Vegetation responses to fire history and soil properties in grazed semi-arid tropical savanna

Gabrielle Lebbink[A,D], *Rod Fensham*[A,B] *and Robyn Cowley*[C]

[A]School of Biological Sciences, The University of Queensland, St Lucia, Qld 4072, Australia.

[B]Queensland Herbarium, Department of Environment and Resource Management, Toowong, Qld 4066, Australia.

[C]Department of Primary Industries and Resources, GPO Box 3000, Darwin, NT 0801, Australia.

[D]Corresponding author. Email: g.lebbink@uq.edu.au

Supplementary material

Table 1. Outline of statistical analysis conducted, indicating the scale and corresponding response and predictor variables

Statistical test	Error distribution	Response variable	Predictor variable	Habitat (separate/to gether/both)	Scale	Response variable specific to scale
Ordination with vector fitting	N/A	Species composition (presence/absence) matrix	N/A	Both	Plot	Species, plot presence/absence score (1,0).
		Species composition (presence/absence) matrix			Block	Sum of species presence/absence scores for each block.
PERMANOVA	Normal	Species composition (presence/absence) matrix	Season of fire	Separate	Block	Sum of species presence/absence scores for each block
		Species abundance matrix				Sum of species abundance scores for each block.
Mixed effect models with habitat and block as random effects	Normal	Species richness	Fixed: Fire interval and clay Random: Habitat and block.	Together	Plot	Total species per plot.
		Lifeform richness				Total species for each lifeform per plot
		Lifeform abundance				Sum abundance scores for each lifeform per plot.
Tukeys HSD test *post-hoc* pairwise analysis	Normal	Species richness	Season of fire Fire interval	Both	Block	Mean species richness for each block
		Lifeform richness				Mean lifeform richness for each block
		Lifeform abundance				Mean lifeform abundance for each block
Generalised linear model (GLM)	poisson	Individual species abundance	Clay and fire interval	Separate	Block	Sum of species abundance scores for each block.
		Individual species presence/absence			Block	Sum of species presence/absence scores for each block.
	binomial	Individual species presence/absence			Plot	Species, plot presence/absence score (1,0).