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1977 Northumberland Strait Project, Part I: Benthic Fauna, Flora, Demersal Fish, and Sedimentary Data

J.F. Caddy, T. Amaratunga, M.J. Dadswell,
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Fisheries and Marine Service
Manuscript Report 1431

September 1977

1975 NORTHUMBERLAND STRAIT PROJECT, PART I: BENTHIC FAUNA, FLORA, DEMERSAL FISH, AND SEDIMENTARY DATA

by

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B. R. McMullin, A. B. Stasko, and H. W. van de Poll

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ABSTRACT

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The purpose of the 1975 Northumberland Strait Project was to provide a baseline description of the physical and biological environment of the Strait in relation to the commercial shellfish resources. The resulting physical and biological data are presented in this, the first of two data-repository reports.

In the 8 1/2-wk survey, 96 stations were sampled for fauna and flora with a van Veen grab and a beam trawl or scallop dredge. Species lists show distribution and empirical estimates of abundance of polychaetes, amphipods and the other invertebrate taxa, demersal fish, and algae. The depth and bottom temperature recordings describe the physical conditions during the survey. Depth and bottom temperature were criteria used to summarize the biomass listings of the major taxonomic groups. A description of sediments and their distribution was made from samples obtained with a van Veen grab, piston cores (Alpine corer), and dredges. The core samples were analyzed for heavy metal content.

Key words: Northumberland Strait, baseline survey, shellfish, benthos, demersal fish, sediments, fauna, substrate, lobsters

RÉSUMÉ

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L'expérience menée dans le détroit de Northumberland, en 1975, avait pour objet de recueillir des données de base sur le milieu physique et biologique, qui seraient utiles pour la pêche commerciale des mollusques et des crustacés. Le présent rapport, qui sera suivi d'un deuxième, en présente les résultats.

Au cours des huit semaines et demie qu'a duré l'expérience, des échantillons de la faune et de la flore ont été prélevés à 96 endroits, à l'aide d'une benne van Veen, d'un chalut à perche ou d'une drague. La distribution et l'estimation empirique des effectifs de polychètes, d'amphipodes, d'autres taxa d'invertébrés, de poissons démersaux et d'algues sont indiquées dans les listes des espèces recensées. Les observations de la profondeur et de la température du fond servent à décrire les conditions physiques qui existaient durant l'étude. La profondeur et la température du fond ont servi à résumer les énumérations des effectifs (biomasse) des principaux groupes taxonomiques. La nature et la distribution des sédiments ont été décrites à la suite de l'examen des échantillons prélevés au moyen d'une benne van Veen, de carottiers à piston Alpine et de dragues. Les métaux lourds dans les carottes ont été dosés.

FOREWORD

The Northumberland Strait Project was conceived in the winter of 1974-75 as a 2-yr, jointly funded, Federal-Provincial study of the shellfish resources of Northumberland Strait. The main purpose of the first year of the study was to provide a baseline description of the physical and biological environment of the scallop and lobster grounds in the Strait. In the second year it was planned to carry out more specific experiments, observations and detailed through-season measurements of selected parameters identified during the first year as being of particular importance to understanding shellfish distribution and abundance. Unfortunately, due to financial considerations and other priorities, the second year of the study was largely occupied in description, tabulation, and analysis of the voluminous data collected during the first year of the project. Analysis of selected aspects of the data base is in progress. Because of its immediate relevance to environmental impact studies in the Strait, the raw data are presented in two reports, in this one and in Stasko et al. (1977).

The original conception of the joint study by Federal, Provincial, and University groups was to carry out standard observations on a variety of parameters at a fixed number of stations throughout the Strait during the summer months, placing particular emphasis on:

a) commercial shellfish and fish abundance (trapping, trawling, and dredging),

b) benthic fauna (grab sampling, beam trawling),

c) sedimentary regime (grab sampling and coring).

In selecting parameters to measure at each station, relatively little emphasis was placed on those variables (in particular the properties of the overlying water masses) which are subject to wide variations on a seasonal, tidal, or diurnal basis. Inevitably, however, there are periodic components in many of the variables measured, e.g. water temperature, vulnerability to trapping of crustacea, benthic biomass and species composition. This is further complicated by the fact that the survey spanned 8 1/2 wk during which time there had been progressive changes in seasonally-linked variables such as bottom temperature. The geographical impact of this potential source of bias was compensated for as much as possible by randomizing the sequence of stations occupied and, in the case of the trap fishing, by repeating the observations at most stations. However, it may still be necessary in some cases, when comparing subsets of data, to take into account the sampling dates. The methods of sampling were not always ideally suited to the wide range of material collected, as was evidently the case for marine algae taken incidentally in the beam trawl. In general, it may be safer to regard the beam trawl data more as an indicator of presence of a particular species on a given station or perhaps as a measure of the ranked abundance, rather than as fully quantitative data.

A list of reports from which the endorsed data are extracted is given in Appendix I.

ACKNOWLEDGMENTS

The authors wish to express their appreciation to the Provincial Departments of Fisheries of New Brunswick, Prince Edward Island, and Nova Scotia for cooperation and financial assistance to Huntsman Marine Laboratory, and to the Universities of New Brunswick and Moncton for cooperation in the course of the study. The Department of Fisheries and Environment provided a significant part of the funding and manpower for this study.

Many individuals contributed to the group effort, but major accreditation for sections of the data included in the two reports is given in the following section.

PARTICIPATION IN THE STUDY

Mr. E. M. Gorman, Department of Fisheries and Environment, chaired the steering committee consisting of the three Deputy Ministers of Fisheries of the three maritime provinces, J. Mullaly, L. Chenard, and L. D. Johnston. Overall scientific coordination was the responsibility of J. F. Caddy, St. Andrews Biological Station, with A. B. Stasko acting as coordinator for crustacean studies. T. Amaratunga coordinated data compilation for the two reports. B. R. McMullin was field geologist and R. A. Chandler, D. E. Graham, and C. A. Dickson were responsible for faunal sampling aboard the *M. V. HARENGUS* (E. H. Benham, master). E. I. Lord, C. D. Burnett, and J. Talbot assisted in faunal sorting and identification, much of which was carried out at the Prince Edward Island Fisheries Training Center and the Pictou School of Fisheries. Capts. K. Merriam and R. Hemphill, directors of these establishments offered valuable cooperation and assistance to the field team.

Special scientific accreditation for sections of the data is as follows:

Subject	Individuals	Organization
Algal studies	T. Edelstein	National Research Council, Halifax
	L. Marks	" " " "
	J. McLachlan	" " " "
Benthic studies	T. Amaratunga	Huntsman Marine Laboratory, St. Andrews
Amphipod identification	M. J. Dadswell	" " " "
Polychaete identification	L. E. Linkletter	" " " "
Fish studies	T. Amaratunga	" " " "
	M. J. Dadswell	" " " "
	L. E. Linkletter	" " " "
Scallop studies	L. E. Linkletter	" " " "
Sediment analysis	H. W. van de Poll	Dept. of Geology, University of New Brunswick
	B. R. McMullin	
Commercial crustacea	A. B. Stasko	DFE, Biological Station, St. Andrews
	L. Marks	Dept. of Fisheries, Nova Scotia
	C. Stewart	" " " " "
Computer analysis		
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	G. Fawkes	" " " " "
	G. A. P. Black	" " " " "
	C. Stewart	Dept. of Fisheries, Nova Scotia
Geology	B. R. McMullin	Dept. of Geology, University of New Brunswick
Algae	A. Taylor	National Research Council, Halifax
Coordination with GURBA	J. S. S. Lakshminarayana	Université de Moncton
Gear (beam trawl) design	T. J. Foulkes	DFE, Biological Station, St. Andrews

INTRODUCTION

Northumberland Strait (45°35'-47°05'N, 61°53'-65°00'W) (Fig. 1) historically has supported a wide variety of fisheries (Caddy and Chandler 1976). During the last two decades, however, there has been a steady decline in the shellfish landings (Amaratunga et al. 1976). Concern for the future of the shellfish fisheries resulted in this interdisciplinary study which was initiated in June 1975.

The study was a broad-scope survey of the Northumberland Strait, designed to collect information of physical and biological parameters related to the life history and production of shellfish, especially lobsters, crabs, and scallops. The project also established a baseline for the coordinated study of the biological factors and physical environment of the Strait, which will be of considerable value in evaluating the effects of pollution and the potential effects of other uses of the environment on the fisheries.

This report presents data and preliminary analyses of macrobenthic fauna, algae, and fish along with environmental conditions at the 96 stations. Data for the commercial shellfish species are presented in Stasko et al. 1977.

METHODS

SAMPLING STATIONS

Lobster landings by fisheries district were used as the basis for dividing the Northumberland Strait into four areas (Amaratunga et al. 1976): Areas A and B in lobster district 8 (open season, Aug. 10-Oct. 10) and Areas C and D in lobster district 7B (open season, May 1-June 30). Areas B and C reflect where lobster landings have declined since 1960 ("affected" areas); areas A and D reflect where landings have remained stable ("unaffected" areas) (Fig. 1).

Twelve transects, each with eight stations (except for the split transect in area B), making a total of 96 stations, were established across the Strait so that there were three transects within each of the four areas (Fig. 1). Where possible, transects were located so that each had an open shoreline at one end and an estuary at the other. An attempt was made to achieve a stratified random sampling by depth to obtain an equal number of samples in each of four depth zones: 0-9, 10-19, 20-29, and >30 m. When a depth zone was not represented in a transect, sampling stations were located randomly.

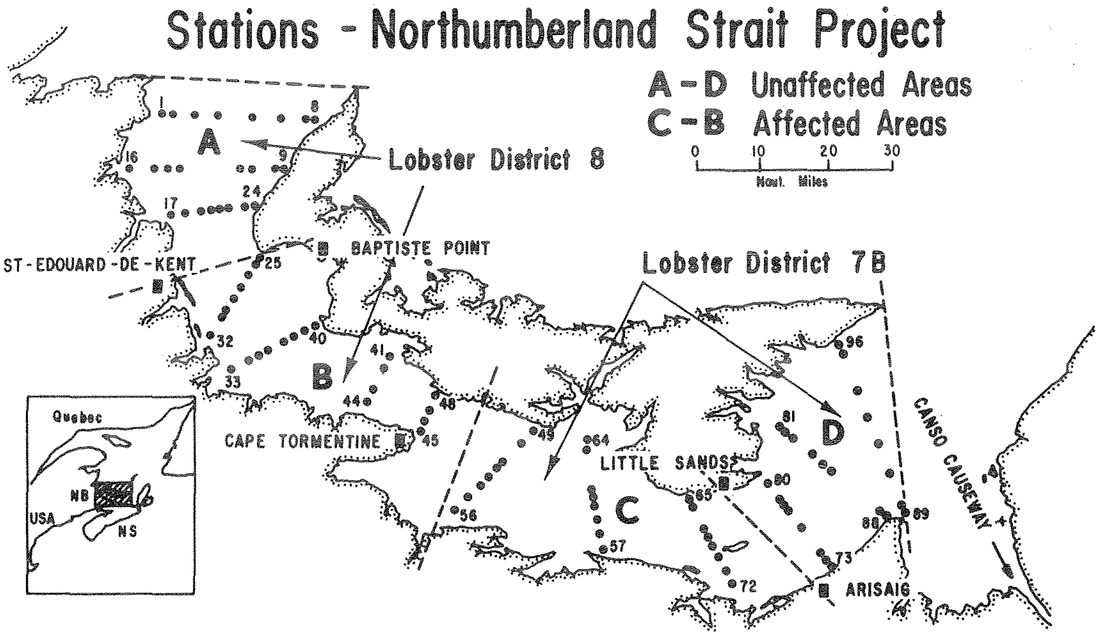

Fig. 1. Study area in Northumberland Strait showing boundaries of the four areas and locations of sampling stations.

Collection of samples from *M.V. HARENGUS* commenced on June 2, 1975, in lobster district 8 (areas A and B) before the lobster fishing season in the district began. Sampling in lobster district 7B (areas C and D) began on July 15, 1975, after the lobster fishing season closed. Sampling was completed on August 1, 1975.

SAMPLING PROCEDURE

(1) Depth and temperature (surface and bottom) recordings were made and surface and bottom water samples were taken.

(2) Two benthic samples were taken with a van Veen grab. The samples were for the analyses of bottom sediment and benthic macrofauna.

(3) One core sample was taken with an Alpine corer for sediment analysis.

(4) Two dredge samples were taken using a beam trawl or a scallop dredge. Samples were analyzed for commercial shellfish, other benthic fauna, demersal fish, and marine algae.

BENTHIC FAUNA

van Veen grab

A 0.1-m^2 van Veen grab sampler was used to obtain two bottom samples per station (a 0.1-m^2 SmithMcIntyre grab sampler was found unsatisfactory under open sea conditions). A subsample of 2 ℓ was removed from each grab for fauna analysis, and another subsample of approximately 440 mℓ for sediment analysis.

The 2-ℓ samples were washed on a 0.5-mm mesh screen on deck. The screened material was stored in 10% neutral formalin until it could be sorted in the laboratory. Animals were often conveniently separated from the sediment by floating them in a saturated sucrose solution.

The wet weights (balance weighing to ±0.01 g) were taken of each of the major components; worms, bivalves, gastropods, echinoderms, arthropods, and others, after removing surface moisture with absorbent paper and allowing to stand for 2 min. Fauna were then identified by conventional taxonomic methods and their numbers were recorded. The most common unit of classification was the species, but some taxonomic units were identified at generic and higher levels.

Beam trawl and scallop dredge

Epibenthic fauna samples were obtained from two 0.5-mile (0.9-km) tows (distance estimated by Decca) using a beam trawl or a scallop dredge. The beam trawl (Appendix II, designed by T. J. Foulkes, Department of Fisheries and the Environment, St. Andrews) used when the substratum was not rocky, was 3 m wide with a 2.5-cm mesh codend and two 1-cm diameter tickler chains. The scallop dredge, used on rough bottom, was a gang of four 0.8-m wide steel frames with a 2.5-cm mesh liner. Catch volume was estimated using approximately 50-ℓ tubs. No cross calibrations of the beam trawl and scallop dredge were made.

A measured volume (approximately 20 ℓ) of unsorted catch from each first tow was saved in 10% neutral formalin for later laboratory analysis. The fauna and flora were studied separately.

Epibenthic fauna were identified and counted. The demersal fish were identified to species and their total length was measured.

The algae were identified to species (taxonomic nomenclature followed was mainly that of South and Cardinal (1970) and of Taylor (1957)). Volumes of the dominant species were determined using a graduated cylinder.

BOTTOM SEDIMENTS

When adequate bottom sediment samples were obtained from the van Veen grabs, they were analyzed for size fraction distribution. Soft sediment cores were obtained with the Apline 202 piston corer. The corer (approximately 144 kg) was found to be too light for adequate penetration into coarse sediments, and up to four attempts were required on some stations to obtain maximum penetration and retention of core. Cores were stored in an upright position on deck to permit settling of the sediment within the plastic liners, and were subsequently frozen to minimize organic decay and destruction of sedimentary features.

In addition to van Veen sediment grab and core samples, a sample of rocks and boulders from the dredge samples provided data on composition and provenance of the bottom sediments.

Data from the grab and core samples for the finer-grained fractions and from the dredges for the coarsest bed load fractions were coded and used for computer analysis.

RESULTS

DESCRIPTION OF THE AREA STUDIED

Station locations and dates of sampling along with corresponding measurements of physical factors are given in Table 1. Depths and bottom temperatures are illustrated in Fig. 2 and 3. Data on tidal current velocities are taken from Kranck (1972).

Depths ranged from 5-49 m with most stations falling within the 10-20 m range. The deepest regions are at the northwest and southeast entrances to the Strait (areas A and D). Bottom temperatures during the survey ranged from 2.5-19.5°C. The shallower regions had

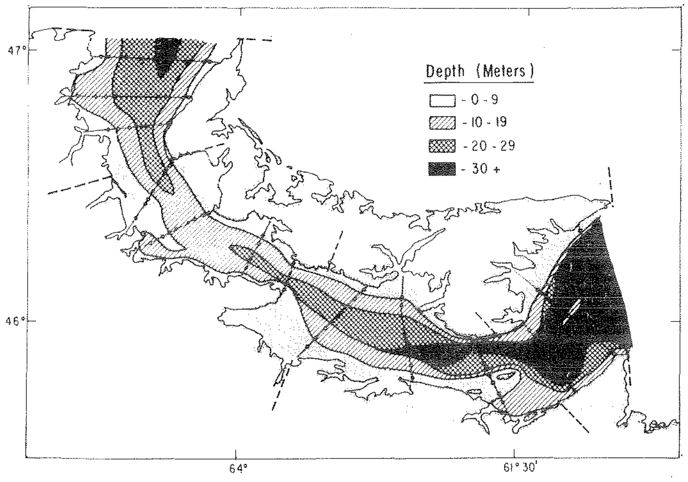

Fig. 2. Depth contours based on echosounder data at time of sampling.

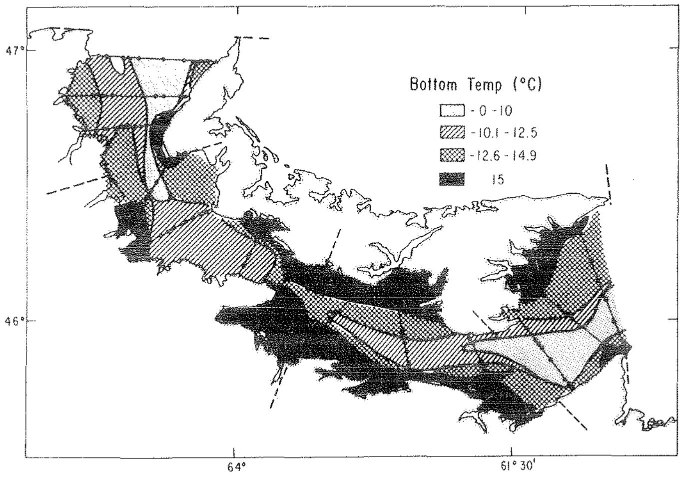

Fig. 3. Bottom temperature contours drawn from recordings at time of sampling.

attained the higher bottom temperatures, while in the deep areas cold water still reached far into the entrances of the Strait.

VAN VEEN GRABS

Benthic fauna

Tables 2, 3, and 4 show the distribution and an empirical estimate of abundance of the polychaetes, amphipods, and other taxa encountered.

Ninety-one species of polychaetes belonging to 31 families were recorded (Table 2). The family Spionidae had the largest number of individuals, 53% of the total, and the family Lumbrineridae was second with 13%. The most common species of polychaetes were:

Species	% of stations	Mainly in areas
Prionospio steenstrupi	50	C
Pholoë minuta	48	C and D
Ninoë nigripes	42	C

Seventy-three species of amphipods belonging to 19 families were recorded (Table 3). The most common amphipod species were:

Species	% of stations	Mainly in areas
Phoxocephalus holbolli	26	A and B
Corophium bonelli	25	B
Ampelisca macrocephala	21	A, B, and D
A. vadorum	19	B and C
Unciola irrorata	18	A and B

There were three species of amphipods not previously recorded in Northumberland Strait: *Erichthonius rubricornis*, a southern species, a single specimen of which was present in station 22 in area A; *Melita obtusata* (1 specimen) and *Centromedon pumilus* (4 specimens), arctic species, were found in stations 92 and 84 respectively in area D.

Twenty-six species of bivalves belonging to 13 families and 16 species of gastropods belonging to 12 families were recorded (Table 4). The most common molluscan species were:

Species	% of stations	Mainly in areas
Thyasira gouldii	25	C and D
Astarte undata	24	B and C
Clinocardium ciliatum	20	B and C
Tellina agilis	16	B
Nassarius trivittatus	15	B and C
Retusa canaliculata	14	B and C

Twenty-six species of arthropods (i.e. excluding amphipods in Table 3) belonging to 13 families were recorded (Table 4). The most common species were:

Species	% of stations	Mainly in areas
Eudorella truncatula	27	C
Diastylis quadrispinosa	14	D
D. sculpta	10	C
Aeginina longicornis	11	B

The most common of the 6 echinoderm species were:

Echinarchnius parma	32	A and B
Ophiura robusta	17	A, B, C, and D

Hydroids and Bryozoa were most common in area B.

Biomass

Wet weight or biomass, as a quantitative measure of fauna (Table 5), is valuable when individuals vary greatly in size and/or are not countable. The data are summarized (Table 6) to illustrate distrubution and relative abundance of the major faunal groups as percentages within each physical factor. Echinoderms constituted more than 50% of the total biomass in areas A and B, while bivalves accounted for more than 50% in areas C and D. Although worms constitute a small percentage of the total biomass, their relative biomass importance was seen in areas A, C, and D.

BEAM TRAWL AND SCALLOP DREDGE

Benthic fauna.

Macrobenthic fauna catch records (Table 7 and 7a) exclude major commercial shellfish data and fish catches. Some small sessile and/or colonial forms like Coelenterates, Bryozoa, and Porifera were not identified. Hence, the species list for these phyla is not complete. Worms were not identified although their presence was recorded. Altogether, 199 macrobenthic species were identified.

Echinoderms were most prevalent, dominated by *Asterias vulgaris*, occurring on 64% of the stations, *Henricia sanguinolenta*, (53%), and *Echinarchnius parma*, (47%). These were found mostly in areas A, B, and C and were less common in area D. Other common echinoderms were the brittle stars, *Ophiopholis aculeata*, occurring mostly in area A, and *Ophiura robusta* and *O. sarsi* occurring mostly in areas A and D.

Among the 25 species of bivalves, the mussels, *Modiolus modiolus* (35.5%) and *Mytilus edulis* (31.3%) were most common and uniformly distributed throughout the Strait. *Astarte undata* (27%) was most prevalent in areas C and D. There were 37 gastropod species, with *Nassarius trivittatus* (21%), *Lunatia heros* (17%), and *Neptunea decemcostata* (14%) most common. The slipper limpets *Crepidula fornicata* (18%) and *C. plana* (19%) occurred virtually exclusively in area B. A probable new species (to be confirmed) of *Colus* was found on station 77 (area D).

Of the 76 species of arthropods, amphipods (51 species) constituted the major component. Excluding the amphipods, the most important arthropods were: *Crangon septemspinosus* (36%) found in areas A, B, and C; *Pagarus acadiens* (30%) mostly in areas A and B; and *Pandalus montagui* (21%) mostly in areas C and D.

The sessile colonial forms - Hydroids (51%), Bryozoans (47%), and Porifera (47%) - were commonly encountered in all four areas.

Demersal fish

Thirty-one species of fish belonging to 12 families (Table 8) were recorded in the total catch of 2460 fish. Winter flounder, *Pseudopleuronectes americanus*, was the most common, occurring on 60% of the stations, and constituting 47% by number of the total catch. They were most common in areas B and C. Another flatfish, *Limanda ferruginea*, occurring on 43% of the stations, commonest in areas C and D, was an important component. The longhorn sculpin, *Myoxocephalus octodecemspinosus* (68%) was distributed throughout the Strait in relatively small numbers.

Length-frequency data of some of the major fish species are summarized by area in Fig. 4, 5, and 6.

Algae

Eighty species of algae were identified (Table 9). These included 46 species of Rhodophyceae, 26 species of Phaeophyceae, 2 species of Chlorophyceae, and 3 species of Cyanophyceae. Two taxa of Phaeophyceae, *Sauvageaugloia chordariaformis* and *Striaria attenuata*, are new records for the Maritime Provinces and the former is also a new record for North America. Most species in the list are taxa of the sublittoral zone. A few exceptions, such as fucoids, were probably present as drift weed. The following species were present in more than 50% of the samples: *Phyllophora* spp., *Polysiphonia* spp., and *Laminaria longicruris*. These genera were also often dominant, forming the bulk of algal material in any one sample. Only eroded fragments of the large *Laminaria* species were

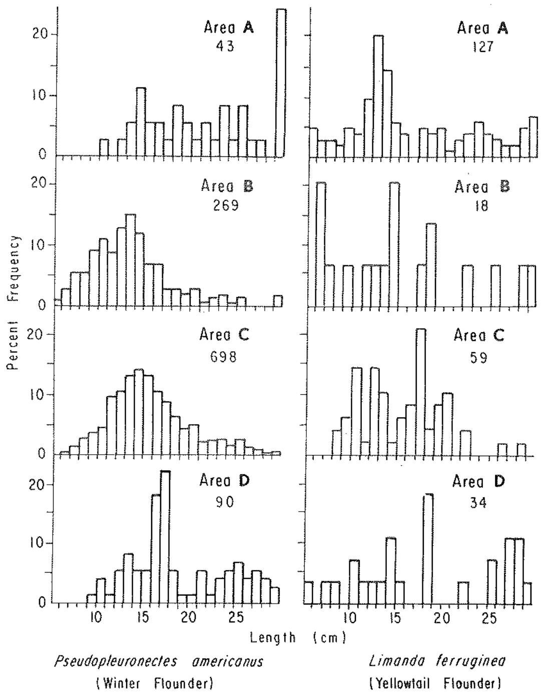

Fig. 4. Length/frequency histograms of major fish species in relation to the four areas.
NOTE - bars representing 25% and over are truncated to 25% height; number of specimens are given in each histogram.

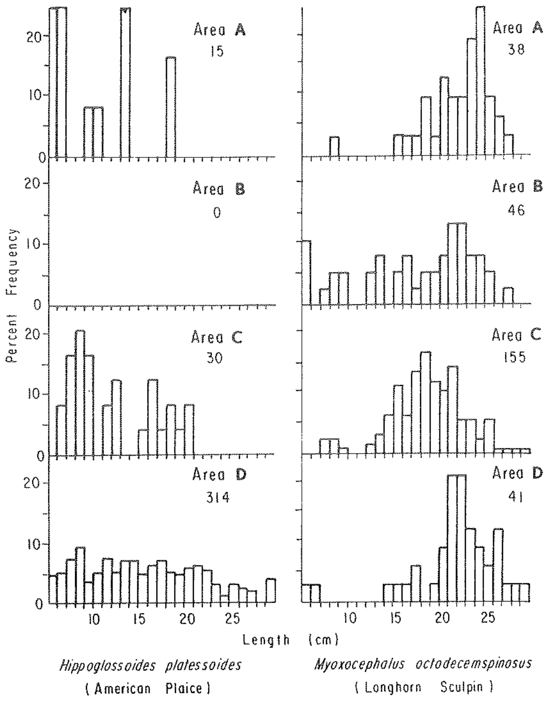

Fig. 5. Length/frequency histograms of major fish species in relation to the four areas.
NOTE - bars representing 25% and over are truncated to 25% height; number of specimens are given in each histogram.

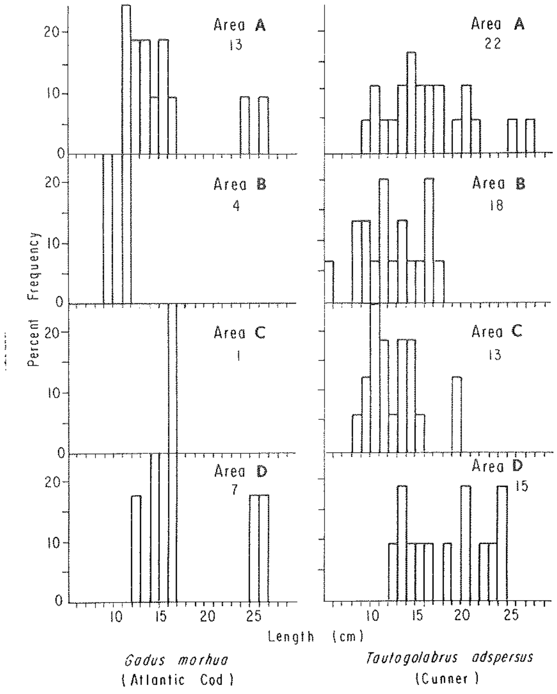

Fig. 6. Length/frequency histograms of major fish species in relation to the four areas.
NOTE - bars representing 25% and over are truncated to 25% height; number of specimens are given in each histogram.

common in the samples; perhaps this resulted from the method of collecting or from subsampling procedures aboard the boat. Species found in 25-50% of the algal samples were: *Ectocarpus siliculosus*, *Desmarestia aculeata*, *Fucus* spp. (fragments only), *Cystoclonium purpureum*, *Rhodomela confervoides*, and *Rhodymenia palmata*.

With few exceptions, the list of species (Table 9) closely resembles that of the sublittoral flora of the open Atlantic coast of Nova Scotia (Edelstein et al. 1969).

The method of sampling proved unsatisfactory for algae with the main shortcomings being: (1) both attached and drift weeds were collected indiscriminately and correlation with depth and type of substrate is therefore unreliable; (2) efficiency of sampling of the hard substrate was not determined, and many areas of boulders yielded samples poor in algae; (3) estimates of abundance are of little value since the ratio of sample to bulk of material was not determined. In spite of these shortcomings, volume measurements (Table 10) were found to be of value. Table 11 shows the percentage of samples with algal material. Volume measurements of algal material show that areas B and C yielded 33% greater volumes of seaweeds (Table 12) than areas A and D.

BOTTOM SEDIMENTS

Sediment distribution in the Strait based on grab and core samples is presented in Table 13 and Fig. 7. Subdivision of bottom sediments was restricted to three major components as follows:

a) gravel and coarser material - including boulders and outcrop fragments

b) sand

c) silt, mud, or clay

The three major size fraction distributions obtained from van Veen grab sieve analysis are given in Table 14. Detailed size-frequency distributions at each station are given in Table 15.

On the basis of sediment data the Strait may be subdivided into two major regions (Fig. 7). Northwest of Cape Tormentine the bottom sediments in the axial region of the Northumberland Strait are generally coarse grained with sand and gravel predominating, whereas to the southeast and east of Cape Tormentine relatively fine-grained sediments, fine sand, silt and clay are prevalent.

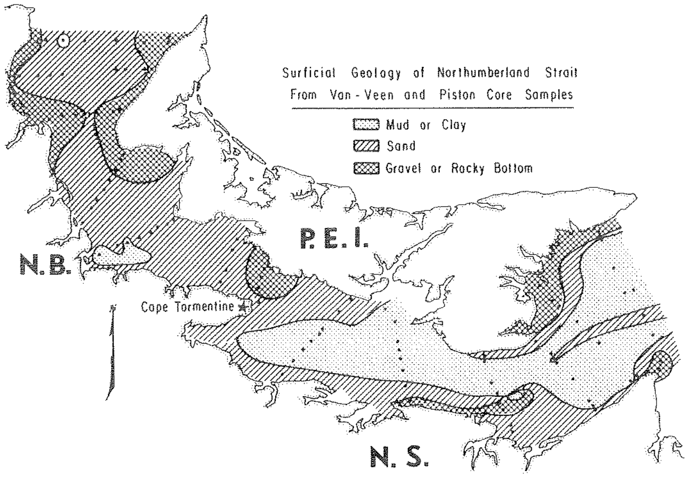

Fig. 7. Surficial geology of Northumberland Strait from van Veen and Piston core samples.

The present work also shows that grey sediments predominate along the New Brunswick coast whereas red sediments are more common offshore from Prince Edward Island and Nova Scotia. This color distribution is matched by a similar distribution in grey and red Carboniferous and Permian sandstone and siltstone in these three provinces. The regional distribution of predominantly grey, mixed grey, and red and red Carboniferous, in addition to local and transported (glacial) metamorphic magaclasts, is shown in Fig. 8.

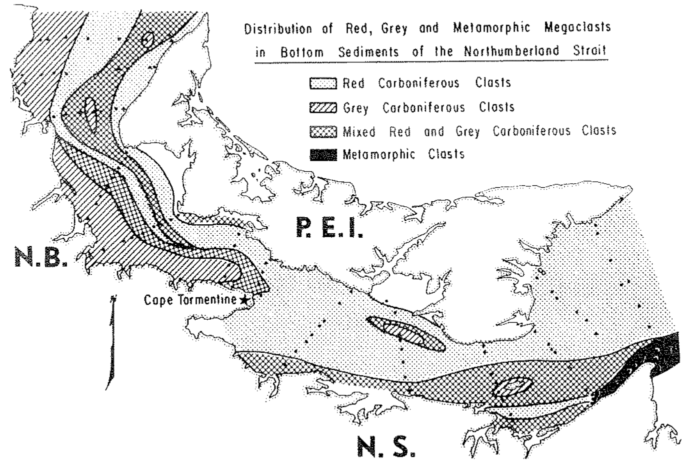

Fig. 8. Distribution of red, grey and metamorphic megaclasts in bottom sediments of the Northumberland Strait.

Core data

Seventy-two cores were obtained from the 96 stations. The total accumulated length was 5018 cm, with an average core length of 69.7 cm. Penetration rates shown in Table 16 indicate a considerable difference in depth of cores obtained between the northwestern and southeastern parts of the Strait. Maximum core penetration in the northwestern area did not exceed 64.0 cm with 27 out of a total of 49 stations yielding cores, whereas penetration in the southeastern and eastern area ranged up to 300.0 cm with 34 of 48 stations yielding cores. This difference in penetration is directly related to finer sediments of the southeastern and eastern parts.

The number of sedimentation units that could be recognized from x-rays of the cores ranged from one to twelve with the majority of cores exhibiting between two and five recognizable units. The sediments intersected ranged from coarse to fine and included a number of prominent shell-fragment layers.

The most significant observation that can be made from the x-ray data is the widespread fining upward trend of the sedimentary columns (Table 17), although this trend was less obvious in the southeastern and eastern part of the Strait than in the northwestern part.

Heavy metals

Fifty-five grab and core samples from 29 stations were analyzed for Cu, Zn, Mn, Cd, As, and Hg in an attempt to determine their concentrations in the surficial bottom sediments. In addition, three cores (#52, 54, and 55) were analyzed at 50-cm vertical intervals. The results are given in Table 18 for bottom grab and in Tables 19 and 20 for core samples. Two subpopulations may be tentatively identified where the area east of Cape Tormentine contains higher values compared with the area west of Cape Tormentine for all elements analyzed except mercury and arsenic which show either a stable distribution (Hg) or a reduction in values (As).

Anomalous heavy metal concentrations were not detected in either the core or bottom grab samples (Table 21), compared with the subsoil and crustal rock. There were also no obvious vertical variations in heavy metal content at 50-cm intervals in cores #52, 54, and 55. These results indicate that no recent accumulations of Cu, Zn, Mn, Cd, As, or Hg, are present in the bottom sediments.

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Table 1. Characteristics of the 96 stations in Northumberland Strait sampled by the *HARENGUS* in 1975. Current velocity in knots (Kranck 1972): 1) 0-.25, 2) .25-.50, 3) .50-.75, 4) .75-1.0, 5) 1.0+. Dredge Gear: S-Scallop Drag, B-Beam Trawl.

STATION	LATITUDE			LONGITUDE			DATA			DREDGE		BOTTOM	CURRENT
NO	D	M	S	D	M	S	D	M	YR	GEAR	DEPTH(M)	TEMP(C)	VEL.
1	46	57	0	64	47	10	2	6	75	S	9	11.6	2
2	46	57	45	64	45	15	1	6	75	B	13	11.0	3
3	46	57	45	64	39	10	1	6	75	B	22	13.0	3
4	46	57	45	64	33	40	1	6	75	B	23	6.7	3
5	46	57	45	64	25	15	2	6	75	B	36	6.6	2
6	46	57	45	64	17	35	2	6	75	S	29	10.0	1
7	46	58	15	64	10	30	2	6	75	S	14	13.1	1
8	46	57	20	64	10	20	8	6	75	S	7	13.1	1
9	46	52	45	64	15	0	8	6	75	S	9	12.4	1
10	46	52	40	64	16	15	8	6	75	B	16	9.8	2
11	46	52	20	64	22	15	8	6	75	B	29	2.5	2
12	46	52	15	64	24	45	2	7	75	B	29	9.0	2
13	46	51	30	64	39	50	2	7	75	B	25	10.5	3
14	46	51	20	64	42	40	2	7	75	B	18	12.6	3
15	46	51	15	64	46	25	2	7	75	B	13	13.5	3
16	46	51	0	64	51	5	3	7	75	B	11	13.6	2
17	46	43	30	64	43	55	3	7	75	B	9	12.5	3
18	46	43	40	64	40	0	3	7	75	S	18	11.7	4
19	46	43	50	64	36	5	3	7	75	S	14	14.7	4
20	46	43	55	64	34	5	4	7	75	S	20	13.3	4
21	46	44	0	64	32	30	4	7	75	S	22	12.2	4
22	46	44	10	64	30	10	4	7	75	S	25	12.0	4
23	46	44	20	64	25	35	4	7	75	S	14	15.0	3
24	46	44	30	64	23	30	4	7	75	S	11	15.5	3
25	46	36	20	64	23	25	4	7	75	S	7	17.0	5
26	46	35	35	64	24	0	1	7	75	B	13	14.2	5
27	46	33	30	64	25	30	10	6	75	B	22	9.3	5
28	46	31	20	64	27	10	6	6	75	B	22	6.1	5
29	46	29	35	64	28	25	1	7	75	B	13	14.6	5
30	46	27	25	64	30	5	26	6	75	B	9	14.1	4
31	46	26	30	64	30	55	26	6	75	B	9	15.3	4
32	46	23	10	64	33	20	26	6	75	S	5	16.2	3
33	46	17	15	64	29	0	25	6	75	B	22	16.8	3
34	46	18	35	64	25	0	13	6	75	B	9	10.7	4
35	46	19	20	64	22	30	13	6	75	B	14	11.4	4
36	46	20	15	64	20	0	13	6	75	B	14	11.4	5
37	46	21	30	64	15	50	10	6	75	B	13	10.8	5
38	46	22	5	64	14	5	10	6	75	B	13	10.8	5
39	46	23	15	64	10	45	5	6	75	B	11	11.5	5
40	46	24	0	64	8	35	5	6	75	B	7	14.5	5
41	46	19	40	63	51	45	3	6	75	B	9	15.0	4
42	46	18	0	63	52	30	3	6	75	B	14	11.5	4
43	46	14	10	63	54	15	3	6	75	B	22	11.4	4
44	46	11	45	63	55	15	4	6	75	B	11	11.6	4
45	46	7	45	63	45	10	24	6	75	B	9	15.1	3
46	46	9	30	63	45	30	24	6	75	S	29	13.5	4
47	46	13	30	63	43	30	24	6	75	B	14	14.2	5
48	46	15	0	63	43	0	24	6	75	B	9	14.6	5
49	46	8	5	63	19	15	10	7	75	B	9	14.8	2
50	46	6	0	63	22	10	10	7	75	B	18	15.8	2
51	46	2	10	63	27	20	9	7	75	B	20	16.4	2
52	46	1	45	63	27	50	9	7	75	B	22	11.0	2
53	46	0	5	63	30	0	9	7	75	B	20	14.0	2
54	45	58	30	63	32	10	8	7	75	B	18	17.5	2
55	45	56	30	63	34	55	8	7	75	B	14	16.6	2
56	45	54	5	63	38	15	8	7	75	B	9	17.5	2
57	45	48	25	63	3	0	16	7	75	S	5	19.0	2
58	45	51	30	63	3	50	16	7	75	B	18	10.4	2

Table 1. (cont'd)

STATION	LATITUDE			LONGITUDE			DATA			DREDGE		BOTTOM	CURRENT
NO	D	M	S	D	M	S	D	M	YR	GEAR	DEPTH(M)	TEMP(C)	VEL.
59	45	54	10	63	4	40	16	7	75	B	31	10.9	3
60	45	56	30	63	5	15	18	7	75	B	27	10.8	3
61	45	58	30	63	5	14	18	7	75	B	22	14.5	3
62	45	59	5	63	5	50	18	7	75	B	22	13.5	3
63	46	3	45	63	56	45	17	7	75	B	16	15.5	2
64	46	6	45	63	9	0	17	7	75	B	9	17.3	2
65	45	56	50	62	44	30	30	7	75	B	9	12.3	5
66	45	55	45	62	43	50	30	7	75	B	31	7.6	5
67	45	55	15	62	40	40	30	7	75	S	29	10.9	4
68	45	49	30	62	39	30	30	7	75	S	20	12.8	3
69	45	47	40	62	38	30	24	7	75	S	7	17.5	3
70	45	46	40	62	37	30	29	7	75	S	7	15.5	3
71	45	43	40	62	35	40	24	7	75	B	9	16.2	3
72	45	43	0	62	35	0	24	7	75	S	14	17.0	3
73	45	46	15	62	10	45	1	8	75	B	14	14.6	2
74	45	47	0	62	11	40	1	8	75	B	29	7.6	2
75	45	48	10	62	13	0	1	8	75	B	32	6.2	2
76	45	52	45	62	18	40	31	7	75	B	31	5.3	2
77	45	56	15	62	22	40	31	7	75	B	40	2.6	4
78	45	56	45	62	23	30	31	7	75	B	36	6.1	4
79	45	57	15	62	24	0	31	7	75	B	36	3.4	4
80	45	59	40	62	27	15	31	7	75	B	14	11.6	4
81	46	10	45	62	25	0	23	7	75	S	9	19.5	2
82	46	8	5	62	23	15	23	7	75	S	16	19.0	2
83	46	7	0	62	21	35	23	7	75	S	22	16.5	2
84	46	3	45	62	16	45	24	7	75	B	34	13.5	2
85	46	2	10	62	14	10	24	7	75	S	14	15.5	2
86	46	1	0	62	12	20	24	7	75	B	34	14.0	2
87	45	51	30	62	50	30	21	7	75	B	25	19.0	2
88	45	53	30	61	58	30	21	7	75	B	14	18.9	2
89	45	54	0	61	53	5	21	7	75	S	14	19.5	1
90	45	54	30	61	53	5	22	7	75	S	32	15.0	1
91	46	0	5	61	57	30	22	7	75	B	49	10.0	2
92	46	4	45	62	0	0	22	7	75	S	32	12.0	2
93	46	9	15	62	4	10	22	7	75	B	40	12.3	2
94	46	13	40	62	6	40	22	7	75	B	43	14.0	2
95	46	19	20	62	10	10	23	7	75	B	34	13.5	2
96	46	21	40	62	10	50	23	7	75	S	7	18.6	2

Table 2. List of polychaetes recorded in the van Veen grab samples. Species abundance recorded as: 1 = present, 2 = common, 3 = abundant.

FAMILY,CODE NO.,SPECIES	STATION NUMBER																																																STATION NUMBER																																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
POLYNOIDAE																																																																																																
1 HARMOTHOË IMBRICATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	.	1	.	.	1	.	.	.	1	.	1	1	.	2
2 HARMOTHOË EXTENUATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
3 HARMOTHOË OERSTEDI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
4 HARMOTHOË SP.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	1	1	.	.	.	1	1	.	.	.	.	.	.	1	.	.	1	2	1	1	.	1	.	1	.	.	.	1	1	1	.	.	.	.	.	.	1	1	.	.	.	.	1	.	2	1	1	1	2	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
5 LEPIDONOTUS SQUAMATUS	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	1	.	.	.	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
6 ARCTEOBIA ANTICOSTIENSIS	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
7 ENIPO CANADENSIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
8 ANTINOELLA SARSI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
9 GATTYANA CIRROSA	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10 HARTMANIA MOOREI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11 EUNOË SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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13 PHOLOË MINUTA	.	1	.	.	1	.	.	.	.	1	.	2	2	.	1	.	.	.	.	.	1	1	.	.	1	.	1	.	1	.	.	.	.	1	.	1	.	1	.	.	.	.	.	.	.	1	.	.	1	1	1	1	1	.	.	.	.	2	1	1	1	2	1	1	1	1	1	2	1	.	.	1	.	.	.	1	1	.	1	.	1	1	.	1	.	1	2	.	.	2	1	.	1	1	.	2
14 STENELAIS LIMICOLA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PHYLLODOCIDAE																																																																																																	
15 PHYLLODOCE SP.	.	2	1	.	1	.	.	.	.	1	.	1	1	1	1	1	2	1	.	1	.	.	.	.	1	1	.	.	1	.	.	.	1	1	.	.	1	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	.	1	.	.	.	.	1	.	.	.	.	1	.	.	2	1	.	.	1	.	.	1	.	.	1	.	.	.	.	.	2
16 ETEONE SP.	.	1	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	1	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	1	1	.	.	1	1	.	1	.	.	1	.	.	.	.	.	.	.	1	1	1	1	.	.	1	.	.	.	1	.	.	.	.	.	.	.	2	1	.	.	1	.	1	1	.	.	1	.	.	1	.	1	2
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27 AGLAOPHAMUS SP.	.	.	.	.	2	1	.	.	.	.	.	2	2	1	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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28 SPHAERODOROPSIS MINUTA	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.
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33 LUMBRINERIA FRAGILIS	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	1	1	1	1	.	.	1	.	.	.	.	.	1	1	.	.	.	.	.	.	1	1	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	1	1	1	.	.	1	.	.	.	1	.
34 LUMBRINERIS ACUTA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	1	.	.	1	1	.	2	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.
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38 PRIONOSPIO STEENSTRUPI	.	1	.	.	2	2	.	.	.	1	.	2	1	.	.	.	.	.	.	.	.	2	1	.	.	.	1	1	.	.	.	.	1	1	2	.	.	.	.	.	.	.	.	.	.	1	2	1	2	3	2	2	2	2	2	.	1	3	2	1	.	2	3	3	3	1	2	2	1	.	.	3	.	.	.	1	2	1	.	3	1	1	.	1	.	.	3	.	.	3	.	2	.	1	.	1
39 SPIOPHANES BOMBYX	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	1	2	1	.	1	1	1	1	1	.	.	.	2	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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41 POLYDORA SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	2	2	2	.	.	.	.	1	.	1	.	.	.	.	.	.	2	1	.	.
42 SCOLELEPIS SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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TOTAL NO. OF SPECIMENS	1	41	17	0	216	70	0	0	0	122	0	321	146	129	11	70	46	43	0	56	19	52	6	0	37	59	28	25	25	37	34	0	57	146	117	10	30	32	2	5	41	15	2	30	46	44	48	36	92	356	88	81	38	39	37	4	27	###	245	80	27	304	466	###	258	59	156	145	28	5	64	748	0	0	35	61	182	116	43	162	73	10	0	114	0	108	725	73	0	522	19	58	293	132	52	176
TOTAL NO. OF SPECIES	1	11	8	0	23	13	0	0	0	16	0	24	10	9	9	11	10	7	0	11	8	14	5	0	12	13	14	9	8	9	7	0	7	14	10	7	10	11	2	4	6	8	2	9	9	16	18	16	10	12	11	8	5	3	3	2	9	16	15	14	8	22	10	15	19	11	19	16	0	1	6	16	0	0	11	14	21	14	11	12	13	4	0	22	0	24	21	7	0	10	11	9	22	16	15	11

Table 3. List of amphipods recorded in the van Veen grab samples. Species abundance recorded as: 1 = present, 2 = common, 3 = abundant.

STATION NUMBER

FAMILY,CODE NO.,SPECIES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
ACANTHONOTOZOMATIDAE																																																																																																			
1 ACANTHONOTOZOMA SERRATUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
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9 NEOHELA MONTROSA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
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32 MAERA LOVENI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
33 MELITA DENTATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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35 M. QUADRISPINOSA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
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39 ACANTHOSTEPHEIA MALINGRENI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40 ARRHIS PHYLLONYX	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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47 M. TUBERCULATUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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52 SYNCHELIDIUM TENUIMANUM	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
53 WESTWOODILLA CAECULA	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
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56 PHOTIS MACROCOXA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
57 P. REINHARDI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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59 P. INAEQUISTYLIS	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60 PROTOMEDIA FASCIATA	.	.	.	.	2	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
61 P. STEPHENSONI	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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62 HARPINIA PROPINQUA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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64 PLEUSTES PANOPLUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
65 PLEUSYMTES GLABER	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
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66 DULICHIA ARCTICA	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
67 D. SPINOSISSIMA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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71 PONTOGENEIA INERMIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
STENOTHOIDAE																																																
72 METOPELLA ANGUSTA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
73 M. CARINATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
74 PARAMETOPELLA SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
75 PROBOLOIDES NORDMANNI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
76 STENULA PELTATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TOTAL NO. OF SPECIMENS	2	8	14	0	74	1	0	4	0	34	0	7	18	7	5	4	1	2	0	3	16	54	33	0	6	21	17	2	0	0	4	8	0	194	102	8	1	11	3	2	3	11	0	0	0	9	5	4
TOTAL NO. OF SPECIES	2	5	6	0	16	1	0	2	0	8	0	3	5	7	5	4	1	2	0	3	7	7	3	0	4	6	5	0	0	0	2	2	0	5	8	2	1	4	2	1	3	5	0	0	0	4	2	2

GEDICEROTIDAE																																																
37 ACEROIDES LATIPES	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	1	.
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39 ACANTHOSTEPHEIA MALINGRENI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
40 ARRHIS PHYLLONYX	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41 MONOCULODES EDWARDSI	.	.	.	.	.	.	.	.	.	1	1	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42 M. NORVEGICUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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47 M. TUBERCULATUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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49 MONOCULOPSIS LONGICORNIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
50 PAROEDICEROS LYNCEUS	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.
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56 PHOTIS MACROCOXA	.	.	.	.	.	.	.	.	.	1	2	.	1	1	.	1	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
57 P. REINHARDI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
58 PODOCEROPSIS NITIDA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
59 P. INAEQUISTYLIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
60 PROTOMEDIA FASCIATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.	.	.	.	.
61 P. STEPHENSONI	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	2	.	2	1	.	.	.	.	.	1	.	1	.
PHOXOCEPHALIDAE																																																
62 HARPINIA PROPINQUA	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	2	1	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	2	.	1	1	.	.	1	.	.	.	.	.	.
63 PHOXOCEPHALUS HOLBOLLI	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	1	.	.	.	1
PLEUSTIDAE																																																
64 PLEUSTES PANOPLUS	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
65 PLEUSYMTES GLABER	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
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66 DULICHIA ARCTICA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
67 D. SPINOSISSIMA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
68 D. MONACANTHA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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PONTOGENEIIDAE																																																
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STENOTHOIDAE																																																
72 METOPELLA ANGUSTA	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
73 M. CARINATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
74 PARAMETOPELLA SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
75 PROBOLOIDES NORDMANNI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
76 STENULA PELTATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
TOTAL NO. OF SPECIMENS	63	4	3	0	0	0	0	1	7	12	81	0	1	2	3	17	12	37	74	10	3	1	8	13	1	0	29	22	35	13	11	9	11	1	0	112	0	288	11	10	5	12	0	25	2	0	3	783
TOTAL NO. OF SPECIES	3	2	2	0	0	0	0	1	2	7	14	0	1	2	3	3	3	4	10	6	3	1	4	3	1	0	2	5	7	2	4	2	5	1	0	13	0	13	6	3	1	4	0	12	2	0	3	11

Table 4. List of other fauna recorded in the van Veen grab samples. Species abundance recorded as: 1 = present, 2 = common, 3 = abundant.

FAMILY,CODE NO.,SPECIES	STATION NUMBER																																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
PELECYPODS																																																
NUCULIDAE																																																
1 NUCULA PROXIMA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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3 YOLDIA LIMULATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
4 Y. SAPOTILLA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
5 Y. THRACIAEFORMIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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7 MUSCULUS NIGER	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8 MODIOLUS MODIOLUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
9 CRENELLA GLANDULA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.
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14 THYASIRA GOULDII	.	.	.	.	.	1	.	.	.	.	.	2	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	1	.	.	.
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16 GEMMA GEMMA	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
17 PITAR MORRHUANA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	1	.	.	.	.	.	.	.	.	.	.	.	.
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20 MACOMA BALTHICA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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25 PANDORA GOULDIANA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.
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26 THRACIA SEPTENTRIONALIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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27 ISCHNOCHITON ALBA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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FAMILY,CODE NO.,SPECIES	STATION NUMBER																																															
	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
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7 MUSCULUS NIGER	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
8 MODIOLUS MODIOLUS	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2
9 CRENELLA GLANDULA	.	.	.	1	1	.	.	.	.	.	.	.	1	1	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.
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12 A. SUBAEQUILATERA	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.
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THYASIRIDAE																																																
14 THYASIRA GOULDII	.	2	1	1	.	.	1	1	.	2	2	1	.	1	1	.	.	.	.	.	.	.	.	1	.	.	.	1	1	1	1	.	.	.	.	2	.	1	2	.	.	.	.	.	.	.	.	.
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TELLINIDAE																																																
19 TELLINA AGILIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20 MACOMA BALTHICA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.
21 M. TENTA	2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
MYIDAE																																																
22 MYA ARENARIA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
23 MYA TRUNCATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
HIATELLIDAE																																																
24 HIATELLA ARCTICA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PANDORIDAE																																																
25 PANDORA GOULDIANA	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
THRACIIDAE																																																
26 THRACIA SEPTENTRIONALIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CHITONS																																																
27 ISCHNOCHITON ALBA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
28 I. RUBER	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
GASTROPODS																																																

Table 4 (cont'd)

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ACMAEIDAE
29 ACMAEA TESTUDINALIS              . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . .

TRICHOTROPIDAE
30 TRICHOTROPIS BOREALIS            . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

CALYPTRAEIDAE
31 CREPIDULA FORNICATA              . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . .

APORRHAIDAE
32 APORRHAIS OCCIDENTALIS           . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

NATICIDAE
33 LUNATIA HEROS                    . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . .
34 L. TRISERIATA                    . . . . . . . . . . . . . . . 1 . . . . . . . . . . 1 . . 1 . . . . 1 . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . .

COLUMBALLIDAE
35 MITRELLA LUNATA                  . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . 1 1 . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
36 M. DISSIMILIS                    . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

BUCCINUM UNDATUM
37 BUCCINUM UNDATUM                 . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

NASSARIIDAE
38 NASSARIUS TRIVITTATUS            1 . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . 1 . . . . 1 1 . . . . 2 2 2 . 2 . . . . 1 . . 1 . . 1 . . . . . . . 1 . . . . . . . 2 . . . . . . . . . . . . . . . . . . . . . . . .
39 N. OBSOLETUS                     . . . . . . . . . . . . . . . . . . . . 1 . . . . . 1 . . . . . . . . . . . . . . . . . . . . . 1 . 1 . . . . . 1 1 . . 1 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

TURRIDAE
40 OENOPOTA (LORA) ELEGANS          . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . 1 . . . . . . . . . . . . 1 . . . 1 . . 1 . . 1 . . . . . . . 1 .
41 O. TURRICULA                     . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . .

CANCELLARIIDAE
42 ADMETE COUTHOUYI                 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . 1 . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . 1 . . .

RETUSIDAE
43 RETUSA OBTUSA                    . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . 1 . . . . . . . . .
44 R. CANALICULATA                  . . . . . . . . . . . 1 1 . . . . . . . . 1 . . . . . . . . . . 2 2 . . . . . . 2 1 . . 2 . 1 . 2 . . . . . 1 1 . . . . . . 2 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

ACLIDIDAE
45 ACLIS TENUIS                     . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . 1 1 . . 1 . 1 . 1 . . . . . . . 1 . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . .

ARTHROPODS

NYMPHONIDAE
46 NYMPHON HIRTIPES                 . . . . . . . . . . . . . . . 1 . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . .
47 N. GROSSIPES                     . . . . . . . . . . . . . . . . . 1 . . . . 1 . . . 1 . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

AMMOTHEIDAE
48 ACHELIA SCABRA                   . . . . . . . . . . . . . . . 1 . . . . . 1 . . . . 1 . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . 1 . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . .

PYCNOGONIDAE
49 PYCNOGONUM LITTORALE             . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

LEUCONIDAE
50 LEUCON NASICA                    . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . 1 . . 2 . . . . . . 1 1 .
51 L. NASCIOIDES                    . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2 . . . . . . . . . . 1 .
52 EUDORELLA EMARGINATA             . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . 2 . 2 . . . . . . . . . .
53 E. TRUNCATULA (SYN=PUSILLA)      . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . 2 1 . . 1 . . 1 . . . . . . . . 1 . . . . . . . 1 2 1 1 1 1 1 1 1 1 . . 1 1 . . . 1 2 1 1 . . . . 1 . 1 1 . . . . . . . . .
54 EUDORELLOPSIS DEFORMIS           . . . . . . . . . 2 . . . 1 . . . . . . 1 1 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

NANNASTACIDAE
55 CAMPYLASPIS RUBRICUNDA           . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

LAMPROPIDAE
56 LAMPROPS QUADRAPLICATA           1 1 1 . 2 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
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Table 4 (cont'd)

DIASTYLIDAE																																																																																														
57 DIASTYLIS SCULPTA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	.	.	1	.	.	.	1	2	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	1	.	.	.	.	.	.
58 D. QUADRISPINOSA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	2	1	.	.	1	1	.	2	.	1	.
59 D. RATHKEI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	1	.	.
60 BRACHYDIASTYLIS RESIMA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.
61 LEPTOSTYLIS LONGIMANA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
62 L. VILLOSA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
CAPRELLIDAE																																																																																															
63 AEGINIMA LONGICORNIS	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	1	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
64 CAPRELLA LINEARIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
65 C. PENANTIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
MYSIDACEA																																																																																																
66 MYSIS MIXTA	.	.	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.
EUPHAUSIACEA																																																																																																
67 EUPHAUSIA SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.
HIPPOLYTIDAE																																																																																																
68 EUALUA PUSIOLUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CRANGONIDAE																																																																																															
69 CRANGON SEPTEMSPINOSA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
PAGURIDAE																																																																																															
70 PAGURUS ACADIANUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
71 P. PUBESCENS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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STRONGYLOCENTROTIDAE																																																																																															
72 STRONGYLOCENTROTUS DROEHBAC	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.
ECHINARACHNIDAE																																																																																															
73 ECHINARCHNIUS PARMA	.	1	1	.	.	.	.	.	.	1	.	.	2	2	1	1	2	.	.	1	1	.	1	.	.	1	1	1	1	2	1	.	.	1	.	1	2	1	.	.	1	1	1	1	1	1	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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86 SPIRORBIS BOREALIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
87 GERSEMIA RUBIFORMIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
88 DULVA MULTIFLORA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
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TOTAL NO. OF SPECIMENS	3	6	5	0	45	8	0	0	0	33	0	71	36	94	3	12	13	3	0	10	6	22	51	0	18	7	28	8	22	70	14	0	88	135	34	13	10	17	26	3	59	51	22	11	174	20	25	41	93	24	6	4	7	1	4	20	15	66	65	6	7	25	31	22	232	8	26	8	14	0	8	173	0	0	4	22	26	36	7	13	26	6	0	58	0	47	97	2	0	20	6	20	22	9	10	82
TOTAL NO. OF SPECIES	2	2	2	0	6	6	0	0	0	7	0	9	11	4	3	5	2	3	0	4	5	9	12	0	7	4	15	3	5	4	4	0	2	11	9	6	1	10	4	3	14	10	5	2	10	8	12	9	8	4	3	3	3	1	2	6	10	14	10	5	4	8	6	5	9	3	9	2	10	0	3	14	0	0	2	8	4	11	3	7	6	2	0	12	0	11	15	2	0	7	5	10	7	4	7	4

TABLE 5. Biomass (gm/2 litre) of major faunal components of van Veen grab samples subtotalled by area.

		WORMS	BI-VALVES	GASTRO-PODS	ECHINO-DERMS	ARTHRO-PODS	TOTAL*
	1	.001	.000	.128	.000	.051	.180
	2	2.856	.008	.000	45.178	.138	48.180
	3	.761	.000	.000	29.990	.272	31.022
	4	.000	.000	.000	.000	.000	.000
	5	3.263	1.119	.164	10.843	.824	23.217
	6	1.018	.024	13.531	7.916	.150	26.550
	7	.000	.000	.000	.000	.000	.000
	8	.000	.000	.000	.000	.000	.000
	9	.000	.000	.000	.000	.000	.000
Area A	10	1.111	6.421	.000	44.862	1.014	65.035
	11	.000	.000	.000	.000	.000	.000
	12	7.003	3.169	.438	.071	.203	24.538
	13	4.932	2.920	.146	1.496	.236	9.842
	14	.192	.085	.000	.357	.005	2.368
	15	.137	.000	.000	7.885	.005	8.272
	16	.283	.003	.084	2.566	.005	2.941
	17	.189	.142	.000	.919	.000	1.250
	18	.506	5.044	.000	1.876	.006	.260
	19	.000	.000	.000	.000	.000	.000
	20	.259	.006	.000	5.364	.008	5.637
	21	1.080	.004	.036	2.776	.316	4.372
	22	.288	9.085	.014	.450	.064	9.865
	23	.015	.000	.135	.156	.033	25.094
	24	.000	.000	.000	.000	.000	.000
	Total	23.894	28.030	14.676	162.705	3.330	288.623
	Mean	1.41	2.16	1.63	10.17	0.21	16.98
	25	.194	.197	.114	.000	.003	.516
	26	.552	.175	.000	.175	.040	.770
	27	.880	23.888	2.992	33.860	3.456	65.076
	28	.520	.028	.364	109.793	.010	117.462
	29	.341	.822	.000	1.056	.008	2.292
	30	.400	.340	.208	19.143	.000	20.102
	31	.086	.043	.000	20.892	.000	21.021
B	32	.000	.000	.000	.000	.000	.000
	33	.425	.005	.118	.000	.000	.549
	34	2.215	.139	1.654	.128	.542	4.777
	35	2.082	.415	.638	.000	.303	3.438
	36	2.028	.374	.065	332.036	.055	334.654
	37	.173	.096	.000	45.924	.007	38.331
	38	.579	.077	.000	3.089	.059	90.625
	39	.033	.020	.150	.000	.000	.203
	40	.743	5.900	.000	.021	.054	11.216
	41	1.013	2.886	4.016	.716	2.124	10.755
	42	.264	.264	.640	38.900	.006	45.449
	43	.068	.112	1.742	45.724	.000	47.984
	44	1.080	.291	.000	33.043	.000	34.353
	45	5.130	1.754	1.244	65.350	.000	73.478
	46	.154	5.220	.011	16.950	.014	22.390
	47	.270	.168	.011	.023	.004	.498
	48	.270	.010	.000	.410	.004	.700
	Total	19.501	43.226	13.968	767.232	6.689	946.638
	Mean	0.85	1.88	0.93	40.38	0.42	41.16

*Total includes biomass of taxonomic group, "others".

TABLE 5 (cont'd)

		WORMS	BI- VALVES	GASTRO- PODS	ECHINO- DERMS	ARTHRO- PODS	TOTAL*
	49	.282	.161	.655	.000	.001	1.099
	50	1.734	.229	.014	.000	.062	1.979
	51	.148	.462	.070	.000	.000	.742
	52	3.421	.017	.001	.000	.000	3.439
	53	.208	.010	.022	.000	.000	.239
	54	.185	.011	.009	.000	.000	.205
	55	.242	.021	.024	.000	.000	.286
	56	.202	.011	.229	69.561	.000	70.003
Area	57	.624	112.459	.156	.502	.070	113.905
	58	1.334	.754	.269	.000	.034	2.391
C	59	4.418	.898	.066	.000	.431	5.813
	60	3.773	1.932	.209	.000	.005	5.920
	61	2.239	1.033	.004	.000	.001	3.278
	62	1.700	.091	.053	.000	.030	1.873
	63	2.256	.023	.018	.000	.018	2.314
	64	2.136	.268	.030	.000	.020	2.454
	65	.779	22.902	1.455	1.692	.014	26.842
	66	3.226	.106	.000	.000	.234	3.566
	67	.822	.290	.045	.085	.107	1.521
	68	1.239	12.840	.000	.000	.011	14.059
	69	.164	113.238	.000	53.410	.056	166.868
	70	.002	.000	.000	.000	.001	.228
	71	.255	.000	.000	17.187	.007	17.449
	72	1.943	.765	.163	.000	.032	2.904
	Total	33.334	268.519	3.493	142.437	1.134	449.378
	Mean	1.39	12.21	0.18	23.74	0.06	18.72
	73	0.193	3.933	.000	.000	0.010	4.136
	74	4.235	41.865	.000	.000	0.063	42.294
	75	1.715	.000	.000	.000	.002	1.717
	76	3.000	1.746	.000	.000	.112	4.858
	77	5.993	.049	.099	.000	.412	7.074
	78	4.925	.049	.000	.000	.146	5.950
	79	1.786	54.212	.000	.000	.157	56.155
	80	.429	.006	.000	.000	.003	.474
	81	2.006	116.288	24.638	1.274	.012	148.360
D	82	.030	112.633	.000	28.981	.001	141.645
	83	.000	.000	.000	.000	.000	.000
	84	3.699	.390	.109	.000	.383	6.706
	85	.000	.000	.000	.000	.000	.000
	86	1.640	.144	.086	.046	.652	2.948
	87	3.555	2.230	.068	.000	.065	6.092
	88	.000	.000	.000	.000	.000	.000
	89	.000	.000	.000	.000	.000	.000
	90	.844	.053	.000	.000	.041	.938
	91	4.231	4.316	.000	.864	.032	9.443
	92	3.082	1.178	.000	19.136	.278	65.722
	93	6.738	.141	.148	.906	.032	8.102
	94	2.106	.103	.148	1.550	.004	3.911
	95	1.211	.259	.017	.000	.071	1.565
	96	2.708	.444	.000	3.540	1.820	8.512
	Total	54.127	340.040	25.312	56.297	4.296	526.601
	Mean	2.71	17.00	3.16	6.26	0.22	26.33

*Total includes biomass of taxonomic group, "others".

Table 6. Biomass distribution of major faunal components in relation to physical factors.

6a. Distribution by area.

Area	Ave no. TUs/sample*	Ave total biomass	% biomass worms	% biomass bivalves	% biomass gastropods	% biomass echinoderms	% biomass arthropods	% biomass others
A	7.8	10.69	8.2	9.7	5.1	56.0	1.1	19.7
B	5.0	29.58	2.0	4.5	1.5	90.5	0.7	10.7
C	5.5	13.22	7.4	59.8	0.8	31.6	0.7	0.2
D	8.2	18.22	10.5	62.1	5.3	11.9	0.9	9.3

6b. Distribution by depth.

Depth	Ave no. TUs/sample*	Ave total biomass	% biomass worms	% biomass bivalves	% biomass gastropods	% biomass echinoderms	% biomass arthropods	% biomass others
0-9 m	5.9	30.74	2.5	54.2	4.7	36.6	0.6	1.3
10-19 m	4.8	19.99	2.6	23.5	0.3	50.9	0.3	22.5
20-29 m	6.8	20.12	6.3	13.0	5.5	69.7	1.3	4.2
30 m	7.9	9.01	23.3	43.7	0.3	2.9	1.7	28.0

6c. Distribution by temperature

Temp. °C	Ave no. TUs/sample*	Ave total biomass	% biomass worms	% biomass bivalves	% biomass gastropods	% biomass echinoderms	% biomass arthropods	% biomass others
0.0-9.9	8.6	28.73	8.9	27.8	0.9	52.4	1.9	8.0
10.0-12.4	6.4	18.91	5.6	8.3	3.8	54.4	0.4	27.5
12.5-14.9	6.6	5.44	7.0	17.7	1.0	71.8	0.4	2.0
15.0+	6.1	35.23	2.6	57.2	3.8	32.3	0.5	3.6

TU* = Taxonomic Unit.

Table 7. Fauna encountered in beam trawl and scallop dredge samples giving species code and station numbers.

Species code	Species	Station no.
MOLLUSKS		
19.	*Astarte undata*	19.20.21.24.27.28.36.43.46.47.57.58.59.61.65.67.68.70.71.73.74.77.78.79.84
20.	*A. subequilatera*	18.21.66.67.77.78.79.82.84.86
21.	*Arctica islandica*	10.11.13.18.58.59.74.77.78.79.84
22.	*Clinocardium ciliatum*	12.22.25.46.67.72.77.78.79.84.96
23.	*Crenella faba*	59.66.70.77.94.96
24.	*C. glandula*	21.22.45.58.67.81
25.	*Ensis directus*	2.21
26.	*Hiatella arctica*	6.12.13.18.19.22.24.25.26.27.28.34.46.47.48.58.66.67.69.71.79.84.85.94.96
27.	*Lyonisa hyalina*	77.95
28.	*Macoma balthica*	52.85
29.	*Modiolus modiolus*	7.8.9.10.18.19.24.25.27.34.35.40.43.46.47.48.50.57.60.65.66.67.68.71.80.85.89.94.96
30.	*Musculus niger*	67.86
31.	*Nucula tenuis*	45.72.86
32.	*Mytilus edulis*	2.7.9.10.16.17.18.20.22.25.26.27.36.40.45.57.60.68.69.70.74.78.80.81.82.84.85.86.96
33.	*Crassostrea virginica*	26.40.58
34.	*Placopecten magellanicus*	2.10.11.12.13.14.15.21.24.26.27.28.42.46.47.48.49.56.57.60.66.67.68.69.70.72.77.78.79.81.82.86.96
35.	*Pitar morrhuana*	34.53.56.59.60.61.65.72.74
36.	*Telina agilis*	12.31.32.57.58
37.	*Thiosira insignis*	57
38.	*Spissula solidissima*	12.25.32.58
39.	*Thyasira gouldii*	46.81
40.	*Yoldia limulta*	63
41.	*Y. sapotilla*	53.55.59.60.61.63.72.74.94.95
42.	*Y. thraciaeformis*	86.95
43.	*Anomia simplex*	34.43.89
44.	*Cyrtodana siliqua*	11
46.	*Aporrhais occidentalis*	6.11.12.34.77.86.93.94.95
47.	*Admete couthouyi*	12.58.67.77.93.94
48.	*Buccinum tenue*	93.94
49.	*B. totteni*	6.93
50.	*B. undatum*	6.11.12.13.17.18.68.77.78.79.85.86.93
51.	*Colus obesa*	94
52.	*C. pygmaea*	22.77.78.79.84
53.	*C. stimpsoni*	6.12.13.22.78.79.84.86.94.95
54.	*C.* sp. (new?)	77
55.	*Littorina saxatilis*	63
56.	*Lunatia heros*	1.10.11.13.14.15.16.21.31.32.34.36.44.71.78.79
57.	*L. immaculata*	67
58.	*L. triseriata*	25.26.32.46.57.72.94
59.	*Margarites groenlandicus*	6.12.22.67.86
60.	*Mitrella lunata*	57
61.	*Nassarius obsoletus*	22.31.32.57.61.66.68

Table 7 (cont'd)

Species code	Species	Station no.
62.	*N. trivittatus*	1.20.21.25.26.30.32.38.41.43.44.46.48.59.66.67.70.72.81
63.	*Neptunea decemcostata*	6.11.12.13.72.73.77.78.79.84.86.93.94
64.	*Sayella unifasciata*	32
65.	*Oenopota concinnula*	94
66.	*O. elegans*	21.22.35.59.66.67.77.79.95
67.	*O. harpularia*	66
68.	*O. incisula*	94.95
69.	*O.* sp.	94
70.	*O. turricula*	12.25.77.79.86.93.94
71.	*Philine lima*	22.79
72.	*Ptychatractus ligatus*	67
73.	*Solariella varicosa*	77.93.94
74.	*Thias lappilus*	63
75.	*Retusa canalicula*	12.13.22.32.34
76.	*Trichotropis bicarinata*	94
77.	*T. borealis*	12.22.77.79
78.	*Turitellopsis acicula*	84.95
79.	*Velutina*	12.13.22.79.86
87.	*Aeolidia papillosa*	22
88.	*Coryphella* sp.	46
80.	*Acmaea testudinalis*	81.82.96
81.	*A. rubella*	96
82.	*Puncturella noachina*	12.22.70
83.	*Crepidula fornicata*	28.32.35.36.38.39.40.41.42.43.44.45.46.48.50.81.89.96
84.	*C. plana*	26.28.30.31.32.34.35.36.38.39.41.42.43.44.45.48.71.72
85.	*Ischnochiton ruber*	1.7.16.69.70.81.82.85.89.96
86.	*Loligo* sp.	79

BRACHIPODS

Species code	Species	Station no.
45.	*Hemithiris psittacea*	6

ARTHROPODS

Species code	Species	Station no.
91.	*Crangon septemspinosus*	1.10.13.15.18.21.22.25.26.30.31.32.34.35.36.38.41.43.44.45.46.50.52.54.55.57.58.59.60.61.63.67.68.81
93.	*Cancer irroratus*	1.2.8.10.11.13.14.15.18.20.21.22.24.25.26.27.28.29.31.32.34.39.40.41.43.44.45.46.47.49.50.51.52.53.54.55.56.57.58.59.60.61.62.63.64.65.66.68.69.71.72.74.77.79.80.81.82.84.85.95.96
94.	*Balanus balanus*	16.24.27.31.38.39.40.43.57.65.67.77.78.80
95.	*B. balanoides*	32.60.67.77.79.86.93
96.	*Argis dentata*	43.67.77.78.84.86.93.94
97.	*Eualis pusiolus*	7.25.39.43.46.67
98.	*Lebbeus groenlandica*	96
99.	*Pandalus montagui*	12.21.22.46.52.55.59.60.61.67.70.77.78.79.84.86.93.94.95
100.	*Mysis mixta*	8.12.13.22.32.78.95
101.	*Sabinea septemcarinata*	6
102.	*Homarus americanus*	refer Table 7A
103.	*Hyas areneus*	2.3.8.11.12.13.15.22.61.62.93.94.96
104.	*H. coarctatus*	2.6.8.11.12.22.65.66.67.77.78.79.81.84

Table 7 (cont'd)

Species code	Species	Station no.
105.	*Pagarus acadianus*	3.8.10.12.13.14.15.18.20.21.25.26.28.30.31.32.34.35. 36.41.43.44.45.70.71.78.79.86.94
106.	*P. arcuatus*	93
107.	*P. pubescens*	3.6.8.12.13.22.67.77.78.79.82.86
108.	*P. longicarpus*	10.12.31.38
201.	*Acanthonotozoma serratum*	22.67
202.	*Ampelisca eschrichti*	94
203.	*A. macrocephala*	12.21.22.58.66.67.70.77.79
204.	*A. vadorum*	22.32.34.35.36.50.63
205.	*Byblis gaimardi*	77.78.79.95
206.	*Haploops tubicola*	67.77.86
207.	*Amphithoe longimanna*	40.41.48.49.96
208.	*Leptocheirus pinguis*	21.50.67.78
210.	*Unicola irrorata*	18.20.21.22.25.26.31.32.36.39.50.67.71.81
199.	*Corophium achenusicum*	96
212.	*C. bonelli*	22.24.26.31.41.49.62.66.67.77.96
213.	*C. crassicorne*	22.67
215.	*Erichthonius rubricornis*	12.21.22.66.84
216.	*E. brasiliensis*	8
220.	*Ischyrocerus anguipes*	22
221.	*I. commensalis*	22.58.78
222.	*Anonyx liljeborgi*	79.84.94
228.	*Orchomenella minuta*	12
198.	*O. pinguis*	15.21.22
229.	*Psammonyx nobilis*	21.25
230.	Re-identified as sp. #229	
231.	*Casco bigelowi*	50
197.	*Maera danae*	22.57
233.	*Melita dentata*	22.25.67
235.	*M. quadrispinosa*	22
237.	*Aceroides latipes*	95
241.	*Monoculodes edwardsi*	21.22.46
242.	*M. norvegicus*	67
247.	*M. tuberculatus*	22
248.	*M. longirostris*	22
250.	*Paroediceros lynceus*	12
253.	*Westwoodilla caecula*	22.67
256.	*Photis macrocoxa*	22.35
257.	*P. reinhardi*	77
258.	*Podoceropsis nitida*	10.12.13.77.78.79.84.86
259.	*P. inaequistylis*	8.58.66
260.	*Protomedia fasciata*	67
263.	*Phoxocephalus holbolli*	18.22.67.73.96
264.	*Pleustes panoplus*	12.21.22.67
265.	*Pleusymtes glaber*	22.38.41
266.	*Dulichia arctica*	12.22.66.67.77.78.86
267.	*D. spinosissima*	22.77.95
271.	*Pontogeneia inermis*	26.41.49.89.96
272.	*Metopella angusta*	67
273.	*M. carinata*	22
196.	*M. brazelli*	67
276.	*Stenula peltata*	77.78.79

Table 7 (cont'd)

Species code	Species	Station no.
277.	*Stenothoe brevicornis*	67
278.	*Syrrhoe crenulata*	12.22.67
279.	*Rhachotropis lobata*	22
280.	*Proboloides nordmanni*	22
109.	*Achelia scabra*	22.62
110.	*Nymphon grossipes*	12.13.21.22.77
111.	*N. longitarse*	94
112.	*N. hirtipes*	22
113.	*Pychnogonum littorale*	65.66
114.	*Aeginina longicornis*	12.13.25.31.36.46.58.62.66.73.77.78.79.84.86.89.94.95
115.	*Caprella linearis*	96
116.	*Diastylis rathkii*	13.21.79.86.95
117.	*D. quadraspinosa*	12.95.79.86
118.	*Lamprops quadiplicata*	12
ECHINODERMS		
1.	*Asterias forbesii*	1.21.22.25.30.31.34.39.41.43.48.58.66.68
2.	*A. vulgaris*	1.2.3.7.8.10.11.13.14.15.17.18.19.20.21.22.24.25.26.27.28.30.31.32.34.35.36.38.39.40.41.42.43.44.45.46.47.48.50.54.56.57.58.59.60.61.63.66.70.72.73.77.78.79.80.82.84.86.89.96
3.	*Cucumaria frondosa*	3.6.12.13.36.49.53.55.65.67.68.71
4.	*Leptasterias tenera*	38.40.43
5.	*Henricia sanguinolenta*	2.3.7.9.10.11.12.13.16.17.18.19.20.22.24.25.26.27.30.31.32.35.36.39.40.42.43.45.46.47.48.50.56.61.67.68.70.71.72.(49.65.).73.78.79.80.82.86.89.93.96
6.	*Leptasterias polaris*	3.12
7.	*Ophiopholus oculeata*	3.7.8.9.10.13.17.18.19.20.21.22.26.28.35.36.48.53.58.65.66.67.68.80.85.96
8.	*Ophiura robusta*	12.13.14.19.22.77.86.93.94.95.96
9.	*O. sarsi*	11.13.21.24.72.73.78.79.84.86
10.	*Strongylocentrotus droehbachiensis*	refer Table 7A
11.	*Echinarchnius parma*	1.2.3.9.10.11.13.14.15.16.18.19.20.21.22.24.25.26.27.28.29.30.31.32.34.35.36.38.42.44.45.46.48.49.50.53.56.57.71.72.73.79.80.81.82
12.	*Ctenodiscus crispatus*	42.77.84.86.93.94
13.	*Solastar papposus*	3.6.12.22.77.78.79.86.93.94
14.	*Malpadia oolitica*	93
15.	*Gorgonocephalus eucnemis*	36.43.46.93
16.	*Solaster endeca*	2.3.78.93
17.	*Psolus fabricci*	6.8.11.12
18.	*P. phantpus*	17
PORIFERA		
119.	*Clatharia delicata*	3.13.22.27.35.36.42.61.63.65.73
120.	*Cliona celata*	39.40.43
121.	*Esperelia lingua*	20.45.46.57.65.66
122.	*Grantia ciliata*	46.50.62.67
123.	*Haliclona oculata*	2.9.12.16.17.24.26.34.41.45.70.78.79.82.84
124.	*Isodictya deichmannae*	25.40.47.65

Table 7 (cont'd)

Species code	Species	Station no.
125.	*Maxilla incrustans*	28.38.44.72
126.	*Mycale ovulum*	13.18.22.41.59.61.66.67.68.73
127.	*Polymastia mammilaris*	19.22.25.27.49.61.62.65.74
128.	*P. robusta*	1.2.7.18.19.20.21.24.25.28.43.49.53.57.62.58.79.80.81.89
129.	*Trichostemma hemisphericum*	35.48.62
CNIDARIDS		
142.	Hydroids	2.3.6.8.10.12.13.14.18.19.21.24.26.27.28.29.30.31.34.36.38.39.40.42.43.44.46.47.49.59.60.61.65.66.67.68.70.71.72.73.74.77.78.80.85.86.89.93.94
*143.	*Dulva multiflora*; 170. *Abietinaria abietina*; 171. *Halecium flexile*; 172. *Campanularia angulata*; 173. *C. groenlandica*; 174. *Diphasia fallax*; 175. *Sertularella fusiformis*; 176. *Lafoea dumosa*; 177. *L. gracillima*; 178. *Hydrallmania fallcata*; 179. *Thuiara cupressina*; 180. *Selaginopsis mirabilis*	
132.	*Cyanea pelagica*	3.44.49.54.55
133.	*C. capillata*	56.60.95
134.	*Aceroides* sp.	95
135.	*Actinauge* sp.	77
136.	*Bundodactis stenna*	12.78.84.86
137.	*Edwardasia* sp.	77
138.	*Metridium dianthus*	2.3.34.35.45.50.56
139.	*M. senile*	7.10.17.19.22.28.42.43.44.65.77.79.80.89
140.	*Tealia felina*	6.7.22.27.65
141.	*Stomphia coccinea*	38.48.68.73.78.79.84.89
144.	BRYOZOANS	2.3.6.7.9.12.13.18.19.21.24.25.27.28.32.34.36.38.39.40.41.42.43.44.47.49.52.56.61.62.65.66.67.68.70.71.73.77.78.80.89.93.94.96
*181.	*Dendrobeania murrayana*; 182. *Eucratea loricata*; 183. *Membranapora pilosa*; 184. *Bugula turrita*; 185. *Gemellaria loricata*	
SIPUNCULIDS		
130.	*Pelonaia corrugata*	59.73.77.79.86
131.	*Phascolosoma eremita*	12.14.35.58.78.79.86
ANNELIDS		
147.	Worms	2.6.7.8.9.10.12.15.17.18.24.26.27.28.30.31.32.34.38.39.40.41.43.44.45.46.47.49.50.53.54.55.58.60.63.65.67.68.69.70.71.73.74.77.78.79.80.81.82.85.89.94.96
*145.	*Spirorbis borealis*; 146. *Aphrodite hastata*; 148. *Potamilla reniformis*; 149. *Sternaspis scutata*	
CHORDATES		
89.	*Mogula* sp.	9.10.12.43.46.78
90.	*Halocynthia pyriformis*	16.17.18.19

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*List of species identified under the common names shown above them.

Table 7a. Size (mm) and number of sea urchins *(Strongylocentrotus droehbachiensis)* and lobsters *(Homarus americanus)* in beam trawl and scallop dredge samples.

	Sea urchins		Lobsters				Sea urchins		Lobsters		
Station number	mean size	N	Sht	Cnr	Mkt	Station number	mean size	N	Sht	Cnr	Mkt
1	-	0	4	1	0	49	49.0	0	0	0	0
2	25.8	44	3	3	0	50	-	0	0	0	0
3	23.0	30	0	2	0	51	-	0	0	0	0
4	24.6	10	0	0	0	52	-	0	0	0	0
5	40.7	577	0	0	0	53	-	0	0	0	0
6	33.1	324	0	0	0	54	x	5	0	0	0
7	48.4	864	4	2	0	55	-	0	0	0	0
8	47.1	790	6	1	0	56	-	0	0	1	0
9	41.8	366	0	0	0	57	-	0	0	1	0
10	-	0	0	0	0	58	-	0	0	0	0
11	25.6	270	0	0	0	59	-	0	0	0	0
12	45.8	211	0	0	0	60	x	2	0	0	0
13	-	0	0	0	0	61	-	0	0	0	0
14	29.8	1	0	0	0	62	45.0	0	0	0	0
15	28.7	3	7	1	0	63	-	0	0	0	0
16	54.4	91	31	2	0	64	-	0	0	0	0
17	41.2	259	19	3	0	65	32.2	0	1	1	1
18	44.0	182	18	11	0	66	24.5	0	0	0	1
19	38.5	566	5	6	0	67	23.8	518	2	0	0
20	31.2	24	0	0	1	68	35.5	353	0	0	0
21	-	0	0	0	0	69	42.5	1348	0	1	0
22	x	1536	0	0	0	70	42.0	168	1	1	0
23	-	0	4	0	0	71	-	0	0	1	0
24	x	24	3	0	0	72	40.0	0	0	1	0
25	x	179	0	0	0	73	60.0	0	2	1	0
26	x	77	2	2	0	74	-	0	0	1	0
27	x	5	1	1	0	75	-	0	0	0	0
28	-	0	0	0	0	76	47.3	8	0	0	0
29	-	0	0	1	0	77	50.0	0	0	0	0
30	-	0	8	4	1	78	49.4	4	0	0	0
31	-	0	20	1	0	79	47.1	46	0	0	0
32	22.5	5	9	0	0	80	47.2	312	13	6	2
33	12.5	0	12	1	0	81	17.5	0	3	0	1
34	22.5	4	0	0	0	82	58.6	72	11	6	0
35	30.8	11	8	1	0	83	44.2	1	2	0	0
36	x	4	0	0	0	84	38.6	2	0	0	0
37	x	6	0	1	0	85	36.4	64	2	0	0
38	-	0	0	1	0	86	-	0	0	0	0
39	-	0	1	3	0	87	47.5	0	1	1	0
40	-	0	0	1	0	88	42.5	1	8	2	5
41	17.5	0	0	0	0	89	49.0	3	5	1	1
42	-	0	0	0	0	90	52.2	3	0	0	0
43	-	0	0	0	0	91	57.5	8	0	0	0
44	-	0	0	0	0	92	17.5	0	0	0	0
45	35.5	5	0	0	0	93	57.5	0	0	0	0
46	-	0	0	0	0	94	50.8	6	0	0	0
47	12.5	12	0	0	0	95	x	16	0	0	0
48	24.2	16	0	1	1	96	49.1	88	18	3	0

Sht = Shorts, carapace length - 63.5 mm
Cnr = Canners, carapace length - 63.5-80.0 mm
Mkt = Markets, carapace length - 81+ mm
x = no measurements taken

Table 8.

FISH FROM BEAM TRAWL SCALLOP DREDGE SAMPLES

	Stations			
SPECIES	Area A	B	C	D
AGONIDAE				
1 *Aspidophoroides monopterygius* **(Bloch)** **(Alligatorfish)**	**5.10.12.13.** **22**			**76.77.84.93.94**
BOTHIDAE				
2 *Scophthalmus aquosus* **(Mitchell)** **(Windowpane)**		**29.31.33.36** **37.44.45**	**50.55.56.63** **64.72**	**88**
COTTIDAE				
3 *Artediellus uncinatus* **(Reinhardt)** **(Arctic hookear sculpin)**	**5**			
4 *Hemitripterus americanus* **(Gmelin)** **(Sea raven)**	**1.7.24**	**38.40.44**	**63.64**	**83.85.87.88**
5 *Myoxocephalus scorpius* **(Linnaeus)** **(Shorthorn sculpin)**	**2.18.22**		**66**	**92**
6 *M. aenus* **(Mitchell)** **(Grubby)**	**16.18**	**32.38.39.42** **43.48**	**49**	
7 *M. octodecemspinosus* **(Mitchell)** **(Longhorn sculpin)**	**1.2.5.7.10** **11.14.15.16** **17.18.19.20** **21.22**	**26.27.28.30** **31.32.33.34** **35.36.37.38** **42.43.44.45** **46**	**49.50.53.54** **55.56.58.59** **60.61.62.63** **65.66.67.70** **71.[illegible]**	**[illegible] 74.75.76.77** **7[illegible].79.80.83.84** **85.86.87.88.91** **92.93**
8 *Triglops murrayi* **Günther** **(Mailed sculpin)**	**5**			
CYCLOPTERIDAE				
9 *Liparis liparis* **(Linnaeus)** **(Striped seasnail)**	**13**			**78.79.86**
10 *L. atlanticus* **(Jordan and Evermann)** **(Atlantic seasnail)**	**11**	**28**		
LABRIDAE				
11 *Tautogolabrus adspersus* **(Walbaum)** (Cunner)	**1.2.3.7.8** **16.17.18**	**2[illegible].32.33.35** **38.39.40.45** **48**	**49.50.56.62** **69**	**73.85.87.96**
MORIDAE and GADIDAE				
12 *Enchelyopus cimbrius* (Linnaeus) (Fourbeard rockling)			53.55.59.61	74.84.94.95
*13 *Gadus morhua* (Linnaeus) (Atlantic cod)	2.11.13.14 17	26.2[illegible]. (28) (29) (30) 35.42	60. (66)	73.75.(76)77. 78.(79) 84.
14 *Microgadus tomcod* (Walbaum) (Atlantic tomcod)		26.28.30	59	
*15 *Urophycis chuss* (Walbaum) (Squirrel hake)		(35)	54.55.56.(59) 61.(66)	(74) (76) (79) 83.87.88.90
OSMERIDAE				
16 *Osmerus mordax* (Mitchell) (American smelt)	15	26.30.3 .42 45	49.55.56.58 59.63.65	84
PHOLIDAE				
17 *Pholis gunnellus* (Linnaeus) (Rock gunnel)		33.37		
PLEURONECTIDAE				
18 *Hippoglossoides platessoides* (Fabricius) (American plaice)	9.12.13		51.53.54.58 59.60.61.62 63.66.72	73.74.75.76 77.78.79.84 86.87.88.90 91.93.94.95

*For Atlantic cod and Squirrel hake, bracketed station numbers are extracted from catch record sheets.

Table 8 (cont'd).

19	*Limanda ferruginea* (Storer) (Yellowtail flounder)	1.2.3.4.5.6 10.11.12.13 14.15.16.20 21	25.29.32.36 37.44	51.53.54.57 58.59.60.61 63.65.71.72	73.74.78.80 82.87.88.96
20	*Liopsetta putnami* (Gill) (Smooth flounder)	17.20	40		
21	*Pseudopleuronectes americanus* (Walbaum) (Winter flounder)	1.2.10.13.14 17.18.19	27.30.31.32 33.34.35.36 37.38.39.40 41.42.43.44 45.47.48	49.50.51.52 53.54.55.56 57.58.59.60 61.62.63.64 65.66.67.71 72	73.74.80.81 82.83.85.87 88.90
	RAJIDAE				
22	*Raja erinacea* Mitchell (Little skate)	17	26.29.33.34 35.36.44.45	65.71.72	80.83
23	*R. ocellata* Mitchell (Winter skate)	15.18	25		
24	*R. radiata* Donovan (Thorny skate)				73
25	*R. senta* Garman (Smooth skate)				82
	STICHAEIDAE				
26	*Cryptacanthodes maculatus* Storer (Wrymouth)			51.53.55.58 59.60.61	84
27	*Lumpenus lumpretaeformis* (Walbaum) (Snake blenny)	12		58.63.72	74.78.79.84 86.91.93.94
28	*L. maculatus* (Fries) (Daubed shanny)			52	91.93
29	*Ulvaria subbifurcata* (Storer) (Radiated shanny)	3.5			
	Zoarcidae				
30	*Lycodes vahlii* Reinhardt (Vahl's eelpout)	21			
31	*Macrozoarces americanus* (Bloch & Schneider) (Ocean pout)	4	27.40.42.43 44	67.72	75.84

FAMILY,SPECIES,CODE NO								STATION NUMBER																								STATION NUMBER																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
HIGHER PLANTS																																																
11 ZOSTERA MARINA	.	.	.	.	3	.	.	.	.	3	.	3	3	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	2	3	.	.	.	.	.	.	.	.	1	.	.	.
20 DIATOMS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
CHLOROPHYCEAE																																																
30 CHAETOMORPHA SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	1	.	.	.	.	.	.	1
31 CHAETOMORPHA LINIUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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40 CALOTHRIX SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
50 LYNGBYA SP.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
PHAEOPHYCEAE																																																
101 LAMINARIA LONGICRURIS	.	3	.	.	3	.	.	3	3	1	.	.	1	.	.	3	3	.	.	.	.	.	.	.	3	.	.	3	.	3	.	2	.	3	3	2	1	1	3	3	1	.	.	1	3	.	.	2
111 CHORDA FILUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
121 ECTOCARPUS SILICULOSUS	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	1
131 FUCUS SERRATUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
132 FUCUS VESICULOSUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
130 FUCUS SP.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.
141 AGARUM CRIBROSUM	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
151 SPHACELARIA CIRROSA	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.
152 SPHACELARIA PLUMOSA	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1
161 DESMARESTIA ACULEATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	1	1	1	.	.	1	1	.	.	.
162 DESMARESTIA VIRIDIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.
171 CHORDARIA FLAGELLIFORMIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
181 DICTYOSIPHON FOENICULACEUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
191 ACROTHRIX NOVAE-ANGLIAE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
201 ASCOPHYLLUM NODOSUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
211 GIFFORDIA OVATA	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
221 HALOSPORA GLOBOAS	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
231 HALOPTERIS SCOPARIA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
241 PYLAIELLA LITTORALIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
251 SAUVAGEAUGLOIA CHORDARIAFORMIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
261 SPHAEROTRICHIA DIVARICATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
271 SORAPION KJELLMANII	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
281 MYRIOTRICHIA FILIFORMIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
291 STICTYOSIPHON SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
301 CLADOSIPHON ZOSTERAE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
311 SCYTOSIPHON LOMENTARIA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
321 STRIARIA ATTENUATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
RHODOPHYCEAE																																																
401 PHYLLOPHORA PSEUDOCERNOIDES	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	3	.	.	1	.	1	3	2	1	3	.	.	2	1	.	.	2
402 PHYLLOPHORA TRUNICATA	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	2	.	.	3	3	1	1	3	.	.	2	2	.	.	2
400 PHYLLOPHORA SP.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
411 RHODOMELA CONFERVOIDES	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	1	.	.	1	1	.	.	1	1	.	.	1
421 RHODYMENIA PALMATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	1	1	.	.	1	1	.	.	1
431 PHYCODRYS RUBENS	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
441 CYSTOCLONIUM PURPUREUM V. CIRRHOSUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.
442 CYSTOCLONIUM PURPUREUM V. PURPUREUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	1	1	.	.	1	.	.	.	.
451 POLYSIPHONIA NIGRESCENS	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1	.	1	1	.	.	.	1	1	1	.	.	1	1	.	.	1
452 POLYSIPHONIA URCEOLATA	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
453 POLYSIPHONIA FLEXICAULIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	1
454 POLYSIPHONIA ELONGATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
455 POLYSIPHONIA HARVEYII	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
456 POLYSIPHONIA NIGRA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
457 POLYSIPHONIA SUBTILISSIMA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
450 POLYSIPHONIA SP.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	1	.	.	.	.	.	.	.	.
461 POLYIDES ROTUNDUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	1	1	.	.	1	.	.	.	.
471 CERAMIUM DESLONGCHAMPII V. HOOPERI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
472 CERAMIUM ELEGANS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
473 CERAMIUM RUBRUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
474 CERAMIUM ARESCHOUGII	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
475 CERAMIUM DESLONGCHAMPII	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
470 CERAMIUM SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
481 BONNEMAISONIA HAMIFERA (TRAILLIELLA)	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	.	1	.	.	.	.	.	1	.	.	1
491 AHNFELTIA PLICATA	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
501 ANTITHAMNION BOREALE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
502 ANTITHAMNION CRICIATUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
503 ANTITHAMNION PLUMULA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
504 ANTITHAMNION FLOCCOSUM	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
500 ANTITHAMNION SP.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
511 CALLITHAMNION CORYMBOSUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
512 CALLITHAMNION ROSEUM	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
510 CALLITHAMNION SP.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
521 GONITHRICHUM ALSIDI	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
531 HARVEYELLA MIRABILIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
541 HILDENBRANDIA PROTOTYPUS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
551 ODONTHALIA DENTATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
561 PANTONEURA BAERII	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
571 RHODOPHYLLIS DICHOTOMA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
581 FURCELLARIA FASTIGIATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
591 PTILOTA SERRATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
601 RHODOCHORTON PENICILLIFORME	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
611 CALLOPHYLLIS CRISTATA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
621 CHONDRUS CRISPUS	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
630 ACROCHAETIUM SP.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
640 CRUSTOSE REDS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
651 CORALLINA OFFICINALIS	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Table 10. Volume measurements (ml) of algae taken in the dredge samples (number of species of Rhodophyceae indicated).

Station number	Total volume	Laminaria	Rhodophyceae	Station number	Total volume	Laminaria	Rhodophyceae
1	4200	0	*p 1sp	49	4590	750	2960 13spp
2	320	320	0	50	270	10	250 6spp
3	0	0	p	51	0	0	0
4	0	0	0	52	20	10	p 1sp
5	17	p	0	53	400	0	385 10spp
6	0	0	0	54	350	p	p 1sp
7	0	0	0	55	510	310	p 1sp
8	15100	15000	50 5spp	56	40	0	20 6spp
9	9402	9000	402 6spp	57	960	960	0
10	100	p	p 1sp	58	110	0	20 2spp
11	0	0	0	59	150	0	p 1sp
12	24	0	p 1sp	60	95	0	p 5spp
13	75	p	0	61	30	0	p 1sp
14	0	0	0	62	54	0	p 1sp
15	0	0	0	63	315	p	p 4spp
16	32	p	0	64	300	270	p 3spp
17	1920	1920	0	65	3750	2550	495 10spp
18	0	0	0	66	245	0	87 5spp
19	0	0	0	67	1440	0	1152 6spp
20	0	0	0	68	0	0	0
21	0	0	0	69	0	0	0
22	0	0	0	70	140	0	p 4spp
23	0	0	0	71	0	0	0
24	0	0	0	72	32000	16000	6000 10spp
25	924	870	54 3spp	73	500	0	420 8spp
26	0	0	0	74	30	0	20 5spp
27	0	0	0	75	5	0	p 1
28	3000	3000	p 3spp	76	40	0	p 1sp
29	0	0	0	77	10	0	p 1sp
30	250	200	50 1sp	78	500	0	p 6spp
31	0	0	0	79	805	0	p 7spp
32	3800	1750	2050 11spp	80	122	0	p 8spp
33	0	0	0	81	8820	8000	32 7spp
34	2420	1500	920 7spp	82	3120	1800	120 7spp
35	410	250	p 3spp	83	6	0	6 2spp
36	75	30	5 1sp	84	10	0	0
37	7330	250	7050 6spp	85	0	0	0
38	19400	1400	18000 7spp	86	200	0	40 7spp
39	5040	2800	2240 8spp	87	20	0	0
40	5135	400	1135 9spp	88	0	0	0
41	20610	300	20250 8spp	89	5400	1700	2870 17spp
42	0	0	0	90	10	p	p 5spp
43	0	0	0	91	120	0	p 2spp
44	4230	700	3500 7spp	92	0	0	0
45	1174	725	430 11spp	93	0	0	0
46	0	0	0	94	15	0	0
47	0	0	0	95	8	0	0
48	24800	4800	18000 10spp	96	26000	11000	15000 21spp

*p - present but too small to measure.

Table 11. Percentage of samples with algal material.

Area	Number of stations	Number of stations with algae	% of total
A	24	10	41.7
D	24	20	83.3
Total	48	30	62.5
B	24	15	62.5
C	24	21	87.5
Total	48	36	75.0

Table 12. Total volume of algal material in the samples.

Stations	Area		Volume of algae (ml)
1-24	A		4,822
73-96	D		17,977
		Total volume (ml)	22,796
25-48	B		32,229
49-72	C		13,793
		Total volume (ml)	46,022

Table 13. Sediment distribution in the Strait from grab and core samples.

Stn.	van Veen grab	Color	Core length(cm)	Color	Sed. type of core	Bottom description
1	sandstone rocks	gray	none			Rocky bottom (grey sandstone)
2	gravel, sand, mud		27.5		fine gravel, sand	Sand over gravel
3	sand, sandstone	brown/grey	none			Sand over rocky bottom (grey sandstone)
4	sand		40		sand, shells	Sand and shell fragments
5	gravel, sand, mud					Gravel and sand
6	gravel, mud	brown	none			Mud over rocky bottom
7	none		none			Rocky bottom (red sandstone)
8	none		none			"
9	none		none			"
10	gravel, sand	brown	52	brown	sand	Sand
11	gravel, sand, shell	brown	17	brown	sand, with shelly layers	Gravel, sand, shell fragments
12	sand, mud		40			Sandy silt
13	sand, mud, clay		35		sand, with shelly layers	Sand
14	sand		24		sand	Sand
15	sand		17		sand	Sand over rocky bottom (grey sandstone)
16	sandstone	grey	20		sand	"
17	sandstone		none			Rocky bottom (grey sandstone)
18	sandstone, sand		none			Rocky bottom
19	sandstone, shells		none			"
20	sandstone		none			"
21	sand, mud		40		sand	Sand and mud
22	sandstone, sand shells		none			Gravel over rocky bottom
23	sandstone, sand shells		none			Sand over rocky bottom
24	sand		none			Sand over rocky bottom
25	sandstone, sand		none			Rocky bottom
26	sand, shells		46		sand	Sand with sandstone cobbles
27	sandstone, mud	red	none			Mud with sandstone cobbles
28	sand		43		sand	Sandy bottom
29	sand		52		sand with shelly layers	"
30	sand		36	red	sand with shelly layers	"
31	sand		washed out		fine sand	"
32	sandstone		none			Rocky bottom (sandstone cobbles and boulders)
33	mud	grey/brown	12,24		mud	Mud
34	sand, shells, mud		15		sandy clay	Sand over clay
35	none		14.5			Rocky bottom
36	sandstone, sand, shells		48		sand and shell fragments	Sandy bottom with pebbles and shells
37	fine sand, shells		11		sand and shells	Sandy bottom with broken shells
38	sandstone, gravel, sand	red	10,5	red	clay	Sand and gravel over sandstone bottom
39	gravel, sand		25,32	grey/red	clay	4 grabs ranged from coarse gravel to sand, to mud, and broken shell
40	gravel, sand		25		fine sand & shelly layers	Gravelly sand
41	fine sand, mud	red	washed out	red	fine sand	Fine sand
42	silty sand	red	25	red	silty sand with shelly layers	"

Table 13. (cont'd)

Stn.	van Veen grab	Color	Core length(cm)	Color	Sed. type of core	Bottom description
43	gravel, sand		none			Sandy gravel bottom
44	none		21		silty mud	Muddy bottom
45	sand, mud, clay	red	washed out	red		Silty sand
46	sandstone, sand		none			Rocky bottom
47	sandstone, sand, shells		10	red	silty sand	Silty sand over rocky bottom of red sandstone
48	gravel, shell	red	5	red	gravel	Red sandstone gravel
49	gravel, sand, mud		45		sand	Sand
50	sand, mud	red	32	red	sand with shell layers	Sand with red sandstone pebbles
51	none		167	red/grey	clay	Mud over clay
52	mud, clay	red	223	red/grey	clay	"
53	mud, clay	red	224	red/grey	clay	"
54	mud, clay	red	105,227.5	red	clay	"
55	mud, clay	red	191,139	red	clay	"
56	sand, clay	red	15.5,43,5			Sand over clay
57	pebbles, mud, shells		none			Mud over rocky bottom
58	gravel, shells		109		sand with gravel and shells	Gravel bottom with broken shells
59	mud		160		silt, clay	Muddy bottom
60	mud		217		mud, clay	"
61	mud		206		mud	"
62	mud		202		mud	"
63	mud		211.5		mud	"
64	mud		106		mud	"
65	pebbles, sand		37		gravel, sand, shells	Gravel bottom with pebbles
66	mud		16,10,11		sand	Sand over rocky bottom
67	gravel, mud		25,60		gravel, mud	Muddy gravel
68	gravel, sand, mud		80,20		mud, clay	"
69	pebbles + gravel	grey	none			Rocky bottom
70	pebbles + gravel		none			"
71	sand		none			Sand
72	none		none			Rocky bottom
73	sand		none			Sand
74	mud, clay	red/brown	104	red/brown	mud, clay	Mud over clay
75	mud, clay		103	red/brown	mud, clay	"
76	mud		53			Mud
77	sand, mud		42		sand	Mud over sand
78	sand, mud		none			Sand
79	sand, mud		42,30		sand, mud	Muddy sand
80	gravel, sand		39	black	mud	Muddy gravel
81	gravel, sand, shell		none			Rocky bottom
82	sandstone pebbles red		none			Rocky bottom (red sandstone)
83	sandstone pebbles red		none			"
84	mud		50		mud	Muddy bottom
85	pebbles, gravel		none			Rocky bottom (red sandstone)
86	mud		21		sand	Muddy sand
87	pebbles, mud		109		mud	Mud with grey sandstone pebbles
88	sand	grey	washed out		sand, shell	Fine sand with shell fragments
89			none			Rocky bottom
90			none			"
91	mud		186		mud	Muddy bottom
92	sandstone,pebbles	grey	none			Rocky bottom
93	mud	red	53,85		silt, clay	Mud over clay
94	mud	red	204.5	red	silt, clay	"
95	mud	red	226.5		silt, clay	"
96	sandstone, mud	red	none			Rocky bottom (red sandstone)

Table 14. Size-frequency distributions of van Veen sediment samples given as percent gravel, sand, and silt.

Station	Gravels %	Sands %	Silts %	Excess gravels %	Excess silts %
1	5.33	93.88	0.78	5.33	0.0
2	0.07	97.54	2.39	0.00	0.0
3	8.59	91.29	0.12	8.59	0.0
4	0.11	99.83	0.06	0.00	0.0
5	34.26	62.20	3.54	34.26	0.0
6	34.97	60.40	4.63	30.81	0.0
7	-----	-----	-----	-----	---
8	-----	-----	-----	-----	---
9	1.24	98.51	0.25	0.00	0.0
10	7.37	89.29	3.34	7.37	0.0
11	9.24	89.92	0.84	9.24	0.0
12	0.19	83.47	16.34	0.00	0.0
13	8.80	90.20	1.00	8.80	0.0
14	0.27	99.32	0.41	0.00	0.0
15	0.00	99.99	0.01	0.00	0.0
16	0.39	99.46	0.15	0.00	0.0
17	0.02	99.60	0.38	0.00	0.0
18	21.89	77.57	0.54	21.89	0.0
19	-----	-----	-----	-----	---
20	7.15	92.68	0.17	5.95	0.0
21	1.41	98.55	0.04	0.00	0.0
22	1.72	94.04	4.24	0.00	0.0
23	0.59	98.99	0.42	0.00	0.0
24	-----	-----	-----	-----	---
25	50.01	49.58	0.41	50.01	0.0
26	39.43	60.02	0.54	39.43	0.0
27	54.03	41.36	4.61	9.30	0.0
28	3.09	95.62	1.29	0.00	0.0
29	0.94	98.16	0.89	0.00	0.0
30	0.11	97.33	2.56	0.00	0.0
31	0.63	98.19	1.17	0.00	0.0
32	10.25	88.98	0.77	0.00	0.0
33	0.00	63.96	36.04	0.00	14.23
34	0.09	85.23	14.68	0.00	8.01
35	0.63	62.78	36.59	0.00	20.27
36	1.18	97.71	1.11	0.00	0.0
37	16.35	83.34	0.31	16.35	0.0
38	29.47	69.31	1.21	29.47	0.0
39	44.48	49.10	6.42	44.48	0.0
40	3.72	96.09	0.19	0.00	0.0
41	0.04	95.37	4.59	0.00	0.0
42	0.02	92.89	7.09	0.00	5.45
43	37.92	60.02	2.07	30.42	0.0
44	0.25	99.44	0.31	0.00	0.0
45	0.25	83.75	16.00	0.00	8.26
46	19.04	73.57	5.23	19.04	0.0
47	29.50	65.93	4.57	29.50	0.0
48	25.57	70.31	4.12	15.69	0.0
49	0.08	49.50	50.42	0.00	32.74
50	0.18	87.06	12.76	0.00	8.58
51	0.00	27.13	72.87	0.00	47.95
52	0.00	24.85	75.15	0.00	51.45
53	0.27	31.98	67.76	0.00	38.49
54	0.16	18.23	81.61	0.00	49.01
55	0.00	19.02	80.98	0.00	61.18
56	0.84	97.34	1.82	0.00	0.0
57	54.63	36.82	8.56	54.63	7.01
58	7.20	69.91	22.89	7.20	18.45
59	0.50	61.91	37.59	0.00	30.89
60	0.01	18.34	81.65	0.00	53.62

Table 14. (cont'd)

Station	Gravels %	Sands %	Silts %	Excess gravels %	Excess silts %
61	0.00	47.84	52.16	0.00	38.93
62	0.59	51.67	47.74	0.00	35.35
63	0.05	24.83	75.12	0.00	46.56
64	0.00	67.52	32.48	0.00	14.77
65	17.50	79.55	2.95	17.50	0.0
66	21.59	58.92	19.50	21.59	13.02
67	20.12	70.35	9.54	20.12	7.94
68	21.59	71.04	7.37	21.59	5.54
69	-----	-----	-----	-----	-----
70	-----	-----	-----	-----	-----
71	0.80	99.17	0.03	0.00	0.0
72	1.69	77.60	20.72	0.00	15.75
73	5.69	93.97	0.34	5.69	0.0
74	0.00	26.12	73.88	0.00	54.77
75	0.00	6.38	93.62	0.00	83.30
76	1.00	77.37	21.63	0.00	18.00
77	0.55	82.73	16.72	0.00	8.68
78	0.09	83.00	16.91	0.00	12.47
79	0.00	79.29	20.71	0.00	15.19
80	13.89	81.30	4.81	13.89	0.0
81	38.52	60.50	0.99	38.52	0.0
82	-----	-----	-----	-----	-----
83	-----	-----	-----	-----	-----
84	0.00	71.81	28.19	0.00	18.52
85	-----	-----	-----	-----	-----
86	6.00	87.29	6.72	6.00	6.70
87	0.77	46.03	53.20	0.00	36.62
88	-----	-----	-----	-----	-----
89	-----	-----	-----	-----	-----
90	-----	-----	-----	-----	-----
91	0.00	9.08	90.92	0.00	66.79
92	47.03	44.69	8.28	23.51	6.55
93 1	0.48	59.65	39.87	0.00	15.76
93 2	0.00	68.43	31.57	0.00	18.49
94	0.00	25.61	74.39	0.00	37.72
95	0.00	23.82	76.18	0.00	40.76
96	-----	-----	-----	-----	-----

Table 15. Size frequency distributions of van Veen sediment samples at each station.

Stn. No.	1	2	3	4	5	6	7	8	9	10	11	12
PHI	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%	Wt.%
-2.5	0.00	0.00	0.00	0.00	0.00	30.81	*	*	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00	2.33			0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00	1.39			0.00	0.00	0.00	0.00
-1.0	5.33	0.07	8.59	0.11	34.26	0.44			1.24	7.37	9.24	0.19
-0.5	1.70	0.05	0.66	0.01	0.33	1.08			0.41	1.15	0.54	0.13
0.0	2.26	0.10	0.88	0.10	0.55	1.10			0.37	0.97	0.59	0.11
0.5	5.54	0.32	1.70	0.75	0.56	1.91			0.79	1.06	0.89	0.28
1.0	9.76	1.25	4.54	8.42	1.49	3.79			2.33	2.98	2.77	2.32
1.5	23.23	7.50	22.41	40.12	6.15	9.55			10.70	18.02	13.09	3.77
2.0	33.66	4.76	45.94	31.84	15.56	13.33			22.77	23.85	17.59	4.24
2.5	13.07	69.47	12.30	12.48	19.68	12.98			33.03	17.69	24.30	4.24
3.0	3.28	9.54	2.49	5.31	11.19	12.89			23.32	16.62	23.27	17.47
3.5	1.00	3.14	0.30	0.94	3.53	3.03			4.35	5.32	5.70	30.23
4.0	0.38	1.41	0.06	0.06	3.17	0.76			0.42	1.63	1.17	20.66
4.5	0.26	1.03	0.10	0.02	2.06	1.16			0.08	1.48	0.57	11.60
5.0	0.52	1.36	0.02	0.04	1.48	3.47			0.17	1.86	0.27	4.74
Mode	2.000	2.500	2.000	1.500	1.000	-2.500			2.500	2.000	2.500	3.500
PHI Mean	1.396	2.266	1.524	1.566	1.063	-0.532			2.147	1.928	2.002	3.273
St.D.	0.929	0.445	0.808	0.543	1.790	3.882			0.623	1.146	1.113	0.863
	13	14	15	16	17	18	19	20	21	22	23	24
-2.5	0.00	0.00	0.00	0.00	0.00	0.00	*	5.95	0.00	0.00	*	*
-2.0	0.00	0.00	0.00	0.00	0.00	0.00		0.60	0.00	0.00		
-1.5	0.00	0.00	0.00	0.00	0.00	0.00		0.27	0.00	0.00		
-1.0	8.80	0.27	0.00	0.39	0.02	21.89		0.33	1.41	1.72		
-0.5	0.40	0.05	0.04	0.25	0.00	2.85		0.91	0.12	1.56		
0.0	0.20	0.04	0.13	0.34	0.01	2.21		1.83	0.07	1.05		
0.5	0.24	0.06	1.00	0.97	0.09	4.40		4.60	0.17	1.36		
1.0	0.50	0.21	6.22	5.30	0.78	11.86		12.57	1.75	3.79		
1.5	2.29	2.36	31.18	35.98	5.79	28.22		28.91	8.51	13.53		
2.0	5.71	10.39	50.28	37.13	17.38	16.83		23.95	21.38	31.69		
2.5	8.38	21.93	9.98	12.47	27.91	9.07		16.51	56.99	30.03		
3.0	33.20	48.82	1.10	4.77	31.90	1.71		2.99	8.47	6.84		
3.5	35.41	13.93	0.06	1.84	14.71	0.28		0.30	0.82	2.76		
4.0	3.85	1.52	0.00	0.41	1.01	0.14		0.10	0.28	1.42		
4.5	0.92	0.40	0.00	0.10	0.20	0.22		0.06	0.03	2.50		
5.0	0.08	0.01	0.01	0.05	0.18	0.32		0.11	0.01	1.74		
Mode	3.500	3.000	2.000	2.000	3.000	1.500		1.500	2.500	2.000		
Mean	2.669	2.570	1.568	1.620	2.412	0.620		1.360	2.061	1.885		
St.D.	1.097	0.507	0.431	0.550	0.616	1.321		1.263	0.468	0.840		
	25	26	27	28	29	30	31	32	33	34	35	36
-2.5	0.00	0.00	17.10	0.00	0.00	0.00	0.00	1.17	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	13.10	0.00	0.00	0.00	0.00	4.27	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	14.53	0.00	0.00	0.00	0.00	2.70	0.00	0.00	0.00	0.00
-1.0	50.01	39.43	9.30	3.09	0.94	0.11	0.63	2.11	0.00	0.09	0.63	1.18
-0.5	6.59	6.13	7.87	1.55	0.53	0.04	0.83	2.64	0.00	0.03	0.12	0.33
-0.0	3.21	3.15	4.17	2.53	0.64	0.07	3.65	2.70	0.05	0.03	0.17	0.38
0.5	2.83	2.38	2.73	3.12	1.57	0.40	14.09	6.16	0.04	0.03	0.21	0.89
1.0	4.74	3.79	2.91	4.67	3.71	1.56	38.81	14.20	0.13	0.03	0.79	3.74
1.5	11.68	13.16	6.04	10.74	24.09	5.52	28.98	21.16	0.56	0.40	3.71	14.48
2.0	12.51	16.48	7.20	31.71	46.10	16.46	9.54	13.08	1.25	0.92	6.42	20.81
2.5	3.00	7.92	3.72	35.81	19.06	42.67	1.94	9.29	1.78	1.38	6.06	32.25
3.0	2.49	5.14	3.34	4.20	2.24	27.82	0.23	14.49	2.78	32.35	13.71	18.28
3.5	1.98	1.61	2.25	0.78	0.17	2.37	0.11	4.00	35.63	45.07	25.22	4.91
4.0	0.55	0.27	1.15	0.51	0.06	0.42	0.01	1.25	21.74	5.00	6.37	1.64
4.5	0.33	0.18	1.60	0.57	0.89	1.15	0.61	0.43	21.81	6.67	16.32	1.11
5.0	0.08	0.36	3.01	0.72	0.00	1.41	0.56	0.35	14.23	8.01	20.27	0.00
Mode	1.000	1.000	2.500	2.500	2.000	2.500	1.000	1.500	3.500	3.500	3.500	2.500
Mean	0.214	0.319	0.608	1.768	1.683	2.288	0.910	1.341	3.757	3.245	3.431	2.075
St.D.	1.371	1.454	2.148	0.807	0.517	0.540	0.559	1.441	0.652	0.618	1.094	0.736

Table 15 (cont'd)

PHI	37 Wt.%	38 Wt.%	39 Wt.%	40 Wt.%	41 Wt.%	42 Wt.%	43 Wt.%	44 Wt.%	45 Wt.%	46 Wt.%	47 Wt.%	48 Wt.%
-2.5	0.00	0.00	0.00	0.00	0.00	0.00	30.42	0.00	0.00	0.00	0.00	15.69
-2.0	0.00	0.00	0.00	0.00	0.00	0.00	2.86	0.00	0.00	0.00	0.00	4.67
-1.5	0.00	0.00	0.00	0.00	0.00	0.00	2.81	0.00	0.00	0.00	0.00	3.14
-1.0	16.35	29.47	44.48	2.72	0.04	0.02	1.83	0.25	0.25	19.04	29.50	2.07
-0.5	3.76	6.63	8.68	4.15	0.03	0.06	3.12	0.37	0.11	3.35	9.40	3.46
0.0	2.21	4.34	5.23	5.43	0.09	0.07	3.32	0.90	0.11	2.08	5.64	3.13
0.5	2.09	4.29	4.39	7.20	0.15	0.14	3.44	1.95	0.11	1.88	4.46	3.39
1.0	5.06	6.81	3.97	10.43	0.18	0.18	4.22	5.94	0.19	4.30	5.99	4.47
1.5	20.44	17.98	6.62	32.27	0.38	0.48	11.20	23.99	0.71	20.40	10.65	14.45
2.0	38.19	16.49	7.06	29.71	1.06	1.24	19.89	55.48	4.14	28.98	17.25	19.61
2.5	10.27	9.04	5.34	6.07	2.78	2.38	11.27	10.42	22.17	9.22	8.77	14.17
3.0	1.03	2.78	4.69	0.69	59.17	53.36	2.19	0.35	34.52	3.45	2.56	3.96
3.5	0.19	0.65	2.08	0.09	27.05	30.00	0.93	0.03	15.43	1.44	0.89	2.65
4.0	0.10	0.30	1.05	0.04	4.49	4.98	0.44	0.01	6.26	0.62	0.32	1.03
4.5	0.11	0.18	1.52	0.07	2.25	1.64	0.47	0.31	7.74	0.95	4.45	1.82
5.0	0.20	1.03	4.90	0.12	2.34	5.45	1.60	0.00	8.26	4.29	0.12	2.30
Mode	2.000	1.000	1.000	1.500	3.000	3.000	-2.500	2.000	3.000	2.000	-1.000	2.000
Mean	0.812	0.532	0.111	1.111	2.950	2.989	-0.740	1.581	3.019	0.870	0.473	0.410
St. D.	1.297	1.385	1.809	0.873	0.414	0.516	3.217	0.457	0.862	1.656	1.558	2.298

	49	50	51	52	53	54	55	56	57	58	59	60
-2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-1.0	0.08	0.18	0.00	0.00	0.27	0.16	0.00	0.84	54.63	7.20	0.50	0.01
-0.5	0.14	0.09	0.08	0.01	0.22	0.03	0.02	0.13	6.66	1.88	0.13	0.01
0.0	0.10	0.20	0.07	0.03	0.63	0.09	0.00	0.06	3.47	1.73	0.18	0.01
0.5	0.21	0.61	0.04	0.06	0.79	0.19	0.02	0.21	2.51	1.08	0.18	0.06
1.0	0.66	2.17	0.01	0.13	0.95	0.34	0.10	1.12	2.46	1.50	0.59	0.14
1.5	3.35	11.75	0.46	0.51	1.23	0.44	0.21	12.47	4.47	3.76	2.63	0.22
2.0	9.84	33.02	1.09	1.35	1.55	0.73	0.89	41.79	7.67	10.30	18.36	0.42
2.5	13.55	23.79	1.35	1.50	2.01	0.91	3.15	27.78	5.69	23.23	28.00	0.56
3.0	11.10	7.77	2.42	2.29	3.16	1.18	5.87	11.24	2.66	19.53	6.35	1.35
3.5	6.13	4.64	10.04	8.23	9.34	4.00	4.26	2.14	0.77	5.28	2.75	5.41
4.0	4.42	3.02	11.56	10.73	12.09	10.32	4.50	0.39	0.43	1.64	2.78	10.14
4.5	17.68	4.17	24.92	23.70	29.56	32.60	19.80	0.29	1.54	4.45	6.70	28.03
5.0	32,74	8.58	47.95	51.45	38.49	49.01	61.18	1.53	7.01	18.45	30.89	53.62
Mode	5.000	2.000	5.000	5.000	5.000	5.000	5.000	2.000	-1.000	2.500	5.000	5.000
Mean	3.609	2.344	4.270	4.315	4.124	4.402	4.375	1.976	-0.070	2.801	3.018	4.423
St.D.	1.189	1.041	0.640	0.639	0.855	0.516	0.666	0.527	1.809	1.716	1.244	0.507

	61	62	63	64	65	66	67	68	69	70	71	72
-2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*	*	0.00	0.00
-2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
-1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
-1.0	0.00	0.59	0.05	0.00	17.50	21.59	20.12	21.59			0.80	1.69
-0.5	0.04	0.06	0.00	0.05	3.42	3.53	4.78	6.35			3.02	0.10
0.0	0.01	0.08	0.00	0.10	2.49	2.63	3.54	4.98			7.73	0.12
0.5	0.02	0.14	0.02	0.14	3.56	2.93	3.80	5.47			13.70	0.17
1.0	0.32	0.37	0.05	0.14	7.95	4.21	4.77	6.91			21.35	0.48
1.5	1.38	1.49	0.23	0.27	18.23	8.79	11.33	10.06			32.85	1.40
2.0	3.92	5.68	0.94	0.71	21.92	12.50	23.35	12.15			17.37	3.48
2.5	7.50	12.97	1.71	1.52	10.31	10.62	11.57	10.57			2.17	18.17
3.0	12.93	13.42	3.19	6.58	3.36	5.41	4.01	8.36			0.77	35.98
3.5	15.72	11.55	7.78	36.62	4.75	4.84	2.07	4.31			0.16	17.27
4.0	5.99	5.91	10.92	21.39	1.51	3.46	1.13	1.89			0.04	0.43
4.5	13.23	12.40	28.56	17.71	1.16	6.48	1.60	1.83			0.03	4.97
5.0	38.93	35.35	46.56	14.77	1.79	13.02	7.94	5.54			0.00	15.75
Mode	5.000	5.000	5.000	3.500	2.000	-1.000	2.000	-1.000			1.500	3.000
Mean	3.828	3.625	4.287	3.715	0.934	1.631	1.009	0.986			0.948	3.183
St.D.	1.005	1.109	0.632	0.673	1.596	2.288	1.842	1.895			0.726	1.043

Table 15 (cont'd)

PHI	73 Wt.%	74 Wt.%	75 Wt.%	76 Wt.%	77 Wt.%	78 Wt.%	79 Wt.%	80 Wt.%	81 Wt.%	82 Wt.%	83 Wt.%	84 Wt.%
-2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*	*	0.00
-2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00
-1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00
-1.0	5.69	0.00	0.00	1.00	0.55	0.09	0.00	13.89	38.52			0.00
-0.5	1.51	0.03	0.00	0.32	0.20	0.07	0.00	2.12	8.55			0.02
0.0	1.70	0.05	0.00	0.50	0.17	0.11	0.02	1.86	11.38			0.10
0.5	14.35	0.11	0.03	1.15	0.26	0.21	0.04	2.37	15.40			0.74
1.0	55.90	0.30	0.07	2.07	0.58	0.37	0.55	4.27	10.11			0.68
1.5	12.43	0.87	0.29	4.22	1.26	0.86	1.12	7.75	6.72			1.52
2.0	4.99	1.64	0.66	6.44	2.61	1.79	1.93	12.14	4.15			2.60
2.5	1.97	2.47	1.06	9.04	10.11	8.94	3.94	27.07	2.03			4.61
3.0	0.51	3.95	1.50	20.50	29.18	36.88	32.50	17.17	1.16			13.36
3.5	0.37	7.83	1.48	27.98	27.17	26.11	31.22	5.37	0.66			35.56
4.0	0.24	8.88	1.28	5.15	11.18	7.66	7.95	1.17	0.33			12.62
4.5	0.13	19.11	10.32	3.63	8.04	4.44	5.52	1.08	0.32			9.67
5.0	0.21	54.77	83.30	18.00	8.68	12.47	15.19	3.73	0.67			18.52
Mode	1.000	5.000	5.000	3.500	3.000	3.000	3.000	2.500	-1.000			3.500
Mean	0.727	4.273	4.690	3.219	3.214	3.221	3.405	1.488	-0.220			3.551
St.D.	0.677	0.744	0.337	1.221	0.815	0.800	0.853	1.635	1.101			0.917

	85	86	87	88	89	90	91	92	93.1	93.2	95	96
-2.5	*	0.00	0.00	*	*	*	0.00	23.51	0.00	0.00	0.00	0.00
-2.0		0.00	0.00				0.00	11.73	0.00	0.00	0.00	0.00
-1.5		0.00	0.00				0.00	7.11	0.00	0.00	0.00	0.00
-1.0		6.00	0.77				0.00	4.69	0.48	0.00	0.00	0.00
-0.5		4.97	0.43				0.00	4.39	0.02	0.00	0.01	0.00
0.0		7.35	0.81				0.00	3.20	0.03	0.00	0.01	0.00
0.5		11.08	1.31				0.01	3.29	0.28	0.02	0.10	0.00
1.0		15.43	2.02				0.01	3.76	0.79	0.15	0.26	0.01
1.5		26.91	1.98				0.14	7.38	2.05	1.61	0.76	1.82
2.0		14.69	1.45				0.32	10.71	4.11	3.22	1.76	2.83
2.5		5.44	1.55				0.53	6.99	6.50	5.21	2.66	2.92
3.0		1.27	5.87				0.73	3.31	12.71	11.56	3.69	3.04
3.5		0.14	18.34				1.65	1.16	18.12	33.05	6.54	4.56
4.0		0.01	12.28				5.70	0.51	15.06	13.62	9.82	8.66
4.5		0.02	16.57				24.13	1.73	24.10	13.08	36.67	35.43
5.0		6.70	36.62				66.79	6.55	15.76	18.49	37.72	40.76
Mode		1.500	5.000				5.000	-2.500	4.500	3.500	5.000	5.000
Mean		0.952	3.954				4.550	-0.393	3.576	3.582	4.210	4.241
St.D.		1.384	1.058				0.384	2.479	0.963	0.888	0.704	0.750

*Stations with no sample are left blank.

Table 16. Maximum depth of penetration of cores in cm at each station for transects 1-6b and transects 7-12 (from core lengths and apparent penetrations).

Transect #	Sta. #	Max. pen.	Transect #	Sta. #	Max. pen.	Transect #	Sta. #	Max. pen.	Transect #	Sta. #	Max. pen.
1	1	0	4	25	0	7	49	45	10	73	0
	2	27.5		26	64		50	32		74	185
	3	0		27	0		51	167		75	195
	4	40		28	43		52	223		76	75
	5	0		29	52		53	224		77	65
	6	0		30	36		54	227.5		78	0
	7	0		31	0		55	191		79	100
	8	0		32	0		56	43.5		80	50
2	9	0	5	33	24	8	57	0	11	81	0
	10	52		34	15		58	120		82	0
	11	17		35	14.5		59	220		83	0
	12	45		36	48		60	290		84	85
	13	35		37	11		61	265		85	0
	14	24		38	15		62	260		86	75
	15	17		39	32		63	260		87	250
	16	20		40	25		64	130		88	50
3	17	0	6a	41	0	9	65	37	12	89	0
	18	0		42	25		66	120		90	0
	19	0		43	0		67	105		91	260
	20	0		44	28		68	80		92	0
	21	40	6b	45	5		69	0		93	130
	22	0		46	0		70	0		94	250
	23	0		47	10		71	0		95	300
	24	0		48	5		72	0		96	0

Table 17. Preliminary X-ray log of piston cores.

Station number	Core length	No. of sed. units	Graded sequence		Non-graded sequence
			Fining upwards	Coarsening upwards	
1	none				
2	27.5	3	Fine shell and gravel at base, to silt at top		
3	none				
4	36	1			silty mud
5	none				
6	none				
7	none				
8	none				
9	none				
10	52	5	Two coarse shell and gravel units fining up to silt at top		
11	17	2	Silt with gravel at base fining up to silt at top		
12	39.5	5	Silt and gravel at base fining up to mud at top		
13	35	3	Coarse and shells at base fining up to mud and silt at top		
14	24	2	Mud and gravel at base fining up to mud at top		
15	17	1			silty mud
16	20	1			silty mud
17	none				
18	none				
19	none				
20	none				
21	40	2	Gravel and sand with shell at base to fine sand and silt at top		
22	none				
23	none				
24	none	3			
25	none				
26	46	2	Gravel with shell at base fining up to sand at top		
27	none				
28	43	2	Mud and gravel and shell at base fining up to silt and mud at top		
29	52	2	Mud and shell at base fining up to mud at top		
30	36	2	Shelly gravel at base fining up to silty mud at top		
31	none				
32	none				
33a	12	1			silty mud
33b	24	1			silty mud
34	14.5	1			silty mud
35	14	1			sand
36	48	1			silty mud
37	11	core tip only			sandstone
38a	10				sandstone
38b	5				sandstone
39a	25	3	Coarse gravel at base fining up to fine gravel at top		
39b	32	3	Mud and silt to coarse sand and shell to silty mud at top		
40	25	4	Coarse gravel and shell fining up to mud and silt at top		
41	none				
42	25	3	Gravel at base to silty mud at top		
43	none				
44	21	1			silty mud

Table 17 (cont'd)

Station number	Core length	No. of sed. units	Graded sequence		Non-graded sequence
			Fining upwards	Coarsening upwards	
45	none	core tip only			
46	none				
47	none				
48	none				
49	45	5	Silt at base, to mud at top		
50	32.2	4	Gravel and shell at base fining up to mud at top		
51	167	5	Mud and shells at base fining up to mud at top		
52	223	1			muddy clay
53	224	1			muddy clay
54a	105	1			clay
54b	227.5	1			clay
55a	138.5	12			muddy clay
55b	186	6			muddy clay
56a	15.5	1			clay
56b	43.5	2	Silty sandy mud at base fining up to silt and mud at top		
57	none				
58	109	1			muddy clay
59	160	1			muddy clay
60	217	1			muddy clay
61	206	1			muddy clay
62	202	1			muddy clay with some fragments
63	211.5	1			muddy clay
64	106	1			silty mud
65	37	5	Shell and gravel at base fining up to silt at top		
66a	11	2	Gravel at base to silt at top		
66b	16	1			gravel
66c	10	1			sandy gravel
67a	25	3	Silt at base, gravel to silt at top		
67b	60	4		silt or clay at base coarsening up to sand and broken shell at top	
68a	80	6	Coarse sand and shell at base fining up to silt and mud at top		
68b	20	1			gravel with shell
69	none				
70	none				
71	none				
72	none				
73	none				
74	104.5	4			clay
75	102	4	Gravelly silt at base fining up to silt and mud at top		
76	53	4	Silt with coarse material at base fining up to silt and mud at top		
77	42	4	Coarse sand at base fining up to silt at top		
78	18.5	1			mud or clay
79a	42	5	Shell fragments and gravel at base fining up to silt and mud at top		
79b	30	3	Sandy silt at base fining up to silt at top		
80	39	3	Muddy gravel and shell fragments at base fining up to mud at top		
81	none				

Table 17 (cont'd)

Station number	Core length	No. of sed. units	Graded sequence Fining upwards	Coarsening upwards	Non-graded sequence
82	none				
83	none				
84	50	3	Fine sand at base to mud at top		
85	none				
86	21	4	Coarse sand and shell at base to silt at top		
87	109	3	Silty sand with gravel at base fining up to mud at top		
88	none				
89	none				
90	none				
91	186	2	Clay with shell fragments at base fining up to silt and mud at top		
92	none				
93a	53	4	Mud with shells and gravel at base fining up to mud at top		
93b	85	6	Mud with shell fragments at base fining up to mud at top		
94	204.5	1			clay
95	226.5	1			clay
96	none				

Table 18. Geochemical analysis of van Veen grab samples in ppm (Hg = ppb).

Station number	Cu	Zn	Mn	Cd	As	Hg (ppb)
2	6	82	229	0.86	1.6	20.5
5	8	42	218	0.60	3.2	12.2
10	5	25	311	0.41	4.0	6.8
13	4	24	168	0.14	1.4	8.0
16	4	26	174	0.11	1.4	3.3
17	4	28	177	0.11	1.2	N.D.
21	5	45	352	0.33	3.6	N.D.
33	8	43	184	0.41	1.0	20.5
35	6	39	182	0.71	0.6	3.3
41	8	31	171	0.06	N.D.	6.8
45	7	38	241	0.33	0.6	6.8
47	13	50	376	0.41	3.6	20.5
51	17	55	294	1.01	4.2	15.0
55	16	62	294	0.60	4.8	15.0
59	17	64	378	0.82	2.6	13.8
62	15	55	300	0.60	1.4	12.2
64	11	44	225	0.60	2.4	3.3
66	16	51	403	0.94	2.4	12.2
68	12	46	796	1.09	3.2	5.4
72	9	47	349	0.56	0.6	6.0
74	17	66	341	0.97	2.4	6.8
79	8	30	270	0.56	1.4	3.3
84	10	36	289	1.16	1.2	6.8
87	15	86	474	0.67	1.8	12.2
91	19	66	316	0.75	2.0	11.5
93b	13	41	352	0.33	1.8	12.2
95	17	55	363	0.75	1.8	15.0
Sum	290	1277	8227	16.43	56.2	259.4
n	27	27	27	27	27	27
Ave	10.7	47.3	304	0.61	2.1	9.6
Max	19	86	796	1.16	4.8	20.5
Min	4	24	168	0.06	0.0	0.0
Range	15	62	643	1.13	4.8	20.5

N.D. = Not detected and is assumed to equal 0.00

Stations 23, 26, 38, 31, 39, and 44 are not included in the above table of results as these samples were not sifted to 80 mesh due to the sample having only very coarse material.

Table 19. Geochemical analysis of cores (in ppm, Hg in ppb).

Core number	Depth	Cu	Zn	Mn	Cd	As	Hg(ppb)*
2	0-10 cm	13	36	265	0.18	2	2.5
10	"	8	26	280	0.09	3	7.5
16	"	7	26	125	0.09	2	3.5
21	"	9	44	315	0.09	5	1.5
33	"	10	35	225	0.09	3	3.5
35	"	9	34	250	0.18	4	5.5
51	"	12	43	300	0.09	5	7.5
52	0-10 cm	16	60	390	0.09	4	10.0
52	50 cm	15	46	375	0.18	3	3.5
52	100 cm	12	39	335	0.18	4	5.5
52	150 cm	15	50	575	0.37	3	5.5
54	0-10 cm	14	47	350	0.09	3	3.5
54	50 cm	14	44	395	0.18	2	0.5
54	100 cm	14	44	375	0.18	2	0.5
54	150 cm	14	50	465	0.09	2	5.5
55	0-10 cm	13	47	345	0.09	3	3.5
59	"	11	34	750	0.18	3	1.5
62	"	11	36	285	0.09	3	3.5
64	"	20	124	345	0.09	1	3.0
66c	"	21	56	465	0.18	6	5.5
68	"	22	63	550	0.09	4	5.5
74	"	29	61	420	0.09	3	7.5
79	"	31	35	300	0.09	2	1.5
84	"	9	36	262	0.27	3	7.0
87	"	10	115	450	0.37	4	3.5
91	"	20	62	467	0.09	5	7.5
93b	"	11	56	355	0.09	2	3.5
95	"	11	37	335	0.09	4	5.5
	Total	401	1386	10349	3.98	90	124.5
	Number of samples	28	28	28	28	28	28
	Ave	14.3	49.5	369.6	0.14	3.2	4.4
	Max	31	124	750	0.37	6	10.0
	Min	7	26	125	0.09	1	1.5
	Range	24	98	625	0.28	5	8.5

*Mercury (Hg) is in parts per billion.

Table 20. Geochemical data (ppm) of Cores 52, 54, and 55.

Core	Depth (cm)	Cu	Zn	Cd	Mn	As	Hg (ppb)
52	0-10	16	60	0.09	360	4	10.0
	50	15	46	0.18	375	3	3.5
	100	12	39	0.18	335	4	5.5
	150	15	50	0.37	575	3	5.5
54	0-10	14	47	0.09	350	3	3.5
	50	14	44	0.18	395	2	0.5
	100	14	44	0.18	375	2	0.5
	150	14	50	0.09	465	2	5.5
55	0-10	13	47	0.09	345	3.0	3.5
	50	12	45	0.60	634	0.4	17.1
	100	22	80	1.01	908	1.8	6.8
	150	12	27	0.44	290	0.6	24.0
	Max =	22	80	1.01	908	4.0	24.0
	Min =	12	27	0.09	290	0.4	0.5

Table 21. Comparison showing maxima, minima, and range for Cu, Zn, Mn, Cd, As, and Hg in samples from the Northumberland Strait soils and crustal rocks.

		van Veen (ppm)	Core (ppm)	Soil (ppm)[a]	Crustal rock (ppm)[b]
Cu	Average	10.7	14.3	20.0	45
	Range	4.0-19.0	7.0-31.0	2.0-100.0	
Zn	Average	47.3	49.5	50.0	65
	Range	24.0-86.0	26.0-124.0	10.0-500.0	
Mn	Average	304.0	369.6	850.0	1000
	Range	168.0-796.0	125.0-750.0	200.0-6000.0	
Cd	Average	0.61	0.14	-	0.2
	Range	0.06-1.16	0.09-0.37	-	
As	Average	2.1	3.2	5.0	2
	Range	0.0-4.8	1.0-6.0	1.0-75.0	
Hg	Average	0.6 ppb	4.4 ppb	-	0.5
	Range	0.0-20.5	1.5-10.0	0.03-0.30	

[a] R. W. Fairbridge, 1972, Ed., Encyclopedia of Geochemistry and Environmental Sciences, Van Nostrand, N.Y.
Mitchel, R. L. 1955. In: Hawkes, H. E. and Webb, J. S. 1962 Geochemistry in Mineral Exploration, Harper and Row.

[b] Mason, B. 1958. Principles of Geochemistry. Wiley and Son, New York.

APPENDIX I.

List of reports that have resulted from the 1975 Northumberland Strait Project.

Amaratunga, T. 1976. Macro-benthic fauna investigation. DOE Contract OSA-76-00053, Final Report, Vol. 1, 74 p.

1976. Northumberland Strait Project: benthic fauna distribution and abundance in relation to shellfish resources. ICES, C.M.1976/K:27, 54 p.

Amaratunga, T., J. F. Caddy, and A. B. Stasko. 1976. Northumberland Strait Project: an interdisciplinary study of the declining shellfish resources. ICES, C.M.1976/K:26, 17 p.

Edelstein, T. 1976. Northumberland Strait Project algae report. National Research Council, Halifax, Unpublished report, 21 p.

Linkletter, L. 1976. Incidental marine fish species analysis. DOE Contract OSA-76-00053, Final Report Vol. II, 34 p.

1976. Scallop shell analysis. DOE Contract OSA-76-0053, Final Report Vol. III, 90 p.

1976. Polychaetes analysis. DOE Contract OSA-76-00053, Final Report Vol. IV, 95 p.

McNally, M. A. 1976. A study of benthic Foraminifera as environmental indicators with particular reference to species of the Northumberland Strait and Buctouche estuary, N.B. B.Sc. Thesis, University of New Brunswick, 101 p.

Stasko, A. B. 1976. Northumberland Strait Project: lobster and rock crab abundance in relation to environmental factors. ICES, C.M.1976/K:25, 13 p.

Van de Poll, H. W., and B. R. McMullin. 1975. Sedimentary aspects of Northumberland Strait. Dept. of Geology, UNB, Fredericton. Unpublished Report, 23 p.

1976a. Size distribution of bottom grab samples from the Northumberland Strait. Dept. of Geology, UNB, Fredericton, unpublished report, 48 p. + appendices.

1976b. Aspects of sedimentation in Northumberland Strait. Dept. of Geology, UNB, Fredericton, unpublished report, 72 p. + appendices.

Appendix II. Beam trawl specifications. Designed and constructed for the Northumberland Strait project at the St. Andrews Biological Station.