

Supplementary Table S2. HCC sample locations, main physical, chemical and biological properties of the seawater sampled and number of 18S rRNA gene reads recovered from each sample

SampleID	Station	Depth (m)	Description <sup>a</sup>	Latitude (°N)	Longitude (°E)	δ <sup>13</sup> C d13C	Phosphate μM	Ammonium μM	Nitrite μM	Nitrate μM	Silica μM	Pyrosequencing reads		No of OTUs (95 %)	
												Total	LCD-producers	Total	LCD-producers
HCC0-5	0	5	Surface	15.54	-28.95	-21.25	NA	NA	NA	NA	NA	1160	0	150	0
HCC0-60	0	60	DCM	15.54	-28.95	-21.63	NA	NA	NA	NA	NA	1652	2	235	1
HCC1-5	1	5	Surface	15.02	-30.56	-20.43	0.01	0.195	0.009	0.05	0.92	4912	0	362	0
HCC1-40	1	40	BWML	15.02	-30.56	-19.72	0.01	0.073	0.004	0.02	0.91	1871	0	368	0
HCC1-80	1	80	DCM	15.02	-30.56	-23.49	0.2	0.055	0.043	0.81	1.75	2352	2	270	1
HCC2-5	2	5	Surface	14.35	-32.58	-20.27	0	0.106	0.003	0.03	0.72	2259	0	304	0
HCC2-33	2	33	BWML	14.35	-32.58	-19.73	0.01	0.095	0.01	0.02	0.72	1875	0	361	0
HCC2-65	2	65	DCM	14.35	-32.58	-21.71	0.23	0.098	0.034	0.99	1.88	1818	0	323	0
HCC3-5	3	5	Surface	13.16	-36.21	-20.33	0	0.058	0	0	0.79	3154	27	483	3
HCC3-35	3	35	BWML	13.16	-36.21	-20.14	0	0.05	0	0	0.73	2349	0	452	0
HCC3-90	3	90	DCM	13.16	-36.21	-23.9	0.36	0.059	0.139	5.63	1.77	2722	6	313	1
HCC4-5	4	5	Surface	12.41	-38.50	-20.26	0	0.089	0	0.01	0.96	4662	1	442	1
HCC4-30	4	30	BWML	12.41	-38.50	-20.24	0.01	0.067	0	0.01	0.89	5295	0	465	0
HCC4-83	4	83	DCM	12.41	-38.50	-23.95	0.04	0.109	0	0.01	1.22	3207	1	399	1
HCC5-5	5	5	Surface	10.83	-40.47	-20.97	0.02	0.05	0	0.01	0.91	1597	3	250	2
HCC5-40	5	40	BWML	10.83	-40.47	-19.98	0.03	0.05	0.001	0.01	1.02	4639	0	507	0
HCC5-80	5	80	DCM	10.83	-40.47	-24.09	0.53	0.066	0.318	7.87	3	3742	2	549	1
HCC6-15	6	15	BWML	9.41	-42.10	-21.44	0	0.05	0	0.01	0.89	4306	0	395	0
HCC6-90	6	90	DCM	9.41	-42.10	-23.78	0.52	0.069	0.274	8.75	2.92	6404	3	520	2
HCC7-15	7	15	BWML	7.52	-44.28	-20.46	0.01	0.05	0	0.01	5.66	3918	0	416	0
HCC7-60	7	60	DCM	7.52	-44.28	-21.09	0.05	0.057	0.163	-0.01	1.05	4821	0	483	0
HCC8-10	8	10	BWML	6.49	-45.45	-19.56	0.01	0.055	0.001	0.01	10.12	4963	1	450	1
HCC8-52	8	52	DCM	6.49	-45.45	-22.83	0.02	0.074	0.019	0	1.36	2581	0	398	0
HCC9-5	9	5	Surface	5.60	-46.40	-21.39	0.02	0.208	0	0.01	11.88	4910	0	516	0
HCC9-40	9	40	DCM	5.60	-46.40	-22.98	0.09	0.069	0.458	0.1	2.89	1818	0	258	0
HCC10-5	10	5	Surface	6.68	-47.49	-20.38	0.01	0.064	0	0.01	13.64	1749	1	310	1
HCC10-9	10	9	BWML	6.68	-47.49	-17.78	0.01	0.053	0	0.01	13.24	2216	1	329	1
HCC10-50	10	50	DCM	6.68	-47.49	-21.12	0.02	0.066	0.007	0	1.26	3983	0	312	0
HCC11-5	11	5	Surface	5.53	-51.49	-19.32	0.07	0.062	0.003	0.01	18.34	2400	0	374	0
HCC11-15	11	15	BWML	5.53	-51.49	-20.65	0.06	0.055	0.088	0.07	1.87	6340	0	367	0
HCC12-5	12	5	Surface	6.07	-52.46	-20.81	0.09	0.105	0.003	0.01	3.14	4094	0	322	0
HCC12-15	12	15	BWML	6.07	-52.46	-19.62	0.09	0.087	0.012	0	2.94	1469	22	274	4
HCC13-3	13	3	Surface	7.60	-53.02	-20.22	0.01	0.111	0	0.01	10.43	2633	10	198	2
HCC13-35	13	35	DCM	7.60	-53.02	-20.89	0.08	0.085	0.004	0.01	2.97	3614	0	245	0
HCC14-5	14	5	Surface	9.53	-51.32	-19.52	0.01	0.051	0.001	0.01	11.77	3772	6	280	2
HCC14-60	14	60	DCM	9.53	-51.32	-19.81	0.03	0.078	0.037	0	1.12	4812	4	524	2
HCC15-5	15	5	Surface	8.95	-49.98	-20.26	0.04	0.05	0	0.01	8.99	3074	7	336	1
HCC15-11	15	11	BWML	8.95	-49.98	-19.74	0.04	0.05	0.001	0.01	8.82	2238	6	224	1
HCC15-45	15	45	DCM	8.95	-49.98	-22.29	0.01	0.087	0.039	0	1.23	3453	0	409	0
HCC16-5	16	5	Surface	10.22	-51.88	-20.55	0.02	0.063	0	0.01	5.8	1647	0	280	0
HCC16-22	16	22	BWML	10.22	-51.88	-19.43	0.03	0.051	0	0.01	3.94	1638	0	287	0
HCC16-77	16	77	DCM	10.22	-51.88	-23.21	0.15	0.05	0.056	2.05	1.52	4081	0	462	0
HCC17-3	17	3	Surface	9.90	-53.27	-20.31	0.01	0.05	0	0.01	13.75	1818	0	300	0
HCC17-10	17	10	BWML	9.90	-53.27	-19.38	0.01	0.05	0	0.01	9.85	4079	0	451	0
HCC17-45	17	45	DCM	9.90	-53.27	-21.96	0.11	0.05	0.007	0	2.7	2044	2	282	1
HCC18-5	18	5	Surface	9.37	-55.20	-20.21	0.02	0.065	0.001	0.01	7.41	4486	4	445	1
HCC18-13	18	13	BWML	9.37	-55.20	-19.71	0.03	0.07	0.001	0.01	6.42	4471	2	323	1
HCC18-66	18	66	DCM	9.37	-55.20	-21.82	0.16	0.082	0.1	1.77	1.92	1876	14	308	3
HCC19-4	19	4	Surface	10.52	-55.48	-20.35	0.03	0.096	0	0.01	7.03	2939	0	245	0
HCC19-12	19	12	BWML	10.52	-55.48	-19.9	0.03	0.076	0	0.01	6.28	2903	2	309	1
HCC19-60	19	60	DCM	10.52	-55.48	-22.43	0.05	0.081	0.026	0.05	1.45	5640	1	446	1
HCC20a-5	20a	5	Surface	11.27	-54.16	-20.6	0.05	0.063	0	0.01	7.45	5924	0	389	0
HCC20a-15	20a	15	BWML	11.27	-54.16	-19.72	0.06	0.061	0	0.01	5.72	9172	6	530	2
HCC20a-65	20a	65	DCM	11.27	-54.16	-22.69	0.02	0.059	0.001	0.01	1.17	1454	5	262	1
HCC20b-5	20b	5	Surface	11.47	-54.21	-20.33	0.03	0.084	0	0.01	6.26	4303	0	269	0
HCC20b-15	20b	15	BWML	11.47	-54.21	-19.94	0.01	0.062	0	0.01	3.5	4566	2	312	1
HCC20b-80	20b	80	DCM	11.47	-54.21	-21.45	0	0.075	0.002	0.01	1.04	2507	1	326	1
HCC21a-5	21a	5	Surface	13.02	-54.67	-20.09	0	0.065	0	0.01	4.36	2268	0	322	0
HCC21a-15	21a	15	BWML	13.02	-54.67	-19.38	0	0.054	0	0.01	2.3	3551	1	331	1
HCC21a-95	21a	95	DCM	13.02	-54.67	-22.14	0.04	0.052	0.116	0.66	1.15	4009	0	407	0
HCC21b-15	21b	15	BWML	13.20	-54.72	-19.63	0.01	0.067	0	0.01	1.78	3024	2	286	1
HCC21b-95	21b	95	DCM	13.20	-54.72	-22.8	0.01	0.073	0.012	0.01	1	4446	0	417	0
HCC22-5	22	5	Surface	14.80	-55.18	-19.7	0.01	0.089	0.001	0.01	1.86	4174	2	503	2
HCC22-35	22	35	BWML	14.80	-55.18	-20.04	0.01	0.076	0	0.01	1.84	1371	0	262	0
HCC22-105	22	105	DCM	14.80	-55.18	-21.78	0.02	0.084	0.049	0.04	0.9	5253	1	406	1
HCC23-5	23	5	Surface	15.79	-57.05	-19.67	0	0.056	0	0.016	3.94	5737	1	599	1
HCC23-11	23	11	BWML	15.79	-57.05	-19.87	0	0.05	0	0.01	3.9	2403	1	360	1
HCC23-95	23	95	DCM	15.79	-57.05	-21.59	0.01	0.055	0.074	0.504	1.16	7946	5	554	2

<sup>a</sup> Seawater layer where the samples were collected. BWML: Bottom Water Mixed Layer, DCM: Deep Chlorophyll Maximum

<sup>b</sup> Total Organic Carbon

<sup>c</sup> Photosynthetic picoeukaryotes

<sup>d</sup> Photosynthetic nanoeukaryotes