Myrmecological News myrmecologicalnews.org
Myrmecol. News 29
Digital supplementary material

Digital supplementary material to

LIZON À L'ALLEMAND, S., BRÜCKNER, A., HASHIM, R., WITTE, V. & VON BEEREN, C. 2019: Competition as possible driver of dietary specialisation in the mushroom harvesting ant *Euprenolepis procera* (Hymenoptera: Formicidae). – Myrmecological News 29: 79-91.

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Supplementary Material

Competition as possible driver of dietary specialisation in the mushroom harvesting ant *Euprenolepis procera* (Hymenoptera: Formicidae)

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Figure S1. Maximum number of ants for each of the three bait types. Only ant genera/ *Euprenolepis* species that were present more than four times at a given resource are shown. *Euprenolepis procera* is highlighted in grey. Upper case letters depict significant differences according to Dunn's post hoc tests for the resource tuna and honey and a Mann Whitney *U* test for the resource mushroom. Boxes depict quartiles, whiskers 10% and 90% percentiles, blue dots outliers, red crosses extreme points, and red bars mean values. Abbreviations: EP = *Euprenolepis procera*, EW = *Euprenolepis wittei*, CN = *Camponotus*, LM = *Lophomyrmex*, OM = *Odontomachus*, OP = *Odontoponera*, PH = *Pheidole*, PL = *Pheidologeton*, TN = *Tapinoma*.

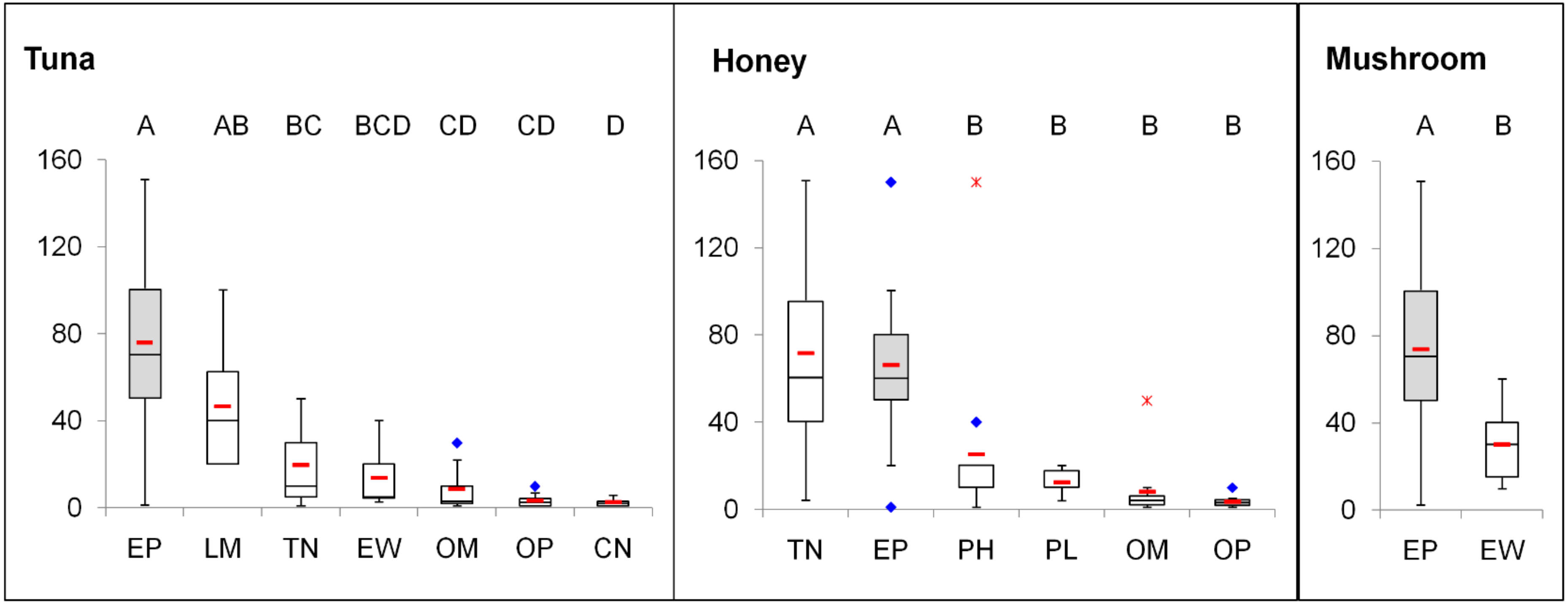

Table S2. Characteristics of the different sample areas. Abbreviation: n.a. = not available.

	Ulu Gombak	Lentang	Bukit Rengit	Kuala Lompat	Endau Rompin
Altitude	230m	160m	72m	52m	49m
Topography	Steep hillsides and narrow valley bottoms [1]	Steep hillsides	Undulating hills	Flat lowland	Undulating hills [2, 3]
Dry season	Not pronounced [4]	n.a.	Beginning of the year, particularly February [5]	Beginning of the year, particularly February [6]	n.a.
average annual rainfall	2433-2500mm [7, 8]	n.a.	1968mm [5]	1982mm [6]	n.a.
Vegetation	Bamboos, palms, dipterocarps, figs and peppers [7]	Dipterocarps	Dipterocarps [5]	Dipterocarps, unusual richness in Leguminosae, strangler and free-standing figs [9, 10]	Dipterocarps [3]
Soils	Alluvial sandy soils [11, 12]	Alluvial sandy soil	Sandy soils, mixture of hornblende-granite, syenite, pyroxene-granite porphyry and dioxite, with heavy sedimentary and organic overlay [5]	Sandy soils, mixture of hornblende-granite, syenite, pyroxene-granite porphyry and dioxite, with heavy sedimentary and organic overlay [5]	Red and yellow latosols and podsolic soils [3]

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Table S1. Obtained least-squares means for the generalized linear mixed model comparing contrasts of the different, possible interactions. Abbreviations: both = refers to competitor presence at honey and tuna baits, no comp. = no competitor present; SE= standard error, H= honey, T= tuna, M= mushroom

contrast	estimate	SE	z-ratio	p value
both,H - no_comp,H	-3.2375	0.586	-5.522	<.0001
both,H - tuna,H	-2.663	0.606	-4.398	<.0001
both,H - both,M	-3.9991	0.716	-5.586	<.0001
both,H - no_comp,M	-2.8076	0.577	-4.862	<.0001
both,H - tuna,M	-3.3762	0.641	-5.268	<.0001
both,H - no_comp,T	-3.1844	0.585	-5.443	<.0001
honey,H - no_comp,H	-5.557	1.1	-5.051	<.0001
honey,H - tuna,H	-4.9825	1.122	-4.442	<.0001
honey,H - both,M	-6.3186	1.218	-5.189	<.0001
honey,H - honey,M	-5.1922	1.13	-4.596	<.0001
honey,H - no_comp,M	-5.1271	1.095	-4.683	<.0001
honey,H - tuna,M	-5.6957	1.142	-4.987	<.0001
honey,H - no_comp,T	-5.5039	1.099	-5.006	<.0001
no_comp,H - both,T	3.46	0.613	5.644	<.0001
no_comp,H - tuna,T	2.6165	0.407	6.434	<.0001
tuna,H - both,T	2.8855	0.631	4.57	<.0001
tuna,H - tuna,T	2.042	0.43	4.75	<.0001
both,M - both,T	4.2215	0.739	5.716	<.0001
both,M - tuna,T	3.378	0.679	4.977	<.0001
honey,M - both,T	3.0951	0.7	4.422	<.0001
no_comp,M - both,T	3.0301	0.605	5.012	<.0001
no_comp,M - tuna,T	2.1866	0.391	5.592	<.0001
tuna,M - both,T	3.5987	0.666	5.407	<.0001
tuna,M - tuna,T	2.7552	0.485	5.687	<.0001
both,T - no_comp,T	-3.4068	0.612	-5.569	<.0001
no_comp,T - tuna,T	2.5634	0.404	6.338	<.0001
both,H - honey,M	-2.8727	0.677	-4.246	0.0001
honey,H - honey,T	-4.5718	1.111	-4.116	0.0001
honey,M - tuna,T	2.2517	0.577	3.9	0.0002
both,T - honey,T	-2.4747	0.675	-3.667	0.0005
both,H - honey,T	-2.2523	0.651	-3.462	0.0011
honey,T - tuna,T	1.6312	0.544	2.999	0.0056
honey,H - tuna,T	-2.9405	1.113	-2.643	0.0164
both,M - honey,T	1.7468	0.715	2.443	0.0283
both,H - honey,H	2.3195	1.177	1.971	0.0902
tuna,H - both,M	-1.336	0.679	-1.967	0.0902
no_comp,H - honey,T	0.9852	0.51	1.93	0.0956
tuna,M - honey,T	1.124	0.592	1.9	0.0997
both,M - no_comp,M	1.1914	0.654	1.821	0.1132
honey,T - no_comp,T	-0.9321	0.509	-1.831	0.1132
honey,H - both,T	-2.097	1.19	-1.762	0.1257
both,M - honey,M	1.1264	0.737	1.528	0.1989
tuna,H - tuna,M	-0.7132	0.493	-1.446	0.2276
no_comp,H - no_comp,M	0.4299	0.307	1.399	0.2427

contrast	estimate	SE	z-ratio	p value
no_comp,H - tuna,H	0.5745	0.426	1.349	0.2543
both,T - tuna,T	-0.8435	0.625	-1.35	0.2543
tuna,H - no_comp,T	-0.5214	0.424	-1.23	0.2914
both,M - no_comp,T	0.8147	0.66	1.234	0.2914
no_comp,M - tuna,M	-0.5686	0.464	-1.225	0.2914
no_comp,M - no_comp,T	-0.3768	0.305	-1.237	0.2914
no_comp,H - both,M	-0.7616	0.662	-1.151	0.3231
honey,M - honey,T	0.6204	0.56	1.109	0.3333
no_comp,M - honey,T	0.5553	0.5	1.11	0.3333
both,H - tuna,T	-0.621	0.599	-1.037	0.3663
both,M - tuna,M	0.6228	0.709	0.878	0.456
honey,M - tuna,M	-0.5036	0.62	-0.812	0.4915
tuna,H - honey,T	0.4107	0.553	0.742	0.5302
no_comp,H - honey,M	0.3648	0.544	0.67	0.5722
honey,M - no_comp,T	-0.3117	0.543	-0.574	0.6331
tuna,M - no_comp,T	0.1918	0.474	0.405	0.7541
tuna,H - honey,M	-0.2097	0.585	-0.359	0.7729
tuna,H - no_comp,M	-0.1446	0.413	-0.35	0.7729
both,H - both,T	0.2225	0.666	0.334	0.7737
no_comp,H - tuna,M	-0.1387	0.475	-0.292	0.7945
no_comp,H - no_comp,T	0.0531	0.322	0.165	0.8822
honey,M - no_comp,M	0.0651	0.535	0.122	0.9032