

Duarte, L. d. S. 2011. Phylogenetic habitat filtering influences forest nucleation in grasslands. – *Oikos* 120: 208–215.





## Appendix 2

Phylogeny-weighted sapling species composition in *Araucaria* forest patches of different sizes in southern Brazilian highlands (matrix P). Columns were standardized by marginal total (column sum = 1).

Species	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9	SM10	SM11	SM12	SM13	SM14	SM15	ME1	ME2	ME3	ME4	ME5	ME6	ME7	ME8	ME9	ME10	LP1	LP2	LP3	LP4	LP5		
<i>Attalea rugulosa</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.014	0.012	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.008	0.010	0.008	0.011	0.011	0.012	0.011	0.010		
<i>Araucaria angustifolia</i>	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.005	0.005	0.004	0.004	0.005	0.004	0.004	0.004	0.018	0.004	0.004	0.004	0.004	0.050	0.004	0.010	0.009	0.010	0.010	0.010		
<i>Cabralia caryocarpa</i>	0.020	0.017	0.020	0.019	0.020	0.020	0.019	0.020	0.020	0.020	0.018	0.019	0.019	0.020	0.018	0.021	0.019	0.020	0.019	0.020	0.020	0.019	0.020	0.017	0.020	0.018	0.019	0.019	0.019	0.018		
<i>Calyptranthes grandifolia</i>	0.024	0.017	0.021	0.021	0.024	0.022	0.020	0.024	0.024	0.021	0.019	0.022	0.020	0.021	0.018	0.022	0.021	0.023	0.021	0.023	0.024	0.022	0.024	0.017	0.023	0.020	0.021	0.020	0.020	0.020		
<i>Casuarina decandra</i>	0.018	0.017	0.018	0.018	0.018	0.019	0.017	0.018	0.018	0.018	0.017	0.017	0.017	0.017	0.020	0.018	0.017	0.020	0.017	0.018	0.018	0.018	0.018	0.020	0.020	0.017	0.019	0.018	0.017	0.018		
<i>Clethra ulmiana</i>	0.019	0.025	0.022	0.023	0.019	0.021	0.021	0.019	0.019	0.022	0.020	0.018	0.021	0.022	0.024	0.019	0.020	0.018	0.020	0.022	0.018	0.022	0.019	0.020	0.021	0.018	0.017	0.017	0.018	0.018		
<i>Daphnopsis fasciculata</i>	0.020	0.017	0.020	0.019	0.020	0.020	0.019	0.020	0.020	0.020	0.018	0.019	0.019	0.020	0.018	0.022	0.019	0.020	0.019	0.020	0.020	0.019	0.020	0.017	0.020	0.018	0.020	0.019	0.019	0.018		
<i>Dicksonia sellowiana</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.029	0.000	0.026	0.000	0.029		
<i>Drinys brasiliensis</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.031	0.025	0.008	0.008	0.025	0.014	0.013	0.008	0.015	0.008	0.008	0.008	0.008	0.010	0.008	0.011	0.012	0.011	0.012	0.011		
<i>Erythroxylum canefolium</i>	0.018	0.017	0.018	0.018	0.018	0.019	0.017	0.018	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.020	0.018	0.017	0.020	0.017	0.018	0.018	0.018	0.020	0.020	0.017	0.019	0.018	0.018	0.017	0.018	
<i>Eugenia uruguayensis</i>	0.024	0.017	0.021	0.021	0.024	0.022	0.020	0.024	0.024	0.021	0.019	0.022	0.020	0.021	0.018	0.022	0.021	0.023	0.021	0.023	0.024	0.022	0.024	0.017	0.023	0.020	0.021	0.020	0.020	0.020	0.020	
<i>Ficus laschmuthiana</i>	0.018	0.017	0.018	0.018	0.018	0.019	0.017	0.018	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.019	0.018	0.017	0.019	0.018	0.018	0.018	0.018	0.019	0.019	0.017	0.018	0.017	0.017	0.017	0.017	
<i>Ilex brevipetala</i>	0.017	0.028	0.018	0.022	0.017	0.020	0.024	0.017	0.017	0.018	0.017	0.017	0.024	0.018	0.019	0.018	0.020	0.017	0.018	0.018	0.018	0.020	0.017	0.017	0.017	0.018	0.018	0.018	0.017	0.020	0.019	
<i>Ilex dumosa</i>	0.017	0.031	0.018	0.023	0.017	0.021	0.024	0.017	0.017	0.018	0.017	0.017	0.026	0.018	0.019	0.018	0.020	0.017	0.018	0.018	0.018	0.021	0.017	0.017	0.017	0.018	0.018	0.018	0.017	0.020	0.019	
<i>Ilex micromorpha</i>	0.017	0.028	0.018	0.022	0.017	0.020	0.026	0.017	0.017	0.018	0.017	0.017	0.024	0.018	0.019	0.018	0.021	0.017	0.018	0.018	0.018	0.020	0.017	0.017	0.017	0.018	0.018	0.018	0.018	0.018	0.020	0.019
<i>Ilex pangwarrensis</i>	0.017	0.028	0.018	0.022	0.017	0.020	0.024	0.017	0.017	0.018	0.017	0.017	0.024	0.018	0.019	0.018	0.020	0.017	0.018	0.018	0.018	0.020	0.017	0.017	0.017	0.018	0.018	0.018	0.018	0.018	0.020	0.019
<i>Inga lentisifolia</i>	0.018	0.017	0.018	0.018	0.018	0.019	0.017	0.018	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.019	0.018	0.017	0.019	0.017	0.018	0.018	0.018	0.019	0.019	0.017	0.018	0.017	0.017	0.017	0.017	
<i>Lamanonia ternata</i>	0.019	0.025	0.022	0.024	0.019	0.022	0.021	0.019	0.019	0.022	0.020	0.018	0.021	0.022	0.026	0.020	0.020	0.018	0.021	0.022	0.018	0.023	0.019	0.020	0.020	0.018	0.017	0.017	0.017	0.017	0.018	
<i>Laplacea acutifolia</i>	0.018	0.017	0.018	0.018	0.018	0.021	0.017	0.018	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.023	0.018	0.017	0.017	0.018	0.018	0.018	0.018	0.022	0.022	0.017	0.019	0.017	0.017	0.017	0.017	
<i>Leandra laevigata</i>	0.024	0.017	0.023	0.021	0.024	0.022	0.021	0.024	0.024	0.023	0.021	0.022	0.021	0.023	0.023	0.018	0.022	0.021	0.023	0.021	0.021	0.023	0.024	0.017	0.022	0.019	0.021	0.020	0.020	0.020	0.020	
<i>Leandra sublanata</i>	0.024	0.017	0.023	0.021	0.024	0.022	0.021	0.024	0.024	0.023	0.021	0.022	0.021	0.023	0.023	0.018	0.022	0.021	0.023	0.021	0.021	0.023	0.024	0.017	0.022	0.019	0.021	0.020	0.020	0.020	0.020	
<i>Matayba elegans</i>	0.020	0.017	0.020	0.019	0.020	0.020	0.019	0.020	0.020	0.020	0.018	0.019	0.019	0.019	0.020	0.018	0.022	0.019	0.020	0.019	0.020	0.019	0.020	0.017	0.020	0.018	0.020	0.019	0.019	0.019	0.018	
<i>Miconia cinerascens</i>	0.025	0.017	0.025	0.022	0.025	0.022	0.022	0.025	0.025	0.025	0.022	0.023	0.022	0.023	0.018	0.023	0.021	0.025	0.022	0.021	0.025	0.024	0.026	0.017	0.023	0.019	0.021	0.020	0.021	0.020	0.020	
<i>Miconia lymnalis</i>	0.026	0.017	0.027	0.023	0.026	0.023	0.023	0.026	0.026	0.027	0.023	0.024	0.023	0.024	0.027	0.018	0.023	0.021	0.025	0.022	0.021	0.025	0.024	0.025	0.017	0.024	0.019	0.021	0.020	0.021	0.020	
<i>Miconia sellowiana</i>	0.025	0.017	0.025	0.022	0.025	0.022	0.022	0.025	0.025	0.025	0.022	0.023	0.022	0.023	0.025	0.018	0.022	0.021	0.024	0.021	0.024	0.024	0.025	0.017	0.023	0.019	0.021	0.020	0.020	0.020	0.020	
<i>Mollinedia elegans</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.014	0.012	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.008	0.010	0.008	0.012	0.012	0.013	0.011	0.012	0.012	
<i>Myrcogenia anomala</i>	0.024	0.017	0.021	0.021	0.024	0.023	0.020	0.024	0.024	0.021	0.019	0.022	0.020	0.021	0.018	0.022	0.021	0.023	0.021	0.023	0.024	0.022	0.024	0.017	0.023	0.020	0.021	0.020	0.020	0.020	0.020	
<i>Myrcogenia micrantha</i>	0.024	0.017	0.021	0.021	0.024	0.023	0.020	0.024	0.024	0.021	0.019	0.022	0.020	0.021	0.018	0.022	0.021	0.023	0.021	0.023	0.024	0.022	0.024	0.017	0.023	0.020	0.021	0.020	0.020	0.020	0.020	

<i>Myrcogenia</i>	0.024	0.017	0.021	0.021	0.024	0.024	0.021	0.018	0.022	0.021	0.023	0.021	0.023	0.024	0.022	0.024	0.017	0.023	0.020	0.021	0.020	0.020	0.020
<i>Myrciodes</i>																							
<i>Myrcia guianensis</i>	0.024	0.017	0.021	0.021	0.024	0.024	0.021	0.018	0.022	0.022	0.025	0.022	0.025	0.024	0.022	0.024	0.017	0.025	0.020	0.022	0.020	0.021	0.020
<i>Myrcia hirtuaguna</i>	0.024	0.017	0.021	0.021	0.024	0.024	0.021	0.018	0.022	0.021	0.024	0.021	0.023	0.025	0.022	0.024	0.017	0.024	0.020	0.022	0.020	0.021	0.020
<i>Myrcia retorta</i>	0.024	0.017	0.021	0.021	0.024	0.024	0.021	0.018	0.022	0.022	0.025	0.022	0.023	0.025	0.022	0.024	0.017	0.025	0.020	0.022	0.020	0.021	0.020
<i>Myrcine coriacea</i>	0.022	0.028	0.025	0.023	0.022	0.022	0.025	0.024	0.019	0.020	0.019	0.022	0.025	0.021	0.022	0.022	0.022	0.021	0.018	0.017	0.017	0.018	0.018
<i>Myrcine lorentziana</i>	0.024	0.032	0.029	0.024	0.024	0.024	0.029	0.026	0.020	0.020	0.020	0.022	0.029	0.021	0.023	0.024	0.025	0.022	0.018	0.017	0.017	0.018	0.018
<i>Nectandra</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.008	0.010	0.008	0.013	0.013	0.013	0.012	0.012
<i>grandiflora</i>																							
<i>Ocotea corymbosa</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.010	0.008	0.014	0.014	0.014	0.013	0.013	0.012
<i>Ocotea elegans</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.010	0.008	0.014	0.014	0.014	0.013	0.013	0.012
<i>Ocotea indica</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.010	0.008	0.014	0.014	0.014	0.013	0.013	0.012
<i>Ocotea parosa</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.010	0.008	0.014	0.014	0.014	0.013	0.013	0.012
<i>Ocotea puberula</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.010	0.008	0.014	0.014	0.014	0.013	0.013	0.012
<i>Ocotea pulchella</i>	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.013	0.010	0.010	0.008	0.010	0.008	0.008	0.008	0.010	0.008	0.014	0.014	0.014	0.013	0.013	0.012
<i>Piptocarpha</i>	0.017	0.025	0.018	0.020	0.017	0.017	0.018	0.019	0.018	0.020	0.017	0.019	0.018	0.018	0.019	0.017	0.017	0.017	0.018	0.018	0.018	0.020	0.018
<i>axillaris</i>																							
<i>Piptocarpha notata</i>	0.017	0.025	0.018	0.020	0.017	0.017	0.018	0.019	0.018	0.020	0.017	0.019	0.018	0.018	0.019	0.017	0.017	0.017	0.018	0.018	0.018	0.020	0.018
<i>Podocarpus</i>	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.005	0.004	0.004	0.004	0.012	0.004	0.004	0.004	0.004	0.029	0.004	0.010	0.007	0.010	0.007	0.010
<i>lamberti</i>																							
<i>Psidium</i>	0.024	0.017	0.021	0.023	0.026	0.022	0.020	0.026	0.021	0.019	0.022	0.021	0.023	0.025	0.023	0.024	0.017	0.023	0.019	0.021	0.020	0.021	0.020
<i>catleyanum</i>																							
<i>Roupaia brasiliensis</i>	0.012	0.013	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.013	0.013	0.012	0.012	0.012	0.012	0.012	0.013	0.012	0.012	0.012	0.012	0.014	0.012
<i>Rudgea paucifloras</i>	0.017	0.023	0.018	0.019	0.017	0.018	0.020	0.017	0.018	0.017	0.021	0.018	0.018	0.018	0.019	0.017	0.017	0.017	0.018	0.017	0.017	0.019	0.018
<i>Sapium</i>	0.018	0.017	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.017	0.021	0.017	0.018	0.018	0.018	0.020	0.020	0.017	0.019	0.018	0.017	0.018
<i>glandulatum</i>																							
<i>Siphonogena</i>	0.026	0.017	0.021	0.021	0.024	0.023	0.020	0.024	0.021	0.019	0.024	0.021	0.023	0.025	0.022	0.026	0.017	0.023	0.020	0.021	0.020	0.021	0.020
<i>retzii</i>																							
<i>Solanum johannae</i>	0.017	0.023	0.018	0.019	0.017	0.018	0.020	0.017	0.018	0.017	0.020	0.019	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.017	0.017	0.019	0.018
<i>Solanum</i>	0.017	0.023	0.018	0.019	0.017	0.018	0.020	0.017	0.018	0.017	0.020	0.019	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.017	0.017	0.019	0.018
<i>pseudopina</i>																							
<i>Solanum variabile</i>	0.017	0.023	0.018	0.019	0.017	0.018	0.020	0.017	0.018	0.017	0.020	0.019	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.017	0.017	0.019	0.018
<i>Tibouchina</i>	0.024	0.017	0.023	0.021	0.024	0.022	0.021	0.024	0.023	0.021	0.022	0.021	0.023	0.023	0.022	0.024	0.017	0.022	0.019	0.020	0.020	0.020	0.020
<i>seloiana</i>																							
<i>Vernonia discolor</i>	0.017	0.025	0.018	0.020	0.017	0.017	0.018	0.019	0.018	0.017	0.017	0.019	0.018	0.019	0.019	0.017	0.017	0.017	0.018	0.018	0.018	0.020	0.018
<i>Vitex megapotamica</i>	0.017	0.023	0.018	0.019	0.017	0.018	0.020	0.017	0.018	0.017	0.020	0.018	0.018	0.018	0.017	0.017	0.017	0.017	0.018	0.017	0.017	0.019	0.018
<i>Wimmeria</i>	0.018	0.017	0.018	0.018	0.018	0.018	0.020	0.017	0.018	0.018	0.017	0.019	0.018	0.018	0.018	0.018	0.024	0.021	0.017	0.019	0.017	0.017	0.017
<i>paullinifolia</i>																							
<i>Xylocna</i>	0.018	0.017	0.018	0.018	0.018	0.018	0.018	0.020	0.018	0.017	0.020	0.017	0.018	0.018	0.018	0.018	0.020	0.020	0.017	0.019	0.018	0.017	0.018
<i>pseudosdamianii</i>																							
<i>Zanthoxylum</i>	0.020	0.017	0.020	0.019	0.020	0.019	0.020	0.018	0.021	0.019	0.020	0.019	0.020	0.020	0.019	0.020	0.017	0.020	0.018	0.019	0.019	0.019	0.018
<i>rhaphilium</i>																							
Total	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

## Appendix 3

Net relatedness index (NRI) for sapling communities occurring in forest patches of different sizes.

Plot <sup>†</sup>	n taxa	Average MPD <sup>‡</sup> <sub>observed</sub>	Average MPD <sub>random</sub>	Std. deviation MPD <sub>random</sub>	NRI	p <sup>§</sup>
SM1	3	400.000	441.699	82.431	0.506	0.4935
SM2	2	400.000	475.915	69.018	1.100	0.1024
SM3	2	480.000	476.760	69.034	-0.047	0.9354
SM4	5	418.667	434.348	73.951	0.212	0.5179
SM5	3	400.000	441.838	82.615	0.506	0.4830
SM6	7	412.698	439.813	61.485	0.441	0.3611
SM7	3	453.333	441.873	82.561	-0.139	0.8060
SM8	3	400.000	440.364	81.854	0.493	0.4979
SM9	3	400.000	438.800	80.377	0.483	0.5050
SM10	2	480.000	476.269	66.886	-0.056	0.9396
SM11	3	586.667	441.293	82.284	-1.767	0.9582
SM12	4	520.000	434.597	80.110	-1.066	0.8248
SM13	3	453.333	442.179	83.123	-0.134	0.8023
SM14	2	480.000	476.541	69.185	-0.050	0.9371
SM15	4	524.444	433.399	80.144	-1.136	0.8576
ME1	11	457.212	452.381	44.207	-0.109	0.5492
ME2	13	453.675	457.861	38.853	0.108	0.4463
ME3	7	377.143	439.555	62.509	0.999	0.1466
ME4	10	494.815	448.737	48.229	-0.955	0.8060
ME5	2	480.000	476.512	70.111	-0.050	0.9345
ME6	9	345.926	445.481	52.413	1.899	0.0263
ME7	6	396.444	435.710	68.425	0.574	0.3259
ME8	3	400.000	440.492	81.374	0.498	0.4923
ME9	3	640.000	441.484	82.331	-2.411	<b>0.9937</b>
ME10	6	391.111	435.726	68.282	0.653	0.2613
LP1	34	508.711	488.480	16.704	-1.211	0.8859
LP2	28	465.538	482.789	20.550	0.840	0.2031
LP3	39	498.246	491.420	13.747	-0.497	0.6710
LP4	24	478.116	477.365	23.666	-0.032	0.5100
LP5	34	500.820	488.559	16.639	-0.737	0.7586

<sup>†</sup> SM: small patches; ME: medium patches; LP: large patches.

<sup>‡</sup> mean phylogenetic distance.

<sup>§</sup> probabilities generated by 10 000 permutations. Bold numbers indicate  $0.025 \leq p \leq 0.975$ .