Digital supplementary material to

YUSAH, K.M. & FOSTER, W.A. 2016: Tree size and habitat complexity affect ant communities (Hymenoptera: Formicidae) in the high canopy of Bornean rain forest. – Myrmecological News 23: 15-23.

Appendix S1: Video of aerial fogging, with fogging machine and trays hoisted into the canopy to avoid contamination by drift from ant communities in other trees.

Appendix S2: Pearson correlation coefficients between all pairs of environmental variables. Values above 0.40 are highlighted in yellow, and below -0.40 in red. Duplicate comparisons are not shown.

	Crown diameter	**Connectivity**	**Live branches**	**Dead branches**	**Tree hollows**	**Large *Asplenium nidus***	**Small *Asplenium nidus***	**Diameter at breast height**	**Tree height**	**Epiphyte and climber cover on trunk**	**Epiphyte and climber cover on crown**
Crown diameter		-0.58	-0.13	-0.10	0.20	0.63	0.45	0.59	0.62	0.15	0.22
Connectivity			-0.02	0.10	0.00	-0.10	-0.10	-0.35	-0.54	-0.37	0.04
Live branches				-0.30	-0.38	-0.36	-0.28	-0.34	-0.18	0.06	-0.29
Dead branches					0.26	-0.13	0.24	-0.03	-0.28	-0.03	0.15
Tree hollows						0.15	0.46	0.26	0.25	0.04	0.35
Large *Asplenium nidus*							0.17	0.56	0.35	0.26	0.34
Small *Asplenium nidus*								0.16	0.16	0.26	0.08
Diameter at breast height									0.52	0.17	0.12
Tree height										-0.02	0.35
Epiphyte / climbers, trunk											-0.31
Epiphyte / climbers, crown											

Appendix S3: Summary of ant species data from purse-string trapping and fogging showing numbers of subfamilies, genera and species in each genus. For full list of ant species from purse-string trapping and fogging, see YUSAH & al. (2012).

Subfamily	**Genus**	**Number of species**	**Bait**	**Fog**
Dolichoderinae	*Dolichoderus*	3	1843	13046
	Tapinoma	2	19	18
	Technomyrmex	3	112	465
Formicinae	*Camponotus*	14	876	354
	Nylanderia	1	76	215
	Plagiolepis	1	246	28
	Polyrhachis	14	330	997

Myrmicinae	*Cardiocondyla*	1	30	46
	Carebara	1	0	11
	Crematogaster	8	816	1825
	Monomorium	5	351	1263
	Myrmicaria	3	169	1077
	Pheidole	1	185	0
	Strumigenys	1	0	12
	Tetramorium	2	1194	33
	Vollenhovia	4	6996	1702
	Vombisidris	2	105	70
Ponerinae	*Anochetus*	1	0	13
	Leptogenys	1	0	19
Pseudomyrmicinae	*Tetraponera*	4	0	202
Total		**72**	**13348**	**21396**

Appendix S4: Table of environmental variables showing differences between the two species of study trees, *Parashorea malaanonan* and *Parashorea tomentella*. There were no significant differences in any of the variables (using t-tests). Also presented are values from a power analysis assessing the probability of being able to detect an effect (i.e. 1–type II error rate) of magnitude 10% of the larger of the two means, using observed pooled errors with critical P=0.05. Note that these power values are rather low, probably due to the small sample size for *P. tomentella*.

Environmental variable	***P. malaanonan* (n = 15)**	***P. tomentella* (n = 5)**	**t**	**P-value**	**Power**
DBH (m)	3.21 ± 0.16	2.77 ± 0.50	0.81	0.455	0.220
Height (m)	47.79 ± 1.60	51.33 ± 3.51	0.91	0.403	0.383
Crown diameter (m)	17.63 ± 1.41	18.10 ± 4.37	0.10	0.924	0.140
% crown touching	12.00 ± 4.02	12.00 ± 7.35	-0.19	0.854	0.075
Live branches	12.60 ± 1.50	10.40 ± 1.86	-0.92	0.382	0.127
Dead branches	1.00 ± 0.30	1.00 ± 0.44	0.00	1.000	0.079
Hollows	1.27 ± 0.48	1.20 ± 0.58	-0.09	0.932	0.112
Large *Asplenium*	0.20 ± 0.11	0.60 ± 0.60	0.66	0.547	0.103
Small *Asplenium*	0.40 ± 0.23	0.20 ± 0.20	-0.65	0.527	0.082
% epiphytes and climbers on trunk	4.77 ± 1.98	20.40 ± 11.75	0.17	0.871	0.116
% epiphytes and climbers on crown	3.73 ± 1.45	12.80 ± 9.38	-0.94	0.377	0.125

References

YUSAH, K.M., FAYLE, T.M., HARRIS, G. & FOSTER, W.A. 2012: Optimising diversity assessment protocols for high canopy ants in tropical rain forest. – Biotropica 44: 73-81.