Oikos

OIK-04471

Reynolds, L. K., Chan, K. M., Huynh, E., Williams, S. L. and Stachowicz, J. J. 2017. Plant genotype identity and diversity interact with mesograzer species diversity to influence detrital consumption in eelgrass meadows. – Oikos
doi: 10.1111/oik.04471

Appendix 1

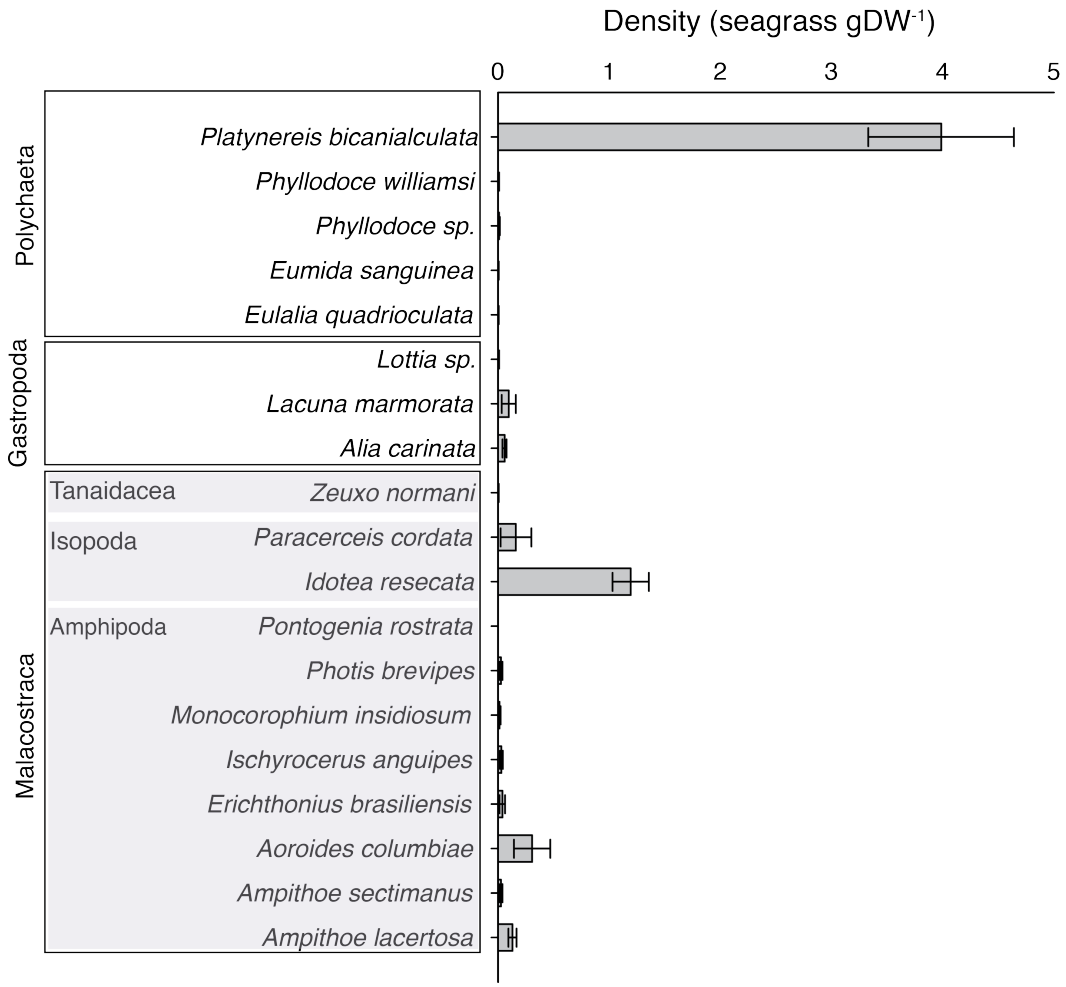

Figure A1. Bodega Bay field densities of herbivorous invertebrates. Grab samples were collected and sieved to 500 µM. Plant material was dried and weighed. Herbivorous invertebrates were identified indentified to species and counted. They are reported here relative to plant mass. Error bars are standard error.

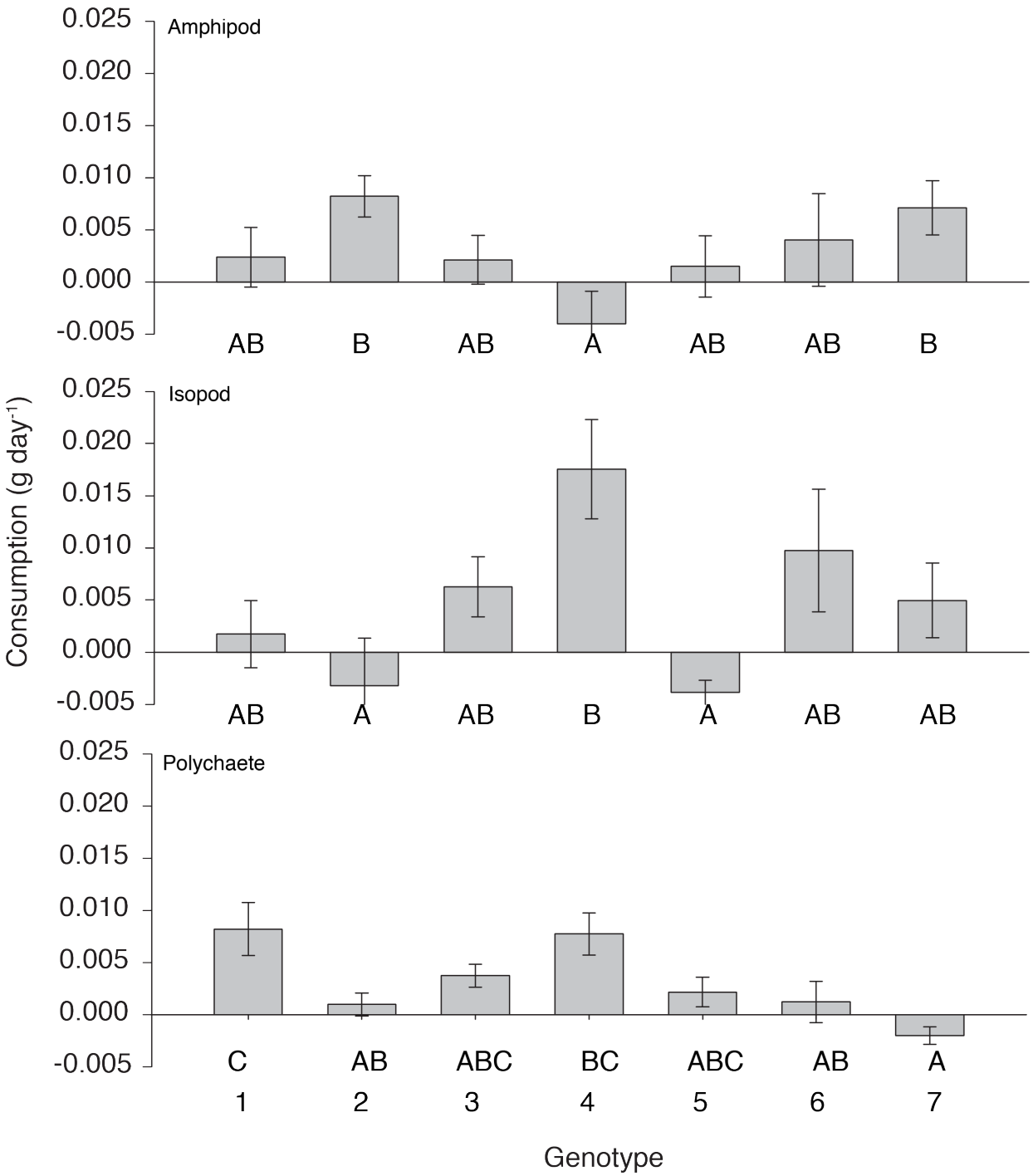

Figure A2. Consumption of outer, brown, detrital *Zostera marina* leaves of seven different genotypes (represented by numbers on the x axis) . These genotypes are a completely separate Error bars are standard error, and different letters represent statistically significant different consumption rates when analyzed using a Hotelling T^2-test.

	Nitrogen	Carbon	Tear Strength	Penetration	Phenolic Content
Nitrogen					
Carbon	-0.01 0.97				
Tear strength	**-0.75** **0.05**	0.34 0.46			
Penetration	-0.63 0.13	-0.08 0.87	0.26 0.58		
Phenolic Content	-0.45 0.31	-0.1 0.82	0.58 0.17	-0.07 0.88	

Table A1. Pearson correlation coefficients for genotype specific traits. Each trait was measured on five independent leaf segments of a *Zostera marina* clone. The upper number is the Pearsons correlation coefficient (r), and the lower number is the significance value (p).

Response variable	**Explanatory variable**	**Partial R2**	**F**	**p**
Isopod consumption	tear strength	0.73	13.44	0.01
Amphipod consumption	none			
Polychaete consumption	tear strength	0.6	7.53	0.04
	penetration	0.18	3.55	0.13

Table A2. Multiple stepwise regression results. For each invertebrate species, we explored the relationship between traits and consumption using a multiple linear regression with independent variables selected using the stepwise method (Proc REG, SAS 9.1).

	P1	P2	P3	P4	P5
Nitrogen	-0.6	0.21	-0.04	0.29	0.71
Carbon	0.1	0.6	0.7	0.33	-0.19
Tear strength	0.58	0.29	0.06	-0.47	0.6
Penetration	0.35	-0.65	0.36	0.47	0.31
Phenolic content	0.41	0.31	-0.61	0.6	-0.02
Prop. of variance explained	0.48	0.24	0.22	0.04	0.02

Table A3. Principal components analysis. The values represent loadings and total variance explained by each principal component.