

The following supplement accompanies the article

Aquaculture-derived trophic subsidy boosts populations of an ecosystem engineer

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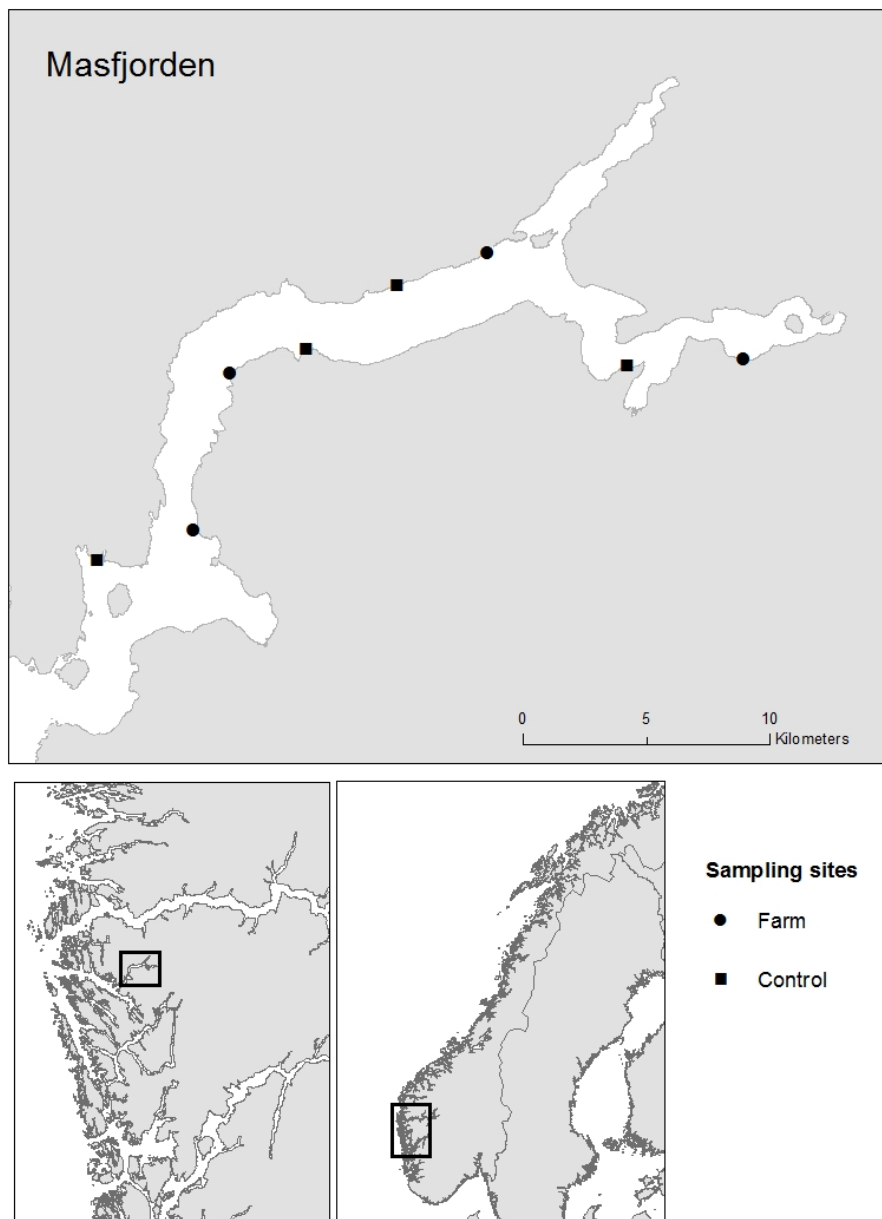


Figure S1. Map of Masfjord, Hordaland, Norway, showing the paired aquaculture (circle) and control (square) sites surveyed for *Gracilechinus acutus* abundance and test diameter.

Table S1. Results of 2-way ANOVA examining the effects of site and proximity to farms (Farm vs Control) on abundance and size of *Gracilechinus acutus*.

Parameter	Source	df	MS	F	P
Urchin density	Site	3	301	3.15	0.04
	Farm proximity (Site)	4	3030	31.6	0.0001
	Residual	37	95.6		
Urchin size	Site	2	59.5	71.5	0.0001
	Farm proximity (Site)	3	27.6	33.2	0.0001
	Residual	390	0.83		

NB: df, degrees of freedom; MS, means square

Table S2. Results of 2-way PERMANOVA examining the effects of diet and tank, and 1-way PERMANOVA examining the effect of diet on the overall larval success of *Gracilechinus acutus*.

Parameters	Source	df	MS	Pseudo-F	P (perm)	Unique perms	P (MC)
Overall larval success 2-way	Diet	2	53.7	2.61	0.16	630	0.14
	Tank (Diet)	4	20.3	1.04	0.44	9950	0.45
	Residual	6	19.4				
Overall larval success 1-way	Diet	2	85.5	4.33	0.03	8950	0.03
	Residual	10	19.7				

NB: df, degrees of freedom; MS, means square

Table S3. Results of ANOVA examining the effects of diet and tank on success parameters of *Gracilechinus acutus* larvae.

Parameter	Source	df	MS	F	P
Fertilisation success	Diet	2	47.2	1.06	0.40
	Tank (Diet)	4	87.0	1.96	0.22
	Residual	6	44.4		
10-day survival	Diet	2	715	5.99	0.04
	Tank (Diet)	4	208	1.74	0.26
	Residual	6	119		
Egg size	Diet	2	6.88	18.7	0.003
	Tank (Diet)	4	1.10	2.98	0.11
	Residual	6	0.37		
Pluteal length	Diet	2	375	1.18	0.37
	Tank (Diet)	4	141	0.44	0.77
	Residual	6	317		
Pluteal symmetry	Diet	2	10.1	6.20	0.04
	Tank (Diet)	4	2.82	1.74	
	Residual	6	1.62		

NB: df, degrees of freedom; MS, means square

Table S4. Results of ANOVA examining the effects of diet on success parameters of *Gracilechinus acutus* larvae.

Fatty Acid	Source	df	MS	F	P
Fertilisation success	Diet	2	242	3.94	0.06
	Residual	10	61.4		
10-day survival	Diet	2	1090	7.02	0.01
	Residual	10	155		
Egg size	Diet	2	7.13	10.8	0.003
	Residual	10	0.66		
Pluteal length	Diet	2	431	1.75	0.22
	Residual	10	247		
Pluteal symmetry	Diet	2	7.13	3.39	0.08
	Residual	10	2.10		

NB: df, degrees of freedom; MS, means square

Table S5. Results of ANOVA examining the effects of diet on lipid uptake parameters of *Gracilechinus acutus*.

Parameter	Source	df	MS	F	P
Gonad index	Diet	2	0.0026	17.15	0.0001
	Residual	12	0.0001		
Total lipid - Adults	Diet	2	8.27	2.97	0.09
	Residual	12	2.79		
Total lipid - Eggs	Diet	2	38.8	1.40	0.32
	Residual	6	83.3		
n-3 PUFA:n-6 PUFA - Adults	Diet	2	0.056	1.93	0.19
	Residual	12	0.029		
n-3 PUFA:n-6 PUFA - Eggs	Diet	2	0.0085	0.12	0.89
	Residual	6	0.071		

NB: df, degrees of freedom; MS, means square