

Table S1. List of the taxa along with the number of stations where this taxon was present and the number of collected individuals, for the 0.5 mm and the 1 mm size classes.

Aphia ID	Phylum	Accepted name	0.5 mm size class		1 mm size class	
			Presence	Density	Presence	Density
102866	Arthropoda	<i>Aceroides (Aceroides) latipes</i>	22	57	14	27
136340	Arthropoda	<i>Akanthophoreus gracilis</i>	31	163	9	13
878476	Mollusca	<i>Ameritella agilis</i>	16	39	14	47
547000	Arthropoda	<i>Ameroculodes edwardsi</i>	8	10	8	10
101908	Arthropoda	<i>Ampelisca macrocephala</i>	—	—	1	2
158022	Arthropoda	<i>Ampelisca vadorum</i>	2	2	2	2
101364	Arthropoda	Ampeliscidae spp.	—	—	5	7
762338	Annelida	<i>Ampharete oculata</i>	—	—	1	8
129155	Annelida	<i>Ampharete</i> sp.	1	2	—	—
981	Annelida	Ampharetidae spp.	—	—	5	9
111186	Bryozoa	<i>Amphiblestrum auritum</i>	1	1	—	—
125064	Echinodermata	<i>Amphipholis squamata</i>	—	—	9	133
1135	Arthropoda	Amphipoda	44	127	6	20
123613	Echinodermata	<i>Amphiura</i> sp.	—	—	1	1
102002	Arthropoda	<i>Ampithoe rubricata</i>	—	—	2	3
882	Annelida	Annelida	13	89	—	—
102513	Arthropoda	<i>Anonyx lilljeborgi</i>	9	16	9	16
102516	Arthropoda	<i>Anonyx sarsi</i>	—	—	2	2
1292	Cnidaria	Anthozoa	3	4	4	5
101368	Arthropoda	Aoridae spp.	1	4	—	—
157214	Annelida	<i>Arcteobia anticostiensis</i>	1	1	1	1
333034	Annelida	<i>Aricidea acmira catherinae</i>	3	13	—	—
129430	Annelida	<i>Aricidea</i> sp.	7	57	—	—
531617	Mollusca	<i>Arrhoges occidentalis</i>	1	1	3	4
137683	Mollusca	<i>Astarte</i> sp.	8	12	7	10
156746	Mollusca	<i>Astarte subaequilatera</i>	—	—	3	12
156747	Mollusca	<i>Astarte undata</i>	—	—	3	12
123219	Echinodermata	<i>Asterias</i> sp.	1	1	1	1
141652	Mollusca	<i>Axinopsida orbiculata</i>	27	134	18	85
130275	Annelida	<i>Axiothella catenata</i>	2	5	2	5
106122	Arthropoda	<i>Balanus</i> sp.	1	2	—	—
102873	Arthropoda	<i>Bathymedon longimanus</i>	4	11	3	8
102875	Arthropoda	<i>Bathymedon obtusifrons</i>	2	15	2	15
158034	Arthropoda	<i>Bathyporeia quoddyensis</i>	—	—	2	2
105	Mollusca	Bivalvia	114	10486	51	483
386411	Mollusca	<i>Boreochiton ruber</i>	8	24	—	—
110397	Arthropoda	<i>Brachydiastylis</i> sp.	4	24	6	28
106673	Arthropoda	Brachyura	2	2	2	2
146142	Bryozoa	Bryozoa	3	9	—	—
416573	Arthropoda	<i>Byblis gaimardii</i>	1	1	—	—
110851	Bryozoa	<i>Callopora</i> sp.	5	9	5	9
1606	Cnidaria	Campanulariidae spp.	1	1	—	—
1607	Cnidaria	Campanulinidae spp.	35	35	—	—
158057	Arthropoda	<i>Cancer irroratus</i>	2	2	—	—
110734	Bryozoa	Candidae spp.	9	14	4	4
129211	Annelida	<i>Capitella</i> sp.	1	1	—	—
921	Annelida	Capitellidae spp.	20	529	—	—

101851	Arthropoda	<i>Caprella septentrionalis</i>	3	13	—	—
110873	Bryozoa	<i>Cellepora</i> sp.	9	370	6	275
111397	Bryozoa	<i>Celleporella hyalina</i>	1	1	—	—
2088	Mollusca	Chaetodermatida	1	1	—	—
2081	Chaetognatha	Chaetognatha	18	25	13	17
129242	Annelida	<i>Chaetozone</i> sp.	1	1	—	—
107315	Arthropoda	<i>Chionoecetes opilio</i>	1	4	—	—
140692	Mollusca	<i>Chlamys islandica</i>	2	2	2	2
129525	Annelida	<i>Chone</i> sp.	1	1	1	1
139000	Mollusca	<i>Ciliatocardium ciliatum</i>	1	12	1	12
919	Annelida	Cirratulidae spp.	1	1	6	17
1082	Arthropoda	Cirripedia	16	246	—	—
238377	Annelida	<i>Cistenides granulata</i>	1	3	1	3
157317	Annelida	<i>Cistenides hyperborea</i>	24	56	43	142
157316	Annelida	<i>Cistenides</i> sp.	2	3	—	—
157320	Annelida	<i>Clymenella zonalis</i>	1	1	—	—
129984	Annelida	<i>Cossura longocirrata</i>	—	—	1	2
237004	Arthropoda	<i>Crassicorophium bonellii</i>	1	6	1	6
140440	Mollusca	<i>Crenella decussata</i>	5	11	—	—
1059487	Bryozoa	<i>Cribrilina cryptoecium</i>	17	77	17	61
1066	Arthropoda	Crustacea	1	1	—	—
1137	Arthropoda	Cumacea	2	2	—	—
157810	Arthropoda	<i>Cyclaspis varians</i>	4	5	—	—
156832	Mollusca	<i>Cyclocardia borealis</i>	—	—	1	1
139474	Mollusca	<i>Cylichna alba</i>	1	5	3	7
140102	Mollusca	<i>Cyrtodaria siliqua</i>	3	16	—	—
111174	Bryozoa	<i>Dendrobeatia murrayana</i>	3	3	2	2
157815	Arthropoda	<i>Diastylis polita</i>	1	1	—	—
110487	Arthropoda	<i>Diastylis rathkei</i>	—	—	1	1
157817	Arthropoda	<i>Diastylis sculpta</i>	10	46	7	41
110398	Arthropoda	<i>Diastylis</i> sp.	16	95	11	47
131121	Annelida	<i>Dipolydora quadrilobata</i>	1	1	1	1
129611	Annelida	<i>Dipolydora</i> sp.	1	1	—	—
971	Annelida	Dorvilleidae spp.	1	1	—	—
117888	Cnidaria	<i>Dynamena pumila</i>	1	14	—	—
158062	Echinodermata	<i>Echinarachnius parma</i>	—	—	1	1
123082	Echinodermata	Echinoidea	46	317	57	378
574096	Mollusca	<i>Ecrobia truncata</i>	3	7	—	—
157884	Arthropoda	<i>Edotia montosa</i>	5	56	2	19
157885	Arthropoda	<i>Edotia triloba</i>	3	5	4	6
111355	Bryozoa	<i>Electra pilosa</i>	6	13	—	—
506605	Mollusca	<i>Ennucula delphinodonta</i>	3	3	—	—
140584	Mollusca	<i>Ennucula tenuis</i>	1	1	—	—
1820	Hemichordata	<i>Enteropneusta</i>	53	229	58	211
130613	Annelida	<i>Eteone flava</i>	1	2	—	—
130616	Annelida	<i>Eteone longa</i>	—	—	1	7
129443	Annelida	<i>Eteone</i> sp.	2	12	—	—
157374	Annelida	<i>Eteone trilineata</i>	20	122	6	8
130903	Annelida	<i>Euchone analis</i>	—	—	1	1
129528	Annelida	<i>Euchone</i> sp.	9	243	—	—
111361	Bryozoa	<i>Eucratea loricata</i>	1	32	1	32

1600	Cnidaria	Eudendriidae spp.	12	12	—	—
110524	Arthropoda	<i>Eudorella emarginata</i>	4	4	—	—
157820	Arthropoda	<i>Eudorellopsis integra</i>	6	9	6	9
140536	Mollusca	<i>Euspira pallida</i>	66	1163	63	669
117690	Cnidaria	<i>Filellum serpens</i>	1	1	1	1
1207	Arthropoda	Gammaridea	1	1	—	—
101537	Arthropoda	<i>Gammarus</i> sp.	4	6	—	—
101	Mollusca	Gastropoda	—	—	1	1
130116	Annelida	<i>Glycera alba</i>	2	14	—	—
130118	Annelida	<i>Glycera capitata</i>	—	—	4	17
157392	Annelida	<i>Glycera dibranchiata</i>	2	2	3	3
129296	Annelida	<i>Glycera</i> sp.	8	25	5	7
130140	Annelida	<i>Goniada maculata</i>	11	40	7	13
953	Annelida	Goniadidae spp.	41	102	48	110
158095	Arthropoda	<i>Guerneia (Prinassus) nordenskioldi</i>	—	—	2	4
1484	Arthropoda	Halacaridae spp.	2	19	—	—
100667	Cnidaria	Halcampidae spp.	6	44	1	1
1342053	Mollusca	<i>Haminoea solitaria</i>	1	1	—	—
158099	Arthropoda	<i>Hardametopa carinata</i>	1	1	1	1
130769	Annelida	<i>Harmothoe imbricata</i>	1	1	—	—
129491	Annelida	<i>Harmothoe</i> sp.	3	9	8	14
1102	Arthropoda	Harpacticoida	3	3	3	3
102974	Arthropoda	<i>Harpinia propinqua</i>	87	651	2	5
157436	Annelida	<i>Hartmania moorei</i>	—	—	2	12
152302	Annelida	<i>Hediste diversicolor</i>	2	3	—	—
128143	Arthropoda	<i>Hemicythere villosa</i>	26	96	16	36
104054	Brachiopoda	<i>Hemithiris psittacea</i>	6	45	—	—
946	Annelida	Hesionidae spp.	—	—	1	2
138749	Mollusca	<i>Heteranomia squamula</i>	1	2	—	—
140103	Mollusca	<i>Hiatella arctica</i>	1	4	1	4
123083	Echinodermata	Holothuroidea	7	23	9	25
107323	Arthropoda	<i>Hyas coarctatus</i>	4	6	4	6
1337	Cnidaria	Hydrozoa	—	—	1	1
157891	Arthropoda	<i>Idotea phosphorea</i>	1	1	—	—
101389	Arthropoda	Ischyroceridae spp.	3	13	3	11
102412	Arthropoda	<i>Ischyrocerus anguipes</i>	1	1	1	1
1131	Arthropoda	Isopoda	7	148	5	76
884676	Annelida	<i>Kirkegaardia</i> sp.	1	1	—	—
140170	Mollusca	<i>Lacuna vincta</i>	4	12	4	11
117136	Cnidaria	<i>Lafoea</i> sp.	1	1	—	—
110516	Arthropoda	<i>Lamprops fasciatus</i>	1	2	1	1
110517	Arthropoda	<i>Lamprops fuscatus</i>	14	26	14	26
1307579	Arthropoda	<i>Lamprops quadriplicata</i>	2	2	—	—
140187	Mollusca	<i>Lepeta caeca</i>	7	12	6	9
158112	Arthropoda	<i>Leptocheirus pinguis</i>	1	2	—	—
110501	Arthropoda	<i>Leptostylis ampullacea</i>	1	12	1	3
110618	Arthropoda	<i>Leucon (Leucon) nasica</i>	1	4	—	—
110619	Arthropoda	<i>Leucon (Leucon) nasicooides</i>	43	408	33	185
880017	Mollusca	<i>Limecola balthica</i>	16	212	13	38
140262	Mollusca	<i>Littorina littorea</i>	5	11	4	10
140263	Mollusca	<i>Littorina obtusata</i>	1	1	—	—

967	Annelida	Lumbrineridae spp.	5	18	3	14
101395	Arthropoda	Lysianassidae spp.	3	5	—	—
141580	Mollusca	<i>Macoma calcarea</i>	88	584	84	420
138531	Mollusca	<i>Macoma</i> sp.	2	5	—	—
158037	Arthropoda	<i>Maera danae</i>	1	1	1	1
130305	Annelida	<i>Maldane sarsi</i>	2	3	2	3
923	Annelida	Maldanidae spp.	31	203	29	197
141819	Mollusca	<i>Margarites costalis</i>	—	—	1	3
138592	Mollusca	<i>Margarites</i> sp.	1	1	—	—
111411	Bryozoa	<i>Membranipora membranacea</i>	2	2	—	—
156805	Mollusca	<i>Mesodesma arctatum</i>	4	89	16	217
130349	Annelida	<i>Micronephthys neotena</i>	2	7	—	—
130168	Annelida	<i>Microphthalmus aberrans</i>	6	63	—	—
130174	Annelida	<i>Microphthalmus szcelkowi</i>	4	35	—	—
129313	Annelida	<i>Microphthalmus</i> sp.	1	1	—	—
101694	Arthropoda	<i>Monoculodes</i> sp.	6	20	—	—
102901	Arthropoda	<i>Monoculopsis longicornis</i>	2	5	—	—
140472	Mollusca	<i>Muculus (Musculus) discors</i>	1	1	1	1
140430	Mollusca	<i>Mya arenaria</i>	1	4	11	17
156249	Mollusca	<i>Mya pseudoarenaria</i>	1	1	—	—
110949	Bryozoa	<i>Myriapora</i> sp.	1	1	—	—
876479	Mollusca	<i>Mysella planulata</i>	3	14	3	5
138228	Mollusca	<i>Mytilus</i> sp.	23	462	10	133
799	Nematoda	Nematoda	61	1377	17	165
152391	Nemertea	Nemertea	3	21	3	17
131069	Annelida	<i>Neoleanira tetragona</i>	1	1	1	1
956	Annelida	Nephtyidae spp.	11	17	14	21
157499	Annelida	<i>Nephtys bucera</i>	—	—	5	5
130355	Annelida	<i>Nephtys caeca</i>	22	31	32	66
130356	Annelida	<i>Nephtys ciliata</i>	—	—	2	6
130362	Annelida	<i>Nephtys incisa</i>	35	73	37	75
130364	Annelida	<i>Nephtys longosetosa</i>	1	1	—	—
129370	Annelida	<i>Nephtys</i> sp.	23	6901	—	—
22496	Annelida	Nereididae spp.	1	1	—	—
130404	Annelida	<i>Nereis pelagica</i>	—	—	1	1
156916	Mollusca	<i>Nucula proxima</i>	—	—	4	11
140577	Mollusca	<i>Nuculana minuta</i>	11	13	11	13
1566	Arthropoda	<i>Nymphonidae</i> spp.	1	1	—	—
117388	Cnidaria	<i>Obelia geniculata</i>	1	1	—	—
117389	Cnidaria	<i>Obelia longissima</i>	1	1	—	—
117034	Cnidaria	<i>Obelia</i> sp.	5	5	—	—
137826	Mollusca	<i>Oenopota</i> sp.	9	10	9	10
2036	Annelida	Oligochaeta	20	261	16	144
130494	Annelida	<i>Ophelia limacina</i>	11	18	13	16
924	Annelida	Opheliidae spp.	2	3	2	3
125125	Echinodermata	<i>Ophiopholis aculeata</i>	2	2	2	2
124933	Echinodermata	<i>Ophiura robusta</i>	6	220	6	220
102690	Arthropoda	<i>Orchomenella minuta</i>	9	14	10	16
1078	Arthropoda	Ostracoda	37	341	—	—
107240	Arthropoda	<i>Pagurus pubescens</i>	3	4	7	9
106854	Arthropoda	<i>Pagurus</i> sp.	1	1	1	1

107651	Arthropoda	<i>Pandalus montagui</i>	1	1	1	1
903	Annelida	Paraonidae spp.	1	1	—	—
111547	Bryozoa	<i>Parasmittina trispinosa</i>	1	1	—	—
954693	Mollusca	<i>Parathyasira equalis</i>	1	2	1	2
181343	Mollusca	<i>Parvicardium pinnulatum</i>	8	13	8	13
156940	Mollusca	<i>Periploma leanum</i>	3	5	3	5
110593	Arthropoda	<i>Petalosarsia declivis</i>	—	—	1	1
129293	Annelida	<i>Pherusa</i> sp.	2	5	—	—
423717	Mollusca	<i>Philine lima</i>	1	1	1	1
196322	Mollusca	Philinoidea	1	2	—	—
127524	Arthropoda	<i>Philomedes</i> sp.	6	7	4	4
130602	Annelida	<i>Pholoe longa</i>	15	117	2	15
335827	Annelida	<i>Pholoe minuta tecta</i>	12	154	—	—
129439	Annelida	<i>Pholoe</i> sp.	69	304	41	92
1789	Phoronida	Phoronida	18	1140	—	—
101403	Arthropoda	Phoxocephalidae spp.	—	—	1	1
102989	Arthropoda	<i>Phoxocephalus holbolli</i>	54	553	29	113
334506	Annelida	<i>Phyllodoce groenlandica</i>	22	520	—	—
334510	Annelida	<i>Phyllodoce maculata</i>	1	1	—	—
334512	Annelida	<i>Phyllodoce mucosa</i>	—	—	3	15
129455	Annelida	<i>Phyllodoce</i> sp.	6	16	—	—
931	Annelida	Phyllodocidae spp.	1	1	4	4
334519	Annelida	<i>Phylo ornatus</i>	—	—	1	1
793	Platyhelminthes	Platyhelminthes	—	—	3	3
101404	Arthropoda	Pleustidae spp.	1	1	—	—
1091	Arthropoda	Podocopida	8	104	—	—
155879	Arthropoda	Podoplea	1	1	—	—
883	Annelida	Polychaeta	24	24	—	—
129472	Annelida	<i>Polygordius</i> sp.	19	729	—	—
939	Annelida	Polynoidae spp.	31	88	33	87
102223	Arthropoda	<i>Pontogeneia inermis</i>	1	6	—	—
101527	Arthropoda	<i>Pontogeneia</i> sp.	—	—	1	1
103079	Arthropoda	<i>Pontoporeia femorata</i>	36	361	30	295
130954	Annelida	<i>Potamilla neglecta</i>	—	—	1	10
130326	Annelida	<i>Praxillella praetermissa</i>	16	76	10	42
129360	Annelida	<i>Praxillella</i> sp.	1	2	—	—
131164	Annelida	<i>Prionospio steenstrupi</i>	22	1165	—	—
160446	Mollusca	<i>Propebela turricula</i>	6	6	6	6
102443	Arthropoda	<i>Protomedeia fasciata</i>	11	44	11	37
102444	Arthropoda	<i>Protomedeia grandimana</i>	45	1092	51	925
157836	Arthropoda	<i>Pseudoleptocuma minus</i>	4	11	4	17
136246	Arthropoda	<i>Pseudotanaïs</i> sp.	9	31	—	—
139975	Mollusca	<i>Puncturella noachina</i>	1	2	—	—
1302	Arthropoda	Pycnogonida	2	4	2	4
131170	Annelida	<i>Pygospio elegans</i>	1	1	—	—
423709	Arthropoda	<i>Quasimelita formosa</i>	1	2	2	92
423710	Arthropoda	<i>Quasimelita quadrispinosa</i>	25	102	28	109
141134	Mollusca	<i>Retusa obtusa</i>	1	2	1	2
985	Annelida	Sabellidae spp.	8	14	7	9
127599	Arthropoda	<i>Sarsicytheridea</i> sp.	18	284	6	169
127951	Arthropoda	<i>Sclerochilus contortus</i>	15	271	—	—

130261	Annelida	<i>Scoletoma fragilis</i>	1	2	—	—
129340	Annelida	<i>Scoletoma</i> sp.	11	39	10	35
130265	Annelida	<i>Scoletoma tetraura</i>	3	3	1	1
130537	Annelida	<i>Scoloplos armiger</i>	2	10	—	—
129425	Annelida	<i>Scoloplos</i> sp.	25	1299	9	85
110866	Bryozoa	<i>Scrupocellaria</i> sp.	2	2	1	1
582749	Mollusca	<i>Serripes groenlandicus</i>	1	1	—	—
1614	Cnidaria	Sertulariidae spp.	3	4	3	3
1268	Sipuncula	Sipuncula	29	29	—	—
506189	Mollusca	<i>Solamen glandula</i>	18	32	15	27
138597	Mollusca	<i>Solariella</i> sp.	1	1	1	1
14635	Mollusca	Solenioidea	11	34	11	23
131183	Annelida	<i>Spio filicornis</i>	8	31	—	—
129625	Annelida	<i>Spio</i> sp.	9	20	—	—
913	Annelida	Spionidae spp.	1	1	—	—
131187	Annelida	<i>Spiophanes bombyx</i>	5	7	1	1
156996	Mollusca	<i>Spisula solidissima</i>	5	16	—	—
101409	Arthropoda	Stenothoidae spp.	18	412	—	—
131077	Annelida	<i>Sthenelais limicola</i>	1	1	1	1
129595	Annelida	<i>Sthenelais</i> sp.	1	1	—	—
129678	Annelida	<i>Streptosyllis</i> sp.	2	2	—	—
123390	Echinodermata	<i>Strongylocentrotus</i> sp.	1	8	—	—
196391	Mollusca	<i>Tachyrhynchus erosus</i>	5	26	21	87
234208	Mollusca	<i>Testudinalia testudinalis</i>	1	1	1	1
129249	Annelida	<i>Tharyx</i> sp.	—	—	2	7
156454	Mollusca	<i>Thracia septentrionalis</i>	6	34	—	—
141663	Mollusca	<i>Thyasira gouldi</i>	23	83	20	57
138552	Mollusca	<i>Thyasira</i> sp.	30	142	29	118
760340	Bryozoa	<i>Tricellaria arctica</i>	1	11	8	44
160421	Mollusca	<i>Trichotropis bicarinata</i>	1	1	—	—
117258	Cnidaria	<i>Tubularia</i> sp.	2	2	2	2
160488	Bryozoa	<i>Tubuliporina</i> sp.	1	1	—	—
140348	Mollusca	<i>Turritellopsis stimpsoni</i>	1	1	—	—
158156	Arthropoda	<i>Unciola irrorata</i>	4	4	4	4
243	Mollusca	Veneridae spp.	—	—	1	2
1255501	Arthropoda	<i>Wecomedon nobilis</i>	1	1	1	1
157005	Mollusca	<i>Yoldia limatula</i>	—	—	3	3
157006	Mollusca	<i>Yoldia myalis</i>	3	3	8	9

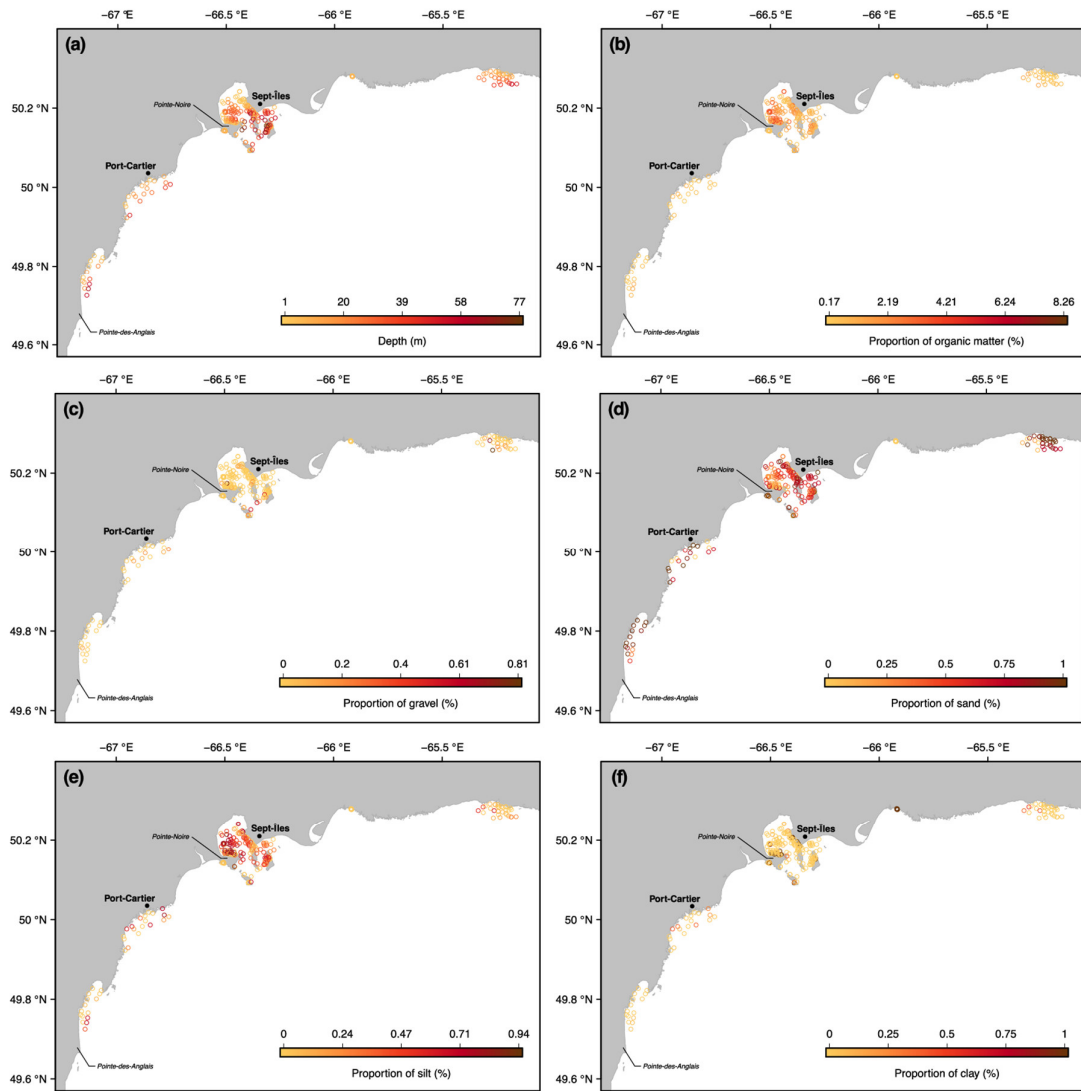
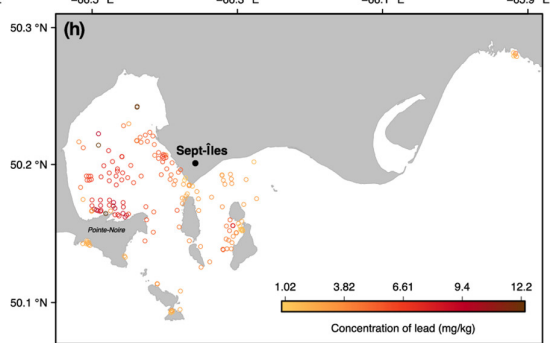
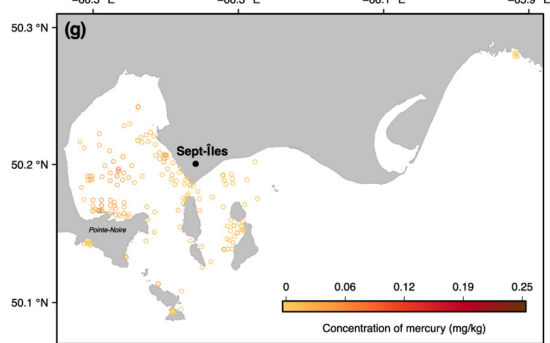
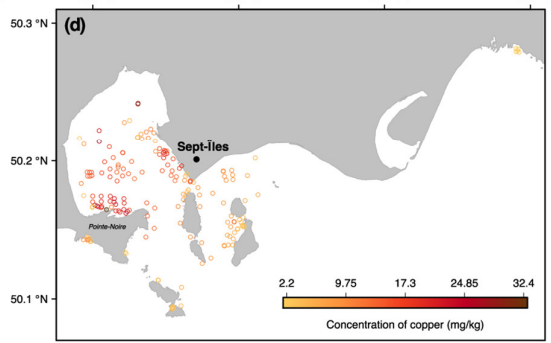
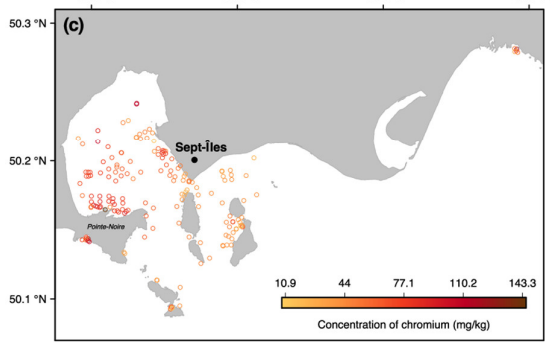
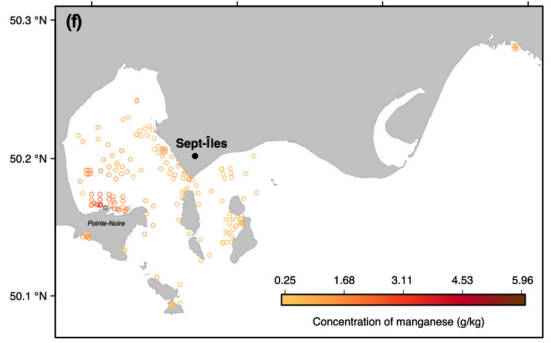
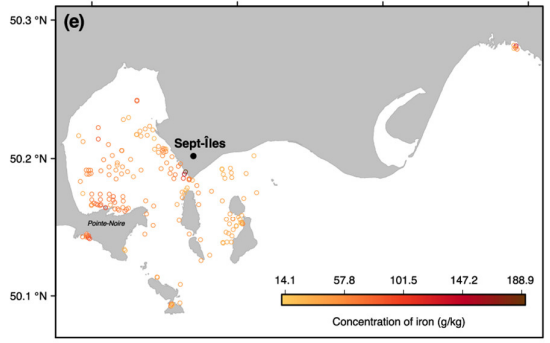
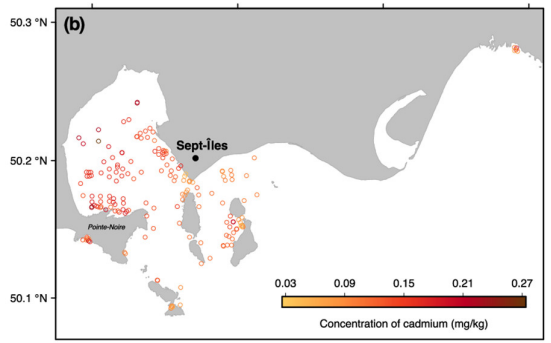
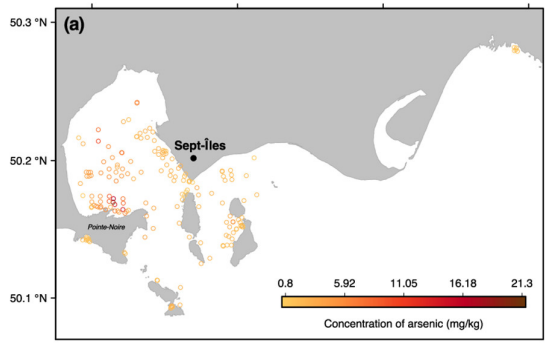


Figure S1. Values of habitat parameters at each station. **(a)** Map for station depth; **(b)** Map for organic matter content; **(c)** Map for gravel content; **(d)** Map for sand content; **(e)** Map for silt content; **(f)** Map for clay content.



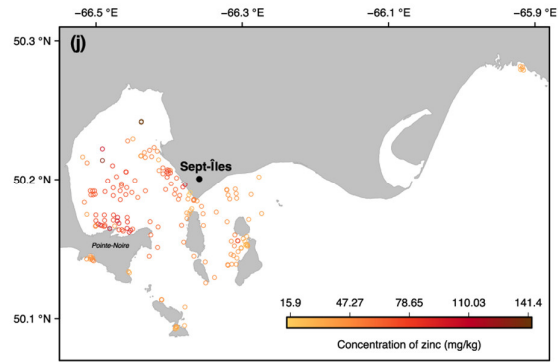
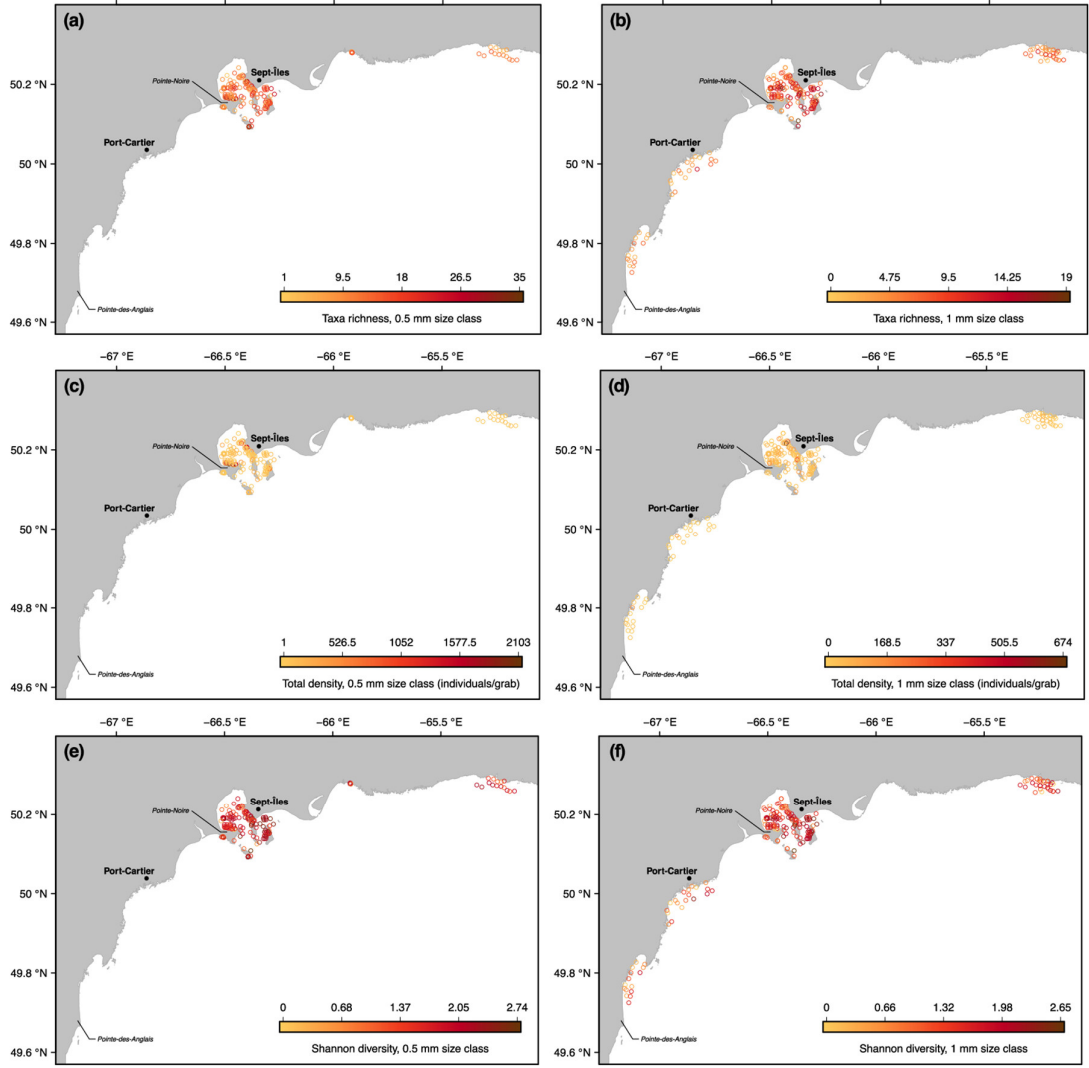


Figure S2. Values of heavy metal concentrations at each station. (a) Map for arsenic concentration; (b) Map for cadmium concentration; (c) Map for chromium concentration; (d) Map for copper concentration; (e) Map for iron concentration; (f) Map for manganese concentration; (g) Map for mercury concentration; (h) Map for lead concentration; (j) Map for zinc concentration



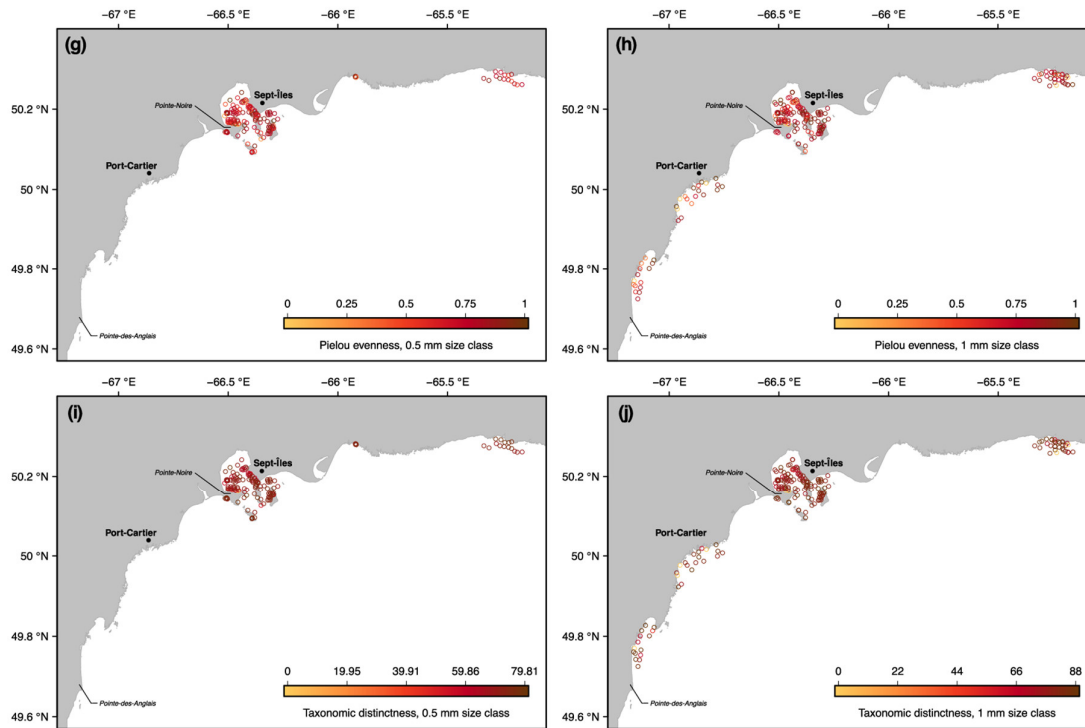


Figure S3. Values of community characteristics at each station. (a) Map for taxa richness for the 0.5 mm size class; (b) Map for taxa richness for the 1 mm size class; (c) Map for total density for the 0.5 mm size class; (d) Map for total density for the 1 mm size class; (e) Map for Shannon diversity for the 0.5 mm size class; (f) Map for Shannon diversity for the 1 mm size class; (g) Map for Pielou evenness for the 0.5 mm size class; (h) Map for Pielou evenness for the 1 mm size class; (i) Map for taxonomical distinctness for the 0.5 mm size class; (j) Map for taxonomical distinctness for the 1 mm size class