

The following supplement accompanies the article

Aggregations of brittle stars can perform similar ecological roles as mussel reefs

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Fig. S1. Picture of the Day grab used to sample fauna. Photo credit: C. Bertolini



Fig. S2. Day grabs illustrating typical samples with *M. modiolus* and *O. fragilis* (A), *M. modiolus* shell (B), *O. fragilis* (C), and mud (D). The grab sampled 0.1m^2 . Photo credits: C. Bertolini and N. Geraldi.

Table S1. Taxon and their respective groups quantified in the grab samples. The proportion for each taxon of the total number of individuals for the grabs that had all taxon quantified and for the grabs that only conspicuous taxon were quantified. Only data from conspicuous taxon were used for all analyses.

Taxa	Taxa group	Full	Conspicuous
<i>Abra alba</i>	Bivalve	0.248	0.254
<i>Amphipholis squamata</i>	Echinoderm		0.002
<i>Amphiura chiajei</i>	Echinoderm		0.008
<i>Amphiura filiformis</i>	Echinoderm		0.010
Anomiidae	Bivalve	0.018	
<i>Aphrodita aculeata</i>	Polychaete	0.001	0.001
<i>Astarte sulcata</i>	Bivalve	0.033	0.036
<i>Atelecyclus rotundatus</i>	Crustacean		0.001
<i>Buccinum undatum</i>	Gastropod	0.005	0.012
Capitellidae	Polychaete	0.046	
<i>Caprella acanthifera</i>	Crustacean		0.001
<i>Clausinella fasciata</i>	Bivalve	0.009	0.015
<i>Crossaster papposus</i>	Echinoderm		0.003
<i>Diodera graeca</i>	Gastropod		0.001
<i>Ebalia tuberosa</i>	Crustacean		0.003
<i>Echinocardium cordatum</i>	Echinoderm		0.001
<i>Emarginula fissura</i>	Gastropod	0.003	
<i>Eschinus esculentus</i>	Echinoderm	0.003	0.003
<i>Eteone longa</i>	Polychaete	0.004	
<i>Eunereis longissima</i>	Polychaete	0.004	
Eunicidae	Polychaete	0.005	
<i>Euspira nitida</i>	Gastropod	0.002	
<i>Galathea</i>	Crustacean		0.017
<i>Galathowenia oculata</i>	Polychaete	0.002	
Gammaridae	Crustacean		0.008
<i>Gari depressa</i>	Bivalve	0.024	0.021
<i>Gari tellinella</i>	Bivalve	0.027	0.030
<i>Gattyana cirrhosa</i>	Polychaete	0.002	
<i>Gibbula cineraria</i>	Gastropod	0.002	
<i>Glycera spp.</i>	Polychaete	0.004	
<i>Glycimeris glycimeris</i>	Bivalve	0.004	0.003
Gobiesocidae	Fish		0.004
Golfingiidae	Sipunucla	0.005	0.005
Harmothoe	Polychaete	0.014	0.009
Hesionidae	Polychaete	0.002	
<i>Hiatella arctica</i>	Bivalve	0.013	0.010

Taxa	Taxa group	Full	Conspicuous
Hippolytidae	Crustacean		0.017
<i>Lepidonotus squamatus</i>	Polychaete	0.013	0.010
<i>Leptochiton asellus</i>	Chiton	0.029	0.018
<i>Limaria sp.</i>	Bivalve	0.010	0.007
<i>Liocarcinus spp.</i>	Crustacean		0.004
Lumbrineridae	Polychaete	0.015	
<i>Marthasterias glacialis</i>	Echinoderm		0.008
<i>Mediomastus fragilis</i>	Polychaete	0.002	
<i>Mimachlamys varia</i>	Bivalve	0.018	0.017
<i>Mya arenaria</i>	Bivalve	0.009	0.009
<i>Mya truncata</i>	Bivalve	0.009	0.007
<i>Myrtea spinifera</i>	Bivalve	0.003	
<i>Mytilus edulis</i>	Bivalve		0.006
Nemertea	Nematode	0.001	0.003
Nephtheidae	Polychaete	0.027	0.018
Nereis spp.	Polychaete	0.001	0.001
<i>Nucula nucleus</i>	Bivalve	0.079	0.069
Nuculanidae	Bivalve	0.002	
Oeonidae	Polychaete	0.003	
<i>Onchidoris spp.</i>	Nudibranch	0.001	
<i>Onoba semicostata</i>	Gastropod	0.002	
<i>Ophelina acuminata</i>	Polychaete	0.009	
<i>Ophiocomina nigra</i>	Echinoderm		0.057
<i>Ophiura spp.</i>	Echinoderm		0.062
Orbiniidae	Polychaete	0.003	
<i>Owenia fusiformis</i>	Polychaete	0.013	0.008
Paguridae	Crustacean		0.024
<i>Parvicardium pinnulatum</i>	Bivalve	0.004	
<i>Pecten maximus</i>	Bivalve	0.003	
Pectinariidae	Polychaete	0.004	
<i>Pherusa plumosa</i>	Polychaete	0.058	0.038
<i>Pholas dactylus</i>	Bivalve		0.014
<i>Pilumnus hirtellus</i>	Crustacean		0.003
<i>Pisa spp.</i>	Crustacean		0.009
<i>Pisidia longicornis</i>	Crustacean		0.006
<i>Platyhelminthes</i>	Platyhelminthes	0.001	
Polynoidae	Polychaete	0.016	0.013
<i>Psammechinus miliaris</i>	Echinoderm	0.001	0.002

Taxa	Taxa group	Full	Conspicuous
Sabellidae	Polychaete	0.045	
<i>Scalibregma inflatum</i>	Polychaete	0.011	
<i>Scoloplos armiger</i>	Polychaete	0.004	
Sepiola spp.	Cephalopod	0.001	
Serpulidae	Polychaete	0.005	0.006
<i>Spatangus purpureus</i>	Echinoderm		0.001
Spionidae	Polychaete	0.001	0.001
<i>Talochlamys pusio</i>	Bivalve		0.001
<i>Tapes aureus</i>	Bivalve	0.002	
<i>Tapes rhomboides</i>	Bivalve	0.005	
Terebellidae	Polychaete	0.020	0.017
<i>Timoclea ovata</i>	Bivalve	0.087	0.085
<i>Tritia incrassata</i>	Gastropod	0.001	0.005
<i>Trivia arctica</i>	Gastropod	0.002	
<i>Tubificoides spp.</i>	Polychaete	0.001	
<i>Velutina velutina</i>	Gastropod	0.002	

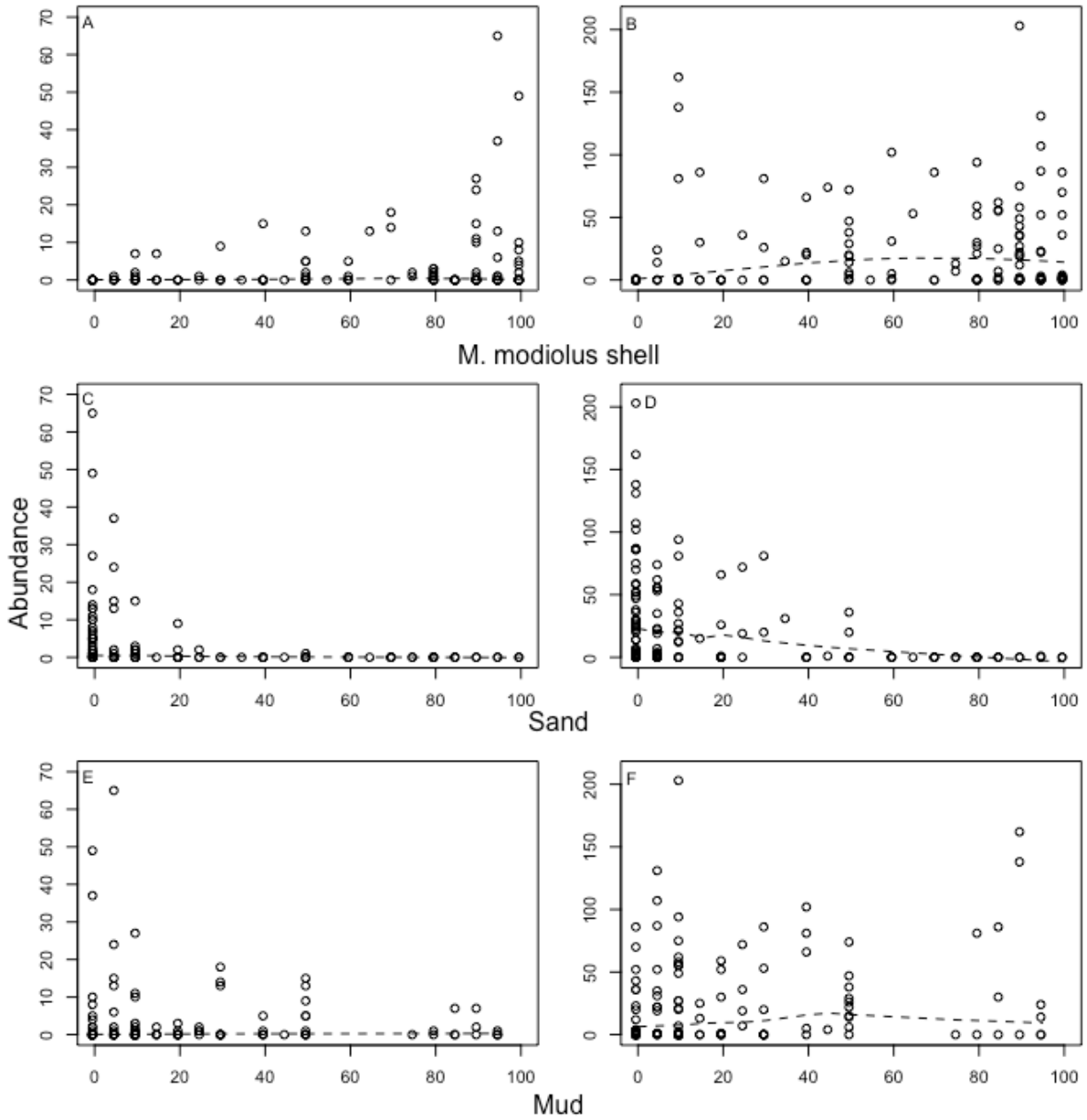


Fig. S3. The abundance of *M. modiolus* (left column) and *O. fragilis* (right column) in grab samples compared to the percent cover of 3 substrate categories. Substrate type was determined from photos of grabs. Fitted lines were determined by the lowess function in R.

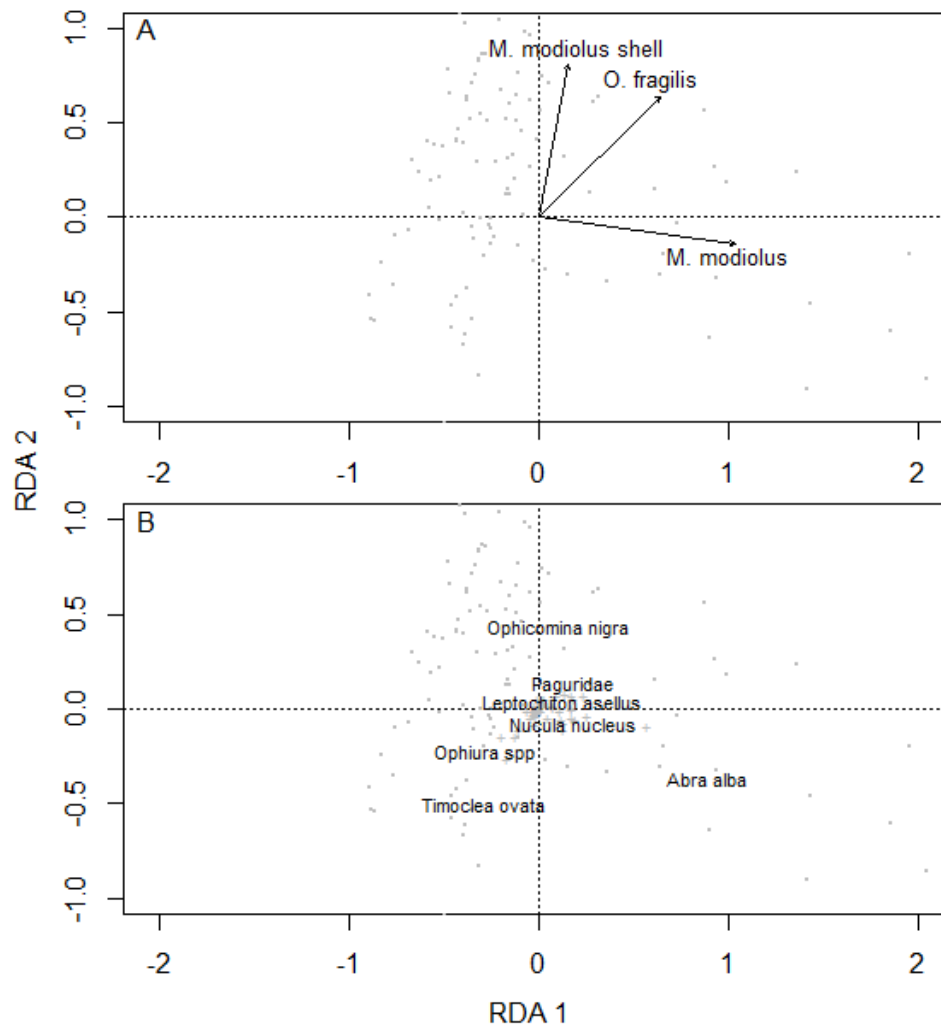


Fig. S4. The first and second axis of RDA of the fauna assemblage in grab samples overlaid with vectors of predictor variables (A) and taxon centroids (B). The first axis explained 6.5% and the second explained 2.9% of the variation respectively. To make taxon labels readable and to reduce clutter in B, only the most abundant taxon that did not overlap with other taxon labels are shown. Grey dots represent individual samples and vector length is relative to the variance explained by the variable.