

Supplement 3: Model selection based on Akaike's Information Criteria,
corrected for small sample size (AICc)

Title:

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

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AICc values for univariate models testing the 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); on 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. The candidate models were analysed using ANOVA for unbalanced designs (Type III ANOVA using the car package in R, Version 3.0-10) and included different levels of interactions (full factorial model: site*fence*mussel addition; two-way factorial model: site + fence + mussel addition + site:fence + fence:mussel addition + site:mussel addition; main effects model: site + fence + mussel addition). AICc estimates the quality of a model, relative to the other models. The best model according to AICc is indicated in bold.

Table S3. AICc values for 1) full factorial, 2) two-way factorial and 3) main effects model.

	full factorial	two-way	no interactions
Candidate model:	model	interaction model	model
total numbers of diatom cells	85.38	81.69	69.13
total biovolume of diatoms	28.19	23.02	12.03
average cell size of diatoms	-9.89	-14.44	-21.83
diatom species richness	95.43	91.55	94.93
organic matter content (5 cm)	-4.84	-10.33	-17.3