Reconstructing past variations in environmental conditions and paleoproductivity over the last ~8000 years off Central Chile (30° S.)

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Supplementary material

Here we are shown the ages estimated based on $^{210}Pb_{xs}$ inventories (no supported) according CRS model (Appleby and Oldfield, 1978) and the main diatom species on sedimentary records.

Table S1. ^{210}Pb and ^{226}Ra activities determined in BGGC5 and BTGC8 cores. Inventories and ages estimated with the CRS model are shown (sd: standard error).

BGGC5

Section (cm)	^{210}Pb (dpm g^{-1})	sd	^{226}Ra (dpm g^{-1})	sd	^{210}Pbxs-corr. (dpm g^{-1})	sd	Total Inventory (dpm cm^{-2})	sd	Ages (yrs)	sd	Year AD	sd
0-1	13.99	0.42	1.29	0.18	12.77	0.46	37.13	0.42	8.7	0.6	2006	0.6
1-2	11.41	0.29	1.30	0.18	10.17	0.35	28.33	0.40	10.7	0.7	1996	0.9
2-3	9.51	0.33	1.30	0.18	8.25	0.38	20.30	0.37	12.5	0.9	1983	1.1
3-4	7.72	0.22	1.31	0.18	6.45	0.29	13.79	0.34	14.3	1.2	1969	1.5
4-5	6.74	0.27	1.31	0.18	5.46	0.33	8.86	0.32	21.8	2.0	1947	2.4
5-6	2.85	0.12	1.32	0.18	1.54	0.23	4.50	0.28	10.4	2.7	1937	3.4
6-7	4.84	0.17	1.33	0.18	3.53	0.26	3.26	0.28	72.5	16.3	1864	16.5
7-8	1.73	0.06	1.33	0.18	0.40	0.20	0.34	0.17				
8-9	1.27	0.07	1.34	0.18								
9-10	1.28	0.05	1.34	0.18								
11-12	1.09	0.08	1.35	0.18								
13-14	1.00	0.06	1.36	0.18								
15-16	1.01	0.07	1.37	0.18								
17-18	0.99	0.05	1.38	0.18								
19-20	1.07	0.06	1.40	0.18								
24-25	1.04	0.05	1.42	0.18								
29-30	1.03	0.05	1.45	0.18								
39-40	1.08	0.08	1.50	0.18								
58-59	1.55	0.10	1.61	0.23								
79-80	1.45	0.10	1.72	0.23								
95-96	1.32	0.06	1.81	0.23								
119-120	1.40	0.06	1.94	0.23								

BTGC8

Section (cm)	^{210}Pb (dpm g^{-1})	sd	^{226}Ra (dpm g^{-1})	Sd	^{210}Pbxs-corr. (dpm g^{-1})	sd	Total Inventory (dpm cm^{-2})	sd	Ages (yrs)	sd	Year AD	sd
0-1	5.97	0.14	1.06	0.08	4.91	0.07	22.93	0.12	8.8	0.3	2006	0.3
1-2	5.31	0.12	1.05	0.08	4.26	0.08	17.46	0.13	11.0	0.4	1995	0.5
2-3	4.74	0.14	1.03	0.08	3.72	0.08	12.43	0.14	14.9	0.6	1980	0.7
3-4	3.90	0.14	1.01	0.08	2.89	0.08	7.83	0.15	19.2	1.1	1961	1.3
4-5	2.87	0.13	0.99	0.08	1.88	0.09	4.31	0.15	23.4	2.3	1938	2.6
5-6	2.00	0.07	0.97	0.08	1.03	0.09	2.09	0.15	29.7	6.3	1908	6.7
6-7	1.47	0.06	0.96	0.08	0.51	0.09	0.83	0.16	46.4	19.3	1862	20.3
7-8	1.10	0.05	0.94	0.08	0.15	0.09	0.20	0.12				
8-9	0.88	0.06	0.93	0.08								
9-10	0.96	0.04	0.91	0.08								
11-12	0.86	0.05	0.90	0.08								
13-14	0.75	0.05	0.87	0.07								
15-16	0.88	0.06	0.85	0.07								
17-18	0.91	0.06	0.83	0.07								
19-20	0.81	0.06	0.81	0.07								
24-25	0.75	0.06	0.77	0.07								
29-30	0.73	0.06	0.75	0.07								
39-40	0.86	0.05	0.75	0.07								
58-59	1.17	0.06	0.92	0.06								
79-80	1.15	0.07	1.37	0.04								
95-96	1.12	0.05	1.88	0.02								

Table S2. Main diatoms in the sedimentary record at Station BGGC5 and BTGC8, off Coquimbo, expressed as average contribution (%) of species and species groups for the downcore sediment, where RS=Resting spores. Species with >1.0% overall relative abundance were ranked in decreasing order of importance.

Species	Station BGGC5		Station BTGC8	
	Rank	Average %	Rank	Average %
Chaetoceros radicans/cinctus (RS)	1	65,5	1	90,2
Ch. affinis (RS)	2	9,8		
Ch. coronatus (RS)	3	6,3		
Skeletonema japonicum	4	5,7		
Ch. diadema (RS)	5	3,5	3	1,1
Ch. didymus vegetative cell	6	2,8		
Ch. debilis (RS)	7	1,6		
Rhizosolenia imbricata ″group″	8	1,1		
Ch. constrictus/vanherurckii (RS)			2	7,3