Supplementary material

Cause and effects of a megafire in sedge-heathland in the Tasmanian temperate wilderness

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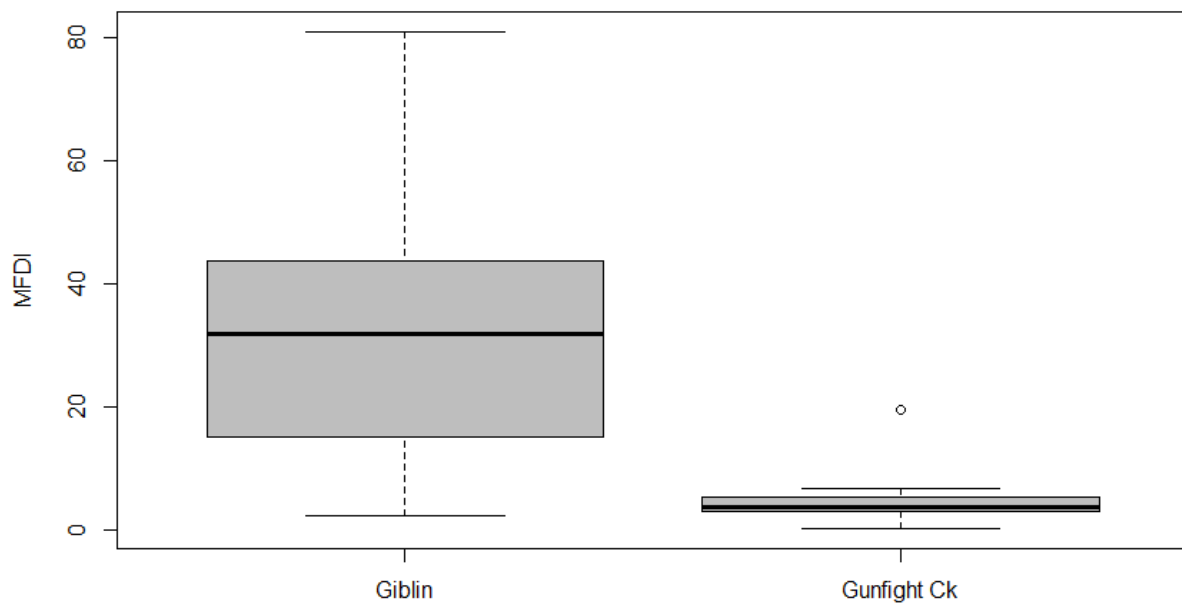[B]Corresponding author. Email: lynda.prior@utas.edu.au

Fig. S1. Boxplot showing daily values of the Moorland fire-danger rating during the Giblin River wildfire, which burnt the Davey and Lost World sites, and the Gunfight Creek management burn. Boxes indicate medians and upper and lower quartiles, with bars showing 10th and 90th percentiles, and circles, outliers.
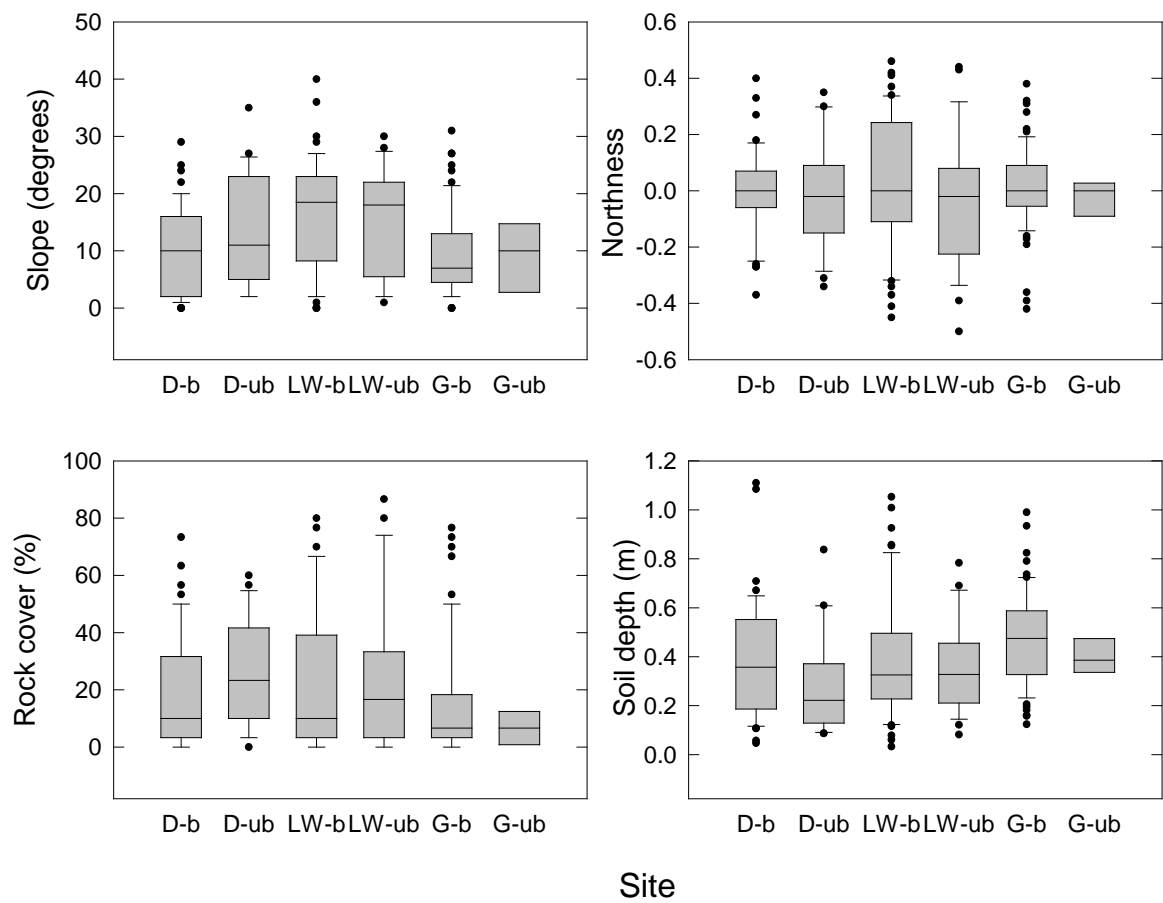
Fig. S2. Boxplots showing variability in physical variables at the three sites and in relation to recent fire history. Boxes indicate medians and upper and lower quartiles, with bars showing 10th and 90th percentiles, and circles, outliers. D, Davey; LW; G, Gunfight, Lost Worldand; b, burnt; and ub, unburnt.
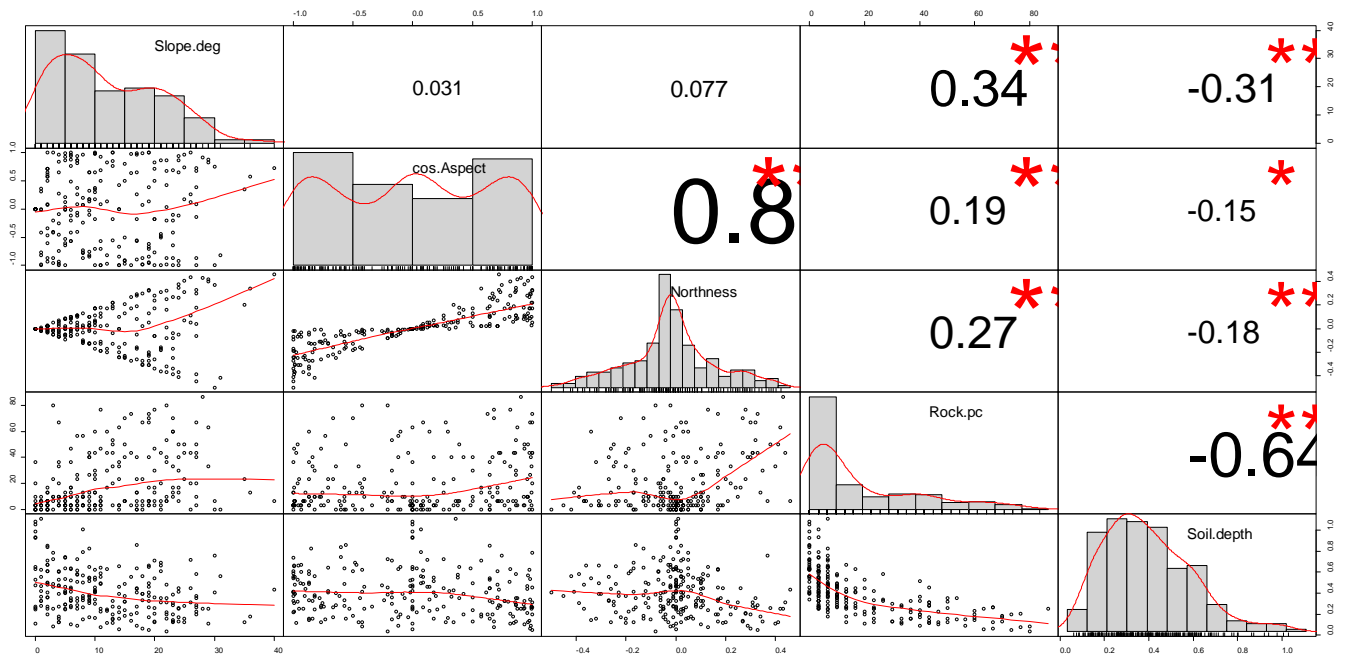
Fig. S3. Interrelationships among physical variables (all sites combined). The correlations between northness and rock cover, and northness and soil depth, were mainly driven by slope, rather than aspect.

Table S1. Calculation of fire-induced death of main stems (topkill) and whole plants

We did this by comparing the densities of live stems and live whole plants in unburnt transects with those in burnt transects at the individual sites, and overall

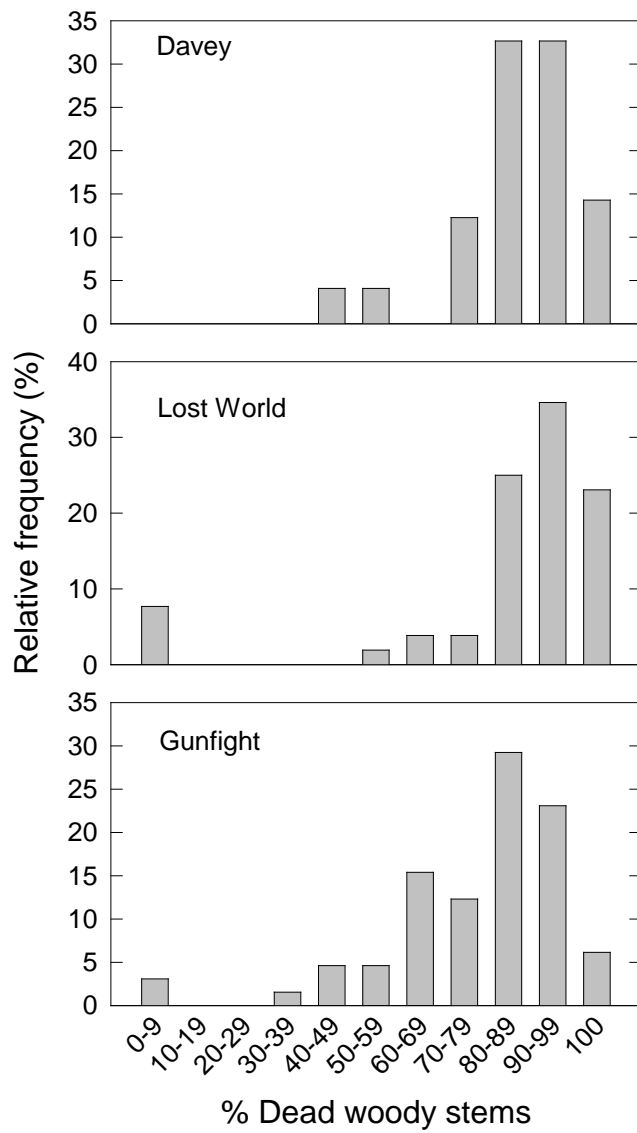| Parameter	Site			
	Davey	Lost World	Gunfight	All
Live-stem density (m^{-2})				
Unburnt	25.8	37.7	24.8	31.0
Burnt	0.3	0.7	0.6	0.5
% lower in burnt transects	98.8	98.3	97.8	98.3
Live whole-plant density (m^{-2})				
Unburnt	25.8	37.7	24.8	31.1
Burnt	2.0	3.4	2.7	2.7
%lower in burnt transects	92.4	90.9	89.1	91.2

Fig. S4. Relative frequency of transects containing the specified percentage of dead woody stems at each of the three sites. Only single-burnt transects are considered here.

Table S2. The % deviance explained by landscape physical variables for a range of biological response variables

Only those physical variables shown to have an important effect (i.e. $w+ > 0.73$; Table 4) are listed here. The %deviance explained is for the single-factor model only. The unit of observation was the individual plant for height, basal diameter, minimum twig diameter and mortality and the module (5 per transect) for the remainder. Site was included in the analyses to account for different long-term fire histories

| Biological variable	Physical variable				
	Site	Topography	Northness	Rock cover	Soil depth
Unburnt transects					
Stem height	1.9	2.2		2.3	1.5
Stem basal diameter	3.7	1.9			
Live-stem density					
Total live basal area ($cm^2\ m^{-2}$)					7.0
Burnt transects					
Minimum twig diameter	8.4		1.7		0.3
Live-stem density	1.3		1.4		
Total live basal area ($cm^2\ m^{-2}$)	11.2			2.1	1.7
%Dead main stems	1.8		0.9		0.6
%Dead whole plants	1.8		0.8		
Resprout density	2.7	2.6		1.1	
Seedling density			0.5	1.0	1.1
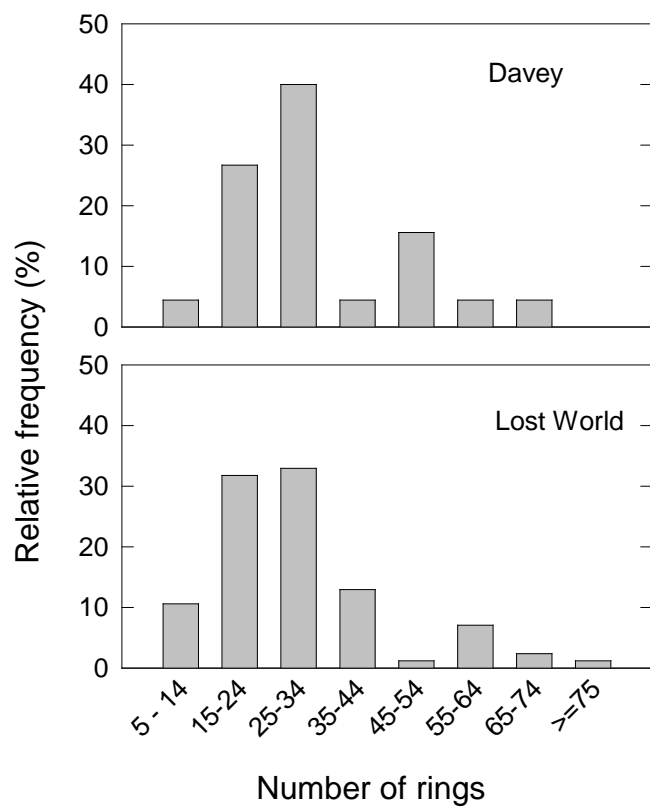
Fig. S5. Relative frequency of age classes (number of rings) at Davey and Lost World.