

DFO - Library / MPO - Bibliothèque



14010550

Zoobenthos Data from Inshore Stations of Upper Frobisher Bay 1969 - 1976

J. W. Wacasey, E. G. Atkinson, and L. Glasspoole

**Arctic Biological Station
Department of Fisheries and Oceans
Ste. Anne de Bellevue, Quebec H9X 3R4**

April 1980

Canadian Data Report of Fisheries and Aquatic Sciences No. 205

**QH
90.5
C33
No 205**

**Canada / Gouvernement du Canada
Oceans / Pêches et Océans**

Canadian Data Report of Fisheries and Aquatic Sciences

These reports provide a medium for filing and archiving data compilations where little or no analysis is included. Such compilations commonly will have been prepared in support of other journal publications or reports. The subject matter of Data Reports reflects the broad interests and policies of the Department of Fisheries and Oceans, namely, fisheries management, technology and development, ocean sciences, and aquatic environments relevant to Canada.

Numbers 1-25 in this series were issued as Fisheries and Marine Service Data Records. Numbers 26-160 were issued as Department of Fisheries and the Environment, Fisheries and Marine Service Data Reports. The current series name was changed with report number 161.

Data Reports are not intended for general distribution and the contents must not be referred to in other publications without prior written clearance from the issuing establishment. The correct citation appears above the abstract of each report.

Rapport statistique canadien des sciences halieutiques et aquatiques

Ces rapports servent de base à la compilation des données de classement et d'archives pour lesquelles il y a peu ou point d'analyse. Cette compilation aura d'ordinaire été préparée pour appuyer d'autres publications ou rapports. Les sujets des Rapports statistiques reflètent la vaste gamme des intérêts et politiques du Ministère des Pêches et des Océans, notamment gestion des pêches, techniques et développement, sciences océaniques et environnements aquatiques, au Canada.

Les numéros 1 à 25 de cette série ont été publiés à titre de Records statistiques, Service des pêches et de la mer. Les numéros 26-160 ont été publiés à titre de Rapports statistiques du Service des pêches et de la mer, Ministère des Pêches et de l'Environnement. Le nom de la série a été modifié à partir du numéro 161.

Les Rapports statistiques ne sont pas préparés pour une vaste distribution et leur contenu ne doit pas être mentionné dans une publication sans autorisation écrite préalable de l'établissement auteur. Le titre exact paraît au haut du résumé de chaque rapport.

17032

i

Canadian Data Report of
Fisheries and Aquatic Sciences 205



April 1980

ZOOBENTHOS DATA FROM INSHORE STATIONS OF UPPER
FROBISHER BAY, 1969-1976

by

J. W. Wacasey, E. G. Atkinson, and L. Glasspoole

Arctic Biological Station
Department of Fisheries and Oceans
555 St. Pierre Boulevard
Ste. Anne de Bellevue, Quebec H9X 3R4

QH
90.5
C33
No 205



©Minister of Supply and Services Canada 1980

Cat. no. Fs 97-13/205

ISSN 0706-6465

Correct citation for this publication:

Wacasey, J. W., E. G. Atkinson, and L. Glasspoole. 1980. Zoobenthos data from inshore stations of upper Frobisher Bay, 1969-1976. Can. Data Rep. Fish. Aquat. Sci. 205: 42 p.

TABLE OF CONTENTS

Abstract	iv
Introduction	1
Description of study area	1
Methods	2
Associated data	2
Zoobenthos	2
Sediment analysis	4
Acknowledgements	5
References	6
Map	7
Tables	8

ABSTRACT

Wacasey, J. W., E. G. Atkinson, and L. Glasspoole. 1980. Zoobenthos data from inshore stations of upper Frobisher Bay, 1969-1976. Can. Data Rep. Fish. Aquat. Sci. 205:42 p.

Data on marine zoobenthic invertebrates of upper Frobisher Bay, Baffin Island, were obtained from grab samples collected periodically from 1969 to 1976 from stations located along a 3.5 km track in water depths extending from 9 to 43 m. Methods of collecting and processing samples, and directions for the presentation of data are given.

Results are presented in tabular form and consist of density and biomass of species by station, and values of elements in sediments. Associated collecting data together with some data on benthic macrophytes and detritus are included.

Key words: Benthos: invertebrates, biomass, density, sediments, Arctic, Canada, Frobisher Bay.

RESUME

Wacasey, J. W., E. G. Atkinson, and L. Glasspoole. 1980. Zoobenthos data from inshore stations of upper Frobisher Bay, 1969-1976. Can. Data Rep. Fish. Aquat. Sci. 205:42 p.

Des données relatives aux invertébrés benthiques ont été obtenues dans le haut de la baie de Frobisher, Terre de Baffin; les échantillons ont été prélevés à la benne périodiquement de 1969 à 1976 à partir de stations situées le long d'un transect de 3.5 km, à des profondeurs variant de 9 à 43 m. On retrouve la description des méthodes de prélèvement et de préparation des échantillons ainsi que des directives sur la présentation des données.

Les résultats, présentés sous forme tabulaire, comprennent la densité et la biomasse des espèces par station et les valeurs des éléments dans les sédiments. Les autres données associées à l'échantillonnage de même que des données sur les macrophytes benthiques et les détritiques sont incluses.

INTRODUCTION

Zoobenthic studies were initiated in 1967 in upper Frobisher Bay, southern Baffin Island, as part of a multidisciplinary program devised by the Biological Oceanography Section of the Arctic Biological Station. The objective of these continuing studies is to determine the nature and magnitude of the role of benthic invertebrates in an arctic marine ecosystem.

In a previous report Wacasey *et al* (1979) presented data from stations that were quantitatively sampled in a 1.2 km² area of upper Frobisher Bay in depths of water from 26 to 90 m. The present report includes data on zoobenthos collected from 5 inshore stations located along a 3.5 km track in water depths extending from 9 to 43 m (Fig. 1). These stations were sampled by grab periodically from 1969 to 1976. Samples were not taken in 1971, 1974, and 1975. Station 5b was sampled 10 times from 1969 to 1976; station 25 was sampled once in 1973 and once in 1976; stations 26, 27, and 28 were sampled only once in 1973.

The data, presented in tabular form, consist of density and biomass estimates of each species by station, and the totals for the stations. Although these totals pertain to the primarily infaunal component of the community, they reflect the largest proportion of the density and biomass of the community. A list of species from all stations is also given.

Sediment samples were usually collected when benthic samples were taken. Sediment data consist of values of particle-size distribution, pH, nitrate-nitrogen, ammonia-nitrogen, total nitrogen, organic carbon, carbon-nitrogen ratio, calcium, potassium, magnesium, phosphorus, iron, manganese, zinc, copper, and silicon.

Associated collection data, biomass of algae, and biomass of detritus are included.

DESCRIPTION OF STUDY AREA

The settlement of Frobisher Bay is located at the head of Koojesse Inlet in upper Frobisher Bay, Baffin Island (Fig. 1). A causeway built of rocks and boulders in the early fifties and now in disrepair is located along the eastern shore of the inlet 2 km south of the settlement. The study area, starting at a point immediately south of the end of the causeway, extends for 3.5 km to a point off Monument Island. Five stations (5b, 25, 26, 27 and 28) were sampled by grab in depths of 9 to 43 m along or near this 3.5 km line.

At all stations the predominant fraction of the sediments is sand. At the shallowest station, 5b, the sand fraction is variable suggesting

that the bottom in this area is patchy. Bottoms at the deeper stations are more uniform with the sand fraction of the sediments decreasing with depth.

Temperatures of water near the bottom vary from -1.8 to 1.5°C with positive temperatures occurring at the shallower stations from August to September. Salinities of water near the bottom vary from 31.0 to 33.65‰ and are uniformly maintained by the mixing effect of the large tides in the area.

The tides in upper Frobisher Bay are semi-diurnal with a mean range of 7.3 m and a large range of 11.6 m.

Ice which begins to form in late November or early December, depending upon the year, gradually increases in thickness to approximately 2 m by late May or early June when the snow cover melts and ice breakup commences.

METHODS

ASSOCIATED DATA

Associated data, mostly self-explanatory, are presented in Tables 1 and 2. The listed water depth of a station is that recorded at the time of sampling. Temperature and salinity values are available only from some of the stations. Calibrated reversing thermometers were used to determine temperatures. Prior to 1973 salinity values of water samples taken near the bottom were determined at Bedford Institute in Dartmouth, Nova Scotia. Subsequently, salinity values were determined on water samples at the Arctic Biological Station using a Bissett-Berman model 6230 laboratory salinometer. Temperature and salinity values apply to depths within 5 m of the bottom.

ZOOBENTHOS

A "Petterson" grab (Foerst, Chicago) was used to collect samples from the 15 m M. V. *Calanus* during the open water season, and from the surface of the ice in winter. This grab samples an area of 0.065 m^2 and has a volume of 5 L. A sample consisted of 4 to 6 grabs giving a total sampled area of 0.25 to 0.39 m^2 . On soft bottoms the volume of a grab is governed by the depth of penetration which ranges from 4 to 10 cm depending upon the nature of the substrate. Grabs with less than 2 L of sediment or with rocks wedged in the jaws were not retained.

Following the collection of grabs at a station, sediments and contained organisms were washed on a stainless steel screen with a mesh size of 0.5 mm. Retained invertebrates and debris were preserved in formalin (1 part

formaldehyde with 9 parts water) for transporting to the Arctic Biological Station where they were processed.

Processing consisted of sorting, identifying, counting, and weighing the specimens in each sample. Organisms in each sample were sorted by hand using a Wild M5 dissecting microscope. Specimens were identified to species in most cases and representatives of the species were counted. Identification of species was not attempted on specimens in the taxa of nematodes, nemerteans, hydroids, bryozoans, and sponges, and although several species were represented, they were listed by taxon on a collective basis. In a similar manner sponges, bryozoans, hydroids, and other colonial forms were regarded as one individual or their presence was indicated by an "X". Names of some species may not be the most recent. Names which were used when the animals were initially identified have been retained to permit consistent referral to the species at different localities in the Canadian Arctic. Protozoans have been arbitrarily excluded from this report.

Following sorting and identification, specimens were oven-dried at 100°C overnight, then weighed on a Sartorius gravimetric balance in grams to four decimal places. The dry weights exclude tubes of polychaetes and shells of molluscs, but due to the difficulty of separating organic and inorganic fractions, the skeletal spicules of sponges and calcareous parts of echinoderms are included in the dry weights of these organisms. No effort was made to eliminate the gut contents of any of the organisms.

Data are presented on a m² basis. These values were derived by multiplying the number and weight of individuals of each species by a factor proportional to the area sampled for that station. For example, data from a sample of five "Petterson" grabs with a sampled area of 0.33 m² was multiplied by a factor of 3 to obtain the m² values. Most species collected by grab were considered to be representative and the sample values were uniformly converted to m² equivalents. In a few cases, as indicated, sample values were used without converting, because representation of large epifaunal species, which were infrequently collected, was not determined.

Species from all stations are listed in Table 3. Number of species, density, and biomass values for each station are summarized in Table 4. Density and biomass of species by station are presented in Tables 5 to 8. Biomass values for algae and organic debris (of terrestrial origin) were determined in the same way as the biomass values for the invertebrates and are listed by station or collection in Table 5.

SEDIMENT ANALYSIS

Samples of sediment were obtained from some of the collections made at Station 5b, and from stations 25, 26, 27 and 28. Approximately one litre of substrate, collected by grab from the station, was frozen for transportation to and storage at the Arctic Biological Station pending analysis.

Mechanical and chemical analyses of sediments were made by the Macdonald College Soil Testing Laboratory under the supervision of Dr. A. F. MacKenzie. Synoptic procedures and references provided by Dr. MacKenzie have been presented in Data Report No. 164 (Wacasey *et al.*, 1979). Where applicable, values are related to 1 g of oven-dried sediment. In most cases the values of the determined substances are presented as levels of the substances in forms that are available to zoobenthos and phytobenthos; however, the significance and relationship of the substances to the biota remain to be evaluated. Data from sediment analyses are presented in Tables 10 to 13.

ACKNOWLEDGEMENTS

We thank B. Emmett, E. H. Grainger, J. Lovrity, B. Marchant, J. Negrijn, B. Petolas, G. Sleno, and D. Weston who, at different times, provided assistance during the collecting and processing of samples in the field, and to summer university students C. Lewis, M. Lines, and S. Starr who sorted the samples in the laboratory and made some of the identifications and counts.

Of our colleagues at the Arctic Biological Station we are grateful to E. H. Grainger and J. Lovrity for providing some of the temperature and salinity data, and to A. Mohammed for identifying the amphipods.

Appreciation is extended to L. McMullon and F. Reid for typing and preparing the manuscript for the printer, and E. Krivanek for making the illustration.

REFERENCES

- Wacasey, J. W., E. G. Atkinson, and L. Glasspoole. 1979. Zoobenthos data from upper Frobisher Bay, 1967-1973. Can. Data Rep. Fish. Aquat. Sci. 164: 99 p.

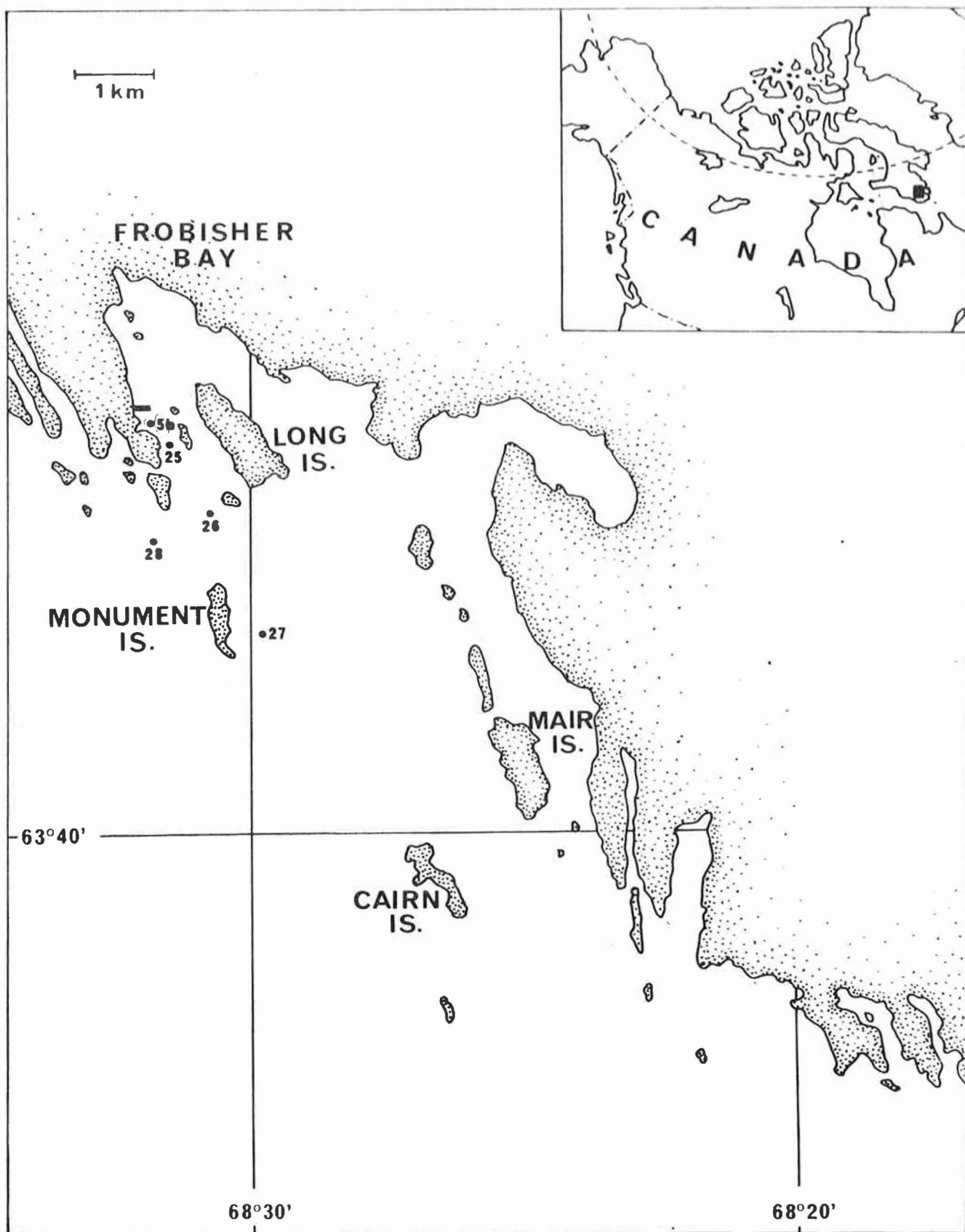


Fig. 1. Stations sampled by grab in upper Frobisher Bay, 1969-1976.

Table 1. Coordinates of stations sampled in upper Frobisher Bay, 1969-1976.

Station Number	North Latitude	West Longitude
5b	63°43.5'	68°31.7'
25	63°43.3'	68°31.4'
26	63°42.6'	68°30.7'
27	63°41.7'	68°29.9'
28	63°42.5'	68°31.4'

Table 2. Associated data for stations sampled by grab in upper Frobisher Bay, 1969-1976.

Station	Date	Time (AST)	Time (GMT)	No. of grabs	Sampled area (m ²)	Depth (m)	Temp. (°C)	Sal. (‰)
69-5b	29 Jul 69	1415	1815	6	0.39	15	0.20	32.225
69-5b	3 Sep 69	0900	1300	6	0.39	15	0.41	32.418
70-5b	9 Jan 70	1215	1615	4	0.25	9	-	32.922
70-5b	21 May 70	1700	2100	4	0.25	13	-1.73	-
72-5b	9 Feb 72	1635	2035	4	0.25	14	-	-
72-5b	17 May 72	1300	1700	4	0.25	12	-1.72	32.467
73-5b	24 Mar 73	1900	2300	4	0.25	12	-1.80	33.65
73-5b	29 May 73	1800	2200	4	0.25	16	-1.80	31.5
73-5b	8 Aug 73	1305	1705	5	0.33	14	-	32.413
76-5b	19 Aug 76	1420	1820	5	0.33	14	0.25	31.0
73-25	8 Aug 73	1430	1830	5	0.33	30	-	32.4
76-25	18 Aug 76	1130	1530	5	0.33	28	1.50	31.0
73-26	8 Aug 73	1540	1940	5	0.33	40	-	-
73-27	8 Aug 73	1650	2050	5	0.33	43	-	-
73-28	13 Aug 73	1330	1730	4	0.25	30	-	-

Table 3. Benthic invertebrates collected by grab from stations in upper Frobisher Bay, 1969-1976.

Species	No. Species	No.
ANNELIDA:Hirudinea Leech	1	<i>Musyllis</i> sp. <i>Exogone dispar</i> <i>Exogone naidina</i>
ANNELIDA:Oligochaeta Oligochaetes	1	<i>Fabricia sabella</i> <i>Flabelligera affinis</i> <i>Gattyana cirrosa</i>
ANNELIDA:Polychaeta <i>Ammotrypane aulogaster</i> <i>Ammotrypane breviata</i> <i>Ampharete acutifrons</i> <i>Ampharete arctica</i> <i>Amphitrite cirrata</i> <i>Amphitrite groenlandica</i> <i>Apistobranchus tullbergi</i> <i>Aricidea jeffreysi</i> <i>Aricidea suecica</i> <i>Brada inhabilis</i> <i>Brada villosa</i> <i>Branchionma infarcta</i> <i>Capitella capitata</i> <i>Chaetozone setosa</i> <i>Chaetozone</i> sp. <i>Chitinopoma fabricii</i> <i>Chone duneri</i> <i>Chone infundibuliformis</i> <i>Chone</i> sp. a <i>Chone</i> sp. b <i>Cirratulus cirratus</i> <i>Clymenella catenata</i> <i>Cossura longocirrata</i> <i>Diplocirrus glaucus</i> Dorvilleid <i>Dysponetus pygmaeus</i> <i>Enipo gracilis</i> <i>Ephesiella minuta</i> <i>Ephesiella peripatus</i> <i>Eteone barbata</i> <i>Eteone flava</i> <i>Eteone longa</i> <i>Euchone analis</i> <i>Euchone papillosa</i> <i>Eumida</i> sp. a	105 <i>Glycera capitata</i> <i>Harmothoe extenuata</i> <i>Harmothoe imbricata</i> <i>Harmothoe oerstedii</i> <i>Heteromastus</i> sp. <i>Lanassa venusta</i> <i>Laonome kroyeri</i> <i>Laphania boeckii</i> <i>Leaena abranchiata</i> <i>Leiochone polaris</i> <i>Lumbrineris fragilis</i> <i>Lumbrineris minuta</i> <i>Maldane sarsi</i> <i>Micronephthys minuta</i> <i>Microphthalmus aberrans</i> <i>Microspio</i> sp. <i>Myriochele heeri</i> <i>Mystides borealis</i> <i>Nephtys ciliata</i> <i>Nephtys longosetosa</i> <i>Nephtys paradoxa</i> <i>Nereimyra aphroditoides</i> <i>Nereis virens</i> <i>Nerinides</i> sp. <i>Nicomache lumbricalis</i> <i>Paraesione</i> sp. <i>Paraonis gracilis</i> <i>Paraonis</i> sp. a <i>Paraonis</i> sp. b <i>Petaloproctus tenuis</i> <i>Pherusa plumosa</i> <i>Pholoe minuta</i> <i>Phyllodoce groenlandica</i> <i>Phyllodoce mucosa</i> <i>Pionosyllis compacta</i> <i>Pista flexuosa</i>	

Table 3. (cont'd.)

Species	No. Species	No.
ANNELIDA: Polychaeta		
<i>Pista maculata</i>		
<i>Polycirrus medusa</i>		
<i>Polydora caeca</i>		
<i>Polydora caulleryi</i>		
<i>Polydora quadrilobata</i>		
<i>Polydora</i> sp.		
<i>Praxillella affinis</i>		
<i>Praxillella gracilis</i>		
<i>Praxillella praetermissa</i>		
<i>Prionospio steenstrupi</i>		
<i>Proclea graffi</i>		
<i>Pygospio elegans</i>		
<i>Rhodine loveni</i>		
<i>Sabella crassicornis</i>		
<i>Sabellides octocirrata</i>		
<i>Scalibregma inflatum</i>		
<i>Scoloplos armiger</i>		
<i>Sphaerodorom gracile</i>		
<i>Sphaerosyllis erinaceus</i>		
<i>Spio filicornis</i>		
<i>Spirorbis</i> sp.		
<i>Stauronereis caecus</i>		
<i>Syllis cornuta</i>		
<i>Syllis fasciata</i>		
<i>Terebellides stroemi</i>		
<i>Tharyx acutus</i>		
<i>Thelepus cincinnatus</i>		
<i>Trichobranchus glacialis</i>		
ARTHROPODA: Amphipoda		
<i>Acanthonotozoma serratum</i>	44	
<i>Aceroides l. latipes</i>		
<i>Ampelisca eschrichti</i>		
<i>Andaniella pectinata</i>		
<i>Anonyx debruyni</i>		
<i>Anonyx nugax</i>		
<i>Anonyx</i> sp.		
<i>Arrhinopsis longicornis</i>		
<i>Byblis gaimardi</i>		
<i>Caprella dubia</i>		
<i>Dulichia porrecta</i>		
<i>Eriethonius tolli</i>		
<i>Guernea nordenskioldi</i>		
<i>Halirages megalops</i>		
<i>Haploops tubicola</i>		
<i>Harpinia serrata</i>		
<i>Hippomedon</i> sp.		
<i>Ischyrocerus megalops</i>		
<i>Melita dentata</i>		
<i>Metopa cariana</i>		
<i>Metopa groenlandica</i>		
<i>Metopa</i> sp.		
<i>Monoculodes latimanus</i>		
<i>Monoculodes longirostris</i>		
<i>Monoculodes simplex</i>		
<i>Monoculodes</i> sp. d		
<i>Odius carinatus</i>		
<i>Orchomene groenlandica</i>		
<i>Orchomene minuta</i>		
<i>Orchomene serrata</i>		
<i>Paradulichia typica</i>		
<i>Parapleustes bicuspis</i>		
<i>Paroediceros lynceus</i>		
<i>Paroediceros</i> sp.		
<i>Phoxocephalus holbolli</i>		
<i>Pleustes media</i>		
<i>Pleusymtes</i> sp.		
<i>Pontoporeia affinis</i>		
<i>Rhachotropis inflata</i>		
<i>Socarnes</i> sp.		
<i>Syrrhoë crenulata</i>		
<i>Tryphosella schneideri</i>		
<i>Unciola leucopis</i>		
<i>Westwoodilla megalops</i>		
ARTHROPODA: Cirripedia		
<i>Balanus balanus</i>		1
ARTHROPODA: Cumacea		
<i>Brachydiastylis resima</i>		9
<i>Cumella</i> sp.		
<i>Diastylis rathkei</i>		
<i>Diastylis scorpioides</i>		
<i>Eudorella emarginata</i>		
<i>Lamprops fuscata</i>		

Table 3. (cont'd.)

Species	No.	Species	No.
ARTHROPODA:Cumacea <i>Leucon acutirostris</i> <i>Leucon nasica</i> <i>Leucon nasicooides</i>		Chordata:Ascidiacea <i>Aplidium glabrum</i> <i>Ascidia callosa</i> <i>Ciona intestinalis</i> <i>Kukenthalia borealis</i>	11
ARTHROPODA:Decapoda <i>Argis dentata</i>	1	<i>Molgula griffithsi</i> <i>Molgula</i> sp. <i>Pelonaia corrugata</i>	
ARTHROPODA:Isopoda <i>Desmosoma lineare</i> <i>Gnathia elongata</i> <i>Gnathia</i> sp. <i>Janiropsis</i> sp. a <i>Mesidotea sabini</i> <i>Munna fabricii</i> <i>Pleurogonium spinosissimum</i>	7	<i>Polycitor vitreus</i> <i>Styela coriacea</i> <i>Styela rustica</i> Ascidian	
ARTHROPODA:Ostracoda <i>Cythereis tuberculata</i> <i>Cytheridea</i> sp. a <i>Hemicythere concinna</i> ? <i>Philomedes globosus</i> <i>Polycope orbicularis</i> ? <i>Sclerochilus contortus</i>	6	COELENTERATA:Anthozoa <i>Halcampa arctica</i> Anthozoan Anthozoan Anthozoan	4
ARTHROPODA:Pycnogonida <i>Eurycyde hispida</i> <i>Nymphon elegans</i> <i>Nymphon hirtipes</i>	3	COELENTERATA:Hydrozoa Hydrozoan Hydrozoan Hydrozoan Hydrozoan	4
ARTHROPODA:Tanaidacea <i>Cryptocope arctica</i> <i>Leptognathia longiremis</i> <i>Leptognathia</i> sp. a <i>Pseudotanais forcipatus</i> <i>Pseudotanais lilljeborgi</i> <i>Pseudotanais</i> sp. <i>Sphyrapus anomalus</i> <i>Typhlotanais finmarchicus</i>	8	ECHINODERMATA:Asteroidea Asteroidean	1
		ECHINODERMATA:Holothuroidea <i>Cucumaria calcigera</i> <i>Myriotrochus rinki</i> <i>Psolus fabricii</i> Holothuroid	4
		ECHINODERMATA:Ophiuroidea <i>Ophiacantha bidentata</i> <i>Ophiopus arcticus</i> <i>Stegophiura nodosa</i>	3
ASCHELMINTHES:Nematoda Nematodes	1	ECTOPROCTA Bryozoan Bryozoan Bryozoan	3
BRANCHIOPODA <i>Hemithyris psittacea</i>	1		

Table 3. (cont'd.)

Species	No.	Species	No.
MOLLUSCA:Cephalopoda	1	<i>Macoma moesta</i>	
<i>Rossia molleri</i>		<i>Macoma torelli</i>	
		<i>Musculus discors</i>	
MOLLUSCA:Gastropoda	27	<i>Musculus niger</i>	
<i>Admete couthouyi</i>		<i>Mya truncata</i>	
<i>Buccinum hydrophanum</i>		<i>Nucula belloti</i>	
<i>Buccinum tenue</i>		<i>Nuculana minuta</i>	
<i>Colus tortuosus</i>		<i>Nuculana permula</i>	
<i>Corophella salmonacea</i>		<i>Serripes groenlandicus</i>	
<i>Cylichna alba</i>		<i>Thyasira gouldi</i>	
<i>Lepeta caeca</i>		<i>Yoldia h. hyperborea</i>	
<i>Lunatia pallida</i>			
<i>Margarites helicinus</i>		NEMERTINA	3
<i>Margarites umbilicalis</i>		Nemertean	
<i>Margarites sp.</i>		Nemertean	
<i>Natica clausa</i>		Nemertean	
<i>Neptunea despecta</i>			
<i>Oenopota arctica</i>		PORIFERA	2
<i>Oenopota bicarinata</i>		Sponge	
<i>Oenopota declivis</i>		Sponge	
<i>Oenopota incisula</i>			
<i>Oenopota pyramidalis</i>		PRIAPULIDA	1
<i>Oenopota turricula</i>		<i>Priapulius caudatus</i>	
<i>Oenopota sp.</i>			
<i>Philine lima</i>		SIPUNCULIDA	1
<i>Puncturella noachina</i>		<i>Golfingia margaritacea</i>	
<i>Retusa obtusa</i>			
<i>Trichotropis borealis</i>		TOTAL	273
<i>Trichotropis conica</i>			
<i>Velutina velutina</i>			
Gastropod			
MOLLUSCA:Pelecypoda	20		
<i>Astarte borealis</i>			
<i>Astarte montagui</i>			
<i>Axinopsida orbiculata</i>			
<i>Cerastoderma pinnatulum</i>			
<i>Dacrydium vitreum</i>			
<i>Hiatella arctica</i>			
<i>Liocyma fluctuosa</i>			
<i>Lyonsia arenosa</i>			
<i>Macoma calcaria</i>			

Table 4. Number of species, density, and biomass of invertebrates collected by grab from stations in upper Frobisher Bay, 1969-1976.

Station	Date	No. of species	Density (no. m ⁻²)	Biomass (g m ⁻²)
69-5b	29 Jul 69	59	24888	8.65
69-5b	3 Sep 69	66	12895	16.71
70-5b	9 Jan 70	44	23620	8.99
70-5b	21 May 70	43	21503	12.78
72-5b	9 Feb 72	42	7040	4.96
72-5b	17 May 72	29	2788	6.42
73-5b	24 Mar 73	39	2700	1.26
73-5b	29 May 73	48	7463	6.68
73-5b	8 Aug 73	57	6783	6.45
76-5b	19 Aug 76	72	13770	15.17
73-25	8 Aug 73	21	465	5.50
76-25	18 Aug 76	93	10068	17.11
73-26	8 Aug 73	147	17451	44.45
73-27	8 Aug 73	145	11862	54.76
73-28	13 Aug 73	101	19100	32.76

Table 5. Dry weight biomass of algae and organic debris (of terrestrial origin) collected by grab from stations in upper Frobisher Bay, 1969-1976.

Station	Date	Water Depth (m)	Sampled Area (m ²)	Algae Biomass (g m ⁻²)	Organic debris Biomass (g m ⁻²)
69-5b	29 Jul 69	15	0.39	-	46.75
69-5b	3 Sep 69	15	0.39	29.95	-
70-5b	9 Jan 70	9	0.25	-	86.12
70-5b	21 May 70	13	0.25	4.52	62.96
72-5b	9 Feb 72	14	0.25	24.88	181.32
72-5b	17 May 72	12	0.25	2.04	77.88
73-5b	24 Mar 73	12	0.25	-	31.48
73-5b	29 May 73	16	0.25	0.72	36.08
73-5b	8 Aug 73	14	0.33	1.62	124.08
76-5b	19 Aug 76	14	0.33	-	114.00
73-25	8 Aug 73	30	0.33	-	87.78
76-25	18 Aug 76	28	0.33	-	38.01
73-26	8 Aug 73	40	0.33	0.63	26.04
73-27	8 Aug 73	43	0.33	-	20.07
73-28	13 Aug 73	30	0.25	0.52	105.88

Table 6. Densities (no. m⁻²) of benthic invertebrates collected by grab from station 5b, 1969-1976.

Species	1969		1970		1972		1973			1976
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ANNELIDA:Hirudinea										
Leech									3	
ANNELIDA:Oligochaeta										
Oligochaetes	8062.5	427.5	8180	7888	224	4	132	208	378	372
ANNELIDA:Polychaeta										
<i>Ampharete acutifrons</i>		7.5			12	12	4	40	45	57
<i>Ampharete arctica</i>			4							
<i>Amphitrite groenlandica</i>								4		
<i>Apistobranchnus tullbergi</i>			4							6
<i>Aricidea suecica</i>			8	8						3
<i>Capitella capitata</i>	445.0	440.0	920	512	44		8	48	27	168
<i>Chaetozone setosa</i>	3042.5	405.0	612	908	76			12	15	144
<i>Chaetozone sp.</i>	17.5	12.5							3	
<i>Chone duneri</i>								28	15	279
<i>Chone infundibuliformis</i>	32.5	1267.5			16	16			12	
<i>Chone sp.</i>	20.0		8					424	9	
<i>Cirratulus cirratus</i>	55.0	190.0	4	20	16	4				
<i>Cossura longocirrata</i>			28							21
<i>Diplocirrus glaucus</i>								4		
<i>Dysponetus pygmaeus</i>	7.5		4	4			8	8		42
<i>Ephesiella minuta</i>	17.5			12		4	44	24	6	171
<i>Eteone barbata</i>		12.5	4						3	
<i>Eteone flava/longa</i>	1232.5	780.0	1084	1672	276	20	76	76	141	558
<i>Euchone analis</i>	87.5	265.0	20	24	16	28	4	36	111	180
<i>Euchone papillosa</i>	7.5	87.5			4	4		4	6	
<i>Exogone dispar</i>	67.5	20.0	24	4	4				9	30
<i>Exogone naidina</i>	10.0	25.0					4	12		12
<i>Flabelligera affinis</i>										3

Table 6. (cont'd.)

Species	1969		1970		1972		1973			1976
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ANNELIDA: Polychaeta										
- <i>Glycera capitata</i>										3
<i>Harmothoe extenuata</i>	2.5									
<i>Harmothoe imbricata</i>	82.5	82.5	112	140	76	4		12	6	123
- <i>Harmothoe oerstedii</i>				4						
<i>Heteromastus</i> sp.	917.5	457.5	924	396	2568		760	112	3189	2838
<i>Lanassa venusta</i>	27.5	50.0	8	4			4		3	15
<i>Laphania boeckii</i>		5.0	4		4				6	3
<i>Lucibrineris minuta</i>				4						
<i>Micronephthys minuta</i>	25.0		8	16	8			12	6	6
- <i>Microphthalmus aberrans</i>	47.5	20.0	172	20	148		4		102	132
<i>Microspio</i> sp.	2810.0	962.5	1448	364			120	80	126	18
<i>Nephtys ciliata</i>	5.0	2.5	4	4	16	16	4		12	102
<i>Nephtys longosetosa</i>										3
<i>Nereimyra aphroditoides</i>	22.5		4	8	92	16	20		33	
<i>Parahesionia</i> sp.	2.5	12.5								342
<i>Pherusa plumosa</i>	2.5					4				
<i>Pholoe minuta</i>	92.5	92.5	32	24	148	20		24	39	69
<i>Phyllodoce groenlandica</i>		5.0						20		
<i>Phyllodoce mucosa</i>			4	32	8					3
<i>Polycirrus medusa</i>		12.5								
<i>Polydora caeca</i>	5.0	50.0		52	4					
<i>Polydora quadrilobata</i>	3565.0	2470.0	3844	2592	64	4	36	8	54	300
<i>Praxillella praetermissa</i>	45.0	227.5	16		28	48	8	20	93	471
<i>Prionospio steenstrupi</i>	10.0	12.5	20	20	8			28	42	162
<i>Pygospio elegans</i>	592.5	1455.0	180	688	24		16		141	1299
<i>Sabellides octocirrata</i>	5.0	65.0	20				4	16	18	
<i>Scalibregma inflatum</i>	15.0	12.5		8				4	6	
<i>Scoloplos armiger</i>										3

Table 6. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ANNELIDA: Polychaeta										
<i>Sphaerodorum gracile</i>		5.0								
<i>Sphaerosyllis erinaceus</i>	20.0	12.5	8	12	48		4		6	21
<i>Spio filicornis</i>	780.0	1182.5	584	652	412	8	44	60	171	1029
<i>Stauronereis caecus</i>	675.0	92.5	1088	280	4					48
<i>Syllis cornuta</i>								8	12	
<i>Tharyx acutus</i>	27.5	92.5					8		15	54
Pieces of polychaetes	X	X	X	X	X	X	X	X		
ARTHROPODA: Amphipoda										
<i>Aceroides l. latipes</i>							4			
<i>Anonyx rugax</i>	2.5									
<i>Anonyx</i> sp.		2.5								
<i>Caprella dubia</i>		15.0								
<i>Erichthonius tolli</i>										3
<i>Halirages megalops</i>									3	
<i>Monoculodes latimanus</i>	57.5	30.0					8		27	6
<i>Monoculodes longirostris</i>					20	4	12			6
- <i>Monoculodes simplex</i>	42.5	62.5							9	
- <i>Monoculodes</i> sp. d										30
<i>Paradulichia typica</i>					4					
- <i>Parapleustes bicuspis</i>									3	
<i>Paroediceros lynceus</i>	252.5	27.5			16		40	4	33	15
<i>Paroediceros</i> sp.	67.5	2.5							33	27
<i>Pleusymtes</i> sp.	2.5									
<i>Pontoporeia affinis</i>									3	
<i>Westwoodilla megalops</i>									3	6
ARTHROPODA: Cumacea										
<i>Diastylis rathkei</i>							8	12		

Table 6. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ARTHROPODA: Cumacea										
<i>Eudorella emarginata</i>								4		
<i>Lamprops fuscata</i>										21
ARTHROPODA: Decapoda										
<i>Argis dentata</i>				4						
ARTHROPODA: Isopoda										
<i>Mesidotea sabinii</i>	2.5	2.5		10*	4		4			3
ARTHROPODA: Ostracoda										
<i>Philomedes globosus</i>		5.0						8		3
ASCHELMINTHES: Nematoda										
Nematodes	600.0	357.5	4104	4540	1648	1492	928	3788	696	1521
CHORDATA: Ascidiacea										
<i>Styela rustica</i>			4							
COELENTERATA: Anthozoa										
Anthozoan	7.5									
COELENTERATA: Hydrozoa										
Hydrozoan										9
ECHINODERMATA: Holothuroidea										
<i>Myriotrochus rinki</i>		10.0								27
MOLLUSCA: Cephalopoda										
<i>Rossia molleri</i>				1*						

Table 6. (cont'd.)

Species	1969		1970		1972		1973			1976
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
MOLLUSCA:Gastropoda										
<i>Buccinum hydrophanum</i>								1*		
- <i>Buccinum tenue</i>		2.5								3
<i>Colus tortuosus</i>								4		
- <i>Coryphella salmonacea</i>										21
<i>Cylichna alba</i>	105.0	45.0	4	200	148	116	20	572	162	354
<i>Margarites helycinus</i>									3	
<i>Natica clausa</i>		2.5								
<i>Oenopota arctica</i>		5.0							6	
<i>Oenopota bicarinata</i>	7.5	5.0			8	4	4	12	6	57
- <i>Oenopota declivis</i>										6
<i>Oenopota incisula</i>										15
<i>Oenopota pyramidalis</i>								4		
<i>Oenopota turricula</i>		2.5					4			15
<i>Oenopota</i> sp.		2.5								
<i>Philine lima</i>	20.0	17.5		12	4	20	28	28	6	24
<i>Retusa obtusa</i>	202.5	57.5	8	76	148	88	36	184	102	192
<i>Trichotropis conica</i>										6
Gastropod	5.0		4							9
MOLLUSCA:Pelecypoda										
<i>Astarte borealis</i>		7.5	4							3
<i>Astarte montagui</i>		2.5								
<i>Axinopsida orbiculata</i>	437.5	660.0	84	212	544	688	228	1064	693	1722
- <i>Cerastoderma pinnatulum</i>										3
<i>Hiatella arctica</i>	2.5	7.5								3
<i>Liocyma fluetuosa</i>								12		
<i>Macoma calcarea</i>	2.5		4	4	4	4	4	12	3	36
<i>Macoma moesta</i>		12.5		4						
<i>Musculus discors</i>		2.5	4	4						

Table 6. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
MOLLUSCA: Pelecypoda										
<i>Mya truncata</i>	2.5					4				
<i>Nucula belloti</i>	20.0	20.0			12	20	16	144	39	27
<i>Serripes groenlandicus</i>		5.0								
<i>Thyasira gouldi</i>	52.5	72.5	8	24	60	76	16	244	39	48
<i>Yoldia h. hyperborea</i>								8		3
NEMERTINA										
Nemertean	62.5	105.0			40	8	4	12	36	351
PORIFERA										
Sponge									3	
PRIAPULIDA										
<i>Priapulid caudatus</i>	50.0	25.0	8	40	32	52	24	8	12	105
SIPUNCULIDA										
<i>Golfingia margaritacea</i>								4		
MISCELLANEOUS										
Unidentified invertebrate										x
Total	24887.5	12895.0	23620	21503	7040	2788	2700	7463	6783	13770

*Sample value used because of disproportionate representation.

Table 7. Biomass (gm^{-2}) of benthic invertebrates collected by grab from station 5b, 1969-1976.

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ANNELIDA:Hirudinea										
Leech									0.0039	
ANNELIDA:Oligochaeta										
Oligochaetes	0.3508	0.0200	0.1908	0.2824	0.0036	0.0001	0.0052	0.0032	0.0189	0.0219
ANNELIDA:Polychaeta										
<i>Ampharete acutifrons</i>		0.0100			0.0252	0.0100	0.0044	0.0212	0.0411	0.0558
<i>Ampharete arctica</i>			0.0020							
<i>Amphitrite groenlandica</i>								0.0244		
<i>Apistobranhus tullbergi</i>			0.0004							0.0003
<i>Aricidea suecica</i>			0.0004	0.0024						0.0009
<i>Capitella capitata</i>	0.1053	0.2475	0.1376	0.0708	0.0168		0.0008	0.0164	0.0096	0.0879
<i>Chaetozone setosa</i>	0.5758	0.2293	0.0492	0.0924	0.0032			0.0064	0.0009	0.0345
<i>Chaetozone</i> sp.	0.0028	0.0015							0.0003	
<i>Chone duneri</i>								0.0040	0.0021	0.0126
<i>Chone infundibuliformis</i>	0.0105	0.1273			0.0052	0.1972			0.2661	
<i>Chone</i> sp.	0.0010		0.0004					0.0428	0.0006	
<i>Cirratulus cirratus</i>	0.0093	0.0173	0.0016	0.0228	0.0008	0.0012				
<i>Cossura longocirrata</i>			0.0004							0.0009
<i>Diplocirrus glaucus</i>								0.0004		
<i>Dysponetus pygmaeus</i>	0.0008		0.0004	0.0004			0.0004	0.0001		0.0015
<i>Ephesiella minuta</i>	0.0035			0.0016		0.0004	0.0040	0.0024	0.0018	0.0282
<i>Eteone barbata</i>		0.0215	0.0096						0.0021	
<i>Eteone flava/longa</i>	1.1380	1.0478	1.0852	0.8716	0.0488	0.0068	0.0084	0.0112	0.0591	0.1746
<i>Euchone analis</i>	0.1588	0.9695	0.0044	0.0184	0.0332	0.1152	0.0016	0.1444	0.1947	0.3327
<i>Euchone papillosa</i>	0.0010	0.0120			0.0004	0.0268		0.0008	0.0012	
<i>Exogone dispar</i>	0.0028	0.0010	0.0016	0.0001	0.0001				0.0009	0.0012
<i>Exogone naidina</i>	0.0008	0.0020					0.0001	0.0004		0.0006
<i>Flabelligera affinis</i>										0.0024

Table 7. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ANNELIDA: Polychaeta										
<i>Glycera capitata</i>										0.0012
<i>Harmothoe extenuata</i>	0.0003									
<i>Harmothoe imbricata</i>	0.2403	0.3338	0.0284	0.2264	0.1632	0.0212		0.0008	0.2241	0.1242
<i>Harmothoe oerstedii</i>				2.8224						
<i>Heteromastus</i> sp.	0.1928	0.1585	0.3268	0.0324	0.0960		0.0536	0.0080	0.4899	0.7395
<i>Lanassa venusta</i>	0.1385	0.0910	0.0108	0.0192			0.0016		0.0072	0.0636
<i>Laphania boeckii</i>		0.0008	0.0028		0.0004				0.0009	0.0066
<i>Lumbrineris minuta</i>				0.0040						
<i>Micronephthys minuta</i>	0.0100		0.0008	0.0008	0.0008			0.0012	0.0030	0.0006
<i>Microphthalmus aberrans</i>	0.0023	0.0008	0.0020	0.0004	0.0024		0.0001		0.0027	0.0033
<i>Microspio</i> sp.	1.3310	0.7178	0.9280	0.0980			0.0596	0.0176	0.0468	0.0135
<i>Nephtys ciliata</i>	0.0185	0.0123	0.0692	1.8412	0.2840	0.5788	0.0196		0.3597	1.9563
<i>Nephtys longosetosa</i>										0.0060
<i>Nereimyra aphroditoides</i>	0.0023		0.0004	0.0008	0.0924	0.0064	0.0012		0.0090	
<i>Parahesion</i> sp.	0.0005	0.0023								0.0579
<i>Pherusa plumosa</i>	0.3188					0.2720				
<i>Pholoe minuta</i>	0.0208	0.0265	0.0264	0.0036	0.0484	0.0092		0.0088	0.0459	0.0330
<i>Phyllodoce groenlandica</i>		0.0060						0.7776		
<i>Phyllodoce mucosa</i>			0.0020	0.0056	0.0064					0.0009
<i>Polycirrus medusa</i>		0.0130								
<i>Polydora caeca</i>	0.0005	0.0595		0.0068	0.0152					
<i>Polydora quadrilobata</i>	1.7900	0.9923	2.1336	0.9052	0.0092	0.0004	0.0048	0.0016	0.0231	0.0240
<i>Praxillella praetermissa</i>	0.0133	0.1185	0.0060		0.2084	0.2896	0.2632	0.1552	2.7066	2.7270
<i>Prionospio steenstrupi</i>	0.0075	0.0053	0.0028	0.0028	0.0012			0.0024	0.0189	0.0492
<i>Pygospio elegans</i>	0.0460	0.1273	0.0104	0.0144	0.0020		0.0008		0.0147	0.0852
<i>Sabellides octocirrata</i>	0.0018	0.0083	0.0036				0.0012	0.0020	0.0069	
<i>Scalibregma inflatum</i>	0.0015	0.0025		0.0016				0.0008	0.0018	
<i>Scoloplos armiger</i>										0.0006

Table 7. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ANNELIDA: Polychaeta										
<i>Sphaerodorum gracile</i>		0.0045								
<i>Sphaerosyllis erinaceus</i>	0.0013	0.0003	0.0004	0.0004	0.0012		0.0001		0.0003	0.0006
<i>Spio filicornis</i>	0.4195	0.7635	0.2652	0.1424	0.0648	0.0032	0.0124	0.0164	0.1071	0.1122
<i>Stauronereis caecus</i>	0.0490	0.0045	0.0352	0.0064	0.0001					0.0042
<i>Syllis cornuta</i>								0.0048	0.0009	
<i>Tharyx acutus</i>	0.0020	0.0280					0.0008		0.0024	0.0042
Pieces of polychaetes	0.2255	0.1173	0.1824	0.2816	0.0360	0.0436	0.0024	0.0888		
ARTHROPODA: Amphipoda										
<i>Aceroides l. latipes</i>							0.0016			
<i>Anonyx nugax</i>	0.2673									
<i>Anonyx</i> sp.		0.0008								
<i>Caprella dubia</i>		0.0028								
<i>Erichthonius tolli</i>										0.0021
<i>Halirages megalops</i>									0.0009	
<i>Monoculodes latimanus</i>	0.0262	0.0160					0.0012		0.0120	0.0039
<i>Monoculodes longirostris</i>					0.0608	0.0028	0.0188			0.0018
<i>Monoculodes simplex</i>	0.0063	0.0193							0.0021	
<i>Monoculodes</i> sp. d										0.0009
<i>Paradulichia typica</i>					0.0012					
<i>Parapleustes bicuspis</i>									0.0006	
<i>Paroediceros lynceus</i>	0.4793	0.0633			0.0220		0.0844	0.0228	0.1461	0.0255
<i>Paroediceros</i> sp.	0.0033	0.0003							0.0012	0.0012
<i>Pleusymtes</i> sp.	0.0001									
<i>Pontoporeia affinis</i>									0.0003	
<i>Westwoodilla megalops</i>									0.0015	0.0015
ARTHROPODA: Cumacea										
<i>Diastylis rathkei</i>							0.0008	0.1252		

Table 7. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
ARTHROPODA: Cumacea										
<i>Eudorella emarginata</i>								0.0008		
<i>Lamprops fuscata</i>										0.0036
ARTHROPODA: Decapoda										
<i>Argis dentata</i>				0.3940						
ARTHROPODA: Isopoda										
<i>Mesidotea sabini</i>	0.0600	0.1015		1.5867*	0.0320		0.0756			1.3254
ARTHROPODA: Ostracoda										
<i>Philomedes globosus</i>		0.0013						0.0016		0.0012
ASCHELMINTHES: Nematoda										
Nematodes	0.0163	0.0098	0.0496	0.0360	0.0108	0.0176	0.0076	0.0372	0.0204	0.0417
CHORDATA: Ascidiacea										
<i>Styela rustica</i>			0.9424							
COELENTERATA: Anthozoa										
Anthozoan	0.0060									
COELENTERATA: Hydrozoa										
Hydrozoan										0.0294
ECHINODERMATA: Holothuroidea										
<i>Myriotrochus rinki</i>		0.1875								1.4046
MOLLUSCA: Cephalopoda										
<i>Rossia molleri</i>				0.5468*						

Table 7. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
MOLLUSCA:Gastropoda										
<i>Buccinum hydrophorum</i>								1.9640*		
<i>Buccinum tenue</i>		0.1653								0.7494
<i>Colus tortuosus</i>								0.2356		
<i>Coryphella salmonacea</i>										0.0159
<i>Cylichna alba</i>	0.1358	0.2608	0.0028	0.0376	0.1752	0.0820	0.0428	0.2960	0.2868	0.3183
<i>Margarites helycinus</i>									0.0069	
<i>Natica clausa</i>		0.0645								
<i>Oenopota arctica</i>		0.0123							0.0171	
<i>Oenopota bicarinata</i>	0.0375	0.0698			0.1088	0.0552	0.0700	0.0464	0.1170	0.1425
<i>Oenopota declivis</i>										0.0288
<i>Oenopota incisula</i>										0.0150
<i>Oenopota pyramidalis</i>								0.0068		
<i>Oenopota turricula</i>		0.0423					0.0024			0.0258
<i>Oenopota</i> sp.		0.0705								
<i>Philine lima</i>	0.0228	0.0208		0.0212	0.0104	0.0080	0.0288	0.0064	0.0156	0.0345
<i>Retusa obtusa</i>	0.0978	0.0235	0.0060	0.0124	0.0160	0.0076	0.0064	0.0380	0.0198	0.0402
<i>Trichotropis conica</i>										0.0147
Gastropod	0.0095		0.0076							0.0021
MOLLUSCA:Pelecypoda										
<i>Astarte borealis</i>		3.7158	2.0836							1.2249
<i>Astarte montagui</i>		0.0003								
<i>Axinopsida orbiculata</i>	0.1038	0.2110	0.0256	0.0320	0.0888	0.1724	0.0772	0.2540	0.2811	0.3087
<i>Cerastoderma pinnatulum</i>										0.0198
<i>Hiatella arctica</i>	0.0125	0.1370								0.0723
<i>Liocyma fluctuosa</i>								0.0008		
<i>Macoma calcarea</i>	0.0290		0.0292	0.0292	0.0860	1.3364	0.3480	0.6724	0.3339	1.6860
<i>Macoma moesta</i>		0.1025		0.0316						
<i>Musculus discors</i>		0.0003	0.0004	0.0004						

Table 7. (cont'd.)

Species	1969		1970		1972		1973		1976	
	29 Jul	3 Sep	9 Jan	21 May	9 Feb	17 May	24 Mar	29 May	8 Aug	19 Aug
MOLLUSCA: Pelecypoda										
<i>Mya truncata</i>	0.0053					0.4128				
<i>Nucula belloti</i>	0.0023	0.0083			0.0116	0.0176	0.0400	1.0900	0.2433	0.7533
<i>Serripes groenlandicus</i>		4.2443								
<i>Thyasira gouldi</i>	0.0115	0.0223	0.0028	0.0036	0.0100	0.0192	0.0084	0.2572	0.0639	0.0468
<i>Yoldia h. hyperborea</i>								0.0048		0.0006
NEMERTINA										
Nemerteans	0.0778	0.0070			0.4388	0.0320	0.0012	0.0316	0.0435	0.0408
PORIFERA										
Sponge									0.0222	
PRIAPULIDA										
<i>Priapulus caudatus</i>	0.0528	0.8280	0.3196	2.2676	2.7220	2.6772	0.0020	0.2196	0.1431	0.0105
SIPUNCULIDA										
<i>Golfingia margaritacea</i>								0.0064		
MISCELLANEOUS										
Unidentified invertebrate										0.0078
Total	8.6584	16.7105	8.9908	12.7784	4.9638	6.4229	1.2635	6.6817	6.4545	15.1713

*Sample value used because of disproportionate representation.

Table 8. Densities (no. m⁻²) of benthic invertebrates collected by grab from stations 73-25, 76-25, 73-26, 73-27, and 73-28 in 1973, 1976.

Species	73-25	76-25	73-26	73-27	73-28
ANNELIDA:Oligochaeta					
Oligochaetes	9	978	561		264
ANNELIDA:Polychaetes					
- <i>Ammotrypane aulogaster</i>				3	
<i>Ammotrypane breviata</i>			3	12	
<i>Ampharete acutifrons</i>		78	12		
<i>Amphitrite cirrata</i>	3				
<i>Amphitrite groenlandica</i>			6		
<i>Apistobranthus tullbergi</i>			333	9	1120
<i>Aricidia jeffreysi</i>			222	12	716
<i>Aricidia suecica</i>		6	258	114	196
<i>Brada inhabilis</i>			6		
<i>Brada villosa</i>		3	9		80
<i>Branchiomma infareta</i>				3	
<i>Capitella capitata</i>	6	186	240	3	40
<i>Chaetozone setosa</i>		240	189	150	1156
<i>Chaetozone</i> sp.			420	99	20
<i>Chitinopoma fabricii</i>				147	
<i>Chone duneri</i>		93	6	9	8
<i>Chone infundibuliformis</i>	3	36			
<i>Chone</i> sp. a				252	
<i>Chone</i> sp. b		108	48	318	224
<i>Cirratulus cirratus</i>		6	36		
- <i>Clymenella catenata</i>			3		28
<i>Cossura longocirrata</i>		15	480	1014	520
<i>Diplocirrus glaucus</i>		12	90	15	40
- Dorvilleid				3	
<i>Dysponetus pygmaeus</i>		51	6	3	
<i>Enipo gracilis</i>			12	24	
<i>Ephesiella minuta</i>		171	6	3	4
<i>Ephesiella peripatus</i>				9	
<i>Eteone barbata</i>		6			
<i>Eteone flava</i>	3	12	54	6	32
<i>Eteone longa</i>		153	66	9	48
<i>Euchone analis</i>		108	3	6	
<i>Euchone papillosa</i>		102	597	87	444
<i>Eumida</i> sp. a				24	
<i>Eusyllis</i> sp.				6	
<i>Exogone dispar</i>		54	105	18	560
<i>Exogone naidina</i>			288	63	28
<i>Fabricia sabella</i>			6		4
<i>Flabelligera affinis</i>			6	3	

Table 8. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ANNELIDA: Polychaetes					
<i>Gattyana cirrosa</i>			27		
<i>Harmothoe imbricata</i>		42	48	15	4
<i>Harmothoe oerstedii</i>				9	
<i>Heteromastus</i> sp.	30	705	426	36	508
<i>Lanassa venusta</i>		18	15	12	
<i>Laonome kroyeri</i>				6	
<i>Laphania boeckii</i>			9	126	40
<i>Leaena abranchiata</i>			3		
<i>Leiochone polaris</i>			6		
<i>Lumbrineris fragilis</i>				3	
<i>Lumbrineris minuta</i>			51	90	20
<i>Maldane sarsi</i>			21	378	
<i>Micronephthys minuta</i>		33	99	36	100
<i>Microphtalmus aberrans</i>		15			20
<i>Microspio</i> sp.		24			
<i>Myriochele heeri</i>			45	45	100
<i>Mystides borealis</i>		3	3	30	
<i>Nephtys ciliata</i>	3	117	30	54	104
<i>Nephtys paradoxa</i>			6	3	4
<i>Nereimyra aphroditoides</i>		9	6		
<i>Nereis virens</i>			6		
<i>Nerinides</i> sp?		3			
<i>Nicomache lumbricalis</i>			15	24	
<i>Parahesion</i> sp.		264	27		24
<i>Paraonis gracilis</i>			48	939	
<i>Paraonis</i> sp. a			417	12	16
<i>Paraonis</i> sp. b			15	24	20
<i>Petaloproctus tenuis</i>			3		
<i>Pherusa plumosa</i>			9		4
<i>Pholoe minuta</i>		42	240	312	52
<i>Phyllodoce groenlandica</i>	3	3	12	18	16
<i>Pionosyllis compacta</i>		33	54	51	
<i>Pista flexuosa</i>		6	6		
<i>Pista maculata</i>			6	90	
<i>Polycirrus medusa</i>			9	63	
<i>Polydora caeca</i>		63	51	42	8
<i>Polydora caulleryi</i>			60	57	
<i>Polydora quadrilobata</i>		90	15		
<i>Polydora</i> sp.			45		
<i>Praxillella affinis</i>		147	252	48	44
<i>Praxillella gracilis</i>			3		
<i>Praxillella praetermissa</i>	6	267	12	39	112
<i>Prionospio steenstrupi</i>		105	45	42	12

Table 8. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ANNELIDA: Polychaetes					
<i>Proclea graffi</i>					20
<i>Pygospio elegans</i>		159	54		60
<i>Rhodine loveni</i>					4
<i>Sabella crassicornis</i>				9	
<i>Sabellides octocirrata</i>	6		6		
<i>Scalibregma inflatum</i>			15	18	4
<i>Scoloplos armiger</i>	9		3	21	
<i>Sphaerodorum gracile</i>			6	15	
<i>Sphaerosyllis erinaceus</i>	9		42	48	8
<i>Spio filicornis</i>	1686		12		8
<i>Spirorbis</i> sp.				6	
<i>Stauronereis caecus</i>		54	21	21	8
<i>Syllis cornuta</i>			111	72	12
<i>Syllis fasciata</i>			45	51	4
<i>Terebellides stroemi</i>			84	60	4
<i>Tharyx acutus</i>			1341	969	4252
<i>Thelepus cincinnatus</i>				15	
<i>Trichobranchus glacialis</i>			9		
Pieces of polychaetes		X	X	X	X
ARTHROPODA: Acarina					
Mite		12			
ARTHROPODA: Amphipoda					
<i>Acanthonotozoma serratum</i>				3	
<i>Ampelisca eschrichti</i>		3		3	4
<i>Andaniella pectinata</i>				3	
<i>Anonyx debruynei</i>				3	
<i>Arrhinopsis longicornis</i>				3	
<i>Byblis gaimardi</i>					4
<i>Dulichia porrecta</i>				6	12
<i>Erichthonius tolli</i>		3			
<i>Guernea nordenskioldi</i>			3		52
<i>Halirages megalops</i>					4
<i>Haploops tubicola</i>				3	
<i>Harpinia serrata</i>			12	18	
<i>Hippomedon</i> sp.			6		4
<i>Ischyrocerus megalops</i>			3	6	
<i>Melita dentata</i>				6	
<i>Metopa cariana</i>			3		
<i>Metopa groenlandica</i>				15	
<i>Metopa</i> sp.		3			
<i>Monoculodes latimanus</i>		6	12	6	4
<i>Monoculodes longirostris</i>		81		9	

Table 8. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ARTHROPODA: Amphipoda					
<i>Monoculodes simplex</i>			3		
<i>Monoculodes</i> sp. d		87			
- <i>Odius carinata</i>				3	
<i>Orchomene groenlandica</i>				3	
<i>Orchomene minuta</i>			3		
<i>Orchomene serrata</i>				81	
<i>Paradulichia typica</i>	60		99		48
<i>Paroediceros lynceus</i>	42		3		4
<i>Paroediceros</i> sp.	12		3		
<i>Phoxocephalus holbolli</i>			9	9	
<i>Pleustes media</i>	3				
- <i>Rhachotropis inflata</i>	3				
<i>Socarnes</i> sp.				9	
<i>Syrrhoe crenulata</i>				6	
<i>Tryphosella schneideri</i>			3	12	
<i>Unicola leucopis</i>			15	30	
<i>Westwoodilla megalops</i>	9			3	
ARTHROPODA: Cirripedia					
<i>Balanus balanus</i>			57	63	
ARTHROPODA: Cumacea					
<i>Brachydiastylis resima</i>				18	4
<i>Cumella</i> sp.			171	147	
<i>Diastylis rathkei</i>	12				4
<i>Diastylis scorpioides</i>			15	18	4
<i>Eudorella emarginata</i>	3		6	18	
<i>Lamprops fuscata</i>	6				4
<i>Leucon acutirostris</i>	3		15	3	4
<i>Leucon nasica</i>				48	
<i>Leucon nasicooides</i>				6	
ARTHROPODA: Decapoda					
<i>Argis dentata</i>		3			
ARTHROPODA: Isopoda					
<i>Desmosoma lineare</i>				99	4
<i>Gnathia elongata</i>			3		
<i>Gnathia</i> sp.				6	
- <i>Janiropsis</i> sp. a				12	
<i>Mesidotea sabini</i>	3				
<i>Munna fabricii</i>			3	3	
<i>Pleurogonium spinosissimum</i>	3		15	36	

Table 8. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ARTHROPODA:Ostracoda					
<i>Cythereis tuberculata</i>					20
<i>Cytheridea</i> sp. a					64
- <i>Hemicythere concinna</i> ?					8
<i>Philomedes globosus</i>		12	4203	2739	1008
- <i>Polycope orbicularis</i> ?					4
- <i>Sclerochilus contortus</i>					4
ARTHROPODA:Pycnogonida					
<i>Eurycyde hispida</i>				6	
- <i>Nymphon elegans</i>				12	
<i>Nymphon hirtipes</i>				9	
ARTHROPODA:Tanaidacea					
<i>Cryptocope arctica</i>			6	39	
<i>Leptognathia longiremis</i>				12	
<i>Leptognathia</i> sp. a					4
- <i>Pseudotanaïs forcipatus</i>					4
<i>Pseudotanaïs lilljeborgi</i>			9	6	4
<i>Pseudotanaïs</i> sp.			6		
<i>Sphyrapus anomalus</i>				474	8
<i>Typhlotanaïs finmarchicus</i>				15	
ASCHELMINTHES:Nematoda					
Nematodes	21	441	2940	546	3964
BRACHIOPODA					
<i>Hemithyris psittacea</i>			3	9	
CHORDATA:Asciacea					
<i>Aplidium glabrum</i>			3		
<i>Ascidia callosa</i>				18	
<i>Ciona intestinalis</i>				9	
<i>Kukenthalia borealis</i>				9	
- <i>Molgula griffithsi</i>	6				
<i>Molgula</i> sp.				18	
<i>Pelonaia corrugata</i>			12		
<i>Polycitor vitreus</i>			3	3	
<i>Styela coriacea</i>			9	24	
Ascidian			24		
COEL ENTERATA:Anthozoa					
- <i>Halimnophora arctica</i>					8
Anthozoan			48	21	
Anthozoan				3	

Table 8. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
COELENTERATA:Hydrozoa					
Hydrozoan		X			
Hydrozoan		X			
Hydrozoan			X		
ECHINODERMATA:Asteriidea					
Asteroid				3	
ECHINODERMATA:Holothuroidea					
- <i>Cucumaria calcigera</i>		3			
<i>Myriotrochus rinki</i>		30			32
<i>Psolus fabricii</i>			3	3	
Holothuroid			9		
ECHINODERMATA:Ophiuroidea					
<i>Ophiacantha bidentata</i>			9	21	
<i>Ophiopus arcticus</i>			39	78	12
<i>Stegophiura nodosa</i>				27	
ECTOPROCTA					
Bryozoan	3				
Bryozoan			X		
Bryozoan				X	
MOLLUSCA:Gastropoda					
<i>Admete couthouyi</i>					4
<i>Buccinum hydrophanum</i>	3				
<i>Buccinum tenue</i>		3			
<i>Colus tortuosus</i>			6	6	4
<i>Cylichna alba</i>	75	210	60	21	40
<i>Lepeta caeca</i>			6		
<i>Lunatia pallida</i>					8
<i>Margarites umbilicalis</i>			3		
- <i>Margarites</i> sp.				33	
<i>Neptunea despecta</i>			6		
<i>Oenopota arctica</i>		15			
<i>Oenopota bicarinata</i>		9			
<i>Oenopota incisula</i>		3	3		
<i>Oenopota turricula</i>		12	3		
<i>Philine lima</i>		27	12		24
<i>Puncturella noachina</i>			6		
<i>Retusa obtusa</i>	30	75	36		44
<i>Trichotropis borealis</i>				6	
<i>Velutina velutina</i>				3	
Gastropod			12		

Table 8. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
MOLLUSCA: Pelecypoda					
<i>Astarte borealis</i>	9	24	72	3	136
<i>Astarte montagui</i>					16
<i>Axinopsida orbiculata</i>	93	1380	27		472
<i>Dacrydium vitreum</i>			6	3	
<i>Hiatella arctica</i>			57	72	
<i>Lyonsia arenosa</i>			3		4
<i>Macoma calcarea</i>	6	15	6		8
<i>Macoma moesta</i>		6	6		116
<i>Macoma torelli</i>					32
<i>Musculus discors</i>			87	66	
<i>Musculus niger</i>					4
<i>Mya truncata</i>		3	3		
<i>Nucula belloti</i>	45	135	60	48	392
<i>Nuculana minuta</i>				12	28
<i>Nuculana permula</i>		3	15		32
<i>Serripes groenlandicus</i>	3	3			
<i>Thyasira gouldi</i>	105	372	819	234	600
<i>Yoldia h. hyperborea</i>		3			4
NEMERTINA					
Nemerteans		303	180	153	344
PORIFERA					
Sponge			9		
PRIAPULIDA					
<i>Priapulus caudatus</i>		285	168	6	356
SIPUNCULIDA					
<i>Golfingia margaritacea</i>			27	36	4
MISCELLANEOUS					
Unidentified		9	X	6	
TOTAL	465	10068	17451	11862	19100

Table 9. Biomass (g m^{-2}) of benthic invertebrates collected by grab from stations 73-25, 76-25, 73-26, 73-27, and 73-28 in 1973, 1976.

Species	73-25	76-25	73-26	73-27	73-28
ANNELIDA:Oligochaeta					
Oligochaetes	0.0012	0.0399	0.0198		0.0076
ANNELIDA:Polychaetes					
<i>Annotrypane aulogaster</i>				0.0441	
<i>Annotrypane breviata</i>			0.0003	0.0009	
<i>Ampharete acutifrons</i>		0.0222	0.0222		
<i>Amphitrite cirrata</i>	0.5730				
<i>Amphitrite groenlandica</i>			3.1566		
<i>Apistobranchnus tullbergi</i>			0.0354	0.0024	0.0716
<i>Aricidia jeffreysi</i>			0.0063	0.0006	0.0232
<i>Aricidia suecica</i>		0.0006	0.0612	0.0075	0.0276
<i>Brada inhabilis</i>			0.0285		
<i>Brada villosa</i>		0.0003	0.0009		0.0648
<i>Branchiomma infareta</i>				0.1446	
<i>Capitella capitata</i>	0.0024	0.0345	0.0207	0.0001	0.0036
<i>Chaetozone setosa</i>		0.1587	0.1611	0.0675	0.3892
<i>Chaetozone sp.</i>			0.3198	0.0648	0.0096
<i>Chitinopoma fabricii</i>				0.0129	
<i>Chone duneri</i>		0.0063	0.0069	0.0024	0.0012
<i>Chone infundibuliformis</i>	0.0270	1.7352			
<i>Chone sp. a</i>				0.1206	
<i>Chone sp. b</i>		0.0081	0.0099	0.0645	0.0112
<i>Cirratulus cirratus</i>		0.0015	0.0111		
<i>Clymenella catenata</i>			0.0231		3.8676
<i>Cassura longocirrata</i>		0.0009	0.0123	0.0174	0.0164
<i>Diplocirrus glaucus</i>		0.0189	0.0636	0.0072	0.0232
Dorvilleid				0.0009	
<i>Dysponetus pygmaeus</i>		0.0018	0.0006	0.0003	
<i>Enipo gracilis</i>			0.2325	0.2268	
<i>Ephesiella minuta</i>		0.0126	0.0003	0.0006	0.0008
<i>Ephesiella peripatus</i>				0.0021	
<i>Eteone barbata</i>		0.0126			
<i>Eteone flava</i>	0.0006	0.0204	0.1125	0.0015	0.0028
<i>Eteone longa</i>		0.0216	0.0168	0.0084	0.0064
<i>Euchone analis</i>		0.0360	0.0006	0.0033	
<i>Euchone papillosa</i>		0.0129	0.0393	0.0102	0.0264
<i>Eumida sp. a</i>				0.0045	
<i>Eusyllis sp.</i>				0.0003	
<i>Exogone dispar</i>		0.0024	0.0027	0.0006	0.0160
<i>Exogone naidina</i>			0.0066	0.0009	0.0016
<i>Fabricia sabella</i>			0.0003		0.0004
<i>Flabelligera affinis</i>			0.0102	0.0030	

Table 9. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ANNELIDA: Polychaetes					
<i>Gattyana cirrosa</i>			0.3147		
<i>Harmothoe imbricata</i>		0.1269	0.0900	0.0234	0.0068
<i>Harmothoe oerstedii</i>				0.0525	
<i>Heteromastus</i> sp.	0.0027	0.1215	0.0333	0.0027	0.0448
<i>Lanassa venusta</i>		0.0615	0.0141	0.0063	
<i>Laonome kroyeri</i>				0.0066	
<i>Laphania boeckii</i>			0.0234	0.0597	0.0328
<i>Leaena abbranchiata</i>			0.0039		
<i>Leiochone polaris</i>			0.0054		
<i>Lumbrineris fragilis</i>				0.1350	
<i>Lumbrineris minuta</i>			0.1686	0.1647	0.0084
<i>Maldane sarsi</i>			0.0351	0.3624	
<i>Micronephthys minuta</i>		0.0060	0.0303	0.0057	0.0236
<i>Microphthalmus aberrans</i>		0.0006			0.0008
<i>Microspio</i> sp.		0.0078			
<i>Myriochele heeri</i>			0.0300	0.0747	0.1220
<i>Mystides borealis</i>		0.0003	0.0003	0.0015	
<i>Nephtys ciliata</i>	0.0462	1.1550	0.5787	0.7650	4.3948
<i>Nephtys paradoxa</i>			4.2657	4.7859	0.4828
<i>Nereimyra aphroditoides</i>		0.0009	0.0012		
<i>Nereis virens</i>			0.0006		
<i>Nerinides</i> sp. ?		0.0036			
<i>Nicomache lumbricalis</i>			4.3950	5.1330	
<i>Parahesion</i> sp.		0.0366	0.0018		0.0044
<i>Paraonis gracilis</i>			0.0072	0.0543	
<i>Paraonis</i> sp. a			0.0357	0.0003	0.0008
<i>Paraonis</i> sp. b			0.0018	0.0012	0.0012
<i>Petaloproctus tenuis</i>			0.0015		
<i>Pherusa plumosa</i>			0.0114		0.4256
<i>Pholoe minuta</i>		0.0435	0.0243	0.0141	0.0040
<i>Phyllodoce groenlandica</i>	0.0282	0.0015	0.0234	0.1998	0.8616
<i>Pionosyllis compacta</i>		0.0009	0.0057	0.0042	
<i>Pista flexuosa</i>		0.1113	0.0054		
<i>Pista maculata</i>			0.9462	5.4258	
<i>Polycirrus medusa</i>			0.0657	0.0282	
<i>Polydora caeca</i>		0.0081	0.0228	0.0129	0.0016
<i>Polydora caulleryi</i>			0.0114	0.0090	
<i>Polydora quadrilobata</i>		0.0060	0.0018		
<i>Polydora</i> sp.			0.0063		
<i>Praxillella affinis</i>		0.0027	0.1515	0.0249	0.0032
<i>Praxillella gracilis</i>			0.0237		
<i>Praxillella praetermissa</i>	0.0327	1.2855	0.0420	0.0588	0.4016
<i>Prionospio steenstrupi</i>		0.0354	0.0036	0.0027	0.0016

Table 9. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ANNELIDA: Polychaetes					
<i>Proclea graffi</i>					0.2020
<i>Pygospio elegans</i>	0.0153		0.0012		0.0024
<i>Rhodine loveni</i>					0.0016
<i>Sabella crassicornis</i>				0.0066	
<i>Sabellides octocirrata</i>	0.0015		0.0009		
<i>Scalibregma inflatum</i>			0.0024	0.0111	0.0012
<i>Scoloplos armiger</i>	0.0006		0.0012	0.0042	
<i>Sphaerodorum gracile</i>			0.0012	0.0087	
<i>Sphaerosyllis erinaceus</i>	0.0009		0.0009	0.0009	0.0008
<i>Spio filicornis</i>	0.1173		0.0021		0.0028
<i>Spirorbis</i> sp.				0.0009	
<i>Stauronereis caecus</i>	0.0062		0.0012	0.0012	0.0012
<i>Syllis cornuta</i>			0.0531	0.0276	0.0008
<i>Syllis fasciata</i>			0.0210	0.0480	0.0012
<i>Terebellides stroemi</i>			0.2733	0.1206	0.0568
<i>Tharyx acutus</i>			0.1590	0.0891	0.5356
<i>Thelepus cincinnatus</i>				0.1209	
<i>Trichobranchus glacialis</i>			0.0123		
Pieces of polychaetes	0.0096		0.0510	0.0801	0.0556
ARTHROPODA: Acarina					
Mite	0.0003				
ARTHROPODA: Amphipoda					
<i>Acanthonotozoma serratum</i>				0.0051	
<i>Ampelisca eschrichti</i>	0.0036			0.0012	0.0476
<i>Andaniella pectinata</i>				0.0003	
<i>Anonyx debruynei</i>				0.0630	
<i>Arrhinopsis longicornis</i>				0.0006	
<i>Byblis gaimardi</i>					0.0072
<i>Dulichia porrecta</i>				0.0006	0.0020
<i>Eriethonius tolli</i>	0.0006				
<i>Guernea nordenskioldi</i>			0.0009		0.0032
<i>Halirages megalops</i>					0.0004
<i>Haploops tubicola</i>				0.0006	
<i>Harpinia serrata</i>			0.0054	0.0033	
<i>Hippomedon</i> sp.			0.0006		0.0001
<i>Ischyrocerus megalops</i>			0.0012	0.0009	
<i>Melita dentata</i>				0.0096	
<i>Metopa cariana</i>			0.0009		
<i>Metopa groenlandica</i>				0.0018	
<i>Metopa</i> sp.	0.0001				
<i>Monoculodes latimanus</i>	0.0042		0.0060	0.0006	0.0040
<i>Monoculodes longirostris</i>	0.0165			0.0018	

Table 9. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ARTHROPODA: Amphipoda					
<i>Monoculodes simplex</i>			0.0001		
<i>Monoculodes</i> sp. d		0.0063			
<i>Odius carinata</i>				0.0009	
<i>Orchomene groenlandica</i>				0.0009	
<i>Orchomene minuta</i>			0.0009		
<i>Orchomene serrata</i>				0.0111	
<i>Paradulichia typica</i>	0.0027		0.0030		0.0020
<i>Paroediceros lynceus</i>	0.0738		0.0159		0.0004
<i>Paroediceros</i> sp.	0.0006		0.0003		
<i>Phoxocephalus holbolli</i>			0.0018	0.0015	
<i>Pleustes media</i>	0.0003				
<i>Rhachotropis inflata</i>	0.0003				
<i>Socarnes</i> sp.				0.0012	
<i>Syrrhoe crenulata</i>				0.0015	
<i>Tryphosella schneideri</i>			0.0033	0.0009	
<i>Unicola leucopis</i>			0.0273	0.0015	
<i>Westwoodilla megalops</i>	0.0036			0.0012	
ARTHROPODA: Cirripedia					
<i>Balanus balanus</i>			6.2700	0.5649	
ARTHROPODA: Cumacea					
<i>Brachydiastylis resima</i>				0.0015	0.0028
<i>Cumella</i> sp.			0.0087	0.0063	
<i>Diastylis rathkei</i>	0.0501				0.0096
<i>Diastylis scorpioides</i>			0.0048	0.0075	0.0072
<i>Eudorella emarginata</i>	0.0006		0.0015	0.0054	
<i>Lamprops fuscata</i>	0.0033				0.0012
<i>Leucon acutirostris</i>	0.0001		0.0012	0.0003	0.0001
<i>Leucon nasica</i>				0.0039	
<i>Leucon nasicoides</i>				0.0012	
ARTHROPODA: Decapoda					
<i>Argis dentata</i>	0.1527				
ARTHROPODA: Isopoda					
<i>Desmosoma lineare</i>				0.0024	0.0004
<i>Gnathia elongata</i>			0.0018		
<i>Gnathia</i> sp.				0.0003	
<i>Janiropsis</i> sp. a				0.0006	
<i>Mesidotea sabini</i>	0.0237				
<i>Munna fabricii</i>			0.0002	0.0001	
<i>Pleurogonium spinosissimum</i>	0.0006		0.0012	0.0015	

Table 9. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
ARTHROPODA:Ostracoda					
<i>Cythereis tuberculata</i>					0.0012
<i>Cytheridea</i> sp. a					0.0032
<i>Hemicythere concinna</i> ?					0.0004
<i>Philomedes globosus</i>		0.0012	0.5061	0.3087	0.1132
<i>Polycope orbicularis</i> ?					0.0001
<i>Sclerochilus contortus</i>					0.0001
ARTHROPODA:Pycnogonida					
<i>Eurycyde hispida</i>				0.0060	
<i>Nymphon elegans</i>				0.0078	
<i>Nymphon hirtipes</i>				0.0018	
ARTHROPODA:Tanaidacea					
<i>Cryptocope arctica</i>			0.0006	0.0024	
<i>Leptognathia longiremis</i>				0.0015	
<i>Leptognathia</i> sp. a					0.0004
<i>Pseudotanais forcipatus</i>					0.0004
<i>Pseudotanais lilljeborgi</i>			0.0006	0.0001	0.0001
<i>Pseudotanais</i> sp.			0.0006		
<i>Sphyrapus anomalus</i>				0.0348	0.0008
<i>Typhlotanais finmarchicus</i>				0.0006	
ASCHELMINTHES:Nematoda					
Nematodes	0.0015	0.0063	0.0411	0.0051	0.0580
BRACHIOPODA					
<i>Hemithyris psittacea</i>			0.0003	0.0204	
CHORDATA:Asciidiacea					
<i>Aplidium glabrum</i>			0.0786		
<i>Ascidia callosa</i>				0.8643	
<i>Ciona intestinalis</i>				1.2711	
<i>Kukenthalia borealis</i>				0.0435	
<i>Molgula griffithsi</i>	0.0222				
<i>Molgula</i> sp.				2.6730	
<i>Pelonaia corrugata</i>			0.2946		
<i>Polycitor vitreus</i>			0.0141	0.1539	
<i>Styela coriacea</i>			0.1392	0.7554	
Ascidian			1.2480		
COELENTERATA:Anthozoa					
<i>Halocampa arctica</i>					1.2252
Anthozoan			0.0285	0.0165	
Anthozoan				0.0003	

Table 9. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
COELENTERATA:Hydrozoa					
Hydrozoan		0.0714			
Hydrozoan		0.0009			
Hydrozoan			0.0096		
ECHINODERMATA:Asteroidea					
Asteroid				0.0018	
ECHINODERMATA:Holothuroidea					
<i>Cucumaria calcigera</i>		1.5132			
<i>Myriotrochus rinki</i>		1.2798			4.7456
<i>Psolus fabricii</i>			0.1497	0.0003	
Holothuroid			0.0024		
ECHINODERMATA:Ophiuroidea					
<i>Ophiacantha bidentata</i>			2.9436	5.1465	
<i>Ophiopus arcticus</i>			1.7013	1.3461	0.0216
<i>Stegophiura nodosa</i>				0.9879	
ECTOPROCTA					
Bryozoan	0.0012				
Bryozoan			0.0036		
Bryozoan				0.6609	
MOLLUSCA:Gastropoda					
<i>Admete couthouyi</i>					0.0456
<i>Buccinum hydrophanum</i>	0.0969				
<i>Buccinum tenue</i>		0.0120			
<i>Colus tortuosus</i>			1.3584	3.6087	0.7232
<i>Cylichna alba</i>	0.1101	0.2375	0.0240	0.0144	0.6828
<i>Lepeta caeca</i>			0.1092		
<i>Lunatia pallida</i>					0.1788
<i>Margarites umbilicalis</i>			0.5217		
<i>Margarites</i> sp.				0.0258	
<i>Neptunea despecta</i>			0.0663		
<i>Oenopota arctica</i>		0.0159			
<i>Oenopota bicarinata</i>		0.0378			
<i>Oenopota incisula</i>		0.0237	0.0015		
<i>Oenopota turricula</i>		0.0084	0.0336		
<i>Philine lima</i>		0.0225	0.0069		0.0112
<i>Puncturella noachina</i>			0.0027		
<i>Retusa obtusa</i>	0.0051	0.0777	0.0051		0.0052
<i>Trichotropis borealis</i>				0.0027	
<i>Velutina velutina</i>				0.0360	
Gastropod			0.0234		

Table 9. (cont'd.)

Species	73-25	76-25	73-26	73-27	73-28
MOLLUSCA: Pelecypoda					
<i>Astarte borealis</i>	0.8613	0.0015	0.0039	0.0003	2.6592
<i>Astarte montagui</i>					0.2600
<i>Axinopsida orbiculata</i>	0.0312	0.3345	0.0042		0.0456
<i>Dacrydium vitreum</i>			0.0027	0.0015	
<i>Hiatella arctica</i>			11.3475	16.3533	
<i>Lyonsia arenosa</i>			0.0114		0.2560
<i>Macoma calcarea</i>	0.0561	1.3017	0.0198		0.8216
<i>Macoma moesta</i>		0.1509	0.2424		2.1736
<i>Macoma torelli</i>					0.1112
<i>Musculus discors</i>			0.2622	0.7458	
<i>Musculus niger</i>					0.6232
<i>Mya truncata</i>		4.1847	0.0810		
<i>Nucula belloti</i>	0.2472	1.6464	0.0438	0.0213	3.7620
<i>Nuculana minuta</i>				0.0240	0.2712
<i>Nuculana pernula</i>		0.0003	0.1290		1.0580
<i>Serripes groenlandicus</i>	3.2667	0.0975			
<i>Thyasira gouldi</i>	0.0864	0.2820	0.1314	0.0324	0.3716
<i>Yoldia h. hyperborea</i>		0.0657			0.0360
NEMERTINA					
Nemerteans		0.0576	0.0564	0.0639	0.1384
PORIFERA					
Sponge			0.0183		
PRIAPULIDA					
<i>Priapulus caudatus</i>		0.0144	0.0414	0.0009	0.0092
SIPUNCULIDA					
<i>Golfingia margaritacea</i>			0.0063	0.0588	0.0012
MISCELLANEOUS					
Unidentified		0.0009	0.0306	0.0003	
TOTAL	5.4999	17.1050	44.4510	54.7629	32.7589

Table 10. Particle-size distribution (Wentworth Scale) and pH of sediments collected from stations in upper Frobisher Bay, 1969-1976.

Station	Date	Water Depth (m)	Sand % (.063-2 mm)	Silt % (.004-.063 mm)	Clay % (<.004 mm)	pH (0.01M CaCl ₂)
69-5b	3 Sep 69	15	54	27	19	6.4
73-5b	24 Mar 73	12	69	24	7	6.4
73-5b	29 May 73	16	59	29	12	6.4
73-5b	8 Aug 73	14	28	46	26	6.8
76-5b	19 Aug 76	14	41	29	30	6.7
73-25	8 Aug 73	30	44	34	22	6.7
76-25	18 Aug 76	28	45	24	31	6.8
73-26	8 Aug 73	40	42	32	26	7.4
73-27	8 Aug 73	43	39	31	30	7.3
73-28	13 Aug 73	34	62	20	18	7.2

Table 11. Levels of nitrate-nitrogen, ammonia-nitrogen, total nitrogen, organic carbon, and carbon-nitrogen ratio of sediments collected from stations in upper Frobisher Bay, 1969-1976.

Station	Water Depth (m)	NO ₃ -N (ug/g)	NH ₄ -N (ug/g)	Total N (mg/g)	Organic C (%)	C/N Ratio
69-5b	15	-	-	0.67	0.52	7.7
73-5b	12	0.76	51.83	1.06	1.28	12.0
73-5b	16	0.48	75.59	0.64	0.70	10.9
73-5b	14	0.43	75.27	1.53	0.58	3.8
76-5b	14	0.27	19.80	1.28	1.62	12.7
73-25	30	0.39	40.05	0.93	0.87	9.4
76-25	28	0.40	16.00	1.03	1.10	10.7
73-26	40	0.43	70.02	1.36	0.98	7.2
73-27	43	0.50	29.23	2.16	1.56	7.2
73-28	34	0.36	42.88	0.90	0.87	9.7

Table 12. Levels of calcium, potassium, magnesium, and phosphorus in sediments collected from stations in upper Frobisher Bay, 1969-1976.

Station	Water Depth (m)	Ammonium Acetate Extractable			Extractable P (ug/g)	Total P (mg/g)
		Ca (ug/g)	K(ug/g)	Mg (ug/g)		
69-5b	15	400	400	690	115	0.60
73-5b	12	900	540	770	70	0.86
73-5b	16	500	280	570	70	0.69
73-5b	14	1000	640	1040	118	0.89
76-5b	14	475	460	670	130	0.97
73-25	30	600	440	760	126	0.71
76-25	28	650	800	1380	180	0.93
73-26	40	1700	640	960	194	0.99
73-27	43	2300	880	1220	190	1.05
73-28	34	1750	470	660	220	0.96

Table 13. Levels of iron, manganese, zinc, copper, and silicon in sediments collected from stations in upper Frobisher Bay, 1969-1976.

Station	Water Depth (m)	HCl Extractable			EDTA	Extractable
		Fe (ug/g)	Mn (ug/g)	Zn (ug/g)	Extractable Cu (ug/g)	Si (ug/g)
69-5b	15	1000	9.5	9.3	1.0	11.3
73-5b	12	3500	25.0	54.0	2.0	8.7
73-5b	16	1700	20.0	13.0	1.0	10.4
73-5b	14	2880	24.0	28.0	3.5	16.3
76-5b	14	3810	15.8	16.5	1.9	15.3
73-25	30	2150	16.0	19.0	1.0	16.2
76-25	28	2500	14.0	13.0	1.0	13.4
73-26	40	3450	26.0	22.0	3.0	11.2
73-27	43	3550	30.0	29.0	3.5	30.1
73-28	34	3350	20.0	20.0	1.5	4.7