

1 Table S1 Plankton ecological characteristics

Plankton group	Group	Social behavior	Habitat	Position in the water column	Biovolume (μm^3)	Shape
<i>Asterionellopsis glacialis</i>	diat (P)	colony	coastal/ oceanic	tychopelagic	4006	cone + half sper + cylinder
<i>Bacillariaceae</i>	diat (P)	colony	coastal/ oceanic	tychopelagic	8875	rectangular box
<i>Biddulphia</i> spp.	diat (C)	colony	oceanic	benthic	2122539	prism on elliptic base
<i>Cerataulina</i> spp.	diat (C)	single cell	coastal	pelagic	170127	cylinder
<i>Chaetoceros</i> spp.	diat (C)	colony	coastal/ oceanic	pelagic	8614	prism on elliptic base
<i>Ciliophora</i>	other	single cell	coastal/ oceanic	tychopelagic	29218	
<i>Cryptophyceae</i>	other	single cell	coastal	pelagic	755	
<i>Dactyliosolen fragilissimus</i>	diat (C)	colony	coastal/ oceanic	pelagic	578273	cylinder
<i>Ditylum</i> spp.	diat (C)	single cell	coastal/ oceanic	pelagic	938772	prism on triangle base
<i>Euglenaceae</i>	other	single cell	coastal	undetermined	3666	
<i>Guinardia delicatula</i>	diat (C)	colony	oceanic	pelagic	69618	cylinder
<i>Guinardia striata</i>	diat (C)	colony	oceanic	pelagic	295702	cylinder

<i>Gymnodiniaceae+</i> <i>Gymnodinium</i>	dino	single cell	coastal/ oceanic	tychopelagic	30130	prism on elliptic base
<i>Leptocylindrus</i> spp.	diat (C)	colony	coastal	pelagic	4614	cylinder
<i>Melosiraceae</i>	diat (C)	colony	coastal	tychopelagic	61163	cylinder
<i>Navicula + Fallacia + Haslea + Lyrella + Petroneis</i> spp.	diat (P)	single cell	coastal	tychopelagic	15029	prism on elliptic base
<i>Nitzschia longissima</i>	diat (P)	single cell	coastal/ oceanic	benthic	10925	prism on parallelogra m base
<i>Odontella</i> spp.	diat (C)	colony	coastal/ oceanic	pelagic	141666	prism on elliptic base
<i>Paralia sulcata</i>	diat (C)	colony	coastal/ oceanic	tychopelagic	298723	cylinder
<i>Phaeocystis</i> spp.	dino	colony	coastal/ oceanic	tychopelagic	121	
<i>Plagiogramma</i> spp.	diat (C)	colony	coastal/ oceanic	tychopelagic	1711	prism on elliptic base
<i>Pleurosigma + Gyrosigma</i>	diat (P)	single cell	coastal/ oceanic	benthic	848160	prism on parallelogra m base
<i>Prorocentrum</i> spp.	dino	single cell	coastal/ oceanic	tychopelagic	9702	
<i>Pseudo-nitzschia</i> spp.	diat (P)	colony	coastal/ oceanic	pelagic	1556	prism on parallelogra m base
<i>Rhizosolenia imbricata + styliformis</i>	diat (C)	colony	oceanic	pelagic	829690	cylinder
<i>Rhizosolenia setigera + pungens</i>	diat (C)	single cell	oceanic	pelagic	712209	cylinder

<i>Scrippsiella + Ensiculifera + Pentapharsodinium + Bysmatrum spp.</i>	dino	single cell	coastal/ oceanic	tychopelagic	5480	
<i>Skeletonema costatum</i>	diat (C)	colony	coastal	pelagic	3669	cylinder + 2 half- spheres
<i>Thalassionema nitzschioides</i>	diat (P)	colony	coastal	pelagic	1790	rectangular box
<i>Thalassiosiracaea</i>	diat (C)	colony	coastal/ oceanic	pelagic	15650	cylinder

2 Plankton characteristics defined as described in Material and methods. Diat: diatoms; dino:

3 dinoflagellates; P: pennate diatoms; C: centric diatoms.

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