

Supplement 5: ANOVA main effects results of mussel additions, different types of fencing and site on properties of the biofilm.

Title:

Intertidal mussel reefs change the composition and size distribution of diatoms in the biofilm

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Results from the ANOVA model selected by AICc to have the highest quality (see Table S3); describing effects of mussel additions (mussel additions or not), different types of fencing (plastic fence or rope) and site (exposed sand plain or more sheltered wake of mussel bed) for each of the response variables: total biovolume of diatoms, total cell numbers, average size of diatom cells in sample, diatom species richness and the organic matter content of the upper 5 cm of the sediment (ANOVA for unbalanced designs; Type III ANOVA using the car package in R, Version 3.0-10). Note that for species richness, the main effects are extracted from the two-way factorial model. For all other response variables, the effects are from the main effects model (no interactions included in the model).

Table S5. ANOVA results of different types of, different types of fencing, mussel additions, and site.

	fence type		mussel addition		site	
	F	p	F	p	F	p
total numbers of diatom cells	2.2	0.156	4.6	0.046	17.1	<0.001
total biovolume of diatoms	1.7	0.205	0.7	0.417	11.1	0.004
organic matter content (5 cm)	0	0.838	0.1	0.768	36.7	<0.001
average cell size of diatoms	0.1	0.825	7.4	0.014	0.8	0.373
diatom species richness	8.5	0.011	0.7	0.434	30.7	<0.001

Note: df fence = 1, df mussel addition = 1, df site = 1, df error = 18