

Supplementary material

Table S1. Abundance and biomass of *Emiliana huxleyi*, total phytoplankton biomass, and coccoliths abundance in 2017

Station (bottom depth)	Depth	Emiliana huxleyi				Total biomass		Coccoliths	N _d /N _{cc}
		Cells L ⁻¹	%	Mg m ⁻³	%	Mg m ⁻³	MgC m ⁻³	Coccol L ⁻¹	
08.06.2017									
1 (25 m)	0 m	8160000	61.81	1468.80	97.00	1514.21	202.94	288000000	60
1 (25 m)	5 m	6821760	81.41	1227.92	94.70	1296.63	174.07	101376000	78
1 (25 m)	14 m	1044480	26.03	188.01	67.21	279.73	33.60	17408000	7
1 (25 m)	24,5 m	520000	6.42	93.60	31.64	295.83	35.31	0	0
2 (50 m)	0 m	6003200	60.03	1080.58	97.20	1111.66	148.81	250880000	70
2 (50 m)	5 m	6230400	70.96	1121.47	96.59	1161.12	155.49	211456000	93
2 (50 m)	17 m	7740800	52.34	1393.34	94.15	1479.94	197.61	113280000	17
2 (50 m)	33 m	179360	11.75	32.28	42.25	76.41	7.02	188800	0
3 (1500 m)	0 m	3584000	88.97	645.12	88.71	727.24	97.18	57344000	178
3 (1500 m)	5 m	8691200	74.38	1564.42	96.87	1615.04	215.65	143360000	67
3 (1500 m)	15 m	1971200	53.13	118.27	70.98	166.64	21.02	28672000	20
3 (1500 m)	30 m	140800	30.31	8.45	58.74	14.38	1.69	1408000	5
4 (50 m)	0 m	5664000	69.43	1019.52	96.72	1054.11	141.44	264320000	117
4 (50 m)	5 m	7174400	59.62	1291.39	97.52	1324.17	177.65	90624000	20
4 (50 m)	15 m	4748800	43.40	854.78	90.61	943.40	121.89	101760000	21
4 (50 m)	30 m	2400	0.62	0.43	3.95	10.95	0.74	115200000	600
09.06.2017									
1 (25 m)	0 m	5734400	82.42	1032.19	93.40	1105.09	148.33	86016000	80
1 (25 m)	5 m	7568000	66.65	1362.24	93.79	1452.45	194.97	177408000	50
1 (25 m)	12 m	9049600	50.59	1628.93	95.16	1711.83	226.95	86016000	10
1 (25 m)	17 m	286720	4.72	51.61	45.95	112.31	11.07	8601600	2
2 (50 m)	0 m	4336640	67.52	780.60	94.58	825.29	110.04	40140800	22
2 (50 m)	4 m	8640000	73.20	1555.20	97.64	1592.80	214.41	138240000	50
2 (50 m)	14 m	6220800	63.87	1119.74	97.58	1147.54	154.88	33177600	10
2 (50 m)	50 m	806400	41.92	145.15	88.37	164.26	20.77	197120	0
3 (1500 m)	0 m	5734400	93.40	1032.19	98.67	1046.08	141.65	86016000	267
3 (1500 m)	5 m	7886400	94.12	1419.55	98.01	1448.39	195.65	162816000	533
3 (1500 m)	10 m	8873600	95.88	1597.25	99.06	1612.40	218.77	75520000	273
3 (1500 m)	27 m	51840	13.82	9.33	67.62	13.80	1.56	0	0
4 (80 m)	4 m	7920000	92.70	1425.60	97.57	1461.03	197.19	70400000	171
4 (80 m)	15 m	7040000	69.69	1267.20	98.35	1288.51	174.09	140800000	50
4 (80 m)	25 m	422400	58.00	76.03	93.18	81.59	10.69	704000	3
10.06.2017									
1 (50 m)	0 m	5257600	89.26	946.37	91.67	1032.31	138.17	46131200	91
1 (50 m)	5 m	6809600	73.78	1225.73	98.04	1250.27	168.83	137625600	59

1 (50 m)	14 m	7744000	92.14	1393.92	98.43	1416.13	191.84	84480000	156
1 (50 m)	20 m	345600	45.08	62.21	92.27	67.42	8.86	207360	1
1 (50 m)	25 m	53760	2.57	9.68	36.45	26.55	2.28	716800	0
2 (500 m)	0 m	6272000	84.58	1128.96	98.23	1149.26	155.40	114688000	120
2 (500 m)	5 m	6739200	86.69	1213.06	99.10	1224.05	165.91	76032000	83
2 (500 m)	10 m	8073600	91.95	1453.25	98.31	1478.28	199.64	37120000	67
2 (500 m)	25 m	143360	29.37	25.80	79.54	32.44	3.97	143360	1
2 (500 m)	33 m	35840	9.39	6.45	34.80	18.54	1.79	161280	1
3 (1000 m)	0 m	4825600	64.82	868.61	96.62	899.02	120.56	63104000	28
3 (1000 m)	5 m	6419200	92.12	1155.46	97.46	1185.57	159.31	37760000	111
3 (1000 m)	10 m	6444800	92.38	1160.06	98.42	1178.72	159.15	74624000	206
3 (1000 m)	25 m	172800	34.41	31.10	88.49	35.15	4.51	69120	0
3 (1000 m)	33 m	4240	0.92	0.76	13.73	5.56	0.42	237440	1
4 (50 m)	0 m	7052800	69.49	1269.50	98.01	1295.28	174.95	103936000	35
4 (50 m)	4 m	9651200	82.40	1737.22	98.09	1771.13	238.78	89088000	48
4 (50 m)	13 m	5753600	58.67	1035.65	96.78	1070.05	142.95	11136000	3
4 (50 m)	22 m	55680	33.12	10.02	52.75	19.00	1.93	0	0
5 (25 m)	0 m	7168000	90.63	1290.24	98.60	1308.51	176.89	157696000	264
5 (25 m)	4 m	7113600	90.74	1280.45	99.09	1292.16	175.23	143001600	235
5 (25 m)	8 m	8393600	69.80	1510.85	96.41	1567.03	209.48	46848000	15
5 (25 m)	15 m	742400	18.30	133.63	54.72	244.20	29.01	7424000	3
11.06.2017									
1 (25 m)	0 m	7808000	22.05	1405.44	91.68	1532.94	197.56	609024000	22
1 (25 m)	2 m	9302400	64.02	1674.43	93.71	1786.77	235.10	116736000	27
1 (25 m)	9 m	8166400	49.47	1469.95	94.71	1552.04	205.22	89088000	12
1 (25 m)	15 m	185600	30.87	33.41	69.24	48.25	5.86	111360	0
2 (50 m)	0 m	7392000	75.20	1330.56	96.55	1378.10	184.05	95040000	45
2 (50 m)	2 m	7174400	43.93	1291.39	96.96	1331.90	178.63	22656000	3
2 (50 m)	8 m	9628800	70.00	1733.18	93.58	1852.11	243.55	75520000	20
2 (50 m)	15 m	981760	15.01	176.72	87.42	202.16	25.69	6796800	1
3 (80 m)	0 m	5380800	82.29	968.54	97.51	993.26	133.73	135936000	135
3 (80 m)	2 m	5011200	44.04	902.02	95.84	941.13	125.19	89088000	15
3 (80 m)	9 m	8064000	61.98	1451.52	49.35	2941.26	257.11	71680000	17
3 (80 m)	15 m	2784000	84.66	501.12	93.82	534.14	69.92	1484800	4
	max	9651200	96	1737.22	99	2941	257	609024000	600
	min	2400	0.62	0.43	3.95	6	0	0	0

Table S2. Abundance and biomass of *Emiliana huxleyi*, total phytoplankton biomass, and coccoliths abundance in 2022.

Station	Depth, m	<i>Emiliana huxleyi</i>	Total biomass	Coccoliths	N _{cl} /N _{cc}
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(bottom depth)		Cells L ⁻¹	%	Mg m ⁻³	%	Mg m ⁻³	Mg C m ⁻³	Coccol L ⁻¹	
06.06.2022									
3 (50 m)	0	11040	0.40	2.0	2.32	85.7	4.2	1766400	160
3 (50 m)	10	4080000	59.09	738.7	90.87	812.9	109.0	61440000	15
3 (50 m)	22	240000	12.70	43.2	56.60	76.3	9.1	768000	3
3 (50 m)	48	36000	0.70	9.0	15.38	58.5	3.2	120000	3
4 (250 m)	0	6809600	69.12	408.6	88.45	461.9	67.5	86016000	13
4 (250 m)	6	9120000	86.28	547.2	93.68	584.1	86.2	38400000	4
4 (250 m)	22	134400	49.53	8.1	51.81	15.6	1.7	17920	0
4 (250 m)	50	8960	0.22	5.6	25.98	21.7	1.5	358400	40
5 (500 m)	0	7104000	63.82	426.2	90.26	472.3	68.1	11366400	2
5 (500 m)	7	8524800	67.85	511.5	84.51	605.3	87.9	28416000	3
5 (500 m)	29	105600	19.00	6.3	34.38	18.4	1.9	42240	0
5 (500 m)	39	2534400	48.48	152.1	86.45	175.9	24.6	316800	0
11.06.2022									
1 (40 m)	0	4788504	90.98	862.2	88.87	970.1	129.0	12096000	3
1 (40 m)	10	5286872	66.74	951.8	91.58	1039.4	138.5	2265600	0
2 (50 m)	0	4300800	54.51	774.1	90.13	858.9	112.2	1638400	0
2 (50 m)	10	4505600	50.31	811.0	91.52	886.2	116.6	3276800	1
3 (80 m)	0	4608000	68.81	829.4	89.80	923.6	123.5	1843200	0
3 (80 m)	6	5280000	93.15	950.4	94.18	1009.1	135.7	105600	0
3 (80 m)	30	261120	36.22	47.0	48.69	96.5	9.7	65280	0
3 (80 m)	50	84480	47.53	53.2	88.03	60.5	7.1	0	0
4 (1400 m)	12	9292800	71.76	1672.7	96.81	1727.8	231.8	202752000	22
14.06.2022									
1 (50 m)	0	5446400	95.01	980.4	97.72	1003.2	135.4	11366400	2
1 (50 m)	10	1766400	81.24	318.0	79.99	397.5	52.2	4416000	3
1 (50 m)	24	156160	24.64	28.1	60.18	46.7	5.4	39040	0
1 (50 m)	47	22720	9.67	4.1	44.81	9.1	1.0	45440	2
2 (500 m)	0	6323200	94.92	1138.2	96.04	1185.1	159.6	24960000	4
2 (500 m)	10	6658560	91.04	1218.1	92.26	1320.4	176.9	4352000	1
2 (500 m)	20	133032	33.32	24.2	44.41	54.5	5.2	0	0
2 (500 m)	35	84480	24.56	34.2	51.00	67.1	6.3	0	0
2 (500 m)	50	17600	12.07	11.1	68.78	16.1	1.6	0	0
2 (500 m)	70	21600	17.84	3.8	57.01	6.6	0.7	34560	2
17.06.2022									
1 (50 m)	0	13209600	96.49	2377.7	97.85	2430.1	328.3	12288000	1
1 (50 m)	12	6080000	94.91	1094.4	94.90	1153.2	154.8	13376000	2
1 (50 m)	30,5	107520	22.18	19.4	52.05	37.2	3.8	179200	2
1 (50 m)	48	48960	1.76	8.8	39.73	22.2	1.9	32640	1
2 (500 m)	0	8537600	95.81	1536.8	97.69	1573.1	212.1	7424000	1

2 (500 m)	11	6774400	93.38	1219.4	92.61	1316.7	176.7	28032000	4
2 (500 m)	29	78080	24.96	14.1	52.09	27.0	2.8	58560	1
2 (500 m)	50	58880	33.30	10.6	44.82	23.6	2.2	29440	1
2 (500 m)	70	4100	3.95	0.7	16.01	4.7	0.3	16320	4
	max	13209600	96.49	2377.7	97.85	2430.1	328.3	202752000	160
	min	4100	0	1	0	5	0	0	0