# Do Fire Cues Enhance Germination of Soil Seed Stores across an Ecotone ofWet Eucalypt Forest to Cool Temperate Rainforest in the Central Highlands of South-Eastern Australia?

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## SUPPLEMENTARY MATERIALS

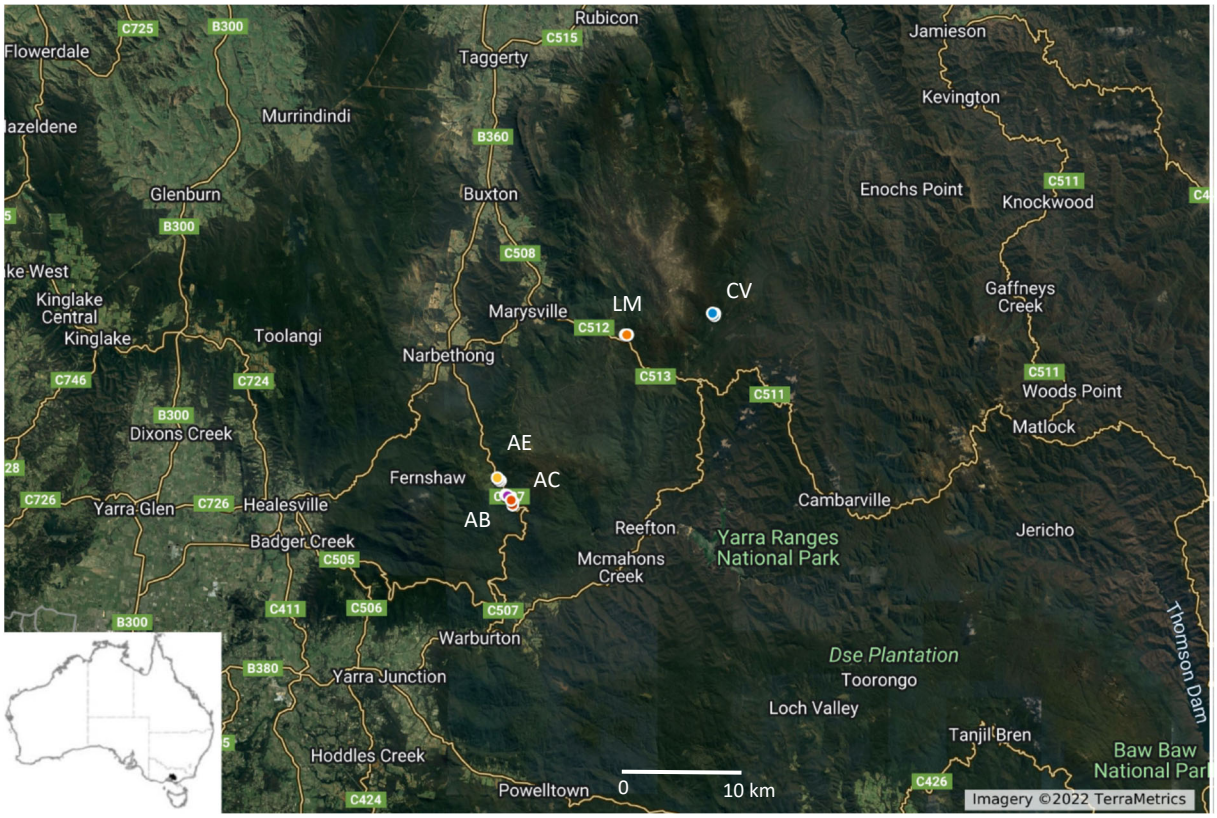



**Figure S1.** Location of study sites selected from previous work conducted by Fedrigo et al [1]. The AB, AC and AE sites are located on Acheron Way, LM sites at Lake Mountain and CV at Camberville. Each study area contains three forest types: rainforest, mixed forest, wet forest. The insert shows the location of the study area within Australia.

**Figure S2.** Relative proportion (%) of germinable seeds within life form, dispersal mode, fire response, and seral stage functional types. Results are pooled across germination treatments and forest types (see Table S2). Life form: T, therophyte; H, hemicryptophyte; C, chamaephyte; P, phanerophyte; G, geophyte. Dispersal mode: ane, anemochory; bar, barochory; end, endozoochory; epi, epizoochory; mob, mobile; myr, myrmecochory. Fire response: R, obligate resprouters; S, obligate seeders; SR, facultative seeders; Sr, weak seeders; Rs, weak resprouters. Seral stage: juv, juvenile; adol, adolescent; rf, rainforest; gen, generalist.

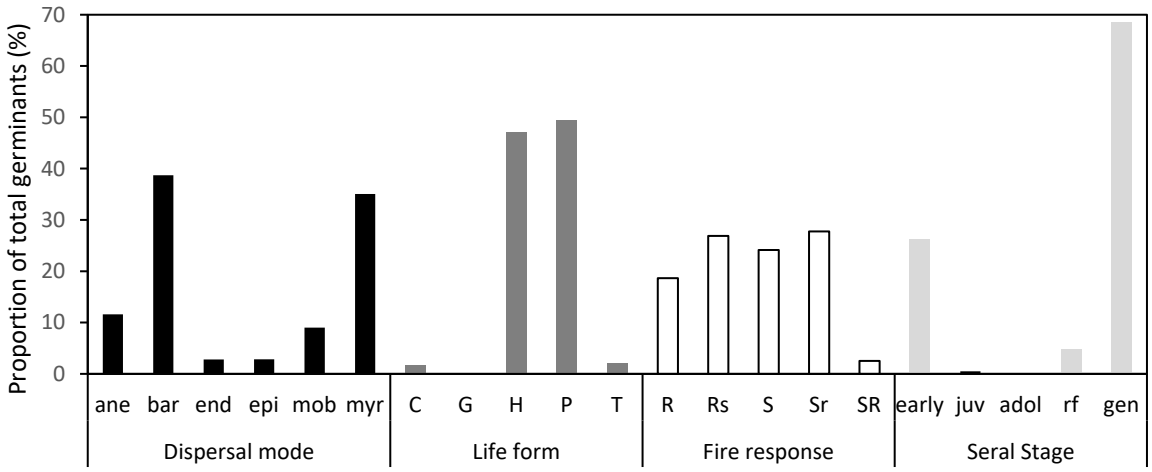


**Figure S3.** Cumulative number of germinants within each of the 10 soil seed bank treatments. The arrow indicates the timing of the soil being turned over. C, control; S, vermiculite smoke product; K, karrikinolide; VLH, very low heat; LH, low heat; HH, high heat. There were no significant differences in the frequency distribution for seedling emergent (Kolmogorov-Smirnov two-sample text, P>0.05).

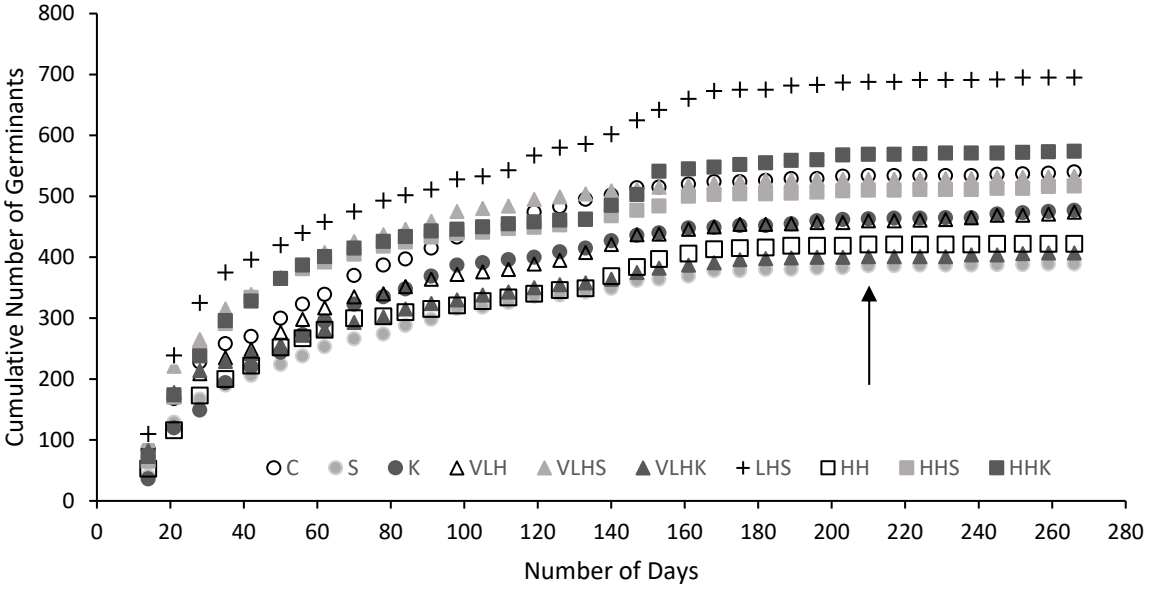
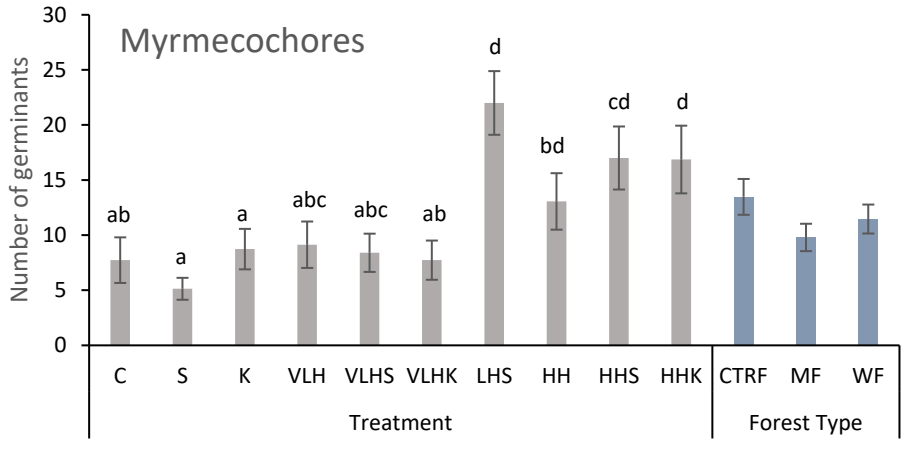
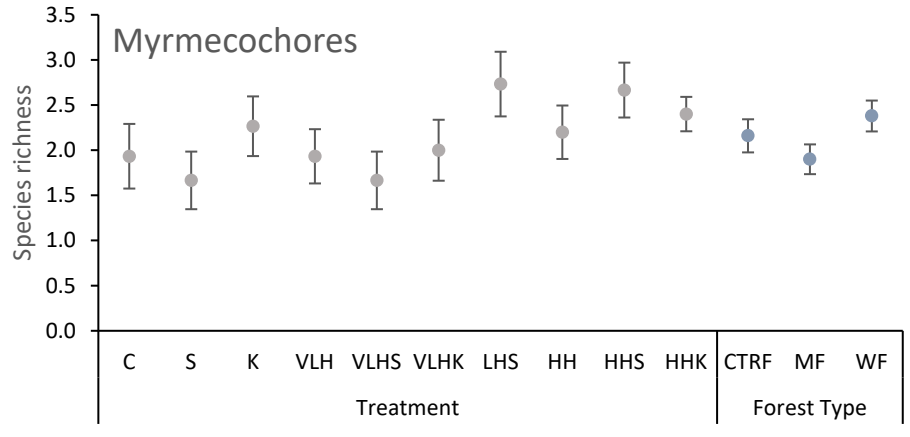
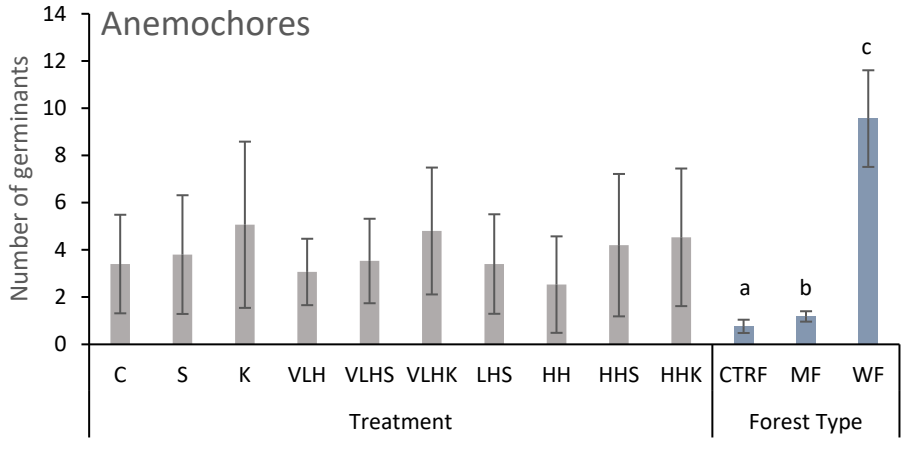


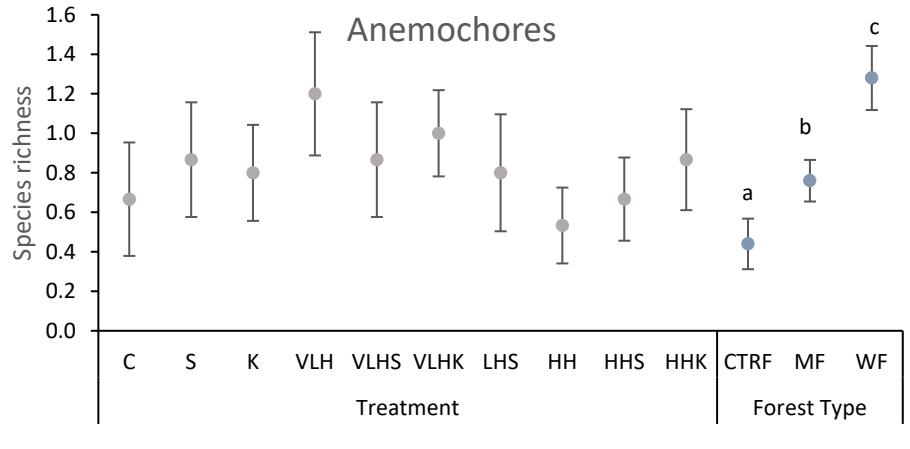
**Figure S4.** Soil seed bank treatment (C, control; S, smoke only; K, Karrikinolide; VLH, Very Low Heat; LH, Low Heat; HH, High Heat) and forest type (CTRF, cool temperate rainforest; MF, mixed forest; WF, wet forest) effects on richness (circles) and germinant density (bars) (mean per site, standard error) of species according to life form, dispersal mode, fire response and seral stage. Significant pairwise comparisons ($P \leq 0.05$) within treatments or forest type are indicated by different letters with model results provided in Table S5. There were no significant interaction effects.

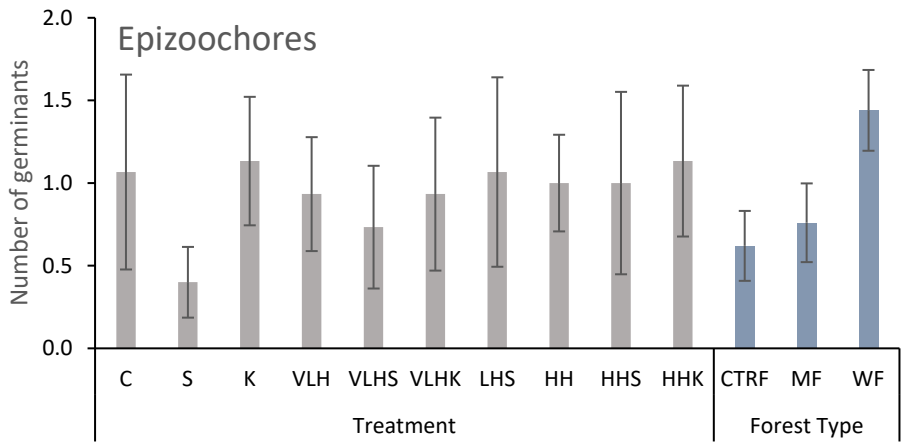
**Figure S4.** DISPERSAL MODE

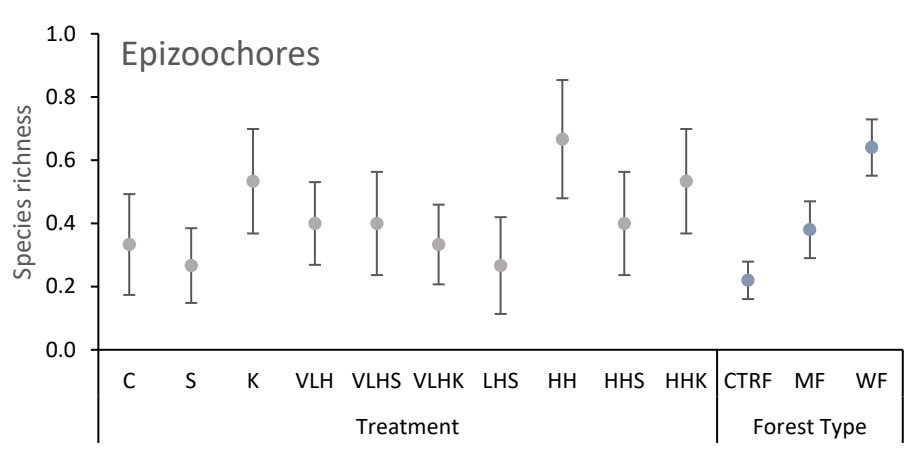


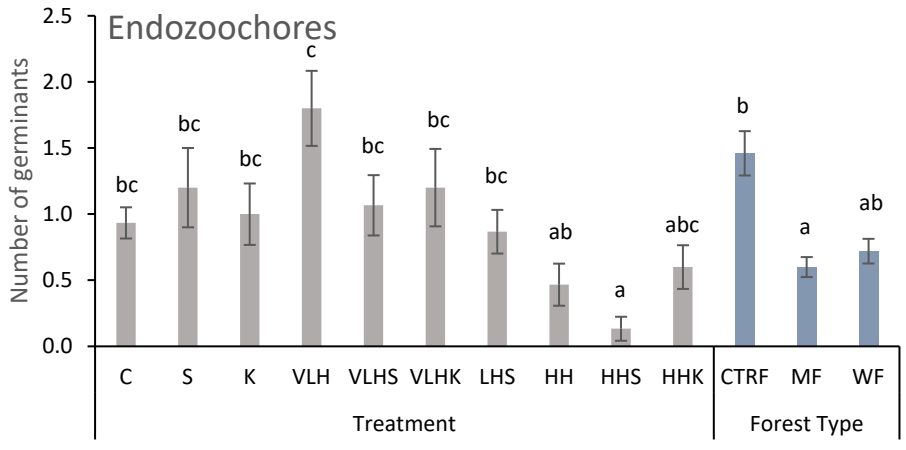



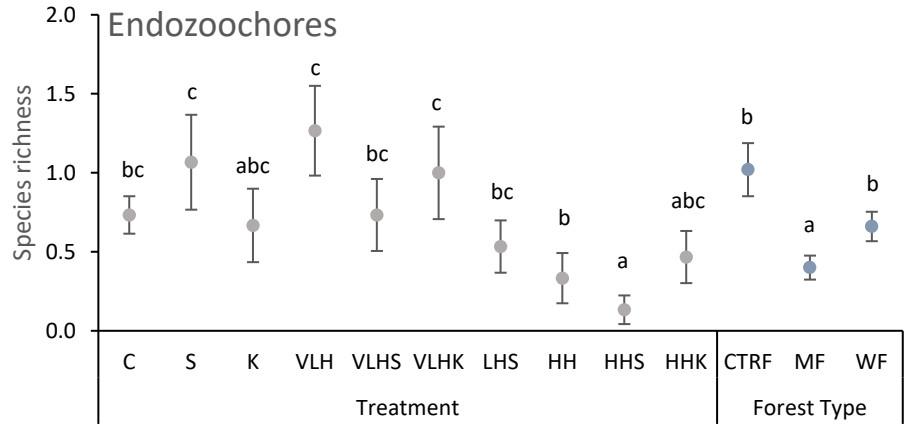



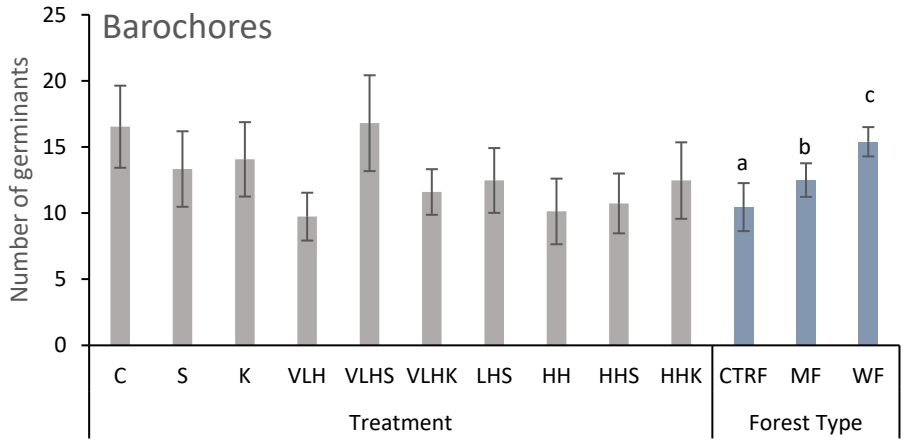



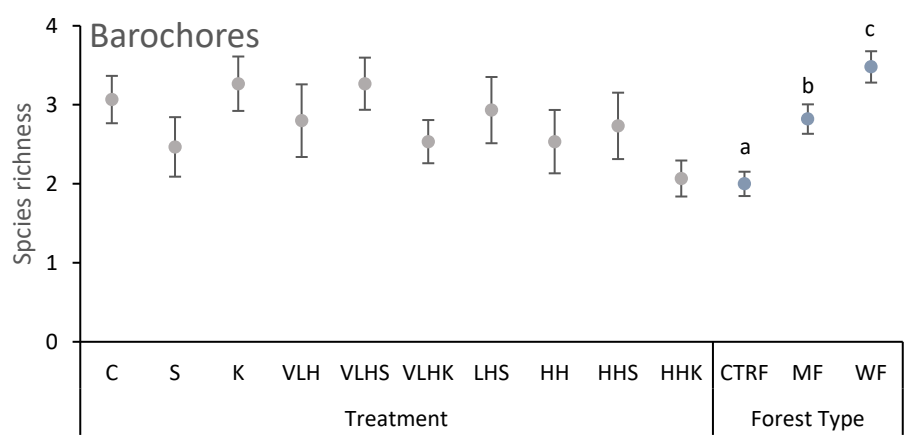



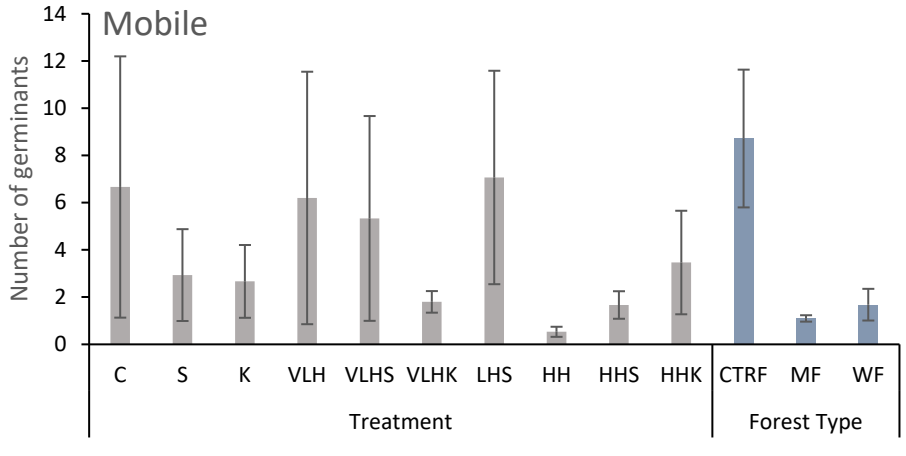



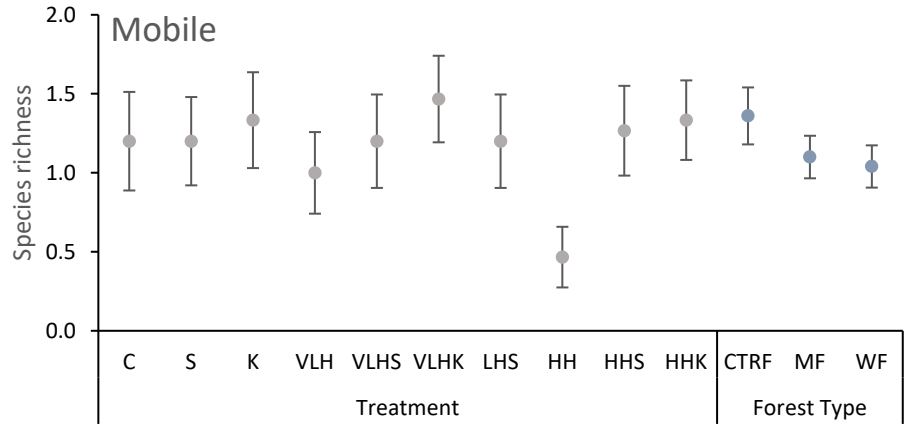
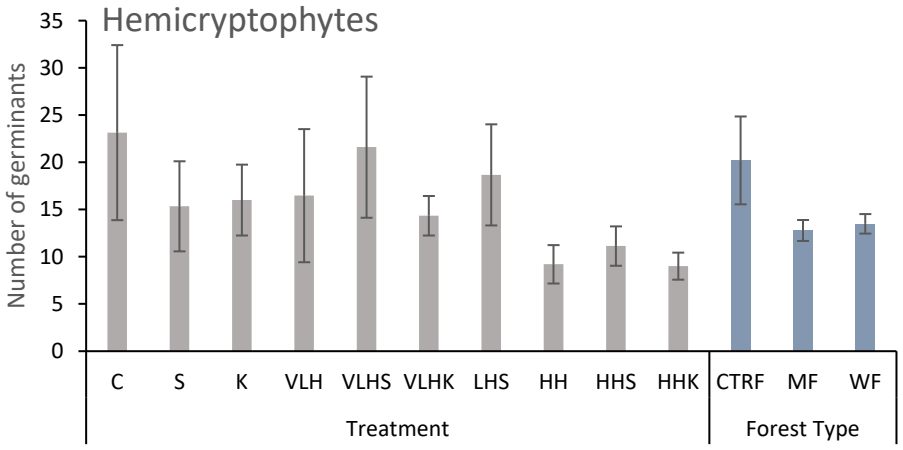
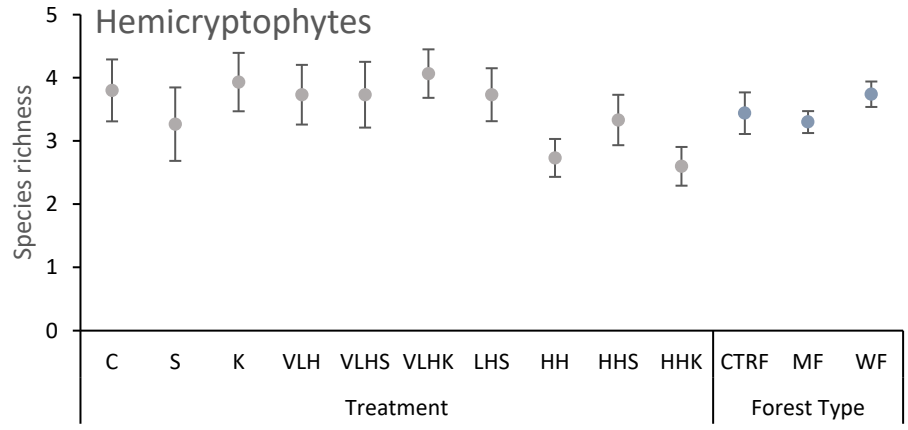
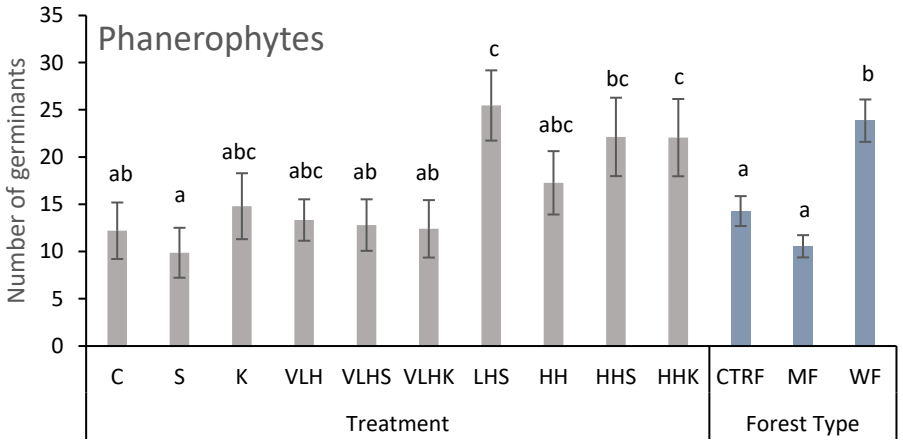
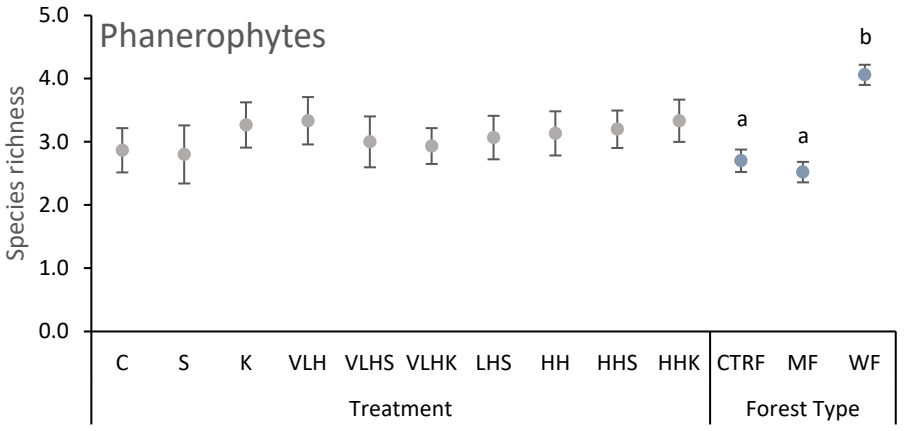



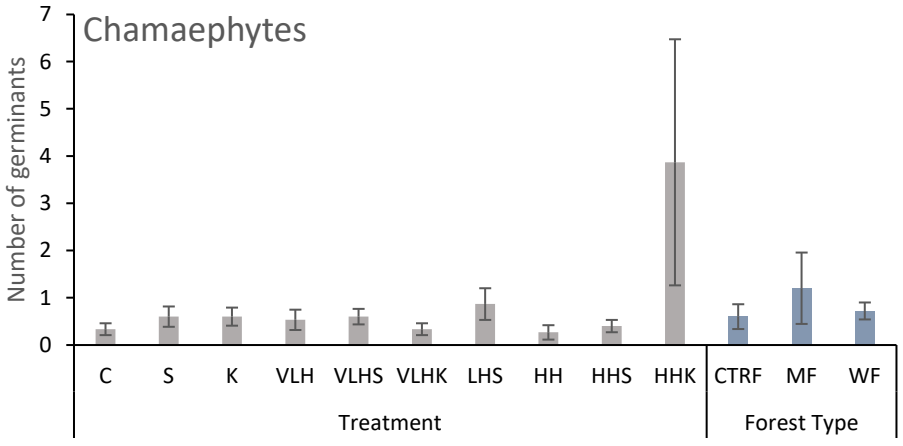
**Figure S4.** LIFE FORM

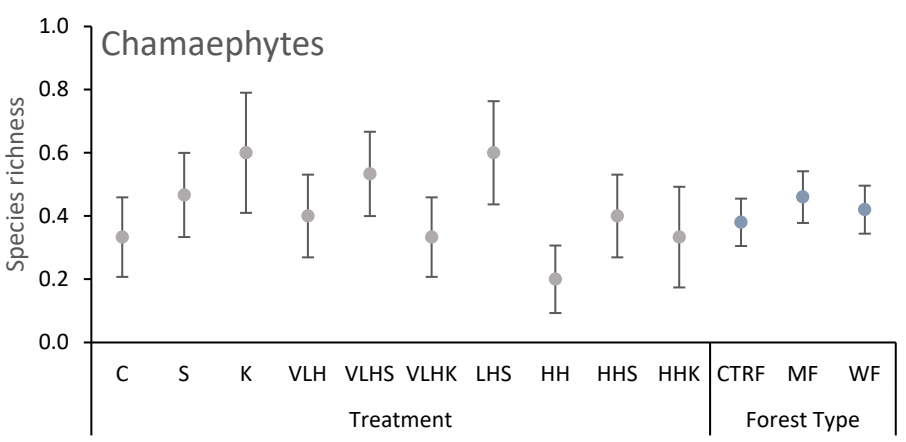


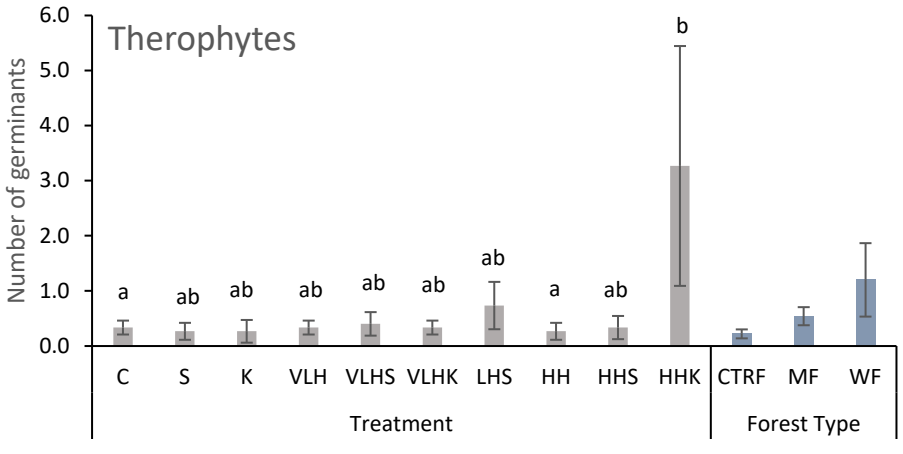



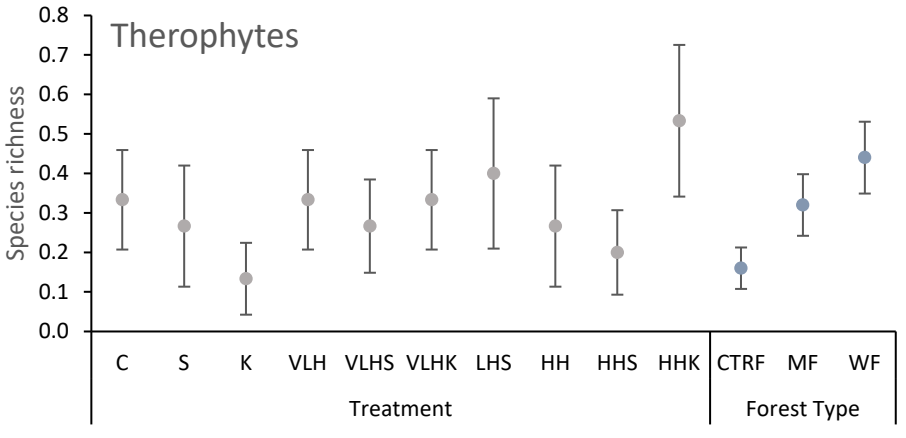



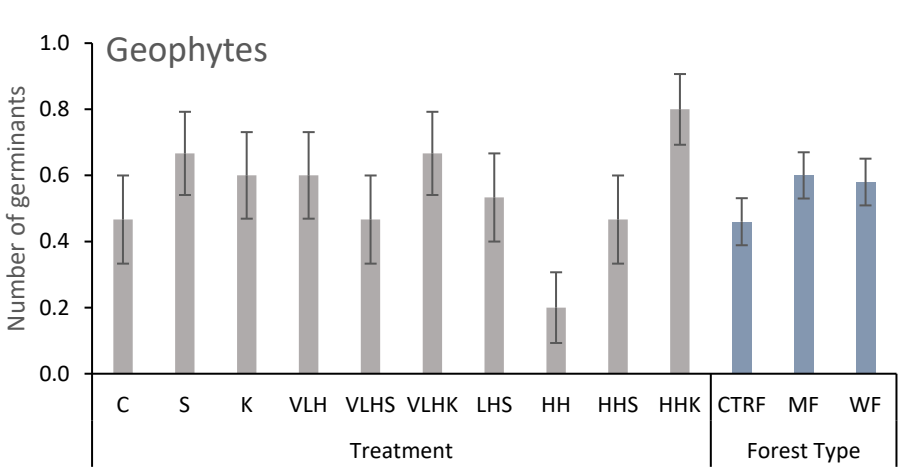



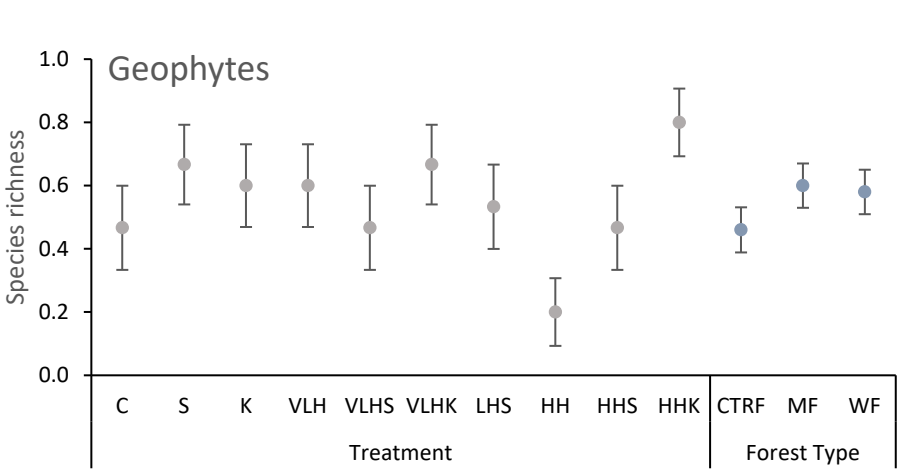
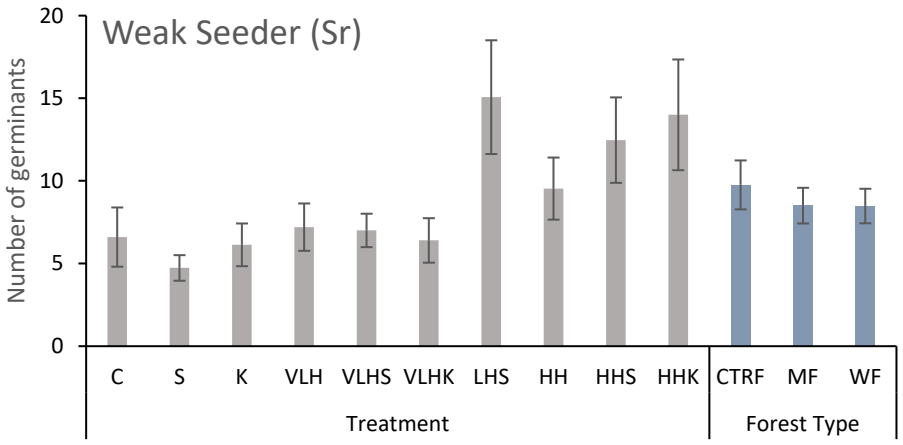
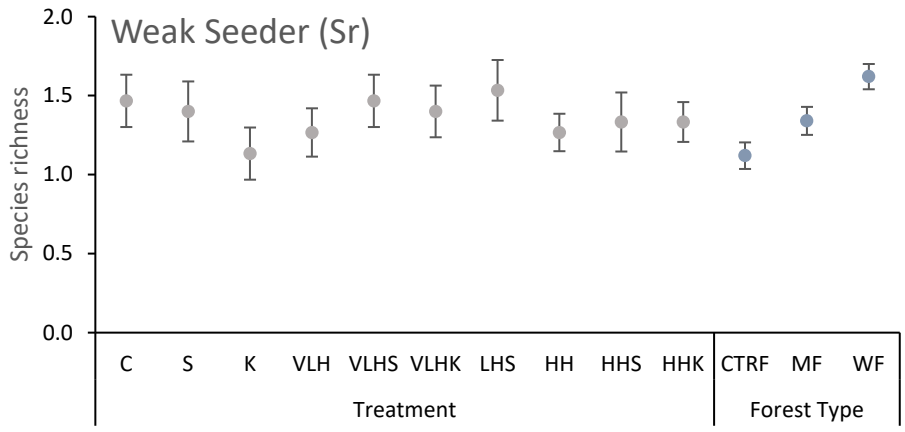
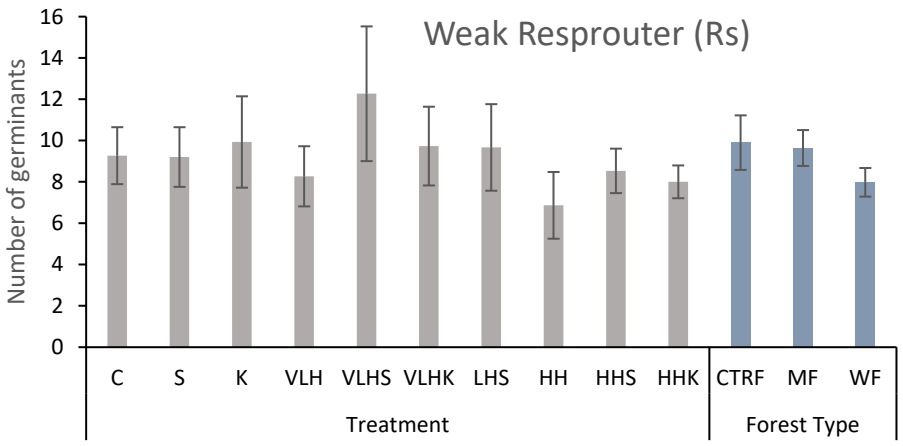
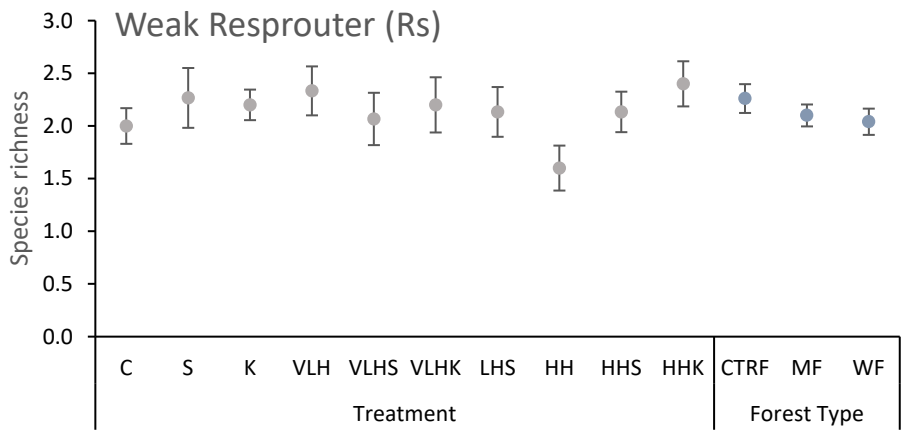



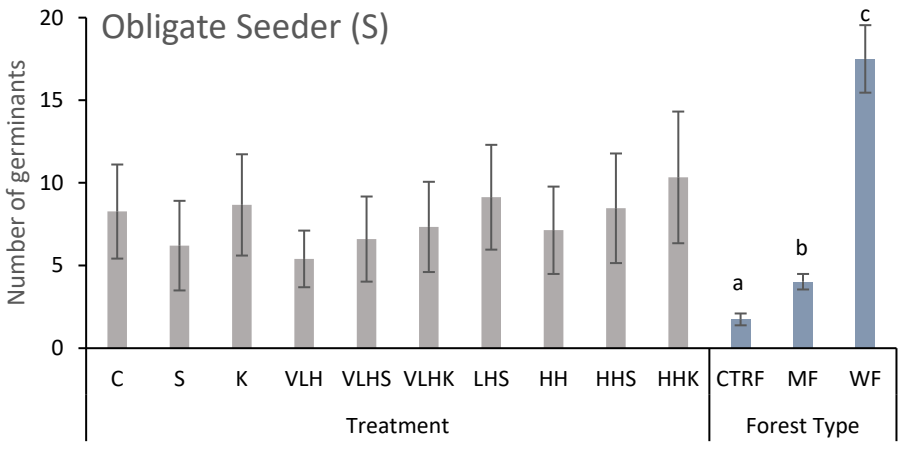
**Figure S4.** FIRE RESPONSE

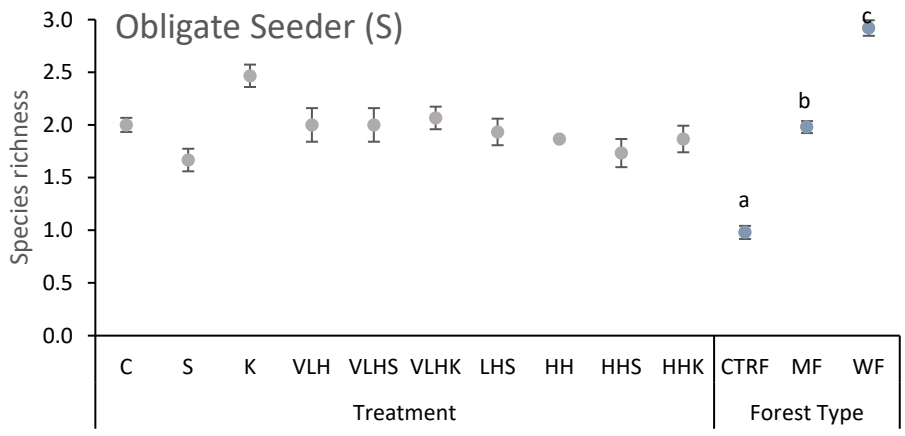


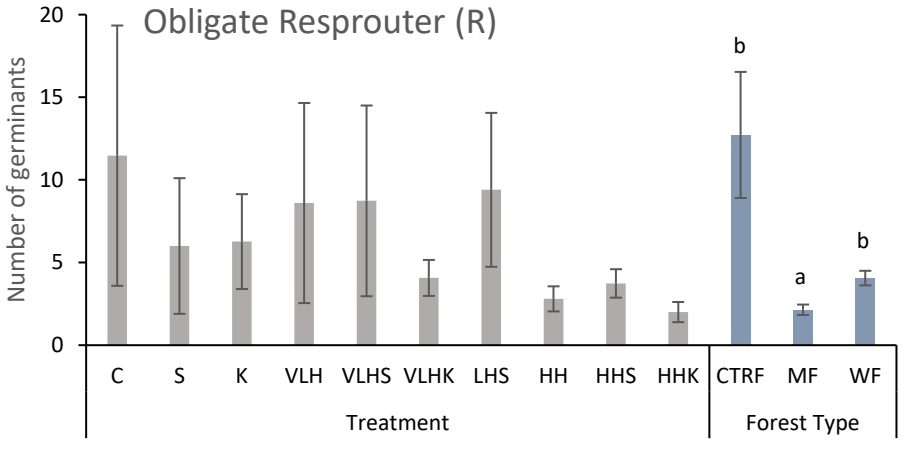



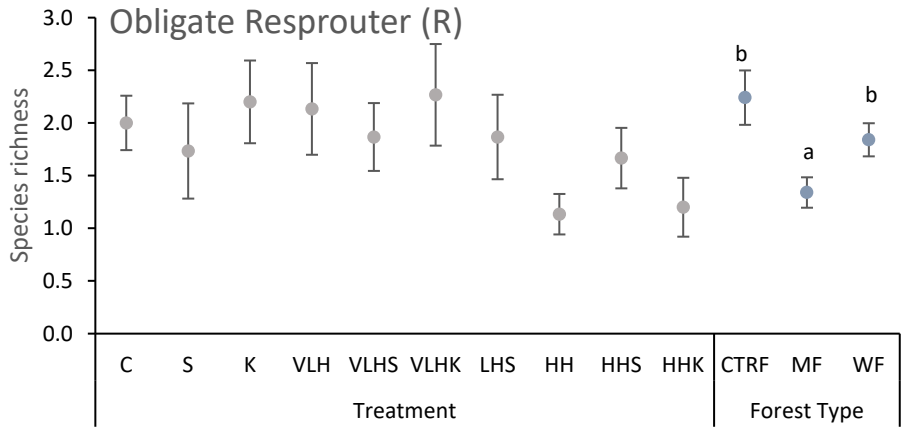



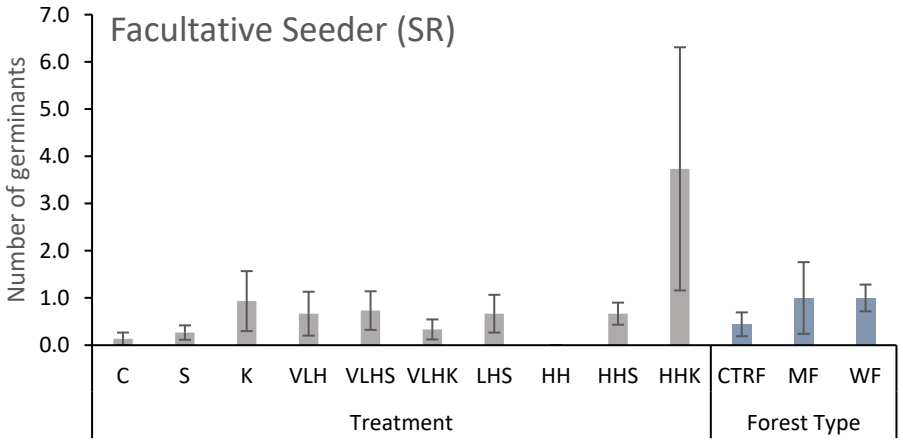



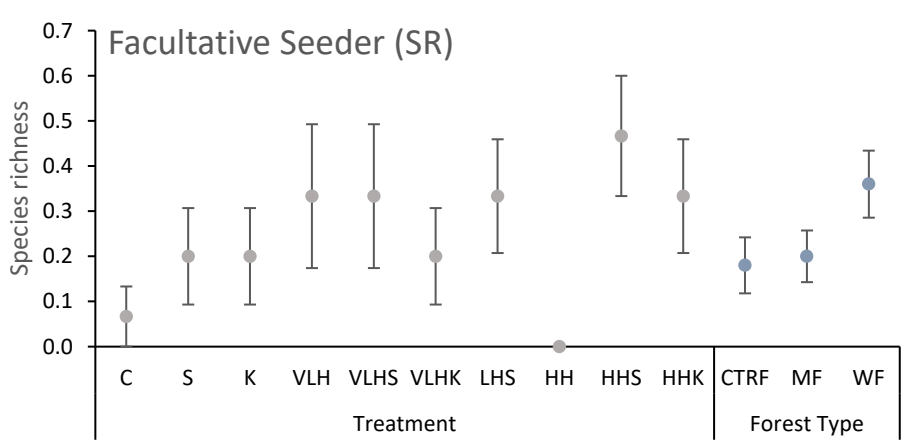
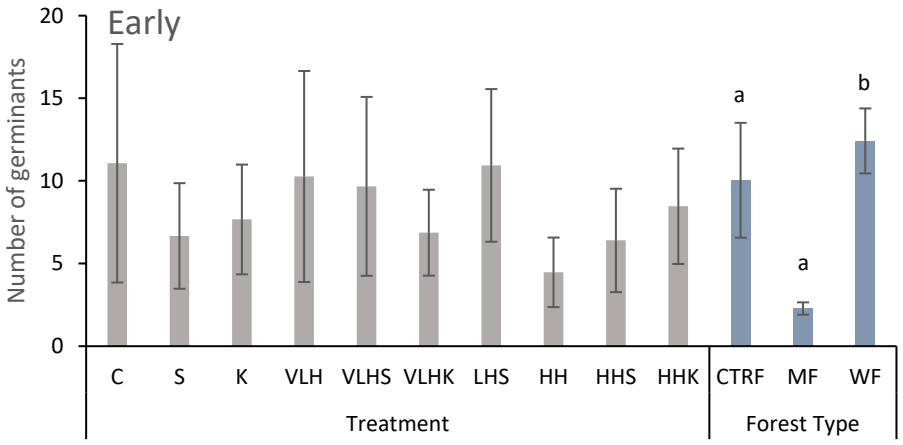
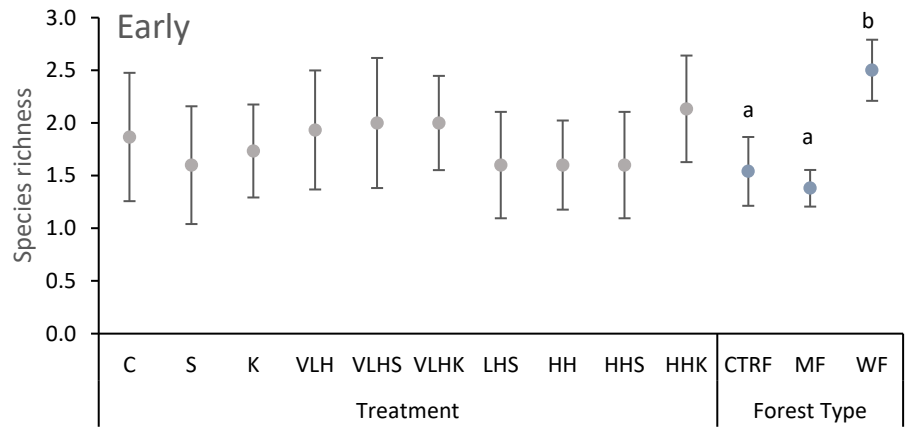
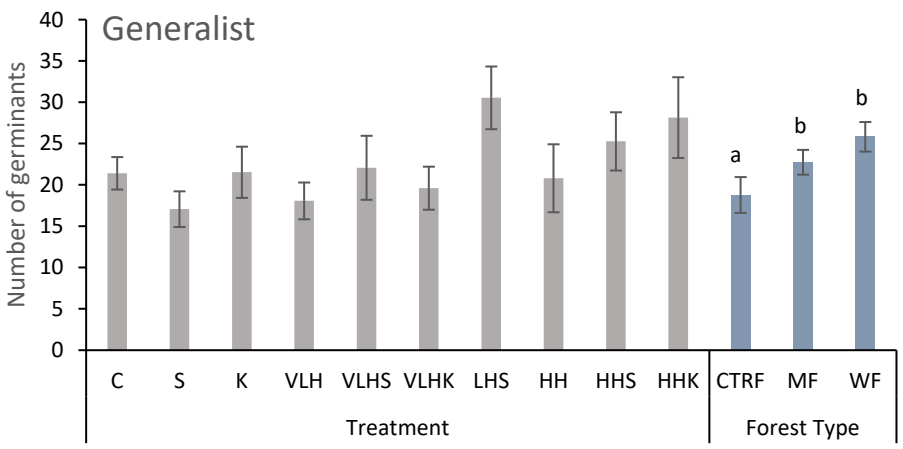
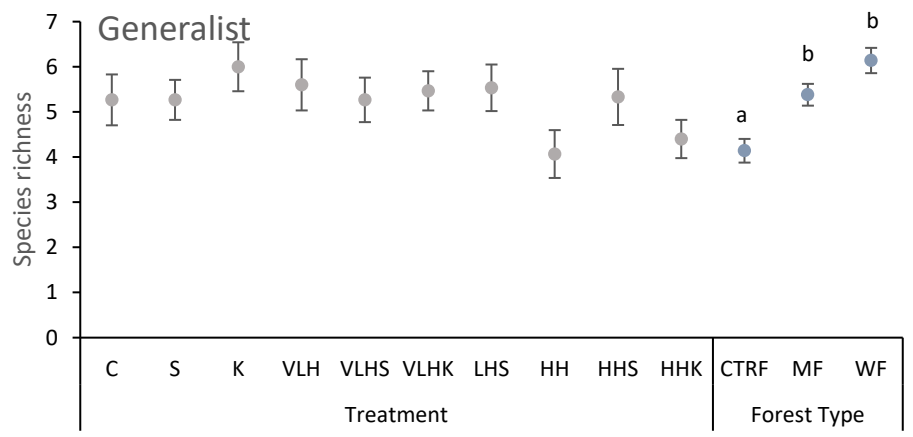



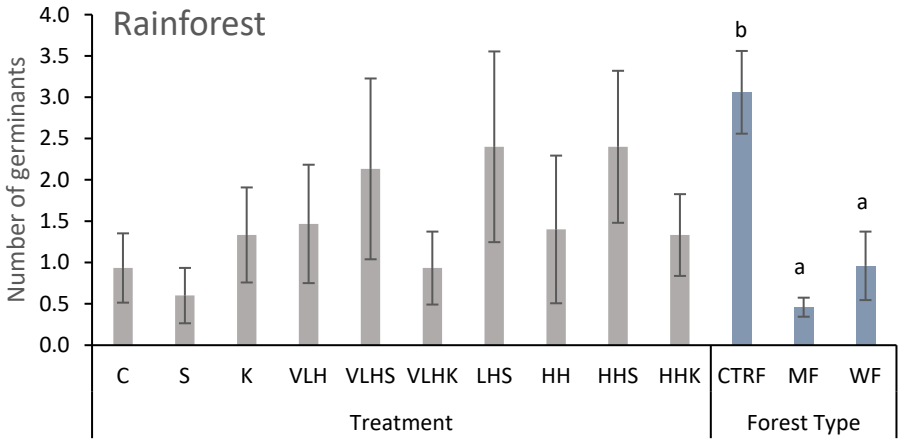
**Figure S4.** SERAL AFFILIATION

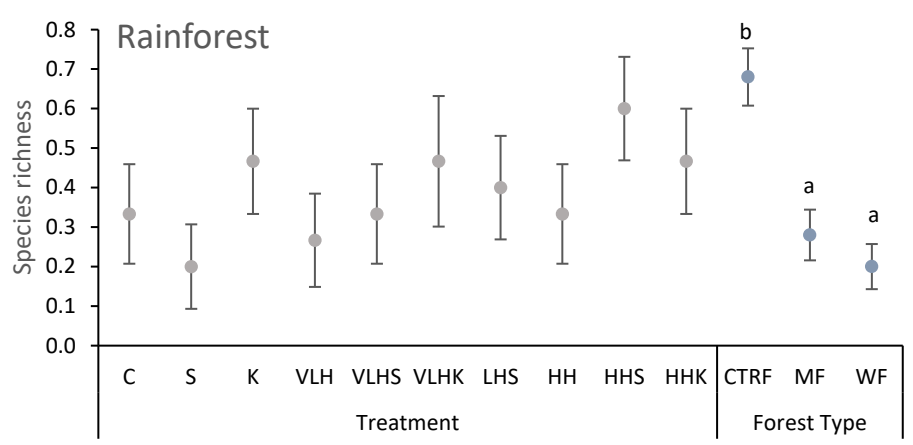


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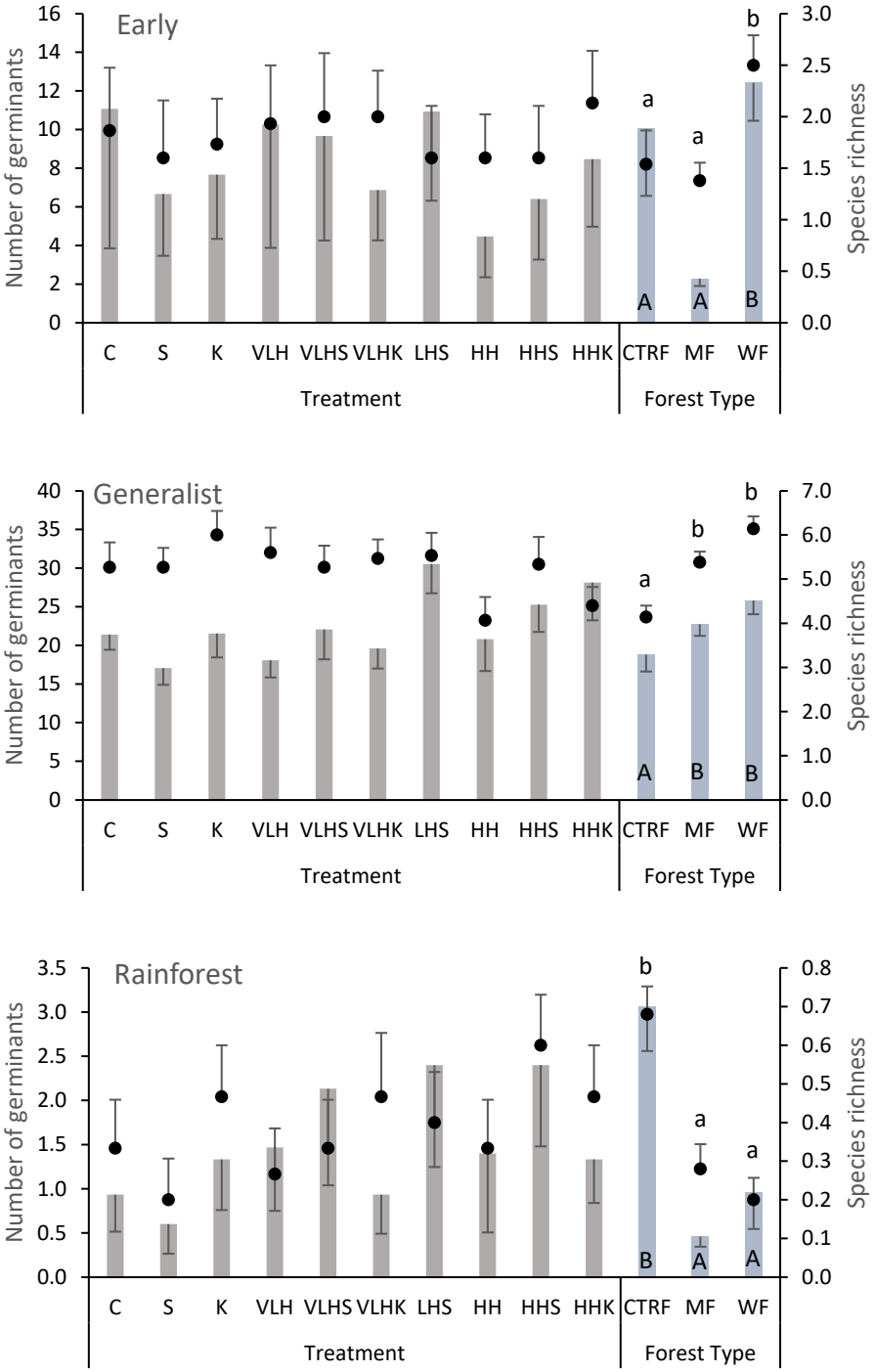

**Figure S5.** NMDS ordination of abundance data for trait associations in the germinable soil seed bank across three forest types (CTRF, cool temperate rainforest; MF, mixed forest; WF, wet forest). Symbols represent 10 soil seed bank treatments across 15 sites. Sites are coded according to forest type (colour) but not treatment given non-significance (Table S6). The vector overlay represents the strength and direction of the relationship for underlying functional attributes. Life form: C, chamaephyte; G, geophyte; H, hemicryptophyte; P, phanerophyte; T, therophyte. Dispersal mode: ane, anemochory; bar, barochory; end, endozoochory; epi, epizoochory; mob, mobile; myr, myrmecochory. Fire response: R, obligate resprouters; S, obligate seeders; SR, facultative seeders; Sr, weak seeders; Rs, weak resprouters. Seral stage: gen, generalist; rf, rainforest.

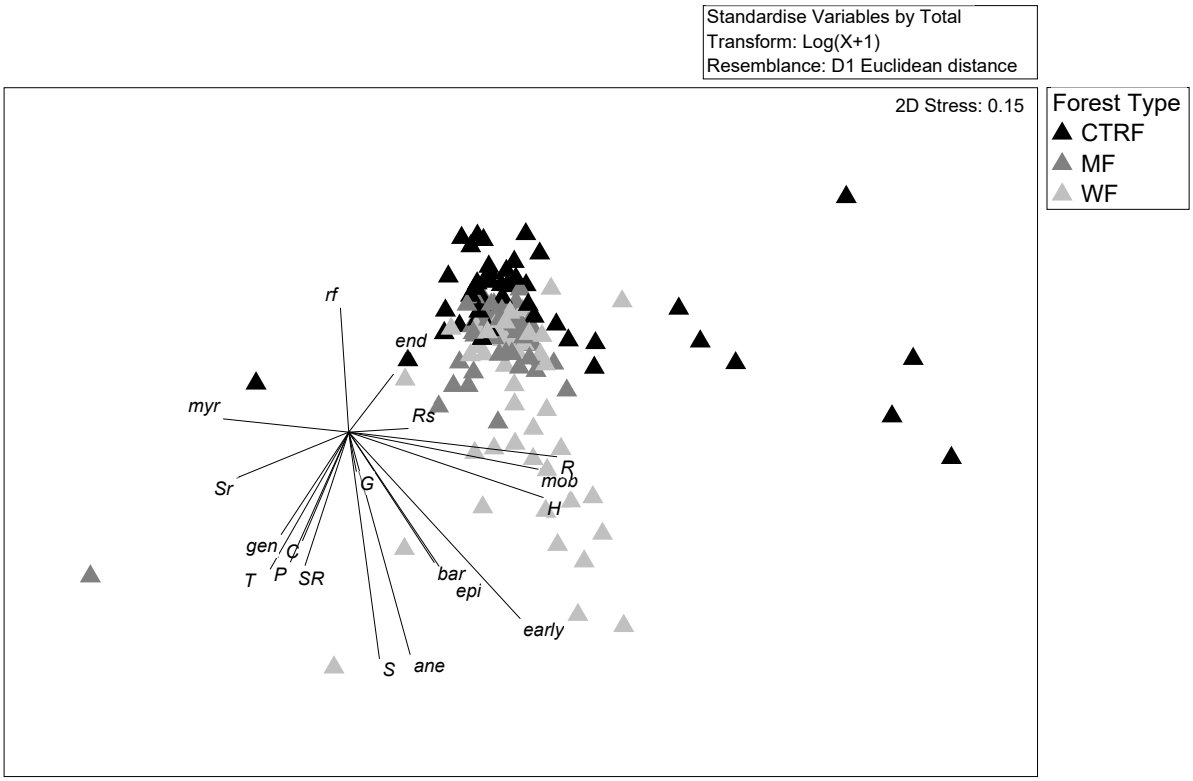

**Table S1.** Spatial, topographic, edaphic, and structural variables across the three forest types sampled in the Central Highlands region. Variables were measured during the initial site establishment as reported in Fedrigo et al [1]. Data presented are restricted to the subset of sites revisited during the current study. PERMANOA tested for significance of differences in edaphic and structural variables among forest types with significant P values indicated in bold. Values are means with range (location, climate, topography) or standard error (edaphic, structural) in brackets (95% confidence interval shown for pH).

| Forest | | | Rainforest (*n* = 5) | | Mixed Forest (*n* = 5) | | Wet Forest (*n* = 5) | |
|---|---|---|---|---|---|---|---|---|
| Variable | Pseudo-F | P | mean | | mean | | mean | |
| *Location* | | | | | | | | |
| Latitude (˚) | | | -37.5946 | (-37.6509, -37.5122) | -37.5961 | (-37.6546, -37.5137) | -37.5953 | (-37.6523, -37.5123) |
| Longitude (˚) | | | 145.7847 | (145.7155, 145.9173) | 145.7856 | (145.7169, 145.9191) | 145.7858 | (145.7183, 145.9194) |
| *Climate*[A] | | | | | | | | |
| Elevation (m) | | | 695 | (508, 963) | 707 | (523, 956) | 713 | (533, 977) |
| Mean Annual Temperature (˚C) | | | 10.7 | (9.6, 11.6) | 10.8 | (9.8, 11.5) | 10.8 | (9.8, 11.6) |
| Mean Annual Precipitation (mm) | | | 1661 | (1580, 1732) | 1657 | (1586, 1662) | 1662 | (1595, 1729) |
| *Topography* | | | | | | | | |
| Slope (˚) | | | 7.5 | (3.4, 14.0) | 8.1 | (4.0, 10.2) | 7.8 | (0.6, 14.0) |
| Aspect (˚) | | | 214.6 | (44.0, 309.0) | 212.4 | (140.0, 279.0) | 238.4 | (193.0, 268.0) |
| Eastness[B, E] | | | -0.2656 | (-1.0, 0.6947) | -0.3734 | (-0.9877, 0.6428) | -0.7709 | (-0.9994, -0.2250) |
| Northness[B] | | | 0.2206 | (-0.8192, 0.7193) | -0.5640 | (-1.0, 0.1564) | -0.4627 | (-0.9744, -0.0349) |
| Heat Load Index[C, E] | | | 0.8454 | (0.7118, 0.8971) | 0.8299 | (0.7540, 0.8872) | 0.8511 | (0.7774, 0.8804) |
| PDIR[C] (MJ cm-2 $yr^{-1}$) | | | 0.8548 | (0.7355, 0.9186) | 0.8036 | (0.7527, 0.8646) | 0.8058 | (0.7201, 0.8643) |
| *Edaphic (0-10 cm)* | | | | | | | | |
| EC (µS $cm^{-1}$) | 1.25 | 0.3188 | 156.46 | (22.39) | 182.52 | (14.45) | 201.54 | (22.68) |
| pH (H2O) | 1.85 | 0.1938 | 4.4 | (4.3, 4.6) | 4.3 | (4.2, 4.5) | 4.2 | (4.0, 4.5) |
| C (%) | 0.50 | 0.6048 | 15.58 | (1.18) | 16.32 | (1.16) | 17.33 | (1.39) |
| N (%) | 1.05 | 0.3790 | 0.77 | (0.09) | 0.84 | (0.06) | 0.92 | (0.08) |
| C:N | 1.48 | 0.2720 | 20.64 | (0.91) | 19.35 | (0.47) | 18.89 | (0.79) |
| LOI (%) | 0.91 | 0.4299 | 26.70 | (1.98) | 27.56 | (0.62) | 29.49 | (1.53) |
| Available P (mg $kg^{-1}$)[E] | 4.62 | **0.0272** | 12.47[a] | (3.49) | 5.28[ab] | (0.70) | 5.06[b] | (0.79) |
| Bulk density (g $cm^{-3}$) | 1.13 | 0.3390 | 0.36 | (0.02) | 0.35 | (0.03) | 0.31 | (0.03) |
| Ca (cmol $p^{+}$ $kg^{-1}$) | 0.24 | 0.7988 | 1.60 | (0.58) | 2.00 | (0.27) | 1.78 | (0.33) |

| Forest | | | Rainforest ($n$ = 5) | | Mixed Forest ($n$ = 5) | | Wet Forest ($n$ = 5) | |
|---|---|---|---|---|---|---|---|---|
| Variable | Pseudo-F | P | mean | | mean | | mean | |
| K (cmol $p^+$ $kg^{-1}$) | 6.57 | **0.0144** | 0.48[a] | (0.05) | 0.62[ab] | (0.02) | 0.65[b] | (0.03) |
| Mg (cmol $p^+$ $kg^{-1}$) | 0.03 | 0.9653 | 0.99 | (0.15) | 1.00 | (0.15) | 1.04 | (0.10) |
| Na (cmol $p^+$ $kg^{-1}$)[E] | 0.25 | 0.7770 | 0.15 | (0.02) | 0.13 | (0.02) | 0.13 | (0.01) |
| Clay (%) | 0.83 | 0.4546 | 24 | (3) | 29 | (2) | 29 | (4) |
| Silt (%) | 1.37 | 0.2997 | 48 | (2) | 50 | (2) | 53 | (2) |
| Sand (%) | 1.75 | 0.2086 | 28 | (4) | 22 | (4) | 18 | (3) |
| Multivariate PERMANOVA | 1.31 | 0.2122 | | | | | | |
| *Edaphic (10-30 cm)* | | | | | | | | |
| EC (µS $cm^{-1}$) | 2.74 | 0.1122 | 54.31 | (5.61) | 68.37 | (2.78) | 60.98 | (3.85) |
| pH (H2O) | 0.57 | 0.5672 | 4.7 | (4.6, 4.8) | 4.7 | (4.6, 4.8) | 4.6 | (4.5, 4.8) |
| C (%) | 1.13 | 0.3629 | 9.06 | (1.20) | 10.84 | (0.69) | 10.47 | (0.67) |
| N (%) | 2.35 | 0.1354 | 0.45 | (0.08) | 0.60 | (0.03) | 0.59 | (0.05) |
| C:N [E] | 4.79 | **0.0047** | 20.95[a] | (1.37) | 18.18[b] | (0.24) | 17.81[b] | (0.42) |
| LOI (%)[E] | 2.06 | 0.1608 | 16.88 | (2.06) | 19.90 | (0.19) | 20.09 | (0.97) |
| Available P (mg $kg^{-1}$) | 0.68 | 0.5462 | 3.15 | (0.86) | 2.19 | (0.48) | 2.36 | (0.42) |
| Bulk density (g $cm^{-3}$) | 0.23 | 0.8060 | 0.56 | (0.04) | 0.53 | (0.02) | 0.54 | (0.02) |
| Ca (cmol $p^+$ $kg^{-1}$)[E] | 1.36 | 0.2898 | 0.22 | (0.08) | 0.40 | (0.12) | 0.24 | (0.06) |
| K (cmol $p^+$ $kg^{-1}$) | 4.86 | **0.0326** | 0.20[a] | (0.03) | 0.31[ab] | (0.03) | 0.32[b] | (0.03) |
| Mg (cmol $p^+$ $kg^{-1}$)[E] | 1.03 | 0.3886 | 0.25 | (0.02) | 0.30 | (0.06) | 0.22 | (0.02) |
| Na (cmol $p^+$ $kg^{-1}$)[E] | 0.85 | 0.4612 | 0.08 | (0.01) | 0.08 | (0.01) | 0.07 | (0.00) |
| Clay (%) | 1.58 | 0.2503 | 23 | (5) | 28 | (1) | 32 | (3) |
| Silt (%) | 0.12 | 0.8954 | 49 | (5) | 51 | (4) | 51 | (2) |
| Sand (%) | 1.49 | 0.2566 | 28 | (5) | 22 | (4) | 18 | (4) |
| Multivariate PERMANOVA | 1.51 | 0.1242 | | | | | | |
| *Forest Structure* | | | | | | | | |
| Leaf Area Index[E] | 11.4 | **0.0012** | 3.14[a] | (0.47) | 1.81[b] | (0.08) | 1.65[b] | (0.09) |
| Basal Area (live) ($m^2$ $ha^{-1}$) | 0.87 | 0.4668 | 61 | (10) | 66 | (7) | 80 | (13) |
| Stem Density Live (stems $ha^{-1}$) | 2.31 | 0.1463 | 1238 | (138) | 840 | (241) | 1404 | (179) |

| Forest | | | Rainforest (*n* = 5) | | Mixed Forest (*n* = 5) | | Wet Forest (*n* = 5) | |
|---|---|---|---|---|---|---|---|---|
| Variable | Pseudo-F | P | mean | | mean | | mean | |
| H Basal Area Live (10 cm DBH bins) | 0.11 | 0.8931 | 1.90 | (0.15) | 1.83 | (0.11) | 1.86 | (0.07) |
| H Basal Area Live (4 m height bins) | 0.09 | 0.9127 | 1.78 | (0.15) | 1.87 | (0.15) | 1.81 | (0.10) |
| Coefficient Variation (Basal Area) | 1.86 | 0.2010 | 2.68 | (0.36) | 2.97 | (0.71) | 4.04 | (0.44) |
| Coefficient Variation (DBH) | 2.98 | 0.0903 | 1.21 | (0.15) | 1.29 | (0.18) | 1.74 | (0.17) |
| Coefficient Variation (Height) | 4.40 | **0.0449** | 0.83[a] | (0.10) | 1.05[ab] | (0.15) | 1.34[b] | (0.10) |
| Multivariate PERMANOVA | 2.12 | **0.0373** | a | | ab | | b | |

[A] Climate variables, are 926.1 m in resolution (30 arc seconds, [2]) for the present range from 1950–2000

[B] Separated into north–south and east–west layers [3]

[C] Calculated using Hyperniche [4], PDIR, Potential Direct Incident Radiation

[D] Soil pH and Electrical conductivity 'EC' in 1:5 soil/ solution [5]; soil total C and N via LECO CHN analyser (LECO Corporation, USA); loss on ignition via combustion at 375ºC for 2.5 hours; exchangeable cations in 1M ammonium acetate [6] determined by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES; Vista Pro Axial, Varian, Australia); bulk density corrected for the volume of stones using a specific density of 2.65 g $cm^{-3}$ [7]; Available P, fluoride-extractable Bray 2 [5]; Clay, Silt, Sand using the hydrometer method [8].

[E] $Log_{10}$ transformed prior to analysis to meet assumptions of normality

PERMANOVA tested for differences in the Euclidean distance matrix according to forest type (9999 permutations). Significant (P≤0.05) pairwise comparisons are indicated by means followed by different letters. Multivariate PERMANOVA tested for the multivariate significance of differences across all edaphic variables at 0-10 cm depth, 10-30 cm depth, and all forest structure variables. Significant (P ≤0.05) pairwise comparisons are indicated by different letters.

**Table S2.** Total number of seedlings per treatment and per forest type in soils from cool temperate rainforest, wet forest, and wet forest in the Central Highlands of south-eastern Australia. Each treatment represents and equivalent surface area of 0.871 $m^2$ and each forest type an area of 2.91 $m^2$. Significance of differences in soil treatment (C, control; S, smoke only; K, karrikinolide; VLH, very low heat; LH, low heat; HH, high heat) and forest type (CTRF, cool temperate rainforest; MF, mixed forest; WF, wet forest) effects on germinant density were determined via Kruskal-Wallis followed by Dunn's pairwise comparisons where P≤0.05. Significant treatment effects are indicated in **bold**. For both the soil seed bank and corresponding extant vegetation, frequency is the relative proportion (%) of sites that included a species (from a total of 15 sites). Values for ferns represent frequency as there was no attempt to assess high density of spores that had germinated (see methods). We obtained functional type values from the literature ([9,10]), publicly available databases [11,12] and field observations. Trait values for seral stage follow Kasel et al [13]. Nomenclature follows VicFlora (https://vicflora.rbg.vic.gov.au/). Traits are defined in Table 1 (main text).

| | | Treatment | | | | | | | | | | | Forest Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species | Family | C | S | K | VLH | VLHS | VLHK | LHS | HH | HHS | HHK | P Value | CTRF | MF | WF | P Value | SSB Site Freq (%) | Veg Site Freq (%) | Dispersal mode[A] | Life form[B] | Fire Res-ponse[C] | Seral Stage[D] |
| *Acacia dealbata* subsp. *dealbata* | FABACEAE | **78ab** | **52a** | **80ab** | **93abc** | **75ab** | **75ab** | **198c** | **130bc** | **174c** | **200c** | 0.025 | 453 | 387 | 315 | NS | 100 | 60 | myr | P | Sr | gen |
| *Acacia frigescens* | FABACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | myr | P | S | rf |
| *Acacia melanoxylon* | FABACEAE | 14 | 9 | 20 | 22 | 32 | 11 | 36 | 21 | 36 | 20 | NS | 151 | 22 | 48 | | 80 | 53 | myr | P | Rs | rf |
| *Acacia* spp. | FABACEAE | 6 | 1 | 4 | 4 | 2 | 1 | 29 | 8 | 8 | 8 | | 40 | 15 | 16 | | 93 | 0 | myr | P | | |
| *Acaena novae-zelandiae* | ROSACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | epi | C | SR | juv |
| *Asperula polymera* | RUBIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | bar | C | | gen |
| *Atherosperma moschatum subsp. moschatum* | MONIMIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 27 | ane | P | Rs | rf |
| *Australina pusilla* subsp. *muelleri* | URTICACEAE | **22bc** | **7abc** | **8c** | **12bc** | **11bc** | **3abc** | **3abc** | **0a** | **2ab** | **0a** | 0.036 | 11 | 31 | 26 | NS | 67 | 40 | bar | HPr | S | gen |
| *Bedfordia arborescens* | ASTERACEAE | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | | 0 | 2 | 1 | | 13 | 0 | ane | P | R | gen |
| *Billardiera macrantha* | PITTOSPORACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | end | P | R | early |
| *Blechnum chambersii* | BLECHNACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | mob | G | R | rf |
| *Blechnum nudum* | BLECHNACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 40 | mob | G | R | rf |
| *Blechnum wattsii* | BLECHNACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | mob | G | R | rf |
| *Cassinia aculeata* subsp. *aculeata* | ASTERACEAE | 42 | 46 | 57 | 28 | 33 | 57 | 34 | 34 | 54 | 53 | NS | **6a** | **28a** | **404b** | 0.0001 | 80 | 27 | ane | P | S | early |
| *Cassinia trinerva* | ASTERACEAE | 0 | 0 | 9 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 1 | 0 | 9 | | 13 | 0 | ane | P | SR | gen |
| *Cirsium vulgare** | ASTERACEAE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 1 | 0 | | 7 | 0 | ane | T | Sr | early |
| *Clematis aristata* | RANUNCULACEAE | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 0 | | 0 | 3 | 3 | | 27 | 67 | ane | P | Rs | gen |
| *Clematis glycinoides* var. *glycinoides* | RANUNCULACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 27 | ane | P | R | gen |
| *Coprosma quadrifida* | RUBIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 47 | end | P | SR | gen |
| *Correa lawrenceana* var. *latrobeana* | RUTACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 20 | bar | P | S | gen |
| *Cyathea australis* | CYATHEACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 33 | mob | P | R | adol |
| *Cyperus lucidus* | CYPERACEAE | 37 | 28 | 22 | 10 | 21 | 4 | 3 | 0 | 1 | 0 | | 126 | 0 | 0 | | 7 | 0 | bar | H | R | |
| Dead | | 2 | 2 | 2 | 12 | 5 | 1 | 5 | 10 | 8 | 2 | | 22 | 11 | 16 | | 93 | 0 | | | | |
| *Dianella tasmanica* | LILIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | end | G | R | rf |
| *Dicksonia antarctica* | DICKSONIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 100 | mob | P | R | rf |
| *Dicondra repens* | CONVULVACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 20 | bar | G | Sr | gen |
| *Dryopoa dives* | POACEAE | 15 | 2 | 12 | 11 | 9 | 13 | 10 | 11 | 13 | 8 | NS | 31 | 33 | 40 | NS | 80 | 33 | epi | H | S | early |
| *Erigeron* spp.# | ASTERACEAE | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | | 0 | 2 | 2 | | 27 | 0 | ane | T | S | early |
| *Erythranthe moschata* | PHRYMACEAE | 5 | 0 | 0 | 10 | 4 | 0 | 0 | 1 | 0 | 0 | | 19 | 0 | 1 | | 13 | 0 | | H | | early |
| *Eucalyptus regnans* | MYRTACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 73 | bar | P | S | gen |
| *Euchiton involucratus* | ASTERACEAE | 3 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 7 | 0 | 1 | | 13 | 0 | ane | H | S | early |
| *Euchiton japonicus* | ASTERACEAE | 2 | 1 | 0 | 0 | 6 | 3 | 0 | 0 | 0 | 0 | | 11 | 1 | 0 | | 13 | 0 | ane | H | Sr | early |
| *Gahnia regular* | CYPERACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 27 | end | H | R | |

| | | Treatment | | | | | | | | | | | Forest Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species | Family | C | S | K | VLH | VLHS | VLHK | LHS | HH | HHS | HHK | P Value | CTRF | MF | WF | P Value | SSB Site Freq (%) | Veg Site Freq (%) | Dispersal mode[A] | Life form[B] | Fire Res-ponse[C] | Seral Stage[D] |
| *Gahnia* spp. | CYPERACEAE | 5 | 5 | 5 | 9 | 8 | 5 | 6 | 4 | 0 | 3 | NS | 32 | 5 | 13 | NS | 73 | 0 | end | H | R | |
| *Galium australe* | RUBIACEAE | 0 | 3 | 1 | 3 | 2 | 0 | 5 | 2 | 1 | 6 | | 0 | 1 | 22 | | 13 | 7 | epi | C | | juv |
| *Gamochaeta* spp.* | ASTERACEAE | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | | 2 | 0 | 2 | | 27 | 0 | ane | T | S | early |
| *Geranium homeanum* | GERANIACEAE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | bar | H | SR | gen |
| *Geranium* spp. | GERANIACEAE | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | | 2 | 3 | 3 | | 33 | 13 | bar | H | SR | gen |
| *Grass* | | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 1 | 0 | | 7 | 0 | | | | |
| *Hedycarya angustifolia* | MONIMIACEAE | **1a** | **3ab** | **1ab** | **5ab** | **6b** | **4ab** | **0a** | **0a** | **0a** | **1a** | 0.035 | 12 | 3 | 6 | NS | 53 | 27 | end | P | Rs | gen |
| *Histiopteris incisa* | DENNSTAEDTIACEAE | 7 | 10 | 9 | 8 | 7 | 10 | 8 | 3 | 7 | 12 | | 23 | 30 | 28 | | 100 | 80 | mob | G | Rs | gen |
| *Hydrocotyle hirta* | APIACEAE | 115 | 112 | 115 | 79 | 139 | 118 | 94 | 77 | 83 | 85 | NS | **298a** | **415b** | **304ab** | 0.0008 | 100 | 40 | bar | H | Rs | gen |
| *Hymenophyllum cupressiforme* | HYMENOPHYLLACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 20 | mob | EPI | S | rf |
| *Hypolepis amaurorachis* | DENNSTAEDTIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | mob | H | R | rf |
| *Hypolepis rugosula* | DENNSTAEDTIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 13 | mob | H | R | |
| *Isolepis inundata* | CYPERACEAE | 12 | 8 | 10 | 10 | 17 | 6 | 65 | 0 | 2 | 1 | NS | **129b** | **2a** | 0 | 0.0001 | 27 | 0 | mob | H | R | early |
| *Juncus articulatus* subsp. *articulatus** | JUNCACEAE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | | 2 | 0 | 1 | | 13 | 0 | mob | H | R | early |
| *Juncus bufonius* | JUNCACEAE | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 33 | | 4 | 0 | 33 | | 20 | 0 | mob | T | S | early |
| *Juncus planifolius* | JUNCACEAE | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | | 0 | 1 | 2 | | 20 | 0 | mob | H | R | early |
| *Juncus procerus* | JUNCACEAE | 72 | 20 | 13 | 64 | 47 | 2 | 26 | 2 | 5 | 2 | NS | **252b** | 0 | **1a** | 0.0001 | 13 | 0 | mob | H | R | early |
| *Juncus* spp.# | JUNCACEAE | 2 | 0 | 2 | 7 | 1 | 0 | 0 | 1 | 1 | 0 | | 8 | 1 | 5 | | 47 | 0 | mob | H | R | early |
| *Lachnagrostis* spp. | POACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | 1 | 0 | | 7 | 0 | epi | H | | |
| *Laphangium luteoalbum* | ASTERACEAE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | ane | T | S | early |
| *Lepidosperma elatius* | CYPERACEAE | **0a** | **0a** | **7b** | **5ab** | **0a** | **9b** | **1ab** | **3ab** | **5b** | **2ab** | 0.033 | 9 | 6 | 17 | NS | 47 | 13 | myr | H | R | gen |
| *Leptinella filicula* | ASTERACEAE | 2 | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 0 | 1 | NS | 2 | 5 | 4 | NS | 33 | 7 | bar | H | R | early |
| *Leptostigma breviflorum* | RUBIACEAE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | 1 | 1 | 0 | | 13 | 0 | end | H | | rf |
| *Lomandra filiformis* | ASPARAGACEAE | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 1 | 1 | 0 | | 13 | 0 | myr | H | R | |
| *Lomatia fraseri* | PROTEACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 53 | ane | P | R | gen |
| *Luzula meridionalis* var. *flaccida* | JUNCACEAE | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | | 2 | 0 | 3 | | 13 | 0 | myr | H | R | early |
| *Mentha laxiflora* | LAMIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | | 0 | 0 | 5 | | 7 | 20 | bar | H | R | gen |
| *Microlaena stipoides* var. *stipoides* | POACEAE | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 3 | | 7 | 0 | epi | H | R | gen |
| *Microsorum pustulatum subsp. pustulatum* | POLYPODIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 33 | mob | EPI | S | rf |
| *Notelaea ligustrina* | OLEACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 13 | end | P | R | gen |
| *Nothofagus cunninghamii* | FAGACEAE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 1 | 0 | 0 | | 7 | 73 | ane | P | R | rf |
| *Notogrammitis angustifolia* subsp. *nothofageti* | GRAMMITIDACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 20 | mob | EPI | S | rf |
| *Notogrammitis billardierei* | GRAMMITIDACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 20 | mob | EPI | S | rf |
| *Olearia argophylla* | ASTERACEAE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 2 | | 7 | 7 | ane | P | R | gen |
| *Olearia lirata* | ASTERACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | ane | P | S | adol |
| *Olearia phlogopappa* subsp. *continentalis* | ASTERACEAE | 0 | 4 | 5 | 9 | 8 | 5 | 9 | 0 | 7 | 6 | NS | **7a** | **9a** | **37b** | 0.021 | 60 | 20 | ane | P | SR | early |
| *Oxalis corniculata** | OXALIDACEAE | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | | 0 | 3 | 1 | | 20 | 0 | bar | C | Rs | gen |
| *Oxalis spp.#* | OXALIDACEAE | 3 | 2 | 6 | 4 | 4 | 0 | 10 | 9 | 4 | 1 | NS | 6 | 14 | 23 | NS | 80 | 33 | bar | | | gen |

| | | Treatment | | | | | | | | | | | Forest Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species | Family | C | S | K | VLH | VLHS | VLHK | LHS | HH | HHS | HHK | P Value | CTRF | MF | WF | P Value | SSB Site Freq (%) | Veg Site Freq (%) | Dispersal mode[A] | Life form[B] | Fire Res-ponse[C] | Seral Stage[D] |
| *Pandorea pandorana* subsp. *pandorana* | BIGNONIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 20 | ane | P | SR | gen |
| *Persoonia arborea* | PROTEACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 13 | end | P | S | rf |
| *Pittosporum bicolor* | PITTOSPORACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 40 | end | P | SR | rf |
| *Poa ensiformis* | POACEAE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 1 | 0 | | 7 | 7 | bar | H | R | early |
| *Poa hothamensis* var. *parviflora* | POACEAE | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | | 1 | 0 | 1 | | 13 | 0 | bar | H | R | |
| *Poa* spp.# | POACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | | H | | |
| *Poa tenera* | POACEAE | 11 | 4 | 0 | 0 | 1 | 0 | 4 | 1 | 0 | 0 | | 18 | 1 | 2 | | 33 | 0 | bar | H | R | gen |
| *Polyscias sambucifolia* | ARALIACEAE | 2 | 4 | 3 | 7 | 0 | 1 | 4 | 2 | 1 | 2 | NS | 11 | 6 | 9 | NS | 60 | 13 | end | P | Rs | gen |
| *Polystichum proliferum* | DRYOPTERIDACEAE | 5 | 6 | 6 | 3 | 7 | 5 | 6 | 2 | 5 | 2 | | 18 | 18 | 11 | | 93 | 73 | mob | C | R | gen |
| *Pomaderris aspera* | RHAMNACEAE | 3 | 4 | 16 | 4 | 3 | 7 | 42 | 33 | 24 | 17 | NS | 5 | 28 | 120 | NS | 47 | 33 | myr | P | S | gen |
| *Poranthera microphylla s.l.* | PHYLLANTHACEAE | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | | 0 | 3 | 3 | | 27 | 0 | mob | T | S | early |
| *Prostanthera incisa* | LAMIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | bar | P | | |
| *Prostanthera lasianthos* var. *lasianthos* | LAMIACEAE | 5 | 8 | 8 | 6 | 9 | 5 | 6 | 12 | 6 | 5 | NS | **11ab** | **5a** | **54b** | 0.006 | 27 | 13 | bar | P | Sr | early |
| *Pteridium esculentum* subsp. *esculentum* | DENNSTAEDTIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 47 | mob | G | R | early |
| *Rubus anglocandicans** | ROSACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 40 | end | P | R | |
| *Rubus fruticosus* spp. agg.* | ROSACEAE | **4abc** | **5c** | **5abc** | **5bc** | **1ab** | **4abc** | **0a** | **0a** | **0a** | **0a** | 0.01 | 11 | 9 | 4 | NS | 53 | 0 | end | P | R | gen |
| *Rubus parvifolius* | ROSACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | end | P | R | gen |
| *Rubus polyanthemus** | ROSACEAE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | end | P | R | gen |
| *Sambucus gaudichaudiana* | CAPRIFOLIACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 27 | end | P | S | gen |
| *Schoenus maschalinus* | CYPERACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | bar | H | S | early |
| *Senecio glomeratus* | ASTERACEAE | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | 1 | 0 | | 7 | 0 | ane | T | S | early |
| *Senecio linearifolius* var. *denticulatus* | ASTERACEAE | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | ane | C | S | early |
| *Senecio minimus* | ASTERACEAE | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 13 | ane | T | S | early |
| *Senecio prenanthoides* | ASTERACEAE | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | | 0 | 1 | 2 | | 20 | 0 | ane | H | S | early |
| *Senecio velleioides* | ASTERACEAE | 1 | 0 | 3 | 0 | 3 | 0 | 6 | 0 | 0 | 9 | | 3 | 11 | 8 | | 40 | 0 | ane | T | S | early |
| *Sigesbeckia orientalis* subsp. *orientalis* | ASTERACEAE | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 3 | | 0 | 3 | 7 | | 20 | 0 | epi | T | S | early |
| *Solanum aviculare* | SOLANACEAE | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | | 4 | 0 | 2 | | 27 | 0 | end | P | S | early |
| *Solanum nigrum** | SOLANACEAE | 2 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 3 | | 2 | 6 | 1 | | 20 | 0 | end | T | S | early |
| *Sonchus asper** | ASTERACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | ane | T | S | early |
| *Sonchus oleraceus** | ASTERACEAE | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | ane | T | Sr | early |
| *Sonchus* spp.* | ASTERACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 7 | ane | T | S | early |
| *Stellaria flaccida* | CARYOPHYLLACEAE | 5 | 14 | 12 | 6 | 11 | 7 | 10 | 6 | 6 | 9 | NS | **2a** | **27a** | **57b** | 0.013 | 47 | 33 | bar | H | S | gen |
| *Taraxacum officinalis* spp. agg.* | ASTERACEAE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | ane | G | S | early |
| *Tasmannia lanceolata* | WINTERACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 40 | end | P | Sr | rf |
| *Tetrarrhena juncea* | POACEAE | 17 | 11 | 20 | 12 | 23 | 21 | 26 | 29 | 31 | 15 | NS | **24a** | **55a** | **126b** | 0.0001 | 80 | 80 | bar | H | R | gen |
| *Urtica incisa* | URTICACEAE | 4 | 1 | 5 | 1 | 4 | 3 | 4 | 0 | 3 | 0 | NS | **9a** | **16b** | 0 | 0.0006 | 20 | 13 | bar | H | S | gen |
| *Veronica calycina* | PLANTAGINACEAE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | | 12 | 38 | 0 | | 13 | 0 | bar | C | SR | gen |
| *Veronica notabilis* | PLANTAGINACEAE | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1 | | 7 | 0 | bar | C | R | early |
| *Viola hederacea* | VIOLACEAE | **14b** | **10b** | **4a** | **8ab** | **14abc** | **13bc** | **22c** | **1a** | **7abc** | **5ab** | 0.048 | **13a** | **31ab** | **54b** | 0.048 | 73 | 40 | myr | H | Sr | gen |

| | | Treatment | | | | | | | | | | | Forest Type | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species | Family | C | S | K | VLH | VLHS | VLHK | LHS | HH | HHS | HHK | P Value | CTRF | MF | WF | P Value | SSB Site Freq (%) | Veg Site Freq (%) | Dispersal mode[A] | Life form[B] | Fire Res-ponse[C] | Seral Stage[D] |
| *Zieria arborescens* subsp. *arborescens* | RUTACEAE | 25 | 11 | 13 | 13 | 22 | 12 | 22 | 16 | 19 | 19 | NS | 1 | 11 | 160 | | 40 | 27 | bar | P | S | gen |

[A] Dispersal mode: ane, anemochory; bar, barochory; end, endozoochory; epi, epizoochory; mob, mobile; myr, myrmecochory

[B] Life form: C, chamaephyte; G, geophyte; H, hemicryptophyte; P, phanerophyte; T, therophyte

[C] Dominant fire response: R, obligate resprouters; S, obligate seeders; SR, facultative seeders; Sr, weak seeders; Rs, weak resprouters

[D] Seral stage: juv, juvenile; adol, adolescent; rf, rainforest; gen, generalist

* introduced species

# species of unknown origin

**Table S3.** Treatment x Forest Type effects on soil seed bank: richness (a), abundance (b), diversity (c), composition (d). All P values are based on 9999 permutations. Significant values are indicated in bold.

(a) Species Richness

| Source | df | SS | MS | Pseudo-F | P(perm) |
|---|---|---|---|---|---|
| Treatment | 9 | 49.973 | 5.5526 | 0.86176 | 0.5645 |
| Forest Type | 2 | 161.69 | 80.847 | 12.547 | **0.0001** |
| Treatment x Forest Type | 18 | 80.707 | 4.4837 | 0.69587 | 0.8083 |
| Residual | 120 | 773.2 | 6.4433 | | |
| Total | 149 | 1065.6 | | | |
| Pair-wise test of Forest Type | | | | t | P(perm) |
| CTRF, Mixed Forest | | | | 0.24849 | 0.8064 |
| CTRF, Wet Forest | | | | 4.0077 | **0.0002** |
| Mixed Forest, Wet Forest | | | | 4.5419 | **0.0001** |

(b) Species Abundance

| Source | df | SS | MS | Pseudo-F | P(perm) |
|---|---|---|---|---|---|
| Treatment | 9 | 5.2081 | 0.57868 | 1.4579 | 0.1730 |
| Forest Type | 2 | 4.2202 | 2.1101 | 5.3159 | **0.0074** |
| Treatment x Forest Type | 18 | 6.1344 | 0.3408 | 0.85857 | 0.6267 |
| Residual | 120 | 47.632 | 0.39694 | | |
| Total | 149 | 63.195 | | | |
| Pair-wise test of Forest Type | | | | t | P(perm) |
| CTRF, Mixed Forest | | | | 0.77366 | 0.4499 |
| CTRF, Wet Forest | | | | 2.0838 | **0.0376** |
| Mixed Forest, Wet Forest | | | | 3.9142 | **0.0004** |

(c) Species Diversity (H)

| Source | df | SS | MS | Pseudo-F | P(perm) |
|---|---|---|---|---|---|
| Treatment | 9 | 1.1566 | 0.12851 | 0.95942 | 0.4740 |
| Forest Type | 2 | 4.609 | 2.3045 | 17.204 | **0.0001** |
| Treatment x Forest Type | 18 | 1.3447 | 0.074706 | 0.55771 | 0.9208 |
| Residual | 120 | 16.074 | 0.13395 | | |
| Total | 149 | 23.184 | | | |
| Pair-wise test of Forest Type | | | | t | P(perm) |
| CTRF, Mixed Forest | | | | 0.99185 | 0.3307 |
| CTRF, Wet Forest | | | | 5.0583 | **0.0001** |
| Mixed Forest, Wet Forest | | | | 5.5398 | **0.0001** |

(d) Species Composition

| Source | df | SS | MS | Pseudo-F | P(perm) |
|---|---|---|---|---|---|
| Treatment | 9 | 33921 | 3769 | 1.0755 | 0.2449 |
| Forest Type | 2 | 44505 | 22253 | 6.3497 | **0.0001** |
| Treatment x Forest Type | 18 | 37931 | 2107.3 | 0.60131 | 1 |
| Residual | 120 | 4.2054E+05 | 3504.5 | | |
| Total | 149 | 5.369E+05 | | | |
| Pair-wise test of Forest Type | | | | t | P(perm) |
| CTRF, Mixed Forest | | | | 2.2207 | **0.0001** |
| CTRF, Wet Forest | | | | 3.0034 | **0.0001** |
| Mixed Forest, Wet Forest | | | | 2.2617 | **0.0001** |

**Table S4.** SIMPER analysis of significant forest type effects on species composition of the soil seed bank. Results are limited to species that contributed to a cumulative total of 50% dissimilarity. CTRF, cool temperate rainforest; MF, wet forest; WF, wet forest. See Table S3 for associated PERMANOVA results.

Groups CTRF & MF
Average dissimilarity = 85.43

| | Group CTRF | Group MF | | | | |
|---|---|---|---|---|---|---|
| Species | Av. Abund | Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
| *Acacia melanoxylon* | 0.66 | 0.14 | 4.86 | 0.96 | 5.69 | 5.69 |
| *Urtica incisa* | 0.22 | 0.34 | 3.56 | 0.51 | 4.17 | 9.85 |
| *Gahnia* spp. | 0.57 | 0.11 | 3.53 | 0.73 | 4.13 | 13.98 |
| *Acacia* spp. | 0.35 | 0.19 | 3.40 | 0.59 | 3.98 | 17.97 |
| *Acacia dealbata* subsp. *dealbata* | 0.47 | 0.45 | 3.30 | 1.08 | 3.87 | 21.83 |
| *Hydrocotyle hirta* | 0.38 | 0.54 | 3.21 | 0.97 | 3.76 | 25.59 |
| *Australina pusilla* subsp. *muelleri* | 0.15 | 0.38 | 3.09 | 0.63 | 3.62 | 29.21 |
| *Dryopoa dives* | 0.27 | 0.29 | 3.07 | 0.68 | 3.60 | 32.81 |
| *Rubus fruticosus* spp. agg. | 0.34 | 0.21 | 2.91 | 0.51 | 3.41 | 36.22 |
| *Viola hederacea* | 0.16 | 0.33 | 2.88 | 0.66 | 3.37 | 39.59 |
| *Tetrarrhena juncea* | 0.16 | 0.32 | 2.84 | 0.73 | 3.33 | 42.91 |
| *Oxalis* spp. | 0.14 | 0.25 | 2.68 | 0.52 | 3.13 | 46.05 |
| *Hedycarya angustifolia* | 0.29 | 0.08 | 2.41 | 0.41 | 2.82 | 48.87 |
| *Polyscias sambucifolia* | 0.24 | 0.15 | 2.26 | 0.42 | 2.65 | 51.51 |

Groups CTRF & WF
Average dissimilarity = 87.50

| | Group CTRF | Group WF | | | | |
|---|---|---|---|---|---|---|
| Species | Av. Abund | Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
| *Zieria arborescens* subsp. *arborescens* | 0.01 | 0.80 | 4.98 | 0.94 | 5.69 | 5.69 |
| *Acacia melanoxylon* | 0.66 | 0.19 | 3.84 | 0.98 | 4.39 | 10.08 |
| *Tetrarrhena juncea* | 0.16 | 0.64 | 3.26 | 0.99 | 3.73 | 13.81 |
| *Pomaderris aspera* | 0.05 | 0.53 | 3.18 | 0.66 | 3.64 | 17.44 |
| *Viola hederacea* | 0.16 | 0.50 | 3.09 | 0.79 | 3.54 | 20.98 |
| *Gahnia* spp. | 0.57 | 0.25 | 3.07 | 0.80 | 3.51 | 24.49 |
| *Prostanthera lasianthos* var. *lasianthos* | 0.15 | 0.54 | 2.96 | 0.60 | 3.39 | 27.88 |
| *Cassinia aculeata* subsp. *aculeata* | 0.02 | 0.61 | 2.89 | 0.68 | 3.31 | 31.18 |
| *Dryopoa dives* | 0.27 | 0.39 | 2.78 | 0.70 | 3.17 | 34.36 |
| *Acacia* spp. | 0.35 | 0.26 | 2.64 | 0.65 | 3.02 | 37.38 |
| *Acacia dealbata subsp. dealbata* | 0.47 | 0.38 | 2.38 | 1.03 | 2.72 | 40.10 |
| *Hedycarya angustifolia* | 0.29 | 0.21 | 2.37 | 0.51 | 2.71 | 42.81 |
| *Olearia phlogopappa* subsp. *continentalis* | 0.14 | 0.45 | 2.36 | 0.65 | 2.70 | 45.50 |
| *Lepidosperma elatius* | 0.22 | 0.30 | 2.33 | 0.53 | 2.66 | 48.16 |
| *Oxalis* spp. | 0.14 | 0.41 | 2.32 | 0.64 | 2.65 | 50.82 |

Groups MF & WF
Average dissimilarity = 83.99

| Species | Group MF Av. Abund | Group WF Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
|---|---|---|---|---|---|---|
| *Zieria arborescens* subsp. *arborescens* | 0.10 | 0.80 | 4.82 | 1.00 | 5.74 | 5.74 |
| *Pomaderris aspera* | 0.16 | 0.53 | 3.39 | 0.73 | 4.04 | 9.78 |
| *Tetrarrhena juncea* | 0.32 | 0.64 | 3.34 | 1.06 | 3.98 | 13.76 |
| *Viola hederacea* | 0.33 | 0.50 | 3.33 | 0.89 | 3.97 | 17.72 |
| *Cassinia aculeata* subsp. *aculeata* | 0.10 | 0.61 | 3.00 | 0.75 | 3.58 | 21.30 |
| *Dryopoa dives* | 0.29 | 0.39 | 2.93 | 0.77 | 3.49 | 24.79 |
| *Prostanthera lasianthos* var. *lasianthos* | 0.08 | 0.54 | 2.87 | 0.61 | 3.41 | 28.20 |
| *Oxalis* spp. | 0.25 | 0.41 | 2.64 | 0.69 | 3.14 | 31.34 |
| *Stellaria flaccida* | 0.31 | 0.40 | 2.58 | 0.76 | 3.08 | 34.42 |
| *Olearia phlogopappa* subsp. *continentalis* | 0.17 | 0.45 | 2.58 | 0.68 | 3.07 | 37.49 |
| *Australina pusilla* subsp. *muelleri* | 0.38 | 0.21 | 2.48 | 0.65 | 2.95 | 40.44 |
| *Lepidosperma elatius* | 0.15 | 0.30 | 2.13 | 0.50 | 2.54 | 42.98 |
| *Acacia dealbata* subsp. *dealbata* | 0.45 | 0.38 | 2.04 | 1.14 | 2.43 | 45.40 |
| *Polyscias sambucifolia* | 0.15 | 0.28 | 1.97 | 0.50 | 2.35 | 47.75 |
| *Hydrocotyle hirta* | 0.54 | 0.44 | 1.89 | 1.19 | 2.25 | 50.00 |

**Table S5** Significance of Treatment (Tr) and Forest Type (FT) effects on abundance and richness of functional attributes within the soil seed bank. Pairwise differences are provided in Figure S4. Significant values are indicated in bold.

| | | | Abundance | | Richness | |
|---|---|---|---|---|---|---|
| attribute | Model | df | Pseudo-F | P value | Pseudo-F | P value |
| myrmecochore | Treatment | 9 | 3.56 | **0.0011** | 1.35 | 0.2178 |
| | Forest Type | 2 | 0.81 | 0.4506 | 1.84 | 0.1684 |
| | Tr x FT | 18 | 0.51 | 0.9498 | 0.49 | 0.9545 |
| epizoochore | Treatment | 9 | 0.36 | 0.9568 | 0.60 | 0.8015 |
| | Forest Type | 2 | 2.93 | 0.0575 | 2.68 | 0.0762 |
| | Tr x FT | 18 | 0.46 | 0.9714 | 0.45 | 0.9726 |
| barochore | Treatment | 9 | 1.00 | 0.4472 | 1.33 | 0.2287 |
| | Forest Type | 2 | 12.33 | **0.0001** | 16.76 | **0.0001** |
| | Tr x FT | 18 | 0.60 | 0.5976 | 0.79 | 0.6984 |
| anemochore | Treatment | 9 | 0.28 | 0.9798 | 0.61 | 0.7834 |
| | Forest Type | 2 | 17.33 | **0.0001** | 10.53 | **0.0002** |
| | Tr x FT | 18 | 0.20 | 0.9999 | 0.44 | 0.9780 |
| endozoochore | Treatment | 9 | 2.00 | **0.0500** | 2.45 | **0.0152** |
| | Forest Type | 2 | 4.18 | **0.0173** | 5.27 | **0.0066** |
| | Tr x FT | 18 | 0.58 | 0.9092 | 0.49 | 0.9559 |
| mobile | Treatment | 9 | 0.60 | 0.8055 | 0.97 | 0.4723 |
| | Forest Type | 2 | 4.13 | **0.0151** | 1.24 | 0.2856 |
| | Tr x FT | 18 | 0.55 | 0.9347 | 0.82 | 0.6717 |
| chamaephyte | Treatment | 9 | 0.77 | 0.6544 | 0.80 | 0.6199 |
| | Forest Type | 2 | 0.37 | 0.6987 | 0.25 | 0.7754 |
| | Tr x FT | 18 | 0.40 | 0.9900 | 0.72 | 0.7913 |
| geophyte | Treatment | 9 | 1.65 | 0.1028 | 1.65 | 0.1025 |
| | Forest Type | 2 | 1.19 | 0.3014 | 1.19 | 0.3162 |
| | Tr x FT | 18 | 0.98 | 0.4895 | 0.98 | 0.4932 |
| hemicryptophyte | Treatment | 9 | 0.99 | 0.4543 | 1.40 | 0.1993 |
| | Forest Type | 2 | 1.51 | 0.2139 | 1.72 | 0.1870 |
| | Tr x FT | 18 | 0.78 | 0.7124 | 0.89 | 0.5994 |
| phanerophyte | Treatment | 9 | 2.62 | **0.0101** | 0.36 | 0.9495 |
| | Forest Type | 2 | 16.62 | **0.0001** | 23.47 | **0.0001** |
| | Tr x FT | 18 | 0.50 | 0.9548 | 0.65 | 0.8490 |
| therophyte | Treatment | 9 | 1.97 | **0.0476** | 0.88 | 0.5343 |
| | Forest Type | 2 | 2.67 | 0.0759 | 2.83 | 0.0648 |
| | Tr x FT | 18 | 0.92 | 0.5528 | 0.75 | 0.7605 |
| obligate seeder (s) | Treatment | 9 | 0.37 | 0.9494 | 0.44 | 0.9061 |
| | Forest Type | 2 | 73.00 | **0.0001** | 29.29 | **0.0001** |
| | Tr x FT | 18 | 0.68 | 0.8221 | 0.77 | 0.7328 |
| weak seeder (Sr) | Treatment | 9 | 1.50 | 0.1538 | 0.60 | 0.7953 |
| | Forest Type | 2 | 0.06 | 0.9387 | 8.97 | **0.0005** |
| | Tr x FT | 18 | 0.66 | 0.8429 | 1.33 | 0.1864 |
| facultative seeder (SR) | Treatment | 9 | 1.78 | 0.0875 | 1.33 | 0.2358 |
| | Forest Type | 2 | 0.54 | 0.5943 | 0.34 | 0.7135 |
| | Tr x FT | 18 | 1.00 | 0.4588 | 0.87 | 0.6168 |

| | | | Abundance | | Richness | |
|---|---|---|---|---|---|---|
| attribute | Model | df | Pseudo-F | P value | Pseudo-F | P value |
| obligate resprouter (R) | Treatment | 9 | 0.87 | 0.6462 | 1.23 | 0.2800 |
| | Forest Type | 2 | 5.59 | **0.0058** | 4.55 | **0.0100** |
| | Tr x FT | 18 | 0.95 | 0.5149 | 0.83 | 0.6600 |
| weak resprouter (Rs) | Treatment | 9 | 0.43 | 0.9156 | 1.00 | 0.4517 |
| | Forest Type | 2 | 0.60 | 0.5477 | 0.87 | 0.4232 |
| | Tr x FT | 18 | 0.65 | 0.8517 | 1.09 | 0.3661 |
| early | Treatment | 9 | 0.20 | 0.9945 | 0.23 | 0.9907 |
| | Forest Type | 2 | 10.25 | **0.0002** | 5.96 | **0.0046** |
| | Tr x FT | 18 | 0.28 | 0.9980 | 0.40 | 0.9875 |
| generalist | Treatment | 9 | 1.08 | 0.3819 | 1.39 | 0.1947 |
| | Forest Type | 2 | 7.67 | **0.0011** | 14.52 | **0.0001** |
| | Tr x FT | 18 | 0.66 | 0.8395 | 0.61 | 0.8858 |
| rainforest | Treatment | 9 | 0.52 | 0.8593 | 0.67 | 0.7296 |
| | Forest Type | 2 | 21.43 | **0.0001** | 14.33 | **0.0001** |
| | Tr x FT | 18 | 0.40 | 0.9842 | 0.94 | 0.5238 |

**Table S6.** Treatment x Forest Type effects on functional trait associations in the soil seed bank. All P values are based on 9999 permutations. SIMPER results are presented in Table S7. Significant values are indicated in bold.

| Source | df | SS | MS | Pseudo-F | P(perm) |
|---|---|---|---|---|---|
| Treatment | 9 | 31.326 | 3.4806 | 1.0387 | 0.3744 |
| Forest Type | 2 | 52.52 | 26.26 | 7.8366 | **0.0001** |
| Treatment x Forest Type | 18 | 32.776 | 1.8209 | 0.5434 | 1 |
| Residual | 120 | 402.11 | 3.3509 | | |
| Total | 149 | 518.73 | | | |
| Pair-wise test of Forest Type | | | | t | P(perm) |
| CTRF, Mixed Forest | | | | 2.2984 | **0.0001** |
| CTRF, Wet Forest | | | | 3.1145 | **0.0001** |
| Mixed Forest, Wet Forest | | | | 2.8428 | **0.0001** |

**Table S7.** SIMPER analysis of forest type effects on trait associations. Results are limited to attributes that contributed to a cumulative total of 50% dissimilarity. CTRF, cool temperate rainforest; MF, mixed forest; WF, wet forest. See Table S6 for associated PERMANOVA results.

*Groups CTRF & MF*
Average squared distance = 6.62

| | Group CTRF | Group MF | | | | |
|---|---|---|---|---|---|---|
| Trait | Av. Abund | Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
| rainforest | 0.668 | 0.151 | 0.705 | 0.77 | 10.65 | 10.65 |
| mobile | 0.474 | 0.166 | 0.692 | 0.40 | 10.47 | 21.12 |
| obligate resprouter (R) | 0.499 | 0.189 | 0.608 | 0.43 | 9.19 | 30.31 |
| endozoochore | 0.543 | 0.275 | 0.552 | 0.78 | 8.35 | 38.65 |
| Facultative seeder (SR) | 0.149 | 0.199 | 0.48 | 0.27 | 7.25 | 45.91 |
| chameaphyte | 0.247 | 0.317 | 0.473 | 0.29 | 7.14 | 53.05 |

*Groups CTRF & WF*
Average squared distance = 8.84

| | Group CTRF | Group WF | | | | |
|---|---|---|---|---|---|---|
| Trait | Av. Abund | Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
| anemochore | 0.0952 | 0.651 | 0.92 | 0.63 | 10.41 | 10.41 |
| rainforest | 0.668 | 0.186 | 0.824 | 0.81 | 9.32 | 19.74 |
| mobile | 0.474 | 0.19 | 0.739 | 0.42 | 8.36 | 28.10 |
| obligate seeder (S) | 0.126 | 0.813 | 0.694 | 0.90 | 7.85 | 35.95 |
| early | 0.323 | 0.562 | 0.671 | 0.71 | 7.60 | 43.55 |
| epizoochore | 0.223 | 0.541 | 0.622 | 0.79 | 7.04 | 50.59 |

*Groups MF & WF*
Average squared distance = 6.35

| | Group MF | Group WF | | | | |
|---|---|---|---|---|---|---|
| Trait | Av. Abund | Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
| anemochore | 0.166 | 0.651 | 0.837 | 0.62 | 13.18 | 13.18 |
| Facultative seeder (SR) | 0.199 | 0.368 | 0.684 | 0.41 | 10.77 | 23.95 |
| therophyte | 0.278 | 0.37 | 0.677 | 0.39 | 10.66 | 34.62 |
| epizoochore | 0.273 | 0.541 | 0.618 | 0.77 | 9.74 | 44.36 |
| obligate seeder (S) | 0.275 | 0.813 | 0.53 | 0.78 | 8.35 | 52.71 |

**Table S8.** Vegetation Pool x Forest Type effects on species composition. All P values are based on 9999 permutations. SIMPER results are shown in Tables S9, S10. Significant values are indicated in bold.

| Source | df | SS | MS | Pseudo-F | P(perm) |
|---|---|---|---|---|---|
| Vegetation Pool | 1 | 21238 | 21238 | 17.933 | **0.0001** |
| Forest Type | 2 | 6091 | 3045.5 | 2.5716 | **0.0024** |
| Vegetation Pool x Forest Type | 2 | 3632.3 | 1816.2 | 1.5336 | 0.0913 |
| Residual | 24 | 28422 | 1184.3 | | |
| Total | 29 | 59383 | | | |

| Pair-wise test of Vegetation Pool | t | P(perm) |
|---|---|---|
| SSB, Extant Vegetation | 4.2348 | 0.0001 |

| Pair-wise test of Forest Type | t | P(perm) |
|---|---|---|
| CTRF, Mixed Forest | 1.6488 | **0.0141** |
| CTRF, Wet Forest | 2.0242 | **0.0003** |
| Mixed Forest, Wet Forest | 0.92283 | 0.5716 |

**Table S9.** SIMPER analysis of significant vegetation pool effects on species composition (see Table S8). Results are limited to species that contributed to a cumulative total of 50% dissimilarity. Veg, Extant vegetation; SSB, soil seed bank.

*Groups Extant Vegetation & SSB*
Average dissimilarity = 72.3

| | Group Veg | Group SSB | | | | |
|---|---|---|---|---|---|---|
| Species | Av. Abund | Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
| *Blechnum wattsii* | 1.00 | 0.00 | 2.40 | 5.90 | 3.32 | 3.32 |
| *Dicksonia antarctica* | 1.00 | 0.00 | 2.40 | 5.90 | 3.32 | 6.63 |
| *Acacia* spp. | 0.00 | 0.93 | 2.23 | 3.11 | 3.08 | 9.71 |
| *Gahnia* spp. | 0.00 | 0.73 | 1.78 | 1.57 | 2.46 | 12.17 |
| *Nothofagus cunninghamii* | 0.73 | 0.07 | 1.72 | 1.46 | 2.38 | 14.56 |
| *Eucalyptus regnans* | 0.73 | 0.00 | 1.67 | 1.60 | 2.30 | 16.86 |
| *Cassinia aculeata* subsp. *aculeata* | 0.27 | 0.80 | 1.55 | 1.29 | 2.14 | 19.01 |
| *Oxalis* spp. | 0.33 | 0.80 | 1.49 | 1.18 | 2.06 | 21.07 |
| *Hydrocotyle hirta* | 0.40 | 1.00 | 1.47 | 1.18 | 2.03 | 23.10 |
| *Dryopoa dives* | 0.33 | 0.80 | 1.42 | 1.19 | 1.96 | 25.06 |
| *Viola hederacea* | 0.40 | 0.73 | 1.36 | 1.07 | 1.88 | 26.93 |
| *Clematis aristata* | 0.67 | 0.27 | 1.35 | 1.14 | 1.87 | 28.81 |
| *Olearia phlogopappa* subsp. *continentalis* | 0.20 | 0.60 | 1.34 | 1.09 | 1.86 | 30.66 |
| *Polyscias sambucifolia* | 0.13 | 0.60 | 1.32 | 1.13 | 1.83 | 32.49 |
| *Australina pusilla* subsp. *muelleri* | 0.40 | 0.67 | 1.28 | 1.04 | 1.77 | 34.26 |
| *Lomatia fraseri* | 0.53 | 0.00 | 1.25 | 1.04 | 1.73 | 35.99 |
| *Hedycarya angustifolia* | 0.27 | 0.53 | 1.23 | 1.00 | 1.70 | 37.69 |
| *Rubus fruticosus* spp. agg. | 0.00 | 0.53 | 1.22 | 1.05 | 1.69 | 39.38 |
| *Stellaria flaccida* | 0.33 | 0.47 | 1.16 | 0.95 | 1.61 | 40.99 |
| *Pomaderris aspera* | 0.33 | 0.47 | 1.15 | 0.96 | 1.59 | 42.58 |
| *Acacia melanoxylon* | 0.53 | 0.80 | 1.13 | 0.93 | 1.57 | 44.15 |
| *Lepidosperma elatius* | 0.13 | 0.47 | 1.11 | 0.93 | 1.54 | 45.69 |
| *Zieria arborescens* subsp. *arborescens* | 0.27 | 0.40 | 1.08 | 0.89 | 1.50 | 47.19 |
| *Coprosma quadrifida* | 0.47 | 0.00 | 1.08 | 0.91 | 1.50 | 48.68 |
| *Juncus* spp. | 0.00 | 0.47 | 1.05 | 0.91 | 1.45 | 50.14 |

**Table S10.** SIMPER analysis of significant forest type effects on species composition (see Table S8). Results are limited to species that contributed to a cumulative total of 50% dissimilarity. CTRF, cool temperate rainforest; MF, mixed forest; WF, wet forest.

*Groups CTRF & MF*
Average dissimilarity = 64.6

| | Group CTRF | Group MF | | | | |
|---|---|---|---|---|---|---|
| Species | Av. Abund | Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
| *Clematis aristata* | 0.10 | 0.60 | 1.53 | 1.14 | 2.37 | 2.37 |
| *Cassinia aculeata* subsp. aculeata | 0.20 | 0.60 | 1.43 | 1.10 | 2.21 | 4.58 |
| *Viola hederacea* | 0.40 | 0.70 | 1.42 | 1.06 | 2.20 | 6.78 |
| *Oxalis* spp. | 0.40 | 0.70 | 1.40 | 1.06 | 2.17 | 8.96 |
| *Dryopoa dives* | 0.40 | 0.60 | 1.36 | 1.02 | 2.10 | 11.06 |
| *Eucalyptus regnans* | 0.20 | 0.50 | 1.31 | 0.97 | 2.02 | 13.08 |
| *Blechnum wattsii* | 0.50 | 0.50 | 1.30 | 0.98 | 2.00 | 15.08 |
| *Dicksonia antarctica* | 0.50 | 0.50 | 1.30 | 0.98 | 2.00 | 17.09 |
| *Australina pusilla* subsp. *muelleri* | 0.50 | 0.70 | 1.30 | 0.97 | 2.00 | 19.09 |
| *Acacia melanoxylon* | 0.90 | 0.50 | 1.29 | 0.97 | 2.00 | 21.09 |
| *Nothofagus cunninghamii* | 0.60 | 0.50 | 1.29 | 0.98 | 2.00 | 23.10 |
| *Stellaria flaccida* | 0.30 | 0.50 | 1.28 | 0.97 | 1.99 | 25.08 |
| *Acacia* spp. | 0.50 | 0.40 | 1.27 | 0.98 | 1.97 | 27.05 |
| *Hedycarya angustifolia* | 0.50 | 0.30 | 1.27 | 0.98 | 1.96 | 29.01 |
| *Gahnia* spp. | 0.50 | 0.20 | 1.24 | 0.98 | 1.91 | 30.93 |
| *Hydrocotyle hirta* | 0.60 | 0.70 | 1.22 | 0.90 | 1.89 | 32.82 |
| *Atherosperma moschatum* subsp. *moschatum* | 0.40 | 0.00 | 1.17 | 0.81 | 1.81 | 34.63 |
| *Polystichum proliferum* | 0.60 | 1.00 | 1.17 | 0.81 | 1.81 | 36.44 |
| *Olearia phlogopappa subsp. continentalis* | 0.30 | 0.40 | 1.17 | 0.90 | 1.80 | 38.24 |
| *Pittosporum bicolor* | 0.40 | 0.10 | 1.15 | 0.83 | 1.78 | 40.03 |
| *Acacia dealbata* subsp. *dealbata* | 0.70 | 0.80 | 1.05 | 0.77 | 1.62 | 41.65 |
| *Rubus anglocandicans* | 0.00 | 0.40 | 1.05 | 0.79 | 1.62 | 43.27 |
| *Lepidosperma elatius* | 0.30 | 0.30 | 1.03 | 0.84 | 1.60 | 44.87 |
| *Tetrarrhena juncea* | 0.70 | 0.80 | 1.03 | 0.77 | 1.59 | 46.46 |
| *Microsorum pustulatum* subsp. *pustulatum* | 0.30 | 0.20 | 1.02 | 0.77 | 1.57 | 48.04 |
| *Urtica incisa* | 0.30 | 0.20 | 0.98 | 0.76 | 1.51 | 49.55 |
| *Pomaderris aspera* | 0.20 | 0.30 | 0.95 | 0.77 | 1.47 | 51.01 |

*Groups CTRF & WF*
Average dissimilarity = 65.9

| Species | Group CTRF Av. Abund | Group WF Av. Abund | Av. Diss | Diss/SD | Contrib (%) | Cum (%) |
|---|---|---|---|---|---|---|
| *Cassinia aculeata* subsp. *aculeata* | 0.20 | 0.80 | 1.64 | 1.40 | 2.50 | 2.50 |
| *Clematis aristata* | 0.10 | 0.70 | 1.64 | 1.34 | 2.49 | 4.98 |
| *Pomaderris aspera* | 0.20 | 0.70 | 1.53 | 1.24 | 2.32 | 7.31 |
| *Nothofagus cunninghamii* | 0.60 | 0.10 | 1.44 | 1.14 | 2.19 | 9.50 |
| *Zieria arborescens* subsp. *arborescens* | 0.10 | 0.60 | 1.40 | 1.14 | 2.13 | 11.62 |
| *Polyscias sambucifolia* | 0.20 | 0.60 | 1.37 | 1.09 | 2.08 | 13.71 |
| *Dryopoa dives* | 0.40 | 0.70 | 1.33 | 1.05 | 2.02 | 15.73 |
| *Viola hederacea* | 0.40 | 0.60 | 1.26 | 1.01 | 1.92 | 17.65 |
| *Oxalis* spp. | 0.40 | 0.60 | 1.24 | 1.01 | 1.88 | 19.53 |
| *Olearia phlogopappa subsp. continentalis* | 0.30 | 0.50 | 1.21 | 0.97 | 1.84 | 21.37 |
| *Australina pusilla* subsp. *muelleri* | 0.50 | 0.40 | 1.21 | 0.97 | 1.84 | 23.20 |
| *Acacia* spp. | 0.50 | 0.50 | 1.20 | 0.98 | 1.82 | 25.02 |
| *Blechnum wattsii* | 0.50 | 0.50 | 1.20 | 0.98 | 1.82 | 26.83 |
| *Dicksonia antarctica* | 0.50 | 0.50 | 1.20 | 0.98 | 1.82 | 28.65 |
| *Hedycarya angustifolia* | 0.50 | 0.40 | 1.19 | 0.97 | 1.81 | 30.46 |
| *Gahnia* spp. | 0.50 | 0.40 | 1.19 | 0.97 | 1.80 | 32.26 |
| *Stellaria flaccida* | 0.30 | 0.40 | 1.11 | 0.89 | 1.68 | 33.94 |
| *Polystichum proliferum* | 0.60 | 0.90 | 1.11 | 0.83 | 1.68 | 35.62 |
| *Lomatia fraseri* | 0.20 | 0.40 | 1.10 | 0.86 | 1.67 | 37.29 |
| *Hydrocotyle hirta* | 0.60 | 0.80 | 1.10 | 0.86 | 1.66 | 38.95 |
| *Eucalyptus regnans* | 0.20 | 0.40 | 1.08 | 0.86 | 1.65 | 40.60 |
| *Atherosperma moschatum* subsp. *moschatum* | 0.40 | 0.00 | 1.08 | 0.80 | 1.64 | 42.23 |
| *Pittosporum bicolor* | 0.40 | 0.10 | 1.07 | 0.83 | 1.63 | 43.86 |
| *Acacia melanoxylon* | 0.90 | 0.60 | 1.05 | 0.83 | 1.59 | 45.45 |
| *Pteridium esculentum subsp. esculentum* | 0.00 | 0.40 | 1.03 | 0.80 | 1.56 | 47.01 |
| *Prostanthera lasianthos* var. *lasianthos* | 0.10 | 0.40 | 1.02 | 0.82 | 1.55 | 48.56 |
| *Juncus* spp. | 0.20 | 0.40 | 0.99 | 0.87 | 1.51 | 50.07 |

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