

## Small-scale variability of protistan planktonic communities relative to environmental pressures and biotic interactions at two adjacent coastal stations

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**Table S1:** Annotated major trophic role, OTUs number at the offshore (O) and inshore (I) stations, size and some related references for the super-groups.

Super groups	Groups	OTUs Number		Trophic role	References	
		O	I			
<b>Amoebozoa</b>	Lobosa	3	5	micro- grazers + some parasites	Lesen et al. 2010 (and references within)	
<b>Apusozoa</b>	Apusomonadidae	3	10	pico- grazers (nanoflagellates)	Boenigk & Arndt 2002	
	Hilomonadea	2	2		Scheckenbach et al. 2006	
<b>Alveolates</b>	Apicomplexa	7	8	Parasites	Skovgaard 2014	
	Ciliates	Litostomatea	12	12	Nano- grazers/ parasites	Lynn 2008
		Oligohymenophorea	12	9		
		Phyllopharyngea	2	4		
		Spirotrichea	38	44		
		Colpodea	4	2		
	Other Ciliates	4	4			
	Dinophyceae	133	135	Mixotrophs/ Micro- grazers	Stoecker 1999; Sherr & Sherr 2007	
	MALV	111	120	Parasites	Guillou et al. 2008; Skovgaard 2014	
	Perkinsea	2	3	Parasites	Mangot et al. 2011; Skovgaard 2014	
<b>Archaeplastida</b>	Chlorophyta	41	41	Autotrophs	Not et al. 2012	
	Rhodophyta	0	1		Yokoyama et al. 2009	
<b>Excavata</b>	Discoba	14	8	Pico- grazers (nanoflagellates)	Cavalier-Smith 2002	
<b>Hacrobia</b>	Centrohelliozoa	3	4	Pico- nano grazers	Burki et al, 2009 (and references within)	
	Cryptophyta	5	5	Autotrophs/ Mixotrophs	Not et al. 2012	
	Haptophyta	29	25	Autotrophs/ Mixotrophs	Not et al. 2012	

	Katablepharidophyta	6	7	Pico- grazers (nanoflagellates)	Boenigk & Arndt 2002
	Picobilliphyta	8	11	Mixotrophs	Not et al. 2007
	Telonemia	24	23	Pico- grazers (nanoflagellates)	Klaveness et al. 2005
	Choanoflaggelida	27	25	Pico- grazers (nanoflagellates)	Boenigk & Arndt 2002
<b>Opisthokonta</b>	Fungi	56	76	Decomposers/ Parasites	Manohar & Raghukumar 2013
	Mesomycetozoa	14	12	Parasites	Marshall et al. 2008
<b>Rhizaria</b>	Cercozoa	74	67	Parasites	Chantangsi & Leander 2010; Skovgaard 2014
	Bacillariophyta (diatoms)	69	80	Autotrophs	Brown & Sorhannus 2010
	Bicoecea	6	8	Pico- grazers (nanoflagellates)	Boenigk & Arndt 2002
	Bigyromonadea	1	1	Pico- grazers (nanoflagellates)	Cavalier-Smith 1997
	Bolidophyceae-and- relatives	12	10	Autotrophs	Brown & Sorhannus, 2010
	Chrysophyceae- Synurophyceae	8	10	Autotrophs/ Mixotrophs	Brown & Sorhannus 2010
	Eustigmatophyceae	1	0	Autotrophs	Brown & Sorhannus 2010
<b>Stramenopiles</b>	Hyphochytriomyceta	1	1	Parasites	Kramarsky-Winter et al. 2006
	Labyrinthulea	25	27	Parasites	Raghukumar 2002
	MAST	71	66	Pico- grazers (nanoflagellates)	Massana et al. 2006
	Oomyceta	18	20	Parasites	Park et al. 2004
	Pelagophyceae	2	1	Autotrophs	Brown & Sorhannus 2010
	Phaeothamniophyceae	1	0	Autotrophs/ Mixotrophs	Bailey et al. 1998; Brown & Sorhannus 2010
	Pirsonia	4	4	Parasites	Skovgaard 2014
<b>Other Protists</b>		26	32		

**Table S2:** Environmental variables from March 2012 to June 2013 at the SOMLIT stations [offshore (O) and inshore (I)] in the eastern English Channel (SOMLIT network, <http://somalit.epoc.u-bordeaux1.fr/fr/>).

Sampling Date	Kd (m <sup>-1</sup> )	PAR (E m <sup>-2</sup> d <sup>-1</sup> )	Temperature (°C)	Salinity	O <sub>2</sub> (mg L <sup>-1</sup> )	pH	NH <sub>4</sub> (μM)	NO <sub>3</sub> +NO <sub>2</sub> (μM)	PO <sub>4</sub> (μM)	SiO <sub>4</sub> (μM)	POC (mg L <sup>-1</sup> )	SPM (mg L <sup>-1</sup> )	Chl <i>a</i> (μg L <sup>-1</sup> )
20/03/2012 (O)	0.30	22.13	7.29	34.81	7.46	8.24	0.36	8.66	0.57	2.37	0.23	1.37	1.32
20/03/2012 (I)	0.55	19.68	7.35	34.13	8.16	8.34	0.20	7.00	0.12	0.70	0.43	1.41	1.94
09/05/2012 (O)	0.31	19.79	10.62	35.16	6.78	8.24	0.17	0.57	0.32	1.13	0.28	1.07	5.75
09/05/2012 (I)	0.23	20.62	10.91	34.66	6.70	8.33	0.13	0.14	0.13	0.60	0.33	1.19	3.40
05/06/2012 (O)	0.23	27.24	13.70	34.94	6.72	8.31	0.01	1.48	0.58	0.10	0.44	0.76	0.82
05/06/2012 (I)	0.20	27.64	14.27	34.63	6.35	8.30	0.03	0.70	0.05	0.70	0.52	0.96	2.12
21/06/2012 (O)	0.30	44.92	14.88	34.93	5.77	8.22	0.06	0.40	0.60	3.56	0.22	0.48	1.21
21/06/2012 (I)	0.19	47.41	15.83	34.43	5.68	8.24	0.06	0.57	0.05	0.60	0.34	0.10	0.50
04/07/2012 (O)	0.19	43.33	15.57	34.54	6.25	8.18	0.02	0.22	0.12	2.66	0.37	0.67	1.95
04/07/2012 (I)	0.32	40.65	17.04	34.04	6.20	8.22	0.00	0.61	0.05	0.37	0.49	1.16	7.96
03/09/2012 (O)	0.35	24.91	17.84	34.90	5.46	8.10	0.15	0.15	0.30	3.59	0.21	0.34	1.91
03/09/2012 (I)	0.28	25.74	18.50	34.20	5.35	8.14	0.47	0.80	0.18	4.20	0.34	1.27	2.81
03/10/2012 (O)	0.31	8.57	14.07	34.77	5.46	8.13	2.13	5.49	0.96	5.69	0.22	2.73	0.24
03/10/2012 (I)	0.50	7.84	12.82	33.29	5.74	8.12	4.57	12.05	0.42	7.70	0.35	7.86	1.03
13/11/2012 (O)	0.26	6.96	12.72	34.95	5.68	8.11	1.12	7.40	1.12	5.86	0.07	1.16	0.68
13/11/2012 (I)	0.61	5.91	11.80	34.20	5.91	8.10	1.03	11.12	0.45	5.25	0.16	3.01	1.77
11/02/2013 (O)	0.26	8.44	7.54	34.81	6.57	8.20	0.15	15.64	0.75	7.12	0.06	0.90	3.41
11/02/2013 (I)	0.32	8.22	6.48	33.75	6.76	8.19	0.20	19.70	0.73	7.55	0.15	3.17	3.57
26/02/2013 (O)	0.27	8.27	6.24	34.65	7.04	8.22	0.69	14.19	0.74	1.79	0.24	1.16	7.20
26/02/2013 (I)	0.49	7.46	5.87	34.30	7.08	8.22	0.63	11.90	0.05	1.14	0.37	3.07	9.95
26/03/2013 (O)	0.27	16.31	5.79	34.83	7.30	8.24	0.39	4.59	0.39	0.10	0.39	1.00	6.89
26/03/2013 (I)	0.27	16.32	5.39	34.40	7.29	8.30	0.39	5.00	0.15	0.30	0.30	2.14	3.16
08/04/2013 (O)	0.29	23.54	5.37	34.69	7.14	8.26	0.55	5.86	0.41	0.10	0.22	3.03	3.08
08/04/2013 (I)	0.49	21.41	5.44	34.41	7.20	8.29	0.34	3.20	0.12	0.30	0.41	6.16	4.42
27/05/2013 (O)	0.33	38.45	10.54	34.65	7.12	8.40	0.09	0.48	0.20	0.10	0.27	3.21	2.70
27/05/2013 (I)	0.23	40.31	11.26	34.10	6.57	8.38	0.43	3.40	0.14	0.40	0.27	1.18	1.94
10/06/2013 (O)	0.28	38.54	11.75	34.54	5.79	8.21	0.51	0.32	0.23	0.10	0.23	0.96	1.79
10/06/2013 (I)	0.64	32.72	12.44	34.33	6.32	8.29	0.10	1.90	0.14	0.35	0.49	2.16	8.08
25/06/2013 (O)	0.32	25.25	13.90	34.70	6.12	8.35	0.06	0.15	0.25	0.10	0.42	1.53	2.79
25/06/2013 (I)	0.66	21.52	14.98	33.64	6.63	8.49	0.06	0.40	0.18	0.10	1.24	3.14	14.19

**Table S3.** Spearman correlation coefficients between environmental parameters (upper panel) and trophic groups (lower panel) and the COIA co-ordinates presented on Fig. 5.

<b>Variable</b>	<b>COIA-X1</b>	<b>COIA-X2</b>
Kd	0.62**	0.66***
PAR	-0.73***	-0.55*
T	-0.16	-0.67***
S	-0.63**	-0.18
O <sub>2</sub>	-0.04	0.74***
pH	-0.57*	0.19
NH <sub>4</sub>	0.73***	0.22
NO <sub>3</sub> +NO <sub>2</sub>	0.73***	0.39
PO <sub>4</sub>	0.70***	0.08
SiO <sub>4</sub>	0.57*	-0.27
POC	-0.29	0.24
SPM	0.78****	0.74***
Chl <i>a</i>	-0.03	0.58*

\*p<0.05      \*\*p<0.01      \*\*\*p<0.005  
\*\*\*\*p<0.001

<b>Variable</b>	<b>COIA-X1</b>	<b>COIA-X2</b>
auto	0.63*	-0.19
microG	-0.98****	-0.09
mixo	0.48	-0.69**
picoG	0.33	-0.63*
nanoG	0.32	-0.72***
symdec	0.22	0.44

\*p<0.05      \*\*p<0.01      \*\*\*p<0.005  
\*\*\*\*p<0.001

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