-1		48 56.5	125 23.4	43.4	8.5	32.00		17.9	1.90	34.8
31A-2		48 56.5	125 23.4	31.6	8.8	31.73		13.8	1.50	26.0
31A-3		48 56.5	125 23.4	21.3	9.4	31.42	2.4	7.5	0.90	14.6

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
31A-4	6 May 88	48 56.5	125 23.4	8.8	9.7	30.52	7.1	2.9	0.60	7.8
31A-5		48 56.5	125 23.4	2.0	11.0	26.62	1.1	0.2	0.20	4.7
34-1		48 58.0	125 20.4	35.1	8.7	31.66		14.3	1.90	24.5
34-2		48 58.0	125 20.4	20.9	9.4	31.11	2.0	9.2	1.20	7.6
34-3		48 58.0	125 20.4	12.0	9.6	30.66	4.9	4.3	0.70	1.7
34-4		48 58.0	125 20.4	1.6	11.1	26.80	2.9	0.2	0.30	0.2
41A-1	7 May 88	49 03.5	124 50.9	253.0	8.6	32.86		32.0	3.30	52.6
41A-2		49 03.5	124 50.9	100.0	8.6	32.59		25.2	2.50	39.9
41A-3		49 03.5	124 50.9	50.5	9.2	31.98		12.8	1.80	28.5
41A-4		49 03.5	124 50.9	25.8	9.3	31.35	1.8	10.3	1.40	13.2
41A-5		49 03.5	124 50.9	10.3	9.7	30.30	3.3	6.3	1.00	7.2
41A-6		49 03.5	124 50.9	0.0	10.9	13.38	6.5	1.7	0.40	33.7
50-1	8 May 88	48 57.9	124 57.5	93.0	8.0	32.57		25.9	2.60	40.8
50-2		48 57.9	124 57.5	51.0	8.4	32.32		23.0	2.30	34.5
50-3		48 57.9	124 57.5	26.2	9.5	31.34	1.6	7.7	1.00	9.3
50-4		48 57.9	124 57.5	10.8	9.9	30.88		9.0	0.70	2.8
50-5		48 57.9	124 57.5	6.5	10.6	29.81	6.7	0.2	0.40	0.2
50-6		48 57.9	124 57.5	0.1	11.8	27.65	4.0	0.2	0.30	0.2
63-1	9 May 88	48 57.9	124 57.5	85.7	8.0	32.62		24.6	2.50	40.6
63-2		48 57.9	124 57.5	75.3	8.1	32.52		30.1	2.40	38.4
63-4		48 57.9	124 57.5	50.8	8.3	32.36		21.7	2.10	35.2
63-5		48 57.9	124 57.5	34.6	8.9	31.83		14.1	1.60	20.4
63-7		48 57.9	124 57.5	25.3	9.3	31.43	0.9	7.5	1.10	11.2
63-8		48 57.9	124 57.5	5.7	10.5	29.75	4.0	0.8	0.40	0.2
63-9		48 57.9	124 57.5	1.6	12.5	24.67	4.8	0.2	0.40	0.2
66-3		48 51.5	125 07.9	74.9	8.5	32.55		24.4	2.50	50.9
66-4		48 51.5	125 07.9	50.0	8.7	32.35		22.2	2.30	41.1
66-5		48 51.5	125 07.9	34.1	8.9	32.00		18.1	1.80	31.0
66-6		48 51.5	125 07.9	25.8	9.0	31.85	0.9	14.1	1.80	22.8
66-7		48 51.5	125 07.9	16.4	9.4	31.42		7.8	1.00	16.6
66-8		48 51.5	125 07.9	7.0	10.1	30.51	2.3	3.1	0.60	8.1
66-9		48 51.5	125 07.9	1.9	11.6	28.58	4.8	0.2	0.30	5.3
95-3	11 May 88	48 58.0	125 20.4	9.8	9.8	30.67	5.2	11.5	0.60	
95-4		48 58.0	125 20.4	4.9	11.9	29.18		0.2	0.30	
95-5		48 58.0	125 20.4	0.4	12.5	27.54		0.2	0.30	
98-4		48 56.5	125 23.4	8.3	11.2	29.62	5.8	0.2	0.40	
100-5	12 May 88	48 55.0	125 25.5	25.7	9.2	31.64	0.9	12.6	1.40	24.9

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate
100-7	12 May 88	48 55.0	125 25.5	14.1	11.0	29.99	6.5	0.3	0.40	7.8
100-9		48 55.0	125 25.5	1.6	11.5	29.73	5.7			
103-7		48 52.5	125 14.0	11.3	10.1	30.61	7.1	1.5	0.50	

CRUISE 88-05

Taxon	Station	2B-4/5	4-7	6-7	6B-1/3	6C-4/5	6B-6/7	7-3	7-6	
ochromonas spp.		491	616	2060	295		1400	472	2630	
dinobryon spp.			35		98				239	
dictyocha speculum			35	4	8		23	2	8	
apedinella spinifera			12							
dicrateria sp.		983	4780	2210	590	917	4490	3070	2630	
chrysocro spp. 0-5		16000	10000	6040	8650	6290	10800	17700	4940	
chrysocro spp. 6-10		1180	13200	1330		131	1540	825	80	
chrysocro spp. 10-15		197	770	295				236	80	
detonula pumila			23				6		8	
leptocylin minimus		148	58				47	101		
skeletonem coetatum		9530	1170	52500	4700	10400	31900	3690	216000	
thalassios spp.				8					4	
thalassios spp. < 10			12	4					4	
thalassios aestivialis		654	94	8	62	148	55	280		
thalassios eccentrica /symmetrica		23	35	8					31	
thalassios nordenskiold		670	666	78	569	500	164	312	55	
thalassios rotula		55	82	8			16	6	8	
chaetocero spp. cells		62	58	8		8				
chaetocero affine		4								
chaetocero compressum							70	16		
chaetocero convolutum /concavicorn			1							
chaetocero debile		31	187		6		39	101	16	
chaetocero decipiens			58							
chaetocero radicans		62	129				39			
chaetocero sociale			210							
rhizosolen delicatula							2			
rhizosolen fragilissima		912	970		39	31	31	678		
asterionel formosa								3		
asterionel glacialis			12							

15

Continued	2B–4/5	4–7	6–7	6B–1/3	6C–4/5	6B–6/7	7–3	7–6
<i>thalassiot</i> <i>frauenfeldii</i>			16					
<i>thalassion</i> <i>nitzschoides</i>	78	58	280	8	10	257	117	231
<i>grammatoph</i> <i>marina</i>						8		
<i>naviculace</i> spp.	16	12	4		16	8		
<i>gyrosigma</i> spp. <i>pleurosigma</i>							2	
<i>navicula</i> <i>wawrikae</i>	2	23					2	
<i>nitzschia</i> spp.			70					
<i>nitzschia</i> <i>closterium</i>	23	12		2	8	8	31	
<i>nitzschia</i> <i>delicatissim</i>	187	94		8	8		31	
<i>nitzschia</i> <i>pungens</i>							31	8
<i>micromonas</i> <i>pusilla?</i>	3730	6320	10300	10800	3600	18800	13900	12400
<i>tetraselmis</i> spp. / <i>pyramimonas</i>	98	616	294	197				399
<i>eutreptiel</i> spp.		1	16	2		16	8	58
<i>dinophycea</i> spp.	16	82	62	16		148	8	39
<i>prorocentr</i> <i>gracile</i>								39
<i>dinophysis</i> <i>ovum</i>		2						
<i>gymnodiniu</i> spp. 10–15	8			31				20
<i>gymnodiniu</i> spp. 15–20	16		4		23	62	23	
<i>gymnodiniu</i> spp. 20–50	47	351	156	6		234	39	16
<i>gymnodiniu</i> <i>simplex</i>			147					
<i>katodinium</i> <i>rotundatum</i>			117	23	8	1120	8	121
<i>gyrodinium</i> spp.	109	82		55	8		117	
<i>scrippsiei</i> sp.1 9.5–13.5		94	55		8	23		12
<i>heterocaps</i> <i>triquetra</i>	8	58	58	2	2	156		82
<i>microcanth</i> spp.			16			8		8
<i>alexandriu</i> <i>ostenfeldii</i>		2						1
<i>gonyaulax</i> <i>digitale</i>			1					
<i>gonyaulax</i> <i>spinifera</i>						2		
<i>gonyaulax</i> <i>triacantha</i>		1	1			2		4
<i>ceratium</i> <i>minutum</i>		2						
<i>cryptomonas</i> spp. 0–5	2750	2460	1920	590	262	7160	3070	1120

Continued	2B-4/5	4-7	6-7	6B-1/3	6C-4/5	6B-6/7	7-3	7-6
<i>cryptomonas</i> spp. 5-10	1180	2160	2210			2810	825	717
<i>cryptomonas</i> spp. 10-15	294	1540	884		131	2110	236	399
<i>cryptomonas</i> spp. 15-20		770					80	
<i>cryptomonas</i> spp. 20-25		154						159
<i>mesodinium rubrum</i>	8	351	12			8	140	77

CRUISE 88-05

TAXON	STATION	12-4	14-4	14-5	14-6
ochromonas spp.		295	197	393	
dictyocha speculum		16	2	2	23
dicrateria sp.		2560	2260	4320	1970
chrysochro spp. 0-5		18000	18400	33200	9240
chrysochro spp. 6-10		2560	2750	3730	1670
chrysochro spp. 10-15		393		197	
leptocylin danicus		117			
leptocylin minimus		109	86	148	171
paralia sulcata			6		
stephanopy nipponica				2	
skeletonem costatum		9530	779	280	117
thalassios aestivalis		55	164	132	109
thalassios nordenskioldi		109	319	203	39
thalassios rotula				8	
eucampia zodiacus		2	8		4
chaetocero spp. cells		31	39	70	179
chaetocero compressum		31		78	
chaetocero convolutum /concavicom					6
chaetocero debile		16	16	55	
chaetocero decipiens		4	6	70	218
chaetocero radicans		47	23	23	
chaetocero sociale				31	
rhizosolen fragilissima		234	740	1250	1380
thalassiot frauenfeldii			2	39	
thalassion nitzschoides		94	164	187	125
licmophora sp.1		2			
naviculace spp.		23		55	31
gyrosigma spp. pleurosigma			4		
navicula wawrikae		18		6	2

Continued	12–4	14–4	14–5	14–6
<i>nitzschia closterium</i>	47	39	86	39
<i>nitzschia delicatissim</i>	31	101	39	31
<i>nitzschia pungens</i>	4	10	12	23
<i>micromonas pusilla?</i>	8940	13800	44600	12900
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	590			
<i>euteptiel</i> spp.	31		16	6
<i>dinophycea</i> spp.	62		47	62
<i>dinophysis ovum</i>	2		2	
<i>gymnodiniu</i> spp. 5–10			249	
<i>gymnodiniu</i> spp. 10–15			156	
<i>gymnodiniu</i> spp. 15–20	55	8		203
<i>gymnodiniu</i> spp. 20–50	156		39	140
<i>ketodinium rotundatum</i>	197		197	688
<i>gyrodinium</i> spp.	47	86	86	
<i>scrippsiel</i> sp.1 9.5–13.5	94			23
<i>heterocaps triquetra</i>	39			249
<i>micracanth</i> spp.	16			47
<i>cryptomonas</i> spp. 0–5	3930	3440	8650	1970
<i>cryptomonas</i> spp. 5–10	1470	295	2160	1470
<i>cryptomonas</i> spp. 10–15	1280	197	786	1280
<i>mesodinium rubrum</i>	335		86	195

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Taxon	Station	15A-1	15A-2	15A-3	15A-4	15A-5	15A-6	15A-7	15B-1/3	15B-5/7
ochromonas spp.			516	66	295	393	1470	3380		
dinobryon spp.										173
dictyocha speculum						2	12	78		31
dicrateria sp.	1570	2210	655	1770	1470	11000	10100	829	2430	
chrysochro spp. 0-5	2360	8770	9110	13000	18100	34500	32700	10100	30200	
chrysochro spp. 6-10	197	74	197	1470	2060	2740	9020	553	3820	
chrysochro spp. 10-15					98				92	
corethron criophilum			23				6			
detonula pumila								6		
leptocylin minimus					94	203	555	561	226	195
paralia sulcata	38									
stephanopy nipponica							2			
skeletonem costatum	732	3480	8450	1670	296	205	545	2400	16500	160
thalassios spp.						35	16			
thalassios spp. < 10							18	16		
thalassios aestivalis	210	561	366	39	55	35	70	62		
thalassios anguste-line						6				
thalassios nordenskiold	436	879	678	171	164	64	164	366	117	
thalassios rotula							16			
coscinodis spp.				2						
eucampia zodiacus							23	31	4	4
chaetocero spp. cells					23	16	6			109
chaetocero compressum	23									
chaetocero convolutum /concavicom						4				
chaetocero debile		9			55		88	335		117
chaetocero decipiens					4	8	64	47	4	86
chaetocero laevisum								16		31
chaetocero radicans					55		58	109		55
chaetocero sodale								8		

Continued	15A-1	15A-2	15A-3	15A-4	15A-5	15A-6	15A-7	15B-1/3	15B-5/7
<i>rhizosolen alata</i> f. <i>alata</i>						2			
<i>rhizosolen fragilissima</i>		19	70	912	912	520	390	873	390
<i>rhizosolen setigera</i>				6	2		1		
<i>rhizosolen stolterfothi</i>						12			
<i>asterionel glacialis</i>			8					8	8
<i>thalassiot frauenfeldii</i>					8	6		2	2
<i>thalassion nitzschoides</i>	39	37	203	140	265	152		226	16
<i>naviculae</i> spp.		2		23	86	53	55	8	31
<i>gyrosigma</i> spp. <i>pleurosigma</i>					2	1			
<i>navicula wawrikiae</i>		2			18	23	16	6	31
<i>nitzschia</i> spp.						6			
<i>nitzschia closterium</i>	16	9		8	70	105	31	31	31
<i>nitzschia delicatissim</i>	8	9	47	70	117	146	39	47	47
<i>nitzschia pacifica</i>				18				16	47
<i>nitzschia pungens</i>						29	23		
<i>micromonas pusilla?</i>	12000	11400	5310	12100	6680	34700	67100	7090	32400
<i>tetraselmis</i> spp. / <i>pyramimonas</i>		147				211	3384		1396
<i>eutreptiel</i> spp.			8			6	8	16	31
<i>dinophycea</i> spp.	8		16		31	58	179	16	148
<i>prorocentr gracile</i>							1		4
<i>prorocentr minimum</i>				39				94	171
<i>dinophysis ovum</i>							2		
<i>gymnodiniu</i> spp. 10–15	16	28	31	31	23	29	249	55	156
<i>gymnodiniu</i> spp. 15–20			31	39	16	70	62		39
<i>gymnodiniu</i> spp. 20–50	78	19	8	8	16	12	460		343
<i>gymnodiniu</i> spp. > 50					2	6			
<i>gymnodiniu simplex</i>						421	564		
<i>catadinium rotundatum</i>							70	92	1390
<i>gyrodinium</i> spp.		47	31	94	70	29	109	70	70
<i>scrippsiel</i> sp. 1 9.5–13.5						12	327		94
<i>heterocaps triquetra</i>						6	405		436

Continued	15A-1	15A-2	15A-3	15A-4	15A-5	15A-6	15A-7	15B-1/3	15B-5/7
<i>micracanth</i> spp.						12	70		55
<i>alexandriu catenella</i>								2	
<i>gonyaulax digitale</i>									6
<i>gonyaulax triacantha</i>							1		2
<i>cryptomonas</i> spp. 0-5	1280	3540	1050	2160	2460	8420	12400	1570	6760
<i>cryptomonas</i> spp. 5-10	393	516	66	393	983	2950	5640	276	2250
<i>cryptomonas</i> spp. 10-15				197	590	211	1690	92	1730
<i>cryptomonas</i> spp. 15-20									173
<i>cryptomonas</i> spp. 20-25						211			
<i>mesodinium rubrum</i>					4	23	55	8	335

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Taxon	Station	17-6	21-1	21-2	21-3	21-4	21-5	25-5	27-6
ochromonas spp.				459	98	197		393	49
dictyocha speculum		8			2	8	8	16	23
apedinella spinifera							94		246
dicrateria sp.		3540	140	852	2160	1470	2480	3240	884
chrysochro spp. 0-5		27200	1780	7270	24100	25100	18600	15200	3640
chrysochro spp. 6-10		1530	94	852	983	2560	3180	2560	786
chrysochro spp. 10-15									49
detonula pumila							8		
leptocylin danicus						2	31		47
leptocylin minimus		405		31	265	374	164	164	16
stephanopy nipponica						2		8	
skeletonem costatum		2590	1500	3410	1570	1280	5900	670	343
thalassios spp.		8							
thalassios aestivalis		39	47	164	94	117	78	218	
thalassios anguste-line								8	
thalassios nordenskiold		164	148	382	171	164	335	203	62
thalassios rotula		8			8	16	16	39	8
eucampia zoodiacus						16			8
chaetocero spp. cells		8		16	23	8	55		23
chaetocero compressum		31			47	8		20	31
chaetocero convolutum /concavicom						18			2
chaetocero debile		47		16		47	312	195	421
chaetocero decipiens		8				10	23	16	16
chaetocero laevisum						23	8	8	
chaetocero radicans		16					210	296	109
chaetocero sociale		31					148	31	
rhizosolen fragilissima		429		686	1220	569	55	171	39
rhizosolen setigera					6	2			
thalassiot frauenfeldii		4		2	10	6		2	

Continued	17–6	21–1	21–2	21–3	21–4	21–5	25–5	27–6
<i>thalassion nitzschoides</i>	140	8	242	296	234	39	8	
<i>naviculace</i> spp.	47	8		8	23	3900	23	8
<i>gyrosigma</i> spp. <i>pleurosigma</i>				2	2			
<i>navicula wawrikae</i>	4		2	8	2	4	4	
<i>nitzschia</i> spp.						16		
<i>nitzschia closterium</i>	23	8	8	31	94	31	23	8
<i>nitzschia delicatissim</i>	47		47	47	86	47	55	
<i>nitzschia pacifica</i>	16					31		
<i>nitzschia pungens</i>			10	31			16	8
<i>micromonas pusilla?</i>	18200	187	5830	9340	20200	19100	12000	4130
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	118			98	98	826		590
<i>euteptiel</i> spp.				8	39	39	8	70
<i>dinophycea</i> spp.	55	16	31	8	31	31		
<i>prorocentr minimum</i>	296			195	312	273	218	226
<i>dinophysis</i> spp.				2				
<i>dinophysis ovum</i>						2		
<i>gymnodiniu</i> spp. 5–10				31				
<i>gymnodiniu</i> spp. 10–15	16		31	23		94	78	55
<i>gymnodiniu</i> spp. 15–20	779	31	23		78	55	23	23
<i>gymnodiniu</i> spp. 20–50	132	8	23	16	8	203	164	405
<i>gymnodiniu</i> spp. > 50			4	4			2	
<i>gymnodiniu simplex</i>					16		16	
<i>katodinium rotundatum</i>				197		31		148
<i>gyrodinium</i> spp.	47		78	8	86	62	62	39
<i>scrippsiel</i> sp.1 9.5–13.5						86		62
<i>heterocaps triquetra</i>						62		210
<i>micracanth</i> spp.						39		62
<i>gonyaulax digitale</i>						8		
<i>gonyaulax spinifera</i>							8	
<i>gonyaulax triacantha</i>						2		
<i>cryptomona</i> spp. 0–5	6490	468	983	3240	5110	5420	5210	2700

Continued	17–6	21–1	21–2	21–3	21–4	21–5	25–5	27–6
<i>cryptomonas</i> spp. 5–10	3070	47	524	1180	1770	943	2260	639
<i>cryptomonas</i> spp. 10–15	943	94	262		688	1180	688	393
<i>cryptomonas</i> spp. 15–20								49
<i>cryptomonas</i> spp. 20–25								49
<i>mesodinium rubrum</i>	39		8	8	16	1160	47	1090

CRUISE 88-05

Taxon	Station	28-2	28-3	28-5	31A-1	31A-2	31A-3	31A-4	31A-5
<i>ochromonas</i> spp.		98	98			128			
<i>dinobryon</i> spp.							688	459	
<i>dictyocha speculum</i>				12			23	8	2
<i>apedinella spinifera</i>									197
<i>dicrateria</i> sp.		786	1380	1530	852	449	786	2360	983
<i>corymbellus aureus</i>								2060	
<i>chrysocro</i> spp. 0-5		13300	19600	26400	5570	8590	12300	12000	5700
<i>chrysocro</i> spp. 6-10		1970	2160	5900	590	1220	1280	983	1180
<i>chrysocro</i> spp. 10-15				354					66
<i>corethron criophilum</i>							2		
<i>detonula pumila</i>			16						
<i>leptocylindrus danicus</i>						14			
<i>leptocylindrus minimus</i>		78	475	1050	16		242	31	39
<i>stephanopyxis nipponica</i>				4				18	
<i>skeletonema costatum</i>		1430	8450	4840	3010	1790	2260	553	125
<i>thalassiosira aestivalis</i>		203	164	82	16	55	31	1060	8
<i>thalassiosira decipiens</i>			2						
<i>thalassiosira nordenskioldii</i>		795	319	187	55	47	78	1830	
<i>thalassiosira rotula</i>			55	35		39	8	210	8
<i>eucampia zodiacus</i>			8	12			16	16	
<i>chaetoceros</i> spp. cells		8	31	23	31	8	23	39	16
<i>chaetoceros affine</i>								16	
<i>chaetoceros compressum</i>			62	164	16		55	42	
<i>chaetoceros convolutum /concavicornis</i>				2					
<i>chaetoceros debile</i>			23	12	8		8	1730	70
<i>chaetoceros decipiens</i>				175					
<i>chaetoceros laciniatum</i>								16	
<i>chaetoceros pseudocrinit</i>								70	
<i>chaetoceros radicans</i>							101	55	

Continued	28–2	28–3	28–5	31A–1	31A–2	31A–3	31A–4	31A–5
<i>chaetoceros sociale</i>		47	47			47	8	
<i>rhizosolen delicatula</i>				14				
<i>rhizosolen fragilissima</i>	2260	9720	8180	132	31	226	23	23
<i>rhizosolen setigera</i>					2	4		
<i>fragilaria</i> spp.			23					
<i>asterionel glacialis</i>							78	
<i>thalassiot frauenfeldii</i>	2	39	23					
<i>thalassion nitzschoides</i>	506	319	234		8	31		
<i>naviculace</i> spp.	23	39	82		8	16	16	2
<i>gyrosigma</i> spp. <i>pleurosigma</i>		2	2	2		2		
<i>navicula wawrikiae</i>		4	12				6	
<i>nitzschia closterium</i>	39	47	117	16		16		
<i>nitzschia delicatissim</i>	55	78	292	94	31	55	94	
<i>nitzschia pacifica</i>			94			8	4	4
<i>nitzschia pungens</i>	2	47		4	10			
<i>micromonas pusilla?</i>	10300	10500	17500	10900	5960	9630	26000	35800
<i>tetraselmi</i> spp. / <i>pyramimonas</i>		590	590				295	590
<i>eutreptiel</i> spp.		8	70			2	23	8
<i>dinophycea</i> spp.	8	8	117				47	31
<i>prorocentr balticum</i>			199			117	210	62
<i>prorocentr minimum</i>	109	171	117		31	31	109	55
<i>dinophysis ovum</i>			2					
<i>gymnodiniu</i> spp. 10–15	47	31	94	39	23	78	31	47
<i>gymnodiniu</i> spp. 15–20	23		58	16	23	8	78	8
<i>gymnodiniu</i> spp. 20–50			82	132	39	86	78	132
<i>gymnodiniu</i> spp. > 50						4		
<i>gymnodiniu simplex</i>			210			23	8	
<i>katodinium rotundatum</i>	16	8	354		8	8		328
<i>gyrodinium</i> spp.	257	55	140	94	218	86	31	16
<i>scrippsiel</i> sp.1 9.5–13.5						8		16
<i>heterocaps triquetra</i>			2					47

Continued	28-2	28-3	28-5	31A-1	31A-2	31A-3	31A-4	31A-5
<i>micracanth</i> spp.			47				16	23
<i>gonyaulax spinifera</i>	2							
<i>cryptomonas</i> spp. 0-5	3540	5600	9790	721	769	2750	5990	6090
<i>cryptomonas</i> spp. 5-10	295	1570	4130	66	385	1280	1080	1310
<i>cryptomonas</i> spp. 10-15	98		3300			393	98	524
<i>mesodinium rubrum</i>		8	82	16		8	249	319

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TAXON	STATION	34-1	34-2	34-3	34-4
ochromonas spp.		780			393
dinobryon spp.				95	491
dictyocha speculum				8	16
apedinella spinifera					491
dicrateria sp.		694	393	2760	
chrysocro spp. 0-5		3640	9340	10900	6780
chrysocro spp. 6-10		87	983	1620	295
detonula pumila					62
leptocylin danicus		8			
leptocylin minimus		23	226	78	
skeletonem costatum		148	296	1620	31
thalassios spp. < 10		70	101	16	
thalassios aestivalis		16	47	421	31
thalassios nordenskiold		8	8	312	125
thalassios rotula			8	210	6
actinoptyc undulatus		8			
eucampia zodiacus				31	
chaetocero spp. cells		8		16	
chaetocero affine				23	
chaetocero compressum				125	374
chaetocero debile			101	592	530
chaetocero decipiens					4
chaetocero laciniatum				4	
chaetocero pseudocrinit				16	
chaetocero radicans			47	70	47
chaetocero sociale			39	23	
rhizosolen delicatula		47	6		
rhizosolen fragilissima		31	62	125	
rhizosolen setigera		2			

Continued	34-1	34-2	34-3	34-4
<i>asterionel glacialis</i>			23	
<i>thalassion nitzschoides</i>	16	47	8	
<i>naviculace</i> spp.		8	16	
<i>gyrosigma</i> spp. <i>pleurosigma</i>	4			
<i>navicula wawrikiae</i>			2	31
<i>nitzschia</i> spp.	16			
<i>nitzschia closterium</i>	2	23	78	
<i>nitzschia delicatissim</i>	94	23	8	
<i>nitzschia pacifica</i>	22		4	8
<i>nitzschia seriata</i>		8		31
<i>micromonas pusilla?</i>	4940	13600	18800	5800
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	87		285	786
<i>eutreptiel</i> spp.	16	8		78
<i>dinophycea</i> spp.	8	31	23	62
<i>prorocentr balticum</i>			156	187
<i>prorocentr gracile</i>				2
<i>prorocentr minimum</i>	8	101	125	62
<i>dinophysis ovum</i>				2
<i>gymnodiniu</i> spp. 10–15	16		23	109
<i>gymnodiniu</i> spp. 15–20		23	39	62
<i>gymnodiniu</i> spp. 20–50	94	55	132	343
<i>gymnodiniu</i> spp. > 50	2	4		
<i>katodinium rotundatum</i>				393
<i>gyrodinium</i> spp.	202	179	55	94
<i>scrippsiel</i> sp.1 9.5–13.5				47
<i>heterocaps triquetra</i>				296
<i>micracanth</i> spp.			8	78
<i>alexandriu catenella</i>				4
<i>alexandriu ostenfeldii</i>				2
<i>cryptomonina</i> spp. 0–5	173	1670	4470	4910
<i>cryptomonina</i> spp. 5–10	434	983	1140	1470

Continued	34-1	34-2	34-3	34-4
<i>cryptomona</i> spp. 10-15	260	197	976	688
<i>cryptomona</i> spp. 15-20				109
<i>cryptomona</i> spp. 20-25			95	125
<i>mesodinium rubrum</i>	16		55	483

CRUISE 88-05

Taxon	Station	41A-1	41A-2	41A-3	41A-4	41A-5	41A-6
ochromonas spp.					476	4520	
dinobryon spp.		66		197	95	197	
dictyocha speculum				2		8	
dicrateria sp.	246	295	147	1770	1430	4320	
chrysochro spp. 0-5	491	459	2310	11600	10700	18100	
chrysochro spp. 6-10			98	491	1190	2950	
corethron criophilum					39		
leptocylin minimus					16		
melosira moniliformis						8	
stephanopy nipponica				2			
skeletonem costatum		360	374	249	2520	67200	
thalassios spp. < 10			55	55	74	187	
thalassios aestivalis			31	78	125		
thalassios anguste-line					3		
thalassios decipiens					2		
thalassios eccentrica /symmetrica				2			
thalassios nordenskiold		4		31	70	70	
thalassios rotula				47	39		
eucampia zodiacus					4		
cerataulin pelagica					4		
chaetocero compressum					31		
chaetocero debile				164	12		
chaetocero sociale					31		
rhizosolen fragilissima			47	8	132		
fragilaria spp.						16	
asterionel formosa						8	
asterionel glacialis			8		27		
thalassion nitzschoides	4	8	23	23	23	600	
naviculace spp.				8	12		

Continued	41A-1	41A-2	41A-3	41A-4	41A-5	41A-6
<i>navicula wawrikae</i>				4	8	
<i>nitzschia closterium</i>		5	8	39	12	
<i>nitzschia delicatissim</i>		4	8	8		
<i>nitzschia pacifica</i>					1	
<i>micromonas pusilla?</i>	1670	2290	3240	13200	3950	11000
<i>tetraselmi</i> spp. / <i>pyramimonas</i>					48	1572
<i>eutreptiel</i> spp.						55
<i>dinophycea</i> spp.		4				148
<i>prorocentr balticum</i>				70	4	55
<i>prorocentr minimum</i>			8	156	70	132
<i>dinophysis ovum</i>						2
<i>gymnodiniu</i> spp. 10–15		16	16	31	20	
<i>gymnodiniu</i> spp. 15–20	4			31	8	
<i>gymnodiniu</i> spp. 20–50		4	8	16	31	8
<i>gymnodiniu</i> spp. > 50				2		
<i>katodinium rotundatum</i>						1380
<i>gyrodinium</i> spp.	12	98	8	39	160	
<i>ceratium minutum</i>						2
<i>cryptomona</i> spp. 0–5	197	197	541	3540	1900	3140
<i>cryptomona</i> spp. 5–10	74	66	147	688	903	16700
<i>cryptomona</i> spp. 10–15			49	491	476	8650
<i>cryptomona</i> spp. 15–20					48	393
<i>mesodinium rubrum</i>				8		109

CRUISE 88-05

Taxon	Station	50-1	50-2	50-3	50-4	50-5	50-6
dinobryon spp.					197	197	590
dictyocha speculum	16					12	23
apedinella spinifera						884	295
dicrateria sp.	197	262	1280	4910	2460	491	
chrysocro spp. 0-5	1970	1640	12600	15900	14400	9340	
chrysocro spp. 6-10		197	884	2950	2650	688	
chrysocro spp. 10-15					197		
detonula pumila						47	16
leptoclylin danicus						23	
leptoclylin minimus			171	78	432	55	
paralia sulcata	20						
skeletonem costatum	31	86	187	78	292	19900	
thalassios spp. < 10	179	55	70	125	70	23	
thalassios aestivialis	499	47	8	16	12	31	
thalassios nordenskiold	475	31	16	47	70	94	
thalassios rotula					12		
chaetocero compressum				39	164	249	
chaetocero convolutum /concavicom				2	18		
chaetocero debile				23	1170	740	
chaetocero decipiens	23			47	1910	693	
chaetocero lacinosum					47	31	
chaetocero pseudocrinit						47	
chaetocero radicans					12	203	
chaetocero sociale						39	
bacteriast delicatula				2			
rhizosolen fragilissima	8	23	86	31	58	31	
rhizosolen setigera				4			
asterionel glacialis					12		
thalassiot frauenfeldii				2			

Continued	50–1	50–2	50–3	50–4	50–5	50–6
<i>thalassion nitzschoides</i>	62	31	94	62	2	16
<i>naviculace</i> spp.	16		23	31	35	16
<i>navicula wawrikae</i>				2		
<i>nitzschia closterium</i>	39	8	16	23	105	31
<i>nitzschia delicatissim</i>		8	23		117	8
<i>nitzschia pacifica</i>			8	16	94	8
<i>micromonas pusilla?</i>	7670	5040	12100	25800	47600	40100
<i>tetraselmi</i> spp. / <i>pyramimonas</i>				295	2458	590
<i>euteptiel</i> spp.		2		16	117	23
<i>dinophycea</i> spp.	23				94	78
<i>prorocentr balticum</i>			8	94	1060	156
<i>prorocentr gracile</i>						8
<i>prorocentr minimum</i>	16			55	94	327
<i>dinophysis ovum</i>					2	8
<i>gymnodiniu</i> spp. 10–15	62	31		55	164	39
<i>gymnodiniu</i> spp. 15–20		16	31	47	117	55
<i>gymnodiniu</i> spp. 20–50	4	8	31	39	82	288
<i>gymnodiniu</i> spp. > 50					2	
<i>gymnodiniu</i> simplex				8	222	8
<i>katodinium rotundatum</i>			16	31	23	98
<i>gyrodinium</i> spp.	16	62	94	132	70	94
<i>scrippsiel</i> sp. 1 9.5–13.5					35	23
<i>heterocaps triquetra</i>					58	639
<i>micracanth</i> spp.					70	117
<i>alexandriu osterfeldii</i>						6
<i>gonyaulax digitale</i>					2	
<i>gonyaulax spinifera</i>						4
<i>gonyaulax triacantha</i>					2	
<i>ceratium fusus</i>	23					4
<i>ceratium minutum</i>						
<i>cryptomonas</i> spp. 0–5	131	262	1870	4820	2360	4820

Continued	50-1	50-2	50-3	50-4	50-5	50-6
cryptomonas spp. 5-10	131	66	393	1670	884	1670
cryptomonas spp. 10-15			197	1180	1770	884
cryptomonas spp. 15-20						98
cryptomonas spp. 20-25						197
cryptomonas spp. 25-30				117	393	
mesodinium rubrum	2	8	47	304	94	117

CRUISE 88-05

TAXON	STATION	63-1	63-2	63-4	63-5	63-7	63-8	63-9
ochromonas spp.		63		157		98	393	491
dinobryon spp.					131			197
dictyocha speculum							2	16
apedinella spinifera							1080	393
dicrateria sp.		125	262	550	393	1670	2460	3240
chrysochro spp. 0-5		753	852	1340	2690	5260	6190	8550
chrysochro spp. 6-10		125	66	184		246	884	2160
chrysochro spp. 10-15				39				
leptocylindrus danicus							12	31
leptocylindrus minimus		8				23	117	
paralia sulcata		20	7					
skeletonema costatum		565	622	20			983	13200
thalassios spp. < 10		70	16	20	31	23		
thalassios aestivialis		94	39	23	16			8
thalassios nordenskioldii		132	121	47	16	27	23	55
coscinodiscus radiatus							2	
cerataulium pelagica							8	
chaetoceros compressum					16		164	717
chaetoceros constrictum /vanheurckii								109
chaetoceros debile						23	506	530
chaetoceros decipiens							327	647
chaetoceros laciniatum							8	62
chaetoceros pseudocornutum							31	31
chaetoceros radicans								94
chaetoceros sociale								39
rhizosolen delicatula							8	94
rhizosolen fragilissima		16		8	62	47	8	16
asterionella glacialis							39	
thalassion nitzschoides		8	8	8	70	20		

Continued	63-1	63-2	63-4	63-5	63-7	63-8	63-9
<i>naviculace</i> spp.			4	8		8	8
<i>navicula wawrikae</i>		1					
<i>nitzschia closterium</i>	47	4	12	16	12	62	47
<i>nitzschia delicatissim</i>	23			16	4	31	
<i>nitzschia pacifica</i>		4				70	47
<i>micromonas pusilla?</i>	5770	3440	3460	3540	6140	20800	4320
<i>tetraselmi</i> spp. / <i>pyramimonas</i>						786	787
<i>eutreptiel</i> spp.					4	101	23
<i>dinophycea</i> spp.		27	4	8	16	47	39
<i>prorocentr balticum</i>						818	460
<i>prorocentr gracile</i>							8
<i>prorocentr minimum</i>	39	20	20		16	156	195
<i>dinophysis infundibulum</i>							2
<i>dinophysis ovum</i>							4
<i>gymnodiniu</i> spp. 10–15	62	8	16	55	4	16	86
<i>gymnodiniu</i> spp. 15–20	86	4	4		20	86	8
<i>gymnodiniu</i> spp. 20–50	31	12	8		16	23	156
<i>gymnodiniu</i> spp. > 50						8	
<i>gymnodiniu simplex</i>					20	393	125
<i>katodinium rotundatum</i>			4	8		197	
<i>gyrodinium</i> spp.	39	35	74	117	160	78	94
<i>scrippsiel</i> sp.1 9.5–13.5							16
<i>heterocaps triquetra</i>						23	366
<i>micracanth</i> spp.		4				23	31
<i>alexandriu osterfeldii</i>							10
<i>gonyaulax digitale</i>							2
<i>gonyaulax triacantha</i>							6
<i>ceratium minutum</i>							6
<i>cryptomonas</i> spp. 0–5	502	229	275	328	934	1770	2560
<i>cryptomonas</i> spp. 5–10	125	66	79		344	295	1080
<i>cryptomonas</i> spp. 10–15	63	33	79		98	590	393

Continued

	63-1	63-2	63-4	63-5	63-7	63-8	63-9
<i>cryptomona</i> spp. 15-20					49	491	98
<i>cryptomona</i> spp. 20-25						39	
<i>mesodinium rubrum</i>	8		8	31	74	195	374

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Taxon	Station	66-3	66-4	66-5	66-6	66-7	66-8	66-9	108
<i>ochromonas</i> spp.		66	197			66			
<i>dinobryon</i> spp.			98	188	66	66		354	
<i>dictyocha speculum</i>					4			19	
<i>apedinella spinifera</i>					8			472	
<i>dicrateria</i> sp.		197	98	565	262	393	3440	4600	
<i>chrysocro</i> spp. 0-5		917	819	4270	2030	4000	11500	14300	
<i>chrysocro</i> spp. 6-10		131	197	565	197	524	983	2000	
<i>chrysocro</i> spp. 10-15								118	
<i>leptoclylin danicus</i>							10	56	
<i>leptoclylin minimus</i>								28	
<i>melosira moniliformis</i>								19	
<i>stephanopy nipponica</i>								4	
<i>skeletonem costatum</i>		62	4320	690	1900	117	31	2950	
<i>thalassios</i> spp. < 10		125	132	109	70	70	109	56	
<i>thalassios aestivalis</i>		47	242	8	55	23	62		
<i>thalassios nordenskiold</i>		187	300	117	47	23	8	9	
<i>thalassios rotula</i>							2		
<i>coscinodis radiatus</i>							2		
<i>chaetocero</i> sp.gi								9	
<i>chaetocero compressum</i>					23	55	132	224	
<i>chaetocero convolutum /concavicorn</i>						2	2	2	
<i>chaetocero constrictum /vanheurckii</i>								56	
<i>chaetocero debile</i>					31	39	117	683	
<i>chaetocero decipiens</i>			2		16		296	832	
<i>chaetocero laevisum</i>							16	103	
<i>chaetocero pseudocornutum</i>							8	140	
<i>chaetocero radicans</i>						16		19	
<i>chaetocero septentrionalis</i>							16		
<i>rhizosolen fragilissima</i>			55	23	8			9	

Continued	66–3	66–4	66–5	66–6	66–7	66–8	66–9
<i>asterionel glacialis</i>							19
<i>thalassiot frauenfeldii</i>			2	4		6	
<i>thalassion nitzschoides</i>	23		101	31	16	23	4
<i>naviculace</i> spp.		4		8	8	31	
<i>nitzschia</i> spp.							9
<i>nitzschia closterium</i>		8	16	47	31	70	56
<i>nitzschia delicatissim</i>		20	8	23		31	
<i>nitzschia pacifica</i>						55	37
<i>micromonas pusilla?</i>	2230	328	5710	1900	3800	25900	18200
<i>tetraselmis</i> spp. / <i>pyramimonas</i>							472
<i>eutreptiel</i> spp.					2		159
<i>dinophycea</i> spp.	16	12		8	16		65
<i>prorocentr balticum</i>				31	16	257	813
<i>prorocentr gracile</i>							2
<i>prorocentr minimum</i>				23	8	70	168
<i>dinophysis</i> spp.						2	18
<i>gymnodiniu</i> spp. 10–15	31	86	109	8	23	47	47
<i>gymnodiniu</i> spp. 15–20	8	78	8	8		70	75
<i>gymnodiniu</i> spp. 20–50		20		2	8		252
<i>gymnodiniu</i> spp. > 50			2				
<i>gymnodiniu simplex</i>				16		8	19
<i>katodinium rotundatum</i>	16		16	66		16	118
<i>gyrodinium</i> spp.	94	117	140	117	78	147	122
<i>scrippsiel</i> sp.1 9.5–13.5							9
<i>heterocaps triquetra</i>				16			150
<i>micracanth</i> spp.				8		8	103
<i>alexandrii ostenfeldii</i>							4
<i>gonyaulax digitale</i>				2			4
<i>gonyaulax triacantha</i>							2
<i>cryptomonad</i> spp. 0–5			439		590	4750	3070
<i>cryptomonad</i> spp. 5–10	131		125	197	197	1800	1300

Continued	66-3	66-4	66-5	66-6	66-7	66-8	66-9
<i>cryptomona</i> spp. 10-15			63	131	131	655	943
<i>cryptomona</i> spp. 15-20					8	16	
<i>cryptomona</i> spp. 20-25					8	70	118
<i>cryptomona</i> spp. 25-30							118
<i>mesodinium rubrum</i>			16	47	23	358	561

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Taxon	Station	95-3	95-4	95-5	98-4	100-5	100-7	100-9	103-7	Total
<i>ochromonas</i> spp.		231			262		262			188
<i>dinobryon</i> spp.		58	393	197	66		131	25	211	
<i>dictyocha speculum</i>					19		23			
<i>apedinella spinifera</i>			66		197	8	262		70	
<i>dicrateria</i> sp.		58	459	491	2490	66	1510	25	70	
<i>chrysochro</i> spp. 0-5		1100	4060	4520	6290	2290	7730	74	1680	
<i>chrysochro</i> spp. 6-10		173	2100		1640	164	2420		632	
<i>chrysochro</i> spp. 10-15							262			
<i>detonula pumila</i>			8							
<i>leptocylindrus danicus</i>		31	226		37	6	47		56	
<i>leptocylindrus minimus</i>			343	187		8	1190		75	
<i>stephanopyxis nipponica</i>							2			
<i>skeletonema costatum</i>		990	514	1390	19	62	1830		1310	
<i>thalassios</i> spp. < 10			8		56	164	152		9	
<i>thalassios aestivalis</i>		16	16		19		234		9	
<i>thalassios anguste-line</i>					19					
<i>thalassios nordenskioldii</i>		16			19	31	94			
<i>coscinodiscus</i> spp.					2					
<i>eucampia zodiacus</i>						8	35		6	
<i>chaetoceros</i> spp. cells									94	
<i>chaetoceros compressum</i>		351	4770	2960	1080		292		795	
<i>chaetoceros convolutum</i> /concavicornis			2		2				47	
<i>chaetoceros constrictum</i> /vanheurckii			187	35	140					
<i>chaetoceros debile</i>		9440	4180	2460	1260		199		6530	
<i>chaetoceros decipiens</i>		390	117	58	56				393	
<i>chaetoceros laevis</i>			4	187			6		9	
<i>chaetoceros pseudocrinit</i>		8	351	362	355		12		290	
<i>chaetoceros radicans</i>		47	319	1010	776		4		851	
<i>chaetoceros septentrionalis</i>		8	16		19		12		37	

Continued	95–3	95–4	95–5	98–4	100–5	100–7	100–9	103–7
<i>chaetoceros sociale</i>	421	257	12	47		82		954
<i>rhizosolen fragilissima</i>	39	16	23	65	304	865		56
<i>rhizosolen setigera</i>		2						
<i>asterionella glacialis</i>		16	35		2	35		28
<i>thalassiot frauenfeldii</i>		12			2			
<i>thalassion nitzschoides</i>		2		84	109	280		28
<i>naviculace spp.</i>	16			19	23	316		19
<i>gyrosigma spp. pleurosigma</i>								2
<i>navicula wawrikiae</i>	2	2						
<i>nitzschia spp.</i>		16					4	19
<i>nitzschia closterium</i>	39	55	23	47	39	222		13
<i>nitzschia delicatissim</i>	31	86	12	47	8	316		56
<i>nitzschia pacifica</i>	4	171	22	65	23	339		178
<i>micromonas pusilla?</i>	1850	5700	11300	4390	1110	3080	884	4070
<i>tetraselmis spp. /pyramimonas</i>	751	524	492	1311		655		281
<i>eutreptiel spp.</i>		47	47			12		
<i>dinophycea spp.</i>	16	47	23	75		35		37
<i>prorocentr balticum</i>	55	31	105	140	16	210		19
<i>prorocentr gracile</i>		8	12					
<i>prorocentr minimum</i>	23	23	105	131		70		37
<i>gymnodiniu spp. 10–15</i>	8	39	47	28	16	70		19
<i>gymnodiniu spp. 15–20</i>		39		56	8	23		28
<i>gymnodiniu spp. 20–50</i>	8	62	105	28	2			9
<i>gymnodiniu spp. > 50</i>	2			2				
<i>gymnodiniu simplex</i>		94	197	290		590		9
<i>katodinium rotundatum</i>		8		197	8	328		
<i>gyrodinium spp.</i>	39	117	70	112	55	58		47
<i>scirripsiel sp.1 9.5–13.5</i>		16	12	56				
<i>heterocaps triquetra</i>	31	109	362	206				
<i>micracanth spp.</i>		78	35	28				
<i>alexandrium catenella</i>		2	4					

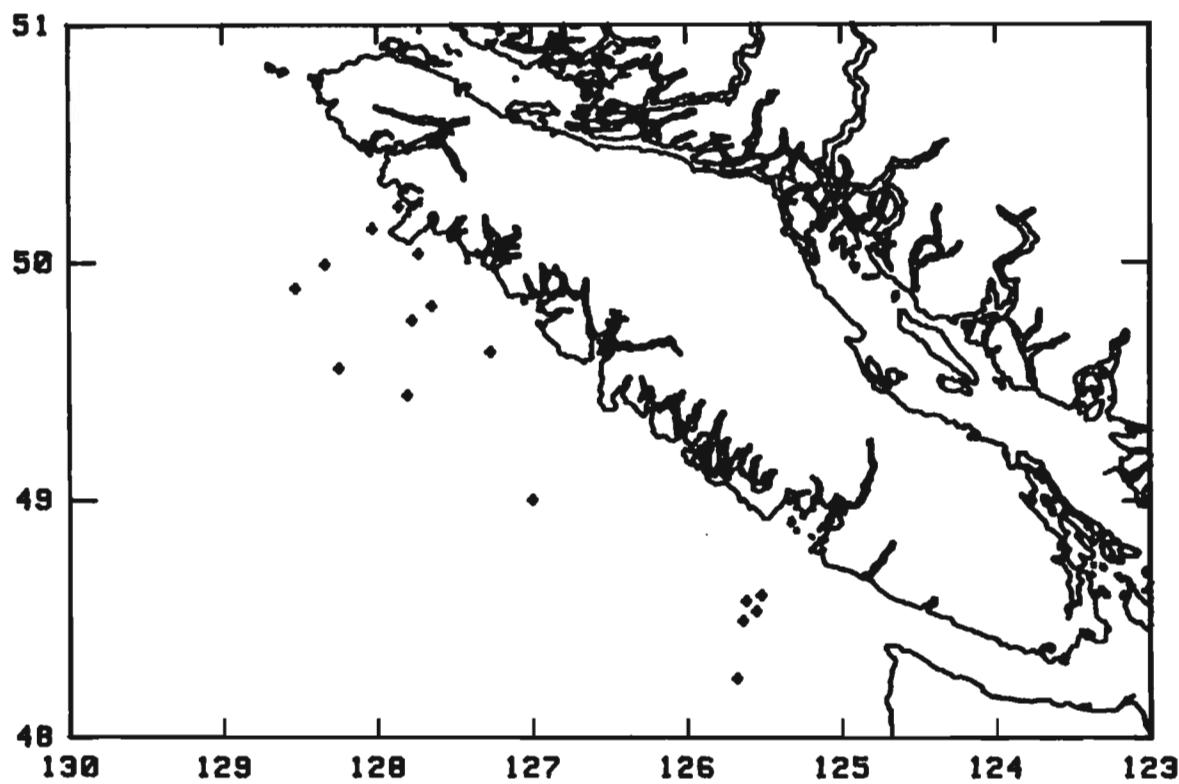
Continued	95-3	95-4	95-5	98-4	100-5	100-7	100-9	103-7
<i>alexandriu ostenfeldii</i>			2	2				
<i>gonyaulax digitale</i>			2					
<i>gonyaulax triacantha</i>				4				2
<i>ceratium minutum</i>	2	2		2				2
<i>cryptomonas spp. 0-5</i>	462	917	1380	2030	295	2230	25	281
<i>cryptomonas spp. 5-10</i>	289	459	786	983	164	1770		211
<i>cryptomonas spp. 10-15</i>	289	328	295	655	328	1050		561
<i>cryptomonas spp. 15-20</i>			98	131				
<i>cryptomonas spp. 20-25</i>	58	66						
<i>mesodinium rubrum</i>	265	203	292	411		164		290

CRUISE 88-07

8 – 19 August 1988

Area of operations: West coast of Vancouver Island

Vessel: C.S.S. Parizeau



CRUISE 88-07

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate	POC	PON
10-7	10 Aug. 88	49 53.2	128 31.6	38.0	10.7	32.48	0.6	3.5	0.71	6.9	69.5	11.0
10-9		49 53.2	128 31.6	2.0	14.2	31.85	1.9	0.4	0.22	6.5	84.6	15.4
12-1		49 59.2	128 20.0	114.0	7.1	33.54	0.5				39.2	9.3
12-4		49 59.2	128 20.0	2.0	12.5	31.22	4.7				331	69.7
15-3		50 08.4	128 01.6	44.0	7.8	33.19	3.7	22.8	1.84	33.5	114	22.8
15-5		50 08.4	128 01.6	17.0	10.7	32.51	23.6	2.7	0.27	10.2	873	167
15-7		50 08.4	128 01.6	4.0	10.7	32.48	24.2	2.7	0.59	11.1	896	173
17-3		50 14.0	127 51.4	30.0	8.8	32.92	14.2	13.5	1.47	25.3		
17-5		50 14.0	127 51.4	10.0	10.0	32.53	15.6	5.3	0.90	14.0	607	121
17-7		50 14.0	127 51.4	2.0	10.9	32.42	19.8	2.0	0.56	9.0	984	169
32-1/3	11 Aug. 88	50 02.1	127 43.7	24.0	8.6	32.88	5.0	15.6	1.53	26.3	277	50.4
32-4/6		50 02.1	127 43.7	11.0	10.0	32.65	19.0	5.5	0.95	13.9		104
32-7/9		50 02.1	127 43.7	1.3	11.3	32.36	18.1	1.0	0.47	4.8	971	167
38B-1/4	12 Aug. 88	49 48.9	127 38.8	26.7	8.3	33.06	3.2	17.3	1.41	27.8	164	33.5
38B-5/7		49 48.9	127 38.8	8.3	10.9	32.63	21.6	3.7	0.64	8.9	843	159
38B-8/9		49 48.9	127 38.8	1.5	11.0	32.64	22.9	1.7	0.48	5.4	880	166
39-2		49 45.4	127 46.3	23.0	10.1	32.54	9.1	5.4	0.94	14.1	419	89.8
39-3		49 45.4	127 46.3	12.2	10.8	32.07	9.5	4.8	0.83	13.6	1108	239
39-4		49 45.4	127 46.3	3.0	11.2	31.95	6.5	3.2	0.77	10.1	497	92.5
43-6	13 Aug. 88	49 33.0	128 15.0	50.0	9.7	32.55	0.5	3.6	0.75	7.0	79.2	14.5
43-7		49 33.0	128 15.0	26.0	13.9	32.07	1.0	1.1	0.54	6.7	127	27.9
43-8		49 33.0	128 15.0	11.0	14.4	31.91	1.3	0.6	0.47	6.2	157	34.1
43-9		49 33.0	128 15.0	1.9	14.1	31.80	1.9	0.5	0.45	8.0	204	44.4
46B-1/3		49 26.4	127 48.2	20.7	10.0	32.19	2.3	8.8	0.94	18.7	118	27.7
46B-4/6		49 26.4	127 48.2	10.7	11.1	31.94	6.9	3.3	0.57	10.1	376	80.0
46B-7/9		49 26.4	127 48.2	2.0	11.7	31.83	8.5	3.0	0.59	10.4	477	94.8
50-7		49 00.0	127 00.0	31.8	12.5	32.50	1.3	1.5	0.56	7.3	173	34.9
50-8		49 00.0	127 00.0	16.4	14.6	32.26	1.0	0.2	0.42	5.4	161	28.6
50-9		49 00.0	127 00.0	1.4	15.2	32.41	0.8	0.2	0.40	5.0	164	28.9
52-6	14 Aug. 88	49 37.4	127 16.1	14.9	9.3	32.63	4.9	11.4	1.01	20.4	200	41.4
52-8		49 37.4	127 16.1	5.9	9.8	32.63	10.0	6.8	0.86	13.9	460	94.3
52-9		49 37.4	127 16.1	1.8	10.9	32.45	12.8	3.8		9.9	633	125
66-1/3	16 Aug. 88	48 35.8	125 31.5	21.4	8.7	32.75	2.1	26.4	2.09	42.4	128	25.8
66-4/6		48 35.8	125 31.5	13.0	9.5	32.34	3.3	24.1	1.98	40.3	135	28.7
66-7/9		48 35.8	125 31.5	1.7	11.1	31.51	5.5	20.5	1.76	40.6	250	52.8

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate	POC	PON
70-5	16 Aug. 88	48 29.5	125 38.5	23.5	8.5	32.91	3.2	22.7	1.86	33.4	94.8	20.9
70-6		48 29.5	125 38.5	10.8	10.8	32.00	6.6	18.0	1.68	36.5	426	82.4
70-8		48 29.5	125 38.5	1.0	12.5	31.88	11.2	11.6	1.23	30.4	656	123
76-1/3	17 Aug. 88	48 34.4	125 37.3	22.7	8.8	32.57	1.9	27.0	2.11	44.2	158	29.4
76-4/6		48 34.4	125 37.3	10.5	9.6	32.28	3.6	23.4	1.90	38.6	188	39.1
76-7/9		48 34.4	125 37.3	2.0	11.4	32.26	9.1	10.0	0.89	17.4	436	89.1
77-1		48 32.0	125 33.2	26.9	8.2	33.02	0.9	26.4	1.99	39.7	87.1	15.7
77-3		48 32.0	125 33.2	20.0	8.8	32.78	1.6	24.2	1.89	35.8		
77-5		48 32.0	125 33.2	2.4	12.9	32.28	7.9	6.0	0.69	12.9	631	116
80-1/3	18 Aug. 88	48 14.9	125 40.8	15.6	9.7	32.43	0.7	10.6	1.14	16.6	60.1	16.1
80-4/6		48 14.9	125 40.8	5.7	11.0	32.51	6.3	5.7	0.74	11.5	274	56.9
80-7/9		48 14.9	125 40.8	2.2	12.9	32.09	5.3	0.8	0.27	3.4	351	70.2

CRUISE 88-07

TAXON	STATION	10-7	10-9	12-1	12-4	15-3	15-5	15-7	190
dinobryon spp.				106					
dictyocha speculum			2						
apedinella spinifera					16		23		
dicrateria sp.		1180	1970	425	2560	295	931	694	
chrysochro spp. 0-5		14600	14900	1810	9240	4910	6520	5550	
chrysochro spp. 6-10			983	106	1970	590	1240		
chrysochro spp. 10-15							155		
minutocell sp.		590							
corethron criophilum			9						
detonula pumila					4				
leptocylin danicus						32		187	
leptocylin minimus								70	
stephanopy turris							8	6	
skeletonem costatum				32		436	2780	2640	
thalassios spp. < 10		65			156	31	164	257	
thalassios aestivalis						47	47	23	
thalassios angusti							2		
thalassios anguste-line							2		
thalassios eccentrica /symmetrica						2	23		
thalassios nordenskioldi		47			47	249	421	187	
thalassios rotula		2	2			4	16	47	
actinoptyc senarius								23	
asterompha sp.1		2			8				
biddulphi longicurvis							2		
eucampia zodiacus		9			16		23	94	
cerataulin pelagica		9				31			
ditylum brightwellii							23	70	
chaetocero compressum						312	2	491	
chaetocero convolutum /concavicom		28				6	2	30	

Continued	10-7	10-9	12-1	12-4	15-3	15-5	15-7
<i>chaetocero constrictum</i> /vanheurckii						70	140
<i>chaetocero debile</i>	56	113			94	2310	1960
<i>chaetocero difficile</i>				16	31		304
<i>chaetocero eibenii</i>						47	187
<i>chaetocero lacinosum</i>	4				140	164	164
<i>chaetocero pseudocrinit</i>		8			47	164	304
<i>chaetocero radicans</i>	9					47	70
<i>chaetocero septentriona</i>		8			16		47
<i>chaetocero simile</i>		8			218	327	280
<i>chaetocero sociale</i>							47
<i>rhizosolen alata</i> f.alata	65				47	23	23
<i>rhizosolen delicatula</i>						23	
<i>rhizosolen fragilissima</i>	47	16	62	16	117		
<i>rhizosolen setigera</i>	421	65	826	1060	16000	12400	
<i>rhizosolen stolterfothi</i>	28						
<i>fragilaria</i> spp.					8		16
<i>asterionel glacialis</i>					16	23	23
<i>thalassiot frauenfeldii</i>	75	2	10	31	47	70	
<i>thalassion nitzschoides</i>			16	31	70	47	
<i>naviculace</i> spp.	8		8		31	117	94
<i>gyrosigma</i> spp. <i>pleurosigma</i>		2	2		4	4	6
<i>navicula wawrikiae</i>		2			2		
<i>tropidonei lepidoptera</i>	4					4	2
<i>nitzschia</i> spp.			8	16	125	210	164
<i>nitzschia closterium</i>	78	4520	8	2950	47	94	187
<i>nitzschia delicatissim</i>	86	47			156	280	164
<i>nitzschia pacifica</i>		9	16	4	171	491	210
<i>nitzschia pungeris</i>					78	23	164
<i>nitzschia seriata</i>					47	94	
<i>micromonas pusilla?</i>	34600	42500	5100	26700	3540	25600	16000
<i>tetraselmis</i> spp. / <i>pyramimonas</i>		197					347

Continued	10–7	10–9	12–1	12–4	15–3	15–5	15–7
euteptiel spp.	2	19		109			
dinophycea spp.	8	28		203	31	47	47
prorocentr gracile		12		12			
prorocentr minimum				47			
dinophysis infundibulum		2		4			
dinophysis ovum		2		2			4
gymnodiniu spp. 10–15	23	28		187	16		94
gymnodiniu spp. 15–20	23	37		94	16	210	140
gymnodiniu spp. 20–50				39		70	
gymnodiniu spp. > 50							47
gymnodiniu simplex		19	8	47			
katodinium rotundatum				156			173
gyrodinium spp.	117	94	32	389	47	94	187
heterocaps triquetra		19		109			
micracanth spp.		9		62		47	
alexandriu catenella		2					2
ceratium minutum		10					
ceratium pentagonum		16		48		2	6
cryptomona spp. 0–5	393	3340		1770	491	466	16
cryptomona spp. 5–10	197	2360		2560	98	931	1390
cryptomona spp. 10–15	8	786		2750		466	520
cryptomona spp. 15–20	16	9		94		23	23
mesodinium rubrum		9		16		47	23

CRUISE 88-07

TAXON	STATION	17-3	17-5	17-7	32-1/3	32-4/6	32-7/9	38B-1/4	38B-5/7	38B-8/9
dinobryon spp.		173	590	621			197			
apedinella spinifera							98			
dicrateria sp.		1560	1970	1090	295	393	688	786	1770	2560
chrysocro spp. 0-5		6590	590	4660	2750	2650	2850	3930	14500	9240
chrysocro spp. 6-10		347	393	1710	295	590	393	884	3930	1970
chrysocro spp. 10-15		173								197
minutocell sp.		173								
detonula pumila						2	4			
leptocylin danicus		304	4	23	62	94	327	31	210	70
leptocylin minimus			374							
stephanopy nipponica			8	47						
stephanopy turris			6	4	4	140	14		47	22
skeletonem costatum		3270	5380	5050	280	187	210	639	514	280
thalassios spp. < 10		70		70	31	117	94	31	280	94
thalassios aestivalis		23	47	164	78	140	70	16	23	94
thalassios angusti		2	2			2				
thalassios anguste-line			94			23			47	
thalassios nordenskiold		374	608	280	47	210	210	140	280	304
thalassios rotula		18	32	47	16	14	6	6	47	16
coscinodis radiatus			2							
asterompha sp.1					2				47	23
biddulphi longicuris							6		6	
eucampia zodiacus			94	140					23	70
cerataulin pelagica		47	94							23
ditylum brightwellii		4	47	117	16	14	23	16	23	70
chaetocero affine				47			47			
chaetocero compressum		210	1080	351		70	70	47		70
chaetocero convolutum /concavicornis		8	12	2	34	14	20	14	102	98
chaetocero constrictum /vanheurckii			187	140			47		23	23

Continued	17–3	17–5	17–7	32–1/3	32–4/6	32–7/9	38B–1/4	38B–5/7	38B–8/9
<i>chaetocero debile</i>	1890	5140	11200	639	514	327	343	865	841
<i>chaetocero decipiens</i>	8		210	62	117	4	4	4	6
<i>chaetocero difficile</i>	140		164	94	70	187	78	234	117
<i>chaetocero eibenii</i>	6	8	23		70	8	31	14	70
<i>chaetocero lacinosum</i>	351	935	514	109	467	210	62	187	234
<i>chaetocero pseudocrinit</i>	140	514	912	47	234	491	78	304	374
<i>chaetocero radicans</i>	23		47	31					
<i>chaetocero septentriona</i>	94	47			23			70	23
<i>chaetocero simile</i>	140	234	561	125	140	70	78	70	70
<i>chaetocero sociale</i>		47	47						
<i>bacteriast delicatula</i>			47						
<i>rhizosolen alata f.alata</i>	23		70	16	117	47	16	47	70
<i>rhizosolen delicatula</i>									23
<i>rhizosolen fragilissima</i>	47	47	47	47					94
<i>rhizosolen setigera</i>	9020	7810	11600	3480	12700	17500	2320	23600	21700
<i>asterionel glacialis</i>	140			78	70	117			23
<i>thalassiot frauenfeldii</i>	94	10	47	47	70	234	16	210	117
<i>thalassion nitzschoides</i>	117	234	140	16	6	23		94	70
<i>licmophora sp.1</i>									2
<i>naviculace spp.</i>	94		47	31	23	70	62	94	140
<i>gyrosigma spp. pleurosigma</i>	10	4		4	8	4	2	8	24
<i>navicula wawrikiae</i>	2		23	16	47		16	23	
<i>tropidonei lepidoptera</i>	2	4	12	47	2	4		2	4
<i>nitzschia spp.</i>	94	234	117	78	23	94	62	140	94
<i>cylindroth closterium</i>	140	327	47	78	117	23	78	117	70
<i>nitzschia delicatissim</i>	234	280	164	312	351	47	171	280	234
<i>nitzschia pacifica</i>	608	514	771	249	841	912	234	1330	1080
<i>nitzschia pungens</i>	164	187	117	16		47	16	94	70
<i>nitzschia seriata</i>	187		94	32	70	70	47	327	467
<i>micromonas pusilla?</i>	12100	13000	15800	8160	2650	4230	7670	22800	28300
<i>tetraselmi spp. /pyramimonas</i>				621			197		393

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Continued	17-3	17-5	17-7	32-1/3	32-4/6	32-7/9	38B-1/4	38B-5/7	38B-8/9
<i>eutreptiel</i> spp.			23						23
<i>dinophycea</i> spp.	47	47	47			47	16	117	
<i>prorocentr gracile</i>	2			31		47			
<i>prorocentr minimum</i>						2			
<i>dinophysis infundibulum</i>						2			
<i>dinophysis ovum</i>						2			
<i>gymnodiniu</i> spp. 10-15								70	
<i>gymnodiniu</i> spp. 15-20	234	47	47	47		23		117	
<i>gymnodiniu</i> spp. 20-50	23	47		16	23	23	16	2	23
<i>gymnodiniu</i> spp. > 50	4	12	47	2	8	12		8	
<i>katodinium rotundatum</i>				98	98		16	197	23
<i>gyrodinium</i> spp.	47	47	94	62	94	70	109	94	70
<i>heterocaps triquetra</i>								23	
<i>micracanth</i> spp.			23						23
<i>alexandriu catenella</i>			2			2			
<i>alexandriu ostenfeldii</i>	2								
<i>heterosigm akashiwo</i>			47			70			
<i>cryptomona</i> spp. 0-5	694	393	621	295	197	688	98	983	1970
<i>cryptomona</i> spp. 5-10	520	983	621	98	393	491	98	2750	3340
<i>cryptomona</i> spp. 10-15	347	393	310	98		197		1180	1570
<i>cryptomona</i> spp. 15-20			155			197			
<i>cryptomona</i> spp. 20-25						98			
<i>mesodinium rubrum</i>			6		23	18			94

CRUISE 88-07

TAXON	STATION	39-2	39-3	39-4	43-6	43-7	43-8	43-9	
dinobryon spp.			155						
dictyocha speculum			2						
apedinella spinifera				31					
dicrateria sp.		1380	621	472	98	1700		123000	
chrysochro spp. 0-5		5420	3720	2360	4130	3610	9890	662000	
chrysochro spp. 6-10		531	612	943	393	638		196000	
detonula pumila				16					
leptocylindrus danicus		65							
skeletonema costatum		194	2070	2170					
thalassios spp. < 10		65	94	94		12		6480	
thalassios aestivialis		16		16					
thalassios nordenskioldii		97	218	47		24	24	3240	
thalassios rotula		10	16	6					
actinopteryx senarius			31						
asterompha sp.1			31	2			4	3240	
biddulphi longicirrus		12							
eucampia zodiacus		32		4					
ditylum brightwellii		49	16						
chaetoceros compressum			296	47					
chaetoceros convolutum /concavicornis		12	4	6		12	122	19400	
chaetoceros constrictum /vanheurckii				125					
chaetoceros debile		421	826	234			8	17800	
chaetoceros decipiens			16	4					
chaetoceros difficile		49		16					
chaetoceros eibenii			8						
chaetoceros laciniatum			31						
chaetoceros pseudocrinitis			78	16					
chaetoceros simile		49		78					
bacteriast delicatula			31						

Continued	39-2	39-3	39-4	43-6	43-7	43-8	43-9
<i>rhizosolen alata</i> f.alata		16	2		12	16	3240
<i>rhizosolen delicatula</i>		2					
<i>rhizosolen fragilissima</i>		16	62		85	65	55100
<i>rhizosolen setigera</i>	7150	4640	2180		49	24	3200
<i>rhizosolen stolterfothi</i>		16					1620
<i>fragilaria</i> spp.	97						
<i>thalassiot frauenfeldii</i>	97	62	78		12	16	3240
<i>thalassion nitzschoides</i>		16			12	8	600
<i>naviculace</i> spp.	16	16		8			3240
<i>gyrosigma</i> spp. <i>pleurosigma</i>		2	2				200
<i>navicula wawrikiae</i>			16		2		
<i>tropidonei</i> lepidoptera	2		10				200
<i>nitzschia</i> spp.	49	31	62				
<i>nitzschia closterium</i>	32	125	78	39	5100	10800	785000
<i>nitzschia delicatissim</i>	130	16	109	4	267	276	43800
<i>nitzschia pacifica</i>	340	125	47		12		1620
<i>nitzschia pungens</i>	32		16				
<i>nitzschia seriata</i>	65	16					
<i>micromonas pusilla?</i>	10900	17700	14000	8650	35300	48500	2670000
<i>eutreptiel</i> spp.		31	31				
<i>dinophycea</i> spp.	49	109	47	8	12	97	
<i>prorocentr gracile</i>			2				
<i>prorocentr minimum</i>	16						
<i>gymnodiniu</i> spp. 10-15			16	23	49	8	
<i>gymnodiniu</i> spp. 15-20	16	109	31			32	1620
<i>gymnodiniu</i> spp. 20-50	65	31	62	8	12		
<i>gymnodiniu simplex</i>			47				
<i>katodinium rotundatum</i>	213		236				
<i>gyrodinium</i> spp.	146	125	109	55	61	41	11300
<i>ensiculifae</i> sp.			4				
<i>micracanth</i> spp.					16		

Continued	39-2	39-3	39-4	43-6	43-7	43-8	43-9
<i>alexandriu catenella</i>			2				
<i>alexandriu osterfeldii</i>		2					
<i>ceratium pentagonum</i>			6		2	2	600
<i>heterosigm akashiwo</i>			31				
<i>cryptomonas spp. 0-5</i>	850		236	98	1280	5740	221000
<i>cryptomonas spp. 5-10</i>	425	1860	943	98	1280	3830	466000
<i>cryptomonas spp. 10-15</i>		466	708			319	49100
<i>cryptomonas spp. 15-20</i>	16		16		24	638	
<i>cryptomonas spp. 20-25</i>		310				8	6480
<i>mesodinium rubrum</i>		16	31				

CRUISE 88-07

TAXON	STATION	46B-1/3	46B-4/6	46B-7/9	50-7	50-8	50-9	52-6	52-8	52-9
dinobryon spp.			155							369
apedinella spinifera				197						16
dicrateria sp.	1080	1090	786	765	425	688	786	1400		
chrysochro spp. 0-5	2850	3570	4320	4850	8080	5010	2750	3590	4050	
chrysochro spp. 6-10	197	310	197	893	4680	1770	983	1400	2210	
detonula pumila										16
leptocylindrus danicus							94			
stephanopyxis turris				8				47	49	10
skeletonema costatum	596	125	12	16				280	956	2030
thalassiosira spp. < 10	58	140	12			23	58	49	140	
thalassiosira aestivalis	12	31					58	65	94	
thalassiosira angustata										2
thalassiosira angustata-line			12							
thalassiosira nordenskioldii	23	31	35	25			94	81	125	66
thalassiosira rotula	12		4				12	16	10	
asterompha sp.1	12	10	10			4				2
eucampia zooidiacus	105	16	35					146	140	
ditylum brightwellii		16			4		23	49	62	
chaetoceros compressum					24				65	
chaetoceros convolutum / concavum		51		4		8	10	6	6	
chaetoceros constrictum / vanheurckii							23			
chaetoceros debile	105	171	35	251	24	20	397	1930	2340	
chaetoceros decipiens										31
chaetoceros difficile						8			32	
chaetoceros eibenii		2							16	8
chaetoceros laevis						8	23	65	78	
chaetoceros pseudodiscinum	12	94	23		16		23	146	358	
chaetoceros radicans						8				
chaetoceros simile								65		

Continued	46B-1/3	46B-4/6	46B-7/9	50-7	50-8	50-9	52-6	52-8	52-9
<i>chaetoceros sociale</i>								32	
<i>bacteriast delicatula</i>					8				
<i>rhizosolen alata f.alata</i>			23	97	122	48	23	2	31
<i>rhizosolen delicatula</i>			12						
<i>rhizosolen fragilissima</i>	35		12	8	24	2	12	49	31
<i>rhizosolen setigera</i>	1160	4390	7460			4	2880	6760	10800
<i>rhizosolen stolterfothi</i>		16							
<i>fragilaria spp.</i>		28					6	65	62
<i>asterionell glaciialis</i>							12	16	
<i>thalassiot frauenfeldii</i>		94		32	57	8	47	113	62
<i>thalassion nitzschoides</i>	35	47	12		32		23	65	
<i>naviculace spp.</i>	35	16	35	8	24		58	65	78
<i>gyrosigma spp. pleurosigma</i>	2	2						2	6
<i>navicula wawrikiae</i>	12				8				31
<i>tropidonei lepidoptera</i>	2	2	4					4	4
<i>nitzschia spp.</i>	23	31	23				58	32	31
<i>nitzschia closterium</i>	94	16	47	1150	1280	70	47	97	109
<i>nitzschia delicatissim</i>	94		12	81	130	39	58	32	62
<i>nitzschia pacifica</i>	94	78	70	81	425		245	454	436
<i>nitzschia pungens</i>	23		12	8				32	78
<i>nitzschia seriata</i>		31					12	65	31
<i>micromonas pusilla?</i>	5800	13700	27100	17600	14700	8250	16300	18900	22300
<i>tetraselmi spp. /pyramimonas</i>			197						
<i>eutreptiel spp.</i>			786					32	369
<i>dinophycea spp.</i>		31	35	146	178	86	12	49	
<i>prorocentr balticum</i>	12	31					16		
<i>prorocentr gracile</i>							8	16	
<i>prorocentr minimum</i>			12						
<i>dinophysis infundibulum</i>			2						
<i>gymnodiniu spp. 10-15</i>	12	16	12	105	170	132		65	16
<i>gymnodiniu spp. 15-20</i>	47	31	140	49	49			16	94

Continued	46B-1/3	46B-4/6	46B-7/9	50-7	50-8	50-9	52-6	52-8	52-9
<i>gymnodiniu</i> spp. 20–50	12	31	12	8	16	55		32	109
<i>gymnodiniu</i> spp. > 50	12	16	14				12	12	16
<i>gymnodiniu simplex</i>			12			23			
<i>katodinium rotundatum</i>				16	16	94			
<i>gyrodinium</i> spp.	23	125	82	1920	1490	70	12	81	62
<i>micracanth</i> spp.			35		8	8			
<i>ceratium pentagonum</i>		2	6	2	6	6			
<i>heterosigmarakashiwo</i>						8			
<i>cryptomona</i> spp. 0–5	393	1240	1570	383	425		393	797	1290
<i>cryptomona</i> spp. 5–10	393	621	1970	383	1280	197	197	996	921
<i>cryptomona</i> spp. 10–15		155	393	128	850	98		598	369
<i>cryptomona</i> spp. 15–20			197			197			
<i>cryptomona</i> spp. 20–25		155	197					16	109
<i>mesodinium rubrum</i>			12				12	10	16

CRUISE 88-07

Taxon	Station	66-1/3	66-4/6	66-7/9	70-5	70-6	70-8	76-1/3	76-4/6	76-7/9
dinobryon spp.						295				590
dictyocha speculum				16		32	47	2	2	47
apedinella spinifera					16					16
dicrateria sp.	393	1380		2060	266	2060	1180	1380	1380	
chrysochro spp. 0-5	9430	13800	35700	5900	18600	33900	5110	12800	22200	
chrysochro spp. 6-10	393	1380	4720	491	4520	8550	590	1770	2750	
chrysochro spp. 10-15				98		295				197
minutocell scriptus	3140	6490	29500	1280	26800	36600	1380	8250	14500	
corethron criophilum				2						
detonula pumila					16					
leptocylin danicus	23		4	8		47	10	8	31	
stephanopy nipponica					2					4
skeletonem costatum		31	101	39	276	1010	78	150	280	
thalassios spp. < 10	8	8	249	16	81	47	23	47	109	203
thalassios aestivalis			86	31	32	70	23	9	31	
thalassios angustii							2			
thalassios anguste-line			16							
thalassios eccentrica /symmetrica			2	2						
thalassios nordenskioldi	86	78	218	171	65	725	117	178	561	
thalassios rotula	23	8	2	39	97	2	10	6	6	
coscinodis radiatus							2			
actinoptyc senarius							2			
eucampia zodiacus	8	8	14	78	81	117	4	28	125	
cerataulin pelagica								9		
ditylum brightwellii	2	2	2	4	4		2			
chaetocero sp.gi			31				16			
chaetocero compressum	195	273	413	327	1040	3040	218	374	1810	
chaetocero convolutum /concavicornis	2			10	16	50	4	9	47	
chaetocero constrictum /vanheurckii	55	86	31	109	97	1800	8	37	280	

Continued	66-1/3	66-4/6	66-7/9	70-5	70-6	70-8	76-1/3	76-4/6	76-7/9
<i>chaetocero debile</i>	148	94	94	288	551	538	55	84	592
<i>chaetocero decipiens</i>	2	16	8	16	16	94		2	6
<i>chaetocero difficile</i>	70		234	810	389	3440	538	832	6870
<i>chaetocero eibenii</i>	2					2	16	19	
<i>chaetocero laciniatum</i>		8			16	164		19	140
<i>chaetocero pseudocrinit</i>	94	156	39	62	211	982	148	122	421
<i>chaetocero radicans</i>		70		101		467		65	171
<i>chaetocero septentrionalis</i>						23			
<i>chaetocero simile</i>	31	78	23	109	130	467	39	159	265
<i>chaetocero sociale</i>								19	
<i>chaetocero subtile</i>				8					
<i>bacteriast delicatula</i>	23						16		16
<i>rhizosolen alata f.alata</i>				18	2	4	6	65	125
<i>rhizosolen delicatula</i>					16				
<i>rhizosolen fragilissima</i>	8		16	23	16	2	2	9	78
<i>rhizosolen setigera</i>	16	47	171		2	8		2	2
<i>asterionel glacialis</i>	16	8		78		70		2	16
<i>thalassiot frauenfeldii</i>	23	23	16	20	8	20	8	19	31
<i>thalassion nitzschoides</i>	8	16	70	16	65	47	10	9	
<i>naviculace spp.</i>	8	8	16	8		47	23	28	78
<i>gyrosigma spp. pleurosigma</i>			2	2					
<i>navicula wawrikiae</i>	2	2	2	4	2	22	4	8	24
<i>tropidonei lepidoptera</i>	4		6			2		2	16
<i>nitzschia spp.</i>	62	31	506	31	146	374	86	112	234
<i>nitzschia closterium</i>	16	62	94	31	81	94	47	65	218
<i>nitzschia delicatissima</i>	31	109	218	109	178	187	55	94	140
<i>nitzschia pacifica</i>	6	16	16		32		31	9	2340
<i>nitzschia pungens</i>				55		94			
<i>micromonas pusilla?</i>	26700	73700	87300	19100	22300	77800	19100	36000	61100
<i>tetraselmis spp. /pyramimonas</i>	197		2360		5050	4720			393
<i>eutreptiella spp.</i>			8	8					

Continued	66–1/3	66–4/6	66–7/9	70–5	70–6	70–8	76–1/3	76–4/6	76–7/9
dinophycea spp.		23	47			187		19	94
prorocentr balticum			16		32	23			
prorocentr gracile						6			
prorocentr minimum				16	16	140			62
dinophysis infundibulum							2		
dinophysis ovum						4			4
gymnodiniu spp. 10–15	8	8		8	32	70		47	31
gymnodiniu spp. 15–20		16	47		16	70	8	9	109
gymnodiniu spp. 20–50	8		4			23			4
gymnodiniu spp. > 50						4			
katodinium rotundatum			8		1330	590			16
gyrodinium spp.	8	8	39	33		94	70	142	175
heterocaps triquetra			8			47			31
ensiculife sp.							2		
micracanth spp.						47		9	16
alexandriu catenella								2	
gonyaulax spinifera				2				2	
heterosigm akashiwo									31
cryptomonas spp. 0–5	1380	2750	6780	295	3190	7080	786	1180	3140
cryptomonas spp. 5–10	197	786	1770	98	1060	4420	393	2160	1970
cryptomonas spp. 10–15	197	197	1770		1330	2650			1770
cryptomonas spp. 15–20			295		531	590		9	31
cryptomonas spp. 20–25			8		266	23		19	
mesodinium rubrum	2		8	8	49	94		9	

CRUISE 88-07

TAXON	STATION	77-1	77-3	77-5	80-1/3	80-4/6	80-7/9
dinobryon spp.		295		1640		197	884
dictyocha speculum				20			
dicrateria sp.		1080	1380	1310	688	1970	2510
chrysochro spp. 0-5		3730	7570	24900	2650	14300	20500
chrysochro spp. 6-10		393	590	6880	295	4130	4570
chrysochro spp. 10-15				655			737
minutocell scriptus					295	590	
corethron criophilum			1				
leptoclylin danicus			5	39			55
leptoclylin minimus			19	39			39
stephanopy turris						10	5
skeletonem costatum		12	70	117	156	47	7
thalassios spp. < 10		25	61	175	23	109	234
thalassios aestivalis		8			16		8
thalassios nordenskiold		31	75	604	23	78	70
thalassios rotula			28	20			
actinoptyc senarius						4	
asterompha sp.1						6	
eucampia zodiacus			28	20	20	156	78
ditylum brightwellii			2			2	
chaetocero spp. cells		121					
chaetocero sp.gi		23					
chaetocero compressum		234	126	1290	16	16	101
chaetocero convolutum /concavicom			1	37		10	
chaetocero constrictum /vanheurckii		47	33	448			16
chaetocero debile		125	178	448	70	156	78
chaetocero decipiens		3	5				
chaetocero difficile			505	12100		47	
chaetocero eibenii		4	3	234			86

Continued	77-1	77-3	77-5	80-1/3	80-4/6	80-7/9
<i>chaetocero laevisum</i>		9	58			
<i>chaetocero pseudocrinit</i>		19	429	23	47	78
<i>chaetocero radicans</i>		47	117			39
<i>chaetocero septentriona</i>		5			94	
<i>chaetocero simile</i>	35	131	273	8		
<i>chaetocero sociale</i>		9				
<i>chaetocero subtile</i>		5				
<i>bacteriast delicatula</i>	4	14	117			
<i>rhizosolen alata f.alata</i>		9	50	12	873	460
<i>rhizosolen delicatula</i>	12					
<i>rhizosolen fragilissima</i>		23	20	16	31	8
<i>rhizosolen setigera</i>			3	31	888	1010
<i>asterionel glacialis</i>	27	33				
<i>thalassiot frauenfeldii</i>	1	7	20	4	28	31
<i>thalassion nitzschoides</i>	23	33	78	8	31	8
<i>naviculace spp.</i>	12	9	97	8	31	16
<i>gyrosigma spp. pleurosigma</i>						1
<i>navicula wawrikiae</i>	3	14	27	2	2	
<i>tropidonei lepidoptera</i>	1	1				2
<i>nitzschia spp.</i>	8	42	370		47	
<i>nitzschia closterium</i>	12	33	253	31	140	125
<i>nitzschia delicatissim</i>	31	61	234	86	171	39
<i>nitzschia pacifica</i>	20	9		8	140	4
<i>nitzschia pungens</i>		19	312			62
<i>nitzschia seriata</i>					16	16
<i>micromonas pusilla?</i>	143	17700	41900	7570	28900	33600
<i>tetraselmi spp. /pyramimonas</i>			1311			147
<i>euteptiel spp.</i>			20	8		8
<i>dinophycea spp.</i>	4	23	136		78	47
<i>prorocentr balticum</i>	8		39			8
<i>prorocentr gracile</i>			13		16	

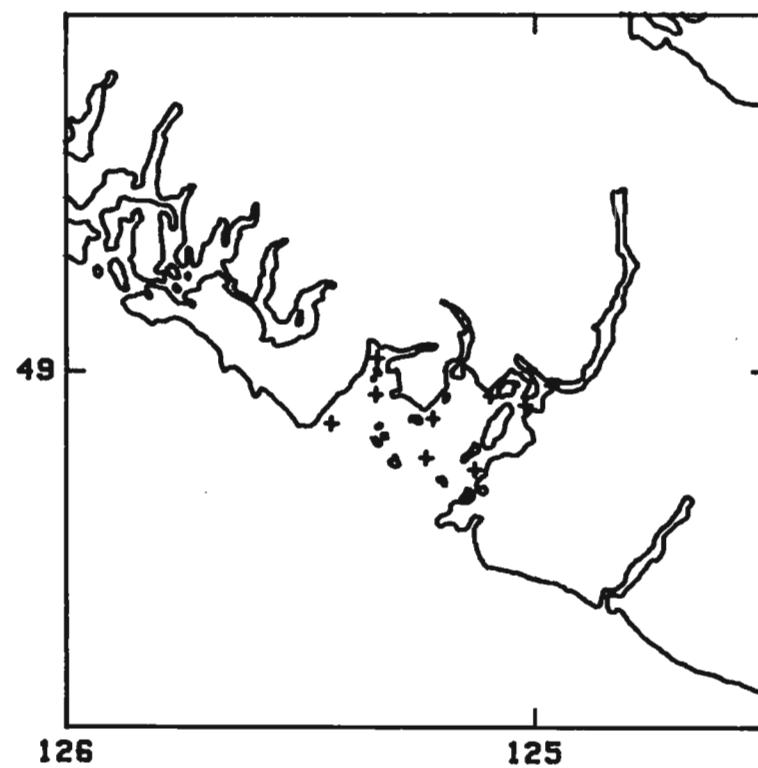
Continued	77-1	77-3	77-5	80-1/3	80-4/6	80-7/9
<i>prorocentr minimum</i>	4	5	195			47
<i>dinophysis infundibulum</i>						1
<i>dinophysis ovum</i>			3	2	2	4
<i>gymnodiniu</i> spp. 10-15	4	19		8	62	47
<i>gymnodiniu</i> spp. 15-20	4	5	39	39	47	70
<i>gymnodiniu</i> spp. 20-50	3	2	39	16	31	86
<i>gymnodiniu</i> spp. > 50			3	2	4	
<i>gymnodiniu simplex</i>	4	5	58			31
<i>katodinium rotundatum</i>	4		983			70
<i>gyrodinium</i> spp.	4	169	332	101	297	335
<i>heterocaps triquetra</i>		5	39		16	1
<i>ensiculife</i> sp.						8
<i>micracanth</i> spp.			78		31	39
<i>alexandriu catenella</i>						2
<i>alexandriu osterfeldii</i>						2
<i>gonyaulax spinifera</i>			3			
<i>ceratium pentagonum</i>				2	2	4
<i>cryptomon</i> a spp. 0-5	393	1080	2950	983	1970	2060
<i>cryptomon</i> a spp. 5-10		393	2950	197	1380	1470
<i>cryptomon</i> a spp. 10-15			2950	197	590	147
<i>cryptomon</i> a spp. 15-20	4	5	39		78	
<i>mesodinium rubrum</i>	1	2	20		16	8

CRUISE 89-02

9 – 12 May 1989

Area of operations: Barkley Sound (MASS Program)

Vessel: Revisor



CRUISE 89-02

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate	POC	PON
1-2	11 May 89	48 57.9	125 05.6	8.0	8.2	31.82	6.8	14.7	0.31	30.8	235	39.7
1-3		48 57.9	125 05.6	1.0	13.8	22.08	3.6	0.3	0.21	8.5	504	49.7
2-2		48 57.1	125 01.2	8.0	8.0	30.76	4.9	13.2	1.05	30.2	174	32.6
2-3		48 57.1	125 01.2	1.0	12.2	16.44	7.1	0.0	0.06	16.0	1223	76.8
3-2	12 May 89	48 58.8	124 57.8	8.0		31.90	1.4	14.9	0.04	33.6	86.8	19.2
3-3		48 58.8	124 57.8	1.0		30.86	12.6	0.9	1.38	23.4	1103	64.4
4-2		48 51.7	125 07.7	8.0	7.8	31.33	2.5	17.4	1.29	33.2	113	23.1
4-3		48 51.7	125 07.7	1.0	13.0	24.83	1.4	0.2	0.09	11.0	362	40.7
5-2		48 52.7	125 13.9	8.0		31.40	11.1	15.1	1.55	29.4	428	78.0
5-3		48 52.7	125 13.9	1.0		28.07	1.9	0.0	0.22	11.6	282	36.3
6-1		48 55.6	125 26.0	8.0		31.36	11.9	11.9	1.25	25.8	388	66.5
6-2		48 55.6	125 26.0	1.0		30.59	11.3	0.0	0.15	5.1	1207	113
7-2		49 01.1	125 20.1	8.0		30.93	5.8	0.1	0.51	12.6	705	65.4
7-3		49 01.1	125 20.1	1.0		27.48	1.0	0.0	0.08	1.5	289	30.1
8-2		48 58.0	125 20.3	8.0		31.08	46.4	4.2	0.92	18.9	1532	218
8-3		48 58.0	125 20.3	1.0		29.60	3.4	0.1	0.13	4.3	750	68.7
9-2		48 56.0	125 13.0	8.0		31.30	17.9	10.0	1.06	26.5	770	130
9-3		48 56.0	125 13.0	1.0		25.25	1.1	0.1	0.12	3.6	371	35.8

CRUISE 89-02

TAXON	STATION	1-2	1-3	2-2	2-3	3-2	3-3	4-2	4-3
<i>synechococcus</i> spp.		24580	1767	3990	1938	3192	2565	3192	3021
<i>anabaena</i> spp.		390	65		29		42		
<i>solenicola setigera</i>						61		34	
<i>ochromonas</i> spp.									1083
<i>dinobryon sueicum</i>		25	330	105	142	20	67	9	180
<i>apedinella spinifera</i>		4	9						
<i>pseudopedi pyriformis</i>		3							
<i>meringosiph mediterranea</i>				3				2	44
<i>imantonia rotunda</i>		10260	3612	1596	1036	448	308	3080	700
<i>chrysocro sp.1</i>		56	4368	112	4480	84	1540	252	3108
<i>chrysocro spp. 3-6</i>		448	2324	56	1848	140	476	140	3612
<i>chrysocro spp. 6-10</i>			504		112	112		168	400
<i>chrysocro spp. 15-20</i>			168						109
<i>phaecysti pouchetii</i>		5796		520		27		2856	870
<i>leyanella arenaria</i>				252		1820		3080	
<i>minutocell scriptus</i>		60		66		78		56	
<i>leptocylindrus danicus</i>		17	9	40				4	
<i>leptocylindrus minimus</i>			14		2				15
<i>leptocylindrus mediterraneus</i>				102		18		8	
<i>melosira</i> sp.					58				
<i>melosira moniliformis</i>			10		27		109		
<i>skeletonema costatum</i>		23860	148200	22940	1602000	2938	400400	16760	104900
<i>thalassios rotula</i>				3					
<i>thalassios anguste-linea</i>				2					
<i>thalassios nordenskioldii</i>		4		12	13		7	2	
<i>thalassios pacifica</i>		90	52	74	90		5	10	
<i>thalassios eccentrica /symmetrica</i>				5					1
<i>thalassios mendiolana</i>		4		4	3	1			
<i>thalassios conferta</i>		42	20	157		64		26	171

Continued	1-2	1-3	2-2	2-3	3-2	3-3	4-2	4-3
<i>thalassios weissflogii</i>		635		9747		8484		
<i>coscinodis radiatus</i>			1					
<i>biddulphi aurita</i>							2	
<i>chaetocero sp.gi</i>	8	43	25	143	10	9	7	109
<i>chaetocero sp.h</i>			5					13
<i>chaetocero sp.l</i>		72		520		1280		
<i>chaetocero compressum</i>			31					82
<i>chaetocero convolutum /concavicorn</i>							5	
<i>chaetocero constrictum /vanheurckii</i>								30
<i>chaetocero debile</i>	362	867	214				4	28
<i>chaetocero decipiens</i>		19					3	11
<i>chaetocero diadema</i>	46	188						16
<i>chaetocero didymum</i>								13
<i>chaetocero lacinosum</i>								6
<i>chaetocero radicans</i>		73	9					136
<i>chaetocero sociale</i>	59	63	15				7	10
<i>chaetocero teres</i>	7	5						
<i>rhizosolen delicatula</i>	4							
<i>rhizosolen fragilissima</i>	15	23	6	2			5	42
<i>rhizosolen fragilissima v.1</i>	8	56	14		4		4	
<i>synedra spp.</i>				24		14		
<i>thalassion bacillaris</i>		16						
<i>thalassion nitzschoides</i>	531	428	2400	702	350	536	186	690
<i>licmophora abbreviata</i>	4			2		3	2	8
<i>synedra spp.</i>				29		45		
<i>nitzschia americana</i>			318	4	2	2	3	
<i>nitzschia bicapitata</i>	4		18		27		34	
<i>nitzschia closterium</i>	5	10	3	2	8	8	3	
<i>nitzschia closterium v.striatula</i>	20	11	6		2			30
<i>nitzschia cylindroform</i>	522	136	325		228		167	21
<i>nitzschia delicatissim</i>	314	157	17	25	98	10	58	81

Continued	1–2	1–3	2–2	2–3	3–2	3–3	4–2	4–3
<i>nitzschia longissima</i>	21				9		2	
<i>nitzschia pungens</i>	17	36	16		3			
<i>nitzschia subcurvata</i>	42		8		11		12	35
<i>cylindrothrix fusiformis</i>					2			
<i>nephroelom spp. /bipedinomon</i>			196	140				
<i>tetraselmi spp. /pyramimonas</i>	6	40	25	2	31		3	8
<i>cymbomonas spp.</i>		27		3				
<i>tetraselmi spp.</i>							2	
<i>pterosperm spp. /pachysphaer</i>				1				
<i>eutreptiel spp.</i>			3		8		1	5
<i>prorocentr minimum</i>						122		
<i>gymnodiniu sp.r</i>	8		1	8				
<i>gymnodiniu gracilentum</i>	49		60	2	87		60	19
<i>katodinium rotundatum</i>	12	552	4	6	9		21	22
<i>peridiniac spp.</i>		43		3				
<i>cryptomonas spp. 5–10</i>	262	800	182	510	430	296	256	254
<i>cryptomonas spp. 11–20</i>	99	176	372	34	132	142	142	64
<i>cryptomonas spp. 21–30</i>	8	88	7	13	15		9	
<i>hemiselmis spp. 4–6</i>	2268	756	3528	392	2394	532	3948	560
<i>mesodinium rubrum</i>	132	45	74	5	35	10	2	43

CRUISE 89-02

Taxon	Station	5-2	5-3	6-1	6-2	7-2	7-3	8-2	8-3
<i>synechococ</i> spp.		3990	6669	3648	3591	1653	3933	4104	6213
<i>solenicola setigera</i>						140		700	
<i>dinobryon sueicum</i>	10	510	70	630	75	620	80	320	
<i>dictyocha speculum</i>		8		2	34	12	3	23	4
<i>apedinella spinifera</i>						16		9	
<i>pseudopedi pyriformis</i>			4						
<i>meringosiph mediterranea</i>	2	9	4	9	5	10			2
<i>imantonia rotunda</i>	282600	2072	95030	57750	1036	420	2828	7980	
<i>chrysochro</i> sp.1	53	1568	3976	3876	280	252			
<i>chrysochro</i> spp. 3-6	50	2576	1540	4047	140	4396	336	504	
<i>chrysochro</i> spp. 6-10		380							
<i>chrysochro</i> spp. 15-20		190	10	360	12	790	14	290	
<i>phaecocysti pouchetii</i>	4984	1550	19490	5244			2730	1250	
<i>minutocell scriptus</i>	112			84	2		11	35	
<i>detonula pumila</i>			481	181		8	52	168	
<i>leptocylin danicus</i>			72	260	80	90	162	54	
<i>leptocylin minimus</i>		9	150	90	20	240	8	109	
<i>leptocylin mediterraneu</i>					42		49		
<i>stephanopy nipponica</i>							46	10	
<i>skeletonem costatum</i>	5575	47040	2532	15700	83700	4550	53660	15580	
<i>thalassios rotula</i>							312		
<i>thalassios angulata</i>							5		
<i>thalassios binata</i>							6		
<i>thalassios aestivalis</i>				9			16		
<i>thalassios nordenskiold</i>			22				926	24	
<i>thalassios pacifica</i>	1		182	127	10		150	26	
<i>thalassios eccentrica /symmetrica</i>	2		5	8	138		46		
<i>thalassios mendiolana</i>							862	10	
<i>thalassios conferta</i>	40	118		17	4		21	2	

Continued	5-2	5-3	6-1	6-2	7-2	7-3	8-2	8-3
<i>eucampia</i> spp.					11			
<i>eucampia zodiacus</i>			26	5			26	13
<i>cerataulin pelagica</i>			8	20	6	8	17	22
<i>ditylum brightwellii</i>							12	
<i>chaetocero</i> sp.d	12	11				12	3	
<i>chaetocero</i> sp.gi		68					12	40
<i>chaetocero compressum</i>	3	354	2280	2550	653	1066	1047	6080
<i>chaetocero convolutum</i> /concavicorn					14		8	
<i>chaetocero constrictum</i> /vanheurckii		124	1180	3540	1879	1400	5310	4600
<i>chaetocero debile</i>	34	572	9700	22520	935	6600	8080	13690
<i>chaetocero decipiens</i>		16	145	535	227	28	181	62
<i>chaetocero diadema</i>	2	190	372	680000	3365	105	11740	4190
<i>chaetocero didymum</i>			63	140	24	31	41	78
<i>chaetocero lacinosum</i>		17	300	464	45	38	23	36
<i>chaetocero radicans</i>		254	590	10640	105	52	136	738
<i>chaetocero septentriona</i>							9	
<i>chaetocero sociale</i>	4	72	1540	640000	1500	162	30100	2640
<i>chaetocero teres</i>					15	8	18	
<i>chaetocero visvisibile</i>								3
<i>bacteriad delicatula</i>								2
<i>rhizosolen alata</i> f.alata					6			1
<i>rhizosolen delicatula</i>		13		11				2
<i>rhizosolen fragilissima</i>		22	12		8	2	6	21
<i>rhizosolen fragilissima</i> v.1	16	90	4	16		49		20
<i>rhizosolen hebetata</i> f.semispina				91				
<i>rhizosolen setigera</i>							4	
<i>rhizosolen stolterfothi</i>							11	
<i>fragilaria</i> spp.							26	
<i>asterionel glacialis</i>						4		
<i>thalassiot longissima</i>					34			
<i>thalassion nitzschoides</i>	62	254	21	9		20	15	12

Continued	5–2	5–3	6–1	6–2	7–2	7–3	8–2	8–3
<i>lcmophora</i> sp.1								4
<i>lcmophora abbreviata</i>			3			2		
<i>gyrosigma</i> spp. <i>pleurosigma</i>							3	
<i>pleurosigm acutum</i>							10	
<i>pleurosigm angulatum</i>							3	
<i>nitzschia americana</i>	8		4	190	44	30	139	37
<i>nitzschia bicapitata</i>	13	12						2
<i>nitzschia closterium</i>	14	7		131	2		3	10
<i>nitzschia closterium</i> v. <i>striatula</i>		145	152		4	33		100
<i>nitzschia cylindroform</i>	48	354	15	95	22	7	66	12
<i>nitzschia delicatissim</i>	730	91	88	86	31	32	100	172
<i>nitzschia subraudulen</i> / <i>raudulen</i>				8			78	
<i>nitzschia longissima</i>	6		2	13	7	6	11	5
<i>nitzschia seriata</i>							49	
<i>nitzschia subcurvata</i>	222	190	220	870	17	12	44	55
<i>nitzschia turgiduloide</i> / <i>turgidula</i>			5	10	9	20	32	43
<i>cylindroth fusiformis</i>						1	3	4
<i>nephroelm</i> spp. / <i>bipedinomon</i>			140	420	672	532	616	120
<i>tetraselm</i> spp. / <i>pyrarthimonas</i>		14	7	32	24	8	35	41
<i>cymbomonas</i> spp.			3	12		42		15
<i>pterosperm</i> spp. / <i>pachysphaer</i>					3		3	5
<i>pterosperm</i> <i>cristatum</i> (<i>phycomata</i>)						3		
<i>euteptiel</i> spp.		3			2		4	6
<i>prorocentr balticum</i>			1	5	8	9	17	4
<i>dinophysis</i> spp.								1
<i>gonyaulax rugosum</i>				2		24		10
<i>gymnodiniu gracilentum</i>	176	9	4	5	2	2	76	9
<i>gymnodiniu paulseni</i>				2	10		15	
<i>gymnodiniu simplex</i>						24		
<i>katodinium rotundatum</i>	6	10					6	13

Continued	5-2	5-3	6-1	6-2	7-2	7-3	8-2	8-3
<i>peridiniac</i> spp.					10	7		
<i>gonyaulax digitale</i>					4			
<i>raphidophy</i> sp.2					3		14	12
<i>cryptomonas</i> spp. 5-10	430	290	410	100	6	54	150	63
<i>cryptomonas</i> spp. 11-20	1440	72	35	46	14	18	130	101
<i>cryptomonas</i> spp. 21-30	10			13	5		6	3
<i>hemiselmis</i> spp. 4-6	16300	2548	1008	308	140	308	448	1036
<i>mesodinium rubrum</i>	178	18			10	20	3	22

CRUISE 89-02

TAXON	STATION	9-2	9-3
<i>synechococ</i> spp.		50790	23350
<i>dinobryon sueicum</i>		130	370
<i>dictyocha speculum</i>		16	9
<i>imantonia rotunda</i>		429600	268700
<i>chrysochro</i> spp. 3-6		476	392
<i>phaeocysti pouchetii</i>		98850	78670
<i>leyanella arenaria</i>		1484	2280
<i>minutocell scriptus</i>		750	670
<i>detonula pumila</i>		10	36
<i>leptocylin danicus</i>		14	50
<i>stephanopy nipponica</i>		44	12
<i>skeletonem costatum</i>		16980	31140
<i>thalassios rotula</i>		22	10
<i>thalassios anguste-line</i>			4
<i>thalassios nordenskiold</i>		6	18
<i>thalassios pacifica</i>		172	72
<i>thalassios mendiolana</i>		3	26
<i>thalassios conferta</i>		158	54
<i>eucampia zodiacus</i>		29	7
<i>cerataulin pelagica</i>			8
<i>chaetocero</i> sp.gi			6
<i>chaetocero compressum</i>		36	81
<i>chaetocero convolutum /concavicornis</i>		9	5
<i>chaetocero constrictum /vanheurckii</i>		563	626
<i>chaetocero debile</i>		7760	6080
<i>chaetocero decipiens</i>		45	4
<i>chaetocero diadema</i>		563	68
<i>chaetocero laciniosum</i>			53
<i>chaetocero radicans</i>		145	154

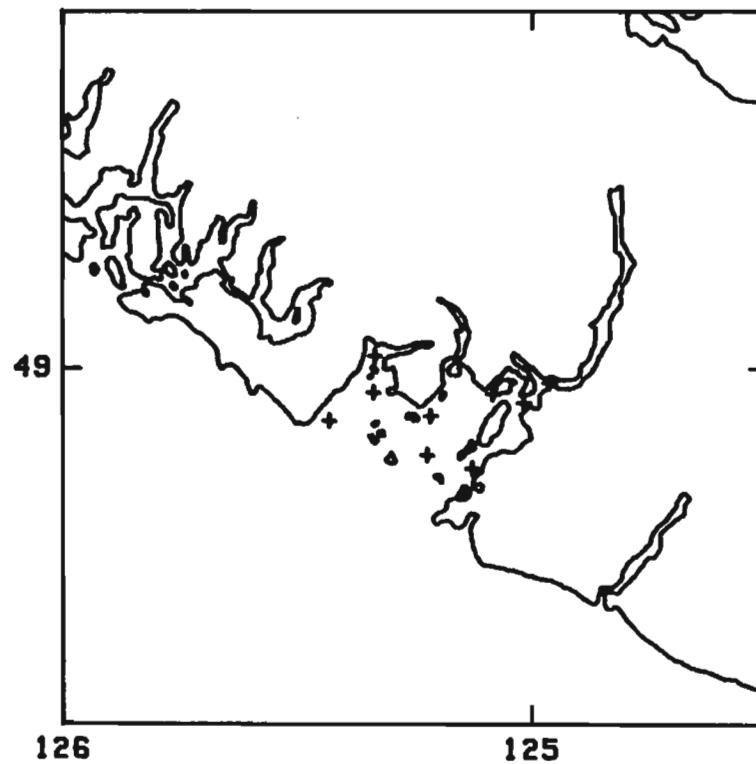
Continued	9-2	9-3
<i>chaetocero septentriona</i>	2	8
<i>chaetocero sodale</i>	1035	885
<i>rhizosolen fragilissima</i>	745	508
<i>rhizosolen fragilissima</i> v.1	4	7
<i>thalassion bacillaris</i>		4
<i>thalassion nitzschoides</i>	34	75
<i>gyrosigma</i> spp. <i>pleurosigma</i>		3
<i>nitzschia americana</i>	11	63
<i>nitzschia bicapitata</i>	56	
<i>nitzschia closterium</i>	2	7
<i>nitzschia cylindroform</i>	350	520
<i>nitzschia delicatissim</i>	1100	1500
<i>nitzschia longissima</i>		11
<i>nitzschia subcurvata</i>	840	450
<i>cylindroth fusiformis</i>		2
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	29	7
<i>eutreptiel</i> spp.		5
<i>gymnodiniu gracilentum</i>	79	20
<i>gymnodiniu paulseni</i>	12	4
<i>katodinium rotundatum</i>	274	163
<i>cryptomonina</i> spp. 5-10	1870	670
<i>cryptomonina</i> spp. 11-20	530	920
<i>cryptomonina</i> spp. 21-30	4	11
<i>hemiselmis</i> spp. 4-6	12770	22530
<i>mesodinium rubrum</i>	56	52

CRUISE 89-04

9 – 12 June 1989

Area of operations: Barkley Sound (MASS Program)

Vessel: Walker Rock



CRUISE 89-04

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate	POC	PON
1-2	11 June 89	48 58.8	124 57.8	8.0		31.63	0.8	8.8	1.41	20.5	182	20.1
1-3		48 58.8	124 57.8	1.0		20.30	2.2	1.3	0.51	25.0	320	49.6
2-2		48 57.1	125 01.2	8.0	9.3	31.79	2.1	9.5	1.52	15.5	164	31.2
2-3		48 57.1	125 01.2	1.0	17.5	22.84	3.2	0.7	0.39	16.5	395	63.5
3-2		48 57.9	125 05.1	8.0	9.8	31.71	8.2	3.5	0.80	3.1	394	68.3
3-3		48 57.9	125 05.1	1.0	17.3	24.86	2.4	0.0	0.11	2.3	553	64.9
4-2		48 56.0	125 13.0	8.0	10.6	31.66	4.9	0.5	0.47	2.9	390	66.1
4-3		48 56.0	125 13.0	1.0	14.9	28.36	1.2	0.0	0.06	0.4	438	50.0
5-2	12 June 89	48 58.0	125 20.3	8.0	9.9	31.63	2.1	2.4	0.83	0.8	261	50.7
5-3		48 58.0	125 20.3	1.0	16.2	28.75	1.3	0.0	0.19	43.0	388	56.7
6-2		49 01.1	125 20.1	8.0	10.0	31.46	1.8	0.0	0.34	7.7	134	26.0
6-3		49 01.1	125 20.1	1.0	18.2	25.46	1.2	0.0	0.07	4.2	244	39.5
7-2		48 55.6	125 26.0	8.0	9.8	31.81	9.1	9.3	1.36	16.3	303	63.1
7-3		48 55.6	125 26.0	1.0	14.2	30.59	2.8	0.0	0.27	1.2	525	58.2
8-2		48 52.7	125 13.4	8.0	9.7	31.88	20.7	4.5	0.92	4.4	724	136
8-3		48 52.7	125 13.4	1.0	14.1	29.90	1.2	0.0	0.20	0.8	332	46.2
9-2		48 51.6	125 07.7	8.0	9.3	31.79	0.9	8.7	1.42	14.0	103	25.2
9-3		48 51.6	125 07.7	1.0	15.5	26.92	2.0	0.0	0.22	4.4	306	56.0

CRUISE 89-04

TAXON	STATION	1-2	1-3	2-2	2-3	3-2	3-3	4-2	4-3	223
<i>synechococ</i> spp.		600		163800	1064	228	18630	9747	1995	
<i>dinobryon sueicum</i>		6	3	170		240	2043		150	
<i>dictyocha speculum</i>			2		2					
<i>apedinella spinifera</i>							9	128	15	
<i>pseudopedi pyriformis</i>				9						
<i>chrysocro</i> sp.1		168	168	16070	112	140	20190	140	12080	
<i>chrysocro</i> spp. 3-6		504	140	71680	392	448	6211	896	9006	
<i>chrysocro</i> spp. 6-10				3078	140	308	1000	392	2052	
<i>chrysocro</i> spp. 15-20				2			68	41	122	
<i>minutocell scriptus</i>					33		18	63	25	
<i>detonula pumila</i>							23	22		
<i>leptoclylin danicus</i>				9	32	133		27	59	
<i>leptoclylin minimus</i>				147		2700	613	118	510	
<i>leptoclylin mediterraneu</i>				3			18			
<i>skeletonem costatum</i>				22	28	15	181	158	57	
<i>thalassios rotula</i>					22	18		158		
<i>thalassios aestivalis</i>					6	2		131		
<i>thalassios nordenskiold</i>		1			2	20		66		
<i>thalassios pacifica</i>								5		
<i>thalassios eccentrica /symmetrica</i>						1		7		
<i>thalassios mendiolana</i>		3			2	19		23		
<i>thalassios conferta</i>				36		12		27		
<i>coscinodis</i> spp.					1	5		2		
<i>cerataulin pelagica</i>				4						
<i>chaetocero</i> sp.d				15						
<i>chaetocero</i> sp.f				64	5		272		16	
<i>chaetocero</i> sp.k				1210		38	7627	34	700	
<i>chaetocero</i> sp.l				21						
<i>chaetocero</i> sp.m				12	10	35		68		

Continued	1–2	1–3	2–2	2–3	3–2	3–3	4–2	4–3
<i>chaetocero affine</i>				2				
<i>chaetocero compressum</i>			452	1638	6970	35820	9350	7320
<i>chaetocero convolutum</i> / <i>concavicom</i>			4	48	52	23		
<i>chaetocero constrictum</i> / <i>vanheurckii</i>					12		240	
<i>chaetocero danicum</i>			7					
<i>chaetocero debile</i>			5	52	127	77	1070	64
<i>chaetocero decipiens</i>				4		113		
<i>chaetocero diadema</i>				10	82	32	122	16
<i>chaetocero didymum</i>			28	62	54	73		13
<i>chaetocero laciniatum</i>			6		10	99	40	
<i>chaetocero perpusillum</i>			18					
<i>chaetocero pseudocrinit</i>			40	4	148	295	1240	132
<i>chaetocero radicans</i>			45	314	1920	5539	970	83
<i>chaetocero sociale</i>					417	227	250	24
<i>chaetocero vivibile</i>			4					
<i>bacteriast delicatula</i>			218	160	617	2769	263	3560
<i>rhizosolen a lata</i> f. <i>gracillima</i>							6	
<i>rhizosolen delicatula</i>			7	16	19	59	39	8
<i>rhizosolen fragilissima</i>			17	8		4		6
<i>rhizosolen fragilissima</i> v.1						18		
<i>rhizosolen hebetata</i> f. <i>semispina</i>				2				
<i>rhizosolen stolterfothi</i>				14	26	9	31	2
<i>thalassion nitzschoides</i>	6	7	121	18	8	23	7	4
<i>licmophora</i> sp.1			4	4				
<i>nitzschia americana</i>			5	43	360	32	210	26
<i>nitzschia brevirostris</i>				12				
<i>nitzschia closterium</i>			6	22	70	27	41	16
<i>nitzschia closterium</i> v. <i>striatula</i>								3
<i>nitzschia cylindroform</i>	8		12					
<i>nitzschia delicatissim</i>	7	3	20	81	88	63	222	85
<i>nitzschia lineola</i>								2

Continued	1–2	1–3	2–2	2–3	3–2	3–3	4–2	4–3
<i>nitzschia pungens</i>					5		17	
<i>nitzschia seriata</i>					3		10	
<i>nitzschia seriata f.obtusa</i>					62		8	3
<i>nitzschia subraudulen /raudulen</i>					21	9		
<i>cylindroth fusiformis</i>					7		14	4
<i>nephroselm spp. /bipedinomon</i>			112		280	636	56	392
<i>tetraselmi spp. /pyramimonas</i>	9	16	1190		270	400	580	44
<i>tetraselmi spp.</i>			232	126		27	145	21
<i>pterosperm spp. /pachysphaer</i>							12	
<i>prorocentr balticum</i>					9	18	17	33
<i>prorocentr nanum</i>								5
<i>dinophysis acuminata</i>			3					
<i>dinophysis ovum</i>							12	2
<i>gymnodiniu flavum</i>						4	2	11
<i>gymnodiniu gracilementum</i>	10	3	36		72	45	118	90
<i>gymnodiniu paulseni</i>	5		5		4	77	39	45
<i>peridiniac spp.</i>		3	6		8	14	6	9
<i>heterocaps triquetra</i>			5			14		
<i>gonyaulax digitale</i>					1			
<i>ceratium lineatum</i>							5	
<i>raphidophy sp.2</i>							11	
<i>cryptomonas spp. 5–10</i>	5757	7056	162	630	150	445	276	230
<i>cryptomonas spp. 10–15</i>	112	50	204	46	52	91	118	68
<i>cryptomonas spp. 21–30</i>	58	15	240		42	91	25	
<i>hemiselmis spp. 4–6</i>	112	61	84	112	196	127	168	
<i>mesodinium rubrum</i>	3	9	168	3	10		6	4

CRUISE 89-04

TAXON	STATION	5-2	5-3	6-2	6-3	7-2	7-3	8-2	8-3
<i>synechococ</i> spp.			8192	228	4096				114
<i>solenicola setigera</i>						46			
<i>dinobryon sueicum</i>	410	205	490	230	50	204	1089	22	
<i>apedinella spinifera</i>	1840	24				23			15
<i>pseudopedi pyriformis</i>				12				41	
<i>chrysochro</i> sp.1	140	1710	308	2688		1226	1180	1425	
<i>chrysochro</i> spp. 3-6	756	8094	784	1148	340	1771	272	3876	
<i>chrysochro</i> spp. 6-10	168	1938	280	224	50	295		285	
<i>chrysochro</i> spp. 15-20	38	446	112	21		304		190	
<i>minutocell scriptus</i>					70			36	
<i>detonula pumila</i>					56	159	104		
<i>leptocylin danicus</i>	57	68		11	115	145	141	90	
<i>leptocylin minimus</i>	27	1350	139	464	87	1021	32	2010	
<i>leptocylin mediterraneu</i>				4	6				
<i>stephanopy nipponica</i>								54	
<i>skeletonem costatum</i>	132		42	105	1807	649			
<i>thalassios</i> spp.					6				
<i>thalassios rotula</i>	26				21	23	73		
<i>thalassios anguste-line</i>					3				
<i>thalassios aestivalis</i>					32	82	145		
<i>thalassios nordenskiold</i>	15		3		188	77	254		
<i>thalassios pacifica</i>					43	27	18		
<i>thalassios eccentrica /symmetrica</i>					8				
<i>thalassios mendiolana</i>	8				24	9	163		
<i>thalassios conferta</i>	14				43	32	36		
<i>eucampia zodiacus</i>			2						
<i>cerataulin pelagica</i>					4	4			
<i>ditylum brightwellii</i>					2				
<i>chaetocero spa</i>			12						

Continued	5–2	5–3	6–2	6–3	7–2	7–3	8–2	8–3
<i>chaetocero sp.d</i>	84	90				14		
<i>chaetocero sp.f</i>		6		7		18		6
<i>chaetocero sp.h</i>	150	560	16	62	12	1398	295	456
<i>chaetocero sp.j</i>				1456				
<i>chaetocero sp.m</i>					49	122		16
<i>chaetocero compressum</i>	614	4550		33	4200	53800	41000	4550
<i>chaetocero convolutum /concavicom</i>		4			68		345	
<i>chaetocero constrictum /vanheurckii</i>					35		358	
<i>chaetocero curvisetum</i>						32		
<i>chaetocero danicum</i>		10			7		9	
<i>chaetocero debile</i>	210	31		7	2110	3995	563	
<i>chaetocero diadema</i>	133	43			36		436	2600
<i>chaetocero didymum</i>	68	30			53	204	1906	
<i>chaetocero lorenzianum</i>					7			
<i>chaetocero perpusillum</i>						68		
<i>chaetocero pseudocrinit</i>	27	32			50	653	272	4800
<i>chaetocero radicans</i>	35				1175	1843	6855	
<i>chaetocero septentriona</i>	18		6		43		104	
<i>chaetocero sociale</i>	95	18	10		2015	136	4522	50
<i>chaetocero vivibile</i>				4	22	9	18	
<i>bacteriast delicatula</i>	47	1320		75	15	2542	295	2175
<i>rhizosolen a lata f.gracillima</i>		10			3			3
<i>rhizosolen delicatula</i>	10	35		5	12	100	22	45
<i>rhizosolen fragilissima</i>		6		4	15	23	4	
<i>rhizosolen fragilissima v.1</i>				7	15		18	10
<i>rhizosolen stolterfothi</i>					8		59	
<i>thalassion nitzschoides</i>		15			28	9	54	11
<i>gyrosigma spp. pleurosigma</i>					7		9	
<i>nitzschia americana</i>	10				920	281	2792	40
<i>nitzschia brevirostris</i>					71		18	
<i>nitzschia closterium</i>	56	38	20	105	100	191	168	52

Continued	5–2	5–3	6–2	6–3	7–2	7–3	8–2	8–3
<i>nitzschia closterium v. striatula</i>				11		249		
<i>nitzschia cylindroform</i>					920	45	27	
<i>nitzschia delicatissim</i>	15				2920	522	758	31
<i>nitzschia lineola</i>						9		
<i>nitzschia pungens</i>					42		14	
<i>nitzschia seriata</i>					3			
<i>nitzschia seriata f. obtusa</i>					24	41	9	
<i>nitzschia subcurvata</i>				26	66	14		5
<i>nitzschia subraudulen /fraudulen</i>					25		54	
<i>cylindroth fusiformis</i>	3	10	3	4	6		14	3
<i>nephroselm spp. /bipedinomon</i>	112	57		114			23	456
<i>tetraselmi spp. /pyramimonas</i>	720	1030	21	3136	24	191	127	62
<i>cymbomonas spp.</i>								120
<i>tetraselmi spp.</i>		4		5		18		10
<i>euteptiel spp.</i>		22		164				4
<i>prorocentr spp.</i>					6			
<i>prorocentr balticum</i>	31	34	13			23		25
<i>prorocentr nanum</i>								3
<i>dinophysis acuminata</i>							9	
<i>dinophysis ovum</i>				1			4	
<i>gymnodiniu flavum</i>				2				
<i>gymnodiniu gracilentum</i>	58	20	24	16	10	36	36	10
<i>gymnodiniu paulseni</i>	28	11			25		182	4
<i>peridiniac spp.</i>								3
<i>scrippsiel trochoidea</i>				4		4		
<i>heterocaps triquetra</i>								4
<i>gonyaulax diegensis</i>					2			
<i>chattonell sp.</i>	40					50		
<i>raphidophy sp.2</i>	1590	49	174			41		15
<i>cryptomona spp. 5–10</i>	276	430	59	490	282	136	613	208
<i>cryptomona spp. 10–15</i>	60	32	6	25	11	86	177	144

Continued	5-2	5-3	6-2	6-3	7-2	7-3	8-2	8-3
<i>cryptomonas</i> spp. 15-20								5
<i>cryptomonas</i> spp. 21-30					12	95	63	
<i>hemiselmis</i> spp. 4-6				180	16	27	418	171
<i>mesodinium rubrum</i>		3		3	9	32	803	6

CRUISE 89-04

TAXON	STATION	
	9-2	9-3
synechococ spp.	6042	19660
dinobryon sueicum		40
dictyocha speculum	2	
pseudopedi pyriformis	10	15
chrysochro spp. 3-6	10370	19950
chrysochro spp. 6-10	1026	3876
minutocell scriptus	15	
leptocylin danicus spores		62
leptocylin minimus		294
leptocylin mediterraneu		8
thalassios nordenskiold		2
thalassios conferta	2	11
cerataulin pelagica		4
chaetocero sp.f		14
chaetocero sp.m		34
chaetocero compressum	90	3630
chaetocero convolutum /concavicorni	8	2
chaetocero danicum	2	8
chaetocero debile	2	
chaetocero decipiens		7
chaetocero diadema		6
chaetocero didymum		12
chaetocero lorenzianum	2	3
chaetocero pseudocorni		66
chaetocero radicans		85
chaetocero sociale		6
chaetocero subtile		11
chaetocero vivibile	3	4
bacterias delicatula	2	358

Continued**9-2****9-3**

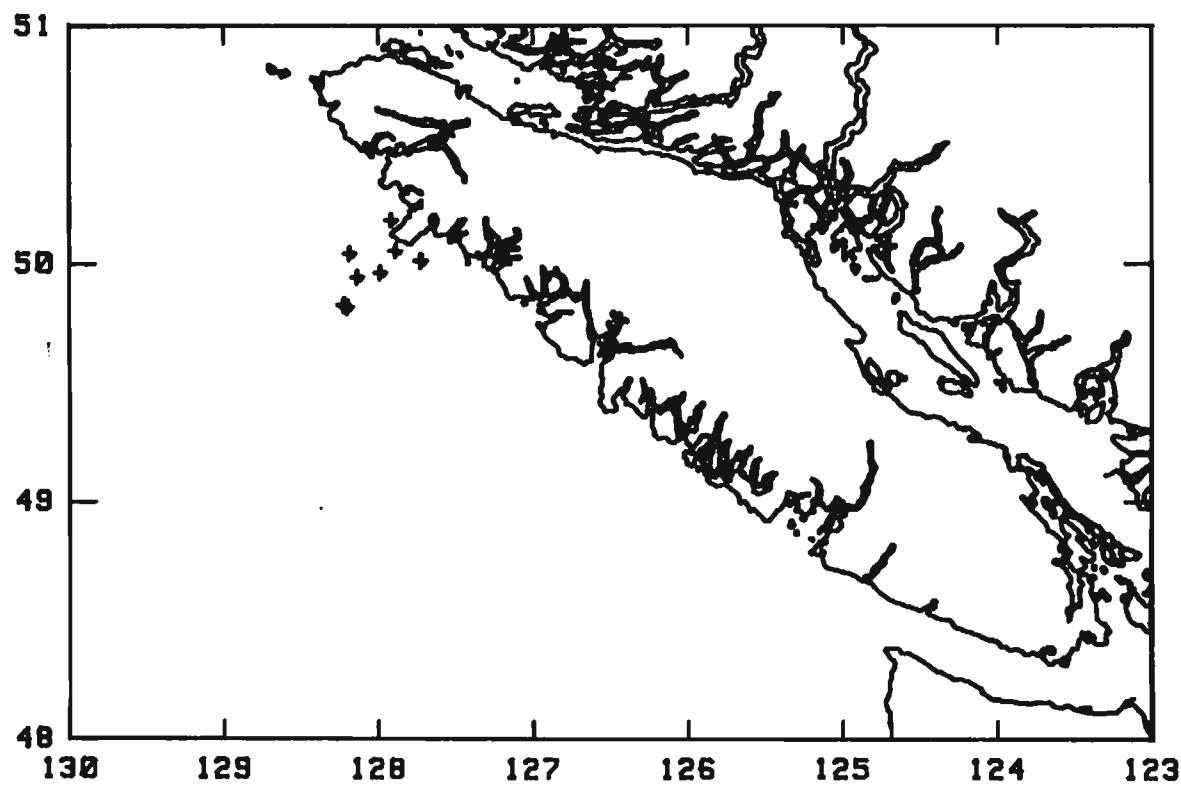
<i>rhizosolen delicatula</i>		22
<i>rhizosolen fragilissima</i>	6	3
<i>rhizosolen fragilissima</i> v.1		23
<i>thalassiot frauenfeldii</i>		1
<i>thalassion bacillaris</i>		3
<i>thalassion nitzschoides</i>	10	40
<i>nitzschia americana</i>	4	16
<i>nitzschia closterium</i>	9	10
<i>nitzschia cylindroform</i>	5	17
<i>nitzschia delicatissim</i>	22	36
<i>nitzschia impressa</i>	1	
<i>nitzschia lineola</i>		3
<i>nitzschia pungens</i>		4
<i>nitzschia subcurvata</i>	6	
<i>nitzschia subraudulen /raudulen</i>		2
<i>cylindroth fusiformis</i>		2
<i>tetraselmi</i> spp. / <i>pyramimonas</i>	33	1820
<i>prorocentr balticum</i>	18	2
<i>cochlodini citron</i>	1	
<i>gymnodiniu gracilentum</i>	16	
<i>gymnodiniu paulseni</i>	2	
<i>peridiniac</i> spp.		1
<i>raphidophy</i> sp.2	10	7
<i>cryptomona</i> spp. 5-10	1250	270
<i>cryptomona</i> spp. 10-15	16	356
<i>hemiselmis</i> spp. 4-6	395	60
<i>mesodinium rubrum</i>	21	60

CRUISE 89-06

8 – 15 August 1989

Area of operations: West coast of Vancouver Island

Vessel: C.S.S. Parizeau



CRUISE 89-06

Station	Date	Latitude	Longitude	Depth	Temperature	Salinity	Chlorophyll	Nitrate	Phosphate	Silicate	POC	PON
28-2	12 Aug. 89	50 00.9	127 43.2	17.7	9.7	32.54	7.4	17.3	1.53	25.3		
28-3		50 00.9	127 43.2	3.4	11.8	32.13	26.4	5.8	0.82	15.5		
29-1		50 00.8	127 43.5	29.2	8.5	32.87						
30-1		50 03.3	127 53.2	23.5	9.0	32.70	2.0	22.1	1.96	34.4	177	21.6
30-4		50 03.3	127 53.2	12.5	10.7	32.29	12.5	22.0	1.93	34.6	329	53.0
30-7		50 03.3	127 53.2	3.3	11.7	32.15	16.0	11.7	1.24	23.8	620	113
36A-1		49 49.6	128 13.2	25.4	11.2	32.16	1.8	10.1	1.03	17.2	157	27.2
36A-4		49 49.6	128 13.2	12.6	12.9	32.12	2.7	2.5	0.58	10.9	242	42.3
36A-7		49 49.6	128 13.2	5.0	14.3	31.89	3.0	0.0	0.34	11.6	313	52.2
37-1	13 Aug. 89	50 11.1	127 54.8	29.7	10.5	32.39	10.7	14.3	1.42	26.3	250	47.6
37-4		50 11.1	127 54.8	23.4	11.8	32.16	18.0	5.7	0.86	17.1	462	92.2
37-7		50 11.1	127 54.8	2.4	12.1	32.11	19.5	3.9	0.73	14.1	439	87.7
39-1		50 02.6	128 11.0	38.8	8.4	32.93	1.5	24.7	2.03	37.6	61.4	10.8
39-3		50 02.6	128 11.0	18.1	11.8	32.16	19.5	5.7	0.76	14.0	408	79.1
39-5		50 02.6	128 11.0	2.1	12.3	32.12	24.5	1.6	0.49	11.4	643	130
40-7		49 56.7	128 07.8	24.0	9.6	32.61	1.2	19.4	1.71	29.4	79.5	16.2
40-9		49 56.7	128 07.8	18.1	9.9	32.55	1.8	17.5	1.64	27.3	63.2	15.5
40-10		49 56.7	128 07.8	3.4	13.0	32.05	4.3	3.5	0.54	15.0	205	38.1
41-1		49 49.6	128 13.2	22.8	9.9	32.34	0.7	14.1	1.27	20.0	75.7	12.4
41-4		49 49.6	128 13.2	13.3	11.2	32.24	2.1	8.4	0.96	14.8	92.6	16.4
41-7		49 49.6	128 13.2	3.0	14.9	31.84	1.7	0.0	0.28	10.1	194	36.7
47-1	14 Aug. 89	49 49.1	128 11.9	27.1	9.5	32.59	4.1	18.1	1.64	28.1	117	22.9
47-4		49 49.1	128 11.9	15.0	10.4	32.41	7.0	13.4	1.34	23.8	208	41.7
47-7		49 49.1	128 11.9	2.8	14.2	31.98	3.8	0.8	0.41	10.1	245	45.3
48-1		49 57.9	127 59.2	26.8	8.5	32.87	0.7	21.0	1.68	30.5	48.8	10.1
48-4		49 57.9	127 59.2	14.5	10.5	32.46	1.6	15.0	1.40	25.6	105	19.0

CRUISE 89-06

Taxon	Station	28-2	28-3	29-1	30-1	30-4	30-7	36A-1	36A-4	36A-7
<i>synechococ</i> spp.		1938	532	969	570	1482	6144			
<i>solenicola setigera</i>			740	149	930		226	172	204	202
<i>dinobryon sueicum</i>							60			
<i>dictyocha speculum</i>			7		2			5	4	8
<i>pedinella</i> sp.239								168		
<i>apedinella spinifera</i>			5		4	12	148			
<i>pseudopedi pyriformis</i>		2	7		3		43			
<i>meringosiph mediterranea</i>					3		5		4	
<i>imantonia rotunda</i>		3416	670	728	200	450	700	1092	5908	10200
<i>corymbellu aureus</i>			22			5	124	20	374	48
<i>chrysochro</i> sp.1		670	590	460	680	1820	580	1008	2156	19950
<i>chrysochro</i> spp. 3-6		230	550	340	310	924	1520	3976	8436	24400
<i>chrysochro</i> spp. 6-10		190		5	11	40	280	162	728	420
<i>chrysochro</i> spp. 15-20			2		4	21	54			112
<i>leyanella arenaria</i>							196			
<i>minutocell scriptus</i>		131	190	17			13	15	15	
<i>detonula pumila</i>							7			
<i>leptocylin danicus</i>		3666	3146	821	1485			2912		
<i>leptocylin minimus</i>		544	2178	50	33	122	82			2
<i>stephanopy nipponica</i>		70	4		18	37	16			
<i>skeletonem costatum</i>		33	162	11	6	36	330			
<i>thalassios</i> sp.1		30	614	4	5	420	792		5	3
<i>thalassios rotula</i>		4	8			4	13			
<i>thalassios angulata</i>		4	4	3	7	14	19			
<i>thalassios anguste-line</i>			19			11	2			
<i>thalassios aestivalis</i>			5							
<i>thalassios nordenskiold</i>		2	2							
<i>thalassios pacifica</i>		17	574	12	21	2	4			
<i>thalassios eccentrica /symmetrica</i>			7							

Continued	28–2	28–3	29–1	30–1	30–4	30–7	36A–1	36A–4	36A–7
<i>thalassios mendiolana</i>						2			
<i>thalassios conferta</i>	144	722	25	81	185	508	330	750	795
<i>coscinodis</i> spp.		2		2					
<i>actinoptyc senarius</i>		10			4	3			
<i>asterompha</i> sp.1	1	7	2	3	15	11		16	10
<i>asterompha heptactis</i>	7	43	3	4	4	16		4	
<i>biddulphi longicruris</i>		2							
<i>eucampia zodiacus</i>	100	875	28	75	863	1703		13	
<i>cerataulin pelagica</i>						2			
<i>ditylum brightwellii</i>	2	62	2	7	49	84			
<i>chaetocero</i> sp.b	49	112	4		15	5	124	50	302
<i>chaetocero</i> sp.d	48	126	10	18	79	420		15	14
<i>chaetocero</i> sp.f	59	92	10	12	53	187	3	7	2
<i>chaetocero</i> sp.h		190		9	392	588		4	24
<i>chaetocero</i> sp.k							13		
<i>chaetocero</i> sp.l								27	236
<i>chaetocero</i> sp.m	6	133		5	32	156			
<i>chaetocero</i> cf. <i>baculites</i>						212			
<i>chaetocero compressum</i>		184	2		109	83		23	
<i>chaetocero convolutum</i> / <i>concavicornis</i>	3	14		2	25	30	25	12	1
<i>chaetocero constrictum</i> / <i>vanheurckii</i>	8	194			24	171			
<i>chaetocero debile</i>	10	155	31		164	48	28	39	6
<i>chaetocero diadema</i>	62	257		10	176	521			
<i>chaetocero filiforme</i>	8								
<i>chaetocero laciniatum</i>	16	187	26	12	72	75			
<i>chaetocero lorenzianum</i>	32	278	19		40	116			
<i>chaetocero perpusillum</i>		20				33			
<i>chaetocero radicans</i>	11					21		8	
<i>chaetocero septentrionalis</i>	15	54	11	18	24	33		4	
<i>chaetocero simile</i>	5	19		6	44	132			
<i>chaetocero sociale</i>		41	5	6					

Continued	28-2	28-3	29-1	30-1	30-4	30-7	36A-1	36A-4	36A-7
<i>chaetocero subtile</i>	2	3				7			
<i>chaetocero teres</i>		14							
<i>chaetocero vivibile</i>		3	1		10	6			
<i>bacteriast delicatula</i>		124		6	8	27		9	4
<i>rhizosolen alata f.gracillima</i>	2	7	2	4	6	4			2
<i>rhizosolen delicatula</i>	1	2			9	30			
<i>rhizosolen fragilissima v.1</i>		118					4	31	5
<i>rhizosolen hebetata f.semispina</i>	16	131	3	5	6	7			
<i>rhizosolen stolterfothi</i>	1	10	6						
<i>synedra spp.</i>	3		5	2					
<i>asterionel glacialis</i>	8	78							
<i>thalassiot frauenfeldii</i>	1				2			3	4
<i>thalassion bacillaris</i>	5	12	8		11	3			
<i>thalassion nitzschoides</i>	21	23	4	12	46	12	5	16	
<i>naviculace spp.</i>	14	85	22	18	47	32			
<i>nitzschia spp.</i>							30	92	34
<i>nitzschia americana</i>	128	194		15	108	100			
<i>nitzschia bicapitata</i>							5		
<i>nitzschia brevirostris</i>	8		7		3				
<i>nitzschia closterium</i>	104	85	16	32	92	20	50	8	33
<i>nitzschia closterium v.striatula</i>	30	27	4		6	22	266	1450	960
<i>nitzschia cylindroform</i>	50	14	25	12	36	18	1350	1270	1090
<i>nitzschia delicatissim</i>	1120	4830	124	84	492	528	110	430	98
<i>nitzschia subraudulen /fraudulen</i>	70	760	18	50	565	850			1
<i>nitzschia granii v.cuvata</i>						10			
<i>nitzschia lineola</i>	84	209		2	8		14	11	4
<i>nitzschia longissima</i>	37	78	18	15	36	35	7		2
<i>nitzschia pseudodelica</i>	11						22	75	10
<i>nitzschia pungens</i>	600	4060	180	147	1585	3150		2	3
<i>nitzschia seriata</i>	262	755	33	88	840	1970			
<i>nitzschia seriata f.obtusa</i>	153	555	41	63	482	1080			

Continued	28–2	28–3	29–1	30–1	30–4	30–7	36A–1	36A–4	36A–7
<i>nitzschia subcurvata</i>	9	20					85	368	80
<i>cylindroth fusiformis</i>	2	4	9			9			
<i>nephroelm spp. /bipedinomon</i>	56	56				224	112	322	140
<i>tetraselmi spp. /pyramimonas</i>		7			21	390	23	13	61
<i>pterosperm spp. /pachysphaer</i>		6	2		12	29	9	25	52
<i>euteptiel spp.</i>	2				3	8	15	9	10
<i>prorocentr balticum</i>						12	1	5	4
<i>prorocentr gracile</i>		4						3	5
<i>prorocentr vaginulum</i>									1
<i>dinophysis acuminata</i>		2							
<i>gonyaulax rugosum</i>						19			1
<i>gymnodiniu flavum</i>						3			
<i>gymnodiniu gracilentum</i>	380	135	161	57	124	122	925	4620	1910
<i>gymnodiniu paulseni</i>					4				
<i>gymnodiniu sanguineum</i>					1				
<i>katodinium rotundatum</i>	177	33	65	21	25	123	48	86	9
<i>scrippsiel trochoidea</i>						4			∞
<i>heterocaps triquetra</i>						3			2
<i>alexandriu catenella</i>		10				20			
<i>gonyaulax digitale</i>		1				3			
<i>ceratium furca</i>	2	1			1	1			
<i>ceratium tripos</i>					1				
<i>ceratium minutum</i>	1	2				1		14	4
<i>ceratium pentagonum</i>					3	1			
<i>chattonell sp.</i>									20
<i>raphidophy sp.1</i>		3	4	2		28	47		6
<i>raphidophy sp.2</i>							14	11	80
<i>heterosigmarakashiwo</i>									5
<i>cryptomona spp. 5–10</i>	466	1250	193	126	920	1650	600	530	1950
<i>cryptomona spp. 11–20</i>	160	430	32	10	136	630	174	390	56
<i>cryptomona spp. 21–30</i>		41			8			4	21

Continued	28-2	28-3	29-1	30-1	30-4	30-7	36A-1	36A-4	36A-7
hemiselmis spp. 4-6	80	308	88	100	500	1288	2548	220	33
mesodinium rubrum	21	10	8	3	8	38	23	112	128

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Taxon	Station	37-1	37-4	37-7	39-1	39-3	39-5	40-7	40-9	40-10
<i>synechococ</i> spp.		812	2166		1767	112		2679		77820
<i>solenicola setigera</i>		1030	1190	1020	292	3976	3920	82	156	
<i>dinobryon sueicum</i>			80		2			2		
<i>dictyocha speculum</i>			3							
<i>pedinellac</i> sp.223										8
<i>apedinella spinifera</i>			6	7		11	44			16
<i>pseudopedi pyriformis</i>		6	8	36	3	15	28			95
<i>meringosiph mediterranea</i>				11		12	20			
<i>imantonia rotunda</i>		120	450	1876	570	800	160	1988	1792	3416
<i>corymbellu aureus</i>		61	190	72	35	222				8
<i>chrysochro</i> sp.1		280	670	728	21	90	100	690	680	3360
<i>chrysochro</i> spp. 3-6		220	210	1820	32	230	420	1130	810	5757
<i>chrysochro</i> spp. 6-10		170	100	400	18	108	470	52	96	296
<i>chrysochro</i> spp. 15-20		6	5	22		14	21			4
<i>minutocell scriptus</i>		3		55	3	16	82	5		30
<i>detonula pumila</i>						5	7			
<i>leptocylin danicus</i>		8460	20310	21920	298	21780	26930	180	126	445
<i>leptocylin minimus</i>		99	250	1150	3	320	660	4	7	40
<i>stephanopy nipponica</i>			15		1	20	20			
<i>skeletonem costatum</i>		13	86	142		42	48		13	29
<i>thalassios</i> sp.1		333	728	910		442	585	15	22	95
<i>thalassios aestivalis</i>		3								
<i>thalassios angulata</i>		10	41	20	5	197	165			
<i>thalassios anguste-line</i>			4			5	12			
<i>thalassios conferta</i>		150	855	835	17	325	313	19	42	90
<i>thalassios eccentrica /symmetrica</i>						7				
<i>thalassios lineata</i>										10
<i>thalassios nordenskiold</i>		16	35	27						
<i>thalassios pacifica</i>		5	6	40	2	98	3		3	

Continued	37-1	37-4	37-7	39-1	39-3	39-5	40-7	40-9	40-10
<i>thalassios rotula</i>	2	17	13		9	4			
<i>coscinodis</i> spp.					3	2			
<i>actinoptyc senarius</i>					6				
<i>asterompha</i> sp.1	3	13	4		12	4		5	6
<i>asterompha heptactis</i>	6	45	11	1	20	21		2	
<i>eucampia zodiacus</i>	554	1794	1430	42	1000	974			9
<i>ditylum brightwellii</i>	32	163	64		52	124			3
<i>chaetocero</i> sp.b	38	240	296	3	44	70	5	5	8
<i>chaetocero</i> sp.d	99	180	214	8	35	396		6	15
<i>chaetocero</i> sp.f	38	72	88		68				7
<i>chaetocero</i> sp.h	59	35	448	5	308	112	4		112
<i>chaetocero</i> sp.m	35	162	100		205	184			
<i>chaetocero</i> sp.n	137	370	77		48	81			5
<i>chaetocero compressum</i>	141	121	115		195		8	7	
<i>chaetocero convolutum</i> / <i>concavicornis</i>	11	10	20		22	13			
<i>chaetocero constrictum</i> / <i>vanheurckii</i>	56	179	142		136	170			
<i>chaetocero danicum</i>			18		7				
<i>chaetocero debile</i>	32	111	108		43	96			
<i>chaetocero diadema</i>	177	500	466		390	850			
<i>chaetocero lacinosum</i>	93	165	260		271	192		4	
<i>chaetocero lorenzianum</i>	26	273	188		216	276			
<i>chaetocero pelagicum</i>					6				
<i>chaetocero radicans</i>		23	53	2	64				
<i>chaetocero septentriona</i>	25	34	144	1	36	90			3
<i>chaetocero simile</i>	13	10	41		21				
<i>chaetocero sociale</i>	29	93	141		45				
<i>chaetocero teres</i>	7		19						
<i>bacteriast delicatula</i>		11	34		12	53			
<i>rhizosolen a lava</i> f. <i>gracillima</i>		12	4		8				
<i>rhizosolen bergonii</i>		1							
<i>rhizosolen delicatula</i>		6	12	5	35	11			

Continued	37-1	37-4	37-7	39-1	39-3	39-5	40-7	40-9	40-10
<i>rhizosolen fragilissima</i> v.1		15	22		51	11		4	14
<i>rhizosolen hebetata</i> f. <i>semispina</i>	6	62	133		155	156			
<i>fragilaria</i> spp.		8							
<i>asterionel glacialis</i>		45	23		58	3			
<i>thalassiot frauenfeldii</i>					1	2			
<i>thalassion bacillaris</i>	3	10	4		4	5			
<i>thalassion nitzschoides</i>		9	3	7	10	8			
<i>naviculace</i> spp.	51	55	170	2	65	14	32	54	45
<i>amphora pusio</i> v. <i>parvula</i>					9	4			
<i>nitzschia</i> spp.								7	2
<i>nitzschia americana</i>	105	392	525	5	462	920	10	11	50
<i>nitzschia bipunctata</i>									8
<i>nitzschia brevirostris</i>	2	5	4		17	10			
<i>nitzschia closterium</i>	141	151	61	12	113	296	25	17	10
<i>nitzschia closterium</i> v. <i>striatula</i>		8	52	2	7	30		8	25
<i>nitzschia cylindroform</i>	42	16	29	6	33	186	9	90	44
<i>nitzschia delicatissim</i>	314	1360	3200	17	2340	2480	26	48	130
<i>nitzschia subraudulen</i> / <i>raudulen</i>	120	264	492	11	460	322	40	12	13
<i>nitzschia granii</i> v. <i>curvata</i>	3				6	15			
<i>nitzschia lineola</i>	9	56	30		115	126			7
<i>nitzschia longissima</i>	22	15	5	4	52	61	7	14	8
<i>nitzschia pseudodelica</i>	2				20				
<i>nitzschia pungens</i>	1330	3330	2770	39	3720	3470	16	20	
<i>nitzschia seriata</i>	1150	3040	1630	14	1440	1980	23	28	9
<i>nitzschia seriata</i> f. <i>obtusa</i>	555	1200	810		490	466		4	
<i>nitzschia subcurvata</i>	8	59	83		71	62	18	30	65
<i>cylindroth fusiformis</i>		4	7	1	10	2			
<i>nephroelm</i> spp. / <i>bipedinomon</i>		140							1204
<i>tetraselmi</i> spp. / <i>pyramimonas</i>		7	169		14	55	5		330
<i>cymbomonas</i> spp.									21
<i>pterosperm</i> spp. / <i>pachysphaer</i>		6	4		12	27	8		18

Continued	37-1	37-4	37-7	39-1	39-3	39-5	40-7	40-9	40-10
euteptiel spp.			3			4			24
prorocentr gracile			5			26			10
prorocentr micans						1			
dinophysis acuminata					2				
dinophysis parva			3			2			
gonyaulax rugosum		3							
cochlodini citron					2				
gymnodiniu flavum									4
gymnodiniu gracilentum	61	35	143	22	348	203	52	83	500
gymnodiniu paulseni									7
katodinium rotundatum	25	21	88	5	11	80	17	11	865
heterocaps triquetra			2						
alexandriu catenella		10				27			
gonyaulax digitale			2			5			3
ceratium lineatum						2			
ceratium minutum						2			
raphidophy sp.1	2	9	7	3				5	9
raphidophy sp.2							3		5
heterosigm akashiwo		3	1						
cryptomonas spp. 5-10	690	660	625	25	590	625	252	640	7923
cryptomonas spp. 11-20	58	725	595	4	164	395	25	42	2380
cryptomonas spp. 21-30		14	9		8		10		68
hemiselmis spp. 4-6	86	102	330	7	150		210	450	1008
mesodinium rubrum	3	9			10	5			45

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TAXON	STATION	41-1	41-4	41-7	47-1	47-4	47-7	48-1	48-4
<i>synechococ</i> spp.		4915	7782	24170		392			
<i>solenicola setigera</i>		200	270	320	400	970	11	41	
<i>dinobryon sueicum</i>			10						
<i>dictyocha speculum</i>		4	2						
<i>apedinella spinifera</i>			10				28		
<i>pseudopedi pyriformis</i>							5		
<i>imantonia rotunda</i>		1344	1484	1008	270	784	680	195	3477
<i>corymbellu</i> sp.									7
<i>corymbellu aureus</i>				11			61		6
<i>chrysocro</i> sp.1		430	2268	110	130	450	980	76	3021
<i>chrysocro</i> spp. 3-6		560	6498	2907	260	200	2156	33	1568
<i>chrysocro</i> spp. 6-10		70	980	114	16	30	122	15	96
<i>chrysocro</i> spp. 15-20				6					
<i>minutocell scriptus</i>			7		22		4		
<i>leptoclylin danicus</i>		4	34	23	3950	5030	2168		240
<i>leptoclylin minimus</i>			12	17	52	99	11		12
<i>skeletonem costatum</i>					62	16	10		
<i>thalassios</i> sp.1		20	2		54	306	94	1	95
<i>thalassios aestivalis</i>						2			
<i>thalassios angulata</i>						7	5		2
<i>thalassios conferta</i>		57	231	486	93	290	300	10	125
<i>thalassios lineata</i>			15	30					
<i>thalassios pacifica</i>					5		26		8
<i>thalassios rotula</i>				2	4	3			
<i>actinoptyc senarius</i>					1				
<i>asterompha</i> sp.1		5	10		2	6	31		
<i>asterompha heptactis</i>		4			5	10			
<i>eucampa</i> spp.		2							
<i>eucampta zodiacus</i>					222	618	275		

Continued	41-1	41-4	41-7	47-1	47-4	47-7	48-1	48-4
<i>ditylum brightwellii</i>				6	25	27		3
<i>chaetocero sp.b</i>	6	38	4	14	82	24	4	7
<i>chaetocero sp.d</i>		10	7	130	58	17		36
<i>chaetocero sp.f</i>	4	5	18	3		56		11
<i>chaetocero sp.h</i>	5	6		56		84		28
<i>chaetocero sp.m</i>		4		46	34	22		15
<i>chaetocero sp.n</i>	4							8
<i>chaetocero compressum</i>		6		16	6	20		15
<i>chaetocero convolutum /concavicorn</i>		2	1	9	10	20		
<i>chaetocero constrictum /vanheurckii</i>					8			
<i>chaetocero danicum</i>					3			
<i>chaetocero debile</i>	17	36	143	12	23	170		
<i>chaetocero diadema</i>				26	38	78		
<i>chaetocero laciniatum</i>		8		24	52	116		12
<i>chaetocero lorenzianum</i>				46	38	61		
<i>chaetocero pelagicum</i>			6					
<i>chaetocero pseudocrinis</i>				4		16		
<i>chaetocero radicans</i>				7				
<i>chaetocero septentriona</i>						7		
<i>chaetocero sociale</i>					7	15		
<i>chaetocero teres</i>						5		4
<i>chaetocero vistulae</i>			4					
<i>bacteriast delicatula</i>		2	9		3			
<i>rhizosolen alata f.gracillima</i>	8	3	1	2				
<i>rhizosolen delicatula</i>					6	5		
<i>rhizosolen fragilissima</i>			1					
<i>rhizosolen fragilissima v.1</i>	4	6	10			39		
<i>rhizosolen hebetata f.semispina</i>		2		5	15	8		2
<i>synedra spp.</i>	2							
<i>asterionel glacialis</i>	3							
<i>thalassiot frauenfeldii</i>	7		1	1		2		

Continued	41-1	41-4	41-7	47-1	47-4	47-7	48-1	48-4
<i>thalassion bacillaris</i>		5			7			8
<i>thalassion nitzschoides</i>			4	18	32	6		7
<i>naviculace</i> spp.	6	11		5	10		7	70
<i>gyrosigma</i> spp. <i>pleurosigma</i>		1			1			
<i>amphora pusio</i> v. <i>parvula</i>					7			
<i>nitzschia</i> spp.	39	83	27		2			5
<i>nitzschia americana</i>	10	3			12	38	3	34
<i>nitzschia brevirostris</i>				1	2		1	
<i>nitzschia closterium</i>	10	9	16	60	100	29		68
<i>nitzschia closterium</i> v. <i>striatula</i>	76	110	360			300	3	17
<i>nitzschia cylindroform</i>	154	348	116	166	132	49	8	250
<i>nitzschia delicatissim</i>	82	127	158	162	330	88	6	243
<i>nitzschia subraudulen</i> / <i>raudulen</i>	9	6	6	188	92	82	4	110
<i>nitzschia granii</i> v. <i>curvata</i>	2							
<i>nitzschia lineola</i>	5	2	5	10	14	30		18
<i>nitzschia longissima</i>	4			27	31	7	4	
<i>nitzschia pseudodelica</i>		7	97		8			
<i>nitzschia pungens</i>	1	6	7	988	1295	475	2	16
<i>nitzschia seriata</i>	2	8	2	330	1005	211	2	71
<i>nitzschia seriata</i> f. <i>obtusa</i>		10	8	12	15	11		12
<i>nitzschia subcurvata</i>	50	88	56			33	9	15
<i>cylindroth fusiformis</i>								3
<i>nephroelm</i> spp. / <i>bipedinomon</i>						196		
<i>tetraselmi</i> spp. / <i>pyramimonas</i>						480		6
<i>cymbomonas</i> spp.						55		
<i>pterosperm</i> spp. / <i>pachysphaer</i>		22	11			44		5
<i>euteptiel</i> spp.	5		17					
<i>prorocentr</i> spp.			1					
<i>prorocentr dentatum</i>			1					
<i>prorocentr gracile</i>			6			61		
<i>dinophysis parva</i>			3					

Continued	41-1	41-4	41-7	47-1	47-4	47-7	48-1	48-4
<i>gonyaulax rugosum</i>			2					
<i>gymnodiniu flavum</i>			5			3		
<i>gymnodiniu gracilemum</i>	522	1810	1060	288	94	780	12	82
<i>katodinium rotundatum</i>	34	32	24	33	43	20	3	
<i>scrippsiel sp.u</i>						8		
<i>scrippsiel trochoidea</i>						9		
<i>heterocaps triquetra</i>						10		
<i>alexandriu catenella</i>			4			27		
<i>gonyaulax digitale</i>							3	
<i>ceratium furca</i>			2	1	1			
<i>ceratium lineatum</i>				1	1			
<i>ceratium minutum</i>		2	5	3	1			
<i>chattonell sp.</i>						20		
<i>raphidophy sp.1</i>		47	5		3	11	4	
<i>raphidophy sp.2</i>	5	72	12			46		
<i>heterosigm akashiwo</i>						110		
<i>cryptomona spp. 5-10</i>	165	495	955	262	228	4190	92	1260
<i>cryptomona spp. 10.1-15</i>							8	53
<i>cryptomona spp. 11-20</i>	50	100	165	130	194	2080		
<i>cryptomona spp. 21-30</i>		2		1	3	39		9
<i>hemiselmis spp. 4-6</i>	180	952	560	84	98	100	32	
<i>mesodinium rubrum</i>	6	14	77			82		