

Table S1. List of the phytoplankton taxa with their occurrences on sampling dates in 2017.

Taxon	25 Mar	4 Apr	15 Apr	20 Apr	25 Apr	29 Apr	10 May	15 May	20 May	25 May	30 May	5 Jun	10 Jun	21 Jun	29 Jun	11 Jul	20 Jul	31 Jul	12 Aug	22 Aug	2 Sep	12 Sep	20 Sep	30 Sep	11 Oct	22 Oct	30 Oct	9 Nov	21 Nov	30 Nov	
Dinoflagellata																															
<i>Amphidinium crassum</i>	+					+								+			+	+	+						+	+			+		
<i>Amphidinium longum</i>							+		+																						
<i>Amphidinium sphenoides</i>				+	+	+	+	+	+		+		+	+		+		+	+	+								+		+	
<i>Amylax triacantha</i>														+		+	+														
<i>Dicroerisma psilonereia</i>					+												+		+	+	+			+				+	+	+	
<i>Dinophysis acuminata</i>		+			+		+	+	+	+	+	+	+					+	+	+									+		
<i>Dinophysis norvegica</i>								+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Dinophysis punctata</i>															+	+		+	+	+	+		+			+	+	+	+	+	
<i>Dinophysis</i> sp.																				+											
<i>Diplopsalis lenticula</i>										+	+							+				+	+					+			
<i>Diplopsalopsis orbicularis</i>																						+									
<i>Enciculifera carinata</i>																	+														
<i>Gonyaulax cochlea</i>															+					+											
<i>Gonyaulax spinifera</i>																			+		+					+					
<i>Gymnodinium verruculosum</i>															+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Gyrodinium fusiforme</i> / <i>Gyrodinium spirale</i>																	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Gyrodinium fusus</i>																											+				
<i>Gyrodinium spirale</i>	+			+	+	+	+	+	+	+	+	+	+	+		+				+											
<i>Gyrodinium</i> spp.															+		+		+												
<i>Heterocapsa rotundata</i>	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Kapelodinium vestifici</i>																	+														
<i>Kryptoperidinium triquetrum</i>	+		+	+	+			+		+	+	+		+			+	+	+	+	+	+	+	+							
<i>Kryptoperidinium triquetrum</i> (spore)			+		+													+	+	+	+	+	+								
<i>Lebouridinium glaucum</i>				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Lessardia elongata</i>					+	+	+	+	+	+	+		+																		
<i>Micracanthodinium claytonii</i>																	+	+		+								+	+		
<i>Oblea rotunda</i>			+		+						+																				
<i>Parvodinium africanum</i>																										+					

Taxon	25 Mar	4 Apr	15 Apr	20 Apr	25 Apr	29 Apr	10 May	15 May	20 May	25 May	30 May	5 Jun	10 Jun	21 Jun	29 Jun	11 Jul	20 Jul	31 Jul	12 Aug	22 Aug	2 Sep	12 Sep	20 Sep	30 Sep	11 Oct	22 Oct	30 Oct	9 Nov	21 Nov	30 Nov	
<i>Peridiniella catenata</i>	+		+	+	+	+	+	+	+	+	+										+	+									
<i>Peridiniella danica</i>	+		+	+		+	+	+	+		+	+	+	+			+	+	+	+	+				+	+	+	+		+	
<i>Phalacroma rotundatum</i>											+			+			+	+	+			+	+		+	+		+			
<i>Prorocentrum cordatum</i>					+						+	+	+	+			+					+									
<i>Prorocentrum micans</i>																+															
<i>Protoceratium reticulatum</i>											+																				
<i>Protoperidinium bipes</i>	+		+	+	+	+	+	+	+	+	+	+	+	+			+	+	+				+	+							
<i>Protoperidinium brevipes</i>				+		+	+		+	+	+	+					+										+	+	+	+	
<i>Protoperidinium conicum</i>																			+												
<i>Protoperidinium curvipes</i>																										+					
<i>Protoperidinium pallidum</i>								+	+	+	+				+					+									+		
<i>Protoperidinium pellucidum</i>										+								+	+												
<i>Protoperidinium pyriforme</i> subsp. <i>breve</i>									+		+																		+		
<i>Protoperidinium subinerve</i>								+	+				+																		
<i>Scrippsiella acuminata</i>																	+	+	+												
<i>Torodinium robustum</i>				+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Tripes arcticus</i>									+	+					+	+	+	+	+				+	+			+				
<i>Tripes furca</i>																+															
<i>Tripes fusus</i>								+	+							+	+		+		+	+	+	+	+	+	+	+	+		
Naked dinoflagellates small ($\leq 30 \mu\text{m}$)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Naked dinoflagellates large ($> 30 \mu\text{m}$)				+	+	+	+	+	+	+	+	+	+			+	+	+	+	+					+					+	
Armored dinoflagellates small ($\leq 30 \mu\text{m}$)	+	+	+	+	+	+	+	+				+	+	+	+	+	+	+								+				+	
Armored dinoflagellates large ($> 30 \mu\text{m}$)	+	+	+	+	+	+	+	+			+	+	+	+			+			+	+					+					
Heterokontophyta (Bacillariophyceae)																															
<i>Amphora angusta</i>																												+			
<i>Amphora</i> spp.																											+		+		
<i>Achnanthes kuwaitensis</i>								+																							
<i>Asterionella formosa</i>												+										+		+		+			+	+	
<i>Asteroplanus karianus</i>						+																									
<i>Cocconeis costata</i>																				+				+					+	+	+
<i>Ctenophora pulchella</i>															+																
<i>Cylindrotheca closterium</i>	+	+	+	+	+	+				+		+	+	+	+	+	+	+	+	+	+		+	+	+		+		+	+	
<i>Diploneis</i> cf. <i>advena</i>																													+		

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<i>Entomoneis</i> cf. <i>paludosa</i> var. <i>hyperborea</i>	+		+		+	+	+	+	+																					
<i>Fragilariopsis</i> cf. <i>cylindrus</i>	+	+	+	+	+	+	+	+	+								+	+			+						+			
<i>Fragilariopsis</i> cf. <i>oceanica</i>		+	+	+	+	+	+	+	+	+	+					+	+	+			+									
<i>Fragilariopsis</i> spp.	+	+					+	+	+															+						
<i>Grammatophora arctica</i>																														
<i>Grammatophora marina</i>															+														+	
<i>Gyrosigma</i> / <i>Pleurosigma</i> <200 µm	+		+	+	+	+	+											+												
<i>Gyrosigma</i> / <i>Pleurosigma</i> >200 µm															+			+												
<i>Hyalosira delicatula</i>																						+								
<i>Licmophora paradoxa</i>	+																													
<i>Licmophora</i> spp.						+										+														
<i>Meuniera membranacea</i>	+																													
<i>Navicula directa</i>	+	+	+	+	+	+	+	+	+							+	+		+	+	+	+		+	+	+	+	+	+	
<i>Navicula pelagica</i>	+	+	+																											
<i>Navicula perminuta</i>																+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Navicula septentrionalis</i>	+	+	+	+	+	+	+	+	+							+	+		+	+	+	+	+	+	+	+	+	+	+	
<i>Navicula transitans</i> var. <i>derasa</i>			+	+																			+	+	+	+				
<i>Navicula transitans</i> f. <i>delicatula</i>																											+			
<i>Navicula</i> spp.														+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
<i>Nitzschia frigida</i>	+		+	+	+	+		+																+						
<i>Pauliella taeniata</i>	+	+	+	+	+	+	+	+	+	+	+	+				+					+									
<i>Pseudo-nitzschia</i> cf. <i>delicatissima</i> complex			+																											
<i>Pseudo-nitzschia seriata</i> complex	+		+			+	+	+	+		+																			
<i>Rhabdonema arcuatum</i>																					+									
<i>Rhabdonema minutum</i>						+																					+	+		
<i>Rhoicosphenia abbreviata</i>																						+					+			+
<i>Rhoicosphenia marina</i>															+															
<i>Synedra</i> spp.																	+	+												
<i>Tabularia fasciculata</i>				+						+				+	+	+	+	+	+	+	+									
<i>Tabularia tabulata</i>																						+		+					+	
<i>Thalassionema nitzschioides</i>		+		+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Ulnaria ulna</i>																+														
<i>Pennales</i> small (< 20 µm)	+	+	+	+						+			+	+									+	+	+	+	+	+	+	+

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<i>Pennales medium</i> (20-50 µm)	+	+	+	+	+	+	+					+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Pennales large</i> (> 50 µm)	+	+		+	+						+	+	+	+		+	+	+												
<i>Pennales extralarge</i> (>100µm)		+																												
Heterokontophyta (Mediophyceae)																														
<i>Attheya septentrionalis</i>			+	+	+	+	+	+	+			+																		
<i>Bacterosira bathyomphala</i>					+	+	+	+																						
<i>Chaetoceros borealis</i>										+																				
<i>Chaetoceros concavicornis</i>								+																						
<i>Chaetoceros constrictus</i>																		+												
<i>Chaetoceros curvisetus</i>																	+	+	+											
<i>Chaetoceros curvisetus</i> (spore)																		+	+											
<i>Chaetoceros danicus</i>																													+	
<i>Chaetoceros densus</i>											+																			
<i>Chaetoceros diadema</i>								+																						
<i>Chaetoceros eibonii</i>									+				+	+			+	+	+							+				
<i>Chaetoceros invisibilis</i>			+	+	+	+	+																							
<i>Chaetoceros minimus</i>																							+							
<i>Chaetoceros minutissimus</i>					+										+															
<i>Chaetoceros muelleri</i>	+			+												+			+	+	+									
<i>Chaetoceros tenuissimus</i>			+	+	+	+												+												
<i>Chaetoceros wighamii</i>									+																					
<i>Chaetoceros</i> spp.			+	+	+		+	+											+											
<i>Cyclotella striata</i>	+																													
<i>Detonula confervacea</i>							+	+																						
<i>Detonula</i> cf. <i>pumila</i>			+																											
<i>Leptocylindrus danicus</i>					+																									
<i>Odontella aurita</i>		+		+	+	+	+	+	+		+		+			+														+
<i>Pantocsekiella kuetzingiana</i>				+												+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Proboscia alata</i>												+																		
<i>Skeletonema costatum</i> 'sensu lato'				+	+		+	+	+	+	+	+		+		+	+	+	+	+										
<i>Thalassiosira angustelineata</i>								+	+	+	+																			
<i>Thalassiosira eccentrica</i>					+					+			+					+												
<i>Thalassiosira leptopus</i>														+															+	

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<i>Thalassiosira nordenskiöldii</i>							+	+	+	+	+	+					+															
<i>Thalassiosira</i> sp. small (10–30 µm)	+	+	+	+	+	+	+	+	+	+	+			+				+	+	+	+	+			+	+	+	+	+	+		
<i>Thalassiosira</i> sp. small (10–30 µm) spore																								+	+		+	+				
<i>Thalassiosira</i> sp. medium (31–50 µm)								+	+	+	+	+				+	+	+						+								
<i>Thalassiosira</i> sp. medium (31–50 µm) spore																		+					+									
<i>Thalassiosira</i> sp. large (50–70 µm)									+			+		+	+	+	+															
Heterokontophyta (Coscinodiscophyceae)																																
<i>Aulacoseira distans</i>																														+		
<i>Aulacoseira italica</i>											+																					
<i>Coscinodiscus asteromphalus</i>					+	+	+	+	+			+											+								+	
<i>Coscinodiscus centralis</i>									+	+	+	+							+													
<i>Coscinodiscus concinnus</i>									+	+	+	+	+													+		+	+			
<i>Coscinodiscus curvatulus</i>								+																		+	+					
<i>Coscinodiscus granii</i>																																
<i>Coscinodiscus radiatus</i>									+										+		+	+	+	+	+	+	+	+	+	+		
<i>Coscinodiscus wailesii</i>									+																							
<i>Coscinodiscus</i> spp.				+					+											+						+						
<i>Melosira arctica</i>		+			+																											
<i>Melosira moniliformis</i>		+		+															+							+	+			+		
<i>Melosira nummuloides</i>																					+											
<i>Paralia sulcata</i>	+	+											+								+	+			+			+	+			
Heterokontophyta (Chrysophyceae)																																
<i>Dinobryon balticum</i>	+	+	+	+	+		+	+	+	+	+	+		+			+															
<i>Dinobryon faculiferum</i>					+																											
Heterokontophyta (Dictyochophyceae)																																
<i>Octactis speculum</i>			+		+	+	+	+	+	+	+	+	+	+	+	+	+						+	+	+	+	+	+	+	+		
<i>Parapedinella reticulata</i>																	+	+			+	+	+	+	+		+					
<i>Pseudopedinella pyriformis</i>					+	+			+	+	+	+	+	+		+		+	+	+												
Euglenophyta																																
<i>Eutreptiella braarudii</i>	+				+	+		+																								
<i>Eutreptiella</i> cf. <i>gymnastica</i>																																

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<i>Eutreptiella hirudoidea</i>						+	+	+	+																						
Euglenozoa gen. spp. <20 µm					+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		+			
Euglenozoa gen. spp. 20–50 µm	+	+	+	+	+	+	+	+	+		+	+	+																		
Chlorophyta																															
<i>Ankistrodesmus arcuatus</i>				+																											+
<i>Dictyosphaerium ehrenbergianum</i>												+																			
<i>Halosphaera russellii</i>																	+														
<i>Koliella longiseta</i>																															
<i>Lemmermannia tetrapedia</i>																					+								+		
<i>Monoraphidium contortum</i>																										+					
<i>Monoraphidium komarkovae</i>																															+
<i>Monoraphidium minutum</i>		+																													
<i>Pachysphaera pelagica</i>																+	+	+													
<i>Pterosperma</i> spp.																			+	+											
<i>Pyramimonas</i> cf. <i>adriaticus</i>			+	+		+	+																								
<i>Pyramimonas propulsa</i>			+	+	+	+																									
<i>Pyramimonas</i> spp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Raphidonema nivale</i>									+																						
<i>Scenedesmus</i> sp.																					+										
<i>Stichococcus bacillaris</i>																+															
Chlorophyta gen. spp.	+	+		+																											
Charophyta																															
<i>Sphaerosozma vertebratum</i>																															+
<i>Staurodesmus dejectus</i>																															+
Cryptista																															
<i>Leucocryptos marina</i>				+	+	+	+				+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cryptista gen. spp.		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cercozoa (Thecofilosea)																															
<i>Ebria tripartita</i>									+					+	+	+	+	+	+	+	+	+	+	+	+						
Haptophyta																															
<i>Phaeocystis</i> cf. <i>globosa</i>							+	+	+	+	+	+	+	+																	

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Cyanobacteria																															
<i>Oscillatoria</i> sp.																					+										
<i>Pseudoanabaena</i> sp.																															+
<i>Spirulina</i> sp.			+																												
<i>Spirulina</i> sp.1		+																													
Chroococcales1		+																													
Nostocales	+																														
Chroococcales2								+																							
Cyanobacteria gen. spp.																				+											

Table S2. List of common zooplankton taxa found in the study area with average biomass \pm SE in 2017 and for the period 1998-2021, mg m⁻³. Common taxa - those found every year in numbers exceeding 10 ind. m⁻³ at least on one date. These taxa were used in the analysis. Ciliophora species, *Pseudocalanus minutus* and *P. acuspes*, *Acartia longiremis* and *A. bifilosa*, *Podon leuckarti* and *Pleopis polyphaemoides* were not distinguished.

Common taxa	Biomass, 2017	Biomass, 1998-2021
Ciliophora (Tintinnina)		
<i>Parafavella denticulata</i> (Ehrenberg, 1840)	0.003 \pm 0.002	0.02 \pm 0.003
<i>Helicostomella</i> sp. Jørgensen, 1924		
Hydrozoa		
<i>Aglantha digitale</i> (O.F. Müller, 1776)	3.8 \pm 1.7	68.1 \pm 10.4
Rotifera		
<i>Keratella cruciformis</i> (Thompson, 1892)	0.2 \pm 0.2	0.5 \pm 0.1
<i>Synchaeta</i> sp. Ehrenberg, 1832		
Polychaeta		
Polychaeta (larvae)	1.6 \pm 0.7	1.3 \pm 0.2
Cladocera		
<i>Evadne nordmanni</i> Lovén, 1836	4.4 \pm 2.5	5.7 \pm 0.6
<i>Pleopis polyphemoides</i> (Leuckart, 1859)	0.2 \pm 0.1	0.7 \pm 0.1
<i>Podon leuckarti</i> (Sars G.O., 1862)		
Copepoda		
<i>Calanus glacialis</i> Jaschnov, 1955	74.8 \pm 24.1	37.1 \pm 4.4
<i>Metridia longa</i> (Lubbock, 1854)	0.4 \pm 0.1	1.2 \pm 0.2
<i>Pseudocalanus acuspes</i> (Giesbrecht, 1881)	56.2 \pm 11.9	56.8 \pm 3.6
<i>Pseudocalanus minutus</i> (Krøyer, 1845)		
<i>Acartia longiremis</i> (Lilljeborg, 1853)	10.1 \pm 3.8	3 \pm 0.3
<i>Acartia bifilosa</i> (Giesbrecht, 1881)		
<i>Centropages hamatus</i> (Lilljeborg, 1853)	3.1 \pm 1	5.7 \pm 0.5
<i>Temora longicornis</i> (Müller, 1792)	16.2 \pm 5.9	16.5 \pm 1.5
<i>Oithona similis</i> Claus, 1866	44.6 \pm 8.5	53.6 \pm 3.1
<i>Triconia borealis</i> (Sars, 1918)	1.2 \pm 0.1	3.8 \pm 1.9
<i>Microsetella norvegica</i> (Boeck, 1864)	5.1 \pm 2.1	16.2 \pm 1.5
Cirripedia		
Cirripedia (larvae)	0.06 \pm 0.03	0.2 \pm 0.04
Amphipoda		
<i>Hyperia galba</i> (Montagu, 1815)	0.9 \pm 0.4	0.3 \pm 0.06
<i>Themisto abyssorum</i> Boeck, 1870		
<i>Themisto libellula</i> (Lichtenstein in Mandt, 1822)		
Euphausiacea		
<i>Thysanoessa raschii</i> (M. Sars, 1864)	0.4 \pm 0.2	0.7 \pm 0.1
Mollusca		
Bivalvia (larvae)	1 \pm 0.3	2.7 \pm 0.3
Gastropoda (larvae)	1.4 \pm 0.5	5 \pm 0.8
<i>Clione limacina</i> (Phipps, 1774)	0.01 \pm 0.005	0.2 \pm 0.1
<i>Limacina helicina</i> (Phipps, 1774)	6.4 \pm 2	12.5 \pm 1.3
Chaetognatha		
<i>Parasagitta elegans</i> Verrill, 1873	46.5 \pm 13.8	55.7 \pm 5.2
Appendicularia		
<i>Fritillaria borealis</i> Lohman, 1896	0.1 \pm 0.1	0.3 \pm 0.04
<i>Oikopleura vanhoeffeni</i> Lohman, 1896	3.9 \pm 1.1	5.8 \pm 0.5

Echinodermata		
Echinodermata (larvae)	0.2 ± 0.1	0.8 ± 0.2
Bryozoa		
Bryozoa (larvae)	0.03 ± 0.02	0.16 ± 0.04
Ascidia		
Ascidia (larvae)	0.4 ± 0.2	1.8 ± 0.3

Table S3. Rare taxa found in the study area. These taxa are registered not every year or each year on a single occasion in numbers less than 10 ind. m⁻³.

Rare taxa
Ciliophora
<i>Tintinnopsis campanula</i> Ehrenberg, 1840
<i>Ptychocylis obtusa</i> Brandt, 1906
Hydrozoa
<i>Aeginopsis laurentii</i> Brandt, 1838
<i>Rathkea octopunctata</i> (M. Sars, 1835)
<i>Bougainvillia superciliaris</i> (L. Agassiz, 1849)
<i>Euphysa flammea</i> (Hartlaub, 1902)
<i>Sarsia tubulosa</i> (M. Sars, 1835)
<i>Obelia geniculata</i> (Linnaeus, 1758)
<i>Obelia longissima</i> (Pallas, 1766)
<i>Halitholus yoldiaearcticae</i> (Birula, 1897)
<i>Catablema vesicarium</i> (A. Agassiz, 1862)
<i>Plotocnide borealis</i> Wagner, 1885
Ctenophora
<i>Bolinopsis infundibulum</i> (O.F. Müller, 1776) (larvae)
<i>Beroe cucumis</i> Fabricius, 1780 (larvae)
Copepoda Calanoida
<i>Jaschnovia tolli</i> (Linko, 1913)
<i>Neoscolecithrix farrani</i> Smirnov, 1935
Copepoda Harpacticoida
<i>Ectinosoma neglectum</i> Sars G.O., 1904
<i>Harpacticus uniremis</i> Krøyer, 1842
<i>Parathalestris croni</i> (Krøyer, 1842)
<i>Tisbe furcata</i> (Baird, 1837)
Mysidacea
<i>Mysis oculata</i> (Fabricius, 1780)
<i>Mysis mixta</i> Lilljeborg, 1852

Table S4. Occurrence of zooplankton taxa in the study area on the sampling dates in 2017.

	25 Mar	4 Apr	15 Apr	20 Apr	25 Apr	29 Apr	10 May	15 May	20 May	25 May	30 May	5 Jun	10 Jun	21 Jun	29 Jun	11 Jul	20 Jul	31 Jul	12 Aug	22 Aug	2 Sep	12 Sep	20 Sep	30 Sep	11 Oct	22 Oct	30 Oct	21 Nov	30 Nov	
Tintinninae	+															+	+	+	+	+	+	+	+	+	+			+	+	
<i>Aglantha digitale</i>																+	+	+	+	+	+	+							+	+
Rotifera			+									+		+	+															
Polychaeta	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		+		+	+	+	
<i>Podon</i> spp.														+	+		+	+	+	+		+		+	+					
<i>Evadne nordmanni</i>														+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
<i>Calanus glacialis</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Metridia longa</i>	+	+	+	+		+		+	+			+	+	+	+	+		+		+	+	+	+	+	+	+	+	+	+	
<i>Pseudocalanus</i> spp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Acartia</i> spp.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Centropages</i>								+				+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		
<i>Temora longicornis</i>								+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Oithona similis</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Triconia borealis</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Microsetella</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cirripedia			+	+	+	+	+	+	+	+	+			+	+	+		+												
Amphipoda	+		+	+	+	+	+	+	+	+	+	+																		
Euphausiacea			+										+	+		+	+		+	+										
Bivalvia													+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Gastropoda	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Clione limacina</i>								+				+		+	+					+		+					+			
<i>Limacina helicina</i>	+	+	+		+	+		+			+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	
<i>Parasagitta elegans</i>	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
<i>Fritillaria borealis</i>	+	+							+	+		+	+	+				+	+	+	+	+	+	+	+	+	+	+	+	
<i>Oikopleura</i>	+		+	+	+	+		+		+	+		+	+			+		+				+				+	+	+	
Echinodermata														+				+	+	+	+	+		+	+					
Bryozoa																			+	+	+	+			+					
Ascidia	+				+	+		+	+													+	+	+		+	+			

Table S5. Characteristic species of the seasonal groups of phytoplankton. Phylum abbreviations: Heteroc. – Heterokontophyta (Bacillariophyceae, Mediophyceae, Coscinodiscophyceae), Dinofl. – Dinoflagellata, Haptoph. – Haptophyta, Chloroph. – Chlorophyta.

	Species	Phylum	Contrib. %	Cumul. %	Average B, mg m ⁻³
Winter Average similarity: 48.85%	<i>Thalassiosira</i> sp. small (10-30 µm)	Heteroc.	12.01	12.01	13.7
	<i>Fragilariopsis</i> cf. <i>cylindrus</i>	Heteroc.	9.46	21.47	10.2
	<i>Peridiniella catenata</i>	Dinofl.	9.37	30.84	7.2
	<i>Pauliella taeniata</i>	Heteroc.	6.79	37.63	12.9
	Armored dinoflagellates small (≤30 µm)	Dinofl.	5.67	43.29	2.7
	<i>Fragilariopsis</i> cf. <i>oceanica</i>	Heteroc.	5.43	48.72	6.8
	Armored dinoflagellates large (>30 µm)	Dinofl.	4.44	53.16	1.7
	<i>Navicula directa</i>	Heteroc.	3.92	57.09	1.4
	Naked dinoflagellates small (≤30 µm)	Dinofl.	3.43	60.51	2.0
Spring Average similarity: 44.55%	Naked dinoflagellates large (>30 µm)	Dinofl.	11.04	11.04	49.7
	<i>Coscinodiscus concinnus</i>	Heteroc.	9.09	20.14	17.6
	<i>Gyrodinium spirale</i>	Dinofl.	8.32	28.45	12.7
	<i>Coscinodiscus asteromphalus</i>	Heteroc.	7.28	35.73	65.8
	Naked dinoflagellates small (≤30 µm)	Dinofl.	6.44	42.17	6.6
	<i>Phaeocystis</i> cf. <i>globosa</i>	Haptoph.	4.99	47.16	5.2
	<i>Lebouridinium glaucum</i>	Dinofl.	4.82	51.98	3.2
	<i>Coscinodiscus centralis</i>	Heteroc.	4.71	56.69	8.5
	<i>Dinophysis acuminata</i>	Dinofl.	4.61	61.3	3.4
Summer Average similarity: 46.47%	Cryptista gen. spp.	Cryptista	13.12	13.12	15.8
	Naked dinoflagellates small (≤30 µm)	Dinofl.	11.69	24.81	9.8
	<i>Pyramimonas</i> spp.	Chloroph.	7.43	32.24	6.1
	<i>Heterocapsa rotundata</i>	Dinofl.	6.67	38.91	4.5
	<i>Thalassionema nitzschioides</i>	Heteroc.	6.24	45.15	7.3
	<i>Navicula perminuta</i>	Heteroc.	5.58	50.72	7.9
	<i>Ebria tripartita</i>	Cercozoa	4.14	54.87	2.5
	<i>Dinophysis norvegica</i>	Dinofl.	3.88	58.75	2.1
	<i>Cyclotella choctawhatcheeana</i>	Heteroc.	3.8	62.55	3.6
Autumn Average similarity: 48.79%	Naked dinoflagellates small (≤30 µm)	Dinofl.	19.93	19.93	3.8
	Cryptista gen. spp.	Cryptista	11.64	31.57	2.5
	<i>Thalassionema nitzschioides</i>	Heteroc.	7.64	39.2	0.6
	<i>Coscinodiscus radiatus</i>	Heteroc.	6.79	46	0.6
	<i>Torodinium robustum</i>	Dinofl.	6.39	52.38	0.5
	<i>Heterocapsa rotundata</i>	Dinofl.	4.44	56.82	0.6
	<i>Gymnodinium verruculosum</i>	Dinofl.	4.03	60.86	0.3

Table S6. Characteristic species of the seasonal groups of zooplankton. F – female; C2, C3, C4, C5 – copepodite stages; J - sum of young copepodite stages (C1+C2+C3) of small species; C – sum of late copepodite stages (C4+C5) of small species; N – nauplii.

Group	Species	Contrib. %	Cumul. %	Average B, mg m ⁻³
Winter Average similarity: 60.06%	<i>Calanus glacialis</i> F	19.83	19.83	42.0
	<i>Oithona similis</i> C	13.26	33.09	9.5
	<i>Pseudocalanus</i> spp. F	7.15	40.25	8.9
	<i>Pseudocalanus</i> spp. N	7.12	47.37	4.8
	<i>Calanus glacialis</i> C4	5.5	52.87	3.2
	<i>Parasagitta elegans</i>	4.53	57.4	11.8
	<i>Pseudocalanus</i> spp. C5	4.41	61.82	4.9
Spring Average similarity: 62.38%	<i>Calanus glacialis</i> C5	12.66	12.66	47.9
	<i>Pseudocalanus</i> spp. N	10.75	23.4	23.3
	<i>Calanus glacialis</i> F	10.37	33.77	32.8
	<i>Calanus glacialis</i> N	5.88	39.65	17.4
	<i>Parasagitta elegans</i>	5.23	44.88	10.9
	<i>Pseudocalanus</i> spp. C1	5.17	50.05	6.2
	<i>Oithona similis</i> F	5.17	55.22	6.4
Summer Average similarity: 55.04%	<i>Pseudocalanus</i> spp. C3	5.12	60.34	8.3
	<i>Parasagitta elegans</i>	15.35	15.35	170.3
	<i>Calanus glacialis</i> C4	12.68	28.04	94.1
	<i>Pseudocalanus</i> spp. C3	9.07	37.11	69.5
	<i>Calanus glacialis</i> C3	8.99	46.1	166.0
	<i>Pseudocalanus</i> spp. C4	5.51	51.61	12.2
	<i>Pseudocalanus</i> spp. C2	3.79	55.4	41.0
	Polychaeta larvae	3.24	58.65	10.2
<i>Oithona similis</i> F	3.23	61.88	8.8	
Summer- Autumn Average similarity: 60.90%	<i>Oithona similis</i> C	15.39	15.39	61.7
	<i>Parasagitta elegans</i>	7.49	22.89	56.6
	<i>Pseudocalanus</i> spp. C5	6.17	29.06	16.8
	<i>Oithona similis</i> J	6.12	35.17	19.5
	<i>Pseudocalanus</i> spp. C4	5.55	40.73	10.3
	<i>Limacina helicina</i>	5.04	45.77	8.5
	<i>Pseudocalanus</i> spp. C3	5.02	50.79	10.0
	<i>Oithona similis</i> N	4.09	54.87	10.6
	<i>Temora longicornis</i> F	3.88	58.75	14.8
	<i>Oithona similis</i> F	3.75	62.51	10.2