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Dark CO₂ fixation into phospholipid-derived fatty acids by the cold-water coral associated sponge *Hymedesmia* (*Stylopus*) *coriacea* (Tisler Reef, NE Skagerrak)

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Table S1. Concentrations (and standard deviations) of variables at the end of cylinder chamber incubations with ^{13}C -DIC. CYa, CYb and CYc refer the different cylinder experiments, each without and with $(\text{NH}_4)_2\text{SO}_4$ ($100\mu\text{M}$) addition. N,n refers to the number replicates without, with $(\text{NH}_4)_2\text{SO}_4$ in the different incubation series.

variable	CYa after 63 h incubation		CYb after 44 h incubation		CYc after 38 h incubation	
	without N	with N	without N	with N	without N	with N
DIC (μM)	n,n 4,8	2625 (85) 2591 (109)	n,n -	-	n,n -	-
TOC (μM)	4,8	185 (79) 347 (107)	6,4	112 (5) 139 (23)	0,2	- 130 (37)
DOC (μM)	0,2	- 185 (45)	6,4	124 (29) 178 (64)	3,2	98 (3) 116 (27)
PO_4 (μM)	4,8	0.95 (0.26) 2.12 (0.73)	6,4	0.91 (0.33) 1.95 (0.50)	6,6	1.09 (0.22) 1.02 (0.10)
NH_3 (μM)	4,8	10.91 (3.82) 140.83 (39.60)	6,4	6.22 (4.29) 127.91 (14.09)	6,6	5.23 (3.50) 93.57 (6.51)
NO_x (μM)	4,8	6.63 (0.59) 2.94 (3.42)	6,4	8.79 (1.26) 7.097 (1.29)	6,6	10.04 (1.84) 12.85 (0.79)
NO_2 (μM)	4,8	0.18 (0.01) 0.17 (0.15)	6,4	0.15 (0.06) 0.35 (0.13)	6,6	0.18 (0.03) 0.26 (0.11)
prokaryotes ($n \cdot 10^6 \cdot \text{ml}^{-1}$)	4,8	34.9 (1.4) 166.7 (134.6)	6,4	15.4 (1.7) 37.0 (8.9)	6,5	9.5 (3.7) 9.8 (5.6)

Table S2. Concentration of variables (with standard variations) during different phases of the pulse-chase experiment. Waste water concentrations (last column) were measured in the overflow of pulse chase aquarium after the throughflow of water supply was turned on again after flushing.

variable	Pulse chase experiment			
	concentration just before addition of ^{13}C -DIC	just after addition of ^{13}C -DIC and $(\text{NH}_4)_2\text{SO}_4$	after 50 h incubation without throughflow	waste water pulse chase aquarium
DIC (μM)	n 2	n 4190 (34)	n 4438 (24)	n -
TOC (μM)	-	2 656 (61)	2 650 (14)	13 98 (14)
DOC (μM)	-	-	2 437 (4)	10 108 (18)
PO_4 (μM)	2 0.43 (0.001)	2 0.51 (0.001)	1 3.39	16 0.50 (0.07)
NH_4 (μM)	2 0.74 (0.01)	2 187.00 (0)	1 290	16 0.32 (0.17)
NO_x (μM)	2 4.51 (0.01)	2 4.65 (0.01)	1 3.86	16 5.76 (0.88)
NO_2 (μM)	2 0.09 (0)	2 0.11 (0.01)	1 0.22	16 0.11 (0.03)
prokaryotes ($n \cdot 10^6 \cdot \text{ml}^{-1}$)	-	2 6.8 (0.6)	2 371 (32)	16 4.4 (0.8)