

Supplemental Table 1. GPS coordinates of the study sites in each location.

Site	Arnhem Land, Australia		New Caledonia	
1	-12.2866	136.8702	-22.2198	166.6596
2	-12.3687	136.8042	-22.2239	166.6421
3	-12.3679	136.7818	-22.2101	166.6808
4	-12.2917	136.8729	-22.2251	166.6377
5	-12.2608	136.8306	-22.2244	166.6319

Supplemental Table 2. Mean (\pm SD) of ground substrate (percentage of each type), vegetation, and vegetation complexity measures for each site.

variable (mean \pm SD)	Arnhem Land, Australia					New Caledonia				
	Site 1	2	3	4	5	Site 1	2	3	4	5
substrate (% area)										
leaf litter	82.8 \pm 24.1	83.9 \pm 5.4	22.1 \pm 12.3	93.4 \pm 2.7	71.2 \pm 16.4	15.3 \pm 7.0	43.1 \pm 18.8	45.0 \pm 35.8	25.8 \pm 27.0	12.6 \pm 10.9
bare	8.44 \pm 20.2	2.89 \pm 2.5	68.6 \pm 15.2	1.67 \pm 1.9	21.0 \pm 17.9	1.00 \pm 0.0	1.00 \pm 0.0	1.00 \pm 0.0	1.00 \pm 0.0	1.00 \pm 0.0
coarse woody debris	0.33 \pm 1.0	3.22 \pm 1.5	2.67 \pm 4.2	0.22 \pm 0.7	3.78 \pm 4.8	0.00 \pm 0.0	0.00 \pm 0.0	0.00 \pm 0.0	0.00 \pm 0.0	0.00 \pm 0.0
rocks	6.56 \pm 5.2	6.33 \pm 4.4	4.22 \pm 3.1	2.44 \pm 1.0	0.44 \pm 1.0	2.22 \pm 1.6	7.44 \pm 9.0	9.22 \pm 15.9	1.78 \pm 1.6	1.11 \pm 0.3
stems	0.78 \pm 0.4	1.67 \pm 1.7	1.44 \pm 1.0	0.89 \pm 0.6	1.56 \pm 0.7	1.44 \pm 0.7	1.33 \pm 0.7	1.33 \pm 0.7	1.33 \pm 0.7	1.11 \pm 0.3
grass	1.11 \pm 1.1	2.00 \pm 1.0	1.00 \pm 0	1.33 \pm 0.6	2.00 \pm 0.9	4.2 \pm 2.7	2.78 \pm 1.9	2.67 \pm 2.45	4.44 \pm 3.8	6.22 \pm 6.6
vegetation										
number of stems	19.7 \pm 9.6	28.3 \pm 17.1	46.7 \pm 23.1	15.1 \pm 12.8	24.1 \pm 10.1	11.1 \pm 11.2	28.2 \pm 24.2	16.9 \pm 9.7	15.9 \pm 12.7	10.4 \pm 6.6
stem height	40.2 \pm 34	42.7 \pm 44	32.0 \pm 22	37.8 \pm 43	35.2 \pm 21	53.0 \pm 51	46.9 \pm 37	60.6 \pm 43	57.5 \pm 46	37.0 \pm 27
total leaves	840.1 \pm 533	536.1 \pm 287	1794 \pm 899	568 \pm 267	640 \pm 453	4201 \pm 4326	9026 \pm 7232	2962 \pm 2391	5338 \pm 2697	4925 \pm 5031
total leaf area m ²	0.78 \pm 0.6	1.11 \pm 1.2	0.68 \pm 0.3	0.57 \pm 0.4	0.85 \pm 0.4	1.39 \pm 1.5	1.82 \pm 1.6	5.27 \pm 1.2	1.20 \pm 1.8	0.50 \pm 0.5
% canopy cover at 3m	12.22 \pm 14	14.78 \pm 15	9.44 \pm 13	15.22 \pm 14	13.89 \pm 10	0	0	0	0	0
% canopy cover at 10cm	9.78 \pm 6.4	8.33 \pm 5.7	6.33 \pm 5.2	6.22 \pm 4.2	6.78 \pm 4.9	12.33 \pm 6.4	13.78 \pm 12.5	18.33 \pm 16.3	13.11 \pm 13.7	13.44 \pm 19.8
vegetation complexity										
height profile	0.0 \pm 0.0	36.9 \pm 34.8	13.6 \pm 16.3	0.0 \pm 0.0	15.3 \pm 12.4	32.9 \pm 52.3	27.5 \pm 51.7	44.0 \pm 33.8	30.4 \pm 33.6	22.1 \pm 43.5
number of size classes	0.0 \pm 0.0	1.7 1.3	1.3 \pm 1.0	0.0 \pm 0.0	2.1 \pm 1.1	1.3 \pm 1.7	1.7 \pm 1.7	2.6 \pm 2.5	1.9 \pm 1.5	1.0 \pm 1.3
number of touches	0.0 \pm 0.0	2.0 \pm 1.7	1.8 \pm 1.4	0.0 \pm 0.0	3.1 \pm 2.2	1.9 \pm 3.0	2.0 \pm 2.4	2.8 \pm 2.9	2.1 \pm 1.7	1.7 \pm 2.6

Supplemental Table 3. Species of yellow crazy ant-tended hemipterans in Arnhem Land, their origin, and their calculated honeydew production by site.

Family	Species	Origin	Number of honeydew-producing individuals (calculated honeydew production mg/24h) ¹					Total honeydew (mg/24h)	
			Site 1	2	3	4	5	native	non-native
Monophlebidae	<i>Icerya seychellarum</i> (Westwood)	Seychelles islands - introduced	41 (23.3)						23.3
Monophlebidae	<i>Steatococcus</i> sp. nov sp. NT 04	Australian-Native	~250 (813.1)					813.1	
Pseudococcidae	<i>Pseudococcus</i> sp. NT 02	Australian-Native	~250 (686.3)					686.3	
Membracidae	<i>Sextius virescens</i> (Fairmaire)	Australian-Native	23 (1888.0)			8 (653.3)		2541.3	
Membracidae	<i>Sextius</i> sp. 02	Australian-Native	3 (172.8)			2 (6.7)		179.5	
Cicadellidae	<i>Ipoella fidelis</i> Evans	Australian-Native	3(160.1)	9 (264.1)			8 (362.7)	786.9	
Cicadellidae	<i>Katipo pallescens</i> (Evans)	Australian-Native	13(384.3)			21 (238.2)	12 (324.1)	946.6	
Psyllidae	<i>Acizzia</i> sp. nov 01	Australian-Native		1 (0.2)				0.2	
Psyllidae	nymph 3	Australian-Native	50 (9.5)	3 (0.6)				10.1	
Psyllidae	nymph sp. 02	Australian-Native				1 (0.2)		0.2	
Psyllidae	<i>Glycaspis</i> nymph 2	Australian-Native	3 (0.6)					0.6	
Psyllidae	<i>Glycaspis</i> nymph 4	Australian-Native		1 (0.2)				0.2	
Psyllidae	<i>Glycaspis</i> nymph 5	Australian-Native	1 (0.2)					0.2	
Total			4275.4	265.1	0.0	898.4	686.9	6102.3 (99.6%)	23.3 (0.4%)

¹ As per Moir, M. L., Renton, M., Hoffmann, B. D., Leng, M. C. and Lach, L. 2018. Development and testing of a standardized method to estimate honeydew production. PLoS ONE 13: e0201845.

Supplemental Table 4. Species of yellow crazy ant-tended hemipterans in New Caledonia, their origin, and their calculated honeydew production by site.

Family	Species	Origin	Number of honeydew-producing individuals (calculated honeydew production mg/24h) ²					Total honeydew (mg/24h)	
			Site 1	2	3	4	5	Native	Non-native
Aphididae	<i>Myzus ornatus</i> Liang	Europe- introduced	147 (46.8)					46.8	
Monophlebidae	<i>Icerya samaraius</i> (Morrison)	Pacific – native	1 (1.7)					1.7	
Coccidae	<i>Ceroplastes destructor</i> (Newstead)	Africa – introduced	5 (10.2)					10.2	
Coccidae	<i>Pulvinaria psidii</i> Maskell	Hawaii (?) – introduced	1448 (698.5)					29 (17.3)	715.8
Cicadellidae	Unknown (escaped – noted tended by ants)	unknown				1 (0.1)		0.1	
		Total	708.7	48.5	0.0	0.1	17.3	1.8 (0.2%)	772.9 (99.8%)

² As per Moir, M. L., Renton, M., Hoffmann, B. D., Leng, M. C. and Lach, L. 2018. Development and testing of a standardized method to estimate honeydew production. PLoS ONE 13: e0201845.

Supplement Table 5. Spearman rho correlation coefficients between environmental variables and measures of yellow crazy ant abundance and carbohydrate availability in Arnhem Land.

variable	yellow crazy ant abundance				carbohydrate resources			untended hemipterans	
	on cat food	on jam	nests	card counts	honeydew production	number of tended bugs	plants with tended bugs		extrafloral nectaries
substrate (% area)									
leaf litter	0.500	0.900*	0.200	0.200	0.500	0.500	0.821*	0.500	0.410
bare	-0.500	-0.900*	-0.200	-0.200	-0.500	-0.500	-0.821*	-0.500	-0.410
coarse woody debris	-0.500	-0.700	-0.100	-0.100	-0.500	-0.667	-0.667	-0.500	0.564
rocks	0.200	0.200	0.100	0.100	0.200	0.359	0.359	0.200	-0.308
stems	-0.700	-0.500	-0.500	-0.500	-0.700	-0.564	-0.564	-0.700	0.821*
grass	0.051	0.154	0.205	0.205	0.051	0.105	0.105	0.051	0.947**
vegetation									
number of stems	-0.900*	-0.900*	-0.700	-0.700	-0.900*	-0.900*	-0.872*	-0.900*	0.051
stem height	0.400	0.400	0.300	0.300	0.400	0.400	0.667	0.400	0.462
total leaves	-0.100	-0.500	0.00	0.00	-0.100	-0.100	-0.410	-0.100	-0.872*
total leaf area m ²	-0.200	-0.300	0.100	0.100	-0.200	-0.200	-0.205	-0.200	0.667
% canopy cover at 3m	0.300	0.700	0.100	0.100	0.300	0.300	0.564	0.300	0.667
% canopy cover at 10cm	0.300	0.000	0.500	0.500	0.300	0.300	0.205	0.300	0.051
vegetation complexity									
height profile	-0.667	-0.564	-0.410	-0.410	-0.667	-0.667	-0.579	-0.667	0.763
number of size classes	-0.564	-0.667	-0.205	-0.205	-0.564	-0.564	-0.684	-0.564	0.658
number of touches	-0.564	-0.667	-0.205	-0.205	-0.564	-0.564	-0.684	-0.564	0.658

Supplement Table 6. Spearman rho correlation coefficients between environmental variables and measures of yellow crazy ant abundance and carbohydrate availability in New Caledonia.

variable	yellow crazy ant abundance				carbohydrate resources			untended hemipterans
	on cat food	on jam	nests	card counts	honeydew production	number of tended bugs	plants with tended bugs	
substrate (% area)								
leaf litter	0.100	-0.300	0.410	0.400	-0.500	-0.500	-0.410	0.900*
bare	-0.100	0.300	-0.410	-0.400	0.500	0.500	0.410	-0.900*
coarse woody debris	NA	NA	NA	NA	NA	NA	NA	NA
rocks	0.300	-0.100	0.308	0.700	-0.200	-0.200	-0.154	0.700
stems	0.894*	0.671	-0.574	0.894*	0.447	0.447	0.574	0.224
grass	-0.300	0.108	0.156	-0.700	0.200	0.200	0.154	-0.700
vegetation								
number of stems	0.300	0.000	0.564	0.300	-0.200	-0.200	-0.103	0.700
stem height	0.100	-0.300	0.564	0.500	-0.200	-0.200	-0.462	0.900*
total leaves	0.200	0.400	0.410	-0.500	-0.600	-0.600	0.359	-0.200
total leaf area m ²	0.300	-0.100	0.308	0.700	0.300	0.300	-0.154	0.900*
% canopy cover at 3m	NA	NA	NA	NA	NA	NA	NA	NA
% canopy cover at 10cm	-0.500	-0.700	0.821*	-0.100	-0.600	-0.600	-0.667	0.500
vegetation complexity								
height profile	0.300	-0.100	-0.410	0.800	-0.300	-0.300	-0.205	0.700
number of size classes	0.000	-0.400	0.103	0.300	-0.700	-0.700	-0.564	1.000**
number of touches	0.000	-0.400	0.103	0.300	-0.700	-0.700	-0.564	1.000**