



Supplement of

Sedimentary organic matter signature hints at the phytoplankton-driven biological carbon pump in the central Arabian Sea

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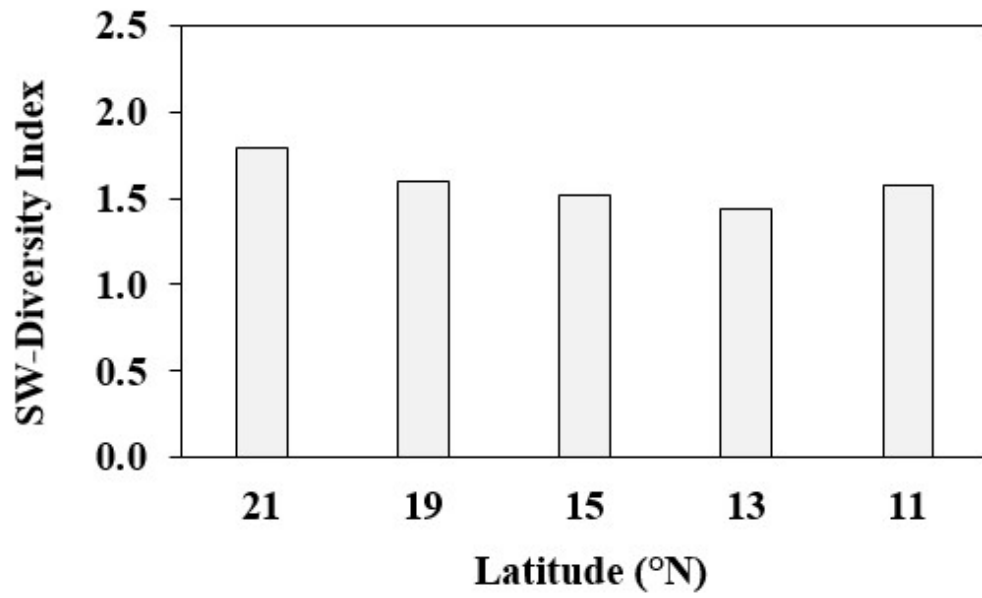


Figure S 1. Shannon-Wiener (SW) diversity index of diatoms calculated using frustules from the surface sediments of the central Arabian Sea.

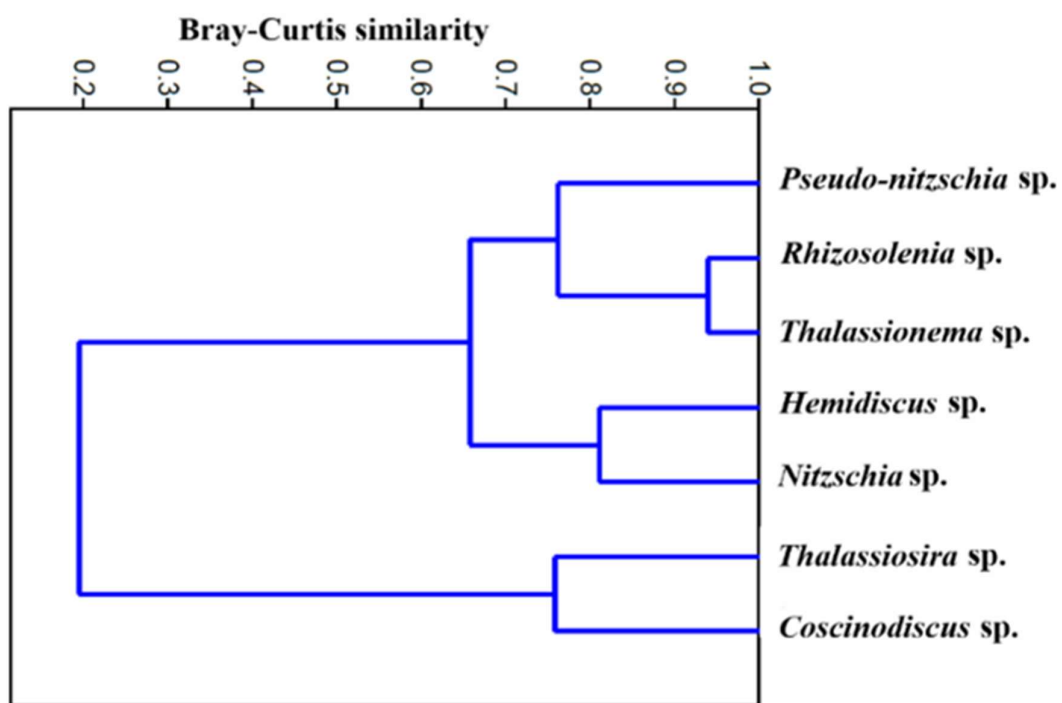


Figure S 2. Bray- Curtis similarity index between different diatom genera from the surface sediments of the central Arabian Sea.

Table S 1. Absolute abundance (AA) of diatom frustules (valves g⁻¹ dry sediment) and their relative abundance (RP %) in the surface sediments (0.5, 1 cm) from 5 locations in the Central Arabian Sea (average ± SD, n = 2).

Locations	21° N		19° N		15° N		13° N		11° N	
	AA	RP	AA	RP	AA	RP	AA	RP	AA	RP
<i>Actinoptychus</i> sp.	450±71	0.8	350±71	0.6	250±71	0.5	200±283	0.5	100±141	0.4
<i>Coscinodiscus</i> sp.	24050±1202	45.1	29300±3818	46.1	20650±6010	44.1	11500±5223	30.7	6150±212	22.2
<i>Cyclotella</i> sp.	1450±1768	2.7	900±707	1.4	250±71	0.5	-	0.0	100±141	0.4
<i>Hemidiscus</i> sp.	800±283	1.5	1800±849	2.8	1800±1414	3.8	2300±707	6.1	1900±141	6.8
<i>Leptocylindrus</i> sp.	-	0.0	500±707	0.8	350±495	0.7	-	0.0	-	0.0
<i>Proboscia</i> sp.	200±283	0.4	-	0.0	-	0.0	-	0.0	-	0.0
<i>Rhizosolenia</i> sp.	3700±990	6.9	2800±283	4.4	1300±424	2.8	450±71	1.2	550±495	2.0
<i>Thalassiosira</i> sp.	12300±424	23.1	18450±778	29.0	16200±849	34.6	18050±7990	48.1	13700±4950	49.4
<i>Triceratium</i> sp.	500±141	0.9	300±141	0.5	350±495	0.7	50±71	0.1	-	0.0
Pennate diatoms										
<i>Amphiprora</i> sp.	200±283	0.4	-	0.0	-	0.0	-	0.0	-	0.0
<i>Bacillaria</i> sp.	550±778	1.0	-	0.0	-	0.0	-	0.0	-	0.0
<i>Diploneis</i> sp.	50±71	0.1	100±141	0.2	-	0.0	-	0.0	-	0.0
<i>Epithemia</i> sp.	-	0.0	-	0.0	-	0.0	-	0.0	50±71	0.2
<i>Eunotia</i> sp.	50±71	0.1	-	0.0	50±71	0.1	-	0.0	-	0.0
<i>Fragilaria</i> sp.	550±778	1.0	150±212	0.2	600±849	1.3	300±424	0.8	500±707	1.8
<i>Fragilariopsis</i> sp.	250±212	0.5	200±283	0.3	250±71	0.5	550±495	1.5	650±919	2.3
<i>Gyrosigma</i> sp.	100±141	0.2	-	0.0	-	0.0	-	0.0	-	0.0
<i>Lioloma</i> sp.	300±424	0.6	-	0.0	-	0.0	-	0.0	-	0.0
<i>Navicula</i> sp.	300±141	0.6	400±283	0.6	-	0.0	150±71	0.4	-	0.0
<i>Nitzschia</i> sp.	1150±71	2.2	1800±849	2.8	1350±354	2.9	1300±141	3.5	850±495	3.1
<i>Pleurosigma</i> sp.	50±71	0.1	50±71	0.1	-	0.0	-	0.0	-	0.0
<i>Pseudo-nitzschia</i> sp.	3150±354	5.9	3350±354	5.3	2200±283	4.7	2200±	5.9	2550±778	9.2
<i>Thalassionema</i> sp.	3150±1626	5.9	3150±1626	5.0	1250±71	2.7	450±212	1.2	650±71	2.3

