Appendix 1. Number of samples per tree for the assessment of water storage capacity.

Tree Species	Tree ID	*Psychilis kraenzlinii*	
		Absent	Present
Coccoloba microstachya	1	4	4
Coccoloba microstachya	2	4	0
Coccoloba microstachya	3	4	0
Coccoloba microstachya	4	4	0
Machaonia portoricensis	1	3	2
Machaonia portoricensis	2	4	2
Machaonia portoricensis	3	3	4
Machaonia portoricensis	4	4	3
Ouratea littoralis	1	3	4
Ouratea littoralis	2	4	4
Ouratea littoralis	3	4	4
Ouratea littoralis	4	4	4
Randia aculeata	1	2	3
Randia aculeata	2	3	2
Randia aculeata	3	4	0
Randia aculeata	4	4	0
Rondeletia inermis	1	4	3
Rondeletia inermis	2	1	3
Rondeletia inermis	3	4	0
Phyllanthus cuneifolius	1	4	4
Phyllanthus cuneifolius	2	4	4
Phyllanthus cuneifolius	3	3	4
Phyllanthus cuneifolius	4	4	4
Swietenia mahagoni	1	3	0
Swietenia mahagoni	2	4	0
Swietenia mahagoni	3	4	0
Swietenia mahagoni	4	4	0
Tabebuia haemantha	1	4	4
Tabebuia haemantha	2	4	4
Tabebuia haemantha	3	4	4
Tabebuia haemantha	4	4	4

Appendix 2. Number of samples per tree for the fissuring index.

Tree Species	Tree ID	*Psychilis kraenzlinii*	
		Absent	Present
Coccoloba microstachya	1	4	4
Coccoloba microstachya	2	4	4
Coccoloba microstachya	3	4	0
Coccoloba microstachya	4	4	0
Ouratea littoralis	1	4	4
Ouratea littoralis	2	3	4
Ouratea littoralis	3	4	4
Ouratea littoralis	4	4	4
Machaonia portoricensis	1	4	4
Machaonia portoricensis	2	4	4
Machaonia portoricensis	3	4	4
Machaonia portoricensis	4	4	4
Randia aculeata	1	3	0
Rondeletia inermis	1	1	4
Rondeletia inermis	2	4	4
Rondeletia inermis	3	4	4
Rondeletia inermis	4	4	0
Swietenia mahagoni	1	4	0
Swietenia mahagoni	2	4	0
Swietenia mahagoni	3	4	0
Swietenia mahagoni	4	4	0
Phyllanthus cuneifolius	1	4	3
Phyllanthus cuneifolius	2	4	0
Phyllanthus cuneifolius	3	4	4
Phyllanthus cuneifolius	4	4	4
Phyllanthus cuneifolius	5	0	4
Tabebuia haemantha	1	4	4
Tabebuia haemantha	2	4	4
Tabebuia haemantha	3	4	4
Tabebuia haemantha	4	4	4

Appendix 3. Number of seed packets placed *in situ* per phorophyte species.

Phorophyte Species	Seed Packets	
	On trees orchid-free	Near established orchid
Coccoloba microstachya	31	0
Machaonia portoricensis	15	13
Ouratea littoralis	10	10
Randia aculeata	18	0
Rondeletia inermis	13	6
Phyllanthus cuneifolius	10	10
Swietenia mahagoni	16	2
Tabebuia haemantha	10	10

Appendix 4. Conover-Iman Pairwise Comparisons among phorophyte species for Water Holding Capacity (WHC), Water Retention Capacity (WRC) and Fissuring Index (FI).

Comparison	WHC		WRC		FI	
	Z	***P***	***Z***	***P***	***Z***	***P***
Coccoloba microstachya - Ouratea littoralis	3.56	**<0.01***	-0.51	0.6	-0.25	0.8
Coccoloba microstachya - Machaonia portoricensis	-5.55	**<0.01***	3.52	**<0.01***	-1.39	0.17
Coccoloba microstachya - Randia aculeata	-0.95	0.34	2.3	**0.02***	-1.22	0.22
Coccoloba microstachya - Rondeletia inermis	-2.99	**<0.01***	3.09	**<0.01***	0.47	0.64
Coccoloba microstachya - Swietenia mahagoni	2.8	**0.01***	-2.35	**0.02***	-0.76	0.45
Coccoloba microstachya - Phyllanthus cuneifolius	-1.87	0.06	0.94	0.35	-2.8	**0.01***
Coccoloba microstachya - Tabebuia haemantha	1.24	0.21	0.21	0.84	-0.64	0.53
Ouratea littoralis - Machaonia portoricensis	-9.99	**<0.01***	4.47	**<0.01***	-1.21	0.23
Ouratea littoralis - Randia aculeata	-4.49	**<0.01***	3.01	**<0.01***	-1.06	0.29
Ouratea littoralis - Rondeletia inermis	-6.5	**<0.01***	3.82	**<0.01***	0.77	0.45
Ouratea littoralis - Swietenia mahagoni	-0.2	0.84	-2.08	**0.04***	-0.57	0.57
Ouratea littoralis - Phyllanthus cuneifolius	-6.13	**<0.01***	1.64	0.11	-2.73	**0.01***
Ouratea littoralis - Tabebuia haemantha	-2.64	**0.01***	0.82	0.42	-0.41	0.68
Machaonia portoricensis - Randia aculeata	4.38	**<0.01***	-1.18	0.24	0.09	0.92
Machaonia portoricensis - Rondeletia inermis	1.96	0.05	0.18	085	1.95	0.05
Machaonia portoricensis - Swietenia mahagoni	8.03	**<0.01***	-5.68	**<0.01***	0.42	0.67
Machaonia portoricensis - Phyllanthus cuneifolius	4.19	**<0.01***	-2.92	**<0.01***	-1.54	0.13
Machaonia portoricensis - Tabebuia haemantha	7.56	**<0.01***	-3.73	**<0.01***	0.81	0.42
Randia aculeata - Rondeletia inermis	-2.04	**0.04***	0.88	0.38	1.67	0.10
Randia aculeata - Swietenia mahagoni	3.63	**<0.01***	-4.43	**<0.01***	0.44	0.66
Randia aculeata - Phyllanthus cuneifolius	-0.77	0.44	-1.61	0.11	-1.14	0.25
Randia aculeata - Tabebuia haemantha	2.25	**0.03***	-2.33	**0.02***	0.74	0.46
Rondeletia inermis - Swietenia mahagoni	5.42	**<0.01***	-5.08	**<0.01***	-1.2	0.23
Rondeletia inermis - Phyllanthus cuneifolius	1.55	0.12	-2.5	**0.01***	-3.42	**<0.01***
Rondeletia inermis - Tabebuia haemantha	4.4	**<0.01***	-3.18	**<0.01***	-1.17	0.24

Appendix 4. *continues...*

Swietenia mahagoni - Phyllanthus cuneifolius	-4.75		3.4	**<0.01***	-1.68	0.10
Swietenia mahagoni - Tabebuia haemantha	-1.93		2.75	**<0.01***	0.24	0.81
Phyllanthus cuneifolius - Tabebuia haemantha	3.53		-0.84	0.41	2.34	**0.02***

Appendix 5. Intraspecific differences in water holding capacity (WHC) and water retention capacity (WRC) between trees with and without *Psychilis kraenzlinii*. Mann-Whitney U test.

Phorophyte Species	WHC		WRC	
	U	*p*	*U*	*p*
Coccoloba microstachya	59	**0.01**	17	0.13
Machaonia portoricensis	129	**<0.01**	NA	NA
Ouratea littoralis	105	0.57	101.5	0.46
Randia aculeata	39	0.57	37.5	0.42
Rondeletia inermis	27	1	NA	NA
Phyllanthus cuneifolius	116	0.89	148.5	0.17
Tabebuia haemantha	71	**0.03**	149	0.39

Appendix 6. Conover-Iman Pairwise Comparisons for the percentage of seeds at Stage 0, 1 and 2 among phorophyte species. Values in bold indicate significant results.

Comparison	Stage 0		Stage 1		Stage 2	
	Z	P	Z	P	Z	P
Coccoloba microstachya - Ouratea littoralis	-0.55	0.29	0.66	0.26	0.06	0.48
Coccoloba microstachya - Machaonia portoricensis	1.48	0.07	-1.4	0.08	-1.2	0.12
Coccoloba microstachya - Randia aculeata	-0.53	0.3	0.15	0.44	0.59	0.29
Coccoloba microstachya - Swietenia mahagoni	1.02	0.15	-1	0.16	-1.52	0.07
Coccoloba microstachya - Phyllanthus cuneifolius	1.83	**0.03***	-1.41	0.08	-2.29	**0.01***
Coccoloba microstachya - Tabebuia haemantha	2.44	**0.01***	-2.77	**<0.01***	-3.22	**<0.01***
Ouratea littoralis - Machaonia portoricensis	1.85	**0.03***	-1.89	**0.03***	-1.13	0.13
Ouratea littoralis - Randia aculeata	0	0.5	-0.45	0.33	0.48	0.31
Ouratea littoralis - Swietenia mahagoni	1.42	0.08	-1.5	0.07	-1.44	0.08
Ouratea littoralis - Phyllanthus cuneifolius	2.16	**0.02***	-1.9	**0.03***	-2.13	**0.02***
Ouratea littoralis - Tabebuia haemantha	2.72	**<0.01***	-3.11	**<0.01***	-2.97	**<0.01***
Machaonia portoricensis - Randia aculeata	-1.8	**0.04***	1.35	0.09	1.62	0.05
Machaonia portoricensis - Swietenia mahagoni	-0.27	0.39	0.22	0.41	-0.45	0.33
Machaonia portoricensis - Phyllanthus cuneifolius	0.48	0.32	-0.14	0.45	-1.17	0.12
Machaonia portoricensis - Tabebuia haemantha	1.08	0.14	-1.47	0.07	-2.08	**0.02***
Randia aculeata - Swietenia mahagoni	1.38	0.08	1.02	0.15	-1.87	**0.03***
Randia aculeata - Phyllanthus cuneifolius	2.1	**0.02***	-1.38	0.09	-2.56	**0.01***
Randia aculeata - Tabebuia haemantha	2.64	**<0.01***	-2.58	**0.01***	-3.38	**<0.01***
Swietenia mahagoni - Phyllanthus cuneifolius	0.68	0.25	-0.33	0.38	-0.64	0.26
Swietenia mahagoni - Tabebuia haemantha	1.22	0.11	-1.53	0.06	-1.45	0.07
Phyllanthus cuneifolius - Tabebuia haemantha	0.55	0.29	-1.23	0.11	-0.84	0.2

Appendix 7. Do not bother…

As part of this project other experiments took place without much success. We tried isolating the orchid mycorrhizal fungi (OMF) that triggers the germination of *Psychilis kraenzlinii*. We tried isolating the OMF from both adult roots and protocorms. To isolate the OMF from the roots we first confirmed the presence of pelotons and then put both a thin cross-sectional slice of the root and the peloton already isolated, in cultivation media. We used water agar (WA) and Potato Dextrose Agar (PDA); the media was both poured over the tissue and already set on the plate. Although several strains grew, none were Rhizoctonia-like fungi. To isolate the OMF from protocorms that resulted from the *in-situ* germination experiment we used WA and PDA, both poured over the pelotons and already set. Again, several strains grew, none of them *Rhizoctonia*-like. Although we paid some attention to two strains that were likely to be *Fusarium* and *Xylaria*. With these strains we did germination assays to see if either would promote germination. Although the seeds swelled, some to the point of breaking the seed coat (testa), there was no further development. It is worth noting that Otero *et al*. (2002) attempted OMF isolation from *Psychilis monensis* using PDA and did not find an obvious OMF strain. We would suggest that, if the reader intends to conduct research on the OMF of *P. kraenzlinii* or a *Psychilis* spp., then they should try other fungi cultivation media.

As part of the phorophyte characterization phase of my research we followed the methodology described by Callaway *et al*. (2002) to measure bark stability. This methodology consists of painting dots with oil paint on the bark of phorophytes and checking them after a pre-determined time (in my case a year) to see if the dots have disappeared or changed. Changes on the dots suggest that the bark is shedding, and it can be used as a proxy for stability. The study site for Callaway *et al*. (2002) was the subtropical Sapelo Island in Georgia (USA), and phorophyte composition was mostly pines and oaks which shed their bark in pieces. A much different scenario than where we did our work: a secondary forest of the tropical moist Susúa State Forest in Puerto Rico, where the oil dots stayed through the length of this study (2 years). We also followed the methodology described by Zarate-Garcia *et al.* (2020) for rhytidome texture characterization. Here, one uses scanning electron microscopy (SEM) to closely look at the bark texture and porosity. After looking at the images closely, the methodology appeared too subjective. The rhytidome classification was too variable and without patterns among phorophyte species. As for the pores, we are not convinced that the so-called pores are, in fact, pores. They seem to be cells. Hence, the data was archived and not used for publication.

With this section our hope is not to avert the reader to conduct research on these topics, but rather to give some input so they can develop a methodology with a higher probability of being successful.

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