

Supplementary Information 1 for:

Sponge contribution to the silicon cycle of a diatom-rich shallow bay

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Table S1. Average concentration (\pm SD) of dissolved silicon ($\mu\text{mol Si L}^{-1}$) at the bottom waters of the Bay of Brest. Data come from the Lanvéoc long-term survey series (48.295777° N, 4.454758° W), which sampled bottom water with a 1L syringe manually by scientific divers just over seabed every two weeks at high tide. Data integrated dissolved silicon concentrations from the last decade (2012-2021).

Month	Dissolved Si concentration	
	AVRG	SD
Jan	11.03	2.79
Feb	13.28	5.68
Mar	8.89	5.77
Apr	2.44	2.20
May	3.60	4.25
Jun	2.44	1.22
Jul	2.10	0.93
Aug	2.83	0.55
Sep	4.85	2.20
Oct	8.35	5.08
Nov	8.57	2.46
Dec	10.13	2.36

Table S2. List of the sponge species of the Bay of Brest (France). Presence at each habitat is indicated. RI, rocky intertidal; RS, rocky subtidal; MB, maerl beds; SM, shallow mud; HS, heterogeneous sediments; CS, circalittoral coarse sediments.

	Habitat					
	RI	RS	MB	SM	HS	CS
Class DEMOSPONGIAE						
Subclass HETEROSCLEROMORPHA						
Order AXINELLIDA						
Family RASPAILIIDAE						
<i>Raspailia ramosa</i>						X
Family STELLIGERIDAE						
<i>Paratimea constellata</i>						X
<i>Stelligera stuposa</i>		X			X	X
Order BIEMNIDA						
Family BIEMNIDAE						
<i>Biemna variantia</i>		X				
Order BUBARIDA						
Family BUBARIDAE						
<i>Bubaris vermiculata</i>						X
Order CLIONAIDA						
Family CLIONAIDAE						
<i>Cliona celata</i>		X		X	X	X
<i>Cliona lobata</i>						X
Order HAPLOSCLERIDA						
Family CHALINIDAE						
<i>Chalinula cf. limbata</i>		X				
<i>Haliclona angulata</i>						X
<i>Haliclona cinerea</i>		X	X		X	X
<i>Haliclona fibulata</i>						X
<i>Haliclona fistulosa</i>		X	X			X
<i>Haliclona rosea</i>		X	X		X	X
<i>Haliclona simulans</i>		X	X		X	X
Order POECILOSCLERIDA						
Family ACARNIDAE						
<i>Iophon hyndmani</i>						X
<i>Iophon nigricans</i>						X
Family ESPERIOPSIDAE						
<i>Amphilectus fucorum</i>		X	X		X	X

Table S2. (Continued)

	Habitat					
	RI	RS	MB	SM	HS	CS
Family HYMEDESMIIDAE						
<i>Hemimycale columella</i>		X	X		X	X
<i>Hymedesmia cf. occulta</i>						X
<i>Hymedesmia coriacea</i>		X	X			X
<i>Hymedesmia jecusculum</i>		X				
<i>Hymedesmia lenta</i>		X				X
<i>Phorbas fictitius</i>		X	X			
<i>Phorbas plumosus</i>		X	X			
<i>Spanioplou armaturum</i>		X				X
Family MICROCIONIDAE						
<i>Antho inconstans</i>		X				
<i>Clathria strepsitoxa</i>		X			X	X
Family MYCALIDAE						
<i>Mycale contarenii</i>		X	X		X	
<i>Mycale macilenta</i>		X	X		X	X
Family MYXILLIDAE						
<i>Myxilla fimbriata</i>		X				X
<i>Myxilla rosacea</i>						X
Family TEDANIIDAE						
<i>Tedania anhelans</i>			X			X
Order POLYMASTIIDA						
Family POLYMASTIIDAE						
<i>Polymastia boletiformis</i>		X				X
<i>Polymastia penicillus</i>	X	X				X
Order SUBERITIDA						
Family HALICHONDRIIDAE						
<i>Ciocalypta penicillus</i>		X				
<i>Halichondria bowerbanki</i>		X	X			X
<i>Halichondria panicea</i>	X	X	X		X	X
<i>Halichondria sp.</i>		X	X			
<i>Hymeniacidon perlevis</i>	X	X	X		X	X
Family SUBERITIDAE						
<i>Protosuberites cf. denhartogi</i>		X			X	
<i>Suberites ficus</i>			X	X	X	
<i>Suberites massa</i>			X			

Table S2. (Continued)

	Habitat					
	RI	RS	MB	SM	HS	CS
Order TETHYIDA						
Family TETHYIDAE						
<i>Tethya citrina</i>	X	X	X		X	X
Family TIMEIDAE						
<i>Timea crassa</i>					X	X
Order TETRACTINELLIDA						
Family GEODIIDAE						
<i>Pachymatisma johnstonia</i>			X			
Subclass KERATOSA						
Order DENDROCERATIDA						
Family DARWINELLIDAE						
<i>Aplysilla rosea</i>			X	X	X	
<i>Aplysilla sulfurea</i>			X	X		
Order DICTYOCERATIDA						
Family DYSIDEIDAE						
<i>Dysidea fragilis</i>			X	X		
Family THORECTIDAE						
<i>Hyrrios</i> sp.				X		
Order DENDROCERATIDA						
Family DICTYODENDRILLIDAE						
<i>Spongionella</i> cf. <i>pulchella</i>			X			
Subclass VERONGIMORPHA						
Order CHONDRILLIDA						
Family HALISARCIDAE						
<i>Halisarca dujardinii</i>						X
Class CALCAREA						
Subclass CALCARONEA						
Order LEUCOSOLENIDA						
Family SYCETTIDAE						
<i>Sycon ciliatum</i>			X	X		
Subclass CALCINEA						
Order CLATHRINIDA						
Family CLATHRINIDAE						
<i>Clathrina</i> cf. <i>coriacea</i>				X		