

Temporal variation of *Skeletonema* community composition from a long-term time series in Narragansett Bay identified using high-throughput DNA sequencing

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Table S1. Whole seawater samples were collected from Narragansett Bay on a weekly basis between December 2008 and December 2013. Each month, the sample containing the highest percentage *Skeletonema* in the phytoplankton community was chosen for sequencing. Additionally, weekly samples were selected to represent three bloom periods: December 2008 to January 2009, March 2010 to April 2010, and May 2013 to July 2013. Samples were not collected in July 2011 and between February and April 2012. A dash indicates no available abundance data. An asterisk indicates that the sample was not part of the Long-Term Plankton Time Series and was collected separately from the pier at the Graduate School of Oceanography.

Date collected	Total phytoplankton abundance (cells L ⁻¹)	<i>Skeletonema</i> abundance (cells L ⁻¹)	Percent <i>Skeletonema</i>
12/09/08	1866000	1690000	90.57%
12/17/08	841000	796000	94.65%
12/22/08	125000	85000	68.00%
12/30/08	43000	4000	9.30%
01/13/09	137000	114000	83.21%
01/20/09	173000	125000	72.25%
01/27/09	242000	164000	67.77%
02/02/09	207000	24000	11.59%
02/09/09	110000	16000	14.55%
03/03/09	921000	11000	1.19%
04/13/09	5147000	3000	0.06%
05/27/09	1153000	9000	0.78%
06/23/09	4680000	4088000	87.35%
07/27/09	10784000	9408000	87.24%
08/10/09	25849000	20074000	77.66%
09/04/09	17383000	15977000	91.91%
10/08/09	541000	20000	3.70%
11/23/09	438000	195000	44.52%
12/31/09	728000	577000	79.26%
01/26/10	19612000	19346000	98.64%
02/02/10	10633000	10308000	96.94%
03/29/10	6085000	252000	4.14%
04/05/10	4516000	3596000	79.63%
04/13/10	49346000	48221000	97.72%
04/20/10	907000	828000	91.29%
04/27/10	172000	50000	29.07%

Date collected	Total phytoplankton abundance (cells L ⁻¹)	<i>Skeletonema</i> abundance (cells L ⁻¹)	Percent <i>Skeletonema</i>
05/28/10	4942000	4450000	90.04%
06/15/10	12709000	11637000	91.57%
07/19/10	18144000	14466000	79.73%
08/20/10	8015000	5334000	66.55%
09/15/10	599000	7000	1.17%
10/05/10	2101000	299000	14.23%
11/16/10	1474000	83000	5.63%
12/30/10	1179000	413000	35.03%
01/11/11	4991000	2434000	48.77%
02/01/11	3539000	2087000	58.97%
03/09/11	2840000	47000	1.65%
04/01/11	1253000	83000	6.62%
04/20/11	14207667	4820000	33.93%
05/31/11	4361000	1405000	32.22%
06/06/11	19456000	15670000	80.54%
06/13/11	3527000	165000	4.68%
08/19/11	1861000	169000	9.08%
09/06/11	3590000	2772000	77.21%
10/03/11	2460000	1932000	78.54%
11/07/11	454000	160000	35.24%
12/07/11	165000	93000	56.36%
12/28/11	68000	0	0.00%
01/04/12	699000	539000	77.11%
*05/23/12	-	-	-
*06/25/12	-	-	-
*07/02/12	-	-	-
*08/01/12	-	-	-
*09/05/12	-	-	-
*10/05/12	-	-	-
*11/02/12	-	-	-
01/02/13	45200	1100	2.43%
02/12/13	8272800	7870000	95.13%
03/12/13	1157000	228000	19.71%
04/02/13	807800	535000	66.23%
05/21/13	192300	8300	4.32%
05/28/13	478000	161000	33.68%
06/06/13	6374300	2390000	37.49%
06/11/13	22438200	740000	3.30%
06/19/13	15745200	8110000	51.51%
06/24/13	7044600	6270000	89.00%
07/03/13	7178000	6420000	89.44%
07/08/13	12231400	10200000	83.39%
07/15/13	48604100	47640000	98.02%
07/22/13	352400	81000	22.99%
08/16/13	2769200	1455000	52.54%
09/09/13	5512100	3375000	61.23%
10/28/13	199700	15000	7.51%

Date collected	Total phytoplankton abundance (cells L ⁻¹)	<i>Skeletonema</i> abundance (cells L ⁻¹)	Percent <i>Skeletonema</i>
11/20/13	851900	432000	50.71%
12/02/13	809000	309000	38.20%

Table S2. Genus-specific primers and Illumina adapters used in PCR reactions to target the 28S rDNA of all *Skeletonema* species in the mixed community and field samples. Primers were located in the D1-D4 region of the 28S. Location on the 28S based on GenBank reference sequence Y11512 (*S. pseudocostatum*). Adapters were added onto the 5' end of the primer.

Primer	28S location (bp)	Adapter	Sequence (5' – 3')
Skel28SF	398-422		GTAAAGAGTACCTGAAATTGTTAA
Skel28SR	700-722		TGTTACTTTCATTACGCATATCA
		Skel28SF-1	TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG
		Skel28SF-2	TCGTCGGCAGCGTCAGATGTGTATAAGAGACAGT
		Skel28SF-3	TCGTCGGCAGCGTCAGATGTGTATAAGAGACAGTC
		Skel28SF-4	TCGTCGGCAGCGTCAGATGTGTATAAGAGACAGTGA
		Skel28SR-1	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG
		Skel28SR-2	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAGC
		Skel28SR-3	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAGCA
		Skel28SR-4	GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAGACT

Table S3. Set of 28S *Skeletonema* sequences used to form a reference database, obtained from the NCBI GenBank database (<http://www.ncbi.nlm.nih.gov/nucleotide>). Sequences were obtained by using the search terms "*Skeletonema* 28S" and "*Skeletonema* LSU". Sequences that were previously published (with the exception of *Skeletonema grevillei*) were accepted as good candidates for the database, downloaded, and aligned in CLC Genomics Workbench.

Species	Accession number	Reference
<i>Skeletonema dohrnii</i>	AB572711, AB572710, AB572708, AJ633538, AJ633537	Yamada et al., 2010, Sarno et al., 2005
<i>Skeletonema marinoi</i>	FR823449, FR823448, AJ633535, AJ633533	Kremp et al., 2012, Sarno et al., 2005
<i>Skeletonema costatum</i>	AB728776, AB728769, AB728755, AB728767	Yamada et al., 2013
<i>Skeletonema potamos</i>	KF621300, KF621299	Duleba et al., 2014
<i>Skeletonema japonicum</i>	AJ633524, AB572714, AB572736, AB572757, AB572793	Sarno et al., 2005, Yamada et al., 2010
<i>Skeletonema grethae</i>	AJ633523, AJ633522, AJ633521	Sarno et al., 2005
<i>Skeletonema menzelii</i>	AJ633528, AJ633527, AJ633526, AB573023, AB555561	Sarno et al., 2005, Yamada et al., 2010
<i>Skeletonema pseudocostatum</i>	AJ633507, AJ633510, AJ633512, AJ633514, AB572831	Sarno et al., 2005, Yamada et al., 2010
<i>Skeletonema tropicum</i>	AJ633519, AJ633516, AB572812, AB572808, AB572825	Sarno et al., 2005, Yamada et al., 2010
<i>Skeletonema ardens</i>	AB572616, AB572613, AB572612, AB572610, AB572609	Yamada et al., 2010
<i>Skeletonema grevillei</i>	AB728798, AB728795, AB728792, AB728787, AB728783	Yamada et al., 2010

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