

Ecography

**ECOG-04764**

Travers, S. and Berdugo, M. 2020. Grazing and productivity alter individual grass size dynamics in semi-arid woodlands. –  
Ecography doi: 10.1111/ecog.04764

Appendix 1

## Appendix 1

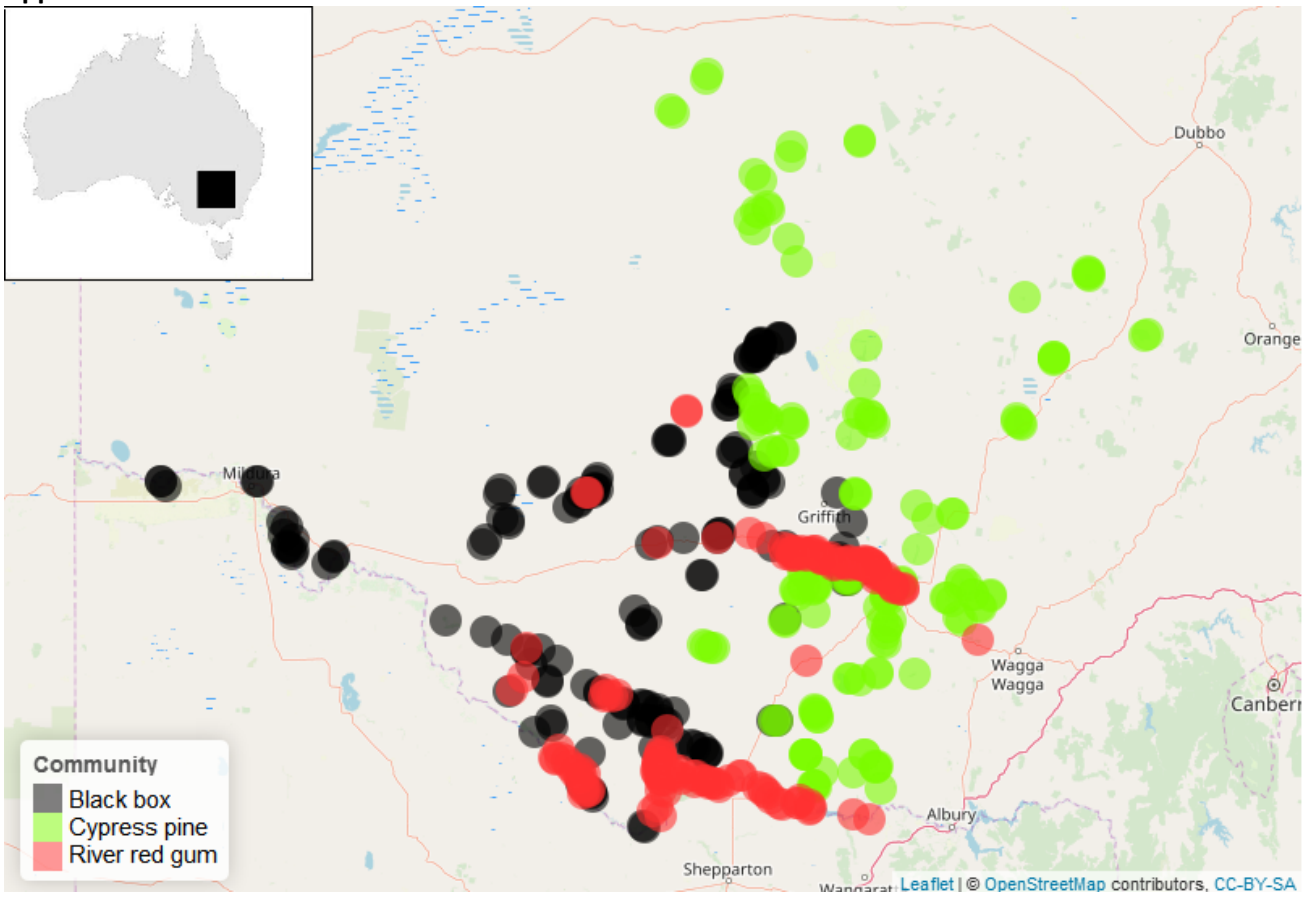


Figure A1. Layout of sites for each community.

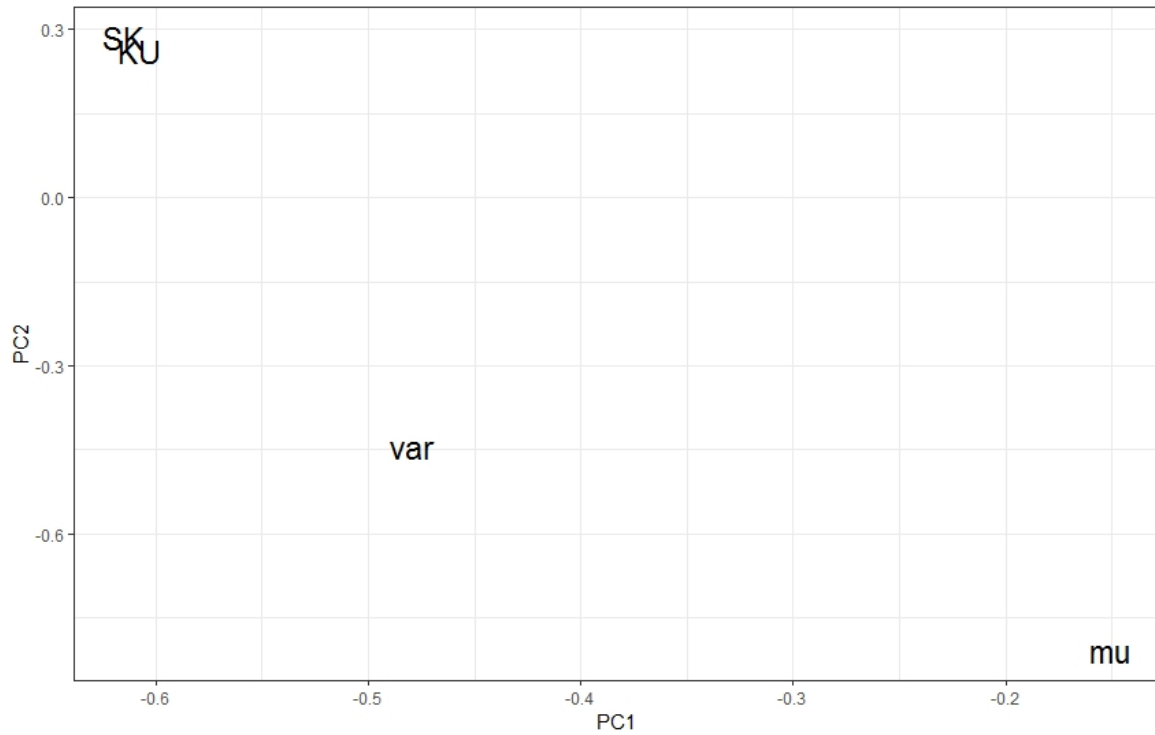


Figure A2. Principal coordinates analyses (PCA) of the measures used to summarise the size distribution of perennial grass butt widths, skewness (SK), kurtosis (KU), variance (var), power law and mean (mu). Variance explained by PC1 and PC2 was 57.1% and 31.5% respectively. Due to the strong relatedness between skewness and variance we did not include both measures in further analyses, as we assumed they were spatially dependent (*sensu* Adler et al. 2001). This means that we assumed the relationship between the measures of size distribution is consistent across different locations.

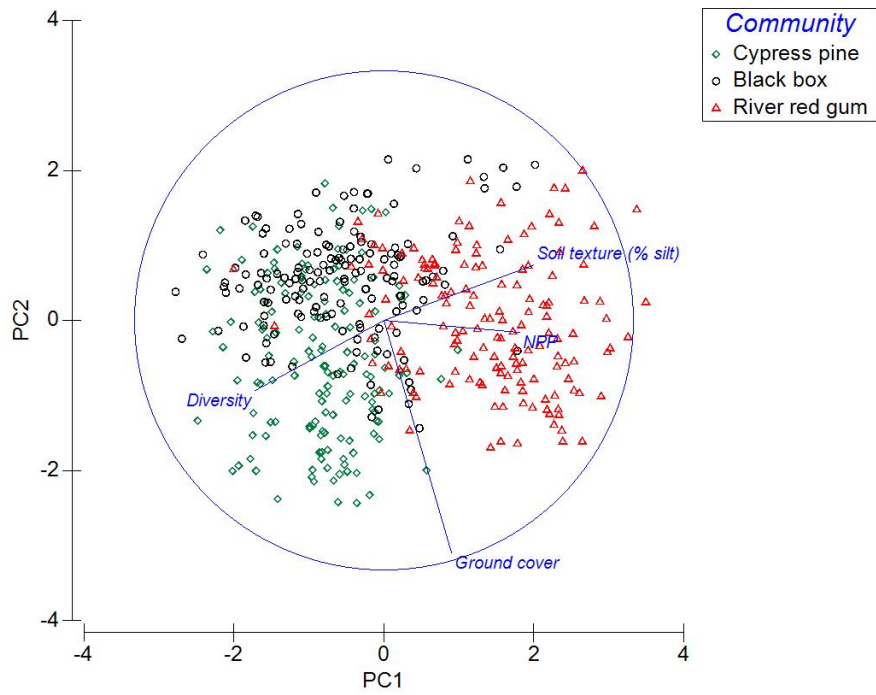


Figure A3. Principal components analyses (PCA) of our broad environmental measures across our sites, diversity, productivity (NPP), ground cover (%) and soil texture (% silt). Variance explained by PC1 and PC2 was 43.1% and 23.9% respectively.

Table A1. Top model averaged coefficients for density and size distribution measures.

Term	Density				Mean diameter				Variance				Skewness			
	Est.	Adj. SE	z-val.	p val.	Est.	Adj. SE	z-val.	p val.	Est.	Adj. SE	z-val.	p val.	Est.	SE	z-val.	p val.
Ground cover %	0.14	0.04	3.72	<0.001	0.07	0.02	4.12	<0.001	0.24	0.05	4.70	<0.001				
DCA1	-0.47	0.05	9.70	<0.001	0.01	0.02	0.57	0.57	0.14	0.06	2.12	0.034				
NPP	0.24	0.04	5.38	<0.001	-0.07	0.02	3.75	<0.001	-0.08	0.06	1.29	0.20	0.06	0.02	2.39	0.017
Diversity	0.08	0.04	1.79	0.07	-0.05	0.02	2.29	0.022	-0.09	0.06	1.59	0.11	-0.04	0.02	1.87	0.06
Cow	0.15	0.04	4.18	<0.001	0.02	0.02	0.86	0.39	0.06	0.05	1.13	0.26	-0.01	0.02	0.33	0.74
Cow × DCA1	0.05	0.04	1.27	0.21	0.04	0.02	1.96	0.049	0.13	0.06	2.23	0.026				
Cow × NPP	0.05	0.04	1.04	0.30	-0.04	0.02	2.03	0.042					0.05	0.03	1.82	0.07
Cow × Div.	-0.03	0.04	0.79	0.43					0.03	0.06	0.49	0.62				
Kangaroo	0.19	0.04	4.71	<0.001	-0.02	0.02	0.95	0.34	-0.02	0.05	0.43	0.67	0.00	0.02	0.04	0.97
Kangaroo × DCA1	-0.10	0.04	2.13	0.034	0.04	0.02	1.80	0.07								
Kangaroo × NPP	-0.04	0.04	0.98	0.33	0.02	0.02	0.83	0.41					0.02	0.02	0.79	0.43
Kangaroo × Div.	-0.06	0.04	1.51	0.13	-0.04	0.02	2.19	0.029	-0.13	0.05	2.69	0.007	-0.05	0.02	2.33	0.020
Sheep	-0.07	0.05	1.32	0.19	-0.04	0.02	2.32	0.020	-0.10	0.06	1.71	0.09				
Sheep × DCA1	-0.14	0.06	2.40	0.016					-0.08	0.07	1.05	0.30				
Sheep × NPP	0.08	0.04	1.81	0.07	0.01	0.02	0.67	0.50								
Sheep × Div.	0.06	0.05	1.26	0.21												
Rabbit	0.07	0.04	1.68	0.09					0.00	0.06	0.36	0.72				
Rabbit × DCA1	-0.05	0.05	0.97	0.33												
Rabbit × NPP	0.08	0.05	1.52	0.13												
Rabbit × Div.									0.10	0.07	1.47	0.14				
Intercept	1.61	0.04	39.20	<0.001	1.66	0.02	94.67	<0.001	1.79	0.05	34.35	<0.001	0.69	0.02	30.52	<0.001