

# CHANGES IN DIVERSITY AND SPECIES COMPOSITION ACROSS MULTIPLE ASSEMBLAGES IN THE EASTERN CHUKCHI SEA DURING TWO CONTRASTING YEARS ARE CONSISTENT WITH BOREALIZATION

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Table S1a: Bacteria (prokaryota) taxa with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence. (*Note:* Includes all samples collected; only surface samples were analyzed.)

Taxon	2015	2017	total
	(n=1 45)	(n=2 14)	(n=3 59)
SAR11_clade;Clade_I;Clade_Ia	145	213	358
SAR86_clade;SAR86_clade_fa;SAR86_clade_ge	145	210	355
Oceanospirillales;Nitrincolaceae;uncultured	145	210	355
Flavobacteriales;Flavobacteriaceae;Formosa	145	209	354
Flavobacteriales;Flavobacteriaceae;NS5_marine_group	145	209	354
Flavobacteriales;Cryomorphaceae;uncultured	145	200	345
Cellvibrionales;Porticoccaceae;SAR92_clade	143	199	342
Rhodobacterales;Rhodobacteraceae;Sulfitobacter	144	197	341
Flavobacteriales;Flavobacteriaceae;Ulvibacter	144	197	341
Thiomicrospirales;Thioglobaceae;SUP05_cluster	144	195	339
Flavobacteriales;NS9_marine_group;NS9_marine_group_ge	141	197	338
Rhodobacterales;Rhodobacteraceae;Planktomarina	144	194	338
Rhodobacterales;Rhodobacteraceae;Amylibacter	143	192	335
OM182_clade;OM182_clade_fa;OM182_clade_ge	142	193	335
Oceanospirillales;Pseudohongiellaceae;Pseudohongiella	138	197	335
Puniceispirillales;SAR116_clade;SAR116_clade_ge	142	185	327
Flavobacteriales;Crocinitomicaceae;Fluviicola	138	186	324
Flavobacteriales;Flavobacteriaceae;uncultured	134	186	320
SAR11_clade;Clade_III;Clade_III_ge	139	180	319
Betaproteobacteriales;Methylophilaceae;OM43_clade	138	180	318
SAR11_clade;Clade_II;Clade_II_ge	139	176	315
Nitrosococcales;Methylophagaceae;uncultured	128	181	309
Cellvibrionales;Haliaceae;OM60(NOR5)_clade	129	168	297
Kordiimonadales;uncultured;uncultured_ge	137	151	288
Sphingobacteriales;NS11-12_marine_group;NS11-12_marine_group_ge	125	159	284
Verrucomicrobiales;Rubritaleaceae;Roseibacillus	129	155	284
Cytophagales;Cyclobacteriaceae;Marinoscillum	124	155	279
Micrococcales;Microbacteriaceae;Candidatus_Aquiluna	120	157	277
SAR11_clade;Clade_IV;Clade_IV_ge	135	140	275
Flavobacteriales;Flavobacteriaceae;Polaribacter	143	132	275
Flavobacteriales;Flavobacteriaceae;NS2b_marine_group	123	145	268
Rhodospirillales;AEGEAN-169_marine_group;AEGEAN-169_marine_group_ge	121	146	267
Flavobacteriales;NS7_marine_group;NS7_marine_group_ge	135	131	266
Flavobacteriales;Flavobacteriaceae;NS4_marine_group	118	145	263
Chitinophagales;Saprosiraceae;uncultured	105	133	238
Alteromonadales;Pseudoalteromonadaceae;Pseudoalteromonas	138	97	235

Marine_Group_II;Marine_Group_II_fa;Marine_Group_II_ge	112	122	234
Microtrichales;Ilumatobacteraceae;Ilumatobacter	109	122	231
Rhodobacterales;Rhodobacteraceae;Ascidiaceihabitans	122	107	229
Opitutales;Puniceicoccaceae;Lentimonas	118	106	224
Verrucomicrobiales;Rubritaleaceae;Persicirhabdus	102	118	220
Chthoniobacterales;Chthoniobacteraceae;LD29	110	101	211
Flavobacteriales;Flavobacteriaceae;NS3a_marine_group	78	133	211
PeM15;PeM15_fa;PeM15_ge	114	85	199
Opitutales;Puniceicoccaceae;MB11C04_marine_group	92	106	198
Rhodospirillales;Magnetospiraceae;uncultured	90	108	198
Microtrichales;Microtrichaceae;Sva0996_marine_group	102	90	192
KI89A_clade;KI89A_clade_fa;KI89A_clade_ge	103	87	190
Parvibaculales;OCS116_clade;OCS116_clade_ge	96	94	190
Rhodobacterales;Rhodobacteraceae;Loktanella	93	93	186
NB1-j;NB1-j_fa;NB1-j_ge	71	112	183
uncultured;uncultured_fa;uncultured_ge	71	111	182
Thiotrichales;Thiotrichaceae;uncultured	98	56	154
Alteromonadales;Alteromonadaceae;Alteromonas	105	47	152
Chitinophagales;Saprospiraceae;Aureispira	81	69	150
Arenicellales;Arenicellaceae;Arenicella	92	57	149
Betaproteobacteriales;Methylophilaceae;Methylotenera	76	70	146
Thiotrichales;Thiotrichaceae;Thiotrichaceae_ge	58	88	146
Cellvibrionales;Spongiibacteraceae;uncultured	74	70	144
Alteromonadales;Colwelliaceae;Colwellia	98	45	143
Alteromonadales;Alteromonadaceae;Paraglaciecola	77	56	133
Synechococcales;Cyanobiaceae;Synechococcus_CC9902	85	48	133
Nitrosopumilales;Nitrosopumilaceae;Candidatus_Nitrosopumilus	86	46	132
Micrococcales;Microbacteriaceae;XZXXH163	79	47	126
Opitutales;Puniceicoccaceae;Pelagicoccus	67	58	125
Cellvibrionales;Porticoccaceae;Porticoccus	70	53	123
Alteromonadales;Psychromonadaceae;Psychromonas	71	44	115
Bdellovibrionales;Bdellovibrionaceae;OM27_clade	51	61	112
Oceanospirillales;Litoricolaceae;Litoricola	73	38	111
Flavobacteriales;Flavobacteriaceae;Tenacibaculum	79	32	111
Flavobacteriales;Flavobacteriaceae;Polaribacter_1	87	23	110
SAR324_clade(Marine_group_B);SAR324_clade(Marine_group_B)_fa;SAR324_clade(Marine_group_B)_ge	77	30	107
Desulfuromonadales;Sva1033;Sva1033_ge	67	40	107
Flavobacteriales;Crocinitomicaceae;Crocinitomix	72	28	100
Cellvibrionales;Spongiibacteraceae;BD1-7_clade	50	49	99
Pseudomonadales;Moraxellaceae;Psychrobacter	80	17	97
Verrucomicrobiales;DEV007;DEV007_ge	54	35	89
Verrucomicrobiales;Rubritaleaceae;Rubritalea	66	23	89

Campylobacteriales;Arcobacteraceae;Arcobacter	63	25	88
Desulfobacterales;Desulfobulbaceae;uncultured	54	30	84
OM190_or;OM190_fa;OM190_ge	38	45	83
Flavobacteriales;Flavobacteriaceae;Lutibacter	64	18	82
Chitinophagales;Saprospiraceae;Portibacter	59	22	81
Puniceispirillales;uncultured;uncultured_ge	37	42	79
Cytophagales;Cyclobacteriaceae;uncultured	64	14	78
Betaproteobacteriales;Nitrosomonadaceae;IS-44	48	28	76
Cytophagales;Cyclobacteriaceae;Fabibacter	58	17	75
Francisellales;Francisellaceae;Francisella	31	43	74
Betaproteobacteriales;Burkholderiaceae;RS62_marine_group	40	33	73
Alteromonadales;Moritellaceae;Moritella	51	20	71
Cellvibrionales;Haliaceae;Halioglobus	42	26	68
Phycisphaerales;Phycisphaeraceae;Urania-1B-19_marine_sediment_group	31	35	66
Rhodobacteriales;Rhodobacteraceae;uncultured	47	18	65
Nostocales;Microcystaceae;Atelocyanobacterium_(UCYN-A)	48	15	63
Flavobacteriales;Cryomorpaceae;NS10_marine_group	50	10	60
Ga0077536;Ga0077536_fa;Ga0077536_ge	37	19	56
Rhodobacteriales;Rhodobacteraceae;Litoreibacter	47	7	54
Steroidobacteriales;Woeseiaceae;Woeseia	36	18	54
Tenderiales;Tenderiaceae;Candidatus_Tenderia	24	28	52
Gammaproteobacteria_Incertae_Sedis;Unknown_Family;uncultured	44	8	52
Parvibaculales;Parvibaculaceae;uncultured	35	16	51
Pirellulales;Pirellulaceae;Blastopirellula	43	6	49
Cellvibrionales;Cellvibrionaceae;Eionea	34	14	48
Rhodobacteriales;Rhodobacteraceae;Octadecabacter	42	6	48
Oceanospirillales;Saccharospirillaceae;Reinekea	19	27	46
Bdellovibrionales;Bacteriovoracaceae;Peredibacter	41	4	45
Marinimicrobia_(SAR406_clade)_or;Marinimicrobia_(SAR406_clade)_fa;Marinimicrobia_(SAR406_clade)_ge	30	14	44
Rickettsiales;Rickettsiaceae;Candidatus_Megaira	31	12	43
Oceanospirillales;Saccharospirillaceae;Oleibacter	42	1	43
Myxococcales;Sandaracinaceae;uncultured	31	5	36
Campylobacteriales;Thiovulaceae;Sulfurimonas	28	7	35
Oceanospirillales;Halomonadaceae;Cobetia	32	2	34
Rickettsiales;Midichloriaceae;MD3-55	23	10	33
Oceanospirillales;Alcanivoracaceae;Alcanivorax	30	0	30
Actinomarinales;Actinomarinnaceae;Candidatus_Actinomarina	25	4	29
BD7-8;BD7-8_fa;BD7-8_ge	27	1	28
Bdellovibrionales;Bacteriovoracaceae;uncultured	23	5	28
Desulfobacterales;Desulfobacteraceae;SEEP-SRB1	24	2	26
Rhizobiales;Methyloligellaceae;Methyloceanibacter	21	4	25
Kiritimatiellales;Kiritimatiellaceae;R76-B128	9	16	25

Pirellulales;Pirellulaceae;uncultured	25	0	25
Flavobacteriales;Flavobacteriaceae;Algibacter	19	5	24
Campylobacterales;Sulfurovaceae;Sulfurovum	20	3	23
Bacteroidales;Marinifilaceae;Marinifilum	22	0	22
Sva0485;Sva0485_fa;Sva0485_ge	20	2	22
Oceanospirillales;Oleiphilaceae;Oleiphilus	19	2	21
SAR202_clade;SAR202_clade_fa;SAR202_clade_ge	21	0	21
Actinomarinales;uncultured;uncultured_ge	19	2	21
Desulfobacterales;Desulfobulbaceae;Desulforhopalus	17	3	20
Micavibrionales;Micavibrionaceae;uncultured	20	0	20
Flavobacteriales;Flavobacteriaceae;Lutimonas	16	2	18
P.palmC41;P.palmC41_fa;P.palmC41_ge	17	1	18
Flavobacteriales;Schleiferiaceae;Schleiferia	14	4	18
Fusobacteriales;Fusobacteriaceae;Psychrilyobacter	16	1	17
Bacteroidales;Bacteroidetes_BD2-2;Bacteroidetes_BD2-2_ge	14	1	15
Solirubrobacterales;67-14;67-14_ge	14	0	14
Flavobacteriales;Flavobacteriaceae;Croceibacter	13	1	14
Flavobacteriales;Flavobacteriaceae;Dokdonia	13	1	14
Fusobacteriales;Fusobacteriaceae;Fusobacterium	12	2	14
JGI_0000069-P22;JGI_0000069-P22_fa;JGI_0000069-P22_ge	14	0	14
Nitrospinales;Nitrospinaceae;LS-NOB	11	3	14
Alteromonadales;Marinobacteraceae;Marinobacter	14	0	14
Nitrospirales;Nitrospiraceae;Nitrospira	13	1	14
Flavobacteriales;Flavobacteriaceae;Pseudofulvibacter	7	7	14
Pseudomonadales;Pseudomonadaceae;Pseudomonas	14	0	14
Desulfobacterales;Desulfobacteraceae;Sva0081_sediment_group	12	2	14
WCHB1-41;WCHB1-41_fa;WCHB1-41_ge	13	1	14
Hydrogenedentiales;Hydrogenedensaceae;Hydrogenedensaceae_ge	7	6	13
Oceanospirillales;Saccharospirillaceae;Oleispira	12	1	13
Flavobacteriales;Cryomorphaceae;Owenweeksia	13	0	13
Pirellulales;Pirellulaceae;Rubripirellula	12	1	13
B2M28;B2M28_fa;B2M28_ge	7	5	12
Nitrosococcales;Nitrosococcaceae;Cm1-21	7	5	12
Planctomycetales;Gimesiaceae;Gimesia	11	1	12
Lactobacillales;Leuconostocaceae;Leuconostoc	8	4	12
Phycisphaerales;Phycisphaeraceae;uncultured	11	1	12
Flavobacteriales;Flavobacteriaceae;Winogradskyella	4	8	12
Alteromonadales;Alteromonadaceae;Glaciecola	11	0	11
Lentisphaerales;Lentisphaeraceae;Lentisphaera	5	6	11
Chitinophagales;Saprosiraceae;Lewinella	11	0	11
Bacteroidales;Marinifilaceae;uncultured	11	0	11
Flavobacteriales;Flavobacteriaceae;Maribacter	9	1	10
Parvibaculales;PS1_clade;PS1_clade_ge	6	4	10

Cytophagales;Spirosomaceae;Taeseokella	10	0	10
Methylococcales;Cycloclasticaceae;Cycloclasticus	9	0	9
Clostridiales;Family_XII;Fusibacter	9	0	9
Desulfuromonadales;Geobacteraceae;Geopsychrobacter	9	0	9
Thiohalorhabdadales;Thiohalorhabdaceae;Granulosicoccus	9	0	9
Rhodospirillales;Magnetospiraceae;Magnetospira	8	1	9
Nitrospinales;Nitrospinaceae;Nitrospina	9	0	9
Thalassobaculales;Nisaeaceae;OM75_clade	9	0	9
Anaerolineales;Anaerolineaceae;uncultured	9	0	9
Cellvibrionales;Porticoccaceae;C1-B045	8	0	8
Phycisphaerales;Phycisphaeraceae;FS140-16B-02_marine_group	8	0	8
Ignavibacteriales;PHOS-HE36;PHOS-HE36_ge	8	0	8
Flavobacteriales;Crocinitomicaceae;uncultured	7	1	8
Flavobacteriales;Flavobacteriaceae;Aquibacter	7	0	7
Dadabacteriales;Dadabacteriales_fa;Dadabacteriales_ge	7	0	7
Flavobacteriales;Flavobacteriaceae;Flavicella	7	0	7
UBA10353_marine_group;UBA10353_marine_group_fa;UBA10353_marine_group_ge	7	0	7
Pseudomonadales;Moraxellaceae;Acinetobacter	0	6	6
Vibrionales;Vibrionaceae;Aliivibrio	4	2	6
Bacteroidetes_VC2.1_Bac22;Bacteroidetes_VC2.1_Bac22_fa;Bacteroidetes_VC2.1_Bac22_ge	6	0	6
Thiotrichales;Thiotrichaceae;Cocleimonas	5	1	6
Izimaplasmatales;Izimaplasmatales_fa;Izimaplasmatales_ge	6	0	6
Gammaproteobacteria_Incertae_Sedis;Unknown_Family;Marinicella	6	0	6
Flavobacteriales;Flavobacteriaceae;Nonlabens	4	2	6
PAUC34f_or;PAUC34f_fa;PAUC34f_ge	6	0	6
Oceanospirillales;Nitrincolaceae;Profundimonas	6	0	6
MSBL9;4572-13;4572-13_ge	5	0	5
Candidatus_Yonathbacteria;Candidatus_Yonathbacteria_fa;Candidatus_Yonathbacteria_ge	1	4	5
Verrucomicrobiales;Rubritaleaceae;Luteolibacter	5	0	5
PB19;PB19_fa;PB19_ge	4	1	5
MSBL9;SG8-4;SG8-4_ge	5	0	5
Cellvibrionales;Cellvibrionaceae;uncultured	0	5	5
Rhodothermales;Rhodothermaceae;uncultured	3	2	5
Syntrophobacterales;Syntrophobacteraceae;uncultured	5	0	5
Desulfobacterales;Desulfobulbaceae;Desulfobulbaceae_ge	4	0	4
Bacteroidales;Prolixibacteraceae;Draconibacterium	4	0	4
Sphingomonadales;Sphingomonadaceae;Erythrobacter	0	4	4
Kordiimonadales;Kordiimonadaceae;Kordiimonas	4	0	4
Oceanospirillales;Marinomonadaceae;Marinomonas	0	4	4
Pedosphaerales;Pedosphaeraceae;Pedosphaeraceae_ge	4	0	4
Sneathiellales;Sneathiellaceae;Sneathiella	4	0	4

Bradymonadales;Bradymonadales_fa;Bradymonadales_ge	3	0	3
Brocadiales;Scalinduaceae;Candidatus_Scalindua	3	0	3
Opitutales;Opitutaceae;Diplosphaera	3	0	3
Flavobacteriales;Flavobacteriaceae;Eudoraea	1	2	3
Flavobacteriales;Flavobacteriaceae;Flavobacterium	3	0	3
Ignavibacteriales;Melioribacteraceae;IheB3-7	3	0	3
KD4-96_or;KD4-96_fa;KD4-96_ge	3	0	3
Flavobacteriales;Flavobacteriaceae;Maritimimonas	3	0	3
Desulfobacterales;Desulfobulbaceae;SEEP-SRB4	3	0	3
Subgroup_26_or;Subgroup_26_fa;Subgroup_26_ge	3	0	3
Planctomycetales;Gimesiaceae;uncultured	3	0	3
Planctomycetales;Rubinisphaeraceae;uncultured	3	0	3
Woesearchaeia_or;Woesearchaeia_fa;Woesearchaeia_ge	3	0	3
Absconditabacteriales_(SR1);Absconditabacteriales_(SR1)_fa;Absconditabacteriales_(SR1)_ge	2	0	2
Bacteroidales;Bacteroidaceae;Bacteroides	2	0	2
Cellvibrionales;BD2-7;BD2-7_ge	2	0	2
Calditrichales;Calditrichaceae;Calditrichaceae_ge	2	0	2
Desulfarculales;Desulfarculaceae;Desulfatigians	2	0	2
Desulfobacterales;Desulfobacteraceae;Desulfoconvexum	2	0	2
Desulfobacterales;Desulfobacteraceae;Desulfofrigus	2	0	2
Bdellovibrionales;Bacteriovoracaceae;Halobacteriovorax	2	0	2
Oceanospirillales;Halomonadaceae;Halomonas	2	0	2
Rhizobiales;Rhizobiaceae;Hoeflea	2	0	2
Caulobacterales;Hyphomonadaceae;Hyphomonas	2	0	2
Latescibacteria_or;Latescibacteria_fa;Latescibacteria_ge	2	0	2
Margulisbacteria_or;Margulisbacteria_fa;Margulisbacteria_ge	1	1	2
Milano-WF1B-44;Milano-WF1B-44_fa;Milano-WF1B-44_ge	2	0	2
OPB56;OPB56_fa;OPB56_ge	2	0	2
Clostridiales;Peptostreptococcaceae;Paeniclostridium	2	0	2
Pirellulales;Pirellulaceae;Pir4_lineage	2	0	2
pItb-vmat-80;pItb-vmat-80_fa;pItb-vmat-80_ge	2	0	2
Clostridiales;Peptostreptococcaceae;Romboutsia	2	0	2
Saccharimonadales;Saccharimonadales_fa;Saccharimonadales_ge	1	1	2
Cellvibrionales;Spongiibacteraceae;Spongiibacteraceae_ge	1	1	2
SS1-B-02-17;SS1-B-02-17_fa;SS1-B-02-17_ge	2	0	2
Oceanospirillales;SS1-B-06-26;SS1-B-06-26_ge	2	0	2
Subgroup_6_or;Subgroup_6_fa;Subgroup_6_ge	2	0	2
Campylobacteriales;Sulfurospirillaceae;Sulfurospirillum	2	0	2
Legionellales;Legionellaceae;uncultured	2	0	2
Propionibacteriales;Propionibacteriaceae;uncultured	2	0	2
Chitinophagales;uncultured;uncultured_ge	2	0	2
Vibrionales;Vibrionaceae;Vibrio	2	0	2





Table S1b: Protist taxa with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence (Note: Includes all samples collected; only surface samples were analyzed.)

Taxon	2015	2017	total
	(n=166)	(n=192)	(n=358)
Ochrophyta;Chaetoceros	166	188	354
Picozoa;Picozoa_XXXX	165	180	345
Dinoflagellata;Gyrodinium	166	175	341
Ciliophora;Leegaardiella	161	177	338
Stramenopiles_X;Stramenopiles_X-Group-7_XXX	158	159	317
Dinoflagellata;Dino-Group-I-Clade-1_X	165	151	316
Choanoflagellida;Stephanoecidae_Group_D_X	158	150	308
Ochrophyta;Proboscia	159	149	308
Chlorophyta;Micromonas	162	145	307
Ochrophyta;Thalassiosira	161	132	293
Haptophyta;Chrysochromulina	147	134	281
Stramenopiles_X;MAST-7A_X	153	117	270
Stramenopiles_X;MAST-1A_X	121	147	268
Dinoflagellata;Dino-Group-I-Clade-5_X	148	113	261
Choanoflagellida;Stephanoecidae_Group_H_X	150	110	260
Ochrophyta;Pedinellales_X	145	110	255
Dinoflagellata;Gymnodinium	147	107	254
Dinoflagellata;Heterocapsa	151	99	250
Ochrophyta;Cylindrotheca	151	99	250
Stramenopiles_X;MAST-3E_X	116	134	250
Cryptophyta;Teleaulax	153	95	248
Ochrophyta;Chrysophyceae_Clade-C_X	127	121	248
Ochrophyta;Raphid-pennate_X	152	96	248
Stramenopiles_X;MAST-1C_X	122	122	244
Stramenopiles_X;MAST-12A_X	140	97	237
Ochrophyta;Attheya	151	85	236
Ochrophyta;Pseudo-nitzschia	155	81	236
Haptophyta;Phaeocystis	153	78	231
Stramenopiles_X;MOCH-2_XX	141	89	230
Ochrophyta;Rhizosolenia	155	72	227
Stramenopiles_X;MAST-2D_X	123	103	226
Dinoflagellata;Prorocentrum	130	95	225
Ochrophyta;Minidiscus	148	76	224
Ciliophora;Strombidiida_G_XX	138	82	220
Ochrophyta;Porosira	132	88	220
Dinoflagellata;Tripos	150	67	217
Telonemia;Telonemia-Group-2_X	128	89	217
Cryptophyta;Plagioselmis	125	90	215

Fungi;Cryptomycotina_XX	125	85	210
Katablepharidophyta;Katablepharidales_XX	114	92	206
Stramenopiles_X;MAST-3L_X	122	80	202
Dinoflagellata;Alexandrium	69	127	196
Dinoflagellata;Dino-Group-II-Clade-10-and-11_X	103	91	194
Dinoflagellata;Dino-Group-II-Clade-1_X	117	73	190
Ochrophyta;Florenciella	140	50	190
Ochrophyta;Leptocylindrus	98	90	188
Ciliophora;Tontoniidae_B_X	113	74	187
Centroheliocystis;Pterocystida_XX	118	66	184
Dinoflagellata;Dino-Group-II-Clade-6_X	98	86	184
Ochrophyta;Aureococcus	109	75	184
Ciliophora;Prostomatea-1_XX	84	99	183
Dinoflagellata;Dino-Group-II-Clade-3_X	134	48	182
Ciliophora;Laboea	99	82	181
Dinoflagellata;Dino-Group-III_XX	85	93	178
Chlorophyta;Bathycoccus	109	63	172
Ciliophora;Didiniidae_X	111	61	172
Ochrophyta;Polar-centric-Mediophyceae_X	97	75	172
Cercozoa;Novel-clade-2_X	90	80	170
Ochrophyta;Actinocyclus	123	43	166
Cercozoa;Protaspa-lineage_X	79	84	163
Ochrophyta;Chrysophyceae_Clade-H_X	79	84	163
Ciliophora;Strombidiidae_M_X	110	52	162
Ciliophora;Colpodea-1_XX	93	66	159
Ciliophora;Cyclotrichia_XX	76	83	159
Opisthokonta_X;Opisthokonta_XXXXXX	103	56	159
Ochrophyta;Parmales_env_1_X	131	26	157
Cryptophyta;Falcomonas	125	31	156
Cercozoa;Cryothecomonas	95	60	155
Ochrophyta;Fragilariopsis	90	64	154
Ciliophora;Lynnella	107	46	153
Ciliophora;Strombidiida_B_XX	105	47	152
Stramenopiles_X;MAST-1B_X	99	52	151
Chlorophyta;Pyramimonas	72	78	150
Ochrophyta;Pseudochattonella	130	19	149
Ciliophora;Strobilidiidae_A_X	84	63	147
Dinoflagellata;Dino-Group-II-Clade-14_X	64	80	144
Ciliophora;Strombidiidae_H_X	91	51	142
Ciliophora;Ciliophora-10_XXX	86	55	141
Dinoflagellata;Margalefidinium	92	48	140
Fungi;Chytridiomycetes_X	90	50	140
Stramenopiles_X;MAST-8A_X	68	72	140

Cryptophyta;Rhodomonas	109	28	137
Ochrophyta;Nitzschia	120	14	134
Choanoflagellata;Choanoflagellatea_X_Group_L_X	69	63	132
Dinoflagellata;Protoceratium	89	41	130
Ciliophora;Chlamydomon	94	35	129
Ciliophora;Strombidiida_F_XX	66	63	129
Stramenopiles_X;MOCH-1_XX	96	30	126
Dinoflagellata;Dino-Group-I-Clade-4_X	65	55	120
Haptophyta;Prymnesiophyceae_Clade_F_XX	77	41	118
Ochrophyta;Triparma	105	13	118
Stramenopiles_X;MAST-4E_X	75	43	118
Ciliophora;Ptychocylis	44	73	117
Ciliophora;Askenasi	66	44	110
Ciliophora;Tintinnopsis_07	58	51	109
Dinoflagellata;Dino-Group-II-Clade-5_X	54	53	107
Haptophyta;Haptophyta_XXXX	48	59	107
Dinoflagellata;Dino-Group-II-Clade-12_X	48	57	105
Cercozoa;NPK2-lineage_X	62	41	103
Dinoflagellata;Dino-Group-II-Clade-4_X	44	59	103
Ochrophyta;Skeletonema	31	72	103
Stramenopiles_X;MAST-12_XX	13	89	102
Cercozoa;Cercozoa_XXXX	72	29	101
Ciliophora;Strombidiidae_L_X	63	38	101
Dinoflagellata;Woloszynskia	60	38	98
Cercozoa;Mataza-lineage_X	37	60	97
Chlorophyta;Picochlorum	64	31	95
Dinoflagellata;Dino-Group-II-Clade-44_X	36	58	94
Ochrophyta;Chrysophyceae_Clade-G_X	36	56	92
Ochrophyta;Paraphysomonas	56	36	92
Stramenopiles_X;Thraustochytriaceae_X	54	37	91
Ochrophyta;Dictyocha	62	28	90
Dinoflagellata;Dino-Group-II-Clade-52_X	44	45	89
Ciliophora;Leegaardiellidae_A_X	18	69	87
Ciliophora;Strombidiidae_B_X	58	29	87
Ochrophyta;Pleurosigma	51	35	86
Ochrophyta;Pseudopedinella	61	23	84
Ciliophora;Strombidiidae_Q_X	79	2	81
Stramenopiles_X;Stramenopiles_XXXXX	43	37	80
Stramenopiles_X;MAST-6_XX	30	48	78
Ciliophora;Strombidinopsis	27	50	77
Ciliophora;Strombidium_R	28	48	76
Ochrophyta;Parmales_env_3B	36	40	76
Stramenopiles_X;MAST-3I_X	37	38	75

Ciliophora;Pelagostrobilidium	35	39	74
Ochrophyta;Amphora	73	1	74
Ochrophyta;Dictyochales_X	74	0	74
Dinoflagellata;Protoperidinium	41	32	73
Dinoflagellata;Spatulodinium	32	41	73
Dinoflagellata;Dino-Group-II-Clade-25_X	71	0	71
Telonemia;Telonemia-Group-1_X	46	23	69
Ciliophora;Cyclotrichium	20	46	66
Haptophyta;Haptophyta_Clade_HAP3_XXX	55	11	66
Ciliophora;Lacrymariidae_X	32	33	65
Stramenopiles_X;MAST-3J_X	23	41	64
Ochrophyta;Navicula	29	34	63
Ciliophora;Tintinnopsis_05	27	35	62
Dinoflagellata;Dino-Group-II-Clade-13_X	37	23	60
Ochrophyta;Thalassionema	51	9	60
Ciliophora;Rimostrombidium_A	16	42	58
Chlorophyta;Prasinoderma	25	32	57
Dinoflagellata;Dino-Group-II-Clade-30_X	22	34	56
Haptophyta;Haptolina	53	3	56
Ochrophyta;Apedinella	42	14	56
Stramenopiles_X;Aplanochytrium	41	13	54
Ciliophora;Litonotidae_X	33	19	52
Dinoflagellata;Dino-Group-II-Clade-16_X	31	21	52
Ochrophyta;Pelagophyceae_XXX	52	0	52
Stramenopiles_X;MAST-4D_X	27	25	52
Cercozoa;Marimonadida_XX	28	22	50
Ciliophora;Hypotrichia_XX	38	12	50
Dinoflagellata;Balechina	27	23	50
Dinoflagellata;Dino-Group-II-Clade-47_X	11	38	49
Cercozoa;CCW10-lineage_X	33	15	48
Haptophyta;Braarudosphaera	32	16	48
Choanoflagellida;Acanthoecida_XX	9	38	47
Ochrophyta;Chrysophyceae_Clade-I_X	9	38	47
Stramenopiles_X;Labyrinthuloides	35	12	47
Chlorophyta;Nephroselmis	28	18	46
Stramenopiles_X;MAST-7B_X	19	26	45
Ochrophyta;Parmales_env_3A	12	32	44
Dinoflagellata;Dino-Group-II-Clade-23_X	37	6	43
Haptophyta;Prymnesium	19	22	41
Stramenopiles_X;Pirsonia_Clade_XXX	6	35	41
Dinoflagellata;Dino-Group-II_XX	30	10	40
Stramenopiles_X;MAST-3F_X	25	15	40
Ochrophyta;Chrysophyceae_XXX	25	14	39

Cercozoa;Reckertia	27	11	38
Dinoflagellata;Dino-Group-II-Clade-32_X	0	38	38
Ochrophyta;Ankylochrysis	26	12	38
Stramenopiles_X;Haliphthorales_X	12	25	37
Cercozoa;Cryothecomonas-lineage_X	33	3	36
Dinoflagellata;Dino-Group-II-Clade-17_X	26	10	36
Dinoflagellata;Polykrikos	0	36	36
Mesomycetozoa;Abeoformidae_Group_MAIP_2_X	19	17	36
Cercozoa;Thaumatomastix	11	24	35
Ochrophyta;Chrysophyceae_Clade-F_X	15	20	35
Ciliophora;Acinetidae_X	30	4	34
Dinoflagellata;Stoeckeria	12	22	34
Stramenopiles_X;Labyrinthulaceae_X	20	14	34
Dinoflagellata;Thoracosphaeraceae_X	31	2	33
Ochrophyta;Eucampia	16	17	33
Chlorophyta;Pterosperma	8	24	32
Choanoflagellida;Lagenoeca	16	16	32
Ciliophora;Strombidium_K	17	15	32
Dinoflagellata;Fragilidium	5	27	32
Ochrophyta;Entomoneis	11	20	31
Chlorophyta;Mamiella	6	24	30
Ochrophyta;Pauliella	29	1	30
Cercozoa;Novel-Clade-4_X	15	14	29
Dinoflagellata;Dinophyceae_XXX	19	9	28
Stramenopiles_X;Oomycota_XXX	27	1	28
Dinoflagellata;Dino-Group-II-Clade-33_X	1	26	27
Dinoflagellata;Dinophysis	5	22	27
Cercozoa;Filosa-Thecofilosea_XXX	19	7	26
Cercozoa;Ventricleftida_XX	17	9	26
Dinoflagellata;Dino-Group-II-Clade-7_X	7	19	26
Katablepharidophyta;Katablepharis	20	6	26
Ciliophora;Parastrombidinopsis	5	20	25
Cryptophyta;Hemiselmis	23	2	25
Ochrophyta;Odontella	7	18	25
Stramenopiles_X;MOCH-3_XX	16	9	25
Haptophyta;Syracosphaerales_XX	24	0	24
Stramenopiles_X;MAST-12B_X	2	21	23
Cercozoa;Verrucomonas	10	12	22
Chlorophyta;Pyramimonadales_XXX	16	6	22
Haptophyta;Prymnesiophyceae_Clade_B3_X	13	9	22
Ciliophora;Eutintinnus	2	19	21
Stramenopiles_X;MAST-8D_X	8	13	21
Stramenopiles_X;MAST-9D_X	15	6	21

Dinoflagellata;Islandinium	9	11	20
Dinoflagellata;Karlodinium	13	5	18
Dinoflagellata;Gonyaulax	8	9	17
Ochrophyta;Synedra	17	0	17
Cercozoa;Ebria	14	2	16
Choanoflagellida;Monosigidae_Group_M_X	8	8	16
Cercozoa;TAGIRI1-lineage_X	5	10	15
Ciliophora;Chlamyodontidae_X	6	9	15
Ciliophora;Scuticociliatia-1_X	3	12	15
Dinoflagellata;Dino-Group-II-Clade-39_X	10	5	15
Dinoflagellata;Euduboscquella	12	3	15
Ochrophyta;Fragilaria	15	0	15
Stramenopiles_X;Cafeteria	14	0	14
Cercozoa;Helkesimastix	11	2	13
Ciliophora;Collinia	0	13	13
Ciliophora;Helicostomella	1	12	13
Ochrophyta;Asterionellopsis	3	10	13
Chlorophyta;Mantoniella	2	10	12
Dinoflagellata;Torodinium	8	4	12
Fungi;Chytridiomycotina_XX	0	12	12
Haptophyta;Prymnesiophyceae_Clade_E_XX	3	9	12
Ochrophyta;Minutocellus	12	0	12
Stramenopiles_X;Borokaceae_X	12	0	12
Stramenopiles_X;MAST-12D_X	3	9	12
Apusomonadidae;Apusomonadidae_Group-1_XXX	2	9	11
Cercozoa;Ventrifissuridae_X	3	8	11
Stramenopiles_X;MAST-3D_X	4	7	11
Chlorophyta;Crustomastigaceae-AB	2	7	9
Chlorophyta;Dolichomastigaceae-B	2	7	9
Cercozoa;Novel-Gran-234_X	3	5	8
Choanoflagellida;Stephanoecidae_Group_I_X	0	8	8
Ciliophora;Euplotes	8	0	8
Dinoflagellata;Amphisoleniaceae_X	0	8	8
Dinoflagellata;Levanderina	8	0	8
Ochrophyta;Dinobryon	3	5	8
Ciliophora;Ephelota	2	5	7
Ciliophora;Strobilidiidae_G_X	3	4	7
Alveolata_X;Thalassomyces	1	5	6
Ciliophora;Strombidium_F	2	4	6
Cryptophyta;Goniomonadales_X	4	2	6
Dinoflagellata;Amylax	2	4	6
Fungi;Rhizophydium	3	3	6
Haptophyta;Chrysocampanula	3	3	6

Haptophyta;Dicrateria	1	5	6
Ochrophyta;Parmales_env_2_X	2	4	6
Radiolaria;Acantharea_XXX	3	3	6
Cercozoa;Filosa-Imbricatea_XXX	5	0	5
Chlorophyta;RCC391	0	5	5
Choanoflagellida;Diaphanoeca	5	0	5
Cryptophyta;Goniomonas	1	4	5
Dinoflagellata;Dino-Group-I-Clade-3_X	4	1	5
Dinoflagellata;Phalachroma	3	2	5
Fungi;Rhyzophidiales_X	0	5	5
Haptophyta;Prymnesiophyceae_Clade_B4_X	5	0	5
Ochrophyta;Cyclotella	2	3	5
Cercozoa;Cryomonadida_XX	0	4	4
Choanoflagellida;Stephanoecidae_New_Choanos_8_X	2	2	4
Ciliophora;Cinetochilum	0	4	4
Ciliophora;Strombidium_N	1	3	4
Dinoflagellata;Dino-Group-II-Clade-9_X	2	2	4
Dinoflagellata;Hematodinium	3	1	4
Dinoflagellata;Scrippsiella	4	0	4
Lobosa;Vannella	0	4	4
Ochrophyta;Actinoptychus	1	3	4
Ochrophyta;Synura	0	4	4
Stramenopiles_X;Hyphochytrium	0	4	4
Stramenopiles_X;Stramenopiles_X-Group-2_XXX	3	1	4
Apicomplexa;Gregarines_XX	3	0	3
Apicomplexa;Selenidium	3	0	3
Cercozoa;LC104-lineage_X	1	2	3
Cercozoa;Peregrinia	2	1	3
Cercozoa;Protaspa	0	3	3
Chlorophyta;Dolichomastigaceae-A	3	0	3
Ciliophora;Strobilidiidae_I_X	3	0	3
Dinoflagellata;Ansanella	2	1	3
Dinoflagellata;Dino-Group-I-Clade-2_X	1	2	3
Dinoflagellata;Pentapharsodinium	0	3	3
Hilomonadea;Planomonas	3	0	3
Lobosa;Pessonella	3	0	3
Radiolaria;Collozoum	3	0	3
Stramenopiles_X;MAST-3A_X	1	2	3
Stramenopiles_X;MAST-3G_X	0	3	3
Apicomplexa;Novel-Apicomplexa-Class-1_XX	1	1	2
Cercozoa;Chlorarachnida_XX	1	1	2
Chlorophyta;Dolichomastix	1	1	2
Chlorophyta;Halosphaera	1	1	2

Ciliophora;Strombidiida_XX	1	1	2
Ciliophora;Tintinnidium	0	2	2
Dinoflagellata;Dino-Group-II-Clade-24_X	2	0	2
Dinoflagellata;Dino-Group-II-Clade-50_X	1	1	2
Dinoflagellata;Dissodinium	2	0	2
Dinoflagellata;Pelagodinium	2	0	2
Fungi;Malassezia	0	2	2
Ochrophyta;Detonula	0	2	2
Ochrophyta;Stephanopyxis	2	0	2
Stramenopiles_X;Oblongichytrium	1	1	2
Streptophyta;Medicago	0	2	2

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Table S1c: Small zooplankton taxa with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence.

<b>Taxon</b>	<b>2015</b>	<b>2017</b>	<b>total</b>
	(n=69)	(n=75)	(n=144)
<i>Oithona similis</i>	69	75	144
Pseudocalanus	69	75	144
Acartia	65	75	140
Bivalvia	66	72	138
Cirripedia	62	75	137
<i>Fritillaria borealis</i>	65	71	136
Polychaeta	52	74	126
Gastropoda	48	66	114
<i>Limacina helicina</i>	51	49	100
Echinodermata	37	58	95
<i>Triconia borealis</i>	42	51	93
<i>Centropages abdominalis</i>	27	62	89
Ophiuroidea	11	52	63
Microsetella	15	30	45
Eurytemora	11	30	41
Bryozoa	16	20	36
<i>Podon leuckartii</i>	4	24	28
<i>Evadne nordmanni</i>	3	20	23
Cerianthus	0	23	23
<i>Tortanus discaudatus</i>	0	22	22
Microcalanus	10	9	19
Sipuncula	0	16	16
<i>Oithona setigera</i>	0	11	11
Caligidae	0	10	10
<i>Plotocnide borealis</i>	0	7	7
Clausiidae	0	2	2
<i>Scolecithricella minor</i>	1	0	1
Candacia	1	0	1
Cyclopina	1	0	1
<i>Typhloscolex muelleri</i>	0	1	1
<i>Dimophyes arctica</i>	0	1	1

Table S1d: Large zooplankton taxa with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence.

<b>Taxon</b>	<b>2015</b>	<b>2017</b>	<b>total</b>
	(n=66)	(n=78)	144
<i>Clione limacina</i>	65	78	143
<i>Calanus glacialis</i>	62	78	140
<i>Parasagitta elegans</i>	62	78	140
Paguridae	54	76	130
<i>Aglantha digitale</i>	64	57	121
Brachyura	56	63	119
Decapoda	54	64	118
<i>Mertensia ovum</i>	34	47	81
Catablema	25	45	70
<i>Mitrocomella polydiademata</i>	6	63	69
Hippolytidae	0	69	69
<i>Centropages abdominalis</i>	25	35	60
<i>Melicertum octocostatum</i>	11	41	52
<i>Eucalanus bungii</i>	21	29	50
<i>Neocalanus flemingeri</i>	27	23	50
<i>Thysanoessa raschii</i>	23	27	50
Hyperiididae	16	33	49
Oikopleura	26	22	48
Beroe	4	43	47
<i>Hyperoche medusarum</i>	2	40	42
Metridia	32	5	37
<i>Bolinopsis infundibulum</i>	1	34	35
Pandalidae	27	6	33
<i>Neocalanus cristatus</i>	17	16	33
<i>Neocalanus plumchrus</i>	16	15	31
<i>Rathkea octopunctata</i>	12	18	30
<i>Themisto pacifica</i>	3	24	27
<i>Themisto libellula</i>	19	3	22
<i>Epilabidocera longipedata</i>	6	15	21
<i>Euphysa flammea</i>	5	15	20
<i>Thysanoessa inermis</i>	14	6	20
Apherusa	1	19	20
<i>Obelia longissima</i>	10	9	19
<i>Cyanea capillata</i>	4	15	19
<i>Aeginopsis laurentii</i>	0	16	16
<i>Sarsia tubulosa</i>	6	7	13
Aurelia	1	12	13

Tomopteris	4	7	11
<i>Bougainvillia superciliaris</i>	2	9	11
<i>Eukrohnia hamata</i>	9	0	9
<i>Halitholus cirratus</i>	6	1	7
<i>Neomysis rayii</i>	5	1	6
Mysida	2	4	6
Ctenophora	1	3	4
<i>Chrysaora melanaster</i>	0	3	3
Onisimus	1	1	2
Ostracoda	1	1	2
<i>Tiaropsis multicirrata</i>	1	1	2
Sipuncula	0	2	2
<i>Thysanoessa spinifera</i>	1	0	1
Siphonophorae	1	0	1
Clausocalanus	1	0	1
Ptychogena	1	0	1
Leptothecata	0	1	1

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Table S1e: Benthic macroinfaunal taxa with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence.

<b>Taxon</b>	<b>2015</b>	<b>2017</b>	<b>total</b>
	(n=55)	(n=64)	(n=119)
Cirratulidae	53	63	116
<i>Pholoe minuta</i>	53	57	110
<i>Ennucula tenuis</i>	50	58	108
<i>Barantolla americana</i>	48	46	94
<i>Macoma calcarea</i>	45	47	92
Nemertea	41	51	92
<i>Scoloplos armiger</i>	44	44	88
<i>Praxillella</i> sp.	40	42	82
<i>Byblis</i> sp.	38	43	81
<i>Leucon</i> sp.	44	36	80
<i>Axinopsida serricata</i>	44	34	78
<i>Protomedeia</i> sp.	32	46	78
<i>Leitoscoloplos pugettensis</i>	36	40	76
<i>Priapulus caudatus</i>	38	38	76
<i>Nephtys caeca</i>	37	38	75
<i>Scoletoma</i> sp.	37	38	75
<i>Yoldia hyperborea</i>	28	46	74
<i>Macoma moesta</i>	34	40	74
<i>Harpinia</i> sp.	34	38	72
<i>Arcteobia anticostienensis</i>	30	41	71
<i>Glycinde armigera</i>	29	41	70
<i>Heteromastus</i> sp.	34	33	67
<i>Terebellides stroemii</i>	39	28	67
<i>Eteone longa</i>	31	36	67
<i>Prionospio cirrifera</i>	30	32	62
<i>Kurtiella planata</i>	32	29	61
<i>Nuculana pernula</i>	29	30	59
<i>Cylichna alba</i>	25	34	59
<i>Photis</i> sp.	27	30	57
<i>Maldane sarsi</i>	33	24	57
<i>Aricidea lopezi</i>	30	25	55
<i>Ophiura sarsi</i>	25	28	53
<i>Thyasira flexuosa</i>	28	25	53
<i>Cossura</i> sp.	28	25	53
<i>Ophiopholis</i> sp.	31	21	52
<i>Liocyma fluctuosa</i>	30	22	52
<i>Euchone analis</i>	34	17	51

<i>Nephtys juvenile</i>	26	24	50
<i>Golfingia margaritacea</i>	25	23	48
<i>Brachydiastylis resima</i>	23	25	48
<i>Ischyrocerus</i> sp.	19	28	47
<i>Macoma torelli</i>	19	28	47
<i>Levinsenia gracilis</i>	21	25	46
Anthozoa	23	23	46
<i>Haploops</i> sp.	26	19	45
<i>Anonyx</i> sp.	22	22	44
<i>Orchomene</i> sp.	23	20	43
<i>Pectinaria granulata</i>	13	30	43
<i>Arrhis</i> sp.	27	15	42
<i>Eteone flava</i>	26	16	42
<i>Bryozoa fragment</i>	20	21	41
<i>Capitella</i> sp.	19	22	41
<i>Pontoporeia femorata</i>	26	14	40
<i>Scalibregma inflatum</i>	21	19	40
<i>Heterophoxus</i> sp.	26	13	39
<i>Rhodine</i> sp.	17	22	39
<i>Prionospio steenstrupi</i>	26	12	38
<i>Sternaspis scutata</i>	19	19	38
<i>Brada villosa</i>	17	21	38
Polynoidae	16	21	37
<i>Axiothella</i> sp.	21	16	37
<i>Pectinaria hyperborea</i>	22	15	37
<i>Lysippe labiata</i>	16	21	37
<i>Cyclocardia crassidens</i>	26	10	36
<i>Ampelisca macrocephala</i>	17	19	36
<i>Bathymedon</i> sp.	14	21	35
<i>Thelepus cincinnatus</i>	16	19	35
<i>Melita alaskensis</i>	19	14	33
<i>Typosyllis</i> sp.	17	16	33
<i>Pelonaia</i> sp.	16	16	32
<i>Phyllodoce groenlandica</i>	19	13	32
<i>Owenia fusiformis</i>	18	14	32
<i>Astarte montagui</i>	12	20	32
<i>Aceroides</i> sp.	23	8	31
<i>Astarte alaskensis</i>	23	8	31
<i>Eteone auricanta</i>	15	16	31
<i>Ampharete finmarchica</i>	22	9	31
<i>Thracia</i> sp.	13	18	31
<i>Grandifoxus</i> sp.	11	20	31
<i>Polydora</i> sp.	17	14	31

<i>Myriochele oculata</i>	14	15	29
<i>Ampharete acutifrons</i>	18	11	29
<i>Chone duneri</i>	15	14	29
<i>Eudorellopsis uschakovi</i>	21	7	28
<i>Nicomache</i> sp.	12	16	28
<i>Paraphoxus</i> sp.	11	17	28
<i>Phascolion strombus</i>	12	15	27
<i>Diplodonta</i> sp.	19	8	27
<i>Lyonsia arenosa</i>	12	15	27
<i>Eudorella pacifica</i>	15	11	26
<i>Saccoglossus</i> sp.	15	11	26
<i>Malmgrenia</i> sp.	14	12	26
<i>Centromedon</i> sp.	15	10	25
<i>Ampelisca eschrichtii</i>	14	11	25
<i>Enipo chuckchi</i>	10	15	25
<i>Laonice</i> sp.	18	6	24
<i>Musculus discors</i>	17	7	24
<i>Astarte borealis</i>	11	13	24
<i>Glycinde wirenii</i>	10	13	23
<i>Onuphis parva</i>	10	13	23
<i>Ampharete lindstroemi</i>	15	7	22
<i>Travisia forbesii</i>	13	9	22
<i>Margarites</i> sp.	5	17	22
<i>Musculus niger</i>	10	12	22
<i>Nutricola tantilla</i>	14	7	21
<i>Apistobranchnus</i> sp.	8	13	21
<i>Magelona pacifica</i>	11	9	20
<i>Bylgides elegans</i>	7	13	20
<i>Ampelisca birulai</i>	9	11	20
<i>Yoldia myalis</i>	5	15	20
<i>Solariella obscura</i>	12	7	19
<i>Polycirrus</i> sp.	12	7	19
<i>Ammotrypane multipapilata</i>	10	9	19
<i>Petaloproctus</i> sp.	12	7	19
<i>Monoculodes</i> sp.	10	9	19
<i>Molgula</i> sp.	11	8	19
<i>Eudorella emarginata</i>	6	12	18
<i>Echinarachnius parma</i>	7	11	18
<i>Cylichna oculata</i>	5	12	17
<i>Pygospio elegans</i>	12	5	17
<i>Guernea</i> sp.	7	10	17
<i>Golfingia vulgaris</i>	9	7	16
<i>Serripes groenlandicus</i>	4	12	16

<i>Spio</i> sp.	4	12	16
<i>Thyasira gouldi</i>	6	10	16
<i>Onisimus</i> sp.	7	9	16
<i>Hiatella arctica</i>	1	15	16
<i>Myriochele heeri</i>	8	7	15
<i>Aricidea jeffreysi</i>	8	7	15
<i>Eudorella truncatula</i>	13	2	15
<i>Kurtiella tumida</i>	8	7	15
<i>Alvania</i> sp.	10	4	14
Cumacea	6	8	14
<i>Cucumaria</i> sp.	4	10	14
<i>Gersemia rubiformis</i>	9	5	14
<i>Paroediceros</i> sp.	3	11	14
<i>Cyclocardia creabricostata</i>	2	12	14
<i>Chelyosoma</i> sp.	6	7	13
<i>Gattyana amondseni</i>	7	6	13
<i>Nuculana minuta</i>	4	9	13
<i>Diplocirrus</i> sp.	6	7	13
<i>Neaeromya</i> sp.	8	5	13
<i>Corophium</i> sp.	7	6	13
<i>Aricidea minuta</i>	7	6	13
<i>Maldane glebifex</i>	0	13	13
<i>Clinocardium ciliatum</i>	5	7	12
<i>Sphenia ovoidea</i>	1	11	12
<i>Caprella</i> sp.	6	6	12
<i>Retusa obtusa</i>	0	12	12
<i>Chone infundibuliformis</i>	5	6	11
<i>Artacama proboscidea</i>	6	5	11
<i>Ampharete arctica</i>	6	5	11
<i>Gattyana cirrhosa</i>	2	9	11
<i>Nutricula lordi</i>	0	11	11
<i>Harmothoe</i> sp.	2	8	10
<i>Nuculana radiata</i>	5	5	10
<i>Chone paucibranchiata</i>	5	5	10
<i>Eteone spetsbergensis</i>	9	1	10
<i>Munna</i> sp.	5	5	10
<i>Rhachotropis</i> sp.	5	5	10
<i>Psolus</i> sp.	4	6	10
<i>Phoronis</i> sp.	7	3	10
<i>Mya arenaria</i>	3	7	10
<i>Nephasoma</i> sp.	0	10	10
<i>Boltenia</i> sp.	4	5	9
<i>Pleustes</i> sp.	6	3	9

<i>Pandora</i> sp.	7	2	9
<i>Disoma multisetosum</i>	8	1	9
<i>Idanthyrus armatus</i>	7	2	9
<i>Laphania boeckii</i>	6	3	9
<i>Apherusa</i> sp.	8	1	9
<i>Astarte arctica</i>	5	4	9
<i>Strongylocentrotus droebachiensis</i>	3	6	9
<i>Montacuta</i> sp.	6	2	8
<i>Macoma lama</i>	6	2	8
<i>Ophelina acuminata</i>	5	3	8
<i>Semele</i> sp.	6	2	8
<i>Westwoodilla</i> sp.	1	7	8
<i>Exogone</i> sp.	2	6	8
<i>Serripes laperousii</i>	3	4	7
<i>Tellina</i> sp.	3	4	7
<i>Notomastus</i> sp.	3	4	7
<i>Eudorellopsis integra</i>	1	6	7
<i>Maera danae</i>	4	3	7
<i>Elpidia</i> sp.	5	2	7
<i>Alcyonidium vermiculare</i>	4	3	7
<i>Sphaerodoropsis</i> sp.	3	4	7
<i>Eusyllis assimilis</i>	3	4	7
<i>Eudorellopsis derzhavini</i>	1	6	7
<i>Nephtys ciliata</i>	0	7	7
<i>Ophiura robusta</i>	6	0	6
<i>Spiophanes bombyx</i>	1	5	6
<i>Diastylis bidentata</i>	3	3	6
<i>Pettibonesia furcosetosa</i>	6	0	6
<i>Macoma inquinata</i>	6	0	6
<i>Ampelisca erythrorhabdota</i>	2	4	6
<i>Ampithoe</i> sp.	3	3	6
<i>Pholoe assimilis</i>	2	4	6
<i>Odius</i> sp.	2	4	6
<i>Petalosarsia declivis</i>	4	2	6
<i>Syllis</i> sp.	1	5	6
<i>Myriochele</i> sp.	1	5	6
<i>Nephtys longosetosa</i>	1	5	6
<i>Yoldia aeolica</i>	0	6	6
<i>Spirorbis</i> sp.	0	6	6
<i>Idotea</i> sp.	5	0	5
<i>Ophiopenia</i> sp.	2	3	5
<i>Campylaspis affinis</i>	4	1	5
<i>Parvilucina</i> sp.	3	2	5



<i>Eteone barbata</i>	5	0	5
<i>Dulichia</i> sp.	1	4	5
<i>Macoma dextioptera</i>	4	1	5
<i>Yoldiella</i> sp.	2	3	5
<i>Campylaspis ribucunda</i>	4	1	5
<i>Amphiura</i> sp.	4	1	5
<i>Ceradocus</i> sp.	3	2	5
<i>Phyllodoce maculata</i>	0	5	5
<i>Amicula vestita</i>	2	2	4
<i>Musculus olivaceus</i>	4	0	4
<i>Magelona longicornis</i>	1	3	4
<i>Diastylis scorpioides</i>	2	2	4
<i>Enipo gracilis</i>	1	3	4
<i>Aricidea neosuecica</i>	1	3	4
<i>Diastylis aleskensis</i>	1	3	4
<i>Diastylis dalli</i>	1	3	4
<i>Eunoe depressa</i>	0	4	4
<i>Magelona</i> sp.	3	0	3
<i>Ophelina limacina</i>	3	0	3
<i>Scalibregma celticum</i>	3	0	3
<i>Amphiodia</i> sp.	3	0	3
<i>Enipo canadensis</i>	3	0	3
<i>Frigidoalvania</i> sp.	1	2	3
<i>Amage</i> sp.	1	2	3
<i>Eumida</i> sp.	3	0	3
<i>Syrrhoe</i> sp.	2	1	3
<i>Musculus glacialis</i>	3	0	3
<i>Sphaerodoidium gracilis</i>	2	1	3
<i>Tiron</i> sp.	2	1	3
<i>Philine</i> sp.	2	1	3
<i>Rexithaerus secta</i>	3	0	3
<i>Autolytus prismaticus</i>	3	0	3
<i>Planktomya</i> sp.	3	0	3
<i>Euchone papillosa</i>	1	2	3
<i>Hippomedon</i> sp.	1	2	3
<i>Monoculopsis</i> sp.	3	0	3
<i>Eohaustorius eous</i>	1	2	3
<i>Eudorellopsis deformis</i>	2	1	3
<i>Lucinoma annulata</i>	1	2	3
<i>Anonyx liljeborgii</i>	0	3	3
<i>Hesperonoe</i> sp.	0	3	3
<i>Ampharete goesi</i>	0	3	3
<i>Gattyana ciliata</i>	0	3	3

<i>Amphitrite</i> sp.	0	3	3
<i>Echiurus echiurus</i>	2	0	2
<i>Brada rugosa</i>	1	1	2
<i>Stegophiura</i> sp.	2	0	2
<i>Portlandia intermedia</i>	2	0	2
<i>Macoma yoldiformis</i>	2	0	2
<i>Melita dentata</i>	1	1	2
<i>Myrianida</i> sp.	2	0	2
<i>Fabricia</i> sp.	1	1	2
<i>Leptognathia gracilis</i>	2	0	2
<i>Brada incrustata</i>	2	0	2
<i>Halicryptus spinulosus</i>	1	1	2
<i>Sphaerochuria bitentaculata</i>	2	0	2
<i>Sphaerodoidium sphaerulifer</i>	1	1	2
<i>Sphaerosyllis hirsuta</i>	2	0	2
<i>Brada inhabilis</i>	1	1	2
<i>Leptoplanta</i> sp.	2	0	2
<i>Panopea abrupta</i>	2	0	2
<i>Clinocardium californiense</i>	1	1	2
<i>Potamilla neglecta</i>	0	2	2
<i>Erichonius difformis</i>	0	2	2
<i>Nuculana leonina</i>	0	2	2
<i>Gattyana nutti</i>	0	2	2
<i>Clymenura polaris</i>	0	2	2
<i>Diastylis rathkei</i>	0	2	2
<i>Aceroides latipes</i>	0	2	2
<i>Anisogammarus</i> sp.	0	2	2
<i>Cyrtodaria kurriana</i>	0	2	2
<i>Protomystides exigua</i>	0	2	2
<i>Melita quadrispinosa</i>	0	2	2
<i>Galathowenia fragilis</i>	0	2	2
<i>Arcteobia spinelytris</i>	0	2	2
<i>Parougia</i> sp.	0	2	2
<i>Oediceros</i> sp.	0	2	2
<i>Nereis</i> sp.	1	0	1
<i>Synmerosyllis</i> sp.	1	0	1
<i>Sphaerodoidium guerritai</i>	1	0	1
<i>Maera loveni</i>	1	0	1
<i>Nephtys punctata</i>	1	0	1
<i>Bodotria scorpioides</i>	1	0	1
<i>Maldane sarsi</i> fragment	1	0	1
<i>Phyllodoce groenlandica</i> fragment	1	0	1
<i>Chaetoderma</i> sp.	1	0	1

<i>Scolecopsis foliosa</i>	1	0	1
<i>Arcturus</i> sp.	1	0	1
<i>Moelleria</i> sp.	1	0	1
<i>Brada nuda</i>	1	0	1
<i>Pherusa</i> sp.	1	0	1
<i>Diastylis goodsiri</i>	1	0	1
<i>Uristes</i> sp.	1	0	1
<i>Abra</i> sp.	1	0	1
<i>Brada sachalina</i>	1	0	1
<i>Rochefortia</i> sp.	1	0	1
<i>Lanice conchylega</i>	1	0	1
<i>Sphaerosyllis erinaceus</i>	1	0	1
<i>Axinopsida orbiculata</i>	1	0	1
<i>Nebalia</i> sp.	1	0	1
<i>Goniada annulata</i>	1	0	1
<i>Mya truncata</i>	1	0	1
<i>Amaroucium</i> sp.	1	0	1
<i>Diastylis spinulosa</i>	1	0	1
<i>Potamilla reniformis</i>	1	0	1
<i>Pseudomystides spinachia</i>	1	0	1
<i>Ctenodiscus crispatus</i>	1	0	1
<i>Cyclocardia umnaka</i>	1	0	1
<i>Amphiophiura</i> sp.	1	0	1
<i>Astarte crenata</i>	1	0	1
<i>Gattyana treadwelli</i>	1	0	1
<i>Jasmineira pacifica</i>	1	0	1
<i>Laniropsis</i> sp.	1	0	1
<i>Saccella hindsii</i>	1	0	1
<i>Unicola</i> sp.	0	1	1
<i>Halocynthia aurantium</i>	0	1	1
<i>Stenothoe</i> sp.	0	1	1
<i>Nicolea zostericola</i>	0	1	1
<i>Gammarus</i> sp.	0	1	1
<i>Halocynthia roretzi</i>	0	1	1
<i>Podosesmus macrochisma</i>	0	1	1
<i>Solariella varicosa</i>	0	1	1
<i>Sabellides borealis</i>	0	1	1
<i>Portlandia arctica</i>	0	1	1
<i>Tethyum aurantium</i>	0	1	1
<i>Ampharete vega</i>	0	1	1
<i>Melaenis loveni</i>	0	1	1
<i>Chiridota</i> sp.	0	1	1
<i>Nephtys</i> juvenile fragment	0	1	1

<i>Nereimyra</i> sp.	0	1	1
<i>Proceraea</i> sp.	0	1	1
<i>Ophiocten</i> sp.	0	1	1
<i>Nephtys paradoxa</i>	0	1	1
<i>Travisia kerguelensis</i>	0	1	1
<i>Ampharete lindstroemi</i> fragment	0	1	1
<i>Myriotrochus rinkii</i>	0	1	1
<i>Metopa</i> sp.	0	1	1
<i>Diastylis paraspinulosa</i>	0	1	1
<i>Ophelina cylindricaudata</i>	0	1	1
<i>Stenopleustes</i> sp.	0	1	1
<i>Trichobranchus gracialis</i>	0	1	1
<i>Mya pseudoarenaria</i>	0	1	1
<i>Ampelisca derjungi</i>	0	1	1
<i>Cumella</i> sp.	0	1	1
<i>Lumbriclymene minor</i>	0	1	1
<i>Spiochaetopterus typicus</i>	0	1	1
<i>Phyllodoce citrina</i>	0	1	1
<i>Philobrya setosa</i>	0	1	1

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Table S1f: Epibenthic invertebrate taxa with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence.

<b>Taxon</b>	<b>2015</b>	<b>2017</b>	<b>total</b>
	(n=67)	(n=81)	(n=148)
<i>Eualus gaimardii</i>	64	73	137
<i>Argis</i> sp.	55	78	133
<i>Chionoecetes opilio</i>	63	63	126
<i>Hyas coarctatus</i>	55	48	103
<i>Pagurus capillatus</i>	45	48	93
<i>Pagurus trigonocheirus</i>	45	47	92
<i>Labidochirus splendescens</i>	45	43	88
<i>Anonyx</i> sp.	40	39	79
<i>Eualus fabricii</i>	7	71	78
Neptunea	36	36	72
<i>Eualus macilentus</i>	14	58	72
<i>Margarites costalis</i>	39	31	70
<i>Cryptonatica affinis</i>	36	30	66
<i>Gersemia rubiformis</i>	34	32	66
<i>Ophiura sarsii</i>	34	30	64
<i>Buccinum polare</i>	31	31	62
<i>Leptasterias groenlandica</i>	32	29	61
<i>Buccinum scalariforme</i>	28	28	56
<i>Euspira pallida</i>	32	24	56
Gorgonocephalus	29	26	55
<i>Admete viridula</i>	18	36	54
Sclerocrangon	21	32	53
<i>Oenopota</i> sp.	29	24	53
<i>Tachyrhynchus erosus</i>	18	34	52
<i>Margarites helacinus</i>	24	28	52
Stegocephalidae	22	29	51
<i>Alcyonidium gelatinosum</i>	22	28	50
<i>Leptasterias polaris</i>	22	27	49
<i>Crangon</i> sp.	11	38	49
<i>Styela rustica</i>	28	20	48
<i>Harmothoe</i> sp.	20	28	48
<i>Rhachotropis aculeata</i>	23	25	48
Nemertea	28	19	47
<i>Spirontocaris</i> sp.	15	31	46
Actiniaria	25	21	46
<i>Eucratea</i> sp.	26	20	46
<i>Stegophiura nodosa</i>	21	24	45

<i>Boltenia echinata</i>	21	19	40
<i>Serripes</i> sp.	19	20	39
<i>Stomphia</i> sp.	21	17	38
<i>Myriotrochus rinkii</i>	21	14	35
<i>Nodulotrophon coronatus</i>	15	20	35
<i>Phyllodoce groenlandica</i>	24	9	33
<i>Psolus peronii</i>	18	15	33
<i>Propebela nobilis</i>	14	18	32
<i>Obesotoma</i> sp.	19	12	31
<i>Leptasterias arctica</i>	16	13	29
<i>Megamoera dentata</i>	17	12	29
<i>Boltenia ovifera</i>	15	14	29
<i>Balanus</i> sp.	9	19	28
<i>Bylgides sarsi</i>	14	14	28
<i>Gattyana ciliata</i>	15	13	28
<i>Pycnogonidae</i>	14	13	27
<i>Onchidiopsis</i> sp.	14	13	27
<i>Crossaster papposus</i>	19	7	26
<i>Cylichna alba</i>	13	13	26
<i>Diastylis alaskensis</i>	19	7	26
<i>Chelyosoma macleayanum</i>	12	13	25
<i>Henricia</i> sp.	18	7	25
<i>Strongylocentrotus pallidus</i>	13	11	24
<i>Ocnus glacialis</i>	13	11	24
<i>Gattyana cirrhosa</i>	15	8	23
<i>Neocrangon communis</i>	12	10	22
<i>Propebela arctica</i>	11	11	22
<i>Neoiphinoe coronata</i>	11	10	21
<i>Granotoma albrechti</i>	13	8	21
<i>Eusirus</i> sp.	11	10	21
<i>Pagurus</i> sp.	12	8	20
<i>Latisipho hypolispus</i>	9	11	20
<i>Echinarachnius parma</i>	8	12	20
<i>Rhachotropis oculata</i>	12	8	20
<i>Heteropora</i> sp.	13	6	19
<i>Ophiopholis aculeata</i>	12	7	19
<i>Socarnes bidenticulatus</i>	10	9	19
<i>Halocynthia aurantium</i>	9	9	18
<i>Lebbeus groenlandicus</i>	7	11	18
<i>Arcteobia anticostiensis</i>	16	2	18
<i>Paramphithoe polyacantha</i>	8	10	18
<i>Synidotea bicuspidata</i>	11	7	18
<i>Musculus glacialis</i>	17	1	18

<i>Boreotrophon clathratus</i>	10	7	17
<i>Pandalus goniurus</i>	7	10	17
<i>Ascidia callosa</i>	13	3	16
<i>Plicifusus kroeyeri</i>	4	12	16
Gammaridae	16	0	16
<i>Pleustes panopla</i>	5	11	16
<i>Synidotea</i> sp.	9	7	16
<i>Amicula vestita</i>	9	5	14
<i>Asterias amurensis</i>	6	8	14
<i>Boreotrophon truncatus</i>	10	4	14
<i>Halichondria</i> sp.	8	6	14
<i>Sabinea septemcarinata</i>	11	3	14
<i>Pagurus rathbuni</i>	7	7	14
<i>Arctolembos arcticus</i>	11	3	14
<i>Pelonaia corrugata</i>	9	5	14
<i>Gattyana amondseni</i>	5	9	14
<i>Acanthostepheia behringiensis</i>	7	7	14
<i>Calycidoris guentheri</i>	4	10	14
<i>Lafoeina maxima</i>	4	10	14
<i>Arrhis luthkei</i>	8	5	13
<i>Solariella obscura</i>	2	11	13
<i>Ariadnaria borealis</i>	9	3	12
<i>Alcyonidium disciforme</i>	6	6	12
<i>Anomalisipho verkruezeni</i>	10	1	11
<i>Ophiura robusta</i>	7	4	11
<i>Molgula retortiformis</i>	9	2	11
<i>Paroediceros lynceus</i>	8	3	11
<i>Quasimelita formosa</i>	3	8	11
<i>Colus</i> sp.	1	10	11
<i>Tritonia</i> sp.	7	4	11
<i>Eunoe nodosa</i>	8	3	11
<i>Retifusus roseus</i>	0	11	11
<i>Admete solida</i>	7	3	10
<i>Anomalisipho martensi</i>	5	5	10
Dendrobeania	6	3	9
<i>Curtitoma incisula</i>	7	2	9
Melita	7	2	9
Nereis	5	4	9
<i>Metopa spitzbergensis</i>	9	0	9
<i>Acanthonotozoma inflatum</i>	8	1	9
<i>Eudistoma parvum</i>	5	4	9
<i>Cylichnoides occultus</i>	9	0	9
<i>Lebbeus polaris</i>	3	6	9

<i>Hiatella arctica</i>	1	8	9
<i>Platyhelminthes</i>	8	0	8
<i>Telmessus cheiragonus</i>	4	4	8
<i>Stenosemus albus</i>	5	3	8
Velutina	4	4	8
Volutopsius	5	3	8
Caprellidae	7	1	8
<i>Botrylloides aureus</i>	0	8	8
<i>Nymphon grossipes</i>	0	8	8
<i>Buccinum solenum</i>	7	0	7
<i>Pteraster obscurus</i>	5	2	7
<i>Buccinum tenellum</i>	3	4	7
<i>Ophiocten sericeum</i>	4	3	7
<i>Monoculodes diamesus</i>	6	1	7
<i>Arctonoe vittata</i>	5	2	7
<i>Bylgides promamme</i>	3	4	7
Trichotropis	1	6	7
<i>Chlamys behringiana</i>	4	2	6
<i>Aulacofusus brevicauda</i>	4	2	6
<i>Eunoe depressa</i>	3	3	6
Dendronotus	3	3	6
<i>Haploops laevis</i>	4	2	6
<i>Musculus discors</i>	0	6	6
<i>Curtitoma violacea</i>	0	6	6
<i>Eunoe oerstedii</i>	5	0	5
<i>Beringius stimpsoni</i>	3	2	5
<i>Buccinum ciliatum</i>	3	2	5
<i>Bathypolypus arcticus</i>	3	2	5
<i>Pontoporeia femorata</i>	5	0	5
<i>Halirages nilssoni</i>	3	2	5
<i>Ctenodiscus crispatus</i>	4	1	5
<i>Lepeta caeca</i>	4	1	5
Eugyra	5	0	5
<i>Margarites groenlandicus</i>	0	5	5
<i>Paratryphosites abyssi</i>	0	5	5
Brachiopoda	2	2	4
<i>Retifusus jessoensis</i>	2	2	4
<i>Buccinum angulosum</i>	2	2	4
<i>Lethasterias nanimensis</i>	3	1	4
<i>Dendrodoa lineata</i>	3	1	4
<i>Buccinum glaciale</i>	2	2	4
Diastylis	4	0	4
<i>Lacuna crassior</i>	1	3	4



<i>Limneria undata</i>	2	2	4
<i>Atylus bruggeni</i>	3	1	4
<i>Haliclona</i> sp.	4	0	4
<i>Erichthonius</i>	2	2	4
Holothuroidea	2	2	4
<i>Solaster</i>	2	2	4
<i>Enipo chuckchi</i>	2	2	4
<i>Amphiodia craterodmeta</i>	1	3	4
Trididemnum	0	4	4
<i>Beringius behringii</i>	0	4	4
<i>Amphiura sundevalli</i>	2	1	3
<i>Distaplia occidentalis</i>	3	0	3
<i>Pandora glacialis</i>	3	0	3
<i>Nemidia microlepida</i>	3	0	3
<i>Nephtys</i>	2	1	3
<i>Tecticeps</i>	2	1	3
Opisthobranchia	3	0	3
<i>Pyrulofusus deformis</i>	3	0	3
<i>Semisuberites cribrosa</i>	2	1	3
<i>Suberites</i>	2	1	3
<i>Rozinante fragilis</i>	3	0	3
<i>Flabelligera mastigophora</i>	1	2	3
<i>Evasterias echinosoma</i>	1	2	3
<i>Psolus phantapus</i>	2	1	3
<i>Diastylis scorpioides</i>	0	3	3
<i>Thelepus cincinnatus</i>	0	3	3
<i>Cylinchnoides occultus</i>	0	3	3
Hexactinellida	2	0	2
<i>Maera danae</i>	2	0	2
<i>Didemnum albidum</i>	1	1	2
<i>Eteone spetsbergensis</i>	2	0	2
Tubularia	2	0	2
Hippomedon	2	0	2
Melphidippa	2	0	2
<i>Ischyrocerus latipes</i>	2	0	2
<i>Musculus niger</i>	1	1	2
Phyllodoceidae	2	0	2
<i>Neoiphinoe kroyeri</i>	2	0	2
<i>Buccinum plectrum</i>	2	0	2
<i>Protomedeia grandimana</i>	2	0	2
Orchomene	2	0	2
<i>Arctonoe fragilis</i>	0	2	2
<i>Acanthonotozoma gurjanovae</i>	0	2	2

Ampharete	0	2	2
Flabellina	0	2	2
Sipuncula	0	2	2
<i>Bradabyssa villosa</i>	0	2	2
<i>Eunoe uniseriata</i>	0	2	2
<i>Lepidepcreum eoum</i>	0	2	2
<i>Curtitioma decussata</i>	0	2	2
Crepidula	1	0	1
<i>Gaudichaudius iphionelloides</i>	1	0	1
Polymastia	1	0	1
<i>Allantactis parasitica</i>	1	0	1
<i>Pseudoliomesus ooides</i>	1	0	1
Urticina	1	0	1
<i>Dulichia spinosissima</i>	1	0	1
<i>Enipo gracilis</i>	1	0	1
<i>Distaplia alaskensis</i>	1	0	1
<i>Syllis armillaris</i>	1	0	1
<i>Pandalus borealis</i>	1	0	1
<i>Acanthonotozoma rusanovae</i>	1	0	1
<i>Syrrhoe crenulata</i>	1	0	1
<i>Melaenis loveni</i>	1	0	1
Naticidae	1	0	1
<i>Ceradocus</i> cf <i>C. torelli</i>	1	0	1
<i>Curtitoma decussata</i>	1	0	1
<i>Enipo torelli</i>	1	0	1
Lumbrineridae	1	0	1
Photis	1	0	1
<i>Unciola leucopis</i>	1	0	1
<i>Boreoscala greenlandica</i>	1	0	1
<i>Urasterias lincki</i>	0	1	1
Metridium	0	1	1
<i>Synoicum pulmonaria</i>	0	1	1
Maldanidae	0	1	1
<i>Eusyllis blomstrandii</i>	0	1	1
<i>Paralithodes platypus</i>	0	1	1
<i>Ciliatocardium ciliatum</i>	0	1	1
<i>Plicifusus rhyssus</i>	0	1	1
<i>Golfingia margaritacea</i>	0	1	1
<i>Phascolion strombus strombus</i>	0	1	1
<i>Chone magna</i>	0	1	1
Potamilla	0	1	1
Onisimus	0	1	1
Ophelina	0	1	1

<i>Eupyrgus scaber</i>	0	1	1
<i>Ophiacantha bidentata</i>	0	1	1
<i>Spinther oniscoides</i>	0	1	1
<i>Buccinum terraenovae</i>	0	1	1
<i>Enipo canadensis</i>	0	1	1
Polyclinum	0	1	1
Playhelminthes	0	1	1
Bathymedon	0	1	1
<i>Priapulus caudatus</i>	0	1	1
<i>Terebellides stroemii</i>	0	1	1
Modiolus	0	1	1
<i>Curtitoma lawrenciana</i>	0	1	1
<i>Diplosoma listerianum</i>	0	1	1

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Table S1g: Demersal fish taxa with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence.

<b>Taxon</b>	<b>2015</b>	<b>2017</b>	<b>total</b>
	(n=67)	(n=75)	(n=142)
<i>Boreogadus saida</i>	49	67	116
<i>Lumpenus fabricii</i>	46	56	102
<i>Gymnocanthus tricuspis</i>	43	49	92
<i>Myoxocephalus scorpius</i>	36	42	78
<i>Anisarchus medius</i>	31	44	75
<i>Aspidophoroides</i> sp.	24	49	73
<i>Artediellus scaber</i>	25	39	64
<i>Hippoglossoides robustus</i>	27	35	62
<i>Lycodes polaris</i>	13	33	46
<i>Nautichthys pribilovius</i>	16	19	35
<i>Podothecus veterinus</i>	11	22	33
<i>Eleginus gracilis</i>	17	14	31
<i>Icelus spatula</i>	13	18	31
<i>Liparis tunicatus</i>	23	8	31
<i>Stichaeus punctatus</i>	15	16	31
<i>Gymnelus hemifasciatus</i>	15	13	28
<i>Triglops pingelii</i>	11	17	28
<i>Liparis gibbus</i>	12	14	26
<i>Lycodes raridens</i>	8	15	23
<i>Gymnelus viridis</i>	6	15	21
<i>Trichocottus brashnikovi</i>	7	10	17
<i>Ammodytes hexapterus</i>	12	4	16
<i>Limanda aspera</i>	2	11	13
<i>Leptoclinus maculatus</i>	0	12	12
<i>Lycodes mucosus</i>	2	4	6
<i>Eumesogrammus praecisus</i>	0	5	5
<i>Lycodes palearis</i>	2	2	4
<i>Melletes papilio</i>	0	4	4
<i>Chirolophis snyderi</i>	0	3	3
<i>Myoxocephalus jaok</i>	0	3	3
<i>Eurymen gyrinus</i>	0	2	2
<i>Hexagrammos stelleri</i>	0	2	2
<i>Limanda proboscidea</i>	0	2	2
<i>Acantholumpenus mackayi</i>	0	1	1
<i>Enophrys diceraus</i>	0	1	1

<i>Gadus chalcogrammus</i>	0	1	1
<i>Hypsagonus quadricornis</i>	0	1	1
<i>Limanda sakhalinensis</i>	0	1	1
<i>Lycodes marisalbi</i>	1	0	1
<i>Mallotus villosus</i>	0	1	1
<i>Osmerus mordax</i>	0	1	1
<i>Pallasina barbata</i>	0	1	1

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Table S1h: Seabird species with frequency of occurrence by year and overall, listed in decreasing order of total frequency of occurrence.

<b>Taxon</b>	<b>2015</b>	<b>2017</b>	<b>total</b>
	(n=74)	(n=64)	(n=138)
Crested Auklet	52	26	78
Short-tailed shearwater	45	23	68
Northern Fulmar	26	39	65
Black-legged Kittiwake	31	26	57
Thick-billed Murre	28	24	52
Red Phalarope	35	1	36
Least Auklet	15	21	36
Glaucus-winged Gull	16	12	28
Common Murre	14	6	20
Parakeet Auklet	12	5	17
Horned Puffin	8	3	11
Pomarine Jaeger	4	6	10
Tufted Puffin	6	3	9
Parasitic Jaeger	6	2	8
Kittlitz's Murrelet	6	2	8
Red-necked Phalarope	2	4	6
Long-tailed Jaeger	1	3	4
Pacific Loon	3	0	3
Sabine's Gull	3	0	3
King Eider	1	1	2
Spectacled Eider	1	1	2
Dovekie	2	0	2
Ancient Murrelet	0	2	2
Arctic Tern	1	0	1
Cassin's Auklet	0	1	1

Table S2: Water column and sediment characteristics in the AMBON study region during 2015 and 2017. Means, standard deviations (SD) and the range (Min, Max) are shown for a subset of 68 stations that were sampled in both years. P-values test the null hypothesis that there is no significant difference in the means between years, after adjusting for within-year spatial autocorrelation (generalized least-squares regression with exponential correlation structure). Significant differences ( $p < 0.01$ , not adjusted for multiple tests) are highlighted (significantly higher mean values and corresponding p-values are shown in bold).

Variable	Abbr	Units	AMBON 2015				AMBON 2017				p
			Mean	SD	Min	Max	Mean	SD	Min	Max	
<b>Water column characteristics</b>											
Surface temperature	SST	°Celsius	6.37	1.88	2.32	10.28	<b>7.02</b>	1.94	3.78	11.88	<b>0.000</b>
Bottom temperature	BT	°Celsius	2.70	3.19	-1.66	9.79	<b>3.56</b>	2.68	-0.21	10.55	<b>0.000</b>
Surface salinity	SSS	psu	30.71	1.35	26.69	32.69	<b>31.35</b>	0.71	28.12	32.70	<b>0.000</b>
Bottom salinity	Bsal	psu	31.95	0.52	30.20	32.75	<b>32.12</b>	0.57	30.09	32.76	<b>0.000</b>
Ammonium	NH <sub>4</sub>	µmol/L	2.67	1.27	0.44	6.73	2.73	1.25	0.19	5.72	0.811
Phosphate	P	µmol/L	1.15	0.47	0.57	2.29	1.25	0.33	0.51	1.73	0.038
Nitrate + Nitrite	N	µmol/L	4.37	4.78	0.24	17.00	4.70	3.81	0.21	16.00	0.648
Silicate	Si	µmol/L	<b>18.72</b>	11.05	6.41	48.75	14.50	6.01	3.04	35.13	<b>0.000</b>
Bottom Chl a	chla	µg/L	<b>1.90</b>	2.30	0.42	14.64	1.14	0.71	0.37	3.37	<b>0.006</b>
Integrated Chl a	int.chla	mg/m <sup>2</sup>	<b>67.59</b>	73.53	12.70	423.89	44.70	28.17	10.86	165.17	<b>0.005</b>
Stratification	strat	g/m <sup>4</sup>	<b>35.00</b>	32.58	0.00	148.40	24.00	13.34	0.23	93.38	<b>0.002</b>
sea ice melt fraction - bottom	melt.bot	%	<b>3.5%</b>	1.6%	0.0%	8.3%	2.1%	1.0%	0.0%	4.2%	<b>0.000</b>
sea ice melt fraction - surface	melt.sfc	%	<b>5.8%</b>	5.0%	0.0%	23.8%	2.5%	1.2%	0.3%	5.5%	<b>0.000</b>
runoff fraction - bottom	runoff.bot	%	4.8%	2.4%	0.0%	13.0%	<b>5.6%</b>	1.6%	3.1%	10.5%	<b>0.003</b>
runoff fraction - surface	runoff.sfc	%	6.2%	2.8%	0.0%	13.3%	<b>7.4%</b>	2.1%	4.2%	14.1%	<b>0.000</b>
<b>Sediment characteristics</b>											
Surface sediment chl a	sed.chla	mg/m <sup>2</sup>	9.90	4.15	2.88	21.82	<b>12.57</b>	6.24	3.11	33.83	<b>0.001</b>
very coarse sand & gravel	phi.0	%	7.78	18.15	0.00	90.52	3.46	7.35	0.00	40.98	0.020
coarse sand	phi.1	%	1.12	1.66	0.01	7.20	1.20	1.92	0.00	8.88	0.756
medium sand	phi.2	%	4.71	7.25	0.02	43.46	4.97	7.25	0.00	34.37	0.755
fine sand	phi.3	%	21.70	23.06	0.17	85.36	21.15	22.56	0.13	82.83	0.818
very fine sand	phi.4	%	12.95	8.39	0.46	35.17	15.43	8.67	1.62	36.47	0.041

silt & clay	phi.5	%	51.74	29.77	1.00	97.19	53.80	29.36	3.20	97.43	0.407
Total Organic Carbon	TOC	%	0.81	0.43	0.12	2.48	0.84	0.55	0.08	3.47	0.619
Total Organic Nitrogen	TON	%	0.11	0.05	0.02	0.21	0.11	0.07	0.01	0.30	0.817
C/N ratio (w/w)	C/N		7.66	3.26	1.37	24.11	7.66	1.71	5.60	16.30	0.998
$\delta^{13}\text{C}$ value	$\delta^{13}\text{C}$	‰	-23.33	2.77	-39.90	-21.20	-22.99	0.78	-25.00	-21.60	0.222
$\delta^{15}\text{N}$ value	$\delta^{15}\text{N}$	‰	6.94	1.78	2.60	11.00	<b>7.78</b>	1.23	3.50	10.60	<b>0.000</b>



Table S3: Results from permutational, multivariate analyses of variance assessing the effects of environmental variables and interannual differences on species compositions of eight pelagic and benthic assemblages in the Chukchi Sea. Environmental variables are sorted by their marginal contributions (marginal  $R^2$ ) to overall variability after accounting for the effect of other variables in the model.  $R^2$  values do not add to one due to multicollinearity, but the total  $R^2$  for each assemblage is equal to 1 – residual  $R^2$ .

Assemblage	Variable	DF	SS	marginal $R^2$	F	p-value
<b><i>Bacteria</i></b>						
	SST	1	0.93	0.085	9.18	< 0.001
	SSS	1	0.33	0.031	3.29	0.005
	melt.sfc	1	0.29	0.026	2.83	0.013
	Year	1	1.12	0.104	12.32	0.002
	Residual	79	8.26	0.735		
<b><i>Protists</i></b>						
	SST	1	0.73	0.046	5.20	< 0.001
	phosphate	1	0.30	0.019	2.18	0.014
	silicate	1	0.27	0.017	1.92	0.024
	Year	1	2.06	0.130	14.74	< 0.001
	Residual	79	11.05	0.699		
<b><i>Small zooplankton (&lt; 150 <math>\mu</math>m)</i></b>						
	BT	1	0.89	0.066	12.81	< 0.001
	BS	1	0.41	0.030	5.90	< 0.001
	Year	1	1.26	0.093	18.18	< 0.001
	Residual	140	9.68	0.719		
<b><i>Large zooplankton (&lt; 505 <math>\mu</math>m)</i></b>						
	Bsal	1	0.91	0.039	7.36	< 0.001
	BT	1	0.56	0.024	4.53	0.001
	SST	1	0.44	0.019	3.52	0.001
	int.chla	1	0.33	0.014	2.69	0.004
	Year	1	2.45	0.105	19.70	< 0.001
	Residual	137	18.32	0.729		
<b><i>Benthic macroinfauna</i></b>						
	PC1 (sed)	1	1.41	0.044	6.24	< 0.001
	SST	1	1.02	0.032	4.50	< 0.001
	BS	1	0.94	0.030	4.18	< 0.001
	PC2 (sed)	1	0.77	0.024	3.39	< 0.001
	Year	1	0.66	0.021	2.94	< 0.001
	Residual	113	25.53	0.803		
<b><i>Epibenthic invertebrates</i></b>						
	PC1 (sed)	1	2.37	0.055	10.56	< 0.001
	BS	1	1.29	0.030	5.75	< 0.001
	BT	1	1.11	0.026	4.96	< 0.001
	SST	1	0.64	0.015	2.85	< 0.001

	Year	1	1.80	0.042	8.01	< 0.001
	Residual	142	31.87	0.742		
<i>Demersal fish</i>						
	PC1 (sed)	1	2.66	0.076	14.13	< 0.001
	BT	1	2.49	0.071	13.22	< 0.001
	Year	1	1.36	0.039	7.24	< 0.001
	Residual	138	25.97	0.742		
<i>Seabirds</i>						
	BT	1	1.81	0.110	18.84	< 0.001
	BS	1	1.01	0.062	10.56	< 0.001
	Year	1	1.21	0.074	12.62	< 0.001
	Residual	130	12.46	0.762		

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Table S4: Taxa whose abundances changed significantly ( $p < 0.05$ , not adjusted for multiple tests) between 2015 and 2017 by assemblage. Incidence denotes the number of stations at which the taxon was captured. Heading “change” is the proportional change in mean abundance (frequency of occurrence [FO] for microbes) between years, where -1 corresponds to a 100% decrease, +3 corresponds to a three-fold (300%) increase and “Inf” corresponds to taxa not captured in 2015. Comparisons were made across a common set of stations sampled in both years. Differences correspond to the change in mean CPUE (FO for microbes) on a log-transformed scale with the corresponding standard errors and t statistic (= difference divided by standard error). Taxa are listed in decreasing order of the t-value.

<i>Assemblage</i>	<i>Taxon</i>	<i>Incidence</i>		<i>change</i>	<i>Difference</i>		
		<i>2015</i>	<i>2017</i>		<i>(log-scale)</i>	<i>se</i>	<i>t-stat</i>
<b>Bacteria</b> 24 stations 31 phyla	Thaumarchaeota	12	1	-0.92	-3.14	1.10	-2.85
	Firmicutes	13	5	-0.62	-1.50	0.65	-2.32
	Cyanobacteria	15	7	-0.53	-1.40	0.62	-2.27
	Patescibacteria	16	8	-0.5	-1.39	0.61	-2.26
	Tenericutes	13	6	-0.54	-1.27	0.62	-2.03
<b>Protists</b> 24 stations 26 phyla	Centroheliozoa	20	12	-0.4	-1.61	0.68	-2.36
	Rhodophyta	20	13	-0.35	-1.44	0.68	-2.11
<b>Zooplankton (small)</b> 60 stations 31 taxa	<i>Cerianthus</i> sp.	0	23	Inf	0.76	0.15	4.92
	<i>Oithona similis</i>	62	62	-0.5	-0.99	0.21	-4.74
	Ophiuroidea	11	39	1.6	1.31	0.32	4.09
	<i>Pseudocalanus</i> sp.	62	62	-0.5	-1.06	0.27	-3.87
	<i>Tortanus discaudatus</i>	0	15	Inf	0.37	0.11	3.28
	<i>Centropages abdominalis</i>	25	49	7.2	1.40	0.43	3.23
	<i>Fritillaria borealis</i>	58	58	5.8	1.04	0.32	3.23
	Cirripedia	55	62	0.5	1.23	0.40	3.07
	Sipuncula	0	13	Inf	0.39	0.13	2.98
	Polychaeta	46	61	0.3	1.29	0.44	2.93
	<i>Oithona setigera</i>	0	8	Inf	0.11	0.04	2.56
	<i>Plotocnide borealis</i>	0	6	Inf	0.10	0.04	2.41
	Bivalvia	59	59	-0.8	0.81	0.34	2.40
	<i>Limacina helicina</i>	46	40	-0.7	-0.88	0.40	-2.17
Echinodermata	34	45	-0.3	0.82	0.41	2.03	
<b>Zooplankton (large)</b> 65 stations 54 taxa	Hippolytidae	0	60	Inf	3.68	0.22	16.94
	<i>Beroe</i> sp.	4	40	8.1	4.84	0.60	8.07
	<i>Bolinopsis infundibulum</i>	1	34	698.3	4.07	0.55	7.40
	<i>Hyperoche medusarum</i>	2	36	15.0	1.53	0.24	6.33
	<i>Mitrocomella polydiademata</i>	6	53	-0.7	2.19	0.39	5.67
	Pandalidae	27	6	-0.6	-1.41	0.31	-4.59
Paguridae	53	66	0.5	1.36	0.33	4.15	

	<i>Melicertum octocostatum</i>	11	32	1.3	1.57	0.38	4.15
	<i>Metridia</i> sp.	32	5	-1.0	-1.37	0.34	-4.04
	<i>Themisto libellula</i>	19	2	-0.8	-1.25	0.32	-3.87
	<i>Aeginopsis laurentii</i>	0	16	Inf	0.68	0.18	3.82
	<i>Apherusa</i> sp.	1	17	10.2	0.88	0.24	3.70
	<i>Catablema</i> sp.	25	41	4.7	1.47	0.44	3.37
	<i>Aglantha digitale</i>	63	48	-0.5	-1.57	0.47	-3.35
	<i>Themisto pacifica</i>	3	22	3.2	0.74	0.26	2.89
	<i>Aurelia</i> sp.	1	9	949.0	1.15	0.41	2.82
	<i>Eukrohnia hamata</i>	9	0	-1.0	-0.59	0.22	-2.74
	<i>Thysanoessa inermis</i>	14	6	-1.0	-0.94	0.36	-2.64
	<i>Oikopleura</i> sp.	26	22	-0.9	-0.96	0.37	-2.58
	<i>Clione limacine</i>	64	67	-0.7	-0.66	0.26	-2.55
	<i>Halitholus cirratus</i>	6	1	-1.0	-0.39	0.18	-2.13
	<i>Cyanea capillata</i>	4	10	24.9	0.66	0.32	2.06
<b>Infauna</b>	<i>Eudorellopsis uschakovi</i>	21	5	-0.9	-0.83	0.21	-3.92
53 stations	<i>Maldane glebifex</i>	0	11	Inf	2.16	0.59	3.66
352 taxa	<i>Prionospio steenstrupi</i>	26	8	-0.8	-0.78	0.23	-3.46
	<i>Eudorella truncatula</i>	13	1	-0.7	-0.68	0.21	-3.21
	<i>Retusa obtuse</i>	0	11	Inf	0.55	0.17	3.18
	<i>Nutricola lordi</i>	0	11	Inf	0.64	0.20	3.18
	<i>Axinopsida serricata</i>	42	26	-0.7	-1.21	0.40	-3.05
	<i>Euchone analis</i>	32	15	-0.8	-1.31	0.43	-3.04
	<i>Nephasoma</i> sp.	0	10	Inf	0.77	0.26	2.97
	<i>Alvania</i> sp.	10	2	-1.0	-0.58	0.20	-2.94
	<i>Sphenia ovoidea</i>	1	10	38.4	0.59	0.20	2.94
	<i>Cyclocardia creabricostata</i>	2	12	410.5	1.18	0.40	2.91
	<i>Aceroides</i> sp.	21	8	-0.8	-0.79	0.28	-2.84
	<i>Astarte alaskensis</i>	23	8	-0.2	-1.49	0.53	-2.83
	<i>Maldane sarsi</i>	32	19	-0.6	-2.43	0.86	-2.82
	<i>Diplodonta</i> sp.	19	7	-0.5	-0.97	0.34	-2.80
	<i>Eteone spetsbergensis</i>	8	1	-1.0	-0.77	0.28	-2.76
	<i>Cyclocardia crassidens</i>	25	10	-0.9	-1.64	0.60	-2.75
	<i>Disoma multisetosum</i>	8	1	-1.0	-0.40	0.15	-2.72
	<i>Nephtys ciliate</i>	0	7	Inf	1.03	0.38	2.70
	<i>Hiatella arctica</i>	1	12	6.9	0.49	0.19	2.65
	<i>Laonice</i> sp.	18	5	-1.0	-0.86	0.33	-2.64
	<i>Ampharete finmarchica</i>	22	7	0.9	-1.15	0.45	-2.56
	<i>Ophiura robusta</i>	6	0	-1.0	-0.84	0.33	-2.54
	<i>Pectinaria granulate</i>	13	27	10.2	1.55	0.61	2.53
	<i>Ophiopholis</i> sp.	29	16	-0.6	-1.32	0.53	-2.51
	<i>Pygospio elegans</i>	11	3	-0.9	-0.33	0.13	-2.47

	<i>Heterophoxus</i> sp.	26	10	-0.3	-1.05	0.43	-2.44
	<i>Margarites</i> sp.	5	15	4.2	0.85	0.36	2.38
	<i>Yoldia myalis</i>	5	12	4.9	0.33	0.14	2.37
	<i>Eudorellopsis integra</i>	1	6	236.0	0.42	0.18	2.35
	<i>Ampharete lindstroemi</i>	14	4	-0.8	-0.75	0.33	-2.29
	<i>Macoma inquinata</i>	6	0	-1.0	-0.57	0.25	-2.29
	<i>Eteone flava</i>	25	13	-0.4	-0.82	0.37	-2.23
	<i>Spio</i> sp.	3	10	1.8	0.43	0.20	2.19
	<i>Idotea</i> sp.	5	0	-1.0	-0.19	0.09	-2.14
	<i>Pettibonesia furcosetosa</i>	5	0	-1.0	-0.44	0.21	-2.13
	<i>Eteone barbata</i>	5	0	-1.0	-0.24	0.12	-2.12
	<i>Barantolla americana</i>	46	37	-0.3	-1.11	0.53	-2.09
	<i>Apherusa</i> sp.	8	1	-0.9	-0.33	0.16	-2.09
	<i>Aricidea minuta</i>	7	4	-0.9	-0.17	0.08	-2.06
	<i>Pontoporeia femorata</i>	26	14	-0.3	-0.91	0.44	-2.04
	<i>Musculus olivaceus</i>	4	0	-1.0	-0.43	0.21	-2.03
	<i>Cossura</i> sp.	27	18	-0.5	-0.30	0.15	-1.98
<b>Epiauna</b>	<i>Eualus fabricii</i>	7	57	399.7	8.74	0.63	13.81
67 stations	<i>Eualus macilentus</i>	14	48	19.3	5.73	0.76	7.52
259 taxa	Gammaridae	16	0	-1.0	-1.94	0.43	-4.47
	Crangon	11	31	10.7	2.88	0.67	4.31
	<i>Musculus glacialis</i>	17	1	-0.9	-2.05	0.50	-4.12
	<i>Arcteoobia anticostiensis</i>	16	2	-1.0	-1.48	0.39	-3.82
	<i>Diastylis alaskensis</i>	19	6	-1.0	-1.88	0.51	-3.68
	Argis	55	64	1.7	2.38	0.66	3.60
	<i>Hyas coarctatus</i>	55	38	-0.5	-3.03	0.90	-3.38
	<i>Chionoecetes opilio</i>	63	54	-0.4	-2.57	0.76	-3.37
	Henricia	18	5	-1.0	-2.02	0.61	-3.33
	<i>Retifusus roseus</i>	0	9	Inf	1.01	0.32	3.16
	<i>Cylichnoides occultus</i>	9	0	-1.0	-1.15	0.36	-3.16
	<i>Metopa spitzbergensis</i>	9	0	-1.0	-0.99	0.31	-3.15
	<i>Platyhelminthes</i>	8	0	-1.0	-0.96	0.32	-2.98
	<i>Styela rustica</i>	28	14	-0.7	-2.57	0.86	-2.97
	<i>Nymphon grossipes</i>	0	8	Inf	0.88	0.30	2.91
	<i>Acanthonotozoma inflatum</i>	8	0	-1.0	-0.81	0.28	-2.87
	<i>Anomalisipho verkruezeni</i>	10	1	-0.9	-1.20	0.42	-2.85
	<i>Phyllodoce groenlandica</i>	24	9	-0.4	-1.82	0.64	-2.85
	<i>Buccinum solenum</i>	7	0	-1.0	-1.03	0.38	-2.75
	<i>Crossaster papposus</i>	19	6	-0.1	-2.01	0.74	-2.73
	<i>Boreotrophon truncatus</i>	10	1	-0.6	-1.14	0.42	-2.72
	<i>Ascidia callosa</i>	13	3	0.0	-1.59	0.61	-2.62
	<i>Botrylloides aureus</i>	0	6	Inf	0.72	0.28	2.54

	<i>Arctolembos arcticus</i>	11	3	-1.0	-1.04	0.42	-2.49
	<i>Margarites costalis</i>	39	24	-0.2	-2.06	0.83	-2.47
	<i>Monoculodes diamesus</i>	6	0	-1.0	-0.55	0.22	-2.45
	<i>Solariella obscura</i>	2	10	10.0	0.85	0.36	2.39
	Caprellidae	7	1	-1.0	-0.85	0.36	-2.35
	<i>Leptasterias arctica</i>	16	6	0.0	-1.70	0.73	-2.32
	<i>Pontoporeia femorata</i>	5	0	-1.0	-0.75	0.33	-2.30
	<i>Musculus discors</i>	0	5	Inf	0.69	0.30	2.30
	<i>Eunoe oerstedii</i>	5	0	-1.0	-0.61	0.26	-2.29
	Eugyra	5	0	-1.0	-0.66	0.29	-2.28
	<i>Paratryphosites abyssii</i>	0	5	Inf	0.47	0.21	2.26
	<i>Curtitoma violacea</i>	0	5	Inf	0.63	0.28	2.25
	Colus	1	7	15.7	0.83	0.38	2.19
	<i>Molgula retortiformis</i>	9	2	-1.0	-1.01	0.46	-2.17
	Nemertea	28	19	-0.5	-1.63	0.77	-2.11
	Heteropora	13	5	-0.7	-1.31	0.62	-2.10
	Eucratea	26	17	0.5	-1.64	0.79	-2.09
	Pagurus	12	5	-0.8	-1.06	0.51	-2.07
	<i>Labidochirus splendescens</i>	45	32	0.1	-1.84	0.89	-2.06
	<i>Amicula vestita</i>	9	3	-1.0	-1.05	0.51	-2.05
	<i>Beringius behringii</i>	0	4	Inf	0.64	0.31	2.04
	<i>Haliclona</i> sp.	4	0	-1.0	-0.78	0.38	-2.04
	<i>Aulacofusus brevicauda</i>	4	0	-1.0	-0.49	0.24	-2.03
	<i>Lepeta caeca</i>	4	0	-1.0	-0.49	0.24	-2.02
	Diastylis	4	0	-1.0	-0.52	0.26	-2.01
<b>Fish</b>	<i>Aspidophoroides</i> sp.	22	44	5.0	0.86	0.17	5.07
62 stations	<i>Boreogadus saida</i>	46	55	5.2	1.22	0.25	4.97
41 taxa	<i>Lycodes polaris</i>	12	29	7.5	0.88	0.21	4.18
	<i>Leptoclinus maculatus</i>	0	10	Inf	0.22	0.07	3.31
	<i>Anisarchus medius</i>	30	36	4.8	0.69	0.25	2.78
	<i>Limanda aspera</i>	2	8	21.0	0.25	0.11	2.14
	<i>Liparis tunicatus</i>	21	8	-0.5	-0.24	0.12	-2.02
<b>Seabirds</b>	<i>Phalaropus fulicarius</i> <sup>a</sup>	29	1	-0.8	-3.12	0.47	-6.68
54 stations	<i>Fulmarus glacialis</i> <sup>b</sup>	23	36	5.1	2.07	0.58	3.59
25 taxa	<i>Ardenna tenuirostris</i> <sup>c</sup>	33	19	-0.8	-1.84	0.61	-3.03
	<i>Aethia cristatella</i> <sup>a</sup>	39	24	-0.3	-1.72	0.68	-2.54
	<i>Uria aalge</i> <sup>b</sup>	13	5	-0.9	-1.08	0.47	-2.29

Note: (a) planktivorous, (b) piscivorous, and (c) omnivorous (but primarily planktivorous) seabirds