

1    **Supplementary materials**

2    **Supplementary Tables**

3    Table S1: Primers and PCR conditions used in this study.

4    Table S2: Environmental sequences from GenBank and CAMERA databases matching

5    Bolidophyceae. Sequences highlighted in grey represent chimeras and were not considered in  
6    our analysis.

7    Table S3: Characteristics of the *Tara* Oceans V9 18S rRNA data set.

8    Table S4: List of all *Tara* Oceans V9 OTUs classified as Bolidophyceae.

9    Table S5: The six major *Tara* Oceans V9 OTUs belonging to the Bolidophyceae. Number  
10   of sequences for each OTU, % of total Bolidophyceae/Parmales sequences in the 4 fractions  
11   considered, % stations where the OTU is present in the 0.8-5 µm fraction in surface and at  
12   DCM and % of Bolidophyceae/Parmales sequences in 0.8-5 µm fraction.

13

14 **Supplementary Figures**

- 15 Fig. S1: Map of the *Tara* Oceans expedition with location of the stations sampled.
- 16 Fig. S2: Nucleotide signature of the six major OTUs belonging to Bolidophyceae in the V9  
17 region of the 18S rRNA gene. The sequence of the diatom *Phaeodactylum tricornutum* is  
18 used as an outgroup.
- 19 Fig. S3: Proportion of environmental nuclear 18S rRNA gene in each clade defined in the 18S  
20 rRNA phylogenetic analysis (Fig. 2).
- 21 Fig. S4: Maximum-likelihood tree inferred from rRNA ITS (ITS1+5.8S RNA+ITS2) gene  
22 nucleotide sequences. Legend as in Fig. 2.
- 23 Fig. S5: Maximum-likelihood tree inferred from *rbcL* gene nucleotide sequences. Legend as  
24 in Fig. 2.
- 25 Fig. S6: Maximum-likelihood tree inferred from NADH dehydrogenase subunit1 (*nad1*) gene  
26 nucleotide sequences. Legend as in Fig. 2.
- 27 Fig. S7: Abundance of the six major Tara OTUs as a function of depth (A) and temperature  
28 (B). The radius of the circles is proportional to the contribution of each OTU to the  
29 photosynthetic sequences.

Sequence	Primer reverse	Sequence	Reference	Initial Denaturation			Denaturation			Annealing			Extension		Elongation	
				N cycles	Time	Temperature	Time	Temperature	Time	Temperature	Time	Temperature	Time	Temperature	Time	Temperature
5' - ACGCTTGTCTCAAAGATTA - 3'	Euk1818R	5' - ACGGAAACCTTGTTACGA - 3'	Lepèvre <i>et al.</i> 2011	35	30 s	98°C	10 s	98°C	30 s	55°C	60 s	72°C	10 min	72°C		
5' - TTGTACACACCGCCC - 3'	1510R	5' - CCTTCYGCAGGTTCACCTAC - 3'	Amaral-Zettler <i>et al.</i> 2009	25	30 s	98°C	10 s	98°C	30 s	57°C	90 s	72°C	10 min	72°C		
5' - CGTTAGGAATCTGGTGTATTCC - 3'	rbcSR	5' - AASHDCCTTGTGTWAGTYTC - 3'	Ichnomyia <i>et al.</i> 2011	35	30 s	98°C	10 s	98°C	30 s	56°C	1 min	72°C	10 min	72°C		
5' - ATMGGTTGGGCCGTATTCC - 3'	Nad1_R936	5' - AATTGATCRTACCGRTAACGAG - 3'	This study	30	30 s	98°C	10 s	98°C	30s	48°C	45s	72°C	10 min	72°C		
5' - AGGAGCWTTAMGWTCCHGCAGC - 3'	Nad1_R936	5' - AATTGATCRTACCGRTAACGAG - 3'	This study	30	30 s	98°C	10 s	98°C	30s	51°C	45s	72°C	10 min	72°C		
5' - GAGGAATAAGCATCGGCTAA - 3'	OXY1313R	5' - CTTCAYGYAGGCAGTTGCAGC - 3'	Fuller <i>et al.</i> 2006 and West <i>et al.</i> 2001	35	30 s	98°C	10 s	98°C	30s	60°C	30s	72°C	10 min	72°C		
5' - GAAAGTAAAAGTCGTAACAAGG - 3'	ITS4	5' - TCCTCCGCTTATTGATATGC - 3'	White <i>et al.</i> 1990	35	30 s	98°C	10 s	98°C	30s	52°C	1 min	72°C	10 min	72°C		

Table S2																
Seq #	Database	Phylo ID	Accession	gene	length	DEFINITION	isolation_source	sample source	location	Lat	Long	BLAST % simi	BLAST Acc	BLAST species	Chimera	
1	PR2	Tripoma mediterranea	HMM74561	185	805	Uncultured bolidophytle clone T60_WD10_022 18S ribosomal RNA gene, marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	99	HQ710555	Bolidomonas mediterranea			
2	PR2	Tripoma mediterranea	HMM74564	185	805	Uncultured bolidophytle clone T60_WD10_022 18S ribosomal RNA gene, marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	99	AH546397	Bolidomonas mediterranea			
3	PR2	Tripoma mediterranea	K175396	185	1.802	Uncultured eukaryote clone SGCV045 18S ribosomal RNA gene, partial	Gulf Stream 15m, North Atlantic	sea water	Atlantic ocean	34.730	-73.950	99	AF173506	Bolidomonas mediterranea		
4	PR2	Tripoma pacifica	AF167156	185	1.613	Uncultured bolidophytle clone OL51103	cruise OLIPAC 1994, 60m depth	sea water	Pacific Ocean	-11.500	-150.000	99	HQ912557	Bolidomonas pacifica		
5	PR2	Tripoma pacifica	AF167157	185	1.612	Uncultured bolidophytle clone OL51104	cruise OLIPAC 1994, 60m depth	sea water	Pacific Ocean	-11.500	-150.000	99	HQ912557	Bolidomonas pacifica		
6	PR2	Tripoma pacifica	K763189	185	1.801	Uncultured eukaryote clone SGU1580 18S ribosomal RNA gene, partial	Ocean water at 3 m depth at station BBCL3 from Atlantic Zone Monitoring Program (AZMP), Scotian Shelf	sea water	Pacific Ocean	33.550	-118.400	99	AF123395	Bolidomonas pacifica		
7	PR2	Tripoma pacifica	KC488907	185	1.685	Uncultured stramenopile clone HLG30412 18S ribosomal RNA gene, partial	Sea surface, oxygenated marine water column, 10 m depth	sea water	Atmospheric ocean	-24.500	-124.500	99	AF121527	Bolidomonas pacifica		
8	PR2	Tripoma pacifica	HOM6296	185	805	Uncultured eukaryote clone SGF13045 18S ribosomal RNA gene, partial	Sanic Inlet, oxygenated marine water column, 10 m depth	sea water	Sanic Inlet, Canada	48.580	-123.504	99	HQ912557	Bolidomonas pacifica		
9	PR2	Tripoma pacifica	HOM6154	185	881	Uncultured eukaryote clone SGPF384 18S ribosomal RNA gene, partial	Sanic Inlet, oxygenated marine water column, 10 m depth	sea water	Sanic Inlet, Canada	48.580	-123.504	99	HQ912557	Bolidomonas pacifica		
10	PR2	Tripoma pacifica	EF695193	185	833	Uncultured eukaryote isolate hotp1e185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
11	PR2	Tripoma pacifica	EF695241	185	811	Uncultured eukaryote isolate hotp1h7hs 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
12	PR2	Tripoma pacifica	EUS00194	185	810	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
13	PR2	Tripoma pacifica	EUS00107	185	812	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
14	PR2	Tripoma pacifica	EUS00187	185	810	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
15	PR2	Tripoma pacifica	EUS00188	185	812	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
16	PR2	Tripoma pacifica	EUS00189	185	812	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
17	PR2	Tripoma pacifica	EUS00190	185	812	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
18	PR2	Tripoma pacifica	EUS00191	185	812	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
19	PR2	Tripoma pacifica	EUS00192	185	811	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
20	PR2	Tripoma pacifica	EUS00198	185	811	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
21	PR2	Tripoma pacifica	EUS00199	185	811	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
22	PR2	Tripoma pacifica	EUS00185	185	811	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
23	PR2	Tripoma pacifica	EUS00197	185	811	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	100	HQ912557	Bolidomonas pacifica		
24	PR2	Tripoma pacifica	EUS00186	185	821	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
25	PR2	Tripoma pacifica	EUS00189	185	821	Uncultured eukaryote isolate hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HQ912557	Bolidomonas pacifica		
26	PR2	Tripoma pacifica	env. clade II	K175752	185	1.800	Uncultured eukaryote clone SGY1049 18S ribosomal RNA gene, partial	Gulf Stream 2500, North Atlantic	sea water	Atlantic ocean	34.730	-73.950	94	AF167153	Bolidomonas pacifica var. eleuther	
27	PR2	Tripoma eleuthera	KC83013	185	1.798	Uncultured stramenopile clone RS_L12.10m_334 18S ribosomal RNA	Red Sea - 10m	sea water	Red Sea	25.170	36.890	99	AF167153	Bolidomonas pacifica var. eleuther		
28	PR2	Tripoma eleuthera	KC83014	185	1.798	Uncultured stramenopile clone RS_L12.10m_334 18S ribosomal RNA	Red Sea - 10m	sea water	Red Sea	25.170	36.890	99	AF167153	Bolidomonas pacifica var. eleuther		
29	PR2	Tripoma eleuthera	EUS00172	185	813	Uncultured eukaryote clone hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	100	KF422629	Bolidomonas pacifica var. eleuther		
30	PR2	Tripoma eleuthera	EUS00174	185	812	Uncultured eukaryote clone hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	KF422629	Bolidomonas pacifica var. eleuther		
31	PR2	Tripoma eleuthera	EUS00175	185	811	Uncultured eukaryote clone hotp2d185 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	KF422629	Bolidomonas pacifica var. eleuther		
32	PR2	Tripoma eleuthera	EU499990	185	824	Uncultured eukaryote clone SGY1175 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	KF422629	Bolidomonas pacifica var. eleuther		
33	PR2	Tripoma levins clade	J0956218	185	961	Uncultured eukaryote clone ANG658_1927A 18S ribosomal RNA gene, water sample taken from 33 m depth at station 115 from ArcticNet cruise, Baffin Bay	sea water	Baffin Bay, Canada	76.320	-71.170	100	KF422625	Bolidomonas sp. 1657			
34	PR2	Tripoma levins clade	HM47456	185	832	Uncultured bolidophytle clone T60_WD10_017 18S ribosomal RNA gene, marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	100	KF422625	Bolidomonas sp. 1657			
35	PR2	Tripoma pacifica	KC582977	185	1.798	Uncultured stramenopile clone RS_L12.10m_003 18S ribosomal RNA	Red Sea - 10m	sea water	Red Sea	25.170	36.890	96	HQ912557	Chimera between Bolido (start) and MAST (end)		
36	PR2	env. clade II	JN263265	185	1.798	Uncultured eukaryote clone SGY1175 18S ribosomal RNA gene, partial	sea surface, oxygenated marine water column, 0-2 m	sea water	Baltic Sea	54.000	19.500	95	AF121523	Bolidomonas pacifica var. eleuther		
37	PR2	env. clade II	JN263266	185	1.798	Uncultured eukaryote clone SGY1175 18S ribosomal RNA gene, partial	sea surface, oxygenated marine water column, 0-2 m	sea water	North Sea	54.000	19.500	95	AF121523	Bolidomonas pacifica var. eleuther		
38	PR2	Unknown	K175749	185	1.798	Uncultured eukaryote clone SGV1137 18S ribosomal RNA gene, partial	Ross Sea 20m	sea water	Ross Sea, Southern Ocean	-76.040	170.300	95	AF123505	Bolidomonas pacifica		
39	PR2	Unknown	K1758075	185	1.793	Uncultured eukaryote clone SGY1175 18S ribosomal RNA gene, partial	Ross Sea 20m	sea water	Ross Sea, Southern Ocean	-76.040	170.300	95	AF123505	Bolidomonas pacifica		
40	PR2	Unknown	K175808	185	1.788	Uncultured eukaryote clone SGY1178 18S ribosomal RNA gene, partial	Ross Sea 20m	sea water	Ross Sea, Southern Ocean	-76.040	170.300	95	AF123505	Bolidomonas pacifica		
41	PR2	Unknown	K1758084	185	1.788	Uncultured eukaryote clone SGY1178 18S ribosomal RNA gene, partial	Ross Sea 20m	sea water	Ross Sea, Southern Ocean	-76.040	170.300	93	AF123505	Bolidomonas pacifica		
42	PR2	Unknown	J077946	185	1.797	Uncultured eukaryote clone SGD107 18S ribosomal RNA gene, partial	Ross Sea 20m	sea water	Ross Sea, Southern Ocean	-76.040	170.300	93	AF123505	Bolidomonas pacifica		
43	PR2	Unknown	K0251829	185	1.797	Uncultured eukaryote clone SGV1172 18S ribosomal RNA gene, partial	Arctic Ocean 30m	sea water	Beaufort Sea	72.420	-157.000	95	AF123505	Bolidomonas pacifica		
44	PR2	Unknown	KJ757883	185	1.785	Uncultured eukaryote clone SGY1176 18S ribosomal RNA gene, partial	Ross Sea, Southern Ocean	sea water	Ross Sea, Southern Ocean	-76.040	170.300	93	AF123505	Bolidomonas pacifica		
45	PR2	env. clade I	J0062504	185	1.771	Uncultured marine eukaryote clone NW414 1.18 18S ribosomal RNA gene, marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	Canada Basin Arctic ocean stations AO-NW08	sea water	Beaufort Sea	76.784	-148.935	93	HQ912557	Bolidomonas pacifica		
46	PR2	Tripoma pacifica	J03263	185	1.696	Uncultured marine bolidophytle clone DH14.1 18S ribosomal RNA	25m from DHRA32 at station in the South Atlantic, small plankton (0.2-5um)	sea water	South Atlantic	-54.995	58.371	99	AB546639	Tripoma sp. TOV-0807		
47	PR2	Tripoma pacifica	J0868528	185	870	Uncultured eukaryote clone SHAN735 18S ribosomal RNA gene, partial	Sanic Inlet, oxygenated marine water column, 10 m depth	sea water	Sanic Inlet, Canada	48.580	-123.504	100	KF422629	Bolidomonas sp. 1657		
48	PR2	Tripoma pacifica	J0868529	185	1.830	Uncultured eukaryote clone SHAN735 18S ribosomal RNA gene, partial	Sanic Inlet, oxygenated marine water column, 10 m depth	sea water	Sanic Inlet, Canada	48.580	-123.504	99	KF422629	Bolidomonas sp. 1657		
49	PR2	Tripoma pacifica	J0868530	185	1.830	Uncultured bolidophytle clone T60_WD10_021 18S ribosomal RNA gene, partial	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	100	KF422625	Bolidomonas sp. 1657		
50	PR2	Tripoma pacifica	JM474565	185	840	Uncultured bolidophytle clone T60_WD10_022 18S ribosomal RNA gene, partial	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	99	KF422625	Bolidomonas sp. 1657		
51	PR2	Tripoma pacifica	JM474567	185	824	Uncultured bolidophytle clone T60_WD10_013 18S ribosomal RNA gene, partial	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	100	KF422625	Bolidomonas sp. 1657		
52	PR2	Tripoma pacifica	JM474567	185	885	Uncultured bolidophytle clone T60_WD10_014 18S ribosomal RNA gene, partial	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSCOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	99	KF422625	Bolidomonas sp. 1657		
53	PR2	Tripoma pacifica	JN263274	185	1.798	Uncultured eukaryote clone SGD12.2 18S ribosomal RNA gene, partial	oligotrophic freshwater lake, estuarine, eutrophic, 10 m depth	sea water	Lake George, New York, USA	48.520	-121.520	94	AF121527	Bolidomonas pacifica var. eleuther		
54	PR2	env. clade II	JN27035	185	1.709	Uncultured eukaryote gene for SSL1800, partial sequence, clone	methylene cold seep sediment of Samoyi Bay	sediment	Samoyi - nata sea	35.003	139.225	95	AF167155	Bolidomonas pacifica var. eleuther		
55	PR2	env. clade II	JY046808	185	1.96	Uncultured eukaryote isolate C2_1018 18S ribosomal RNA gene, partial	isolated from Guymas Hydrothermal vent core C-1 2-3 cm layer	sediment	Gulf of California	27.015	-111.411	94	AF167155	Bolidomonas pacifica var. eleuther		
56	PR2	env. clade II	JY046872	185	1.97	Uncultured eukaryote isolate C3_1022 18S ribosomal RNA gene, partial	isolated from Guymas Hydrothermal vent core C-2 3-5 cm layer	sediment	Gulf of California	27.015	-111.411	94	AF167155	Bolidomonas pacifica var. eleuther		
57	PR2	env. clade II	JY0468724	185	1.664	Uncultured freshwater eukaryote gene for LRS_185, partial	freshwater lake	sea ice	Guinea, Japan	36.557	-139.378	94	AB546639	Tripoma sp. TOV-0807		
58	PR2	env. clade II	JB71900	185	1.664	Uncultured marine diatom clone DHA22_2 ZA36 18S ribosomal RNA gene	freshwater lake	sea water	Atlantic ocean	-76.153	-54.192	94	AF167154	Bolidomonas pacifica var. eleuther		
59	PR2	env. clade II	JF032657	185	1.658	Uncultured eukaryote clone SHAN103 18S ribosomal RNA gene, partial	Boothbay Harbor, 1 m depth, Gulf of Maine	sea water	Atlantic ocean	43.844	-69.641	94	KF422629	Bolidomonas pacifica var. eleuther		
60	PR2	env. clade II	JM69748													

Seq #	Database	Phylo ID	Accession	gene	length	DEFINITION	isolation source	sample source	location	Lat	Long	BLAST % simi	BLAST Acc	BLAST species	Chimera
110	PR2	Unknown	HQ866478	185	881	Uncultured eukaryote clone SGSJ408 18S ribosomal RNA gene, partial	Saanich Inlet, oxygenated marine water column, 100 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	95	KF422625	Bolidomonas sp. 1657	
111	PR2	Triparma pacifica	EF695236	185	866	Uncultured eukaryote isolate hotp12 18S ribosomal RNA gene,	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HO912557	Bolidomonas pacifica	
112	PR2	Triparma laevis clade	HGM74554	185	864	Uncultured boldiphyle clone T60_WD1_015 18S ribosomal RNA gene,	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	99	KF422625	Bolidomonas sp. 1657	
113	PR2	Triparma laevis clade	EF695230	185	860	Uncultured boldiphyle clone T60_WD1_015 18S ribosomal RNA gene,	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	98	KF422625	Bolidomonas pacifica	
114	PR2	Unknown	EF695128	185	855	Uncultured eukaryote isolate hotp12 18S ribosomal RNA gene,	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	98	HO912557	Bolidomonas pacifica	
115	PR2	Unknown	KC47233	185	835	Uncultured eukaryote clone LAS.9 18S ribosomal RNA gene,	enriched seawater incubation	sea water	Mediterranean Sea	41.670	2.800	94	KF422629	Bolidomonas pacifica var. eleuthera	
116	PR2	Unknown	HO868684	185	835	Uncultured eukaryote clone SHAD931 18S ribosomal RNA gene, partial	Saanich Inlet, oxygenated marine water column, 10 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	95	KF422629	Bolidomonas pacifica var. eleuthera	
117	PR2	Unknown	EU500178	185	824	Uncultured eukaryote clone hotp3g 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	98	KF422625	Bolidomonas sp. 1657	
118	PR2	Unknown	EU500179	185	814	Uncultured eukaryote isolate hotp12 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	98	KF422625	Bolidomonas sp. 1657	
119	PR2	Unknown	EU500178	185	813	Uncultured eukaryote clone hotp12 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	98	KF422625	Bolidomonas sp. 1657	
120	PR2	Unknown	EU500109	185	815	Uncultured eukaryote clone hotp12 18S ribosomal RNA gene,	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	96	KF422625	Bolidomonas pacifica	
121	PR2	Triparma mediterranea	EF695204	185	817	Uncultured eukaryote isolate hotp12 18S ribosomal RNA gene,	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HO710555	Bolidomonas mediterranea	
122	PR2	Triparma mediterranea	EF695206	185	824	Uncultured eukaryote isolate hotp12 18S ribosomal RNA gene,	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	99	HO710555	Bolidomonas mediterranea	
123	PR2	Triparma mediterranea	EU500180	185	818	Uncultured eukaryote clone hotp2d21 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	96	HO912557	Bolidomonas pacifica	
124	PR2	Unknown	EU500218	185	814	Uncultured eukaryote clone hotp2d4 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	96	KF422625	Bolidomonas mediterranea	
125	PR2	Unknown	EU500181	185	813	Uncultured eukaryote isolate hotp12 18S ribosomal RNA gene, partial	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	96	KF422625	Bolidomonas pacifica var. eleuthera	
126	PR2	Unknown	EF695205	185	812	Uncultured eukaryote isolate hotp12 18S ribosomal RNA gene,	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	96	KF422629	Bolidomonas pacifica var. eleuthera	
127	Camera	Triparma laevis clade	CAM READ_057049907	536		CAM READ_057049907	MLC16.5 m	sea water	Eastern Subtropical South Pacific	-36.513	-73.129	100	KF422625	Bolidomonas sp. 1657	
128	Camera	Triparma laevis clade	CAM READ_051970623	572		CAM READ_051970623	Coastal Pacific Drifting ESP 9/17/2010 10em	sea water	Coastal Pacific	35.302	-122.848	99	KF422625	Bolidomonas sp. 1657	
129	Camera	Triparma laevis clade	CAM READ_046403231	544		CAM READ_046403231	21 Sept 2009 DCM transcriptome	sea water	Oregon Coast	44.250	-124.233	99	KF422625	Bolidomonas sp. 1657	
130	Camera	env. Triparma laevis clade	CAM READ_046403191	540		CAM READ_046403191	21 Sept 2009 DCM transcriptome	sea water	Oregon Coast	44.250	-124.233	99	KF422625	Bolidomonas sp. 1657	
131	GenBank	Triparma laevis clade	CAM READ_0464212457	585	572	CAM READ_0464212457	21 Sept 2009 5 m transcriptome	sea water	Pacific Ocean	22.750	-158.000	94	KF422629	Bolidomonas pacifica var. eleuthera	Chimera between Bolido (end) and Colpodella (start)
132	GenBank	Unknown	EU500177	813		Uncultured eukaryote clone hotxp2b6 18S ribosomal RNA gene, partial sequence	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	94	KF422629	Bolidomonas pacifica var. eleuthera	Chimera between Bolido (end) and Colpodella (start)
133	GenBank	Unknown	EU500182	813		Uncultured eukaryote clone hotxp21 18S ribosomal RNA gene, partial sequence	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	98	HO912557	Bolidomonas pacifica	
134	GenBank	Triparma pacifica	EU500193	185	812	Uncultured eukaryote clone hotxp49 18S ribosomal RNA gene, partial sequence	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	100	HO912557	Bolidomonas pacifica	
135	GenBank	Triparma pacifica	EU500196	185	812	Uncultured eukaryote clone hotxp49 18S ribosomal RNA gene, partial sequence	ocean surface waters, HOT cruise 179	sea water	Pacific Ocean	22.750	-158.000	100	HO912557	Bolidomonas pacifica	
136	GenBank	Unknown	HO868674	185	803	Uncultured eukaryote clone hotxp49 18S ribosomal RNA gene, partial sequence	sea water, Gulf of California	sea water	Pacific Ocean	22.750	-124.534	99	HO912557	Bolidomonas pacifica	
137	GenBank	Unknown	HM474544	185	862	Uncultured boldiphyle clone T60_WD1_005 18S ribosomal RNA gene, partial sequence	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	97	KF422625	Bolidomonas sp. 1657	
138	GenBank	Unknown	HM474559	185	814	Uncultured boldiphyle clone T60_WD1_020 18S ribosomal RNA gene, partial sequence	marine photosynthetic pico-eukaryotes sorted by flow cytometry from cruise BIOSOPE, 2004, Stn STB11, depth 2	sea water	Pacific Ocean	-27.700	-107.290	97	HO710555	Bolidomonas mediterranea	
139	GenBank	Unknown	HO156894	185	1183	Uncultured marine stramenopile clone 30079	Ihofjord Area, Svalbard	sea water	Greenland sea	78.63333	16.53333	91	HO912557	Bolidomonas pacifica	
140	GenBank	Unknown	HO864907	185	884	Uncultured eukaryote clone SGPA78 18S ribosomal RNA gene, partial sequence	Saanich Inlet, oxygenated marine water column, 10 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	95	HO912557	Bolidomonas pacifica	
141	GenBank	Triparma pacifica	HO864914	185	863	Uncultured eukaryote clone SGPA78 18S ribosomal RNA gene, partial sequence	Saanich Inlet, oxygenated marine water column, 10 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	97	HO912557	Bolidomonas pacifica	
142	GenBank	Unknown	HO868749	185	914	Uncultured eukaryote clone SHAX085 18S ribosomal RNA gene, partial sequence	Saanich Inlet, oxygenated marine water column, 10 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	90	AF167154	Bolidomonas pacifica var. eleuthera	Chimera between Bolido (start) and Paraphysomonas (end)
143	GenBank	Unknown	HO868645	185	907	Uncultured eukaryote clone SHAX081 18S ribosomal RNA gene, partial sequence	Saanich Inlet, oxygenated marine water column, 10 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	90	AF167154	Bolidomonas pacifica var. eleuthera	Chimera between Bolido (start) and Paraphysomonas (end)
144	GenBank	Unknown	HO868693	185	869	Uncultured eukaryote clone SHAX056 18S ribosomal RNA gene, partial sequence	Saanich Inlet, oxygenated marine water column, 10 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	90	AF167154	Bolidomonas pacifica var. eleuthera	Chimera between Bolido (start) and Paraphysomonas (end)
145	GenBank	Unknown	KC582990	185	179	Uncultured stramenopile clone RS.12f.10m.0070 18S ribosomal RNA gene, partial sequence	Red Sea - 10 m	sea water	Red Sea	25.170	-36.890	96	AF123590	Bolidomonas pacifica	Chimera between Bolido (start) and MAST (end)
146	GenBank	Triparma eleuthera	KC583015	185	178	Uncultured stramenopile clone RS.12f.10m.0070 18S ribosomal RNA gene, partial sequence	Red Sea - 10 m	sea water	Red Sea	25.170	-36.890	99	AF167153	Bolidomonas pacifica var. eleuthera	
147	PhytoRef	Triparma laevis	JF452410	185	1475	Uncultured bacterium clone HGFeb511 16S rRNA gene, complete sequence	intestinal microbiota of two Antarctic notothenioid fish species	Fish microbiota	Dallmann Bay, Antarctic Ocean	-64.236	-52.534	99	LN735531	Triparma striata	
148	PhytoRef	Triparma pacifica	JF452428	185	1475	Uncultured bacterium clone MTB-001 16S rRNA gene, partial sequence	La Perouse Bay, Antarctic Ocean	Fish microbiota	Dallmann Bay, Antarctic Ocean	-64.236	-52.534	99	LN735531	Triparma striata	
149	PhytoRef	Triparma pacifica	JX016595	185	1439	Uncultured bacterium clone HGF-h00902 16S rRNA gene, partial sequence	marine bulk water, island of Helgoland	sea water	Atlantic ocean	54.192	7.900	99	LN73525	Bolidomonas pacifica	
150	PhytoRef	Triparma laevis	JF458635	185	1447	Uncultured bacterium clone AD72_NCI 16S rRNA gene, complete sequence	intestinal microbiota of two Antarctic notothenioid fish species	Fish microbiota	Dallmann Bay, Antarctic Ocean	-64.236	-62.534	99	LN735531	Triparma striata	
151	PhytoRef	Triparma pacifica	JN986001	185	1443	Uncultured bacterium clone U1368_L28 16S rRNA gene, partial sequence	South Pacific Gyre	sea water	Pacific Ocean	-27.917	-123.167	99	LN73525	Bolidomonas pacifica	
152	PhytoRef	Triparma pacifica	JN986257	185	1444	Uncultured bacterium clone U13740_16S rRNA gene	South Pacific Gyre	sea water	Pacific Ocean	-27.917	-123.167	99	LN73525	Bolidomonas pacifica	
153	PhytoRef	Triparma pacifica	JG0310214	185	1478	Uncultured eukaryote clone SPGP27 16S rRNA gene	Saanich Inlet, 100 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	99	HO912557	Bolidomonas pacifica	
154	PhytoRef	Triparma laevis	JG0310214	185	1478	Uncultured eukaryote clone SPGP27 16S rRNA gene	Saanich Inlet, 100 m depth	sea water	Saanich Inlet, Canada	48.588	-123.504	99	HO912557	Bolidomonas pacifica	
155	PhytoRef	Triparma pacifica	JX016933	185	1439	Uncultured bacterium clone HGFeb511 16S rRNA gene, partial sequence	marine bulk water, island of Helgoland	sea water	Atlantic ocean	54.192	7.900	99	LN73525	Bolidomonas pacifica	
156	PhytoRef	Triparma pacifica	JX016962	185	1439	Uncultured bacterium clone HGF-h00902 16S rRNA gene, partial sequence	marine bulk water, island of Helgoland	sea water	Atlantic ocean	54.192	7.900	99	LN73525	Bolidomonas pacifica	
157	PhytoRef	Triparma pacifica	JM133484	185	758	Uncultured marine boldiphyle clone Biosope T84_16S_PLA491_009 16S rRNA gene	cruse BIOSOPE, 2006, Stn STB14, Depth 5m	sea water	Pacific Ocean	-30.040	-98.390	99	LN73525	Bolidomonas pacifica	
158	PhytoRef	Triparma pacifica	JM133468	185	766	Uncultured marine boldiphyle clone Biosope T84_16S_OXY107_069 16S rRNA gene	cruse BIOSOPE, 2006, Stn STB14, Depth 5m	sea water	Pacific Ocean	-30.040	-98.390	99	LN73525	Bolidomonas pacifica	
159	PhytoRef	Triparma laevis	JM133455	185	767	Uncultured marine boldiphyle clone Biosope T84_16S_PLA491_021 16S rRNA gene	cruse BIOSOPE, 2006, Stn STB17, Depth 20m	sea water	Pacific Ocean	-30.040	-98.390	99	LN73524	Bolidomonas pacifica var. eleuthera	
160	PhytoRef	Triparma eleuthera	JM133202	185	683	Uncultured marine boldiphyle clone Biosope T23_16S_PLA491_010 16S rRNA gene	cruse BIOSOPE, 2006, Stn STB17, Depth 20m	sea water	Pacific Ocean	-32.400	-88.780	99	LN73534	Bolidomonas pacifica var. eleuthera	
161	Camera	Triparma striata clade	CAM READ_046715135	165	543	CAM READ_046715135	21 Sept 2009 Meso transcriptome	sea water	Oregon Coast	44.250	-124.233	99	LN73531	Triparma striata	
162	Camera	Triparma striata clade	CAM READ_019761303	165	528	CAM READ_019761303	Station 388 - um	sea water	Southern Ocean	-63.818	115.173	99	LN73531	Triparma striata	
163	Camera	Triparma striata	CAM READ_0371469201	175	141	CAM READ_0371469201	CamerawGSW Amend_CDNA 14	sea water	n/a	n/a	n/a	n/a	n/a	n/a	
164	Camera	Triparma eleuthera	CAM READ_0091836385	185	138	CAM READ_0091836385	West Tropical Atlantic Province	sea water	South Pacific/Tropical Gyre	12.004	-59.110	86	n/a	n/a	
165	Camera	Triparma mediterranea	CAM READ_0091836382	185	134	CAM READ_0091836382	21 Sept 2009	sea water	South Pacific/Tropical Gyre	12.004	-59.110	89	n/a	n/a	
166	Camera	Triparma mediterranea	SargassoSea READ_00324961	175	134	SargassoSea READ_00324961	SARGASSOSEA_SMP1_CONTROL	sea water	n/a	n/a	n/a	n/a	n/a		
167	Camera	Triparma mediterranea	SargassoSea READ_0032310	175	124	SargassoSea READ_0032310	SARGASSOSEA_SMP1_DMSP	sea water	n/a	n/a	n/a	n/a	n/a		
168	Camera	Triparma striata clade	CAM READ_016154727	185	472	CAM READ_016154727	Station 366 - 3.0 nm	sea water	Open Ocean Transact	-52.023	144.066	n/a	n/a	n/a	
169	Camera	Triparma striata clade	CAM READ_010215625	185	470	CAM READ_010215625	Coastal Pacific Drifting ESP 9/17/2010 2pm	sea water	Coastal Pacific	36.045	-123.022	n/a	n/a	n/a	
170	Camera	Triparma striata clade	CAM READ_010215611	185	476	CAM READ_010215611	Coastal Pacific Drifting ESP 9/17/2010 2pm	sea water	Coastal Pacific	35.824	-122.760	n/a	n/a	n/a	
171	Camera	Triparma pacifica	CAM READ_017217955	185	476	CAM READ_017217955	Coastal Pacific Drifting ESP 9/17/2010 2pm	sea water	Coastal Pacific	3					

Table S3

Number of stations		47
Number of samples		334
Number of samples considered in the present work		293
Number of sequences	Total	531 135 063
Number of sequences	Bolidophyceae/Parmales	105 113
Number of OTUs	Total	50 698
Number of OTUs	Bolidophyceae/Parmales	36

Table S4

OTU #	OTU code	# of reads	% of Bolido reads	Affiliation
1	6580aebaa8f2b07cc7d3791351a47fda	25 562	24.32%	T. eleuthera
2	a03f46dc48a84e7b77ae265d835f42d	17 209	16.37%	T. pacifica
3	7d0078d33405cd3728aa2c1f8227d293	16 954	16.13%	T. laevis clade
4	b99d2ec11726f5c856b5e2485929b05e	15 994	15.22%	T. mediterranea
5	284901f9bb628dee6f002aa6b40faa28	9 628	9.16%	B. uncult 5
6	e482ce165e365cda880749f00e1903b2	6 154	5.85%	B. uncult 6
7	48266d329ffcd364247a84799ae9dd4d	5 762	5.48%	Others
8	9c2162267c0e3b9fbdfb9434be2733fb	2 051	1.95%	Others
9	91eb6c0a66fa90eb0c77463aef5d1ee5	922	0.88%	Others
10	b85a7f8e7c4dcc5f65a72ed6df659378	694	0.66%	Others
11	d9f49f7b8fb52d093453df7a3bfa5577	647	0.62%	Others
12	07306dfe514c3fb9448fe18d4b433da0	588	0.56%	Others
13	da57e1ecac12709ad076629645f078c9	395	0.38%	Others
14	19f175201aa8c1326b7d45706c5dfb80	372	0.35%	Others
15	918e95dc6a5217d8b9bab7d72488668	324	0.31%	Others
16	7abd3cd662c2067e8330a74ea9d4ed24	278	0.26%	Others
17	521a1fb0a1f07df2c53d79e49a74d31d	252	0.24%	Others
18	de68cb0ef8e4dfc07b41c21d6742f81c	171	0.16%	Others
19	9f2432b79665b29d0f3a944f029ea1b9	168	0.16%	Others
20	ef71d0dba6595f0052c8ade8102845b	136	0.13%	Others
21	ea23ec21df352f258f72a20ba30f469e	111	0.11%	Others
22	575d1dab880764cdbcaf203b1cae375	105	0.10%	Others
23	5b24328c0776376d57cd8decfd126a209	102	0.10%	Others
24	cbe3ecb0061297f8120dd28613a46d57	89	0.08%	Others
25	1cb82a76c3a734a6808e33552089afa1	75	0.07%	Others
26	a498816768431dc18c62e8274979cfb8	64	0.06%	Others
27	46de74f404db0f87c071e7ea84c22c8c	58	0.06%	Others
28	a926d1ae2e55ab0eb48568ab36ff60aa	54	0.05%	Others
29	7b2ca4c635c4719b4322e9353875b5b9	52	0.05%	Others
30	336876e2095e89d56a3e1903c44a3d36	45	0.04%	Others
31	3dea4a676e0cecc97d1dae0becfa025e	26	0.02%	Others
32	cbeb458aecd875add459767d361fb13d	20	0.02%	Others
33	572cd0e679506d6839fa61e837c03aeb	17	0.02%	Others
34	ee43aa13657a7da972cfcaec22d36446	12	0.01%	Others
35	6ddbdb0aaf9ea27b6d5148e2ad05e3ac	11	0.01%	Others
36	8b30ebd58ca9bdca7665c88aa5786207	11	0.01%	Others

Table S5

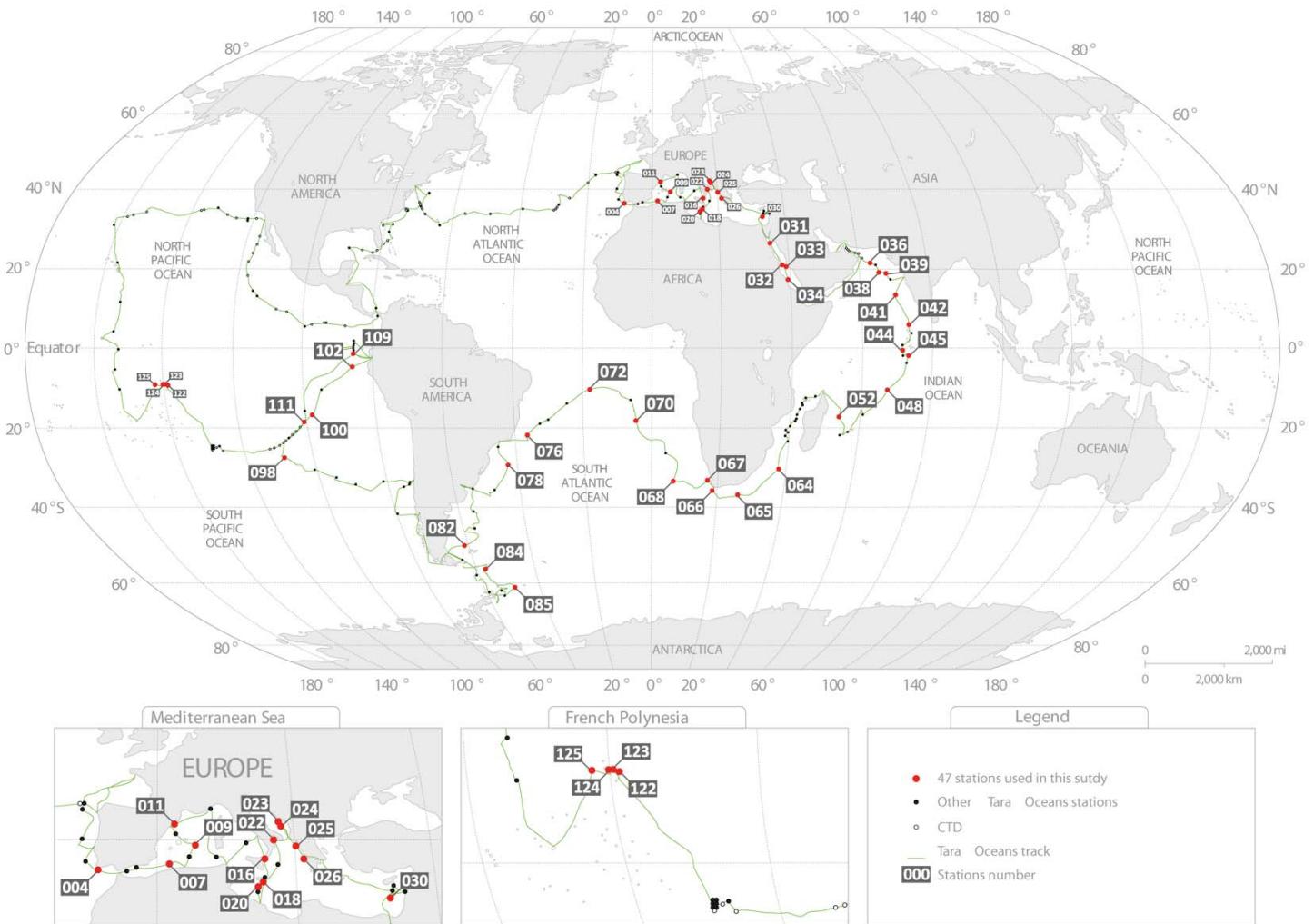
OTU #	Affiliation	# of reads	% of Bolido reads	# of reads in 0.8-5 µm	% of stations where present in 0.8-5 µm		% of Bolido reads in 0.8-5 µm	
					SUR	DCM	SUR	DCM
1	<i>T. eleuthera</i>	25 562	24.32%	16 270	98%	79%	22%	28%
2	<i>T. pacifica</i>	17 209	16.37%	11 756	90%	88%	17%	17%
3	<i>T. laevis</i> clade	16 954	16.13%	11 193	50%	52%	18%	10%
4	<i>T. mediterranea</i>	15 994	15.22%	11 189	53%	55%	19%	7%
5	B. uncult 5	9 628	9.16%	6 805	18%	36%	13%	9%
6	B. uncult 6	6 154	5.85%	3 566	25%	42%	10%	4%

Table S4

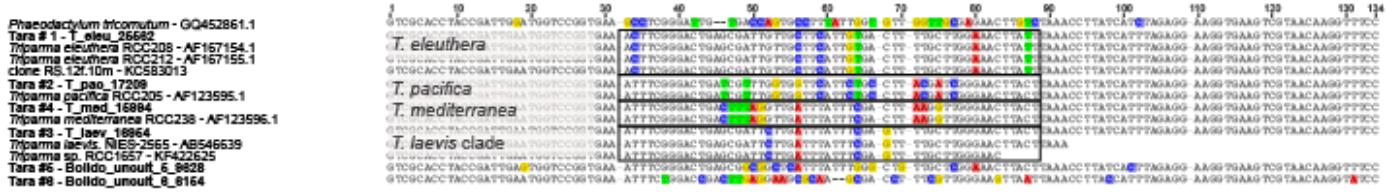
OTU #	OTU code	# of reads	% of Bolido reads	Affiliation
1	6580aebaa8f2b07cc7d3791351a47fda	25 562	24.32%	T. eleuthera
2	a03f46dc48a84e7b77ae265d835f42d	17 209	16.37%	T. pacifica
3	7d0078d33405cd3728aa2c1f8227d293	16 954	16.13%	T. laevis clade
4	b99d2ec11726f5c856b5e2485929b05e	15 994	15.22%	T. mediterranea
5	284901f9bb628dee6f002aa6b40faa28	9 628	9.16%	B. uncult 5
6	e482ce165e365cda880749f00e1903b2	6 154	5.85%	B. uncult 6
7	48266d329ffcd364247a84799ae9dd4d	5 762	5.48%	Others
8	9c2162267c0e3b9fbdfb9434be2733fb	2 051	1.95%	Others
9	91eb6c0a66fa90eb0c77463aef5d1ee5	922	0.88%	Others
10	b85a7f8e7c4dcc5f65a72ed6df659378	694	0.66%	Others
11	d9f49f7b8fb52d093453df7a3bfa5577	647	0.62%	Others
12	07306dfe514c3fb9448fe18d4b433da0	588	0.56%	Others
13	da57e1ecac12709ad076629645f078c9	395	0.38%	Others
14	19f175201aa8c1326b7d45706c5dfb80	372	0.35%	Others
15	918e95dc6a5217d8b9bab7d72488668	324	0.31%	Others
16	7abd3cd662c2067e8330a74ea9d4ed24	278	0.26%	Others
17	521a1fb0a1f07df2c53d79e49a74d31d	252	0.24%	Others
18	de68cb0ef8e4dfc07b41c21d6742f81c	171	0.16%	Others
19	9f2432b79665b29d0f3a944f029ea1b9	168	0.16%	Others
20	ef71d0dba6595f0052c8ade8102845b	136	0.13%	Others
21	ea23ec21df352f258f72a20ba30f469e	111	0.11%	Others
22	575d1dab880764cdbcaf203b1cae375	105	0.10%	Others
23	5b24328c0776376d57cd8decfd126a209	102	0.10%	Others
24	cbe3ecb0061297f8120dd28613a46d57	89	0.08%	Others
25	1cb82a76c3a734a6808e33552089afa1	75	0.07%	Others
26	a498816768431dc18c62e8274979cfb8	64	0.06%	Others
27	46de74f404db0f87c071e7ea84c22c8c	58	0.06%	Others
28	a926d1ae2e55ab0eb48568ab36ff60aa	54	0.05%	Others
29	7b2ca4c635c4719b4322e9353875b5b9	52	0.05%	Others
30	336876e2095e89d56a3e1903c44a3d36	45	0.04%	Others
31	3dea4a676e0cecc97d1dae0becfa025e	26	0.02%	Others
32	cbeb458aecd875add459767d361fb13d	20	0.02%	Others
33	572cd0e679506d6839fa61e837c03aeb	17	0.02%	Others
34	ee43aa13657a7da972cfcaec22d36446	12	0.01%	Others
35	6ddbdb0aaf9ea27b6d5148e2ad05e3ac	11	0.01%	Others
36	8b30ebd58ca9bdca7665c88aa5786207	11	0.01%	Others

Table S5

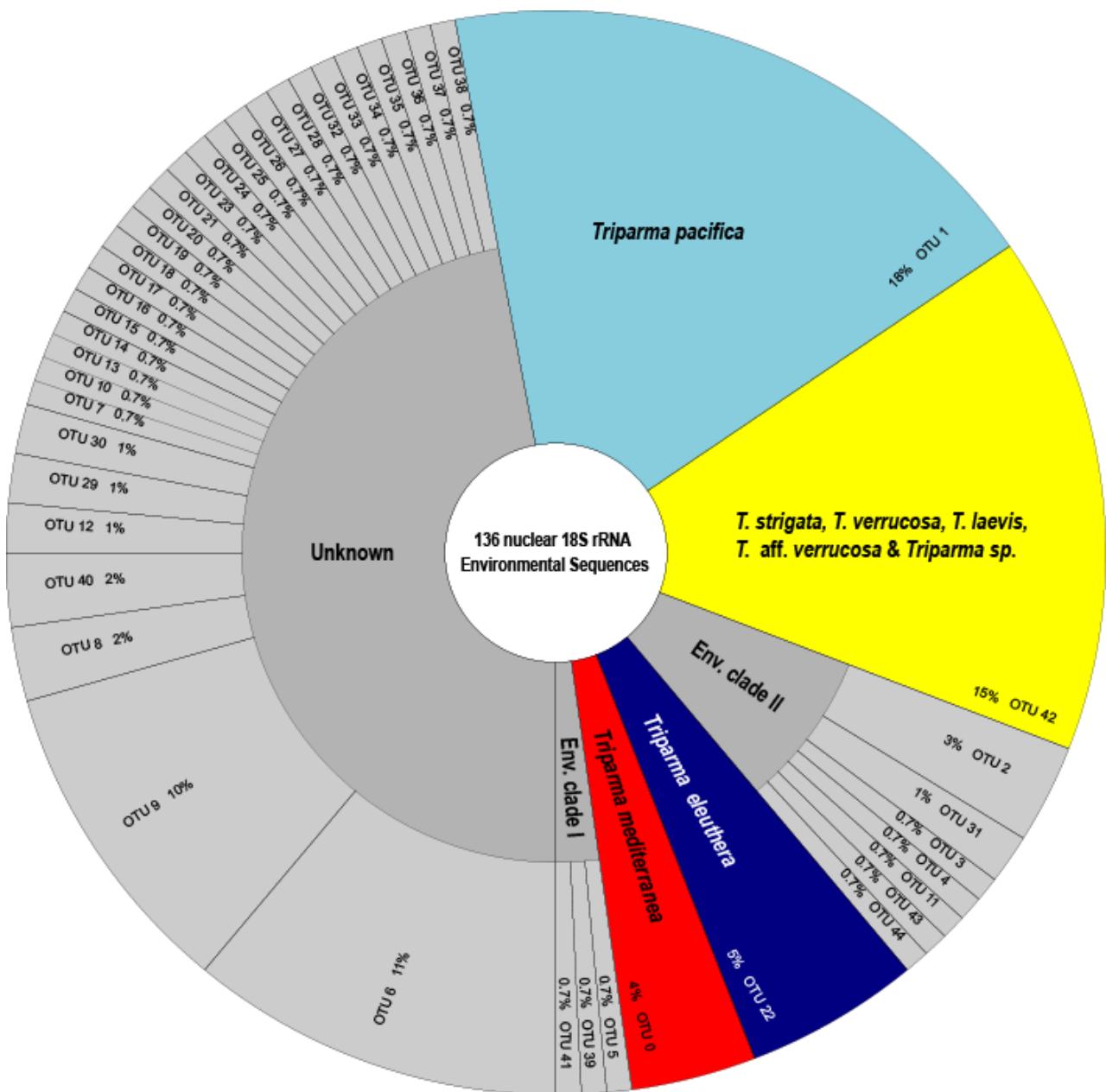
OTU #	Affiliation	# of reads	% of Bolido reads	# of reads in 0.8-5 µm	% of stations where present in 0.8-5 µm		% of Bolido reads in 0.8-5 µm	
					SUR	DCM	SUR	DCM
1	<i>T. eleuthera</i>	25 562	24.32%	16 270	98%	79%	22%	28%
2	<i>T. pacifica</i>	17 209	16.37%	11 756	90%	88%	17%	17%
3	<i>T. laevis</i> clade	16 954	16.13%	11 193	50%	52%	18%	10%
4	<i>T. mediterranea</i>	15 994	15.22%	11 189	53%	55%	19%	7%
5	B. uncult 5	9 628	9.16%	6 805	18%	36%	13%	9%
6	B. uncult 6	6 154	5.85%	3 566	25%	42%	10%	4%



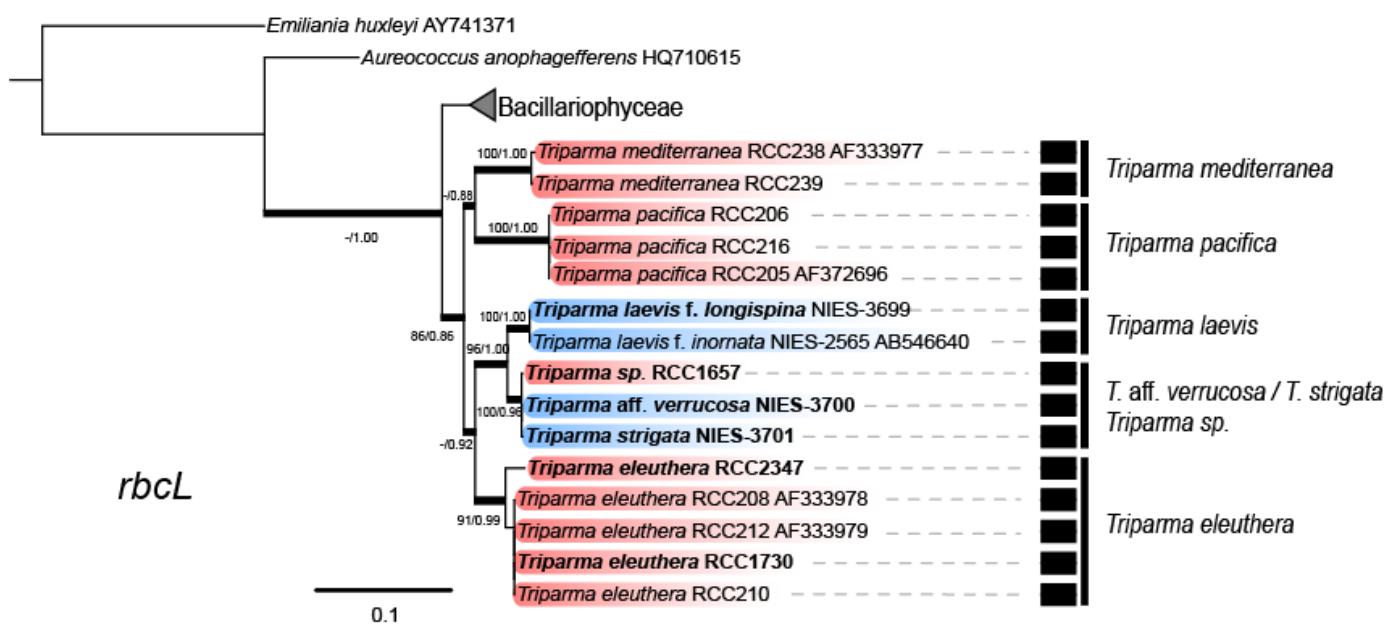
Supp Fig. S1



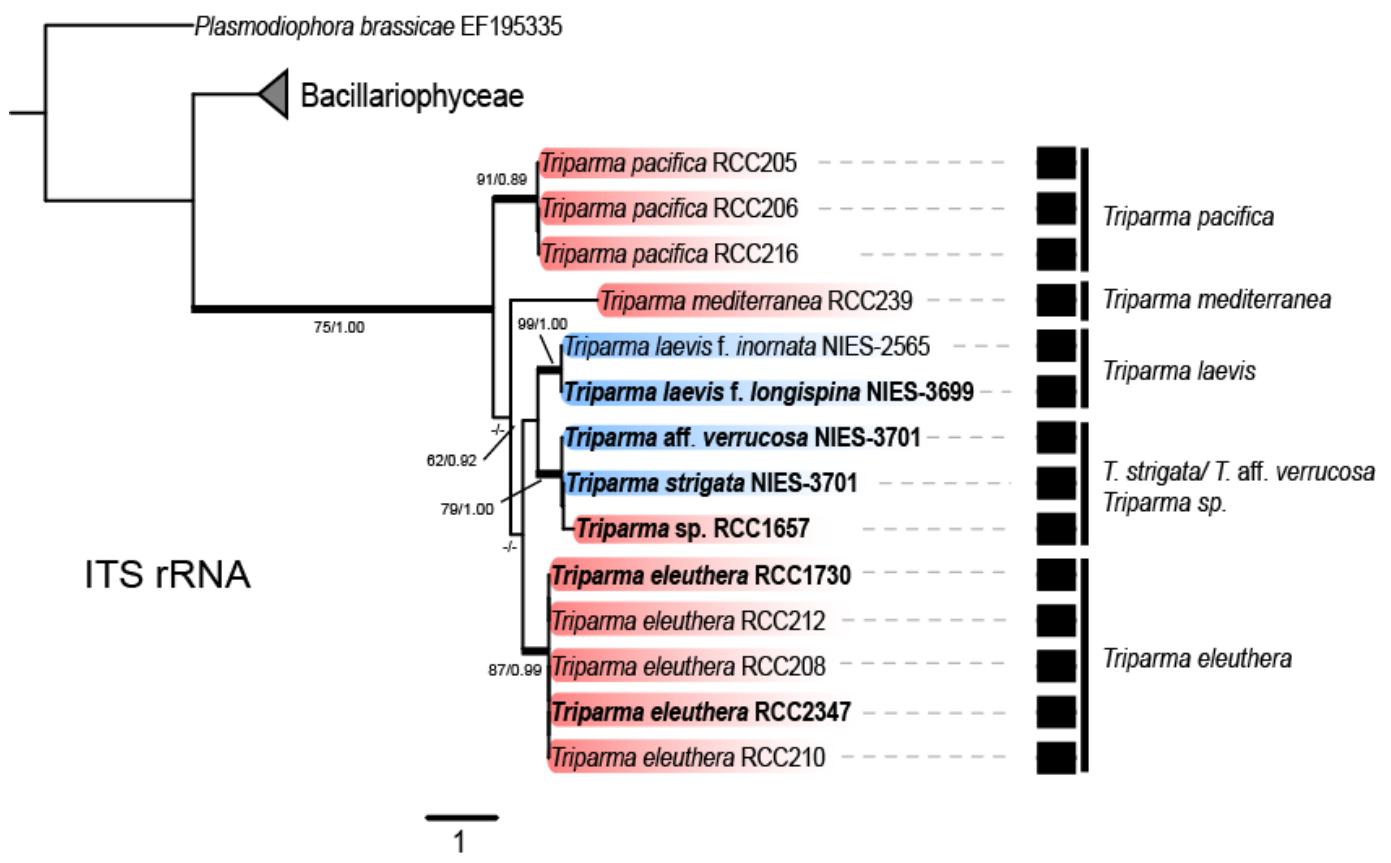
Supp Fig. S2



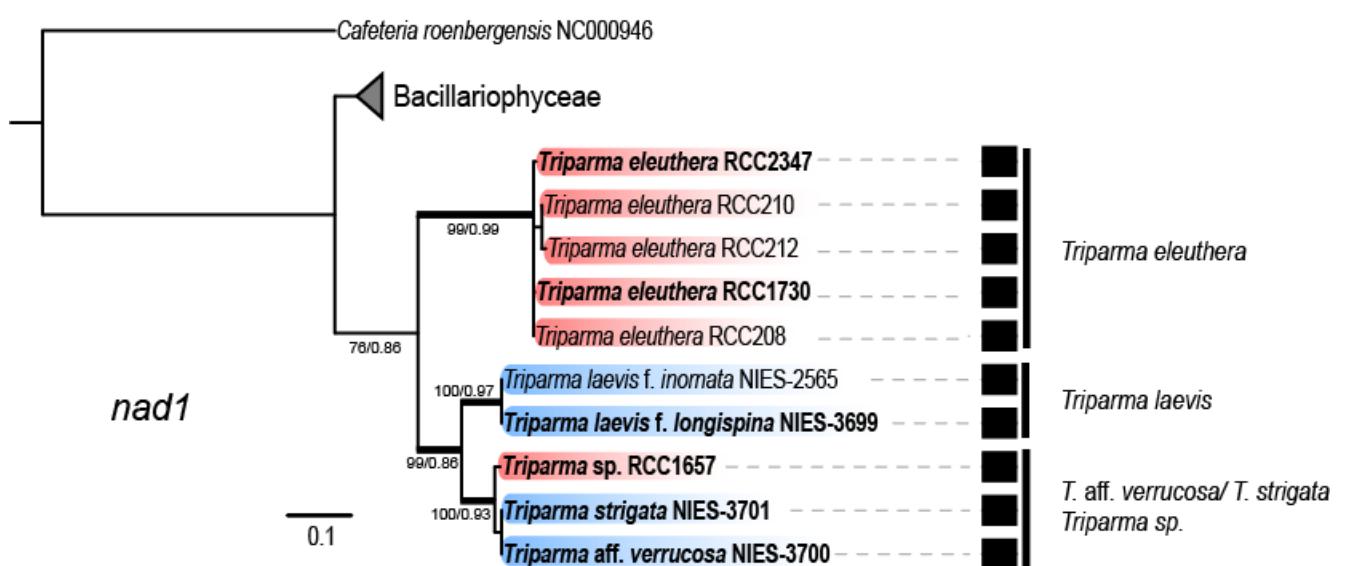
Supp Fig. S3



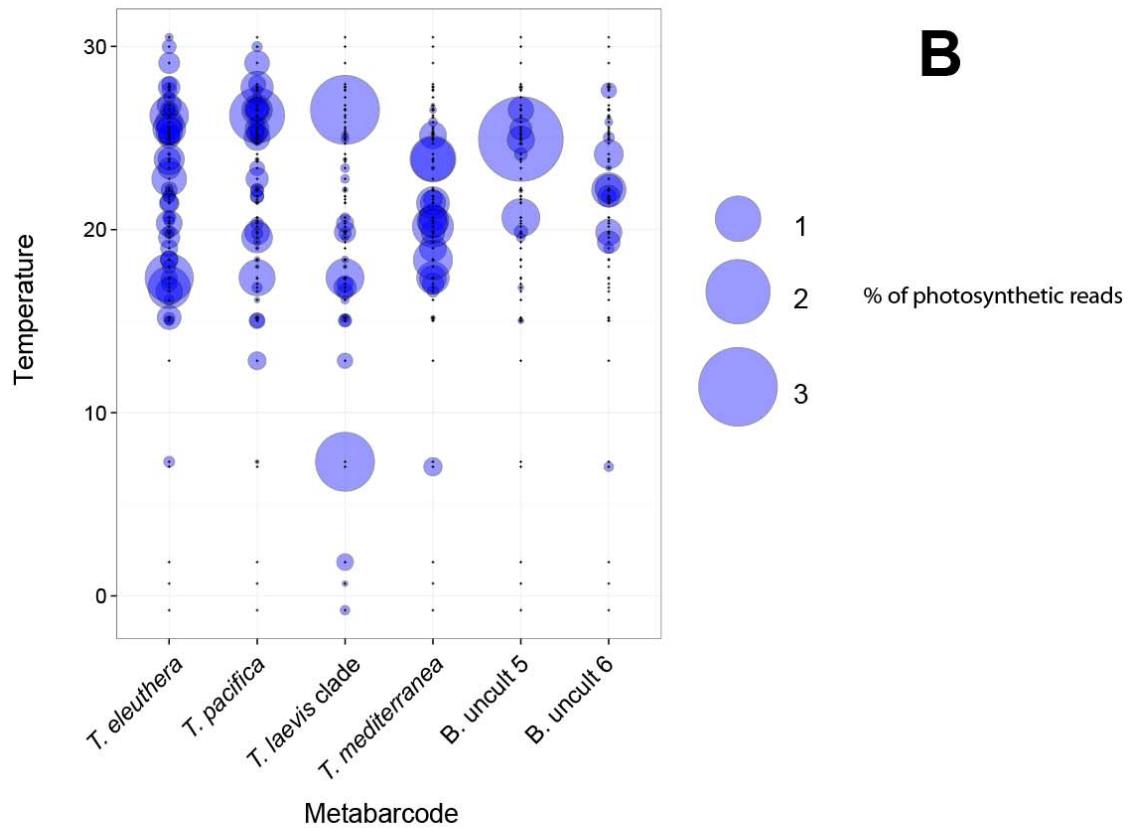
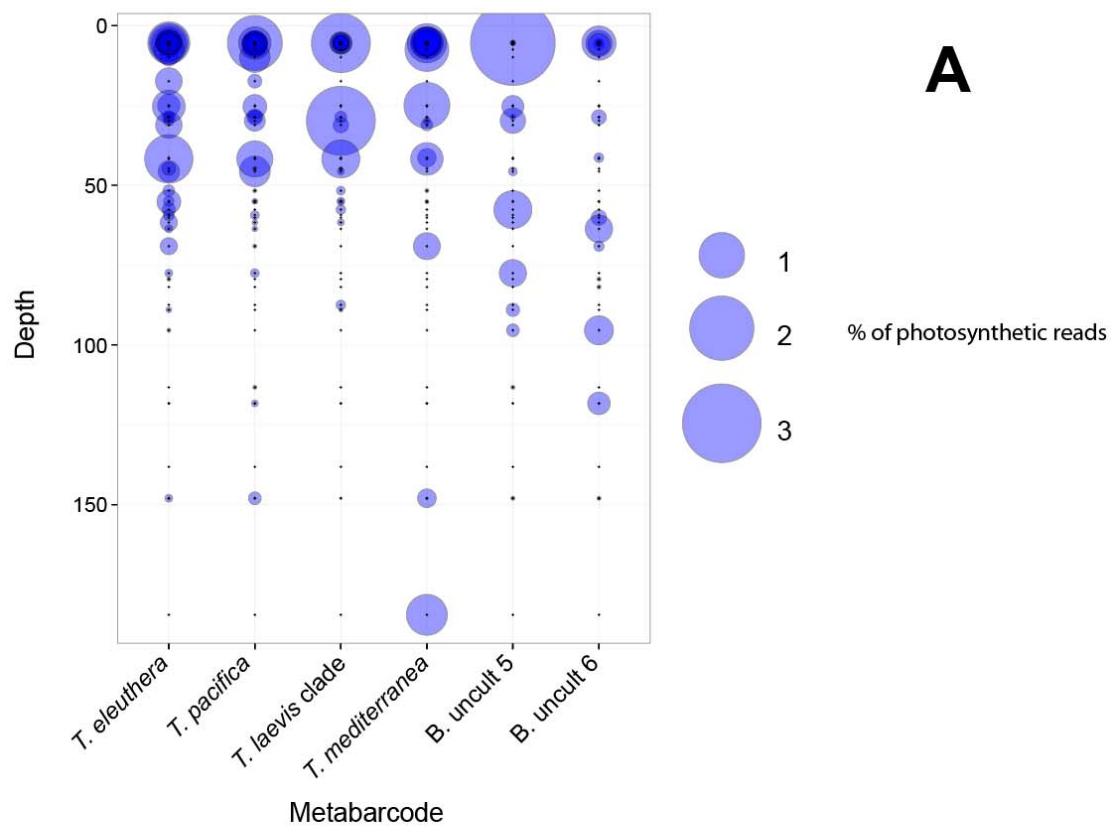
Supp Fig. S4



Supp Fig. S5



Supp Fig. S6



Supp Fig. S7