

SUPPLEMENTARY DATA—Basic data for studied samples (in exhaustive dataset diversity values are given only for samples, which were used in the analysis i.e., those which retained more than 30 individuals).

Explanation of sample numbers: S1A – S is the lithification state (S – unlithified, L – lithified); 1 – is the number of shell bed within this lithification ; A – is the number of replicate sample (one of three) within this shell bed; A – is the number of replicate sample (one of three) within this shell bed

	Sample	Weight (in kg)	Number of individuals		Number of species		Shannon diversity		Simpson diversity	
			>2 mm	>5 mm	>2 mm	>5 mm	>2 mm	>5 mm	>2 mm	>5 mm
Unlithified	S1A	0.8	92	14	21		10.6		5.9	
	S1B	0.76	171	25	27		15.6		11.2	
	S1C	0.75	238	48	26	16	14.4	13.4	10.7	11.7
	S2A	0.9	681	170	45	31	15.7	16.7	9.9	10.6
	S2B	0.81	328	91	42	19	17.5	12.3	10.4	8.9
	S2C	0.77	298	67	32	21	13.3	13.1	8.7	9.1
	S3A	0.64	307	49	32	16	13.7	12.8	9.2	11.2
	S3B	0.66	237	33	29	14	13.6	11.2	9.3	9.3
	S3C	0.73	237	39	34	16	15.4	13	10.7	10.8
	S4A	0.86	168	72	28	22	15.1	12.8	10.4	7.9
	S4B	0.72	231	70	32	22	15.6	13.8	9.1	9.2
	S4C	0.78	105	47	19	15	11.7	10.5	8	7.4
	S5A	0.75	114	50	27	16	13.5	10.3	8.4	7.3
	S5B	1.39	119	59	24	15	12.3	10.1	8.3	7.5
	S5C	0.74	163	79	32	19	14	10.1	8.1	6.4
	S6A	0.72	64	40	21	18	12.9	12.8	8.9	9.3
	S6B	0.77	91	55	23	18	13.3	12.7	8.8	9.4
	S6C	0.74	123	67	29	22	14	12.9	9.2	7.9
		Total	14.25	3767	1020	78	53	17.4	17.3	10.5
Lithified	L1A	1.54	49	27	18		12.6		9.7	
	L1B	0.87	71	38	21	13	12.9	7.5	9.3	5
	L1C	0.77	171	137	31	24	14.2	11	8.2	6.6
	L2A	0.62	62	33	17	12	11.9	8.6	9.6	6.7
	L2B	0.63	94	69	23	21	14	11.7	9.7	7.1
	L2C	0.8	86	39	20	13	12.7	8.8	9.9	6.6
	L3A	0.7	93	15	21		11.4		7.6	
	L3B	0.89	111	32	23	11	11.8	8.1	7.9	6.7

Lithifite	L3C	0.96	66	7	11		6.1		4.2	
	L4A	0.72	181	70	31	19	15.5	10.6	10.9	7.2
	L4B	0.82	248	136	38	27	17	12.1	11	7
	L4C	0.85	93	36	23	16	12.3	11.2	8.2	8.3
	L5A	1.09	105	13	20		9		6	
	L5B	0.85	148	19	20		9.3		5.9	
	L5C	1.67	140	25	27		11.3		6.6	
	Total	13.78	1718	585	66	41	16.5	13	10.4	7.4