ASSESSMENT OF BENTHIC MACROFAUNA IN AN OCEAN DISPOSAL AREA NEAR CHARLESTON, SOUTH CAROLINA[1]

by

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Introduction

Charleston Harbor, South Carolina, is the site of an important commercial port and a United States Naval Base. Water depths throughout the harbor are typically shallow, and maintenance dredging is necessary to keep access channels at their prescribed depth because of shoaling. Ships enter the harbor via an entrance channel protected along its inner reaches by a pair of rubble jetties. The Charleston Harbor Project, authorized by the River and Harbor Act, provides that the entrance channel be maintained at a depth of 35 feet and a width of 1000 feet from the sea to the inner end of the jetties (U.S. Army Engineer District, Charleston, 1975). The depth of the entrance channel is maintained using a hopper dredge, and dredged material is disposed of in an open ocean disposal area just south of the jetties.

Relatively little is known about the marine life and sedimentologic processes of the Charleston Harbor Ocean Disposal Area (ODA) and vicinity. The South Carolina Wildlife and Marine Resources Department (1972) conducted surveys in this area using a shrimp trawl and found relatively few species and low numbers of individuals compared with inshore estuarine areas. However, no thorough benthic sampling has ever been conducted in the area, and no data base exists which might be used to assess the impact of disposing dredged material there. As a result, the U.S. Army Corps of Engineers, Charleston District, contracted with the South Carolina Marine Resources Research Institute for an assessment of the benthic fauna and sedimentologic conditions in and near the Charleston Harbor ODA. Specific goals related to the biological component of this study were to:

1) characterize the species composition and density of macrofaunal assemblages at 40 sites in and adjacent to the Ocean Disposal Area.

2) determine any differences in macrofaunal community structure which could be attributed to past disposal activities.

3) provide a data base for appraising the effects of future deposition of dredged material in the Ocean Disposal Area.

This report presents the findings of that study and provides the first detailed description of benthic macrofaunal assemblages found in sand bottom habitat of shallow continental shelf waters (8-17 m) off South Carolina.

Materials & Methods

Sampling was undertaken at 40 stations in and adjacent to the Ocean Disposal Area during August, 1978. Eight stations were sampled along each of five transects, (Fig. 1). Three of the transects crossed the disposal area, while the other two were located outside the disposal site to the northwest and southeast. This array of stations provided a total of 12 sampling sites within the Ocean Disposal Area and 28 sites outside. Stations were located using Loran-C aboard the R/V ATLANTIC SUN. The research vessel was anchored at each site for all sampling except dredge tows.

Water Chemistry and Sediment Analysis

Surface and bottom water chemistry samples were collected at each station using a Van Dorn bottle. Properties measured included temperature, salinity, dissolved oxygen, nitrates, silicates, phosphates, turbidity, and suspended and settleable solids. Water temperatures were measured in the field with stem thermometers mounted inside the Van Dorn bottles. All other samples were returned to the laboratory for analysis. Salinity samples were analyzed using a Beckman Model RS7B Induction Salinometer. Dissolved oxygen was determined by modified Winkler titration (Strickland and Parsons, 1972). Nutrients were analyzed using a Technicon Auto Analyzer II. Turbidities were measured using a Hach Model 2100A turbidimeter. Solids were determined using standard Methods 224C and 224F (American Public Health Association, 1971).

Bottom sediments were obtained at each station using a Smith-McIntyre grab. Sediment samples were analyzed for % weight of quartz sand, calcium carbonate, silt, and clay content. Silts and clays were separated from sand-size material by wet-sieving through a 62-μ screen. Silt was separated from clay by pipette analysis. Calcium carbonate was separated from the quartz sand by HCl digestion. Quartz sand-size fractions were sieved for 30 minutes in a nest of 1/4-Ø Tyler screens. Mean grain size ($\pm$ standard deviation) of the sand fraction was then computed. A more detailed analysis of the sediments and bedforms, conducted as a separate component of this study, is presented in the contract report for this study (South Carolina Wildlife and Marine Resources Dept., 1979).

Separate sediment samples for geochemical analysis were also taken with the Smith-McIntyre grab at 24 stations (Fig. 1). Collected sediments were placed in 3.8-l plastic bags, immediately frozen in dry ice, and delivered to the U.S. Army Corps' South Atlantic Division Laboratory, Marietta, Georgia for analysis of volatile solids, total organic carbon, COD, Kjeldahl nitrogen, oil and grease, lead, zinc, mercury, total phosphorus as PO_4, iron, cadmium, arsenic, chromium, nickel, copper, beryllium, selenium, and vanadium.

Benthic Sampling

Quantitative benthic samples were collected using a 0.10-m^2 Smith-McIntyre grab. Five replicate samples were taken at each of the 40 stations. The volume of each grab sample was measured and the contents were then washed through a 1-mm sieve. Organisms and sediment remaining on the sieve after washing were preserved in a 10% seawater-formaldehyde solution containing rose bengal. In the laboratory, all non-colonial fauna collected in the grabs were identified to the

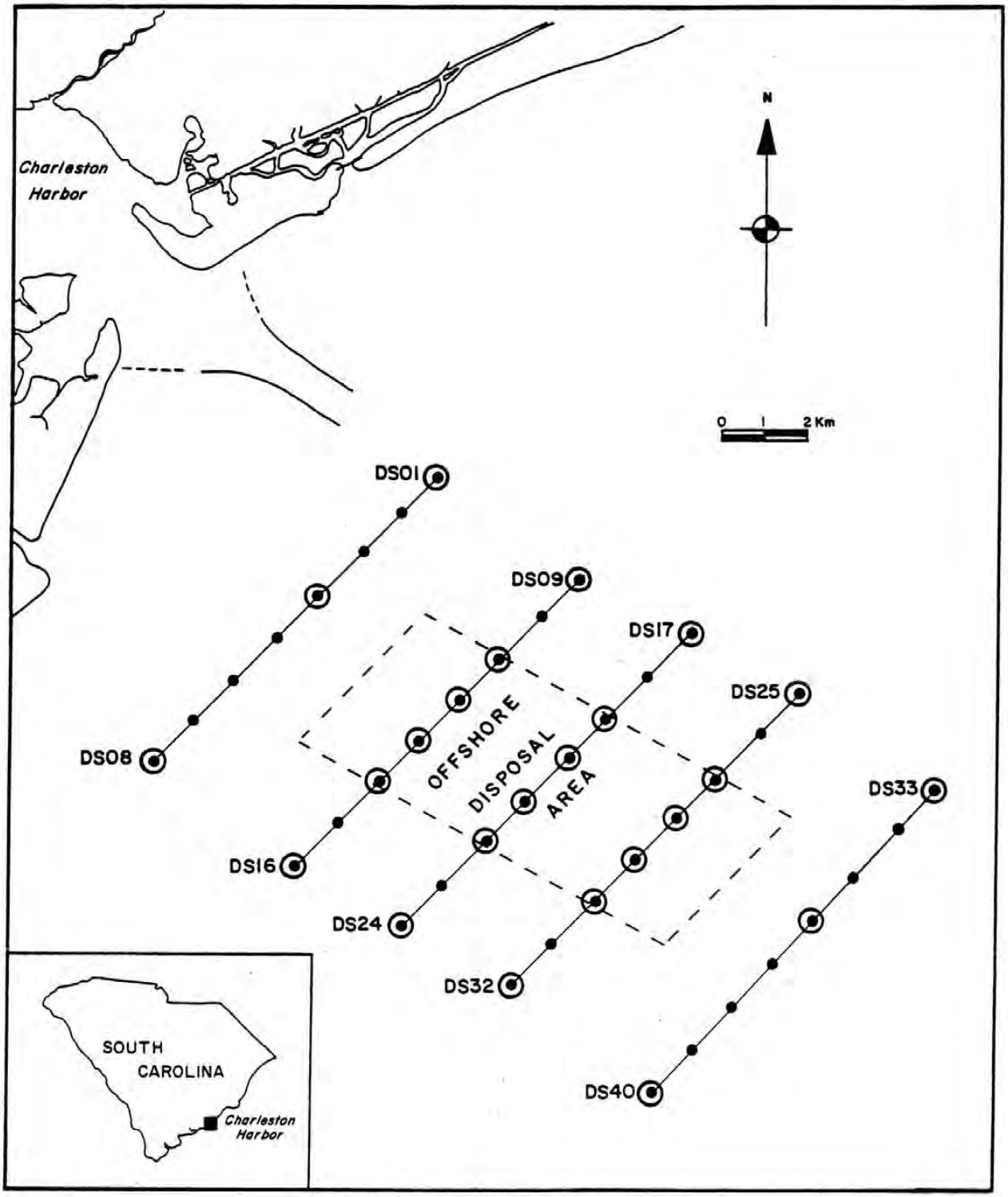

Figure 1. Map showing location of the 40 stations sampled in and adjacent to the Charleston Harbor Ocean Disposal Area. Stations circled represent those sampled for geochemical analysis.

lowest practical taxonomic level and counted.

Quantitative samples were supplemented with qualitative samples of the epifauna using a modified oyster dredge. The dredge consisted of a rectangular steel frame measuring 80 cm across the mouth, with a 1.5-m long bag of 2.5-cm stretch mesh polypropylene. A skirt of interlacing metal rings protected the bag from chafing. A single tow of five minutes was made at each station. After preliminary sorting of the catch in the field, unidentified epifaunal invertebrates and representative samples of firm substrata were preserved in 10% seawater-formalin and returned to the laboratory for examination. Small organisms, such as polychaetes and amphipods, were not considered in the analysis of dredge samples since these organisms were not adequately sampled by this type of gear.

Benthic Data Analysis

Benthic community structure was evaluated through cluster analysis and through evaluation of species numbers, number of individuals, and indices of species diversity including Shannon's diversity index (H'), species richness, and evenness (Margalef, 1958; Pielou, 1977). The Bray-Curtis coefficient (Boesch, 1977) was used in the normal cluster analysis to compare faunal similarity between stations. The normal analysis was performed on pooled data for each station using a flexible sorting strategy and a standard β value of -0.25 (Boesch, 1977). All data were log-transformed, and species which occurred in fewer than six grab samples were eliminated from the analysis. These deletions were made to simplify the data set, since rare species usually do not have easily defined distribution patterns and can confuse interpretation of cluster analysis.

Results & Discussion

Hydrography

The Charleston Harbor Ocean Disposal Area is located in coastal marine waters beyond the harbor mouth. Salinities were all in the euhaline range (30-40 °/oo) during field studies in August, 1978 (Appendix 1) and were lowest along the innermost transect (averaging 33.4 °/oo) and highest along the outermost transect (averaging 35.2 °/oo). Although salinities at all stations were higher on bottom than at the surface, vertical differences seldom exceeded 3.0 °/oo. High water temperatures reflected the season when sampling was undertaken, ranging from a low of 26.5°C in a bottom sample from station DS34 to a high of 30.1°C in a surface sample from station DS23. Most temperature readings were between 28 and 30°C, and differences from surface to bottom in most cases were rather small (Appendix 1). Dissolved oxygen concentrations were relatively high, despite the high temperature and salinity of the water. The lowest oxygen value observed was 4.0 $mg/1^{-1}$ in a surface sample from station DS02. Most oxygen concentrations ranged between 5.0 and 6.8 $mg/1^{-1}$ (Appendix 1). Values for other hydrographic properties measured during the study, including turbidity, nutrients, and solids, are given in Appendix 1.

Sediments

Quartz sand was the primary constituent at most of the 40 stations sampled in the vicinity of the Ocean Disposal Area (Appendix 2; Fig. 2). The average grain size of this component throughout much of the area was fine, although sands of medium grain size were common at the deeper stations (Fig. 2, Appendix 2). Only station DS38 had coarse sand (ϕ = 0.26). Stations in deeper water usually had a relatively high percentage of shell hash in comparison to most of the shallower stations (Fig. 3). Finally, silts and clay were detected only at stations on the transect nearest shore (DS01-DS08). These finer sediments never exceeded 15% of the total sample weight at any of the stations (Appendix 2).

Data resulting from the chemical analysis of sediment samples collected in the vicinity of the Charleston Harbor Ocean Disposal Area are presented in Appendix 3. These analyses revealed no high concentrations of toxic material.

Epifaunal Assemblages

At least 157 epifaunal (or partly epifaunal) macroinvertebrate species were obtained from the 40 oyster dredge collections (Table 1, Appendix 4). In terms of species, the fauna was dominated by bryozoans (39 species), cnidarians (33 species), mollusks (28 species), and arthropods (26 species). These four groups accounted for 75% of the total number of species identified from the samples. Of the species found, only six (the hydroid Clytia cylindrica; the bryozoans Membranipora tenuis, Microporella ciliata, and Parasmittina nitida; the bivalve Chama macerophylla; and the barnacle Balanus venustus) were found at 20 or more of the 40 stations. The most ubiquitous species was the barnacle Balanus venustus, which was present in samples from 29 stations.

With a few exceptions, the study area was sparcely populated by epifaunal invertebrates. The bottom, consisting largely of sand sediments with various amounts of shell hash, provided an unsuitable substrate for most epibenthic species. The volume of most oyster dredge catches was very small, typically consisting of a few shells along with occasional decapods and echinoderms.

Areas with large octocorals (Titanideum frauenfeldii), sponges, and other hard-bottom organisms were infrequent and quite localized, and none of the stations were characterized as "live-bottom" areas. Sand dollars (Mellita quinquiesperforata) were abundant at fine sand stations (DS01, DS02, DS03, and DS04) along the innermost transect, but they were infrequent or absent elsewhere.

Considerable variation was observed in the number of species from one station to another (Fig. 4). The number of species collected at a given site was often a function of the presence or absence of large shells, which provided substrate for the sessile epifauna. Species numbers were quite high

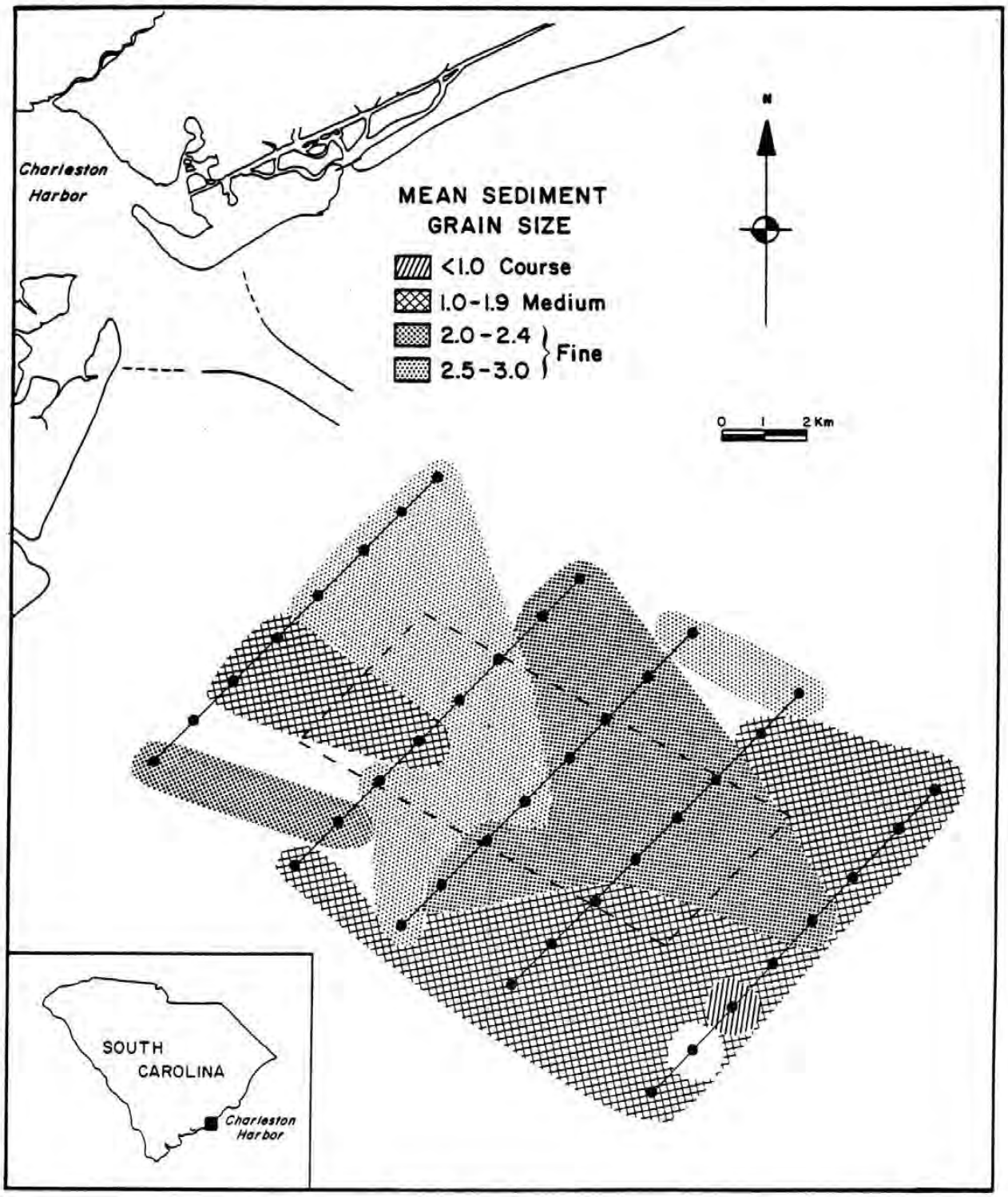

Figure 2. Distribution of mean sediment grain size in the study area. Values are in Ø units.

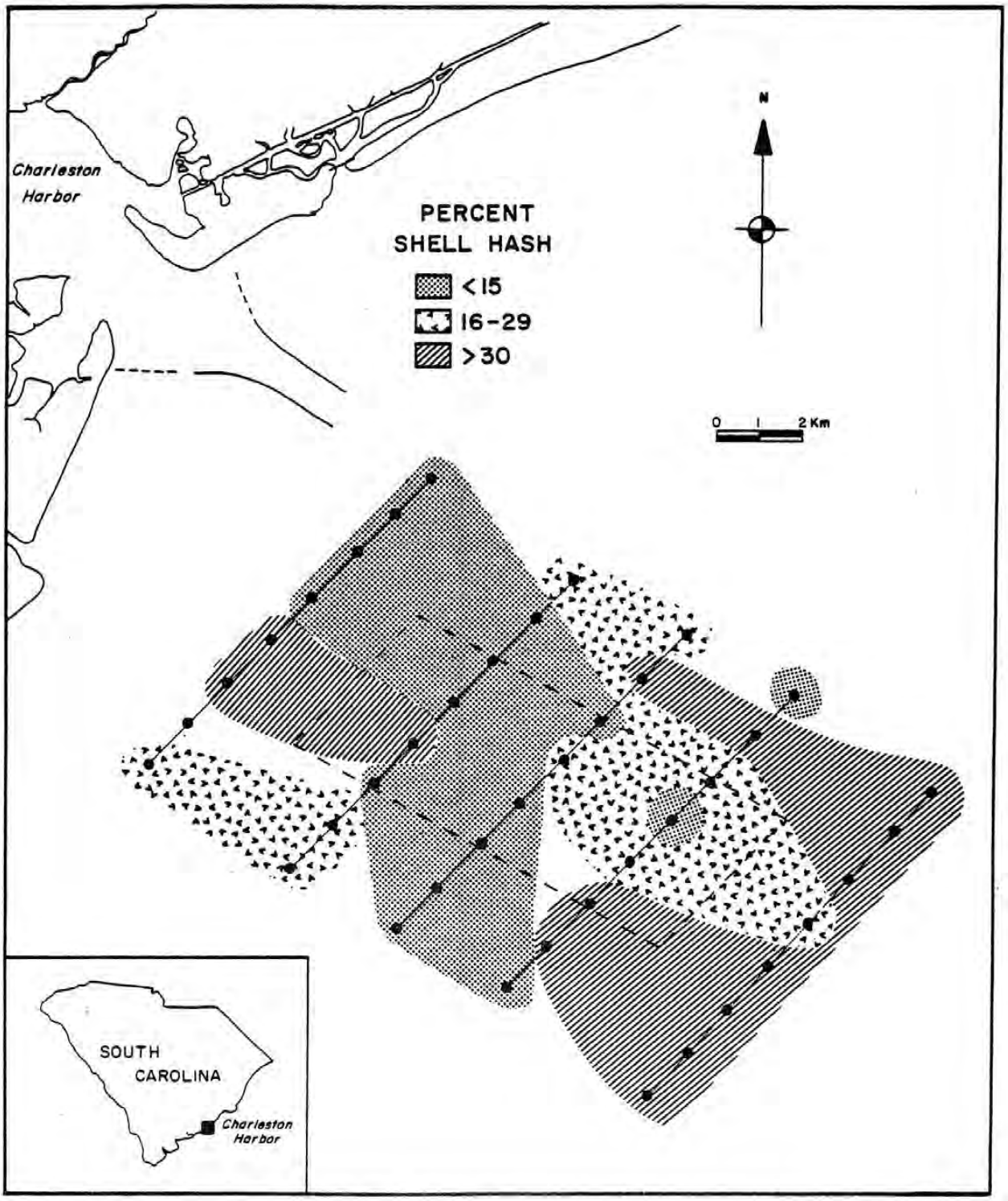

Figure 3. Distribution of shell hash content of sediment in the study area.

Table 1. List of epifaunal species collected in oyster dredge samples, and their frequency of occurrence at 40 stations in the study area.

Species	Occurrence at Number of Stations
Phylum Porifera	
Cliona sp.	13
Clathrina coriacea	5
Porifera (undet.)	4
Spheciospongia vesparia	1
Phylum Cnidaria	
Clytia cylindrica	25
Astrangia danae	17
Turritopsis nutricula	16
Schizotricha tenella	15
Eudendrium sp.	14
Dynamena cornicina	13
Telesto sanguinea	12
Ectopleura dumortieri	11
Halecium dysymmetrum	8
Telesto fruticulosa	8
Leptogorgia setacea	7
Zanclea costata	5
Actiniaria (undet.)	4
Halecium sp.	3
Lovenella grandis	3
Titanideum frauenfeldii	3
Chrysaora quinquecirrha (polyp)	2
Leptogorgia virgulata	2
Lovenella gracilis	2
Monostaechas quadridens	2
Plumularia floridana	2
Proboscidactyla ornata	2
Bougainvillia sp.	1
Campanulina sp.	1
Clytia fragilis	1
Clytia kincaidi	1
Clytia paulensis	1
Cuspidella humilis	1
Epizoanthus americanus	1
Hydractinia echinata	1
Lophogorgia hebes	1
Pandeidae (undet.)	1
Sertularella conica	1
Phylum Entoprocta	
Barentsia sp.	1
Entoproct (undet.)	1
Phylum Bryozoa	
Parasmittina nitida	24
Membranipora tenuis	23
Microporella ciliata	21
Schizoporella cornuta	17
Aetea anguina	15
Cribrilaria radiata	14
Hippopleurifera mucronata	13

Species	Occurrence at Number of Stations
Phylum Bryozoa	
Hippoporina verrilli	12
Phylactellipora aviculifera	12
Trypsostega venusta	9
Cleidochasma porcellanum	8
Cyclostomata A (undet.)	8
Schizoporella errata	8
Bowerbankia gracilis	7
Crisia sp.	7
Floridina parvicella	7
Hippoporella uvulifera	7
Copidozoum tenuirostre	6
Lichenopora sp.	6
Celleporidae (undet.)	4
Reptadeonella violacea	3
Sundanella sibogae	3
Aeverrillia setigera	2
Amathia distans	2
Caulibugula pearsei	2
Reginella floridana	2
Cryptosula pallasiana	2
Hippaliosina rostrigera	2
Hippoporina contracta	2
Alcyonidium hauffi	1
Amathia alternata	1
Amathia sp.	1
Anasca A (undet.)	1
Celleporina hassalli	1
Ctenostomata (undet.)	1
Discoporella umbellata	1
Electra monostachys	1
Membranipora arborescens	1
Nolella stipata	1
Phylum Mollusca	
Chama macerophylla	21
Crepidula fornicata	14
Anadara transversa	13
Ostrea equestris	13
Anomia simplex	10
Chaetopleura apiculata	8
Crepidula plana	8
Mitrella lunata	8
Octopus vulgaris	4
Anachis translirata	3
Musculus lateralis	3
Oliva sayana	3
Polinices duplicatus	3
Eupleura caudata	2
Modiolus modiolus squamosus	2

Table 1. (Continued)

Species	Occurrence at Number of Stations
Phylum Mollusca	
Acanthodoris pilosa	1
Argopecten gibbus	1
Dinocardium robustum	1
Diodora cayenensis	1
Diplothyra smithi	1
Fasciolaria lilium hunteria	1
Gastropoda (undet.)	1
Lithophaga bisulcata	1
Muricidae (undet.)	1
Prunum apicinum	1
Sinum perspectivum	1
Turbo castanea	1
Urosalpinx cinerea	1
Phylum Arthropoda	
Balanus venustus	29
Balanus calidus	12
Ovalipes stephensoni	11
Kochlorine floridana	8
Xanthidae (undet.)	7
Pilumnus sp.	5
Portunus gibbesii	5
Pagurus pollicaris	3
Podochela sidneyi	3
Libinia dubia	2
Ovalipes ocellatus	2
Portunus spinimanus	2
Squilla empusa	2
Balanus galeatus	1
Balanus improvisus	1
Callinectes sapidus	1
Chelonibia patula	1
Hepatus pudibundus	1
Hypoconcha sabulosa	1
Metoporhaphis calcarata	1
Micropanope xanthiformis	1
Paguridae (undet.)	1
Pilumnus sayi	1
Synalpheus townsendi	1
Tanystylum orbiculare	1
Trachypenaeus constrictus	1

Species	Occurrence at Number of Stations
Phylum Echinodermata	
Arbacia punctulata	14
Astropecten duplicatus	11
Ophiothrix angulata	11
Asterias forbesi	9
Mellita quinquiesperforata	8
Luidia clathrata	3
Clypeaster rosaceus	2
Lytechinus variegatus	2
Astropecten articulatus	1
Clypeaster subdepressus	1
Luidia bernasconiae	1
Ophioderma appressum	1
Ophiolepis elegans	1
Phylum Chordata	
Didemnum candidum	12
Ascidiacea A (undet.)	8
Styela plicata	7
Ascidiacea B (undet.)	6
Amaroucium sp.	4
Amaroucium constellatum	2
Ascidiacea C (undet.)	2
Ascidiacea (undet.)	1
Ascidiacea D (undet.)	1
Clavelina picta	1
Molgulidae (undet.)	1
Styela sp.	1

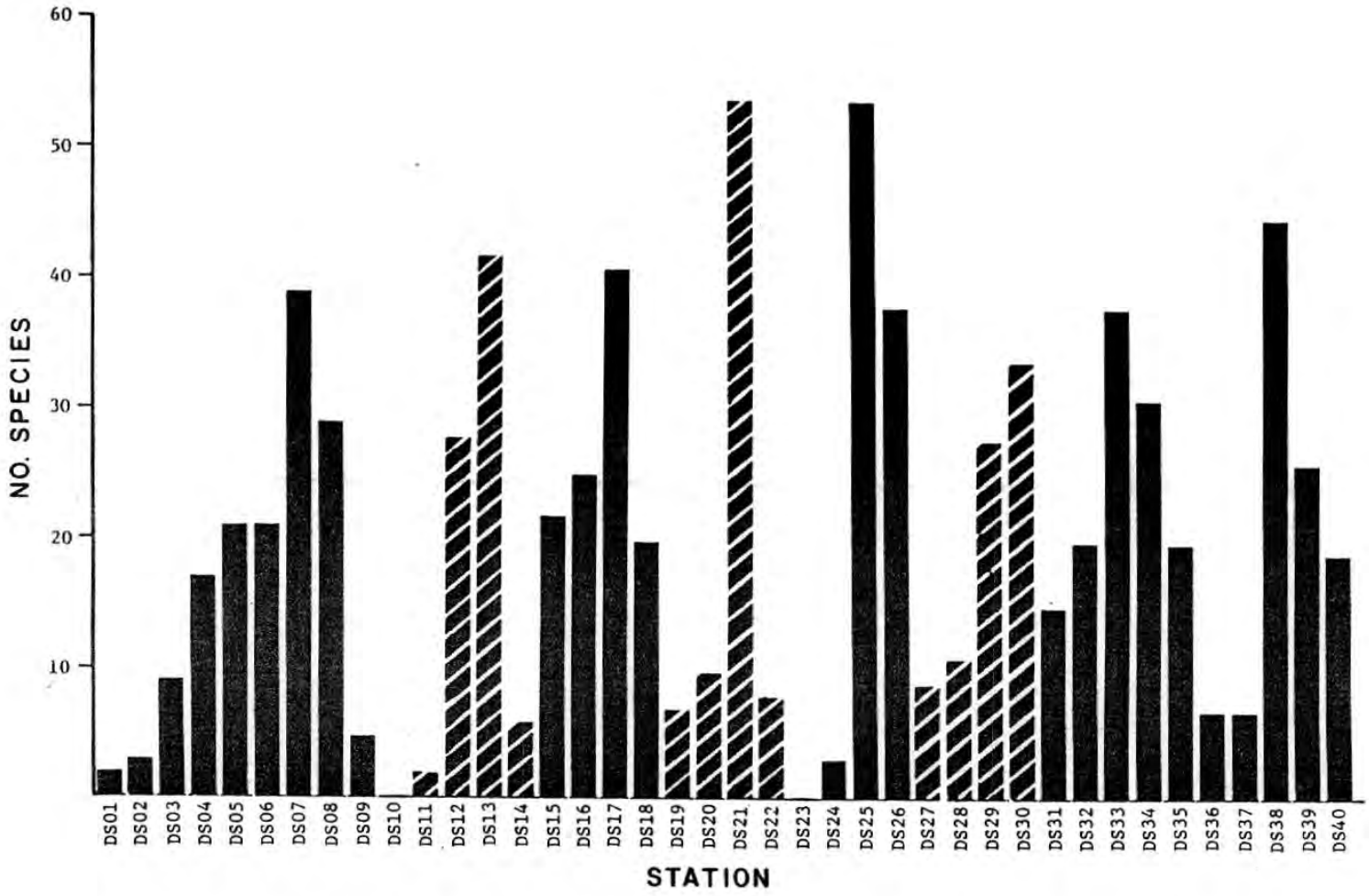

Figure 4. Number of species in oyster dredge collections from the 40 stations in the study area. Histograms with slanted lines represent stations within the Ocean Disposal Area.

where such substrates occurred, and typically low where the bottom was sand or sand and shell hash only. Forty or more species were identified in collections from six of the stations (DS13, DS17, DS21, DS25, DS33, and DS38). The maximum number of species (53) occurred in a sample from station DS25. The average number of species per station was 20.5.

No faunal differences that could be attributed to deposition of dredged material were detected between the Ocean Disposal Area and adjacent sites. Species numbers averaged 22.0 inside the Ocean Disposal Area and 21.3 outside. Faunal composition of the two areas was similar, with 96 species identified inside the disposal area, 139 outside the site, and 78 species common to the two areas. The lower total number of species collected from sites in the Ocean Disposal Area is probably due to the smaller number of stations sampled there (only 12 of the 40 stations) rather than to any disposal effects. In addition, the innermost and outermost transects, neither of which crossed the Ocean Disposal Area, were somewhat different from the three middle transects with respect to environmental characteristics and faunal composition.

Infaunal Assemblages

Nearly 34,000 benthic macroinvertebrates, representing 439 species, were obtained in quantitative Smith-McIntyre grab collections from the study area (Appendix 5). Of the total number of organisms collected, 37.5% were polychaetes, 19.6% were the cephalochordate Branchiostoma caribaeum, 10.0% were amphipods, and 7.0% were pelecypods. Representatives of 24 other major taxa comprised the remaining 26% of individuals collected (Table 2). Polychaetes also dominated the fauna taxonomically, with 211 species accounting for 42.8% of the total. Pelecypods comprised 10.8% of the total number of species, while decapods and gastropods contributed 9.9% each. Knott et al. (1983) documented that polychaetes also dominated subtidal infaunal assemblages of nearshore areas at Murrells Inlet, South Carolina.

The most abundant species in the samples was the lancelet Branchiostoma caribaeum, which comprised nearly one-fifth of the total number of individuals. This species was collected at 31 of the 40 stations included in the study. B. caribaeum was either absent or present in low densiites at several of the shallower stations inshore, particularly those characterized by finer sediments (see Appendix 2). Highest numbers were encountered at stations with bottoms of coarser sand. For example, densities of 2750 and 2788 individuals per m^2 were found at stations DS33 and DS40, respectively. These concentrations exceed the maximum densities of 1345 lancelets per m^2 recorded by Frankenberg and Leiper (1977) in summer samples from shelf waters off Georgia. In a study of the ecology and distribution of B. caribaeum on the shelf of the southeastern United States, Cory and Pierce (1967) found maximum densities of 204 individuals per m^2 off Sapelo Island, Georgia. They noted that optimal conditions for aggregations of B. caribaeum included the presence of coarse, shelly, siliceous sand in areas of subsurface wave action and tidal current.

Ranking second in abundance was the sipunculid Aspidosiphon spinalis, which accounted for 3.4% of the total fauna. It was present in collections from 30 of the 40 stations sampled. Other species contributing more than 2% of the total fauna included the polychaetes Spiophanes bombyx, Goniadides carolinae, Spio pettiboneae, Nephtys picta, and Prionospio cristata, the lunulitiform bryozoan Cupuladria doma, the amphipod Trichophoxus floridanus, and nematodes of undetermined identity. The polychaete Spiophanes bombyx was the most ubiquitous species in this study, occurring at all of the 40 stations sampled. This species is also abundant in shallower nearshore sand bottom areas, as well as in deeper live bottom areas of the South Atlantic Bight (Knott et al., 1983; Wenner et al., 1983). Other species widely distributed throughout our study area included the polychaete Nephtys picta (35 stations), Nemertina A (37 stations), the amphipods Eudevenopus honduranus and Tiron tropakis (33 stations each), nematodes (33 stations), the decapod Pagurus longicarpus (32 stations), and the pelecypods Tellina probrina and Ervilia concentrica (30 stations each).

Species diversity (H') ranged from 3.46 to 6.13 in samples from the study area (Table 3). Diversity measurements (H') did not reveal any significant differences ($p > 0.4$, Mann-Whitney U test) between stations inside and outside the Ocean Disposal Area. The mean value for H' was 4.64 for stations in the disposal area and 4.62 for the surrounding stations. Diversity values over the entire study area were generally higher than those observed in shallow shelf waters off Virginia (Boesch, 1972) and Rhode Island (Saila, et al., 1972). In fact, H' values were generally equivalent to those noted for hard bottom reef areas located further offshore in the South Atlantic Bight (Wenner et al., 1983). The high diversity if partly attributable to the high species richness component of diversity (SR), which ranged from 5.52 at DS10 to 22.90 at DS38 (Table 3). The number of species collected at these stations was 31 and 173, respectively. Neither the number of species per station nor species richness was significantly different between stations inside and outside the disposal area ($p > 0.2$, Mann-Whitney U test). High diversities were also partly attributable to the evenness component (J'), which measures the distribution of individuals among species present. In spite of the numerical dominance of Branchiostoma caribaeum, 19 other species each contributed more than 1% of the total number of individuals collected. Yet these 20 species accounted for only 56.4% of the total number of animals present. This is a substantially more even distribution of individuals among the species collected than Dorjes (1972) found on transects off Georgia, where the 10 most abundant species contributed 86% of the total. Likewise, the 10 most

Table 2. Number of individuals and number of species for each of the major invertebrate taxa of infaunal organisms from the study area.

Taxon	Number of Individuals	% of Total	Cumul. %
Polychaeta	12,713	37.47	37.47
Cephalochordata	6,633	19.55	57.02
Amphipoda	3,406	10.04	67.06
Pelecypoda	2,369	6.98	74.04
Sipunculida	1,768	5.21	79.25
Ectoprocta	1,329	3.92	83.17
Nematoda	1,142	3.36	86.53
Decapoda	1,052	3.10	89.63
Isopoda	590	1.74	91.37
Gastropoda	535	1.58	92.95
Polyplacophora	451	1.33	94.28
Echinodermata	405	1.19	95.47
Rhynchocoela	366	1.08	96.55
Oligochaeta	296	0.87	97.42
Tanaidacea	203	0.60	98.02
Cumacea	195	0.57	98.59
Ostracoda	119	0.35	98.94
Mysidacea	111	0.33	99.27
Unknown Taxa	66	0.19	99.46
Brachiopoda	63	0.18	99.64
Turbellaria	59	0.17	99.81
Scaphapoda	21	0.06	99.87
Anthozoa	16	0.05	99.92
Pycnogonida	14	0.04	99.96
Stomatopoda	6	0.02	99.98
Phoronida	2	<0.01	
Hemichordata	1	<0.01	
Echiurida	1	<0.01	100.00

Taxon	Number of Species	% of Total	Cumul. %
Polychaeta	211	42.80	42.80
Pelecypoda	53	10.75	53.55
Decapoda	49	9.94	63.49
Gastropoda	49	9.94	73.43
Amphipoda	43	8.72	82.15
Echinodermata	20	4.06	86.21
Isopoda	12	2.43	88.64
Cumacea	7	1.42	90.06
Mysidacea	7	1.42	91.48
Sipunculida	6	1.22	92.70
Polyplacophora	5	1.01	93.71
Stomatopoda	4	0.81	94.52
Tanaidacea	4	0.81	95.33
Rhynchocoela	3	0.61	95.94
Scaphapoda	3	0.61	96.55
Anthozoa	2	0.40	96.95
Ectoprocta	2	0.40	97.35
Pycnogonida	2	0.40	97.75
Unknown Taxa	2	0.40	98.15
Brachiopoda	1	0.20	98.35
Cephalochordata	1	0.20	98.55
Echiurida	1	0.20	98.75
Hemichordata	1	0.20	98.95
Nematoda	1	0.20	99.15
Oligochaeta	1	0.20	99.35
Ostracoda	1	0.20	99.55
Phoronida	1	0.20	99.75
Turbellaria	1	0.20	99.95

Table 3. Species diversity and faunal density of grab samples collected in the study area.

Station	Diversity (H')	Evenness (J')	Richness (SR)	Number of Individuals/0.5 m^2	Number of Species
DS01	3.96	0.83	5.62	102	27
DS02	3.48	0.70	5.68	234	32
DS03	3.70	0.69	7.13	273	41
DS04	4.34	0.75	8.99	407	55
DS05	4.66	0.79	9.03	550	58
DS06	5.50	0.79	17.69	1,108	125
DS07	4.81	0.70	16.83	1,107	119
DS08	5.40	0.80	16.24	643	106
DS09	5.18	0.83	12.13	447	75
DS10	3.66	0.74	5.52	230	31
DS11*	3.86	0.73	6.99	264	40
DS12*	4.63	0.77	10.43	419	64
DS13*	5.98	0.81	22.00	1,978	168
DS14*	4.78	0.82	10.02	296	58
DS15	5.17	0.82	13.10	416	80
DS16	5.53	0.75	20.86	2,593	165
DS17	4.78	0.84	9.06	310	53
DS18	4.83	0.75	12.69	812	86
DS19*	5.09	0.85	10.38	475	65
DS20*	5.04	0.80	12.75	531	81
DS21*	4.20	0.71	9.39	596	61
DS22*	4.74	0.80	10.09	347	60
DS23	4.30	0.81	6.77	274	39
DS24	5.34	0.86	12.93	262	73
DS25	4.60	0.76	10.43	462	65
DS26	5.13	0.79	13.94	551	89
DS27*	3.46	0.55	10.90	1,169	78
DS28*	4.31	0.72	9.84	546	63
DS29*	4.95	0.73	14.85	1,253	107
DS30*	5.23	0.70	21.00	3,966	175
DS31**	4.11	0.63	13.55	1,031	95
DS32	4.20	0.65	12.42	1,197	89
DS33	3.98	0.58	14.79	2,919	119
DS34	4.02	0.61	13.04	1,459	96
DS35	5.11	0.72	18.30	1,690	137
DS36	3.97	0.62	12.06	974	84
DS37	4.64	0.71	13.57	759	91
DS38	6.13	0.82	22.90	1,830	173
DS39	3.91	0.58	13.67	2,169	106
DS40	4.20	0.60	15.73	3,420	129

* stations located in disposal area
** number of individuals in 0.4 m^2

abundant species of shallow nearshore infaunal communities at Murrells Inlet, South Carolina, contributed 80.2% of the total number of animals collected (Knott et al., 1983).

Many more species were identified from the study area off Charleston then have been reported from similar areas off the Georgia coast. Collections from supratidal, intertidal, and subtidal shallow shelf areas out to depths of about 15 m off Sapelo Island yielded 298 species (Dorjes, 1972). Three stations sampled by Frankenberg and Leiper (1977) off Sapelo Island with sediment characteristics and water depths similar to the present study area, yielded an average of 68 species per 1.2 m^2 for August collections. By comparison, we collected 493 species with an average of approximately 84 species per 0.5 m^2 in the study area off Charleston (Table 3). In the only previous study of this nature in South Carolina, 205 species were identified in samples collected over four seasons from nine subtidal stations (maximum depths of 5 m) in the Murrells Inlet area (Knott et al., 1983).

Cluster analysis of ODA samples revealed five distinct station groups based on their degree of faunal similarity (Fig. 5). All but one of the groups contained stations located both inside and outside the disposal area boundaries (Fig. 6). This suggests that past disposal activities have not noticeably modified faunal composition in that area. Rather, most station groupings can be related to natural variation in sediment composition.

Stations in Group 1 were characterized by medium to coarse sand with a relatively high content of shell hash (Figs. 2, 3, 6). Branchiostoma caribaeum was by far the most common species at Group 1 stations, reflecting its preference for coarse, shelly sediments. Aspidosiphon spinalis was also very abundant at these stations. This species is known to live chiefly in empty mollusc shells (Cutler, 1973), which is consistent with its dominance at stations having greater amounts of coarse shell hash. Stations in Groups 2 and 3, on the other hand, contained mostly finer sediments with moderate to high shell content. Differences between these two groups appeared to be related to the amount of shell hash (Figs. 3 and 6), with more of this material in sediments at Group 3 stations. Finally, stations in Groups 4 and 5 were located in areas of fine sediment having little shell hash. The polychaete Nephtys picta was an important constituent of the species assemblages in both of these groups, particularly among Group 5 stations, where sediments contained a notably greater percentage of silt and clay (Appendix 2). This species has been reported to show higher abundance with increasing amounts of these finer sediments (Kinner and Maurer, 1978).

The lack of any detectable disposal effects, based on comparisons among stations using cluster analysis, diversity indices and faunal abundance, is probably due to two factors. First, no sediments had been recently disposed in the area prior to this study. Rather, our study was intended to provide baseline data before more intensive disposal activities are begun. Secondly, the small volume of sediments placed in the Charleston Ocean Disposal Area prior to this study had been dredged from the entrance channel, and thus were similar in composition to those at the disposal site (South Carolina Wildlife and Marine Resources Department, 1979). Deposition of dredged material of a different particle size, such as muds from Charleston Harbor, could have a much more severe and potentially long-term impact on the bottom communities (Windom, 1976; Morton, 1977), if these sediments were not rapidly diluted and dispersed.

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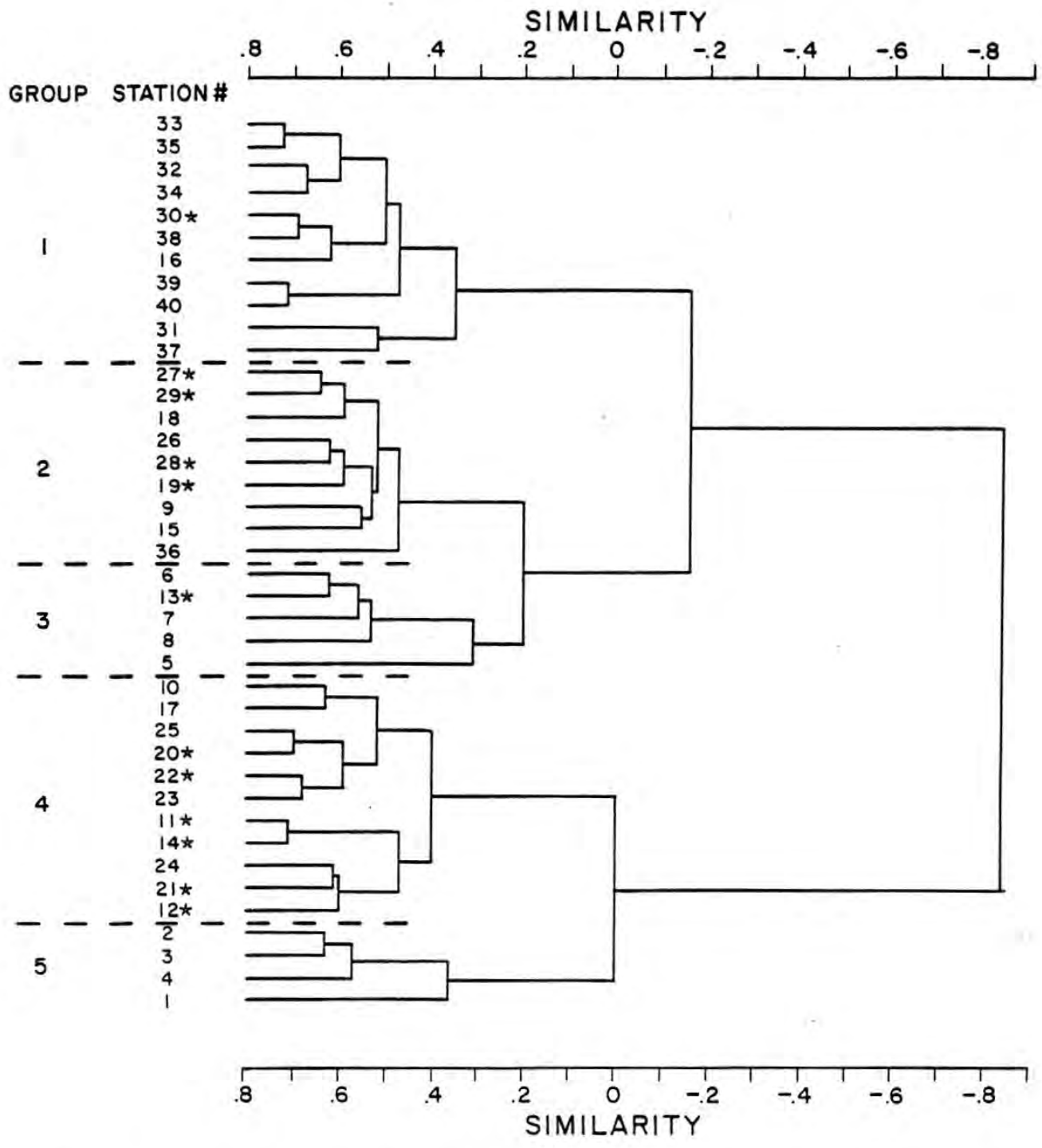

Figure 5. Normal cluster dendrogram showing heirarchy of station groups formed using the Bray-Curtis similarity coefficient and flexible sorting.

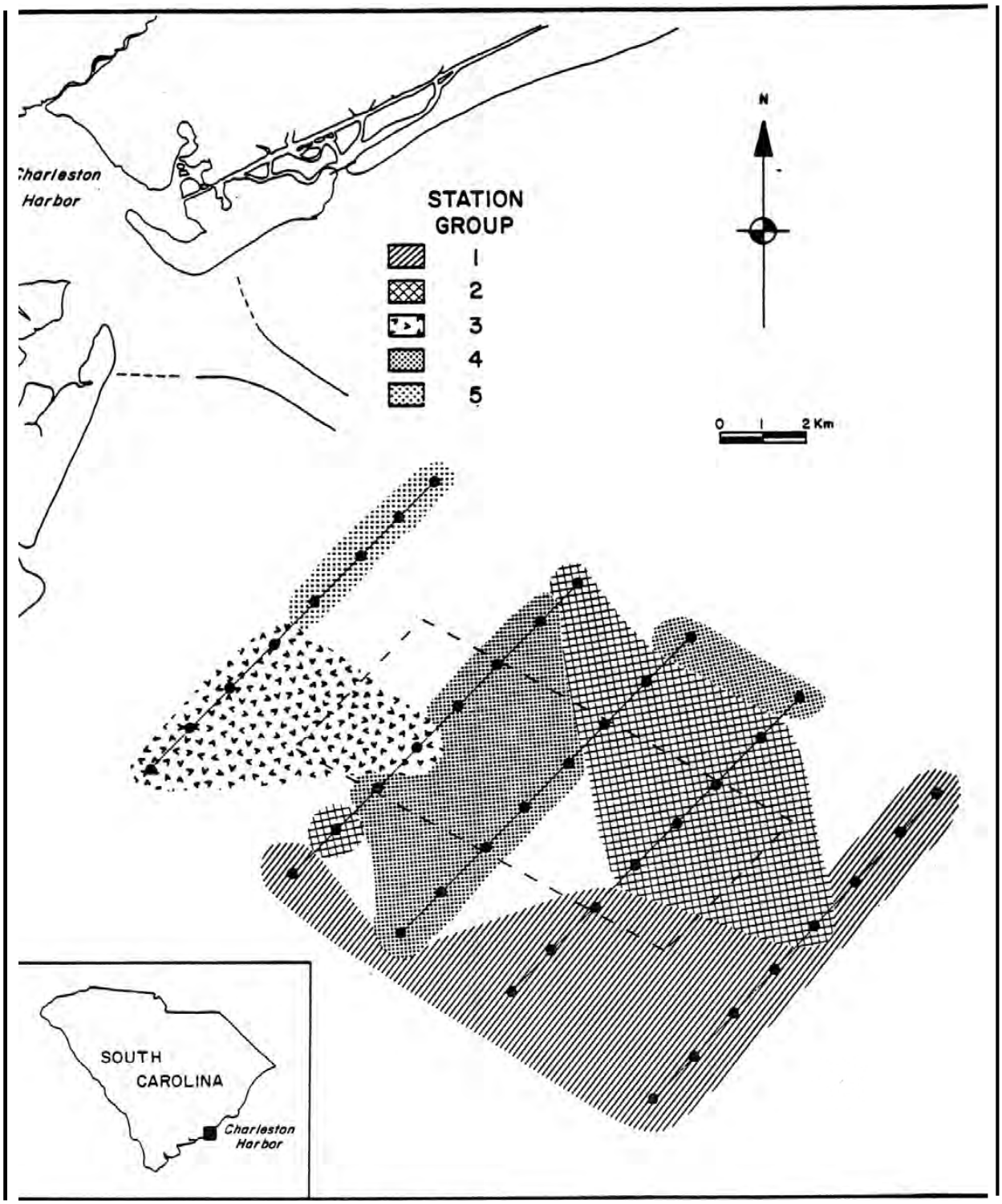

Figure 6. Location of station groups resulting from normal cluster analysis. See Figure 5 for the degree of similarity.

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List of Appendices

Appendix 1. Hydrographic data collected during benthic sampling in the Charleston Harbor Ocean Disposal Area and vicinity.

Station	Date	Station Depth	Depth	Temp. (C)	Salinity (°/oo)	D.O. (mg/l)	Turbidity (FTU)	Nutrients (µg/l)				Solids	
								Nitrate	Nitrite	Silicate	Phosphate	Total	Settleable
DS01	8- 7-78	8.0	Surface	28.9	31.32	6.4	3.7	-	-	337.2	18.0	-	-
			Bottom	28.0	34.36	5.5	8.7	1.8	1.0	70.2	48.0	-	-
DS02	8- 7-78	8.0	Surface	28.7	33.03	4.0	1.8	2.4	1.1	56.2	3.0	-	-
			Bottom	28.3	33.99	5.6	6.8	1.4	0.7	49.2	31.0	-	-
DS03	8- 7-78	9.0	Surface	28.9	32.99	6.4	3.5	2.0	1.8	49.2	11.5	-	-
			Bottom	28.2	33.90	5.5	5.7	2.7	0.8	91.3	32.0	111.6	5.2
DS04	8- 7-78	9.0	Surface	29.0	32.04	6.5	4.3	1.4	1.4	77.3	21.0	90.0	10.8
			Bottom	28.2	34.20	5.1	10.0	10.6	1.3	105.4	78.5	132.8	31.2
DS05	8- 7-78	8.0	Surface	28.3	31.57	6.5	8.6	-	-	175.6	57.5	106.4	6.0
			Bottom	29.2	33.94	5.1	6.9	-	-	112.4	46.5	-	-
DS06	8- 8-78	9.0	Surface	28.6	31.54	6.6	2.5	-	-	189.7	66.0	74.0	13.6
			Bottom	28.2	34.63	5.7	-	3.4	1.5	56.2	21.0	108.0	41.6
DS07	8- 8-78	9.0	Surface	28.8	33.67	6.6	1.3	5.1	1.5	105.4	0.0	-	-
			Bottom	28.2	34.63	5.7	0.7	1.8	1.4	70.2	8.0	-	-
DS08	8- 8-78	10.2	Surface	28.8	33.65	6.8	0.7	-	-	70.2	0.0	-	-
			Bottom	28.3	34.61	5.7	4.9	1.4	1.4	28.1	3.0	-	-
DS09	8- 9-78	12.0	Surface	29.0	32.90	6.2	1.8	-	-	70.2	4.5	-	-
			Bottom	28.0	34.71	5.9	2.0	2.1	0.3	56.2	9.5	-	-
DS10	8- 9-78	11.0	Surface	29.3	31.70	6.8	1.8	2.0	0.4	140.5	0.0	88.4	5.6
			Bottom	28.0	34.48	5.7	6.0	1.7	0.4	28.1	0.0	-	-
DS11	8- 9-78	12.6	Surface	29.3	-	6.6	1.6	2.8	0.4	133.5	0.0	-	-
			Bottom	28.0	34.77	5.8	3.2	2.5	0.3	42.2	9.5	83.2	2.4
DS12	8- 9-78	12.5	Surface	29.5	32.20	6.9	1.4	4.0	0.6	105.4	6.5	-	-
			Bottom	28.3	34.73	5.7	2.0	2.9	0.3	42.2	6.5	108.0	5.6
DS13	8- 8-78	11.5	Surface	29.2	34.20	6.4	0.7	7.7	0.7	42.9	8.0	-	-
			Bottom	28.1	34.74	5.8	2.0	4.9	0.3	42.2	0.0	-	-
DS14	8- 8-78	11.5	Surface	29.2	34.27	6.5	0.7	2.8	0.0	35.1	0.0	72.0	16.8
			Bottom	28.2	34.68	6.7	1.1	2.9	0.3	35.1	4.5	72.4	18.8
DS15	8- 8-78	12.0	Surface	29.3	34.15	6.4	0.7	7.7	1.1	70.2	0.0	86.8	21.2
			Bottom	28.2	34.70	5.6	3.7	5.7	0.3	105.4	13.0	113.6	40.8
DS16	8- 8-78	12.0	Surface	29.2	34.27	6.5	1.0	4.1	0.1	28.1	0.0	1.0	-
			Bottom	28.2	34.73	5.9	1.3	3.2	0.0	28.1	0.0	1.3	-

Appendix 1. (Continued)

Station	Date	Station Depth	Depth	Temp. (C)	Salinity (°/oo)	D.O. (mg/l)	Turbidity (FTU)	Nutrients (µg/l)				Solids	
								Nitrate	Nitrite	Silicate	Phosphate	Total	Settleable
DS17	8- 9-78	13.6	Surface	30.0	32.66	6.6	1.2	3.7	70.2	0.0	1.2	82.4	34.8
			Bottom	28.3	34.77	6.6	2.3	3.4	84.3	8.0	2.3	124.4	78.8
DS18	8- 9-78	11.2	Surface	29.2	33.43	6.5	1.0	2.7	0.1	35.1	-	91.6	32.0
			Bottom	28.3	34.85	6.0	1.1	3.2	0.0	42.2	0.0	115.2	55.6
DS19	8-10-78	12.3	Surface	28.9	32.92	6.8	0.6	3.8	0.0	63.2	13.0	-	-
			Bottom	28.0	34.91	6.0	1.6	3.8	0.0	35.1	3.0	-	-
DS20	8-10-78	12.8	Surface	29.1	33.00	6.7	0.7	2.4	0.0	63.2	19.5	74.8	12.0
			Bottom	28.2	35.05	6.1	3.0	2.1	0.0	28.1	19.5	109.2	27.2
DS21	8-10-78	12.8	Surface	29.0	33.33	6.5	1.1	2.8	0.0	56.2	-	78.8	14.8
			Bottom	28.0	34.98	6.0	1.5	2.4	0.0	42.2	0.0	76.4	9.6
DS22	8-10-78	12.9	Surface	29.2	32.61	6.6	1.0	2.8	0.0	84.3	0.0	86.8	26.4
			Bottom	28.2	35.01	6.2	2.3	2.0	0.1	28.1	0.0	89.2	19.2
DS23	8-10-78	14.0	Surface	30.1	32.61	6.9	0.7	2.5	0.3	35.1	11.5	69.2	7.6
			Bottom	28.5	35.01	6.3	1.9	2.9	0.3	98.4	3.0	86.0	16.4
DS24	8-10-78	15.2	Surface	29.6	33.60	6.5	1.2	2.9	0.3	49.2	6.5	-	-
			Bottom	28.5	35.05	6.2	0.7	2.5	0.3	49.2	2.0	-	-
DS25	8-11-78	14.1	Surface	28.0	33.48	6.4	1.2	1.8	0.3	35.1	0.0	77.2	8.4
			Bottom	27.8	35.15	6.0	1.4	1.1	0.3	21.1	0.0	108.4	22.0
DS26	8-11-78	15.1	Surface	28.8	33.80	6.5	0.7	1.4	0.0	21.1	0.0	-	-
			Bottom	27.8	35.21	6.0	1.0	1.3	0.1	21.1	0.0	-	-
DS27	8-11-78	12.5	Surface	29.0	33.73	6.5	1.0	1.8	0.0	28.1	8.0	63.2	1.6
			Bottom	28.0	35.17	6.1	1.1	1.8	0.0	21.1	0.0	63.6	2.8
DS28	8-11-78	11.6	Surface	29.0	33.74	6.5	1.0	1.0	0.1	21.1	0.0	-	-
			Bottom	28.0	35.17	6.0	2.0	2.1	0.0	35.1	0.0	-	-
DS29	8-11-78	14.6	Surface	29.2	33.72	6.6	1.0	2.3	0.1	49.2	13.0	67.2	9.6
			Bottom	28.0	35.25	6.0	4.0	3.4	0.4	63.2	35.5	86.8	24.0
DS30	8-14-78	14.8	Surface	29.3	34.13	6.3	0.9	2.8	0.0	56.2	0.0	73.2	23.2
			Bottom	27.4	35.76	5.6	1.0	5.1	0.1	49.2	0.0	93.2	39.2
DS31	8-14-78	13.2	Surface	29.4	33.98	6.5	1.0	2.4	0.0	49.2	0.0	76.0	17.6
			Bottom	27.4	35.77	5.3	1.0	4.2	0.0	21.1	0.0	97.2	37.2
DS32	8-10-78	13.8	Surface	29.6	33.72	6.5	0.6	3.5	0.3	42.2	13.0	84.0	10.4
			Bottom	28.2	35.22	6.4	1.0	7.1	0.3	28.1	19.5	94.4	24.4
DS33	8-14-78	14.5	Surface	28.6	33.70	5.5	0.9	0.4	0.3	14.1	0.0	-	-
			Bottom	26.5	35.79	5.3	0.5	7.4	0.0	28.1	0.1	-	-

Appendix 1. (Continued)

Station	Date	Station Depth	Depth	Temp. (C)	Salinity (°/oo)	D.O. (mg/l)	Turbidity (FTU)	Nutrients (µg/l)				Solids	
								Nitrate	Nitrite	Silicate	Phosphate	Total	Settleable
DS34	8-14-78	15.0	Surface	28.7	34.54	6.4	0.8	3.2	0.0	28.1	0.0	-	-
			Bottom	26.5	35.80	5.5	0.4	4.6	0.0	21.1	0.0	-	-
DS35	8-14-78	15.1	Surface	28.8	34.56	6.4	1.0	2.8	0.0	28.1	0.0	63.2	11.6
			Bottom	26.8	35.80	5.4	0.5	6.3	0.0	42.2	0.0	70.4	16.4
DS36	8-14-78	14.2	Surface	28.8	34.56	6.3	0.6	3.2	0.0	28.1	0.0	71.6	20.4
			Bottom	26.7	35.82	5.5	0.4	6.0	0.0	28.1	0.0	88.4	36.0
DS37	8-14-78	15.0	Surface	29.0	34.64	6.4	0.5	3.2	0.0	28.1	0.0	76.4	9.6
			Bottom	26.9	35.81	5.5	0.7	9.0	0.1	105.4	0.0	94.4	15.6
DS38	8-14-78	17.1	Surface	29.0	34.72	6.4	0.6	3.2	0.0	21.1	0.0	77.6	16.4
			Bottom	27.0	35.81	5.3	0.6	4.3	0.6	28.1	0.0	-	-
DS39	8-14-78	15.5	Surface	29.4	34.74	6.2	0.7	2.7	0.1	14.1	0.0	83.6	34.4
			Bottom	27.0	35.88	5.6	0.5	2.8	0.4	14.1	0.0	98.0	46.4
DS40	8-14-78	15.3	Surface	30.0	34.80	6.6	0.8	3.4	0.1	56.2	0.0	-	-
			Bottom	26.9	35.87	5.9	0.6	4.2	0.4	28.1	0.0	-	-

Appendix 2. Sediment composition and quartz grain size distribution for the forty stations sampled in and adjacent to the Charleston Harbor Ocean Disposal Area.

STATIONS	COMPOSITION (Weight %) Quartz Sand	$CaCO_3$ Shell	Silt	Clay	QUARTZ SAND GRAIN SIZE Mean ϕ	St. Dev. (ϕ units)
DS01	93	7			2.68	.413
DS02	88	7	2	3	2.83	.426
DS03	87	1	3	9	3.01	.474
DS04	67	10	10	13	2.88	.734
DS05	70	30			2.00	.626
DS06	65	31	2	2	0.99	1.198
DS07	--	--	--	--	--	--
DS08	70	16	--	14	2.29	.960
DS09	72	28			2.03	.541
DS10	86	14			2.15	.528
DS11	94	6			2.58	.374
DS12	93	7			2.69	.381
DS13	70	30			1.09	1.363
DS14	95	5			2.60	.384
DS15	82	18			2.26	.509
DS16	74	26			1.20	.924
DS17	82	18			2.51	.526
DS18	58	42			2.11	.916
DS19	87	13			2.42	.470
DS20	78	22			2.44	.698
DS21	91	9			2.60	.478
DS22	92	8			2.40	.435
DS23	94	6			2.41	.377
DS24	89	11			2.50	.485
DS25	92	8			2.53	.432
DS26	64	36			1.72	.849
DS27	79	21			2.27	.532
DS28	90	10			2.06	.511
DS29	75	25			1.98	.670
DS30	44	56			1.82	.782
DS31	52	38			1.39	.762
DS32	88	12			1.05	.849
DS33	59	41			1.19	.967
DS34	51	49			1.73	.778
DS35	68	32			1.53	.767
DS36	76	24			2.10	.498
DS37	70	30			1.69	.650
DS38	67	33			0.26	1.122
DS39	--	--			--	--
DS40	70	30			1.15	.932

Appendix 3. Geochemical analysis of sediments from stations in and near Charleston Harbor Ocean Disposal Area (expressed as percent by weight, dry basis).

STATIONS IN DISPOSAL AREA

	DS11	DS12	DS13	DS14	DS19	DS20	DS21	DS22	DS27	DS28	DS29	DS30
Volatile Solids	0.86	1.16	1.27	1.69	1.74	1.48	1.47	0.88	1.74	0.70	1.30	1.54
Total Org. Carbon	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
C.O.D.	0.27	0.33	0.16	0.24	0.31	0.33	0.28	0.17	0.20	0.15	0.22	0.26
Nitrogen Kjeldahl	0.01	<0.01	<0.01	0.02	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01
NH_3-N	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NO_2-N	0.00001	0.00002	0.00002	0.00002	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001
NO_3-N	0.00009	0.00004	0.00008	0.00006	0.00008	0.00015	0.00002	0.00009	0.00005	0.00009	0.00008	0.00011
Oil and Grease	0.022	0.003	0.013	0.012	0.008	0.014	0.007	0.010	0.009	0.007	0.011	0.007
Lead	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006
Zinc	0.0014	0.0008	0.0013	0.0012	0.0015	0.0016	0.0015	0.0008	0.0015	0.0006	0.0008	0.0016
Mercury	0.000020	0.000015	0.00019	0.000014	0.000030	0.000017	0.000012	0.000021	0.000018	0.000113	0.000015	0.000021
Soluble PO_4-P	0.00005	0.00012	0.00013	0.00005	0.00005	0.00002	0.00007	0.00005	<0.00001	0.00003	0.00008	0.00008
Total PO_4-P	0.23	0.19	0.21	0.07	1.06	0.64	0.16	0.19	0.77	0.25	0.22	0.25
Iron	0.32	0.34	0.33	0.33	0.27	0.31	0.32	0.22	0.20	0.19	0.19	0.20
Cadmium	<0.00001	0.00001	<0.00001	<0.00001	0.00004	0.00002	0.00001	<0.00001	0.00003	<0.00001	<0.00001	<0.00001
Arsenic	0.00015	0.00018	0.00040	0.00014	0.00014	0.00029	0.00015	0.00011	0.00013	0.00014	0.00018	0.00020
Chromium	0.0031	0.0027	0.0022	0.0027	0.0027	0.0022	0.0022	0.0017	0.0022	0.0020	0.0022	0.0022
Nickel	0.00006	0.00010	0.00018	0.00018	0.00073	0.00021	0.00023	<0.00005	0.00018	<0.00005	0.00006	<0.00005
Copper	0.0018	0.0016	0.0024	0.0016	0.0008	0.0012	0.0022	0.0008	0.0010	0.0010	0.0012	0.0014
Beryllium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Selenium	<0.00002	<0.00002	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Vanadium	0.00037	0.00005	0.00010	0.00037	0.00030	0.00020	0.00010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005

STATIONS OUTSIDE DISPOSAL AREA

	DS01	DS04	DS08	DS09	DS16	DS17	DS24	DS25	DS32	DS33	DS36	DS40
Volatile Solids	1.48	2.34	2.17	1.65	1.45	1.26	1.70	1.44	0.89	1.95	1.15	1.70
Total Org. Carbon	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
C.O.D.	0.10	0.86	0.30	0.26	0.36	0.41	0.26	0.22	0.14	0.32	0.20	0.36
Nitrogen Kjeldahl	<0.10	0.02	0.02	0.02	0.01	<0.01	0.01	0.01	<0.01	0.02	0.01	0.02
NH_3-N	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NO_2-N	0.00002	<0.00001	0.00001	0.00002	0.00002	0.00002	0.00001	0.00002	0.00001	0.00002	0.00001	0.00002
NO_3-N	0.00006	0.00019	0.00009	0.00006	0.00004	0.00006	0.00008	0.00005	0.00010	0.00007	0.00011	0.000013
Oil and Grease	0.008	0.010	0.007	<0.01	0.002	0.010	0.003	0.010	<0.001	0.012	0.007	0.008
Lead	<0.00005	<0.00005	<0.00005	<0.00005	0.00019	<0.00005	<0.00005	<0.00005	<0.00005	0.00025	<0.00005	<0.00005
Zinc	0.0028	0.0016	0.0010	0.0012	0.0010	0.0014	0.0012	0.0010	0.0006	0.0008	0.0007	0.0008
Mercury	0.000020	0.000036	0.000022	0.000007	0.000042	0.000037	0.000022	0.000029	0.000006	0.000043	0.000015	0.000018
Soluble PO_4-P	0.00014	0.00001	0.00006	0.00004	0.00005	0.00006	0.00006	0.00006	0.00010	0.00007	0.00001	0.00022
Total PO_4-P	0.56	0.35	0.20	1.38	0.21	0.56	0.13	0.12	1.17	0.19	0.16	0.15
Iron	0.38	0.68	0.63	0.36	0.54	0.34	0.31	0.31	0.12	0.41	0.19	0.18
Cadmium	0.00003	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Arsenic	0.00017	0.00024	0.00040	0.00055	0.00070	0.00020	0.00020	0.00017	0.00012	0.00100	0.00029	0.00018
Chromium	0.0027	0.0038	0.0031	0.0021	0.0022	0.0007	0.0022	0.0022	0.0017	0.0031	0.0022	0.0017
Nickel	0.00008	0.00021	<0.00005	0.00008	0.00003	0.00018	0.00016	0.00006	<0.00005	<0.00005	<0.00005	<0.00005
Copper	0.0016	0.0027	0.0018	0.0018	0.0016	0.0016	0.0012	0.0010	0.0012	0.0010	0.0012	0.0018
Beryllium	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Selenium	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Vanadium	<0.00005	0.00030	0.00010	<0.00005	0.00020	0.00020	<0.00005	<0.00005	<0.00005	0.00020	<0.00005	<0.00005

Appendix 4.1 Occurrence of epifaunal invertebrates in dredge collections at the 28 stations located outside the Charleston Ocean Disposal Area.

Species	STATION NUMBER																													
	1	2	3	4	5	6	7	8	9	10	15	16	17	18	23	24	25	26	31	32	33	34	35	36	37	38	39	40		
Phylum Porifera																														
Cliona sp.					x	x	x										x	x			x	x	x			x		x		
Clathrina coriacea																					x						x	x		
Porifera (undet.)								x					x													x		x		
Phylum Cnidaria																														
Clytia cylindrica			x		x	x	x				x	x	x	x			x	x	x			x	x	x			x	x		
Astrangia danae				x	x	x	x				x	x	x				x				x					x				
Turritopsis nutricula					x		x					x	x				x	x			x	x	x			x	x	x		
Schizotricha tenella				x								x	x	x			x	x		x						x	x			
Eudendrium sp.				x	x		x	x			x		x				x	x												
Dynamena cornicina				x	x							x	x				x					x	x				x			
Telesto sanguinea							x				x		x	x			x									x	x	x		
Ectopleura dumortieri														x			x			x	x	x	x	x						
Halecium dysymmetrum					x												x	x				x				x				
Telesto fruticulosa						x	x	x			x		x				x		x											
Leptogorgia setacea																		x			x		x	x			x			
Zanclea costata																	x				x					x		x		
Actiniaria (undet.)													x															x		
Halecium sp.																	x													
Lovenella grandis						x															x			x	x					
Titanideum frauenfeldii								x					x																	
Chysaora quinquecirrha					x				x																					
Leptogorgia virgulata							x													x									
Lovenella gracilis						x																								
Monostaechas quadridens																		x					x							
Proboscidactyla ornata				x																										
Bougainvillia sp.							x																							
Campanulina sp.					x																									
Clytia fragilis				x																										
Clytia kincaidi				x																										
Clytia paulensis				x																										
Epizoanthus americanus																										x				
Hydractinia echinata					x																									
Pandeidae (undet.)				x																										
Phylum Entoprocta																														
Barentsia sp.				x																										
Entoproct (undet.)																										x				
Phylum Bryozoa																														
Parasmittina nitida						x	x					x	x				x	x	x	x	x	x	x		x	x	x	x		
Membranipora tenuis				x	x	x	x	x	x			x	x	x			x	x	x	x	x		x	x			x	x	x	
Microporella ciliata					x	x	x				x	x	x	x			x	x	x	x		x	x		x		x	x	x	
Schizoporella cornuta					x	x	x	x			x	x	x				x							x			x	x		
Aetea anguina											x	x	x				x	x			x	x	x				x			
Cribrilaria radiata													x				x	x	x	x	x	x	x				x	x	x	
Hippopleurifera mucronata													x				x	x		x	x	x		x			x	x	x	
Hippoporina verrilli						x	x	x			x	x	x	x			x			x										
Phylactellipora aviculifera													x				x	x		x	x	x	x					x	x	
Trypsostega venusta													x				x	x			x	x	x				x	x		
Cleidochasma porcellanum																	x	x		x	x	x					x	x		
Cyclostomata A (undet.)																	x	x		x	x	x					x	x		

Appendix 4.1 (Continued)

Species	STATION NUMBER 1	2	3	4	5	6	7	8	9	10	15	16	17	18	23	24	25	26	31	32	33	34	35	36	37	38	39	40
Phylum Bryozoa																												
Schizoporella errata						x	x						x	x			x											
Bowerbankia gracilis							x				x						x									x		
Crisia sp.								x			x						x									x		
Floridina parvicella																	x			x	x	x	x			x		
Hippoporella uvulifera													x					x		x	x				x			
Copidozoum tenuirostre												x	x				x			x		x						
Lichenopora sp.																					x	x	x		x	x	x	
Celleporidae (undet.)								x																				
Reptadeonella violacea													x													x		
Sundanella sibogae																	x											
Aeverrillia setigera																x												
Amathia distans																					x					x		
Caulibugula pearsei																										x		
Reginella floridana																					x					x		
Cryptosula pallasiana							x							x														
Hippaliosina rostrigera																										x		
Hippoporina contracta																	x											
Alcyonidium hauffi							x																					
Amathia alternata												x																
Amathia sp.																x												
Anasca A (undet.)																					x							
Celleporina hassalli											x																	
Discoporella umbellata																	x											
Electra monostachys						x																						
Membranipora arborescens					x																							
Nolella stipata																										x		
Phylum Mollusca																												
Chama macerophylla						x	x					x	x				x	x	x	x	x	x	x		x	x	x	x
Crepidula fornicata			x			x	x	x				x	x	x			x					x						
Anadara transversa						x	x				x	x		x			x	x	x			x					x	
Ostrea equestris						x	x	x					x	x				x		x		x						
Anomia simplex						x	x	x			x	x		x			x											
Chaetopleura apiculata													x				x	x			x	x				x		
Crepidula plana			x		x		x	x						x			x	x								x		
Mitrella lunata								x						x			x	x	x									
Octopus vulgaris							x														x							
Anachis translirata																			x									
Musculus lateralis							x					x					x									x		
Oliva sayana									x									x		x								
Polinices duplicatus				x							x																	
Eupleura caudata																		x										
Modiolus modiolus squamosus				x							x																	
Acanthodoris pilosa																			x									
Dinocardium robustum											x																	
Diplothyra smithi							x																					
Fasciolaria lilium hunteria													x															
Lithophaga bisulcata																										x		
Muricidae (undet.)																	x											
Turbo castanea																					x							
Urosalpinx cinerea								x																				

Appendix 4.1 (Continued)

Species	STATION NUMBER 1	2	3	4	5	6	7	8	9	10	15	16	17	18	23	24	25	26	31	32	33	34	35	36	37	38	39	40
Phylum Arthropoda																												
Balanus venustus			x		x	x	x	x			x	x	x	x			x	x	x	x	x	x	x		x	x	x	x
Balanus calidus							x					x	x				x	x	x		x	x				x	x	x
Ovalipes stephensoni	x							x	x		x			x		x		x		x	x		x					
Kochlinine floridana							x										x				x	x				x		
Xanthidae (undet.)							x	x					x					x										
Pilumnus sayi								x														x						
Portunus gibbesii		x															x	x			x							
Pagurus pollicaris			x		x		x																					
Podochela sidneyi																					x							
Libinia dubia			x	x																								
Ovalipes ocellatus					x																							
Portunus spinimanus								x										x										
Squilla empusa			x				x																					
Balanus improvisus									x																			
Callinectes sapidus				x																								
Chelonibia patula																		x										
Hepatus pudibundus														x														
Hypoconcha sabulosa																						x						
Metoporhaphis calcarata								x																				
Paguridae (undet.)													x				x											
Pilumnus sayi													x															
Synalpheus townsendi													x															
Tanystylum orbiculare								x																				
Phylum Echinodermata																												
Arbacia punctulata					x		x					x	x				x	x	x		x	x					x	x
Astropecten duplicatus							x							x			x	x	x									
Ophiothrix angulata							x	x				x	x				x	x									x	
Asterias forbesi				x	x		x														x		x			x	x	x
Mellita quinquiesperforata	x	x	x	x	x			x			x																	
Luidia clathrata			x																							x		
Clypeaster rosaceus													x								x							
Lytechinus variegatus																	x									x		
Astropecten articulatus											x															x		
Luidia bernasconiae								x																				
Ophioderma appressum																										x		
Phylum Chordata																												
Didemnum candidum						x	x					x	x				x				x	x				x	x	
Ascidiacea A (undet.)							x				x	x	x				x											
Ascidiacea B (undet.)						x						x					x									x		
Ascidiacea C (undet.)																					x							
Ascidiacea (undet.)								x																				
Amaroucium sp.								x																				
Amaroucium constellatum		x											x															
Styela plicata								x										x				x						
Clavelina picta								x																				
Styela sp.														x														

Appendix 4.2 Occurrence of epifaunal invertebrates in dredge collections at the 12 stations located in the Charleston Ocean Disposal Area.

Species	STATION NUMBER											
	11	12	13	14	19	20	21	22	27	28	29	30
Phylum Porifera												
Cliona sp.			x				x					x
Clathrina coriacea												x
Spheciospongia vesparia		x										
Phylum Cnidaria												
Clytia cylindrica		x	x	x	x		x		x	x	x	x
Astrangia danae			x			x	x	x	x		x	x
Turritopsis nutricula			x				x		x	x		x
Schizotricha tenella			x		x		x			x	x	x
Eudendrium sp.		x	x		x		x				x	x
Dynamena cornicina		x	x				x					x
Telesto sanguinea		x					x			x		x
Ectopleura dumortieri						x	x			x	x	
Halecium dysymmetrum					x						x	x
Telesto fruticulosa			x									
Leptogorgia setacea		x	x									
Zanclea costata							x					
Actiniaria (undet.)		x					x					
Halecium sp.							x					x
Lovenella grandis							x					
Titanideum frauenfeldii		x										
Plumularia floridana			x							x		
Proboscidactyla ornata		x										
Cuspidella humilis									x			
Lophogorgia hebes		x										
Sertularella conica							x					
Phylum Bryozoa												
Parasmittina nitida			x	x		x	x	x	x	x	x	x
Membranipora tenuis			x	x		x	x				x	x
Microporella ciliata					x		x	x				x
Schizoporella cornuta		x	x			x	x	x		x	x	
Aetea anguina			x				x				x	x
Cribrilaria radiata							x				x	x
Hippopleurifera mucronata							x	x			x	
Hippoporina verrilli			x				x				x	
Phylactellipora aviculifera							x					x
Trypsostega venusta							x					
Cleidochasma porcellanum							x					
Cyclostomata A (undet.)												x
Schizoporella errata						x	x				x	
Bowerbankia gracilis		x	x				x					
Crisia sp.		x	x				x					
Floridina parvicella							x					
Hippoporella uvulifera							x	x				
Copidozoum tenuirostre			x									
Celleporidae (undet.)		x	x				x					
Reptadeonella violacea							x					
Sundanella sibogae			x				x					
Aeverrillia setigera			x									

Appendix 4.2 (Continued)

Species	STATION NUMBER 11	12	13	14	19	20	21	22	27	28	29	30
Phylum Bryozoa												
Caulibugula pearsei							x					
Hippaliosina rostrigera							x					
Anasca A (undet.)							x					
Ctenostomata (undet.)		x										
Phylum Mollusca												
Chama macerophylla			x				x	x	x		x	x
Crepidula fornicata			x				x				x	x
Anadara transversa			x								x	x
Ostrea equestris			x	x			x				x	
Anomia simplex			x				x				x	
Chaetopleura apiculata			x									x
Crepidula plana											x	
Mitrella lunata			x			x					x	x
Octopus vulgaris							x				x	
Anachis translirata		x					x					
Musculus lateralis		x	x									
Polinices duplicatus											x	
Eupleura caudata												x
Argopecten gibbus												x
Diodora cayenensis							x					
Gastropoda (undet.)												x
Prunum apicinum			x									
Sinum perspectivum					x							
Phylum Arthropoda												
Balanus venustus			x	x	x	x	x		x	x	x	x
Balanus calidus		x										x
Ovalipes stephensoni									x	x	x	
Kochlinine floridana			x				x					
Xanthidae (undet.)		x	x				x				x	
Pilumnus sayi		x	x									x
Portunus gibbesii												x
Podochela sidneyi		x					x					
Balanus galeatus		x										
Micropanope xanthiformis						x						
Trachypenaeus constrictus	x											
Phylum Echinodermata												
Arbacia punctulata			x				x					x
Astropecten duplicatus	x	x	x					x		x		
Ophiothrix angulata			x			x	x					x
Asterias forbesi			x									
Mellita quinquiesperforata									x			
Luidia clathrata				x								
Ophiolepis elegans											x	
Phylum Chordata												
Didemnum candidum		x	x				x					
Ascidiacea A (undet.)			x				x					x
Styela plicata		x	x				x					x
Ascidiacea B (undet.)			x				x					
Amaroucium sp.		x					x				x	
Amaroucium constellatum		x										
Ascidiacea C (undet.)		x										
Ascidiacea D (undet.)		x										
Molgulidae (undet.)												

Appendix 5.1 Abundance of macroinvertebrate species in grab collections from station DS01. (A = Amphipoda; Cn = Cnidaria; D = Decapoda; E = Echinodermata; I = Isopoda; M = Mollusca; P = Polychaeta).

	DS01				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Nephtys picta (P)	28	5.6	1.5	56	1.0
Nemertina (undet.) A	10	2.0	1.0	20	2.0
Tellina probrina (M)	8	1.6	1.5	16	3.0
Eudevenopus honduranus (A)	7	1.4	1.3	14	4.0
Tellina texana (M)	5	1.0	2.2	10	5.0
Protohaustorius nr. deichmannae (A)	4	0.8	0.8	8	7.5
Renilla reniformis (Cn)	4	0.8	0.4	8	7.5
Strigilla mirabilis (M)	4	0.8	0.8	8	7.5
Magelona rosea (P)	4	0.8	1.1	8	7.5
Trichophoxus epistomus (A)	3	0.6	1.3	6	11.0
Mellita quinquiesperforata (E)	3	0.6	0.9	6	11.0
Tharyx marioni (P)	3	0.6	0.9	6	11.0
Dissodactylus mellitae (D)	2	0.4	0.9	4	15.5
Lucinidae (undet.) A (M)	2	0.4	0.5	4	15.5
Glycera sp. (Gar.) (P)	2	0.4	0.5	4	15.5
Goniada littorea (P)	2	0.4	0.5	4	15.5
Onuphis eremita (P)	2	0.4	0.5	4	15.5
Haploscoloplos fragilis (P)	2	0.4	0.5	4	15.5
Trachypeneus constrictus (D)	1	0.2	0.4	2	23.0
Leptochela serratorbita (D)	1	0.2	0.4	2	23.0
Pinnixa sayana (D)	1	0.2	0.4	2	23.0
Gastrosaccus sp. A (My)	1	0.2	0.4	2	23.0
Chiridotea stenops (I)	1	0.2	0.4	2	23.0
Nemertina (undet.) B	1	0.2	0.4	2	23.0
Glycera capitata (P)	1	0.2	0.4	2	23.0
Spiophanes bombyx (P)	1	0.2	0.4	2	23.0
Spiochaetopterus costarum oculatus (P)	1	0.2	0.4	2	23.0

Appendix 5.2 Abundance of macroinvertebrate species in grab collections from station DS02. (A = Amphipoda; C = Cumacea; Cn = Cnidaria; D = Decapoda; E = Echinodermata; M = Mollusca; P = Polychaeta).

	DS02				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Nephtys picta (P)	93	18.6	4.7	186	1.0
Magelona rosea (P)	33	6.6	3.8	66	2.0
Spiophanes bombyx (P)	17	3.4	2.6	34	3.0
Cirratulus sp. (P)	12	2.4	0.9	24	4.0
Dissodactylus mellitae (D)	8	1.6	2.6	16	5.0
Tharyx marioni (P)	6	1.2	1.1	12	6.5
Mellita quinquiesperforata (E)	6	1.2	2.2	12	6.5
Tellina probrina (M)	5	1.0	1.4	10	8.0
Onuphis eremita (D)	5	1.0	1.2	10	8.0
Haploscoloplos fragilis (P)	5	1.0	1.0	10	8.0
Oxyurostylis smithi (C)	4	0.8	1.1	8	11.0
Renilla reniformis (Cn)	4	0.8	0.8	8	11.0
Glycera dibranchiata (P)	4	0.8	1.3	8	11.0
Ogyrides limicola (D)	3	0.6	0.9	6	16.0
Pinnixa sayana (D)	3	0.6	0.5	6	16.0
Nemertina (undet.) A	3	0.6	0.5	6	16.0
Nemertina (undet.) B	3	0.6	1.3	6	16.0
Strigilla mirabilis (M)	3	0.6	0.9	6	16.0
Tellina texana (M)	3	0.6	0.9	6	16.0
Goniada littorea (P)	3	0.6	0.5	6	16.0
Brachyura (undet.) A (D)	2	0.4	0.5	4	21.5
Eudevenopus honduranus (A)	2	0.4	0.9	4	21.5
Owenia fusiformis (P)	2	0.4	0.5	4	21.5
Paraprionospio pinnata (P)	2	0.4	0.5	4	21.5
Leptochela serratorbita (D)	1	0.2	0.4	2	28.0
Pagurus longicarpus (D)	1	0.2	0.4	2	28.0
Decapoda larvae (undet.)	1	0.2	0.4	2	28.0
Batea catharinensis (A)	1	0.2	0.4	2	28.0
Natica pusilla (M)	1	0.2	0.4	2	28.0
Mulinia lateralis (M)	1	0.2	0.4	2	28.0
Scoloplos rubra (P)	1	0.2	0.4	2	28.0
Glycera capitata (P)	1	0.2	0.4	2	28.0
Ceratonereis irritablis (P)	1	0.2	0.4	2	28.0

Appendix 5.3 Abundance of macroinvertebrate species in grab collections from station DS03. (A = Amphipoda; C = Cumacea; Cn = Cnidaria; D = Decapoda; M = Mollusca; P = Polychaeta).

	DS03				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Spiophanes bombyx (P)	81	16.2	8.2	162	1.0
Nephtys picta (P)	70	14.0	4.4	140	2.0
Magelona phyllisae (P)	12	2.4	2.3	24	3.0
Notomastus lobatus (P)	9	1.8	1.8	18	4.5
Prionospio dayi (P)	9	1.8	1.1	18	4.5
Haploscoloplos fragilis (P)	7	1.4	0.9	14	6.0
Callianassa atlantica (D)	6	1.2	0.8	12	7.5
Phyllodoce arenae (P)	6	1.2	1.1	12	7.5
Nemertina (undet.) A	5	1.0	0.7	10	10.5
Tellina iris (M)	5	1.0	0.7	10	10.5
Cirratulus sp. (P)	5	1.0	1.0	10	10.5
Aglaophamus verrilli (P)	5	1.0	0.7	10	10.5
Ogyrides limicola (D)	4	0.8	0.4	8	14.5
Solen viridis (M)	4	0.8	1.3	8	14.5
Glycera dibranchiata (P)	4	0.8	0.8	8	14.5
Onuphis eremita (P)	4	0.8	1.1	8	14.5
Brachyura (undet.) B (D)	3	0.6	0.9	6	18.5
Tharyx marioni (P)	3	0.6	0.5	6	18.5
Goniada littorea (P)	3	0.6	0.5	6	18.5
Magelona rosea (P)	3	0.6	0.9	6	18.5
Magelona sp. (Day '73) (P)	2	0.4	0.9	4	22.5
Scoloplos rubra (P)	2	0.4	0.5	4	22.5
Paraprionospio pinnata (P)	2	0.4	0.5	4	22.5
Sthenelais limicola (P)	2	0.4	0.9	4	22.5
Leptochela serratorbita (D)	1	0.2	0.4	2	33.0
Albunea paretii (D)	1	0.2	0.4	2	33.0
Pinnixa sayana (D)	1	0.2	0.4	2	33.0
Listriella barnardi (A)	1	0.2	0.4	2	33.0
Oxyurostylis smithi (C)	1	0.2	0.4	2	33.0
Eudevenopus honduranus (A)	1	0.2	0.4	2	33.0
Renilla reniformis (Cn)	1	0.2	0.4	2	33.0
Natica pusilla (M)	1	0.2	0.4	2	33.0
Odostomia sp. A (M)	1	0.2	0.4	2	33.0
Lucinidae (undet.) A (M)	1	0.2	0.4	2	33.0
Abra aequalis (M)	1	0.2	0.4	2	33.0
Lumbrineris impatiens (P)	1	0.2	0.4	2	33.0
Glycera sp. (Gar.) (P)	1	0.2	0.4	2	33.0
Eteone lactea (P)	1	0.2	0.4	2	33.0
Lumbrineris latreilli (P)	1	0.2	0.4	2	33.0
Owenia fusiformis (P)	1	0.2	0.4	2	33.0
Magelona papillicornis (P)	1	0.2	0.4	2	33.0

Appendix 5.4 Abundance of macroinvertebrate species in grab collections from station DS04. (A = Amphipoda; C = Cumacea; Cn = Cnidaria; D = Decapoda; E = Echinodermata; M = Mollusca; P = Polychaeta; St = Stomatopoda).

	DS04				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Spiophanes bombyx (P)	96	19.2	10.6	192	1.0
Magelona sp. (Day 73) (P)	62	12.4	7.6	124	2.0
Nephtys picta (P)	34	6.8	3.2	68	3.0
Onuphis eremita (P)	18	3.6	2.1	36	4.5
Notocirrus spiniferus (P)	18	3.6	1.1	36	4.5
Callianassa atlantica (D)	9	1.8	1.9	18	7.5
Tiron tropakis (A)	9	1.8	1.1	18	7.5
Cirratulus sp. (P)	9	1.8	1.5	18	7.5
Clymenella torquata (P)	9	1.8	1.9	18	7.5
Pinnixa sayana (D)	8	1.6	1.5	16	10.0
Loimia medusa (P)	7	1.4	1.5	14	11.5
Owenia fusiformis (P)	7	1.4	1.1	14	11.5
Tellina texana (M)	6	1.2	2.2	12	15.5
Pelecypoda (undet.) B	6	1.2	1.3	12	15.5
Tharyx marioni (P)	6	1.2	0.8	12	15.5
Notomastus hemipodus (P)	6	1.2	1.6	12	15.5
Glycera dibranchiata (P)	6	1.2	1.3	12	15.5
Haploscoloplos fragilis (P)	6	1.2	1.8	12	15.5
Nemertina (undet.) A	5	1.0	1.2	10	20.5
Sigambra tentaculata (P)	5	1.0	1.2	10	20.5
Magelona phyllisae (P)	5	1.0	1.4	10	20.5
Phyllodoce arenae (P)	5	1.0	1.7	10	20.5
Glycera americana (P)	4	0.8	0.8	8	24.0
Scoloplos rubra (P)	4	0.8	0.8	8	24.0
Goniada littorea (P)	4	0.8	0.8	8	24.0
Dissodactylus mellitae (D)	3	0.6	1.3	6	28.0
Batea catharinensis (A)	3	0.6	0.9	6	28.0
Solen viridis (M)	3	0.6	0.5	6	28.0
Macroclymene zonalis (P)	3	0.6	0.9	6	28.0
Armandia agilis (P)	3	0.6	0.9	6	28.0
Oxyurostylis smithi (C)	2	0.4	0.5	4	32.5
Nemertina (undet.) B	2	0.4	0.9	4	32.5
Mellita quinquiesperforata (E)	2	0.4	0.9	4	32.5
Tellina iris (M)	2	0.4	0.5	4	32.5
Brachyura (undet.) A (D)	1	0.2	0.4	2	45.5
Pagurus longicarpus (D)	1	0.2	0.4	2	45.5
Squilla neglecta (St)	1	0.2	0.4	2	45.5
Eudevenopus honduranus (A)	1	0.2	0.4	2	45.5
Melita appendiculata (A)	1	0.2	0.4	2	45.5
Actiniaria (undet.) (Cn)	1	0.2	0.4	2	45.5
Ophiuroidea (undet.) B (E)	1	0.2	0.4	2	45.5
Turbonilla sp. A (M)	1	0.2	0.4	2	45.5
Busycon carica (M)	1	0.2	0.4	2	45.5
Abra aequalis (M)	1	0.2	0.4	2	45.5
Terebra dislocata (M)	1	0.2	0.4	2	45.5
Unknown Taxon A	1	0.2	0.4	2	45.5
Sabellaria vulgaris (P)	1	0.2	0.4	2	45.5
Glycera sp. (Gar.) (P)	1	0.2	0.4	2	45.5
Aglaophamus verrilli (P)	1	0.2	0.4	2	45.5
Lumbrineris latreilli (P)	1	0.2	0.4	2	45.5
Paranaitis polynoides (P)	1	0.2	0.4	2	45.5
Pectinaria gouldii (P)	1	0.2	0.4	2	45.5
Arabella iricolor (P)	1	0.2	0.4	2	45.5
Drilonereis magna (P)	1	0.2	0.4	2	45.5
Paraprionospio pinnata (P)	1	0.2	0.4	2	45.5
Prionospio dayi (P)	1	0.2	0.4	2	45.5

Appendix 5.5 Abundance of macroinvertebrate species in grab collections from station DS05. (A = Amphipoda; Br = Brachipoda; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida).

	DS05				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	68	13.6	9.6	136	1.0
Tharyx marioni (P)	60	12.0	9.2	120	2.0
Prionospio cristata (P)	55	11.0	3.4	110	3.0
Pseudeurythoe ambigua (P)	37	7.4	7.0	74	4.0
Nematoda (undet.)	36	7.2	4.2	72	5.0
Crassinella lunulata (M)	30	6.0	10.7	60	6.0
Sabellaria vulgaris (P)	26	5.2	11.1	52	7.5
Nephtys picta (P)	26	5.2	1.9	52	7.5
Goniadides carolinae (P)	25	5.0	5.2	50	9.0
Tiron tropakis (A)	20	4.0	5.7	40	10.0
Spiophanes bombyx (P)	14	2.8	1.9	28	11.0
Cirratulidae (undet.) B (P)	12	2.4	2.3	24	12.0
Glycera oxycephala (P)	11	2.2	2.2	22	13.5
Sigambra bassi (P)	11	2.2	1.8	22	13.5
Armandia maculata (P)	8	1.6	1.5	16	15.0
Nemertina (undet.) A	7	1.4	1.1	14	17.0
Tellina texana (M)	7	1.4	1.3	14	17.0
Glycera dibranchiata (P)	7	1.4	1.5	14	17.0
Ancinus depressus (I)	6	1.2	1.6	12	19.5
Eudevenopus honduranus (A)	6	1.2	0.4	12	19.5
Tellina probrina (M)	5	1.0	1.0	10	21.0
Mellita quinquiesperforata (E)	4	0.8	0.4	8	24.0
Crassinella martinicensis (M)	4	0.8	1.3	8	24.0
Magelona sp. (Day 73) (P)	4	0.8	0.8	8	24.0
Ancistrosyllis jonesi (P)	4	0.8	1.3	8	24.0
Drilonereis magna (P)	4	0.8	0.4	8	24.0
Pagurus longicarpus (D)	3	0.6	0.9	6	28.5
Apanthura magnifica (I)	3	0.6	0.9	6	28.5
Aspidosiphon spinalis (S)	3	0.6	1.3	6	28.5
Schistomeringos rudolphi (P)	3	0.6	0.9	6	28.5
Brachyura (undet.) A (D)	2	0.4	0.9	4	37.5
Dissodactylus mellitae (D)	2	0.4	0.9	4	37.5
Listriella barnardi (A)	2	0.4	0.9	4	37.5
Corophium sp. (A)	2	0.4	0.9	4	37.5
Ophiuroidea (undet.) B (E)	2	0.4	0.5	4	37.5
Glottidia pyramidata (Br)	2	0.4	0.5	4	37.5
Ervilia concentrica (M)	2	0.4	0.9	4	37.5
Abra aequalis (M)	2	0.4	0.5	4	37.5
Polycirrus sp. (P)	2	0.4	0.9	4	37.5
Notomastus latericeus (P)	2	0.4	0.5	4	37.5
Prionospio fallax (P)	2	0.4	0.9	4	37.5
Nereis succinea (P)	2	0.4	0.5	4	37.5
Phyllodoce arenae (P)	2	0.4	0.9	4	37.5
Prionospio dayi (P)	2	0.4	0.9	4	37.5
Pinnixa savana (D)	1	0.2	0.4	2	51.5
Portunidae (undet.) (D)	1	0.2	0.4	2	51.5
Synchelidium americanum (A)	1	0.2	0.4	2	51.5
Dentalium eboreum (M)	1	0.2	0.4	2	51.5
Nucula proxima (M)	1	0.2	0.4	2	51.5
Spisula solidissima (M)	1	0.2	0.4	2	51.5
Cirrophorus branchiatus (P)	1	0.2	0.4	2	51.5
Aricidea suecica (P)	1	0.2	0.4	2	51.5
Onuphis eremita (P)	1	0.2	0.4	2	51.5
Eteone heteropoda (P)	1	0.2	0.4	2	51.5
Exogone dispar (P)	1	0.2	0.4	2	51.5
Caulleriella killariensis (P)	1	0.2	0.4	2	51.5
Magelona rosea (P)	1	0.2	0.4	2	51.5
Phyllodocidae (undet.) (P)	1	0.2	0.4	2	51.5

Appendix 5.6 Abundance of macroinvertebrate species in grab collections from station DS06. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; Py = Pycnogonida; S = Sipunculida).

	DS06				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Nereis succinea (P)	182	36.4	17.1	364	1.0
Polycirrus eximius (P)	95	19.0	11.9	190	2.0
Crassinella lunulata (M)	78	15.6	5.1	156	3.0
Eulalia sanguinea (P)	46	9.2	6.3	92	4.0
Onuphis nebulosa (P)	39	7.8	4.1	78	5.0
Sabellaria vulgaris (P)	33	6.6	4.2	66	6.0
Cupuladria doma (Ec)	30	6.0	6.5	60	7.0
Spiophanes bombyx (P)	29	5.8	4.0	58	8.0
Lumbrineris tenuis (P)	27	5.4	4.3	54	9.0
Nematoda (undet.)	24	4.8	5.2	48	10.0
Mysidopsis bigelowi (My)	21	4.2	3.3	42	11.0
Axiothella mucosa (P)	20	4.0	1.6	40	12.5
Glycera dibranchiata (P)	20	4.0	1.9	40	12.5
Ophiuroidea (undet.) E (E)	19	3.8	3.9	38	14.0
Nephtys picta (P)	17	3.4	4.5	34	15.0
Tharyx marioni (P)	16	3.2	4.0	32	16.0
Pelecypoda (undet.) B	15	3.0	3.2	30	18.0
Magelona sp. (Day 73) (P)	15	3.0	4.5	30	18.0
Loimia medusa (P)	15	3.0	2.8	30	18.0
Natica pusilla (M)	14	2.8	3.8	28	20.0
Batea catharinensis (A)	13	2.6	3.6	26	21.0
Cyathura burbancki (I)	12	2.4	2.3	24	22.5
Nemertina (undet.) A	12	2.4	1.7	24	22.5
Lucinidae (undet.) A (M)	11	2.2	2.3	22	24.0
Hydroides uncinata (P)	10	2.0	3.9	20	25.0
Pectinaria gouldii (P)	8	1.6	1.7	16	27.0
Scolelepis texana (P)	8	1.6	1.5	16	27.0
Spiophanes wigleyi (P)	8	1.6	1.9	16	27.0
Euceramus praelongus (D)	7	1.4	1.1	14	31.5
Pagurus longicarpus (D)	7	1.4	1.7	14	31.5
Polydora sp. C (P)	7	1.4	1.7	14	31.5
Lumbrineris latreilli (P)	7	1.4	1.1	14	31.5
Aricidea suecica (P)	7	1.4	1.5	14	31.5
Chrysopetalidae (undet.) (P)	7	1.4	1.7	14	31.5
Brachyura (undet.) A (D)	6	1.2	1.3	12	38.5
Ampelisca vadorum (A)	6	1.2	1.6	12	38.5
Nucula proxima (M)	6	1.2	0.8	12	38.5
Golfingia sp. A (S)	6	1.2	1.3	12	38.5
Cirrophorus lyriformis (P)	6	1.2	0.8	12	38.5
Diopatra cuprea (P)	6	1.2	1.8	12	38.5
Drilonereis magna (P)	6	1.2	2.2	12	38.5
Lepidonotus sublevis (P)	6	1.2	1.1	12	38.5
Unciola serrata (A)	5	1.0	0.7	10	45.0
Chaetopleura apiculata (M)	5	1.0	1.7	10	45.0
Goniadides carolinae (P)	5	1.0	1.4	10	45.0
Phyllodoce arenae (P)	5	1.0	1.4	10	45.0
Ceratonereis irritablis (P)	5	1.0	2.2	10	45.0
Pinnixa sp. B (D)	4	0.8	0.4	8	52.5
Callianasidae (undet.) (D)	4	0.8	1.1	8	52.5
Tiron tropakis (A)	4	0.8	0.8	8	52.5
Corophium tuberculatum (A)	4	0.8	1.8	8	52.5
Tellina texana (M)	4	0.8	1.3	8	52.5
Macominae (undet.) A (M)	4	0.8	1.1	8	52.5
Calyptraea centralis (M)	4	0.8	0.8	8	52.5
Pelecypoda (undet.) C	4	0.8	1.3	8	52.5
Pherusa sp. (P)	4	0.8	1.8	8	52.5
Hydroides dianthus (P)	4	0.8	1.3	8	52.5
Acetes americanus (D)	3	0.6	1.3	6	64.0
Upogebia sp. (D)	3	0.6	0.9	6	64.0
Glyptoplax smithii (D)	3	0.6	0.9	6	64.0
Discoporella umbellata (Ec)	3	0.6	0.9	6	64.0
Turbonilla sp. E (M)	3	0.6	0.9	6	64.0

Appendix 5.6 (Cont.)

DS06

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Hypsicomus sp. (P)	3	0.6	0.9	6	64.0
Cirratulus sp. (P)	3	0.6	0.9	6	64.0
Owenia fusiformis (P)	3	0.6	0.5	6	64.0
Onuphis eremita (P)	3	0.6	1.3	6	64.0
Arabella iricolor (P)	3	0.6	1.3	6	64.0
Odontosyllis fulgurans (P)	3	0.6	0.9	6	64.0
Mediomastus californiensis (P)	3	0.6	0.9	6	64.0
Clymenella torquata (P)	3	0.6	1.3	6	64.0
Trachypeneus constrictus (D)	2	0.4	0.9	4	81.5
Panopeus sp. (D)	2	0.4	0.9	4	81.5
Brachyura (undet.) B (D)	2	0.4	0.9	4	81.5
Calappidae (undet.) (D)	2	0.4	0.9	4	81.5
Pinnixa retinens (D)	2	0.4	0.5	4	81.5
Processa hemphilli (D)	2	0.4	0.9	4	81.5
Eudevenopus honduranus (A)	2	0.4	0.5	4	81.5
Nemertina (undet.) B	2	0.4	0.9	4	81.5
Glottidia pyramidata (Br)	2	0.4	0.5	4	81.5
Tellina iris (M)	2	0.4	0.9	4	81.5
Turridae (undet.) A (M)	2	0.4	0.9	4	81.5
Anachis obesa (M)	2	0.4	0.5	4	81.5
Mitrella lunata (M)	2	0.4	0.5	4	81.5
Aspidosiphon spinalis (S)	2	0.4	0.5	4	81.5
Sabellaria floridensis (P)	2	0.4	0.9	4	81.5
Nereis sp. B (P)	2	0.4	0.9	4	81.5
Glycera oxycephala (P)	2	0.4	0.5	4	81.5
Autolytus dentalius (P)	2	0.4	0.9	4	81.5
Glycinde solitaria (P)	2	0.4	0.9	4	81.5
Haploscoloplos fragilis (P)	2	0.4	0.5	4	81.5
Paraprionospio pinnata (P)	2	0.4	0.9	4	81.5
Hemipodus roseus (P)	2	0.4	0.9	4	81.5
Branchiostoma caribaeum (Cc)	1	0.2	0.4	2	109.0
Latreutes parvulus (D)	1	0.2	0.4	2	109.0
Hepatus epheliticus (D)	1	0.2	0.4	2	109.0
Heterocrypta granulata (D)	1	0.2	0.4	2	109.0
Portunidae (undet.) (D)	1	0.2	0.4	2	109.0
Gastrosaccus sp. A (My)	1	0.2	0.4	2	109.0
Oxyurostylis smithi (C)	1	0.2	0.4	2	109.0
Anoplodactylus petiolatus (Py)	1	0.2	0.4	2	109.0
Ophiolepis elegans (E)	1	0.2	0.4	2	109.0
Astropecten sp. (E)	1	0.2	0.4	2	109.0
Asteroidea (undet.) (E)	1	0.2	0.4	2	109.0
Odostomia sp. B (M)	1	0.2	0.4	2	109.0
Pelecypoda (undet.) E	1	0.2	0.4	2	109.0
Ervilia concentrica (M)	1	0.2	0.4	2	109.0
Asthenothaerus sp. (M)	1	0.2	0.4	2	109.0
Gastrochaena hians (M)	1	0.2	0.4	2	109.0
Episcynia sp. (M)	1	0.2	0.4	2	109.0
Dentalium eboreum (M)	1	0.2	0.4	2	109.0
Anomia simplex (M)	1	0.2	0.4	2	109.0
Chama macerophylla (M)	1	0.2	0.4	2	109.0
Arcinella cornuta (M)	1	0.2	0.4	2	109.0
Ensis directus (M)	1	0.2	0.4	2	109.0
Melinnopsis atlantica (P)	1	0.2	0.4	2	109.0
Scoloplos rubra (P)	1	0.2	0.4	2	109.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	109.0
Aedicira belgicae (P)	1	0.2	0.4	2	109.0
Armandia maculata (P)	1	0.2	0.4	2	109.0
Hesionidae (undet.) (P)	1	0.2	0.4	2	109.0
Ampharete americana (P)	1	0.2	0.4	2	109.0
Schistomeringos rudolphi (P)	1	0.2	0.4	2	109.0
Sigambra bassi (P)	1	0.2	0.4	2	109.0
Sthenelais limicola (P)	1	0.2	0.4	2	109.0
Polyodontes lupinus (P)	1	0.2	0.4	2	109.0

Appendix 5.7 Abundance of macroinvertebrate species in grab collections from station DS07. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; Cn = Cnidaria; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida).

	DS07				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Cupuladria doma (Ec)	337	67.4	25.8	674	1.0
Goniadides carolinae (P)	96	19.2	18.9	192	2.0
Crassinella lunulata (M)	54	10.8	15.0	108	3.0
Polycirrus eximius (P)	45	9.0	6.0	90	4.0
Prionospio cristata (P)	38	7.6	6.5	76	5.0
Lumbrineris latreilli (P)	30	6.0	3.8	60	6.0
Nereis succinea (P)	23	4.6	3.6	46	7.0
Hemipodus roseus (P)	22	4.4	5.0	44	8.0
Nematoda (undet.)	21	4.2	4.0	42	10.0
Nucula proxima (M)	21	4.2	4.4	42	10.0
Oligochaeta (undet.)	21	4.2	5.4	42	10.0
Branchiostoma caribaeum (Cc)	18	3.6	3.7	36	12.5
Eulalia sanguinea (P)	18	3.6	3.9	36	12.5
Tellina probrina (M)	15	3.0	3.2	30	15.0
Nephtys picta (P)	15	3.0	1.4	30	15.0
Mediomastus californiensis (P)	15	3.0	2.5	30	15.0
Calyptraea centralis (M)	14	2.8	1.3	28	17.0
Axiothella mucosa (P)	13	2.6	2.6	26	18.0
Batea catharinensis (A)	12	2.4	5.4	24	19.5
Spiophanes bombyx (P)	12	2.4	1.1	24	19.5
Armandia maculata (P)	11	2.2	2.8	22	21.0
Tellina texana (M)	10	2.0	0.0	20	23.0
Abra aequalis (M)	10	2.0	2.3	20	23.0
Aspidosiphon spinalis (S)	10	2.0	2.3	20	23.0
Pinnixa sayana (D)	8	1.6	1.1	16	25.5
Crassinella martinicensis (M)	8	1.6	1.8	16	25.5
Nemertina (undet.) A	7	1.4	2.1	14	28.5
Lumbrineris impatiens (P)	7	1.4	3.1	14	28.5
Tharyx marioni (P)	7	1.4	2.6	14	28.5
Ceratonereis irritablis (P)	7	1.4	3.1	14	28.5
Glottidia pyramidata (Br)	6	1.2	0.8	12	32.0
Pseudeurythoe ambigua (P)	6	1.2	1.1	12	32.0
Onuphis eremita (P)	6	1.2	1.3	12	32.0
Lembos unicornis (A)	5	1.0	1.4	10	35.5
Natica pusilla (M)	5	1.0	1.0	10	35.5
Phyllodoce arenae (P)	5	1.0	1.7	10	35.5
Clymenella torquata (P)	5	1.0	1.7	10	35.5
Trachypeneus constrictus (D)	4	0.8	1.3	8	41.5
Glyptoplax smithii (D)	4	0.8	1.8	8	41.5
Pelecypoda (undet.) F (M)	4	0.8	1.3	8	41.5
Acteocina candei (M)	4	0.8	1.3	8	41.5
Lucinidae (undet.) A (M)	4	0.8	0.8	8	41.5
Anachis obesa (M)	4	0.8	0.4	8	41.5
Aspidosiphon misakiensis (S)	4	0.8	0.8	8	41.5
Lumbrineris tenuis (P)	4	0.8	1.3	8	41.5
Mysidopsis bigelowi (My)	3	0.6	1.3	6	49.5
Tiron tropakis (A)	3	0.6	0.5	6	49.5
Macominae (undet.) A (M)	3	0.6	0.9	6	49.5
Cirratulus sp. (P)	3	0.6	0.9	6	49.5
Pista cristata (P)	3	0.6	0.9	6	49.5
Nephtys incisa (P)	3	0.6	1.3	6	49.5
Pectinaria gouldii (P)	3	0.6	0.5	6	49.5
Haploscoloplos fragilis (P)	3	0.6	0.9	6	49.5
Leptochela serratorbita (D)	2	0.4	0.5	4	62.5
Latreutes parvulus (D)	2	0.4	0.9	4	62.5
Brachyura (undet.) A (D)	2	0.4	0.9	4	62.5
Pagurus longicarpus (D)	2	0.4	0.9	4	62.5
Liljeborgia sp. (A)	2	0.4	0.5	4	62.5
Gastrosaccus sp. (My)	2	0.4	0.5	4	62.5
Melita nitida (A)	2	0.4	0.9	4	62.5
Oxyurostylis smithi (C)	2	0.4	0.9	4	62.5

Appendix 5.7 (Cont.)

DS07

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Pelecypoda (undet.) B (M)	2	0.4	0.5	4	62.5
Turridae (undet.) B (M)	2	0.4	0.5	4	62.5
Mitrella lunata (M)	2	0.4	0.5	4	62.5
Chaetopleura apiculata (M)	2	0.4	0.9	4	62.5
Chama macerophylla (M)	2	0.4	0.9	4	62.5
Glycera oxycephala (P)	2	0.4	0.5	4	62.5
Onuphis nebulosa (P)	2	0.4	0.9	4	62.5
Owenia fusiformis (P)	2	0.4	0.5	4	62.5
Glycera dibranchiata (P)	2	0.4	0.5	4	62.5
Magelona rosea (P)	2	0.4	0.5	4	62.5
Brachyura (undet.) B (D)	1	0.2	0.4	2	95.0
Euceramus praelongus (D)	1	0.2	0.4	2	95.0
Calappidae (undet.) (D)	1	0.2	0.4	2	95.0
Heterocrypta granulata (D)	1	0.2	0.4	2	95.0
Callianassa atlantica (D)	1	0.2	0.4	2	95.0
Rudilemboides sp. (A)	1	0.2	0.4	2	95.0
Cumacea (undet.) E	1	0.2	0.4	2	95.0
Isopoda (undet.) A	1	0.2	0.4	2	95.0
Ampelisca verrilli (A)	1	0.2	0.4	2	95.0
Unciola serrata (A)	1	0.2	0.4	2	95.0
Cyathura burbancki (I)	1	0.2	0.4	2	95.0
Actiniaria (undet.) (Cn)	1	0.2	0.4	2	95.0
Ophiuroidea (undet.) B (E)	1	0.2	0.4	2	95.0
Holothuroidea (undet.) A (E)	1	0.2	0.4	2	95.0
Holothuroidea (undet.) B (E)	1	0.2	0.4	2	95.0
Tellina sp. D (M)	1	0.2	0.4	2	95.0
Odostomia sp. B (M)	1	0.2	0.4	2	95.0
Turbonilla sp. C (M)	1	0.2	0.4	2	95.0
Ervilia concentrica (M)	1	0.2	0.4	2	95.0
Solenidae (undet.) (M)	1	0.2	0.4	2	95.0
Epitonium multistriatum (M)	1	0.2	0.4	2	95.0
Anachis avara (M)	1	0.2	0.4	2	95.0
Pteromeris perplana (M)	1	0.2	0.4	2	95.0
Turridae (undet.) C (M)	1	0.2	0.4	2	95.0
Polyplacophora (undet.) A (M)	1	0.2	0.4	2	95.0
Corbula barrattiana (M)	1	0.2	0.4	2	95.0
Peristichia toreta (M)	1	0.2	0.4	2	95.0
Calliostoma sp. (M)	1	0.2	0.4	2	95.0
Anatina anatina (M)	1	0.2	0.4	2	95.0
Solen viridis (M)	1	0.2	0.4	2	95.0
Sabellaria vulgaris (P)	1	0.2	0.4	2	95.0
Loimia medusa (P)	1	0.2	0.4	2	95.0
Cirrophorus lyriformis (P)	1	0.2	0.4	2	95.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	95.0
Lumbrineris sp. A (P)	1	0.2	0.4	2	95.0
Laonice cirrata (P)	1	0.2	0.4	2	95.0
Hydroides protulicola (P)	1	0.2	0.4	2	95.0
Nephtys squamosa (P)	1	0.2	0.4	2	95.0
Syllidae (undet.) A (P)	1	0.2	0.4	2	95.0
Syllis regulata carolinae (P)	1	0.2	0.4	2	95.0
Diopatra cuprea (P)	1	0.2	0.4	2	95.0
Arabella iricolor (P)	1	0.2	0.4	2	95.0
Drilonereis magna (P)	1	0.2	0.4	2	95.0
Aricidea sp. A (P)	1	0.2	0.4	2	95.0
Paraprionospio pinnata (P)	1	0.2	0.4	2	95.0
Marphysa sanguinea (P)	1	0.2	0.4	2	95.0
Polydora caeca (P)	1	0.2	0.4	2	95.0

Appendix 5.8 Abundance of macroinvertebrate species in grab collections from station DS08. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida).

	DS08				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Cupuladria doma (Ec)	101	20.2	22.1	202	1.0
Nematoda (undet.)	63	12.6	13.2	126	2.0
Tellina texana (M)	37	7.4	4.1	74	3.0
Nephtys picta (P)	35	7.0	6.2	70	4.0
Pagurus longicarpus (D)	27	5.4	5.2	54	5.0
Crassinella lunulata (M)	25	5.0	6.4	50	6.5
Onuphis eremita (P)	25	5.0	3.7	50	6.5
Tiron tropakis (A)	16	3.2	1.3	32	8.0
Nemertina (undet.) A	15	3.0	1.2	30	9.0
Magelona sp. (Day 73) (P)	14	2.8	3.0	28	10.0
Polycirrus eximius (P)	13	2.6	2.5	26	11.0
Corbula barrattiana (M)	10	2.0	3.1	20	12.0
Trachypeneus constrictus (D)	8	1.6	0.9	16	13.5
Mysidopsis bigelowi (My)	8	1.6	3.0	16	13.5
Eudevenopus honduranus (A)	7	1.4	1.1	14	18.5
Mellita quinquiesperforata (E)	7	1.4	0.9	14	18.5
Ophiophragmus sp. A (E)	7	1.4	2.2	14	18.5
Ervilia concentrica (M)	7	1.4	1.1	14	18.5
Goniadides carolinae (P)	7	1.4	2.6	14	18.5
Spiophanes bombyx (P)	7	1.4	2.1	14	18.5
Eulalia sanguinea (P)	7	1.4	1.9	14	18.5
Phyllodoce arenae (P)	7	1.4	0.9	14	18.5
Latreutes parvulus (D)	6	1.2	1.1	12	24.5
Brachyura (undet.) B (D)	6	1.2	2.2	12	24.5
Discoporella umbellata (Ec)	6	1.2	1.8	12	24.5
Nereis succinea (P)	6	1.2	1.6	12	24.5
Ogyrides limicola (D)	5	1.0	1.0	10	29.5
Aspidosiphon spinalis (S)	5	1.0	0.7	10	29.5
Axiothella mucosa (P)	5	1.0	0.7	10	29.5
Pectinaria gouldii (P)	5	1.0	1.0	10	29.5
Haploscoloplos fragilis (P)	5	1.0	0.7	10	29.5
Spio setosa (P)	5	1.0	1.4	10	29.5
Branchiostoma caribaeum (Cc)	4	0.8	1.3	8	37.5
Leptochela serratorbita (D)	4	0.8	1.1	8	37.5
Processa hemphilli (D)	4	0.8	1.3	8	37.5
Ophiuroidea (undet.) E (E)	4	0.8	1.3	8	37.5
Natica pusilla (M)	4	0.8	1.1	8	37.5
Calyptraea centralis (M)	4	0.8	0.8	8	37.5
Pelecypoda (undet.) G	4	0.8	0.8	8	37.5
Nucula proxima (M)	4	0.8	1.3	8	37.5
Loimia medusa (P)	4	0.8	1.3	8	37.5
Prionospio cristata (P)	4	0.8	1.1	8	37.5
Euceramus praelongus (D)	3	0.6	0.5	6	47.0
Hypoconcha sabulosa (D)	3	0.6	1.3	6	47.0
Pinnixa retinens (D)	3	0.6	0.9	6	47.0
Batea catharinensis (A)	3	0.6	0.9	6	47.0
Oxyurostylis smithi (C)	3	0.6	0.5	6	47.0
Holothuroidea (undet.) B (E)	3	0.6	0.9	6	47.0
Lucinidae (undet.) A (M)	3	0.6	0.9	6	47.0
Anachis obesa (M)	3	0.6	0.9	6	47.0
Goniada littorea (P)	3	0.6	0.9	6	47.0
Trichophoxus floridanus (A)	2	0.4	0.9	4	58.5
Cyclaspis varians (C)	2	0.4	0.5	4	58.5
Erichthonius brasiliensis (A)	2	0.4	0.5	4	58.5
Turbonilla sp. A (M)	2	0.4	0.5	4	58.5
Cylichnella bidentata (M)	2	0.4	0.5	4	58.5
Polinices duplicatus (M)	2	0.4	0.5	4	58.5
Olivella floralia (M)	2	0.4	0.5	4	58.5
Goniada sp. A (P)	2	0.4	0.9	4	58.5
Glycera sp. (Gar.) (P)	2	0.4	0.9	4	58.5
Glycera oxycephala (P)	2	0.4	0.5	4	58.5
Onuphis nebulosa (P)	2	0.4	0.9	4	58.5
Glycera dibranchiata (P)	2	0.4	0.9	4	58.5
Odontosyllis fulgurans (P)	2	0.4	0.9	4	58.5
Armandia maculata (P)	2	0.4	0.5	4	58.5

Appendix 5.8 (Cont.)

Species	DS08 Total Number	Number/0.1m² $\bar{x}$	Number/0.1m² SD	Estimated Number/m²	Rank by Number
Majidae (undet.) A (D)	1	0.2	0.4	2	86.0
Mesorhoea sexspinosa (D)	1	0.2	0.4	2	86.0
Glyptoplax smithii (D)	1	0.2	0.4	2	86.0
Elasmopus levis (A)	1	0.2	0.4	2	86.0
Trichophoxus epistomus (A)	1	0.2	0.4	2	86.0
Rudilemboides sp. (A)	1	0.2	0.4	2	86.0
Jerbarnia sp. (A)	1	0.2	0.4	2	86.0
Lembos smithi (A)	1	0.2	0.4	2	86.0
Unciola serrata (A)	1	0.2	0.4	2	86.0
Apanthura magnifica (I)	1	0.2	0.4	2	86.0
Turbellaria (undet.)	1	0.2	0.4	2	86.0
Nemertina (undet.) B	1	0.2	0.4	2	86.0
Ophiothrix angulata (E)	1	0.2	0.4	2	86.0
Hemichordata (undet.)	1	0.2	0.4	2	86.0
Olivella mutica (M)	1	0.2	0.4	2	86.0
Acteocina candei (M)	1	0.2	0.4	2	86.0
Pandora trilineata (M)	1	0.2	0.4	2	86.0
Terebra sp. A (M)	1	0.2	0.4	2	86.0
Pelecypoda (undet.) C	1	0.2	0.4	2	86.0
Mitrella lunata (M)	1	0.2	0.4	2	86.0
Crassispira sp. (M)	1	0.2	0.4	2	86.0
Anadara transversa (M)	1	0.2	0.4	2	86.0
Mercenaria mercenaria (M)	1	0.2	0.4	2	86.0
Ensis directus (M)	1	0.2	0.4	2	86.0
Aspidosiphon misakiensis (S)	1	0.2	0.4	2	86.0
Cirratulus sp. (P)	1	0.2	0.4	2	86.0
Tharyx marioni (P)	1	0.2	0.4	2	86.0
Lumbrineris latreilli (P)	1	0.2	0.4	2	86.0
Armandia agilis (P)	1	0.2	0.4	2	86.0
Aricidea suecica (P)	1	0.2	0.4	2	86.0
Prionospio fallax (P)	1	0.2	0.4	2	86.0
Owenia fusiformis (P)	1	0.2	0.4	2	86.0
Drilonereis magna (P)	1	0.2	0.4	2	86.0
Magelona papillicornis (P)	1	0.2	0.4	2	86.0
Paraprionospio pinnata (P)	1	0.2	0.4	2	86.0
Oligochaeta (undet.)	1	0.2	0.4	2	86.0
Mediomastus californiensis (P)	1	0.2	0.4	2	86.0
Ampharete americana (P)	1	0.2	0.4	2	86.0
Notocirrus spiniferus (P)	1	0.2	0.4	2	86.0
Prionospio dayi (P)	1	0.2	0.4	2	86.0
Chrysopetalidae (undet.) (P)	1	0.2	0.4	2	86.0

Appendix 5.9 Abundance of macroinvertebrate species in grab collections from station DS09. (A = Amphipoda; C = Cumacea; Oc = Cephalochordata; Cn = Cnidaria; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS09				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	67	13.4	10.0	134	1.0
Protohaustorius nr. deichmannae (A)	29	5.8	6.0	58	2.0
Tellina probrina (M)	25	5.0	4.4	50	3.0
Onuphis eremita (P)	23	4.6	2.5	46	4.0
Glycera oxycephala (P)	19	3.8	3.1	38	5.0
Acanthohaustorius millsi (A)	18	3.6	4.0	36	7.5
Aspidosiphon spinalis (S)	18	3.6	2.6	36	7.5
Nephtys picta (P)	18	3.6	2.1	36	7.5
Prionospio cristata (P)	18	3.6	6.4	36	7.5
Acanthohaustorius sp. (A)	15	3.0	2.4	30	10.0
Mellita quinquiesperforata (E)	12	2.4	2.8	24	11.5
Ervilia concentrica (M)	12	2.4	1.5	24	11.5
Nematoda (undet.)	10	2.0	1.4	20	13.5
Cupuladria doma (Ec)	10	2.0	1.6	20	13.5
Apanthura magnifica (I)	8	1.6	0.9	16	15.5
Crassinella martinicensis (M)	8	1.6	2.5	16	15.5
Oligochaeta (undet.)	7	1.4	1.7	14	17.0
Trichophoxus floridanus (A)	6	1.2	0.4	12	20.0
Strigilla mirabilis (M)	6	1.2	1.6	12	20.0
Prionospio fallax (P)	6	1.2	2.2	12	20.0
Diopatra cuprea (P)	6	1.2	2.2	12	20.0
Hemipodus roseus (P)	6	1.2	2.2	12	20.0
Oxyurostylis smithi (C)	5	1.0	1.2	10	24.0
Ancinus depressus (I)	5	1.0	1.0	10	24.0
Nemertina (undet.) A	5	1.0	1.2	10	24.0
Nemertina (undet.) B	4	0.8	0.8	8	27.5
Discoporella umbellata (Ec)	4	0.8	1.8	8	27.5
Abra aequalis (M)	4	0.8	1.1	8	27.5
Spio pettiboneae (P)	4	0.8	1.8	8	27.5
Trichophoxus epistomus (A)	3	0.6	1.3	6	32.5
Cyathura burbancki (I)	3	0.6	1.3	6	32.5
Eudevenopus honduranus (A)	3	0.6	0.9	6	32.5
Semele nuculoides (M)	3	0.6	1.3	6	32.5
Cirratulidae (undet.) B (P)	3	0.6	0.9	6	32.5
Spiophanes bombyx (P)	3	0.6	0.5	6	32.5
Pagurus longicarpus (D)	2	0.4	0.9	4	41.0
Pinnixa sayana (D)	2	0.4	0.5	4	41.0
Amphipoda (undet.) A	2	0.4	0.5	4	41.0
Gastrosaccus sp.A (My)	2	0.4	0.5	4	41.0
Leptognatha caeca (T)	2	0.4	0.5	4	41.0
Crepidula sp. (M)	2	0.4	0.9	4	41.0
Spisula solidissima (M)	2	0.4	0.5	4	41.0
Crassinella lunulata (M)	2	0.4	0.9	4	41.0
Goniadides carolinae (P)	2	0.4	0.9	4	41.0
Paraonis sp. A (P)	2	0.4	0.9	4	41.0
Nephtys bucera (P)	2	0.4	0.9	4	41.0
Emerita talpoida (D)	1	0.2	0.4	2	61.0
Pinnixa sp. (D)	1	0.2	0.4	2	61.0
Maera caroliniana (A)	1	0.2	0.4	2	61.0
Melita nitida (A)	1	0.2	0.4	2	61.0
Lembos smithi (A)	1	0.2	0.4	2	61.0
Tiron tropakis (A)	1	0.2	0.4	2	61.0
Actiniaria (undet.) (Cn)	1	0.2	0.4	2	61.0
Turbellaria (undet.)	1	0.2	0.4	2	61.0
Ophiothrix angulata (E)	1	0.2	0.4	2	61.0
Ophiophragmus sp. A (E)	1	0.2	0.4	2	61.0
Natica pusilla (M)	1	0.2	0.4	2	61.0
Acteocina candei (M)	1	0.2	0.4	2	61.0
Corbula barrattiana (M)	1	0.2	0.4	2	61.0
Mitrella lunata (M)	1	0.2	0.4	2	61.0
Magelona sp. (Day '73) (P)	1	0.2	0.4	2	61.0

Appendix 5.9 (Cont.)

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
		DS09			
Goniada littorea (P)	1	0.2	0.4	2	61.0
Lumbrineris latreilli (P)	1	0.2	0.4	2	61.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	61.0
Nephtys incisa (P)	1	0.2	0.4	2	61.0
Notomastus hemipodus (P)	1	0.2	0.4	2	61.0
Polydora sp. A (P)	1	0.2	0.4	2	61.0
Polydora sp. B (P)	1	0.2	0.4	2	61.0
Nemertina (undet.) C	1	0.2	0.4	2	61.0
Synelmis albini (P)	1	0.2	0.4	2	61.0
Prionospio cirrobranchiata (P)	1	0.2	0.4	2	61.0
Armandia maculata (P)	1	0.2	0.4	2	61.0
Caulleriella killariensis (P)	1	0.2	0.4	2	61.0
Phyllodoce arenae (P)	1	0.2	0.4	2	61.0
Ceratonereis irritablis (P)	1	0.2	0.4	2	61.0

Appendix 5.10 Abundance of macroinvertebrate species in grab collections from station DS10. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; E = Echinodermata; Ec = Ectoprocta); I = Isopoda; M = Mollusca; P = Polychaeta).

	DS10				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Strigilla mirabilis (M)	63	12.6	4.2	126	1.0
Tellina probrina (M)	40	8.0	1.2	80	2.0
Mellita quinquiesperforata (E)	27	5.4	3.2	54	3.0
Protohaustorius nr. deichmannae (A)	15	3.0	2.3	30	4.0
Trichophoxus epistomus (A)	13	2.6	1.8	26	5.0
Nemertina (undet.) A	9	1.8	1.5	18	6.0
Glycera oxycephala (P)	7	1.4	1.1	14	7.5
Acanthohaustorius sp. (A)	7	1.4	1.7	14	7.5
Nephtys picta (P)	6	1.2	0.8	12	9.0
Tellina texana (M)	5	1.0	1.0	10	10.0
Spiophanes bombyx (P)	4	0.8	0.8	8	12.5
Eudevenopus honduranus (A)	4	0.8	0.8	8	12.5
Bathyporeia parkeri (A)	4	0.8	0.8	8	12.5
Tellina sp. (M)	4	0.8	0.8	8	12.5
Onuphis eremita (P)	3	0.6	0.9	6	15.5
Olivella mutica (M)	3	0.6	0.5	6	15.5
Nematoda (undet.)	2	0.4	0.5	4	17.0
Glycera americana (P)	1	0.2	0.4	2	24.5
Crassinella martinicensis (M)	1	0.2	0.4	2	24.5
Ervilia concentrica (M)	1	0.2	0.4	2	24.5
Tiron tropakis (A)	1	0.2	0.4	2	24.5
Oxyurostylis smithi (C)	1	0.2	0.4	2	24.5
Ancinus depressus (I)	1	0.2	0.4	2	24.5
Oligochaeta (undet.)	1	0.2	0.4	2	24.5
Ophiophragmus sp. A (E)	1	0.2	0.4	2	24.5
Nemertina (undet.) B	1	0.2	0.4	2	24.5
Discoporella umbellata (Ec)	1	0.2	0.4	2	24.5
Pareulepis sp. (P)	1	0.2	0.4	2	24.5
Branchiostoma caribaeum (Cc)	1	0.2	0.4	2	24.5
Natica pusilla (M)	1	0.2	0.4	2	24.5
Hesionidae (undet.) A (P)	1	0.2	0.4	2	24.5

Appendix 5.11 Abundance of macroinvertebrate species in grab collections from station DS11. (A = Amphipoda; C = Cumacea; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta).

Species	DS11 Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Strigilla mirabilis (M)	56	11.2	6.5	112	1.0
Discoporella umbellata (Ec)	44	8.8	5.4	88	2.0
Protohaustorius nr. deichmannae (A)	33	6.6	5.6	66	3.0
Tellina texana (M)	15	3.0	2.0	30	4.0
Spiophanes bombyx (P)	14	2.8	2.2	28	5.5
Nephtys picta (P)	14	2.8	2.0	28	5.5
Nemertina (undet.) A	10	2.0	1.0	20	7.0
Trichophoxus epistomus (A)	7	1.4	1.9	14	8.0
Onuphis eremita (P)	6	1.2	0.8	12	9.0
Ophiophragmus sp. A. (E)	5	1.0	1.0	10	10.0
Lucinidae (undet.) A (M)	4	0.8	0.8	8	12.0
Glycera oxycephala (P)	4	0.8	1.3	8	12.0
Magelona papillicornis (P)	4	0.8	0.8	8	12.0
Tellina sp. (M)	3	0.6	0.9	6	14.5
Terebra concava (M)	3	0.6	0.5	6	14.5
Trachypeneus constrictus (D)	2	0.4	0.5	4	18.0
Acanthohaustorius sp. (A)	2	0.4	0.5	4	18.0
Gastrosaccus sp. A (My)	2	0.4	0.5	4	18.0
Oxyurostylis smithi (C)	2	0.4	0.9	4	18.0
Aricidea sp. A	2	0.4	0.5	4	18.0
Brachyura (undet.) A (D)	1	0.2	0.4	2	30.5
Brachyura (undet.) B (D)	1	0.2	0.4	2	30.5
Pagurus longicarpus (D)	1	0.2	0.4	2	30.5
Albunea paretti (D)	1	0.2	0.4	2	30.5
Lepidopa websteri (D)	1	0.2	0.4	2	30.5
Mysidacea (undet.) A	1	0.2	0.4	2	30.5
Chiridotea stenops (I)	1	0.2	0.4	2	30.5
Eudevenopus honduranus (A)	1	0.2	0.4	2	30.5
Turbellaria (undet.)	1	0.2	0.4	2	30.5
Mellita quinquiesperforata (E)	1	0.2	0.4	2	30.5
Turbonilla sp. B (M)	1	0.2	0.4	2	30.5
Ervilia concentrica (M)	1	0.2	0.4	2	30.5
Turridae (undet.) A (M)	1	0.2	0.4	2	30.5
Goniada littorea (P)	1	0.2	0.4	2	30.5
Lumbrineris latreilli (P)	1	0.2	0.4	2	30.5
Armandia agilis (P)	1	0.2	0.4	2	30.5
Notomastus latericeus (P)	1	0.2	0.4	2	30.5
Owenia fusiformis (P)	1	0.2	0.4	2	30.5
Armandia maculata (P)	1	0.2	0.4	2	30.5
Prionospio dayi (P)	1	0.2	0.4	2	30.5

Appendix 5.12 Abundance of macroinvertebrate species in grab collections from station DS12. (A = Amphipoda; C = Cumacea; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; M = Mollusca; My = Mysidacea; S = Sipunculida; P = Polychaeta; Ph = Phoronida).

	DS12				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Protohaustorius nr. deichmannae (A)	97	19.4	13.4	194	1.0
Mellita quinquiesperforata (E)	47	9.4	3.8	94	2.0
Pagurus longicarpus (D)	29	5.8	9.1	58	3.0
Tellina texana (M)	23	4.6	1.9	46	4.0
Spiophanes bombyx (P)	21	4.2	3.6	42	5.0
Discoporella umbellata (Ec)	17	3.4	2.4	34	6.5
Onuphis eremita (P)	17	3.4	1.3	34	6.5
Strigilla mirabilis (M)	12	2.4	2.5	24	8.0
Eudevenopus honduranus (A)	10	2.0	1.6	20	9.5
Nephtys picta (P)	10	2.0	1.6	20	9.5
Trichophoxus epistomus (A)	8	1.6	0.9	16	11.0
Ervilia concentrica (M)	7	1.4	1.1	14	12.0
Trachypeneus constrictus (D)	6	1.2	1.1	12	15.0
Ogyrides limicola (D)	6	1.2	0.8	12	15.0
Nemertina (undet.) A	6	1.2	1.1	12	15.0
Magelona papillicornis (P)	6	1.2	1.3	12	15.0
Prionospio dayi (P)	6	1.2	1.3	12	15.0
Magelona sp. (Day '73) (P)	5	1.0	1.2	10	19.0
Armandia maculata (P)	5	1.0	0.7	10	19.0
Ophiophragmus sp. A (E)	5	1.0	1.2	10	19.0
Oxyurostylis smithi (C)	4	0.8	0.8	8	22.0
Goniada littorea (P)	4	0.8	1.3	8	22.0
Polydora sp. B (P)	4	0.8	0.8	8	22.0
Synchelidium americanum (A)	3	0.6	0.9	6	25.5
Gastrosaccus sp. A (My)	3	0.6	0.5	6	25.5
Natica pusilla (M)	3	0.6	0.5	6	25.5
Cylichnella bidentata (M)	3	0.6	1.3	6	25.5
Leptochela serratorbita (D)	2	0.4	0.5	4	36.0
Brachyura (undet.) A (D)	2	0.4	0.5	4	36.0
Brachyura (undet.) B (D)	2	0.4	0.5	4	36.0
Albunea paretii (D)	2	0.4	0.5	4	36.0
Ostracoda (undet.)	2	0.4	0.5	4	36.0
Tiron tropakis (A)	2	0.4	0.9	4	36.0
Nemertina (undet.) B	2	0.4	0.5	4	36.0
Nematoda (undet.)	2	0.4	0.5	4	36.0
Tellina iris (M)	2	0.4	0.5	4	36.0
Acteocina candei (M)	2	0.4	0.5	4	36.0
Aspidosiphon misakiensis (S)	2	0.4	0.5	4	36.0
Aspidosiphon spinalis (S)	2	0.4	0.5	4	36.0
Aglaophamus verrilli (P)	2	0.4	0.5	4	36.0
Lumbrineris latreilli (P)	2	0.4	0.5	4	36.0
Scoloplos acmeceps (P)	2	0.4	0.9	4	36.0
Owenia fusiformis (P)	2	0.4	0.5	4	36.0
Prionospio cristata (P)	2	0.4	0.5	4	36.0
Acanthohaustorius sp. (A)	1	0.2	0.4	2	54.0
Luconacia incerta (A)	1	0.2	0.4	2	54.0
Phoronis sp. A (Ph)	1	0.2	0.4	2	54.0
Olivella mutica (M)	1	0.2	0.4	2	54.0
Turridae (undet.) C (M)	1	0.2	0.4	2	54.0
Corbula barrattiana (M)	1	0.2	0.4	2	54.0
Polinices duplicatus (M)	1	0.2	0.4	2	54.0
Lucinidae (undet.) A (M)	1	0.2	0.4	2	54.0
Dentalium eboreum (M)	1	0.2	0.4	2	54.0
Tellina sp. (M)	1	0.2	0.4	2	54.0
Terebra concava (M)	1	0.2	0.4	2	54.0
Epitonium angulatum (M)	1	0.2	0.4	2	54.0
Nereis acuminata (P)	1	0.2	0.4	2	54.0
Tharyx marioni (P)	1	0.2	0.4	2	54.0
Nephtys incisa (P)	1	0.2	0.4	2	54.0
Aricidea sp. A (P)	1	0.2	0.4	2	54.0
Paraprionospio pinnata (P)	1	0.2	0.4	2	54.0
Ceratocephale sp. (P)	1	0.2	0.4	2	54.0
Magelona rosea (P)	1	0.2	0.4	2	54.0

Appendix 5.13 Abundance of macroinvertebrate species in grab collections from station DS13. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; Cn = Cnidaria; D = Decapoda; E = Echinodermata: Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida).

	DS13				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Nematoda (undet.)	195	39.0	26.9	390	1.0
Polycirrus eximius (P)	112	22.4	19.4	224	2.0
Lumbrineris latreilli (P)	96	19.2	16.0	192	3.0
Ceratonereis irritablis (P)	93	18.6	19.8	186	4.0
Goniadides carolinae (P)	86	17.2	18.1	172	5.0
Spiophanes bombyx (P)	78	15.6	10.0	156	6.0
Eulalia sanguinea (P)	57	11.4	8.4	114	7.0
Nereis succinea (P)	54	10.8	14.0	108	8.0
Crassinella lunulata (M)	51	10.2	9.2	102	9.0
Cyathura burbancki (I)	47	9.4	7.6	94	10.5
Prionospio cristata (P)	47	9.4	12.3	94	10.5
Maera caroliniana (A)	46	9.2	7.0	92	12.5
Magelona sp. (Day '73) (P)	46	9.2	12.2	92	12.5
Sabellaria vulgaris (P)	41	8.2	10.4	82	14.0
Axiothella mucosa (P)	30	6.0	5.5	60	15.0
Cirrophorus lyriformis (P)	29	5.8	3.9	58	16.5
Onuphis eremita (P)	29	5.8	6.2	58	16.5
Lembos smithi (A)	26	5.2	6.6	52	18.5
Lucinidae (undet.) A (M)	26	5.2	5.5	52	18.5
Discoporella umbellata (Ec)	22	4.4	2.5	44	21.5
Minuspio cirrifera (P)	22	4.4	6.7	44	21.5
Laonice cirrata (P)	22	4.4	6.8	44	21.5
Nephtys picta (P)	22	4.4	4.2	44	21.5
Melita appendiculata (A)	20	4.0	7.4	40	25.0
Scolelepis texana (P)	20	4.0	5.8	40	25.0
Phyllodoce arenae (P)	20	4.0	3.3	40	25.0
Nemertina (undet.) A	19	3.8	1.6	38	27.5
Chrysopetalidae (undet.) (P)	19	3.8	3.3	38	27.5
Spiophanes wigleyi (P)	18	3.6	3.4	36	29.0
Pagurus longicarpus (D)	17	3.4	2.9	34	30.5
Onuphis nebulosa (P)	17	3.4	3.9	34	30.5
Tiron tropakis (A)	16	3.2	2.4	32	32.5
Corophium tuberculatum (A)	16	3.2	2.8	32	32.5
Tellina texana (M)	15	3.0	3.5	30	34.0
Glycera dibranchiata (P)	14	2.8	2.3	28	36.0
Mediomastus californiensis (P)	14	2.8	2.8	28	36.0
Nereis sp. (P)	14	2.8	2.2	28	36.0
Glyptoplax smithii (D)	13	2.6	3.3	26	39.5
Erichthonius brasiliensis (A)	13	2.6	3.2	26	39.5
Oxyurostylis smithi (C)	13	2.6	1.1	26	39.5
Crepidula sp. (M)	13	2.6	3.8	26	39.5
Diopatra cuprea (P)	12	2.4	2.7	24	42.0
Batea catharinensis (A)	11	2.2	2.7	22	43.5
Cirratulidae (undet.) (P)	11	2.2	2.5	22	43.5
Tharyx marioni (P)	10	2.0	1.9	20	46.0
Macroclymene zonalis (P)	10	2.0	2.9	20	46.0
Prionospio cirrobranchiata (P)	10	2.0	2.0	20	46.0
Goneplacidae (undet.) (D)	9	1.8	2.2	18	50.0
Eudevenopus honduranus (A)	9	1.8	1.1	18	50.0
Ophiuroidea (undet.) E (E)	9	1.8	1.8	18	50.0
Glycera sp. (Gar.) (P)	9	1.8	1.3	18	50.0
Capitellidae (undet.) (P)	9	1.8	4.0	18	50.0
Leptochela serratorbita (D)	8	1.6	0.9	16	54.5
Parapionosyllis longicirrata (P)	8	1.6	1.8	16	54.5
Ancistrosyllis jonesi (P)	8	1.6	1.8	16	54.5
Isolda pulchella (P)	8	1.6	1.8	16	54.5
Ampelisca vadorum (A)	7	1.4	1.7	14	58.0
Glottidia pyramidata (Br)	7	1.4	0.9	14	58.0
Exogone dispar (P)	7	1.4	2.1	14	58.0

Appendix 5.13 (Cont.)

DS13

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Synchelidium americanum (A)	6	1.2	1.3	12	64.0
Calyptraea centralis (M)	6	1.2	0.8	12	64.0
Anomia simplex (M)	6	1.2	1.3	12	64.0
Aricidea fauveli (P)	6	1.2	1.3	12	64.0
Hydroides protulicola (P)	6	1.2	1.3	12	64.0
Polydora sp. B (P)	6	1.2	2.2	12	64.0
Owenia fusiformis (P)	6	1.2	1.6	12	64.0
Pectinaria gouldii (P)	6	1.2	1.6	12	64.0
Aricidea sp. A (P)	6	1.2	1.1	12	64.0
Cyclaspis varians (C)	5	1.0	1.0	10	71.5
Photis sp. (A)	5	1.0	2.2	10	71.5
Ophiuroidea (undet.) B (E)	5	1.0	1.2	10	71.5
Chama macerophylla (M)	5	1.0	1.4	10	71.5
Aspidosiphon spinalis (S)	5	1.0	1.0	10	71.5
Drilonereis magna (P)	5	1.0	0.7	10	71.5
Trachypeneus constrictus (D)	4	1.0	1.2	8	78.0
Pinnixa sp. A (D)	4	0.8	0.8	8	78.0
Holothuroidea (undet.) B (E)	4	0.8	1.1	8	78.0
Asthenothaerus sp. (M)	4	0.8	0.8	8	78.0
Pherusa sp. (P)	4	0.8	1.3	8	78.0
Lepidonotus sublevis (P)	4	0.8	1.3	8	78.0
Magelona rosea (P)	4	0.8	0.8	8	78.0
Branchiostoma caribaeum (Cc)	3	0.6	0.9	6	86.5
Brachyura (undet.) A (D)	3	0.6	0.5	6	86.5
Heterocrypta granulata (D)	3	0.6	0.9	6	86.5
Elasmopus levis (A)	3	0.6	0.9	6	86.5
Trichophoxus epistomus (A)	3	0.6	1.3	6	86.5
Ostracoda (undet.)	3	0.6	0.5	6	86.5
Cupuladria doma (Ec)	3	0.6	1.3	6	86.5
Natica pusilla (M)	3	0.6	0.5	6	86.5
Loimia medusa (P)	3	0.6	0.5	6	86.5
Arabella iricolor (P)	3	0.6	0.5	6	86.5
Brachyura (undet.) B (D)	2	0.4	0.5	4	106.0
Calappidae (undet.) (D)	2	0.4	0.9	4	106.0
Upogebia sp. (D)	2	0.4	0.9	4	106.0
Maera williamsi (A)	2	0.4	0.9	4	106.0
Ophiuroidea (undet.) G (E)	2	0.4	0.5	4	106.0
Ophiuroidea (undet.) C (E)	2	0.4	0.5	4	106.0
Strigilla mirabilis (M)	2	0.4	0.5	4	106.0
Pelecypoda (undet.) G	2	0.4	0.9	4	106.0
Musculus lateralis (M)	2	0.4	0.9	4	106.0
Chaetopleura apiculata (M)	2	0.4	0.9	4	106.0
Nucula proxima (M)	2	0.4	0.5	4	106.0
Anadara transversa (M)	2	0.4	0.5	4	106.0
Ensis directus (M)	2	0.4	0.5	4	106.0
Abra aequalis (M)	2	0.4	0.5	4	106.0
Aspidosiphon misakiensis (S)	2	0.4	0.5	4	106.0
Sipunculida (undet.)	2	0.4	0.5	4	106.0
Polydora sp. C (P)	2	0.4	0.5	4	106.0
Sthenelais boa (P)	2	0.4	0.5	4	106.0
Scoloplos rubra (P)	2	0.4	0.5	4	106.0
Aricidea suecica (P)	2	0.4	0.5	4	106.0
Nephtys incisa (P)	2	0.4	0.9	4	106.0
Notomastus hemipodus (P)	2	0.4	0.5	4	106.0
Syllis cornuta (P)	2	0.4	0.5	4	106.0
Armandia maculata (P)	2	0.4	0.5	4	106.0
Hemipodus roseus (P)	2	0.4	0.9	4	106.0
Ampharete americana (P)	2	0.4	0.9	4	106.0
Notocirrus spiniferus (P)	2	0.4	0.5	4	106.0

Appendix 5.13 (Cont.)

DS13

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Prionospio dayi (P)	2	0.4	0.5	4	106.0
Schistomeringos rudolphi (P)	2	0.4	0.5	4	106.0
Alpheus normanni (D)	1	0.2	0.4	2	144.5
Latreutes parvulus (D)	1	0.2	0.4	2	144.5
Euceramus praelongus (D)	1	0.2	0.4	2	144.5
Brachyura (undet.) C (D)	1	0.2	0.4	2	144.5
Portunidae (undet.) (D)	1	0.2	0.4	2	144.5
Processa hemphilli (D)	1	0.2	0.4	2	144.5
Bathyporeia parkeri (A)	1	0.2	0.4	2	144.5
Lembos unicornis (A)	1	0.2	0.4	2	144.5
Rudilemboides sp. (A)	1	0.2	0.4	2	144.5
Liljeborgia sp. (A)	1	0.2	0.4	2	144.5
Lysianopsis alba (A)	1	0.2	0.4	2	144.5
Mysidacea (undet.) C	1	0.2	0.4	2	144.5
Mysidopsis bigelowi (My)	1	0.2	0.4	2	144.5
Cumacea (undet.)	1	0.2	0.4	2	144.5
Actiniaria (undet.) (Cn)	1	0.2	0.4	2	144.5
Nemertina (undet.) B	1	0.2	0.4	2	144.5
Ophiothrix angulata (E)	1	0.2	0.4	2	144.5
Arbacia punctulata (E)	1	0.2	0.4	2	144.5
Turridae (undet.) C (M)	1	0.2	0.4	2	144.5
Corbula barrattiana (M)	1	0.2	0.4	2	144.5
Pelecypoda (undet.) C	1	0.2	0.4	2	144.5
Anachis avara (M)	1	0.2	0.4	2	144.5
Turbonilla sp. E (M)	1	0.2	0.4	2	144.5
Turbonilla sp. F (M)	1	0.2	0.4	2	144.5
Pelecypoda (undet.) K	1	0.2	0.4	2	144.5
Pelecypoda (undet.)	1	0.2	0.4	2	144.5
Lyonsia hyalina (M)	1	0.2	0.4	2	144.5
Eulalia macroceros (P)	1	0.2	0.4	2	144.5
Serpulus vermicularis granulosa (P)	1	0.2	0.4	2	144.5
Megalomma sp. B (P)	1	0.2	0.4	2	144.5
Marphysa sp. B (Gar.) (P)	1	0.2	0.4	2	144.5
Cirratulus sp. (P)	1	0.2	0.4	2	144.5
Protodorvillea kefersteini (P)	1	0.2	0.4	2	144.5
Goniada littorea (P)	1	0.2	0.4	2	144.5
Pista cristata (P)	1	0.2	0.4	2	144.5
Notomastus latericeus (P)	1	0.2	0.4	2	144.5
Glycera oxycephala (P)	1	0.2	0.4	2	144.5
Spiochatopterus costarum oculatus (P)	1	0.2	0.4	2	144.5
Autolytus dentalius (P)	1	0.2	0.4	2	144.5
Eteone heteropoda (P)	1	0.2	0.4	2	144.5
Eunicidae (undet.) (P)	1	0.2	0.4	2	144.5
Paraprionospio pinnata (P)	1	0.2	0.4	2	144.5
Spio pettiboneae (P)	1	0.2	0.4	2	144.5
Oligochaeta (undet.)	1	0.2	0.4	2	144.5
Brania clavata (P)	1	0.2	0.4	2	144.5
Sigambra bassi (P)	1	0.2	0.4	2	144.5
Spio setosa (P)	1	0.2	0.4	2	144.5
Pionosyllis sp. (P)	1	0.2	0.4	2	144.5

Appendix 5.14 Abundance of macroinvertebrate species in grab collections from station DS14. (A = Amphipoda; C = Cumacea; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida).

	DS14				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Protohaustorius nr. deichmannae (A)	36	7.2	4.0	72	1.0
Spiophanes bombyx (P)	28	5.6	3.8	56	2.0
Strigilla mirabilis (M)	25	5.0	1.9	50	3.0
Discoporella umbellata (Ec)	24	4.8	2.2	48	4.0
Nephtys picta (P)	22	4.4	3.4	44	5.0
Nemertina (undet.) A	19	3.8	3.0	38	6.5
Tellina texana (M)	19	3.8	2.6	38	6.5
Aspidosiphon misakiensis (S)	10	2.0	2.9	20	8.0
Tellina probrina (M)	9	1.8	2.5	18	9.0
Trichophoxus epistomus (A)	6	1.2	1.6	12	11.0
Onuphis eremita (P)	6	1.2	0.8	12	11.0
Prionospio dayi (P)	6	1.2	1.3	12	11.0
Acanthohaustorius sp. (A)	5	1.0	0.7	10	14.0
Eudevenopus honduranus (A)	5	1.0	0.7	10	14.0
Lucinidae (undet.) A (M)	5	1.0	1.2	10	14.0
Chiridotea stenops (I)	4	0.8	1.3	8	17.0
Magelona papillicornis (P)	4	0.8	0.8	8	17.0
Magelona rosea (P)	4	0.8	0.8	8	17.0
Mysidacea (undet.) A	3	0.6	0.5	6	21.5
Erichthonius brasiliensis (A)	3	0.6	0.9	6	21.5
Oxyurostylis smithi (C)	3	0.6	0.5	6	21.5
Ophiuroidea (undet.) A (E)	3	0.6	0.9	6	21.5
Nephtys incisa (P)	3	0.6	0.9	6	21.5
Armandia maculata (P)	3	0.6	0.5	6	21.5
Pagurus longicarpus (D)	2	0.4	0.9	4	28.0
Pinnixa sayana (D)	2	0.4	0.9	4	28.0
Mellita quinquiesperforata (E)	2	0.4	0.5	4	28.0
Nematoda (undet.)	2	0.4	0.5	4	28.0
Cirratulus sp. (P)	2	0.4	0.9	4	28.0
Lumbrineris latreilli (P)	2	0.4	0.5	4	28.0
Glycera oxycephala (P)	2	0.4	0.9	4	28.0
Trachypeneus constrictus (D)	1	0.2	0.4	2	45.0
Latreutes parvulus (D)	1	0.2	0.4	2	45.0
Brachyura (undet.) A (D)	1	0.2	0.4	2	45.0
Euceramus praelongus (D)	1	0.2	0.4	2	45.0
Lepidopa websteri (D)	1	0.2	0.4	2	45.0
Heterocrypta granulata (D)	1	0.2	0.4	2	45.0
Bathyporeia parkeri (A)	1	0.2	0.4	2	45.0
Parametopella cypris (A)	1	0.2	0.4	2	45.0
Actiniaria (undet.)	1	0.2	0.4	2	45.0
Ophiuroidea (undet.) C (E)	1	0.2	0.4	2	45.0
Tellina iris (M)	1	0.2	0.4	2	45.0
Turbonilla sp. B (M)	1	0.2	0.4	2	45.0
Anachis avara (M)	1	0.2	0.4	2	45.0
Dentaliidae (undet.) A (M)	1	0.2	0.4	2	45.0
Pandora trilineata (M)	1	0.2	0.4	2	45.0
Terebra concava (M)	1	0.2	0.4	2	45.0
Goniada littorea (P)	1	0.2	0.4	2	45.0
Glycera capitata (P)	1	0.2	0.4	2	45.0
Armandia agilis (P)	1	0.2	0.4	2	45.0
Pareulepis sp. (P)	1	0.2	0.4	2	45.0
Naineris laevigata (P)	1	0.2	0.4	2	45.0
Arabella mutans (P)	1	0.2	0.4	2	45.0
Owenia fusiformis (P)	1	0.2	0.4	2	45.0
Haploscoloplos fragilis (P)	1	0.2	0.4	2	45.0
Aricidea sp. A (P)	1	0.2	0.4	2	45.0
Prionospio cristata (P)	1	0.2	0.4	2	45.0
Sigambra bassi (P)	1	0.2	0.4	2	45.0

Appendix 5.15 Abundance of macroinvertebrate species in grab collections from station DS15. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida).

	DS15				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Tellina probrina (M)	41	8.2	4.3	82	1.0
Trichophoxus floridanus (A)	38	7.6	2.8	76	2.0
Branchiostoma caribaeum (Cc)	32	6.4	2.6	64	3.0
Strigilla mirabilis (M)	31	6.2	1.5	62	4.5
Nephtys picta (P)	31	6.2	2.3	62	4.5
Nematoda (undet.)	24	4.8	3.8	48	6.0
Tellina texana (M)	22	4.4	2.6	44	7.0
Spiophanes bombyx (P)	14	2.8	0.8	28	8.0
Glycera oxycephala (P)	12	2.4	2.1	24	9.0
Tiron tropakis (A)	9	1.8	1.6	18	10.0
Trachypeneus constrictus (D)	8	1.6	1.5	16	11.0
Acanthohaustorius sp. (A)	7	1.4	1.7	14	12.0
Apanthura magnifica (I)	6	1.2	2.2	12	14.5
Nemertina (undet.) A	6	1.2	1.6	12	14.5
Cupuladria doma (Ec)	6	1.2	1.1	12	14.5
Goniadides carolinae (P)	6	1.2	2.2	12	14.5
Ervilia concentrica (M)	5	1.0	1.2	10	17.0
Bathyporeta parkeri (A)	4	0.8	1.1	8	20.5
Erichthonius brasiliensis (A)	4	0.8	1.3	8	20.5
Oxyurostylis smithi (C)	4	0.8	0.4	8	20.5
Semele nuculoides (M)	4	0.8	0.4	8	20.5
Lumbrineris laterilli (P)	4	0.8	0.4	8	20.5
Onuphis nebulosa (P)	4	0.8	0.8	8	20.5
Trichophoxus epistomus (A)	3	0.6	0.9	6	30.5
Liljeborgia sp. (A)	3	0.6	0.9	6	30.5
Ophiophragmus sp. A (E)	3	0.6	0.9	6	30.5
Discoporella umbellata (Ec)	3	0.6	0.5	6	30.5
Natica pusilla (M)	3	0.6	0.9	6	30.5
Pandora trilineaia (M)	3	0.6	0.9	6	30.5
Abra aequalis (M)	3	0.6	0.5	6	30.5
Crassinella lunulata (M)	3	0.6	0.5	6	30.5
Aspidosiphon misakiensis (S)	3	0.6	0.9	6	30.5
Aricidea cerruti (P)	3	0.6	0.9	6	30.5
Axiothella mucosa (P)	3	0.6	0.5	6	30.5
Armandia maculata (P)	3	0.6	0.5	6	30.5
Phyllodoce arenae (P)	3	0.6	0.5	6	30.5
Prionospio cristata (P)	3	0.6	0.5	6	30.5
Brachyura (undet.) A (D)	2	0.4	0.5	4	42.0
Gastrosaccus sp. A (My)	2	0.4	0.9	4	42.0
Acanthohaustorius millsi (A)	2	0.4	0.5	4	42.0
Cyathura burbancki (I)	2	0.4	0.5	4	42.0
Turbellaria (undet.)	2	0.4	0.5	4	42.0
Lucinidae (undet.) A (M)	2	0.4	0.9	4	42.0
Polycirrus eximius (P)	2	0.4	0.9	4	42.0
Onuphis eremita (P)	2	0.4	0.9	4	42.0
Magelona rosea (P)	2	0.4	0.5	4	42.0
Latreutes parvulus (D)	1	0.2	0.4	2	63.5
Brachyura (undet.) B (D)	1	0.2	0.4	2	63.5
Pinnixa sayana (D)	1	0.2	0.4	2	63.5
Portunidae (undet.) (D)	1	0.2	0.4	2	63.5
Jerbarnia sp. (A)	1	0.2	0.4	2	63.5
Colomastix halichondriae (A)	1	0.2	0.4	2	63.5
Ampelisca verrilli (A)	1	0.2	0.4	2	63.5
Eudevenopus honduranus (A)	1	0.2	0.4	2	63.5
Cyclaspis varians (C)	1	0.2	0.4	2	63.5
Sclerodactyla briareus (E)	1	0.2	0.4	2	63.5
Mellita quinquiesperforaia (E)	1	0.2	0.4	2	63.5
Olivella mutica (M)	1	0.2	0.4	2	63.5
Crepidula sp. (M)	1	0.2	0.4	2	63.5
Caecum pulchellum (M)	1	0.2	0.4	2	63.5
Terebra sp. A (M)	1	0.2	0.4	2	63.5

Appendix 5.15 (Cont.)

DS15

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Oliva sayana (M)	1	0.2	0.4	2	63.5
Dentalium eboreum (M)	1	0.2	0.4	2	63.5
Aspidosiphon spinalis (S)	1	0.2	0.4	2	63.5
Sipunculida (undet.)	1	0.2	0.4	2	63.5
Scoloplos rubra (P)	1	0.2	0.4	2	63.5
Glycera sp. (Gar.) (P)	1	0.2	0.4	2	63.5
Goniada littorea (P)	1	0.2	0.4	2	63.5
Macroclymene zonalis (P)	1	0.2	0.4	2	63.5
Cirratulidae (undet.) B (P)	1	0.2	0.4	2	63.5
Tharyx marioni (P)	1	0.2	0.4	2	63.5
Nephtys incisa (P)	1	0.2	0.4	2	63.5
Polydora sp. B (P)	1	0.2	0.4	2	63.5
Aedicira belgicae (P)	1	0.2	0.4	2	63.5
Phyllodoce castanea (P)	1	0.2	0.4	2	63.5
Glycera dibranchiata (P)	1	0.2	0.4	2	63.5
Haploscoloplos fragilis (P)	1	0.2	0.4	2	63.5
Aricidea sp. A (P)	1	0.2	0.4	2	63.5
Oligochaeta (undet.)	1	0.2	0.4	2	63.5
Cirratulidae (undet.) (P)	1	0.2	0.4	2	63.5

Appendix 5.16 Abundance of macroinvertebrate species in grab collections from station DS16. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS16				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	446	89.2	38.0	892	1.0
Aspidosiphon spinalis (S)	175	35.0	6.8	350	2.0
Hemipodus roseus (P)	128	25.6	13.5	256	3.0
Golfingia sp. A (S)	121	24.2	18.8	242	4.0
Goniadides carolinae (P)	115	23.0	11.5	230	5.0
Nematoda (undet.)	111	22.2	14.7	222	6.0
Pseudeurythoe ambigua (P)	91	18.2	9.9	182	7.5
Cirratulidae (undet.) B (P)	91	18.2	14.1	182	7.5
Prionospio cristata (P)	88	17.6	9.3	176	9.0
Apseudidae (undet.) A (T)	70	14.0	10.4	140	10.0
Axiothella mucosa (P)	54	10.8	4.3	108	11.0
Chrysopetalidae (undet.) (P)	51	10.2	5.6	102	12.0
Unknown Taxon B	48	9.6	6.2	96	13.0
Cupuladria doma (Ec)	39	7.8	3.3	78	14.0
Oligochaeta (undet.)	34	6.8	3.2	68	15.0
Syllis regulata carolinae (P)	32	6.4	4.7	64	16.0
Tiron tropakis (A)	29	5.8	5.8	58	17.0
Onuphis nebulosa (P)	26	5.2	3.6	52	18.0
Leptochelia rapax (T)	25	5.0	3.7	50	20.0
Tharyx marioni (P)	25	5.0	2.7	50	20.0
Spiophanes bombyx (P)	25	5.0	2.5	50	20.0
Trichophoxus floridanus (A)	24	4.8	3.6	48	22.0
Polycirrus eximius (P)	22	4.4	3.5	44	24.0
Synelmis albini (P)	22	4.4	4.4	44	24.0
Exogone dispar (P)	22	4.4	4.3	44	24.0
Golfingia sp. B (S)	21	4.2	1.3	42	26.0
Sipunculida (undet.)	20	4.0	2.3	40	27.0
Trypanosyllis sp. (P)	19	3.8	1.9	38	28.0
Crassinella lunulata (M)	18	3.6	4.0	36	29.0
Glottidia pyramidata (Br)	17	3.4	2.3	34	30.0
Terebellidae (undet.) B (P)	16	3.2	1.8	32	31.5
Phyllodoce castanea (P)	16	3.2	3.3	32	31.5
Pinnixa retinens (D)	15	3.0	1.6	30	35.0
Liljeborgia sp. (A)	15	3.0	2.3	30	35.0
Apanthura magnifica (I)	15	3.0	2.5	30	35.0
Pisione remota (P)	15	3.0	3.2	30	35.0
Mediomastus californiensis (P)	15	3.0	2.2	30	35.0
Calyptraea centralis (M)	14	2.8	2.5	28	38.5
Nereis succinea (P)	14	2.8	5.2	28	38.5
Hydroides protulicola (P)	13	2.6	1.3	26	40.5
Aonides mayaguezensis (P)	13	2.6	4.0	26	40.5
Protodorvillea kefersteini (P)	12	2.4	3.7	24	43.0
Lumbrineris latreilli (P)	12	2.4	1.5	24	43.0
Armandia maculata (P)	12	2.4	2.1	24	43.0
Chaetopleura apiculata (M)	10	2.0	1.7	20	45.0
Pinnixa sp. A (D)	8	1.6	1.5	16	50.5
Lembos unicornis (A)	8	1.6	3.6	16	50.5
Eurydice littoralis (I)	8	1.6	1.5	16	50.5
Turbellaria (undet.)	8	1.6	1.3	16	50.5
Polyplacophora (undet.) A (M)	8	1.6	1.5	16	50.5
Pelecypoda (undet.)	8	1.6	1.1	16	50.5
Chione sp. (M)	8	1.6	1.1	16	50.5
Parapionosyllis longicirrata (P)	8	1.6	1.5	16	50.5
Minuspio cirrifera (P)	8	1.6	1.7	16	50.5
Aricidea suecica (P)	8	1.6	0.5	16	50.5
Brachyura (undet.) B (D)	7	1.4	1.3	14	58.5
Ophelia denticulata (P)	7	1.4	1.7	14	58.5

Appendix 5.16 (Cont.)

DS16

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Sabellaria vulgaris (P)	7	1.4	1.3	14	58.5
Eteone lactea (P)	7	1.4	0.5	14	58.5
Owenia fusiformis (P)	7	1.4	1.1	14	58.5
Clymenella torquata (P)	7	1.4	1.9	14	58.5
Heterocrypta granulata (D)	6	1.2	1.3	12	64.0
Discoporella umbellata (Ec)	6	1.2	0.8	12	64.0
Nudibranchia (undet.) A (M)	6	1.2	0.8	12	64.0
Psammolyce ctenidophora (P)	6	1.2	2.2	12	64.0
Prionospio cirrobranchiata (P)	6	1.2	1.3	12	64.0
Glyptoplax smithii (D)	5	1.0	1.7	10	72.0
Cirolana polita (I)	5	1.0	1.4	10	72.0
Rudilemboides sp. (A)	5	1.0	1.7	10	72.0
Ostracoda (undet.)	5	1.0	1.2	10	72.0
Chiridotea stenops (I)	5	1.0	1.0	10	72.0
Nemertina (undet.) B	5	1.0	0.7	10	27.2
Mellita quinquiesperforata (E)	5	1.0	1.0	10	72.0
Corbula barrattiana (M)	5	1.0	1.0	10	72.0
Abra aequalis (M)	5	1.0	1.2	10	72.0
Aricidea cerruti (P)	5	1.0	1.2	10	72.0
Nephtys picta (P)	5	1.0	0.7	10	72.0
Pagurus longicarpus (D)	4	0.8	1.3	8	82.5
Isopoda (undet.) A	4	0.8	0.4	8	82.5
Maera williamsi (A)	4	0.8	1.8	8	82.5
Leptognatha caeca (T)	4	0.8	0.8	8	82.5
Arene sp. (M)	4	0.8	0.8	8	82.5
Terebellidae (undet.) C (P)	4	0.8	1.1	8	82.5
Serpulidae (undet.) B (P)	4	0.8	1.8	8	82.5
Rullierinereis sp. (P)	4	0.8	0.4	8	82.5
Terebellidae (undet.) A (P)	4	0.8	0.8	8	82.5
Polydora caeca (P)	4	0.8	1.3	8	82.5
Goneplacidae (undet.) (D)	3	0.6	1.3	6	94.5
Ophiuroidea (undet.) E (E)	3	0.6	0.9	6	94.5
Ophiuroidea (undet.) C (E)	3	0.6	0.5	6	94.5
Crassinella martinicensis (M)	3	0.6	0.5	6	94.5
Semele nuculoides (M)	3	0.6	1.3	6	94.5
Laevicardium mortoni (M)	3	0.6	0.5	6	94.5
Chama macerophylla (M)	3	0.6	0.9	6	94.5
Glycera tesselata (P)	3	0.6	0.5	6	94.5
Serpulidae (undet.) A (P)	3	0.6	0.9	6	94.5
Syllis gracilis (P)	3	0.6	0.9	6	94.5
Nephtys incisa (P)	3	0.6	0.9	6	94.5
Nephtys squamosa (P)	3	0.6	1.3	6	94.5
Polydora sp. B (P)	3	0.6	0.9	6	94.5
Isolda pulchella (P)	3	0.6	0.9	6	94.5
Amphipoda (undet.) A	2	0.4	0.5	4	113.5
Maera caroliniana (A)	2	0.4	0.5	4	113.5
Gastrosaccus sp. A (My)	2	0.4	0.5	4	113.5
Acanthohaustorius millsi (A)	2	0.4	0.5	4	113.5
Cyathura burbancki (I)	2	0.4	0.5	4	113.5
Lytechinus variegatus (E)	2	0.4	0.5	4	113.5
Ophiuroidea (undet.) B (E)	2	0.4	0.9	4	113.5
Natica pusilla (M)	2	0.4	0.5	4	113.5
Tellina probrina (M)	2	0.4	0.5	4	113.5
Semele bellastriata (M)	2	0.4	0.5	4	113.5
Ervilia concentrica (M)	2	0.4	0.5	4	113.5
Glycymeris pectinata (M)	2	0.4	0.9	4	113.5
Pelecypoda (undet.) I	2	0.4	0.5	4	113.5
Nucula proxima (M)	2	0.4	0.5	4	113.5
Ensis directus (M)	2	0.4	0.9	4	113.5
Spisula solidissima (M)	2	0.4	0.5	4	113.5

Appendix 5.16 (Cont.)

DS16

Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Aspidosiphon misakiensis (S)	2	0.4	0.9	4	113.5
Notomastus latericeus (P)	2	0.4	0.9	4	113.5
Hesionidae (undet.) A (P)	2	0.4	0.5	4	113.5
Syllis cornuta (P)	2	0.4	0.5	4	113.5
Sabellidae (undet.) (P)	2	0.4	0.9	4	113.5
Lysidice ninetta (P)	2	0.4	0.5	4	113.5
Pholoe minuta (P)	2	0.4	0.9	4	113.5
Spio setosa (P)	2	0.4	0.5	4	113.5
Calappidae (undet.) (D)	1	0.2	0.4	2	145.5
Cumacea (undet.) F	1	0.2	0.4	2	145.5
Erichthonius brasiliensis (A)	1	0.2	0.4	2	145.5
Unciola serrata (A)	1	0.2	0.4	2	145.5
Melita appendiculata (A)	1	0.2	0.4	2	145.5
Nemertina (undet.) C	1	0.2	0.4	2	145.5
Holothuroidea (undet.) A (E)	1	0.2	0.4	2	145.5
Tellina texana (M)	1	0.2	0.4	2	145.5
Turridae (undet.) B (M)	1	0.2	0.4	2	145.5
Polinices duplicatus (M)	1	0.2	0.4	2	145.5
Gastropoda (undet.) A	1	0.2	0.4	2	145.5
Oliva sayana (M)	1	0.2	0.4	2	145.5
Anadara transversa (M)	1	0.2	0.4	2	145.5
Anomia simplex (M)	1	0.2	0.4	2	145.5
Trachycardium muricatum (M)	1	0.2	0.4	2	145.5
Echiurida (undet.)	1	0.2	0.4	2	145.5
Harmothoe sp. B (Day) (P)	1	0.2	0.4	2	145.5
Serpulus vermicularis granulosa (P)	1	0.2	0.4	2	145.5
Metavermilia multicristata (P)	1	0.2	0.4	2	145.5
Marphysa sp. B (Gar.) (P)	1	0.2	0.4	2	145.5
Sphaerosyllis pirifera (P)	1	0.2	0.4	2	145.5
Marphysa sp. A (Gar.) (P)	1	0.2	0.4	2	145.5
Hypsicomus sp. (P)	1	0.2	0.4	2	145.5
Sphaerosyllis erinaceus (P)	1	0.2	0.4	2	145.5
Polychaeta (undet.) D	1	0.2	0.4	2	145.5
Glycinde sp. (P)	1	0.2	0.4	2	145.5
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	145.5
Laonice cirrata (P)	1	0.2	0.4	2	145.5
Pareulepis sp. (P)	1	0.2	0.4	2	145.5
Autolytus dentalius (P)	1	0.2	0.4	2	145.5
Marphysa sanguinea (P)	1	0.2	0.4	2	145.5
Diopatra cuprea (P)	1	0.2	0.4	2	145.5
Ampharete americana (P)	1	0.2	0.4	2	145.5
Phyllodoce arenae (P)	1	0.2	0.4	2	145.5
Schistomeringos rudolphi (P)	1	0.2	0.4	2	145.5
Sigalion arenicola (P)	1	0.2	0.4	2	145.5
Travisia parva (P)	1	0.2	0.4	2	145.5
Pionosyllis sp. (P)	1	0.2	0.4	2	145.5
Lumbrinerides acuta (P)	1	0.2	0.4	2	145.5
Petaloprotus socialis (P)	1	0.2	0.4	2	145.5

Appendix 5.17 Abundance of macroinvertebrate species in grab collections from station DS17. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida).

	DS17				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Tellina probrina (M)	29	5.8	1.8	58	1.0
Nephtys picta (P)	24	4.8	1.8	48	2.0
Protohaustorius nr. deichmannae (A)	23	4.6	2.9	46	3.5
Mellita quinquiesperforata (E)	23	4.6	2.2	46	3.5
Trichophoxus epistomus (A)	21	4.2	6.0	42	5.5
Strigilla mirabilis (M)	21	4.2	4.9	42	5.5
Bathyporeia parkeri (A)	19	3.8	3.6	38	7.0
Magelona sp. (Day 73) (P)	18	3.6	5.4	36	8.0
Acanthohaustorius sp. (A)	16	3.2	2.0	32	9.0
Spiophanes bombyx (P)	10	2.0	1.0	20	10.5
Onuphis eremita (P)	10	2.0	1.6	20	10.5
Ophiuroidea (undet.) A (E)	7	1.4	2.2	14	12.5
Ervilia concentrica (M)	7	1.4	0.5	14	12.5
Nemertina (undet.) A	6	1.2	0.8	12	15.0
Cupuladria doma (Ec)	6	1.2	1.3	12	15.0
Glycera oxycephala (P)	6	1.2	2.2	12	15.0
Oxyurostylis smithi (C)	5	1.0	1.2	10	17.0
Tiron tropakis (A)	4	0.8	0.8	8	19.0
Aspidosiphon misakiensis (S)	4	0.8	1.1	8	19.0
Magelona papillicornis (P)	4	0.8	1.3	8	19.0
Eudevenopus honduranus (A)	3	0.6	0.5	6	23.0
Turbellaria (undet.)	3	0.6	0.9	6	23.0
Discoporella umbellata (Ec)	3	0.6	0.9	6	23.0
Tellina texana (M)	3	0.6	1.3	6	23.0
Scolelepis texana (P)	3	0.6	0.9	6	23.0
Albunea paretii (D)	2	0.4	0.5	4	27.5
Odostomia sp. A (M)	2	0.4	0.5	4	27.5
Goniada littorea (P)	2	0.4	0.5	4	27.5
Cirratulidae (undet.) B (P)	2	0.4	0.5	4	27.5
Branchiostoma caribaeum (Cc)	1	0.2	0.4	2	41.5
Pagurus longicarpus (D)	1	0.2	0.4	2	41.5
Lepidopa websteri (D)	1	0.2	0.4	2	41.5
Synchelidium americanum (A)	1	0.2	0.4	2	41.5
Amphipoda (undet.) A	1	0.2	0.4	2	41.5
Gastrosaccus sp. A (My)	1	0.2	0.4	2	41.5
Ampelisca verrilli (A)	1	0.2	0.4	2	41.5
Apanthura magnifica (I)	1	0.2	0.4	2	41.5
Nemertina (undet.) B	1	0.2	0.4	2	41.5
Natica pusilla (M)	1	0.2	0.4	2	41.5
Acteocina candei (M)	1	0.2	0.4	2	41.5
Anachis obesa (M)	1	0.2	0.4	2	41.5
Oliva sayana (M)	1	0.2	0.4	2	41.5
Aspidosiphon spinalis (S)	1	0.2	0.4	2	41.5
Magelona sp. A (P)	1	0.2	0.4	2	41.5
Tharyx marioni (P)	1	0.2	0.4	2	41.5
Prionospio fallax (P)	1	0.2	0.4	2	41.5
Axiothella mucosa (P)	1	0.2	0.4	2	41.5
Notomastus hemipodus (P)	1	0.2	0.4	2	41.5
Owenia fusiformis (P)	1	0.2	0.4	2	41.5
Drilonereis magna (P)	1	0.2	0.4	2	41.5
Aricidea sp. A (P)	1	0.2	0.4	2	41.5
Oligochaeta (undet.)	1	0.2	0.4	2	41.5
Prionospio dayi (P)	1	0.2	0.4	2	41.5

Appendix 5.18 Abundance of macroinvertebrate species in grab collections from station DS18. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida).

	DS18				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Prionospio cristata (P)	186	37.2	48.2	372	1.0
Branchiostoma caribaeum (Cc)	89	17.8	23.4	178	2.0
Cyathura burbancki (I)	52	10.4	10.1	104	3.0
Trichophoxus floridanus (A)	41	8.2	7.3	82	4.0
Spiophanes bombyx (P)	35	7.0	8.6	70	5.0
Hemipodus roseus (P)	34	6.8	14.1	68	6.0
Glycera oxycephala (P)	23	4.6	2.3	46	7.0
Polycirrus eximius (P)	18	3.6	7.5	36	8.0
Cyclaspis varians (C)	16	3.2	2.6	32	10.0
Crassinella lunulata (M)	16	3.2	3.0	32	10.0
Aspidosiphon spinalis (S)	16	3.2	3.8	32	10.0
Nemertina (undet.) A	14	2.8	2.4	28	12.0
Ervilia concentrica (M)	13	2.6	2.3	26	13.0
Apanthura magnifica (I)	12	2.4	1.7	24	14.5
Lumbrineris latreilli (P)	12	2.4	2.9	24	14.5
Nereis succinea (P)	11	2.2	2.7	22	16.0
Acanthohaustorius sp. (A)	10	2.0	3.1	20	17.5
Nephtys picta (P)	10	2.0	2.0	20	17.5
Nematoda (undet.)	9	1.8	2.0	18	20.5
Axiothella mucosa (P)	9	1.8	1.9	18	20.5
Diopatra cuprea (P)	9	1.8	2.7	18	20.5
Eulalia sanguinea (P)	9	1.8	1.8	18	20.5
Eudevenopus honduranus (A)	8	1.6	1.9	16	24.0
Tellina probrina (M)	8	1.6	1.5	16	24.0
Hydroides protulicola (P)	8	1.6	2.2	16	24.0
Protohaustorius nr. deichmannae (A)	7	1.4	2.6	14	27.5
Tiron tropakis (A)	7	1.4	0.9	14	27.5
Crepidula sp. (M)	7	1.4	2.1	14	27.5
Tharyx marioni (P)	7	1.4	2.6	14	27.5
Oxyurostylis smithi (C)	6	1.2	1.3	12	30.0
Bathyporeia parkeri (A)	5	1.0	1.0	10	33.5
Liljeborgia sp. (A)	5	1.0	1.2	10	33.5
Erichthonius brasiliensis (A)	5	1.0	1.7	10	33.5
Onuphis eremita (P)	5	1.0	2.2	10	33.5
Spio pettiboneae (P)	5	1.0	1.0	10	33.5
Phyllodoce arenae (P)	5	1.0	1.2	10	33.5
Crassinella martinicensis (M)	4	0.8	1.3	8	38.0
Serpulus vermicularis granulosa (P)	4	0.8	0.8	8	38.0
Onuphis eremita (P)	4	0.8	0.8	8	38.0
Pagurus longicarpus (D)	3	0.6	0.9	6	41.5
Goniadides carolinae (P)	3	0.6	0.9	6	41.5
Schistomeringos rudolphi (P)	3	0.6	0.5	6	41.5
Lumbrinerides acuta (P)	3	0.6	0.9	6	41.5
Heterocrypta granulata (D)	2	0.4	0.5	4	50.0
Elasmopus levis (A)	2	0.4	0.5	4	50.0
Cirolana polita (I)	2	0.4	0.5	4	50.0
Nemertina (undet.) B	2	0.4	0.5	4	50.0
Mellita quinquiesperforata (E)	2	0.4	0.9	4	50.0
Calyptraea centralis (M)	2	0.4	0.5	4	50.0
Aspidosiphon misakiensis (S)	2	0.4	0.9	4	50.0
Cirratulidae (undet.) B (P)	2	0.4	0.5	4	50.0
Cirrophorus lyriformis (P)	2	0.4	0.9	4	50.0
Nephtys incisa (P)	2	0.4	0.5	4	50.0
Nephtys squamosa (P)	2	0.4	0.9	4	50.0
Armandia maculata (P)	2	0.4	0.5	4	50.0
Mediomastus californiensis (P)	2	0.4	0.9	4	50.0
Trachypeneus constrictus (D)	1	0.2	0.4	2	71.5
Brachyura (undet.) B (D)	1	0.2	0.4	2	71.5
Synchelidium americanum (A)	1	0.2	0.4	2	71.5
Amphipoda (undet.) A	1	0.2	0.4	2	71.5

Appendix 5.18 (Cont.)

DS18

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Eurydice littoralis (I)	1	0.2	0.4	2	71.5
Maera williamsi (A)	1	0.2	0.4	2	71.5
Ampelisca verrilli (A)	1	0.2	0.4	2	71.5
Batea catharinensis (A)	1	0.2	0.4	2	71.5
Ancinus depressus (I)	1	0.2	0.4	2	71.5
Corophium tuberculatum (A)	1	0.2	0.4	2	71.5
Holothuroidea (undet.) B (E)	1	0.2	0.4	2	71.5
Glottidia pyramidata (Br)	1	0.2	0.4	2	71.5
Discoporella umbellata (Ec)	1	0.2	0.4	2	71.5
Strigilla mirabilis (M)	1	0.2	0.4	2	71.5
Natica pusilla (M)	1	0.2	0.4	2	71.5
Tellina texana (M)	1	0.2	0.4	2	71.5
Semele bellastriata (M)	1	0.2	0.4	2	71.5
Semele nuculoides (M)	1	0.2	0.4	2	71.5
Mitrella lunata (M)	1	0.2	0.4	2	71.5
Nucula proxima (M)	1	0.2	0.4	2	71.5
Spisula solidissima (M)	1	0.2	0.4	2	71.5
Pelecypoda (undet.)	1	0.2	0.4	2	71.5
Glycera americana (P)	1	0.2	0.4	2	71.5
Magelona sp. (Day 73) (P)	1	0.2	0.4	2	71.5
Sabellaria vulgaris (P)	1	0.2	0.4	2	71.5
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	71.5
Owenia fusiformis (P)	1	0.2	0.4	2	71.5
Scolelepis texana (P)	1	0.2	0.4	2	71.5
Oligochaeta (undet.)	1	0.2	0.4	2	71.5
Chrysopetalidae (undet.) (P)	1	0.2	0.4	2	71.5

Appendix 5.19 Abundance of macroinvertebrate species in grab collections from station DS19. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida).

DS19

Species	Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	37	7.4	13.3	74	1.0
Tellina probrina (M)	35	7.0	4.0	70	2.5
Onuphis eremita (P)	35	7.0	7.6	70	2.5
Spiophanes bombyx (P)	27	5.4	4.9	54	4.0
Acanthohaustorius sp. (A)	25	5.0	4.5	50	5.0
Strigilla mirabilis (M)	24	4.8	3.6	48	6.0
Spio pettiboneae (P)	21	4.2	7.7	42	7.0
Nematoda (undet.)	20	4.0	5.5	40	8.5
Crassinella lunulata (M)	20	4.0	5.7	40	8.5
Goniadides carolinae (P)	17	3.4	7.6	34	10.0
Discoporella umbellata (Ec)	16	3.2	2.4	32	11.5
Prionospio fallax (P)	16	3.2	7.2	32	11.5
Nephtys picta (P)	13	2.6	2.6	26	13.0
Trichophoxus floridanus (A)	12	2.4	2.8	24	15.0
Nemertina (undet.) A	12	2.4	0.9	24	15.0
Glycera oxycephala (P)	12	2.4	2.5	24	15.0
Lucinidae (undet.) A (M)	11	2.2	2.8	22	17.0
Pagurus longicarpus (D)	10	2.0	4.5	20	18.5
Cyathura burbancki (I)	10	2.0	2.3	20	18.5
Bathyporeia parkeri (A)	9	1.8	1.3	18	20.0
Protohaustorius nr. deichmannae (A)	6	1.2	1.6	12	22.0
Ervilia concentrica (M)	6	1.2	1.1	12	22.0
Tharyx marioni (P)	6	1.2	2.7	12	22.0
Eudevenopus honduranus (A)	5	1.0	1.0	10	24.0
Heterocrypta granulata (D)	4	0.8	1.8	8	25.5
Trichophoxus epistomus (A)	4	0.8	0.4	8	25.5
Brachyura (undet.) A (D)	3	0.6	0.5	6	30.0
Oxyurostylis smithi (C)	3	0.6	0.9	6	30.0
Lumbrineris latreilli (P)	3	0.6	0.9	6	30.0
Owenia fusiformis (P)	3	0.6	1.3	6	30.0
Armandia maculata (P)	3	0.6	1.3	6	30.0
Prionospio dayi (P)	3	0.6	0.9	6	30.0
Sigambra bassi (P)	3	0.6	0.9	6	30.0
Liljeborgia sp. (A)	2	0.4	0.5	4	38.5
Cyclaspis varians (C)	2	0.4	0.5	4	38.5
Mellita quinquiesperforata (E)	2	0.4	0.9	4	38.5
Ophiophragmus sp. A (E)	2	0.4	0.5	4	38.5
Cupuladria doma (Ec)	2	0.4	0.9	4	38.5
Magelona sp. (Day 73) (P)	2	0.4	0.9	4	38.5
Scoloplos rubra (P)	2	0.4	0.5	4	38.5
Nereis succinea (P)	2	0.4	0.5	4	38.5
Chrysopetalidae (undet.) (P)	2	0.4	0.9	4	38.5
Spiophanes wigleyi (P)	2	0.4	0.9	4	38.5
Albunea paretii (D)	1	0.2	0.4	2	54.0
Hepatus epheliticus (D)	1	0.2	0.4	2	54.0
Lembos unicornis (A)	1	0.2	0.4	2	54.0
Amphipoda (undet.) A	1	0.2	0.4	2	54.0
Hippomedon serratus (A)	1	0.2	0.4	2	54.0
Tiron tropakis (A)	1	0.2	0.4	2	54.0
Oliva sayana (M)	1	0.2	0.4	2	54.0
Spisula solidissima (M)	1	0.2	0.4	2	54.0
Abra aequalis (M)	1	0.2	0.4	2	54.0
Sipunculus nudus (S)	1	0.2	0.4	2	54.0
Nereis acuminata (P)	1	0.2	0.4	2	54.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	54.0
Nephtys incisa (P)	1	0.2	0.4	2	54.0
Axiothella mucosa (P)	1	0.2	0.4	2	54.0
Spiochaetopterus costarum oculatus (P)	1	0.2	0.4	2	54.0
Drilonereis magna (P)	1	0.2	0.4	2	54.0
Magelona papillicornis (P)	1	0.2	0.4	2	54.0
Scolelepis texana (P)	1	0.2	0.4	2	54.0
Caulleriella killariensis (P)	1	0.2	0.4	2	54.0
Eulalia sanguinea (P)	1	0.2	0.4	2	54.0
Prionospio cristata (P)	1	0.2	0.4	2	54.0

Appendix 5.20 Abundance of macroinvertebrate species in grab collections from station DS20. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida).

	DS20				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Tellina probrina (M)	103	20.6	13.2	206	1.0
Discoporella umbellata (Ec)	33	6.6	5.0	66	2.5
Nephtys picta (P)	33	6.6	2.9	66	2.5
Nematoda (undet.)	24	4.8	5.6	48	4.0
Spiophanes bombyx (P)	23	4.6	1.8	46	5.0
Acanthohaustorius sp. (A)	20	4.0	3.8	40	6.5
Trichophoxus epistomus (A)	20	4.0	3.5	40	6.5
Prionospio dayi (P)	18	3.6	1.1	36	8.0
Bathyporeia parkeri (A)	17	3.4	4.3	34	9.0
Strigilla mirabilis (M)	15	3.0	2.3	30	10.5
Glycera oxycephala (P)	15	3.0	2.3	30	10.5
Protohaustorius nr. deichmannae (A)	14	2.8	2.8	28	12.0
Tellina texana (M)	13	2.6	1.1	26	13.0
Nemertina (undet.) A	12	2.4	0.9	24	14.0
Branchiostoma caribaeum (Cc)	11	2.2	2.7	22	15.0
Tiron tropakis (A)	10	2.0	1.4	20	17.0
Ervilia concentrica (M)	10	2.0	0.7	20	17.0
Magelona sp. (Day '73) (P)	10	2.0	1.0	20	17.0
Mellita quinquiesperforata (E)	7	1.4	1.1	14	19.5
Ophiophragmus sp. A (E)	7	1.4	1.1	14	19.5
Eudevenopus honduranus (A)	6	1.2	0.8	12	21.0
Oxyurostylis smithi (C)	5	1.0	1.4	10	22.5
Onuphis eremita (P)	5	1.0	1.2	10	22.5
Synchelidium americanum (A)	4	0.8	0.8	8	26.0
Turbellaria (undet.)	4	0.8	1.1	8	26.0
Natica pusilla (M)	4	0.8	0.4	8	26.0
Crassinella lunulata (M)	4	0.8	0.8	8	26.0
Goniada littorea (P)	4	0.8	0.8	8	26.0
Pagurus longicarpus (D)	3	0.6	0.9	6	32.5
Amphipoda (undet.) A	3	0.6	1.3	6	32.5
Aspidosiphon misakiensis (S)	3	0.6	0.9	6	32.5
Aglaophamus verrilli (P)	3	0.6	1.3	6	32.5
Owenia fusiformis (P)	3	0.6	0.5	6	32.5
Magelona papillicornis (P)	3	0.6	0.5	6	32.5
Scolelepis texana (P)	3	0.6	0.9	6	32.5
Prionospio cristata (P)	3	0.6	0.9	6	32.5
Lembos unicornis (A)	2	0.4	0.9	4	42.0
Ostracoda (undet.)	2	0.4	0.5	4	42.0
Lucinidae (undet.) A (M)	2	0.4	0.5	4	42.0
Glycera sp. (Gar.) (P)	2	0.4	0.5	4	42.0
Cirratulidae (undet.) B (P)	2	0.4	0.9	4	42.0
Nephtys incisa (P)	2	0.4	0.9	4	42.0
Nereis succinea (P)	2	0.4	0.9	4	42.0
Aricidea sp. A (P)	2	0.4	0.9	4	42.0
Paraonidae (undet.) (P)	2	0.4	0.5	4	42.0
Spio pettiboneae (P)	2	0.4	0.9	4	42.0
Haploscoloplos foliosus (P)	2	0.4	0.9	4	42.0
Trachypeneus constrictus (D)	1	0.2	0.4	2	64.5
Brachyura (undet.) A (D)	1	0.2	0.4	2	64.5
Brachyura (undet.) B (D)	1	0.2	0.4	2	64.5
Ogyrides limicola (D)	1	0.2	0.4	2	64.5
Ovalipes stephensoni (D)	1	0.2	0.4	2	64.5
Brachyuran megalopa (D)	1	0.2	0.4	2	64.5
Trichophoxus floridanus (A)	1	0.2	0.4	2	64.5
Erichthonius brasiliensis (A)	1	0.2	0.4	2	64.5
Photis sp. (A)	1	0.2	0.4	2	64.5
Chiridotea stenops (I)	1	0.2	0.4	2	64.5
Cyclaspis varians (C)	1	0.2	0.4	2	64.5
Holothuroidea (undet.) B	1	0.2	0.4	2	64.5
Glottidia pyramidata (Br)	1	0.2	0.4	2	64.5
Olivella mutica (M)	1	0.2	0.4	2	64.5
Semele nuculoides (M)	1	0.2	0.4	2	64.5
Turridae (undet.) A (M)	1	0.2	0.4	2	64.5
Turridae (undet.) C (M)	1	0.2	0.4	2	64.5
Melanellidae (undet.) (M)	1	0.2	0.4	2	64.5

Appendix 5.20 (Cont.)

DS20

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Mitrella lunata (M)	1	0.2	0.4	2	64.5
Chama macerophylla (M)	1	0.2	0.4	2	64.5
Terebra concava (M)	1	0.2	0.4	2	64.5
Unknown Taxon A	1	0.2	0.4	2	64.5
Tharyx marioni (P)	1	0.2	0.4	2	64.5
Eteone lactea (P)	1	0.2	0.4	2	64.5
Lumbrinreis laterilli (P)	1	0.2	0.4	2	64.5
Loimia medusa (P)	1	0.2	0.4	2	64.5
Aricidea suecica (P)	1	0.2	0.4	2	64.5
Onuphis nebulosa (P)	1	0.2	0.4	2	64.5
Spiochaetopterus costarum oculatis (P)	1	0.2	0.4	2	64.5
Diopatra cuprea (P)	1	0.2	0.4	2	64.5
Oligochaeta (undet.)	1	0.2	0.4	2	64.5
Notocirrus spiniferus (P)	1	0.2	0.4	2	64.5
Terebellidae (undet.) (P)	1	0.2	0.4	2	64.5
Chrysopetalidae (undet.) (P)	1	0.2	0.4	2	64.5

Appendix 5.21 Abundance of macroinvertebrate species in grab collections from station DS21. (A = Amphipoda; C = Cumacea; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; M = Mollusca; P = Polychaeta; Py = Pycnogonida; S = Sipunculida).

	DS21				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Spio pettiboneae (P)	172	34.4	11.5	344	1.0
Nephtys picta (P)	66	13.2	4.4	132	2.0
Discoporella umbellata (Ec)	55	11.0	5.7	110	3.0
Protohaustorius nr. deichmannae (A)	49	9.8	6.6	98	4.0
Mellita quinquiesperforata (E)	25	5.0	3.4	50	5.0
Turridae (undet.) C (M)	21	4.2	2.5	42	6.0
Tellina texana (M)	14	2.8	2.4	28	7.0
Ervilia concentrica (M)	13	2.6	1.1	26	8.0
Eudevenopus honduranus (A)	11	2.2	1.9	22	10.5
Nemertina (undet.) A	11	2.2	2.7	22	10.5
Aspidosiphon misakiensis (S)	11	2.2	2.9	22	10.5
Magelona sp. (Day '73) (P)	11	2.2	1.6	22	10.5
Onuphis eremita (P)	10	2.0	1.0	20	13.5
Prionospio dayi (P)	10	2.0	2.9	20	13.5
Nephtys incisa (P)	9	1.8	2.2	18	15.0
Spiophanes bombyx (P)	8	1.6	1.3	16	16.0
Phyllodoce arenae (P)	6	1.2	1.3	12	17.0
Strigilla mirabilis (M)	5	1.0	0.7	10	19.0
Tellina probrina (M)	5	1.0	1.0	10	19.0
Ophiophragmus sp. A (E)	5	1.0	0.7	10	19.0
Trichophoxus epistomus (A)	4	0.8	0.8	8	23.0
Natica pusilla (M)	4	0.8	1.1	8	23.0
Dentalium eboreum (M)	4	0.8	0.4	8	23.0
Aspidosiphon spinalis (S)	4	0.8	1.8	8	23.0
Glycera sp. (Gar.) (P)	4	0.8	0.4	8	23.0
Trachypeneus constrictus (D)	3	0.6	0.9	6	29.5
Sicyonia typica (D)	3	0.6	0.9	6	29.5
Ogyrides limicola (D)	3	0.6	0.9	6	29.5
Processa hemphilli (D)	3	0.6	0.9	6	29.5
Synchelidium americanum (A)	3	0.6	0.5	6	29.5
Pandora trilineata (M)	3	0.6	0.9	6	29.5
Lucinidae (undet.) A (M)	3	0.6	0.5	6	29.5
Crassinella lunulata (M)	3	0.6	0.5	6	29.5
Acanthohaustorius sp. (A)	2	0.4	0.5	4	37.5
Photis sp. (A)	2	0.4	0.5	4	37.5
Oxyurostylis smithi (C)	2	0.4	0.5	4	37.5
Anoplodactylus petiolatus (Py)	2	0.4	0.5	4	37.5
Nematoda (undet.)	2	0.4	0.5	4	37.5
Columbellidae (undet.) A (M)	2	0.4	0.9	4	37.5
Olivella floralia (M)	2	0.4	0.5	4	37.5
Lyonsia hyalina (M)	2	0.4	0.5	4	37.5
Brachyura (undet.) B (D)	1	0.2	0.4	2	51.0
Pagurus longicarpus (D)	1	0.2	0.4	2	51.0
Rudilemboides sp. (A)	1	0.2	0.4	2	51.0
Ampelisca verrilli (A)	1	0.2	0.4	2	51.0
Nemertina (undet.) B	1	0.2	0.4	2	51.0
Cupuladria doma (Ec)	1	0.2	0.4	2	51.0
Crassinella martinicensis (M)	1	0.2	0.4	2	51.0
Turbonilla sp. B (M)	1	0.2	0.4	2	51.0
Pelecypoda (undet.) H (M)	1	0.2	0.4	2	51.0
Goniada littorea (P)	1	0.2	0.4	2	51.0
Eteone lactea (P)	1	0.2	0.4	2	51.0
Lumbrineris latreilli (P)	1	0.2	0.4	2	51.0
Armandia agilis (P)	1	0.2	0.4	2	51.0
Arabella iricolor (P)	1	0.2	0.4	2	51.0
Magelona papillicornis (P)	1	0.2	0.4	2	51.0
Armandia maculata (P)	1	0.2	0.4	2	51.0
Scolelepis texana (P)	1	0.2	0.4	2	51.0
Notocirrus spiniferus (P)	1	0.2	0.4	2	51.0
Clymenella torquata (P)	1	0.2	0.4	2	51.0

Appendix 5.22 Abundance of macroinvertebrate species in grab collections from station DS22. (A = Amphipoda; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; M = Mollusca; P = Polychaeta; S = Sipunculida).

	DS22				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Tellina probrina (M)	60	12.0	6.4	120	1.0
Spiophanes bombyx (P)	43	8.6	3.3	86	2.0
Strigilla mirabilis (M)	28	5.6	3.4	56	3.0
Lucinidae (undet.) A (M)	17	3.4	3.6	34	4.0
Bathyporeia parkeri (A)	15	3.0	1.9	30	5.0
Glycera oxycephala (P)	14	2.8	2.0	28	6.0
Trichophoxus epistomus (A)	12	2.4	2.8	24	8.0
Nemertina (undet.) A	12	2.4	1.9	24	8.0
Discoporella umbellata (Ec)	12	2.4	2.4	24	8.0
Acanthohaustorius sp. (A)	11	2.2	2.3	22	10.0
Erichthonius brasiliensis (A)	10	2.0	3.5	20	11.0
Nephtys picta (P)	8	1.6	1.1	16	12.0
Branchiostoma caribaeum (Cc)	7	1.4	1.1	14	14.0
Eudevenopus honduranus (A)	7	1.4	1.5	14	14.0
Ophiophragmus sp. A (E)	7	1.4	1.1	14	14.0
Semele nuculoides (M)	5	1.0	0.7	10	17.0
Turbonilla sp. B (M)	5	1.0	0.0	10	17.0
Magelona papillicornis (P)	5	1.0	1.0	10	17.0
Tellina texana (M)	4	0.8	1.1	8	20.0
Magelona sp. (Day '73) (P)	4	0.8	0.8	8	20.0
Onuphis eremita (P)	4	0.8	0.8	8	20.0
Tiron tropakis (A)	3	0.6	0.9	6	23.5
Mellita quinquiesperforata (E)	3	0.6	0.9	6	23.5
Aspidosiphon misakiensis (S)	3	0.6	1.3	6	23.5
Nereis succinea (P)	3	0.6	1.3	6	23.5
Trichophoxus floridanus (A)	2	0.4	0.5	4	30.5
Ostracoda (undet.)	2	0.4	0.5	4	30.5
Corophium tuberculatum (A)	2	0.4	0.9	4	30.5
Turbellaria (undet.)	2	0.4	0.5	4	30.5
Ervilia concentrica (M)	2	0.4	0.9	4	30.5
Anachis avara (M)	2	0.4	0.9	4	30.5
Turridae (undet.) C (M)	2	0.4	0.5	4	30.5
Owenia fusiformis (P)	2	0.4	0.9	4	30.5
Armandia maculata (P)	2	0.4	0.9	4	30.5
Prionospio dayi (P)	2	0.4	0.9	4	30.5
Euceramus praelongus (D)	1	0.2	0.4	2	48.0
Pagurus longicarpus (D)	1	0.2	0.4	2	48.0
Lepidopa websteri (D)	1	0.2	0.4	2	48.0
Brachyuran megalopa (D)	1	0.2	0.4	2	48.0
Synchelidium americanum (A)	1	0.2	0.4	2	48.0
Batea catharinensis (A)	1	0.2	0.4	2	48.0
Echinoidea (undet.) A (E)	1	0.2	0.4	2	48.0
Ophiothrix angulata (E)	1	0.2	0.4	2	48.0
Natica pusilla (M)	1	0.2	0.4	2	48.0
Turbonilla sp. A (M)	1	0.2	0.4	2	48.0
Mitrella lunata (M)	1	0.2	0.4	2	48.0
Dentalium eboreum (M)	1	0.2	0.4	2	48.0
Terebra concava (M)	1	0.2	0.4	2	48.0
Crassinella lunulata (M)	1	0.2	0.4	2	48.0
Aspidosiphon spinalis (S)	1	0.2	0.4	2	48.0
Sipunculus nudus (S)	1	0.2	0.4	2	48.0
Glycera sp. (Gar.) (P)	1	0.2	0.4	2	48.0
Cirratulidae (undet.) B (P)	1	0.2	0.4	2	48.0
Cirrophorus lyriformis (P)	1	0.2	0.4	2	48.0
Notomastus hemipodus (P)	1	0.2	0.4	2	48.0
Spiochaetopterus costarum oculatis (P)	1	0.2	0.4	2	48.0
Pareulepis sp. (P)	1	0.2	0.4	2	48.0
Phyllodoce castanea (P)	1	0.2	0.4	2	48.0
Diopatra cuprea (P)	1	0.2	0.4	2	48.0
Scolelepis texana (P)	1	0.2	0.4	2	48.0

Appendix 5.23 Abundance of macroinvertebrate species in grab collections from station DS23. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; E = Echinodermata; Ec = Ectoprocta; M = Mollusca; P = Polychaeta).

	DS23				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Strigilla mirabilis (M)	46	9.2	2.8	92	1.0
Tellina probrina	29	5.8	3.4	58	2.0
Lucinidae (undet.) A (M)	26	5.2	5.3	52	3.0
Nephtys picta (P)	23	4.6	1.3	46	4.0
Bathyporeia parkeri (A)	17	3.4	1.3	34	5.0
Discoporella umbellata (Ec)	15	3.0	3.1	30	6.5
Spiophanes bombyx (P)	15	3.0	1.9	30	6.5
Nemertina (undet.) A	13	2.6	1.5	26	8.0
Trichophoxus epistomus (A)	10	2.0	1.9	20	9.5
Mellita quinquiesperforata (E)	10	2.0	1.9	20	9.5
Acanthohaustorius sp. (A)	8	1.6	0.9	16	11.0
Eudevenopus honduranus (A)	7	1.4	1.7	14	12.5
Glycera oxycephala (P)	7	1.4	1.5	14	12.5
Magelona rosea (P)	6	1.2	1.3	12	14.0
Prionospio dayi (P)	4	0.8	0.4	8	15.0
Protohaustorius nr. deichmannae (A)	3	0.6	0.9	6	17.0
Turbonilla sp. B (M)	3	0.6	0.5	6	17.0
Ervilia concentrica (M)	3	0.6	0.9	6	17.0
Branchiostoma caribaeum (Cc)	2	0.4	0.9	4	22.5
Synchelidium americanum (A)	2	0.4	0.5	4	22.5
Oxyurostylis smithi (C)	2	0.4	0.5	4	22.5
Ophiophragmus sp. A (E)	2	0.4	0.5	4	22.5
Turridae (undet.) C (M)	2	0.4	0.5	4	22.5
Nephtys incisa (P)	2	0.4	0.5	4	22.5
Onuphis eremita (P)	2	0.4	0.5	4	22.5
Aricidea sp. B (P)	2	0.4	0.9	4	22.5
Albunea paretii (D)	1	0.2	0.4	2	33.0
Trichophoxus floridanus (A)	1	0.2	0.4	2	33.0
Tiron tropakis (A)	1	0.2	0.4	2	33.0
Nematoda (undet.)	1	0.2	0.4	2	33.0
Olivella mutica (M)	1	0.2	0.4	2	33.0
Tellina texana (M)	1	0.2	0.4	2	33.0
Acteocina candei (M)	1	0.2	0.4	2	33.0
Pelecypoda (undet.) C (M)	1	0.2	0.4	2	33.0
Glycera sp. (Gar.) (P)	1	0.2	0.4	2	33.0
Spiochaetopterus costarum oculatis (P)	1	0.2	0.4	2	33.0
Owenia fusiformis (P)	1	0.2	0.4	2	33.0
Armandia maculata (P)	1	0.2	0.4	2	33.0
Scolelepis texana (P)	1	0.2	0.4	2	33.0

Appendix 5.24 Abundance of macroinvertebrate species in grab collections from station DS24. (A = Amphipoda; C = Cumacea; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; Ph = Phoronida; P = Polychaeta; Py = Pycnogonida; S = Sipunculida).

	DS24				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Nephtys picta (P)	31	6.2	2.9	62	1.0
Protohaustorius nr. deichmannae (A)	21	4.2	2.7	42	2.0
Pagurus longicarpus (D)	16	3.2	3.6	32	3.0
Discoporella umbellata (Ec)	14	2.8	3.3	28	4.0
Turridae (undet.) C (M)	13	2.6	3.2	26	5.0
Acanthohaustorius millsi (A)	9	1.8	3.0	18	7.0
Eudevenopus honduranus (A)	9	1.8	1.5	18	7.0
Ervilia concentrica (M)	9	1.8	2.0	18	7.0
Mellita quinquiesperforata (E)	8	1.6	2.6	16	10.5
Strigilla mirabilis (M)	8	1.6	3.0	16	10.5
Spio pettiboneae (P)	8	1.6	3.6	16	10.5
Prionospio dayi (P)	8	1.6	1.5	16	10.5
Tiron tropakis (A)	5	1.0	1.2	10	13.5
Nemertina (undet.) A	5	1.0	0.7	10	13.5
Bathyporeia parkeri (A)	4	0.8	0.8	8	16.0
Natica pusilla (M)	4	0.8	0.8	8	16.0
Glycera sp. (Gar.) (P)	4	0.8	1.8	8	16.0
Ogyrides limicola (D)	3	0.6	0.5	6	20.5
Aspidosiphon spinalis (S)	3	0.6	0.5	6	20.5
Onuphis nebulosa (P)	3	0.6	0.9	6	20.5
Polydora sp. B (P)	3	0.6	1.3	6	20.5
Owenia fusiformis (P)	3	0.6	0.5	6	20.5
Onuphis eremita (P)	3	0.6	0.9	6	20.5
Leptochela serratorbita (D)	2	0.4	0.5	4	32.5
Albunea paretii (D)	2	0.4	0.5	4	32.5
Amphipoda (undet.) A	2	0.4	0.5	4	32.5
Ostracoda (undet.)	2	0.4	0.5	4	32.5
Oxyurostylis smithi (C)	2	0.4	0.5	4	32.5
Anoplodactylus petiolatus (Py)	2	0.4	0.5	4	32.5
Turbellaria (undet.)	2	0.4	0.5	4	32.5
Ophiophragmus sp. A (E)	2	0.4	0.5	4	32.5
Tellina texana (M)	2	0.4	0.5	4	32.5
Pandora trilineata (M)	2	0.4	0.9	4	32.5
Olivella floralia (M)	2	0.4	0.5	4	32.5
Dentalium eboreum (M)	2	0.4	0.9	4	32.5
Eteone lactea (P)	2	0.4	0.5	4	32.5
Glycera oxycephala (P)	2	0.4	0.5	4	32.5
Nephtys incisa (P)	2	0.4	0.5	4	32.5
Spiophanes bombyx (P)	2	0.4	0.9	4	32.5
Phyllodoce arenae (P)	2	0.4	0.5	4	32.5
Terebellidae (undet.) (P)	2	0.4	0.5	4	32.5
Trachypeneus constrictus (D)	1	0.2	0.4	2	57.5
Euceramus praelongus (D)	1	0.2	0.4	2	57.5
Acanthohaustorius sp. (A)	1	0.2	0.4	2	57.5
Synchelidium americanum (A)	1	0.2	0.4	2	57.5
Trichophoxus epistomus (A)	1	0.2	0.4	2	57.5
Luconacia incerta (A)	1	0.2	0.4	2	57.5
Mysidacea (undet.) A	1	0.2	0.4	2	57.5
Hippomedon serratus (A)	1	0.2	0.4	2	57.5
Chiridotea stenops (I)	1	0.2	0.4	2	57.5
Nemertina (undet.) B	1	0.2	0.4	2	57.5
Ophiuroidea (undet.) E (E)	1	0.2	0.4	2	57.5
Holothuroidea (undet.) B (E)	1	0.2	0.4	2	57.5
Phoronis sp. A (Ph)	1	0.2	0.4	2	57.5
Nematoda (undet.)	1	0.2	0.4	2	57.5
Cupuladria doma (Ec)	1	0.2	0.4	2	57.5
Tellina probrina (M)	1	0.2	0.4	2	57.5
Acteocina candei (M)	1	0.2	0.4	2	57.5
Dentaliidae (undet.) A (M)	1	0.2	0.4	2	57.5
Lucinidae (undet.) A (M)	1	0.2	0.4	2	57.5
Marginellidae (undet.) A (M)	1	0.2	0.4	2	57.5
Abra aequalis (M)	1	0.2	0.4	2	57.5

Appendix 5.24 (Cont.)

Species	DS24 Total Number	Number/0.1m^2 $\bar{X}$	SD	Estimated Number/m^2	Rank by Number
Veneridae (undet.) A (M)	1	0.2	0.4	2	57.5
Aspidosiphon misakiensis (S)	1	0.2	0.4	2	57.5
Goniadides carolinae (P)	1	0.2	0.4	2	57.5
Magelona sp. (Day 73) (P)	1	0.2	0.4	2	57.5
Pseudeurythoe ambigua (P)	1	0.2	0.4	2	57.5
Loimia medusa (P)	1	0.2	0.4	2	57.5
Cirratulidae (undet.) B (P)	1	0.2	0.4	2	57.5
Axiothella mucosa (P)	1	0.2	0.4	2	57.5
Pareulepis sp. (P)	1	0.2	0.4	2	57.5
Scoloplos acmeceps (P)	1	0.2	0.4	2	57.5
Arabella mutans (P)	1	0.2	0.4	2	57.5

Appendix 5.25 Abundance of macroinvertebrate species in grab collections from station DS25. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; M = Mollusca; My = Mysidacea; P = Polychaeta; Py = Pycnogonida; S = Sipunculida).

	DS25				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Spiophanes bombyx (P)	83	16.6	8.4	166	1.0
Tellina probrina (M)	50	10.0	6.5	100	2.0
Eudevenopus honduranus (A)	37	7.4	4.2	74	3.5
Discoporella umbellata (Ec)	37	7.4	4.8	74	3.5
Nephtys picta (P)	33	6.6	4.1	66	5.0
Magelona sp. (P)	25	5.0	2.0	50	6.0
Protohaustorius nr. deichmannae (A)	24	4.8	1.8	48	7.0
Bathyporeia parkeri (A)	21	4.2	4.5	42	8.0
Prionospio dayi (P)	15	3.0	2.5	30	9.0
Tiron tropakis (A)	12	2.4	1.5	24	10.0
Trichophoxus epistomus (A)	7	1.4	2.2	14	11.5
Scolelepis texana (P)	7	1.4	1.1	14	11.5
Nemertina (undet.) A	6	1.2	0.8	12	13.0
Nematoda (undet.)	5	1.0	0.7	10	15.0
Strigilla mirabilis (M)	5	1.0	1.2	10	15.0
Tellina texana (M)	5	1.0	0.7	10	15.0
Nereis succinea (P)	4	0.8	1.8	8	17.0
Branchiostoma caribaeum (Cc)	3	0.6	1.3	6	23.0
Synchelidium americanum (A)	3	0.6	0.9	6	23.0
Oxyurostylis smithi (C)	3	0.6	0.9	6	23.0
Anoplodactylus petiolatus (Py)	3	0.6	0.9	6	23.0
Ophiophragmus sp. A (E)	3	0.6	0.9	6	23.0
Olivella mutica (M)	3	0.6	0.9	6	23.0
Lucinidae (undet.) A (M)	3	0.6	0.9	6	23.0
Lumbrineris latreilli (P)	3	0.6	0.5	6	23.0
Nephtys incisa (P)	3	0.6	0.5	6	23.0
Owenia fusiformis (P)	3	0.6	0.5	6	23.0
Magelona papillicornis (P)	3	0.6	0.5	6	23.0
Acanthohaustorius sp. (A)	2	0.4	0.5	4	36.5
Mysidopsis bigelowi (My)	2	0.4	0.9	4	36.5
Mellita quinquiesperforata (E)	2	0.4	0.5	4	36.5
Ervilia concentrica (M)	2	0.4	0.5	4	36.5
Turridae (undet.) A (M)	2	0.4	0.5	4	36.5
Gastrochaena hians (M)	2	0.4	0.9	4	36.5
Magelona sp. A (P)	2	0.4	0.5	4	36.5
Hydroides uncinata (P)	2	0.4	0.9	4	36.5
Hypsicomus sp. (P)	2	0.4	0.9	4	36.5
Cirratulus sp. (P)	2	0.4	0.5	4	36.5
Glycera sp. (Gar.) (P)	2	0.4	0.5	4	36.5
Glycera oxycephala (P)	2	0.4	0.5	4	36.5
Onuphis nebulosa (P)	2	0.4	0.5	4	36.5
Axiothella mucosa (P)	2	0.4	0.5	4	36.5
Armandia maculata (P)	2	0.4	0.5	4	36.5
Oligochaeta (undet.)	2	0.4	0.5	4	36.5
Trachypeneus constrictus (D)	1	0.2	0.4	2	55.0
Lembos unicornis (A)	1	0.2	0.4	2	55.0
Trichophoxus floridanus (A)	1	0.2	0.4	2	55.0
Ampelisca abdita (A)	1	0.2	0.4	2	55.0
Hippomedon serratus (A)	1	0.2	0.4	2	55.0
Turbellaria (undet.)	1	0.2	0.4	2	55.0
Ophiuroidea (undet.) C (E)	1	0.2	0.4	2	55.0
Natica pusilla (M)	1	0.2	0.4	2	55.0
Turbonilla sp. B (M)	1	0.2	0.4	2	55.0
Anachis obesa (M)	1	0.2	0.4	2	55.0
Chama macerophylla (M)	1	0.2	0.4	2	55.0
Aspidosiphon misakiensis (S)	1	0.2	0.4	2	55.0
Aspidosiphon spinalis (S)	1	0.2	0.4	2	55.0
Sipunculida (undet.)	1	0.2	0.4	2	55.0
Goniadides carolinae (P)	1	0.2	0.4	2	55.0
Eteone lactea (P)	1	0.2	0.4	2	55.0

Appendix 5.25 (Cont.)

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
		DS25			
Dispio uncinata (P)	1	0.2	0.4	2	55.0
Paraprionospio pinnata (P)	1	0.2	0.4	2	55.0
Spio pettiboneae (P)	1	0.2	0.4	2	55.0
Phyllodoce arenae (P)	1	0.2	0.4	2	55.0
Prionospio cristata (P)	1	0.2	0.4	2	55.0

Appendix 5.26 Abundance of macroinvertebrate species in grab collections from station DS26. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida).

	DS26				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	95	19.0	14.8	190	1.0
Trichophoxus floridanus (A)	40	8.0	8.6	80	2.0
Spiophanes bombyx (P)	36	7.2	1.9	72	3.0
Nematoda (undet.)	34	6.8	6.8	68	4.0
Tellina probrina (M)	27	5.4	3.2	54	5.5
Glycera oxycephala (P)	27	5.4	3.3	54	5.5
Prionospio fallax (P)	24	4.8	8.7	48	7.0
Bathyporeia parkeri (A)	23	4.6	3.6	46	8.0
Nephtys picta (P)	19	3.8	2.6	38	9.0
Tiron tropakis (A)	14	2.8	2.2	28	10.0
Aspidosiphon spinalis (S)	12	2.4	2.3	24	11.0
Maldanidae (undet.) (P)	10	2.0	1.9	20	12.0
Discoporella umbellata (Ec)	9	1.8	0.8	18	14.0
Strigilla mirabilis (M)	9	1.8	1.8	18	14.0
Onuphis eremita	9	1.8	3.5	18	14.0
Acanthohaustorius sp. (A)	8	1.6	2.1	16	16.0
Trichophoxus epistomus (A)	7	1.4	1.1	14	18.5
Nemertina (undet.) A	7	1.4	1.5	14	18.5
Magelona sp. (Day '73) (P)	7	1.4	1.5	14	18.5
Prionospio dayi (P)	7	1.4	1.5	14	18.5
Eudevenopus honduranus (A)	6	1.2	1.1	12	21.5
Polycirrus eximius (P)	6	1.2	2.2	12	21.5
Cyathura burbancki (I)	5	1.0	1.7	10	25.5
Cupuladria doma (Ec)	5	1.0	0.7	10	25.5
Olivella mutica (M)	5	1.0	0.7	10	25.5
Ervilia concentrica (M)	5	1.0	1.0	10	25.5
Owenia fusiformis (P)	5	1.0	1.2	10	25.5
Aricidea sp. A (P)	5	1.0	1.0	10	25.5
Lembos unicornis (A)	4	0.8	0.8	8	29.0
Amphipoda (undet.) A	3	0.6	0.5	6	33.5
Protohaustorius nr. deichmannae (A)	3	0.6	0.9	6	33.5
Lucinidae (undet.) A (M)	3	0.6	0.9	6	33.5
Nephtys incisa (P)	3	0.6	0.9	6	33.5
Hesionidae (undet.) A (P)	3	0.6	0.5	6	33.5
Phyllodoce longipes (P)	3	0.6	0.9	6	33.5
Onuphis eremita (P)	3	0.6	0.9	6	33.5
Cyclaspis varians (C)	3	0.6	0.5	6	33.5
Ostracoda (undet.)	2	0.4	0.5	4	44.5
Oxyurostylis smithi (C)	2	0.4	0.5	4	44.5
Apanthura magnifica (I)	2	0.4	0.5	4	44.5
Turbellaria (undet.)	2	0.4	0.5	4	44.5
Atys caribaea (M)	2	0.4	0.9	4	44.5
Dentalium eboreum (M)	2	0.4	0.9	4	44.5
Goniadides carolinae (P)	2	0.4	0.5	4	44.5
Pseudeurythoe ambigua (P)	2	0.4	0.9	4	44.5
Lumbrineris latreilli (P)	2	0.4	0.5	4	44.5
Cirratulidae (undet.) B (P)	2	0.4	0.5	4	44.5
Armandia maculata (P)	2	0.4	0.5	4	44.5
Oligochaeta (undet.)	2	0.4	0.5	4	44.5
Hemipodus roseus (P)	2	0.4	0.9	4	44.5
Ampharetidae (undet.) (P)	2	0.4	0.5	4	44.5
Brachyura (undet.) B (D)	1	0.2	0.4	2	70.0
Albunea paretii (D)	1	0.2	0.4	2	70.0
Processa hemphilli (D)	1	0.2	0.4	2	70.0
Liljeborgia sp. (A)	1	0.2	0.4	2	70.0
Cumacea (undet.) E	1	0.2	0.4	2	70.0
Eurydice littoralis (I)	1	0.2	0.4	2	70.0
Mysidacea (undet.) A	1	0.2	0.4	2	70.0
Ampelisca verrilli (A)	1	0.2	0.4	2	70.0
Chiridotea stenops (I)	1	0.2	0.4	2	70.0
Mellita quinquiesperforata (E)	1	0.2	0.4	2	70.0

Appendix 5.26 (Cont.)

DS26

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Ophiophragmus sp. A (E)	1	0.2	0.4	2	70.0
Semele bellastriata (M)	1	0.2	0.4	2	70.0
Turbonilla sp. B (M)	1	0.2	0.4	2	70.0
Macrocallista nimbosa (M)	1	0.2	0.4	2	70.0
Terebra concava (M)	1	0.2	0.4	2	70.0
Crassinella lunulata (M)	1	0.2	0.4	2	70.0
Aspidosiphon misakiensis (S)	1	0.2	0.4	2	70.0
Sipunculida (undet.) (S)	1	0.2	0.4	2	70.0
Aricidea suecica (P)	1	0.2	0.4	2	70.0
Aricidea cerruti (P)	1	0.2	0.4	2	70.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	70.0
Hydroides protulicola (P)	1	0.2	0.4	2	70.0
Syllidae (undet.) A (P)	1	0.2	0.4	2	70.0
Terebellidae (undet.) A (P)	1	0.2	0.4	2	70.0
Syllis regulata carolinae (P)	1	0.2	0.4	2	70.0
Spiochaetopterus costarum oculatis (P)	1	0.2	0.4	2	70.0
Autolytus dentalius (P)	1	0.2	0.4	2	70.0
Pectinaria gouldii (P)	1	0.2	0.4	2	70.0
Scoloplos sp. (P)	1	0.2	0.4	2	70.0
Hesionidae (undet.) (P)	1	0.2	0.4	2	70.0
Mediomastus californiensis (P)	1	0.2	0.4	2	70.0
Phyllodoce arenae (P)	1	0.2	0.4	2	70.0
Polydora caeca (P)	1	0.2	0.4	2	70.0
Magelona rosea (P)	1	0.2	0.4	2	70.0
Schistomeringos rudolphi (P)	1	0.2	0.4	2	70.0
Clymenella torquata (P)	1	0.2	0.4	2	70.0
Prionospio cirrifera (P)	1	0.2	0.4	2	70.0

Appendix 5.27 Abundance of macroinvertebrate species in grab collections from station DS27. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida).

	DS27				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Spio pettiboneae (P)	587	117.4	48.6	1174	1.0
Trichophoxus floridanus (A)	79	15.8	14.5	158	2.0
Branchiostoma caribaeum (Cc)	67	13.4	11.4	134	3.0
Spiophanes bombyx (P)	59	11.8	19.8	118	4.0
Nematoda (undet.)	43	8.6	6.8	86	5.0
Prionospio cristata (P)	23	4.6	5.2	46	6.0
Tiron tropakis (A)	20	4.0	4.6	40	7.0
Nephtys picta (P)	19	3.8	3.9	38	8.0
Acanthohaustorius sp. (A)	17	3.4	3.2	34	9.0
Onuphis eremita (P)	16	3.2	2.2	32	10.5
Oligochaeta (undet.)	16	3.2	2.9	32	10.5
Liljeborgia sp. (A)	14	2.8	3.4	28	12.5
Goniadides carolinae (P)	14	2.8	3.9	28	12.5
Eudevenopus honduranus (A)	13	2.6	1.1	26	14.0
Armandia maculata (P)	12	2.4	2.8	24	15.0
Glycera oxycephala (P)	11	2.2	2.2	22	16.0
Tellina probrina (M)	9	1.8	1.8	18	17.5
Phyllodoce arenae (P)	9	1.8	1.3	18	17.5
Pagurus longicarpus (D)	7	1.4	1.7	14	20.0
Apanthura magnifica (I)	7	1.4	1.7	14	20.0
Semele nuculoides (M)	7	1.4	1.3	14	20.0
Ervilia concentrica (M)	6	1.2	1.1	12	22.0
Bathyporeia parkeri (A)	5	1.0	1.7	10	24.0
Protohaustorius nr. deichmannae (A)	5	1.0	1.0	10	24.0
Strigilla mirabilis (M)	5	1.0	1.7	10	24.0
Trichophoxus epistomus (A)	4	0.8	1.3	8	30.0
Amphipoda (undet.) A	4	0.8	1.3	8	30.0
Oxyurostylis smithi (C)	4	0.8	1.1	8	30.0
Turbellaria (undet.)	4	0.8	1.8	8	30.0
Nemertina (undet.) A	4	0.8	0.8	8	30.0
Nemertina (undet.) B	4	0.8	0.8	8	30.0
Calyptraea centralis (M)	4	0.8	1.1	8	30.0
Aspidosiphon spinalis (S)	4	0.8	1.3	8	30.0
Nereis succinea (P)	4	0.8	1.8	8	30.0
Lembos unicornis (A)	3	0.6	1.3	6	37.0
Lumbrineris latreilli (P)	3	0.6	0.9	6	37.0
Aricidea cerruti (P)	3	0.6	0.9	6	37.0
Onuphis nebulosa (P)	3	0.6	0.9	6	37.0
Phyllodoce castanea (P)	3	0.6	1.3	6	37.0
Synchelidium americanum (A)	2	0.4	0.5	4	44.0
Cyclaspis varians (C)	2	0.4	0.5	4	44.0
Erichthonius brasiliensis (A)	2	0.4	0.9	4	44.0
Crassinella lunulata (M)	2	0.4	0.5	4	44.0
Eteone lactea (P)	2	0.4	0.5	4	44.0
Syllis regulata carolinae (P)	2	0.4	0.9	4	44.0
Hesionidae (undet.) A (P)	2	0.4	0.5	4	44.0
Hemipodus roseus (P)	2	0.4	0.5	4	44.0
Schistomeringos rudolphi (P)	2	0.4	0.5	4	44.0
Trachypeneus constrictus (D)	1	0.2	0.4	2	63.5
Hepatus epheliticus (D)	1	0.2	0.4	2	63.5
Portunidae (undet.) (D)	1	0.2	0.4	2	63.5
Eurydice littoralis (I)	1	0.2	0.4	2	63.5
Isopoda (undet.) A	1	0.2	0.4	2	63.5
Ostracoda (undet.)	1	0.2	0.4	2	63.5
Ampelisca verrilli (A)	1	0.2	0.4	2	63.5
Cyathura burbancki (I)	1	0.2	0.4	2	63.5
Ancinus depressus (I)	1	0.2	0.4	2	63.5
Mellita quinquiesperforata (E)	1	0.2	0.4	2	63.5
Ophiuroidea (undet.) B (E)	1	0.2	0.4	2	63.5
Ophiophragmus sp. A (E)	1	0.2	0.4	2	63.5
Cupuladria doma (Ec)	1	0.2	0.4	2	63.5

Appendix 5.27 (Cont.)

Species	DS27 Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Semele bellastriata (M)	1	0.2	0.4	2	63.5
Crassinella martinicensis (M)	1	0.2	0.4	2	63.5
Pelecypoda (undet.) G	1	0.2	0.4	2	63.5
Magelona sp. A (P)	1	0.2	0.4	2	63.5
Syllidae (undet.) B (P)	1	0.2	0.4	2	63.5
Protodorvillea kefersteini (P)	1	0.2	0.4	2	63.5
Magelona sp. (Day 73) (P)	1	0.2	0.4	2	63.5
Cirratulidae (undet.) B (P)	1	0.2	0.4	2	63.5
Nephtys incisa (P)	1	0.2	0.4	2	63.5
Spiochaetopterus costarum oculatus (P)	1	0.2	0.4	2	63.5
Scoloplos sp. (P)	1	0.2	0.4	2	63.5
Diopatra cuprea (P)	1	0.2	0.4	2	63.5
Poecilochaetus sp. (P)	1	0.2	0.4	2	63.5
Aricidea sp. A (P)	1	0.2	0.4	2	63.5
Eunicidae (undet.) (P)	1	0.2	0.4	2	63.5
Sigambra bassi (P)	1	0.2	0.4	2	63.5
Chrysopetalidae (undet.) (P)	1	0.2	0.4	2	63.5

Appendix 5.28 Abundance of macroinvertebrate species in grab collections from station DS28. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida).

	DS28				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	157	31.4	16.3	314	1.0
Trichophoxus floridanus (A)	62	12.4	2.2	124	2.0
Tiron tropakis (A)	24	4.8	3.7	48	3.0
Bathyporeia parkeri (A)	23	4.6	4.3	46	4.5
Nephtys picta (P)	23	4.6	1.5	46	4.5
Natantia (undet.)	22	4.4	8.3	44	6.5
Eudevenopus honduranus (A)	22	4.4	3.6	44	6.5
Trichophoxus epistomus (A)	21	4.2	5.6	42	8.0
Acanthohaustorius sp. (A)	19	3.8	2.4	38	9.0
Onuphis eremita (P)	17	3.4	2.6	34	10.0
Cupuladria doma (Ec)	15	3.0	2.2	30	11.0
Tellina probrina (M)	13	2.6	1.1	26	12.0
Glycera oxycephala (P)	12	2.4	1.5	24	13.0
Nemertina (undet.) A	9	1.8	0.8	18	14.0
Protohaustorius nr. deichmannae (A)	7	1.4	1.1	14	16.0
Apanthura magnifica (I)	7	1.4	0.5	14	16.0
Strigilla mirabilis (M)	7	1.4	1.7	14	16.0
Nematoda (undet.)	6	1.2	0.8	12	18.0
Neomysis americana (My)	5	1.0	2.2	10	19.0
Oxyurostylis smithi (C)	4	0.8	1.1	8	21.5
Ancinus depressus (I)	4	0.8	1.3	8	21.5
Spiophanes bombyx (P)	4	0.8	0.8	8	21.5
Spio pettiboneae (P)	4	0.8	0.8	8	21.5
Liljeborgia sp. (A)	3	0.6	0.5	6	26.5
Discoporella umbellata (Ec)	3	0.6	0.9	6	26.5
Olivella mutica (M)	3	0.6	0.9	6	26.5
Ervilia concentrica (M)	3	0.6	0.5	6	26.5
Oligochaeta (undet.)	3	0.6	0.9	6	26.5
Pionosyllis sp. (P)	3	0.6	0.9	6	26.5
Pagurus longicarpus (D)	2	0.4	0.5	4	33.0
Lembos unicornis (A)	2	0.4	0.5	4	33.0
Cumacea (undet.) F	2	0.4	0.9	4	33.0
Mysidopsis bigelowi (My)	2	0.4	0.9	4	33.0
Mellita quinquiesperforata (E)	2	0.4	0.5	4	33.0
Ophiuroidea (undet.) B (E)	2	0.4	0.5	4	33.0
Aricidea cerruti (P)	2	0.4	0.5	4	33.0
Ovalipes stephensoni (D)	1	0.2	0.4	2	50.0
Eurydice littoralis (I)	1	0.2	0.4	2	50.0
Erichthonius brasiliensis (A)	1	0.2	0.4	2	50.0
Stomatopoda (undet.)	1	0.2	0.4	2	50.0
Cyclaspis varians (C)	1	0.2	0.4	2	50.0
Ophiophragmus sp. A (E)	1	0.2	0.4	2	50.0
Turbonilla sp. D (M)	1	0.2	0.4	2	50.0
Mitrella lunata (M)	1	0.2	0.4	2	50.0
Abra aequalis (M)	1	0.2	0.4	2	50.0
Terebra concava (M)	1	0.2	0.4	2	50.0
Crassinella lunulata (M)	1	0.2	0.4	2	50.0
Aspidosiphon spinalis (S)	1	0.2	0.4	2	50.0
Goniadides carolinae (P)	1	0.2	0.4	2	50.0
Aglaophamus verrilli (P)	1	0.2	0.4	2	50.0
Aricidea suecica (P)	1	0.2	0.4	2	50.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	50.0
Nephtys incisa (P)	1	0.2	0.4	2	50.0
Syllidae (undet.) A (P)	1	0.2	0.4	2	50.0
Terebellidae (undet.) A (P)	1	0.2	0.4	2	50.0
Spiochaetopterus costarum oculatis (P)	1	0.2	0.4	2	50.0
Hesionidae (undet.) A (P)	1	0.2	0.4	2	50.0
Scolelepis texana (P)	1	0.2	0.4	2	50.0
Schistomeringos rudolphi (P)	1	0.2	0.4	2	50.0
Sigambra bassi (P)	1	0.2	0.4	2	50.0
Chrysopetalidae (undet.) (P)	1	0.2	0.4	2	50.0
Syllis hyalina (P)	1	0.2	0.4	2	50.0
Lumbrinerides acuta (P)	1	0.2	0.4	2	50.0

Appendix 5.29 Abundance of macroinvertebrate species in grab collections from station DS29. (A = Amphipoda; B = Brachipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS29				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	266	53.2	37.1	532	1.0
Nematoda (undet.)	154	30.8	34.7	308	2.0
Trichophoxus floridanus (A)	78	15.6	9.0	156	3.0
Goniadides carolinae (P)	58	11.6	11.5	116	4.0
Spiophanes bombyx (P)	52	10.4	2.9	104	5.0
Bathyporeia parkeri (A)	38	7.6	4.2	76	6.5
Aspidosiphon spinalis (S)	38	7.6	8.1	76	6.5
Cyathura burbancki (I)	35	7.0	7.6	70	8.0
Eudevenopus honduranus (A)	27	5.4	3.2	54	10.0
Tellina probrina (M)	27	5.4	3.3	54	10.0
Nephtys picta (P)	27	5.4	2.4	54	10.0
Oligochaeta (undet.)	24	4.8	5.4	48	12.0
Cupuladria doma (Ec)	23	4.6	3.2	46	13.0
Aspidosiphon misakiensis (S)	20	4.0	2.0	40	14.0
Onuphis eremita (P)	19	3.8	1.5	38	15.0
Armandia maculata (P)	17	3.4	2.1	34	16.0
Tiron tropakis (A)	15	3.0	4.6	30	17.5
Strigilla mirabilis (M)	15	3.0	3.7	30	17.5
Acanthohaustorius sp. (A)	14	2.8	2.8	28	19.5
Ervilia concentrica (M)	14	2.8	2.6	28	19.5
Rudilemboides sp. (A)	12	2.4	2.1	24	21.5
Turbellaria (undet.)	12	2.4	1.9	24	21.5
Nemertina (undet.) A	11	2.2	1.1	22	23.0
Amphipoda (undet.) A	10	2.0	2.3	20	25.5
Apanthura magnifica (I)	10	2.0	1.4	20	25.5
Discoporella umbellata (Ec)	10	2.0	1.6	20	25.5
Ancistrosyllis jonesi (P)	10	2.0	2.5	20	25.5
Ostracoda (undet.)	9	1.8	1.6	18	28.5
Glycera oxycephala (P)	9	1.8	1.9	18	28.5
Oxyurostylis smithi (C)	8	1.6	1.1	16	31.0
Hesionidae (undet.) A (P)	8	1.6	1.8	16	31.0
Prionospio cristata (P)	8	1.6	1.8	16	31.0
Trichophoxus epistomus (A)	7	1.4	1.1	14	34.0
Cirrophorus lyriformis (P)	7	1.4	1.7	14	34.0
Nephtys incisa (P)	7	1.4	1.1	14	34.0
Aricidea cerruti (P)	6	1.2	1.3	12	36.0
Liljeborgia sp. (A)	5	1.0	1.2	10	41.0
Ophiuroidea (undet.) B (E)	5	1.0	0.7	10	41.0
Semele nuculoides (M)	5	1.0	1.4	10	41.0
Axiothella mucosa (P)	5	1.0	0.7	10	41.0
Syllis regulata carolinae (P)	5	1.0	2.2	10	41.0
Phyllodoce arenae (P)	5	1.0	1.7	10	41.0
Magelona rosea (P)	5	1.0	1.0	10	41.0
Chrysopetalidae (undet.) (P)	5	1.0	1.2	10	41.0
Isolda pulchella (P)	5	1.0	1.7	10	41.0
Synchelidium americanum (A)	4	0.8	1.3	8	48.5
Lumbrineris latreilli (P)	4	0.8	0.4	8	48.5
Onuphis nebulosa (P)	4	0.8	0.8	8	48.5
Spio pettiboneae (P)	4	0.8	1.8	8	48.5
Sigambra bassi (P)	4	0.8	0.4	8	48.5
Aonides mayaguezensis (P)	4	0.8	1.3	8	48.5
Cumacea (undet.) F	3	0.6	0.9	6	54.0
Mellita quinquiesperforata (E)	3	0.6	0.9	6	54.0
Owenia fusiformis (P)	3	0.6	0.9	6	54.0
Synelmis albini (P)	3	0.6	1.3	6	54.0
Schistomeringos rudolphi (P)	3	0.6	1.3	6	54.0
Pagurus longicarpus (D)	2	0.4	0.5	4	63.0
Ampelisca verrilli (A)	2	0.4	0.5	4	63.0
Erichthonius brasiliensis (A)	2	0.4	0.9	4	63.0
Glottidia pyramidata (Br)	2	0.4	0.5	4	63.0
Tellina texana (M)	2	0.4	0.9	4	63.0

Appendix 5.29 (Cont.)

Species	DS29 Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Lucinidae (undet.) A (M)	2	0.4	0.5	4	63.0
Cirrophorus branchiatus (P)	2	0.4	0.5	4	63.0
Polycirrus eximius (P)	2	0.4	0.5	4	63.0
Prionospio cirrobranchiata (P)	2	0.4	0.5	4	63.0
Scoloplos sp. (P)	2	0.4	0.5	4	63.0
Caulleriella killariensis (P)	2	0.4	0.5	4	63.0
Prionospio dayi (P)	2	0.4	0.5	4	63.0
Pionosyllis sp. (P)	2	0.4	0.9	4	63.0
Trachypeneus constrictus (D)	1	0.2	0.4	2	88.5
Euceramus praelongus (D)	1	0.2	0.4	2	88.5
Albunea paretii (D)	1	0.2	0.4	2	88.5
Ampelisca vadorum (A)	1	0.2	0.4	2	88.5
Jerbarnia sp. (A)	1	0.2	0.4	2	88.5
Isopoda (undet.) A	1	0.2	0.4	2	88.5
Protohaustorius nr. deichmannae (A)	1	0.2	0.4	2	88.5
Serolis mgrayi (I)	1	0.2	0.4	2	88.5
Campylaspis sp. (C)	1	0.2	0.4	2	88.5
Argissa sp. (A)	1	0.2	0.4	2	88.5
Stomatopoda (undet.)	1	0.2	0.4	2	88.5
Leptognatha caeca (T)	1	0.2	0.4	2	88.5
Ophiophragmus sp. A (E)	1	0.2	0.4	2	88.5
Turbonilla sp. C (M)	1	0.2	0.4	2	88.5
Turridae (undet.) C (M)	1	0.2	0.4	2	88.5
Tellina sp. (M)	1	0.2	0.4	2	88.5
Crassinella lunulata (M)	1	0.2	0.4	2	88.5
Sipunculida (undet.)	1	0.2	0.4	2	88.5
Glycera sp. (Gar.) (P)	1	0.2	0.4	2	88.5
Tharyx marioni (P)	1	0.2	0.4	2	88.5
Loimia medusa (P)	1	0.2	0.4	2	88.5
Aricidea suecica (P)	1	0.2	0.4	2	88.5
Notomastus hemipodus (P)	1	0.2	0.4	2	88.5
Spiochaetopterus costarum oculatis (P)	1	0.2	0.4	2	88.5
Nemertina undet. C	1	0.2	0.4	2	88.5
Pareulepis sp. (P)	1	0.2	0.4	2	88.5
Nereis succinea (P)	1	0.2	0.4	2	88.5
Nephtys bucera (P)	1	0.2	0.4	2	88.5
Syllis cornuta (P)	1	0.2	0.4	2	88.5
Magelona papillicornis (P)	1	0.2	0.4	2	88.5
Aricidea sp. A (P)	1	0.2	0.4	2	88.5
Hemipodus roseus (P)	1	0.2	0.4	2	88.5
Syllis hyalina (P)	1	0.2	0.4	2	88.5
Lumbrinerides acuta (P)	1	0.2	0.4	2	88.5
Polyodontes lupinus (P)	1	0.2	0.4	2	88.5
Paraonis gracilis (P)	1	0.2	0.4	2	88.5
Petaloprotus socialis (P)	1	0.2	0.4	2	88.5
Malacoceros indicus (P)	1	0.2	0.4	2	88.5

Appendix 5.30 Abundance of macroinvertebrate species in grab collections from station DS30. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; Cn = Cnidaria; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS30				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Aspidosiphon spinalis (S)	1013	202.6	89.6	2026	1.0
Branchiostoma caribaeum (Cc)	399	79.8	27.6	798	2.0
Goniadides carolinae (P)	173	32.6	6.7	346	3.0
Syllis regulata carolinae (P)	138	27.6	16.9	276	4.0
Sipunculida (undet.)	102	20.4	10.8	204	5.0
Calyptraea centralis (M)	101	20.2	10.5	202	6.0
Glyptoplax smithii (D)	89	17.8	14.5	178	7.0
Chrysopetalidae (undet.) (P)	85	17.0	8.4	170	8.0
Prionospio cristata (P)	83	16.6	7.4	166	9.0
Cupuladria doma (Ec)	77	15.4	5.9	154	10.0
Exogone dispar (P)	68	13.6	5.9	136	11.0
Cirratulidae (undet.) B (P)	65	13.0	5.2	130	12.0
Tiron tropakis (A)	60	12.0	7.3	120	13.0
Spiophanes bombyx (P)	55	11.0	6.0	110	14.0
Photis sp. (A)	48	9.6	9.0	96	15.0
Trichophoxus floridanus (A)	46	9.2	11.0	92	16.0
Nematoda (undet.)	45	9.0	4.1	90	17.0
Crassinella lunulata (M)	39	7.8	3.0	78	18.0
Hemipodus roseus (P)	38	7.6	2.6	76	19.0
Pelecypoda (undet.) C	37	7.4	6.1	74	20.0
Jasmineira bilobata (P)	36	7.2	9.6	72	21.0
Leptochelia rapax (T)	34	6.8	6.4	68	22.0
Polyplacophora (undet.) A (M)	33	6.6	3.0	66	23.0
Minuspio cirrifera (P)	32	6.4	6.9	64	24.5
Hydroides protulicola (P)	32	6.4	1.7	64	24.5
Rudilemboides sp. (A)	31	6.2	3.7	62	26.5
Eulalia sanguinea (P)	31	6.2	4.5	62	26.5
Oligochaeta (undet.)	30	6.0	2.2	60	28.0
Axiothella mucosa (P)	29	5.8	4.1	58	29.5
Prionospio cirrobranchiata (P)	29	5.8	1.6	58	29.5
Golfingia sp. A (S)	27	5.4	7.1	54	31.5
Nereis succinea (P)	27	5.4	1.8	54	31.5
Aspidosiphon misakiensis (S)	25	5.0	5.9	50	33.0
Chama macerophylla (M)	24	4.8	4.1	48	34.0
Eurydice littoralis (I)	23	4.6	3.6	46	35.5
Isolda pulchella (P)	23	4.6	4.7	46	35.5
Golfingia sp. B (S)	21	4.2	4.0	42	37.0
Ervilia concentrica (M)	20	4.0	4.5	40	38.0
Microdeutopus sp. (A)	19	3.8	3.3	38	39.0
Lembos unicornis (A)	18	3.6	5.5	36	41.5
Liljeborgia sp. (A)	18	3.6	3.0	36	41.5
Polycirrus eximius (P)	18	3.6	3.0	36	41.5
Eunice vittata (P)	18	3.6	3.8	36	41.5
Pagurus longicarpus (D)	17	3.4	3.4	34	44.5
Mediomastus californiensis (P)	17	3.4	2.5	34	44.5
Isopoda (undet.) A	15	3.0	2.3	30	47.5
Onuphis nebulosa (P)	15	3.0	1.2	30	47.5
Synelmis albini (P)	15	3.0	2.1	30	47.5
Dorvillea sociabilis (P)	15	3.0	5.0	30	47.5
Pinnixa retinens (D)	14	2.8	2.8	28	50.5
Polyplacophora (undet.) B (M)	14	2.8	1.6	28	50.5
Polychaeta (undet.) D	13	2.6	1.8	26	53.0
Laonice cirrata (P)	13	2.6	2.1	26	53.0
Phyllodoce arenae (P)	13	2.6	1.9	26	53.0
Nereidae (undet.) A (P)	12	2.4	1.8	24	55.5
Pholoe minuta (P)	12	2.4	1.9	24	55.5
Maera caroliniana (A)	11	2.2	2.2	22	59.5
Ostracoda (undet.)	11	2.2	2.3	22	59.5
Eulalia macroceros (P)	11	2.2	2.3	22	59.5
Lumbrineris latreilli (P)	11	2.2	1.1	22	59.5
Nephtys incisa (P)	11	2.2	1.1	22	59.5
Terebellidae (undet.) A (P)	11	2.2	1.9	22	59.5
Goneplacidae (undet.) (D)	10	2.0	1.6	20	65.0
Nemertina (undet.) A	10	2.0	1.0	20	65.0

Appendix 5.30 (Cont.)

DS30

Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Semele bellastriata (M)	10	2.0	1.7	20	65.0
Hesionidae (undet.) A (P)	10	2.0	1.4	20	65.0
Owenia fusiformis (P)	10	2.0	1.7	20	65.0
Carinobatea carinata (A)	9	1.8	1.5	18	69.5
Magelona sp. (Day 73) (P)	9	1.8	1.3	18	69.5
Nephtys squamosa (P)	9	1.8	1.3	18	69.5
Schistomeringos rudolphi (P)	9	1.8	4.0	18	69.5
Ampelisca vadorum (A)	8	1.6	1.1	16	72.5
Pisione remota (P)	8	1.6	2.1	16	72.5
Cumacea (undet.) H	7	1.4	1.5	14	75.0
Crassinella martinicensis (M)	7	1.4	1.5	14	75.0
Parapionosyllis longicirrata (P)	7	1.4	1.5	14	75.0
Amphipoda (undet.) A	6	1.2	1.3	12	79.0
Laevicardium pictum (M)	6	1.2	0.8	12	79.0
Trypanosyllis sp. (P)	6	1.2	2.2	12	79.0
Polydora sp. A (P)	6	1.2	1.8	12	79.0
Aonides mayaguezensis (P)	6	1.2	1.3	12	79.0
Sicyonia typica (D)	5	1.0	1.2	10	84.0
Ophiophragmus sp. A (E)	5	1.0	1.2	10	84.0
Semele nuculoides (M)	5	1.0	1.0	10	84.0
Chaetopleura apiculata (M)	5	1.0	2.2	10	84.0
Syllis cornuta (P)	5	1.0	1.4	10	84.0
Alpheus formosus (D)	4	0.8	1.1	8	94.5
Jerbarnia sp. (A)	4	0.8	1.3	8	94.5
Oxyurostylis smithi (C)	4	0.8	1.1	8	94.5
Lytechinus variegatus (E)	4	0.8	0.8	8	94.5
Ophiuroidea (undet.) B (E)	4	0.8	0.8	8	94.5
Melanellidae (undet.) (M)	4	0.8	1.8	8	94.5
Anachis avara (M)	4	0.8	1.1	8	94.5
Ostrea equestrus (M)	4	0.8	0.8	8	94.5
Abra aequalis (M)	4	0.8	0.8	8	94.5
Unknown Taxon B	4	0.8	1.3	8	94.5
Harmothoe sp. B (Day) (P)	4	0.8	0.8	8	94.5
Psammolyce ctenidophora (P)	4	0.8	0.4	8	94.5
Protodorvillea kefersteini (P)	4	0.8	1.3	8	94.5
Cirrophorus lyriformis (P)	4	0.8	1.1	8	94.5
Polydora sp. B (P)	4	0.8	0.8	8	94.5
Arabella mutans (P)	4	0.8	0.8	8	94.5
Majidae (undet.) C (D)	3	0.6	0.9	6	108.0
Orchomene sp. (A)	3	0.6	0.9	6	108.0
Ophiuroidea (undet.) E (E)	3	0.6	1.3	6	108.0
Discoporella umbellata (Ec)	3	0.6	0.9	6	108.0
Tellina probrina (M)	3	0.6	0.9	6	108.0
Vermiliopsis annulata (P)	3	0.6	0.9	6	108.0
Scalibregma inflatum (P)	3	0.6	0.9	6	108.0
Platynereis dumerilii (P)	3	0.6	0.9	6	108.0
Armandia maculata (P)	3	0.6	0.5	6	108.0
Lysidice ninetta (P)	3	0.6	0.9	6	108.0
Petaloproctus socialis (P)	3	0.6	0.9	6	108.0
Latreutes parvulus (D)	2	0.4	0.9	4	123.0
Luconacia incerta (A)	2	0.4	0.5	4	123.0
Campylaspis sp. (C)	2	0.4	0.9	4	123.0
Eudevenopus honduranus (A)	2	0.4	0.5	4	123.0
Leptognatha caeca (T)	2	0.4	0.9	4	123.0
Apanthura magnifica (I)	2	0.4	0.9	4	123.0
Actiniaria (undet.) (Cn)	2	0.4	0.5	4	123.0
Pelecypoda (undet.) I	2	0.4	0.5	4	123.0
Arene sp. (M)	2	0.4	0.5	4	123.0
Mitrella lunata (M)	2	0.4	0.9	4	123.0
Lima pelucida (M)	2	0.4	0.5	4	123.0
Ophelia denticulata (P)	2	0.4	0.9	4	123.0
Glycera sphyrabrancha (P)	2	0.4	0.5	4	123.0
Notomastus lobatus (P)	2	0.4	0.5	4	123.0
Aricidea suecica (P)	2	0.4	0.5	4	123.0
Nephtys picta (P)	2	0.4	0.9	4	123.0
Diopatra cuprea (P)	2	0.4	0.9	4	123.0
Pionosyllis sp. (P)	2	0.4	0.5	4	123.0
Syllis hyalina (P)	2	0.4	0.5	4	123.0

Appendix 5.30 (Cont.)

Species	DS30 Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Ebalia cariosa (D)	1	0.2	0.4	2	154.0
Pinnixa sp. A (D)	1	0.2	0.4	2	154.0
Majidae (undet.) B (D)	1	0.2	0.4	2	154.0
Heterocrypta granulata (D)	1	0.2	0.4	2	154.0
Brachyura (undet.) (D)	1	0.2	0.4	2	154.0
Portunidae (undet.) (D)	1	0.2	0.4	2	154.0
Processa hemphilli (D)	1	0.2	0.4	2	154.0
Maera williamsi (A)	1	0.2	0.4	2	154.0
Cyclaspis varians (C)	1	0.2	0.4	2	154.0
Lembos smithi (A)	1	0.2	0.4	2	154.0
Amphipoda (undet.) G	1	0.2	0.4	2	154.0
Unciola serrata (A)	1	0.2	0.4	2	154.0
Podoceridae (undet.) (A)	1	0.2	0.4	2	154.0
Argissa sp. (A)	1	0.2	0.4	2	154.0
Ophiuroidea (undet.) C (E)	1	0.2	0.4	2	154.0
Natica pusilla (M)	1	0.2	0.4	2	154.0
Epitonium multistriatum (M)	1	0.2	0.4	2	154.0
Glycymeris pectinata (M)	1	0.2	0.4	2	154.0
Polyplacophora (undet.) D (M)	1	0.2	0.4	2	154.0
Nudibranchia (undet.) D (M)	1	0.2	0.4	2	154.0
Anomia simplex (M)	1	0.2	0.4	2	154.0
Chione sp. (M)	1	0.2	0.4	2	154.0
Caecum sp. (M)	1	0.2	0.4	2	154.0
Sipunculus nudus (S)	1	0.2	0.4	2	154.0
Echiurida (undet.)	1	0.2	0.4	2	154.0
Syllis ferrugina (P)	1	0.2	0.4	2	154.0
Serpulidae (undet.) A (P)	1	0.2	0.4	2	154.0
Pomatoceros americanus (P)	1	0.2	0.4	2	154.0
Marphysa sp. B (Gar.) (P)	1	0.2	0.4	2	154.0
Scoloplos sp. C (P)	1	0.2	0.4	2	154.0
Sabellaria vulgaris (P)	1	0.2	0.4	2	154.0
Tharyx marioni (P)	1	0.2	0.4	2	154.0
Eteone lactea (P)	1	0.2	0.4	2	154.0
Loimia medusa (P)	1	0.2	0.4	2	154.0
Aricidea cerruti (P)	1	0.2	0.4	2	154.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	154.0
Eunice websteri (P)	1	0.2	0.4	2	154.0
Travisia sp. (P)	1	0.2	0.4	2	154.0
Lepidonotus sublevis (P)	1	0.2	0.4	2	154.0
Magelona papillicornis (P)	1	0.2	0.4	2	154.0
Poecilochaetus sp. (P)	1	0.2	0.4	2	154.0
Spio setosa (P)	1	0.2	0.4	2	154.0
Lumbrinerides acuta (P)	1	0.2	0.4	2	154.0

Appendix 5.31 Abundance of macroinvertebrate species in grab collections from station DS31. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta: S = Sipunculida; T = Tanaidacea).

	DS31				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	311	77.8	32.8	778	1.0
Aspidosiphon spinalis (S)	224	56.0	23.1	560	2.0
Sipunculida (undet.)	60	15.0	8.8	150	3.0
Trichophoxus floridanus (A)	45	11.2	5.2	112	4.0
Calyptraea centralis (M)	28	7.0	6.9	70	5.0
Glyptoplax smithii (D)	23	5.8	4.3	58	6.5
Goniadides carolinae(P)	23	5.8	2.2	58	6.5
Polyplacophora (undet.) A (M)	22	5.5	3.3	55	8.0
Syllis regulata carolinae (P)	17	4.2	1.0	42	9.0
Eurydice littoralis (I)	16	4.0	4.0	40	10.0
Isopoda (undet.) A	15	3.8	1.7	38	11.5
Tiron tropakis (A)	15	3.8	3.0	38	11.5
Nematoda (undet.)	14	3.5	2.6	35	13.0
Cupuladria doma (Ec)	11	2.8	3.1	28	14.5
Crassinella lunulata (M)	11	2.8	3.2	28	14.5
Golfingia sp. A (S)	10	2.5	2.4	25	16.0
Nephtys picta (P)	9	2.2	1.7	22	17.0
Chama macerophylla (M)	8	2.0	0.8	20	18.5
Abra aequalis (M)	8	2.0	1.4	20	18.5
Pelecypoda (undet.) G	7	1.8	1.5	18	20.0
Ostracoda (undet.)	6	1.5	0.6	15	22.0
Semele nuculoides (M)	6	1.5	0.6	15	22.0
Ervilia concentrica (M)	6	1.5	1.3	15	22.0
Pagurus longicarpus (D)	5	1.2	1.0	12	26.0
Liljeborgia sp. (A)	5	1.2	1.5	12	26.0
Chaetopleura apiculata (M)	5	1.2	1.0	12	26.0
Golfingia sp. B (S)	5	1.2	1.0	12	26.0
Hemipodus roseus (P)	5	1.2	1.0	12	26.0
Amphipoda (undet.) A	4	1.0	1.4	10	31.0
Leptochelia rapax (T)	4	1.0	1.2	10	31.0
Campylaspis sp. (C)	4	1.0	1.4	10	31.0
Semele bellastriata (M)	4	1.0	1.4	10	31.0
Sigalion arenicola (P)	4	1.0	1.4	10	31.0
Pinnixa retinens (D)	3	0.8	1.0	8	36.5
Arene sp. (M)	3	0.8	1.0	8	36.5
Aspidosiphon misakiensis (S)	3	0.8	1.5	8	36.5
Onuphis nebulosa (P)	3	0.8	1.0	8	36.5
Hydroides protulicola (P)	3	0.8	0.5	8	36.5
Exogone dispar (P)	3	0.8	1.0	8	36.5
Synchelidium americanum (A)	2	0.5	0.6	5	48.0
Lembos unicornis (A)	2	0.5	1.0	5	48.0
Maera caroliniana (A)	2	0.5	0.6	5	48.0
Oxyurostylis smithi (C)	2	0.5	1.0	5	48.0
Eudevenopus honduranus (A)	2	0.5	0.6	5	48.0
Leptognatha caeca (T)	2	0.5	1.0	5	48.0
Apanthura magnifica (I)	2	0.5	0.6	5	48.0
Ophiuroidea (undet.) B (E)	2	0.5	0.6	5	48.0
Tellina texana (M)	2	0.5	0.6	5	48.0
Corbula barrattiana (M)	2	0.5	1.0	5	48.0
Mitrella lunata (M)	2	0.5	0.6	5	48.0
Chione sp. (M)	2	0.5	0.6	5	48.0
Pseudeurythoe ambigua (P)	2	0.5	1.0	5	48.0
Macroclymeme zonalis (P)	2	0.5	0.6	5	48.0
Nephtys incisa (P)	2	0.5	0.6	5	48.0
Syllis cornuta (P)	2	0.5	0.6	5	48.0
Chrysopetalidae (undet.) (P)	2	0.5	0.6	5	48.0
Latreutes parvulus (D)	1	0.2	0.5	2	76.0
Ovalipes stephensoni (D)	1	0.2	0.5	2	76.0
Batrachonotus fragosus (D)	1	0.2	0.5	2	76.0
Cirolana polita (I)	1	0.2	0.5	2	76.0
Rudilemboides sp. (A)	1	0.2	0.5	2	76.0

Appendix 5.31 (Cont.)

DS31

Species	Total Number	Number/0.1m² x̄	Number/0.1m² SD	Estimated Number/m²	Rank by Number
Apseudidae (undet.) A (T)	1	0.2	0.5	2	76.0
Stomatopoda (undet.) A	1	0.2	0.5	2	76.0
Cumacea (undet.) F.	1	0.2	0.5	2	76.0
Tanystylum orbiculare (Py)	1	0.2	0.5	2	76.0
Nemertina (undet.) A	1	0.2	0.5	2	76.0
Lytechinus variegatus (E)	1	0.2	0.5	2	76.0
Natica pusilla (M)	1	0.2	0.5	2	76.0
Tellina probrina (M)	1	0.2	0.5	2	76.0
Crassinella martinicensis (M)	1	0.2	0.5	2	76.0
Melanellidae (undet.) (M)	1	0.2	0.5	2	76.0
Glycymeris pectinata (M)	1	0.2	0.5	2	76.0
Pelecypoda (undet.) I	1	0.2	0.5	2	76.0
Marginella aureocincta (M)	1	0.2	0.5	2	76.0
Anadara transversa (M)	1	0.2	0.5	2	76.0
Argopecten gibbus (M)	1	0.2	0.5	2	76.0
Atrina seminuda (M)	1	0.2	0.5	2	76.0
Ophelia denticulata (P)	1	0.2	0.5	2	76.0
Trypanosyllis sp. (P)	1	0.2	0.5	2	76.0
Eupanthalis kinbergi (P)	1	0.2	0.5	2	76.0
Pisione remota (P)	1	0.2	0.5	2	76.0
Pomatoceros americanus (P)	1	0.2	0.5	2	76.0
Nereis riisei (P)	1	0.2	0.5	2	76.0
Marphysa sp. A (Gar.) (P)	1	0.2	0.5	2	76.0
Magelona sp. (Day '73) (P)	1	0.2	0.5	2	76.0
Notomastus latericeus (P)	1	0.2	0.5	2	76.0
Glycera oxycephala (P)	1	0.2	0.5	2	76.0
Spiophanes bombyx (P)	1	0.2	0.5	2	76.0
Polydora sp. B (P)	1	0.2	0.5	2	76.0
Pareulepis sp. (P)	1	0.2	0.5	2	76.0
Arabella mutans (P)	1	0.2	0.5	2	76.0
Lysidice ninetta (P)	1	0.2	0.5	2	76.0
Phyllodoce arenae (P)	1	0.2	0.5	2	76.0
Polynoidae (undet.) (P)	1	0.2	0.5	2	76.0
Petaloprotus socialis (P)	1	0.2	0.5	2	76.0

Appendix 5.32 Abundance of macroinvertebrate species in grab collections from station DS32. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS32				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	486	97.2	26.1	972	1.0
Aspidosiphon spinalis (S)	59	11.8	6.6	118	2.0
Trichophoxus floridanus (A)	57	11.4	4.7	114	3.0
Hemipodus roseus (P)	49	9.8	5.4	98	4.0
Eurydice littoralis (I)	35	7.0	4.1	70	5.0
Cupuladria doma (Ec)	32	6.4	1.8	64	6.5
Syllis regulata carolinae (P)	32	6.4	2.7	64	6.5
Acanthohaustorius millisi (A)	24	4.8	4.0	48	8.0
Nematoda (undet.)	23	4.6	3.8	46	9.0
Goniadides carolinae (P)	22	4.4	1.5	44	10.0
Polycirrus eximius (P)	20	4.0	3.4	40	11.0
Tharyx marioni (P)	18	3.6	3.3	36	12.0
Spiophanes bombyx (P)	17	3.4	1.7	34	13.5
Prionospio cristata (P)	17	3.4	2.1	34	13.5
Aonides mayaguezensis (P)	15	3.0	1.6	30	15.0
Amphipoda (undet.) A	14	2.8	3.1	28	17.0
Neomysis americana (My)	14	2.8	5.7	28	17.0
Golfingia sp. B (S)	14	2.8	1.6	28	17.0
Chrysopetalidae (undet.) (P)	13	2.6	1.8	26	19.0
Hesionura elongata (P)	12	2.4	2.3	24	20.0
Eulalia sanguinea (P)	11	2.2	2.8	22	21.0
Pionosyllis sp. (P)	10	2.0	1.2	20	22.0
Pinnixa retinens (D)	9	1.8	1.8	18	24.5
Tiron tropakis (A)	9	1.8	1.5	18	24.5
Minuspio cirrifera (P)	9	1.8	1.3	18	24.5
Onuphis nebulosa (P)	9	1.8	1.5	18	24.5
Eudevenopus honduranus (A)	8	1.6	2.3	16	28.5
Calyptraea centralis (M)	8	1.6	1.3	16	28.5
Axiothella mucosa (P)	8	1.6	2.2	16	28.5
Terebellidae (undet.) A (P)	8	1.6	2.1	16	28.5
Leptognatha caeca (T)	7	1.4	1.5	14	31.5
Lumbrinerides acuta (P)	7	1.4	1.7	14	31.5
Nemertina (undet.) A	6	1.2	0.8	12	34.0
Ervilia concentrica (M)	6	1.2	0.8	12	34.0
Exogone dispar (P)	6	1.2	2.7	12	34.0
Ostracoda (undet.)	5	1.0	1.2	10	38.0
Polyplacophora (undet.) A (M)	5	1.0	1.2	10	38.0
Marphysa sp. B (Gar.) (P)	5	1.0	1.4	10	38.0
Oligochaeta (undet.)	5	1.0	1.4	10	38.0
Schistomeringos rudolphi (P)	5	1.0	1.0	10	38.0
Leptochelia rapax (T)	4	0.8	1.1	8	43.0
Nemertina (undet.) B	4	0.8	1.3	8	43.0
Strigilla mirabilis (M)	4	0.8	1.1	8	43.0
Tellina probrina (M)	4	0.8	1.1	8	43.0
Crassinella martinicensis (M)	4	0.8	0.8	8	43.0
Echinoidea (undet.) A (E)	3	0.6	0.9	6	46.5
Ophiuroidea (undet.) B (E)	3	0.6	0.5	6	46.5
Goneplacidae (undet.) (D)	2	0.4	0.9	4	52.5
Heterocrypta granulata (D)	2	0.4	0.5	4	52.5
Rudilemboides sp. (A)	2	0.4	0.9	4	52.5
Liljeborgia sp. (A)	2	0.4	0.9	4	52.5
Apanthura magnifica (I)	2	0.4	0.5	4	52.5
Turbellaria (undet.)	2	0.4	0.9	4	52.5
Lytechinus variegatus (E)	2	0.4	0.5	4	52.5
Nephtys incisa (P)	2	0.4	0.5	4	52.5
Arabella iricolor (P)	2	0.4	0.5	4	52.5
Syllis hyalina (P)	2	0.4	0.9	4	52.5
Pagurus longicarpus (D)	1	0.2	0.4	2	73.5

Appendix 5.32 (Cont.)

Species	DS32 Total Number	Number/0.1m² $\bar{x}$	Number/0.1m² SD	Estimated Number/m²	Rank by Number
Glyptoplax smithii (D)	1	0.2	0.4	2	73.5
Portunidae (undet.) (D)	1	0.2	0.4	2	73.5
Processa hemphilli (D)	1	0.2	0.4	2	73.5
Cyclaspis varians (C)	1	0.2	0.4	2	73.5
Unciola serrata (A)	1	0.2	0.4	2	73.5
Oxyurostylis smithi (C)	1	0.2	0.4	2	73.5
Chiridotea stenops (I)	1	0.2	0.4	2	73.5
Cyathura burbancki (I)	1	0.2	0.4	2	73.5
Glottidia pyramidata (Br)	1	0.2	0.4	2	73.5
Acteocina candei (M)	1	0.2	0.4	2	73.5
Vitrinellidae (undet.) A (M)	1	0.2	0.4	2	73.5
Marginella aureocincta (M)	1	0.2	0.4	2	73.5
Chama macerophylla (M)	1	0.2	0.4	2	73.5
Ophelia denticulata (P)	1	0.2	0.4	2	73.5
Trypanosyllis sp. (P)	1	0.2	0.4	2	73.5
Serpulus vermicularis granulosa (P)	1	0.2	0.4	2	73.5
Sphaerosyllis pirifera (P)	1	0.2	0.4	2	73.5
Magelona sp. (Day '73) (P)	1	0.2	0.4	2	73.5
Lumbrineris latreilli (P)	1	0.2	0.4	2	73.5
Cirratulidae (undet.) B (P)	1	0.2	0.4	2	73.5
Terebellidae (undet.) B (P)	1	0.2	0.4	2	73.5
Owenia fusiformis (P)	1	0.2	0.4	2	73.5
Nereis succinea (P)	1	0.2	0.4	2	73.5
Nephtys picta (P)	1	0.2	0.4	2	73.5
Glycera dibranchiata (P)	1	0.2	0.4	2	73.5
Mediomastus californiensis (P)	1	0.2	0.4	2	73.5
Ampharetidae (undet.) (P)	1	0.2	0.4	2	73.5
Phyllodoce arenae (P)	1	0.2	0.4	2	73.5
Sigalion arenicola (P)	1	0.2	0.4	2	73.5
Travisia parva (P)	1	0.2	0.4	2	73.5
Petaloprotus socialis (P)	1	0.2	0.4	2	73.5

Appendix 5.33 Abundance of macroinvertebrate species in grab collections from station DS33. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; T = Tunaidacea).

	DS33				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	1375	275.0	61.5	2750	1.0
Syllis regulata carolinae (P)	102	20.4	11.3	204	2.0
Chrysopetalidae (undet.) (P)	97	19.4	12.6	194	3.0
Nematoda (undet.)	93	18.6	10.7	186	4.0
Exogone dispar (P)	68	13.6	10.3	136	5.5
Prionospio cristata (P)	68	13.6	8.2	136	5.5
Glyptoplax smithii (D)	61	12.2	8.3	122	8.0
Aspidosiphon spinalis (S)	61	12.2	5.8	122	8.0
Polycirrus eximius (P)	61	12.2	3.6	122	8.0
Cupuladria doma (Ec)	54	10.8	8.8	108	10.5
Hemipodus roseus (P)	54	10.8	4.9	108	10.5
Tharyx marioni (P)	52	10.4	7.1	104	12.0
Goniadides carolinae (P)	51	10.2	8.5	102	13.0
Minuspio cirrifera (P)	50	10.0	4.9	100	14.0
Polyplacophora (undet.) A (M)	44	8.8	4.8	88	15.0
Vermiliopsis annulata (P)	39	7.8	7.7	78	16.0
Oligochaeta (undet.)	32	6.4	5.5	64	17.0
Polyplacophora (undet.) C (M)	21	4.2	4.2	42	18.0
Golfingia sp. A (S)	20	4.0	4.6	40	19.0
Unciola serrata (A)	19	3.8	1.6	38	20.5
Axiothella mucosa (P)	19	3.8	0.8	38	20.5
Calyptraea centralis (M)	18	3.6	3.6	36	22.5
Pisione remota (P)	18	3.6	3.0	36	22.5
Golfingia sp. B (S)	17	3.4	4.7	34	24.0
Goneplacidae (undet.) (D)	16	3.2	1.8	32	26.0
Eurydice littoralis (I)	16	3.2	1.1	32	26.0
Parapionosyllis longicirrata (P)	16	3.2	3.3	32	26.0
Tiron tropakis (A)	14	2.8	1.6	28	28.0
Mysidopsis bigelowi (My)	13	2.6	5.3	26	30.0
Syllis ferrugina (P)	13	2.6	2.8	26	30.0
Travisia parva (P)	13	2.6	0.9	26	30.0
Sipunculida (undet.)	12	2.4	4.3	24	33.0
Nephtys incisa (P)	12	2.4	2.3	24	33.0
Terebellidae (undet.) B (P)	12	2.4	2.8	24	33.0
Marphysa sp. B (Gar.) (P)	11	2.2	2.5	22	35.5
Eunice vittata (P)	11	2.2	1.9	22	35.5
Nemertina (undet.) A	10	2.0	1.6	20	37.5
Unknown Taxon B	10	2.0	2.0	20	37.5
Ostracoda (undet.)	9	1.8	0.8	18	40.0
Goniada teres (P)	9	1.8	3.5	18	40.0
Spiophanes bombyx (P)	9	1.8	1.8	18	40.0
Chiridotea stenops (I)	8	1.6	1.3	16	42.5
Schistomeringos rudolphi (P)	8	1.6	1.8	16	42.5
Pagurus longicarpus (D)	7	1.4	0.5	14	45.0
Crassinella lunulata (M)	7	1.4	1.7	14	45.0
Hesionura elongata (P)	7	1.4	1.7	14	45.0
Pinnixa retinens (D)	6	1.2	0.8	12	49.0
Rudilemboides sp. (A)	6	1.2	0.8	12	49.0
Leptognatha caeca (T)	6	1.2	1.6	12	49.0
Onuphis nebulosa (P)	6	1.2	0.8	12	49.0
Nephtys squamosa (P)	6	1.2	1.3	12	49.0
Carinobatea carinata (A)	5	1.0	1.2	10	55.0
Campylaspis sp. (C)	5	1.0	0.7	10	55.0
Nudibranchia (undet.) A (M)	5	1.0	1.7	10	55.0
Trypanosyllis sp. (P)	5	1.0	1.2	10	55.0
Nereidae (undet.) A (P)	5	1.0	0.7	10	55.0
Notomastus latericeus (P)	5	1.0	1.2	10	55.0
Pionosyllis sp. (P)	5	1.0	1.2	10	55.0

Appendix 5.33 (Cont.)

DS33

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Photis sp. (A)	4	0.8	1.3	8	62.0
Discoporella umbellata (Ec)	4	0.8	0.8	8	62.0
Ophelia denticulata (P)	4	0.8	0.8	8	62.0
Eulalia macroceros (P)	4	0.8	1.8	8	62.0
Aricidea cerruti (P)	4	0.8	1.1	8	62.0
Terebellidae (undet.) A (P)	4	0.8	1.1	8	62.0
Ampharete americana (P)	4	0.8	0.4	8	62.0
Podochela sidneyi (D)	3	0.6	0.9	6	69.5
Corbula barrattiana (M)	3	0.6	0.5	6	69.5
Polyplacophora (undet.) B (M)	3	0.6	0.5	6	69.5
Glycera papillosa (P)	3	0.6	1.3	6	69.5
Syllis gracilis (P)	3	0.6	0.5	6	69.5
Phyllodoce longipes (P)	3	0.6	1.3	6	69.5
Syllis cornuta (P)	3	0.6	0.5	6	69.5
Aonides mayaguezensis (P)	3	0.6	0.9	6	69.5
Apseudidae (undet.) B (T)	2	0.4	0.9	4	83.0
Oxyurostylis smithi (C)	2	0.4	0.9	4	83.0
Apanthura magnifica (I)	2	0.4	0.5	4	83.0
Ophiuroidea (undet.) B (E)	2	0.4	0.5	4	83.0
Crassinella martinicensis (M)	2	0.4	0.5	4	83.0
Pelecypoda (undet.) G	2	0.4	0.9	4	83.0
Hyalina veliei (M)	2	0.4	0.5	4	83.0
Anchis avara (M)	2	0.4	0.9	4	83.0
Chaetopleura apiculata (M)	2	0.4	0.9	4	83.0
Laevicardium pictum (M)	2	0.4	0.5	4	83.0
Aspidosiphon misakiensis (S)	2	0.4	0.5	4	83.0
Harmothoe sp. B (Day) (P)	2	0.4	0.9	4	83.0
Terebellidae (undet.) C (P)	2	0.4	0.9	4	83.0
Phyllodocidae (undet.) A (P)	2	0.4	0.5	4	83.0
Hydroides protulicola (P)	2	0.4	0.9	4	83.0
Autolytus dentalius (P)	2	0.4	0.5	4	83.0
Lepidonotus sublevis (P)	2	0.4	0.5	4	83.0
Lysidice ninetta (P)	2	0.4	0.5	4	83.0
Eulalia sanguinea (P)	2	0.4	0.9	4	83.0
Sicyonia typica (D)	1	0.2	0.4	2	106.0
Palaemoninae (undet.) (D)	1	0.2	0.4	2	106.0
Leucosiidae (undet.) (D)	1	0.2	0.4	2	106.0
Ampelisca vadorum (A)	1	0.2	0.4	2	106.0
Trichophoxus floridanus (A)	1	0.2	0.4	2	106.0
Amphipoda (undet.) F	1	0.2	0.4	2	106.0
Cumacea (undet.) H	1	0.2	0.4	2	106.0
Ampelisca verrilli (A)	1	0.2	0.4	2	106.0
Lembos websteri (A)	1	0.2	0.4	2	106.0
Nemertina (undet.) C	1	0.2	0.4	2	106.0
Ophiuroidea (undet.) F (E)	1	0.2	0.4	2	106.0
Arbacia punctulata (E)	1	0.2	0.4	2	106.0
Tellina probrina (M)	1	0.2	0.4	2	106.0
Glycymeris pectinata (M)	1	0.2	0.4	2	106.0
Arene sp. (M)	1	0.2	0.4	2	106.0
Turbinidae (undet.) A (M)	1	0.2	0.4	2	106.0
Dentalium eboreum (M)	1	0.2	0.4	2	106.0
Argopecten gibbus (M)	1	0.2	0.4	2	106.0
Chama macerophylla (M)	1	0.2	0.4	2	106.0
Nudibranchia (undet.) B (M)	1	0.2	0.4	2	106.0
Glycera sphyrabrancha (P)	1	0.2	0.4	2	106.0
Pomatoceros americanus (P)	1	0.2	0.4	2	106.0
Scoloplos sp. B (P)	1	0.2	0.4	2	106.0
Nereis succinea (P)	1	0.2	0.4	2	106.0
Lumbrinerides acuta (P)	1	0.2	0.4	2	106.0
Sabellaria vulgaris (P)	1	0.2	0.4	2	106.0
Scoloplos rubra (P)	1	0.2	0.4	2	106.0

Appendix 5.34 Abundance of macroinvertebrate species in grab collections from station DS34. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; St = Stomatopoda; T = Tanaidacea).

	DS34				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	631	126.2	73.4	1262	1.0
Syllis regulata carolinae (P)	79	15.8	7.6	158	2.0
Tiron tropakis (A)	78	15.6	4.7	156	3.0
Cupuladria doma (Ec)	45	9.0	11.0	90	4.5
Prionospio cristata (P)	45	9.0	6.9	90	4.5
Nematoda (undet.)	33	6.6	7.2	66	6.5
Chrysopetalidae (undet.) (P)	33	6.6	4.3	66	6.5
Aspidosiphon spinalis (S)	32	6.4	5.3	64	8.0
Goniadides carolinae (P)	29	5.8	4.5	58	9.5
Tharyx marioni (P)	29	5.8	4.3	58	9.5
Polyplacophora (undet.) A (M)	27	5.4	5.9	54	11.0
Hemipodus roseus (P)	26	5.2	3.1	52	12.0
Rudilemboides sp. (A)	25	5.0	3.9	50	13.5
Trichophoxus floridanus (A)	25	5.0	5.7	50	13.5
Nephtys incisa (P)	21	4.2	1.6	42	15.0
Oligochaeta (undet.)	19	3.8	3.1	38	16.0
Calyptraea centralis (M)	18	3.6	1.9	36	17.0
Eurydice littoralis (I)	16	3.2	3.6	32	18.0
Exogone dispar (P)	15	3.0	2.2	30	19.0
Aricidea cerruti (P)	13	2.6	1.3	26	20.0
Armandia maculata (P)	11	2.2	2.9	22	21.0
Spiophanes bombyx (P)	9	1.8	2.9	18	22.5
Aonides mayaguezensis (P)	9	1.8	2.7	18	22.5
Pinnixa retinens (D)	8	1.6	2.3	16	25.0
Apanthura magnifica (I)	8	1.6	1.1	16	25.0
Minuspio cirrifera (P)	8	1.6	2.2	16	25.0
Glyptoplax smithii (D)	7	1.4	1.1	14	28.0
Leptochelia rapax (T)	7	1.4	1.5	14	28.0
Nereis succinea (P)	7	1.4	2.1	14	28.0
Crassinella lunulata (M)	6	1.2	1.1	12	31.0
Trypanosyllis sp. (P)	6	1.2	2.2	12	31.0
Polycirrus eximius (P)	6	1.2	0.8	12	31.0
Goneplacidae (undet.) (D)	5	1.0	1.7	10	35.0
Pagurus longicarpus (D)	5	1.0	1.7	10	35.0
Discoporella umbellata (Ec)	5	1.0	1.2	10	35.0
Terebellidae (undet.) B (P)	5	1.0	2.2	10	35.0
Sigalion arenicola (P)	5	1.0	0.7	10	35.0
Liljeborgia sp. (A)	4	0.8	1.3	8	40.0
Microdeutopus sp. (A)	4	0.8	0.8	8	40.0
Nemertina (undet.) A	4	0.8	0.8	8	40.0
Parapionosyllis longicirrata (P)	4	0.8	0.8	8	40.0
Lumbrinerides acuta (P)	4	0.8	1.8	8	40.0
Ostracoda (undet.)	3	0.6	0.9	6	46.5
Cyclaspis varians (C)	3	0.6	0.5	6	46.5
Tellina probrina (M)	3	0.6	0.9	6	46.5
Crassinella martinicensis (M)	3	0.6	1.3	6	46.5
Golfingia sp. B (S)	3	0.6	1.3	6	46.5
Marphysa sp. B (Gar.) (P)	3	0.6	0.5	6	46.5
Axiothella mucosa (P)	3	0.6	0.9	6	46.5
Schistomeringos rudolphi (P)	3	0.6	1.3	6	46.5
Amphipoda (undet.) A	2	0.4	0.5	4	57.0
Campylaspis sp. (C)	2	0.4	0.5	4	57.0
Photis sp. (A)	2	0.4	0.5	4	57.0
Oxyurostylis smithi (C)	2	0.4	0.5	4	57.0
Pelecypoda (undet.) G	2	0.4	0.5	4	57.0
Pelecypoda (undet.) I	2	0.4	0.5	4	57.0
Chama macerophylla (M)	2	0.4	0.5	4	57.0
Vermiliopsis annulata (P)	2	0.4	0.9	4	57.0
Pseudeurythoe ambigua (P)	2	0.4	0.5	4	57.0
Terebellidae (undet.) A (P)	2	0.4	0.9	4	57.0
Nephtys picta (P)	2	0.4	0.5	4	57.0
Eulalia sanguinea (P)	2	0.4	0.5	4	57.0
Travisia parva (P)	2	0.4	0.5	4	57.0

Appendix 5.34 (Cont.)

Species	DS34 Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Acetes americanus (D)	1	0.2	0.4	2	80.0
Natantia (undet.) (D)	1	0.2	0.4	2	80.0
Latreutes parvulus (D)	1	0.2	0.4	2	80.0
Podochela sidneyi (D)	1	0.2	0.4	2	80.0
Processa hemphilli (D)	1	0.2	0.4	2	80.0
Synchelidium americanum (A)	1	0.2	0.4	2	80.0
Gastrosaccus sp. A (My)	1	0.2	0.4	2	80.0
Amphipoda (undet.) F	1	0.2	0.4	2	80.0
Acanthohaustorius millsi (A)	1	0.2	0.4	2	80.0
Nannosquilla sp. (St)	1	0.2	0.4	2	80.0
Batea catharinensis (A)	1	0.2	0.4	2	80.0
Leptognatha caeca (T)	1	0.2	0.4	2	80.0
Ptilanthura tricarina (I)	1	0.2	0.4	2	80.0
Nemertina (undet.) B	1	0.2	0.4	2	80.0
Lytechinus variegatus (E)	1	0.2	0.4	2	80.0
Semele bellastriata (M)	1	0.2	0.4	2	80.0
Ervilia concentrica (M)	1	0.2	0.4	2	80.0
Arene sp. (M)	1	0.2	0.4	2	80.0
Hesionura elongata (P)	1	0.2	0.4	2	80.0
Serpulidae (undet.) (P)	1	0.2	0.4	2	80.0
Exogone verugera (P)	1	0.2	0.4	2	80.0
Scalibregma inflatum (P)	1	0.2	0.4	2	80.0
Scoloplos rubra (P)	1	0.2	0.4	2	80.0
Notomastus latericeus (P)	1	0.2	0.4	2	80.0
Onuphis nebulosa (P)	1	0.2	0.4	2	80.0
Laonice cirrata (P)	1	0.2	0.4	2	80.0
Notomastus hemipodus (P)	1	0.2	0.4	2	80.0
Hydroides protulicola (P)	1	0.2	0.4	2	80.0
Owenia fusiformis (P)	1	0.2	0.4	2	80.0
Mediomastus californiensis (P)	1	0.2	0.4	2	80.0
Ampharete americana (P)	1	0.2	0.4	2	80.0
Phyllodoce arenae (P)	1	0.2	0.4	2	80.0
Pionosyllis sp. (P)	1	0.2	0.4	2	80.0

Appendix 5.35 Abundance of macroinvertebrate species in grab collections from station DS35. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS35				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	469	93.8	49.8	938	1.0
Tiron tropakis (A)	65	13.0	12.2	130	2.0
Prionospio cristata (P)	63	12.6	7.2	126	3.0
Hemipodus roseus (P)	61	12.2	8.3	122	4.0
Syllis regulata carolinae (P)	60	12.0	3.4	120	5.0
Chrysopetalidae (undet.) (P)	54	10.8	9.1	108	6.0
Calyptraea centralis (M)	52	10.4	9.3	104	7.0
Glyptoplax smithii (D)	49	9.8	11.0	98	8.0
Aspidosiphon spinalis (S)	48	9.6	5.6	96	9.0
Goniadides carolinae (P)	47	9.4	3.3	94	10.0
Vermiliopsis annulata (P)	39	7.8	9.4	78	11.0
Nematoda (undet.)	35	7.0	5.6	70	12.0
Polyplacophora (undet.) A (M)	32	6.4	3.8	64	13.0
Trichophoxus floridanus (A)	25	5.0	7.0	50	14.5
Golfingia sp. A (S)	25	5.0	9.0	50	14.5
Spiophanes bombyx (P)	24	4.8	4.0	48	16.0
Polyplacophora (undet.) B (M)	22	4.4	1.7	44	17.0
Eulalia sanguinea (P)	21	4.2	4.4	42	18.0
Exogone dispar (P)	20	4.0	4.2	40	19.0
Cupuladria doma (Ec)	19	3.8	2.4	38	20.0
Photis sp. (A)	17	3.4	6.0	34	21.5
Axiothella mucosa (P)	17	3.4	2.1	34	21.5
Hesionura elongata (P)	15	3.0	3.2	30	23.5
Polycirrus eximius (P)	15	3.0	1.6	30	23.5
Minuspio cirrifera (P)	14	2.8	1.9	28	25.0
Eurydice littoralis (I)	13	2.6	2.1	26	26.5
Onuphis nebulosa (P)	13	2.6	0.9	26	26.5
Cirratulidae (undet.) B (P)	12	2.4	2.3	24	28.0
Pinnixa retinens (D)	11	2.2	1.6	22	29.5
Travisia parva (P)	11	2.2	2.3	22	29.5
Crassinella lunulata (M)	10	2.0	1.9	20	31.0
Maera caroliniana (A)	9	1.8	1.6	18	33.5
Apanthura magnifica (I)	9	1.8	1.9	18	33.5
Turbellaria (undet.)	9	1.8	2.4	18	33.5
Marphysa sp. B (Gar.) (P)	9	1.8	1.8	18	33.5
Isopoda (undet.) A	8	1.6	1.8	16	37.5
Leptognatha caeca (T)	8	1.6	1.3	16	37.5
Nephtys squamosa (P)	8	1.6	1.8	16	37.5
Oligochaeta (undet.)	8	1.6	1.8	16	37.5
Goneplacidae (undet.) (D)	7	1.4	1.1	14	42.5
Ostracoda (undet.)	7	1.4	1.3	14	42.5
Trypanosyllis sp. (P)	7	1.4	2.1	14	42.5
Notomastus latericeus (P)	7	1.4	1.1	14	42.5
Nephtys incisa (P)	7	1.4	1.1	14	42.5
Schistomeringos rudolphi (P)	7	1.4	1.7	14	42.5
Liljeborgia sp. (A)	6	1.2	1.3	12	48.0
Lembos smithi (A)	6	1.2	2.7	12	48.0
Abra aequalis (M)	6	1.2	1.6	12	48.0
Eulalia macroceros (P)	6	1.2	1.6	12	48.0
Phyllodocidae (undet.) A (P)	6	1.2	2.2	12	48.0
Pagurus longicarpus (D)	5	1.0	1.7	10	54.0
Ervilia concentrica (M)	5	1.0	1.0	10	54.0
Anachis avara (M)	5	1.0	1.4	10	54.0
Ophelia denticulata (P)	5	1.0	1.2	10	54.0
Nereidae (undet.) A (P)	5	1.0	1.4	10	54.0
Syllis cornuta (P)	5	1.0	1.2	10	54.0
Pionosyllis sp. (P)	5	1.0	1.0	10	54.0
Crassinella martinicensis (M)	4	0.8	1.3	8	61.0
Pelecypoda (undet.) G	4	0.8	1.8	8	61.0
Unknown Taxon B	4	0.8	0.8	8	61.0
Parapionosyllis longicirrata (P)	4	0.8	0.8	8	61.0
Eunice vittata (P)	4	0.8	0.8	8	61.0
Ampharete americana (P)	4	0.8	1.1	8	61.0
Lumbrinerides acuta (P)	4	0.8	1.3	8	61.0

Appendix 5.35 (Cont.).

Species	DS35 Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Cyclaspis varians (C)	3	0.6	0.9	6	70.5
Campylaspis sp. (C)	3	0.6	0.9	6	70.5
Oxyurostylis smithi (C)	3	0.6	0.9	6	70.5
Neomysis americana (My)	3	0.6	1.3	6	70.5
Lytechinus variegatus (E)	3	0.6	1.3	6	70.5
Discoporella umbellata (Ec)	3	0.6	0.5	6	70.5
Hyalina veliei (M)	3	0.6	0.9	6	70.5
Mitrella lunata (M)	3	0.6	0.9	6	70.5
Sipunculida (undet.)	3	0.6	0.9	6	70.5
Aricidea cerruti (P)	3	0.6	0.9	6	70.5
Terebellidae (undet.) A (P)	3	0.6	1.3	6	70.5
Sigalion arenicola (P)	3	0.6	0.9	6	70.5
Rudilemboides sp. (A)	2	0.4	0.5	4	82.5
Amphipoda (undet.) A	2	0.4	0.5	4	82.5
Gastrosaccus sp. A (My)	2	0.4	0.9	4	82.5
Eudevenopus honduranus (A)	2	0.4	0.5	4	82.5
Ophiuroidea (undet.) (E)	2	0.4	0.5	4	82.5
Natica pusilla (M)	2	0.4	0.5	4	82.5
Melanellidae (undet.) (M)	2	0.4	0.5	4	82.5
Gastropoda (undet.) A (M)	2	0.4	0.5	4	82.5
Chama macerophylla (M)	2	0.4	0.5	4	82.5
Glycera tesselata (P)	2	0.4	0.9	4	82.5
Syllis gracilis (P)	2	0.4	0.5	4	82.5
Podarke obscura	2	0.4	0.4	4	82.5
Leptochela serratorbita (D)	1	0.2	0.4	2	113.0
Latreutes parvulus (D)	1	0.2	0.4	2	113.0
Podochela sidneyi (D)	1	0.2	0.4	2	113.0
Heterocrypta granulata (D)	1	0.2	0.4	2	113.0
Portunidae (undet.) (D)	1	0.2	0.4	2	113.0
Synchelidium americanum (A)	1	0.2	0.4	2	113.0
Bathyporeia parkeri (A)	1	0.2	0.4	2	113.0
Luconacia incerta (A)	1	0.2	0.4	2	113.0
Carinobatea carinata (A)	1	0.2	0.4	2	113.0
Leptochelia rapax (T)	1	0.2	0.4	2	113.0
Apseudidae (undet.) A (T)	1	0.2	0.4	2	113.0
Serolis mgrayi (I)	1	0.2	0.4	2	113.0
Ampelisca agassizi (A)	1	0.2	0.4	2	113.0
Horoloanthura irpex (I)	1	0.2	0.4	2	113.0
Unciola serrata (A)	1	0.2	0.4	2	113.0
Nemertina (undet.) A	1	0.2	0.4	2	113.0
Nemertina (undet.) B	1	0.2	0.4	2	113.0
Ophiuroidea (undet.) G (E)	1	0.2	0.4	2	113.0
Ophiuroidea (undet.) B (E)	1	0.2	0.4	2	113.0
Tellina probrina (M)	1	0.2	0.4	2	113.0
Semele bellastriata (M)	1	0.2	0.4	2	113.0
Semele nuculoides (M)	1	0.2	0.4	2	113.0
Acteocina candei (M)	1	0.2	0.4	2	113.0
Turridae (undet.) B (M)	1	0.2	0.4	2	113.0
Corbula barrattiana (M)	1	0.2	0.4	2	113.0
Crepidula sp. (M)	1	0.2	0.4	2	113.0
Polyplacophora (undet.) C (M)	1	0.2	0.4	2	113.0
Pelecypoda (undet.) L	1	0.2	0.4	2	113.0
Chaetopleura apiculata (M)	1	0.2	0.4	2	113.0
Dentalium eboreum (M)	1	0.2	0.4	2	113.0
Caecum sp. (M)	1	0.2	0.4	2	113.0
Psammolyce ctenidophora (P)	1	0.2	0.4	2	113.0
Eupanthalis kinbergi (P)	1	0.2	0.4	2	113.0
Pisione remota (P)	1	0.2	0.4	2	113.0
Syllis ferrugina (P)	1	0.2	0.4	2	113.0
Marphysa sp. A (Gar.) (P)	1	0.2	0.4	2	113.0
Amphinomidae (undet.) (P)	1	0.2	0.4	2	113.0

Appendix 5.35 (Cont.).

DS35

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Tharyx marioni (P)	1	0.2	0.4	2	113.0
Cirrophorus lyriformis (P)	1	0.2	0.4	2	113.0
Ancistrosyllis jonesi (P)	1	0.2	0.4	2	113.0
Glycera oxycephala (P)	1	0.2	0.4	2	113.0
Eunice websteri (P)	1	0.2	0.4	2	113.0
Terebellidae (undet.) B (P)	1	0.2	0.4	2	113.0
Nereis succinea (P)	1	0.2	0.4	2	113.0
Eteone heteropoda (P)	1	0.2	0.4	2	113.0
Poecilochaetus sp. (P)	1	0.2	0.4	2	113.0
Lysidice ninetta (P)	1	0.2	0.4	2	113.0
Phyllodoce arenae (P)	1	0.2	0.4	2	113.0
Aonides mayaguezensis (P)	1	0.2	0.4	2	113.0

Appendix 5.36 Abundance of macroinvertebrate species in grab collections from station DS36. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; Ec = Echinodermata; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida).

	DS36				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	353	70.6	50.4	706	1.0
Cupuladria doma (Ec)	162	32.4	58.1	324	2.0
Trichophoxus floridanus (A)	58	11.6	7.3	116	3.0
Spiophanes bombyx (P)	37	7.4	3.3	74	4.0
Acanthohaustorius sp. (A)	25	5.0	10.1	50	5.0
Axiothella mucosa (P)	24	4.8	4.2	48	6.0
Armandia maculata (P)	20	4.0	3.5	40	7.0
Nemertina (undet.) A	19	3.8	2.5	38	8.0
Nematoda (undet.)	18	3.6	2.1	36	9.5
Nephtys incisa (P)	18	3.6	3.0	36	9.5
Chrysopetalidae (undet.) (P)	16	3.2	2.8	32	11.0
Glycera oxycephala (P)	15	3.0	2.4	30	12.5
Nephtys picta (P)	15	3.0	2.3	30	12.5
Onuphis eremita (P)	12	2.4	2.1	24	14.0
Apanthura magnifica (I)	10	2.0	1.9	20	15.0
Trichophoxus epistomus (A)	8	1.6	3.0	16	17.0
Protohaustorius nr. deichmannae (A)	8	1.6	2.5	16	17.0
Aspidosiphon spinalis (S)	8	1.6	1.1	16	17.0
Syllis regulata carolinae (P)	7	1.4	1.7	14	19.5
Prionospio cristata (P)	7	1.4	3.1	14	19.5
Bathyporeia parkeri (A)	6	1.2	2.2	12	21.5
Pseudeurythoe ambigua (P)	6	1.2	1.6	12	21.5
Prionospio fallax (P)	5	1.0	1.7	10	23.5
Phyllodoce arenae (P)	5	1.0	1.4	10	23.5
Pinnixa retinens (D)	4	0.8	0.8	8	29.5
Rudilemboides sp. (A)	4	0.8	1.8	8	29.5
Gastrosaccus sp. A (My)	4	0.8	1.3	8	29.5
Ampelisca verrilli (A)	4	0.8	1.3	8	29.5
Tiron tropakis (A)	4	0.8	1.3	8	29.5
Polyplacophora (undet.) A (M)	4	0.8	1.3	8	29.5
Cirratulidae (undet.) B (P)	4	0.8	0.8	8	29.5
Aricidea cerruti (P)	4	0.8	1.3	8	29.5
Prionospio cirrobranchiata (P)	4	0.8	1.3	8	29.5
Magelona rosea (P)	4	0.8	1.3	8	29.5
Acanthohaustorius millsi (A)	3	0.6	1.3	6	36.0
Holothuroidea (undet.) B	3	0.6	0.5	6	36.0
Oligochaeta (undet.)	3	0.6	1.3	6	36.0
Trachypeneus constrictus (D)	2	0.4	0.9	4	46.0
Liljeborgia sp. (A)	2	0.4	0.5	4	46.0
Jerbarnia sp. (A)	2	0.4	0.9	4	46.0
Photis sp. (A)	2	0.4	0.5	4	46.0
Neomysis americana (My)	2	0.4	0.9	4	46.0
Ervilia concentrica (M)	2	0.4	0.5	4	46.0
Crassinella lunulata (M)	2	0.4	0.5	4	46.0
Aspidosiphon misakiensis (S)	2	0.4	0.9	4	46.0
Goniadides carolinae (P)	2	0.4	0.5	4	46.0
Lumbrineris latreilli (P)	2	0.4	0.5	4	46.0
Macroclymene zonalis (P)	2	0.4	0.9	4	46.0
Terebellidae (undet.) A (P)	2	0.4	0.5	4	46.0
Owenia fusiformis (P)	2	0.4	0.9	4	46.0
Clymenella torquata (P)	2	0.4	0.9	4	46.0
Pionosyllis sp. (P)	2	0.4	0.9	4	46.0
Isolda pulchella (P)	2	0.4	0.9	4	46.0
Lembos unicornis (A)	2	0.4	0.5	4	46.0
Sicyonia typica (D)	1	0.2	0.4	2	68.0
Goneplacidae (undet.) (D)	1	0.2	0.4	2	68.0
Ovalipes stephensoni (D)	1	0.2	0.4	2	68.0
Glyptoplax smithii (D)	1	0.2	0.4	2	68.0
Portunidae (undet.) (D)	1	0.2	0.4	2	68.0
Processa hemphilli (D)	1	0.2	0.4	2	68.0
Amphipoda (undet.) A	1	0.2	0.4	2	68.0

Appendix 5.36 (Cont.)

Species	DS36 Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Cyclaspis varians (C)	1	0.2	0.4	2	68.0
Oxyurostylis smithi (C)	1	0.2	0.4	2	68.0
Cyathura burbancki (I)	1	0.2	0.4	2	68.0
Eudevenopus honduranus (A)	1	0.2	0.4	2	68.0
Actiniaria (undet.)	1	0.2	0.4	2	68.0
Ophiuroidea (undet.)	1	0.2	0.4	2	68.0
Discoporella umbellata (Ec)	1	0.2	0.4	2	68.0
Olivella mutica (M)	1	0.2	0.4	2	68.0
Tellina probrina (M)	1	0.2	0.4	2	68.0
Calyptraea centralis (M)	1	0.2	0.4	2	68.0
Chione sp. (M)	1	0.2	0.4	2	68.0
Sipunculus nudus (S)	1	0.2	0.4	2	68.0
Nereis acuminata (P)	1	0.2	0.4	2	68.0
Loimia medusa (P)	1	0.2	0.4	2	68.0
Polycirrus eximius (P)	1	0.2	0.4	2	68.0
Dispio uncinata (P)	1	0.2	0.4	2	68.0
Nereis succinea (P)	1	0.2	0.4	2	68.0
Drilonereis magna (P)	1	0.2	0.4	2	68.0
Exogone dispar (P)	1	0.2	0.4	2	68.0
Magelona phyllisae (P)	1	0.2	0.4	2	68.0
Magelona papillicornis (P)	1	0.2	0.4	2	68.0
Eunice vittata (P)	1	0.2	0.4	2	68.0

Appendix 5.37 Abundance of macroinvertebrate species in grab collections from station DS37. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; St = Stomatopoda; T = Tanaidacea).

	DS37				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	195	39.0	19.6	390	1.0
Trichophoxus floridanus (A)	112	22.4	9.5	224	2.0
Cupuladria doma (Ec)	66	13.2	7.5	132	3.0
Aspidosiphon spinalis (S)	24	4.8	5.0	48	4.0
Syllis regulata carolinae (P)	23	4.6	1.9	46	5.5
Oligochaeta (undet.)	23	4.6	3.8	46	5.5
Goniadides carolinae (P)	22	4.4	2.5	44	7.0
Spiophanes bombyx (P)	17	3.4	3.4	34	8.0
Armandia maculata (P)	15	3.0	1.6	30	9.0
Prionospio cristata (P)	14	2.8	2.9	28	10.0
Chrysopetalidae (undet.) (P)	13	2.6	2.7	26	11.0
Eulalia sanguinea (P)	11	2.2	2.5	22	12.0
Ervilia concentrica (M)	9	1.8	2.9	18	13.5
Vermiliopsis annulata (P)	9	1.8	1.3	18	13.5
Spio pettiboneae (P)	8	1.6	1.8	16	15.0
Liljeborgia sp. (A)	7	1.4	2.2	14	17.5
Apanthura magnifica (I)	7	1.4	1.3	14	17.5
Nemertina (undet.) A	7	1.4	0.5	14	17.5
Nephtys picta (P)	7	1.4	1.1	14	17.5
Glyptoplax smithii (D)	6	1.2	1.3	12	21.5
Calyptraea centralis (M)	6	1.2	1.6	12	21.5
Glycera oxycephala (P)	6	1.2	1.6	12	21.5
Aonides mayaguezensis (P)	6	1.2	1.1	12	21.5
Nereidae (undet.) (P)	5	1.0	1.7	10	24.0
Turbellaria (undet.)	4	0.8	0.8	8	30.0
Nemertina (undet.) B	4	0.8	0.8	8	30.0
Protodorvillea kefersteini (P)	4	0.8	0.4	8	30.0
Cirratulidae (undet.) B (P)	4	0.8	1.3	8	30.0
Aricidea suecica (P)	4	0.8	0.8	8	30.0
Nephtys incisa (P)	4	0.8	0.4	8	30.0
Onuphis nebulosa (P)	4	0.8	0.8	8	30.0
Axiothella mucosa (P)	4	0.8	0.8	8	30.0
Hydroides protulicola (P)	4	0.8	0.8	8	30.0
Polydora sp. B (P)	4	0.8	1.3	8	30.0
Pholoe minuta (P)	4	0.8	0.8	8	30.0
Lembos unicornis (A)	3	0.6	0.9	6	42.5
Amphipoda (undet.) A	3	0.6	0.9	6	42.5
Eurydice littoralis (I)	3	0.6	0.9	6	42.5
Ostracoda (undet.) A	3	0.6	1.3	6	42.5
Gastrosaccus sp. B (My)	3	0.6	0.9	6	42.5
Ophiuroidea (undet.) E (E)	3	0.6	0.9	6	42.5
Semele nuculoides (M)	3	0.6	0.9	6	42.5
Sipunculida (undet.)	3	0.6	0.9	6	42.5
Ophelia denticulata (P)	3	0.6	0.5	6	42.5
Terebellidae (undet.) A (P)	3	0.6	0.9	6	42.5
Prionospio cirrobranchiata (P)	3	0.6	0.9	6	42.5
Eusyllis lamelligera (P)	3	0.6	0.5	6	42.5
Exogone dispar (P)	3	0.6	0.9	6	42.5
Ampharetidae (undet.) (P)	3	0.6	0.9	6	42.5
Maera caroliniana (A)	2	0.4	0.5	4	56.0
Campylaspis sp. (C)	2	0.4	0.5	4	56.0
Leptognatha caeca (T)	2	0.4	0.5	4	56.0
Nematoda (undet.)	2	0.4	0.5	4	56.0
Tellina probrina (M)	2	0.4	0.9	4	56.0
Turridae (undet.) C (M)	2	0.4	0.5	4	56.0
Crassinella lunulata (M)	2	0.4	0.5	4	56.0
Serpulus vermicularis granulosa (P)	2	0.4	0.5	4	56.0
Pseudeurythoe ambigua (P)	2	0.4	0.5	4	56.0
Cirrophorus lyriformis (P)	2	0.4	0.5	4	56.0
Syllis cornuta (P)	2	0.4	0.5	4	56.0
Lumbrinerides acuta (P)	2	0.4	0.5	4	56.0
Pionosyllis sp. (P)	2	0.4	0.5	4	56.0

Appendix 5.37 (Cont.)

DS37

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Pagurus longicarpus (D)	1	0.2	0.4	2	77.0
Ovalipes stephensoni (D)	1	0.2	0.4	2	77.0
Processa hemphilli (D)	1	0.2	0.4	2	77.0
Synchelidium americanum (A)	1	0.2	0.4	2	77.0
Bathyporeia parkeri (A)	1	0.2	0.4	2	77.0
Rudilemboides sp. (A)	1	0.2	0.4	2	77.0
Carinobatea carinata (A)	1	0.2	0.4	2	77.0
Microdeutopus sp. (A)	1	0.2	0.4	2	77.0
Leptochelia rapax (T)	1	0.2	0.4	2	77.0
Nannosquilla sp. (St)	1	0.2	0.4	2	77.0
Oxyurostylis smithi (C)	1	0.2	0.4	2	77.0
Eudevenopus honduranus (A)	1	0.2	0.4	2	77.0
Mellita quinquiesperforata (E)	1	0.2	0.4	2	77.0
Ophiophragmus sp. A (E)	1	0.2	0.4	2	77.0
Polyplacophora (undet.) A (M)	1	0.2	0.4	2	77.0
Crepidula sp. (M)	1	0.2	0.4	2	77.0
Anachis avara (M)	1	0.2	0.4	2	77.0
Mitrella lunata (M)	1	0.2	0.4	2	77.0
Abra aequalis (M)	1	0.2	0.4	2	77.0
Golfingia sp. B (S)	1	0.2	0.4	2	77.0
Trypanosyllis sp. (P)	1	0.2	0.4	2	77.0
Pomatoceros americanus (P)	1	0.2	0.4	2	77.0
Parapionosyllis longicirrata (P)	1	0.2	0.4	2	77.0
Tharyx marioni (P)	1	0.2	0.4	2	77.0
Aricidea cerruti (P)	1	0.2	0.4	2	77.0
Polycirrus eximius (P)	1	0.2	0.4	2	77.0
Hesionidae (undet.) A (P)	1	0.2	0.4	2	77.0
Nereis succinea (P)	1	0.2	0.4	2	77.0
Phyllodocidae (undet.) (P)	1	0.2	0.4	2	77.0

Appendix 5.38 Abundance of macroinvertebrate species in grab collections from station DS38. (A = Amphipoda; Br = Brachiopoda; C = Cumacea; Cc = Cephalochordata; Cn = Cnidaria; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS38				
Species	Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Eunice vittata (P)	146	29.2	12.7	292	1.0
Goniadides carolinae (P)	133	26.6	9.4	266	2.0
Chrysopetalidae (undet.) (P)	132	26.4	5.4	264	3.0
Syllis regulata carolinae (P)	73	14.6	6.1	146	4.0
Oligochaeta (undet.)	65	13.0	7.3	130	5.0
Aspidosiphon spinalis (S)	53	10.6	4.0	106	6.0
Pelecypoda (undet.) C	50	10.0	5.4	100	7.0
Jasmineira bilobata (P)	45	9.0	5.3	90	8.0
Branchiostoma caribaeum (Cc)	44	8.8	4.5	88	9.0
Pagurus longicarpus (D)	35	7.0	4.2	70	10.0
Exogone dispar (P)	30	6.0	2.5	60	11.0
Polyplacophora (undet.) A (M)	29	5.8	4.0	58	12.0
Lumbrineris latreilli (P)	28	5.6	3.6	56	13.0
Rudilemboides sp. (A)	27	5.4	3.5	54	14.0
Ampelisca vadorum (A)	25	5.0	4.8	50	15.0
Lembos unicornis (A)	24	4.8	3.0	48	18.0
Glottidia pyramidata (Br)	24	4.8	2.2	48	18.0
Nematoda (undet.)	24	4.8	3.8	48	18.0
Synelmis albini (P)	24	4.8	2.6	48	18.0
Prionospio cristata (P)	24	4.8	1.9	48	18.0
Photis sp. (A)	23	4.6	1.8	46	21.0
Polyplacophora (undet.) B (M)	22	4.4	3.0	44	22.5
Polycirrus eximius (P)	22	4.4	3.9	44	22.5
Ampharete americana (P)	20	4.0	3.1	40	24.0
Laonice cirrata (P)	19	3.8	1.9	38	25.5
Eulalia sanguinea (P)	19	3.8	3.6	38	25.5
Tiron tropakis (A)	18	3.6	1.8	36	27.5
Mediomastus californiensis (P)	18	3.6	2.3	36	27.5
Onuphis nebulosa (P)	17	3.4	1.8	34	29.0
Parapionosyllis longicirrata (P)	16	3.2	1.6	32	30.5
Cirratulidae (undet.) B (P)	16	3.2	1.6	32	30.5
Goneplacidae (undet.) (D)	15	3.0	3.7	30	33.0
Microdeutopus sp. (A)	15	3.0	3.9	30	33.0
Vermiliopsis annulata (P)	15	3.0	3.3	30	33.0
Glycymeris pectinata (M)	14	2.8	1.8	28	35.5
Phyllodoce longipes (P)	14	2.8	0.8	28	35.5
Glycera tesselata (P)	13	2.6	2.4	26	37.5
Axiothella mucosa (P)	13	2.6	1.3	26	37.5
Isopoda (undet.) A	12	2.4	1.8	24	40.5
Crassinella lunulata (M)	12	2.4	1.8	24	40.5
Macroclymene zonalis (P)	12	2.4	2.5	24	40.5
Nephtys squamosa (P)	12	2.4	1.8	24	40.5
Glyptoplax smithii (D)	11	2.2	1.3	22	43.5
Unciola serrata (A)	11	2.2	1.5	22	43.5
Syllis cornuta (P)	10	2.0	2.0	20	45.0
Alpheus normanni (D)	9	1.8	1.8	18	49.0
Ensis directus (D)	9	1.8	1.1	18	49.0
Spionidae (undet.) B (P)	9	1.8	2.5	18	49.0
Spiophanes bombyx (P)	9	1.8	1.9	18	49.0
Hemipodus roseus (P)	9	1.8	1.8	18	49.0
Phyllodoce arenae (P)	9	1.8	2.0	18	49.0
Syllis hyalina (P)	9	1.8	1.6	18	49.0
Amphipoda (undet.) F	8	1.6	1.1	16	55.5
Ancistrosyllis carolinensis (P)	8	1.6	0.5	16	55.5
Trypanosyllis sp. (P)	8	1.6	1.1	16	55.5
Psammolyce ctenidophora (P)	8	1.6	1.3	16	55.5
Syllidae (undet.) C (P)	8	1.6	1.7	16	55.5
Euclymene sp. (P)	8	1.6	1.5	16	55.5
Maera williamsi (A)	7	1.4	1.3	14	60.5
Golfingia sp. B (S)	7	1.4	1.7	14	60.5
Ampharete acutifrons (P)	7	1.4	0.5	14	60.5
Lysidice ninetta (P)	7	1.4	1.1	14	60.5

Appendix 5.38(Cont.)

DS38

Species	Total Number	Number/0.1m^2 $\bar{x}$	Number/0.1m^2 SD	Estimated Number/m^2	Rank by Number
Sicyonia typica (D)	6	1.2	0.8	12	65.0
Discoporella umbellata (Ec)	6	1.2	1.8	12	65.0
Semele bellastriata (M)	6	1.2	0.8	12	65.0
Sipunculida (undet.)	6	1.2	0.8	12	65.0
Harmothoe sp. B (Day) (P)	6	1.2	1.1	12	65.0
Amphipoda (undet.) A	5	1.0	1.0	10	74.0
Apanthura magnifica (I)	5	1.0	1.0	10	74.0
Nemertina (undet.) A	5	1.0	1.0	10	74.0
Holothuroidea (undet.) A (E)	5	1.0	0.7	10	74.0
Corbula barrattiana (M)	5	1.0	1.2	10	74.0
Sipunculus nudus (S)	5	1.0	1.2	10	74.0
Megalomma sp. A (P)	5	1.0	0.7	10	74.0
Pisione remota (P)	5	1.0	0.7	10	74.0
Syllis ferrugina (P)	5	1.0	1.2	10	74.0
Nephtys incisa (P)	5	1.0	1.4	10	74.0
Terebellidae (undet.) A (P)	5	1.0	1.2	10	74.0
Nephtys picta (P)	5	1.0	2.2	10	74.0
Schistomeringos rudolphi (P)	5	1.0	0.7	10	74.0
Latreutes parvulus (D)	4	0.8	1.8	8	85.5
Speloeophorus pontifer (D)	4	0.8	0.8	8	85.5
Maera caroliniana (A)	4	0.8	0.8	8	85.5
Nemertina (undet.) B	4	0.8	0.8	8	85.5
Anachis avara (M)	4	0.8	0.8	8	85.5
Microspio pigmentata (P)	4	0.8	1.8	8	85.5
Eunicidae (undet.) A (P)	4	0.8	0.8	8	85.5
Loimia medusa (P)	4	0.8	1.1	8	85.5
Nereidae (undet.) (P)	4	0.8	0.8	8	85.5
Pionosyllis sp. (P)	4	0.8	0.4	8	85.5
Pinnixa retinens (D)	3	0.6	0.9	6	97.5
Cirolana polita (I)	3	0.6	0.5	6	97.5
Ostracoda (undet.)	3	0.6	0.5	6	97.5
Chama macerophylla (M)	3	0.6	0.5	6	97.5
Lima pelucida (M)	3	0.6	0.9	6	97.5
Golfingia sp. A (S)	3	0.6	1.3	6	97.5
Ophelia denticulata (P)	3	0.6	0.5	6	97.5
Lumbrineriopsis paradoxa (P)	3	0.6	0.9	6	97.5
Protodorvillea kefersteini (P)	3	0.6	0.9	6	97.5
Magelona sp. (Day 73) (P)	3	0.6	0.9	6	97.5
Sabellaria vulgaris (P)	3	0.6	0.9	6	97.5
Autolytus dentalius (P)	3	0.6	0.9	6	97.5
Owenia fusiformis (P)	3	0.6	0.5	6	97.5
Pholoe minuta (P)	3	0.6	0.9	6	97.5
Processa hemphilli (D)	2	0.4	0.9	4	115.5
Liljeborgia sp. (A)	2	0.4	0.5	4	115.5
Carinobatea carinata (A)	2	0.4	0.5	4	115 5
Erichsonella filiformis (I)	2	0.4	0.9	4	115.5
Cumacea (undet.) H	2	0.4	0.9	4	115.5
Ampelisca verrilli (A)	2	0.4	0.5	4	115.5
Cyclaspis varians (C)	2	0.4	0.5	4	115.5
Lytechinus variegatus (E)	2	0.4	0.5	4	115.5
Calyptraea centralis (M)	2	0.4	0.9	4	115.5
Marginella hartleyanum (M)	2	0.4	0.5	4	115.5
Laevicardium pictum (M)	2	0.4	0.5	4	115.5
Unknown Taxon B	2	0.4	0.9	4	115.5
Amaeana trilobata (P)	2	0.4	0.5	4	115.5
Serpulus vermicularis granulosa (P)	2	0.4	0.9	4	115.5
Nereidae (undet.) A (P)	2	0.4	0.5	4	115.5
Minuspio cirrifera (P)	2	0.4	0.5	4	115.5
Cirrophorus lyriformis (P)	2	0.4	0.9	4	115.5
Notomastus hemipodus (P)	2	0.4	0.5	4	115.5
Phyllodoce castanea (P)	2	0.4	0.5	4	115.5
Drilonereis magna (P)	2	0.4	0.9	4	115.5
Brania clavata (P)	2	0.4	0.5	4	115.5
Aonides mayaguezensis (P)	2	0.4	0.9	4	115.5

Appendix 5.38 (Cont.)

Species	DS38 Total Number	Number/0.1m^2 $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Paguridae (undet.) A (D)	1	0.2	0.4	2	150.0
Automate evermanni (D)	1	0.2	0.4	2	150.0
Pelia mutica (D)	1	0.2	0.4	2	150.0
Majidae (undet.) B (D)	1	0.2	0.4	2	150.0
Callianassa atlantica (D)	1	0.2	0.4	2	150.0
Elasmopus levis (A)	1	0.2	0.4	2	150.0
Trichophoxus floridanus (A)	1	0.2	0.4	2	150.0
Cumacea (undet.) E	1	0.2	0.4	2	150.0
Eurydice littoralis (I)	1	0.2	0.4	2	150.0
Mesanthura sp. (I)	1	0.2	0.4	2	150.0
Leptochelia rapax (T)	1	0.2	0.4	2	150.0
Gastrosaccus sp. B (My)	1	0.2	0.4	2	150.0
Heteromysis formosa (My)	1	0.2	0.4	2	150.0
Lembos smithi (A)	1	0.2	0.4	2	150.0
Batea catharinensis (A)	1	0.2	0.4	2	150.0
Leptognatha caeca (T)	1	0.2	0.4	2	150.0
Actiniaria (undet.) (Cn)	1	0.2	0.4	2	150.0
Turbellaria (undet.)	1	0.2	0.4	2	150.0
Ophiothrix angulata (E)	1	0.2	0.4	2	150.0
Arbacia punctulata (E)	1	0.2	0.4	2	150.0
Ophiolepis elegans (E)	1	0.2	0.4	2	150.0
Natica pusilla (M)	1	0.2	0.4	2	150.0
Epitonium multistriatum (M)	1	0.2	0.4	2	150.0
Caecum pulchellum (M)	1	0.2	0.4	2	150.0
Pelecypoda (undet.) I	1	0.2	0.4	2	150.0
Chaetopleura apiculata (M)	1	0.2	0.4	2	150.0
Nucula proxima (M)	1	0.2	0.4	2	150.0
Eulalia macroceros (P)	1	0.2	0.4	2	150.0
Eupanthalis kinbergi (P)	1	0.2	0.4	2	150.0
Serpulidae (undet.) A (P)	1	0.2	0.4	2	150.0
Glycera papillosa (P)	1	0.2	0.4	2	150.0
Metavermilia multicristata (P)	1	0.2	0.4	2	150.0
Glycera sphyrabrancha (P)	1	0.2	0.4	2	150.0
Megalomma sp. B (P)	1	0.2	0.4	2	150.0
Lumbrineris impatiens (P)	1	0.2	0.4	2	150.0
Glycera oxycephala (P)	1	0.2	0.4	2	150.0
Hydroides protulicola (P)	1	0.2	0.4	2	150.0
Eunice websteri (P)	1	0.2	0.4	2	150.0
Polydora sp. B (P)	1	0.2	0.4	2	150.0
Hesionidae (undet.) A (P)	1	0.2	0.4	2	150.0
Aedicira belgicae (P)	1	0.2	0.4	2	150.0
Prionospio cirrobranchiata (P)	1	0.2	0.4	2	150.0
Eusyllis lamelligera (P)	1	0.2	0.4	2	150.0
Chloeia sp. (P)	1	0.2	0.4	2	150.0
Armandia maculata (P)	1	0.2	0.4	2	150.0
Ceratocephale sp. (P)	1	0.2	0.4	2	150.0
Isolda pulchella (P)	1	0.2	0.4	2	150.0

Appendix 5.39 Abundance of macroinvertebrate species in grab collections from station DS39. (A = Amphipoda; C = Cumacea: Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; P = Polychaeta; S = Sipunculida; T = Tanaidacea).

	DS39				
Species	Total Number	Number/0.1m^2* $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	1027			2054	1.0
Unciola serrata (A)	99			198	2.0
Aspidosiphon spinalis (S)	92			184	3.0
Polyplacophora (undet.) A (M)	56			112	4.0
Chrysopetalidae (undet.) (P)	49			98	5.0
Exogone dispar (P)	47			94	6.0
Nematoda (undet.)	44			88	7.0
Goniadides carolinae (P)	38			76	8.0
Syllis regulata carolinae (P)	36			72	9.0
Eunice vittata (P)	34			68	10.5
Hemipodus roseus (P)	34			68	10.5
Eurydice littoralis (I)	33			66	12.0
Cirratulidae (undet.) B (P)	32			64	13.0
Leptognatha caeca (T)	30			60	14.0
Tiron tropakis (A)	29			58	15.0
Glyptoplax smithii (D)	26			52	16.0
Pisione remota (P)	24			48	17.0
Ampelisca vadorum (A)	23			46	18.5
Travisia parva (P)	23			46	18.5
Pholoe minuta (P)	21			42	20.0
Goneplacidae (undet.) (D)	19			38	21.5
Polyplacophora (undet.) B (M)	19			38	21.5
Axiothella mucosa (P)	18			36	23.5
Prionospio cristata (P)	18			36	23.5
Pagurus longicarpus (D)	17			34	25.5
Pinnixa retinens (D)	17			34	25.5
Onuphis nebulosa (P)	16			32	27.0
Minuspio cirrifera (P)	13			26	28.5
Oligochaeta (undet.)	13			26	28.5
Sicyonia typica (D)	12			24	30.0
Golfingia sp. A (S)	11			22	31.0
Carinobatea carinata (A)	10			20	32.0
Photis sp. (A)	9			18	33.0
Nephtys squamosa (P)	8			16	34.0
Microdeutopus sp. (A)	7			14	36.0
Marginella hartleyanum (M)	7			14	36.0
Nephtys incisa (P)	7			14	36.0
Alpheus normanni (D)	6			12	38.5
Processa hemphilli (D)	6			12	38.5
Podochela sidneyi (D)	5			10	43.0
Ostracoda (undet.)	5			10	43.0
Apanthura magnifica (I)	5			10	43.0
Sipunculida (undet.)	5			10	43.0
Glycera tesselata (P)	5			10	43.0
Marphysa sp. B (Gar.) (P)	5			10	43.0
Syllis hyalina (P)	5			10	43.0
Campylaspis sp. (C)	4			8	48.5
Calyptraea centralis (M)	4			8	48.5
Ophelia denticulata (P)	4			8	48.5
Schistomeringos rudolphi (P)	4			8	48.5
Lembos websteri (A)	3			6	54.5
Oxyurostylis smithi (C)	3			6	54.5
Cupuladria doma (Ec)	3			6	54.5
Syllis gracilis (P)	3			6	54.5
Scalibregma inflatum (P)	3			6	54.5
Harmothoe sp. (P)	3			6	54.5
Parapionosyllis longicirrata (P)	3			6	54.5
Polynoidae (undet.) (P)	3			6	54.5
Latreutes parvulus (D)	2			4	66.5
Speloeophorus pontifer (D)	2			4	66.5
Corbula barrattiana (M)	2			4	66.5
Glycymeris pectinata (P)	2			4	66.5
Marginella aureocincta (M)	2			4	66.5

DS39

Species	Total Number	Number/0.1m^2* $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Dentalium calamus (M)	2			4	66.5
Sipunculus nudus (S)	2			4	66.5
Trypanosyllis sp. (P)	2			4	66.5
Syllis ferrugina (P)	2			4	66.5
Glycera papillosa (P)	2			4	66.5
Notomastus latericeus (P)	2			4	66.5
Terebellidae (undet.) B (P)	2			4	66.5
Glycera dibranchiata (P)	2			4	66.5
Nereidae (undet.) (P)	2			4	66.5
Eulalia sanguinea (P)	2			4	66.5
Phyllodoce arenae (P)	2			4	66.5
Alpheus formosus (D)	1			2	90.5
Ebalia cariosa (D)	1			2	90.5
Heterocrypta granulata (D)	1			2	90.5
Portunidae (undet.) (D)	1			2	90.5
Cirolana polita (I)	1			2	90.5
Trichophoxus floridanus (A)	1			2	90.5
Maera caroliniana (A)	1			2	90.5
Luconacia incerta (A)	1			2	90.5
Cumacea (undet.) H	1			2	90.5
Turbellaria (undet.)	1			2	90.5
Ophiuroidea (undet.) B (E)	1			2	90.5
Semele nuculoides (M)	1			2	90.5
Columbellidae (undet.) A (M)	1			2	90.5
Turridae (undet.) A (M)	1			2	90.5
Turridae (undet.) B (M)	1			2	90.5
Hyalina velei (M)	1			2	90.5
Marginellidae (undet.) A (M)	1			2	90.5
Nudibranchia (undet.) C (M)	1			2	90.5
Ensis directus (M)	1			2	90.5
Lima pelucida (M)	1			2	90.5
Crassinella lunulata (M)	1			2	90.5
Golfingia sp. B (S)	1			2	90.5
Psammolyce ctenidophora (P)	1			2	90.5
Terebellidae (undet.) C (P)	1			2	90.5
Phyllodocidae (undet.) A (P)	1			2	90.5
Goniada brunnea (P)	1			2	90.5
Eunice websteri (P)	1			2	90.5
Spiophanes bombyx (P)	1			2	90.5
Owenia fusiformis (P)	1			2	90.5
Ampharetidae (undet.) (P)	1			2	90.5
Lysidice ninetta (P)	1			2	90.5
Petaloproctus socialis (P)	1			2	90.5

*Replicate grabs were combined; no mean or standard deviation available.

Appendix 5.40 Abundance of macroinvertebrate species in grab collections from station DS40. (A = Amphipoda; C = Cumacea; Cc = Cephalochordata; D = Decapoda; E = Echinodermata; Ec = Ectoprocta; I = Isopoda; M = Mollusca; My = Mysidacea; P = Polychaeta; Py = Pycnogonida; S = Sipunculida; T = Tanaidacea).

	DS40				
Species	Total Number	Number/0.1m^2* $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Branchiostoma caribaeum (Cc)	1394			2788	1.0
Aspidosiphon spinalis (S)	339			678	2.0
Nematoda (undet.)	111			222	3.0
Polyplacophora (undet.) A (M)	101			202	4.0
Polyplacophora (undet.) B (M)	79			158	5.0
Golfingia sp. B (S)	74			148	6.0
Eurydice littoralis (I)	68			136	7.0
Glyptoplax smithii (D)	60			120	8.0
Ostracoda (undet.)	55			110	9.0
Sipunculida (undet.)	54			108	10.5
Goniadides carolinae (P)	54			108	10.5
Leptognatha caeca (T)	50			100	12.0
Pisione remota (P)	47			94	14.0
Cirratulidae (undet.) B (P)	47			94	14.0
Eunice vittata (P)	47			94	14.0
Tiron tropakis (A)	42			84	17.0
Syllis regulata carolinae (P)	42			84	17.0
Hemipodus roseus (P)	42			84	17.0
Golfingia sp. A (S)	40			80	19.0
Pholoe minuta (P)	39			78	20.0
Chrysopetalidae (undet.) (P)	34			68	21.0
Exogone dispar (P)	27			54	22.0
Photis sp. (A)	25			50	24.0
Axiothella mucosa (P)	25			50	24.0
Oligochaeta (undet.)	25			50	24.0
Microdeutopus sp. (A)	20			40	26.0
Maera caroliniana (A)	19			38	27.0
Lembos unicornis (A)	18			36	28.5
Notomastus lobatus (P)	18			36	28.5
Unciola serrata (A)	17			34	30.5
Onuphis nebulosa (P)	17			34	30.5
Alpheus normanni (D)	16			32	32.0
Pagurus longicarpus (D)	15			30	34.0
Nephtys squamosa (P)	15			30	34.0
Travisia parva (P)	15			30	34.0
Syllis hyalina (P)	13			26	36.0
Terebellidae (undet.) A (P)	12			24	37.0
Nephtys incisa (P)	11			22	38.0
Goneplacidae (undet.) (D)	10			20	41.5
Ampelisca vadorum (A)	10			20	41.5
Campylaspis sp. (C)	10			20	41.5
Harmothoe sp. B (Day) (P)	10			20	41.5
Protodorvillea kefersteini (P)	10			20	41.5
Laonice cirrata (P)	10			20	41.5
Apanthura magnifica (I)	9			18	45.0
Carinobatea carinata (A)	8			16	46.5
Armandia maculata (P)	8			16	46.5
Trichophoxus floridanus (A)	7			14	49.5
Marginella aureocincta (M)	7			14	49.5
Spiophanes bombyx (P)	7			14	49.5
Isolda pulchella (P)	7			14	49.5
Sicyonia typica (D)	6			12	54.5
Liljeborgia sp. (A)	6			12	54.5
Chiridotea stenops (I)	6			12	54.5
Corbula barrattiana (M)	6			12	54.5
Glycymeris pectinata (M)	6			12	54.5
Phyllodoce arenae (P)	6			12	54.5
Majidae (undet.) C (D)	5			10	60.0
Isopoda (undet.) A	5			10	60.0

Appendix 5.40 (Cont.)

DS40					
Species	Total Number	Number/0.1m^2* $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Tanystylum orbiculare (Py)	5			10	60.0
Crassinella lunulata (M)	5			10	60.0
Glycera sphyrabrancha (P)	5			10	60.0
Amphipoda (undet.) A	4			8	65.5
Amphipoda (undet.) F	4			8	65.5
Calyptraea centralis (M)	4			8	65.5
Dentalium calamus (M)	4			8	65.5
Gastropoda (undet.) B	4			8	65.5
Ophelia denticulata (P)	4			8	65.5
Pinnixa retinens (D)	3			6	73.0
Cumacea (undet.) H	3			6	73.0
Cyclaspis varians (C)	3			6	73.0
Nemertina (undet.) B	3			6	73.0
Discoporella umbellata (Ec)	3			6	73.0
Crassinella martinicensis (M)	3			6	73.0
Marginella hartleyanum (M)	3			6	73.0
Gastropoda (undet.) A	3			6	73.0
Sigalion arenicola (P)	3			6	73.0
Trachypeneus constrictus (D)	2			4	85.5
Brachyura (undet.) C (D)	2			4	85.5
Portunidae (undet.) (D)	2			4	85.5
Leptochelia rapax (T)	2			4	85.5
Lembos smithi (A)	2			4	85.5
Amphipoda (undet.) G	2			4	85.5
Amphipoda (undet.) H	2			4	85.5
Ophiuroidea (undet.) B (E)	2			4	85.5
Anachis avara (M)	2			4	85.5
Abra aequalis (M)	2			4	85.5
Glycera tesselata (P)	2			4	85.5
Psammolyce ctenidophora (P)	2			4	85.5
Platynereis dumerilii (P)	2			4	85.5
Lysidice ninetta (P)	2			4	85.5
Eulalia sanguinea (P)	2			4	85.5
Petaloprotus socialis (P)	2			4	85.5
Latreutes parvulus (D)	1			2	111.5
Heterocrypta granulata (D)	1			2	111.5
Processa hemphilli (D)	1			2	111.5
Luconacia incerta (A)	1			2	111.5
Cumacea (undet.) E	1			2	111.5
Mysidacea (undet.) A	1			2	111.5
Heteromysis formosa (My)	1			2	111.5
Cumacea (undet.) F	1			2	111.5
Eudevenopus honduranus (A)	1			2	111.5
Nemertina (undet.) C	1			2	111.5
Asteroidea (undet.) B (E)	1			2	111.5
Ophiothrix angulata (E)	1			2	111.5
Natica pusilla (M)	1			2	111.5
Tellina texana (M)	1			2	111.5
Pandora trilineata (M)	1			2	111.5
Pelecypoda (undet.) G	1			2	111.5
Hyalina velei (M)	1			2	111.5
Arene sp. (M)	1			2	111.5
Marginellidae (undet.) A (M)	1			2	111.5
Vitrinellidae (undet.) B (M)	1			2	111.5
Polyplacophora (undet.) D (M)	1			2	111.5
Granulina ovuliformis (M)	1			2	111.5
Chama macerophylla (M)	1			2	111.5
Aspidosiphon misakiensis (S)	1			2	111.5
Sipunculus nudus (S)	1			2	111.5

Appendix 5.40 (Cont.)

DS40

Species	Total Number	Number/0.1m^2* $\bar{x}$	SD	Estimated Number/m^2	Rank by Number
Trypanosyllis sp. (P)	1			2	111.5
Serpulus vermicularis granulosa (P)	1			2	111.5
Goniada teres (P)	1			2	111.5
Sphaerosyllis pirifera (P)	1			2	111.5
Pherusa sp. (P)	1			2	111.5
Scoloplos rubra (P)	1			2	111.5
Hydroides protulicola (P)	1			2	111.5
Polydora sp. B (P)	1			2	111.5
Owenia fusiformis (P)	1			2	111.5
Arabella iricolor (P)	1			2	111.5
Nereidae (undet.) (P)	1			2	111.5

*Replicate grabs were combined; no mean or standard deviation available.