

Supplemental material for submission to *Trees: Structure & Function* as a Research Article (June 2022)

Functional Seed Traits as Predictors of Germination and Seedling Growth for Species with Potential for Restoration in Caquetá, Colombia
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Online Resource 3: Species-specific differences in percent germination (PG%) by pre-germination and light treatments.

Within ES, species differed in how percent germination was affected by pre-germination and light treatments ($F_{9,114} = 4.979$, $p < 0.001$; $F_{14,114} = 3.801$, $p < 0.001$; [Online Resource 4](#)). *Apeiba membranacea* did not differ by pre-germination or light treatment ($F_{2,18} = 1.625$, $p = 0.225$; $F_{2,18} = 1.865$, $p = 0.184$, respectively). *Miconia minutiflora* showed higher germination in the control over the hot water treatment ($t = 3.124$, $p = 0.007$) but did not receive the abrasion treatment and did not differ by light treatment ($F_{2,12} = 0.835$, $p = 0.457$). *Ochroma pyramidale* showed higher germination when seeds received the hot water treatment over the control ($t = 2.996$, $p = 0.006$), but the abrasion treatment did not differ from control ($t = 0.627$, $p = 0.537$) or hot water ($t = 1.206$, $p = 0.24$). Also for *O. pyramidale*, percent germination was lowest under null light (vs. partial: $t = 1.906$, $p = 0.069$; vs. full: $t = 3.886$, $p = 0.001$) and was marginally higher in full over partial ($t = 1.981$, $p = 0.059$). *Piper aduncum*, *P. discolor*, and *V. baccifera* did not respond to pre-germination treatment ($F_{2,12} = 1.12$, $p = 0.311$; $F_{2,12} = 0.222$, $p = 0.646$; $F_{2,12} = 1.179$, $p = 0.299$, respectively) but did not receive the abrasion treatment. *Piptocoma discolor* and *V. baccifera* responded to light treatments; both showed lowest percent germination under null light ($p < 0.1$) but differed in that *P. discolor* had higher germination under partial light ($t = 1.814$, $p = 0.09$) and *V. baccifera* under full light ($t = 3.423$, $p = 0.004$). *Miconia tomentosa* and *C. engleriana* showed interactions between pre-germination and light treatments on percent germination ($F_{2,12} = 3.332$, $p = 0.071$; $F_{4,18} = 4.124$, $p = 0.015$, respectively; [Online Resource 5](#)). *Miconia tomentosa* did not receive an abrasion treatment but showed marginally higher percent germination in the control over hot water treatment when there was full light ($F_{1,4} = 3.154$, $p = 0.074$) but not when there was partial ($F_{1,4} = 3.834$, $p = 0.83$). No *M. tomentosa* seeds germinated under null light. Percent germination was higher in the control treatment when in full light ($F_{2,6} = 5.491$, $p = 0.001$) but showed no difference under partial light ($F_{2,6} = 1.004$, $p = 0.354$). For *C. engleriana*, percent germination was highest under the abrasion and hot water treatments when full or partial light was present ($p < 0.05$). When there was no light, there were no differences among pre-germination treatments ($p > 0.1$). Percent germination was lowest under the control treatment ($p < 0.05$) except under the control pre-germination treatment where there were no differences ($p > 0.1$).

Within MS, species differed in how they responded to pre-germination ($F_{2,30} = 16.426$, $p < 0.001$) but not to light treatments ($F_{2,30} = 1.418$, $p = 0.258$; [Online Resource 6](#)). *Ormosia nobilis* showed higher percent germination under the abrasion treatment (vs. control: $t = 7.607$, $p < 0.001$; vs abrasion: $t = 7.684$, $p < 0.001$). Abrasion and control did not differ ($t = 0.077$, $p = 0.939$). *Cedrelinga cateniformis* lacked an abrasion treatment but showed significantly higher germination under the hot water treatment (vs control: $t = 3.82$, $p = 0.002$). Both MS species were unresponsive to the light treatment ($F = 1.691$, $p = 0.212$; $F = 1.532$, $p = 0.256$, respectively).

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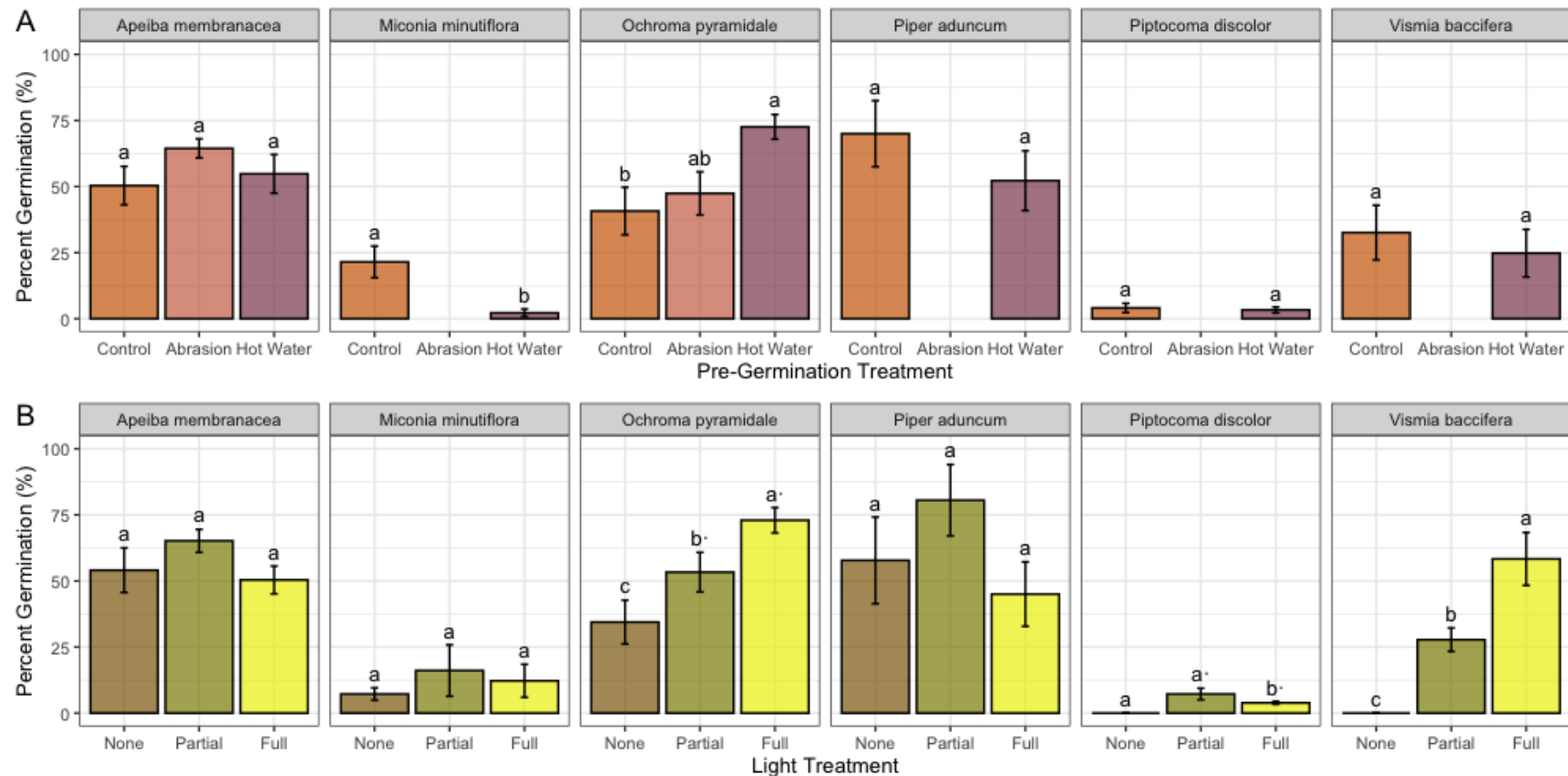
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Online Resource 4: Species-specific comparisons of mean percent germination by (A) pre-germination and (B) light treatment within the early-successionals functional group. The species illustrated here did not show a significant interaction between light and pre-germination treatments ($p > 0.1$). Letters above bars represent statistically significant differences ($p < 0.05$). Letters with interpuncts (·) represent marginally significant differences ($0.05 < p < 0.1$).



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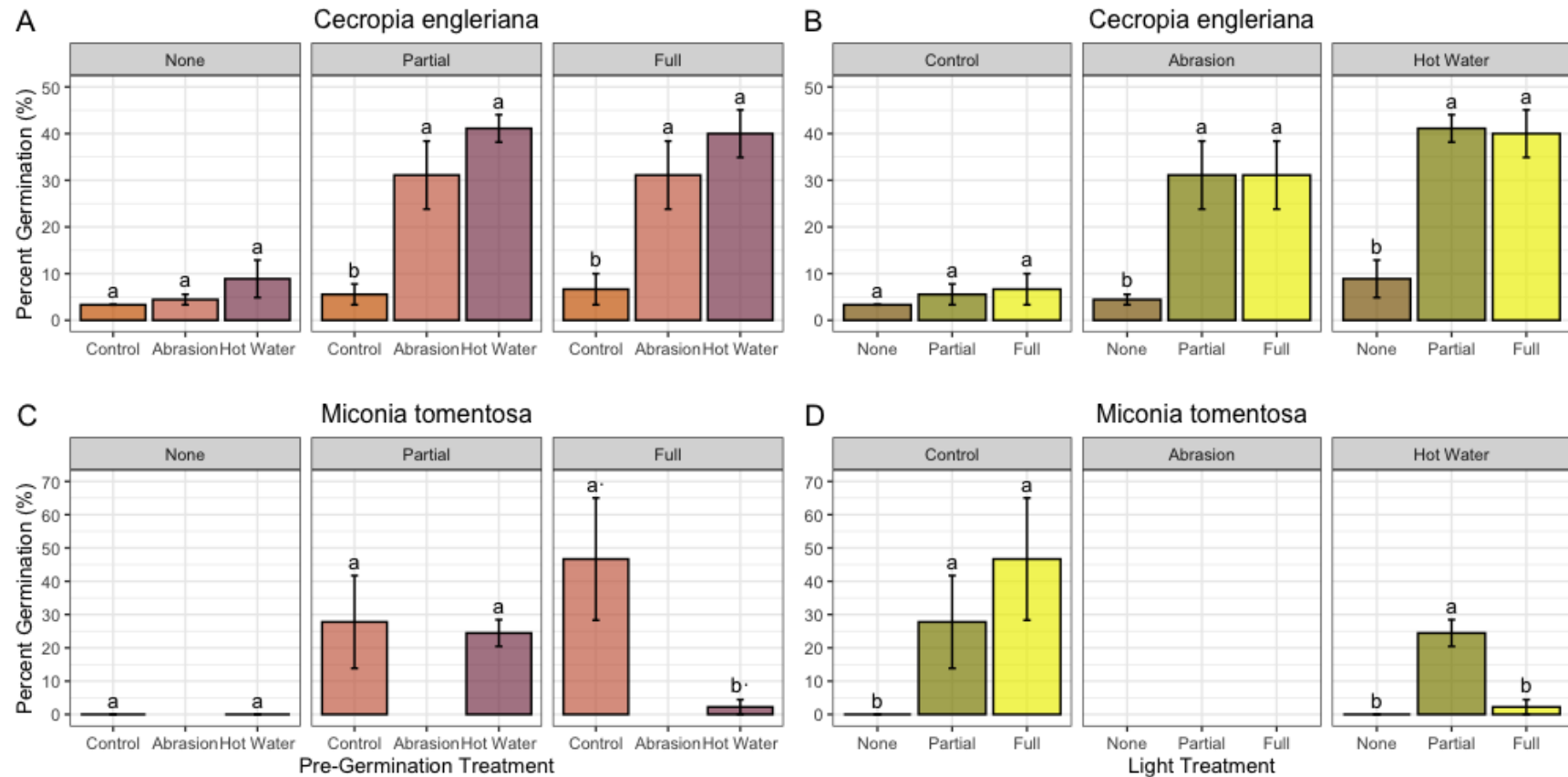
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Online Resource 5: Comparisons of mean percent germination by combinations of pre-germination and light treatment for *Cecropia engleriana* (A-B) and *Miconia tomentosa* (C-D). Both of these species showed an interaction between light and pre-germination treatments ($F_{4,18} = 4.124$, $p = 0.015$; $F_{2,12} = 3.332$, $p = 0.71$, respectively). Letters above bars represent statistically significant differences ($p < 0.05$). Letters with interpuncts (·) represent marginally significant differences ($0.05 < p < 0.1$).



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Online Resource 6: Species-specific comparisons of mean percent germination by (A) pre-germination and (B) light treatment within the mid-successionals functional group. The species illustrated here did not show a significant interaction between light and pre-germination treatments or a significant effect of light treatment ($p > 0.1$). Letters above bars represent statistically significant differences ($p < 0.05$). *Cedrelinga cateniformis* was not subjected to the abrasion pre-germination treatment.

