

[10.1071/MF22236](https://doi.org/10.1071/MF22236)

Marine and Freshwater Research

Supplementary Material

Investigating microplastic contamination and biomagnification in a remote area of South Australia

Solomon O. Ogunola^{A,}, Patrick Reis-Santos^A, Nina Wootton^A, and Bronwyn M. Gillanders^A*

^ASouthern Seas Ecology Laboratories, School of Biological Sciences and Environment Institute, The University of Adelaide, Adelaide, SA 5005, Australia.

*Correspondence to: Solomon O. Ogunola Southern Seas Ecology Laboratories, School of Biological Sciences and Environment Institute, The University of Adelaide, Adelaide, SA 5005, Australia Email: solomon.ogunola@adelaide.edu.au

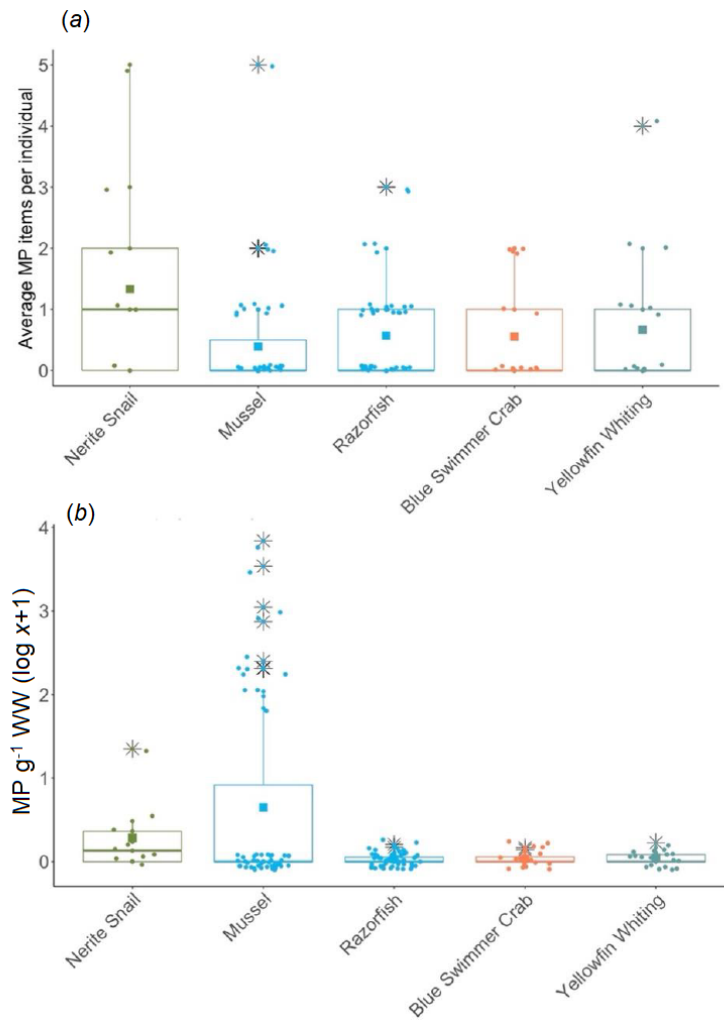


Figure S1. Box plots of mean and standard error of the abundance of microplastic in biota species (a) per individual and (b) per gram (wet weight) ($\log(x+1)$ transformed). The line shows the median, the filled in square shows the mean, the circles represent jittered data points and asterisks represent outliers. Green, gastropods; blue, bivalve; orange, crustacean; grey, fish.

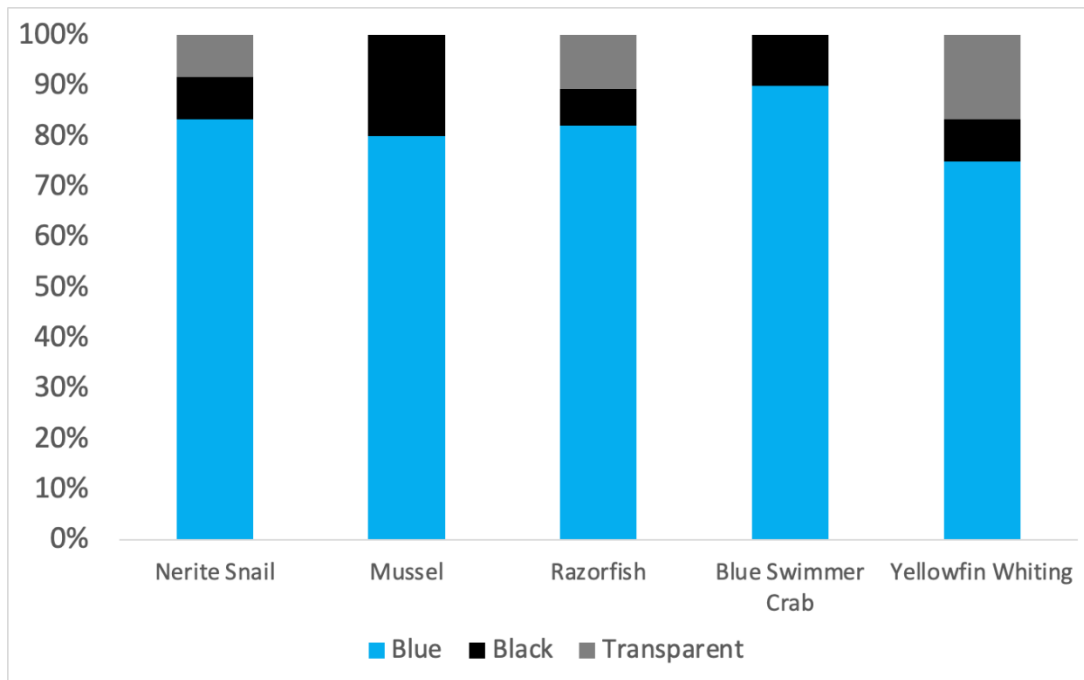


Figure S2. Percentage of microplastic colours found in biota species (nerite snail, $n = 12$; mussel, $n = 20$; razorfish, $n = 28$; blue swimmer crab, $n = 10$; yellowfin whiting, $n = 12$). The colours shown in the figure represent the colours of the microplastic (blue, black and transparent).

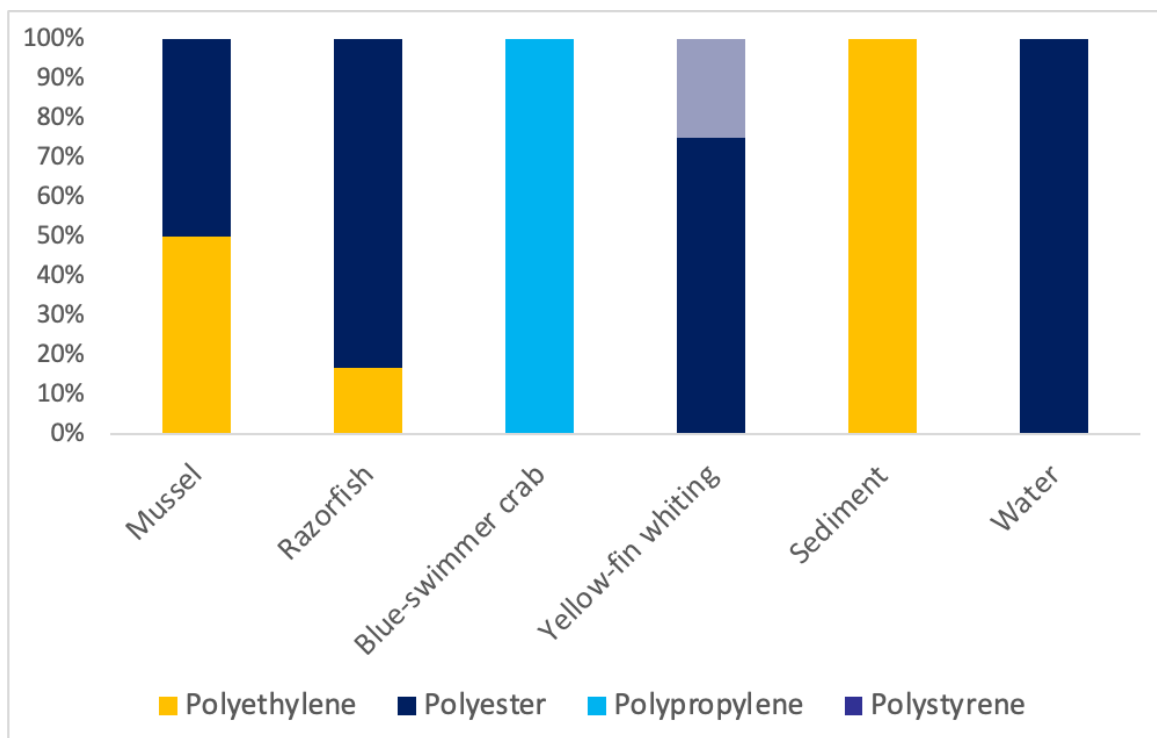


Figure S3. Polymer composition of microplastic identified using the u-FTIR in different biota species and water and sediment. Number of microplastics tested; mussel, $n = 6$; razorfish, $n = 6$; blue-swimmer crab, $n = 1$; yellowfin whiting, $n = 4$; sediment, $n = 7$; water, $n = 4$. Note only 20% of microplastic particles were tested with the FTIR.

Table S1. PERMANOVA table of results for differences in average microplastic abundance per species for (a) microplastics per individual and (b) microplastics per gram (wet weight).

Source	d.f.	SS	MS	Pseudo- <i>F</i>	<i>P</i> (perm)	Unique perms
(a) Microplastics per individual						
(main test)						
Biota	4	7.0263	1.7566	1.9737	0.079	901
Residual	140	124.6	0.89001			
Total	144	131.63				
B) Microplastics per gram (WW)						
(main test)						
Biota	4	436.53	109.13	4.0362	0.013	998
Residual	140	3785.4	27.039			
Total	144	4221.9				
Pair-wise tests: Groups				<i>t</i>	<i>P</i> (perm)	Unique perms
Razorfish, mussel				2.9583	0.001	999
Razorfish, blue swimmer crab				0.4994	0.606	991
Razorfish, nerite snail				3.5219	0.001	907
Razorfish, yellowfin whiting				1.0888	0.27	995
Mussel, blue swimmer crab				1.7812	0.077	887
Mussel, nerite snail				1.1049	0.253	881
Mussel, yellowfin whiting				1.7764	0.078	936
Blue swimmer crab, nerite snail				2.0624	0.01	596
Blue swimmer crab, yellowfin whiting				0.4182	0.694	880
Nerite snail, yellowfin whiting				2.0123	0.007	734