Macrobenthic Infauna from Hecate Strait, British Columbia

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1987

Canadian Technical Report of Hydrography and Ocean Sciences No. 88

Fisheries and Oceans Pêches et Océans

Canada

Canadian Technical Report of Hydrography and Ocean Sciences

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Les établissements des Sciences et Levés océaniques dans les régions et à l'administration centrale ont cessé de publier leurs diverses séries de rapports depuis décembre 1981. Vous trouverez dans l'index des publications du volume 38 du *Journal canadien des sciences halieutiques et aquatiques*, la liste de ces publications ainsi que le dernier numéro paru dans chaque catégorie. La nouvelle série a commencé avec la publication du Rapport n° 1 en janvier 1982.

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Cat.No. Fs-97-18/88

ISSN 0711-6765

Correct citation for this publication:

Burd, B.J. and R.O. Brinkhurst. 1987. Macrobenthic infauna from Hecate Strait, British Columbia. Can. Tech. Rep. Hydrogr. Ocean Sci. No. 88:123p.

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ABSTRACT

Burd, B.J. and R.O. Brinkhurst. 1987. Macrobenthic infauna from Hecate Strait, British Columbia. Can. Tech. Rep. Hydrogr. Ocean Sci. No. 88:123p.

The macrobenthic infauna of Hecate Strait, B.C. was studied as part of an overall investigation into the productivity of commercial fisheries in the area. The study included three cruises between June 1985 and January 1986. Detailed taxonomic identifications and statistical analyses of abundance and wet weight data are provided.

The study showed that correcting the abundance data for the amount of sediment collected in the grab did not affect the cluster pattern of stations. Each sample area had distinct species assemblages, which were stable over the entire study period. The hypothesis that the three abundance dendrograms (Cruises 1 to 3) were the same could not be rejected at any linkage level, and the high probabilities (between 80-100% generally) suggested that there were no differences between the three cruises. It was concluded statistically that geographic proximity and depth were the most important environmental factors studied which affected species assemblages. Sediment silt content also affected species assemblages, but to a lesser extent. These factors have been cited as important community delimiters in similar benthic studies in coastal areas of Pacific North America.

The dendrograms generated from wet weight data were not consistent from cruise to cruise, and bore no resemblance to the abundance dendrograms. Average biomass per grab sample was considerably higher in the two most northerly areas (A and B) than in the southernmost areas (C and D). The taxonomic groups which contributed most to the infaunal biomass included the Nemertea, Polychaeta, Gastropoda, Pelecypoda, Ophiuroidea and Echinoidea. This data may be of primary importance in the examination of fish stomach content analyses from Hecate Stait.

Keywords: benthic infauna, benthos, Hecate Strait.

RÉSUMÉ

Burd, B.J. and R.O. Brinkhurst. 1987. Macrobenthic infauna from Hecate Strait, British Columbia. Can. Tech. Rep. Hydrogr. Ocean Sci. No. 88:123p.

L'endofaune macrobenthique du détroit d'Hécate (C.-B.) a été étudiée dans le cadre d'une étude globale de la productivité des pêches commerciales dans la région. Les échantillons de macrofaune recueillis au cours de trois expéditions effectuées entre juin 1985 et janvier 1986 ont fait l'objet d'une identification taqxonomique et les données sur l'abondance et le poids humide ont été statistiquement analysées.

L'étude a révélé que la correction des données sur l'abondance en fonction du volume de sédiment recuilli dans la benne n'a pas influé sur la composition typologique des stations. Chaque zone étudiée montrait des groupements spécifiques distincts qui ont été stables pendant toute la durée de l'étude. L'hypothèse selon laquelle les trois dendrogrammes de l'abondance (expéditions 1 à 3) étaient semblables n'a pu être rejetée à aucun niveau de rapprochement; les probabilités élevées (de 80 à 100 % en général) portent à croire qu'il n'existe aucune difference entre les résultats des trois expéditions. Au niveau statistique, les auteurs ont formulé la conclusion que la proximité géographique et la profondeur constituent les plus importants facteurs environmentaux qui influent sur les groupements spécifiques. La teneur en vase des sédiments influait aussi sur ces derniers, mais à un moindre degré. Selon des études semblables du benthos menées dans des régions côtières du Pacifique, ces facteurs jouent un rôle important dans la délimitations des communautés benthiques.

Les dendogrammes élaborés à partir des donnees sur le poids humide n'étaient pas uniformes d'une expédition à l'autre et ne ressemblaient aucunement aux dendogrammes de l'abondance. La biomasse moyenne par échantillon recueilli à la benne était nettement plus élevée dans les régions A et B que dans C et D. Les principaux groupes taxonomiques constituant la plus grande partie de la biomasse endofaunique comprennent les suivants: Nemertea, Polychaeta, Gastropoda, Pelecypoda, Ophiuroidea et Echinoidea. Les données présentées auron peut-être une grande importance pour l'étude des contenus stomacaux des poissons peuplant le détroit d'Hécate.

Mots-clés: endofaune benthique, benthos, détroit d'Hécate

INTRODUCTION

The Hecate Strait benthic fauna study was carried out as part of an overall research project aimed at examining multi-species fishery productivity in the area. Hecate Strait is an important groundfish and pelagic fishing area, and contains spawning and nursery grounds for various commercial species. The goal of the research project is to acquire sufficient understanding of relationships among selected fish species in Hecate Strait to develop a multi-species, assemblage approach to their management.

The current study examined the benthic fauna in conjunction with fish trawl surveys conducted by personnel at the Pacific Biological Station (PBS) of the Department of Fisheries and Oceans, Nanaimo, B.C. The trawl surveys were carried out to collect groundfish for analysis of food content in the stomachs, while the benthic study examined the species composition of the sediment in the areas where the groundfish were sampled. Three sample areas were selected by PBS personnel, in order to include three previously identified fish species assemblages (Tyler 1986). Later, a fourth area was added near the third because the substrate of the latter area was found difficult to sample.

In this report, detailed taxonomic identifications of the benthic grab samples, statistical analyses of the data obtained, and interpretations of the results in relation to the overall project (see Tyler 1986) are presented. Additional meiofauna samples as well as sled or trawl samples are archived at the Ocean Ecology Division, Institute of Ocean Sciences (IOS) awaiting processing and species identification.

METHODS

SAMPLING SITES

Prior to the first cruise, three provisional sample areas were selected based on geological survey maps of Hecate Strait (supplied by B. Bornhold, Pacific Geoscience Centre). These areas were selected to cover three different substrate types (sand, silt, gravel) and a range of depths. The selection of sample sites within each area was modified as necessary by cruise personnel to cover the range of substrate types and depths indicated above. In particular, an additional area was selected and sampled during Cruises 2 and 3 (area D) to meet this requirement. The locations of the four areas are shown in Figure 1.

A single benthic grab sample was taken at five stations (2 to 6) in every area: one at each of the four corners, and one in the center (see Figure 2). At each of two other stations (1 and 7) within the area five replicate grabs were taken. In summary, fifteen grab samples were taken from each of three areas in Cruise 1 and from each of 4 areas in Cruises 2 and 3. An epibenthic sled was used to obtain a qualitative sample, across 0.4 nautical miles of bottom (20-minute haul), near station #1 in each area.

The cruises were conducted from the C.S.S. G.B. Reid during June 7-17, 1985 (Cruise 1), September 23 - October 4, 1985 (Cruise 2) and January 27-February 8, 1986 (Cruise 3).

BENTHIC SAMPLING

Benthic grab samples were taken using a Smith-McIntyre grab with a total capacity of 0.1m2. Before the grab was opened, a core was taken through the top of the grab to obtain a subsample of biota for analysis of meiofauna. These subsamples have not yet been identified and will not be discussed in this report. The remaining grab sample was then washed with filtered (0.5mm screen) seawater through a 1mm sieve and preserved with 10% formalin stained with Rose Bengal. A further core was extacted for determination of particle size (see below).

The sled and/or trawl samples have not been sorted or identified, and will not be discussed in this report. Large organisms were removed and washed on a 1mm screen. The remainder of the sample was then washed through the same size screen. The large animals were preserved in plastic bags separate from the remaining samples.

Rough sorting of samples to taxonomic group was carried out by D. Moore of the Ocean Ecology division, Institute of Ocean Sciences. Twenty percent of the samples were then resorted by a benthic specialist at E.V.S. Consultants, in order to determine if there were errors greater than 5%, which would have necessitated a resorting of all samples.

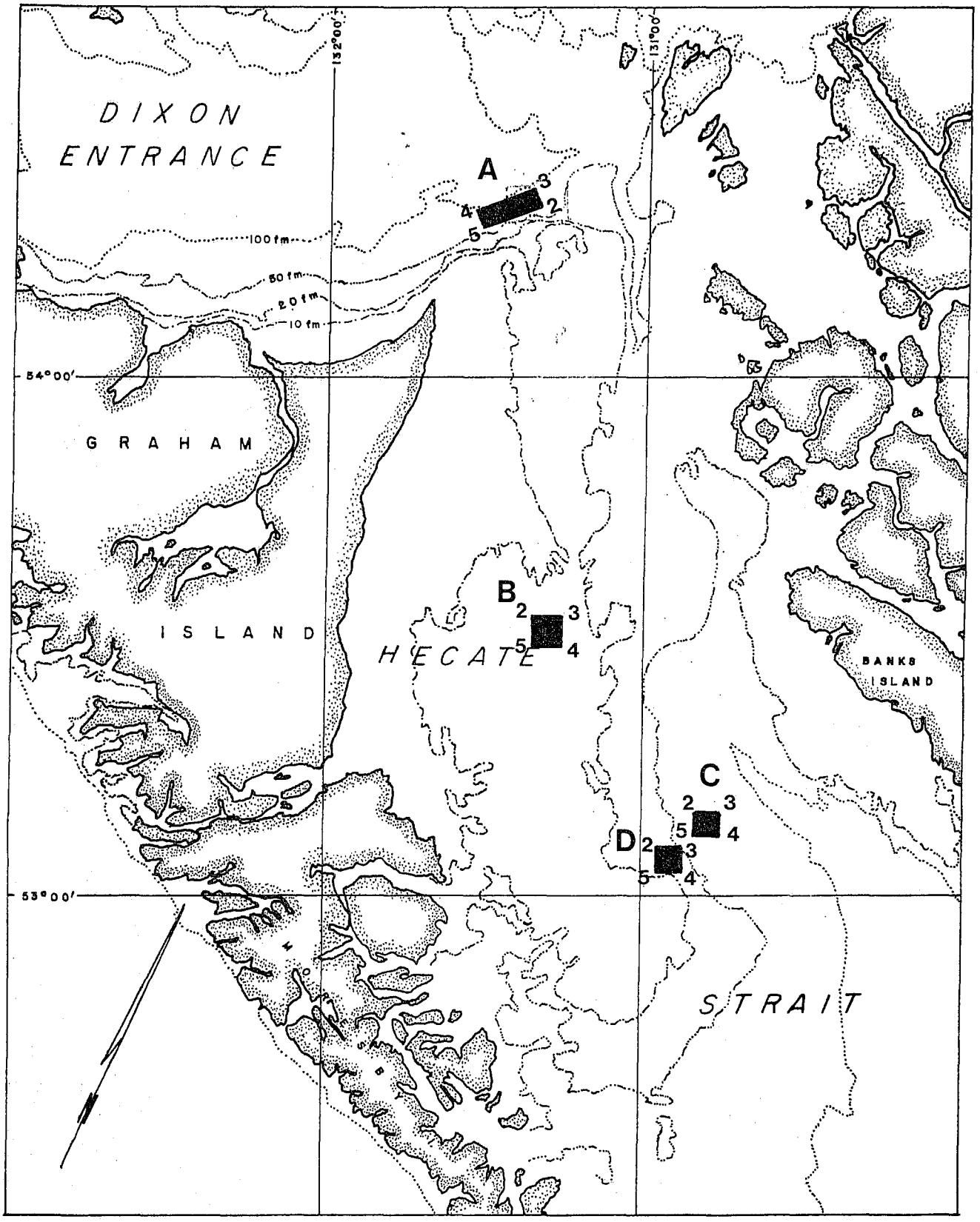
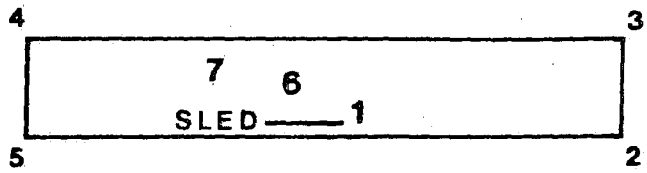
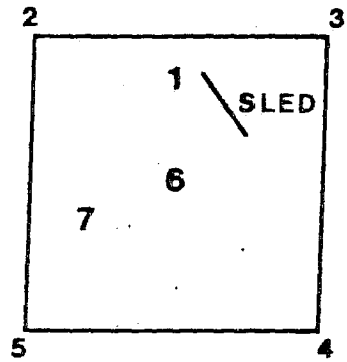


Figure 1. Locations of sampling areas in Hecate Strait, B.C.

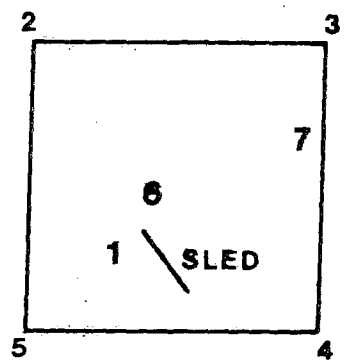
AREA A 1×6 (Nautical Miles)^2



AREA B 3×3 (N.M.)^2



AREA C 3×3 (N.M.)^2



AREA D 3×3 (N.M.)^2

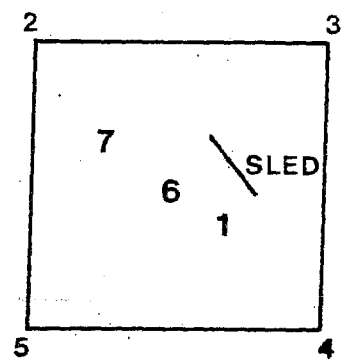


Figure 2. Sampling configuration for grab and sled samples in Hecate Strait, B.C.

The sorted samples were then identified by personnel associated with E.V.S. Consultants. The list of taxonomic authorities included:

Dr. Howard Jones, Marine Taxonomic Services	Polychaeta
Dr. William Austin, Khoyatan Marine Labs	Crustacea
Dr. William Austin, Khoyatan Marine Labs	Echinodermata
Dr. William Austin, Khoyatan Marine Labs	Varia
Mr. Pat Shaw, University of British Columbia	Amphipoda
Dr. Robert Reid, University of Victoria	Mollusca

Identified samples were then archived in vials containing 70% isopropanol and secured with neoprene stoppers. The archived samples will be delivered to the British Columbia Provincial Museum or the Royal Ontario Museum for curation. Samples will be retained for three years before being incorporated into standard collections.

BIOMASS DETERMINATIONS

Biomass determinations consisted of the summation of wet weights for each of 14 different taxonomic groups for each cruise. Sorted samples preserved in 70% isopropanol (excluding specimens too large for vials) were decanted, blotted dry and left to air dry for 10 minutes. The samples were then weighed to the nearest 0.0001g using a Mettler balance.

A selected number of molluscs were removed from shells and the bodies weighed separately to determine a set of correction factors for the different types of molluscs in the samples. The corrections were then applied to the final wet weight totals for the group.

SEDIMENT PARTICLE SIZE ANALYSIS

Before each grab was opened, a 100 mL (approximately) core was taken through the top of the grab to obtain a sample for particle size analysis. The core sample was kept on ice (4 C) without preservation, and returned to the Institute of Ocean Sciences for analysis.

Sediment samples were dried at 80 C for 12 hours, weighed to the nearest .01g and washed through a set of 2mm screens to trap gravel. The residue was then washed through a 63 micron mesh screen to trap sand. The silt was considered to be the residue fraction which passed through the two different sized screens. The residue from each size class was then dried overnight at 80 C and weighed. Percent gravel, silt and sand were then calculated. This procedure is analagous to the Wentworth method for sieving sediments.

STATISTICAL ANALYSES

In order to obtain symmetrical data sets for analysis, they were "rolled up" into taxonomic groups common to all three cruises. These rolled up data sets were used for all of the following data analyses. The data based on species which were present at 20% or more stations in any of the four areas over the entire three cruises were retained. Data from species not fitting this criterion were combined to the family level. The number of taxa was identical for each cruise, and no data were rejected.

Data were initially recorded as numbers per grab (0.1m2) regardless of the volume of sediment obtained by the grab sample (principal abundance data set). The abundance data values were then modified based on volume of sediment within the grab sample, and normalized to abundance per 0.1m2 (second abundance data set). The wet weights of the major taxa (14 groups) were presented as a data matrix for each cruise. There was therefore a total of 9 data sets for the entire study.

Analysis 1. Cluster Analysis with raw data

All of the above matrices were subjected to agglomerative, hierarchical cluster analysis using the complement of the Bray-Curtis coefficient of similarity (i.e. dissimilarity) with unweighted pair group mean average linkage (Sneath and Sokal 1973). Each grab sample was included separately in the analysis, producing a matrix with 45 samples for Cruise 1 and 60 for Cruises 2 and 3 (see Sample Stations - above).

As initial results (see below) indicated that the abundance data modified for sediment volume changed the cluster patterns very little, these were not used for further statistical analyses. As well, the five replicate samples from each of Stations 1 and 7 in each area clustered together in most cases, so that further analyses therefore utilized the average values for these stations.

Analysis 2. Comtree 1

The abundance data sets were then subjected to cluster analyses (WPGMA) with the replicates in each area averaged as indicated above. This reduction of data simplified the presentation and interpretation of cluster analyses and accurately reflected the actual sampling pattern. The resulting dendrograms had 21 stations for Cruise 1 and 28 stations for each of Cruises 2 and 3.

The geographic distances between stations, and the differences in depths and mean percent silt in the sediment for each station were processed using the same clustering method as in the case of the abundance data sets (WPGMA) to produce "reference" dendrograms for each cruise. These reference cluster patterns were then used for comparison with the abundance data.

Each abundance data matrix was compared with the pre-determined reference trees. This method (COMTREE 1 -Nemec and Brinkhurst - in prep.) involves testing the null hypothesis (Ho) that the random cluster pattern (abundance) is different from the reference (i.e. geographic distance) cluster dendrogram, using the Fowlkes-Mallows test statistic (Sneath and Sokal 1973). The probability that the two dendrograms are different is given at any linkage level desired for either dendrogram. The following comparisons were done:

a) Comparison of abundance matrix with geographic distance between stations (total of 3 - one for each cruise)
b) Comparison of abundance matrix with differences in %mud (or silt/clay) between stations (total of 3)
c) Comparison of abundance matrix with differences in depth between stations (total of 3)

Analysis 3. Computer Programs Sigtree and Comtree 2

In order to use the programmes SIGTREE and COMTREE 2 (Nemec and Brinkhurst in prep.) which allow tests of significance levels within a single abundance dendrogram and significance between abundance dendrograms, there must be variation about the mean values for any given sample. Therefore, the single replicate stations had to be grouped together in some rational manner. Since the grabs from stations 2-6 within any given area represented 5 stations which were closest to each other (and tended to cluster together anyway - see results for Analysis 1 - below), these were grouped together. The resulting abundance data and wet weight dendrograms had replicates grouped as follows to correspond with labelling on the figures (see results):

Station A1 = A1a,A1b,A1c,A1d,A1e
A2-6 = A2,A3,A4,A5,A6
A7 = A7a,A7b,A7c,A7d,A7e

Stations in areas B,C, and D were grouped in the same manner. Each data set now consisted of 5 replicates at each of 3 stations per area, for a total of 9 stations in Cruise 1 and 12 stations in Cruises 2 and 3.

Sigtree: The linkage groupings were statistically analysed for significance using a "bootstrap" simulation (Diaconis and Efron 1983, Felsenstein 1985), which requires a variance about the mean values for each station to generate the statistical probabilities from the random simulations. The significance levels obtained indicated the probability of a given group of stations being linked together by random chance, based on simulations generated from the original abundance data set (Nemec and Brinkhurst, in prep.). A total of six Sigtree tests were done; three on the abundance data (one for each cruise), and three on the wet weight data.

Comtree 2: The matrices were then statistically compared to each other using a similar "bootstrap" method (Nemec and Brinkhurst, in prep.) which tests the null hypothesis (Ho) that two abundance or biomass data sets are the same. The significance (p) of each pair of linkage levels (one for each dendrogram) is calculated using the Fowlkes-Mallows test statistic. The following data sets were compared:

Abundance:
- Cruises 1 and 2 (areas A,B and C only)
- Cruises 1 and 3 (areas A,B, and C only)
- Cruises 2 and 3 (areas A,B,C and D)

Wet Weight:
- Cruises 1 and 2 (areas A,B and C only)
- Cruises 1 and 3 (areas A,B, and C only)
- Cruises 2 and 3 (areas A,B,C and D)

For this analysis, only the corresponding linkage levels in each dendrogram were tested for significance (i.e. linkage 1 in dendrogram 1 with linkage 1 in dendrogram 2, etc.).

RESULTS

SAMPLING SITES

The sampling site locations and the sampling scheme followed are displayaed in Figures 1 and 2 repectively, as noted previously. The depths and number of replicates per station are given in Table 1. Brief descriptions of the areas with names commonly used by fishermen follow;

Area A -The Two Peaks

Depths in the Two Peaks area of Dixon Entrance were the greatest of any area sampled, varying from 124-166m. Substrates were consistently fine sandy silt. Tidal movement through this area is fairly strong.

Area B - The Shellground

The depths were shallowest in the Shellground, ranging from 25-36m. Shell fragments and coarse sand were the major components of the substrate. In the southwestern part of the area there were increased fractions of large pebbles, which adversely affected sampling. Because of the pebbles, any deep burrowing molluscs would not have been caught in the grab.

Areas C and D - The Horseshoe

Sediments at Area C were the most variable of all the sample areas, ranging from cobbles, gravel and pebbles to silty sand on the western side of the area, and more sandy silt on the eastern side. The sand was much coarser than that in area A. Depths ranged from 121-159m. As a result of the difficulties encountered during sampling in Cruise 1, additional samples were taken close by (Area D) in Cruises 2 and 3, but sampling at Area C was maintained for continuity.

Substrates at Area D were basically sandy, ranging from fine, silty sand to coarser sand. In some stations there was considerable shell debris, similar to that found in Area B. Depths ranged from 55-108m.

BENTHIC SAMPLES

The species identified from the three cruises are listed in Appendix 1. Presence or absence of each species in a given cruise is indicated. The number of taxa in each cruise ranged from 267 to 355. Cruise 1 seemed to have about 100 fewer taxa than did the other two cruises. The taxa missing from Cruise 1 only did not seem to be mainly area D species. The abundance of each species in each grab sample is presented separately for the three cruises in Appendices 2 to 4.

The most abundant species in area A in all three cruises included the polychaetes Lumbrineris luti, Prionospio steenstrupi, Spiophanes berkleyorum, Galathowenia oculata, Euchlymene zonalis, Owenia fusiformis, Polycirrus sp. and Mediomastus sp. In addition, Decamastus gracilis was common in Cruises 2 and 3 only, and Polycirrus complex was abundant in

Table 1. Geographic locations for Hecate Strait sample stations, Cruises 1 to 3.

Station	Number Samples	Latitude	Longitude	Depth (m) Cruise 1	Cruise 2	Cruise 3
A1	5	54 18 60	131 24 60	130	130	139
A2	1	54 19 30	131 20 00	135	124	139
A3	1	54 20 70	131 20 30	166	166	166
A4	1	54 18 50	131 31 00	157	150	152
A5	1	54 17 50	131 30 50	129	129	135
A6	1	54 18 80	131 25 50	140	144	146
A7	5	54 18 20	131 27 80	140	146	142
B1	5	53 32 50	131 17 20	28	29	36
B2	1	53 32 80	131 19 50	26	26	18
B3	1	53 33 00	131 13 80	29	28	29
B4	1	53 30 00	131 13 80	26	29	29
B5	1	53 33 00	131 19 80	29	29	29
B6	1	53 31 20	131 17 00	31	29	27
B7	5	53 32 00	131 18 00	29	25	27
C1	5	53 11 50	130 48 40	128	135	130
C2	1	53 12 70	130 50 20	128	126	125
C3	1	53 12 60	130 45 30	159	157	154
C4	1	53 09 60	130 45 50	146	153	147
C5	1	53 09 40	130 50 60	121	117	128
C6	1	53 11 00	130 47 70	128	128	128
C7	5	53 11 40	130 45 60	148	146	148
D1*	5	53 06 30	130 53 00	--	97	95
D2*	1	53 08 00	130 57 00	--	70	69
D3*	1	53 07 80	130 51 80	--	106	108
D4*	1	53 04 80	130 51 80	--	77	79
D5*	1	53 04 80	130 56 60	--	55	55
D6*	1	53 06 40	130 54 80	--	87	84
D7*	5	53 06 30	130 55 50	--	82	75
Sled samples						
A	1	54 18 00	131 25 90	97	113	120
B1	1	53 32 60	131 16 90	25	28	27
C1	1	53 11 80	130 48 40	128	129	126
C2	1	53 11 50	130 44 70	153	--	
D*	1	53 06 50	130 53 00	--	97	100

* Samples were taken in area D during cruises 2 and 3 only.

Cruise 3 only. Other abundant taxa in all three cruises include the bivalve Axinopsida serricata and the amphipod Rhepoxynius sp.

In Area B the most abundant species included: The polychaetes Spiophanes bombyx, Magelona hobsonae, Euclymenidae, Hemipodus borealis; the bivalve Tellina nuculoides; and the amphipod Foxiphalis obtusidens. The echinoid Dendraster excentricus was common in Cruise 3 only.

In Area C the most abundant species included: The polychaetes Spiochaetopterus costarum, Galathowenia oculata, Owenia fusiformis, Myriochele heeri and Odostomia sp.; the bivalves Psephidia lordi and Axionopsida serricata; and the amphipod Ampelisca macrocephala.

In Area D the most abundant species included; the polychaetes Spiophanes bombyx, Polycirrus complex and Spiochaetopterus costarum; the bivalve A. serricata; and the amphipods Grandifoxis sp. and Foxiphalus sp. (both found in Cruise 3 only).

The total abundance of animals and number of species for each station is summarized for the three cruises in Table 2. Abundance ranged from 35 to 358 animals per 0.1m2 per station in cruise 1, 41 to 470 in cruise 2 and 13 to 560 in cruise 3. The mean abundances for the stations with 5 replicates were comparable to the single values for stations with only 1 replicate each. Number of species per station ranged from 12 to 109 in Cruise 1, 21 to 123 in Cruise 2 and 9 to 140 in Cruise 3. Station A3 had low abundances and species numbers in all three cruises, reaching a minimum of 9 species and 13 animals in Cruise 3. Area B had generally low species numbers, especially in Cruise 1.

BIOMASS

The biomass values (grams wet weight) per grab (0.1m2) for each of the 14 arbitrarily selected taxonomic groups are shown in Appendices 5 to 7. A summary of these data is included in Table 3. The average biomass per grab for Cruise 1 was lower than that for the other two cruises. Cruise 3 had the highest average biomass of any of the cruises (6.13 grams per grab). The biomass of different groups varied considerably between the three cruises, reflecting either seasonal changes in abundance or the presence of the odd large but rare specimen. For example, the large biomass of Holothuroidea in Cruise 1 is almost entirely derived from one large specimen of Molpadia intermedia obtained at station A3. The biomass of Echinoidea reflects the large numbers of Dendraster excentricus in Area B, particularly in Cruise 3. Average biomass per grab was consistently higher in Areas A and B than in C and D. The taxonomic groups which contributed most to the biomass in all cruises were the Polychaeta, Gastropoda and Pelecypoda, with Ophiuroidea (2 cruises), Nemertea and Echinoidea (1 cruise) biomass high during certain cruises.

PARTICLE SIZE

Appendix 8 includes the particle size data from Cruises 1 to 3. In general, Area B had the highest sand content, with considerable quantities of gravel, especially in B4. In some stations of Area B, much of the gravel component was actually shell fragment, as observed during the

Table 2. Species number and abundance for each station sampled during Cruises 1-3 in Hecate Strait.

	Station	Abundance/0.1m2			Number of Species		
		Cruise 1	Cruise 2	Cruise 3	Cruise 1	Cruise 2	Cruise 3
*	A1	276.0	368.2	349.4	37-52	55-74	31-54
	A2	135.0	237.0	239.0	32	42	42
	A3	35.0	90.0	13.0	25	28	9
	A4	136.0	150.0	71.0	33	37	28
	A5	190.0	294.0	111.0	24	50	36
	A6	211.0	467.0	275.0	38	67	55
*	A7	210.4	448.4	245.8	34-43	47-70	29-52
*	B1	288.4	402.0	258.6	12-24	28-36	7-13
	B2	323.0	372.0	560.0	12	44	19
	B3	283.0	428.0	412.0	20	29	22
	B4	358.0	364.0	205.0	15	39	33
	B5	89.0	490.0	282.0	20	59	20
	B6	438.0	280.0	471.0	12	28	16
*	B7	228.2	470.6	379.8	14-20	19-34	15-18
*	C1	228.4	336.6	337.0	31-60	45-57	50-73
	C2	246.0	157.0	125.0	61	65	42
	C3	138.0	101.0	141.0	27	36	35
	C4	119.0	253.0	83.0	33	65	28
	C5	202.0	248.0	321.0	65	86	88
	C6	189.0	336.0	122.0	41	51	39
*	C7	33.0	148.4	136.4	2-25	41-52	19-40
*	D1	--	390.0	92.0	--	16-24	18-38
	D2	--	62.0	127.0	--	21	21
	D3	--	117.0	186.0	--	35	29
	D4	--	210.0	323.0	--	58	25
	D5	--	199.0	214.0	--	27	34
	D6	--	41.0	126.0	--	22	43
*	D7	--	253.0	99.0	--	12-20	12-20
Mean per 0.1m2		150.2	266.0	217.4			

*For stations with 5 replicates (*), mean values are shown for abundance, minimum and maximum (x-x) for species numbers.

Table 3. Biomass totals (grams wet weight per cruise) for each taxonomic group from Hecate Strait Cruises I,II and III (AFDW= ash free dry weight; se = standard error).

Taxa	Cruise 1 * weight	(+/-se)	Cruise 2 Wet	(+/-se)	Cruise 3 Wet	(+/-se)	AFDW Factor
Nemertea	1.45	0.01	68.25	0.13	0.68	0.01	0.13
Polychaeta	27.28	0.11	122.15	0.51	81.37	0.21	0.13
Gastropoda	4.21	0.03	68.19	0.28	184.88	0.82	0.10
Pelecypoda	87.81	0.58	6.98	0.03	9.50	0.04	0.10
Scaphopoda	1.24	0.02	0.07	0.00	0.98	0.01	0.10
Ostracoda	0.00	0.00	0.01	0.00	0.32	0.00	0.13
Cumacea	0.00	0.00	3.81	0.05	2.59	0.01	0.13
Isopoda	0.08	0.00	4.39	0.05	0.06	0.00	0.13
Amphipoda	1.32	0.00	0.13	0.00	0.05	0.00	0.13
Decapoda	0.76	0.10	0.35	0.00	7.95	0.07	0.13
Sipunculida	0.74	0.10	1.04	0.00	0.27	0.00	0.13
Ophiuroidea	23.22	0.17	0.76	0.00	22.02	0.12	0.07
Echinoidea	0.16	0.00	4.05	0.01	56.81	0.73	0.07
Holothuroidea	12.49	0.25	0.02	0.00	0.25	0.00	0.07
Area A mean	5.93		11.49		12.48		
Area B mean	4.11		3.62		6.54		
Area C mean	0.68		2.43		2.66		
Area D mean	--		1.13		2.83		
Overall Mean (=grams/0.1m2)	3.57		4.67		6.13		

Conversion factors for ash free dry weight (AFDW) were calculated from Thorson (1957), Lie (1968), Ellis (1960).

* based on 45 samples. Cruise 2 and 3 data are based on 60 samples.

sampling. Area D had similar sediments to Area B, with particularly high gravel contents in D3 and D4. Areas A and C had the highest silt contents (particularly A2, A3 and C3), with little gravel evident in Cruise 1, but more in Cruises 2 and 3. Visual descriptions of the different sample areas are given on Page 8.

STATISTICAL ANALYSES

Analysis 1. Cluster Analyses with Raw Data

The dendrograms derived from the rolled-up abundance matrices in a) original numbers per grab (0.1m2), b) abundance modified for sediment volume, and c) wet weight per 0.1m2 of all animals grouped into taxonomic units are included as Figures 3 to 11. There were 45 grab samples in Cruise 1 and 60 in each of Cruises 2 and 3. The matrices were symmetrical, with 300 taxa in the abundance data sets and 14 taxa in the wet weight data sets.

The dendrograms for original abundance data (Figures 3 to 5) illustrate that the sample stations within a given sample area (A to D) generally cluster together, separate from the other areas. A and C were consistently the most closely related areas, with some mixing of the stations in the same cluster groups. There was also some mixing of C and D stations.

The dendrograms for abundance data corrected for grab volume (Figures 6 to 9) show clustering patterns almost identical to those from the original data, suggesting that the grab volume correction has little effect on the species composition of the grab samples.

The dendrograms for wet weight data (Figures 9-11) do not show any consistent pattern between cruises, with stations from all sampling areas being mixed. The groupings of the wet weight clusters differ considerably from those derived from the abundance data.

Analysis 2. Comtree 1

Figures 12 to 14 represent the cluster analyses derived from those abundance data sets in which 5 replicates from stations 1 and 7 in each area were averaged (21 stations for Cruise 1, 28 for Cruises 2 and 3). These dendrograms were compared statistically with the reference dendrograms for geographic distance between stations (Figures 15 and 16), differences in depth between stations (Figures 17-19), and differences in percent silt between stations (Figures 20-22). The Fowlkes-Mallows statistics and significances for linkages at corresponding levels (i.e. linkage 1 with linkage 1) are given in Appendix 9. A range of other linkage levels (i.e. linkage 1 with linkage 2, etc.) could be tested, but were not included in this study.

The comparisons indicate that all three factors have some effect on the station clustering based on abundance. However, visual examination suggests that the reference trees for depth most closely resemble the cluster patterns for the abundance data. For instance, in both the depth and abundance dendrograms, Areas A and C cluster closely and are somewhat

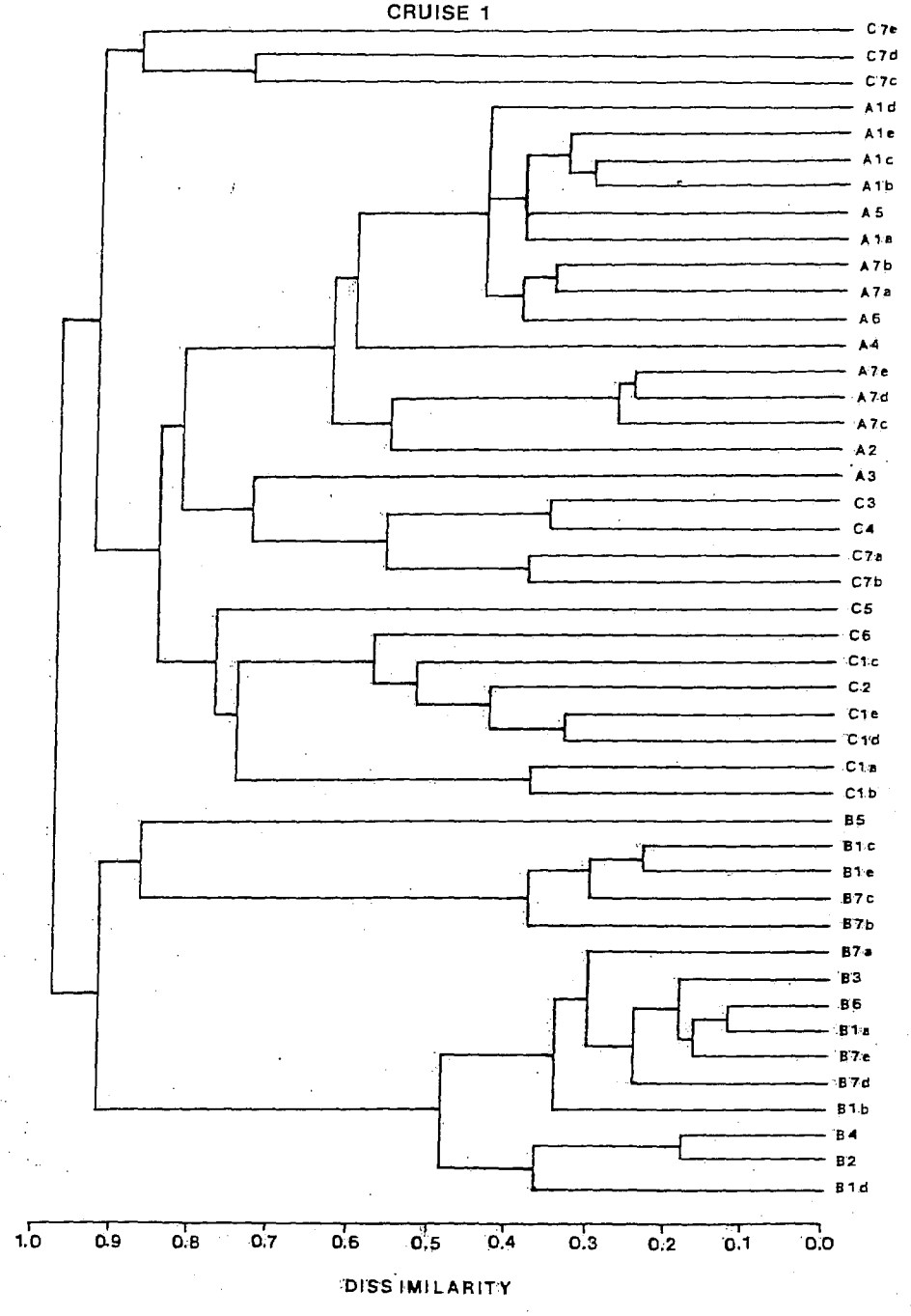


Figure 3. Dendrogram of abundance per $0.1m^2$ for Cruise 1 - total replicates = 45.

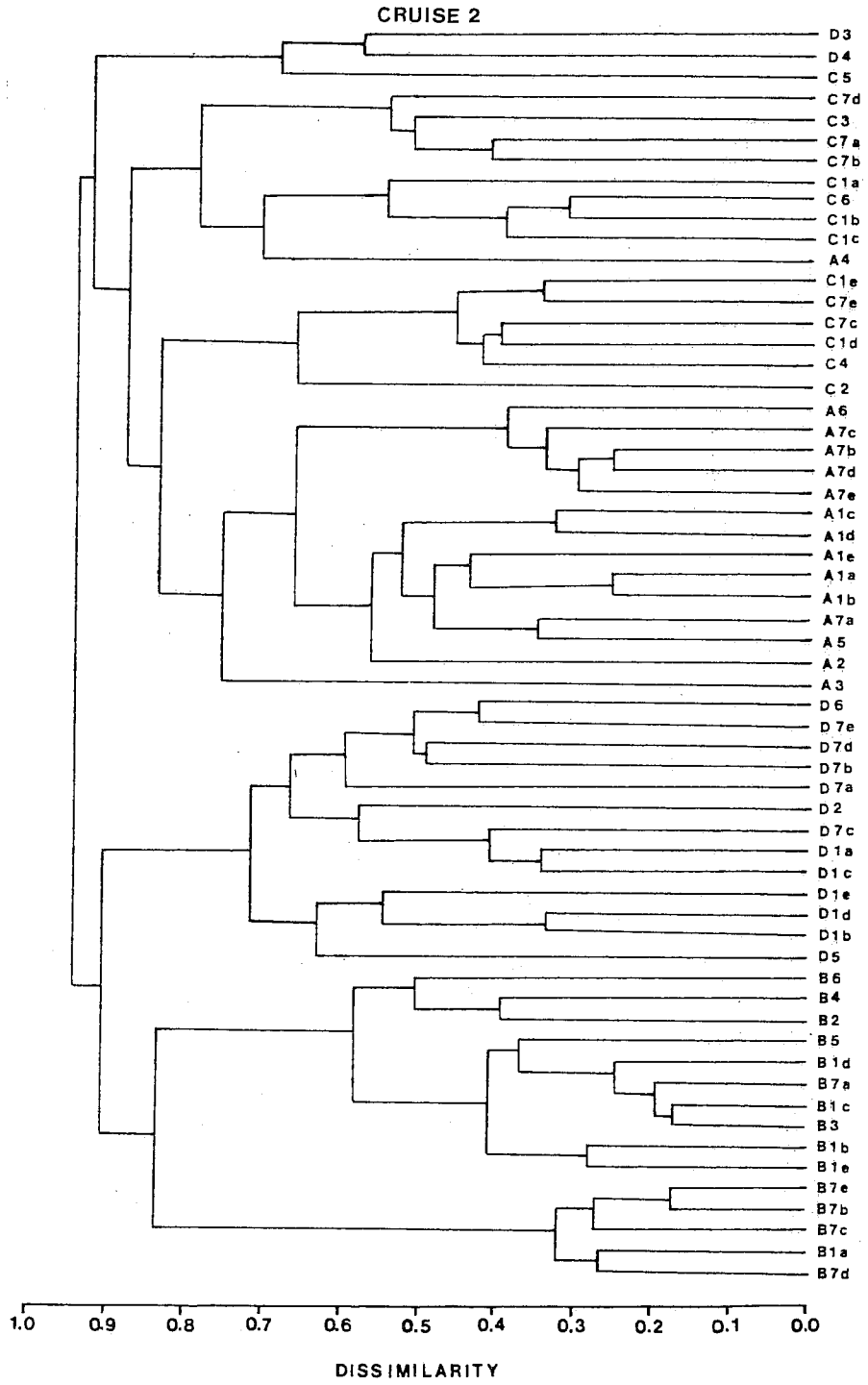


Figure 4. Dendrogram of abundance per $0.1m^2$ for Cruise 2 - total replicates = 60.

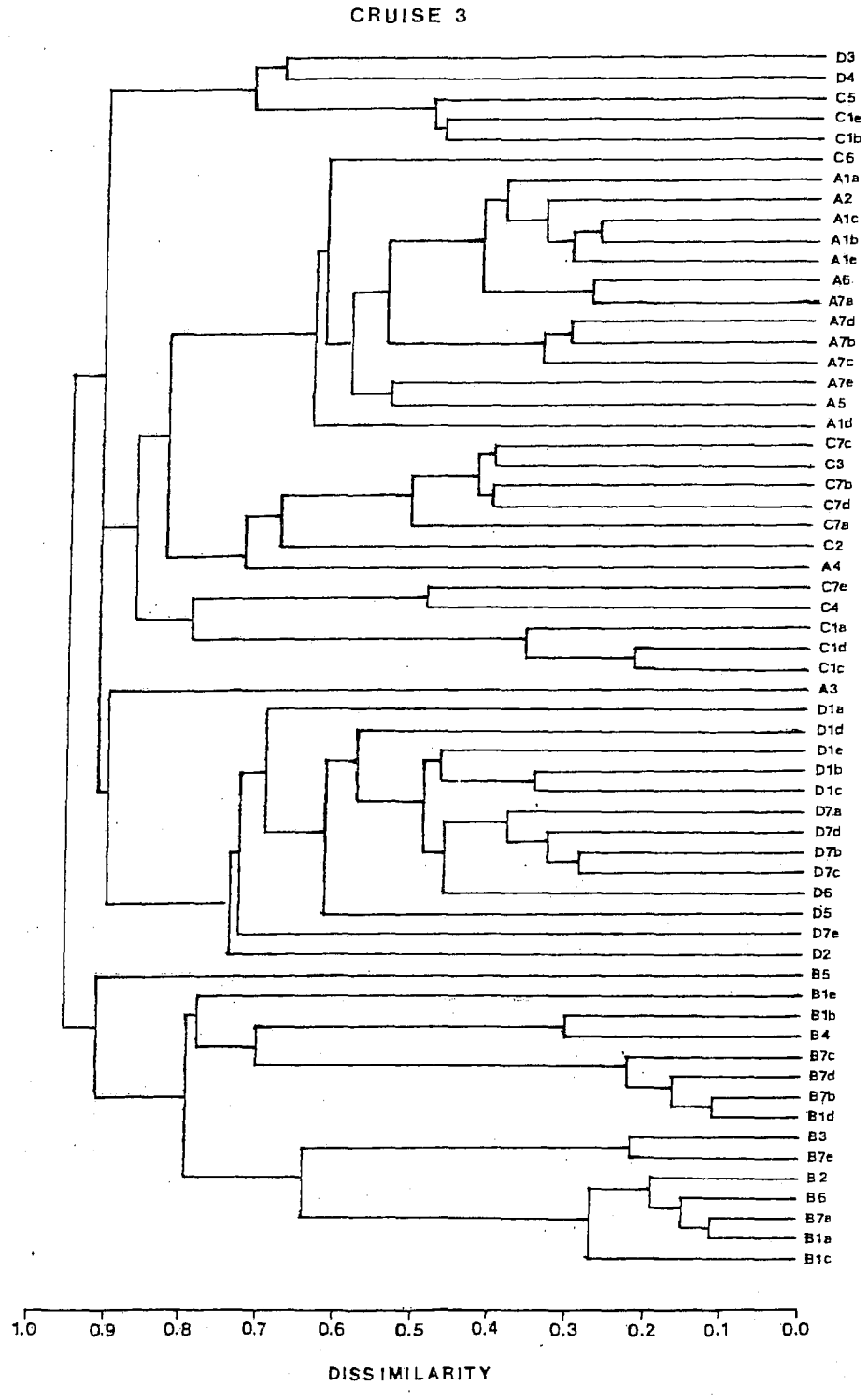


Figure 5. Dendrogram of abundance per $0.1m^2$ for Cruise 3 - total replicates = 60.

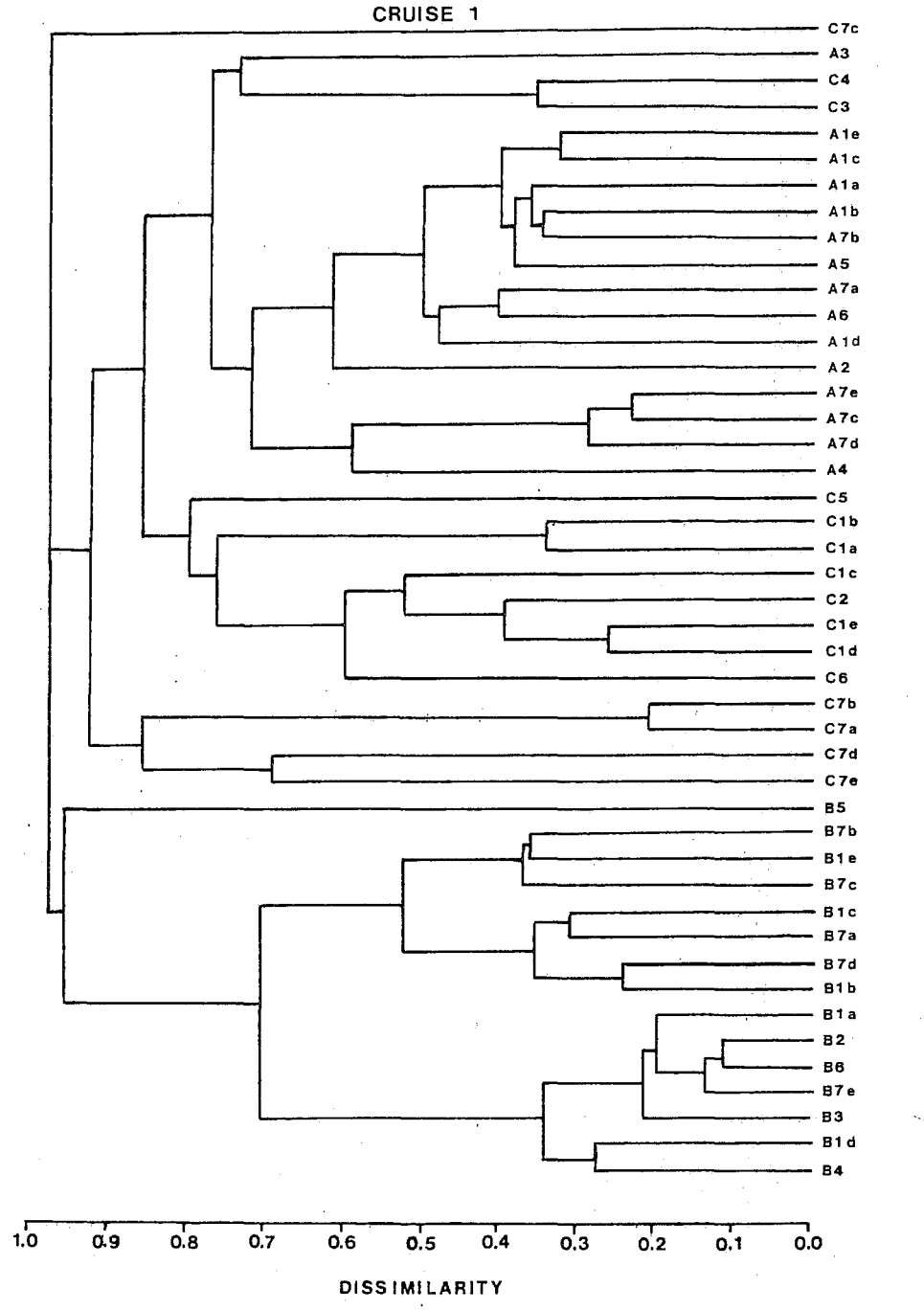


Figure 6. Dendrogram of abundance per $0.1m^2$ corrected for grab volume for Cruise 1. Total replicates = 45.

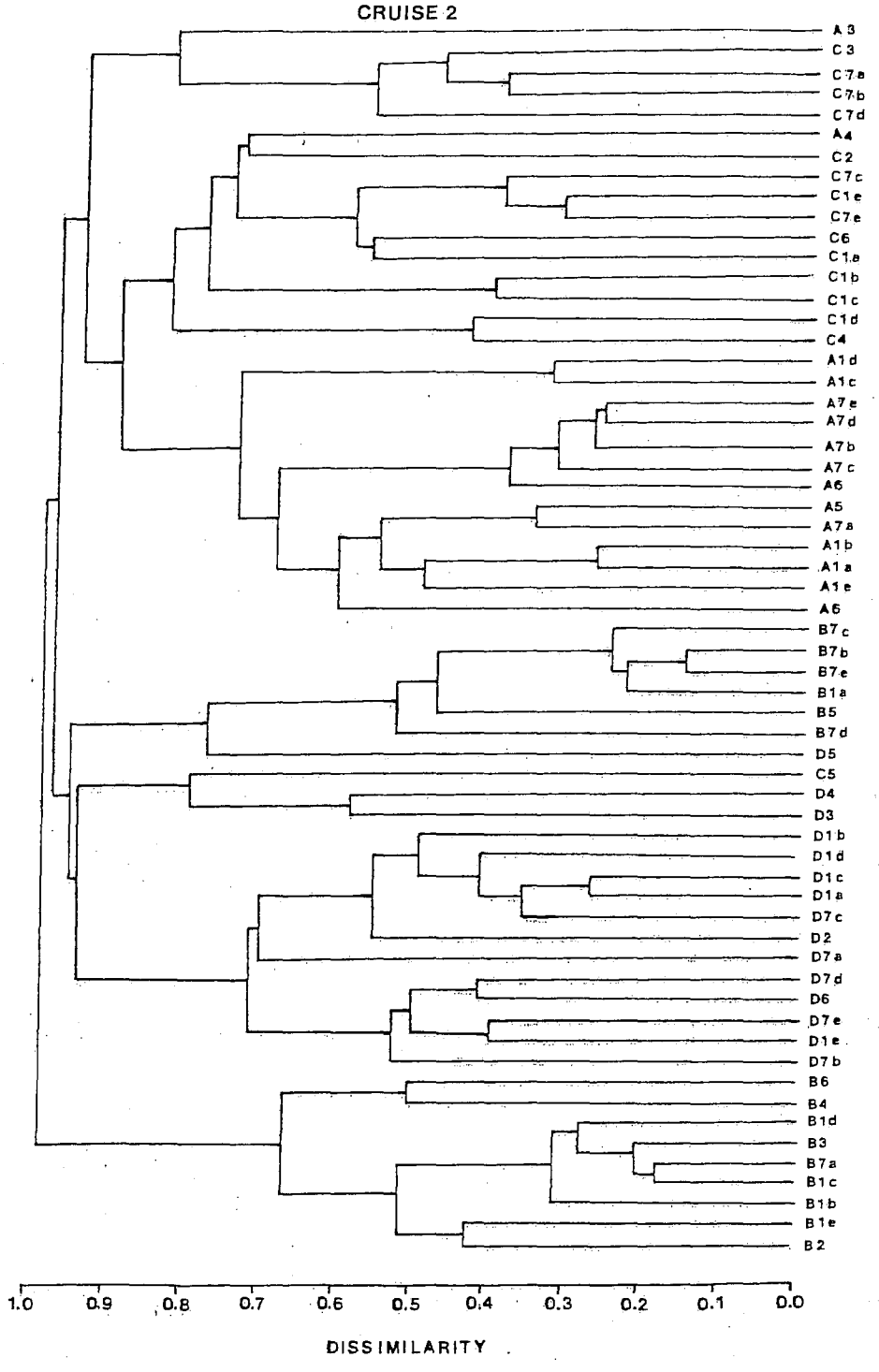


Figure 7. Dendrogram of abundance per $0.1m^2$ corrected for grab volume for Cruise 2. Total replicates = 60.

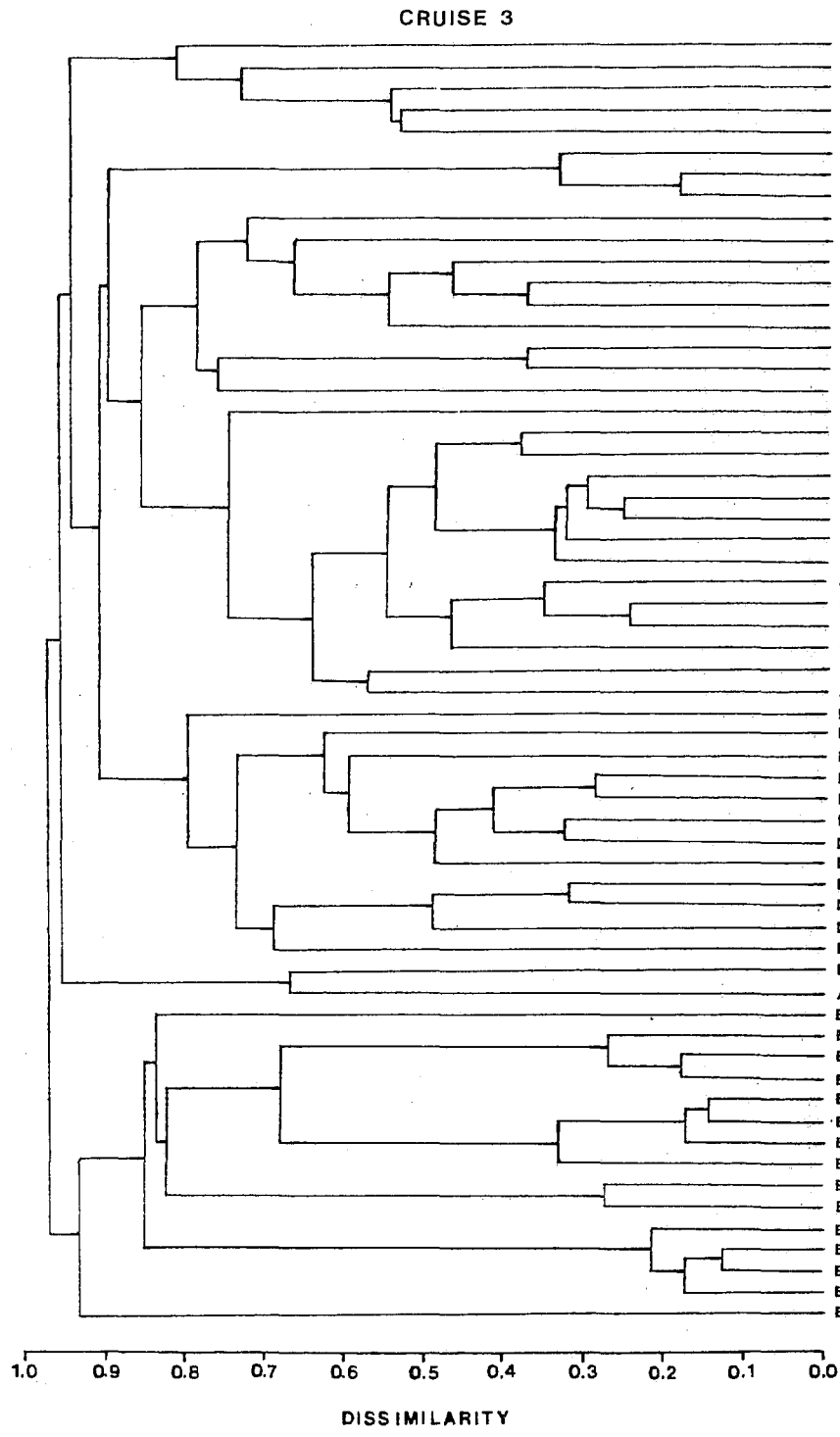


Figure 8. Dendrogram of abundance per 0.1m^2 corrected for grab volume for Cruise 3. Total replicates = 60.

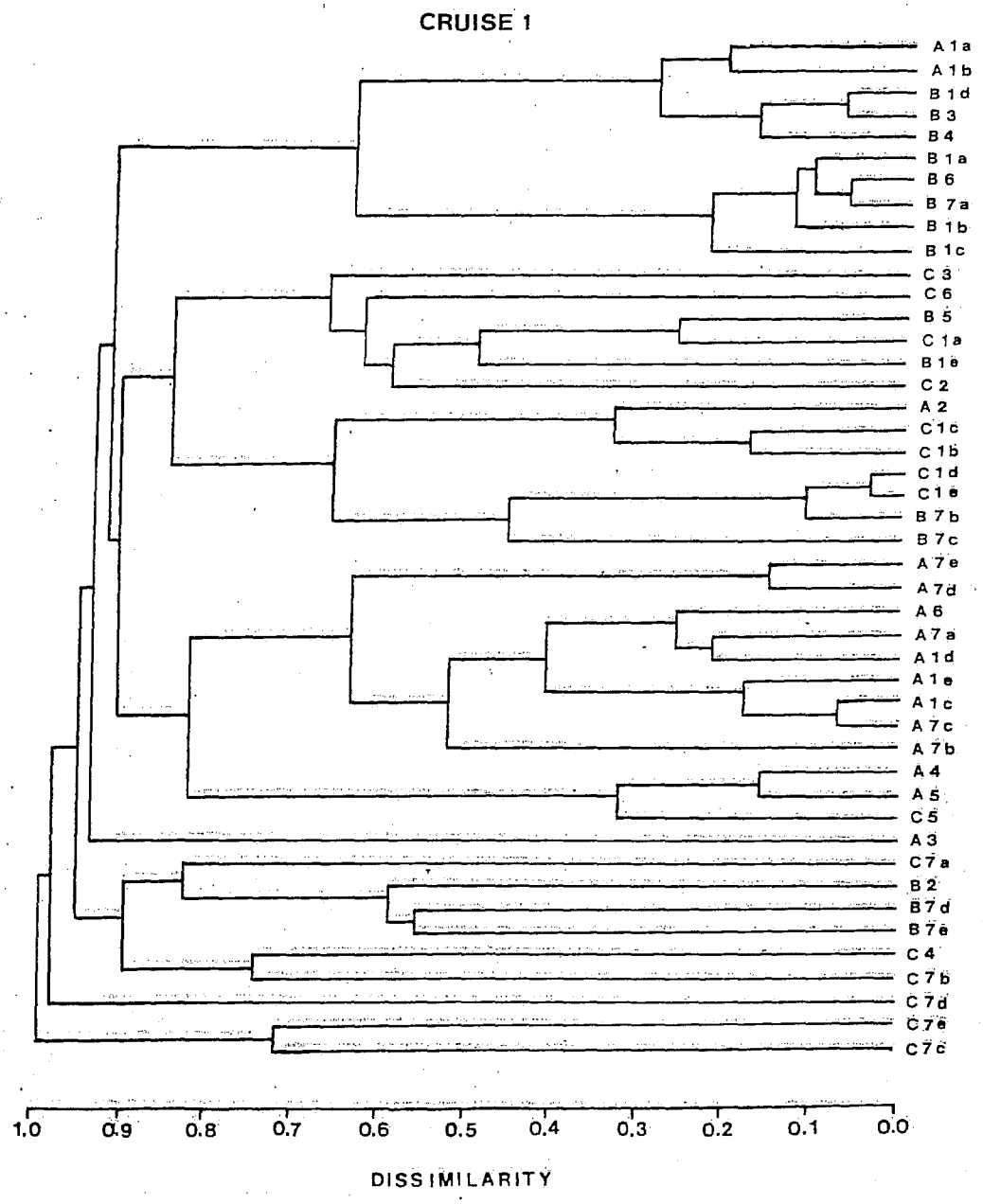


Figure 9. Dendrogram of wet weight per $0.1m^2$ for Cruise 1. Total replicates = 45.

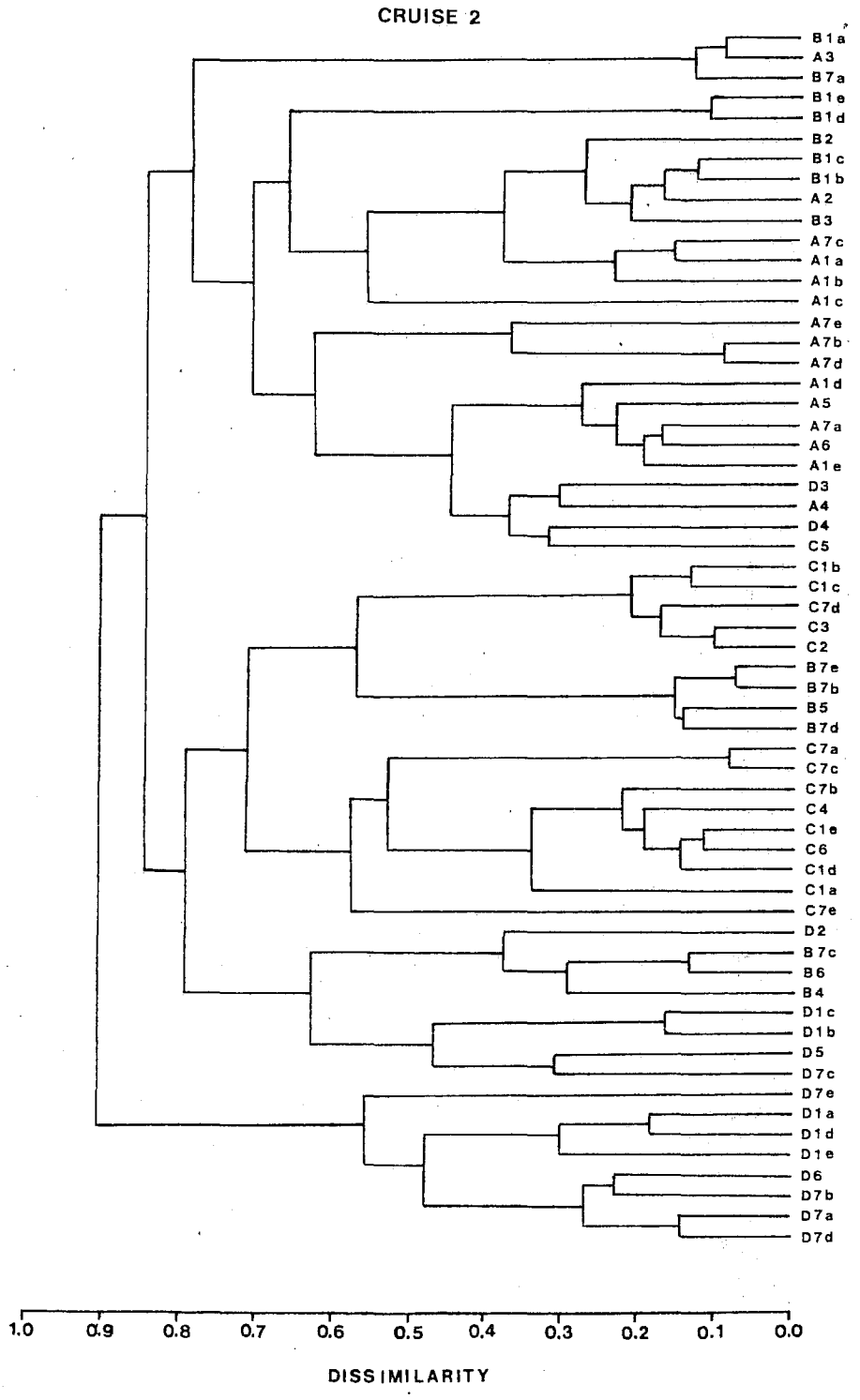


Figure 10. Dendrogram of wet weight per $0.1m^2$ for Cruise 2. Total replicates = 60.

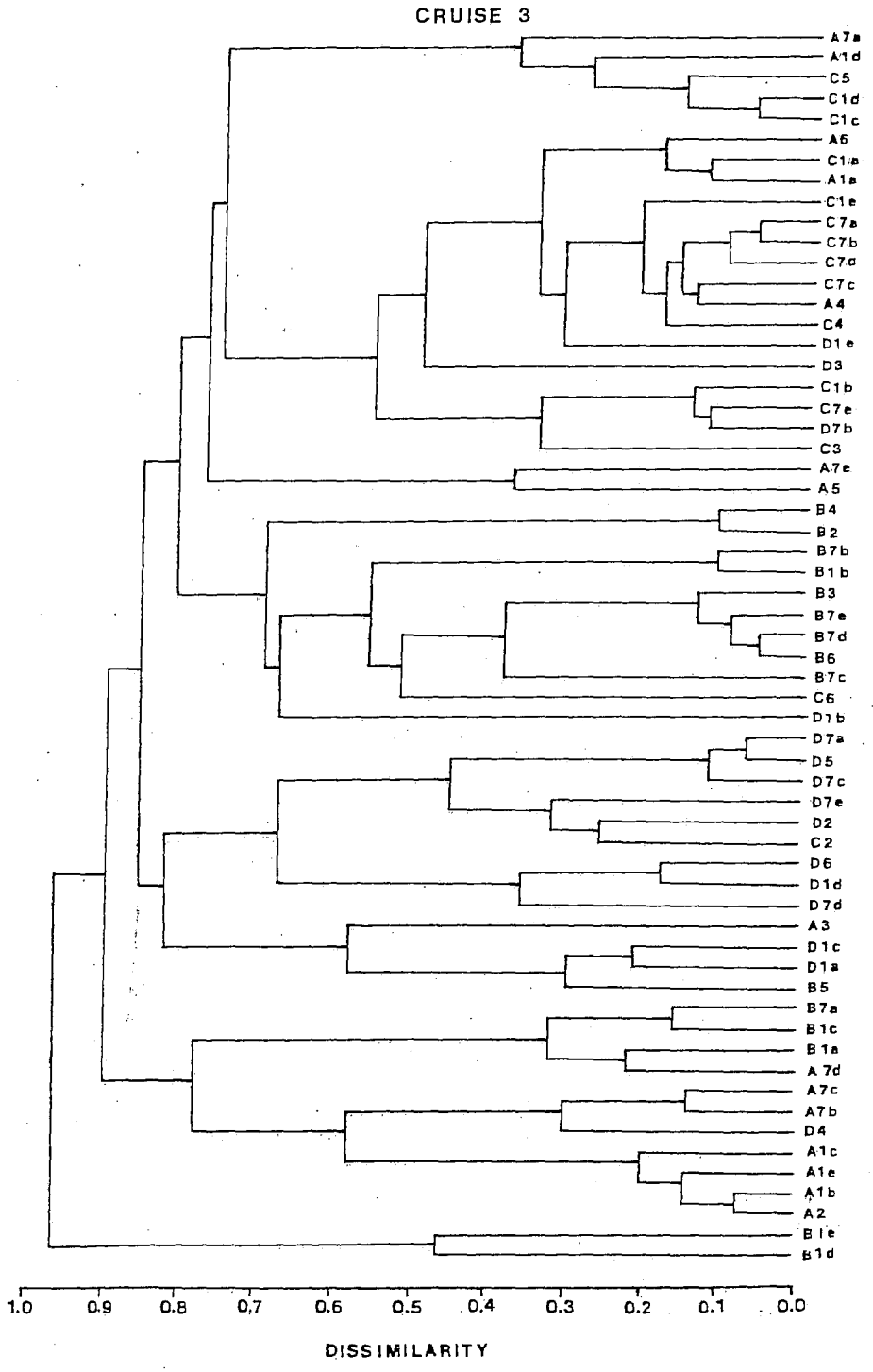


Figure 11. Dendrogram of wet weight per $0.1m^2$ for Cruise 3. Total replicates = 60.

mixed, area B is separate in Cruise 1 and most closely linked with Area D in Cruises 2 and 3. This was supported by the statistical tests. In the depth dendrogram vs abundance dendrogram comparison for Cruise 1 (Figures 12,15), the hypothesis that these dendrograms are significantly different could be rejected ($p<0.1$) at 5 coinciding linkage levels. In Cruises 2 and 3, this is true for 6 and 8 linkage levels respectively.

The stations from each area tended to cluster together in the abundance matrices, which would suggest that geographic proximity is an important factor in species composition. For the comparison of the geographic distance dendrogram with the abundance dendrograms, (Figures 12,17; 13,18; 14,19), the hypothesis could be rejected at 3 linkage levels in Cruise 1, at 9 in Cruise 2 and at 6 in Cruise 3.

Of the factors studied, sediment silt content appears to be the least important. In the comparison of the percent silt in sediment dendrogram with the abundance dendrograms (Figures 12,20; 13,21; 14,22) the hypothesis could be rejected at 4 linkages in Cruise 1, 2 in Cruise 2 and 4 in Cruise 3.

Analysis 3. Sigtree and Comtree 2

Sigtree: The data matrices with stations 2-6 combined as replicates for each area (9 stations for Cruise 1, 12 for each of Cruises 2 and 3) for both original abundance data and wet weights were subjected to significance analysis as described in Methods. The resulting dendrograms and significances are illustrated in Figures 23 to 28.

For original abundance data (Figure 23-25), the areas (A-D) always clustered out separately, with A and C most similar to each other, D most similar to the AC pair, and B separate. The clustering of separate areas was statistically significant ($p<10\%$) in all cases, except that stations C7 formed a significant cluster separate to all the other stations in Cruise 1. In Cruises 2 and 3, C7 joined the other C stations to form a significant cluster. This result reinforces the suggestion that geographic proximity of stations strongly affects species composition. The consistency in cluster patterns between cruises suggests that the species composition is fairly stable temporally.

The wet weight cluster analyses (Figures 26 to 28) show significant groupings ($p<10\%$)only at the higher levels of dissimilarity (dissimilarity about 0.5 to 0.6). In Cruise 1 the grouping sequence within the A1-B1 set is insignificant, but the group is significantly separated from the rest of the stations. The same is true of the two subgroups including A1 and B1 in Cruise 2. There were no significant differences within the C cluster group in Cruises 2 and 3. There are no significant groups below a dissimilarity of 0.6 in the data from the third cruise. Visual inspection suggests a lack of consistency in groupings between the three cruises, apart from some tendency to link A and B stations or C and D stations together. This can be evaluated using the computer program Comtree 2.

Comtree 2: The results of the comparison of the three abundance data matrices with each other are reported in Appendix 10. The Fowlkes-Mallows statistics and significances are given for each matched linkage level.

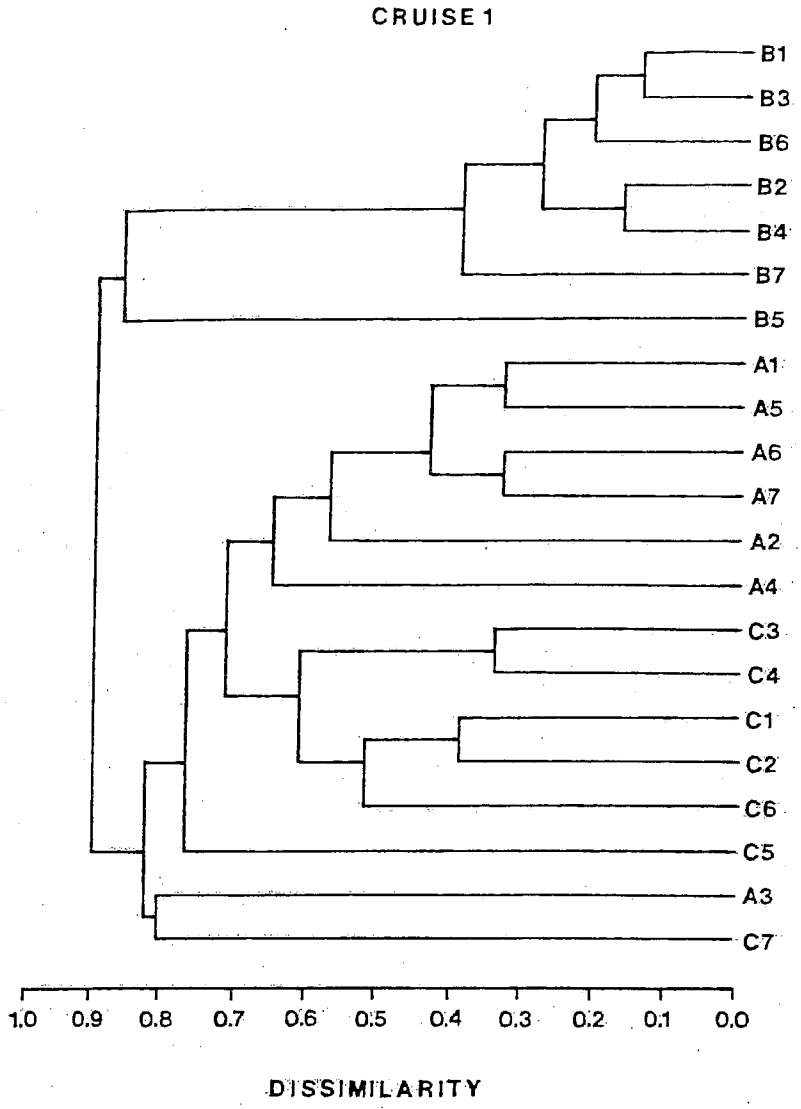


Figure 12. Dendrogram of abundance per $0.1m^2$ for Cruise 1. Replicates were averaged for stations 1 and 7 in each area. Total stations = 21.

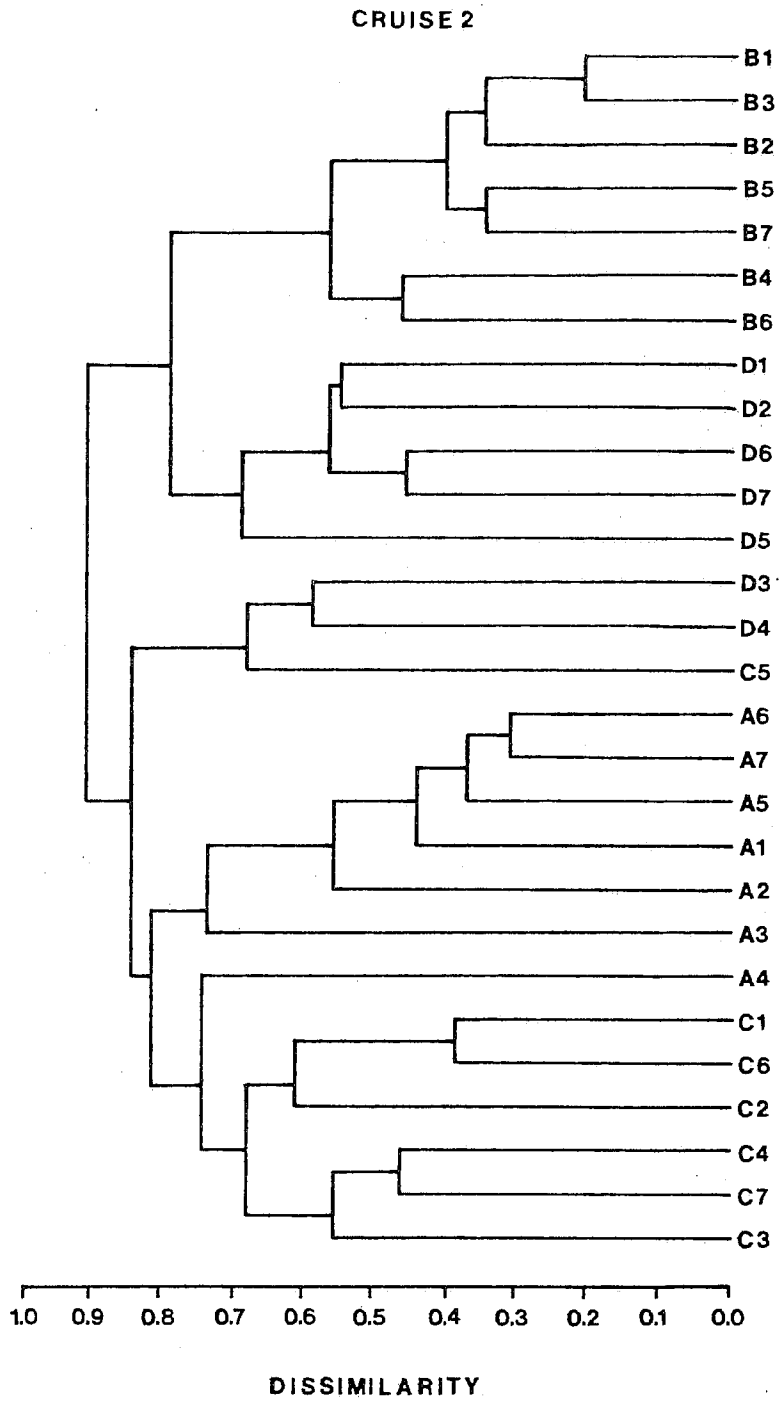


Figure 13. Dendrogram of abundance per $0.1m^2$ for Cruise 2. Replicates were averaged for stations 1 and 7 from each area. Total stations = 28.

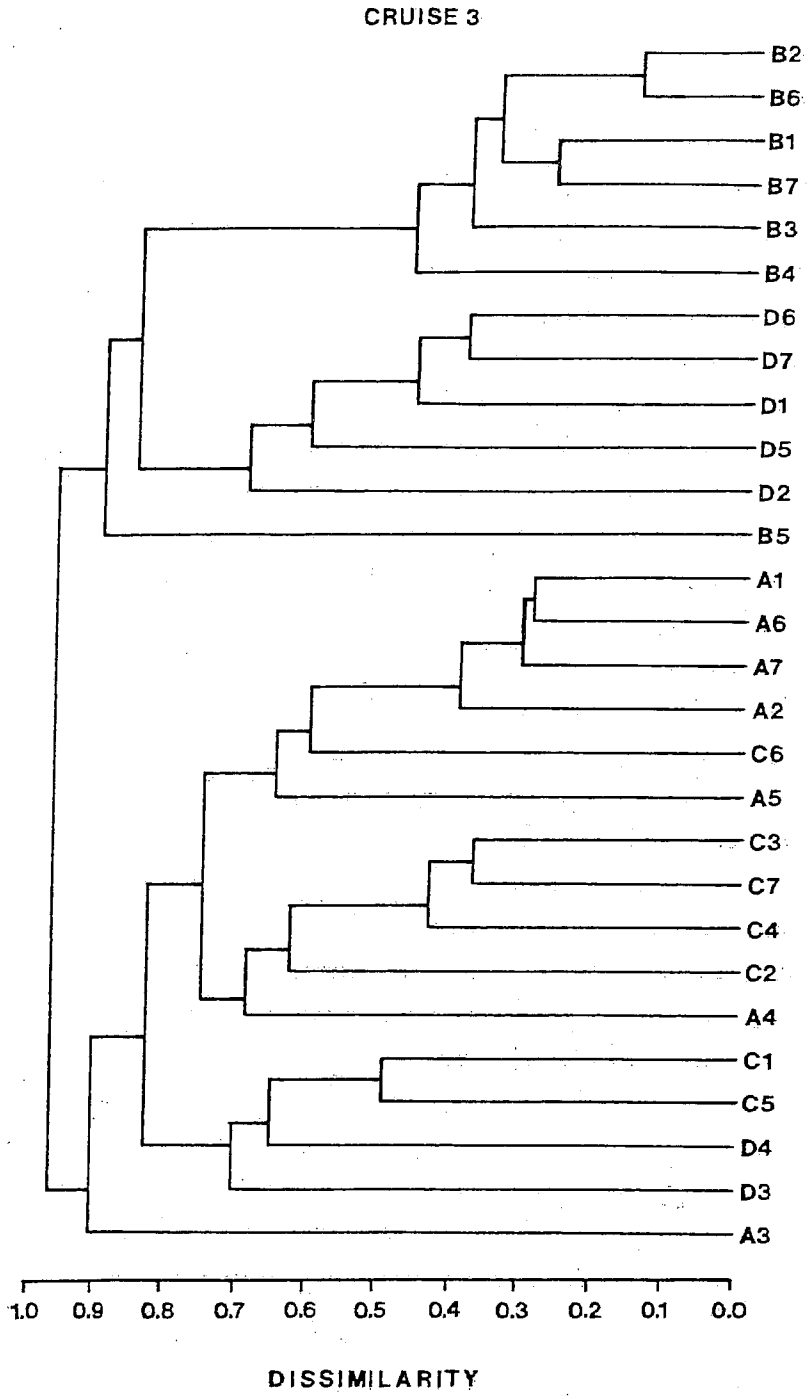


Figure 14. Dendrogram of abundance per $0.1m^2$ for Cruise 3. Replicates were averaged for stations 1 and 7 from each area. Total stations = 28.

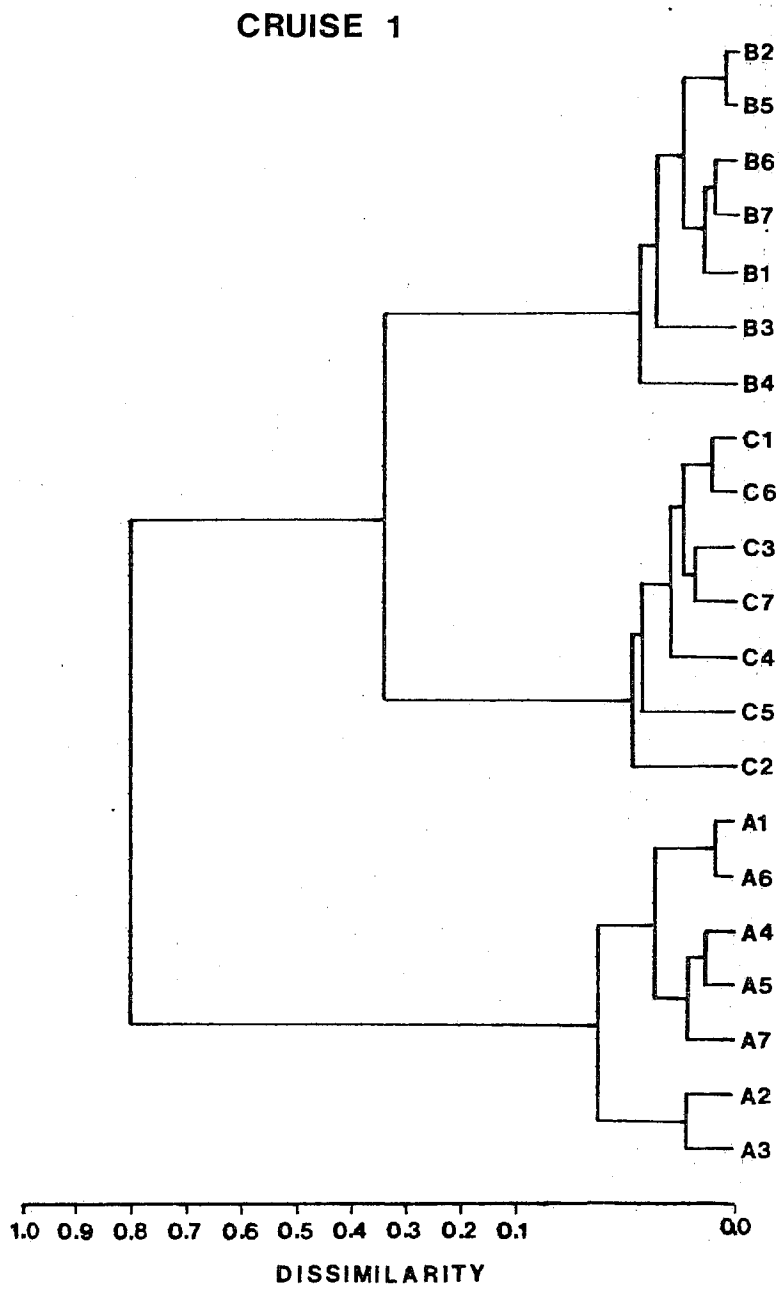


Figure 15. Dendrogram of geographic distance between stations for Cruise 1. Total stations = 21. The scale is elongated between 0 and 0.1 since many linkages were less than 0.05.

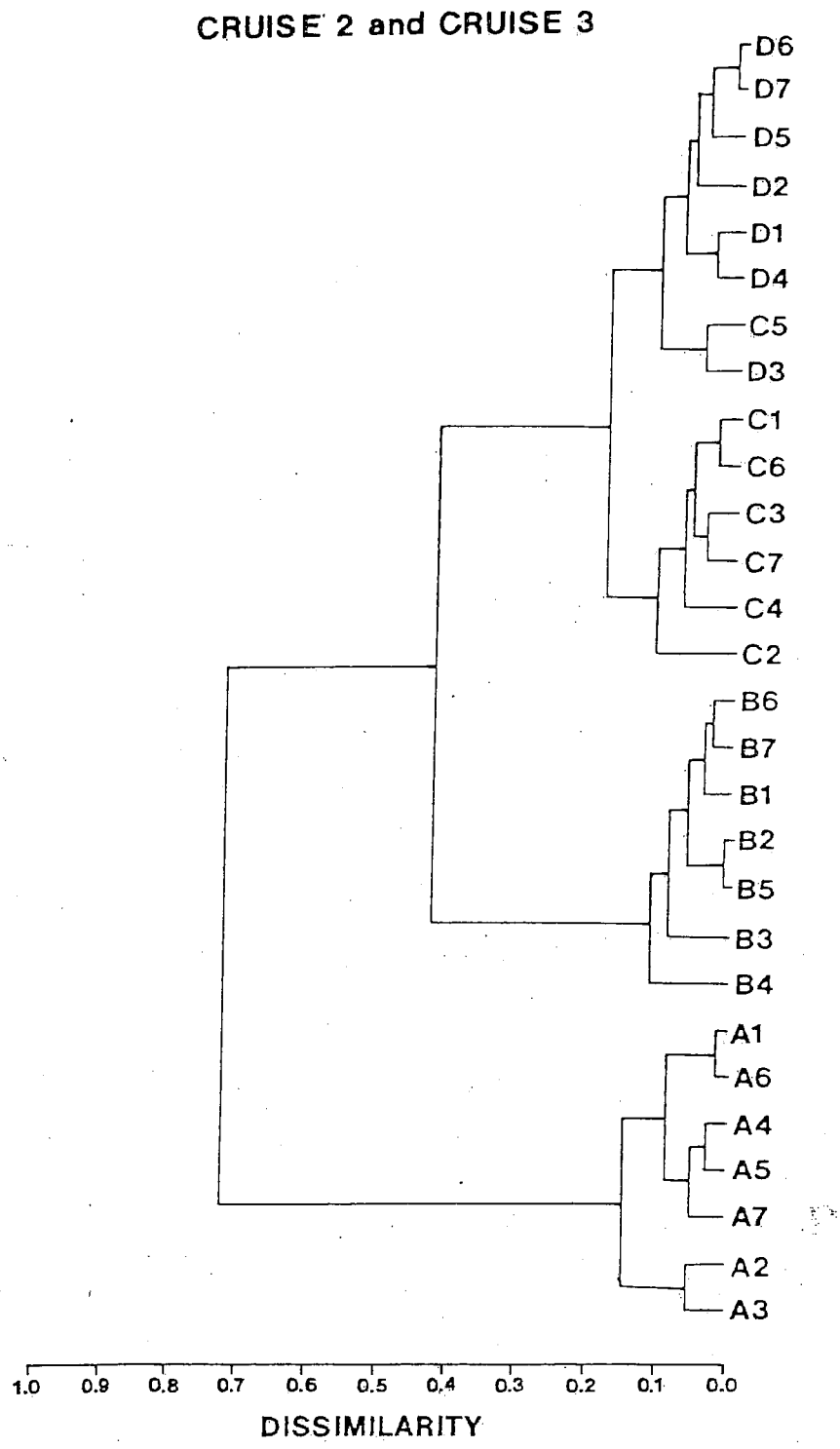


Figure 16. Dendrogram of geographic distance between stations for Cruises 2 and 3. Total stations = 28. The scale is elongated between 0 and 0.1 since many linkages were less than 0.05.

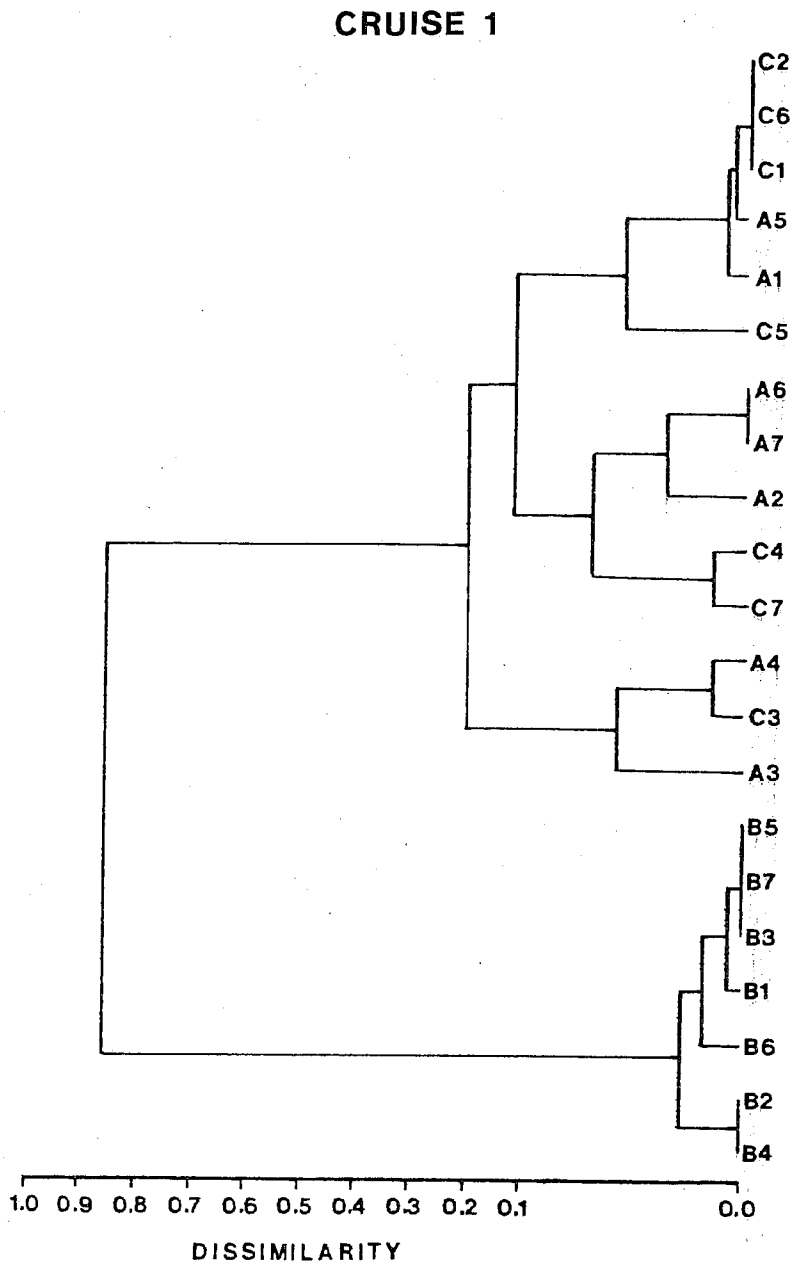


Figure 17. Dendrogram of depth differences between stations for Cruise 1. Total stations = 21. The scale is elongated between 0 and 0.1 since many linkages were less than 0.05.

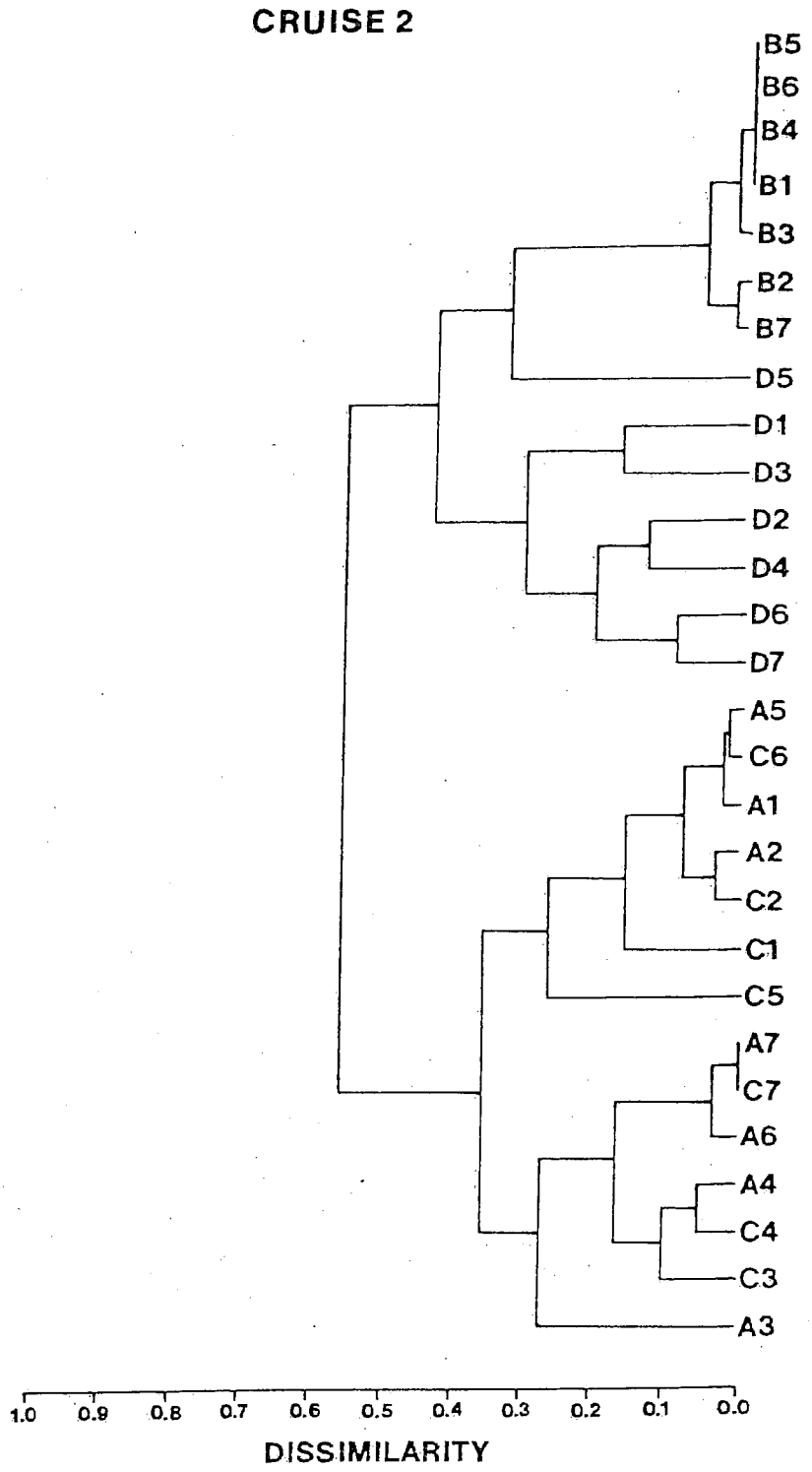


Figure 18. Dendrogram of depth differences between stations for Cruise 2. Total stations = 28.

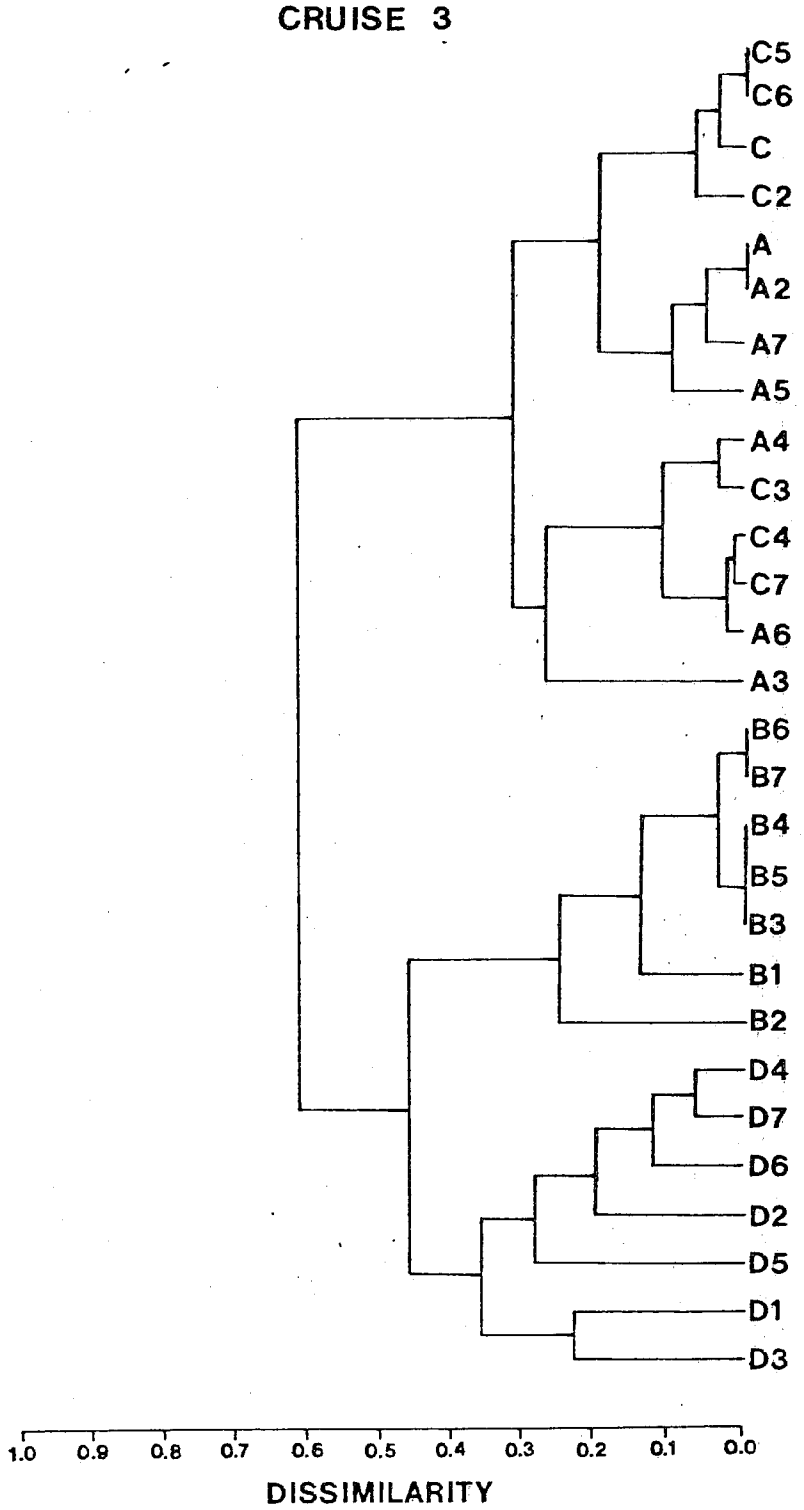


Figure 19. Dendrogram of depth differences between stations for Cruise 3. Total stations = 28.

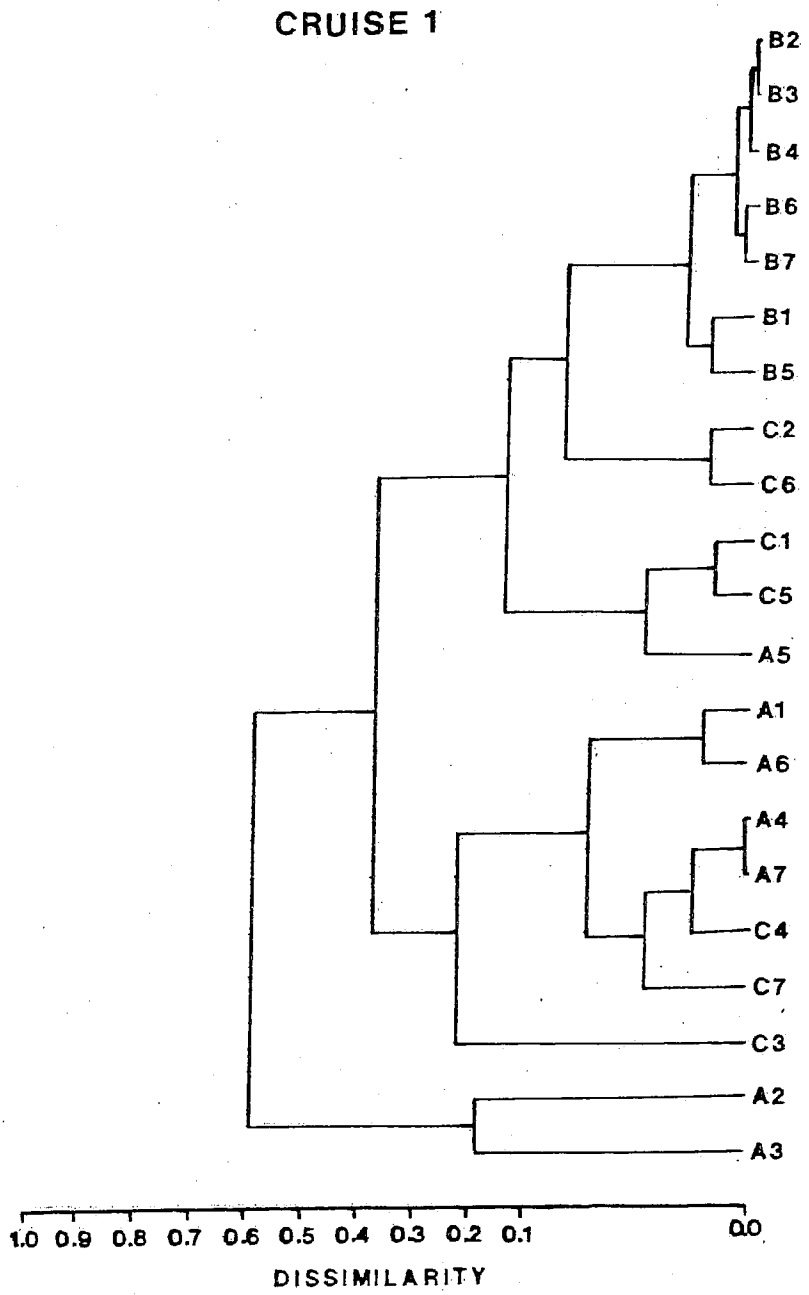


Figure 20. Dendrogram of percent mud differences between stations for Cruise 1. Total stations = 21. The scale is elongated between 0 and 0.1 since many linkages were less than 0.05.

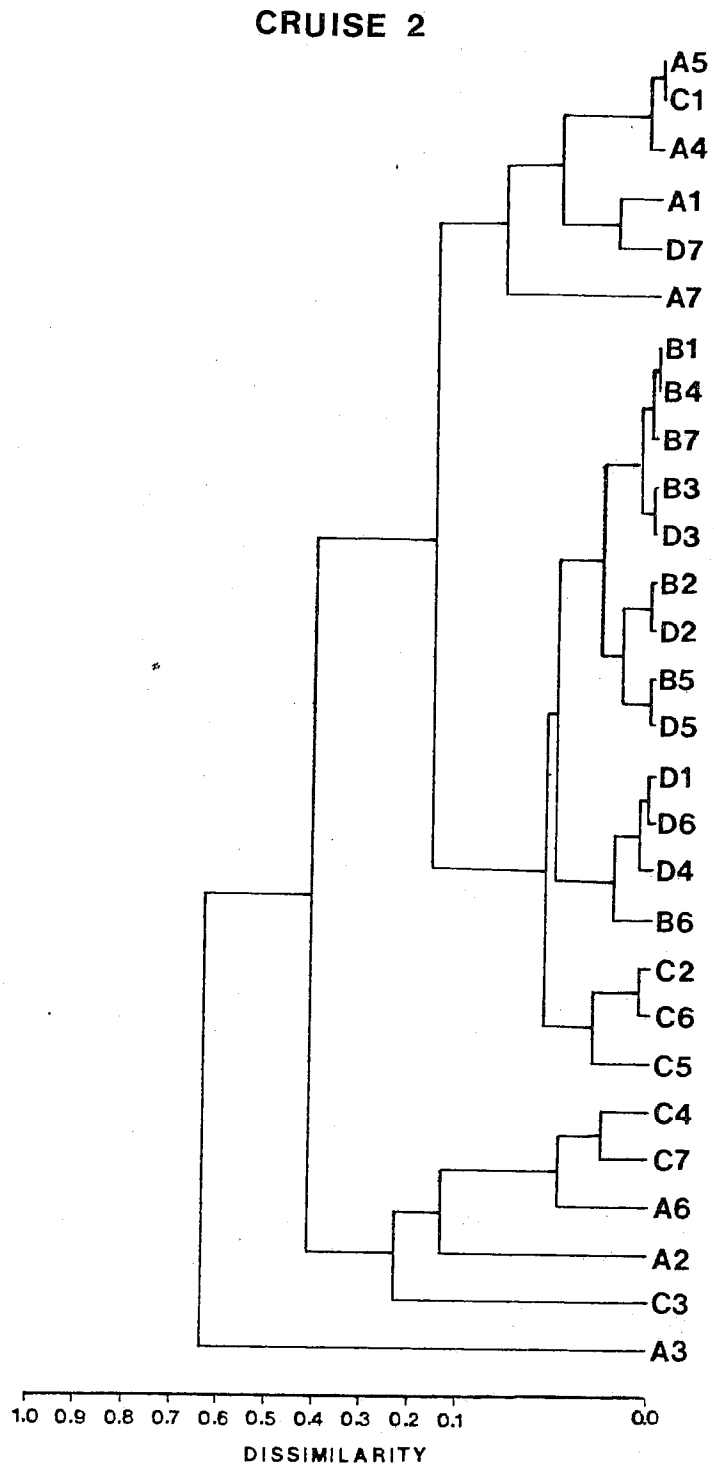


Figure 21. Dendrogram of percent mud differences between stations for Cruise 2. Total stations = 28. The scale is elongated between 0 and 0.1 since many linkages were less than 0.05.

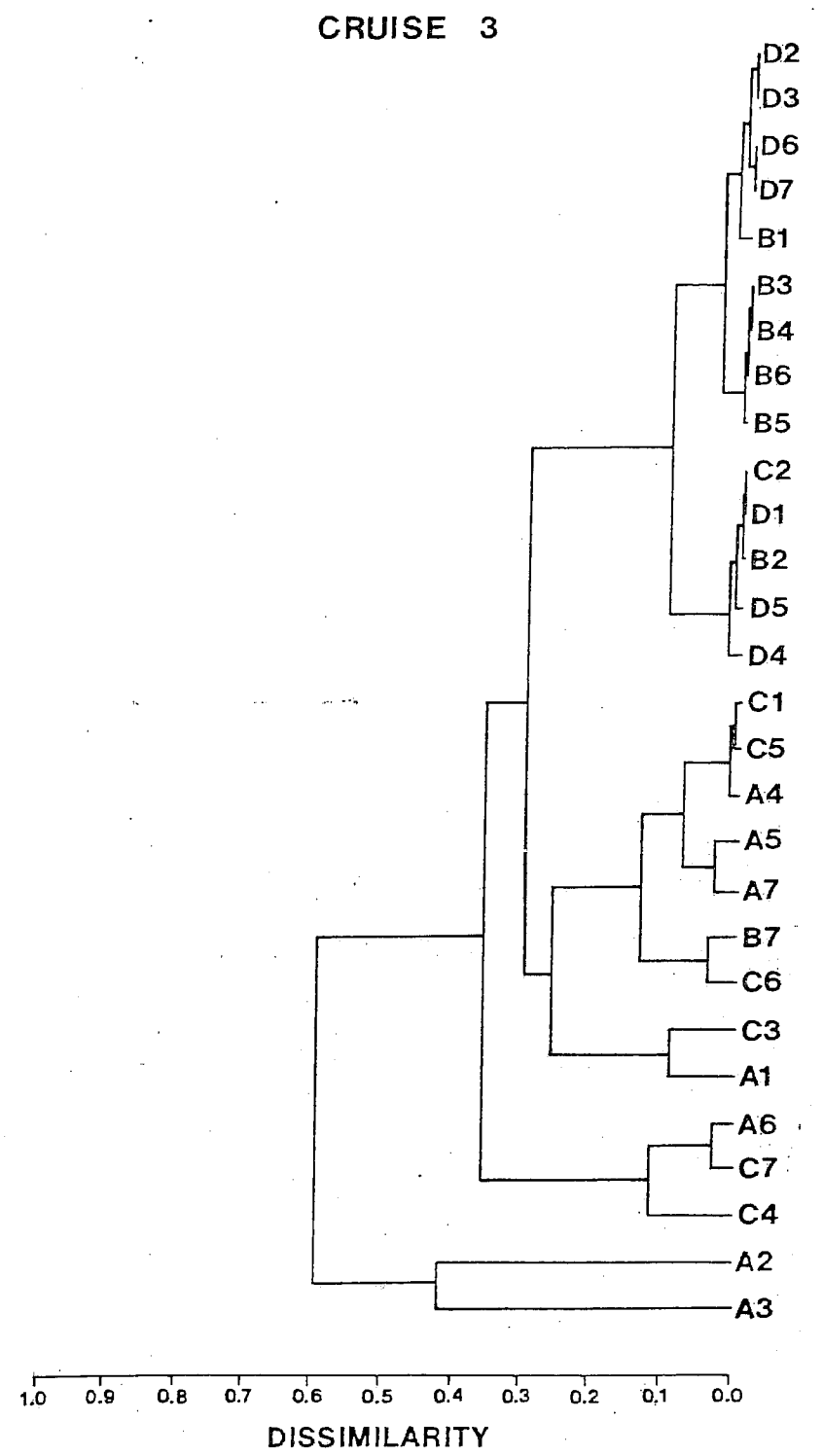


Figure 22. Dendrogram of percent mud differences between stations for Cruise 3. Total stations = 28.

Since this analysis tests the null hypothesis that the two data sets are the same, the significance (p) would have to be low (5 or 10%) to reject the hypothesis. The comparison of the abundance data sets (Cruises 1 to 3) with each other result in p values which are almost consistently between 80-100%. There were no P values <10% at any linkage levels. Therefore the hypothesis cannot be rejected, and it can be concluded that the three abundance data sets are almost certainly the same.

Conversely, the results of the comparison of the three wet weight data matrices with each other (Appendix 11) indicate that the hypothesis that the data matrices are the same can be rejected at 4 of the 8 direct linkage levels for Cruises 1 and 2, 2 levels for Cruises 1 and 3 and 1 level for Cruises 2 and 3. However, the P values were high only at the lower linkage levels (1-4), and declined at the higher linkage levels. This suggests that there is not much similarity between any of the three wet weight data matrices.

DISCUSSION

The statistical analyses indicate that all four sample areas were statistically distinct in terms of species abundance. The replicates for stations 1 and 7 in each area generally clustered together. Since stations 2 to 6 from each area were generally most similar to each other (as opposed to stations from other areas), they were treated as replicates of a single station for some statistical analyses. The consistent clustering of this group (stations 2-6) with stations 1 and 7 in the same area suggests that this grouping was reasonable.

It is not surprising that Area B clustered separately from all other areas, since it has a substrate consisting of fine sand and considerable shell debris, and is shallower than the other areas. The bivalves typify the difference in species composition between areas. Tellina nuculoides was dominant numerically in area B in all three cruises. In contrast, the bivalve Axinopsida serricata was dominant in the other three areas. A third dominant bivalve was evident only in area D (Psephidia lordi). Area D is intermediate both in depth and in sediment type to the AC pair and the B area, therefore sharing some dominant species in common with all three areas. It is interesting that Areas A and C do not have more dominant species in common, since they are featured by similar substrates and depths. The polychaetes Owenia fusiformis and Galathowenia oculata are common to both, as is the bivalve Axinopsida serricata. Otherwise, these two areas are quite different.

The hypothesis that cluster patterns based on abundance data were the same for the three cruises could not be rejected at any linkage level, and high P values suggest that the abundance data for the three cluster dendrograms were the same. This implies that the species assemblages at the four areas are temporally stable (at least seasonally).

Station A3 had consistently low total abundances in all three cruises, especially Cruise 3 (9 species, 13 animals). This was the deepest station sampled, and may have been located in a "hole" with limited water

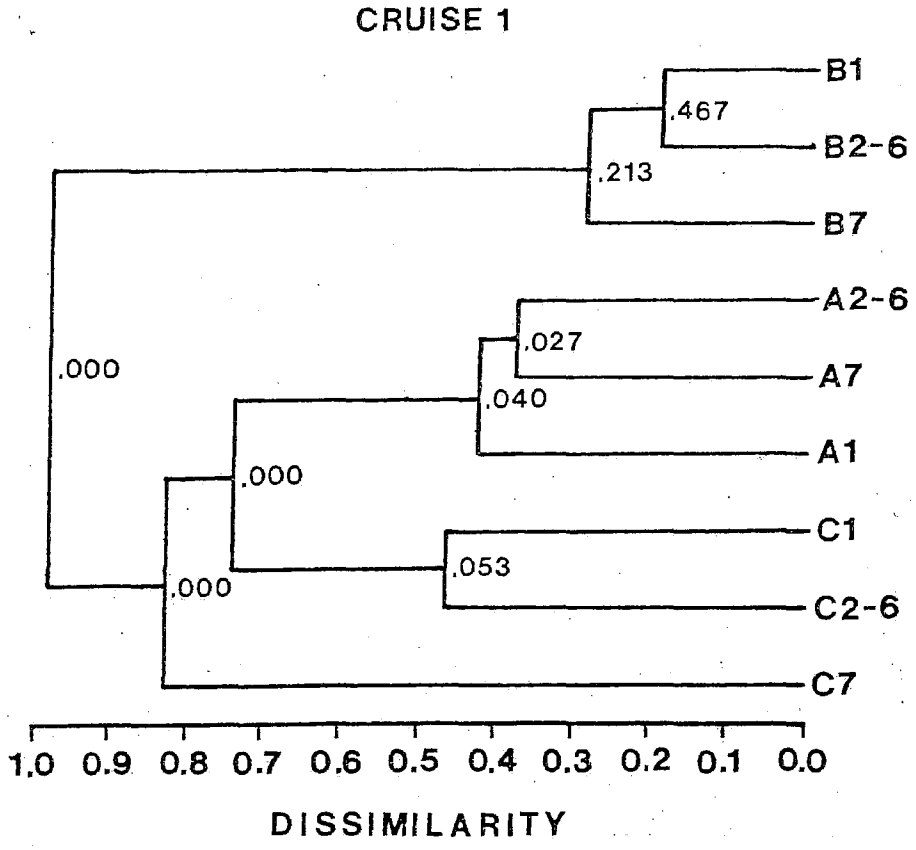


Figure 23. Dendrogram of abundance per $0.1m^2$ with replicates averaged for stations 1 and 7 in each area, and stations 2-6 averaged for each area. This reduction was done to facilitate the testing of significance of linkages in Cruise 1 (p values are shown for each linkage level).

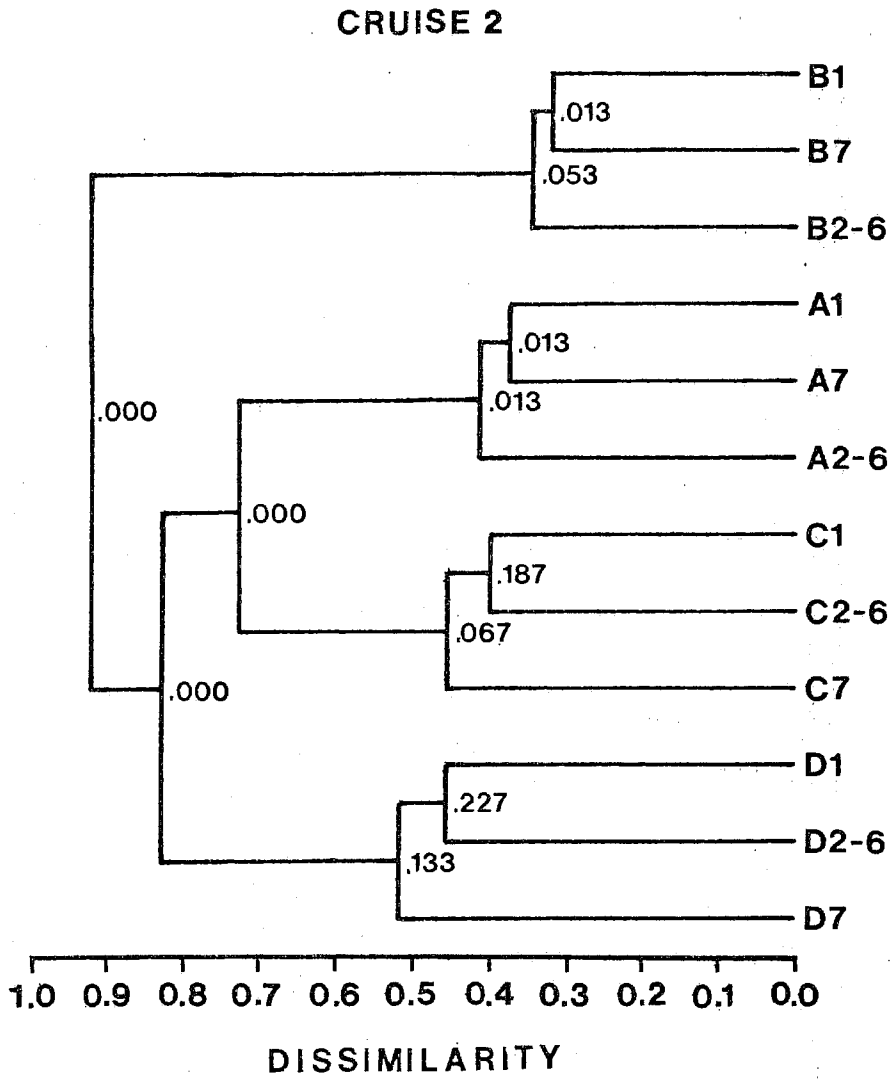


Figure 24. Dendrogram of abundance per $0.1m^2$ with replicates averaged for stations 1 and 7 in each area, and stations 2-6 averaged for each area. This reduction was done to facilitate the testing of significance of linkages in Cruise 2 (p values are given for each linkage level).

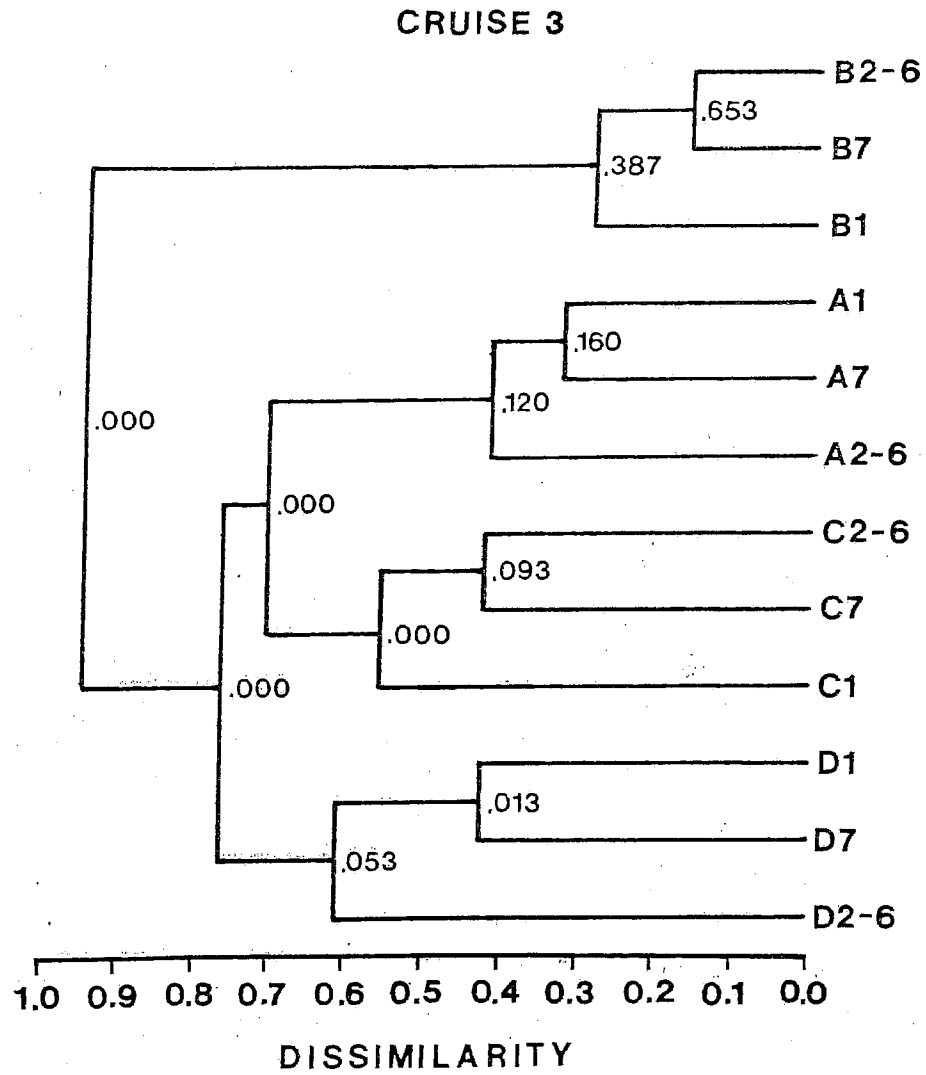


Figure 25. Dendrogram of abundance per $0.1m^2$ with replicates averaged for stations 1 and 7 in each area, and stations 2-6 averaged for each area. This reduction was done to facilitate the testing of significance of linkages in Cruise 3 (p values are given for each linkage level).

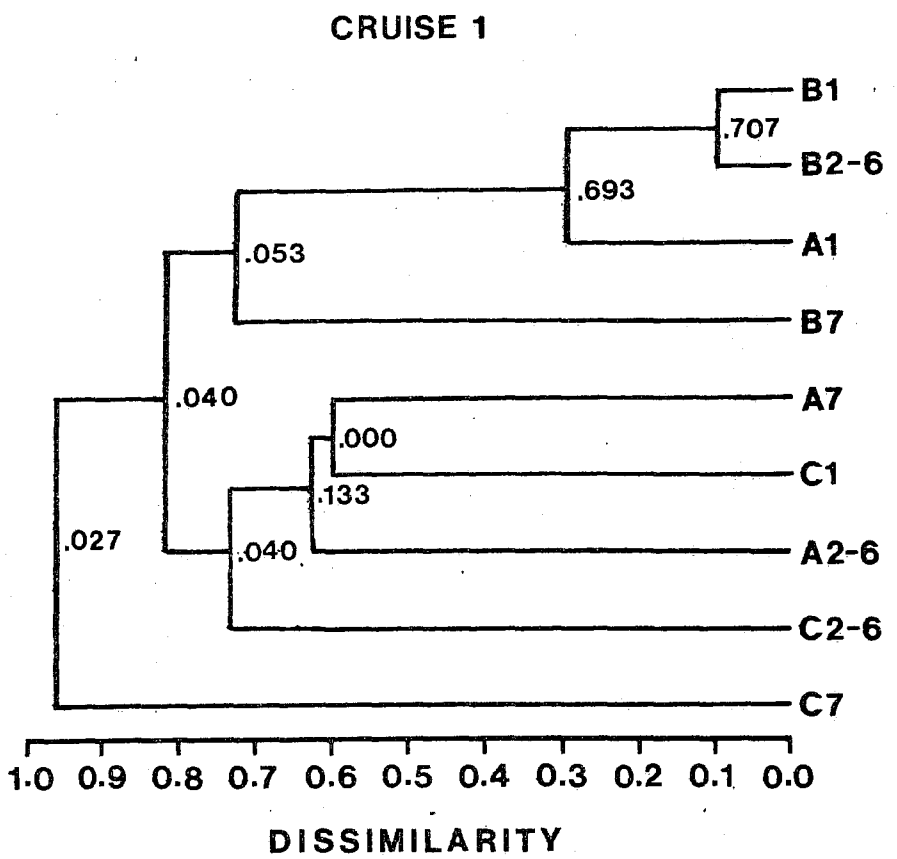


Figure 26. Dendrogram of wet weight per $0.1m^2$ with replicates averaged for stations 1 and 7 in each area, ans with stations 2-6 averaged for each area. This reduction was done to facilitate the testing of significances of linkages in Cruise 1 (p values are given for each linkage level).

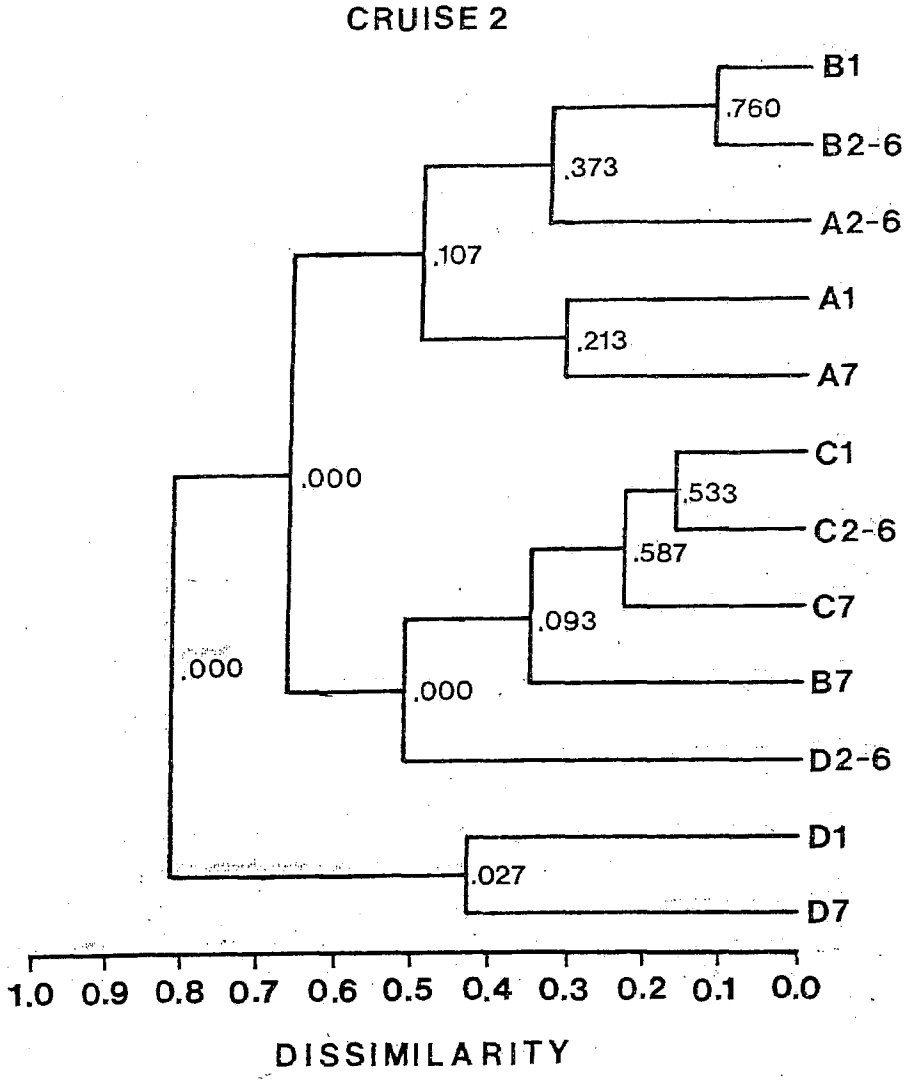


Figure 27. Dendrogram of wet weight per $0.1m^2$ with replicates averaged for stations 1 and 7 in each area, and stations 2-6 averaged for each area. This reduction was done to facilitate the testing of significance of linkages in Cruise 2 (p values are given for each linkage level.

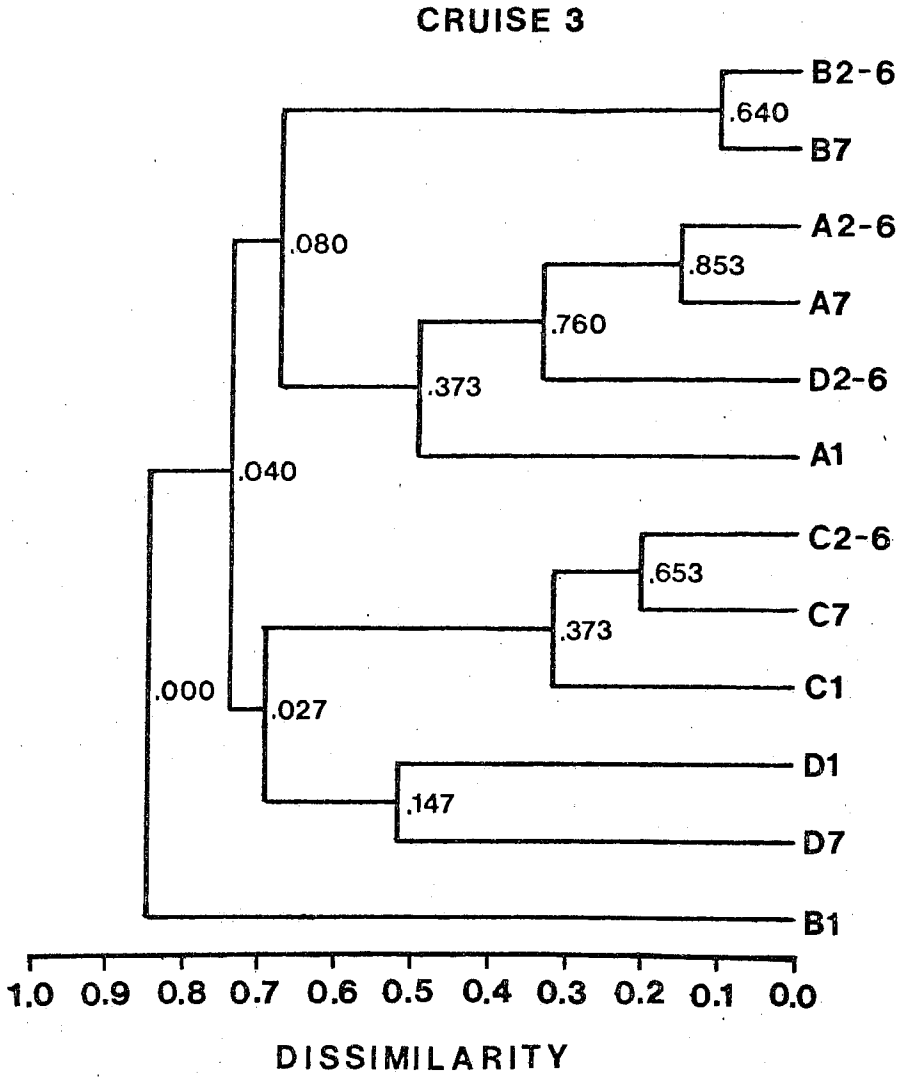


Figure 28. Dendrogram of wet weight per $0.1m^2$ with replicates averaged for stations 1 and 7 in each area, and stations 2-6 averaged for each area. This reduction was done to facilitate the testing of significance of linkages in Cruise 3 (p values are given for each linkage level).

circulation. The original grab samples for station A3 exhibited a slight odour of hydrogen sulfide in all three cruises, and had blackish (possibly reducing) sediment with considerable fibrous debris (twigs, roots, etc.).

The comparisons of abundance data with "reference" dendrograms showed that depth had a significant and considerable effect on the benthic assemblages sampled. Depth differences between areas may be a surrogate for unmeasured variables such as differences in current regime and water exchange, or sedimentation rates, as in the example of the stagnant station A3.

Geographic distance had a significant effect on species assemblages, such that each area clustered out separately. The combined effects of depth and geographic distance accounted for many of the linkages between stations (based on species abundance data). The fact that areas C and D were not more similar to each other in terms of species assemblages is somewhat surprising in view of their proximity to each other, but can perhaps be explained by other environmental factors.

Sediment silt content had less effect on species abundance than did depth or geographic distance. This is possibly related to the fact that an evaluation of the sediment characteristics which affect species assemblages is complex and requires consideration of many different aspects. For example, the original structure of the sediment is changed by the drying and breaking up of particles during size analysis. The interrelated effect of environmental factors is obviously also important, since sediment type is very much dependent on depth.

The wet-weight data were considerably more variable than the abundance data and bore very little resemblance to the latter. Significances in linkages were evident only at the higher dissimilarity levels, at which most of the stations were already included. This shows that the ordering of stations within the major clusters was not significant. Therefore little can be concluded about the cluster patterns produced in the wet weight data. Total wet weights (and probably productivity) were considerably higher in Areas A and B than in C and D. As well, average wet weight biomass per station was lowest in Cruise 1 (June 1985), possibly because reproduction occurs in many species between January and June, and recruitment occurs sometime after June. Appendices 5 to 7 and Table 5 indicate that the Polychaeta, Gastropoda and Pelecypoda were the most important contributors to the biomass. Area B accounted for most of the Pelecypod biomass, which is not surprising since the substrate was largely shell debris. The use of totals for each taxonomic group (class or phyla) may introduce considerable variation in the data. These data may prove to be of most value in relation to fish stomach content analyses.

Studies similar to the Hecate Strait survey have been conducted in the Strait of Geogia, B.C. (for review - see Levings et al. 1983), off the coast of Vancouver Island, B.C. (Brinkhurst 1987), Puget Sound, Washington (Lie 1969, 1974) and the Gulf of Alaska (Shevtsov 1964). These studies utilized similar sampling equipment and mesh sizes (1.0mm), with the exception of the Vancouver Island study (0.25mm mesh); however not all included the detail of taxonomic identification obtained in the current study. For example, Lie (1969) identified and analysed only the Crustacea, Echinodermata and Mollusca from Puget Sound.

Comparisons of the numerically dominant species common to these studies with the dominant species from Hecate Strait indicate that there are several species common along the whole of the northwestern coast of North America. Several of these include the bivalves Tellina nuculoides, Axinopsida serricata and Psephidia lordi; the polychaetes Spiophanes berkleyorum and Prionospio steenstrupi; and the amphipod Ampelisca macrocephala. Aside from these species, the Hecate Strait assemblages seem to have dominant fauna different from the more "southerly" assemblages (Strait of Georgia, Puget Sound, southwestern Vancouver Island shelf).

Lie and Evans (1973) reported considerable stability in species numbers and abundances of benthic fauna in 4 stations in Puget Sound which were sampled between 1963 and 1969. However, there was considerable change in biomass at these stations over time, as was found in the current study. Brinkhurst (1987) found no significant differences in species assemblages of a coastal area off southwestern Vancouver Island over a six month period. This temporal stability might be normal in areas where there is little change in physical habitat over time.

Sediment type and depth are two factors commonly sited in the literature as important community delimiters (e.g. Nichols 1970, Lie 1974, Bernard 1978, Levings et al. 1983). The Hecate Strait survey supports this hypothesis, but also shows the importance of geographic spacing of stations in delimiting species assemblages. It is difficult accurately to separate the influences of depth and sediment type. Sediment particle size was the most important factor in the clustering of species abundance data on the shelf off Vancouver Island (Brinkhurst 1987), but there were only minor differences in depth between stations and areas, and a great difference in sediment type in the two major community types identified. Brinkhurst's study tends to support the conclusion from the current work that geographic spacing of stations is an important factor in delimiting species assemblages, since he found that within a given sediment type, stations tended to cluster with their nearest neighbors.

The mean ash-free dry weights calculated from the Hecate Strait wet weight data (Table 5 - see conversions) are equivalent to about 10% of the wet weights, therefore averaging about 3.5-6.2g/m2. These values are comparable to those found in other studies in Pacific coastal areas of North America. Values for open shelf stations off Washington averaged 1.92 g/m2 (Lie 1969), which are comparable to biomasses measured in the Gulf of Alaska shelf (Shevtsov 1964 - in Lie 1974), whereas values for the shelf off Vancouver Island averaged between 6.4g/m2 and 16.4g/m2 (O'Connell et al. 1983). Stations sampled by Lie (1969) in Puget Sound contained biomasses comparable to those measured in the current study (Lie 1969). Ellis (1969) measured dry weights (not ash free) in Satellite Channel and Stuart Channel in the Strait of Georgia, and found values of 60 and 17 g/m2 respectively. Therefore, it would appear that biomass estimates in Areas A and B in Hecate Strait are similar to or lower than those for more southerly subtidal inland waters, whereas values for Areas C and D are similar to those characterizing shelf areas.

Biomass values for Puget Sound and Washington shelf stations were highly variable between stations, even though the rare, large specimens

were removed. Similarly, the Vancouver Island study (Brinkhurst 1987) and the current Hecate Strait study both had variable biomass results, suggesting that spatial patchiness is a problem in such analyses.

The separation of sample areas based on cluster analyses of species abundance agrees reasonably well with the basic premise of the sampling design. There were three distinct types of fish assemblages found in areas A, B and C (Tyler 1986). Therefore, there may be some relationships between the benthic faunal community and the fish community utilizing this food source. However, according to the sampling design, Area D should have been similar to C, both because of proximity and because they fall within the same fish assemblage area. However, even though the species assemblages were different between them, Areas C and D had similar overall biomasses, suggesting that the benthic food resources available to bottom-feeding fish may be comparable.

ACKNOWLEDGEMENTS

The authors thank the crew of the C.S.S. G.B. Reid. They are grateful to personnel who assisted in the field surveys, including Mr. Doug Moore (coordinator), Ms. Sheila Byers, Ms. Irina Ostrovsky, Mr. Andrew Fedoruk and workers from the Pacific Biological Station who assisted on some cruises.

The authors especially thank Dr. A. V. Tyler of the Pacific Biological Station for initiating the study, and providing partial funding and continued encouragement.

Dr. B. Bornhold and Ms. T. Forbes of the Pacific Geoscience Centre (Department of Energy, Mines and Resources) generously contributed information on the sediment characteristics of Hecate Strait, and the use of the Center's sediment analysis laboratory. The authors thank these personnel and Mr. L. Giovando of the Institute of Ocean Sciences (Department of Fisheries and Oceans), who edited the final manuscript.

Taxonomic identifications and some data analyses were carried out under contract with E.V.S. Consultants of Vancouver, B.C. The authors thank Dr. P. Chapman and Mr. S. Cross, as well as the personnel involved in the Job Development Program who drafted many of the final figures.

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Appendix 1. List of taxa identified in the 1985-1986 Hecate Strait benthos cruises.

TAXON	CRUISE 1	CRUISE 2	CRUISE 3
PORIFERA	x	x	x
Scypha			x
Microciona primitiva		x	
Myxilla incrustans			x
CNIDARIA			
Campanularidae indet.			x
Lafoea dumosa		x	
Sertularella sp.			x
Halecium sp.			x
Anthozoa			x
Ptilosarcus guerneyi			x
Pennatulidae		x	
PLATYHELMINTHES			
Turbelleria		x	
NEMERTEA			
Nemertea indet.	x	x	x
Cerebratulus sp.			x
ANNELIDA			
POLYCHAETA			
Polychaeta indet.		x	x
Polynoidae			
Polynoidae indet.		x	x
Arcteobia spinelytris		x	
Eunoe sp.			x
Gattyana cirrosa			x
Gattyana ciliata	x	x	x
Harmothoe lunulata	x	x	
Lepidonotus squamatus	x	x	x
Polynoe canadensis	x		x
Lepidasthenia berkeleyae			x
Pholoididae			
Pholoides aspera	x	x	x
Sigalionidae			
Sigalionidae indet.		x	
Pholoe minuta	x	x	x
Sthenelais berkelyi		x	
Sthenelais tertiaglabra		x	
Sigalion sp.		x	x
Thalenessa sp.		x	
Pisionidae			
Pisione remota			x
Chrysopetalidae			
Paleonotus bellis		x	x
Amphinomidae			
Amphinomidae indet.		x	
Phyllodocidae			
Phyllodocidae indet.		x	x

Phyllodoce sp.	x		
Phyllodoce nr. citrina		x	
Phyllodoce groenlandica	x	x	x
Phyllodoce mucosa		x	x
Eteone sp.		x	x
Eteone longa	x	x	x
Eulalea sp.	x	x	
Eulalia viridis		x	
Eulelia bilineata		x	x
Eulalea levicornuta	x		
Phyllodoce castanea	x	x	
Hesionidae			
Parnaitides polynoides			x
Hesionura coineaui difficilis	x	x	x
Eumida sanguinea		x	x
Hesionidae indet.			x
Micropodarke dubia	x	x	x
Pilargiidae			
Pilargis berkeleyi		x	
Syllidae			
Syllidae indet.			x
Autolytus sp.		x	x
Pionosyllis uraga	x		
Syllis sp.	x	x	x
Syllis elongata		x	x
Syllis hyalina	x	x	x
Syllis alternata	x	x	x
Eusyllis blomstrandi	x		
Exogene sp.	x		
Exogene lourei	x	x	x
Sphaerosyllis cf. pirifera	x		
Sphaerosyllis brandhorsti		x	x
Syllis heterochaeta	x		
Odontosyllis sp.			x
Ondontosyllis phophorea	x	x	x
Streptosyllis sp.	x		
Diplosyllis sp.	x	x	x
Nereidae			
Nereis sp.			x
Nereis procera		x	
Nereis zonata		x	x
Nephtyidae			
Nephtyidae indet.		x	
Nephtys sp.	x		x
Nephtys ciliata		x	x
Nephtys caeca	x	x	
Nephtys cornuta franciscanum		x	x
Nephtys punctata	x	x	x
Nephtys rickettsi	x	x	
Nephtys longosetosa	x	x	x
Nephtys ferruginea	x	x	x
Nephtys californiensis	x	x	x
Nephtys caecoides		x	
Nephtys assignis			x

Aglaophamus rubella anops		x	
Sphaerodoridae			
Sphaerodoridium sp.		x	
Glyceridae			
Glyceridae indet.			x
Glycera tenuis		x	x
Glycera capitata	x	x	x
Glycera americana	x	x	x
Hemipodus borealis	x	x	x
Goniadidae			
Glycinde armigera	x	x	x
Goniada maculata		x	
Goniada sp.	x		
Goniada maculata	x		x
Goniada brunnea	x	x	x
Onuphidae			
Onuphidae indet.		x	x
Onuphis sp.		x	x
Onuphis conchylega	x	x	x
Onuphis geophiliformis	x	x	x
Onuphis iridescens	x	x	x
Onuphis elegans		x	x
Lumbrineridae			
Lumbrineridae indet.		x	
Lumbrineris sp.		x	x
Lumbrineris bicirrata	x	x	x
Lumbrineris latreilli		x	
Lumbrineris luti	x	x	x
Lumbrineris acuta	x	x	x
Lumbrineris limicola		x	x
Lumbrineris lagunae	x		
Paraninoe simpla	x		
Ninoe gemmea	x	x	x
Arabellidae			
Arabellidae indet.			x
Driloneris longa	x		
Driloneris falcata minor	x	x	x
Dorvilliidae			
Dorvillidae indet.		x	
Dorvillea pseudorubrovittata			x
Protodorvillea gracilis		x	x
Schistomeringos annulata			x
Orbiniidae			
Leitoscoloplos pugettensis	x	x	x
Naineris uncinata		x	
Scoloplos armiger			x
Scoloplos acmeceps	x	x	x
Orbinia felix	x	x	x
Paraonidae			
Paraonidae indet.		x	
Aricidea suecica	x	x	x
Aricidea neosuecica	x	x	x
Aricidea quadrilobata		x	x

Aricidea minuta	x	x	x
Aricidea ramosa	x	x	x
Aricidea cerruti	x	x	x
Aricidea cf. lopezi	x		
Levinsenia gracilis	x	x	x
Apistobranchidae			
Apistobranchus ornatus	x	x	x
Spionidae			
Spionidae indet.		x	x
Laonice cirrata	x	x	x
Polydora sp.		x	
Polydora giardi			x
Polydora socialis	x	x	x
Polydora brachycephala	x	x	x
Polydora cardalia	x	x	x
Polydora pugettensis	x		
Prionospio cirrifera	x	x	x
Prionospio steenstrupi	x	x	x
Spio sp.	x	x	x
Spio filicornis		x	x
Spio cirrifera	x		
Spio cf. butleri	x		
Spiophanes bombyx	x	x	x
Spiophanes berkeleyorum	x	x	x
Malacoceros glutaeus	x		
Scolelepis squamata	x		
Aonides sp.		x	x
Magelonidae			
Magelonidae indet.		x	
Magelona sp.		x	
Magelona hobsonae	x	x	x
Magelona longicornis	x	x	x
Magelona sacculata		x	x
Chaetopteridae			
Chaetopteridae indet.		x	
Phyllochaetopterus sp.		x	x
Spiochaetopterus costarum	x	x	x
Mesochaetopoterus taylori		x	
Cirratulidae			
Cirratulidae indet.	x	x	x
Cirratulus cirratus	x		
Caulleriella oculata			x
Caulleriella bioculata		x	x
Tharyx sp.	x	x	x
Tharyx multifilis	x		
Tharyx tesselata	x	x	x
Chaetozone sp.1	x		
Chaetozone sp.2		x	x
Chaetozone setosa	x	x	x
Chaetozone acuta	x	x	
Chaetozone spinosa		x	x
Cossuridae			
Cossura sp.	x		
Cossura longocirrata	x	x	x

Flabelligeridae			
Flabelligeridae indet.		x	
Brada villosa			x
Pherusa plumosa		x	
Diplocirrus sp.		x	
Scalibregmidae			
Scalibregma inflatum		x	x
Asclerocheilus beringianus			x
Opheliidae			
Opheliidae indet.		x	
Armandia brevis		x	x
Travisia sp.			x
Travisia brevis	x	x	x
Travisia pupa	x		
Ophelia sp.		x	
Ophelia limacina	x	x	
Ophelina sp.		x	
Ophelina breviata			x
Ophelina acumulata	x	x	x
Sternaspidae			
Sternaspis scutata	x	x	x
Capitellidae			
Capitellidae indet.			x
Capitella capitata	x	x	x
Notomastus sp.			x
Notomastus lineatus	x	x	x
Mediomastus sp.	x	x	x
Mediomastus californiensis		x	
Mediomastus capensis	x		
Decamastus gracilis	x	x	x
Euclymenidae			
Euclymenidae indet.	x		
Maldanidae			
Maldanidae indet.		x	x
Maldane glebifex	x	x	x
Nicomache sp.			x
Nicomache lumbricalis	x	x	x
Notoproctus pacificus	x	x	x
Petaloproctus tenuis tenuis	x		x
Petaloproctus tenuis borealis	x	x	
Axiothella rubrocincta	x	x	x
Praxillela sp.		x	
Praxillella gracilis	x	x	x
Rhodine bitorquata	x	x	x
Euclymene nr geralis		x	
Euclymene zonalis	x	x	x
Clymenura columbiana	x	x	x
Micromaldane ornithochaeta	x		
Isocirrus longiceps		x	
Macroclymene sp.	x		
Oweniidae			
Oweniidae indet.		x	
Owenia fusiformis	x	x	x
Myriochele sp.		x	
Myriochele heeri	x	x	x

Galathowenia oculata	x	x	x
Sabellariidae			
Sabelliidae indet.		x	x
Idanthyrsus ornamentatus		x	x
Sabellaria cementarium		x	x
Pectinariidae			
Cistenides brevicoma	x		
Pectinaria granulata	x	x	x
Pectinaria californiensis	x	x	x
Ampharetidae			
Ampharetidae indet.		x	x
Amage anops	x	x	x
Ampharete sp.	x	x	
Ampharete acutifrons	x	x	x
Ampharete finmarchica	x	x	x
Amphicteis sp.		x	
Amphicteis scaphobranchiata	x		x
Lysippe labiata	x	x	x
Melinna cristata		x	x
Melinna elisabethae	x		
Anobothrus gracilis		x	x
Asabellides lineata	x		x
Schistocomus hiltoni	x	x	x
Terebellidae			
Terebellidae indet.		x	x
Neoamphritrite robusta		x	
Nicolea zostericola			x
Pista cristata	x	x	x
Pista elongata			x
Pista brevibranchiata	x	x	x
Pista moorei			x
Polycirrus sp. complex	x	x	x
Thelepus cincinnatus		x	x
Thelepus japonica		x	x
Artacama conifera	x	x	x
Artacamella hancocki	x	x	x
Scionella estevanica		x	x
Streblosoma bairdi		x	
Trichobranchidae			
Terebellides stroemi	x	x	x
Sabellidae			
Sabellidae indet.		x	x
Chone duneri	x	x	x
Chone ecaudata		x	x
Euchone analis		x	x
Euchone ecaudata			x
Euchone arenae	x		
Eudistylia catharinal		x	
Megaloma splendida		x	x
Sabella (demonax) pacifica			x
Jasmineira pacifica	x		
Serpulidae			
Pseudochitinopoma occidentalis		x	x
Crucigera irregularis		x	

Crucigera zygophora		x	x
Spirorbidae			
Spirorbis sp.			x
ARCHIANNELIDA			
Archianellida indet.		x	x
Polygordiidae			
Polygordius sp.		x	x
MOLLUSCA			
Mollusca indet.			x
Gastropoda			
Gastropoda indet.			x
Punctarella galeata		x	x
Acmaeidae indet.		x	x
Margarites sp.			x
Margarites helicinus	x	x	
Margarites pupillus			x
Solariella peramabilis	x	x	x
Alvania sp.	x	x	x
Alvania compacta	x		
Caecum crebricinctum	x	x	x
Bittium sp.	x	x	x
Epitonium indianorum		x	
Balcis sp.		x	x
Trichotropis cancellata			x
Calyptraea fastigata		x	
Crepidula sp.		x	
Crepipatella lingulata		x	x
Natica clausi	x	x	x
Polinices pallida	x		
Polinices lewisii	x	x	x
Amphissa columbiana	x	x	x
Amphissa versicolor	x		
Mitrella gouldi	x	x	x
Nitidella gouldi	x		
Colus sp.	x	x	x
Neptunea lirata		x	
Nassarius mendicus		x	
Olivella baetica	x	x	x
Admete couthouyi		x	
Mangelia sp.		x	
Oenopota turricula			x
Oenopota excurvata		x	
Lora harpa	x		
Odostomia sp.	x	x	x
Odostomia tenuisculpta	x		
Odostomia oregonensis	x		
Turbonilla sp.	x	x	x
Turbonilla aurantia	x		
Turbonilla newcombei	x		
Turbonilla pugettensis	x		
Cephalaspidea indet.		x	
Acteocina culcitella			x
Acteocina exima	x	x	x
Cylinchna alba	x		
Cylinchna attonsa	x	x	x
Limacina pacifica	x		

Polyplacophora			
Polyplachophora indet.			x
Ischnochitonidae indet.		x	x
Ischnochiton sp.	x		
Lepidochitona flectens			x
Lepidozona mertenzii	x	x	x
Aplacophora			
Aplacophora indet.			x
Chaetoderma sp.	x	x	
Pelecypoda			
Acila castrensis	x	x	x
Nucula tenuis	x	x	x
Nuculana pernula		x	
Nuculana minuta	x	x	
Nuculana fossa			x
Nuculana extenulata	x		
Nuculana hamata	x		
Nuculana taphria			x
Yoldia amygdalea	x	x	
Yoldia myalis	x		x
Yoldia scissurata	x		x
Yoldia thraciaeformis	x		
Yoldia martyria			x
Glycymeris subobsoleta	x	x	x
Crenella decussata	x	x	x
Rhomboidiella columbiana			x
Musculus cultellus			x
Dacrydium vitreum	x	x	x
Chlamys rubida	x		x
Parvamussium alaskensis		x	
Delectopecten vancouverensis	x	x	x
Lucinidae indet.		x	x
Lucinoma annulata	x	x	x
Lucina tenuisculpta	x	x	x
Adontorhina cyclia			x
Axinopsida serricata	x	x	x
Thyasira gouldi		x	x
Thyasira flexuosa	x		
Mysella compressa		x	
Mysella tumida	x	x	x
Cyclocardia ventricosa	x	x	x
Tridonta alaskensis		x	
Tridonta borealis			x
Tridonta montagui			x
Astarte alaskensis			x
Astarte esquimalti	x		x
Clinocardium ciliatum		x	
Clinocardium nuttallii	x		x
Clinocardium fucanum		x	x
Nemocardium centrifilosum	x	x	x
Spisula falcata	x	x	x
Macoma sp.		x	
Macoma alaskana	x		
Macoma eliminata	x	x	x

Macoma lipara	x	x	x
Macoma modesta	x		
Macoma yoldiformis			x
Macoma carlottensis			x
Tellina nuculoides	x	x	x
Tellina carpenteri	x	x	x
Tellina modesta	x		x
Gari californica	x		
Transennella tantilla	x		x
Compsomyax subdiaphana		x	x
Psephidia lordi	x	x	x
Protothaca staminea	x		
Clinocardium fucanum	x		
Cardium fucanum	x		
Hiatella arctica	x	x	x
Pandora filosa	x		
Pandora bilirata	x	x	x
Lyonsia bracteata			x
Lyonsia californica	x	x	x
Lyonsia striata			x
Cardiomya pectinata		x	
Cardiomya planetica			x
Cardiomya oldroydi	x		
Cardiomya californica	x		
Scaphopoda			
Pulsellum salishorum		x	x
Dentalium pretiosum	x	x	x
Dentalium rectius	x	x	
Laevidentalium dalli			x
Cadulus sp.	x	x	
Cadulus hepburni	x		
Polyschides californicus		x	x
PYCNOGONIDA			
Achelia alaskensis		x	
ARTHROPODA			
CRUSTACEA			
Ostracoda			
Bathylberis sp.	x	x	
Rutiderma sp.		x	x
Euphilomedes carcharodonta			x
Euphilomedes producta		x	x
Scheroconcha trituberculata	x		x
Cirripedia			
Balanidae indet.		x	
Balanus crenatus		x	x
Solidobalanus hesperius		x	
Nebaliacidae indet.		x	x
Nebalia pugettensis			x
Cumacea			
Leucon sp.		x	
Eudorella pacifica	x	x	x
Eudorella tridentata	x		
Eudorellopsis longirostris	x	x	x
Diastylidae indet.			x
Diastylis sp.	x	x	x

Diastylis dalli	x		
Diastylis pellucida	x		
Diastylis paraspinulosa	x		
Diastylopsis sp.		x	
Diastylopsis dawsoni	x	x	x
Diastylopsis tenuis		x	x
Campylapsis sp.		x	x
Campylapsis canaliculata	x		
Campylaspis rubromaculata	x		
Cumella sp.	x		
Vaunthompsonia sp.	x	x	x
Tanaidacea			
Neotanaidomorpha indet.			x
Leptognathia indet.		x	x
Isopoda			
Gnathia sp.		x	x
Gnathia trilobata	x	x	x
Haliophasma geminata			x
Rocinela augustata	x		
Synidotea nebulosa	x	x	x
Synidotea picta			x
Synidotea media		x	x
Janiralata solasteri	x		
Jaeropsis dubia		x	
Amphipoda			
Ampelisca sp.		x	x
Ampelisca macrocephala	x	x	x
Amplesica agassizi			x
Ampelisca cristata		x	x
Ampelsica hancocki			x
Byblis sp.		x	
Byblis pearcyi	x		
Byblis gammairdi		x	x
Haploops tubicola	x	x	x
Eusirus sp.			x
Rhacotropis sp.	x		x
Melita dentata			x
Photis sp.		x	x
Photis brevipes	x	x	x
Protomedia arandimana	x		
Cheirimedia sp.		x	x
Ischyrocerus anguipes		x	x
Lysianassidae indet.		x	x
Anonyx sp.	x		
Lepidepecreum sp.	x	x	x
Orchomene sp.			x
Pachynus sp.		x	x
Pachynus barnardi	x		
Oedicerotidae indet.	x	x	
Dedicerotidae indet.			x
Synchelidium shoemakeri	x	x	x
Nicippe tumida	x	x	x
Phoxocephalidae indet.			x
Heterophoxus oculatus	x		

Metaphoxus frequens	x		
Rhepoxynius episburi	x		
Rhepoxynius sp.	x	x	
Grandifoxus sp.		x	x
Foxiphalus obtusidens	x	x	x
Parapleustes sp.		x	x
Pleustes sp.			x
Podocerus sp.		x	x
Metopa sp.			x
Tiron biocellata	x	x	x
Neomegamphopus sp.			x
Caprella sp.		x	
Caprella laeviuscula	x		
Euphausidacea			
Thysanoessa spinifera		x	
Decapoda			
Crangon alaskensis	x	x	
Crangon alba		x	
Crangon stylirostris	x		
Argis alaskensis			x
Paguroidea indet.		x	x
Pagurus sp.			x
Pagarus armatus		x	x
Paguristes turgidus			x
Majidae indet.			x
Pugettia richii		x	x
Cancer gracilis		x	
Pinnixa sp.	x	x	x
Pinnixa occidentalis	x	x	x
Pinnixa sp.			x
SIPUNCULA			
Sipunculida indet.			x
Sipunculus sp.		x	
Golfingia sp.		x	
Golfingia margaritacea			x
Golfingia cf. vulgaris			x
Golfingia minuta	x		
ECHIURA			
Echiurus echiurus		x	
PHORONIDA			
Phoronopsis harmeri		x	
ECTOPROCTA			
Ectoprocta indet.			x
Cheilostomata indet.			x
Ascophora indet.			x
BRACHIOPODA			
Brachiopoda indet.			x
Terebratulina unguicula			x
Laqueus californianus			x
ECHINODERMATA			
Asteroidae			
Solasteridae indet.			
Henricia sanguinolenta		x	

Ophiuroidea			
Ophiura sp.	x	x	x
Ophiura leutkeni	x	x	x
Ophiura sarsi	x	x	x
Amphiuridae indet.		x	x
Amphiodia periercta	x	x	x
Amphiopholis pugetana		x	x
Amphiopholis squamata	x	x	
Amphioplus macraspis	x		
Amphioplus sp.	x		
Amphioplus strongyloplax	x		x
Echinoidea			
Dendraster excentricus	x	x	x
Holothuroidea			
Dendrochirotida indet.			x
Eupentacta sp.			x
Pentamera sp.		x	x
Havelockia benti		x	
Leptosynapta routana		x	
Leptosynapta transgressor			x
Chiridota nanaimensis		x	
Molpadia intermedia	x		
UROCHORDATA			
Aplidium sp.			x
Chelyosoma columbianum		x	
TOTAL NUMBER OF TAXA:	267	348	355

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Appendix 2. Hecate Strait Cruise 1 species abundance data.

	STATION																							
	A1a	A1b	A1c	A1d	A1e	A2	A3	A4	A5	A6	A7a	A7b	A7c	A7d	A7e	B1a	B1b	B1c	B1d	B1e	B2	B3	B4
POLYCHAETA																							
Gattyana ciliata	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Harmathoe lunulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polynoe canadensis	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pholoides aspera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pholoe minuta complex	3	0	0	0	1	2	0	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0
Phyllodoce sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce goenlandica	1	1	4	1	4	2	0	1	0	3	2	1	1	0	1	0	0	0	0	0	0	0	0
Eteone longa	0	0	4	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Eulalea sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulalea levicornuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce castanea	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Hesionura coineaui difficilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0
Micropodarke dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	12
Pionosyllis araga	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	
Syllis hyalina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	4	4	1	0	1	4
Syllis alternata	0	0	0	1	1	0	0	0	1	1	1	0	1	1	3	0	0	0	0	0	0	0	0
Eusyllis blomstrandi	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exogene sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exogene lourei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerosyllis cf. pirifera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Syllis heterochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ondontosyllis phophorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? Streptosyllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Dioplosyllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	5	0	0	0	
Nephtys sp.	0	2	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
Nephtys caeca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	
Nephtys punctata	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Nephtys rickettsi	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Nephtys longosetosa	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
Nephtys ferruginea	0	0	1	0	1	0	0	0	0	0	0	4	0	1	1	0	0	0	0	0	0	0	
Nephtys cf. californiensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	1	0	2	0
Glycera capitata	3	3	5	3	1	3	0	1	0	4	2	3	4	2	1	0	0	0	0	0	0	0	0
Glycera americana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemipodus borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	18	0	17	5	5	22
Glycinde armigera	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0

Appendix 2. Stations B5-C7

	B 5	B 6	B 7a	B 7b	B 7c	B 7d	B 7e	C 1a	C 1b	C 1c	C 1d	C 1e	C 2	C 3	C 4	C 5	C 6	C 7a	C 7b	C 7c	C 7d	C 7e
POLYCHAETA																						
Gattyana ciliata	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Harmathoe lunulata	0	0	0	0	0	0	0	2	2	1	0	1	0	0	0	0	1	0	0	0	0	0
Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Polynoe canadensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pholoides aspera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0
Pholoe minuta complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Phyllodoce sp.	0	0	0	0	0	0	0	0	1	3	0	0	0	1	0	0	0	0	0	0	0	0
Phyllodoce goenlandica	0	0	0	0	0	0	0	4	0	2	0	0	1	0	0	1	2	1	0	0	0	0
Eteone longa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulalea sp.	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Eulalea levicornuta	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Phyllodoce castanea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hesionura coineaui difficilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micropodarke dubia	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pionosyllis araga	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Syllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis hyalina	0	0	11	6	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis alternata	1	1	0	0	0	0	0	0	0	1	1	0	1	0	1	9	0	1	0	0	0	0
Eusyllis blomstrandi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exogene sp.	0	0	0	0	0	0	0	0	1	5	5	0	1	0	0	0	2	0	0	0	0	0
Exogene lourei	0	0	0	0	0	0	0	9	0	4	0	3	0	0	0	1	0	0	0	0	0	0
Sphaerosyllis cf. pirifera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis heterochaeta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ondontosyllis phophorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
? Streptosyllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dioplosyllis sp.	0	0	0	8	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys caeca	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys punctata	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Nephtys rickettsi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys longosetosa	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys ferruginea	0	0	0	0	0	0	0	1	0	1	3	0	0	0	1	0	0	0	0	0	2	0
Nephtys cf. californiensis	0	0	0	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycera capitata	0	0	0	0	0	0	0	0	0	1	0	5	1	0	1	2	3	0	0	0	0	0
Glycera americana	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Hemipodus borealis	1	0	7	16	4	21	10	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Glycinde armigera	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0

Appendix 2. Hecate Strait Cruise 1 species abundance data (continued).

	STATION																							
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4
Goniada sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Goniada maculata	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goniada brunnea	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Onuphis conchylega	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis geophiliformis	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Onuphis iridescens	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Lumbrineris bicirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris luti	19	10	17	8	5	9	3	0	5	16	1	4	0	1	2	0	0	0	0	0	0	0	0
Lumbrineris lagunae	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraninoe simpla	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ninoe gemmea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris acuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	16	3	3	4	1	6	8
Driloneris longa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Driloneris falcata minor	0	0	1	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
Leitoscoloplos pugettensis	6	1	3	3	4	0	0	0	2	1	3	1	3	1	7	0	0	0	0	0	0	0	0
Scoloplos acmeceps	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orbinia felix	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Aricidea sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea cf. suecica	0	2	4	2	6	1	0	0	0	7	1	2	2	0	1	0	0	0	0	0	0	0	0
Aricidea neosuecica	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Aricidea minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea ramosa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Levinsenia gracilis	0	0	2	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea cerruti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0	0	1	2
Aricidea cf. lopezi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apistobranchus ornatus	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Laonice cirrata	0	0	0	1	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
Polydora pugettensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora socialis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Polydora brachycephala	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora cardalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionospio cirrifera	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Prionospio steenstrupi	11	8	30	7	26	0	5	5	4	10	5	14	10	16	20	0	0	0	0	0	0	0	0
Spio sp. (from filicornis)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	6	7	6	1	5	0
Spio cirrifera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Spio cf. butleri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spiophanes bombyx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	50	115	43	8	51	6
Spiophanes berkeleyorum	25	12	15	19	26	6	2	0	7	18	7	11	11	8	20	0	0	0	0	0	0	0	0
Malacoceros glutaeus	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scolelepis squamata	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magelona hobsonae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	9	5	30	4	0	1	0
Magelona longicornis	0	0	8	3	6	3	0	0	0	6	1	1	8	4	6	0	0	0	0	0	0	0	0
Spiochaetopterus costarum	0	0	2	1	1	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0
Chaetozone sp.	6	1	6	1	3	0	0	0	1	0	0	2	0	5	2	0	0	0	0	0	0	0	0
Cirratulidae	3	2	4	3	2	0	0	1	2	5	0	5	3	7	4	1	0	0	0	0	0	0	0
Cirratulus cirratus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Tharyx sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tharyx multifilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tharyx tesselata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone acuta	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
Chaetozone setosa	0	1	5	5	6	0	0	0	0	2	1	3	0	0	1	0	0	0	0	0	0	0	0

Appendix 2. Stations B5-C7

	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e	C 1 a	C 1 b	C 1 c	C 1 d	C 1 e	C 2	C 3	C 4	C 5	C 6	C 7 a	C 7 b	C 7 c	C 7 d	C 7 e
Goniada sp.	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Goniada maculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Goniada brunnea	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	2	0	0	0	1	0
Onuphis conchylega	0	0	0	0	0	0	0	2	3	4	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis geophiliformis	0	0	0	0	0	0	0	2	0	0	0	1	2	0	1	0	0	0	0	0	0	0
Onuphis iridescens	0	0	0	0	0	0	0	0	0	0	1	1	2	0	1	1	0	0	0	0	0	0
Lumbrineris bicirrata	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	1	0	0	0	0
Lumbrineris luti	0	2	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	3	1	0	0	9
Lumbrineris lagunae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraninoe simpla	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0
Ninoe gemmea	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Lumbrineris acuta	4	0	6	3	5	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Driloneris longa	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Driloneris falcata minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Leitoscoloplos pugettensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scoloplos acmeceps	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2	0	0	2	0	0	0	0
Orbinia felix	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea cf. suecica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea neosuecica	0	0	0	0	0	0	0	2	1	1	4	3	4	0	2	3	1	0	0	0	0	0
Aricidea minuta	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0
Aricidea ramosa	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	1	0
Levinsenia gracilis	0	0	0	0	0	0	0	0	0	1	0	0	0	3	3	0	0	1	5	0	1	0
Aricidea cerruti	0	0	0	6	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea cf. lopezi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Apistobranchus ornatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laonice cirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0
Polydora pugettensis	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora socialis	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0
Polydora brachycephala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0
Polydora cardalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Prionospio cirrifera	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Prionospio steenstrupi	0	0	0	0	0	0	0	0	0	1	4	1	5	0	5	6	0	0	1	0	0	0
Spio sp. (from filicornis)	2	4	21	7	35	7	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spio cirrifera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spio cf. butleri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Spiophanes bombyx	51	213	12	2	42	10	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Spiophanes berkeleyorum	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0	0	0	0	0
Malacoceros glutaeus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scolelepis squamata	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magelona hobsonae	1	0	9	2	6	4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magelona longicornis	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Spiochaetopterus costarum	0	0	0	0	0	0	0	27	26	23	51	32	32	36	28	12	30	16	16	0	5	0
Chaetozone sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cirratulidae	0	0	0	0	0	0	0	0	1	1	1	0	0	0	2	15	1	2	1	1	1	0
Cirratulus cirratus	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tharyx sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tharyx multifilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Tharyx tesselata	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	0	0	0	0	0
Chaetozone acuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone setosa	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Appendix 2. Hecate Strait Cruise 1 species abundance data (continued).

	STATION																							
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4
Cossura sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cossura longocirrata	0	1	0	5	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Travisia brevis	0	0	0	0	0	0	0	1	0	1	1	1	1	1	2	0	0	0	0	0	0	0	0
Travisia pupa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophelina limacina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Ophelina acumulata	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Sternopsis scutata	0	0	1	0	0	3	10	3	2	2	1	3	5	3	3	0	0	0	0	0	0	0	0
Capitella capitata	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Notomastus lineatus	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0
Mediomastus sp.	11	6	0	1	0	0	0	1	3	2	9	7	19	27	28	0	0	0	0	0	0	0	0
Mediomastus capensis	0	2	1	1	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Decamastus gracilis	0	0	0	0	0	8	1	1	0	2	2	3	5	5	4	0	0	0	0	0	0	0	0
Euclymenidae	16	27	12	1	4	27	3	5	14	31	40	41	28	29	30	0	0	0	0	0	0	0	0
Maldane glebifex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nicomache lumbricalis	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notoproctus pacificus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
? Petaloproctus tenuis tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petaloproctus tenuis borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Axiotella rubrocincta	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Praxillella gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhodine bitorquata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euclymene zonalis	1	8	11	4	13	0	0	0	0	0	10	3	3	3	0	0	0	0	0	0	0	0	0
Clymenura columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micromaldane ornithochaeta	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macroclymene sp.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Owenia fusiformis	0	2	0	0	1	0	0	13	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0
Myriochele heeri	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Galathowenia oculata	3	24	13	15	38	9	2	12	6	6	15	10	14	16	8	0	0	0	1	1	0	0	0
Cistenides brevicoma	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria granulata	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria californiensis	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Anage anops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharete sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharete acutifrons	3	5	8	7	1	8	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ampharete finmarchica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
Amphicteis scaphobranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lysippe labiata	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Melinna elisabethae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asabellides lineata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schistocomus hiltoni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pista cristata	0	1	0	0	4	0	0	9	2	0	3	5	8	1	6	0	0	0	0	0	0	1	0
Pista brevibranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polycirrus sp.	2	5	25	2	6	8	0	0	16	9	10	0	1	3	0	0	0	0	0	2	0	0	2
Artacama conifera	0	0	0	1	0	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Artacamella hancocki	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellides stroemi	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Chone duneri	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euchone arenae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jasmineira pacifica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GASTROPODA																							
Margarites helicinus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 2. Stations B5-C7

	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e	C 1 a	C 1 b	C 1 c	C 1 d	C 1 e	C 2	C 3	C 4	C 5	C 6	C 7 a	C 7 b	C 7 c	C 7 d	C 7 e
Cossura sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Cossura longocirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Travisia brevis	0	0	0	0	0	0	0	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0
Travisia pupa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Ophelina limacina	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophelina acumulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Sternopsis scutata	0	0	0	0	0	0	2	0	0	0	0	0	0	9	4	0	0	0	0	0	0	0
Capitella capitata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notomastus lineatus	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0
Mediomastus sp.	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	1	1	0	0	0	0
Mediomastus capensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decamastus gracilis	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0
Euclymenidae	0	0	0	0	0	0	0	4	3	5	0	2	2	8	6	14	2	3	3	1	1	0
Maldane glebifex	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Nicomache lumbricalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Notoproctus pacificus	0	0	0	0	0	0	0	2	3	0	0	0	3	0	0	0	0	0	0	0	0	0
? Petaloproctus tenuis tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Petaloproctus tenuis borealis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Axiotella rubrocincta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Praxillella gracilis	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhodine bitorquata	0	0	0	0	0	0	0	1	1	3	0	0	1	0	0	2	1	0	0	0	0	0
Euclymene zonalis	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0	1	0	0	0	0	1	0
Clymenura columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0
Micromaldane ornithochaeta	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0
Macroclymene sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Owenia fusiformis	1	0	0	0	0	0	0	14	4	4	15	12	21	0	0	0	2	0	0	0	0	0
Myriochele heeri	0	0	0	0	0	0	0	26	6	4	49	24	10	0	2	1	20	1	0	0	1	0
Galathowenia oculata	0	0	0	0	0	0	0	13	11	18	32	17	18	14	21	2	16	10	9	2	2	0
Cistenides brevicoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria granulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Pectinaria californiensis	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
Anage anops	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0
Ampharete sp.	0	0	0	0	0	0	0	0	1	11	1	0	6	1	0	2	4	0	1	0	0	0
Ampharete acutifrons	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	7
Ampharete finmarchica	0	0	0	0	0	0	0	2	0	1	2	1	0	0	0	0	0	0	0	0	0	0
Amphicteis scaphobranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Lysippe labiata	0	0	0	0	0	0	0	4	0	1	1	0	1	0	2	0	1	0	0	0	0	0
Melinna elisabethae	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0
Asabellides lineata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Schistocomus hiltoni	0	0	0	0	0	0	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Pista cristata	0	0	0	0	0	0	0	5	3	2	3	5	8	0	0	0	4	0	0	0	0	0
Pista brevibranchiata	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Polycirrus sp.	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	7	1	0	8	0	0
Artacama conifera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artacamella hancocki	0	0	0	0	0	0	0	0	1	0	2	0	1	0	0	2	1	0	0	0	0	0
Terebellides stroemi	0	0	0	0	0	0	0	2	2	6	0	1	4	2	2	3	1	0	0	0	0	0
Chone duneri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euchone arenae	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jasmineira pacifica	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GASTROPODA																						
Margarites helicinus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0

Appendix 2. Hecate Strait Cruise 1 species abundance data (continued).

	STATION																							
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4
Solariella peramabilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alvania compacta	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alvania sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Caecum crebricinctum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Bittium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natica clausi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polinices pallida	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polinices lewisii	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphissa columbiana	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphissa versicolor	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitrella gouldi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nitidella gouldi	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colus sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Olivella baetica	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Lora harpa	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odostomia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odostomia tenuisculpta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla aurantia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odostomia oregonensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla newcombei	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla pugettensis	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Acteocina exima	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cylinchna alba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cylinchna attonsa	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Limacina pacifica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POLYPLACOPHORA																							
Ischnochiton sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidozona mertenzii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APLACOPHORA																							
Chaetoderma sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PELECYPODA																							
Acila castiensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nucula tenuis	4	1	1	1	0	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana extenulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana hamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia amygdalea	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia myalis	13	9	0	0	2	0	0	0	8	0	10	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia scissurata	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia thraeciformis	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycymeris subobsoleta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	2	2	
Crenella decussata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dacrydium vitreum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chlamys rubida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Delectopecten vancouverensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lucinoma annulata	1	2	0	0	0	0	0	0	4	0	0	0	3	0	1	0	0	0	0	0	0	0	
Lucina tenuisculpta	5	2	4	0	2	2	0	0	0	14	2	4	3	2	1	1	0	0	0	0	0	0	
Axinopsida serricata	62	103	92	38	71	5	4	30	84	33	35	70	27	17	18	0	0	0	0	0	0	0	
Thyasira flexuosa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
Mysella tumida	11	9	4	1	2	0	0	2	0	0	0	7	1	2	0	1	3	1	1	1	0	0	

Appendix 2. Stations B5-C7

	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e	C 1 a	C 1 b	C 1 c	C 1 d	C 1 e	C 2	C 3	C 4	C 5	C 6	C 7 a	C 7 b	C 7 c	C 7 d	C 7 e
Solariella peramabilis	0	0	0	1	0	0	0	5	0	0	1	0	4	0	0	3	0	1	0	0	0	0
Alvania compacta	0	0	0	0	0	0	0	14	3	5	1	0	0	0	0	0	0	0	0	0	0	0
Alvania sp.	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caecum crebricinctum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bittium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Natica clausi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Polinices pallida	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Polinices lewisii	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphissa columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Amphissa versicolor	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitrella gouldi	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Nitidella gouldi	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0
Colus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Olivella baetica	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Lora harpa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odostomia sp.	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	38	0	0	0	0	0
Odostomia tenuisculpta	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla aurantia	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla sp.	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Odostomia oregonensis	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla newcombei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla pugettensis	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Acteocina exima	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Cylinchna alba	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
Cylinchna attonsa	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0
Limacina pacifica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
POLYPLACOPHORA																						
Ischnochiton sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Lepidozona mertenzii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
APLACOPHORA																						
Chaetoderma sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
PELECYPODA																						
Acila castiensis	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0
Nucula tenuis	0	0	0	0	0	0	0	0	1	0	1	0	1	2	0	1	0	0	0	0	0	0
Nuculana minuta	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Nuculana extenulata	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Nuculana hamata	0	0	0	0	0	0	0	2	0	5	4	0	11	0	0	0	0	0	0	0	0	0
Yoldia amygdalea	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia myalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia scissurata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia thraeciformis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycymeris subobsoleta	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crenella decussata	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	3	0	0	0	0	0	0
Dacrydium vitreum	0	0	0	0	0	0	0	14	7	4	4	3	4	0	0	0	0	0	0	0	0	0
Chlamys rubida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Delectopecten vancouverensis	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinoma annulata	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Lucina tenuisculpta	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Axinopsida serricata	0	0	0	0	0	0	0	23	17	10	1	4	8	23	12	5	0	1	2	0	0	0
Thyasira flexuosa	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	3	1	0	0	0
Mysella tumida	6	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Appendix 2. Hecate Strait Cruise 1 species abundance data (continued).

	STATION																					
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4
Cyclocardia ventricosa	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Astarte esquimalti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinocardium nuttallii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinocardium fucanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemocardium centrifilosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spisula falcata	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	2	2	1	6	3	0
Macoma alaskana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma elimata	2	0	1	0	0	2	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma lipara	0	1	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma modesta	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0
Tellina nuculoides	2	4	0	1	0	0	0	0	0	0	0	0	0	0	0	195	144	100	380	62	291	195	262
Tellina carpenteri	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Tellina modesta	0	0	5	1	7	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Gari californica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transennella tantilla	0	1	0	0	0	0	0	0	1	0	2	2	0	0	0	0	1	0	0	0	0	0	0
Psephidia lordi	0	0	1	0	0	0	0	19	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0
Protothaca staminea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardium fucanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Hiatella arctica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pandora filosa	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Pandora bilirata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyonsia californica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Cardiomya oldroydi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiomya californica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCAPHOPODA																							
Dentalium pretiosum	2	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dentalium rectius	0	0	0	0	0	4	2	0	0	0	2	0	1	1	1	0	0	0	0	0	0	0	0
Cadulus hepburni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cadulus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OSTRACODA																							
Bathylebris sp.	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Scheroconcha trituberculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CUMACEA																							
Eudorella pacifica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eudorella tridentata	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
Eudorellapsis ? longirostris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Diastylis dalli	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylis pellucida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylis paraspinulosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Diastylopsis dawsoni	0	4	2	3	1	1	0	0	0	1	1	2	3	0	2	0	0	0	0	0	0	0	0
Campylapsis canaliculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Campylaspis rubromaculata	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vaunthompsonia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ISOPODA																							
Gnathia trilobata	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
Rocinela augustata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synidotea nodulosa	2	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Janiralata solasteri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AMPHIPODA																							

Appendix 2. Stations B5-C7

	B 5	B 6	B 7a	B 7b	B 7c	B 7d	B 7e	C 1a	C 1b	C 1c	C 1d	C 1e	C 2	C 3	C 4	C 5	C 6	C 7a	C 7b	C 7c	C 7d	C 7e
Cyclocardia ventricosa	0	0	0	0	0	0	0	1	4	0	0	2	1	0	0	2	0	0	0	0	0	0
Astarte esquimalti	0	0	0	0	0	0	0	5	4	0	4	2	1	0	0	0	0	0	0	0	0	0
Clinocardium nuttallii	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinocardium fucanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Nemocardium centrifilosum	0	0	0	0	0	0	0	5	4	1	4	5	2	0	0	1	0	0	0	0	0	0
Spisula falcata	0	0	4	9	6	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma alaskana	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Macoma elimata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Macoma lipara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma modesta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tellina nuculoides	0	200	179	48	63	166	182	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Tellina carpenteri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
Tellina modesta	0	0	0	0	0	0	0	4	1	1	1	0	0	0	1	0	0	0	0	0	0	0
Gari californica	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Transennella tantilla	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psephidia lordi	8	0	0	0	0	0	0	78	12	10	57	45	24	0	0	0	0	2	0	0	0	0
Protothaca staminea	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardium fucanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hiatella arctica	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Pandora filosa	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	1	0	0	0
Pandora bilirata	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
Lyonsia californica	0	0	0	0	0	3	0	2	0	2	1	0	0	0	0	0	0	0	0	0	0	0
Cardiomya oldroydi	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Cardiomya californica	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0
SCAPHOPODA																						
Dentalium pretiosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dentalium rectius	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0	0
Cadulus hepburni	0	0	0	0	0	0	0	8	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Cadulus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
OSTRACODA																						
Bathylebris sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheroconcha trituberculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
CUMACEA																						
Eudorella pacifica	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Eudorella tridentata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eudorellapsis ? longirostris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Diastylis sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Diastylis dalli	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Diastylis pellucida	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Diastylis paraspinulosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylopsis dawsoni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Campylapsis canaliculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Campylaspis rubromaculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumella sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Vaunthompsonia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
ISOPODA																						
Gnathia trilobata	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Rocinela augustata	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Synidotea nodulosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Janiralata solasteri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
AMPHIPODA																						

Appendix 2. Hecate Strait Cruise 1 species abundance data (continued).

	STATION																						
	A1a	A1b	A1c	A1d	A1e	A2	A3	A4	A5	A6	A7a	A7b	A7c	A7d	A7e	B1a	B1b	B1c	B1d	B1e	B2	B3	B4
Ampelisca macrocephala	0	0	0	2	1	7	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Byblis pearcyi	1	3	6	6	2	2	0	5	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0
Haploops tubicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhacotropis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Photis brevipes	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0
Protomedia arandimana	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aronyx sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidepecreum sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pachynus barnardi	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Oedicerotidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synchelidium shoemakeri	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	4
Nicippe tumida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Heterophoxus oculata	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Metaphoxus frequens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhepoxynius sp.	22	18	22	15	11	2	0	7	16	12	10	19	7	11	7	0	0	0	0	0	0	0	0
Rhepoxynius episburi	1	3	3	1	2	0	0	0	2	0	3	0	0	2	4	0	0	0	0	0	0	0	0
Foxiphalus obtusidens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	2	22	3	1	1	4
Tiron biocellata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EUPHAUSIACEA																							
Caprella laevioscula	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
DECAPODA																							
Crangon alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
Crangon stylirostris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinnixa sp.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Pinnixa occidentalis	6	1	1	3	1	0	0	2	0	2	1	1	0	0	0	0	0	0	0	0	0	0	0
SIPUNCULA																							
Golfingia minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ECHINODERMATA																							
Ophiura sp.	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0
Ophiura leutkeni	4	0	0	0	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura sarsi	0	3	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Amphiodia periercta	0	5	4	0	3	0	0	0	0	1	3	3	2	0	0	0	0	0	0	0	0	0	0
Amphiopholis squamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphioplus macraspis	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Amphioplus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphioplus strongyloplax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dendraster excentricus	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	10	4	0	1	0
Molpadia intermedia	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 2. Stations B5-C7

	B5	B6	B7a	B7b	B7c	B7d	B7e	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e
Ampelisca macrocephala	0	0	0	0	0	0	0	9	2	8	7	0	20	5	1	7	15	1	0	0	0	0
Byblis pearcyi	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	1	0	0	0	0
Haploops tubicola	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Rhacotropis sp.	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Photis brevipes	0	0	1	0	0	0	0	2	0	0	0	0	3	0	0	0	2	0	0	0	0	0
Protomedia arandimana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anonyx sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidepecreum sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pachynus barnardi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oedicerotidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Synchelidium shoemakeri	0	1	1	1	0	0	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0
Nicippe tumida	0	0	0	0	0	0	0	2	0	2	2	0	4	0	0	0	3	0	0	0	0	0
Heterophoxus oculata	0	0	0	0	0	0	0	0	0	0	0	0	0	11	8	0	0	0	0	0	0	0
Metaphoxus frequens	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Rhepoxynius sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhepoxynius episburi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foxiphalus obtusidens	0	11	15	5	12	23	1	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0
Tiron biocellata	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
EUPHAUSIACEA																						
Caprella laevioscula	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DECAPODA																						
Crangon alaskensis	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crangon stylirostris	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinnixa sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinnixa occidentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SIPUNCULA																						
Golfingia minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ECHINODERMATA																						
Ophiura sp.	0	0	0	0	0	0	0	6	0	0	0	0	4	0	0	0	1	0	0	0	0	0
Ophiura leutkeni	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	7	0	0	0	0	0	0
Ophiura sarsi	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Amphiodia periercta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphiopholis squamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphioplus macraspis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphioplus sp.	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0
Amphioplus strongyloplax	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Dendraster excentricus	1	1	2	17	15	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Molpadia intermedia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3 Hecate Strait Cruise II species abundance data

	STATION																																		
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
Microciona primitiva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lafoea dumosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
Pennatulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Turbellaria	0	0	0	0	0	0	0	0	1	6	2	6	0	1	4	10	3	4	47	4	9	6	1	1	27	6	10	10	10	16	0	0	0	0	0
Nemertinea	0	0	7	1	3	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polychaeta sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Polynoidae sp.	0	0	1	1	0	0	0	1	0	1	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arcteobia spinelytris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gattyana ciliata	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Harmothoe nr. lunulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0	0	0	0	0
Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pholoides aspera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigalionidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Pholoe minuta	2	6	8	7	4	5	0	1	5	5	2	5	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sthenelais berkelyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sthenelais tertiaglabra	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigalion sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Thalenessa sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	6	4	0	5	0	0	0	0	0	0	0	0	0	0
Paleonotus bellis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphinomidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Phyllodocidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce nr. citrina	0	2	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce groenlandica	0	0	1	0	0	2	0	0	2	1	4	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Phyllodoce mucosa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eteone sp.	0	0	2	1	0	4	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eteone longa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Eulalia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulalia viridis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulelia bilineata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce castanea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nesionura coineaui difficilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	6	1	5	0	6	5	7	26	2	6	2	18	4	13	0	0	0	0	0
Eumida sanguinea	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	16	0	23	9	53	1	25	4	0	1	0	4	0	0	0	0	0
Micropodarke dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	1	2	1	2	0	1	0	1	0	0	0	0	0
Pilargis berkeleyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Autolytus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	0	1	1	0	0	0	0	0	0	0	0	0
Syllidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	1	2	3	1	0	0	0	0	0
Syllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	9	0	5	1	4	0	0	2	0	0	0	0	0	0	0	0	0
Syllis elongata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis hyalina	0	0	0	0	0	0	0	0	0	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis alternata	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exogone lourei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerosyllis brandhorsti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontosyllis phosphorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dioplosyllis sp.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nereis procera	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	11	0	0	0	0	0	0	0	0	0	0	0
Nereis zonata	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtyidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Nephtys ciliata	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Nephtys cornuta franciscarum	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys caeca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys punctata	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys rickettsi	3	1	0	3	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Nephtys longosetosa	1	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys ferruginea	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys californiensis	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys caecoides	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aglaophamus rubella anops	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerodoridium sp.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Glycera tenuis	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycera capitata	1	4	7	5	3	1	0	1	4	5	0	1	2	2	5	0	0	0	0	0	0	0	0	0	0	5	1	0	1	1	1	4	0	0	0
Glycera americana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9	0	8	7	16	0	0	0	0	0	0	0	0	0	0	0	0
Hemipodus borealis	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycinde armigera	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goniada maculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goniada brunnea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Opheliidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis cerchylega	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis geophiliformis	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis iridescens	1	0	0	1	0	2	2	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineridae	0	0	1	2	2	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris sp.	0	0	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris bicirrata	0	0	1	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3. Stations C1a to D7e

	STATION																														
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
Microciona primitiva	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lafoea dumosa	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pennatulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbellaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemertinea	2	0	0	2	1	2	0	0	2	1	0	1	0	1	0	0	1	0	0	0	0	0	3	0	2	0	1	1	0	0
Polychaeta sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Polynoidae sp.	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	2	9	0	1	0	0	0	0	0
Arcteobia spinelytris	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gattyana ciliata	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harmothoe nr. lunulata	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Lepidonotus squamatus	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pholoides aspera	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	15	13	0	0	0	0	0	0	0	0
Sigalionidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
Pholoe minuta	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Sthenelais berkelyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sthenelais tertiaglabra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigalion sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0
Thalenessa sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paleonotus bellis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphinomidae	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodocidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Phyllodoce nr. citrina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce groenlandica	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce mucosa	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eteone sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eteone longa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulalia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulalia viridis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulelia bilineata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Phyllodoce castanea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Nesionura coineaui difficilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eumida sanguinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5	7	2	0	0	0	0	0	0
Micropodarke dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pilargis berkeleyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Autolytus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllidae sp.	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Syllis elongata	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0
Syllis hyalina	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	9	3	0	0	0	0	0	0	0	0
Syllis alternata	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0
Exogone lourei	6	3	3	0	0	3	0	2	0	5	0	2	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0
Sphaerosyllis brandhorsti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Odontosyllis phosphorea	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0
Dioplosyllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nereis procera	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nereis zonata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Nephtyidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys ciliata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys cornuta franciscarum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys caeca	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys punctata	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys rickettsi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys longosetosa	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	2	1	0	0	5	0	3	0	1	0	0
Nephtys ferruginea	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys californiensis	0	1	1	0	0	1	0	0	0	0	2	0	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Nephtys caecoides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aglaophamus rubella anops	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerodoridium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycera tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycera capitata	0	0	2	0	2	0	0	3	0	0	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Glycera americana	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemipodus borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycinde armigera	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0
Goniada maculata	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goniada brunnea	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphidae sp.	4	0	0	2	1	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Opheliidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
Onuphis cenchylega	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Onuphis geophiliformis	2	2	0	0	0	0	2	2	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3	0	0	0	0	0	0	0
Onuphis iridescens	0	0	1	0	1	0	0	1	1	3	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineridae	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris sp.	0	0	0	0	1	1	0	2	2	1	2	0	2	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Lumbrineris bicirrata	0	2	0	0	0	0	1	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris latreilli	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3. Hecate Strait Cruise II species abundance data (continued)

	STATION																												
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
Lumbrineris latreilli	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris luti	24	16	40	61	28	69	8	1	12	9	12	8	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris acuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	4	2	22	2	5	11	1	2	6	7	4	7	7	12
Lumbrineris limnicola	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ninoe gemmea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Driloneris falcata minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dorvillidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Protodorvillea gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	1	0	0	0	0	0	0
Leitoscoloplos pugettensis	18	13	5	0	12	1	0	0	6	2	12	7	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naineris uncinata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scoloplos acmeceps	1	0	2	4	2	0	0	0	0	4	1	2	4	1	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Orbinia felix	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paraonidae sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea nr. suecica	3	0	9	8	4	0	1	0	0	10	4	1	3	1	3	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0
Aricidea neosuecica	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea quadrilobata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea ramosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Levinsenia gracilus	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea nr. cerrutii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13	43	0	3	1	1	2	0	1
Apistobranchus ornatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spionidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laonice cirricata	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora sp.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	1
Polydora socialis	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Polydora brachycephela	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora cardalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionospio cirrifera	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionospio steenstrupi	14	5	27	42	20	4	14	9	19	37	28	32	37	34	47	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0
Spio sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	30	17	7	14	7	0	4	1	4	0	6	2	20	29	20
Spio filicornus	0	0	2	2	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spiophanes bombyx	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	198	20	116	178	10	62	108	73	167	89	163	301	232	200	342
Spiophanes berkeleyorum	28	19	41	65	35	25	1	0	3	31	8	14	26	6	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aonides sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	3	2	0	0	0	0	0	0
Magelona hobsonae	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	15	22	37	33	8
Magelona sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	13	8	14	17	0	0	0	1	0	0	0	0	0	0	0
Magelona longicornis	1	2	14	6	4	5	1	0	2	9	4	4	6	5	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Magelona sacculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetopteridae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllochaetopterus sp.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	0	2	0	1
Spiochaetopterus costerum	0	0	4	1	0	0	0	0	1	2	2	4	1	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Mesochaetopoterus taylori	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Cirratulidae	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caulleriella nr. bioculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0
Tharyx sp.	0	0	1	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tharyx tesselata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone sp.	0	0	0	7	0	0	1	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone acuta	0	0	0	1	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone setosa	0	0	0	0	0	2	0	0	3	23	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone spinosa	15	24	15	6	10	0	2	0	6	5	14	17	18	32	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cossura longocirrata	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flabelligeridae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pherusa plumosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diplocirrus sp.	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	5	1	6	4	4	0	4	0	0	0	0	0	1
Scalibregma inflatum	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Armandia brevis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	4	3	0	1	1	3	4	0	3	0	4
Travisia brevis	0	0	1	1	0	0	0	0	0	3	1	0	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophelina sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophelina lumicina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	15	0	0	0	1	6	7
Ophelia sp.	5	0	2	3	4	0	0	0	0	0	1	2	2	1	1	1	0	0	3	0	3	0	0	0	0	0	0	0	0	0
Ophelia acuminata	1	0	1	0	0	1	1	1	3	10	2	10	15	10	14	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Stemapsis scutata	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Capitella capitata complex	0	0	0	0	0	0	0	0	1	3	2	2	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notomastus lineatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mediomastus sp.	2	1	78	41	13	1	2	0	6	3	17	47	37	42	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mediomastus californiensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decamastus gracilis	0	1	16	5	1	0	5	0	1	0	3	5	1	9	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maldanidae sp.	3	1	0	0	2	0	0	0	0	0	0	0	5	8	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Maldane glebifer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nicomache lumbricallis	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notoproctus pacificus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petaloproctus tenui borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
Axiothella rubrocinata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Praxillela sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Praxillela gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhodine bitorquata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Euchymere nr. geralis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0
Euchymene zonalis	4	3	103	53	15	4	13	0	8	8	0	18	11	18	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clymenura columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isocirrus longiceps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3. Stations C1a to D7e

	STATION																														
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
Lumbrineris luti	20	0	0	2	1	0	0	4	0	0	0	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris acuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris limnicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ninoe gemmea	0	0	0	0	0	0	1	2	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Driloneris falcata minor	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dorvillidae sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Protodorvillea gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leitoscoloplos pugettensis	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naineris uncinata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Scoloplos acmeceps	0	0	1	1	2	0	0	2	0	0	2	9	5	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Orbinia felix	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0
Paraonidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea nr. suecica	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	1	1	1	1	3	2	1
Aricidea neosuecica	7	3	2	5	5	4	1	5	2	5	3	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea quadrilobata	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Aricidea ramosa	0	0	0	0	0	1	0	1	0	1	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Levinsenia gracilus	0	0	0	0	0	0	1	5	0	0	1	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea nr. cerrutii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apistobranchus ornatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spionidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Laonice cirricata	0	0	1	1	0	0	0	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora sp.	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora socialis	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0
Polydora brachycephela	1	0	0	1	0	0	3	0	2	5	5	4	1	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Polydora cardalia	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionospio cirrifera	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	0	0
Prionospio steenstrupi	16	3	1	5	5	2	3	10	1	5	11	8	2	5	4	2	3	2	5	0	0	0	2	0	0	0	0	0	0	0	0
Spio sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	4	5	1	1	0	1	5	0	0	0	3	0	0	0
Spio filicornus	2	2	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Spiophanes bombyx	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	19	26	16	11	3	9	0	2	65	6	10	5	22	12	4	0
Spiophanes berkeleyorum	20	0	0	1	0	0	0	0	3	0	0	0	1	0	1	1	3	1	2	2	0	0	0	1	1	1	1	3	2	1	0
Aonides sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magelona hobsonae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	1	0	0	0	2	0	1	0	0	0	0	0	0
Magelona sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magelona longicornis	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Magelona sacculata	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetopteridae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Phyllochaetopterus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Spiochaetopterus costerum	17	46	80	46	32	8	12	13	6	53	10	19	26	13	27	2	6	7	1	2	2	0	5	0	0	0	0	2	0	0	0
Mesochaetopoterus taylori	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cirratulidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Caulleriella nr. bioculata	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Tharyx sp.	0	0	1	4	2	0	0	3	3	0	1	1	1	0	0	0	0	0	0	0	0	1	9	0	0	0	0	0	0	0	0
Tharyx tesselata	0	0	1	3	0	2	0	1	0	2	0	0	1	3	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Chaetozone sp.	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Chaetozone acuta	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone setosa	0	0	0	0	0	0	0	1	2	0	2	0	0	0	0	2	4	4	3	4	3	0	3	13	4	0	2	4	7	6	0
Chaetozone spinosa	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cossura longocirrata	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flabelligeridae sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pherusa plumosa	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Diplocirrus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scalibregma inflatum	2	1	1	0	0	0	1	1	0	0	0	2	1	1	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0
Armandia brevis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Travisia brevis	0	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	2	0	0	0	0	0	1	0	2	0	0
Ophelina sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ophelina lumicina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophelia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophelia acuminata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sternapsis scutata	0	0	0	0	1	0	8	2	2	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Capitella capitata complex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notomastus lineatus	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3	1	1	0	0	0	2	1	0
Mediomastus sp.	0	0	0	0	0	0	0	0	0	0	0	5	3	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
Mediomastus californiensis	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decamastus gracilis	0	1	1	3	0	0	0	1	0	1	2	1	1	1	1	0	1	0	0	0	0	2	0	1	0	1	0	0	0	0	0
Maldanidae sp.	4	0	6	2	4	6	1	18	5	1	3	2	3	1	4	0	2	1	1	0	0	8	5	1	0	1	0	0	0	0	0
Maldane glebifer	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nicomache lumbricallis	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notoproctus pacificus	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Petaloproctus tenui borealis	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Axiothella rubrocinata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Praxillela sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Praxillela gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhodine bitorquata	1	1	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Euchymere nr. geralis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euchymene zonalis	0	0	0	8	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	11	12	0	0	0	2	0	0	0	0
Clymenura columbiana	0	2	4	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Isocirrus longiceps	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3 Hecate Strait Cruise II species abundance data (continued)

	STATION																													
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
Oweniidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Owenia fusiformis	10	5	18	4	0	0	0	0	0	6	4	2	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Myriochele sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Myriochele heeri	45	46	62	26	26	1	3	9	2	28	10	9	14	4	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Galathowenia nr. oculata	11	20	43	48	19	0	5	10	1	5	8	6	26	8	16	3	8	5	10	6	1	0	3	0	1	0	0	1	0	0
Sabellidae	3	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	5	0	0	0	0	0	0	0
Idanthyrsus ornamentatus	1	1	0	0	0	2	0	0	3	0	0	2	0	0	1	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0
Sabellaria cementarium	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria granulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Pectinaria californiensis	0	0	1	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Ampharetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amage anops	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ampharete sp.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Ampharete acutifrons	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	1	3	0	0	1	0	0	0	0	0	0
Ampharete finmarchica	5	8	12	2	0	1	0	0	8	0	0	0	3	0	3	0	0	0	0	0	0	0	11	0	1	1	0	1	0	0
Amphicteis sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lysippe labiata	0	0	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mellina cristata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anobothrus gracilis	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schistocomus hiltoni	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0
Terebellidae sp.	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Terebellidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neoamphritite robusta	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pista cristata	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	3	8	2	0	0	0	0	0	0	0	0	0	0	0
Pista brevibranchiata	0	0	0	0	0	0	0	1	2	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Polycirrus complex	1	3	3	3	0	1	0	1	0	5	0	0	3	0	0	12	30	13	22	8	7	8	9	56	3	2	9	13	4	5
Thelepus cincinnatus	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Thelepus japonicus	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artacama conifera	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Artacamella hancocki	2	2	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scionella estevanica	4	4	10	0	1	1	0	0	0	6	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Strehlosoma bairdi	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellides stroemi	3	1	1	2	4	0	1	4	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megalonidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Chone dunneri	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	2	0	1	0	1	0	0	0	0
Chone ecaudata	0	4	2	1	0	1	0	1	0	1	1	0	0	0	0	0	1	1	0	0	0	2	0	1	0	0	0	0	0	0
Euchone nr. analis	3	1	11	5	2	1	0	3	1	5	1	6	1	1	2	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0
Eudistylia catharinal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Megaloma splendida	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Pseudochitinopoma occidentalis	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crucigera irregularis	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crucigera zygophora	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Archianellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polygordius sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetoderma sp.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Punctarella galeata	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0
Acmaeidae	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Margarites ? helicinus	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	0
Solariella permabilis	6	9	4	1	0	4	0	1	0	5	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alvinia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caecum crebricinctum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Bittium sp.	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Epitonium ? indianorum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Balcis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Calyptraea fastigata	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crepidula sp.	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Crepipatella lingulata	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natica clausa	0	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Polinices lewisii	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0
Amphissa columbiana	2	2	0	5	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitrella gouldii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Neptunea lirata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	9	0	0	6	0	1	0	2	0	1
Nassarius mendicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Olivella baetica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Admete couthouyi	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Mangelia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oenopota excurvata	18	8	10	2	0	2	0	0	1	44	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Odostomia sp.	0	1	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turbonilla sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Cephalaspidea	0	2	0	2	0	1	0	0	0	4	0	0	4	0	1	0	2	0	0	1	0	0	0	0	0	1	0	0	1	1
Acteocina eximia	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Cylichna attonsa	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ischnochitonidae	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidozona mertensii	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acila castrensis																														

Appendix 3. Stations C1a to D7e

	STATION																												
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
Owenidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Owenia fusiformis	0	0	0	1	0	0	0	1	0	0	1	13	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Myriochele sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Myriochele heeri	0	0	0	0	0	0	0	0	0	1	0	3	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1
Galathowenia nr. oculata	2	4	16	10	11	8	5	22	21	22	8	24	52	27	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabellidae	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idanthyrsus ornamentatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabellaria cementarium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria granulata	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria californiensis	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amage anops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharete sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharete acutifrons	0	0	2	0	2	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharete finmarchica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Amphicteis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lysippe labiata	0	0	2	2	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mellina cristata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anobothrus gracilis	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schistocomus hiltoni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellidae sp.	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Neoamphritrite robusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pista cristata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Pista brevibranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polycirrus complex	6	0	38	11	1	26	0	0	30	49	55	45	43	15	13	0	0	0	3	0	1	4	9	2	2	0	0	0	0	0
Thelepus cincinnatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thelepus japanicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artacama conifera	0	0	0	0	0	2	0	0	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artacamella hancocki	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scionella estevanica	1	0	6	0	0	0	0	10	13	5	5	19	23	9	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Streblosoma bairdi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellides stroemi	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megalonidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chone dunneri	0	0	0	0	0	1	0	0	1	2	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chone ecaudata	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euchone nr. analis	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eudistylia catharinal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megaloma splendida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudochitinopoma occidentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crucigera irregularis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crucigera zygophora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Archianellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Polygordius sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
Chaetoderma sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Punctarella galeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acmaeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Margarites ? helicinus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solariella peramabilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alvinia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	2	0	0	0	0	0	1
Caecum crebricinctum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
Bittium sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Epitonium ? indianorum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balcis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calyptraea fastigata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crepidula sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crepipatella lingulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natica clausa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polinices lewisii	0	0	0	0	1	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Amphissa columbiana	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitrella gouldii	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colus sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Neptunea lirata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Nassarius mendicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Olivella baetica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	2	0	1	1	1	0	1	0	1	0	1	0	0
Admete couthouyi	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mangelia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oenopota excurvata	0	0	0	0	0	1	0	1	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odostomia sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Turbonilla sp.	0	0	3	9	2	0	0	0	1	1	2	3	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cephalaspidea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acteocina eximia	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cylichna attonsa	0	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ischnochitonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidozona mertenzii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acila castrensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3. Hecate Strait Cruise II species abundance data (continued)

	STATION																												
	A 1 1 a	A 1 1 b	A 1 1 c	A 1 1 d	A 1 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 1 a	B 1 1 b	B 1 1 c	B 1 1 d	B 1 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
Nucula tenuis	0	1	8	0	0	1	0	1	0	3	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana pernula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia amygdalea	14	14	8	0	10	4	0	0	2	1	6	4	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycemeris subobsoleta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	2	0	0	0	0	0	4
Crenella decussata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dacrydium vitreum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parvamussium alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delectopecten vancouverensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinidae	0	0	3	4	0	1	0	0	0	0	0	5	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinoma annulata	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucina tenuisculpta	5	4	4	7	6	3	0	0	3	3	1	3	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Axinopsida serricata	48	59	58	62	0	20	2	7	52	103	45	71	149	74	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thyasira gouldi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mysella compressa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Mysella tumida	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mysella tumida	8	4	9	3	0	2	0	0	1	1	0	0	2	1	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclocardia ventricosa	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tridonta alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinocardium ciliatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	1	0	0	0	2	1	0
Clinocardium fucanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Nemocardium centifilosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spisula falcata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	20	6	18	16	5	0	2	2	0	14	2	13	0	20
Macoma sp.	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma elimata	0	0	0	0	0	2	3	0	0	2	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma lipara	0	0	1	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tellina nuculoides	3	3	3	4	6	0	0	3	13	14	8	15	6	5	7	76	227	235	220	140	135	220	52	133	0	203	92	167	0	89
Tellina carpenteri	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Compsomyax subdiaphana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psephidia lordi	0	0	0	0	0	0	3	39	5	1	0	10	2	12	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hiatella arctica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pandora bilirata	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Lyonsia californica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiomya pectinata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Pulsellum salishorum	0	0	2	3	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dentalium pretiosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dentalium rectius	0	0	0	2	0	6	5	1	2	1	3	3	9	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Cadulus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyschides californicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Achelia alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bathylebris sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rutiderma sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euphilomedes producta	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	1	1
Balanidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	1	0	0
Balanus crenatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Solidobalanus hesperius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nebaliacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leucon sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eudorella pacifica	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eudorellopsis longirostris	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylis sp.	1	0	0	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylopsis sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylopsis dawsoni	1	1	1	5	2	0	0	10	0	2	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylopsis tenuis	0	0	0	1	1	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Campylaspis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vaunthompsonia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptognathia	0	0	0	0	0	0	0	0	0	0	0	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gnathia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gnathia triloblata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	2	0	0	0	0	0
Synidotea nebulosa	1	0	1	1	1	1	0	2	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synidotea media	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jaeropsis dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampelisca sp.	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampelisca macrocephala	9	10	5	15	12	8	1	8	30	16	10	7	4	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampelisca cristata	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Byblis sp.	2	1	0	1	2	0	0	0	0	4	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Byblis gammairdi	0	1	3	2	0	1	0	0	4	0	1	5	0	3	8	0	0	0	0	0	0	0	1	0	2	1	1	0	0	0
Haploops tubicola	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Photis sp.	0	0	0	1	1	7	0	0	0	0	2	0	0	1	1	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0
Photis brevipes	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	2	1	0	0	1	2	0	0
Cheirimedia sp.	0	0	0	0	0	2	0	3	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ischyrocerus abguipes	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lysianassidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	5	1	6	2	1	0	0	0	0	0
Lepidepecreum sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	2	15	0	10	2	8	3	25	2	2	0	1	2
Pachynus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	1	1	2	1	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0

Appendix 3. Stations C1a to D7e

	STATION																													
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
Nucula tenuis	0	1	0	3	5	3	1	4	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana pernula	0	1	1	1	1	4	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana minuta	0	1	1	4	2	1	1	1	11	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia amygdalea	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycymeris subobsoleta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crenella decussata	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dacrydium vitreum	0	8	2	11	1	10	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parvamussium alaskensis	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delectopecten vancouverensis	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinoma annulata	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucina tenuisculpta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Axinopsida serricata	40	13	26	63	15	13	9	48	0	6	11	22	48	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thyasira gouldi	0	0	0	4	0	0	8	4	0	0	7	10	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mysella compressa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mysella tumida	0	5	3	2	2	2	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mysella tumida	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyclocardia ventricosa	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tridonta alaskensis	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinocardium ciliatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinocardium fucanum	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemocardium centifilosum	0	1	5	0	2	2	0	0	4	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spisula falcata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma elimata	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma lipara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tellina nuculoides	0	3	1	4	0	1	1	2	0	1	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tellina carpenteri	0	5	1	4	0	5	1	6	0	2	1	1	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Compsomyax subdiaphana	0	1	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psephidia lordi	0	73	42	9	8	20	0	10	0	71	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hiatella arctica	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pandora bilirata	0	3	0	3	1	3	0	4	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyonsia californica	0	0	1	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiomya pectinata	0	1	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pulsellum salishorum	5	16	21	16	7	1	7	18	13	17	4	5	7	2	4	2	0	0	0	2	0	2	2	0	2	2	0	0	7	0
Dentalium pretiosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Dentalium rectius	0	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cadulus sp.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyschides californicus	0	0	0	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Achelia alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bathylebris sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rutiderma sp.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euphilomedes producta	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balanidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balanus crenatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solidobalanus hesperius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nebaliacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Leucon sp.	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eudorella pacifica	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Eudorellopsis longirostris	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Diastylis sp.	2	1	0	2	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylopsis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylopsis dawsoni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylopsis tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Campylaspis sp.	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Vaunthompsonia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Leptognathia	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Gnathia sp.	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gnathia triloblata	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synidotea nebulosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synidotea media	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jaeropsis dubia	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampelisca sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampelisca macrocephala	2	5	1	3	1	1	2	3	0	0	1	2	1	0	1	3	2	0	3	1	4	0	3	2	1	3	2	10	2	1
Ampelisca cristata	4	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	1	8	0	0	8	0	0	0	0	0	0
Byblis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Byblis gammairdi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	0	0	0	0	2	0
Haploops tubicola	1	2	0	1	0	0	0	1	2	0	1	0	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Photis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Photis brevipes	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Cheirimedia sp.	1	0	0	0	0	0	0	2	1	0	2	3	0	0	0	0	1	1	0	1	0	1	1	7	3	0	1	2	1	2
Ischyrocerus abguipes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lysianassidae	2	6	1	2	0	0	0	4	1	1	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0	1	0
Lepidepecreum sp.	1	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pachynus sp.	0	0	0	0	1	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3. Hecate Strait Cruise II species abundance data (continued)

	STATION																														
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
Oedicerotidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synchelidium shoemakeri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2	0	1	1	0	1	0	0	0
Nicippe tumida	0	0	0	1	0	0	1	0	1	4	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heterpphoxus oculatus	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhepoxynius sp.	0	0	0	0	0	0	1	0	3	3	1	0	4	1	3	0	2	1	19	3	10	1	2	1	20	2	0	0	0	0	0
Grandifoxus sp.	1	3	1	10	9	1	1	1	3	6	5	0	10	11	10	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Foxiphalus obtusiden	10	2	1	0	2	0	1	0	5	3	0	8	1	3	5	1	0	2	5	0	10	8	10	1	15	3	0	9	2	1	1
Parapleustes sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	1	2	0	1	4	0	0	0	0	2
Podocerus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tiron biocellata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	3	1	0	0	1	1	1
Caprella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thysanoessa spinifera	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crangon alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crangon alba	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Paguridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Pagarus armatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Pugettia richii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cancer gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinnixa sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinnixa occidentalis	2	2	4	1	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Sipunculus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Golfingia sp.	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golfingia cf. vulgaris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Echiurus echiuris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phoronopsis harmeri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Henricia sanguinolenta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura luetkeni	1	0	1	3	0	0	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura sarsi	7	9	1	2	3	0	0	5	6	4	6	9	7	10	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphiuridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphiodia periercta	0	0	0	1	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphipholis putagana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphipholis squamata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphioplus strongyloplax	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dendraster exentricus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	1	13	10	0	5	3	16	3	30	0	0	15	9	3	3
Pentamara	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Havelockia benti	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptosynapta routana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chirodota nanaimensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Chelyosoma columbianum	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 3. Stations C1a to D7e

	STATION																														
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
Oedicerotidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Synchelidium shoemakeri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Nicippe tumida	1	2	0	1	1	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heterophoxus oculatus	1	8	1	1	0	1	8	3	1	0	1	0	2	0	2	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0
Rhepoxynius sp.	0	0	0	1	1	1	0	2	1	1	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grandifoxus sp.	0	0	1	0	0	1	0	0	3	1	2	1	1	1	3	0	1	1	0	1	0	0	0	5	1	1	2	5	3	1
Foxiphalus obtusidens	10	0	0	0	1	0	0	2	1	0	1	2	1	1	2	0	0	0	2	1	0	2	0	3	5	2	3	8	3	0
Parapleustes sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Podocerus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0
Tiron biocellata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Caprella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thysanoessa spinifera	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crangon alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crangon alba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Paguridae	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Pagarus armatus	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Pugettia richii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Cancer gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pinnixa sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	2	0	0	0	0
Pinnixa occidentalis	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Sipunculus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golfingia sp.	0	1	2	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golfingia cf. vulgaris	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Echiurus echiuris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phoronopsis harmeri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Henricia sanguinolenta	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura sp.	1	0	3	1	1	0	0	0	7	3	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura luetkeni	4	5	2	0	1	2	0	0	7	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Ophiura sarsi	3	3	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Amphiuridae	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Amphiodia periercta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphipholis putagana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Amphipholis squamata	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphioplus strongyloplax	0	0	5	4	1	0	5	3	0	0	3	1	2	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dendraster exentricus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pentamera	0	0	1	0	0	1	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Havelockia benti	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptosynapta routana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chirodota nanaimensis	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chelyosoma columbianum	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Hecate Strait Cruise III species abundance data.

	STATION																												
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
PORIFERA																													
Scypha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Myxilla incrustans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CNIDARIA																													
Campanularidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sertularella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Halecium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anthozoa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ptilosarcus guerneyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
NEMERTEA	1	1	0	4	2	3	0	0	0	6	4	1	2	3	0	0	2	0	2	2	8	1	1	1	3	5	1	2	1	1
Cerebratulus sp.	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POLYCHAETA																													
Polychaeta indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
Polynoidae	0	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Eunoe sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gattyana cirrosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gattyana ciliata	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidonotus squamatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polynoe canadensis	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidasthenia berkeleyae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pholoides aspera	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pholoe minuta	1	1	1	2	0	7	1	0	3	0	1	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sigalion sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Pisione remota	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0
Paleonotus belli	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodocidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce groenlandica	1	0	0	0	1	3	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce mucosa	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eteone sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eteone longa	0	1	0	1	1	1	0	0	0	1	1	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eulalia bilineata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parnaitides polynoides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nesionura coineaui difficilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	2	1	0	0	0	0	0	0	0
Eumida sanguinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nesionidae sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	169	0	0	1	0	0	1
Micropodarke dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Syllidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Autolytus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Syllis sp.	0	0	0	0	0	0	0	0	0	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis alternata	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Syllis elongata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	1	2	1	2	6	10
Syllis hyalina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exogone lourei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerosyllis brandhorsti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontosyllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontosyllis phosphorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	1	0	0	4	2	2	0	1
Dioplosyllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nereis sp.	0	0	0	0	0	0	0	0	0	1	3	1	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0
Neiris zonata	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys sp.	0	0	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Nephtys ciliata	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys cornuta franciscanum	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys punctata	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0
Nephtys longosetosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys ferruginea	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0
Nephtys nr. californiensis	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	1	0	0	0	1	0	0
Nephtys assignis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glyceridae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Glycera tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0
Glycera capitata	2	1	2	7	3	1	0	1	1	2	4	2	4	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycera americana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	2	5	3	18	9	1	2	0	1	3
Hemipodus borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycinde armigera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goniada maculata	1	2	0	0	2	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goniada brunnea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis conchlyega	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis geophiliformis	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis iridescens	0	0	0	0	2	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1
Onuphis elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris sp.	0	0	0	3	0	0	0	0	0	1	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris bicirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Stations C1a to D7e.

	STATION																													
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
PORIFERA																														
Scypha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Myxilla incrustans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
CNIDARIA																														
Campanulariidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Sertularella sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Halecium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Anthozoa	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ptilosarcus guerneyi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEMERTEA																														
Nemertea	3	2	2	2	0	0	0	0	2	0	0	2	0	2	0	0	0	1	2	1	3	0	2	1	0	0	0	0	0	0
POLYCHAETA																														
Cerebratulus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polychaeta	0	5	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polynoidae	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	1	0	0	0	0
Eunoe sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gattyana cirrosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0
Gattyana ciliata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidonotus squamatus	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polynoe canadensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidasthenia berkeleyae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Pholoides aspera	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	29	13	0	0	0	0	1	0	0	0
Pholoe minuta	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	0	0	0	0	0
Sigalion sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4	0	1	0	0	0
Pisione remota	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Paleonotus belli	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodocidae	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce groenlandica	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Phyllodoce mucosa	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Eteone sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eteone longa	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Eulalia bilineata	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Parnaitides polynoides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Nesionura coineaui difficilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eumida sanguinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	3	0	0	0	3	5	0	0	0	0	0	0
Nesionidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Micropodarke dubia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllidae	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Autolytus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syllis sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Syllis alternata	1	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0
Syllis elongata	0	2	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0
Syllis hyalina	0	0	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Exogone lourei	7	5	0	0	19	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sphaerosyllis brandhorsti	0	0	11	10	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontosyllis sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odontosyllis phosphorea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Dioplosyllis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nereis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Neiris zonata	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Nephtys sp.	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Nephtys ciliata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Nephtys cornuta franciscanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys punctata	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nephtys longosetosa	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	0	0	5	4	6	5	4	0	2
Nephtys ferruginea	0	1	0	0	0	0	1	1	0	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Nephtys nr. californiensis	0	0	1	0	0	0	0	2	0	0	0	4	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Nephtys assignis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glyceridae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycera tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Glycera capitata	2	0	3	2	3	0	0	2	2	0	3	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Glycera americana	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemipodus borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycinde armigera	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Goniada maculata	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goniada brunnea	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphidae	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis sp.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis conchlyega	1	0	4	2	1	14	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Onuphis geophiliformis	0	1	0	2	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0
Onuphis iridescens	1	0	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Onuphis elegans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Lumbrineris sp.	1	0	0	0	3	0	0	0	1	2	1	0	0	1	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0
Lumbrineris bicirrata	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Hecate Strait Cruise III species abundance data (continued).

	STATION																												
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
Spionidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laonice cirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora giardi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora socialis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora brachycephela	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora cardiala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionopsio cirrifera	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prionopsio steenstrupi	9	4	9	29	13	19	1	2	6	11	17	10	32	3	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spio filicornis	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spio sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	4	6	5	6	1	0	3	8	3	2	6	13	
Spiophanes bombyx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	77	23	143	204	31	2	54	20	83	46	107	217	
Spiophanes berkeleyorum	25	24	34	166	37	33	0	0	0	21	5	6	18	4	19	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0
Aonides sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4	8	5	6	7	
Magelona hobsonae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Magelona longicornis	7	3	11	15	9	4	1	0	0	3	3	5	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Magelona sacculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
Phyllochaetopterus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Spiochaetopterus costarum	2	2	3	1	1	0	0	0	0	2	4	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cirratullidae	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	1	
Caulleriella nr. oculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Caulleriella nr. hioculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tharyx sp.	1	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tharyx tesselata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chaetozone sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chaetozone setosa	3	0	0	4	0	5	0	0	2	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chaetozone spinosa	0	1	1	15	2	5	0	0	12	6	7	1	7	8	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cossura longocirrata	0	1	0	1	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Brada villosa	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Scalibregma inflatum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Asclerocheilus beringianus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	1	0		
Armandia brevis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Travisia sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Travisia brevis	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ophelina breviata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	1	
Ophelina acuminata	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sternapsis scutata	1	0	0	4	1	3	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Capitellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Capitella capitata	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Notomastus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Notomastus lineatus	3	0	0	0	0	1	0	0	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mediomastus sp.	34	11	15	131	13	17	1	1	2	31	26	16	18	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Decamastus gracilis	6	19	10	24	15	15	3	0	1	15	6	9	0	13	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
Maldanidae sp.	7	13	1	19	6	1	1	2	0	5	5	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maldane glebifer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Nicomache sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Nicomache lumbricalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Notoproctus pacificus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Petaloproctus tenuis tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	1	0	0	0	0	0	
Axiothella rubrocinata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Praxillella gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rhodine bitoquata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lumbrineris luti	19	11	8	32	12	11	0	0	4	9	4	6	20	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lumbrineris limicola	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ninoe gemmea	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lumbrineris acuta	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	4	3	5	1	1	1	1	0	1	1	3	
Arabellidae	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Drilonereis falcata minor	1	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dorvillea pseudorubrovittata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Protodorvillea gracilis	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Schistomeringos annulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leitoscoloplos pugettensis	1	3	2	6	3	0	0	0	6	1	1	8	14	7	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Scoloplos armiger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Scoloplos acmeceps	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Orbinia (phylo) felix	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aricidea nr. suecica	5	1	5	7	0	1	0	0	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aricidea neosuecica	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aricidea quadrilobata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aricidea minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aricidea ramosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Levinsenia gracilis	0	0	0	2	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aricidea nr. cerruti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	4	1	0	0	0	2	0	0	1	
Apistobranchus ornatus	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Appendix 4. Stations C1a to D7e.

	STATION																												
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
Spionidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Laonice cirrata	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora giardi	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Polydora socialis	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Polydora brachycephela	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polydora cardiala	0	1	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Prionopsio cirrifera	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Prionopsio steenstrupi	5	0	7	5	6	2	2	3	3	5	9	2	8	15	4	1	2	2	3	7	0	2	1	0	0	0	0	0	0	1
Spio filicornis	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spio sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	2	0	3	0	1	1	0	1	5	0
Spiophanes bombyx	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	17	3	10	31	12	0	2	24	0	9	19	8	15	1
Spiophanes berkeleyorum	20	0	1	0	0	0	0	0	1	9	3	0	0	1	0	1	1	1	0	6	1	0	6	1	6	1	3	1	3	0
Aonides sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magelona hobsonae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Magelona longicornis	0	1	2	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0
Magelona sacculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0
Phyllochaetopterus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Spiochaetopterus costarum	50	32	58	59	26	7	8	8	15	0	16	15	3	19	17	0	0	2	0	5	0	3	19	0	0	0	0	0	0	0
Cirratullidae	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
Caulleriella nr. oculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caulleriella nr. bioculata	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Tharyx sp.	0	4	3	3	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
Tharyx tesselata	5	12	12	11	19	0	0	0	14	0	0	1	1	0	2	0	0	0	0	0	0	3	13	0	0	0	0	0	0	0
Chaetozone sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chaetozone setosa	0	0	3	3	0	0	0	0	3	0	0	1	0	2	0	0	9	9	2	17	0	1	0	2	8	3	5	3	2	2
Chaetozone spinosa	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cossura longocirrata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brada villosa	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scalibregma inflatum	0	1	0	0	1	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
Asclerocheilus beringianus	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Armandia brevis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Travisia sp.	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Travisia brevis	1	0	0	0	0	0	0	0	2	0	1	0	0	0	0	3	0	0	0	0	1	0	0	1	0	2	1	3	0	1
Ophelina breviata	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophelina acuminata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	2	1	0	0
Sternapsis scutata	0	0	0	0	0	0	2	2	0	2	2	4	3	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capitellidae	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capitella capitata	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notomastus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Notomastus lineatus	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	4	4	0	0	4	6	1	0	2	3	2	2	2
Mediomastus sp.	30	0	1	0	0	0	3	0	6	9	6	3	0	1	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
Decamastus gracilis	0	2	0	1	0	0	1	1	0	2	5	4	0	2	3	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
Maldanidae sp.	1	11	8	0	11	0	0	2	11	0	3	12	5	3	0	1	1	1	0	0	0	7	7	0	0	0	0	0	0	0
Maldane glebifer	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nicomache sp.	0	2	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nicomache lumbricalis	1	0	0	0	3	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notoproctus pacificus	3	11	14	4	5	0	0	0	23	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Petaloproctus tenuis tenuis	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Axiothella rubrocinata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Praxillella gracilis	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhodine bitoquata	1	2	3	1	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Lumbrineris luti	10	3	1	1	1	0	2	2	1	0	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris limicola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ninoe gemmea	0	0	0	0	0	0	0	0	0	0	1	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lumbrineris acuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arabellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Drilonerис falcata minor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dorvillea pseudorubrovittata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Protodorvillea gracilis	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schistomeringos annulata	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leitoscoloplos pugettensis	0	2	0	0	1	0	1	1	0	0	1	5	5	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scoloplos armiger	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Scoloplos acmeceps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Orbinia (phylo) felix	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	5	0	0	0	0	3	1	0	2	1	0
Aricidea nr. suecica	0	0	0	1	0	0	0	0	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Aricidea neosuecica	7	5	11	6	7	2	1	0	10	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea quadrilobata	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea minuta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Aricidea ramosa	0	3	0	0	1	0	3	0	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Levinsenia gracilis	0	0	0	0	0	0	1	1	1	0	2	2	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aricidea nr. cerruti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apistobranchus ornatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Hecate Strait Cruise III species abundance data (continued).

	STATION																														
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
Euclymene zonalis	29	38	41	96	57	31	0	0	4	42	43	34	29	24	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clymenura columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Owenia fusiformis	0	1	2	2	1	0	0	15	0	0	1	7	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0
Myriochele heeri	0	0	0	0	2	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Galathowenia nr. oculata	4	9	10	10	9	14	0	12	12	18	19	12	22	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabellidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Idanthyrus ornamentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabellaria cementarium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria granulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pectinaria californiensis	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharetidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharetidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amage anops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharete acutifrons	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharete finmarchia	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphicteis scaphobranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lysippe labiata	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Melinna cristata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anobothrus gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asabellides lineata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schistocomus hiltoni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Terebellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nicolea zostericola	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Pista cristata	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pista elongata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Pista brevibranchiata	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pista moorei	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	0	0	0	0	0	0	0
Polycirrus sp. complex	15	13	6	88	18	11	0	0	15	55	48	35	42	49	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thelepus cincinnatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thelepus japonica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artacama conifera	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artacamella hancocki	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scionella estavanica	3	2	4	6	3	0	0	10	4	4	8	5	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellides stroemi	1	0	0	2	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabellidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Chone dunneri	0	0	0	1	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chone ecaudata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euchone nr. analis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euchone ecaudata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megalomma splendida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabella (demonax) pacifica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pseudochitinopoma occidentali s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crucigera zygophora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spirorbis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Archiannelida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	1	1	3	0	1	1	0		
Polygordius sp.																															
MOLLUSCA																															
GASTROPODA																															
Gastropoda indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Punctarella galeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acmaeidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Margarites sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Margarites pupillus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solariella permabilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Alvania sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	5	0	0	0	0	0	0	0
Caecum crebricinctum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bittium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Balcis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trichotropis cancellata	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Crepipatella lingulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natica clausa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polinices lewisii	0	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphissa columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mitrella gouldii	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colus sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	3	0	2	0	0	0	1	0	0	0	0	0
Olivella baetica	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oenopota turricula	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Odostomia sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Turbonilla sp.	2	0	0	4	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acteocina culcitella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acteocina eximia	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cylichna attonsa	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Stations C1a to D7e.

	STATION																														
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
Euclymene zonalis	23	0	5	5	0	0	7	6	14	23	0	3	1	7	4	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0
Clymenura columbiana	0	7	1	0	7	0	0	0	8	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Owenia fusiformis	32	2	21	19	6	6	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Myriochele heeri	40	6	68	49	18	3	9	9	7	0	7	2	10	8	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Galathowenia nr. oculata	34	5	59	49	19	18	20	14	15	6	13	24	11	15	8	3	1	0	1	1	0	0	3	0	1	0	1	0	0	0
Sabellidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
Idanthyrus ornamentalis	0	0	1	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
Sabellaria cementarium	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Pectinaria granulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Pectinaria californiensis	2	0	0	0	0	0	0	1	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ampharetidae	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ampharetidae sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Amage anops	1	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Ampharete acutifrons	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	2	0	1	1	0	0	0
Ampharete finmarchia	2	0	6	2	5	2	3	2	7	0	1	1	4	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
Amphicties scaphobranchiata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Lysippe labiata	1	0	1	0	1	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Melinna cristata	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anobothrus gracilis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Asabellides lineata	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Schistocomus hiltoni	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellidae	1	0	3	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	0	3	0	0	0	0	0	0	0	0
Nicolea zostericola	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pista cristata	0	0	0	0	2	3	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1	1	0	0	0
Pista elongata	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pista brevibranchiata	4	5	0	0	2	0	0	0	7	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	2	0	0	0
Pista moorei	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polycirrus sp. complex	14	4	2	4	4	2	0	0	14	9	2	0	0	4	0	3	3	2	1	6	2	7	5	6	6	3	9	2	5	0
Thelepus cincinnatus	0	3	0	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thelepus japonica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Artacama conifera	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Artacamella hancocki	1	0	3	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scionella estavanica	2	0	5	3	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebellides stroemi	2	3	5	3	0	0	2	2	5	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabellidae	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Chone dunneri	0	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Chone ecaudata	1	0	4	0	4	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euchone nr. analis	10	5	11	5	1	1	0	0	2	0	0	0	1	2	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
Euchone ecaudata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Megalomma splendida	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sabella (demonax) pacifica	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Pseudochitinopoma occidentalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Crucigera zygophora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Spirorbis sp.	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Archiannelida	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polygordius sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MOLLUSCA																														
GASTROPODA																														
Gastropoda indet.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Punctarella galeata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Acmaeidae	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	11	0	0	0	0	0	0	0	0
Margarites sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Margarites pupillus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Solariella permabilis	2	0	1	2	3	4	0	0	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0
Alvania sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Caecum crebricinctum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bittium sp.	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	0	3	2	0	0	0	0	0	0	0	0	0	0
Balcis sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Trichotropis cancellata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crepipatella lingulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0
Natica clausa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Polinices lewisii	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphissa columbiana	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
Mitrella gouldii	2	0	1	2	0	2	0	0	0	0	0	0	2	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
Colus sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Olivella baetica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	1	5	0	0	12	5	2	3	4	2	3
Oenopota turricula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Odostomia sp.	4	0	7	6	6	2	0	0	3	6	0	0	0	1	0	0	0	0	0	1	0	2	6	0	0	0	0	0	0	0
Turbonilla sp.	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Acteocina culcitella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Acteocina eximia	0	0	0	0	1	2	0	0	1	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	2	0	0	0	0	0
Cylinchna attonsa	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	2	1	0	0	1	0	0

Appendix 4. Hecate Strait Cruise III species abundance data (continued).

	STATION																												
	A 1 a	A 1 b	A 1 c	A 1 d	A 1 e	A 2	A 3	A 4	A 5	A 6	A 7 a	A 7 b	A 7 c	A 7 d	A 7 e	B 1 a	B 1 b	B 1 c	B 1 d	B 1 e	B 2	B 3	B 4	B 5	B 6	B 7 a	B 7 b	B 7 c	B 7 d	B 7 e
POLYPLACOPHORA																													
Polyplachophora indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ischnochitonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidochitona flectens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lepidozona mertenzii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APLACOPHORA																													
Aplacophora indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PELECYPODA																													
Acilia castrensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nucula tenuis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana fossa	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nuculana taphria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia myalis	0	1	0	7	1	0	0	0	2	0	2	1	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia scissurata	0	0	1	0	1	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia martyria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Glycymeris subobsoleta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	1	0	0	1	3	0
Crenella decussata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rhomboidiella columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Musculus cultellus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decrydium vitreum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlamys rubida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delectopecten vancouverensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinoma annulata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucina tenuisculpta	10	3	5	1	3	5	0	0	1	3	0	6	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adontorhina cyclia	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Axinopsida serricata	0	5	8	81	41	6	3	7	8	15	57	11	26	19	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thyasira gouldii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mysella tumida	1	0	1	1	1	2	0	0	1	0	0	0	5	1	2	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	2
Cyclocardia ventricosa	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tridonta borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tridonta montagui	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Astarte alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Astarte esquimalti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clinocardium nuttalli	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Clinocardium fucanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nemocardium centifilosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	121	1	1	0	0	1	0	2	2	9	3
Spisula falcata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma eliminata	1	1	0	1	1	1	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma lipara	0	2	1	0	1	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma yoldiformis	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma carlottensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	347	99	256	195	2	354	136	104	12	387	348	174	158	168	241
Tellina nuculoides	0	0	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tellina carpenteri	1	0	0	0	0	0	0	0	0	0	1	3	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tellina buttoni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transenella tantilla	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Compsomyax subdiaphana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psephidia lordi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hiatella arctica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pandora bilareta	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyonia bracteata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyonsia californica	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lyonsia striata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiomya planetica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCAPHOPODA																													
Pulsellum salishorum	2	0	0	3	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Laevidentalium dalli	0	1	0	2	2	0	1	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dentalium pretiosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Polyschides californicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTACEA																													
OSTRACODA																													
Rutiderma sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euphilomedes carcharodonta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euphilomedes producta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scleroconcha trituberculata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CIRRIPEDIA																													
Balanus crenulatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
Nebaliacea indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nebalia pugettensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CUMACEA																													
Eudorella pacifica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eudorellopsis longirostris	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Stations C1a to D7e.

	STATION																														
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
POLYPLACOPHORA																															
Polyplachophora indet.	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ischnochitonidae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0
Lepidochitona flectens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Lepidozona mertenzii	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
APLACOPHORA																															
Aplacophora indet.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PELECYPODA																															
Acilia castrensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	4	0	0	0	0	0	0	0	0	0
Nucula tenuis	1	0	1	0	2	7	0	0	0	0	1	4	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	1
Nuculana fossa	0	5	4	3	5	1	1	0	7	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0
Nuculana taphria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Yoldia myalis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia scissurata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yoldia martyria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Glycymeris subobsoleta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Crenella decussata	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Rhomboidiella columbiana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Musculus cultellus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Dacrydium vitreum	4	1	2	1	1	0	1	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chlamys rubida	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
Delectopecten vancouverensis	1	0	0	0	1	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
Lucinidae	3	0	4	3	8	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucinoma annulata	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lucina tenuisculpta	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adontorhina cyclia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Axinopsida serricata	27	1	27	12	19	1	29	0	6	0	10	42	35	23	0	10	27	26	16	35	4	0	4	17	32	26	45	41	38	4
Thyasira gouldii	0	0	0	0	0	0	0	0	0	0	1	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mysella tumida	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0	1	1	1	1	1	1	0	0	0
Cyclocardia ventricosa	0	1	1	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Tridonta borealis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Tridonta montagui	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Astarte alaskensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Astarte esquimalti	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
Clinocardium nuttalli	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
Clinocardium fucanum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Nemocardium centifilosum	1	2	1	1	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spisula falcata	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Macoma eliminata	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma lipara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Macoma yoldiformis	0	0	0	0	0	0	0	0	0	0	0	4	3	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Macoma carlottensis	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tellina nuculoides	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	2	0	0	0	0	0	0	0	0
Tellina carpenteri	7	1	3	4	6	6	3	0	1	0	1	2	0	3	0	2	3	3	3	3	2	0	1	1	3	1	0	3	1	0	0
Tellina buttoni	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Transenella tantilla	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Compsomyax subdiaphana	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	0	0	0	0	0	0	0
Psephidia lordi	0	0	11	14	5	1	2	0	7	0	3	0	2	2	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Hiatella arctica	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Pandora bilareta	2	0	0	1	2	2	0	0	0	0	0	0	1	0	0	3	1	2	2	3	0	0	0	0	0	0	0	2	0	0	0
Lysonia bracteata	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Lysonsia californica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lysonia striata	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cardiomya planetica	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCAPHOPODA																															
Pulsellum salishorum	6	3	25	19	1	9	2	6	2	7	1	6	2	9	1	0	6	1	2	0	0	0	0	0	1	0	0	0	0	0	0
Laevidentalium dalli	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dentalium pretiosum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Polyschides californicus	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTACEA																															
OSTRACODA																															
Rutiderma sp.	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Euphilomedes carcharodonta	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Euphilomedes producta	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scleroconcha trituberculata	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
CIRRIPEDIA																															
Balanus crenulatus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nebeliacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0
Nebalia pugettensis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
CUMACEA																															
Eudorella pacifica	0	0	0	1	1	0	2	1	0	0	0	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Eudorellopsis longirostris	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diastylidae	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Hecate Strait Cruise III species abundance data (continued).

	STATION																												
	A1a	A1b	A1c	A1d	A1e	A2	A3	A4	A5	A6	A7a	A7b	A7c	A7d	A7e	B1a	B1b	B1c	B1d	B1e	B2	B3	B4	B5	B6	B7a	B7b	B7c	B7d	B7e
SIPUNCULIDA																														
Sipunculida indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Golfingia margaritacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRYOZOA																														
Ectoprocta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0
Cheilostomes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ascophora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRACHIOPODA																														
Brachiopoda indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Terebratulina unguicula	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Laqueus californicus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ECHINODERMATA																														
Solasteridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura sp.	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura leutkeni	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophiura sarsi	0	0	0	2	0	0	0	0	4	1	8	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Amphiuridae	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphiodia periercta	0	0	1	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphiopholis pugetana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphipholus strongyloplax	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	20	4	10	12	21	14	10	0	5	6	15	22	11	35
Dendraster excentricus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Dendrochirote sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eupentacta sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pentamera sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptosynapta transgressor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UROCHORDATA																														
Aplidium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4. Stations C1a to D7e.

	STATION																												
	C1a	C1b	C1c	C1d	C1e	C2	C3	C4	C5	C6	C7a	C7b	C7c	C7d	C7e	D1a	D1b	D1c	D1d	D1e	D2	D3	D4	D5	D6	D7a	D7b	D7c	D7d	D7e
SIPUNCULIDA																														
Sipunculida	0	5	0	0	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Golfingia margaritacea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRYOZOA																														
Ectoprocta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
Cheilostomes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ascophora	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRACHIOPODA																														
Brachiopoda indet.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0
Terebratulina unguicula	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Laqueus californicus	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0
ECHINODERMATA																														
Solasteridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ophiura sp.	0	1	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Ophiura leutkeni	2	0	3	2	0	3	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0
Ophiura sarsi	0	0	3	2	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphiuridae	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amphiodia periercta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	1	0	0	0	0	0
Amphiopholis pugetana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
Amphipholus strongyloplax	0	2	2	1	2	0	3	2	1	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Dendraster excentricus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Dendrochirote sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eupentacta sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pentamera sp.	0	0	1	0	2	1	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leptosynapta transgressor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
UROCHORDATA																														
Aplidium sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Appendix 5. Wet Weight Biomass Estimates for Hecate Strait Cruise I Benthos – All values are given as grams tissue per grab sample. Values were originally calculated to 4 decimal places but are presented rounded to 2 decimal places.

TAXA	A-1a	A-1b	A-1c	A-1d	A-1e	A-2	A-3	A-4	A-5	A-6	A-7a	A-7b	A-7c	A-7d	A-7e
Nemertea	0.00	0.12	0.03	0.29	0.33	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.10	0.02	0.08
Polychaeta	1.08	0.79	2.63	1.16	2.97	1.31	0.42	0.51	0.34	1.42	1.53	1.17	2.42	1.39	1.76
Gastropoda	0.01	0.08	0.02	0.42	0.00	0.24	0.00	0.05	0.02	1.13	0.11	0.00	0.00	0.00	0.00
Pelecypoda	17.06	10.07	0.63	0.11	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.46	0.52	0.26	0.34
Scaphopoda	0.00	0.01	0.01	0.00	0.00	0.72	0.24	0.00	0.00	0.05	0.00	0.00	0.01	0.09	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amphipoda	0.03	0.04	0.12	0.00	0.03	0.02	0.02	0.03	0.03	0.00	0.03	0.03	0.01	0.02	0.02
Decapoda	0.21	0.02	0.03	0.00	0.03	0.00	0.03	0.02	0.00	0.15	0.02	0.11	0.00	0.00	0.01
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ophiuroidea	4.06	3.60	1.54	0.93	1.22	0.02	0.00	1.18	1.01	0.75	0.89	5.05	1.64	0.00	0.00
Echinoidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.00	11.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	22.46	14.72	5.01	2.92	4.57	2.31	12.10	1.91	1.40	3.50	2.59	6.81	4.70	1.78	2.21

TAXA	B-1a	B-1b	B-1c	B-1d	B-1e	B-2	B-3	B-4	B-5	B-6	B-7a	B-7b	B-7c	B-7d	B-7e
Nemertea	0.08	0.24	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.02	0.03	0.02	0.00
Polychaeta	0.02	0.15	0.23	0.31	0.19	0.08	0.15	0.06	0.43	0.01	0.05	0.62	0.29	0.04	0.06
Gastropoda	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.02	0.02	0.00	0.02	0.00
Pelecypoda	5.91	4.78	3.46	8.60	1.24	0.00	9.77	12.45	0.39	5.18	4.64	0.00	0.00	0.00	0.00
Scaphopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amphipoda	0.06	0.00	0.01	0.05	0.02	0.03	0.02	0.00	0.00	0.07	0.02	0.01	0.07	0.05	0.00
Decapoda	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ophiuroidea	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Echinoidea	0.01	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.03	0.01	0.02
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	6.08	5.67	3.69	9.02	1.48	0.24	10.00	13.09	0.90	5.35	4.73	0.70	0.42	0.14	0.09

TAXA	C-1a	C-1b	C-1c	C-1d	C-1e	C-2	C-3	C-4	C-5	C-6	C-7a	C-7b	C-7c	C-7d	C-7e
Nemertea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Polychaeta	0.22	0.89	1.18	0.73	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gastropoda	0.09	0.28	0.41	0.00	0.00	0.49	0.00	0.05	0.06	0.12	0.00	0.00	0.00	0.00	0.00
Pelecypoda	0.34	0.20	0.18	0.00	0.00	0.54	0.20	0.03	0.00	0.36	0.00	0.01	0.00	0.00	0.00
Scaphopoda	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00
Amphipoda	0.04	0.00	0.07	0.00	0.00	0.07	0.02	0.01	0.04	0.06	0.16	0.01	0.00	0.00	0.00
Decapoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00
Ophiuroidea	0.03	0.00	0.06	0.00	0.00	0.31	0.00	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00
Echinoidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.07	0.90	0.00	0.00	0.00	0.00	0.00
Total	0.73	1.37	1.90	0.73	0.68	1.45	0.24	0.09	1.07	1.45	0.17	0.10	0.00	0.20	0.00

Appendix 6. Wet Weight Biomass Estimates for Hecate Strait Cruise II Benthos - All values as grams per grab sample. Values were measured to 4 decimal places, but have been rounded to 2 decimal places for presentation.

TAXA	A1a	A1b	A1c	A1d	A1e	A-2	A-3	A-4	A-5	A-6	A-7a	A-7b	A-7c	A-7d	A-7e
Nemertea	0.82	0.37	4.42	5.00	1.56	1.86	0.62	1.07	1.24	2.10	2.11	2.77	3.04	2.86	2.22
Polychaeta	7.83	9.21	25.52	3.29	2.16	7.42	1.69	0.69	3.45	1.09	1.42	0.30	7.80	0.63	0.22
Gastropoda	5.73	10.06	1.04	3.94	2.95	0.00	0.00	2.33	5.17	3.55	4.98	6.01	3.25	7.22	3.54
Pelecypoda	0.00	0.00	0.06	0.04	0.05	0.09	0.00	0.01	0.00	0.39	0.02	0.08	0.03	0.00	0.02
Scaphopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Isopoda	0.05	0.03	0.53	0.02	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	3.28
Amphipoda	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.02	0.02	0.01	0.00	0.00
Decapoda	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.01	0.09	0.00	0.00	0.00	0.00	0.00
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.03	0.00	0.03	0.01	0.21	0.09	0.08	0.01
Ophiuroidea	0.02	0.02	0.03	0.12	0.06	0.00	0.00	0.23	0.00	0.04	0.00	0.06	0.04	0.01	0.07
Echinoidea	0.04	0.03	0.03	0.20	0.05	0.04	0.02	0.05	0.10	0.20	0.04	0.10	0.08	0.13	0.32
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	14.49	19.72	31.65	12.62	6.87	9.65	2.40	4.42	9.98	7.48	8.58	9.58	14.36	10.93	9.68

TAXA	B-1a	B-1b	B-1c	B-1d	B-1e	B-2	B-3	B-4	B-5	B-6	B7-a	B7-b	B7-c	B7-d	B7-e
Nemertea	0.86	0.20	0.62	0.70	0.14	1.28	0.47	0.38	1.11	0.58	0.36	1.45	0.62	1.20	1.52
Polychaeta	1.61	6.83	5.74	2.77	2.74	4.34	10.11	0.32	0.76	0.38	1.84	0.84	0.52	1.18	0.61
Gastropoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pelecypoda	0.06	0.03	0.27	0.00	0.03	0.13	0.07	0.12	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Scaphopoda	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Amphipoda	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
Decapoda	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Ophiuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Echinoidea	0.00	0.00	0.17	0.06	0.23	0.12	0.02	0.02	0.11	0.09	0.04	0.10	0.21	0.07	0.03
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.54	7.07	6.82	3.54	3.13	5.89	10.67	0.84	2.12	1.12	2.23	2.39	1.36	2.45	2.16

	C-1a	C-1b	C-1c	C-1d	C-1e	C-2	C-3	C-4	C-5	C-6	C-7a	C-7b	C-7c	C-7d	C-7e
Nemertea	0.93	1.72	1.89	0.86	1.05	1.50	1.85	0.70	1.11	0.93	1.37	0.79	1.25	2.46	0.78
Polychaeta	0.47	0.57	0.44	0.34	0.27	0.32	0.37	0.29	1.94	0.37	0.17	0.09	0.14	0.39	0.51
Gastropoda	0.11	0.34	0.51	0.22	0.10	0.10	0.10	0.11	1.65	0.04	0.13	0.16	0.17	0.08	0.35
Pelecypoda	0.29	0.53	0.20	0.10	0.05	0.00	0.02	0.04	0.09	0.05	0.00	0.00	0.09	0.00	0.15
Scaphopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	3.02
Isopoda	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.01	0.00	0.00	0.01	0.00
Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Decapoda	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sipunculida	0.00	0.01	0.02	0.02	0.01	0.00	0.01	0.07	0.01	0.02	0.02	0.00	0.01	0.02	0.00
Ophiuroidea	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Echinoidea	0.06	0.05	0.02	0.02	0.03	0.01	0.02	0.10	0.05	0.00	0.03	0.03	0.05	0.02	0.07
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.60	3.21	3.10	1.62	1.50	1.93	2.37	1.32	4.99	1.44	1.72	1.07	1.71	2.99	4.88

Appendix 6. Continued

	D-1a	D-1b	D-1c	D-1d	D-1e	D-2	D-3	D-4	D-5	D-6	D-7a	D-7b	D-7c	D-7d	D-7e
Nemertea	0.34	0.67	0.59	0.26	0.18	0.26	0.63	1.17	0.64	0.19	0.11	0.14	0.20	0.09	0.04
Polychaeta	0.02	0.06	0.02	0.01	0.02	0.72	0.47	0.49	0.05	0.04	0.03	0.03	0.15	0.05	0.01
Gastropoda	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pelecypoda	0.09	0.13	0.02	0.16	0.12	0.26	1.31	0.44	0.66	0.00	0.02	0.01	0.50	0.02	0.08
Scaphopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Isopoda	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00	0.01	0.04	0.00	0.00	0.00
Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Decapoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sipunculida	0.08	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ophiuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Echinoidea	0.00	0.00	0.01	0.01	0.02	0.33	0.00	0.16	0.12	0.03	0.02	0.02	0.04	0.02	0.00
Holothuroidea	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.54	0.88	0.64	0.56	0.35	1.58	4.43	4.64	1.49	0.26	0.20	0.23	0.89	0.19	0.14

Appendix 7. Wet Weight Biomass Estimates for Hecate Strait Cruise III Benthos – All values as grams per grab sample. Values were originally measured to 4 decimal places, but are rounded to 2 for presentation.

TAXA	A-1a	A-1b	A-1c	A-1d	A-1e	A-2	A-3	A-4	A-5	A-6	A-7a	A-7b	A-7c	A-7d	A-7e
Nemertea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
Polychaeta	2.25	2.41	2.63	6.63	4.32	3.49	0.14	1.37	0.58	2.88	4.34	1.91	1.75	2.11	0.70
Gastropoda	0.45	26.92	17.96	2.20	22.40	30.15	0.01	0.44	2.06	0.22	3.00	10.28	7.76	5.84	0.22
Pelecypoda	0.01	0.00	0.06	0.10	0.04	0.00	0.00	0.04	0.01	0.05	0.06	0.13	0.00	0.00	0.00
Scaphopoda	0.00	0.01	0.00	0.01	0.01	0.29	0.06	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00
Ostracoda	0.02	0.00	0.00	0.00	0.06	0.00	0.00	0.01	0.00	0.00	0.00	0.12	0.00	0.00	0.00
Cumacea	0.06	0.00	0.04	0.13	0.05	0.02	0.00	0.02	0.02	0.01	0.02	0.02	0.05	0.04	0.03
Isopoda	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Decapoda	0.03	0.00	0.10	0.00	0.40	0.05	0.00	0.00	0.00	0.00	2.92	0.00	0.00	0.00	0.00
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ophiuroidea	0.34	0.00	0.92	1.96	0.00	0.00	0.00	0.00	3.98	0.08	0.90	2.14	1.59	0.00	2.22
Echinoidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	3.15	29.34	21.71	11.03	27.29	34.00	0.21	1.88	6.65	3.35	11.24	14.61	11.16	8.39	3.17

TAXA	B-1a	B-1b	B-1c	B-1d	B-1e	b-2	B-3	B-4	B-5	B-6	B-7a	B-7b	B-7c	B-7d	B-7e
Nemertea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polychaeta	0.37	0.27	0.06	0.14	0.04	0.32	0.30	0.69	0.05	0.33	0.07	0.57	0.07	0.31	0.46
Gastropoda	5.01	2.04	3.92	2.70	3.72	2.36	1.72	2.48	0.07	1.45	3.15	2.02	0.93	1.59	1.66
Pelecypoda	0.00	0.08	0.47	0.25	0.13	0.00	0.37	0.00	0.02	0.00	0.04	0.00	0.00	0.00	0.01
Scaphopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumacea	0.02	0.00	0.01	0.02	0.01	0.14	0.05	0.01	0.00	0.06	0.01	0.12	0.40	0.14	0.03
Isopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Decapoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ophiuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Echinoidea	0.06	0.02	0.00	42.23	14.38	0.03	0.01	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.02
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	5.45	2.42	4.46	45.34	18.28	2.85	2.46	3.19	0.15	1.84	3.28	2.76	1.42	2.05	2.18

TAXA	C-1a	C-1b	C-1c	C-1d	C-1e	C-2	C-3	C-4	C-5	C-6	C-7a	C-7b	C-7c	C-7d	C-7e
Nemertea	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polychaeta	2.65	0.99	4.63	5.12	1.75	0.42	0.50	1.25	6.56	0.00	1.84	1.69	1.36	1.44	0.83
Gastropoda	0.51	0.06	0.26	0.42	0.55	0.42	0.14	0.02	0.52	0.66	0.13	0.18	0.18	0.18	0.01
Pelecypoda	0.22	0.00	0.03	0.14	0.08	0.46	0.00	0.00	0.06	0.05	0.00	0.03	0.10	0.00	0.00
Scaphopoda	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.05	0.00	0.01	0.00	0.00	0.17	0.00	0.00
Ostracoda	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Cumacea	0.02	0.01	0.01	0.00	0.07	0.01	0.04	0.02	0.01	0.01	0.02	0.03	0.06	0.02	0.03
Isopoda	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Decapoda	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ophiuroidea	0.57	0.02	0.39	0.16	0.14	0.28	0.14	0.01	0.36	0.09	0.03	0.01	0.02	0.01	0.00
Echinoidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Holothuroidea	0.00	0.00	0.00	0.00	0.10	0.01	0.00	0.00	0.04	0.09	0.00	0.00	0.00	0.00	0.00
Total	4.04	1.08	5.36	6.03	2.73	1.61	0.84	1.35	7.57	0.94	2.02	1.95	1.90	1.66	0.87

Appendix 7. Continued

TAXA	D-1a	D-1b	D-1c	D-1d	D-1e	D-2	D-3	D-4	D-5	D-6	D-7a	D-7b	D-7c	D-7d	D-7e
Nemertea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Polychaeta	0.11	0.21	0.09	0.16	1.09	0.53	1.32	2.72	0.40	0.19	0.30	0.76	0.38	0.07	0.45
Gastropoda	0.06	0.72	0.08	0.05	0.30	0.57	0.08	13.76	0.07	0.07	0.03	0.02	0.05	0.03	0.03
Pelecypoda	0.05	0.00	0.07	0.19	0.53	0.34	0.03	0.32	1.42	0.30	1.48	0.00	1.14	0.18	0.41
Scaphopoda	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.00
Ostracoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
Cumacea	0.00	0.02	0.03	0.02	0.05	0.16	0.01	0.04	0.11	0.04	0.04	0.00	0.08	0.06	0.06
Isopoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Amphipoda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Decapoda	0.00	2.62	0.00	0.01	0.04	0.00	0.00	1.58	0.01	0.02	0.00	0.00	0.02	0.01	0.01
Sipunculida	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Ophiuroidea	0.00	0.01	0.00	0.00	0.00	0.00	0.86	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Echinoidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Holothuroidea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Total	0.22	3.65	0.27	0.44	2.01	1.60	2.30	23.57	2.00	0.63	1.85	0.87	1.68	0.47	0.96

APPENDIX 8a

RESULTS FOR PARTICLE SIZE ANALYSIS FOR HECATE STRAIT BENTHOS SAMPLES, CRUISE I

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
A	1b	72.81	27.49	0.00
	1c	71.84	28.16	0.00
	1d	73.02	26.98	0.00
	1e	69.94	30.06	0.00
	1f	70.59	29.41	0.00
MEAN	(b-f)	71.64	28.42	0.00
± SE		± 0.60	± 0.58	± 0.00
A	2	45.51	54.49	0.00
	3	33.19	66.81	0.00
	4	77.81	22.19	0.00
	5	84.35	15.65	0.00
	6	70.21	29.79	0.00
MEAN	(2-6)	62.21	37.79	0.00
± SE		± 9.79	± 9.79	± 0.00
A	7a	82.84	17.16	0.00
	7b	74.06	25.94	0.00
	7c	76.08	23.92	0.00
	7d	79.04	20.96	0.00
	7e	77.69	22.30	0.01
MEAN	(a-e)	77.94	22.06	0.00
± SE		± 1.48	± 1.48	± 0.00
AREA A MEAN ± SE		70.60 ± 3.52	29.42 ± 3.52	0.00 ± 0.00
B	1a	98.23	1.15	0.62
	1b	74.83	13.89	11.28
	1c	85.48	1.69	12.85
	1d	96.46	2.27	1.27
	1e	85.74	1.01	13.25
MEAN	(a-e)	88.15	4.00	7.85
± SE		± 4.25	± 2.48	± 2.84
B	2	95.83	0.94	3.23
	3	96.72	0.87	2.41
	4	54.45	1.21	44.34
	5	94.18	2.72	3.09

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
B	6	96.93	1.52	1.55
MEAN ± SE	(2-6)	87.62 ± 8.31	1.45 ± 0.34	10.92 ± 8.36
B	7a	87.85	1.91	10.24
	7b	89.49	1.97	8.54
	7c	95.46	1.34	3.20
	7d	93.84	2.69	3.47
	7e	97.34	1.61	1.05
MEAN ± SE	(a-e)	92.80 ± 1.79	1.90 ± 0.23	5.30 ± 1.74
AREA B MEAN ± SE		89.52 ± 3.00	2.45 ± 0.83	8.03 ± 2.04
C	1a	88.60	11.07	0.33
	1c	91.86	7.50	0.64
	1f	77.96	22.04	0.00
	1g	90.63	9.24	0.13
	1i	89.26	10.44	0.30
MEAN ± SE	(a-i)	87.66 ± 2.49	12.06 ± 2.57	0.28 ± 0.11
C	2	87.56	8.48	3.96
	3	58.71	41.29	0.00
	4	76.21	23.79	0.00
	5	54.62	13.13	32.25
	6	92.55	7.21	0.24
MEAN ± SE	(2-6)	73.93 ± 7.56	18.78 ± 6.34	7.29 ± 7.82
C	7a	74.23	25.77	0.00
	7b	74.00	26.00	0.00
MEAN ± SE	(a-b)	74.12 ± 0.12	25.89 ± 0.12	0.00 ± 0.00
AREA C MEAN ± SE		79.68 ± 3.71	17.16 ± 3.05	3.15 ± 4.98

APPENDIX 8b

RESULTS FOR PARTICLE SIZE ANALYSIS FOR HECATE STRAIT BENTHOS SAMPLES, CRUISE II

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
A	1a	88.27	11.72	0.01
	1b	90.23	9.75	0.01
	1c	78.86	21.11	0.03
	1d	84.08	15.89	0.03
	1e	82.93	17.06	0.01
MEAN ± SE	(a-e)	84.87 ± 2.01	15.11 ± 2.01	0.02 ± 0.00
A	2	68.51	31.26	0.23
	3	42.13	57.87	0.00
	4	88.58	11.23	0.09
	5	87.74	11.76	0.50
	6	75.09	24.88	0.03
MEAN ± SE	(2-6)	72.41 ± 8.47	27.42 ± 8.52	0.17 ± 0.09
A	7a	86.14	13.71	0.14
	7b	84.00	15.99	0.01
	7c	80.05	19.95	0.00
	7d	79.19	20.81	0.00
	7e	81.92	18.08	0.00
MEAN ± SE	(a-e)	82.26 ± 1.27	17.71 ± 1.30	0.03 ± 0.03
AREA A MEAN ± SE		79.85 ± 3.07	20.08 ± 3.08	0.07 ± 0.03
B	1a	98.41	1.24	0.35
	1b	97.63	1.26	1.12
	1c	97.22	1.80	0.98
	1d	96.04	1.28	2.69
	1e	97.63	1.70	0.66
MEAN ± SE	(a-e)	97.39 ± 0.39	1.46 ± 0.12	1.16 ± 0.41
B	2	93.01	2.66	4.33
	3	92.19	1.65	6.16
	4	71.70	1.39	26.91
	5	95.46	3.49	1.05
	6	75.37	4.52	20.10

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
MEAN ± SE	(2-6)	86.10 ± 4.71	2.77 ± 0.61	11.86 ± 5.07
B	7a	95.55	1.01	3.44
	7b	97.30	1.98	0.72
	7c	93.43	1.07	5.50
	7d	96.99	0.95	2.06
	7e	96.27	1.10	2.63
MEAN ± SE	(a-e)	95.91 ± 0.69	1.22 ± 0.19	2.87 ± 0.79
AREA B MEAN ± SE		93.13 ± 1.99	1.82 ± 0.27	5.30 ± 2.02
C	1a	90.21	9.69	0.10
	1b	90.67	8.94	0.04
	1c	90.52	8.37	1.11
	1d	85.43	14.57	0.00
	1e	82.86	17.02	0.12
MEAN ± SE	(a-e)	87.94 ± 1.60	11.72 ± 1.72	0.27 ± 0.21
C	2	84.77	9.39	5.85
	3	58.98	40.34	0.68
	4	77.08	22.92	0.00
	5	70.60	7.48	21.91
	6	90.37	9.05	0.59
MEAN ± SE	(2-6)	76.36 ± 5.49	17.84 ± 6.28	5.81 ± 4.16
C	7a	73.35	26.65	0.00
	7b	54.41	19.14	26.45
	7c	76.41	23.31	0.28
	7d	67.01	20.29	12.70
	7e	72.52	18.36	9.12
MEAN ± SE	(a-e)	68.74 ± 3.89	21.55 ± 1.52	9.71 ± 4.86
AREA C MEAN ± SE		77.68 ± 3.00	17.04 ± 2.33	5.26 ± 2.23

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
D	1a	92.39	7.61	0.00
	1b	98.05	1.95	0.00
	1c	94.75	5.25	0.00
	1d	94.31	5.69	0.00
	1e	92.39	7.61	0.00
MEAN	(a-e)	94.38	5.62	0.00
± SE		± 1.04	± 1.04	± 0.00
D	2	97.39	2.48	0.01
	3	3.82	1.78	93.79
	4	60.57	5.97	33.47
	5	96.39	3.61	0.00
	6	88.88	5.44	0.75
MEAN	(2-6)	69.41	3.86	25.60
± SE		± 17.71	± 0.81	± 18.22
D	7a	91.23	8.77	0.00
	7b	73.49	26.51	0.00
	7c	87.92	12.08	0.00
	7d	87.81	12.19	0.00
	7e	89.99	9.86	0.00
MEAN	(a-e)	86.09	13.88	0.00
± SE		± 3.21	± 3.22	± 0.00
AREA D		83.29	7.89	8.53
MEAN ± SE		± 6.22	± 1.59	± 6.48

APPENDIX 8c

RESULTS FOR PARTICLE SIZE ANALYSIS FOR HECATE STRAIT BENTHOS SAMPLES, CRUISE III

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
A	1a	79.12	20.72	0.00
	1b	82.70	17.19	0.00
	1c	79.93	20.06	0.00
	1d	80.60	19.40	0.00
	1e	81.91	18.09	0.00
MEAN ± SE	(a-e)	80.85 ± 0.65	19.09 ± 0.64	0.00 ± 0.00
A	2	52.45	47.55	0.00
	3	27.94	72.06	0.00
	4	86.89	11.64	0.00
	5	86.88	13.11	0.00
	6	72.58	27.42	0.00
MEAN ± SE	(2-6)	65.35 ± 11.28	34.36 ± 11.42	0.00 ± 0.00
A	7a	75.83	23.01	0.00
	7b	87.87	12.07	0.00
	7c	86.60	13.40	0.00
	7d	87.03	12.96	0.00
	7e	90.99	8.90	0.00
MEAN ± SE	(a-e)	85.66 ± 2.58	14.07 ± 2.37	0.00 ± 0.00
AREA A MEAN ± SE		77.29 ± 4.26	22.51 ± 4.28	0.00 ± 0.00
B	1a	96.72	0.93	2.34
	1b	93.20	2.70	4.10
	1c	88.72	1.94	9.34
	1d	94.39	2.56	2.95
	1e	89.36	0.82	9.81
MEAN ± SE	(a-e)	92.48 ± 1.52	1.79 ± 0.40	5.71 ± 1.61
B	2	95.36	3.77	0.87
	3	95.85	0.83	3.32
	4	84.52	0.85	14.63
	5	28.49	1.06	70.45
	6	96.54	0.91	2.56

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
MEAN ± SE	(2-6)	80.15 ± 13.10	1.48 ± 0.57	18.37 ± 13.25
B	7a	91.80	0.96	7.24
	7b	97.11	1.23	1.66
	7c	85.23	12.66	2.11
	7d	82.12	13.50	4.38
	7e	79.24	18.43	2.34
MEAN ± SE	(a-e)	87.10 ± 3.26	9.36 ± 3.51	3.55 ± 1.03
AREA B MEAN ± SE		86.58 ± 4.40	4.21 ± 1.47	9.20 ± 4.48
C	1a	86.67	10.70	2.63
	1b	46.51	8.76	44.79
	1c	87.41	12.34	0.24
	1d	89.03	9.84	1.13
	1e	86.10	13.45	0.45
MEAN ± SE	(a-e)	79.14 ± 8.17	11.02 ± 0.84	9.85 ± 8.75
C	2	95.71	3.97	0.33
	3	21.22	16.53	62.25
	4	75.39	24.61	0.00
	5	70.88	11.30	17.82
	6	91.47	8.20	0.34
MEAN ± SE	(2-6)	70.93 ± 13.28	12.92 ± 3.57	16.15 ± 12.02
C	7a	71.27	28.73	0.00
	7b	68.41	31.50	0.00
	7c	75.54	24.46	0.00
	7d	75.46	24.54	0.00
	7e	67.61	32.39	0.00
MEAN ± SE	(a-e)	71.66 ± 1.68	28.32 ± 1.67	0.00 ± 0.00
AREA C MEAN ± SE		73.91 ± 4.94	17.42 ± 2.42	8.67 ± 4.92

AREA	REPLICATE	% SAND	% MUD	% GRAVEL
D	1a	96.27	3.73	0.00
	1b	94.96	5.04	0.00
	1c	97.82	2.18	0.00
	1d	93.90	6.10	0.00
	1e	96.96	3.04	0.00
MEAN ± SE	(a-e)	95.98 ± 0.70	4.02 ± 0.70	0.00 ± 0.00
D	2	97.01	2.15	0.83
	4	49.95	4.69	45.36
	5	95.73	4.27	0.00
	6	97.60	2.40	0.00
MEAN ± SE	(2-6)	85.07 ± 11.71	3.38 ± 0.64	11.55 ± 11.27
D	7a	97.59	2.41	0.00
	7b	97.26	2.74	0.00
	7c	97.68	2.32	0.00
	7d	97.79	2.21	0.00
	7e	97.69	2.26	0.08
MEAN ± SE	(a-e)	97.60 ± 0.09	2.39 ± 0.09	0.02 ± 0.02
AREA D MEAN ± SE		93.44 ± 3.36	3.26 ± 0.35	3.31 ± 3.24

Appendix 9a. Hecate Strait - Cruise 1 comparison of depth dendrogram with abundance dendrogram. (L = number of clusters present at a given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZE
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
20	20	0.000000	0.004762	0.068842	1.0000
			0.004762	0.068842	
19	19	0.000000	0.006446	0.050892	1.0000
			0.011664	0.068014	
18	18	0.000000	0.006753	0.043632	1.0000
			0.019048	0.068875	
17	17	0.000000	0.006790	0.033713	1.0000
			0.036886	0.071804	
16	16	0.113961	0.116822	0.022325	0.8971
			0.041786	0.068776	
15	15	0.204124	0.105518	0.023256	0.0417
			0.046657	0.066662	
14	14	0.250873	0.249819	0.026448	0.6476
			0.056944	0.067766	
13	13	0.314970	0.215087	0.027021	0.0220
			0.075593	0.068309	
12	12	0.378517	0.322027	0.031019	0.0897
			0.088063	0.068653	
11	11	0.334855	0.353692	0.036473	0.8485
			0.099545	0.065367	
10	10	0.402492	0.316485	0.033475	0.0545
			0.106479	0.063249	
9	9	0.454859	0.466716	0.040348	0.7778
			0.125628	0.061793	
8	8	0.579771	0.603707	0.048168	0.8889
			0.164268	0.059519	
7	7	0.579751	0.589026	0.047426	0.7857
			0.180702	0.057367	
6	6	0.562286	0.537899	0.049215	0.0952
			0.245596	0.054447	
5	5	0.576106	0.517569	0.046900	0.1333
			0.281033	0.049943	
4	4	0.583709	0.570360	0.055427	0.5000
			0.301846	0.044223	
		(0.549766	0.242814	0.048160)	
3	3	0.797731	0.719815	0.083691	0.3333
			0.435760	0.043787	
		(0.760006	0.325967	0.052505)	
2	2	1.000000	0.880326	0.114160	0.3333
			0.533333	0.035497	
		(1.000000	0.219901	0.059338)	

Appendix 9b. Hecate Strait - Cruise 2 comparison of depth dendrogram with abundance dendrogram. (L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
27	27	0.000000	0.002646	0.051366	1.0000
			0.002646	0.051366	
26	26	0.000000	0.003489	0.037581	1.0000
			0.006480	0.051025	
25	25	0.000000	0.004060	0.029681	1.0000
			0.011224	0.050357	
24	24	0.000000	0.003923	0.025453	1.0000
			0.015651	0.051657	
23	23	0.000000	0.003654	0.023112	1.0000
			0.019797	0.051524	
22	22	0.102062	0.103523	0.023992	0.7747
			0.025921	0.051223	
21	21	0.296500	0.094108	0.023450	0.0043
			0.035690	0.054560	
20	20	0.313112	0.264402	0.019924	0.0286
			0.042245	0.053208	
19	19	0.342997	0.338823	0.020642	0.7368
			0.046277	0.051870	
18	18	0.324443	0.319973	0.021267	0.6374
			0.048924	0.050878	
17	17	0.549350	0.496657	0.028582	0.0261
			0.062604	0.052134	
16	16	0.492764	0.513499	0.032414	0.8750
			0.069793	0.051987	
15	15	0.507093	0.495304	0.031096	0.4167
			0.078255	0.050286	
14	14	0.513200	0.508339	0.033033	0.6762
			0.082479	0.049087	
13	13	0.521168	0.505031	0.034541	0.2857
			0.086294	0.048117	
12	12	0.701358	0.487372	0.036205	0.0128
			0.101843	0.048921	
11	11	0.651339	0.651261	0.037481	0.6515
			0.113726	0.047382	
10	10	0.674200	0.611955	0.039382	0.0364
			0.117717	0.046446	
9	9	0.598157	0.620261	0.043345	0.8000
			0.141528	0.044647	
8	8	0.591327	0.581869	0.045391	0.5000
			0.152111	0.043704	
7	7	0.553303	0.534181	0.049664	0.4286

			0.162564	0.043099	
6	6	0.537853	0.499971	0.052427	0.2857
			0.177071	0.042448	
5	5	0.581932	0.526933	0.063316	0.2667
			0.195481	0.042028	
		(0.564276	0.161446	0.043809)	
4	4	0.655936	0.511883	0.068799	0.1000
			0.258123	0.035494	
		(0.608614	0.154321	0.040533)	
3	3	0.805133	0.773430	0.081493	0.5000
			0.371295	0.033028	
		(0.752434	0.200448	0.042023)	
2	2	0.858746	0.800747	0.132480	0.6667
			0.486744	0.026812	
		(0.740148	0.055567	0.049341)	

Appendix 9c. Hecate Strait - Cruise 3 comparison of depth dendrogram with abundance dendrogram. (L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
27	27	0.000000	0.002646	0.051366	1.0000
			0.002646	0.051366	
26	26	0.000000	0.002588	0.034357	1.0000
			0.005291	0.051241	
25	25	0.000000	0.002777	0.029103	1.0000
			0.007937	0.051138	
24	24	0.000000	0.003545	0.027374	1.0000
			0.013228	0.051065	
23	23	0.136083	0.003431	0.023095	0.0217
			0.019440	0.050883	
22	22	0.119523	0.120085	0.018776	0.8340
			0.022134	0.050375	
21	21	0.184900	0.101572	0.017712	0.0303
			0.028615	0.050279	
20	20	0.161165	0.160959	0.016967	0.7429
			0.032830	0.050048	
19	19	0.228665	0.126702	0.018943	0.0158
			0.046277	0.051870	
18	18	0.263523	0.215162	0.019841	0.0468
			0.050195	0.050755	
17	17	0.333712	0.336248	0.021443	0.7124
			0.055493	0.049767	
16	16	0.401286	0.300208	0.021739	0.0147
			0.065926	0.049604	
15	15	0.424334	0.378913	0.023125	0.0583
			0.068579	0.048891	
14	14	0.374228	0.384965	0.025939	0.8286
			0.077762	0.048159	
13	13	0.382518	0.386169	0.025392	0.7582
			0.089908	0.047425	
12	12	0.383886	0.386095	0.027245	0.6538
			0.096479	0.046689	
11	11	0.450000	0.443611	0.030525	0.5455
			0.105820	0.046194	
10	10	0.498012	0.427837	0.033959	0.0545
			0.132803	0.045145	
9	9	0.520756	0.465830	0.036974	0.0667
			0.142243	0.044228	
8	8	0.531995	0.492280	0.040305	0.1111
			0.149184	0.043647	
7	7	0.575708	0.557268	0.047985	0.3571

			0.160833	0.042896	
6	6	0.563085	0.520184	0.051267	0.1905
			0.206722	0.040893	
5	5	0.597516	0.555178	0.052349	0.2000
			0.261222	0.035387	
		(0.585625	0.238367	0.036540)	
4	4	0.705704	0.743617	0.067901	0.8000
			0.371125	0.035709	
		(0.678777	0.312577	0.039084)	
3	3	0.729405	0.687777	0.068322	0.3333
			0.398963	0.030993	
		(0.663837	0.250322	0.038785)	
2	2	0.858746	0.773973	0.078956	0.3333
			0.486744	0.026812	
		(0.740148	0.055567	0.049341)	

Appendix 9d. Hecate Strait - Cruise 1 comparison of geographic distance dendrogram with abundance dendrogram. (L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
20	20	0.000000	0.004762	0.068842	1.0000
			0.004762	0.068842	
19	19	0.000000	0.005263	0.051028	1.0000
			0.009524	0.068550	
18	18	0.000000	0.005587	0.041901	1.0000
			0.016496	0.067626	
17	17	0.000000	0.005492	0.033603	1.0000
			0.030117	0.064074	
16	16	0.000000	0.004673	0.023986	1.0000
			0.035315	0.063412	
15	15	0.109109	0.111701	0.024426	0.7917
			0.043644	0.065219	
14	14	0.098058	0.101371	0.025093	0.6667
			0.048562	0.064208	
13	13	0.223607	0.089367	0.027834	0.0220
			0.063888	0.062668	
12	12	0.207514	0.207666	0.024361	0.5256
			0.068842	0.061521	
11	11	0.404577	0.321050	0.032324	0.0303
			0.094161	0.065213	
10	10	0.392792	0.351855	0.033112	0.1455
			0.109109	0.062899	
9	9	0.371391	0.385631	0.040386	0.7778
			0.128218	0.061401	
8	8	0.546459	0.449196	0.045463	0.0833
			0.156854	0.058609	
7	7	0.685160	0.590074	0.055951	0.1071
			0.180702	0.056818	
6	6	0.485325	0.609564	0.063442	0.9524
			0.255107	0.050887	
5	5	0.567253	0.530373	0.046914	0.2000
			0.293814	0.047421	
4	4	0.606757	0.592896	0.058617	0.5000
			0.313925	0.044807	
		(0.575708	0.258168	0.048587)	
3	3	0.697512	0.604572	0.079477	0.1667
			0.389138	0.033810	
		(0.635489	0.254196	0.041805)	
2	2	0.562500	0.597736	0.057377	0.6667
			0.533333	0.035497	
		(0.268657	0.219901	0.059338)	

Appendix 9e. Hecate Strait - Cruise 2 comparison of geographic distance dendrogram and abundance dendrogram. (L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
27	27	0.000000	0.002646	0.051366	1.0000
			0.002646	0.051366	
26	26	0.000000	0.002849	0.037635	1.0000
			0.005291	0.051241	
25	25	0.000000	0.002940	0.030521	1.0000
			0.007937	0.051138	
24	24	0.000000	0.003157	0.027204	1.0000
			0.011831	0.050734	
23	23	0.000000	0.003036	0.022478	1.0000
			0.015651	0.050399	
22	22	0.144338	0.003147	0.020259	0.0079
			0.018329	0.050333	
21	21	0.283473	0.117740	0.019534	0.0043
			0.027997	0.049629	
20	20	0.323381	0.255237	0.017660	0.0238
			0.032723	0.049015	
19	19	0.372678	0.294154	0.018101	0.0211
			0.035493	0.048698	
18	18	0.331133	0.325608	0.020446	0.6316
			0.039946	0.048786	
17	17	0.310087	0.304359	0.020807	0.5359
			0.042657	0.048555	
16	16	0.316228	0.330405	0.021783	0.8603
			0.050195	0.048028	
15	15	0.300000	0.294025	0.020417	0.4167
			0.052910	0.047846	
14	14	0.451335	0.406464	0.025379	0.0571
			0.064476	0.048412	
13	13	0.407687	0.395814	0.028029	0.2967
			0.071380	0.047940	
12	12	0.451856	0.367503	0.028954	0.0256
			0.087821	0.047028	
11	11	0.510355	0.459247	0.033394	0.0455
			0.098489	0.046514	
10	10	0.555225	0.540964	0.039811	0.4364
			0.109589	0.045840	
9	9	0.704068	0.600152	0.044646	0.0222
			0.127753	0.044919	
8	8	0.753086	0.664539	0.052146	0.0278
			0.144028	0.044063	
7	7	0.810465	0.749995	0.061273	0.1071

			0.153416	0.043665	
6	6	0.850420	0.790241	0.067664	0.1429
			0.167984	0.043047	
5	5	0.772873	0.725019	0.081188	0.3333
			0.191685	0.041943	
		(0.763084	0.156776	0.043756)	
4	4	0.717430	0.718359	0.077291	0.5000
			0.258123	0.035494	
		(0.678839	0.154321	0.040533)	
3	3	0.500626	0.563284	0.085171	0.8333
			0.369907	0.033101	
		(0.364375	0.197876	0.042161)	
2	2	0.593393	0.649403	0.040190	1.0000
			0.548366	0.021109	
		(0.318497	0.242276	0.035734)	

Appendix 9f. Hecate Strait - Cruise 3 comparison of geographic distance dendrogram with abundance dendrogram. (L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
27	27	0.000000	0.002646	0.051366	1.0000
			0.002646	0.051366	
26	26	0.000000	0.002588	0.034357	1.0000
			0.005291	0.051241	
25	25	0.333333	0.002940	0.030521	0.0062
			0.007937	0.051138	
24	24	0.223607	0.245995	0.026805	0.9900
			0.011831	0.050734	
23	23	0.298142	0.180661	0.021520	0.0145
			0.017747	0.049825	
22	22	0.258199	0.255358	0.019051	0.8340
			0.020492	0.049697	
21	21	0.392232	0.418648	0.023044	0.9091
			0.026979	0.049811	
20	20	0.445435	0.350603	0.020483	0.0190
			0.029696	0.049511	
19	19	0.447214	0.478994	0.024512	0.9737
			0.035493	0.048698	
18	18	0.387298	0.389885	0.021939	0.7953
			0.040984	0.048735	
17	17	0.354787	0.356107	0.021804	0.6928
			0.044740	0.048465	
16	16	0.298142	0.316934	0.020383	0.9559
			0.053240	0.047653	
15	15	0.283473	0.279106	0.018800	0.6000
			0.055995	0.047425	
14	14	0.339200	0.348950	0.024237	0.8190
			0.070193	0.048218	
13	13	0.364646	0.302325	0.021847	0.0220
			0.079805	0.047542	
12	12	0.331361	0.333847	0.024560	0.6795
			0.087821	0.046973	
11	11	0.357813	0.354404	0.026539	0.5455
			0.096116	0.046566	
10	10	0.429669	0.366053	0.029596	0.0727
			0.110827	0.045775	
9	9	0.473804	0.471584	0.036093	0.6444
			0.122838	0.045171	
8	8	0.552406	0.471722	0.038106	0.0556
			0.138883	0.044369	
7	7	0.584094	0.546484	0.044497	0.1071
			0.149465	0.043979	

6	6	0.624940	0.589719	0.051424	0.1429
			0.194728	0.040612	
5	5	0.536752	0.566177	0.061794	0.7333
			0.261222	0.035387	
		(0.522880	0.238367	0.036540)	
4	4	0.497346	0.534065	0.044553	0.9000
			0.308516	0.032956	
		(0.442553	0.230694	0.036975)	
3	3	0.543738	0.530783	0.028135	0.3333
			0.398963	0.030993	
		(0.431494	0.250322	0.038785)	
2	2	0.593393	0.650874	0.099000	0.6667
			0.548366	0.021109	
		(0.318497	0.242276	0.035734)	

Appendix 9g. Hecate Strait - Cruise 1 comparison of sediment (% mud) type with abundance dendrogram. (L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
20	20	0.000000	0.004762	0.068842	1.0000
			0.004762	0.068842	
19	19	0.000000	0.004780	0.046585	1.0000
			0.009524	0.068550	
18	18	0.250000	0.284566	0.037158	1.0000
			0.019048	0.068875	
17	17	0.424264	0.198817	0.028966	0.0065
			0.033672	0.069024	
16	16	0.545455	0.539195	0.033130	0.8897
			0.052381	0.079510	
15	15	0.500000	0.492674	0.033566	0.7667
			0.057143	0.075046	
14	14	0.461538	0.453347	0.033931	0.6476
			0.061905	0.071538	
13	13	0.629941	0.419596	0.033889	0.0110
			0.075593	0.071663	
12	12	0.592349	0.577001	0.031652	0.4872
			0.080390	0.068694	
11	11	0.556294	0.526388	0.031319	0.0909
			0.094161	0.065213	
10	10	0.654330	0.610220	0.042945	0.0727
			0.123718	0.067033	
9	9	0.576354	0.589076	0.046116	0.7556
			0.140456	0.063615	
8	8	0.507972	0.531998	0.045027	0.8889
			0.159364	0.059770	
7	7	0.550000	0.490787	0.045043	0.1071
			0.190476	0.056724	
6	6	0.439155	0.464727	0.043339	0.9524
			0.292770	0.058304	
5	5	0.432099	0.427641	0.035979	0.4000
			0.385714	0.058358	
4	4	0.426829	0.450332	0.048926	0.7000
			0.390476	0.054840	
		(0.389610	0.350897	0.058401)	
3	3	0.486635	0.501748	0.051315	0.6667
			0.459912	0.044854	
		(0.392616	0.360950	0.053151)	
2	2	0.634029	0.713402	0.098269	1.0000
			0.660928	0.029993	
		(0.466154	0.506626	0.045128)	

Appendix 9h. Hecate Strait - Cruise 2 comparison of sediment type dendrogram with abundance dendrogram. L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
27	27	0.000000	0.002646	0.051366	1.0000
			0.002646	0.051366	
26	26	0.000000	0.002588	0.034357	1.0000
			0.005291	0.051241	
25	25	0.000000	0.002940	0.030521	1.0000
			0.007937	0.051138	
24	24	0.000000	0.003069	0.026437	1.0000
			0.011831	0.050734	
23	23	0.000000	0.003081	0.022732	1.0000
			0.015651	0.050399	
22	22	0.000000	0.003149	0.020227	1.0000
			0.018329	0.050333	
21	21	0.094491	0.003681	0.019486	0.0346
			0.027997	0.049629	
20	20	0.080845	0.087289	0.016086	0.9238
			0.032723	0.049015	
19	19	0.182574	0.182296	0.019060	0.7474
			0.043470	0.052052	
18	18	0.166924	0.167055	0.019094	0.6667
			0.047546	0.050966	
17	17	0.153897	0.154537	0.019611	0.5752
			0.051570	0.050077	
16	16	0.170251	0.181887	0.019857	0.8897
			0.062155	0.049557	
15	15	0.156893	0.158466	0.019193	0.4917
			0.067447	0.048878	
14	14	0.148148	0.152823	0.019017	0.7429
			0.071429	0.048246	
13	13	0.178571	0.179299	0.020014	0.4176
			0.074074	0.047854	
12	12	0.374634	0.291553	0.028274	0.0513
			0.112985	0.051716	
11	11	0.370970	0.356870	0.029379	0.1818
			0.121232	0.048997	
10	10	0.376309	0.353915	0.028582	0.1636
			0.126542	0.047230	
9	9	0.395352	0.422890	0.047129	0.8222
			0.180671	0.045168	
8	8	0.423507	0.392563	0.048059	0.1389
			0.193646	0.041890	
7	7	0.372531	0.363511	0.046878	0.2500

			0.234347	0.036469	
6	6	0.372425	0.394540	0.056371	0.6667
			0.248621	0.034109	
5	5	0.372429	0.393871	0.064202	0.6000
			0.262825	0.032770	
		(0.353592	0.240350	0.033858)	
4	4	0.374409	0.415732	0.038622	0.9000
			0.431014	0.040635	
		(0.326667	0.388148	0.044136)	
3	3	0.531291	0.486554	0.028902	0.1667
			0.497938	0.027704	
		(0.445517	0.405561	0.033187)	
2	2	0.669246	0.733158	0.086550	1.0000
			0.675956	0.007747	
		(0.527186	0.537573	0.011995)	

Appendix 9i. Hecate Strait - Cruise 3 comparison of sediment type dendrogram with abundance dendrogram. (L=number of clusters present at any given linkage level).

FOWLKES-MALLOWS STATISTIC (FM)

CONDITIONAL ON CLUSTERS DEFINED BY PREVIOUS LEVEL
CONDITIONAL ON CLUSTER SIZES
(WALLACE MODIFIED VALUES ARE IN PARENTHESES)

L1	L2	FM STAT	MEAN	STD. DEV.	PROB.
27	27	0.000000	0.002646	0.051366	1.0000
			0.002646	0.051366	
26	26	0.000000	0.002849	0.037635	1.0000
			0.005291	0.051241	
25	25	0.000000	0.003077	0.031877	1.0000
			0.007937	0.051138	
24	24	0.000000	0.003333	0.028674	1.0000
			0.011831	0.050734	
23	23	0.000000	0.003534	0.023720	1.0000
			0.019440	0.050883	
22	22	0.000000	0.003596	0.018760	1.0000
			0.025097	0.051799	
21	21	0.000000	0.004105	0.018395	1.0000
			0.031636	0.051467	
20	20	0.069007	0.004777	0.017243	0.0476
			0.038337	0.051127	
19	19	0.117851	0.067796	0.019100	0.0684
			0.044896	0.050973	
18	18	0.102598	0.107687	0.018561	0.8187
			0.051570	0.050307	
17	17	0.093048	0.098385	0.018600	0.7190
			0.056863	0.049418	
16	16	0.153960	0.087539	0.018265	0.0368
			0.068732	0.049616	
15	15	0.175466	0.143196	0.017271	0.0917
			0.075385	0.049096	
14	14	0.161374	0.171327	0.018342	0.8857
			0.081968	0.048343	
13	13	0.182153	0.159184	0.018461	0.1319
			0.087141	0.047579	
12	12	0.204440	0.213301	0.026682	0.7179
			0.116462	0.047858	
11	11	0.197338	0.204196	0.026752	0.6061
			0.120653	0.046418	
10	10	0.195740	0.191636	0.026562	0.2909
			0.135154	0.045360	
9	9	0.185984	0.200009	0.027954	0.7778
			0.142243	0.044336	
8	8	0.296325	0.262982	0.037789	0.1944
			0.196410	0.039206	
7	7	0.311504	0.314654	0.046183	0.3571

			0.203824	0.036548	
6	6	0.320385	0.333418	0.050188	0.4762
			0.264233	0.045116	
5	5	0.415385	0.394329	0.045903	0.2667
			0.343915	0.043997	
		(0.401575	0.328417	0.045036)	
4	4	0.558340	0.500215	0.066712	0.3000
			0.535412	0.031444	
		(0.531491	0.507072	0.033488)	
3	3	0.665978	0.688289	0.107219	0.5000
			0.623660	0.015805	
		(0.622706	0.573791	0.018269)	
2	2	0.641641	0.748399	0.150172	1.0000
			0.651439	0.011036	
		(0.471003	0.486360	0.017298)	

Appendix 10a. Hecate Strait - comparison of abundance dendrograms for Cruises 1 and 2.

FOWLKES-MALLOWS STATISTIC (FM)
L=linkage level (for both matrices)

L	FM(L,L)	PVAL(L)	MEAN	VAR
1	0.00000	0.62667	0.3733E+00	0.2371E+00
2	1.00000	1.00000	0.4842E+00	0.1040E+00
3	0.75000	0.86667	0.5734E+00	0.4981E-01
4	0.73030	0.80000	0.6010E+00	0.3538E-01
5	1.00000	1.00000	0.6868E+00	0.5174E-01
6	0.64715	0.50667	0.6804E+00	0.4789E-01
7	1.00000	1.00000	0.8062E+00	0.3682E-01
8	1.00000	1.00000	0.1000E+01	0.0000E+00

ESTIMATES ARE BASED ON 75 SIMULATIONS.

Appendix 10b. Hecate Strait - comparison of abundance dendrograms for Cruises 1 and 3.

FOWLKES-MALLOWS STATISTIC (FM)
L=linkage level for both matrices

L	FM(L,L)	PVAL(L)	MEAN	VAR
1	0.00000	0.60000	0.4000E+00	0.2432E+00
2	1.00000	1.00000	0.4735E+00	0.8317E-01
3	0.75000	0.90667	0.5588E+00	0.4073E-01
4	0.73030	0.86667	0.5877E+00	0.3038E-01
5	0.85714	0.77333	0.6373E+00	0.5304E-01
6	0.64715	0.62667	0.6093E+00	0.3822E-01
7	1.00000	1.00000	0.7668E+00	0.3455E-01
8	1.00000	1.00000	0.1000E+01	0.0000E+00

ESTIMATES ARE BASED ON 75 SIMULATIONS.

Appendix 10c. Hecate Strait - comparison of abundance dendrograms for Cruises 2 and 3.

FOWLKES-MALLOWS STATISTIC (FM)
L=linkage level for both matrices

L	FM(L,L)	PVAL(L)	MEAN	VAR
1	0.00000	0.77333	0.2267E+00	0.1777E+00
2	1.00000	1.00000	0.3418E+00	0.1204E+00
3	1.00000	1.00000	0.3627E+00	0.5208E-01
4	0.80000	0.98667	0.4523E+00	0.3206E-01
5	0.85714	0.97333	0.5239E+00	0.3498E-01
6	0.82496	0.94667	0.5714E+00	0.3233E-01
7	0.90000	0.96000	0.6278E+00	0.3000E-01
8	1.00000	1.00000	0.6086E+00	0.2176E-01
9	1.00000	1.00000	0.6126E+00	0.2504E-01
10	1.00000	1.00000	0.7192E+00	0.2089E-01
11	1.00000	1.00000	0.1000E+01	0.0000E+00

ESTIMATES ARE BASED ON 75 SIMULATIONS.

Appendix 11a. Comparison between wet weight data matrices for Cruises 1 and 2.

FOWLKES-MALLOWS STATISTIC

L	FM(L,L)	PVAL(L)	MEAN	VAR
1	1.00000	1.00000	0.2267E+00	0.1777E+00
2	0.40825	0.77333	0.2706E+00	0.6203E-01
3	0.25000	0.38667	0.3407E+00	0.4680E-01
4	0.18257	0.06667	0.4543E+00	0.4159E-01
5	0.12599	0.00000	0.5476E+00	0.3893E-01
6	0.18257	0.00000	0.6549E+00	0.2813E-01
7	0.61419	0.02667	0.9309E+00	0.9720E-02
8	1.00000	1.00000	0.1000E+01	0.0000E+00

ESTIMATES ARE BASED ON 75 SIMULATIONS.

Appendix 11b. Comparison between wet weight data matrices for Cruises 1 and 3.

FOWLKES-MALLOWS STATISTIC

L	FM(L,L)	PVAL(L)	MEAN	VAR
1	0.00000	0.77333	0.2267E+00	0.1777E+00
2	0.00000	0.42667	0.2718E+00	0.6554E-01
3	0.00000	0.17333	0.3389E+00	0.6173E-01
4	0.18257	0.21333	0.4437E+00	0.6264E-01
5	0.25198	0.09333	0.5139E+00	0.3826E-01
6	0.50518	0.21333	0.6629E+00	0.3714E-01
7	0.75000	0.02667	0.9513E+00	0.6227E-02
8	1.00000	1.00000	0.1000E+01	0.0000E+00

ESTIMATES ARE BASED ON 75 SIMULATIONS.

Appendix 11c. Comparison between wet weight data matrices for Cruises 2 and 3.

FOWLKES-MALLOWS STATISTIC

L	FM(L,L)	PVAL(L)	MEAN	VAR
1	0.00000	0.93333	0.6667E-01	0.6306E-01
2	0.00000	0.64000	0.1897E+00	0.7165E-01
3	0.28868	0.68000	0.2599E+00	0.6779E-01
4	0.60000	0.81333	0.3936E+00	0.5585E-01
5	0.42857	0.24000	0.5162E+00	0.2993E-01
6	0.40000	0.12000	0.6066E+00	0.3578E-01
7	0.45455	0.29333	0.6090E+00	0.3682E-01
8	0.55641	0.42667	0.6119E+00	0.2565E-01
9	0.48008	0.05333	0.7298E+00	0.2939E-01
10	0.73560	0.28000	0.8566E+00	0.2943E-01
11	1.00000	1.00000	0.1000E+01	0.0000E+00

ESTIMATES ARE BASED ON 75 SIMULATIONS.