

## Co-occurring secondary foundation species have distinct effects on the recruitment and survival of associated organisms

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**Table S1** ANOVA results for the effects of cages, oysters and algae on sediment accretion around PVC recruitment sticks. \*Tukey tests revealed no significant pairwise interactions among oyster treatment levels.

Factor	df	MS	F	P
Cage	1	5.32	3.16	0.08
Oyster	3	5.27	3.13	0.03*
Algae	2	3.46	2.05	0.13
Cage x Oyster	3	0.14	0.09	0.97
Cage x Algae	2	2.90	1.72	0.18
Oyster x Algae	6	1.68	1.00	0.43
Cage x Oyster x Algae	6	0.59	0.35	0.91
Residuals	408	1.69		

**Table S2** ANOVA results for the effects of time, caging, oysters and algae on densities of oysters and barnacles recruiting to PVC stakes. Significant results are indicated in bold.

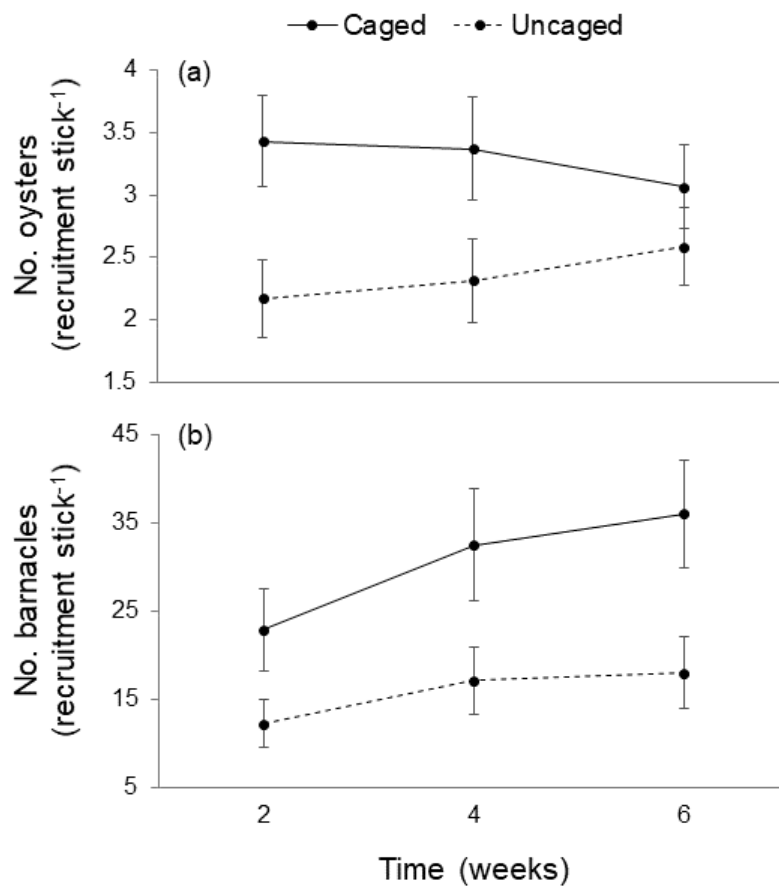
Factor	df	Oysters			Barnacles		
		MS	F	P	MS	F	P
Time	2	0.014	0.03	0.97	23.65	2.16	0.12
Cage	1	5.705	11.54	<b>&lt;0.01</b>	169.63	15.47	<b>&lt;0.01</b>
Oyster	3	3.875	7.84	<b>&lt;0.01</b>	14.49	1.32	0.27
Algae	2	1.235	2.50	0.08	109.02	9.94	<b>&lt;0.01</b>
Time x Cage	2	0.381	0.77	0.46	5.61	0.51	0.60
Time x Oyster	6	0.073	0.15	0.99	2.86	0.26	0.95
Time x Algae	4	0.282	0.57	0.68	7.51	0.69	0.60
Cage x Oyster	3	0.023	0.05	0.97	9.83	0.90	0.44
Cage x Algae	2	0.346	0.70	0.50	1.44	0.13	0.88
Oyster x Algae	6	0.853	1.73	0.11	13.58	1.24	0.29
Time x Cage x Oyster	6	0.798	1.61	0.14	12.32	1.12	0.35
Time x Cage x Algae	4	0.158	0.32	0.87	2.17	0.20	0.94
Time x Oyster x Algae	12	0.204	0.41	0.96	3.28	0.30	0.99
Cage x Oyster x Algae	6	0.241	0.49	0.82	4.35	0.40	0.88
Time x Cage x Oyster x Algae	12	0.345	0.70	0.75	6.15	0.56	0.87
Residuals	360	0.494			10.97		

**Table S3** ANOVA results for the effects of oysters and algae on the survival of juvenile *S. glomerata* and *B. auratum*, and on shell damage to *B. auratum* snails. Significant results are indicated in bold. \*Evaluation of Tukey test results revealed no significant pairwise interactions.

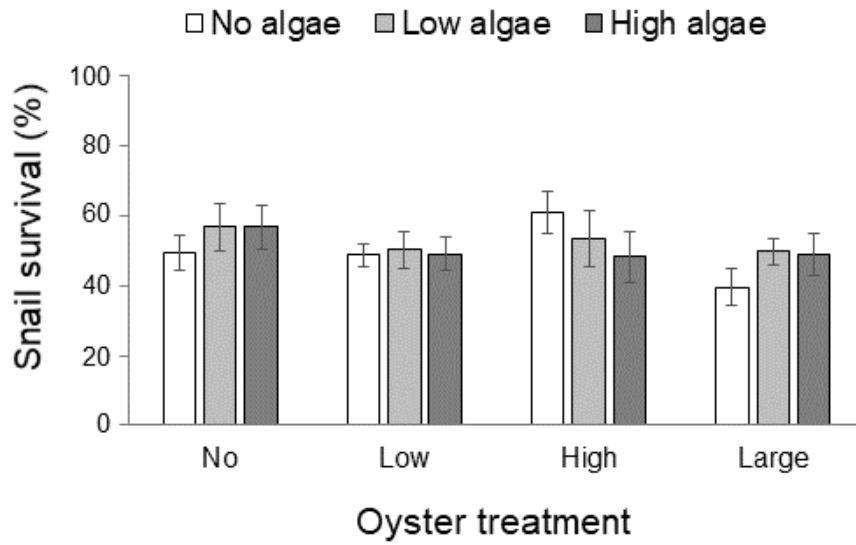
Month	Factor	df	Survival			<i>B. auratum</i>			Shell damage			Drilled		
			<i>S. glomerata</i>						Cracked					
			MS	F	<i>P</i>	MS	F	<i>P</i>	MS	F	<i>P</i>	MS	F	<i>P</i>
<b>1</b>	Oyster	3	0.058	1.72	0.17	0.083	1.52	0.22	0.002	1.00	0.40	0.002	1.00	0.40
	Algae	2	0.185	5.46	<b>0.01</b>	0.123	2.24	0.12	0.002	1.00	0.37	0.002	1.00	0.37
	Oyster x Algae	6	0.017	0.51	0.80	0.028	0.51	0.80	0.002	1.00	0.43	0.002	1.00	0.43
	Residuals	60	0.034			0.054			0.002			0.002		
<b>2</b>	Oyster	3	0.024	0.51	0.68	0.085	1.29	0.29	0.003	0.24	0.87	0.009	0.32	0.81
	Algae	2	0.094	2.02	0.14	0.231	3.49	<b>0.04</b>	0.006	0.50	0.61	0.018	0.63	0.54
	Oyster x Algae	6	0.013	0.27	0.95	0.073	1.10	0.37	0.027	2.38	0.04*	0.042	1.52	0.19
	Residuals	60	0.047			0.066			0.012			0.028		
<b>3</b>	Oyster	3	2.037	16.34	<b>&lt;0.01</b>	0.035	0.55	0.65	0.008	0.58	0.63	0.078	1.31	0.28
	Algae	2	0.012	0.10	0.91	0.140	2.20	0.12	0.014	1.01	0.37	0.055	0.92	0.40
	Oyster x Algae	6	0.034	0.27	0.95	0.109	1.71	0.14	0.022	1.59	0.17	0.032	0.55	0.77
	Residuals	60	0.125			0.064			0.014			0.059		
<b>4</b>	Oyster	3	2.250	21.78	<b>&lt;0.01</b>									
	Algae	2	0.002	0.02	0.98									
	Oyster x Algae	6	0.037	0.36	0.90									
	Residuals	60	0.103											

**Table S4** ANOVA results for the effect of oysters and algae on survival of *P. laevis* and *B. australis* in the presence of predatory fish, *T. hamiltoni*, and snails, *C. sordidum*, respectively. Significant results are indicated in bold.

Factor	df	<i>P. laevis</i>			<i>B. australis</i>		
		MS	F	<i>P</i>	MS	F	<i>P</i>
Oyster	3	3319	17.84	<b>&lt;0.01</b>	0.038	1.34	0.27
Algae	2	2322	12.48	<b>&lt;0.01</b>	0.013	0.46	0.63
Oyster x Algae	6	928	4.99	<b>&lt;0.01</b>	0.019	0.67	0.67
Residuals	78	186			0.029		



**Fig. S1** The mean ( $\pm$  SE) density of (A) *Saccostrea glomerata* oysters and (B) barnacles (*Amphibalanus* spp. and *Hexaminius* spp.) recruiting to PVC stakes (62.8 cm<sup>2</sup>) after two, four or six weeks. There was no significant ( $P > 0.05$ ) effect of time or the interaction between time and caging on the density of recruiting oysters and barnacles (Table S2). However, in each instance the main effect of caging was significant (ANOVA,  $P < 0.05$ , Table S2).



**Fig. S2** The mean ( $\pm$  SE) percentage of *Batillaria australis* snails surviving in each of 12 habitats after a 12 day feeding trial with the predatory snail, *Conuber sordidum*. Tanks received either no oyster habitat (no), two small clumps (low), four small clumps (high) or a single large clump (large), and either no (white bars), low (light grey bars) or high algal biomass (dark grey bars) in a fully factorial design. There was no significant effect of oysters, algae or their interaction on snail survivorship (ANOVA,  $P > 0.05$ , Table S4).