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Oceanography and Planktonic Communities of Two Northern Québec Fjords

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ABSTRACT

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This report presents a tabulation of all oceanographic and biological data collected during the summers of 1989 and 1990 in two fjords, Sugluk Inlet and Wakeham Bay, located on the Québec coast in western Hudson Strait. The data set includes information on the vertical distribution of temperature, salinity, nutrients (PO_4 , NO_3), and oxygen as well as total, particulate and dissolved organic carbon, bacterial and phytoplankton counts, chlorophyll *a*, and the composition and abundance of the phytoplankton and zooplankton communities. In Sugluk Inlet the vertical distribution of temperature, salinity and zooplankton in the vicinity of the fjord sill was examined at intervals during a tidal cycle. The water flow across the sill of Sugluk Inlet was measured during a two week period by means of a moored current meter.

Key words: fjords, northern Québec, phytoplankton, zooplankton, oceanography

RÉSUMÉ

Percy, J.A., E.H. Grainger, J.N. Bunch and S.I.C. Hsiao. 1992. Oceanography and planktonic communities of two northern Québec fjords. Can. Data Rep. Fish. Aquat. Sci. 892: iv+136 p.

Ce rapport sert de répertoire tabulaire des données océanographiques et biologiques recueillies au cours des étés 1989 et 1990 dans deux fjords, la baie de Sugluk et la baie de Wakeham, situés sur la côte québécoise de l'ouest du détroit d'Hudson. Les données comprennent des informations sur la distribution verticale de la température, de la salinité, des sels nutritifs (PO_4 , NO_3), de l'oxygène, du carbone organique total, dissous et particulaire, des bactéries, du phytoplancton, de la chlorophylle *a* et du zooplancton. Dans la baie de Sugluk, la répartition verticale de la température, de la salinité et du zooplancton à proximité du seuil du fjord a été déterminée périodiquement au cours d'un cycle de marée. La vitesse des courants au-dessus du seuil a été mesurée durant deux semaines au moyen d'un courantomètre électronique.

Mots clés: fjords, Nord québécois, phytoplancton, zooplancton, océanographie

INTRODUCTION

Narrow, deep fjords are a characteristic feature of many northern coastlines and several occur along the Québec coast bordering Hudson Strait. Two of these, Wakeham Bay and Sugluk Inlet, located towards the western end of Hudson Strait, are the focus of the present study which is designed to provide preliminary comparative information about their oceanographic and biological characteristics. The abundance, composition and distribution of the fauna and flora of the pelagic communities of Sugluk and Wakeham Bays, and the influence of hydrodynamic processes on them is not known. This report represents a tabulation of all the oceanographic and biological data collected within and adjacent to the fjords during two consecutive summer field seasons.

STUDY AREA

Sugluk Inlet (Fig. 1) and Wakeham Bay (Fig. 2) are located about 210 km apart on the Québec coast of Hudson Strait. Superficially they appear strikingly similar. Sugluk Inlet, the westernmost of the two ($62^{\circ}18'N$ $75^{\circ}27'W$) is 23 km long and 1.8 km in width. Wakeham Bay, situated nearer to the center of the Strait ($61^{\circ}37'N$ $72^{\circ}00'W$) is 30 km long and 3.5 km in breadth. The water depth in Hudson Strait 2 km off the mouth of Sugluk Inlet is 97 m and off Wakeham Bay 115 m. Both fjords extend inland in a southwesterly direction, although Wakeham has a more pronounced dogleg to the west at its inner end. In both, settlements are located on the southeast shore midway down the bay. Both fjords are surrounded by rugged rocky hills. At their inner end, each has a deep basin separated from the main bay by a narrow, shallow passage. The innermost basin of Wakeham Bay is 3.7 km long by 1.4 km wide, has a maximum depth of 82 m and is separated from the main bay by an 11.7 m deep sill. The innermost basin of Sugluk Inlet is 4.5 km long and 1.8 km wide, has a maximum depth of 73 m and a sill depth of 6.7 m. Each of these basins is fed by two principal rivers.

The differences between the two fjords are almost as striking as their similarities. Available chart and tidal data suggest that their hydrography and hence probably their physical and chemical oceanographic regimes may be very different. Sugluk Inlet is separated from Hudson Strait by a sill depth of only 12.8 m. In contrast, the sill depth in Wakeham Bay is fully 73 m, almost 6 times deeper. Wakeham Bay has a maximum depth of 214 m, 1.7 times greater than that of Sugluk Inlet which is 121 m. Finally, the tidal range in Wakeham Bay (mean tide=7.5 m, large tide=11.3 m) is more than twice as great as that in Sugluk Inlet (mean tide=3.4 m, large tide=5.6 m). Topographical charts suggest that the drainage area of the freshwater runoff, and hence the local freshening of surface waters, is much more extensive in Sugluk Inlet than in Wakeham Bay. Furthermore, Sugluk Inlet is located farther to the west in the Strait and is thus probably more strongly influenced than Wakeham by the warmed and freshened discharge from Hudson Bay, which flows eastward along the Québec coast (Campbell 1958; Drinkwater 1986). Wakeham Bay, in contrast, is probably subject to a more marine north Atlantic influence from the eastern Strait.

METHODS

STATION LOCATIONS

The station locations and sampling depths in Sugluk Inlet and Wakeham Bay during the two field seasons are shown in figures 1 to 3. Bottom topography was derived from the appropriate hydrographic charts. During 1989, eight stations situated in comparable positions along the axis of both fjords were occupied in Sugluk Inlet (S1-S8) and Wakeham Bay (W1-W8). In each case, station 1 was located in Hudson Strait approximately 5 km outside the sill. Stations 2 and 3 were situated just outside and just inside the sill, respectively. Stations 4,5 and 6 were distributed along the length of the main basin of the fjords, while station 7 was situated just outside the sill of the innermost basin. Station 8 was located at the deepest point in the innermost basin of both bays. During 1990, four of these same stations in Sugluk Inlet (S1, S4, S6 and S8) were occupied on August 3-5 and again on August 19-20. In addition, on August 10-11 temperature, salinity and macrozooplankton were sampled along a transect of more closely spaced stations (Fig. 3) consisting of stations S3 to S8 as well as 6 additional stations located between these and distinguished by "b" or "c" after the station number. During 1990 a current meter was deployed on the sill at a new station designated S2b.

TEMPERATURE AND SALINITY MEASUREMENT

Temperature and salinity were routinely measured at 1 m depth intervals from the surface to near bottom with an Applied Microsystems model 12 STD. Additional reference temperatures and salinities were measured with a mercury thermometer and a Guildline model 5000 Auto-Sal salinometer, respectively.

CURRENT MEASUREMENT

An InterOcean S-4 electromagnetic current meter was deployed at 1222 EDT on August 5, 1990 in 17 m of water at station 2b located on the outer sill of Sugluk Inlet (Fig. 3, Table 1.1). The instrument was moored 4 m off the bottom in a kelp-free area to the west of the shipping channel. The instrument measured current magnitude and direction as well as temperature and salinity. The pressure sensor was not calibrated and thus recorded only relative pressure with the minimum value encountered as 0.00 dB. The relative depth values derived from the pressure readings are reported here because the run of values clearly indicate the range and time of the tides. The meter was programmed to record instantaneous current speed and direction for 4 min every 20 min, with one set of U (east) and V (north) velocity vector averages, and one instantaneous temperature, conductivity and pressure reading every 20 min. Every 12 h a special record block was recorded containing the date, time, reference voltage and compass reading. The current speed sensor range was 0-350 cm/s, with an accuracy of ± 1 cm/s or 2% of the reading and a resolution of 0.2 cm/s. A flux-gate magnetometer accurate to $\pm 2^\circ$ provided compass orientation. The thermistor for temperature measurements had a range of -2.5 to 35°C, a resolution of 0.05°C and an accuracy of $\pm 0.1^\circ\text{C}$. Salinity was measured with an inductive conductivity cell having a range of 1-70 mS/cm, a

resolution of 0.1 mS/cm and an accuracy of ± 0.2 mS/cm. The current meter was recovered at 1015 EDT on August 18, 1990. In addition to graphic presentation of current meter data for the whole period of deployment, summary statistics for the various parameters were calculated for the entire period, August 5 to 18, as well as for the intermediate periods, August 5 to 12 and August 12 to 18. This roughly encompassed the periods of spring and neap tides respectively.

WATER COLLECTION AND ANALYSIS

Water was collected at selected depths using 5 L Niskin bottles. Water for nutrients, chlorophyll *a* and carbon analyses as well as for bacterial and phytoplankton counts were taken from the same bottle, processed and analyzed as follows:

Nutrient analysis

Samples of 5 mL for nitrate and phosphate determinations were frozen in cryotubes in liquid nitrogen. They were thawed in a warm water bath just prior to analysis. Reactive phosphate and nitrate was measured with a Technicon Autoanalyser II. Phosphate samples collected in 1989 were analysed by method no. 155-71W/T (Technicon Industrial Systems 1973) at l'Institut Maurice-Lamontagne. This is essentially an automated version of the standard technique described by Strickland and Parsons (1972). The limit of detection for phosphate was $0.08 \mu\text{mol L}^{-1}$. Samples collected in 1990 were similarly measured at the Arctic Biological Station. Reactive nitrate samples collected in 1989 were analysed by method no. 158-71W/B (Technicon Industrial Systems 1976) at l'Institut Maurice-Lamontagne. The limit of detection for nitrate was $0.1 \mu\text{mol L}^{-1}$. Samples collected in 1990 were analysed for reactive nitrate at the Arctic Biological Station by an automated method (United States Environmental Protection Agency 1979) involving hydrazine reduction. The method was modified to increase sensitivity by increasing the concentration of hydrazine phosphate. The limit of detection for nitrate was $0.06 \mu\text{mol L}^{-1}$.

Carbon analysis

Organic carbon was measured by the procedure of Bunch (1987). Aliquots of 100 mL of freshly collected sea water were filtered through ashed (500°C) Whatman GF/F 25-mm glass filters in 25 mm, in-line Sartorius filter holders fitted to disposable 50 mL syringes. Filters and filtrates were immediately frozen. Organic carbon was determined by wet oxidation to CO_2 and reduction of the CO_2 to CH_4 in a stream of hydrogen over a nickel catalyst. Methane was measured by flame ionization with the response recorded on a Hewlett-Packard 3380 recorder-integrator. The limits of detection for dissolved (DOC) and particulate (POC) were $54.0 \mu\text{g}$ and $20 \mu\text{g C L}^{-1}$, respectively. During filtrations in 1989, leakage across the filter occurred in some cases because of the stiffness of the teflon O-ring in the filter holder. Data for 1989 are therefore reported only as total organic carbon (TOC). A softer silicone O-ring was successfully used in 1990.

Bacterial numbers

Total counts of bacteria in sea water were estimated by epifluorescence microscopy (Watson et al. 1977). The counts were done from 20 mL samples

preserved with 0.2% aqueous gluteraldehyde and refrigerated in the dark.

Chlorophyll a analysis

Replicate samples of 500 mL of seawater from each sampling depth were filtered through Millipore HA type 47 mm diameter filters which were then frozen for later analysis. Chlorophyll *a* was analyzed by a spectrophotometric technique according to the method of Strickland and Parsons (1972) and was calculated from the Jeffrey-Humphrey equations (Jeffrey and Humphrey 1975). In some cases, replicate values of chlorophyll *a* in 1989 showed considerable variation. Replicates were plotted against each other and a regression line fitted through the values to zero. When the average of replicates exceeded the 95% confidence limits of individual values, the data were discarded. All data from 1990 were retained after applying the same test.

PHYTOPLANKTON COLLECTION AND ANALYSIS

The subsamples containing natural populations of phytoplankton from several depths at each station were taken from the water collection bottles. One hundred mL samples were preserved with 2 mL of 40% formaldehyde neutralized with calcium carbonate in polyethylene Boston round bottles. During 1990, 5 drops of acid Lugol's solution was also added to each 100 mL phytoplankton sample for comparison. The methods of identification and enumeration are described in Foy and Hsiao (1976). Standard references for identification such as Cleve and Grunow (1880), Cleve (1896), Lebour (1925, 1930), Hendeby (1964) and Hustedt (1985) were used.

ZOOPLANKTON COLLECTION AND ANALYSIS

Mesozooplankton

Mesozooplankton samples were collected with conical nets of 30 cm mouth diameter and 233 μm mesh towed vertically through the water column. At each station, 2 or 3 vertical tows were carried out, each from a different depth to the surface. Closing nets were not used, so the numbers of organisms in the various depth layers were determined by subtraction. Samples were preserved in a 2% aqueous solution of buffered formaldehyde. Flow meters were not used, but collecting efficiency was assumed for further calculations to be 100%, since minimal net clogging was indicated by the low concentrations of phytoplankton generally found and by the relatively small quantities of water filtered. All organisms were identified to species when possible. In a number of collections, depending on total sample size, the smaller, and usually most abundant, taxa were subsampled for counting with a Stempel pipette, with subsample sizes ranging from 5 to 20%. Results are expressed as number of organisms per m^3 .

During 1989, mesozooplankton were collected at eight stations in both Sugluk Inlet (August 11 to 15, Fig. 1) and Wakeham Bay (August 18 to 22, Fig. 2). During 1990, mesozooplankton were collected at stations S1, S4, S6 and S8 in Sugluk Inlet (Fig. 3) on two occasions, August 3 to 5 and August 19 to 20. In addition, mesozooplankton were collected at specific intervals at two stations in the vicinity of the sill in Sugluk Inlet throughout a tidal cycle on August 12 and again on August 18. Samples were collected alternately at

station S2b, located on the sill and with a depth of 14 m, and station S3, located just inside the sill and with a depth of 82 m. At station S2b the net was towed vertically from 12 m depth to the surface. At each occupation of station S3 three vertical tows were carried out, from near bottom to the surface, from 50 m to the surface and from 12 m to the surface. A CTD cast from surface to near bottom was also carried out at each station occupation. After sampling at one station the vessel proceeded immediately to the other (\approx 0.5 h) and sampled there. Approximately two hours later the vessel returned to the first station and repeated the sequence. This was repeated 7 times on August 12 and 7 times on August 18. An attempt to carry out the same exercise on August 17 was hampered by weather, so although the CTD casts were carried out according to schedule at both stations it was not possible to obtain the corresponding zooplankton collections.

Macrozooplankton

Macrozooplankton were collected by hauling a ring net of 1 mm mesh vertically through the water column from selected depths to the surface. Nets of 0.5 m and 1 m diameter were used in 1989 and 1990, respectively. Two to four net hauls were made at each station. Closing nets were not used, so the abundance of animals in each depth range was estimated by subtraction. The results are expressed as number of organisms per 100 m³. The numbers of the ctenophore, *Mertensia ovum*, which tends to disintegrate on preservation, were recorded prior to preserving the samples in 2% buffered formaldehyde in seawater.

During 1989, macrozooplankton were collected immediately after the microzooplankton tows at each of the eight stations in both Sugluk Inlet and Wakeham Bay. Similarly, during 1990 macrozooplankton samples were collected at each of the 4 stations in Sugluk Inlet on August 3 to 5 and again on August 19 to 20. In addition, on August 10 to 11 macrozooplankton samples and CTD vertical profiles were collected at 11 closely spaced stations, S3b to S8 (Fig. 3) distributed along the length of Sugluk Inlet. All animals larger than about 2 mm were identified to species or higher taxa before counting them and measuring their pooled weight after draining them for 1 min. on plankton mesh in a buchner funnel through which air was drawn by a vacuum pump.

RESULTS

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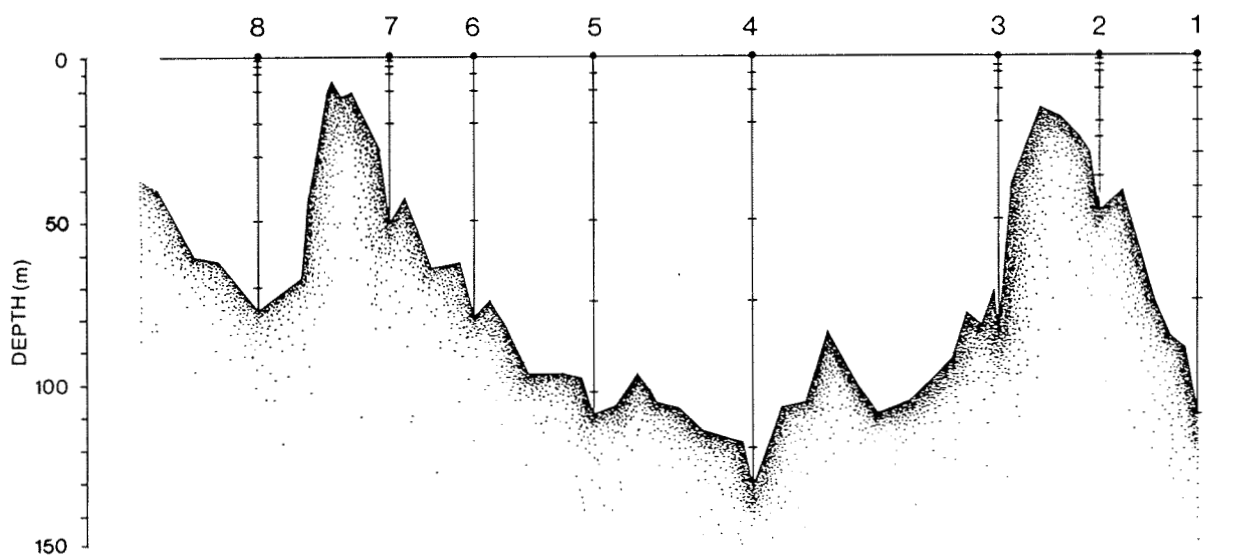
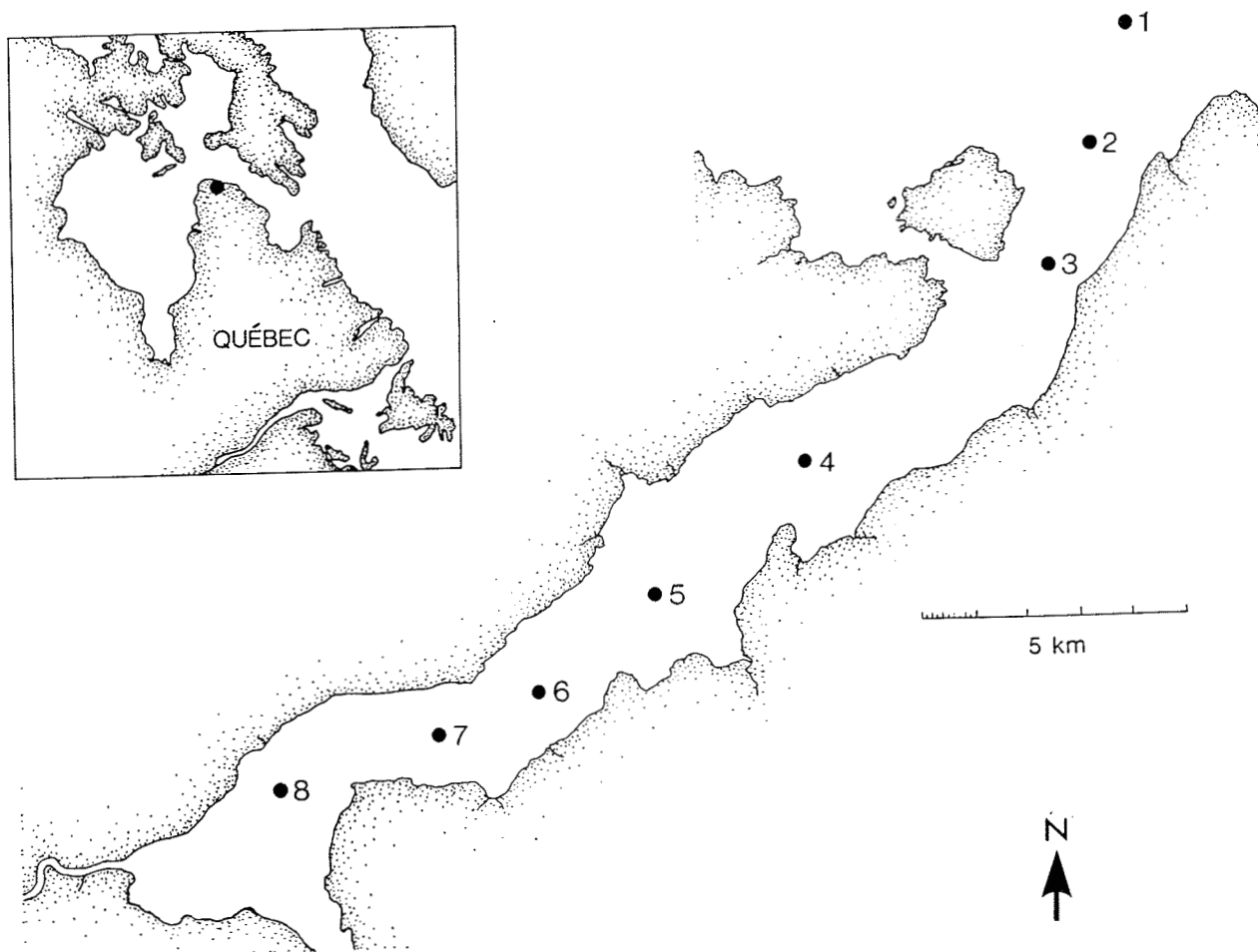


Figure 1. Map and longitudinal profile of Sugluk Inlet indicating station locations (S series), bottom topography and depths at which water samples were collected, August 11-15, 1989.

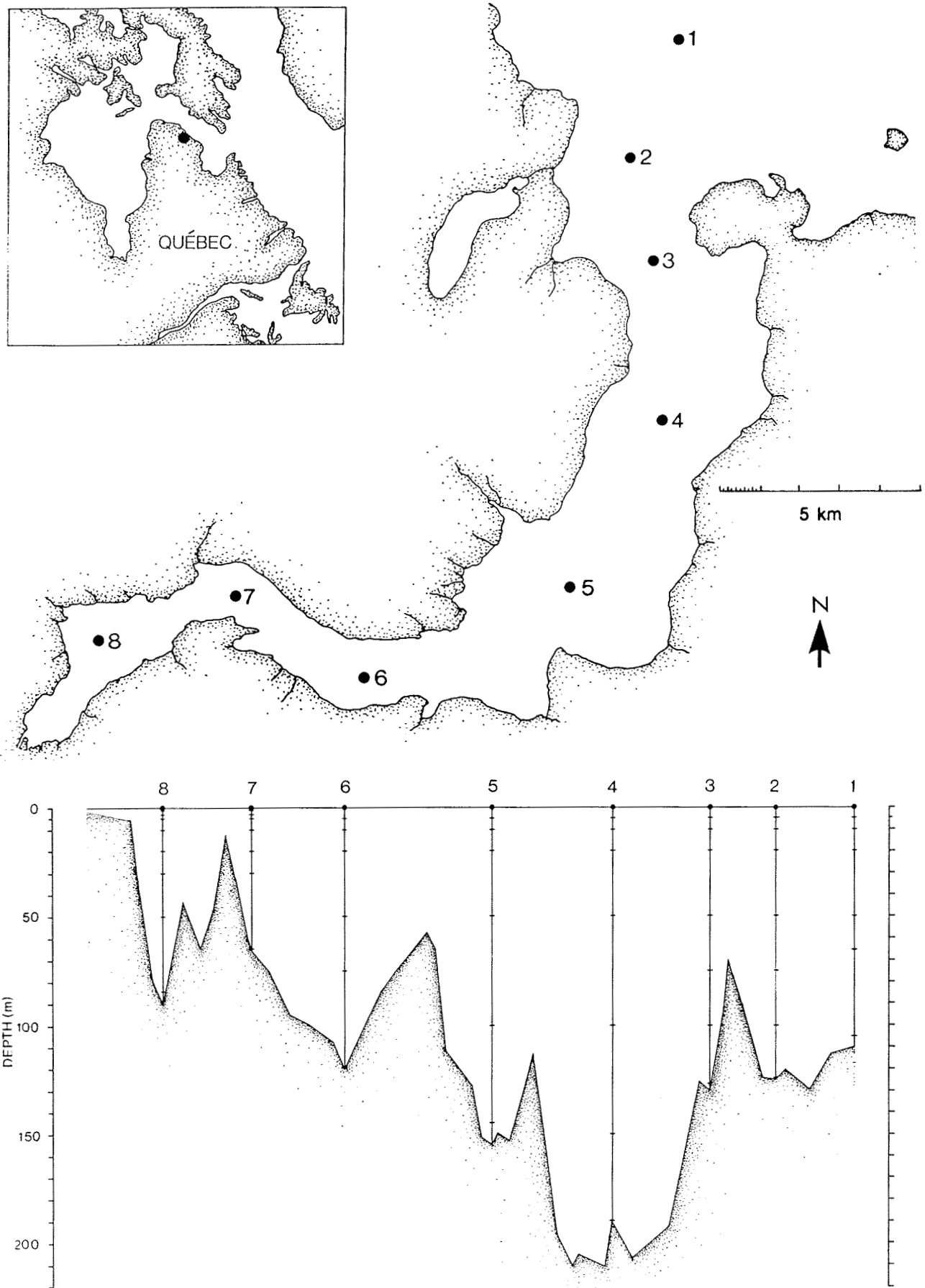


Figure 2. Map and longitudinal profile of Wakeham Bay indicating station locations (W series), bottom topography and depths at which water samples were collected, August 18-22, 1989.

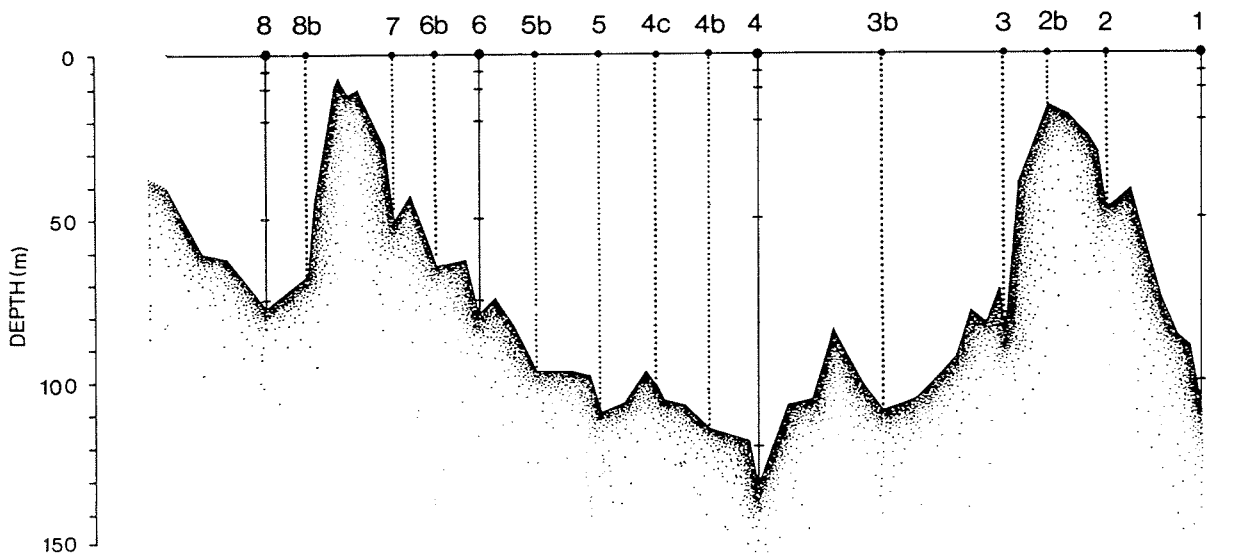
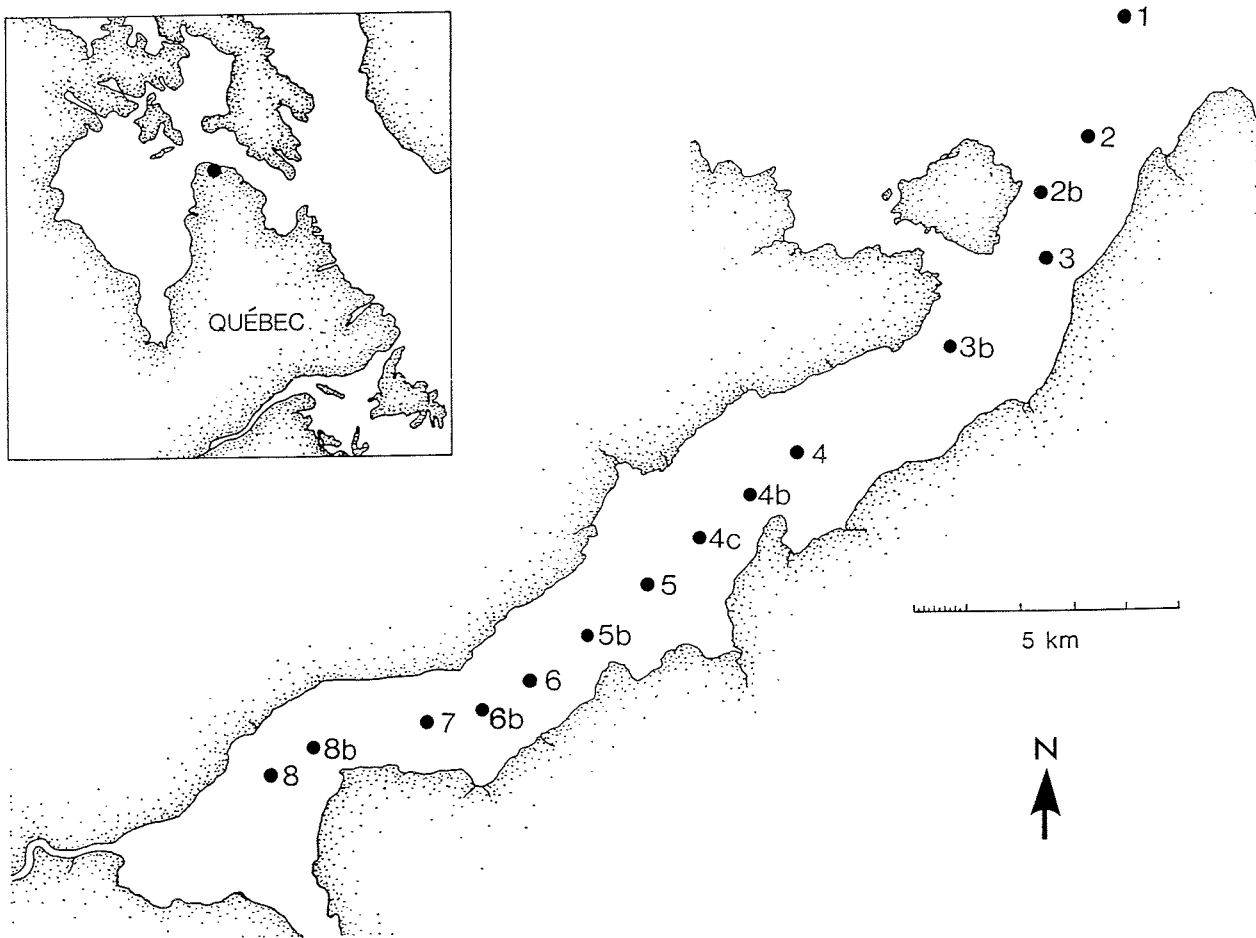


Figure 3. Map and longitudinal profile of Sugluk Inlet indicating station locations (S series), bottom topography and depths at which water samples were collected, August 3-20, 1990.

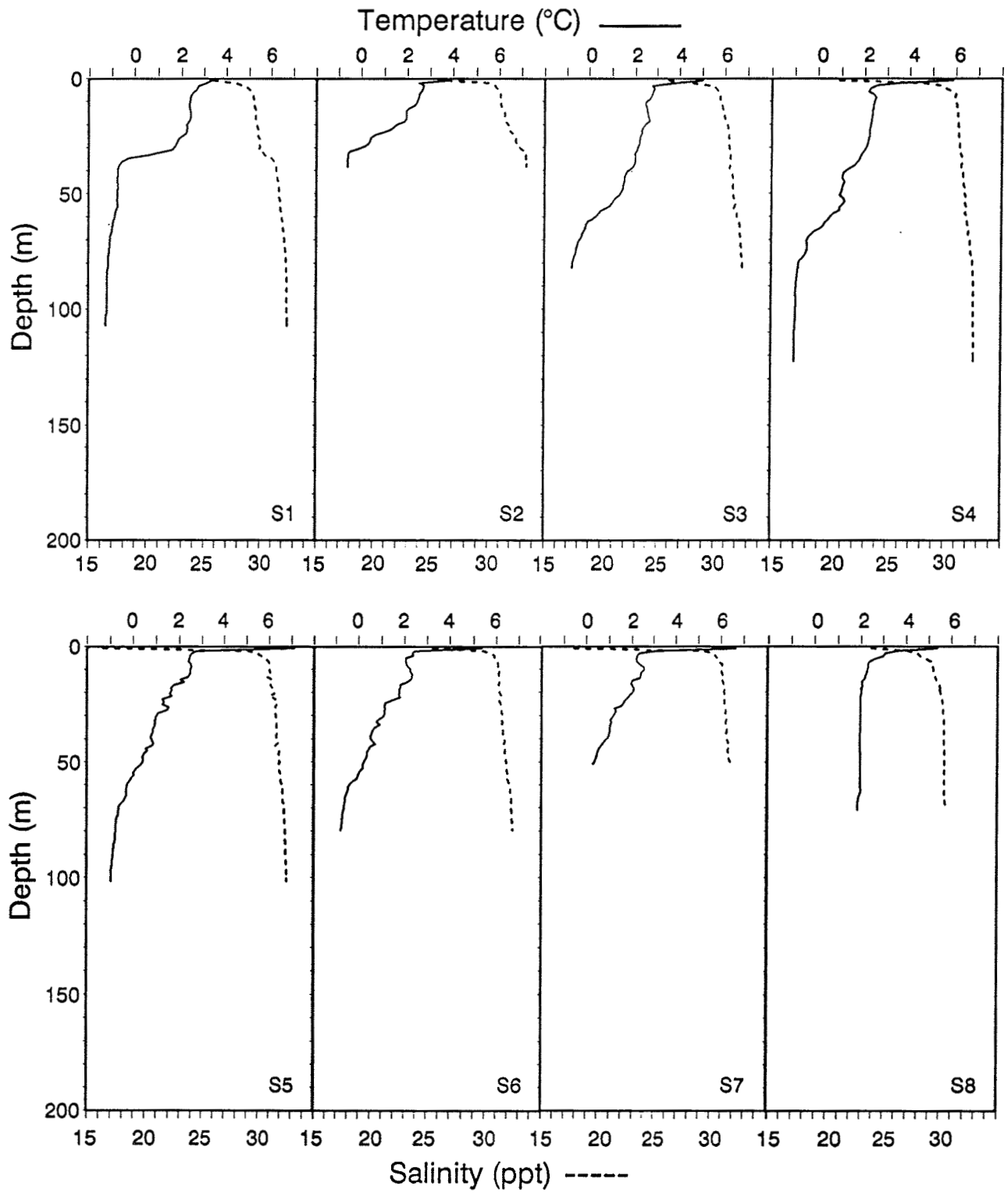


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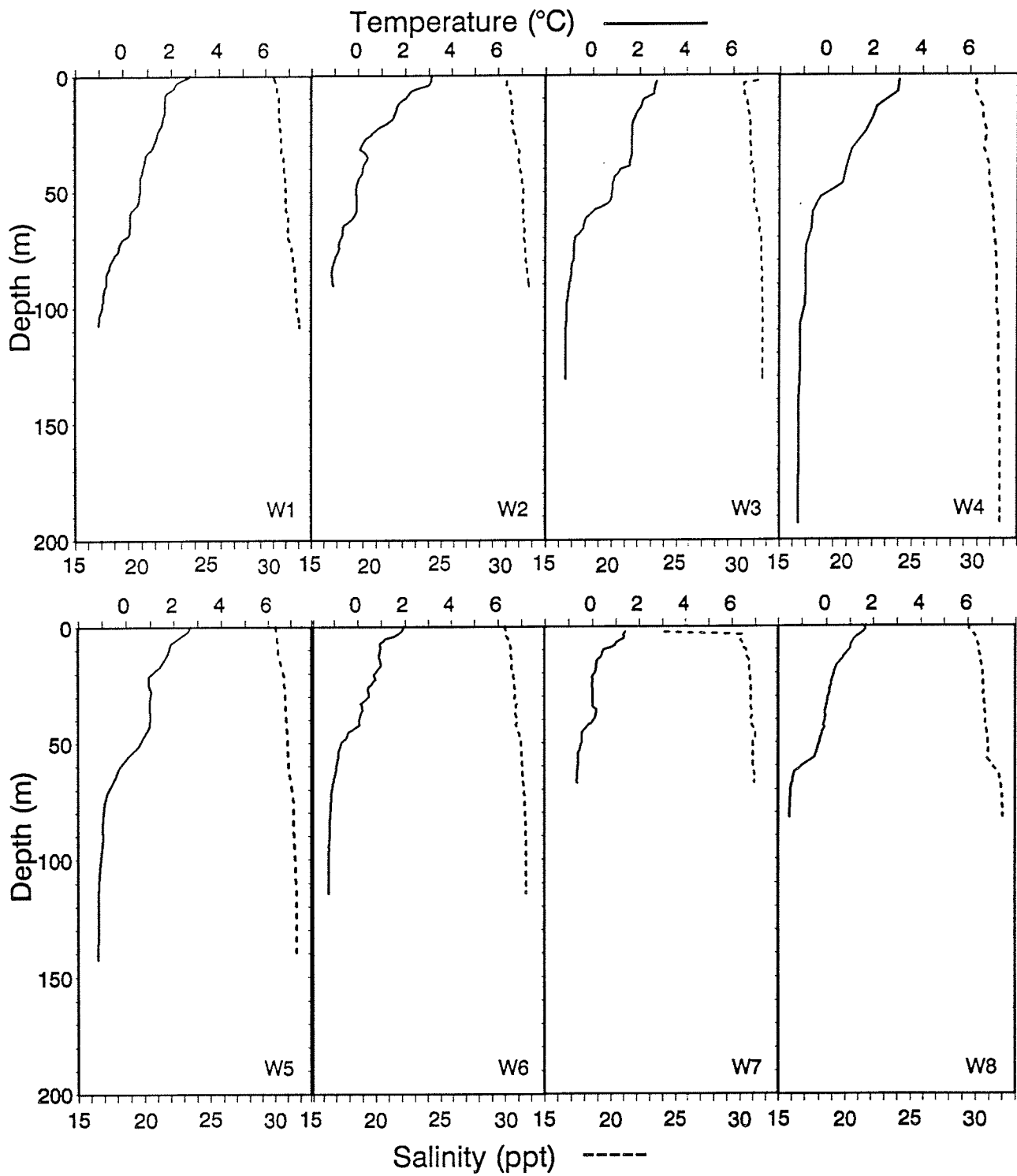


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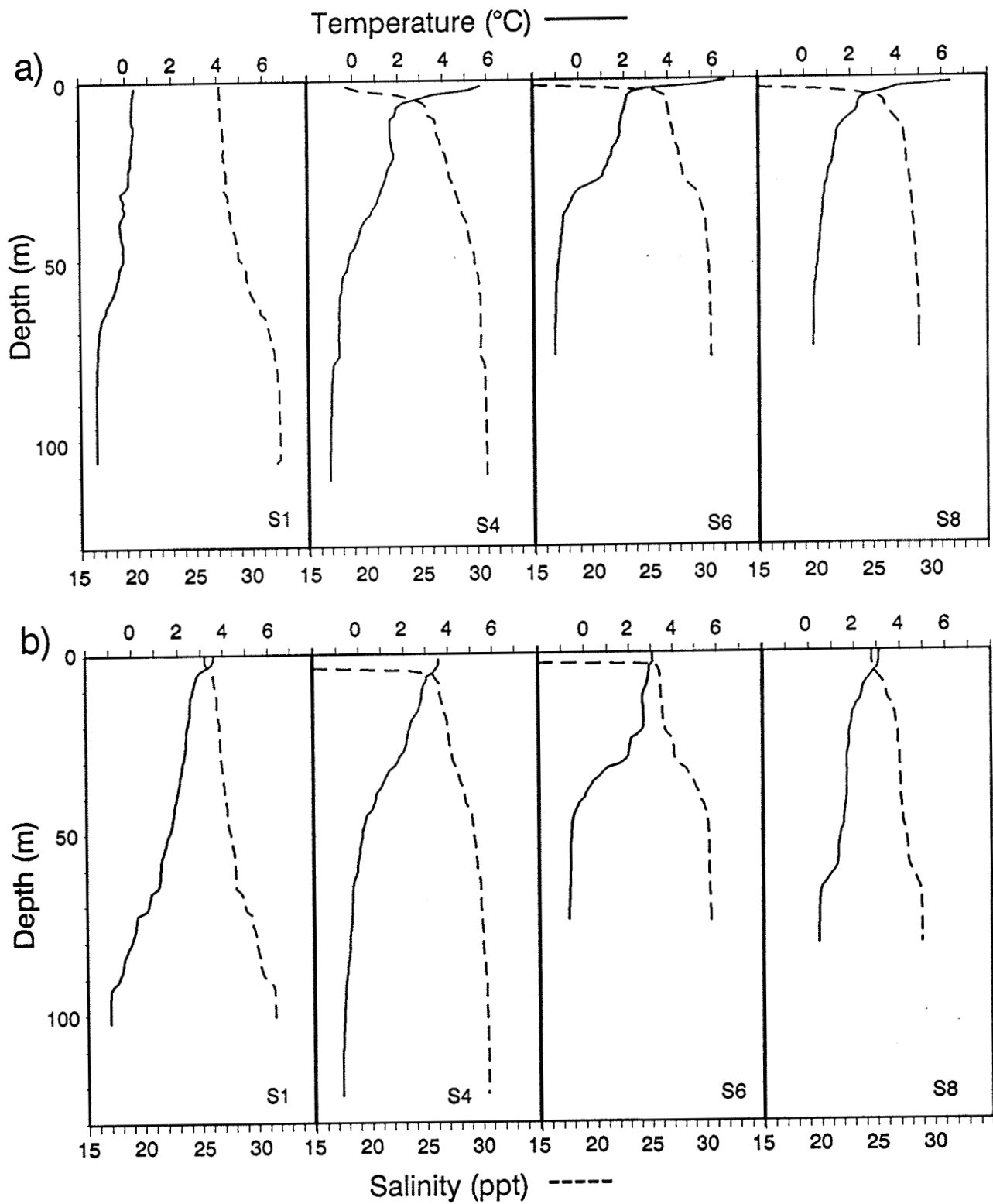


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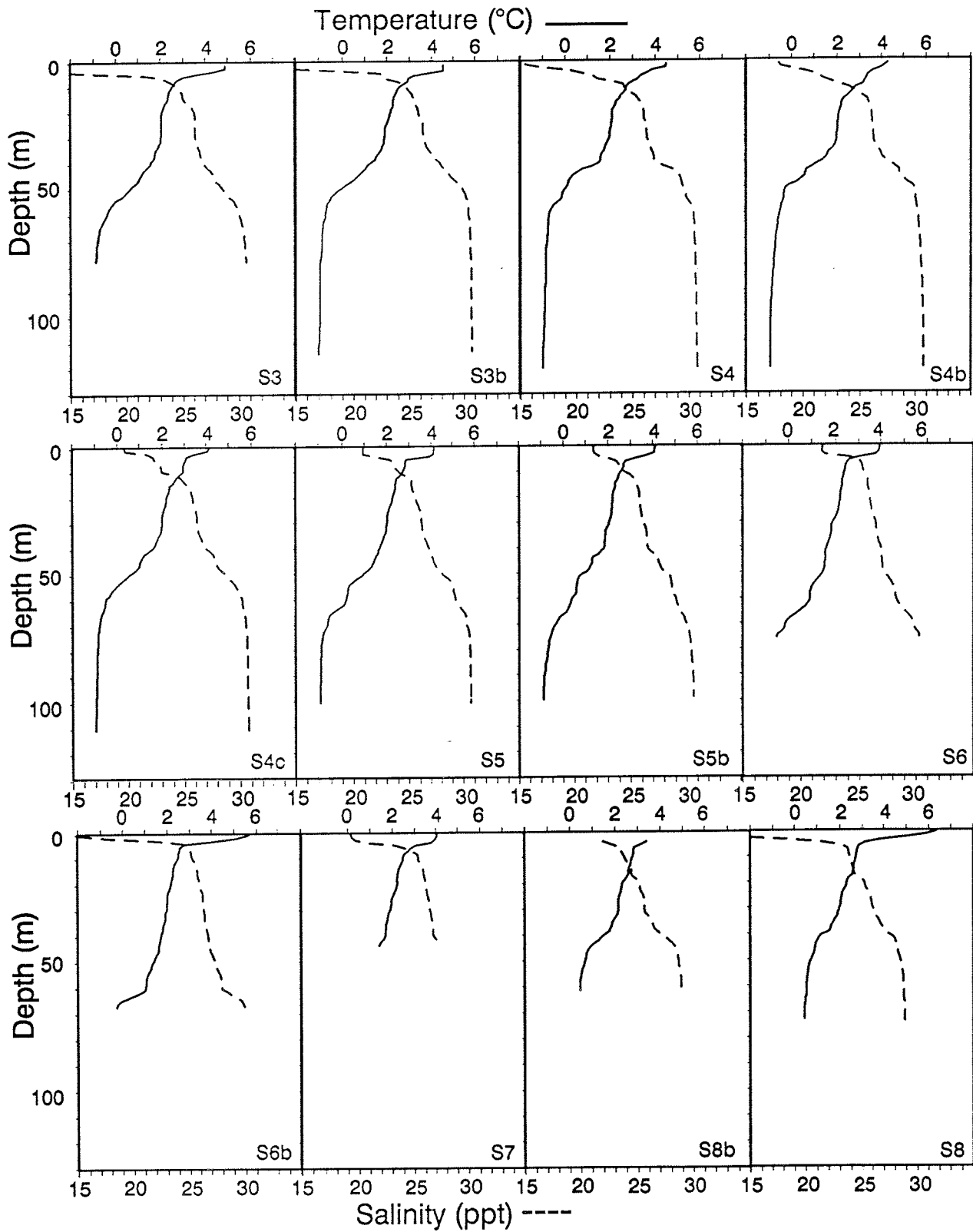


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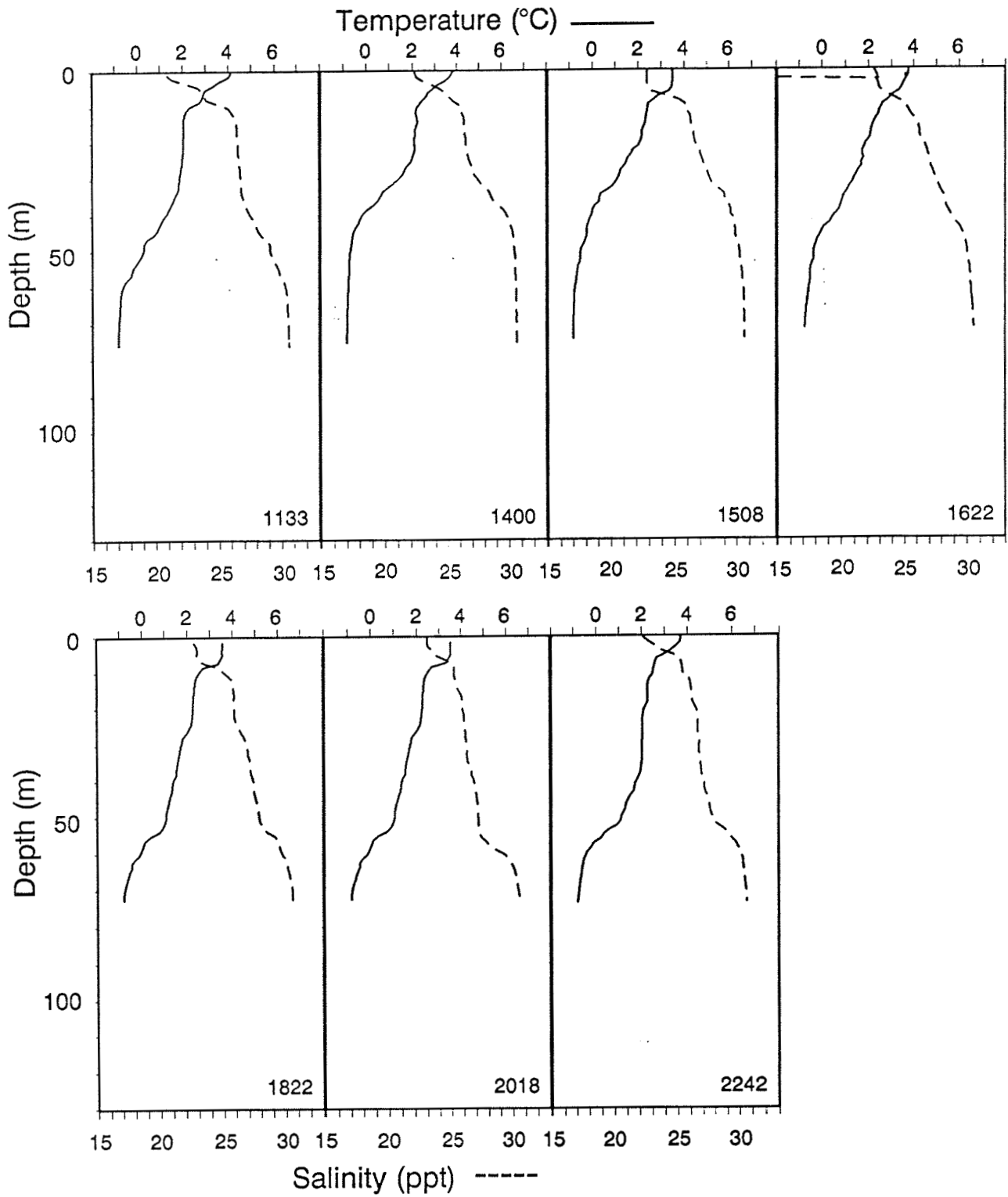


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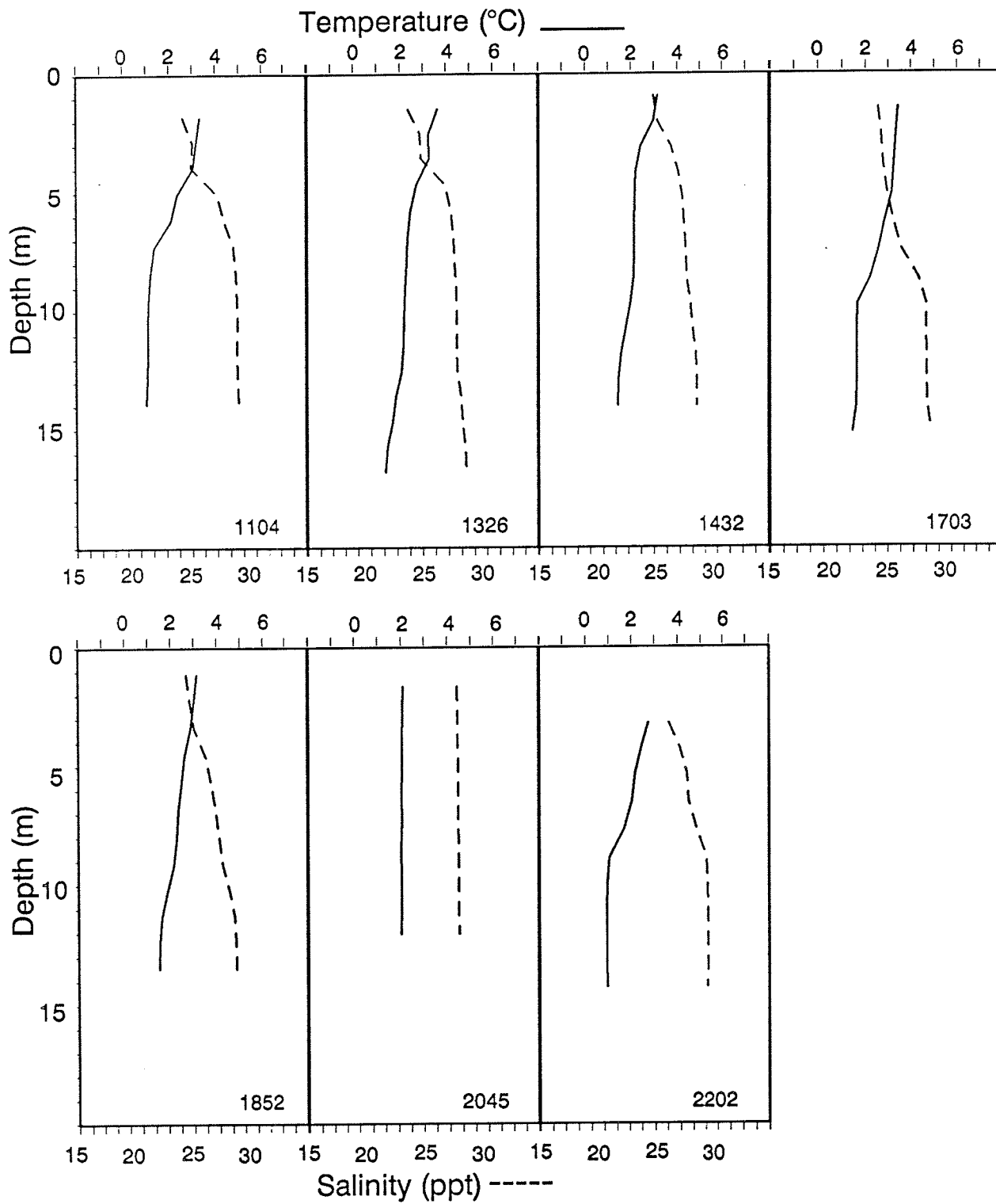


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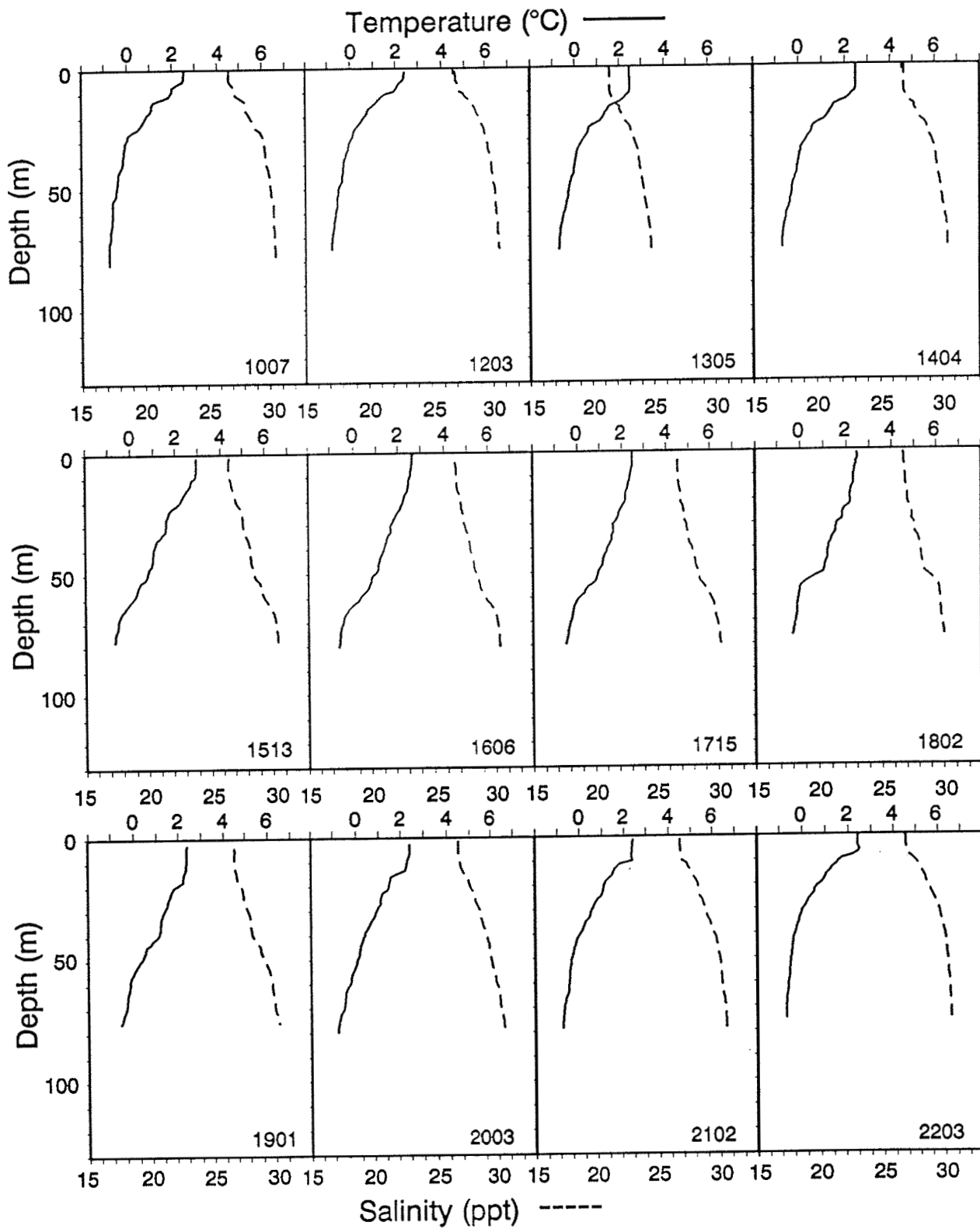


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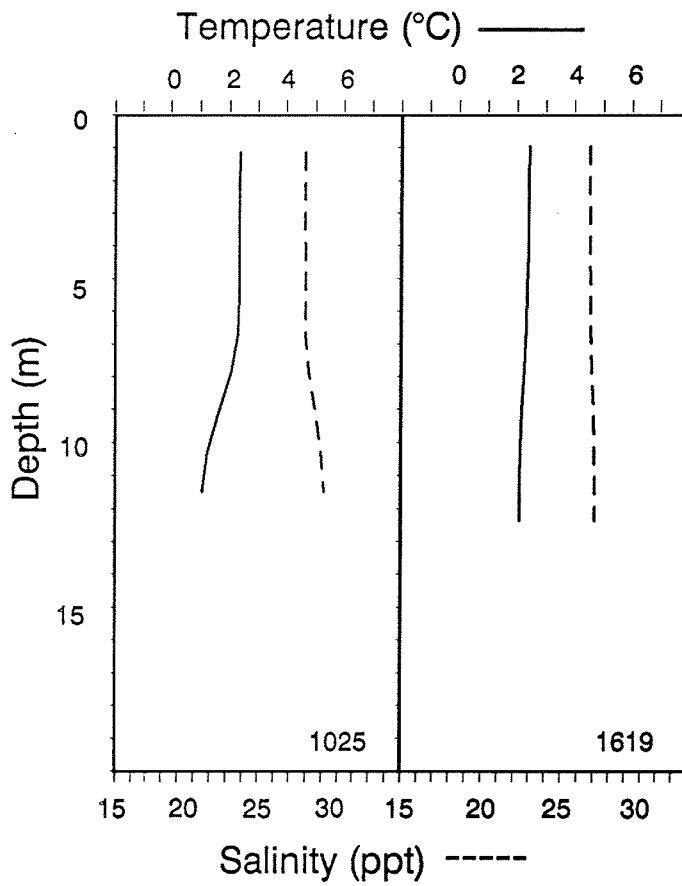


Figure 9b. Temperature and salinity profiles at station S2b in Sugluk Inlet at intervals (local time: EDT) during a tidal cycle, August 17, 1990.

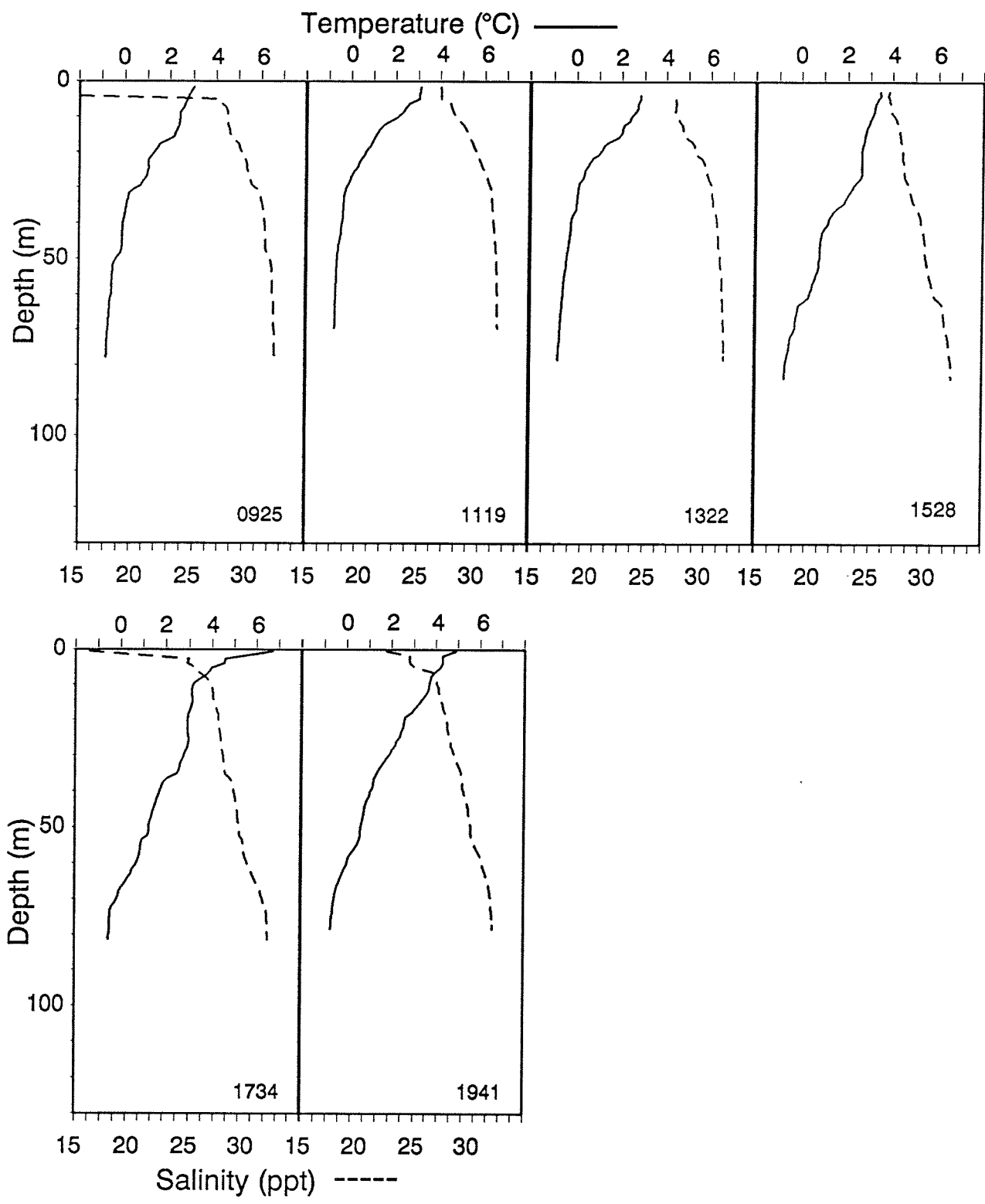


Figure 10a. Temperature and salinity profiles at station S3 in Sugluk Inlet at intervals (local time: EDT) during a tidal cycle, August 18, 1990.

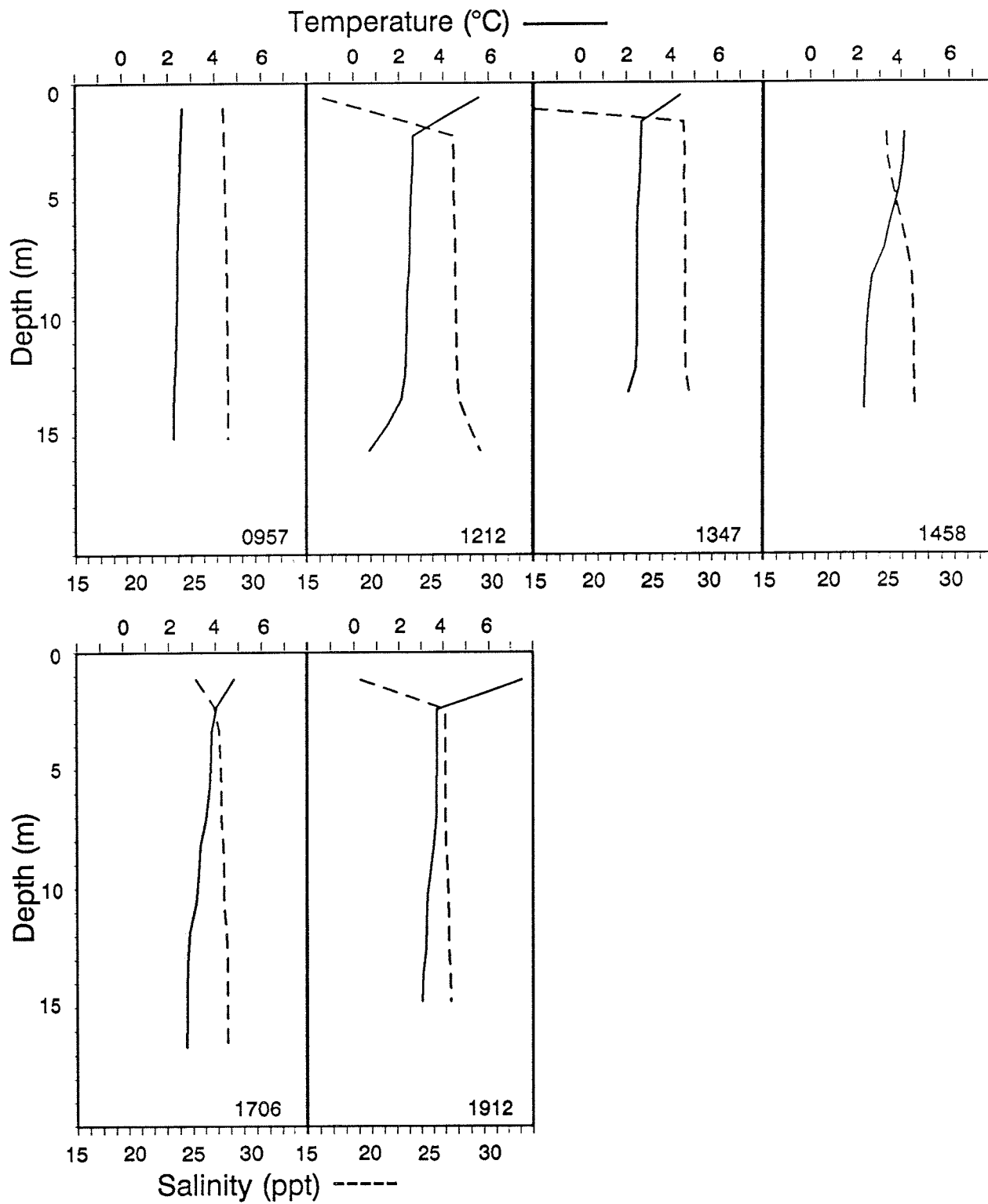


Figure 10b. Temperature and salinity profiles at station S2b in Sugluk Inlet at intervals (local time: EDT) during a tidal cycle, August 18, 1990.

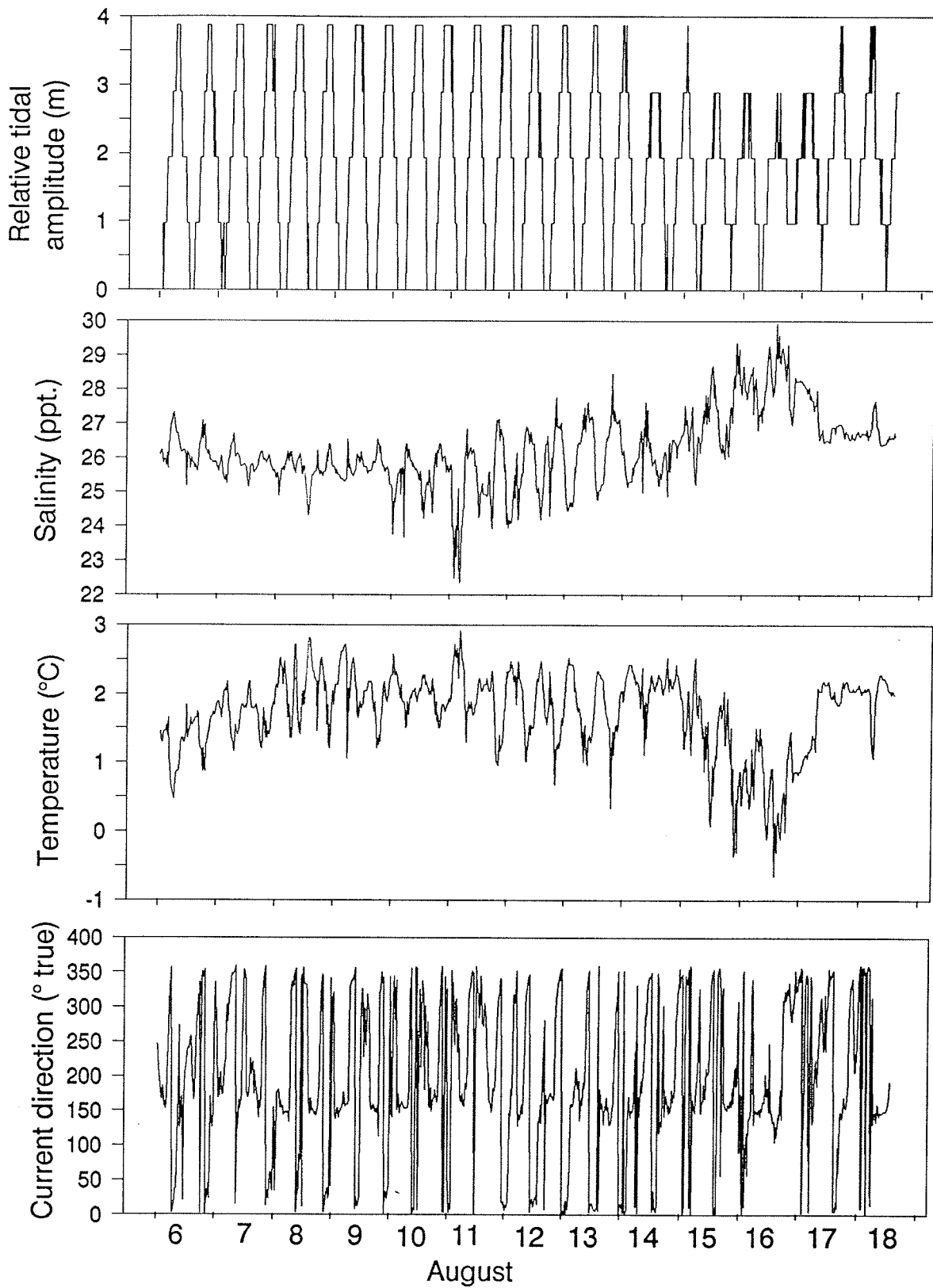


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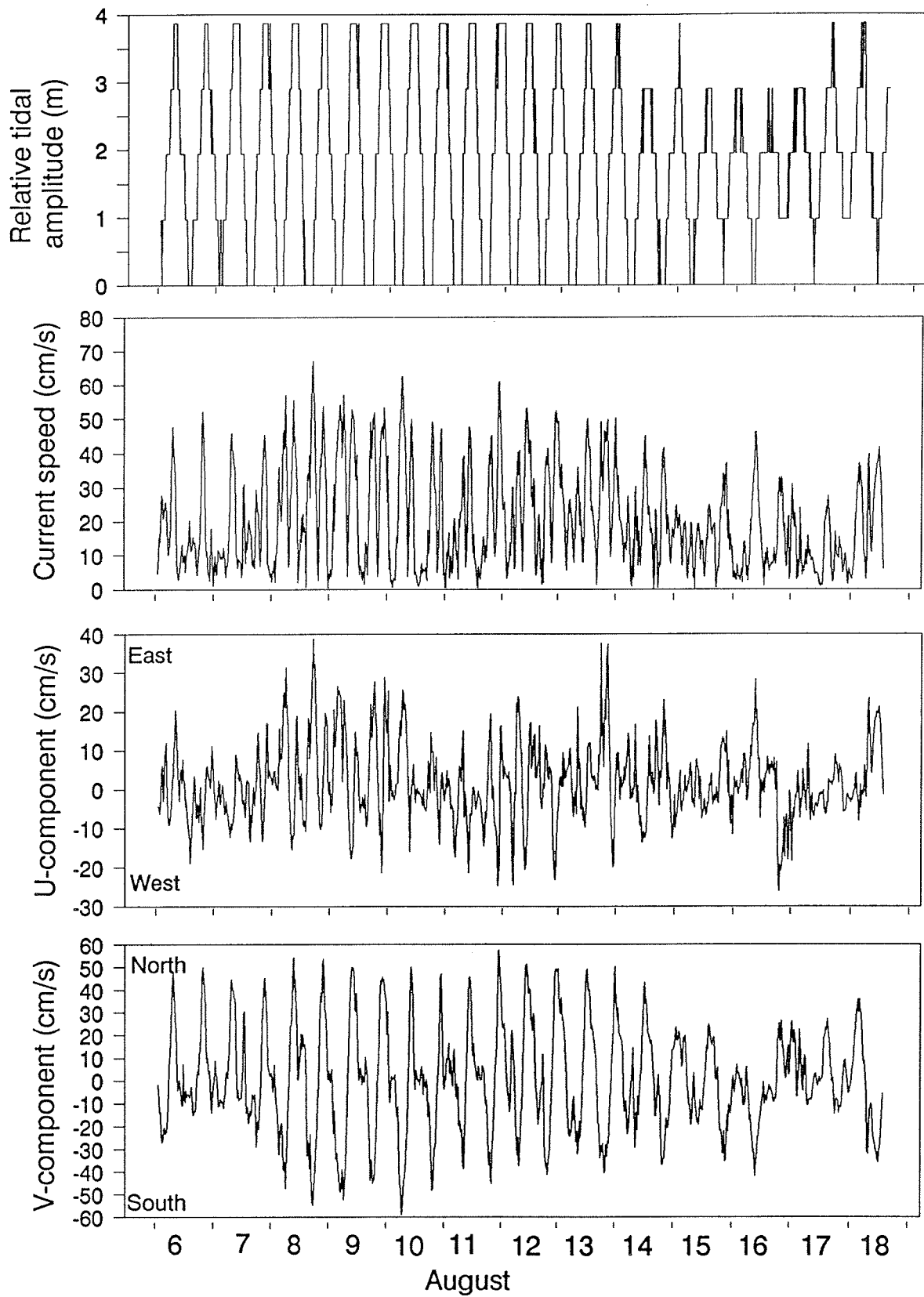


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- Table 3.9 Quantitative species composition and vertical distribution of phytoplankton at station W6 in Wakeham Bay, August 21, 1989.
- Table 3.10 Quantitative species composition and vertical distribution of phytoplankton at station W8 in Wakeham Bay, August 22, 1989.
- Table 3.11 Comparison of biomass and major groups of phytoplankton in Sugluk Inlet and Wakeham Bay during the summer of 1989.
- Table 3.12 Phytoplankton taxa found in Sugluk Inlet in 1990.
- Table 3.13 Quantitative species composition and vertical distribution of phytoplankton at station S1 in Sugluk Inlet, August 3, 1990.
- Table 3.14 Quantitative species composition and vertical distribution of phytoplankton at station S4 in Sugluk Inlet, August 5, 1990.
- Table 3.15 Quantitative species composition and vertical distribution of phytoplankton at station S6 in Sugluk Inlet, August 4, 1990.
- Table 3.16 Quantitative species composition and vertical distribution of phytoplankton at station S8 in Sugluk Inlet, August 4, 1990.

- Table 3.17 Quantitative species composition and vertical distribution of phytoplankton at station S1 in Sugluk Inlet, August 19, 1990.
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- Table 3.19 Quantitative species composition and vertical distribution of phytoplankton at station S6 in Sugluk Inlet, August 20, 1990.
- Table 3.20 Quantitative species composition and vertical distribution of phytoplankton at station S8 in Sugluk Inlet, August 20, 1990.
- Table 3.21 Comparison of biomass and major groups of phytoplankton in Sugluk Inlet during August of 1990.

4. ZOOPLANKTON TAXONOMY/ABUNDANCE

- Table 4.1 Meso- and macrozooplankton taxa found in Wakeham Bay and Sugluk Inlet in 1989 and 1990.
- Table 4.2 Mesozooplankton abundance (no./m³) in Sugluk Inlet, August 11-15, 1989.
- Table 4.3 Macrozooplankton abundance (no./100 m³) in Sugluk Inlet, August 11-15, 1989.
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- Table 4.10 Macrozooplankton abundance (no./100 m³) at stations S2b and S3 in Sugluk Inlet at intervals during a tidal cycle, August 12, 1990.
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- Table 4.12 Macrozooplankton abundance (no./100 m³) at stations S2b and S3 in Sugluk Inlet at intervals during a tidal cycle, August 18, 1990.
- Table 4.13 Mesozooplankton abundance (no./m³) in Sugluk Inlet, August 19-20, 1990.
- Table 4.14 Macrozooplankton abundance (no./100 m³) in Sugluk Inlet, August 19-20, 1990.

Table 1.1 Station locations and depths in Sugluk Inlet and Wakeham Bay.

Station No.	Latitude (N)	Longitude (W)	Depth (m)
Sugluk Inlet			
S1	62°18.9'	75°29.6'	105
S2	62°17.7'	75°30.5'	40
S2b	62°17.2'	75°31.5'	14
S3	62°16.5'	75°31.6'	82
S3b	62°15.5'	75°33.8'	110
S4	62°14.5'	75°37.0'	122
S4b	62°14.1'	75°38.0'	116
S4c	62°13.6'	75°39.4'	103
S5	62°13.2'	75°40.4'	108
S5b	62°12.7'	75°41.6'	97
S6	62°12.2'	75°43.0'	78
S6b	62°12.0'	75°44.1'	65
S7	62°11.8'	75°45.2'	52
S8	62°11.2'	75°48.8'	79
S8b	62°11.5'	75°47.9'	63
Wakeham Bay			
W1	61°44.4'	71°57.4'	110
W2	61°42.8'	71°58.8'	125
W3	61°41.4'	71°58.1'	130
W4	61°39.1'	71°57.8'	194
W5	61°36.8'	72°00.4'	155
W6	61°35.6'	72°06.5'	120
W7	61°36.7'	72°10.2'	66
W8	61°36.1'	72°14.0'	90

Table 1.2 Temperature, salinity and nutrients (PO₄, NO₃) at stations in Sugluk Inlet, August 11-15, 1989.

Station	Date	Depth (m)	Temperature (°C)	Salinity (‰)	NO ₃ (μmol L ⁻¹)	PO ₄ (μmol L ⁻¹)
S1	11 Aug.	0	4.3	-	0.2	0.9
		3	2.7	28.74	0.2	0.6
		5	2.6	29.06	0.2	0.6
		10	2.4	29.44	0.3	0.6
		20	2.2	29.70	0.3	0.7
		30	1.7	29.96	1.8	0.7
		40	-0.7	31.47	4.5	1.0
		50	-0.8	31.73	6.1	1.0
		75	-1.1	32.28	8.0	1.1
		110	-1.3	32.48	9.0	1.2
S2	12 Aug.	0	6.5	-	0.2	0.5
		1	3.7	25.27	0.3	0.6
		3	2.7	29.05	0.2	0.6
		5	2.7	29.22	0.3	0.7
		10	2.4	29.56	0.3	0.7
		20	1.5	30.13	0.3	0.6
		25	0.6	30.59	1.7	0.7
		37	-0.6	31.58	5.7	1.1
S3	12 Aug.	0	6.0	-	0.4	0.7
		3	2.8	28.44	0.3	0.7
		5	2.9	28.65	0.2	0.6
		10	2.5	29.12	0.1	0.6
		20	2.5	29.56	0.2	0.5
		50	1.4	30.05	1.2	0.9
		80	-0.7	30.79	4.8	1.1
S4	13 Aug.	0	7.0	-	0.2	0.4
		5	2.3	28.64	0.2	0.5
		10	2.4	29.47	0.1	0.5
		20	2.3	29.64	0.3	0.7
		50	0.9	30.20	2.0	0.8
		75	-0.5	30.63	4.4	1.7
		120	-1.0	30.90	5.7	1.2

Table 1.2 Continued.

Station	Date	Depth (m)	Temperature (°C)	Salinity (‰)	NO3 ($\mu\text{mol L}^{-1}$)	PO4 ($\mu\text{mol L}^{-1}$)
S5	13 Aug.	0	3.1	-	0.3	0.4
		5	2.5	28.71	0.3	0.5
		10	2.5	29.47	0.2	0.6
		20	1.7	29.59	0.2	0.5
		50	0.4	30.30	-	-
		75	-0.7	30.71	4.2	1.0
		103	-1.0	30.89	4.7	1.0
S6	14 Aug.	0	7.7	-	0.4	0.4
		5	2.1	29.26	0.2	0.5
		10	2.3	29.68	0.3	0.6
		20	1.8	29.70	0.7	0.8
		50	0.2	30.25	2.5	0.9
		80	-0.8	30.76	5.2	1.0
		S7	14 Aug.	0	6.2	-
1	6.7			17.64	0.3	0.4
3	2.3			28.82	0.2	0.5
5	2.2			28.96	-	-
10	2.6			29.35	0.3	0.7
20	2.0			29.64	0.7	0.6
50	0.4			30.11	2.5	0.8
S8	15 Aug.	0	8.8	-	0.9	0.3
		1	5.3	23.00	0.5	0.3
		3	3.1	26.69	0.5	-
		5	2.6	27.36	0.6	0.4
		10	2.3	27.96	0.5	0.6
		20	2.0	28.53	0.7	0.6
		30	2.0	28.81	0.7	0.6
		50	2.0	28.88	0.6	0.5
		70	1.9	28.97	0.7	0.6

Table 1.3 Temperature, salinity and nutrients (PO₄, NO₃) at stations in Wakeham Bay, August 18-22, 1989.

Station	Date	Depth (m)	Temperature (°C)	Salinity (‰)	NO ₃ (μmol L ⁻¹)	PO ₄ (μmol L ⁻¹)
W1	15 Aug.	0	2.8	-	0.6	0.5
		5	2.3	30.30	0.3	0.5
		10	1.7	30.47	0.5	0.5
		20	1.6	30.52	0.5	0.5
		50	0.7	30.96	2.2	0.7
		65	0.3	31.17	2.8	0.7
		105	-1.0	32.05	6.1	1.0
W2	18 Aug.	0	3.6	-	0.3	0.4
		5	3.1	30.09	0.5	0.5
		10	2.1	30.36	0.5	0.4
		20	1.5	30.45	1.4	0.7
		50	-0.1	31.31	2.1	0.7
		75	-0.8	31.48	4.4	0.9
		100	-1.0	-	5.1	0.9
125	-	-	7.5	1.0		
W3	20 Aug.	0	3.3	-	0.4	0.4
		5	2.6	30.22	0.5	0.5
		10	2.1	30.49	0.5	0.4
		20	1.7	30.70	0.5	0.5
		50	0.8	31.02	1.8	0.7
		75	-0.8	31.58	5.1	0.9
		100	-1.1	31.68	4.9	0.9
127	-1.2	31.70	5.0	0.9		
W4	20 Aug.	0	3.8	-	0.5	0.4
		5	3.0	29.88	0.3	0.4
		10	2.5	29.85	0.6	0.5
		20	1.9	30.41	0.7	0.5
		50	0.6	30.90	3.0	0.9
		100	-0.9	31.47	3.9	0.9
		150	-1.2	31.72	4.7	0.9
190	-1.2	31.75	6.2	0.9		

Table 1.3 Continued.

Station	Date	Depth (m)	Temperature (°C)	Salinity (‰)	NO ₃ (μmol L ⁻¹)	PO ₄ (μmol L ⁻¹)
W5	21 Aug.	0	2.5	-	0.6	0.4
		5	2.4	30.05	0.6	0.5
		10	1.8	30.19	0.3	0.5
		20	1.4	30.48	0.6	0.5
		50	0.8	30.97	1.1	0.6
		100	-1.0	31.59	0.9	1.0
		145	-1.2	31.68	5.8	1.0
W6	21 Aug.	0	2.2	-	0.2	0.5
		5	1.6	30.03	0.9	0.4
		10	1.0	30.38	0.2	0.4
		20	0.8	30.49	0.7	0.5
		50	-0.7	31.15	1.8	0.7
		75	-1.1	31.42	4.3	0.9
		128	-1.2	31.56	5.4	0.9
W7	22 Aug.	0	2.6	-	0.3	0.4
		1	-	-	0.3	0.4
		3	1.4	24.15	0.3	0.4
		5	1.4	30.15	-	0.4
		10	0.8	30.17	1.1	0.5
		20	0.1	30.73	1.5	0.6
		30	0.0	30.83	1.7	0.7
		65	-0.6	31.11	0.4	0.7
W8	22 Aug.	0	2.3	-	0.3	0.5
		1	1.7	29.46	0.1	0.4
		3	1.6	29.59	0.3	0.4
		5	1.3	29.97	0.2	0.4
		10	1.0	30.22	0.2	-
		20	0.3	30.51	0.4	0.5
		30	0.1	30.57	0.4	0.5
		50	-0.3	30.89	2.7	0.8
		84	-1.5	32.05	4.6	0.9

Table 1.4 Temperature, salinity, nutrients (PO₄, NO₃) and oxygen at stations in Sugluk Inlet, August 3-5, 1990.

Station	Date	Time (EDT)	Depth (m)	Temperature (°C)	Salinity (‰)	PO ₄ (μmol L ⁻¹)	NO ₃ (μmol L ⁻¹)	Oxygen (mL L ⁻¹)
S1	3 Aug.	1406	0	0.6	27.20	0.7	1.2	8.40
			5	0.5	-	0.7	0.8	-
			10	0.4	-	0.9	0.8	-
			20	0.0	-	0.8	0.8	-
			50	0.2	32.63	0.9	0.7	8.10
			100	-1.2	33.13	0.8	0.6	7.49
S8	4 Aug.	1420	0	8.0	1.40	0.1	4.4	8.21
			5	3.5	-	0.4	0.8	-
			10	2.7	-	0.8	0.7	-
			20	1.6	-	1.1	0.7	-
			50	0.8	29.03	1.2	0.8	8.22
			75	0.7	29.53	1.1	0.5	7.91
S6	4 Aug.	1830	0	6.1	11.45	0.5	3.7	8.30
			5	2.9	-	0.5	0.6	-
			10	2.4	-	0.5	1.2	-
			20	1.6	-	0.9	0.4	-
			50	-0.7	31.23	1.1	0.4	7.70
			75	-0.8	30.90	1.2	0.4	7.69
S4	5 Aug.	1547	0	8.2	10.05	0.3	2.4	8.12
			5	3.4	-	0.5	0.3	-
			10	2.2	-	0.7	0.3	-
			20	2.2	-	0.6	-	-
			50	0.0	30.30	0.8	1.2	7.98
			120	-0.8	30.89	1.0	0.7	8.13

Table 1.5 Temperature and salinity measured in conjunction with meso- and macrozooplankton tows at stations in Sugluk Inlet, August 3-5, 1990.

Station	Date	Time (EDT)	Depth (m)	Temperature (°C)	Salinity (‰)
S1	3 Aug.	1127	1	0.4	27.24
			5	0.3	27.26
			10	0.3	27.31
			20	0.3	27.56
			50	-0.1	28.70
			100	-1.3	32.54
			106	-1.3	32.54
S8	4 Aug.	1119	1	4.2	19.74
			5	3.9	21.81
			10	1.8	27.03
			20	1.3	27.85
			50	0.6	28.76
			75	0.4	28.98
			81	0.4	28.99
S6	4 Aug.	1645	1	6.3	13.06
			5	2.4	26.23
			10	2.1	26.97
			20	1.7	27.68
			50	-0.9	30.66
			75	-1.1	30.88
S4	5 Aug.	1347	1	5.4	17.78
			5	2.4	24.61
			10	1.8	25.79
			20	1.7	26.77
			50	-0.2	29.79
			100	-1.1	30.87
			120	-1.1	30.89

Table 1.6 Temperature and salinity measured in conjunction with macrozooplankton tows at stations in Sugluk Inlet, August 10-11, 1990.

Station	Date	Depth (m)	Temperature (°C)	Salinity (‰)
S3	10 Aug.	1	4.8	12.40
		5	3.6	21.61
		10	2.5	24.56
		20	2.1	26.08
		50	0.6	28.73
		78	-0.9	30.63
S3b		1	4.5	15.00
		5	3.4	20.08
		10	2.5	24.64
		20	2.1	25.83
		50	-0.2	29.77
		114	-1.0	30.77
S4		1	4.5	15.37
		5	3.5	20.82
		10	2.7	24.27
		20	2.1	25.98
		50	0.1	29.60
		100	-0.9	30.68
		120	-1.0	30.75
S4b		1	5.0	11.25
		5	3.2	22.26
		10	2.6	24.57
		20	2.1	25.87
		50	0.1	29.43
		100	-0.9	30.71
		121	-1.0	30.75
S4b	11 Aug.	1	3.4	20.58
		5	3.5	20.43
		10	3.1	23.26
		20	2.1	25.96
		50	-0.2	29.86
		100	-0.9	30.71
		120	-1.0	30.72
S4c		1	4.1	19.68
		5	3.1	22.38
		10	2.9	23.03
		20	2.2	23.44
		50	0.5	28.81
		100	-0.9	30.69
		111	-1.0	30.72

Table 1.6 Continued.

Station	Date	Depth (m)	Temperature (°C)	Salinity (‰)
S5		1	4.1	20.91
		5	2.9	23.38
		10	2.7	24.21
		20	2.3	25.64
		50	0.9	28.15
		100	-0.9	30.70
S5b		1	4.1	21.72
		5	3.2	23.13
		10	2.6	24.49
		20	2.2	25.77
		50	0.9	28.27
		100	-0.9	30.64
S6		1	3.9	21.87
		5	2.8	24.42
		10	2.4	25.36
		20	2.2	25.93
		50	1.4	27.27
		75	-0.5	30.27
S6b		1	5.4	15.61
		5	2.6	24.90
		10	2.4	25.32
		20	2.1	25.99
		50	1.4	27.38
		67	-0.3	29.93
S7		1	4.0	19.27
		5	3.3	22.60
		10	2.5	25.31
		20	2.2	25.97
		44	1.4	27.29
S8b		1	3.0	17.76
		5	3.1	22.95
		10	2.7	23.90
		20	2.3	25.16
		50	0.7	28.65
		61	0.4	28.91
S8		1	6.3	9.49
		5	3.4	22.53
		10	2.7	23.88
		20	2.3	25.23
		50	0.8	28.52
		73	0.4	28.93

Table 1.7 Temperature, salinity, nutrients (PO_4 , NO_3) and oxygen at stations in Sugluk Inlet, Aug. 19-20, 1990.

Station	Date	Time (EDT)	Depth (m)	Temperature ($^{\circ}\text{C}$)	Salinity ($^{\circ}/_{\infty}$)	PO_4 ($\mu\text{mol L}^{-1}$)	NO_3 ($\mu\text{mol L}^{-1}$)	Oxygen (mL L^{-1})
S1	19 Aug.	1224	0	3.7	25.44	0.7	0.2	7.91
			5	3.1	26.08	0.7	0.3	-
			10	2.8	26.47	0.9	0.4	-
			20	2.6	26.73	0.7	0.3	-
			50	2.7	28.01	0.7	0.4	7.89
			100	-0.7	32.11	0.9	0.7	7.77
S4	19 Aug.	1718	0	3.7	24.72	0.8	0.4	8.11
			5	3.2	25.62	0.6	0.6	-
			10	3.0	26.36	0.7	0.2	-
			20	2.5	26.95	0.6	0.6	-
			50	0.8	28.75	0.8	0.6	7.90
			120	-0.6	30.58	1.3	0.7	7.54
S6	20 Aug.	1609	0	3.1	25.60	0.7	0.8	8.01
			5	3.0	25.78	0.7	0.6	-
			10	2.9	26.08	0.5	0.7	-
			20	2.7	26.26	0.8	0.5	-
			50	-0.3	30.24	0.9	0.9	7.65
			75	-0.4	30.46	1.0	0.7	7.57
S8	20 Aug.	1209	0	3.5	24.46	0.8	0.5	7.94
			5	3.2	24.75	0.8	0.5	-
			10	2.6	25.84	0.9	0.7	-
			20	2.1	26.56	0.6	1.1	-
			50	1.6	27.40	0.9	0.9	7.84
			83	0.6	28.88	0.9	0.7	7.28

Table 1.8 Temperature and salinity measured in conjunction with meso- and macrozooplankton tows at stations in Sugluk Inlet, August 19-20, 1990.

Station	Date	Time (EDT)	Depth (m)	Temperature (°C)	Salinity (‰)
S1	19 Aug.	1153	1	2.8	26.11
			5	3.5	25.50
			10	2.8	26.19
			20	2.5	26.54
			50	1.7	27.48
			100	-1.0	31.53
S4	19 Aug.	1608	1	3.7	24.14
			5	3.4	24.70
			10	2.5	26.58
			20	2.3	26.87
			50	-0.1	29.71
			100	-0.7	30.50
			110	-0.8	30.57
S6	20 Aug.	1515	1	3.0	25.92
			5	2.9	25.93
			10	2.8	25.99
			20	2.7	26.23
			50	-0.3	30.00
			75	-0.7	30.46
S8	20 Aug.	1106	1	3.0	24.67
			5	3.0	24.82
			10	2.8	25.16
			20	2.0	26.48
			50	1.5	27.39
			80	0.4	28.92

Table 1.9 Temperature and salinity at stations on (S2b) and just inside (S3) the sill of Sugluk Inlet at intervals (local time: EDT) during tidal cycles, August 12, 17 and 18, 1990.

Station	Date	Time	Depth (m)	Temperature (°C)	Salinity (‰)
S2b	12 Aug.	1104	1	3.0	23.79
			5	2.4	25.99
			10	1.1	27.52
			14	1.0	27.63
S3		1133	1	4.1	21.01
			5	3.2	23.59
			10	2.4	25.72
			20	2.0	26.55
			50	0.3	29.14
			76	-0.9	30.61
S2b		1326	1	3.2	23.69
			5	2.7	25.87
			10	2.2	26.65
			17	1.4	27.39
S3		1400	1	3.8	22.37
			5	3.0	24.07
			10	2.3	25.98
			20	2.1	26.55
			50	-0.7	30.43
			76	-0.9	30.64
S2b		1432	1	3.2	23.99
			5	2.2	26.13
			10	1.9	26.90
			14	1.4	27.37
S8		1622	1	3.7	22.59
			5	3.4	23.02
			10	2.5	25.21
			20	1.8	26.65
			50	-0.4	30.05
			71	-0.8	30.57
S2b		1703	1	3.3	23.52
			5	3.2	23.98
			10	1.7	27.02
			15	1.5	27.44

Table 1.9 Continued.

Station	Date	Time	Depth (m)	Temperature (°C)	Salinity (‰)
S3	12 Aug.	1822	1	3.6	22.78
			5	3.5	23.04
			10	2.5	25.37
			20	2.2	25.94
			50	1.0	27.93
			72	-0.8	30.62
S2b		1852	1	3.1	23.44
			5	2.6	25.13
			10	1.9	26.73
			13	1.5	27.32
S3		2018	1	3.5	23.11
			5	3.4	23.59
			10	2.4	25.32
			20	2.3	25.96
			50	1.4	27.25
			72	-0.8	30.55
S2b		2202	1	3.0	24.19
			5	2.3	26.37
			10	0.9	28.19
			14	0.9	28.21
S3		2242	1	3.7	22.37
			5	3.2	24.13
			10	2.5	25.46
			20	2.2	26.40
			50	1.1	27.77
			74	-0.8	30.61
S3	17 Aug.	1007	1	2.5	26.75
			5	2.5	26.77
			10	2.0	27.27
			20	0.8	28.47
			50	-0.4	30.13
			81	-0.8	30.53
S2b		1025	1	2.4	26.95
			5	2.4	26.97
			10	1.3	27.88
			11	1.0	28.16

Table 1.9 Continued.

Station	Date	Time	Depth (m)	Temperature (°C)	Salinity (‰)
S3	17 Aug.	1203	1	2.4	26.93
			5	2.2	27.01
			10	1.7	27.50
			20	0.6	28.85
			50	-0.5	30.22
			74	-0.8	30.53
S3		1305	1	2.5	26.87
			5	2.5	26.87
			10	2.5	26.87
			20	1.3	28.02
			50	-0.3	29.89
			75	-0.7	30.46
S3		1404	1	2.5	26.85
			5	2.5	26.86
			10	2.5	26.85
			20	1.5	27.72
			50	0.1	29.41
			76	-0.6	30.39
S3		1513	1	2.9	26.53
			5	2.9	26.52
			10	2.8	26.63
			20	2.2	27.19
			50	0.7	28.63
			77	-0.7	30.46
S3		1606	1	2.6	26.68
			5	2.6	28.69
			10	2.5	26.75
			20	2.2	27.06
			50	1.0	28.37
			80	-0.6	30.37
S2b		1619	1	2.4	26.75
			5	2.4	26.81
			10	2.1	27.06
			12	2.1	27.11

Table 1.9 Continued.

Station	Date	Time	Depth (m)	Temperature (°C)	Salinity (‰)
S3	17 Aug.	1715	1	2.5	26.77
			5	2.5	26.76
			10	2.4	26.77
			20	2.2	27.02
			50	0.9	28.42
			80	-0.5	30.25
S3		1802	1	2.5	26.73
			5	2.4	26.77
			10	2.3	26.86
			20	2.1	27.05
			50	1.0	28.46
			76	-0.3	30.05
S3		1901	2	2.4	26.78
			5	2.4	26.79
			10	2.4	26.81
			20	1.8	27.42
			50	0.3	29.25
			75	-0.6	30.33
S3		2003	1	2.4	26.75
			5	2.4	26.75
			10	2.3	26.91
			20	1.4	27.75
			50	0.0	29.52
			80	-0.8	30.56
S3		2102	2	2.4	26.76
			5	2.4	26.79
			10	2.3	27.02
			20	1.1	28.26
			50	-0.4	30.06
			78	-0.8	30.56
S3		2203	1	2.4	26.80
			5	2.4	26.85
			10	1.7	27.41
			20	0.9	28.53
			50	-0.5	30.23
			76	-0.7	30.50

Table 1.9 Continued.

Station	Date	Time	Depth (m)	Temperature (°C)	Salinity (‰)
S3	18 Aug.	0925	1	2.7	26.05
			5	2.7	26.03
			10	2.4	26.70
			20	1.3	27.84
			50	-0.4	30.21
			78	-0.8	30.55
S2b		0957	1	2.6	26.52
			5	2.5	26.69
			10	2.4	26.84
			15	2.3	26.91
S3		1119	1	2.9	25.97
			5	3.0	25.87
			10	2.1	27.03
			20	0.6	28.73
			50	-0.6	30.37
			69	-0.7	30.51
S2b		1212	1	5.0	17.80
			5	2.5	26.71
			10	2.4	26.91
			16	1.5	28.79
S3		1322	1	2.8	26.54
			5	2.8	26.53
			10	2.4	26.75
			20	1.0	28.19
			50	-0.4	30.18
			78	-0.8	30.57
S2b		1347	1	3.8	9.90
			5	2.5	26.82
			10	2.4	26.88
			13	2.1	27.18
S2b		1458	2	4.1	24.60
			5	3.8	25.40
			10	2.5	26.80
			14	2.3	26.92
S3		1528	1	3.3	25.53
			5	3.3	25.55
			10	3.0	26.03
			20	2.6	26.62
			50	0.8	28.49
			83	-0.7	30.55

Table 1.9 Continued.

Station	Date	Time	Depth (m)	Temperature (°C)	Salinity (‰)
S2b	18 Aug.	1706	1	4.8	24.29
			5	3.8	26.20
			10	3.2	26.48
			16	2.7	26.75
S3		1734	1	6.5	16.75
			5	4.1	24.28
			10	3.2	25.64
			20	2.9	26.30
			50	1.2	28.01
			82	-0.5	30.31
S2b		1912	1	7.5	19.19
			5	3.7	25.99
			10	3.4	26.23
			15	3.0	26.46
S3		1941	1	4.8	22.00
			5	4.2	23.93
			10	3.7	25.88
			20	2.6	26.73
			50	0.6	28.70
			78	-0.7	30.49

Table 1.10 Summary statistics for current meter data at station S2b on the sill in Sugluk Inlet during August 1990.

	Mean	Std dev	Minimum	Maximum	n
a) August 5-12					
temperature (°C)	1.87	0.44	0.47	2.92	482
salinity (ppt)	25.67	0.72	22.35	27.31	482
speed (cm/s)	22.34	16.34	0.40	67.04	482
U component (cm/s)	1.81	10.89	-24.75	38.81	482
V component (cm/s)	1.01	25.36	-58.98	57.31	482
b) August 12-18					
temperature (°C)	1.58	0.66	-0.65	2.53	430
salinity (ppt)	26.88	1.03	24.30	29.92	430
speed (cm/s)	18.39	12.33	0.00	52.50	430
U component (cm/s)	1.72	9.18	-26.06	37.73	430
V component (cm/s)	-0.68	20.06	-41.83	50.20	430
c) August 5-18					
temperature (°C)	1.73	0.57	-0.65	2.92	912
salinity (ppt)	26.24	1.07	22.35	29.92	912
speed (cm/s)	20.48	14.72	0.00	67.04	912
U component	1.77	10.12	-26.06	38.81	912
V component	0.21	23.03	-58.98	57.31	912

Table 2.1 Phytoplankton and bacterial counts, and concentrations of total organic carbon (TOC) and chlorophyll *a* (Chl *a*) at stations S1 to S8 in Sugluk Inlet, August 11-15, 1989.

Station	Date	Depth (m)	Bacteria (no. X 10 ⁸ L ⁻¹)	Phytoplankton (no. X 10 ³ L ⁻¹)	TOC (mg L ⁻¹)	Chl <i>a</i> (μg L ⁻¹)
S1	11	0	8.83	216.5	2.36	0.73
		3	8.66	-	1.61	0.58
		5	7.26	548.8	2.18	0.94
		10	6.09	947.0	2.02	1.38
		20	5.69	885.5	-	0.96
		30	7.77	-	3.86	1.14
		40	6.76	-	0.37	1.06
		50	4.33	215.2	1.42	0.60
		75	2.13	-	1.89	0.24
		110	2.35	368.3	3.10	0.06
S2	12	0	6.85	-	1.93	0.14
		1	8.63	-	2.33	0.31
		3	5.47	-	2.33	0.72
		5	3.30	-	2.06	0.87
		10	4.35	-	1.76	1.24
		20	6.39	-	2.73	1.58
		25	9.66	-	2.33	1.87
		37	5.96	-	5.15	0.56
S3	12	0	9.01	-	2.00	0.58
		3	6.16	-	2.07	0.88
		5	7.91	-	2.06	1.36
		10	8.17	-	1.44	0.58
		20	6.82	-	1.60	1.04
		50	7.79	-	1.54	1.79
		80	6.29	-	1.77	0.65
S4	13	0	9.95	188.3	2.82	0.43
		5	8.63	449.6	1.47	1.37
		10	7.37	588.3	1.62	1.12
		20	6.52	478.3	1.79	1.26
		50	8.20	550.1	1.52	1.17
		75	5.10	-	1.51	0.23
		120	3.92	2,305.4	2.39	0.28

Table 2.1 Continued.

Station	Date	Depth (m)	Bacteria (no. X 10 ⁸ L ⁻¹)	Phytoplankton (no. X 10 ³ L ⁻¹)	TOC (mg L ⁻¹)	Chl <i>a</i> (µg L ⁻¹)
S5	13	0	10.25	-	1.86	0.20
		5	11.63	-	1.54	1.27
		10	10.33	-	1.87	0.96
		20	9.95	-	1.94	3.12
		50	10.13	-	1.51	0.65
		75	5.60	-	3.83	0.18
		103	4.26	-	1.19	0.12
S6	14	0	8.43	82.2	2.43	0.07
		5	8.61	99.8	1.84	0.59
		10	6.93	148.6	2.02	0.81
		20	7.26	31.1	1.84	1.97
		50	4.26	43.3	1.66	0.53
		80	3.49	21.4	1.95	0.18
S7	14	0	8.15	-	1.88	0.45
		1	7.63	-	1.79	0.35
		3	8.73	-	1.81	1.17
		5	8.00	-	2.04	0.94
		10	8.21	-	1.86	1.09
		20	6.99	-	1.71	3.16
		50	6.72	-	1.51	0.53
S8	15	0	6.51	655.3	2.26	0.59
		1	6.33	-	2.01	0.45
		3	8.90	-	2.28	0.88
		5	8.99	320.5	2.71	0.82
		10	10.37	425.7	1.95	1.30
		20	9.35	224.8	1.88	0.99
		30	10.15	-	2.37	0.99
		50	7.50	344.4	3.76	1.33
		70	8.52	535.7	2.38	1.64

Table 2.2 Phytoplankton and bacterial counts, and concentrations of total organic carbon (TOC) and chlorophyll *a* (Chl *a*) at stations W1 to W8 in Wakeham Bay, August 15-22, 1989.

Station	Date	Depth (m)	Bacteria (no. X 10 ⁸ L ⁻¹)	Phytoplankton (no. X 10 ³ L ⁻¹)	TOC (mg L ⁻¹)	Chl <i>a</i> (μg L ⁻¹)
W1	15	0	8.10	770.1	2.59	2.38
		5	8.35	879.2	2.24	2.31
		10	7.41	1,100.0	2.36	2.69
		20	8.26	444.8	1.87	-
		50	7.61	645.7	-	-
		65	5.53	-	2.46	2.36
		105	2.23	918.3	1.93	0.54
W2	18	0	14.47	-	2.42	1.40
		5	15.06	-	2.00	2.12
		10	13.40	-	2.89	3.00
		20	9.96	-	1.99	3.28
		50	6.50	-	2.60	2.26
		75	3.88	-	1.98	1.07
		100	3.44	-	2.34	0.90
	125	1.97	-	1.94	0.91	
W3	20	0	15.85	-	1.89	2.06
		5	16.23	-	2.24	2.27
		10	17.65	-	2.00	2.58
		20	13.53	-	2.33	3.23
		50	8.74	-	1.87	2.56
		75	3.29	-	1.72	0.90
		100	3.00	-	1.87	0.61
	127	1.89	-	2.25	0.76	
W4	20	0	21.79	248.7	2.24	1.50
		5	16.47	698.3	2.17	1.69
		10	18.16	559.6	2.09	2.01
		20	15.14	779.6	2.62	2.35
		50	6.05	234.4	2.70	1.27
		100	5.32	-	6.44	1.20
		150	2.97	-	2.02	0.81
	190	2.57	2,453.7	1.93	0.85	

Table 2.2 Continued.

Station	Date	Depth (m)	Bacteria (no. X 10 ⁸ L ⁻¹)	Phytoplankton (no. X 10 ³ L ⁻¹)	TOC (mg L ⁻¹)	Chl <i>a</i> (μg L ⁻¹)
W5	21	0	13.82	-	2.54	2.25
		5	15.18	-	1.66	1.42
		10	13.92	-	1.70	2.78
		20	13.19	-	1.96	3.57
		50	8.17	-	2.45	3.07
		100	2.98	-	1.66	0.50
		145	2.43	-	1.16	-
W6	21	0	14.16	93.5	1.56	3.06
		5	13.08	45.6	2.16	3.02
		10	16.06	14.0	2.22	-
		20	10.77	-	2.31	-
		50	6.83	30.0	1.21	-
		75	2.23	15.5	2.22	0.55
		128	3.81	8.1	1.90	0.97
W7	22	0	13.18	-	1.41	-
		1	12.00	-	2.16	2.51
		3	12.04	-	2.79	3.19
		5	13.21	-	1.57	3.35
		10	11.62	-	2.48	3.90
		20	6.53	-	2.42	3.10
		30	9.55	-	2.11	2.74
		65	5.41	-	2.16	1.42
W8	22	0	12.72	545.3	2.28	3.80
		1	12.13	-	1.14	3.82
		3	12.59	-	1.79	3.35
		5	10.74	841.8	2.73	3.46
		10	12.62	822.7	1.86	4.78
		20	10.84	1,095.3	2.18	5.10
		30	9.06	-	2.15	4.13
		50	6.84	272.6	2.17	1.71
		84	2.62	2,683.3	2.25	0.00

Table 2.3 Phytoplankton and bacterial counts, and concentrations of total organic carbon (TOC), dissolved organic carbon (DOC), particulate organic carbon (POC), and chlorophyll *a* (Chl *a*) at four stations in Sugluk Inlet, August 3-5, 1990.

Station	Date	Depth (m)	Bacteria (no. X 10 ⁸ L ⁻¹)	Phytoplankton (no. X 10 ³ L ⁻¹)	TOC (mg L ⁻¹)	DOC (mg L ⁻¹)	POC (mg L ⁻¹)	Chl <i>a</i> (μg L ⁻¹)
S1	3	0	2.98	478.7	1.42	1.08	0.34	1.03
		5	3.28	603.0	1.46	1.09	0.37	1.16
		10	3.63	487.4	1.49	1.15	0.34	1.04
		20	3.39	494.1	1.41	1.06	0.35	1.44
		50	2.27	309.0	1.35	1.00	0.35	0.68
		100	3.37	40.4	1.32	1.00	0.32	0.48
S4	5	0	7.09	229.5	2.80	2.40	0.40	0.71
		5	5.71	194.4	1.92	1.39	0.53	1.78
		10	4.45	109.6	1.45	1.04	0.41	0.89
		20	5.58	189.9	1.40	0.96	0.44	1.90
		50	2.36	42.0	1.50	1.18	0.32	0.65
		120	1.76	24.3	1.24	0.96	0.28	0.82
S6	4	0	8.05	185.0	2.91	2.43	0.48	0.91
		5	6.35	429.6	1.78	1.36	0.42	2.55
		10	4.62	319.2	1.38	0.99	0.39	2.38
		20	4.61	229.1	1.49	1.17	0.32	1.51
		50	1.55	24.9	1.17	0.86	0.31	0.63
		75	1.71	8.9	1.19	0.90	0.29	0.60
S8	4	0	6.82	200.1	3.42	3.04	0.38	0.88
		5	7.29	270.4	1.96	1.53	0.43	2.08
		10	5.23	358.5	1.67	1.31	0.36	1.39
		20	3.89	144.9	1.34	1.03	0.31	0.77
		50	3.35	82.9	1.36	1.08	0.28	0.53
		75	3.61	28.0	1.46	1.09	0.37	0.71

Table 2.4 Phytoplankton and bacterial counts, and concentrations of total organic carbon (TOC), dissolved organic carbon (DOC), particulate organic carbon (POC), and chlorophyll a (Chl a) at four stations in Sugluk Inlet, August 19-20, 1990.

Station	Date	Depth (m)	Bacteria (no. X 10 ⁸ L ⁻¹)	Phytoplankton (no. X 10 ³ L ⁻¹)	TOC (mg L ⁻¹)	DOC (mg L ⁻¹)	POC (mg L ⁻¹)	Chl a (µg L ⁻¹)
S1	19	0	7.30	28.6	1.54	1.22	0.32	0.37
		5	6.92	48.5	1.55	1.15	0.40	0.59
		10	6.76	35.2	1.55	1.18	0.37	0.50
		20	6.78	62.3	1.41	1.10	0.31	0.79
		50	5.29	-	1.33	1.02	0.31	0.56
		100	3.00	25.8	-	-	0.28	0.32
S4	19	0	6.75	80.7	1.61	1.24	0.37	0.45
		5	7.07	89.4	1.58	1.19	0.39	0.77
		10	8.57	172.9	1.54	1.19	0.35	0.71
		20	7.86	62.6	1.54	1.19	0.35	0.81
		50	6.62	99.1	1.44	1.12	0.32	0.54
		120	2.48	36.7	1.45	1.16	0.29	0.32
S6	20	0	6.40	69.9	1.38	1.09	0.29	0.43
		5	7.27	47.2	1.46	1.17	0.29	0.49
		10	6.53	66.3	1.64	1.32	0.32	0.70
		20	5.36	73.2	1.25	1.07	0.18	0.71
		50	4.49	22.5	1.21	0.96	0.25	0.56
		75	3.64	6.6	1.19	0.92	0.27	0.53
S8	20	0	6.10	80.2	1.69	1.37	0.32	0.43
		5	7.15	79.2	1.50	1.22	0.28	0.53
		10	7.82	59.8	1.81	1.49	0.32	0.54
		20	7.94	32.7	1.39	1.08	0.31	0.48
		50	6.15	53.9	1.39	1.12	0.27	0.43
		83	7.14	28.2	-	-	0.30	0.43

Table 3.1 Phytoplankton taxa found in Sugluk Inlet in 1989.

Bacillariophyceae

Centrales

Biddulphia aurita (Lyngbye) Br/bisson et Godey
Chaetoceros atlanticus Cleve
C. brevis Schutt
C. cinctus Gran
C. compressus Lauder
C. convolutus Castracane
C. danicus Cleve
C. decipiens Cleve
C. diadema (Ehrenberg) Gran
C. difficilis Cleve
C. fragilis Meunier
C. holsaticus Schutt
C. lorenzianus Grunow
C. neogracile Van Landingham
C. perpusillus Cleve
C. septentrionalis Ostrup
C. simplex Ostenfeld
C. teres Cleve
C. wighami Brightwell
Coscinodiscus curvatulus Grunow
C. curvatulus var. *Kariana* Cleve et Grunow
C. radiatus Ehrenberg
Cyclotella comta (Ehrenberg) Kutzing
Eucampia zodiacus Ehrenberg
Leptocylindrus danicus Cleve
Melosira arctica (Ehrenberg) Dickie
M. moniliformis (Muller) Agardh
Rhizosolenia alata Brightwell
R. setigera Brightwell
Thalassiosira anguste-lineata (A. Schmidt) G. Fryxell et Hasle
T. decipiens (Grunow) E. Jorgensen
T. gravida Cleve
T. nordenskioeldii Cleve
Triceratium reticulum Ehrenberg

Pennales

Achnanthes taeniata Grunow
Amphora angusta Gregory
A. exsecta Grunow
A. laevis Gregory
Cocconeis costata Gregory
Cylindrotheca closterium (Ehrenberg) Reinmann et Lewin
Diploneis litoralis (Donkin) Cleve
Fragilaria crotonensis Kitton
F. striatula Lyngbye
Fragilariopsis cylindrus (Grunow) Helmcke et Krieger
Licmophora abbreviata Agardh
L. dalmatica (Kutzing) Grunow
L. gracilis (Ehrenbert) Grunow
L. tenuis (Kutzing) Grunow

Table 3.1 Continued.

Pennales (continued)

Navicula directa (Wm. Smith) Ralfs
N. gelida Grunow
N. pelagica Cleve
N. superba Cleve
N. transitans Cleve
N. vanhoeffeii Gran
Nitzschia grunowii Hasle
N. polaris Grunow
N. seriata Cleve
Rhabdonema minutum Kutzing
Thalassionema nitzschioides (Grunow) Van Heurck

Chrysophyceae

Coccolith pelagicus (Wallisch) Schiller
Dinobryon balticum (Schutt) Lemmermann
Distephanus speculum (Ehrenberg) Haeckel
Lohmannosphaera Schiller
Pontosphaera ditrematolitha Bursa
P. huxleyi Lohmann

Dinophyceae

Amphidinium ovum Herdman
Corythodinium diploconus (Stein) Taylor
Dinophysis ovum Schutt
Goniaulax tamarensis Lebour
Gymnodinium gracile Bergh
G. rubrum Kofoid et Swezy
G. simplex (Lohmann) Kofoid et Swezy
Gyrodinium pingue (Schutt) Kofoid et Swezy
G. spirale (Bergh) Kofoid et Swezy
Kofooidinium arcticum Bursa
Prorocentrum lima (Ehrenberg) Dodge
Protoceratium reticulatum (Claparède et Lachmann) Butschli
Protoperidinium globulum (Stein) Balech
P. thorianum (Paulsen) Balech

Table 3.2 Quantitative species composition and vertical distribution of phytoplankton at station S1 in Sugluk Inlet, August 11, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	216,486	548,828	947,034	885,456	215,235	368,291
Bacillariophyceae	197,496	521,156	808,327	780,923	71,745	33,481
Centrales	167,112	456,588	573,960	639,496	47,830	33,481
<i>Biddulphia aurita</i>	-	-	4,783	-	-	-
<i>Chaetoceros atlanticus</i>	18,990	78,404	95,660	141,427	9,566	4,783
<i>C. compressus</i>	30,384	-	-	-	-	-
<i>C. convolutus</i>	-	50,732	-	-	-	-
<i>C. danicus</i>	3,798	-	-	-	-	-
<i>C. decipiens</i>	-	-	57,396	24,596	-	-
<i>C. diadema</i>	-	50,732	-	-	-	-
<i>C. fragilis</i>	-	13,836	-	-	-	-
<i>C. neogracile</i>	11,394	32,284	-	-	-	-
<i>C. perpusillus</i>	-	9,224	28,698	18,447	-	-
<i>C. septentrionalis</i>	-	-	62,179	-	-	-
<i>Coscinodiscus curvatulus</i>	-	-	4,783	6,149	-	-
<i>Eucampia zodiacus</i>	22,788	-	-	-	-	-
<i>Leptocylindrus danicus</i>	-	4,612	-	-	-	9,566
<i>Melosira arctica</i>	7,596	-	-	-	-	-
<i>Rhizosolenia alata</i>	7,596	-	52,613	18,447	-	-
<i>R. setigera</i>	-	13,836	-	18,447	-	-
<i>Thalassiosira anguste-lineata</i>	-	46,120	14,349	30,745	14,349	14,349
<i>T. decipiens</i>	15,192	73,792	-	-	-	-
<i>T. gravida</i>	-	-	148,273	30,745	-	-
<i>T. nordenskioldii</i>	49,374	83,016	105,226	350,493	23,915	-
<i>Triceratium reticulum</i>	-	-	-	-	-	4,783
Pennales	30,384	64,568	234,367	141,427	23,915	-
<i>Achnanthes taeniata</i>	3,798	-	-	-	-	-
<i>Cylindrotheca closterium</i>	11,394	18,448	-	-	-	-
<i>Diploneis litoralis</i>	-	-	4,783	-	-	-
<i>Fragilaria crotonensis</i>	-	-	-	12,298	-	-
<i>Fragilariopsis cylindrus</i>	-	4,612	-	-	4,783	-

Table 3.2 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
<i>Licmophora dalmatica</i>	-	-	9,566	-	-	-
<i>Navicula directa</i>	-	-	-	-	4,783	-
<i>N. pelagica</i>	-	4,612	-	24,596	9,566	-
<i>N. transitans</i>	3,798	-	-	-	-	-
<i>N. vanhoeffenii</i>	3,798	-	81,311	-	-	-
<i>Nitzschia grunowii</i>	-	-	105,226	104,533	-	-
<i>N. polaris</i>	-	-	4,783	-	-	-
<i>N. seriata</i>	3,798	18,448	28,698	-	-	-
<i>Thalassionema nitzschioides</i>	3,798	18,448	-	-	4,783	-
Chrysophyceae	-	4,612	4,783	-	105,226	306,112
<i>Coccolith pelagicus</i>	-	-	-	-	47,830	148,273
<i>Distephanus speculum</i>	-	4,612	4,783	-	-	-
<i>Pontosphaera ditrematolitha</i>	-	-	-	-	14,349	57,396
<i>P. huxleyi</i>	-	-	-	-	43,047	100,443
Dinophyceae	18,990	23,060	133,924	104,533	38,264	28,698
<i>Goniaulax tamarensis</i>	-	-	19,132	6,149	-	-
<i>Gymnodinium gracile</i>	-	-	-	-	-	4,783
<i>G. simplex</i>	-	-	33,481	-	-	-
<i>Gyrodinium spirale</i>	-	-	-	-	-	9,566
<i>Prorocentrum lima</i>	15,192	-	-	-	-	-
<i>Protoperidinium globulum</i>	3,798	9,224	38,264	12,298	28,698	14,349
<i>P. thorianum</i>	-	-	19,132	-	-	-
Unidentified	-	13,836	23,915	86,086	9,566	-

Table 3.3 Quantitative species composition and vertical distribution of phytoplankton at station S4 in Sugluk Inlet, August 13, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	188,335	449,602	588,309	478,300	550,045	2,305,406
Bacillariophyceae	134,525	396,989	487,866	459,168	516,564	52,613
Centrales	64,572	368,391	440,036	454,385	506,998	28,698
<i>Chaetoceros atlanticus</i>	10,762	71,745	86,094	62,179	66,962	9,566
<i>C. cinctus</i>	-	-	-	-	-	9,566
<i>C. compressus</i>	-	-	-	-	28,698	-
<i>C. danicus</i>	5,381	43,047	71,745	23,915	-	-
<i>C. debilis</i>	-	-	-	19,132	-	-
<i>C. diadema</i>	-	14,349	4,783	-	-	-
<i>C. lorenzianus</i>	-	14,349	-	-	-	-
<i>C. perpusillus</i>	26,905	14,349	28,698	-	4,783	-
<i>C. septentrionalis</i>	5,381	-	-	-	-	-
<i>C. teres</i>	-	-	4,783	-	-	-
<i>C. wighami</i>	-	-	-	19,132	-	-
<i>Coscinodiscus radiatus</i>	-	-	-	-	4,783	-
<i>Cyclotella comta</i>	-	-	-	23,915	33,481	-
<i>Leptocylindrus danicus</i>	-	-	9,566	-	-	9,566
<i>Melosira arctica</i>	-	-	-	-	28,698	-
<i>Rhizosolenia alata</i>	10,762	23,915	14,349	28,698	14,349	-
<i>R. styliformis</i>	-	-	-	-	14,349	-
<i>Thalassiosira anguste-lineata</i>	-	19,132	4,783	4,783	14,349	-
<i>T. gravida</i>	5,381	153,056	81,311	272,631	296,546	-
<i>T. nordenskioldii</i>	-	-	133,924	-	-	-
Unidentified	-	14,349	-	-	-	-
Pennales	69,953	28,698	47,830	4,783	9,566	23,915
<i>Achnanthes taeniata</i>	16,143	-	4,783	-	-	4,783
<i>Cylindrotheca closterium</i>	5,381	-	4,783	-	-	-
<i>Fragilariopsis cylindrus</i>	16,143	4,783	-	-	-	14,349
<i>Licmophora dalmatica</i>	-	9,566	-	-	-	-

Table 3.3 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
<i>Navicula pelagica</i>	32,286	-	19,132	4,783	-	-
<i>Nitzschia seriata</i>	-	14,349	19,132	-	9,566	-
<i>Thalassionema nitzschioides</i>	-	-	-	-	-	4,783
Chrysophyceae	-	-	33,481	4,783	4,783	2,200,180
<i>Coccolith pelagicus</i>	-	-	4,783	-	4,783	793,978
<i>Lohmannosphaera</i> sp.	-	-	-	-	-	181,754
<i>Pontosphaera ditrematolitha</i>	-	-	4,783	-	-	932,685
<i>P. huxleyi</i>	-	-	23,915	4,783	-	291,763
Dinophyceae	53,810	52,613	66,962	14,349	28,698	52,613
<i>Amphidinium ovum</i>	-	-	9,566	-	-	-
<i>Corythodinium diploconus</i>	-	-	9,566	-	-	-
<i>Dinophysis ovum</i>	-	9,566	-	-	-	-
<i>Goniaulax tamarensis</i>	-	4,783	-	-	-	-
<i>Protoperidinium globulum</i>	32,286	23,915	14,349	9,566	14,349	52,613
Unidentified	21,524	14,349	33,481	4,783	14,349	-

Table 3.4 Quantitative species composition and vertical distribution of phytoplankton at station S6 in Sugluk Inlet, August 14, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	82,182	99,956	148,567	31,064	43,312	21,388
Bacillariophyceae	29,140	4,492	3,800	4,856	1,488	1,860
Centrales	13,020	3,252	2,436	3,988	1,364	1,736
<i>Chaetoceros</i> spp.	3,100	248	-	-	372	620
<i>C. decipiens</i>	1,240	-	-	-	-	-
<i>C. diadema</i>	-	124	-	-	496	-
<i>C. didymus</i>	-	-	-	1,984	-	-
<i>Coscinodiscus centralis</i>	-	40	80	20	-	-
<i>C. radiatus</i>	-	-	124	-	-	248
<i>Leptocylindrus danicus</i>	620	-	-	-	-	-
<i>Rhizosolenia styliformis</i>	-	-	124	-	-	-
<i>Thalassiosira</i> spp.	620	1,860	1,612	1,860	248	744
<i>T. anguste-lineata</i>	-	124	124	124	248	-
<i>T. decipiens</i>	-	124	124	-	-	-
<i>T. gravida</i>	-	-	248	-	-	-
<i>T. nordenskioeldii</i>	7,440	732	-	-	-	124
Pennales	16,120	1,240	1,364	868	124	124
<i>Achnanthes</i> sp.	1,860	-	-	-	-	-
<i>Ceratoneis arcus</i>	1,240	-	-	-	-	-
<i>Cylindrotheca closterium</i>	620	248	1,116	744	124	124
<i>Licmophora</i> sp.	1,240	-	-	-	-	-
<i>L. abbreviata</i>	3,100	-	-	-	-	-
<i>Navicula</i> spp.	4,340	992	-	-	-	-
<i>N. directa</i>	-	-	124	-	-	-
<i>Pseudonitzschia delicatissima</i>	3,100	-	-	-	-	-
<i>Thalassionema nitzschioides</i>	620	-	124	124	-	-
Chrysophyceae			66,297		11,568	-
<i>Dinobryon balticum</i>	9,644	42,416	64,288	-	8,676	-
<i>D. petiolatum</i>	-	-	2,009	-	-	-
Unidentified	-	-	-	-	2,892	-

Table 3.4 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Dinophyceae	-	3,884	2,004	2,108	372	2,176
<i>Amphidinium</i> sp.	-	248	124	124	-	-
<i>Ceratium arcticum</i>	-	40	20	-	-	-
<i>Dinophysis arctica</i>	-	-	124	-	-	-
<i>Gymnodinium</i> sp.	-	-	-	-	248	1,928
<i>G. arcticum</i>	-	496	744	-	-	-
<i>G. simplex</i>	-	372	124	868	-	-
<i>Prorocentrum compressum</i>	-	868	124	-	-	-
<i>Protoperidinium achromaticum</i>	-	124	-	-	124	-
<i>P. bipes</i>	-	496	-	248	-	-
<i>P. palladium</i>	-	496	-	-	-	-
<i>P. pellucidum</i>	-	-	124	124	-	-
Unidentified	-	372	372	496	-	-
Unidentified cyst	-	372	248	248	-	248
Prymnesiophyceae	-	-	124	-	-	-
<i>Emiliana huxleyii</i>	-	-	124	-	-	-
Unidentified flagellates	-	49,164	76,342	24,100	29,884	17,352
1 - 2 μ	-	5,784	8,036	3,856	5,784	2,892
2 - 5 μ	43,398	36,632	46,207	12,532	19,280	8,676
5 - 10 μ	-	6,748	22,099	7,712	3,856	5,784
10 - 20 μ	-	-	-	-	964	-

Table 3.5 Quantitative species composition and vertical distribution of phytoplankton at station S8 in Sugluk Inlet, August 15, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	655,271	320,461	425,687	224,801	344,376	535,696
Bacillariophyceae	573,960	205,669	377,857	129,141	181,754	129,141
Centrales	76,528	119,575	310,895	86,094	181,754	76,528
<i>Chaetoceros atlanticus</i>	-	47,830	47,830	43,047	47,830	33,481
<i>C. brevis</i>	-	-	-	-	-	14,349
<i>C. decipiens</i>	-	33,481	-	-	-	-
<i>C. difficile</i>	-	-	-	9,566	-	-
<i>C. fragilis</i>	-	4,783	62,179	-	-	-
<i>C. holsaticus</i>	-	-	-	-	-	9,566
<i>C. neogracile</i>	-	-	-	4,783	-	-
<i>C. perpusillus</i>	-	19,132	9,566	-	-	-
<i>C. simplex</i>	-	-	-	-	4,783	-
<i>C. wighami</i>	-	-	-	-	-	9,566
<i>Coscinodiscus curvatulus</i> var <i>kariana</i>	-	-	-	-	4,783	-
<i>C. radiatus</i>	-	-	-	4,783	-	-
<i>Cyclotella comta</i>	-	-	9,566	-	-	-
<i>Leptocylindrus danicus</i>	4,783	-	-	9,566	-	4,783
<i>Melosira arctica</i>	-	4,783	105,226	4,783	14,349	-
<i>M. moniliformis</i>	-	-	33,481	-	-	-
<i>Rhizosolenia alata</i>	4,783	9,566	14,349	-	-	-
<i>Thalassiosira anguste-lineata</i>	14,349	-	28,698	9,566	9,566	4,783
<i>T. gravida</i>	52,613	-	-	-	100,443	-
Pennales	497,432	86,094	66,962	43,047	-	52,613
<i>Achnanthes taeniata</i>	33,481	-	-	-	-	-
<i>Amphora angusta</i>	-	-	-	-	-	4,783
<i>A. exsecta</i>	23,915	-	-	-	-	-
<i>A. laevis</i>	23,915	-	9,566	-	-	-
<i>Cocconeis costata</i>	28,698	-	-	-	-	-
<i>C. scutellum</i>	-	-	-	-	-	4,783
<i>Cylindrotheca closterium</i>	-	-	-	-	-	14,349
<i>Diploneis litoralis</i>	-	4,783	-	-	-	-

Table 3.5 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Pennales (Continued)						
<i>Fragilaria striatula</i>	95,660	-	-	-	-	-
<i>Fragilariopsis cylindrus</i>	33,481	23,915	4,783	9,566	-	14,349
<i>Licmophora abbreviata</i>	4,783	-	-	-	-	-
<i>L. dalmatica</i>	-	-	-	-	-	4,783
<i>L. gracilis</i>	-	-	-	-	-	9,566
<i>L. tenuis</i>	-	4,783	-	-	-	-
<i>Navicula gelida</i>	-	-	4,783	9,566	-	-
<i>N. pelagica</i>	57,396	14,349	14,349	9,566	-	-
<i>N. superba</i>	-	-	4,783	-	-	-
<i>N. vanhoeffenii</i>	100,443	-	-	-	-	-
<i>Nitzschia grunowii</i>	47,830	-	4,783	-	-	-
<i>N. seriata</i>	-	9,566	19,132	-	-	-
<i>Rhabdonema minutum</i>	38,264	28,698	-	9,566	-	-
<i>Thalassionema nitzschioides</i>	9,566	-	4,783	4,783	-	-
Chrysophyceae						
<i>Coccolith pelagicus</i>	57,396	86,094	33,481	81,311	124,358	377,857
<i>Dinobryon balticum</i>	14,349	28,698	33,481	23,915	38,264	119,575
<i>Lohmannosphaera</i> sp.	-	9,566	-	-	-	-
<i>Pontosphaera ditrematolitha</i>	-	-	-	-	-	47,830
<i>P. huxleyi</i>	-	-	-	-	-	86,094
<i>P. huxleyi</i>	43,047	47,830	-	57,396	86,094	124,358
Dinophyceae						
<i>Goniaulax tamarensis</i>	23,915	28,698	14,349	14,349	38,264	28,698
<i>Gymnodinium rubrum</i>	-	9,566	-	-	-	4,783
<i>Gyrodinium pingue</i>	9,566	-	-	-	-	-
<i>Kofoidinium arcticum</i>	-	-	-	-	-	4,783
<i>Protoceratium reticulatum</i>	-	-	-	-	4,783	-
<i>Protoperidinium globulum</i>	-	-	-	-	-	4,783
<i>P. obtusum</i>	14,349	19,132	4,783	9,566	23,915	14,349
<i>P. obtusum</i>	-	-	-	-	4,783	-
Unidentified	-	9,566	9,566	4,783	4,783	-

Table 3.6 Phytoplankton taxa found in Wakeham Bay in 1989.

Bacillariophyceae

Centrales

Chaetoceros atlanticus Cleve
C. cinctus Gran
C. danicus Cleve
C. decipiens Cleve
C. difficilis Cleve
C. fragilis Meunier
C. holsaticus Schutt
C. lorenzianus Grunow
C. neogracile Van Landingham
C. perpusillus Cleve
C. wighami Brightwell
Coscinodiscus granii Gough
C. radiatus Ehrenberg
Eucampia zodiacus Ehrenberg
Leptocylindrus danicus Cleve
Melosira arctica (Ehrenberg) Dickie
Rhizosolenia alata Brightwell
R. setigera Brightwell
Skeletonema costatum (Greville) Cleve
Thalassiosira anguste-lineata (A. Schmidt) G. Fryxell et Hasle
T. decipiens (Grunow) E. Jorgensen
T. gravis Cleve
T. nordenskioldii Cleve
Triceratium alternans J.W. Bailey
T. arcticum Brightwell

Pennales

Achnanthes taeniata Grunow
Amphiprora alata (Ehrenberg) Kutzing
A. kjellmanii var. *striolata* (Grunow) Cleve
Cocconeis costata Gregory
Cylindrotheca closterium (Ehrenberg) Reimann et Lewin
Fragilaria islandica Grunow
Licmophora dalmatica (Kutzing) Grunow
Navicula directa (Wm. Smith) Ralfs
N. distans (Wm. Smith) Ralfs
N. pelagica Cleve
N. superba Cleve
N. valida Cleve et Grunow
Nitzschia cylindrus (Grunow) Hasle
N. grunowii Hasle
N. longissima (Brébisson) Grunow
N. seriata Cleve
Rhabdonema arcuatum (Lyngbye) Kutzing
Thalassionema nitzschioides (Grunow) Van Heurck

Table 3.6 Continued.

Chrysophyceae

Coccolith pelagicus (Wallisch) Schiller
Lohmannosphaera Schiller
Pontosphaera ditrematolitha Bursa
P. huxleyi Lohmann
Salpingoeca natans Grontved

Dinophyceae

Amphidinium britannicum (Herdman) Lebour
Cachonina hallii (Freudenthal et Lee) Dodge
Cenchradius globosus (Williamson) Stein
C. sphaerula Ehrenberg
Ceratium longipes (Bailey) Gran
Goniaulax catenata Kofoid
G. tamarensis Lebour
Gymnodinium arcticum Wulff
Gyrodinium britannicum Kofoid et Swezy
G. pingue (Schutt) Kofoid et Swezy
G. spirale (Bergh) Kofoid et Swezy
Prorocentrum compressum (Bailey) Abe ex Dodge
P. micans Ehrenberg
Protoperidinium globulum (Stein) Balech

Table 3.7 Quantitative species composition and vertical distribution of phytoplankton at station W1 in Wakeham Bay, August 18, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	770,063	879,159	1,100,090	444,819	645,705	918,336
Bacillariophyceae	650,488	789,753	870,506	296,546	521,347	81,311
Centrales	420,904	491,733	846,591	253,499	315,678	47,830
<i>Chaetoceros atlanticus</i>	33,481	54,637	71,745	52,613	95,660	4,783
<i>C. cinctus</i>	19,132	-	14,349	33,481	38,264	-
<i>C. danicus</i>	9,566	-	14,349	23,915	19,132	-
<i>C. decipiens</i>	9,566	14,901	57,396	-	-	-
<i>C. fragilis</i>	-	-	-	28,698	-	-
<i>C. holsaticus</i>	14,349	-	-	-	28,698	-
<i>C. neogracile</i>	19,132	-	-	-	-	-
<i>C. perpusillus</i>	43,047	-	81,311	4,783	14,349	-
<i>C. wighami</i>	23,915	-	157,839	4,783	4,783	-
<i>Coscinodiscus granii</i>	9,566	-	14,349	4,783	4,783	4,783
<i>C. radiatus</i>	-	-	4,783	-	-	-
<i>Leptocylindrus danicus</i>	4,783	-	-	-	-	4,783
<i>Melosira arctica</i>	71,745	-	47,830	-	9,566	-
<i>Rhizosolenia alata</i>	4,783	-	38,264	28,698	14,349	-
<i>R. setigera</i>	-	-	9,566	-	4,783	-
<i>Skeletonema costatum</i>	-	-	191,320	-	-	-
<i>Thalassiosira anguste-lineata</i>	-	9,934	19,132	4,783	43,047	-
<i>T. decipiens</i>	-	-	-	47,830	-	-
<i>T. gravida</i>	153,056	407,294	124,358	19,132	38,264	33,481
<i>Triceratium arcticum</i>	-	4,967	-	-	-	-
<i>T. alternans</i>	4,783	-	-	-	-	-
Pennales	229,584	298,020	23,915	43,047	205,669	33,481
<i>Achnanthes taeniata</i>	4,783	-	-	-	-	9,566
<i>Amphiprora alata</i>	4,783	-	-	-	-	-
<i>A. kjellmanii</i> var. <i>striolata</i>	-	-	-	-	4,783	-
<i>Cylindrotheca closterium</i>	-	19,868	9,566	-	9,566	-
<i>Fragilaria islandica</i>	172,188	233,449	-	-	-	-
<i>Fragilariopsis cylindrus</i>	38,264	14,901	14,349	38,264	-	-

Table 3.7 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Pennales (Continued)						
<i>Licmophora dalmatica</i>	-	14,901	-	-	-	4,783
<i>Nitzschia grunowii</i>	-	-	-	4,783	191,320	-
<i>N. seriata</i>	-	9,934	-	-	-	-
<i>Rhabdonema arcuatum</i>	-	-	-	-	-	19,132
<i>Thalassionema nitzschioides</i>	9,566	4,967	-	-	-	-
Chrysophyceae						
<i>Coccolith pelagicus</i>	4,783	14,901	81,311	14,349	28,698	325,244
<i>Lohmannosphaera sp.</i>	4,783	-	-	-	-	105,226
<i>Pontosphaera ditrematolitha</i>	14,349	-	-	-	-	215,235
<i>P. huxleyi</i>	47,830	24,835	81,311	86,094	52,613	148,273
<i>Salpingoeca natans</i>	-	-	-	4,783	-	-
Dinophyceae						
<i>Cachonina hallii</i>	-	-	-	9,566	14,349	-
<i>Cenchradius globosum</i>	9,566	-	-	-	-	-
<i>Goniaulax catenata</i>	-	9,934	-	-	-	-
<i>G. tamarensis</i>	-	-	-	-	-	4,783
<i>Gyrodinium britannicum</i>	-	-	-	-	-	9,566
<i>G. pingue</i>	-	9,934	-	-	-	-
<i>Prorocentrum micans</i>	-	-	-	-	-	4,783
<i>Protoperidinium globulum</i>	38,264	29,802	66,962	33,481	28,698	23,915

Table 3.8 Quantitative species composition and vertical distribution of phytoplankton at station W4 in Wakeham Bay, August 20, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	248,716	698,318	559,611	779,629	234,367	2,453,698
Bacillariophyceae	90,877	550,045	444,819	530,913	95,660	29,802
Centrales	90,877	540,479	435,253	516,564	71,745	9,934
<i>Chaetoceros atlanticus</i>	33,481	4,783	33,481	57,396	28,698	9,934
<i>C. danicus</i>	-	4,783	-	-	-	-
<i>C. difficilis</i>	-	19,132	19,132	38,264	-	-
<i>C. holsaticus</i>	-	-	-	-	14,349	-
<i>C. perpusillus</i>	-	23,915	-	23,915	-	-
<i>C. wighami</i>	14,349	-	-	-	-	-
<i>Coscinodiscus granii</i>	9,566	-	4,783	23,915	-	-
<i>Eucampia zodiacus</i>	-	33,481	-	-	-	-
<i>Leptocylindrus danicus</i>	-	14,349	9,566	-	-	-
<i>Melosira arctica</i>	9,566	129,141	-	-	-	-
<i>Rhizosolenia alata</i>	9,566	4,783	-	-	-	-
<i>Skeletonema costatum</i>	-	-	28,698	-	-	-
<i>Thalassiosira anguste-lineata</i>	9,566	9,566	23,915	14,349	19,132	-
<i>T. gravida</i>	4,783	296,546	110,009	358,725	9,566	-
<i>T. nordenskioldii</i>	-	-	205,669	-	-	-
Pennales	-	9,566	9,566	14,349	23,915	19,868
<i>Achnanthes taeniata</i>	-	-	-	-	19,132	4,967
<i>Amphiprora kjellmanii</i> var. <i>striolata</i>	-	-	4,783	-	-	-
<i>Cocconeis costata</i>	-	-	-	-	-	4,967
<i>Cylindrotheca closterium</i>	-	4,783	-	14,349	-	-
<i>Navicula directa</i>	-	-	-	-	4,783	-
<i>N. valida</i>	-	-	4,783	-	-	-
<i>Nitzschia cylindrus</i>	-	-	-	-	-	9,934
<i>Thalassionema nitzschioides</i>	-	4,783	-	-	-	-
Chrysophyceae	57,396	90,877	95,660	186,537	129,141	2,359,325
<i>Coccolith pelagicus</i>	43,047	14,349	52,613	57,396	57,396	804,654
<i>Lohmannosphaera</i> sp.	-	-	-	14,349	-	427,162

Table 3.8 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
<i>Pontosphaera ditrematolitha</i>	-	-	-	-	-	769,885
<i>P. huxleyi</i>	14,349	66,962	33,481	114,792	71,745	357,624
<i>Salpingoeca natans</i>	-	9,566	9,566	-	-	-
Dinophyceae	100,443	57,396	19,132	62,179	9,566	64,571
<i>Cachonina hallii</i>	14,349	-	-	-	-	-
<i>Cenchridium sphaerula</i>	-	-	4,783	-	-	-
<i>Ceratium longipes</i>	-	4,783	-	-	-	-
<i>Goniaulax tamarensis</i>	-	-	-	4,783	-	9,934
<i>Gymnodinium arcticum</i>	4,783	-	-	-	-	-
<i>Gyrodinium spirale</i>	4,783	-	-	4,783	4,783	-
<i>Protoperidinium globulum</i>	76,528	52,613	14,349	52,613	4,783	54,637

Table 3.9 Quantitative species composition and vertical distribution of phytoplankton at station W6 in Wakeham Bay, August 21, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	93,496	45,600	13,952	29,984	15,480	8,084
Bacillariophyceae	1,640	45,440	2,976	5,084	1,984	1,928
Centrales	1,640	45,160	1,860	4,960	1,984	-
<i>Chaetoceros</i> sp.	620	960	496	3,348	-	-
<i>Coscinodiscus centralis</i>	400	400	-	-	-	-
<i>Thalassiosira</i> sp.	620	40	1,116	1,240	620	-
<i>T. decipiens</i>	-	9,240	248	372	-	-
<i>T. gravida</i>	-	-	-	-	1,240	-
<i>T. nordenskioeldii</i>	-	34,520	-	-	124	-
Pennales	-	280	1,116	124	-	1,928
<i>Cylindrotheca clostenium</i>	-	-	868	124	-	-
<i>Navicula</i> spp.	-	-	124	-	-	1,928
<i>Nitzschia longissima</i>	-	280	124	-	-	-
Chrysophyceae	-	-	3,140	3,856	-	-
<i>Dinobryon balticum</i>	4,822	-	2,892	3,856	-	-
Unidentified	-	-	248	-	-	-
Dinophyceae	5,060	160	124	2,728	-	372
<i>Amphidinium</i> sp.	-	-	-	124	-	-
<i>Dinophysis norvegica</i>	100	120	-	-	-	-
<i>Gymnodinium</i> sp.	2,480	-	124	-	-	-
<i>G. simplex</i>	-	-	-	248	-	-
<i>Gyrodinium</i> sp.	-	-	-	124	-	-
<i>Peridiniella catenata</i>	-	-	-	372	-	-
<i>Prorocentrum compressum</i>	620	40	-	372	-	-
<i>Protoperidinium achromaticum</i>	620	-	-	-	-	-
<i>P. palladium</i>	620	-	-	-	-	-
Unidentified	620	-	-	1,240	-	-
Unidentified cyst	-	-	-	248	-	372

Table 3.9 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Unidentified flagellates	81,974	-	7,712	18,316	13,496	5,784
1 - 2 μ	9,644	-	2,892	1,928	1,928	-
2 - 5 μ	53,042	-	3,856	10,604	5,784	964
5 - 10 μ	19,288	-	964	5,784	4,820	2,892
10 - 20 μ	-	-	-	-	964	1,928

Table 3.10 Quantitative species composition and vertical distribution of phytoplankton at station W8 in Wakeham Bay, August 22, 1989.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	545,262	841,808	822,676	1,095,307	272,631	2,683,263
Bacillariophyceae	454,385	698,318	454,385	870,506	100,443	-
Centrales	449,602	578,743	449,602	803,544	86,094	-
<i>Chaetoceros atlanticus</i>	43,047	43,047	47,830	52,613	9,566	-
<i>C. cinctus</i>	-	-	-	23,915	14,349	-
<i>C. decipiens</i>	-	-	14,349	-	-	-
<i>C. difficilis</i>	4,783	110,009	33,481	119,575	-	-
<i>C. fragilis</i>	-	28,698	-	-	-	-
<i>C. holsaticus</i>	-	9,566	-	4,783	4,783	-
<i>C. lorenzianus</i>	-	33,481	-	-	-	-
<i>C. perpusillus</i>	-	23,915	14,349	-	14,349	-
<i>C. wighami</i>	-	9,566	-	-	-	-
<i>Coscinodiscus granii</i>	4,783	4,783	4,783	28,698	14,349	-
<i>Leptocylindrus danicus</i>	-	9,566	-	23,915	-	-
<i>Melosira arctica</i>	148,273	-	-	110,009	-	-
<i>Rhizosolenia alata</i>	4,783	-	9,566	4,783	-	-
<i>Thalassiosira anguste-lineata</i>	9,566	23,915	33,481	33,481	28,698	-
<i>T. gravida</i>	234,367	186,537	291,763	119,575	-	-
<i>T. nordenskioldii</i>	-	95,660	-	282,197	-	-
Pennales	4,783	119,575	4,783	66,962	14,349	-
<i>Achnanthes taeniata</i>	-	-	4,783	4,783	4,783	-
<i>Cylindrotheca closterium</i>	4,783	9,566	-	-	-	-
<i>Fragilaria islandica</i>	-	-	-	4,783	-	-
<i>Navicula directa</i>	-	-	-	-	4,783	-
<i>N. distans</i>	-	4,783	-	-	-	-
<i>N. pelagica</i>	-	19,132	-	-	-	-
<i>N. superba</i>	-	4,783	-	-	-	-
<i>Nitzschia cylindrus</i>	-	81,311	-	28,698	-	-
<i>N. longissima</i>	-	-	-	28,698	4,783	-

Table 3.10 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Chrysophyceae	57,396	119,575	248,716	162,622	143,490	2,611,518
<i>Coccolith pelagicus</i>	19,132	43,047	81,311	100,443	95,660	798,761
<i>Lohmannosphaera</i> sp.	-	-	14,349	4,783	14,349	71,745
<i>Pontosphaera ditrematolitha</i>	-	4,783	-	-	4,783	1,157,486
<i>P. huxleyi</i>	38,264	57,396	153,056	57,396	28,698	583,526
<i>Salpingoeca natans</i>	-	14,349	-	-	-	-
Dinophyceae	33,481	23,915	119,575	62,179	28,698	71,745
<i>Amphidinium britannicum</i>	-	-	-	23,915	-	-
<i>Gyrodinium britannicum</i>	-	-	52,613	-	-	-
<i>G. pingue</i>	-	-	9,566	-	14,349	-
<i>G. spirale</i>	4,783	-	-	-	-	-
<i>Prorocentrum compressum</i>	-	-	-	4,783	-	-
<i>P. micans</i>	-	-	-	-	4,783	4,783
<i>Protooperidinium globulum</i>	28,698	23,915	57,396	33,481	9,566	66,962

Table 3.11 Comparison of biomass and major groups of phytoplankton in Sugluk Inlet and Wakeham Bay during the summer of 1989.

Station	Date	Depth (m)	Chl a ($\mu\text{g}\cdot\text{l}^{-1}$)	Total phytoplankton ($\text{cells}\cdot\text{l}^{-1}$)	Chrysophyte (%)	Diatom (%)		Dinoflagellate (%)
						Centric	Pennate	
Sugluk Inlet								
S1	11 Aug.	0	0.73	216,486	0	77.2	14.0	8.8
		5	0.94	548,828	0.8	83.2	11.8	4.2
		10	1.38	947,034	0.5	60.6	24.8	14.1
		20	0.96	885,456	0	72.2	16.0	11.8
		50	0.60	215,235	48.9	22.2	11.1	17.8
		110	0.02	368,291	83.1	9.1	0	7.8
S4	13 Aug.	0	0.43	188,335	0	34.3	37.1	28.6
		5	1.37	449,602	0	81.9	6.4	11.7
		10	1.12	588,309	5.7	74.8	8.1	11.4
		20	1.26	478,300	1.0	95.0	1.0	3.0
		50	1.17	550,045	0.9	92.2	1.7	5.2
		120	0.28	2,305,406	95.4	1.2	1.1	2.3
S6	14 Aug.	0	0.06	82,182	11.7	15.8	19.6	0
		5	0.59	99,596	42.6	3.3	1.3	3.9
		10	0.81	148,567	44.6	1.6	1.0	1.4
		20	1.97	31,064	0	12.8	2.8	6.8
		50	0.53	43,312	26.7	3.2	0.3	0.9
		80	0.18	21,388	0	8.1	0.6	10.2
S8	15 Aug.	0	0.59	655,271	8.8	11.7	75.8	3.7
		5	0.82	320,461	26.9	37.3	26.8	9.0
		10	1.30	425,687	7.9	73.0	15.7	3.4
		20	0.99	224,801	36.2	38.3	19.2	6.3
		50	1.33	344,376	36.1	52.8	0	11.1
		70	1.64	535,696	70.5	14.3	9.8	5.4

Table 3.11 Continued.

Station	Date	Depth (m)	Chl a ($\mu\text{g}\cdot\text{l}^{-1}$)	Total phytoplankton ($\text{cells}\cdot\text{l}^{-1}$)	Chrysophyte (%)	Diatom (%)		Dinoflagellate (%)
						Centric	Pennate	
Wakeham Bay								
W1	18 Aug.	0	2.38	770,063	9.3	54.7	29.8	6.2
		5	2.31	879,159	4.5	55.9	33.9	5.7
		10	2.69	1,100,090	14.7	77.0	2.2	6.1
		20	1.99	444,819	23.6	57.0	9.7	9.7
		50	1.82	645,705	12.6	48.8	31.9	6.7
		105	0.54	918,336	86.4	5.2	3.7	4.7
W4	20 Aug.	0	1.50	248,716	23.1	36.5	0	40.4
		5	1.69	698,318	13.0	77.4	1.4	8.2
		10	2.01	559,611	17.1	77.8	1.7	3.4
		20	2.35	779,629	23.9	66.3	1.8	8.0
		50	1.27	234,367	55.1	30.6	10.2	4.1
		190	0.85	2,453,698	96.2	0.4	0.8	2.6
W6	21 Aug.	0	3.06	93,496	5.2	1.8	0	5.4
		5	3.02	45,600	0	99.0	0.6	0.4
		10	3.76	13,952	22.5	13.3	8.0	0.9
		50	1.76	29,984	12.9	16.5	0.4	9.1
		75	0.55	15,480	0	12.8	0	0
		128	0.97	8,084	0	0	23.9	4.6
W8	22 Aug.	0	3.80	545,262	10.5	82.5	0.9	6.1
		5	3.46	841,808	14.2	68.8	14.2	2.8
		10	4.78	822,676	30.2	54.7	0.6	14.5
		20	5.10	1,095,307	14.9	73.3	6.1	5.7
		50	1.71	272,631	52.6	31.6	5.3	10.5
		84	0	2,683,263	97.3	0	0	2.7

Table 3.12 Phytoplankton taxa found in Sugluk Inlet in 1990.

Bacillariophyceae

Centrales

Chaetoceros atlanticus Cleve
C. brevis Schütt
C. compressus lauder
C. convolutus Castracane
C. debilis Cleve
C. fragilis Meunier
C. lacinosus Schutt
C. septentrionalis Ostrup
C. socialis Lauder
Coscinodiscus centralis Ehrenberg
C. radiatus Ehrenberg
Eucampia zodiacus Ehrenberg
Leptocylindrus danicus Cleve
Rhizosolenia hebetata (Bailey) Hensen
R. styliformis Brightwell
Skeletonema costatum (Greville) Cleve
Thalassiosira anguste-lineata (A. Schmidt) Fryxell et Hasle
T. gravida Cleve
T. nordenskiöldii Cleve

Pennales

Achnanthes Bory
Amphora Ehrenberg
Ceratoneis arcus Kützing
Cocconeis Ehrenberg
Cylindrotheca closterium (Ehrenberg) Reimann et Lewin
Diatoma vulgare Bory
Diploneis littoralis (Donkin) Cleve
Eunotia Ehrenberg
Fragilaria crotonensis Kitton
F. islandica Grunow
Licmophora Agardh
L. abbreviata Agardh
Navicula directa (Wm Smith) Ralfs
N. kjellmanii Cleve
N. salinarum Grunow
Nitzschia acicularis Wm Smith
N. cylindrus (Grunow) Hasle
N. grunowii (Grunow) Hasle
N. longissima (Brebisson) Grunow
N. paradoxa (Gmelin) Grunow
N. pungens Grunow
N. seriata Cleve
Pseudonitzschia delicatissima (Cleve) Heiden
Synedra Ehrenberg
Tabellaria flocculosa (Roth) Kützing
Thalassionema nitzschoides (Grunow) Van Heurck

Table 3.12 Continued.

Chlorophyceae

Ankistrodesmus falcatus (Corda) Ralfs
Arthrodesmus Ehrenberg
Carteria Diesing
Closterium Nitzsch
Cosmarium Corda
Desmidium Agardh
Mougeotia Agardh
Scenedesmus Meyen
Staurastrum Meyen

Chrysophyceae

Dinobryon balticum Willen
D. cylindricum Imhof
D. petiolatum Willen
D. sociale Ehrenberg
Distephanus speculum (Ehrenberg) Haeckel
Ochromonas Wyssotzki

Craspedophyceae

Monosiga Kent
Salpingoeca Clark

Cryptophyceae

Plagioselmis Butcher
Rhodomonas Karsten

Cyanophyceae

Merismopaedia Meyen
Synechococcus Nägeli

Dinophyceae

Amphidinium Claparède et Lachmann
Ceratium arcticum (Ehrenberg) Cleve
C. longipes (Bailey) Gran
Dinophysis acuminata Claparède et Lachmann
D. acuta Ehrenberg
D. arctica Mereschkowsky
D. ovum Schütt
D. rotundata Claparède et Lachmann
Gymnodinium simplex (Lohmann) Kofoid et Swezy
Gyrodinium spirale (Bergh) Kofoid et Swezy
Oxytoxum Stein
Peridiniella catenata (Levander) Balech
Phalachroma Stein
Prorocentrum Ehrenberg
Protogonyaulax tamarensis (Lebour) Taylor
Protoperidinium achromaticum (Levander) Balech
P. bipes (Paulsen) Balech
P. cerasus (Paulsen) Balech

Table 3.12 Continued.

P. depressum (Bailey) Balech
P. ovatum (Pouchet) Balech
P. palladium (Ostenfeld) Balech
P. pellucidum (Bergh) Balech

Euglenophyceae

Trachelomonas Ehrenberg

Prasinophyceae

Heteromastix Clark
Pyramimonas Schmarda

Prymnesiophyceae

Dicrateria Parke
Emiliana huxleyi (Lohmann) Hay et Mohler

Table 3.13 Quantitative species composition and vertical distribution of phytoplankton at station S1 in Sugluk Inlet, August 3, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	478,708	603,002	487,448	494,092	309,041	40,355
Bacillariophyceae	117,800	217,124	128,900	268,756	129,476	6,880
Centrales	29,512	74,160	65,740	89,784	37,964	100
<i>Chaetoceros</i> spp.	248	7,416	6,696	2,064	1,240	-
<i>C. brevis</i>	1,240	-	-	-	-	-
<i>C. convolutus</i>	-	-	744	-	-	-
<i>C. debilis</i>	-	-	-	688	-	-
<i>C. septentrionalis</i>	-	-	744	1,032	496	-
<i>C. socialis</i>	-	-	-	1,376	-	-
<i>Coscinodiscus</i> sp.	-	-	-	344	-	-
<i>C. centralis</i>	-	-	20	-	20	20
<i>Eucampia zodiacus</i>	496	-	248	1,720	-	20
<i>Leptocylindrus danicus</i>	744	-	-	-	-	-
<i>Rhizosolenia hebetata</i>	-	412	-	-	248	-
<i>R. styliformis</i>	248	-	-	-	-	-
<i>Skeletonema costatum</i>	496	-	-	-	-	-
<i>Thalassiosira</i> sp.	744	-	-	344	496	-
<i>T. anguste-lineata</i>	496	-	-	-	992	-
<i>T. gravida</i>	-	1,236	-	2,408	-	-
<i>T. nordenskioldii</i>	24,800	65,096	57,288	79,808	34,472	60
Pennales	88,288	142,964	73,160	178,972	91,512	6,780
<i>Cylindrotheca closterium</i>	248	824	248	-	248	-
<i>Navicula</i> sp.	496	-	-	-	248	-
<i>N. directa</i>	-	-	-	248	-	-
<i>N. kjellmanii</i>	248	-	-	-	-	-
<i>Nitzschia</i> sp.	-	-	-	-	248	-
<i>N. acicularis</i>	2,232	-	-	-	-	-
<i>N. cylindrus</i>	-	109,592	30,008	50,912	84,320	5,480
<i>N. grunowii</i>	70,432	5,356	29,264	-	744	1,180
<i>N. longissima</i>	744	2,060	496	248	-	-

Table 3.13 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
<i>N. paradoxa</i>	1,488	-	-	-	-	-
<i>Pseudonitzschia delicatissima</i>	10,416	24,720	11,656	24,768	4,464	120
<i>Thalassionema nitzschoides</i>	1,984	412	1,488	1,032	1,240	-
Unidentified	-	-	-	101,764	-	-
Chlorophyceae	-	-	2,678	-	-	-
<i>Carteria</i> sp.	-	-	2,678	-	-	-
Chrysophyceae	21,092	50,882	26,780	21,424	6,027	-
<i>Dinobryon balticum</i>	992	42,848	24,102	13,390	4,018	-
<i>D. cylindricum</i>	-	-	2,678	-	-	-
<i>D. petiolatum</i>	-	-	-	5,356	-	-
<i>Distephanus speculum</i>	248	-	-	-	-	-
<i>Ochromonas</i> sp.	5,672	-	-	-	-	-
Unidentified cyst	14,180	8,034	-	2,678	2,009	-
Craspedophyceae	14,180	13,390	10,712	5,356	2,009	-
<i>Monosiga</i> sp.	5,672	13,390	8,034	-	2,009	-
<i>Salpingoeca</i> sp.	8,508	-	2,678	5,356	-	-
Dinophyceae	2,332	2,924	4,276	384	516	-
<i>Amphidinium</i> sp.	794	412	-	-	-	-
<i>Ceratium arcticum</i>	-	40	-	20	20	-
<i>Dinophysis acuta</i>	-	824	-	-	-	-
<i>D. arctica</i>	-	-	744	344	248	-
<i>Gymnodinium</i> sp.	794	412	1,240	-	-	-
<i>Gyrodinium</i> sp.	248	-	248	-	-	-
<i>G. spirale</i>	-	412	1,240	-	-	-
<i>Oxytoxum</i> sp.	-	-	248	-	-	-
<i>Prorocentrum</i> sp.	248	-	-	-	-	-
<i>Protoperidinium bipes</i>	-	412	496	-	-	-
<i>P. depressum</i>	248	-	60	20	-	-
<i>P. pellucidum</i>	-	412	-	-	248	-

Table 3.13 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Prasinophyceae	2,836	-	-	-	-	-
<i>Heteromatix sp.</i>	2,836	-	-	-	-	-
Prymnesiophyceae	31,196	-	-	-	-	-
<i>Emiliana huxleyii</i>	28,360	-	-	-	-	-
Unidentified	2,836	-	-	-	-	-
Unidentified flagellates	289,272	318,682	302,614	198,172	170,765	33,475
1 - 2 μ	90,752	53,560	120,510	66,950	56,252	5,356
2 - 5 μ	130,456	203,528	163,358	93,730	96,432	25,441
5 - 10 μ	36,868	56,238	18,746	34,814	18,081	2,678
10 - 20 μ	31,196	5,356	-	2,678	-	-

Table 3.14 Quantitative species composition and vertical distribution of phytoplankton at station S4 in Sugluk Inlet, August 5, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	229,501	194,402	109,562	189,873	41,953	24,255
Bacillariophyceae	60,572	114,864	63,488	157,729	7,560	18,104
Centrales	46,128	111,888	62,000	151,528	5,520	1,612
<i>Chaetoceros</i> spp.	-	496	496	-	-	-
<i>C. debilis</i>	4,464	-	-	-	-	-
<i>Coscinodiscus centralis</i>	-	40	-	496	-	-
<i>Thalassiosira</i> sp.	-	1,240	248	248	-	-
<i>T. gravida</i>	-	-	-	5,704	1,080	-
<i>T. nordenskioeldii</i>	41,664	110,112	61,256	145,080	4,440	1,612
Pennales	14,444	2,976	1,488	6,201	2,040	16,492
<i>Achnanthes</i> sp.	496	-	-	-	-	-
<i>Ceratoneis arcus</i>	248	-	-	-	-	-
<i>Diatoma vulgare</i>	248	-	-	-	-	-
<i>Licmophora</i> sp.	992	-	-	-	-	-
<i>Navicula</i> sp.	8,978	1,984	-	-	-	-
<i>Nitzschia cylindrus</i>	-	-	-	4,960	2,040	-
<i>N. grunowii</i>	496	-	-	-	-	16,244
<i>N. longissima</i>	-	248	-	-	-	-
<i>Synedra</i> sp.	-	496	-	-	-	-
<i>Tabellaria flocculosa</i>	1,994	248	-	-	-	-
<i>Thalassionema nitzschooides</i>	992	-	-	1,241	-	248
Unidentified	-	-	1,488	-	-	-
Chlorophyceae	1,736	-	-	-	-	-
<i>Ankistrodesmus falcatus</i>	1,488	-	-	-	-	-
<i>Closterium</i> sp.	248	-	-	-	-	-
Chrysophyceae	3,224	12,054	10,045	6,027	8,036	-
<i>Dinobryon balticum</i>	-	12,054	10,045	6,027	-	-
<i>D. cylindricum</i>	3,224	-	-	-	-	-
Unidentified	-	-	-	-	8,036	-

Table 3.14 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Cryptophyceae	14,063	-	-	-	-	-
<i>Plagioselmis sp.</i>	14,063	-	-	-	-	-
Dinophyceae	8,780	3,196	1,876	-	240	124
<i>Amphidinium sp.</i>	8,036	-	248	-	240	-
<i>Ceratium arcticum</i>	-	80	-	-	-	-
<i>Dinophysis acuminata</i>	-	20	-	-	-	-
<i>D. arctica</i>	248	1,488	248	-	-	-
<i>Gymnodinium sp.</i>	-	248	496	-	-	124
<i>Gyrodinium sp.</i>	-	-	248	-	-	-
<i>Protooperidinium bipes</i>	496	496	-	-	-	-
<i>P. depressum</i>	-	-	40	-	-	-
<i>P. ovatum</i>	-	-	60	-	-	-
<i>P. palladium</i>	-	120	-	-	-	-
Unidentified	-	744	536	-	-	-
Unidentified flagellates	140,630	64,288	34,153	26,117	26,117	6,027
1 - 2 μ	6,027	4,018	-	-	4,018	-
2 - 5 μ	78,351	40,180	30,135	16,072	16,072	2,009
5 - 10 μ	52,234	20,090	4,018	10,045	6,027	4,018
10 - 20 μ	4,018	-	-	-	-	-

Table 3.15 Quantitative species composition and vertical distribution of phytoplankton at station S6 in Sugluk Inlet, August 4, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	185,016	429,552	319,214	229,144	24,927	8,876
Bacillariophyceae	108,451	330,928	244,230	142,760	6,520	840
Centrales	64,728	280,704	201,574	91,848	3,586	600
<i>Chaetoceros</i> sp.	992	688	992	688	-	-
<i>C. septentrionalis</i>	-	-	2,678	-	-	-
<i>Coscinodiscus</i> sp.	-	2,064	-	-	-	-
<i>Eucampia zodiacus</i>	1,240	-	-	-	-	-
<i>Thalassiosira anguste-lineata</i>	744	-	-	-	-	-
<i>T. gravida</i>	5,208	8,944	1,488	-	-	-
<i>T. nordenskiöldii</i>	56,544	269,008	196,416	91,160	3,586	600
Pennales	43,723	50,224	42,656	50,912	2,934	240
<i>Achnanthes</i> sp.	496	-	-	-	-	-
<i>Cocconeis</i> sp.	248	-	-	-	-	-
<i>Cylindrotheca closterium</i>	-	-	-	-	163	-
<i>Diatoma vulgare</i>	992	-	-	-	-	-
<i>Licmophora</i> sp.	2,480	-	-	-	-	-
<i>Navicula</i> sp.	8,680	2,064	-	-	-	-
<i>Nitzschia</i> sp.	3,720	-	-	-	-	-
<i>N. cylindrus</i>	-	48,160	29,264	39,560	2,771	-
<i>N. grunowii</i>	5,456	-	10,416	11,352	-	-
<i>N. pungens</i>	1,488	-	-	-	-	-
<i>Pseudonitzschia delicatissima</i>	1,736	-	-	-	-	-
<i>Synedra</i> sp.	1,488	-	-	-	-	120
<i>Tabellaria flocculosa</i>	10,912	-	-	-	-	120
<i>Thalassionema nitzschooides</i>	-	-	2,976	-	-	-
Unidentified	6,027	-	-	-	-	-
Chlorophyceae	992	-	-	-	-	-
<i>Arthrodesmus</i> sp.	248	-	-	-	-	-
<i>Mougeotia</i> sp.	496	-	-	-	-	-
<i>Staurastrum</i> sp.	248	-	-	-	-	-

Table 3.15 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Chrysophyceae	6,027	8,034	-	-	-	-
<i>Dinobryon cylindricum</i>	6,027	8,034	-	-	-	-
Cyanophyceae	6,027	-	-	-	-	-
<i>Synechococcus sp.</i>	6,027	-	-	-	-	-
Dinophyceae	3,001	2,752	-	344	326	-
<i>Dinophysis arctica</i>	-	688	-	-	-	-
<i>Gymnodinium sp.</i>	-	-	-	344	326	-
<i>Prorocentrum sp.</i>	744	-	-	-	-	-
<i>Protoperidinium bipe</i>	2,009	2,064	-	-	-	-
<i>P. cerasus</i>	248	-	-	-	-	-
Unidentified flagellates	60,270	87,838	74,984	85,696	18,081	8,036
1 - 2 μ	-	45,526	-	16,068	-	-
2 - 5 μ	46,207	15,532	66,950	64,272	14,063	8,036
5 - 10 μ	14,063	24,102	8,034	5,356	4,018	-
10 - 20 μ	-	2,678	-	-	-	-

Table 3.16 Quantitative species composition and vertical distribution of phytoplankton at station S8 in Sugluk Inlet, August 4, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	200,120	270,400	358,501	144,919	82,913	28,003
Bacillariophyceae	25,296	147,796	188,009	41,964	17,137	868
Centrales	1,984	112,364	74,673	26,413	10,937	248
<i>Chaetoceros</i> spp.	-	7,912	-	10,045	992	-
<i>C. atlanticus</i>	-	220	-	-	-	-
<i>C. septentrionalis</i>	-	-	2,009	-	2,009	-
<i>Coscinodiscus</i> sp.	-	1,032	248	-	248	-
<i>Eucampia zodiacus</i>	-	-	-	-	744	-
<i>Thalassiosira anguste-lineata</i>	-	-	-	1,240	-	-
<i>T. gravida</i>	744	2,064	2,480	992	248	-
<i>T. nordenskioldii</i>	1,240	101,136	69,936	14,136	6,696	248
Pennales	23,312	35,432	113,336	15,551	6,200	620
<i>Achnanthes</i> sp.	3,472	-	-	-	-	-
<i>Amphora</i> sp.	1,240	-	-	-	-	-
<i>Ceratoneis arcus</i>	744	-	-	-	-	-
<i>Cylindrotheca closterium</i>	-	688	-	-	-	124
<i>Diatoma vulgare</i>	4,960	688	-	-	-	-
<i>Eunotia</i> sp.	248	-	-	-	-	-
<i>Fragilaria islandica</i>	496	-	36,704	-	-	-
<i>Licmophora</i> sp.	-	344	248	-	-	-
<i>L. abbreviata</i>	-	-	-	-	248	-
<i>Navicula</i> sp.	3,224	2,408	-	248	992	124
<i>N. directa</i>	-	-	496	-	-	-
<i>Nitzschia</i> sp.	496	-	496	-	248	124
<i>N. acicularis</i>	-	-	-	-	744	124
<i>N. cylindrus</i>	1,488	20,640	21,328	14,063	992	-
<i>N. grunowii</i>	-	7,568	54,064	496	1,488	-
<i>Pseudonitzschia delicatissima</i>	-	688	-	-	1,488	-
<i>Synedra</i> sp.	992	-	-	248	-	124
<i>Tabellaria flocculosa</i>	5,704	2,064	-	-	-	-
<i>Thalassionema nitzschoides</i>	248	-	-	496	-	-
Unidentified	-	344	-	-	-	-

Table 3.16 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Chlorophyceae	1,984	-	248	-	-	-
<i>Closterium sp.</i>	992	-	248	-	-	-
<i>Cosmarium sp.</i>	248	-	-	-	-	-
<i>Scenedesmus sp.</i>	496	-	-	-	-	-
<i>Staurastrum sp.</i>	248	-	-	-	-	-
Chrysophyceae	1,448	-	-	-	-	-
<i>Dinobryon sociale</i>	1,448	-	-	-	-	-
Cryptophyceae	-	-	-	2,009	-	-
<i>Rhodomonas minuta</i>	-	-	-	2,009	-	-
Dinophyceae	-	2,064	1,488	496	1,488	-
<i>Amphidinium sp.</i>	-	-	-	496	248	-
<i>Dinophysis acuta</i>	-	344	-	-	-	-
<i>D. arctica</i>	-	344	-	-	-	-
<i>Gymnodinium sp.</i>	-	-	-	-	248	-
<i>Gyrodinium sp.</i>	-	-	744	-	992	-
<i>G. spirale</i>	-	344	-	-	-	-
<i>Protoperidinium bipes</i>	-	344	496	-	-	-
<i>P. depressum</i>	-	-	248	-	-	-
Unidentified	-	688	-	-	-	-
Prasinophyceae	-	-	-	2,009	-	-
<i>Pyramimonas sp.</i>	-	-	-	2,009	-	-
Prymnesiophyceae	-	-	-	-	2,009	-
<i>Dicrateria sp.</i>	-	-	-	-	2,009	-

Table 3.16 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Unidentified flagellates	171,392	120,540	166,747	94,423	58,261	27,135
1 - 2 μ	53,560	28,126	28,126	4,018	4,018	-
2 - 5 μ	99,086	88,396	118,531	80,360	38,171	24,120
5 - 10 μ	18,746	4,018	20,090	10,045	16,072	1,005
10 - 20 μ	-	-	-	-	-	2,010

Table 3.17 Quantitative species composition and vertical distribution of phytoplankton at station S1 in Sugluk Inlet, August 19, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	28,597	48,537	35,163	62,295	25,794	
Bacillariophyceae	992	6,448	18,352	38,440	5,580	
Centrales	-	4,712	12,152	32,736	5,456	
<i>Chaetoceros</i> spp.	-	992	496	1,984	-	
<i>Thalassiosira</i> sp.	-	3,720	-	-	3,224	
<i>T. gravida</i>	-	-	992	4,960	2,232	
<i>T. nordenskioldii</i>	-	-	10,664	25,792	-	
Pennales	992	1,736	6,200	5,704	124	
<i>Cylindrotheca closterium</i>	-	-	248	-	124	
<i>Navicula</i> sp.	-	-	248	-	-	
<i>Nitzschia</i> sp.	-	-	-	248	-	
<i>N. acicularis</i>	-	248	-	-	-	
<i>Pseudonitzschia delicatissima</i>	-	-	2,480	-	-	
<i>Thalassionema nitzschoides</i>	992	1,488	3,224	5,456	-	
Chrysophyceae	8,036	12,054	-	8,036	4,018	
<i>Dinobryon balticum</i>	8,036	12,054	-	8,036	4,018	
Cryptophyceae	-	2,009	-	-	-	
<i>Plagioselmis</i> sp.	-	2,009	-	-	-	
Dinophyceae	1,488	8,184	2,748	1,260	124	
<i>Amphidinium</i> sp.	-	248	-	-	-	
<i>Ceratium arcticum</i>	-	-	20	20	-	
<i>Dinophysis acuta</i>	248	-	248	-	-	
<i>D. arctica</i>	868	2,976	496	-	-	
<i>D. ovum</i>	-	496	-	-	-	
<i>D. rotundatum</i>	-	-	248	-	-	
<i>Gymnodinium</i> sp.	-	992	744	496	-	
<i>G. simplex</i>	-	744	-	-	-	
<i>Gyrodinium</i> sp.	-	-	-	-	124	
<i>Prorocentrum</i> sp.	-	1,488	744	744	-	

Table 3.17 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
<i>Peridiniella catenata</i>	-	-	248	-	-	-
<i>Protogonyaulax tamarensis</i>	248	-	-	-	-	-
<i>Protopedinium palladium</i>	-	744	-	-	-	-
Unidentified	124	248	-	-	-	-
Unidentified flagellates	18,081	18,081	14,063	14,063	16,072	
1 - 2 μ	-	2,009	-	-	-	
2 - 5 μ	14,063	16,072	10,045	10,045	12,054	
5 - 10 μ	2,009	-	4,018	4,018	4,018	
10 - 20 μ	2,009	-	-	-	-	

Table 3.18 Quantitative species composition and vertical distribution of phytoplankton at station S4 in Sugluk Inlet, August 19, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	80,696	89,401	172,901	62,615	99,054	36,658
Bacillariophyceae	13,888	13,094	67,496	15,376	22,588	496
Centrales	12,400	10,664	57,576	14,012	16,016	248
<i>Chaetoceros</i> spp.	992	992	7,440	744	248	-
<i>C. compressus</i>	-	-	32,736	-	-	-
<i>C. fragilis</i>	-	-	7,688	868	-	-
<i>C. laciniosus</i>	-	-	1,240	-	-	-
<i>Coscinodiscus</i> sp.	-	-	40	-	20	124
<i>Eucampia zodiacus</i>	-	-	248	-	-	-
<i>Leptocylindrus danicus</i>	-	248	-	-	-	-
<i>Rhizosolenia hebetata</i>	-	-	248	-	-	-
<i>Thalassiosira</i> sp.	-	248	-	-	-	124
<i>T. gravida</i>	-	744	-	2,356	2,604	-
<i>T. nordenskioldii</i>	11,408	8,432	7,936	10,044	13,144	-
Pennales	1,488	2,430	9,920	1,364	6,572	248
<i>Cylindrotheca closterium</i>	496	496	744	124	-	-
<i>Licmophora</i> sp.	-	-	248	-	-	-
<i>Navicula</i> sp.	744	-	-	-	372	-
<i>Nitzschia</i> sp.	248	-	744	-	-	248
<i>N. acicularis</i>	-	-	992	-	-	-
<i>N. cylindrus</i>	-	-	-	-	5,456	-
<i>N. seriata</i>	-	496	-	-	-	-
<i>Thalassionema nitzschoides</i>	-	1,438	7,192	1,240	744	-
Chrysophyceae	20,090	50,225	42,685	28,126	8,036	4,018
<i>Dinobryon balticum</i>	20,090	50,225	38,171	28,126	8,036	4,018
<i>Distephanus speculum</i>	-	-	496	-	-	-
Unidentified cyst	-	-	4,018	-	-	-
Cryptophyceae	-	-	12,054	-	-	-
<i>Plagioselmis</i> sp.	-	-	12,054	-	-	-

Table 3.18 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Cyanophyceae	-	-	-	-	30,135	-
<i>Synechococcus sp.</i>	-	-	-	-	30,135	-
Dinophyceae	2,520	5,992	3,492	1,032	124	-
<i>Amphidinium sp.</i>	-	-	496	-	-	-
<i>Ceratium arcticum</i>	20	40	20	40	-	-
<i>Dinophysis arctica</i>	-	2,480	496	620	-	-
<i>Gymnodinium sp.</i>	1,240	-	744	-	124	-
<i>G. simplex</i>	-	248	-	-	-	-
<i>Gyrodinium sp.</i>	-	-	248	-	-	-
<i>G. spirale</i>	248	496	496	-	-	-
<i>Oxytoxum sp.</i>	248	-	-	-	-	-
<i>Peridiniella catenata</i>	248	992	-	-	-	-
<i>Protoperidinium depressum</i>	20	-	-	-	-	-
<i>P. pellucidum</i>	-	496	248	248	-	-
Unidentified dinoflagellate	496	1,240	744	124	-	-
Unidentified flagellates	44,198	20,090	44,198	18,081	38,171	32,144
1 - 2 μ	4,018	-	-	-	-	-
2 - 5 μ	30,135	12,054	26,117	12,054	34,153	26,117
5 - 10 μ	10,045	8,036	18,081	6,027	4,018	6,027
10 - 20 μ	-	-	-	-	-	-

Table 3.19 Quantitative species composition and vertical distribution of phytoplankton at station S6 in Sugluk Inlet, August 20, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	69,867	47,173	66,271	73,200	22,491	6,647
Bacillariophyceae	14,136	11,284	8,928	22,568	144	248
Centrales	12,400	7,688	5,084	18,724	144	124
<i>Chaetoceros</i> spp.	-	496	2,976	2,480	-	-
<i>Coscinodiscus</i> sp.	124	-	-	-	-	-
<i>C. radiatus</i>	-	-	-	-	20	-
<i>Leptocylindrus danicus</i>	-	248	496	-	-	-
<i>Thalassiosira</i> sp.	620	496	124	248	124	124
<i>T. anguste-lineata</i>	248	-	-	-	-	-
<i>T. gravida</i>	-	1,488	1,240	-	-	-
<i>T. nordenskioldii</i>	11,408	4,960	248	15,996	-	-
Pennales	1,736	3,596	3,844	3,844	-	124
<i>Cylindrotheca closterium</i>	-	248	248	-	-	-
<i>Diploneis littoralis</i>	-	-	124	-	-	-
<i>Navicula</i> sp.	1,240	868	1,240	1,240	-	-
<i>N. salinarum</i>	-	-	-	-	-	124
<i>Nitzschia</i> sp.	248	1,612	-	124	-	-
<i>N. acicularis</i>	248	-	-	-	-	-
<i>N. cylindrus</i>	-	-	1,488	-	-	-
<i>N. longissima</i>	-	-	-	248	-	-
<i>N. pungens</i>	-	-	372	372	-	-
<i>Thalassionema nitzschoides</i>	-	868	372	1,860	-	-
Chlorophyceae	-	248	-	-	-	-
<i>Arthrodesmus</i> sp.	-	124	-	-	-	-
<i>Staurastrum</i> sp.	-	124	-	-	-	-
Chrysophyceae	12,054	14,063	20,090	20,090	10,169	372
<i>Dinobryon balticum</i>	12,054	14,063	20,090	20,090	10,045	-
Unidentified cyst	-	-	-	-	124	372

Table 3.19 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Craspedophyceae	-	6,027	-	-	-	-
<i>Salpingoeca</i> sp.	-	6,027	-	-	-	-
Cyanophyceae	-	124	-	-	-	-
<i>Merismopaedia</i> sp.	-	124	-	-	-	-
Dinophyceae	1,364	992	2,852	2,416	124	-
<i>Amphidinium</i> sp.	248	124	-	-	-	-
<i>Ceratium arcticum</i>	-	-	124	40	-	-
<i>C. longipes</i>	-	-	-	20	-	-
<i>Dinophysis acuta</i>	-	124	124	124	-	-
<i>C. arctica</i>	248	248	248	248	-	-
<i>Gymnodinium</i> sp.	620	248	496	620	-	-
<i>Gyrodinium spirale</i>	-	-	372	124	-	-
<i>Phalochroma</i> sp.	124	-	-	-	-	-
<i>Prorocentrum</i> sp.	124	-	744	868	-	-
<i>Protoperidinium achromaticum</i>	-	-	124	-	-	-
<i>P. bipes</i>	-	-	-	-	124	-
Unidentified	-	248	620	372	-	-
Unidentified flagellates	42,189	14,063	34,153	28,126	12,054	6,027
1 - 2 μ	4,018	-	-	-	-	-
2 - 5 μ	30,135	12,054	18,081	12,054	10,045	4,018
5 - 10 μ	8,036	2,009	16,072	12,054	2,009	2,009
10 - 20 μ	-	-	-	4,018	-	-

Table 3.20 Quantitative species composition and vertical distribution of phytoplankton at station S8 in Sugluk Inlet, August 20, 1990.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Total phytoplankton (cells/litre)	80,186	79,150	59,764	32,738	53,945	28,225
Bacillariophyceae	3,100	30,048	4,216	12,276	3,596	1,736
Centrales	496	25,832	-	9,424	2,604	248
<i>Chaetoceros</i> spp.	372	7,440	-	744	-	248
<i>C. compressus</i>	-	5,456	-	-	-	-
<i>C. septentrionalis</i>	-	496	-	-	-	-
<i>Coscinodiscus</i> sp.	-	40	-	-	-	-
<i>Thalassiosira</i> sp.	-	-	-	496	-	-
<i>T. gravis</i>	124	-	-	744	868	-
<i>T. nordenskioldii</i>	-	12,400	-	7,440	1,736	-
Pennales	2,604	4,216	4,216	2,852	992	1,488
<i>Ceratoneis arcus</i>	-	248	-	-	-	-
<i>Cylindrotheca closterium</i>	-	-	-	248	-	-
<i>Diploneis littoralis</i>	248	-	-	-	-	124
<i>Eunotia</i> sp.	-	248	-	-	-	-
<i>Fragilaria crotenensis</i>	-	-	372	-	-	-
<i>Licmophora</i> sp.	-	248	124	124	124	124
<i>Navicula</i> sp.	1,488	2,728	1,612	868	372	620
<i>Nitzschia</i> sp.	124	-	-	248	-	496
<i>N. acicularis</i>	-	-	-	124	-	-
<i>Pseudonitzschia delicatissima</i>	-	-	1,240	-	-	-
<i>Tabellaria flocculosa</i>	-	248	-	-	-	-
<i>Thalassionema nitzschoides</i>	744	496	868	1,240	496	124
Chlorophyceae	2,257	-	124	-	-	-
<i>Ankistrodesmus falcatus</i>	2,009	-	-	-	-	-
<i>Desmidium</i> sp.	124	-	-	-	-	-
<i>Staurastrum</i> sp.	124	-	124	-	-	-
Chrysophyceae	24,108	6,275	-	-	6,027	2,009
<i>Dinobryon balticum</i>	24,108	6,027	-	-	6,027	2,009
Unidentified cyst	-	248	-	-	-	-

Table 3.20 Continued.

	SAMPLING DEPTH (m)					
	0	5	10	20	50	120
Cryptophyceae	6,027	2,009	-	-	-	-
<i>Plagioselmis</i> sp.	6,027	2,009	-	-	-	-
Cyanophyceae	-	-	10,045	-	-	-
<i>Synechococcus</i> sp.	-	-	10,045	-	-	-
Dinophyceae	496	1,488	4,430	496	-	372
<i>Amphidinium</i> sp.	-	-	124	-	-	-
<i>Ceratium arcticum</i>	-	-	20	-	-	-
<i>Dinophysis acuta</i>	-	-	-	124	-	-
<i>D. arctica</i>	124	248	-	124	-	-
<i>Gymnodinium</i> sp.	-	248	2,009	-	-	372
<i>Gyrodinium spirale</i>	124	-	-	124	-	-
<i>Prorocentrum</i> sp.	124	-	2,009	-	-	-
<i>Protoperidinium achromaticum</i>	-	248	248	-	-	-
<i>P. bipes</i>	-	248	-	124	-	-
<i>P. depressum</i>	-	-	20	-	-	-
Unidentified	124	496	-	-	-	-
Euglenophyceae	4,018	-	-	-	-	-
<i>Trachelomonas</i>	4,018	-	-	-	-	-
Unidentified flagellates	40,180	38,090	42,189	20,090	44,198	24,108
1 - 2 μ	-	-	-	-	-	2,009
2 - 5 μ	24,108	18,081	32,144	14,063	28,126	8,036
5 - 10 μ	16,072	20,009	10,045	6,027	16,072	12,054
10 - 20 μ	-	-	-	-	-	2,009

Table 3.21 Comparison of biomass and major groups of phytoplankton in Sugluk Inlet during August of 1990.

Station	Date	Depth (m)	Chl a ($\mu\text{g}\cdot\text{l}^{-1}$)	Total phytoplankton ($\text{cells}\cdot\text{l}^{-1}$)	Chrysophyte (%)	Diatom (%)		Dinoflagellate (%)	Unidentified flagellates (%)	
						Centric	Pennate			
S1	3 Aug.	0	1.03	478,708	4.4	6.2	18.4	0.5	60.4	
		5	1.16	603,002	8.4	12.3	23.7	0.5	52.9	
		10	1.04	487,448	5.5	13.5	15.0	0.9	62.1	
		20	1.44	494,092	4.3	18.2	36.2	0.1	40.1	
		50	0.68	309,041	2.0	12.3	29.6	0.2	55.2	
		100	0.48	40,355	0	0.3	16.8	0	83.0	
	19 Aug.	0	0.37	28,597	28.1	0	3.5	5.2	63.2	
		5	0.59	48,537	24.8	9.7	3.6	16.9	37.3	
		10	0.50	35,163	0	34.6	17.6	7.8	40.0	
		20	0.79	62,295	12.9	52.6	9.2	2.0	22.6	
		100	0.32	25,794	15.6	21.2	0.5	0.5	62.3	
	S4	5 Aug.	0	0.71	229,501	1.4	20.1	6.3	3.8	61.3
			5	1.78	194,402	6.2	57.6	1.5	1.6	33.1
			10	0.89	109,562	9.2	56.6	1.4	1.7	31.2
20			1.90	189,873	3.2	79.8	3.3	0	13.8	
50			0.65	41,953	19.2	13.2	4.9	0.6	62.3	
120			0.82	24,255	0	6.7	68.0	0.5	24.9	
19 Aug.		0	0.45	80,696	24.9	15.4	1.8	3.1	54.8	
		5	0.77	89,401	56.2	11.9	2.7	6.7	22.5	
		10	0.71	172,901	24.7	33.3	5.7	2.0	25.6	
		20	0.81	62,615	44.9	22.4	2.2	1.7	28.9	
		50	0.54	99,054	8.1	16.2	6.6	0.1	38.5	
		120	0.32	36,658	11.0	0.7	0.7	0	87.7	

Table 3.21 Continued.

Station	Date	Depth (m)	Chl a ($\mu\text{g}\cdot\text{l}^{-1}$)	Total phytoplankton ($\text{cells}\cdot\text{l}^{-1}$)	Chrysophyte (%)	Diatom (%)		Dinoflagellate (%)	Unidentified flagellates (%)	
						Centric	Pennate			
S6	4 Aug.	0	0.91	185,016	3.3	35.0	23.6	1.6	32.6	
		5	2.55	429,552	1.9	65.4	11.7	0.6	20.5	
		10	2.38	319,214	0	63.2	13.4	0	23.5	
		20	1.51	229,144	0	40.1	22.2	0.2	37.4	
		50	0.63	24,927	0	14.4	11.8	1.3	72.5	
		75	0.60	8,876	0	6.8	2.7	0	90.5	
	20 Aug.	0	0.43	69,867	17.3	17.8	2.5	2.0	60.4	
		5	0.49	47,173	29.8	16.3	7.6	2.1	29.8	
		10	0.70	66,271	30.3	7.7	5.8	4.3	51.5	
		20	0.71	73,200	27.5	25.6	5.3	3.3	38.4	
		50	0.56	22,491	45.2	0.6	0	0.6	53.6	
		75	0.53	6,647	5.6	1.9	1.9	0	90.7	
	S8	4 Aug.	0	0.88	200,120	0.7	1.0	11.7	0.8	85.6
			5	2.08	270,400	0	41.6	13.1	0	44.6
10			1.39	358,501	0	20.8	31.6	0.4	46.5	
20			0.77	144,919	0	18.2	10.7	0.3	65.2	
50			0.53	82,913	0	13.2	7.5	1.8	70.3	
75			0.71	28,003	0	0.9	2.2	0	96.9	
20 Aug.		0	0.43	80,186	30.1	0.6	3.3	0.6	50.1	
		5	0.53	79,150	7.9	32.6	5.3	1.9	48.1	
		10	0.54	59,764	0	0	7.1	7.4	70.6	
		20	0.48	32,738	0	28.8	8.7	1.5	61.4	
		50	0.43	53,945	11.2	4.8	1.8	0	81.9	
		83	0.43	28,228	7.1	0.9	5.3	1.3	85.4	

Table 4.1 Meso- and macrozooplankton taxa found in Sugluk Inlet and Wakeham Bay in 1989 and 1990.

Cnidaria

Bougainvillia superciliaris (L. Agassiz)
Sarsia sp.
Euphysa flammea (Linko)
Perigonimus yoldia-arcticae Birula
Aglantha digitale (O. F. Müller)
Aeginopsis laurenti Brandt

Ctenophora

Mertensia ovum (Fabricius)
Beroe cucumis Fabricius

Mollusca

Spiratella helicina (Phipps)
Clione limacina (Phipps)

Annelida

Autolytus sp.
Polychaete larvae

Copepoda

Acartia longiremis (Lilljeborg)
Aetideopsis rostrata G. O. Sars
Calanus finmarchicus (Gunnerus)
Calanus glacialis Jaschnov
Calanus hyperboreus Krøyer
Limnocalanus macrurus G. O. Sars
Metridia longa (Lubbock)
Pseudocalanus sp.
Jaschnovia tolli (Markhaseva)
Scolecithrix farrani Smirnov
Halectinosoma neglecta (G. O. Sars)
Harpacticus sp.
Tisbe furcata (Baird)
Cyclopina gracilis Claus
Cyclopina schneideri Scott
Oithona similis Claus
Copepod nauplii

Cirripedia

Balanus nauplii

Mysidacea

Mysis oculata (Fabricius)
Mysis mixta Lilljeborg
Mysis ?polaris Holmquist
Mysis litoralis (Banner)
Pseudomma affine G.O. Sars
Erythroops erythrothalma (Göes)

Table 4.1 Continued.

Amphipoda Gammaridea

Rozinante fragilis (Goës)
Onisimus litoralis (Krøyer)
Ischyrocerus anguipes Krøyer
Acanthostepheia malmgreni (Goës)
Monoculodes intermedius (Shoemaker)
Westwoodilla megalops (G.O. Sars)
Syrrhoe crenulata Goës
Tryphosella schneideri (Stephensen)
Rhachotropis aculeata (Lepechin.)
Melita dentata (Krøyer)
Gammarellus homari (J.C. Fabricius)
Orchomene minuta (Krøyer)

Amphipoda Hyperiidea

Hyperia galba (Montagu)
Hyperoche medusarum (Krøyer)
Themisto libellula (Lichtenstein)
Themisto abyssorum Boeck

Euphausiacea

Thysanoessa raschii (M. Sars)
Euphausiid nauplii

Decapoda

Decapod larvae

Chaetognatha

Sagitta elegans Verrill

Larvacea

unidentified spp.

Pisces

unidentified spp.

Table 4.2 Mesozooplankton abundance (no./m³) in Sugluk Inlet, August 11-15, 1989.

	Station						
	S1 Depth (m)			S2 Depth (m)		S3 Depth (m)	
	0-10	10-40	40-105	0-25	25-48	0-10	10-80
<i>Aglantha digitale</i>	0	2.4	0	0.6	6.0	0	0.6
<i>Aeginopsis laurenti</i>	0	0	0.2	0	0	1.4	0.2
<i>Spiratella helicina</i>	1.4	2.9	0	0	0	0	0
Polychaete larvae	0	0	2.5	6.9	0	0	0
<i>Autolytus</i> sp.	0	0	0.2	0	0	0	0
<i>Acartia longiremis</i>	0	0	0	0	0	0	5.1
<i>Calanus finmarchicus</i> F	0	0	0.7	0	0.6	0	0.2
C V	0	0	0.2	0	0	0	0
<i>Calanus glacialis</i> F	0	0	1.6	0	3.6	1.4	2.0
C V	0	0.5	7.7	0.6	6.6	0	22.7
C IV	0	0	0.4	0	0	0	0
C III	0	0.5	1.1	0	0.6	0	0.2
C II	0	1.9	0	0	0	0	0
C I	14.3	10.5	0	0	0	4.3	24.9
<i>Calanus hyperboreus</i> F	0	0	1.1	0	0	0	0.6
C V	0	0	3.6	0	2.4	0	0
C IV	0	0	0	0	0	0	0
C III	0	0	0.2	0	0.6	0	0
<i>Metridia longa</i>	0	0	3.4	0	1.2	0	0.2
<i>Pseudocalanus</i> sp.	8.6	275.2	0	312.5	197.0	8.6	151.8
<i>Oithona similis</i>	84.3	760.5	0	500.0	0	58.6	160.0
Copepod nauplii	17.1	165.7	6.4	131.9	65.3	34.3	30.8
<i>Balanus</i> nauplii	0	0	0	13.9	0	0	10.2
<i>Onisimus litoralis</i>	0	0	0	0	0	0	0
<i>Themisto libellula</i>	0	0.9	0.2	0.6	0	0	1.0
Euphausiid nauplii	0	0	0	13.9	0	21.4	2.0
Decapod larvae	1.4	4.8	0	0	0	0	0
<i>Sagitta elegans</i>	20.0	2.8	0	1.1	5.3	0	3.5

Table 4.2 Continued.

	Station						
	S4 Depth (m)		S6 Depth (m)		S8 Depth (m)		
	0-10	10-120	0-10	10-75	0-10	10-25	25-70
<i>Aglantha digitale</i>	0	1.7	0	1.7	0	0	0.9
<i>Aeginopsis laurenti</i>	0	0	0	0	0	0	0
<i>Spiratella helicina</i>	0	6.2	0	0	0	0	0
Polychaete larvae	0	4.1	0	5.4	0	0	0
<i>Autolytus</i> sp.	0	0	0	0	0	2.8	0
<i>Acartia longiremis</i>	0	0	1.4	0	0	7.4	2.6
<i>Calanus finmarchicus</i> F	-	0.5	0	0.2	0	0	2.5
C V	0	0.2	0	0	0	0	0.6
<i>Calanus glacialis</i> F	0	4.9	0	0.7	0	0	8.3
C V	0	44.0	0	11.4	0	1.8	47.6
C IV	0	0.9	0	0	0	0	0
C III	0	0.1	0	2.7	0	0	0.3
C II	0	0	0	0	0	3.7	2.2
C I	1.4	4.0	4.3	23.8	8.6	19.3	0
<i>Calanus hyperboreus</i> F	0	1.9	0	4.1	0	0	6.3
C V	0	6.2	0	13.7	0	0	34.9
C IV	0	0	0	0	0	0	0.3
C III	0	0	0	0.2	0	0	0
<i>Metridia longa</i>	0	3.7	0	0	0	0	0
<i>Pseudocalanus</i> sp.	102.9	228.8	51.4	269.7	2.9	146.3	52.2
<i>Oithona similis</i>	240.0	181.5	508.6	278.2	0	1570.3	152.1
Copepod nauplii	57.1	44.1	18.6	24.3	0	81.5	0
<i>Balanus</i> nauplii	0	12.3	2.9	2.3	0	0	0
<i>Onisimus litoralis</i>	0	0.1	0	2.2	0	12.0	1.7
<i>Themisto libellula</i>	0	0.1	0	5.4	0	0.9	0
Euphausiid nauplii	0	0	1.4	2.5	0	0	0
Decapod larvae	0	0	0	0	0	0	0
<i>Sagitta elegans</i>	0	3.7	0	25.9	11.5	22.0	16.5

Table 4.3 Macrozooplankton abundance (No./100 m³) in Sugluk Inlet, August 11-15, 1989.

	Station					
	S1	Depth (m)		S2	Depth (m)	
	0-10	10-30	30-100	0-10	10-25	25-40
Cnidaria						
<i>Bougainvillia superciliaris</i>	51.0	0	0	0	0	0
<i>Euphysa flammea</i>	51.0	0	0	0	0	0
<i>Aglantha digitale</i>	0	101.8	247.5	102.0	34.0	0
<i>Aeginopsis laurenti</i>	0	178.1	0	51.0	0	0
unident. spp.	0	0	0	0	0	136.1
Mollusca						
<i>Spiratella helicina</i>	0	25.4	14.6	102.0	68.0	0
Annelida						
polychaetes	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	0	0	0	0	0
<i>Monoculodes intermedius</i>	0	0	0	0	0	34.0
<i>Tryphosella schneideri</i>	0	0	0	0	0	34.0
<i>Syrrhoe crenulata</i>	0	0	0	0	0	34.0
Amphipoda Hyperiidea						
<i>Themisto libellula</i>	0	101.8	7.3	0	170.1	850.3
<i>Themisto abyssorum</i>	0	25.4	7.3	0	0	0
Euphausiacea						
<i>Thysanoessa raschii</i>	0	0	0	0	0	0
Decapoda						
unident. spp.	0	101.8	0	0	0	0
Chaetognatha						
<i>Sagitta elegans</i>	0	101.8	254.7	0	204.1	1224.5

Table 4.3 Continued.

	Station			
	S3 Depth (m)		S4 Depth (m)	
	0-10	10-80	0-10	10-120
Cnidaria				
<i>Bougainvillia superciliaris</i>	51.0	0	0	4.6
<i>Euphysa flammea</i>	51.0	0	0	0
<i>Aglantha digitale</i>	51.0	218.3	0	185.3
<i>Aeginopsis laurenti</i>	51.0	21.8	0	0
unident. spp.	0	0	0	0
Mollusca				
<i>Spiratella helicina</i>	0	0	0	4.6
Annelida				
polychaetes	0	0	0	0
Amphipoda Gammaridea				
<i>Onisimus litoralis</i>	0	0	0	9.3
<i>Monoculodes intermedius</i>	0	0	0	0
<i>Tryphosella schneideri</i>	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0
Amphipoda Hyperiidea				
<i>Themisto libellula</i>	0	203.8	0	37.1
<i>Themisto abyssorum</i>	0	0	0	0
Euphausiacea				
<i>Thysanoessa raschii</i>	0	0	0	4.6
Decapoda				
unident. spp.	0	0	0	0
Chaetognatha				
<i>Sagitta elegans</i>	255.1	240.2	51.0	481.7

Table 4.3 Continued.

	Station				
	S5	Depth (m)		S6	Depth (m)
	0-10	10-36	36-105	0-10	10-75
Cnidaria					
<i>Bougainvillia superciliaris</i>	0	0	0	0	0
<i>Euphysa flammea</i>	0	0	0	0	0
<i>Aglantha digitale</i>	0	0	29.5	0	172.4
<i>Aeginopsis laurenti</i>	0	63.7	0	0	0
unident. spp.	0	0	0	0	0
Mollusca					
<i>Spiratella helicina</i>	0	0	0	0	0
Annelida					
polychaetes	0	0	29.5	0	0
Amphipoda Gammaridea					
<i>Onisimus litoralis</i>	102.0	95.5	0	0	125.4
<i>Monoculodes intermedius</i>	0	0	0	0	0
<i>Tryphosella schneideri</i>	0	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0	0
Amphipoda Hyperiidea					
<i>Themisto libellula</i>	102.0	286.6	7.4	102.0	195.9
<i>Themisto abyssorum</i>	0	0	7.4	0	7.8
Euphausiacea					
<i>Thysanoessa raschii</i>	0	0	0	0	0
Decapoda					
unident. spp.	0	0	0	0	7.8
Chaetognatha					
<i>Sagitta elegans</i>	0	0	1041.4	51.0	1943.6

Table 4.3 Continued.

	Station				
	S7 Depth (m)		S8 Depth (m)		
	0-10	10-50	0-7	7-25	25-70
Cnidaria					
<i>Bougainvillia superciliaris</i>	0	0	0	0	0
<i>Euphysa flammea</i>	0	0	0	0	0
<i>Aglantha digitale</i>	51.0	0	0	28.3	0
<i>Aeginopsis laurenti</i>	0	0	0	0	0
unident. spp.	0	0	0	0	0
Mollusca					
<i>Spiratella helicina</i>	0	0	0	0	0
Annelida					
polychaetes	0	0	0	0	0
Amphipoda Gammaridea					
<i>Onisimus litoralis</i>	0	51.0	219.0	566.6	600.2
<i>Monoculodes intermedius</i>	0	0	0	0	0
<i>Tryphosella schneideri</i>	0	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0	0
Amphipoda Hyperiidea					
<i>Themisto libellula</i>	51.0	38.2	0	56.7	34.0
<i>Themisto abyssorum</i>	0	12.7	0	0	0
Euphausiacea					
<i>Thysanoessa raschii</i>	0	0	0	0	0
Decapoda					
unident. spp.	0	0	0	28.3	0
Chaetognatha					
<i>Sagitta elegans</i>	357.1	751.6	0	283.3	1109.9

Table 4.4 Mesozooplankton abundance (no./m³) in Wakeham Bay, August 18-22, 1989.

	Station								
	W1			W2			W3		
	Depth(m)			Depth (m)			Depth (m)		
	0-10	10-65	65-105	0-10	10-75	75-125	0-20	20-75	75-128
<i>Bougainvillia</i>									
<i>superciliaris</i>	0	0	0	0	0	0.3	0	0.2	0
<i>Sarsia</i> sp.	0	0	0	0	0	0	0	0.2	0
<i>Euphysa flammea</i>	0	0	0	0	0	0	0	0	0
<i>Perigonimus yoldia-</i>									
<i>arcticae</i>	0	0	0	0	0	0	0	0	0.3
<i>Aglantha digitale</i>	0	0	1.8	1.4	0	1.4	0.7	0	0.3
<i>Aeginopsis laurenti</i>	0	0.5	0	0	0	0	0	0	0.8
<i>Spiratella helicina</i>	0	0	3.0	0	0	0	0	0	3.5
Polychaete larvae	0	0	5.9	0	0	0	0	0	0.1
<i>Acartia longiremis</i>	0	2.0	9.0	17.1	0	7.4	18.5	13.8	0
<i>Aetideopsis rostrata</i>	0	0	0.3	0	0	0.3	0	0	0
<i>Calanus finmarchicus</i> F	0	0.2	0.7	0	0.4	1.1	0	0	1.3
C V	0	0	0.7	0	0	0.9	0	0	1.3
C IV	0	0	0.4	0	0	0	0	0	0
<i>Calanus glacialis</i> M	0	0	0	0	0	0.6	0	0	0.5
F	0	0.2	2.2	0	1.7	6.8	0	0.5	7.5
C V	0	2.3	31.2	0	2.8	37.4	0	1.3	62.5
C IV	0	0.7	0	0	0.2	0	0	0.2	0
C III	0	1.3	3.4	0	2.8	3.4	0	5.1	0
C II	1.4	16.9	9.6	1.4	8.1	0	0	20.6	0
C I	90.0	19.8	14.5	10.0	25.7	0	8.5	48.3	0
<i>Calanus hyperboreus</i> F	0	0	1.1	0	0	0.6	0	0.2	1.3
C V	0	0	7.4	0	2.4	4.3	0	0.2	16.6
C IV	0	0	0	0	0	0	0	0	0
C III	0	0	0.4	0	0	0	0	0	0
<i>Metridia longa</i>	0	0	12.2	0	0	1.7	0	0	1.3
<i>Pseudocalanus</i> sp.	240.0	170.1	324.2	94.3	148.8	391.4	131.4	374.2	92.1
<i>Oithona similis</i>	468.6	186.1	197.8	125.7	95.0	21.8	184.3	545.3	0
<i>Cyclopina schneideri</i>	0	0	0	0	0	0	0	0	0.3
Copepod nauplii	880.0	4.4	0	97.1	66.7	0	177.1	162.0	0
<i>Mysis oculata</i>	0	0	0.4	0	0	0	0	0	0
<i>Themisto libellula</i>	0	2.0	0	0	1.5	0	0.7	0.5	1.1
Euphausiid nauplii	0	0	0	22.9	0	2.5	4.3	13.9	0
<i>Sagitta elegans</i>	0	3.6	1.3	0	4.1	8.5	2.8	31.9	0

Table 4.4 Continued.

Station	Station							
	W4	Depth(m)		W6	Depth(m)		W8 Depth (m)	
	Depth (m)	0-10	10-75	75-190	0-75	75-118	0-10	10-83
<i>Bougainvillia</i>								
<i>superciliaris</i>	0	0	0	0	0	0	0	0
<i>Sarsia</i> sp.	0	0	0	0.2	0	0	0	0
<i>Euphysa flammea</i>	0	0.2	0	0	0	0	0	0.4
<i>Perigonimus yoldia-</i>								
<i>arcticae</i>	0	0	0	0	0	0	0	0
<i>Aglantha digitale</i>	0	1.5	0.7	1.1	0	0	0	2.1
<i>Aeginopsis laurenti</i>	0	0.4	0	0	0	0	0	0
<i>Spiratella helicina</i>	0	0	0	0	0	0	0	0
Polychaete larvae	0	0	1.2	7.2	0	0	0	23.1
<i>Acartia longiremis</i>	5.7	3.5	0	0	0	0	0	0
<i>Aetideopsis rostrata</i>	0	0	0	0	0	0	0	0
<i>Calanus finmarchicus</i>	F 0	0.9	2.0	1.1	6.3	0	0	3.3
	C V 0	1.1	0.1	0.6	11.4	0	0	3.3
	C IV 0	0	0	0	0	0	0	0
<i>Calanus glacialis</i>	M 0	0	0.3	0	4.1	0	0	0.2
	F 0	0.4	8.9	2.6	20.2	0	0	1.2
	C V 0	3.7	56.6	16.0	67.1	1.4	0	41.8
	C IV 0	0.2	0.9	0.2	0	0	0	0.2
	C III 0	2.2	0.6	0	0	0	0	1.4
	C II 0	8.9	0	0.7	19.3	7.1	0	2.5
	C I 2.9	24.1	5.1	2.6	3.6	7.1	0	0.7
<i>Calanus hyperboreus</i>	F 0	0	2.6	1.3	0	0	0	2.5
	C V 0	2.2	10.7	12.4	11.3	0	0	15.0
	C IV 0	0	0	0.2	0	0	0	0
	C III 0	0	0	0	4.1	0	0	0
<i>Metridia longa</i>	0	0	5.6	0	4.1	0	0	6.5
<i>Pseudocalanus</i> sp.	131.4	218.4	197.0	186.4	220.4	137.1	0	163.1
<i>Oithona similis</i>	160.0	227.9	0	139.2	87.8	217.1	0	105.9
<i>Cyclopina schneideri</i>	0	0	0	0	0	0	0	0
Copepod nauplii	131.4	106.9	0	9.4	4.2	68.6	0	12.2
<i>Mysis oculata</i>	0	0	0.2	0	0	0	0	0.2
<i>Themisto libellula</i>	0	0.2	0.9	2.6	4.6	0	0	0.2
Euphausiid nauplii	0	0	0	0	0	0	0	0
<i>Sagitta elegans</i>	0	7.4	2.8	20.4	26.9	2.9	0	16.9

Table 4.5 Macrozooplankton abundance (no./100m³) in Wakeham Bay, August 18-22, 1989.

	Station					
	W1			W2		
	Depth (m)		Depth (m)	Depth (m)		Depth (m)
	0-10	10-65	65-105	0-10	10-75	75-125
Cnidaria						
<i>Bougainvillia superciliaris</i>	0	0	0	0	0	0
<i>Euphysa flamea</i>	50.9	0	0	0	0	20.4
<i>Aglantha digitale</i>	0	83.4	114.6	50.9	47.0	142.6
<i>Aeginopsis laurentii</i>	0	18.5	0	0	7.8	0
Ctenophora						
<i>Mertensia ovum</i>	0	27.8	0	50.9	0	10.2
<i>Beroe cucumis</i>	0	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	50.9	0	25.5	305.7	0	20.4
<i>Clione limacina</i>	0	9.3	0	0	0	0
Mysidacea						
<i>Mysis oculata</i>	0	0	0	0	0	0
<i>Mysis mixta</i>	0	0	0	0	0	0
<i>Mysis polaris</i>	0	0	0	0	0	0
<i>Pseudomma affine</i>	0	0	0	0	0	0
unident. spp.	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	0	0	0	0	0
<i>Monoculodes intermedius</i>	0	0	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	0	0	0
Amphipoda Hyperiidea						
<i>Themisto libellula</i>	0	194.5	12.7	0	94.0	254.7
<i>Themisto abyssorum</i>	0	0	0	0	0	0
Euphausiacea						
unident. spp.	0	0	0	0	0	10.2
Decapoda						
unident. spp.	0	0	0	0	0	10.2
Chaetognatha						
<i>Sagitta elegans</i>	101.9	185.2	0	0	235.1	356.6
Larvacea						
unident. spp.	0	0	0	0	0	0
Pisces						
unident. spp.	0	0	25.5	0	0	0

Table 4.5 Continued.

	Station			
	W3	Depth (m)		
		0-25	25-75	75-90
Cnidaria				
<i>Bougainvillia superciliaris</i>	40.7	0	0	13.4
<i>Euphysa flamea</i>	0	0	34.0	0
<i>Aglantha digitale</i>	0	61.1	135.8	0
<i>Aeginopsis laurentii</i>	20.4	0	0	13.4
Ctenophora				
<i>Mertensia ovum</i>	0	10.2	0	13.4
<i>Beroe cucumis</i>	0	0	0	0
Mollusca				
<i>Spiratella helicina</i>	101.9	0	0	0
<i>Clione limacina</i>	0	0	0	0
Mysidacea				
<i>Mysis oculata</i>	0	0	0	13.4
<i>Mysis mixta</i>	0	0	0	0
<i>Mysis polaris</i>	0	0	0	0
<i>Pseudomma affine</i>	0	0	0	0
unident. spp.	0	0	0	0
Amphipoda Gammaridea				
<i>Onisimus litoralis</i>	0	0	0	0
<i>Monoculodes intermedius</i>	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	0
Amphipoda Hyperiidea				
<i>Themisto libellula</i>	142.6	10.2	237.7	80.4
<i>Themisto abyssorum</i>	0	0	0	0
Euphausiacea				
unident. spp.	0	0	0	0
Decapoda				
unident. spp.	0	0	34.0	13.4
Chaetognatha				
<i>Sagitta elegans</i>	0	224.1	271.6	201.1
Larvacea				
unident. spp.	0	0	0	0
Pisces				
unident. spp.	0	0	34.0	0

Table 4.5 Continued.

	Station				
	W4	Depth (m)		W5	Depth (m)
	0-10	10-75	75-196	0-75	75-145
Cnidaria					
<i>Bougainvillia superciliaris</i>	0	0	0	0	14.6
<i>Euphysa flamea</i>	0	0	0	0	14.6
<i>Aglantha digitale</i>	0	125.4	75.8	88.3	123.7
<i>Aeginopsis laurentii</i>	0	0	0	6.8	0
Ctenophora					
<i>Mertensia ovum</i>	0	0	0	0	7.3
<i>Beroe cucumis</i>	0	0	0	6.8	0
Mollusca					
<i>Spiratella helicina</i>	0	0	0	0	0
<i>Clione limacina</i>	0	0	0	0	0
Mysidacea					
<i>Mysis oculata</i>	0	0	0	0	0
<i>Mysis mixta</i>	0	0	0	0	21.8
<i>Mysis polaris</i>	0	0	0	0	7.3
<i>Pseudomma affine</i>	0	0	0	0	7.3
unident. spp.	0	0	8.4	0	0
Amphipoda Gammaridea					
<i>Onisimus litoralis</i>	0	0	4.2	0	0
<i>Monoculodes intermedius</i>	0	0	12.6	0	0
<i>Westwoodilla megalops</i>	0	0	29.5	0	0
Amphipoda Hyperiidea					
<i>Themisto libellula</i>	0	31.3	50.5	67.9	422.1
<i>Themisto abyssorum</i>	0	7.8	0	0	0
Euphausiacea					
unident. spp.	0	0	0	0	0
Decapoda					
unident. spp.	0	0	4.2	6.8	29.1
Chaetognatha					
<i>Sagitta elegans</i>	101.9	407.5	214.7	400.7	531.3
Larvacea					
unident. spp.	0	0	4.2	0	0
Pisces					
unident. spp.	0	0	0	0	0

Table 4.5 Continued.

	Station					
	W6 Depth (m)		W7 Depth (m)		W8 Depth (m)	
	0-75	75-118	0-10	10-65	0-10	10-83
Cnidaria						
<i>Bougainvillia superciliaris</i>	0	11.8	0	0	0	0
<i>Euphysa flamea</i>	6.8	11.8	0	37.0	0	7.0
<i>Aglantha digitale</i>	237.7	189.6	0	361.2	0	202.4
<i>Aeginopsis laurentii</i>	13.6	0	0	0	50.9	0
Ctenophora						
<i>Mertensia ovum</i>	13.6	23.7	0	27.8	0	7.0
<i>Beroe cucumis</i>	0	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	0	0	0	0	0	0
<i>Clione limacina</i>	0	0	0	0	0	0
Mysidacea						
<i>Mysis oculata</i>	0	0	0	0	0	0
<i>Mysis mixta</i>	0	0	0	0	0	14.0
<i>Mysis polaris</i>	0	0	0	0	0	0
<i>Pseudomma affine</i>	0	0	0	0	0	0
unident. spp.	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	23.7	0	0	0	0
<i>Monoculodes intermedius</i>	0	0	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	0	0	0
Amphipoda Hyperiidea						
<i>Themisto libellula</i>	203.8	533.1	101.9	0	0	27.9
<i>Themisto abyssorum</i>	0	59.2	0	0	0	0
Euphausiacea						
unident. spp.	0	0	0	0	0	0
Decapoda						
unident. spp.	6.8	0	50.9	27.8	0	0
Chaetognatha						
<i>Sagitta elegans</i>	1412.8	0	815.1	1055.8	967.9	949.1
Larvacea						
unident. spp.	0	0	0	0	0	0
Pisces						
unident. spp.	0	0	0	0	0	7.0

Table 4.6 Mesozooplankton abundance (no./m³) in Sugluk Inlet, August 3-5, 1990.

	Station					
	S1			S4		
	Depth (m)			Depth (m)		
	0-10	10-65	65-105	0-10	10-50	50-120
<i>Bougainvillia superciliaris</i>	0	0	0.8	0	0	0.2
<i>Sarsia</i> sp.	0	0.7	0	1.4	0.4	0
<i>Aglantha digitale</i>	2.9	7.1	0	11.0	3.0	2.4
<i>Aeginopsis laurenti</i>	1.4	4.1	0	0	1.1	0.2
<i>Spiratella helicina</i>	10.0	65.5	0	23.0	11.7	0
Polychaete larvae	4.3	13.4	0	11.0	11.0	0
<i>Acartia longiremis</i>	43.0	0	0	263.0	20.5	0
<i>Calanus finmarchicus</i> F	0	0.5	0	0	0	1.0
C V	0	0	0	0	0	0.2
<i>Calanus glacialis</i> M	0	0	0	0	0	0.2
F	0	3.1	0	0	1.4	5.7
C V	0	6.6	3.0	0	8.2	17.6
C IV	0	0.7	0	0	0	0.5
C III	0	0	2.3	0	2.9	0
C II	5.7	7.2	0	0	8.6	0
C I	39.0	29.5	0	34.0	29.0	0
<i>Calanus hyperboreus</i> F	0	0	0	0	3.2	5.3
C V	0	0.5	0	0	5.7	5.8
C IV	0	0	0	0	0	0
C III	0	0	0.2	0	0	0
<i>Limnocalanus macrurus</i>	0	0	0	0	0	0
<i>Metridia longa</i>	0	0.5	75.8	0	0	37.7
<i>Pseudocalanus</i> sp.	476.0	561.1	0	2126.0	451.0	213.4
<i>Jaschnovia tolli</i>	0	0	0	0	0	0.3
<i>Scolecithrix farrani</i>	0	0	0	0	0	0.3
<i>Halectinosoma neglecta</i>	0	0	2.9	0	0	0
<i>Harpacticus</i> sp.	7.1	0	0	0	0	0
<i>Tisbe furcata</i>	2.9	2.0	0	0	2.9	0
<i>Cyclopina schneideri</i>	0	0	0	0	0	0.2
<i>Oithona similis</i>	996.0	658.0	0	766.0	522.2	125.3
Copepod nauplii	506.0	124.3	0	2434.0	354.0	0
<i>Balanus</i> nauplii	54.0	1235.8	1243.0	1269.0	25.2	25.4
<i>Mysis oculata</i>	0	0	0	0	0	0.2
<i>Rozinante fragilis</i>	0	0	0	0	0	0
<i>Onisimus litoralis</i>	0	0	0	1.4	0	0
<i>Acanthostepheia malmgreni</i>	0	0	0	0	0	0.3
<i>Hyperia galba</i>	0	0.5	0.1	0	0.4	0.3
<i>Themisto libellula</i>	0	0	1.3	0	1.1	0.9
<i>Themisto abyssorum</i>	0	0	0	0	0.4	0
Euphausiid nauplii	130.0	35.4	0	34.0	17.7	0
Decapod larvae	0	0.7	0	1.4	0.1	0.6
<i>Sagitta elegans</i>	19.0	5.8	2.8	0	7.5	2.6

Table 4.6 Continued.

	Station					
	S6	Depth (m)			S8	Depth (m)
	0-10	10-50	50-75	0-10	10-77	
<i>Bougainvillia superciliaris</i>	0	0	0	0	0	
<i>Sarsia</i> sp.	0	0	0	0	0	
<i>Aglantha digitale</i>	33.0	2.9	5.3	4.3	14.3	
<i>Aeginopsis laurenti</i>	0	1.4	0.5	0	0.2	
<i>Spiratella helicina</i>	11.0	3.0	4.3	0	5.1	
Polychaete larvae	80.0	20.0	0	29.0	5.9	
<i>Acartia longiremis</i>	19.0	0	0	13.0	2.7	
<i>Calanus finmarchicus</i> F	0	0.7	0	0	2.0	
C V	0	0.4	0.6	0	0	
<i>Calanus glacialis</i> M	0	0	1.2	0	0.2	
F	0	3.9	0	0	10.8	
C V	0	7.9	0	2.9	35.2	
C IV	0	0.4	1.2	0	0	
C III	0	0	0	0	0	
C II	0	5.7	18.1	0	1.7	
C I	80.0	37.5	0	16.0	0	
<i>Calanus hyperboreus</i> F	0	10.7	0	2.9	30.6	
C V	0	18.7	9.0	0	51.7	
C IV	0	0	0	0	0	
C III	0	0	0	0	1.7	
<i>Limnocalanus macrurus</i>	1.4	0	0	0	0	
<i>Metridia longa</i>	0	1.1	0.9	1.4	4.5	
<i>Pseudocalanus</i> sp.	686.0	426.0	451.1	110.0	1059.3	
<i>Jaschnovia tolli</i>	0	0	0	0	0	
<i>Scolecithrix farrani</i>	0	0	0	0	0.2	
<i>Halectinosoma neglecta</i>	0	0	0	0	0	
<i>Harpacticus</i> sp.	0	0	0	0	0	
<i>Tisbe furcata</i>	0	2.3	0	0	0.7	
<i>Cyclopina schneideri</i>	0	0	0	1.4	0	
<i>Oithona similis</i>	1634.0	429.0	295.0	414.0	770.3	
Copepod nauplii	1029.0	0	0	64.0	11.1	
<i>Balanus</i> nauplii	5360.0	0	445.0	793.0	108.0	
<i>Mysis oculata</i>	0	0	0	0	0	
<i>Rozinante fragilis</i>	0	0	0	0	0.2	
<i>Onisimus litoralis</i>	0	0.7	0	2.9	1.1	
<i>Acanthostepheia malmgreni</i>	0	0	0	0	0	
<i>Hyperia galba</i>	0	0	0	0	0.7	
<i>Themisto libellula</i>	0	0.4	1.2	0	10.8	
<i>Themisto abyssorum</i>	0	0	0	0	0	
Euphausiid nauplii	114.0	9.0	21.0	2.9	3.0	
Decapod larvae	0	1.7	0.5	0	3.8	
<i>Sagitta elegans</i>	10.0	6.4	0	8.6	34.3	

Table 4.7 Macrozooplankton abundance (no./100 m³) in Sugluk Inlet, August 3-5, 1990.

	Station						
	S1	Depth (m)			S4	Depth (m)	
	0-10	10-50	50-100	0-10	0-50	50-120	
Cnidaria							
unident. spp.	278.5	0	0	974.7	199.4	74.1	
Ctenophora							
<i>Mertensia ovum</i>	0	3.2	0	0	3.2	0	
Mollusca							
<i>Spiratella helicina</i>	88.6	9.5	10.1	278.5	22.2	0	
Annelida							
polychaetes	0	0	0	0	0	0	
Mysidacea							
<i>Mysis oculata</i>	0	0	2.5	0	0	0	
<i>Mysis mixta</i>	0	0	0	0	0	0	
<i>Mysis litoralis</i>	0	0	0	0	0	16.3	
Amphipoda Gammaridea							
<i>Onisimus litoralis</i>	0	0	0	0	6.3	0	
Unident. spp.	0	0	0	0	0	0	
Amphipoda Hyperiidea							
<i>Hyperia galba</i>	0	3.2	0	0	0	0	
<i>Themisto libellula</i>	0	22.2	0	0	132.9	65.1	
<i>Themisto abyssorum</i>	0	0	20.3	0	3.2	25.3	
Decapoda							
unident. spp.	12.7	19.0	0	0	47.5	9.0	
Chaetognatha							
<i>Sagitta elegans</i>	189.9	750.0	141.8	38.0	452.5	387.0	
unident. spp.	0	0	2.5	0	0	0	
Larvacea							
unident. spp.	0	0	2.5	0	0	0	
Pisces							
unident. spp.	0	0	0	50.6	0	1.8	

Table 4.7 Continued.

	Station					
	S6			S8		
	Depth (m)			Depth (m)		
	0-10	10-30	30-75	0-10	10-30	30-70
Cnidaria						
unident. spp.	2721.5	1113.9	0	544.3	202.5	1389.2
Ctenophora						
<i>Mertensia ovum</i>	0	6.3	0	12.7	0	0
Mollusca						
<i>Spiratella helicina</i>	75.9	6.3	5.6	0	6.3	6.3
Annelida						
polychaetes	0	0	0	0	0	3.2
Mysidacea						
<i>Mysis oculata</i>	0	0	0	0	0	0
<i>Mysis mixta</i>	0	0	0	0	0	3.2
<i>Mysis litoralis</i>	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	88.6	0	84.4	227.8	63.3	85.4
Unident. spp.	0	44.3	0	0	0	0
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	0	0	0	0	0
<i>Themisto libellula</i>	12.7	170.9	28.1	0	297.5	1525.3
<i>Themisto abyssorum</i>	0	0	14.1	0	0	12.7
Decapoda						
unident. spp.	88.6	113.9	0	0	170.9	164.6
Chaetognatha						
<i>Sagitta elegans</i>	278.5	1493.7	112.5	341.8	626.6	63.3
unident. spp.	0	6.3	0	0	0	0
Larvacea						
unident. spp.	0	0	0	0	0	0
Pisces						
unident. spp.	25.3	0	5.6	0	0	22.2

Table 4.8 Macrozooplankton abundance (no./100 m³) in Sugluk Inlet, August 10-11, 1990

	Station					
	S3 Depth (m)		S3B Depth (m)		S4 Depth (m)	
	0-25	25-75	0-20	20-110	0-20	20-115
Cnidaria						
unident. spp.	850.6	435.4	2481.0	0	651.9	205.2
Ctenophora						
<i>Mertensia ovum</i>	0	0	0	0	0	0
<i>Beroe cucumis</i>	5.1	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	35.4	30.4	6.3	0	19.0	0
<i>Cliione limacina</i>	0	2.5	0	0	0	0
Annelida						
unident. spp.	0	25.3	6.3	0	0	0
Mysidacea						
<i>Mysis oculata</i>	0	32.9	0	0	0	0
<i>Mysis mixta</i>	0	0	0	2.8	0	1.3
<i>Mysis polaris</i>	0	0	0	12.7	0	6.7
<i>Mysis litoralis</i>	0	55.7	0	0	0	0
<i>Erythrops erythroptalma</i>	0	0	0	4.2	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	10.1	12.7	0	0	9.3
<i>Ischyrocerus anguipes</i>	0	20.3	0	0	0	0
<i>Acanthostepheia malmgreni</i>	0	0	0	1.4	0	9.3
<i>Monoculodes intermedius</i>	0	43.0	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	5.6	0	1.3
<i>Syrrhoe crenulata</i>	0	0	0	2.8	0	0
<i>Rhachotropis aculeata</i>	0	10.1	0	1.4	0	0
<i>Melita dentata</i>	0	2.5	0	0	0	0
Unident. spp.	0	17.7	0	9.8	0	2.7
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	0	6.3	0	0	1.3
<i>Hyperoche medusarum</i>	0	0	0	0	0	0
<i>Themisto libellula</i>	111.4	275.9	94.9	125.2	57.0	65.3
<i>Themisto abyssorum</i>	0	2.5	6.3	5.6	0	2.7
Euphausiacea						
unident. spp.	0	0	0	0	0	1.3
Decapoda						
unident. spp.	116.5	43.0	101.3	7.0	12.7	10.7
Chaetognatha						
<i>Sagitta elegans</i>	313.9	341.8	430.4	246.1	75.9	243.8
unident. spp.	5.1	0	0	0	0	0
Pisces						
unident. spp.	35.4	2.5	12.7	1.4	12.7	0

Table 4.8 Continued.

	Station					
	S4B Depth (m)		S4C Depth (m)		S5 Depth (m)	
	0-20	20-100	0-20	20-100	0-20	20-110
Cnidaria						
unident. spp.	3126.6	45.9	3848.1	0	3582.3	0
Ctenophora						
<i>Mertensia ovum</i>	0	0	0	0	19.0	0
<i>Beroe cucumis</i>	0	0	0	0	19.0	0
Mollusca						
<i>Spiratella helicina</i>	12.7	3.2	19.0	0	31.6	0
<i>Clione limacina</i>	0	0	0	0	0	0
Annelida						
unident. spp.	0	0	0	0	0	0
Mysidacea						
<i>Mysis oculata</i>	0	0	0	0	0	1.4
<i>Mysis mixta</i>	0	0	0	0	0	0
<i>Mysis polaris</i>	0	7.9	0	4.7	0	0
<i>Mysis litoralis</i>	0	0	0	0	0	2.8
<i>Erythrops erythroptalma</i>	0	1.6	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	11.1	6.3	6.3	6.3	11.3
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0
<i>Acanthostepheia malmgreni</i>	6.3	0	0	1.6	0	2.8
<i>Monoculodes intermedius</i>	0	0	0	1.6	0	1.4
<i>Westwoodilla megalops</i>	0	1.6	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0	0	0
<i>Rhachotropis aculeata</i>	0	0	0	0	0	0
<i>Melita dentata</i>	0	0	0	0	0	0
Unident. spp.	0	0	0	7.9	0	2.8
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	1.6	12.7	0	0	0
<i>Hyperoche medusarum</i>	0	0	0	0	0	0
<i>Themisto libellula</i>	44.3	156.6	94.9	98.1	215.2	313.6
<i>Themisto abyssorum</i>	0	12.7	0	9.5	0	15.5
Euphausiacea						
unident. spp.	0	1.6	0	0	0	0
Decapoda						
unident. spp.	189.9	0	44.3	4.7	6.3	22.5
Chaetognatha						
<i>Sagitta elegans</i>	284.8	175.6	50.6	257.9	44.3	298.2
unident. spp.	0	1.6	0	0	0	0
Pisces						
unident. spp.	6.3	1.6	0	0	0	1.4

Table 4.8 Continued.

	Station					
	S5B Depth (m)		S6 Depth (m)		S6B Depth (m)	
	0-20	20-95	0-20	20-70	0-20	20-60
Cnidaria						
unident. spp.	664.6	518.1	557.0	357.0	291.1	414.6
Ctenophora						
<i>Mertensia ovum</i>	0	0	12.7	0	6.3	0
<i>Beroe cucumis</i>	0	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	0	0	0	2.5	0	0
<i>Clione limacina</i>	0	0	0	2.5	0	0
Annelida						
unident. spp.	0	0	0	0	0	0
Mysidacea						
<i>Mysis oculata</i>	0	0	0	0	0	0
<i>Mysis mixta</i>	0	0	0	0	0	0
<i>Mysis polaris</i>	0	0	0	0	0	0
<i>Mysis litoralis</i>	0	0	0	0	0	0
<i>Erythrope erythrope</i>	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	12.7	6.8	6.3	0	12.7	0
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0
<i>Acanthostepheia malmgreni</i>	0	0	0	0	0	0
<i>Monoculodes intermedius</i>	0	0	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0	0	0
<i>Rhachotropis aculeata</i>	0	0	0	0	0	0
<i>Melita dentata</i>	0	0	0	0	0	0
Unident. spp.	0	0	0	0	0	0
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	0	0	0	0	0
<i>Hyperoche medusarum</i>	0	0	0	0	0	0
<i>Themisto libellula</i>	670.9	288.6	25.3	420.3	208.9	484.2
<i>Themisto abyssorum</i>	0	0	0	0	0	0
Euphausiacea						
unident. spp.	0	0	0	0	0	0
Decapoda						
unident. spp.	38.0	10.1	31.6	73.4	38.0	94.9
Chaetognatha						
<i>Sagitta elegans</i>	44.3	332.5	113.9	810.1	164.6	778.5
unident. spp.	0	0	0	7.6	0	0
Pisces						
unident. spp.	0	0	0	0	0	0

Table 4.8 Continued.

	Station					
	S7 Depth (m)		S8B Depth (m)		S8 Depth (m)	
	0-20	20-40	0-20	20-60	0-20	20-75
Cnidaria						
unident. spp.	405.1	519.0	1145.6	205.7	246.8	741.1
Ctenophora						
<i>Mertensia ovum</i>	0	0	0	0	0	4.6
<i>Beroe cucumis</i>	0	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	6.3	12.7	0	0	0	0
<i>Clione limacina</i>	0	0	0	0	0	0
Annelida						
unident. spp.	0	0	0	0	0	0
Mysidacea						
<i>Mysis oculata</i>	0	0	0	0	0	0
<i>Mysis mixta</i>	0	0	0	0	0	0
<i>Mysis polaris</i>	0	0	0	0	0	0
<i>Mysis litoralis</i>	0	0	0	0	0	0
<i>Erythroops erythropthalma</i>	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	158.2	0	6500.0	0	1721.5	271.6
<i>Ischyrocerus anguipes</i>	0	0	6.3	0	6.3	0
<i>Acanthostepheia malmgreni</i>	0	0	0	0	0	0
<i>Monoculodes intermedius</i>	0	0	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	0	0	4.6
<i>Syrrhoe crenulata</i>	0	0	0	0	0	0
<i>Rhachotropis aculeata</i>	0	0	0	0	0	0
<i>Melita dentata</i>	0	0	0	0	0	0
Unident. spp.	0	0	0	0	0	4.6
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	6.3	12.7	0	9.5	0	2.3
<i>Hyperoche medusarum</i>	0	0	0	0	0	2.3
<i>Themisto libellula</i>	75.9	405.1	139.2	53.8	69.6	156.5
<i>Themisto abyssorum</i>	6.3	0	0	12.7	0	6.9
Euphausiacea						
unident. spp.	0	0	0	0	0	2.3
Decapoda						
unident. spp.	57.0	297.5	50.6	57.0	12.7	48.3
Chaetognatha						
<i>Sagitta elegans</i>	221.5	1620.3	563.3	769.0	189.9	527.0
unident. spp.	0	0	6.3	0	0	0
Pisces						
unident. spp.	0	6.3	0	0	0	0

Table 4.9 Mesozooplankton abundance (no./m³) at stations S2b and S3 in Sugluk Inlet at intervals (local time: EDT) during a tidal cycle, August 12, 1990.

	Time							
	1045	1130	1127	1122	1334	1357	1352	1349
	Station							
	S2b	S3	Depth (m)		S2b	S3	Depth (m)	
0-12	0-12	12-50	50-70	0-15	0-12	12-50	50-78	
<i>Bougainvillia</i>								
<i>superciliaris</i>	0	0	0.4	0	0	2.5	0	0
<i>Sarsia</i> sp.	1.2	0	0.4	0	0.9	0	0	0
<i>Perigonium yoldia-</i>								
<i>arcticae</i>	0	0	0	0	0	0	0	0
<i>Aglantha digitale</i>	6.2	3.7	3.7	0	1.8	17.0	0	0
<i>Aeginopsis laurenti</i>	2.5	2.5	0.4	0	4.5	16.0	0	0
<i>Spiratella helicina</i>	0	0	0	0	0.9	0	0.8	0
<i>Acartia longiremis</i>	101.0	116.0	13.4	59.0	54.0	167.0	47.3	0
<i>Calanus finmarchicus</i> F	0	0	0	0	0	0	0	0.6
C V	0	0	0	0	0	0	0	0.6
<i>Calanus glacialis</i> F	1.2	1.2	0.4	1.5	0.9	0	0.8	0.9
C V	8.7	0	2.2	7.7	0	0	3.8	9.6
C IV	3.7	0	0	9.7	1.8	0	1.2	0
C III	11.0	0	0	9.0	5.4	0	6.7	24.3
C II	58.0	2.5	11.6	0	17.0	21.0	12.0	0
C I	101.0	72.0	40.4	0	53.0	84.0	30.0	0
<i>Calanus hyperboreus</i> F	0	0	1.2	2.7	0	0	0.8	5.9
C V	0	0	1.8	2.6	0	0	1.2	1.9
<i>Metridia longa</i>	0	1.2	0	69.0	0	0	0	6.1
<i>Pseudocalanus</i> sp.	2190.0	1015.0	1072.9	276.0	1751.0	2337.0	971.2	159.6
<i>Oithona similis</i>	450.0	492.0	685.4	0	601.0	1900.0	730.3	0
Copepod nauplii	1000.0	681.0	349.4	0	548.0	1022.0	380.0	0
<i>Balanus nauplii</i>	290.0	145.0	117.4	64.0	147.0	751.0	214.1	298.4
<i>Mysis oculata</i>	0	0	0	0.3	0	0	0	0
<i>Onisimus litoralis</i>	0	0	0	0.3	0	0	0	0.6
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0	0	0
<i>Themisto libellula</i>	0	0	0.4	1.5	0	1.2	1.1	0
Decapod larvae	1.2	0	0	0.6	0.9	1.2	0	0
<i>Sagitta elegans</i>	1.2	0	1.2	3.5	0	1.2	1.9	2.5

Table 4.9 Continued.

	Time								
	1430	1610	1608	1603	1701	1818	1815	1809	185
	Station								
	S2b	S3	Depth (m)		S2b	S3	Depth (m)		S2b
	0-13	0-12	12-50	50-78	0-13	0-12	12-50	50-73	0-10
<i>Bougainvillia</i>									
<i>superciliaris</i>	0	1.2	0	0	0	0	0.4	0	0
<i>Sarsia</i> sp.	0	0	0	0.6	0	0	0	0	0
<i>Perigonium yoldia-</i>									
<i>arcticae</i>	0	0	0	0	0	0	0	0	0
<i>Aglantha digitale</i>	7.8	11.0	1.4	0	8.9	15.0	0.5	5.9	8.6
<i>Aeginopsis laurenti</i>	3.3	10.0	0	0	1.1	8.7	1.1	0	2.8
<i>Clione limacina</i>	0	0	0	0.6	0	0	0	0	0
<i>Acartia longiremis</i>	67.0	0	93.4	0	122.0	350.0	39.5	256.8	114.0
<i>Calanus finmarchicus</i>	F 0	0	0	0.6	0	0	0	1.3	0
C V	0	0	0	0	0	0	0	1.3	0
<i>Calanus glacialis</i>	F 0	1.2	0.4	5.1	0	0	1.2	1.2	0
C V	1.1	0	4.9	14.0	0	0	1.8	13.5	2.8
C IV	0	0	0.4	0	0	0	1.2	1.5	1.4
C III	51.0	2.5	0	7.6	3.3	0	4.1	0	0
C II	25.0	37.0	0.7	0	0	6.2	7.4	0	17.0
C I	64.0	37.0	38.0	0	1.1	40.0	43.9	0	50.0
<i>Calanus hyperboreus</i>	F 0	0	1.2	7.0	0	0	0	2.5	0
C V	0	0	6.7	7.0	0	0	0	8.6	0
<i>Metridia longa</i>	0	0	0	33.4	0	0	0	4.7	0
<i>Pseudocalanus</i> sp.	1263.0	1975.0	738.2	603.2	1199.0	1187.0	771.2	1122.2	1408.0
<i>Oithona similis</i>	619.0	775.0	784.2	0	283.0	937.0	502.8	511.8	878.0
Copepod nauplii	734.0	662.0	375.2	457.9	683.0	650.0	377.6	211.3	1160.0
<i>Balanus</i> nauplii	232.0	87.0	205.4	57.2	64.0	87.0	358.0	0	100.0
<i>Mysis oculata</i>	0	0	0	0	0	0	0	0	26.0
<i>Onisimus litoralis</i>	0	0	0	0	0	0	0	0.6	0
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0	0	0	0
<i>Themisto libellula</i>	0	1.2	0.1	0.6	0	0	1.8	0.1	0
Decapod larvae	1.1	0	1.2	0	0	0	0	0	0
<i>Sagitta elegans</i>	1.1	0	3.8	6.0	0	0	2.2	2.3	0

Table 4.9 Continued.

	Time							
	2015	2013	2009	2042	2152	2238	2235	2230
	Station							
	S3	Depth (m)		S2b Depth (m)		S3	Depth (m)	
0-12	12-50	50-78	0-11	0-13	0-12	12-50	50-80	
<i>Bougainvillia</i>								
<i>superciliaris</i>	0	0	0	0	0	0	0.4	0
<i>Sarsia</i> sp.	0	0.8	0	0	1.0	0	0	0.5
<i>Perigonium yoldia-</i>								
<i>arcticae</i>	0	0.4	0	0	0	0	0.4	0.1
<i>Aglantha digitale</i>	22.0	0.2	12.1	5.0	5.7	16.0	2.4	0
<i>Aeginopsis laurenti</i>	7.5	2.1	0	0	1.8	7.5	0	1.8
<i>Clione limacina</i>	0	0	0	0	0	0	0	0
<i>Acartia longiremis</i>	237.0	179.1	0	0	0	354.0	179.0	0
<i>Calanus finmarchicus</i> F	0	0	1.4	0	0	0	0	0
C V	0	0	0.6	0	0	0	0	0
<i>Calanus glacialis</i> F	0	1.4	1.1	0	2.8	0	1.8	0
C V	0	4.5	0	5.0	5.7	0	0.8	2.7
C IV	0	1.4	0	1.2	0	2.5	0	0
C III	1.2	9.0	0	0	0	5.0	4.9	0
C II	6.2	9.0	0	29.0	11.3	21.0	40.7	0
C I	46.0	80.2	0	72.0	33.2	41.0	91.0	0
<i>Calanus hyperboreus</i> F	0	0	0.6	0	0	0	0	0.5
C V	0	0.8	1.4	0	0	0	1.8	1.9
<i>Metridia longa</i>	0	0	13.6	0	0	0	1.4	7.2
<i>Pseudocalanus</i> sp.	1812.0	1373.8	0	2247.0	1194.5	1629.0	726.4	1463.0
<i>Oithona similis</i>	962.0	1039.6	0	782.0	350.8	1670.0	760.8	0
Copepod nauplii	1075.0	468.4	0	754.0	505.8	1315.0	478.2	0
<i>Balanus nauplii</i>	212.0	121.2	48.3	101.0	153.8	396.0	53.9	0
<i>Mysis oculata</i>	0	0	0	0	0	0	0	1.1
<i>Onisimus litoralis</i>	0	0	0	0	0	0	0	0
<i>Ischyrocerus anguipes</i>	0	0	0	0	17.2	0	0	0.5
<i>Themisto libellula</i>	0	3.8	2.4	0	0.8	1.2	0	0.6
Decapod larvae	0	0	0.6	1.2	0	1.2	0	0.5
<i>Sagitta elegans</i>	0	1.8	0	2.5	3.1	3.7	0.7	0.9

Table 4.10 Macrozooplankton abundance (no./100 m³) at stations S2b and S3 in Sugluk Inlet, at intervals (local time: EDT) during a tidal cycle, August 12, 1990.

	Time				
	1101	1206	1156	1329	1418
	Station				
	S2b	S3 Depth (m)		S2b	S3
0-13	0-20	20-75	0-15	0-20	
Cnidaria					
unident. spp.	886.1	3411.4	0	227.8	955.7
Ctenophora					
<i>Mertensia ovum</i>	0	0	0	0	0
<i>Beroe cucumis</i>	0	57.0	0	16.9	0
Mollusca					
<i>Spiratella helicina</i>	146.1	82.3	0	16.9	126.6
Annelida					
polychaetes	0	0	0	0	6.3
Mysidacea					
<i>Mysis polaris</i>	0	0	0	0	0
Amphipoda Gammaridea					
<i>Onisimus litoralis</i>	38.9	0	4.6	0	0
<i>Ischyrocerus anguipes</i>	0	0	0	8.4	0
<i>Monoculodes intermedius</i>	0	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0	0
<i>Gammarellus homari</i>	0	0	0	0	0
<i>Orchomene minuta</i>	0	0	0	0	0
Amphipoda Hyperiidea					
<i>Hyperia galba</i>	0	0	0	0	6.3
<i>Themisto libellula</i>	9.7	113.9	0	33.8	38.0
<i>Themisto abyssorum</i>	9.7	0	2.3	0	0
Decapoda					
unident. spp.	19.5	38.0	0	42.2	82.3
Chaetognatha					
<i>Sagitta elegans</i>	632.9	234.2	145.0	0	50.6
Pisces					
unident. spp.	0	19.0	0	8.4	0

Table 4.10 Continued.

	Time				
	1409	1436	1647	1633	1707
	Station				
S3	S2b	S3	Depth (m)	S2b	
20-78	0-13	0-20	20-75	0-13	
Cnidaria					
unident. spp.	58.9	525.8	924.1	209.4	1275.6
Ctenophora					
<i>Mertensia ovum</i>	2.2	0	6.3	2.3	19.5
<i>Beroe cucumis</i>	0	0	0	0	0
Mollusca					
<i>Spiratella helicina</i>	0	19.5	19.0	4.6	107.1
Annelida					
polychaetes	0	0	0	0	0
Mysidacea					
<i>Mysis polaris</i>	0	0	0	0	0
Amphipoda Gammaridea					
<i>Onisimus litoralis</i>	8.7	0	0	2.3	0
<i>Ischyrocerus anguipes</i>	2.2	0	0	0	6864.7
<i>Monoculodes intermedius</i>	0	0	0	0	0
<i>Westwoodilla megalops</i>	0	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0	0
<i>Gammarellus homari</i>	0	0	0	0	0
<i>Orchomene minuta</i>	0	0	0	0	0
Amphipoda Hyperiidea					
<i>Hyperia galba</i>	0	0	0	0	0
<i>Themisto libellula</i>	13.1	19.5	31.6	25.3	9.7
<i>Themisto abyssorum</i>	6.5	0	0	2.3	0
Decapoda					
unident. spp.	0	9.7	25.3	2.3	204.5
Chaetognatha					
<i>Sagitta elegans</i>	80.8	29.2	63.3	363.6	379.7
Pisces					
unident. spp.	2.2	0	0	0	38.9

Table 4.10 Continued.

	Time				
	1838	1831	1855	2030	2024
	Station				
	S3 Depth (m)		S2b	S3 Depth (m)	
0-20	20-75	0-10	0-20	20-78	
Cnidaria					
unident. spp.	987.3	227.8	1164.6	1613.9	196.4
Ctenophora					
<i>Mertensia ovum</i>	12.7	2.3	38.0	0	6.5
<i>Beroe cucumis</i>	0	0	0	0	0
Mollusca					
<i>Spiratella helicina</i>	12.7	2.3	0	6.3	0
Annelida					
polychaetes	0	0	0	0	0
Mysidacea					
<i>Mysis polaris</i>	0	0	12.7	0	6.5
Amphipoda Gammaridea					
<i>Onisimus litoralis</i>	6.3	0	12.7	0	4.4
<i>Ischyrocerus anguipes</i>	12.7	20.7	0	0	0
<i>Monoculodes intermedius</i>	0	0	0	0	2.2
<i>Westwoodilla megalops</i>	0	0	0	0	0
<i>Syrrhoe crenulata</i>	0	0	0	0	2.2
<i>Gammarellus homari</i>	0	2.3	0	0	0
<i>Orchomene minuta</i>	0	0	0	0	0
Amphipoda Hyperiidea					
<i>Hyperia galba</i>	12.7	0	0	0	0
<i>Themisto libellula</i>	0	34.5	0	6.3	235.7
<i>Themisto abyssorum</i>	0	4.6	12.7	0	0
Decapoda					
unident. spp.	12.7	2.3	12.7	0	10.9
Chaetognatha					
<i>Sagitta elegans</i>	44.3	310.7	164.6	50.6	305.5
Pisces					
unident. spp.	0	0	12.7	0	0

Table 4.10 Continued.

	Time			
	2047	2206	2256	2250
	Station			
	S2b Depth (m)		S3 Depth (m)	
0-11	0-11	0-20	20-75	
Cnidaria				
unident. spp.	632.9	920.6	557.0	99.0
Ctenophora				
<i>Mertensia ovum</i>	23.0	0	0	4.6
<i>Beroe cucumis</i>	11.5	0	6.3	0
Mollusca				
<i>Spiratella helicina</i>	0	241.7	12.7	0
Annelida				
polychaetes	0	0	0	2.3
Mysidacea				
<i>Mysis polaris</i>	0	0	0	6.9
Amphipoda Gammaridea				
<i>Onisimus litoralis</i>	0	0	19.0	0
<i>Ischyrocerus anguipes</i>	0	0	6.3	0
<i>Monoculodes intermedius</i>	0	0	6.3	2.3
<i>Westwoodilla megalops</i>	0	0	0	20.7
<i>Syrrhoe crenulata</i>	0	0	0	2.3
<i>Gammarellus homari</i>	0	0	0	0
<i>Orchomene minuta</i>	0	23.0	0	0
Amphipoda Hyperiidea				
<i>Hyperia galba</i>	0	0	0	4.6
<i>Themisto libellula</i>	0	11.5	6.3	46.0
<i>Themisto abyssorum</i>	0	0	0	4.6
Decapoda				
unident. spp.	0	23.0	6.3	9.2
Chaetognatha				
<i>Sagitta elegans</i>	195.6	678.9	88.6	73.6
Pisces				
unident. spp.	0	0	12.7	0

Table 4.11 Mesozooplankton abundance (no./m³) at stations S2b and S3 in Sugluk Inlet at intervals (local time: EDT) during a tidal cycle, August 18, 1990.

	Time							
	0922	0919	0915	0954	1115	1113	1109	1209
	Station							
	S3	Depth (m)		S2b	S3	Depth (m)		S2b
0-12	12-50	50-85	0-13	0-12	12-50	50-80	0-12	
<i>Bougainvillia</i>								
<i>superciliaris</i>	0	0.4	0.1	0	0	0	0	0
<i>Sarsia</i> sp.	0	0	0	0	0	0	0	0
<i>Perigonimus yoldia-</i>								
<i>arcticae</i>	0	0	0	0	0	0	0	0
<i>Aglantha digitale</i>	8.7	4.9	4.1	3.3	1.2	9.3	3.4	2.5
<i>Aeginopsis laurenti</i>	5.9	0.6	2.4	2.2	0	0.7	0	2.5
<i>Spiratella helicina</i>	1.2	0.8	0	1.1	1.2	1.0	0	0
<i>Acartia longiremis</i>	300.0	41.2	0	344.4	262.5	0	0	207.5
<i>Calanus finmarchicus</i> F	0	0.7	0	0	0	3.6	0	0
C V	0	0	0	0	0	0	4.8	0
<i>Calanus glacialis</i> F	12.5	10.4	19.7	0	1.2	15.9	34.3	0
C V	0	22.5	30.1	0	0	26.2	37.0	0
C IV	0	0.7	0	0	0	0	0	0
C III	0	6.1	0	30.0	6.2	5.4	11.8	1.2
C II	0	11.7	0	23.3	36.2	0	17.5	11.2
C I	0	37.6	0	12.2	40.0	8.0	10.7	26.2
<i>Calanus hyperboreus</i> F	0	0	2.9	0	0	2.1	10.5	0
C V	0	1.4	0	0	0	4.2	8.7	0
C III	0	0	0	0	0	0	0	0
<i>Metridia longa</i>	0	0	8.0	0	0	0	6.0	0
<i>Pseudocalanus</i> sp.	887.5	598.9	565.7	1200.0	1275.0	421.2	947.0	747.5
<i>Oithona similis</i>	1412.5	220.1	170.1	1144.4	775.0	78.7	155.7	788.7
Copepod nauplii	562.5	0	0	244.4	312.5	0	0	145.0
<i>Balanus</i> nauplii	12.5	2.5	1.0	66.7	12.5	0	4.8	0
<i>Onisimus litoralis</i>	0	0	0	0	0	0	0	0
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0	0	0
<i>Themisto libellula</i>	0	1.1	3.6	2.2	1.2	1.0	9.6	0
Decapod larvae	0	0.7	0	1.1	0	0.4	2.4	0
<i>Sagitta elegans</i>	93.7	118.7	1.9	220.0	1.2	5.0	3.2	0

Table 4.11 Continued.

	Time							
	1319	1312	1308	1343	1455	1525	1523	1518
	Station							
	S3	Depth (m)		S2b	S2b	S3	Depth (m)	
0-12	12-50	50-80	0-10	0-12	0-12	12-50	50-82	
<i>Bougainvillia</i>								
<i>superciliaris</i>	0	0.4	0	0	0	0	0	0.5
<i>Sarsia</i> sp.	0	0	0	0	0	1.2	0	0
<i>Perigonimus yoldia-</i>								
<i>arcticae</i>	0	0	0	0	0	0	0.4	0.1
<i>Aglantha digitale</i>	1.2	4.5	6.1	5.7	2.5	8.7	2.1	1.7
<i>Aeginopsis laurenti</i>	1.2	0	0.6	4.3	3.7	2.5	1.0	0.1
<i>Spiratella helicina</i>	6.2	0	0	1.4	5.0	2.5	0	1.4
<i>Acartia longiremis</i>	337.5	0	0	314.3	466.2	125.0	167.1	0
<i>Calanus finmarchicus</i>	F 0	0	0	0	0	0	0	0
C V	0	0.4	0	0	0	0	0	0
<i>Calanus glacialis</i>	F 0	5.7	22.2	0	0	0	0	38.4
C V	0	14.5	0.3	0	0	0	0.8	34.9
C IV	0	0	4.8	0	0	0	0	0
C III	0	14.5	0	1.4	8.7	0	12.4	0
C II	12.5	7.5	4.3	30.0	8.7	0	18.4	0
C I	50.0	2.6	0.4	41.4	27.5	0	56.6	0
<i>Calanus hyperboreus</i>	F 0	2.2	4.9	0	0	0	0.8	2.3
C V	0	2.6	0.4	0	0	0	0	0.8
C III	0	0	0	1.4	0	0	0	0
<i>Metridia longa</i>	0	0.4	0	0	1.2	0	0.4	12.8
<i>Pseudocalanus</i> sp.	1350.0	603.9	0	1128.6	902.5	862.5	1034.4	242.2
<i>Oithona similis</i>	1362.5	0	0	1042.9	1141.2	575.0	490.8	0
Copepod nauplii	400.0	0	0	214.3	311.2	562.5	293.6	0
<i>Balanus nauplii</i>	25.0	0	38.0	0	0	0	0	0
<i>Onisimus litoralis</i>	0	0	0.5	0	0	0	0	0.5
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0	0	0
<i>Themisto libellula</i>	2.5	3.7	0	0	0	2.5	3.3	0
Decapod larvae	0	0.8	0.3	0	0	0	0	0.8
<i>Sagitta elegans</i>	0	8.7	0	1.4	0	0	7.1	2.6

Table 4.11 Continued.

	Time							
	1704	1730	1728	1725	1910	1938	1936	1932
	Station							
	S2B	S3	Depth (m)		S2B	S3	Depth (m)	
0-12	0-12	12-50	50-81	0-12	0-12	12-50	50-82	
<i>Bougainvillia</i>								
<i>superciliaris</i>	1.2	0	0	0	0	0	0.4	0
<i>Sarsia</i> sp.	0	0	0	0	0	0	0	0
<i>Perigonimus yoldia-</i>								
<i>arcticae</i>	0	0	0	0	0	0	0	0
<i>Aglantha digitale</i>	1.2	5.0	1.0	4.1	1.2	17.5	5.3	3.8
<i>Aeginopsis laurenti</i>	0	0	0.8	0	0	2.5	4.9	0
<i>Spiratella helicina</i>	6.2	1.2	0.4	0	0	17.5	0.8	5.2
<i>Acartia longiremis</i>	475.0	321.2	419.7	0	608.7	1420.0	619.7	0
<i>Calanus finmarchicus</i> F	0	0	0	0	0	0	0.4	0
C V	0	0	0	0	0	0	0	1.8
<i>Calanus glacialis</i> F	0	0	0.4	8.6	0	0	45.1	0
C V	0	0	1.8	25.6	0	0	23.7	11.6
C IV	0	0	0.8	0	0	0	1.2	0
C III	0	0	5.7	0.9	1.2	0	8.7	0
C II	0	0	6.4	31.3	1.2	2.5	5.7	14.8
C I	0	0	31.6	0	7.5	16.2	18.7	41.4
<i>Calanus hyperboreus</i> F	0	0	0	1.3	0	0	0	3.8
C V	0	0	0	1.3	0	0	0.4	5.2
C III	0	0	0	0	0	0	0	0
<i>Metridia longa</i>	0	0	0	10.2	0	0	0	0.5
<i>Pseudocalanus</i> sp.	1512.5	861.2	964.9	297.2	1656.2	1570.0	195.9	935.8
<i>Oithona similis</i>	500.0	550.0	623.7	0	515.0	470.0	544.1	44.3
Copepod nauplii	362.5	436.2	276.8	35.4	358.7	1570.0	346.8	0
<i>Balanus</i> nauplii	0	0	6.4	23.4	0	0	6.0	14.8
<i>Onisimus litoralis</i>	0	0	0	0	0	0	0	0
<i>Ischyrocerus anguipes</i>	106.2	0	0	0	0	0	0	0
<i>Themisto libellula</i>	0	5.0	0.6	11.1	3.7	3.7	5.2	0
Decapod larvae	0	2.5	1.0	0	1.2	6.2	1.1	0
<i>Sagitta elegans</i>	0	0	2.6	1.7	0	47.5	58.3	0

Table 4.12 Macrozooplankton abundance (no./100m³) at stations S2b and S3 in Sugluk Inlet at intervals (local time: EDT) during a tidal cycle, August 18, 1990.

	Time					
	0939	0930	1001	1134	1128	1214
	Station					
	S3		S2b	S3		S2b
0-20	20-80	0-13	0-20	20-80	0-12	
Cnidaria						
unident. spp.	405.1	719.4	214.2	417.7	286.9	369.2
Ctenophora						
<i>Mertensia ovum</i>	0	0	0	0	0	0
<i>Beroe cucumis</i>	6.3	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	120.3	0	87.6	88.6	6.3	316.5
<i>Clione limacina</i>	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	0	0	6.3	0	0
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	10.5
Unident. spp.	0	0	0	0	4.2	0
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	6.3	0	0	0	2.1	0
<i>Themisto libellula</i>	38.0	50.6	0	75.9	54.9	0
<i>Themisto abyssorum</i>	0	4.2	0	0	12.7	0
Decapoda						
unident. spp.	19.0	8.4	136.3	57.0	19.0	73.8
Chaetognatha						
<i>Sagitta elegans</i>	69.6	440.9	29.2	455.7	280.6	52.7
Pisces						
unident. spp.	0	0	0	0	0	0

Table 4.12 Continued.

	Time					
	1333	1328	1349	1500	1539	1535
	Station					
	S3	Depth (m)	S2b	S2b	S3	Depth (m)
0-20	20-75	0-10	0-12	0-20	20-79	
Cnidaria						
unident. spp.	158.2	695.1	354.4	211.0	816.5	195.2
Ctenophora						
<i>Mertensia ovum</i>	0	6.9	0	0	0	2.1
<i>Beroe cucumis</i>	0	0	12.7	0	6.3	0
Mollusca						
<i>Spiratella helicina</i>	531.6	0	101.3	337.6	132.9	0
<i>Clione limacina</i>	0	0	0	0	6.3	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	6.9	0	0	0	0
<i>Ischyrocerus anguipes</i>	0	0	0	21.1	0	0
Unident. spp.	0	0	0	0	0	0
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	2.3	0	0	6.3	0
<i>Themisto libellula</i>	50.6	41.4	0	10.5	208.9	79.4
<i>Themisto abyssorum</i>	6.3	20.7	0	0	0	4.3
Decapoda						
unident. spp.	12.7	46.0	50.6	0	12.7	25.7
Chaetognatha						
<i>Sagitta elegans</i>	411.4	458.0	75.9	10.5	164.6	521.3
Pisces						
unident. spp.	0	0	0	0	6.3	0

Table 4.12 Continued.

	Time					
	1708	1743	1739	1915	1950	1946
	Station					
	S2b	S3	Depth (m)	S2b	S3	Depth (m)
	0-10	0-20	20-80	0-10	0-20	20-75
Cnidaria						
unident. spp.	481.0	436.7	341.8	151.9	373.4	389.0
Ctenophora						
<i>Mertensia ovum</i>	0	0	4.2	0	6.3	0
<i>Beroe cucumis</i>	0	0	0	0	6.3	0
Mollusca						
<i>Spiratella helicina</i>	240.5	44.3	4.2	113.9	519.0	16.1
<i>Clione limacina</i>	12.7	0	4.2	0	12.7	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	0	0	0	0	0
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0
Unident. spp.	0	0	0	0	0	0
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	0	0	12.7	0	0
<i>Themisto libellula</i>	0	88.6	67.5	25.3	189.9	142.7
<i>Themisto abyssorum</i>	0	0	4.2	0	0	4.6
Decapoda						
unident. spp.	63.3	6.3	27.4	0	126.6	0
Chaetognatha						
<i>Sagitta elegans</i>	63.3	75.9	542.2	25.3	227.8	462.6
Pisces						
unident. spp.	0	0	0	0	19.0	0

Table 4.13 Mesozooplankton abundance (no./m³) in Sugluk Inlet, August 19-20, 1990.

	Station					
	S1			S4		
	Depth (m)			Depth (m)		
	0-10	10-65	65-105	0-10	10-50	50-130
<i>Bougainvillia superciliaris</i>	0	0	0	1.4	0	0
<i>Sarsia</i> sp.	0	0.2	0	0	0	0
<i>Perigonimus yoldia-arcticae</i>	0	0	0	1.4	0	0
<i>Aglantha digitale</i>	0	1.5	0.6	5.7	0.3	3.5
<i>Aeginopsis laurenti</i>	1.4	1.7	0	0	2.9	0.8
<i>Spiratella helicina</i>	0	8.3	0	1.4	8.3	0
Polychaete larvae	8.6	20.9	0	7.1	1.1	11.2
<i>Acartia longiremis</i>	181.4	42.7	0	288.6	359.0	37.9
<i>Calanus finmarchicus</i> F	0	0	0	0	0	0.3
C V	0	0	0	0	0	0.2
<i>Calanus glacialis</i> F	0	0	0	0	0	4.9
C V	0	0	2.2	0	0	22.7
C IV	0	0	1.1	0	2.9	4.2
C III	0	27.2	0	0	13.7	9.4
C II	4.3	50.0	0	1.4	59.6	0.9
C I	4.3	93.8	0	5.7	104.8	0
<i>Calanus hyperboreus</i> F	0	0	0	0	0	7.1
C V	0	0	0	0	1.1	10.1
<i>Metridia longa</i>	0	0	80.0	1.4	0.4	38.6
<i>Pseudocalanus</i> sp.	261.4	428.8	0	194.3	877.7	505.4
<i>Jaschnovia tolli</i>	0	0	0	0	0	0
<i>Harpacticus</i> sp.	0	0	0	0	0	0
<i>Tisbe furcata</i>	0	0	0	0	0	0
<i>Cyclopina gracilis</i>	0	0	0	0	0	0
<i>Cyclopina schneideri</i>	0	0	0	0	0	0
<i>Oithona similis</i>	850.0	585.3	0	241.4	757.2	397.2
Copepod nauplii	30.0	100.9	0	42.9	118.0	8.7
<i>Balanus</i> nauplii	2.9	30.2	0	1.4	0	4.0
<i>Onisimus litoralis</i>	0	0	0	0	0	0
<i>Ischyroceros anguipes</i>	0	0	0	0	0	0
<i>Hyperia galba</i>	0	0.2	0	0	0	0
<i>Themisto libellula</i>	2.9	1.5	0.1	0	1.1	5.3
<i>Themisto abyssorum</i>	0	0	0	0	0	0
Euphausiid nauplii	1.4	3.9	0	1.4	2.5	0
Decapod larvae	0	0	0	0	0	0
<i>Sagitta elegans</i>	121.4	42.3	0	38.6	46.5	2.7

Table 4.13 Continued.

	Station				
	S6	Depth (m)			S8 Depth (m)
	0-10	10-50	50-75	0-10	10-83
<i>Bougainvillia superciliaris</i>	0	0	0	0	0
<i>Sarsia</i> sp.	0	0	0	0	0
<i>Perigonimus yoldia-arcticae</i>	0	0	0.6	0	0
<i>Aglantha digitale</i>	0	1.4	1.7	0	5.0
<i>Aeginopsis laurenti</i>	2.9	3.9	0	0	0
<i>Spiratella helicina</i>	0	0	9.0	1.4	1.3
Polychaete larvae	8.6	11.6	20.0	2.9	2.7
<i>Acartia longiremis</i>	225.7	501.0	0	778.6	18.2
<i>Calanus finmarchicus</i> F	0	0	0.6	0	0.8
C V	0	0.4	0	0	0
<i>Calanus glacialis</i> F	0	0.4	2.1	0	7.8
C V	0	2.9	17.9	0	19.0
C IV	0	0.4	0.6	0	1.6
C III	0	0	0	0	3.1
C II	0	22.0	0	0	4.7
C I	1.4	28.4	0	0	4.7
<i>Calanus hyperboreus</i> F	0	0.7	3.9	0	28.0
C V	1.4	2.9	4.4	0	28.6
<i>Metridia longa</i>	0	0	1.2	1.4	9.0
<i>Pseudocalanus</i> sp.	101.4	534.7	271.0	4.3	361.6
<i>Jaschnovia tolli</i>	0	0	0	0	1.6
<i>Harpacticus</i> sp.	0	0	0	0	0.2
<i>Tisbe furcata</i>	0	0	0	0	0.2
<i>Cyclopina gracilis</i>	0	2.9	0	0	0
<i>Cyclopina schneideri</i>	0	0	0	1.4	0
<i>Oithona similis</i>	183.0	1023.0	0	235.7	696.9
Copepod nauplii	28.6	72.7	4.0	12.9	2.9
<i>Balanus</i> nauplii	1.4	5.4	4.3	1.4	0
<i>Onisimus litoralis</i>	0	0	0.6	25.7	0
<i>Ischyroceros anguipes</i>	0	0	0	0	0.2
<i>Hyperia galba</i>	0	0.7	0	1.4	0.1
<i>Themisto libellula</i>	0	3.6	0	2.9	1.5
<i>Themisto abyssorum</i>	0	0	0	0	0.3
Euphausiid nauplii	0	2.9	0	2.9	1.2
Decapod larvae	0	0	0	0	0.8
<i>Sagitta elegans</i>	41.4	41.0	20.0	25.7	12.6

Table 4.14 Macrozooplankton abundance (no./100 m³) at stations in Sugluk Inlet, August 19-20, 1990.

	Station					
	S1			S4		
	0-10	Depth (m)		0-10	Depth (m)	
	0-10	10-50	50-100	0-10	10-50	50-125
Cnidaria						
unident. spp.	113.9	91.8	220.3	379.7	164.6	452.3
Ctenophora						
<i>Mertensia ovum</i>	0	0	0	12.7	0	1.7
<i>Beroe cucumis</i>	0	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	25.3	0	0	0	0	0
<i>Clione limacina</i>	0	0	0	0	0	5.1
Annelida						
polychaetes	0	0	0	0	0	0
Mysidacea						
<i>Mysis polaris</i>	0	0	0	0	0	0
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	0	0	0	0	0
<i>Ischyrocerus anguipes</i>	0	0	0	0	4.2	0
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	0	0	0	4.2	1.7
<i>Themisto libellula</i>	12.7	69.6	17.7	0	50.6	55.7
<i>Themisto abyssorum</i>	0	0	0	0	0	5.1
Decapoda						
unident. spp.	0	6.3	7.6	0	8.4	1.7
Chaetognatha						
<i>Sagitta elegans</i>	0	85.4	169.6	202.5	388.2	342.6
Pisces						
unident. spp.	0	0	0	0	0	0

Table 4.14 Continued.

	Station					
	S6			S8		
	0-10	Depth (m)		0-10	Depth (m)	
	0-10	10-30	30-75	0-10	10-30	30-80
Cnidaria						
unident. spp.	88.6	189.9	135.0	50.6	170.9	916.5
Ctenophora						
<i>Mertensia ovum</i>	0	12.7	0	0	0	2.5
<i>Beroe cucumis</i>	12.7	0	0	0	0	0
Mollusca						
<i>Spiratella helicina</i>	0	0	0	0	0	0
<i>Clione limacina</i>	0	0	0	0	0	0
Annelida						
polychaetes	0	0	0	12.7	0	5.1
Mysidacea						
<i>Mysis polaris</i>	0	0	0	0	0	2.5
Amphipoda Gammaridea						
<i>Onisimus litoralis</i>	0	0	0	569.6	417.7	124.1
<i>Ischyrocerus anguipes</i>	0	0	0	0	0	0
Amphipoda Hyperiidea						
<i>Hyperia galba</i>	0	19.0	0	0	0	0
<i>Themisto libellula</i>	38.0	322.8	45.0	50.6	82.3	98.7
<i>Themisto abyssorum</i>	0	6.3	0	0	0	35.4
Decapoda						
unident. spp.	0	0	5.6	0	0	63.3
Chaetognatha						
<i>Sagitta elegans</i>	0	38.0	464.1	0	75.9	969.6
Pisces						
unident. spp.	0	0	0	0	0	2.5

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