

CALCAREOUS NANNOPLANKTON RESPONSE TO THE LATEST CENOMANIAN
OCEANIC ANOXIC EVENT 2 PERTURBATION

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SUPPLEMENTARY DATA

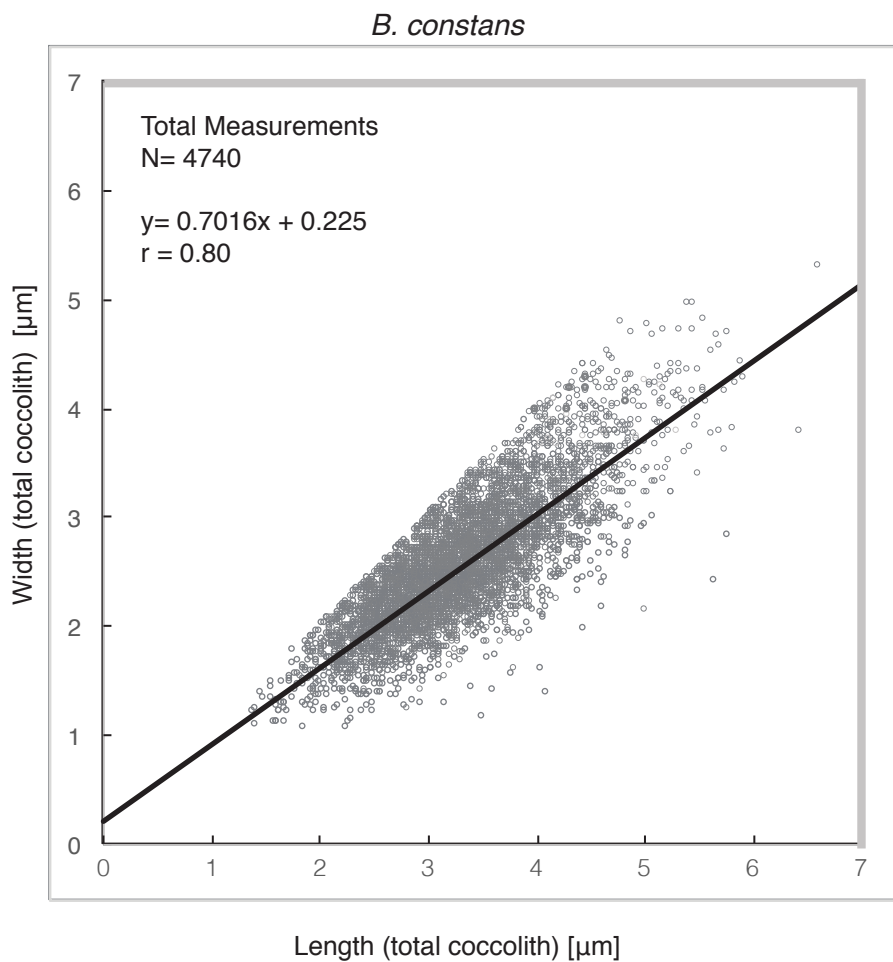


Fig. S1 - Scatter plots of *B. constans* length and width with Pearson correlation coefficient (r) and the number of measurements (N).

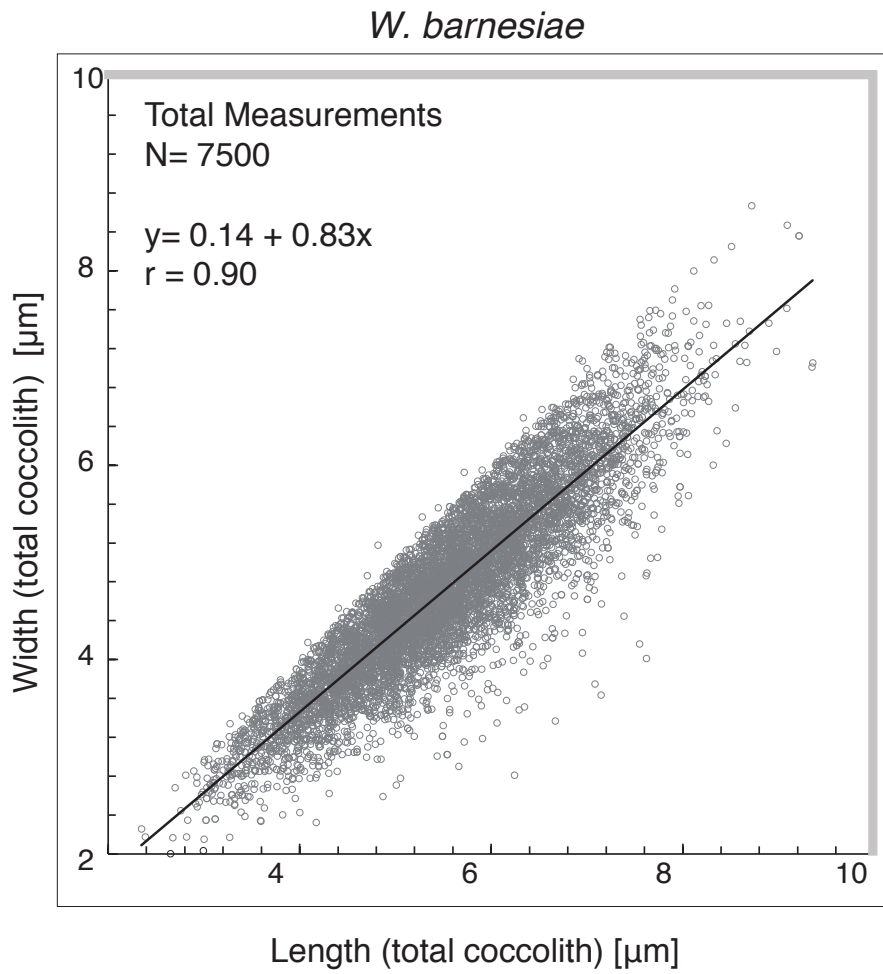
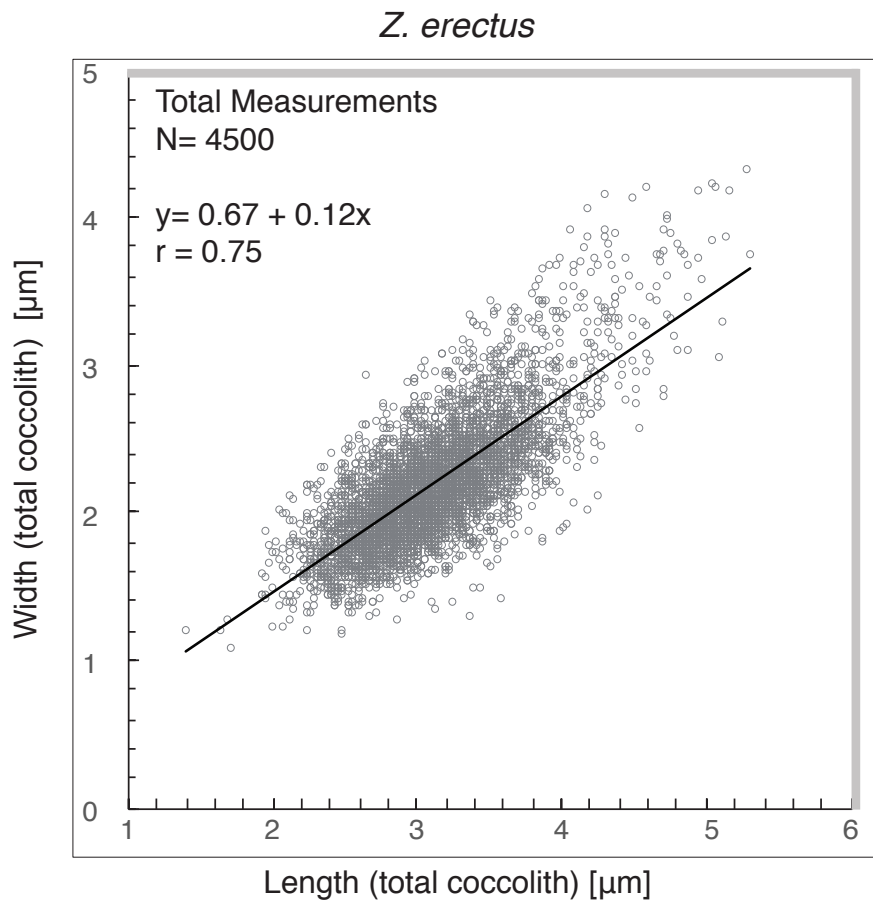


Fig. S2 - Scatter plots of *W. barnesiae* length and width with Pearson correlation coefficient (r) and the number of measurements (N).

Fig. S3 - Scatter plots of *Z. erectus* length and width with Pearson correlation coefficient (r) and the number of measurements (N).



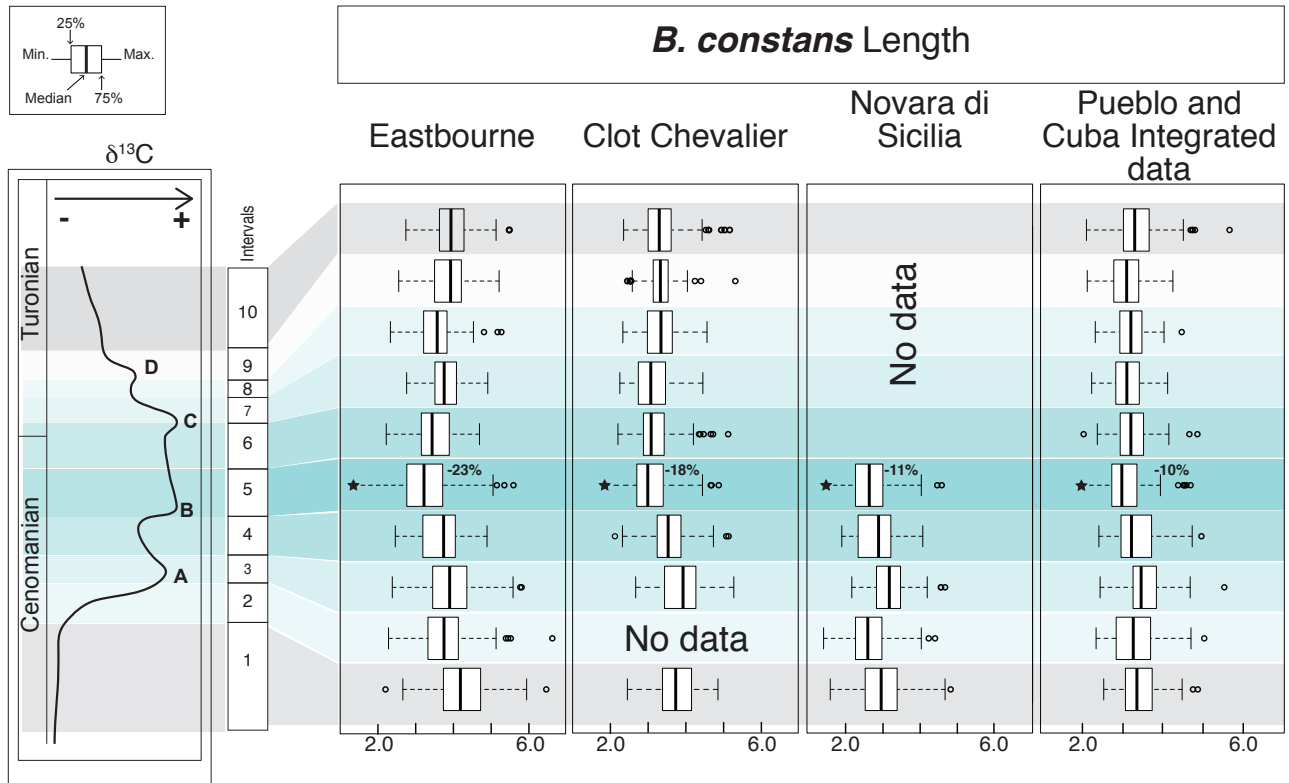


Fig. S4 - Box plot of *B. constans* length across OAE 2 in the studied sections (Eastbourne, Clot Chevalier, Novara di Sicilia, and the Pueblo-Cuba composite curve), against $\delta^{13}\text{C}$ stratigraphy. Ten intervals were identified on the basis of $\delta^{13}\text{C}$ curve variations; for each interval the average length is plotted. Percentages in interval 5 (around $\delta^{13}\text{C}$ peak B) represent the size reduction of *B. constans* compared to the mean size value recorded in the pre-OAE 2 interval (interval 1). In interval number 5, stars underline the minimum *B. constans* length detected.

		<i>B. constans</i>				<i>W. barnesiae</i>				<i>Z. erectus</i>				<i>D. rotatorius</i>	
		length coccolith (μm)	width coccolith (μm)	area coccolith (μm^2)	ellipticity coccolith	length coccolith (μm)	width coccolith (μm)	area coccolith (μm^2)	ellipticity coccolith	length coccolith (μm)	width coccolith (μm)	area coccolith (μm^2)	ellipticity coccolith	diameter coccolith (μm)	area coccolith (μm^2)
Eastbourne	max.	6.62	5.29	27.48	2.60	9.22	8.67	62.74	1.89	4.34	3.14	10.41	2.23	4.80	72.35
	min.	1.67	1.19	1.66	1.01	2.67	2.17	60.50	1.01	1.94	1.17	2.11	1.01	1.20	4.52
	mean	3.79	2.96	9.06	1.31	5.76	5.03	23.50	1.15	3.11	2.12	5.25	1.48	3.05	29.82
	N	1590	1590	1590	1590	2150	2150	2150	2150	1560	1560	1560	1560	1560	1560
	sdt. dev.	0.70	0.63	--	--	1.08	1.00	--	--	0.42	0.31	--	--	0.45	--
Clot Chevalier	max.	5.31	4.32	17.86	1.98	8.32	7.64	49.14	1.83	5.31	4.32	17.86	1.98	4.43	61.65
	min.	1.84	1.36	2.18	1.01	2.65	2.00	4.17	1.01	2.00	1.36	2.68	1.01	1.46	6.71
	mean	3.31	2.56	6.83	1.31	5.38	4.54	19.75	1.19	3.32	2.57	6.86	1.31	2.61	21.87
	N	1110	1110	1110	1110	1850	1850	1850	1850	990	990	990	990	1110	1110
	sdt. dev.	0.57	0.50	--	--	0.95	0.86	--	--	0.56	0.50	--	--	0.36	--
Novara di Sicilia	max.	4.82	4.00	12.56	3.05	9.35	8.47	60.47	1.95	5.08	3.86	15.30	2.57	4.61	66.77
	min.	1.40	1.05	3.31	1.01	2.35	2.15	4.08	1.02	1.40	1.09	1.32	0.90	1.19	4.44
	mean	2.82	2.13	6.68	1.35	5.49	4.66	20.80	1.19	3.04	2.08	5.06	1.47	2.66	22.76
	N	930	930	930	930	2000	2000	2000	2000	900	900	900	900	1050	1050
	sdt. dev.	0.60	0.48	--	--	1.04	0.94	--	--	0.47	0.34	--	--	0.42	--
WI Pueblo	max.	5.66	4.16	15.39	2.48	8.10	6.89	42.41	2.22	3.90	2.61	7.47	2.33	4.00	50.17
	min.	2.03	1.50	2.69	1.01	2.92	2.32	5.57	1.01	1.92	1.23	1.92	1.05	1.27	5.07
	mean	3.31	2.56	6.76	1.31	5.32	4.50	19.31	1.19	2.90	1.98	4.54	1.48	2.60	21.65
	N	570	570	570	570	1050	1050	1050	1050	540	540	540	540	570	570
	sdt. dev.	0.52	0.44	--	--	0.90	0.83	--	--	0.33	0.26	--	--	0.38	--
WI Cuba	max.	5.53	4.25	14.95	2.40	9.36	8.11	53.05	1.98	4.25	2.79	9.31	2.32	5.22	85.47
	min.	1.98	1.24	2.14	1.01	2.82	2.18	4.82	1.00	2.06	1.35	2.66	1.01	1.27	5.07
	mean	3.26	2.41	6.28	1.37	5.74	4.94	22.96	1.17	2.95	1.99	4.64	1.50	2.52	20.47
	N	540	540	540	540	449	450	450	450	510	510	510	510	480	480
	sdt. dev.	0.51	0.45	--	--	1.03	0.98	--	--	0.35	0.24	--	--	0.43	--

Tab. S1 - Overview of statistical parameters of the analyzed species, *B. constans*, *W. barnesiae*, *Z. erectus* and *D. rotatorius* in the five studied sections. Abbreviation: max. = maximum; min. = minimum; N = number of measurements; sdt.dev. = standard deviation.

Eastbourne											
int 1vs int 2	0.000										
int 1vs int 3	0.000	int 2 vs int 3	0.146								
int 1vs int 4	0.000	int 2 vs int 4	0.998	int 3 vs int4	0.112						
int 1vs int 5	0.000	int 2 vs int 5	0.000	int 3 vs int5	0.000	int 4 vs 5	0.001				
int 1vs int 6	0.000	int 2 vs int 6	0.217	int 3 vs int6	0.000	int 4 vs 6	0.952	int 5 vs 6	0.040		
int 1vs int 7	0.000	int 2 vs int 7	1.000	int 3 vs int7	0.863	int 4 vs 7	0.990	int 5 vs 7	0.000	int 6 vs int 7	0.304
int 1vs int 8	0.000	int 2 vs int 8	0.578	int 3 vs int8	0.000	int 4 vs 8	0.998	int 5 vs 8	0.003	int 6 vs int 8	1.000
int 1vs int 9	0.000	int 2 vs int 9	0.869	int 3 vs int9	1.000	int 4 vs 9	0.590	int 5 vs 9	0.000	int 6 vs int 9	0.008
int 1vs int 10	0.000	int 2 vs int 10	0.139	int 3 vs int10	1.000	int 4 vs 10	0.100	int 5 vs 10	0.000	int 6 vs int 10	0.000
										int 7 vs int 10	0.820
										int 8 vs int 10	0.000
										int 9 vs int 10	1.0

Clot de Chevalier											
int 1vs int 3	0.976										
int 1vs int 4	0.572	int 3 vs int4	0.098								
int 1vs int 5	0.000	int 3 vs int5	0.000	int 4 vs 5	0.000						
int 1vs int 6	0.000	int 3 vs int6	0.000	int 4 vs 6	0.000	int 5 vs 6	0.699				
int 1vs int 7	0.000	int 3 vs int7	0.000	int 4 vs 7	0.000	int 5 vs 7	1.000	int 6 vs int 7	0.997		
int 1vs int 8	0.000	int 3 vs int8	0.000	int 4 vs 8	0.056	int 5 vs 8	0.001	int 6 vs int 8	0.114	int 7 vs int 8	0.061
int 1vs int 9	0.000	int 3 vs int9	0.000	int 4 vs 9	0.230	int 5 vs 9	0.014	int 6 vs int 9	0.327	int 7 vs int 9	1.000
int 1vs int 10	0.000	int 3 vs int10	0.000	int 4 vs 10	0.057	int 5 vs 10	0.000	int 6 vs int 10	0.014	int 7 vs int 10	0.013
										int 8 vs int 10	1.000
										int 9 vs int 10	1.000

Novara di Sicilia					
int 1vs int 2	0.000				
int 1vs int 3	0.118	int 2 vs int 3	0.000		
int 1vs int 4	0.832	int 2 vs int 4	0.913	int 3 vs int4	0.057
int 1vs int 5	0.000	int 2 vs int 5	1.000	int 3 vs int5	0.000
				int 4 vs 5	0.986

Cuba											
int 1vs int 2	0.865										
int 1vs int 3	0.955	int 2 vs int 3	0.110								
int 1vs int 4	0.046	int 2 vs int 4	0.767	int 3 vs int4	0.000						
int 1vs int 5	0.000	int 2 vs int 5	0.000	int 3 vs int5	0.000	int 4 vs 5	0.007				
int 1vs int 7	0.001	int 2 vs int 7	0.137	int 3 vs int7	0.000	int 4 vs 7	0.992	int 5 vs 7	0.049		
int 1vs int 8	0.933	int 2 vs int 8	1.000	int 3 vs int8	0.329	int 4 vs 8	0.938	int 5 vs 8	0.001	int 7 vs int 8	0.488
int 1vs int 9	0.696	int 2 vs int 9	1.000	int 3 vs int9	0.106	int 4 vs 9	0.997	int 5 vs 9	0.005	int 7 vs int 9	0.823
int 1vs int 10	0.023	int 2 vs int 10	0.622	int 3 vs int10	0.000	int 4 vs 10	1.000	int 5 vs 10	0.017	int 7 vs int 10	0.999
										int 8 vs int 9	1.000
										int 8 vs int 10	0.873
										int 9 vs int 10	0.988

Pueblo											
int 3 vs int4	0.508										
int 3 vs int5	0.004	int 4 vs 5	0.000								
int 3 vs int6	0.049	int 4 vs 6	0.000	int 5 vs 6	0.988						
int 3 vs int7	0.001	int 4 vs 7	0.000	int 5 vs 7	0.998	int 6 vs int 7	0.835				
int 3 vs int8	0.005	int 4 vs 8	0.000	int 5 vs 8	0.985	int 6 vs int 8	0.790	int 7 vs int 8	1.000		
int 3 vs int9	0.000	int 4 vs 9	0.000	int 5 vs 9	0.437	int 6 vs int 9	0.130	int 7 vs int 9	0.832	int 8 vs int 9	0.982
int 3 vs int10	0.779	int 4 vs 10	0.016	int 5 vs 10	0.026	int 6 vs int 10	0.335	int 7 vs int 10	0.009	int 8 vs int 10	0.043
										int 9 vs int 10	0.000

Tab. S2 - *B. constans* length comparison between 10 selected stratigraphic intervals with post hoc Tukey test.