

Appendix

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“Extending the study of range-abundance relations to tropical insects: sphingid moths in Southeast-Asia”

Evolutionary Ecology Research

Locations, sample sizes, range-abundance correlations and data sources for all sample sites and regions. Meta-analyses in results of main text are based on parametric correlations of log-transformed data (right two columns in “Range-abundance correlations”). Note that geographic position is given in metric format.

Acronyms:

- 1) Region - first letters of site: **B** – Borneo, **F** – Flores, **L** – Lombok, **N** – New Guinea, **P** – Malay Peninsula, **SE** – Seram, **SU** – Sulawesi, **V** – Vietnam.
- 2) Data transformations and correlations: ‘raw’ = non-transformed, ‘log’ = log-transformed; ‘spec’ = species-level data, ‘contr’ = independent contrasts; r = Pearson’s r , R = Spearman’s R .
- 3) Sources of unpublished data: **AM** – Azmi Mahyudin, Forest Research Institute of Malaysia (Kepong); **GM** – Geoffrey Martin, Natural History Museum (London); **HB** – Henry Barlow, Kuala Lumpur; **HvM** – Henk van Mastrigt, Jayapura; **JDH** – Jeremy D. Holloway, Natural History Museum (London); **TB** – Torben Larsen; **UB** – Ulf Buchsbaum, Zoologische Staatssammlung München.

Site information		GPS position) no GPS data, accuracy $\pm 0.5^\circ$		Samples		Range-abundance correlations (p < 0.05 in bold print; *) most data do not follow normal distribution)				Data source
Site	Locality	Lat.	Long.	Indiv.	Species (N for correl.)	R* (raw,spec)	r* (raw,spec)	r (log,spec)	r (log,contr)	(1) own sampling (2) unpubl. (3) publ.
B-CRO1	Crocker Range	5.444	116.080	968	39	0.218	-0.039	0.169	0.182	(1) JB
B-DV1	Danum Valley	4.965	117.796	899	30	0.257	-0.035	0.217	0.462	(1) JB
B-DV2	Danum Valley	4.961	117.858	266	17	-0.090	-0.208	-0.127	-0.186	(1) JB
B-DV3	Danum Valley	4.962	117.858	56	17	0.057	0.066	0.051	0.115	(1) JB
B-DV4	Danum Valley	4.969	117.859	129	23	0.252	0.190	0.252	0.411	(1) JB
B-KIN2	Kinabatangan	5.414	118.030	94	22	-0.248	-0.274	-0.362	-0.493	(1) JB
B-LPS1	Long Pasia	4.442	115.720	69	16	0.048	-0.023	-0.163	-0.202	(1) JB
B-LPS3	Long Pasia	4.413	115.740	107	20	0.077	0.052	0.036	-0.189	(1) JB
B-POR1	Poring	6.043	116.700	166	26	-0.140	-0.097	-0.121	-0.227	(1) JB
B-POR8	Poring	6.026	116.770	1746	43	0.321	0.025	0.268	0.368	(1) JB
B-PORtw	Poring	6.05	116.70	36	14	-0.240	-0.347	-0.344	-0.009	(1) JB
B-SIL1	Lahad Datu	4.975	118.170	205	22	-0.186	-0.048	-0.105	0.021	(1) JB
B-TAW2	Tawau Hills	4.399	117.890	184	24	0.262	0.131	0.212	0.330	(1) JB
B-TAW3	Tawau Hills	4.367	117.890	77	23	0.186	-0.103	-0.012	-0.145	(1) JB
B-BRUEd	Brumas	4.5*	117.5*	105	20	0.147	-0.143	0.001	-0.272	(3) Chey, 1994
B-BRUPf	Brumas	4.5*	117.5*	84	17	-0.069	-0.215	-0.146	-0.109	(3) Chey, 1994
B-BRUSf	Brumas	4.5*	117.5*	557	36	0.134	-0.067	0.076	-0.127	(3) Chey, 1994
B-BT	Bundu Tuhan	5.5*	116.5*	58	23	0.270	-0.006	0.211	-0.189	(3) Holloway, 1976
B-K	Kamborangoh	5.5*	116.5*	34	15	0.308	-0.054	0.132	-0.110	(3) Holloway, 1976
B-KU	Kundasang	5.5*	116.5*	33	13	0.050	-0.153	-0.119	-0.341	(3) Holloway, 1976
B-PS	Mt. Kinabalu Power Station	5.5*	116.5*	62	19	0.159	-0.023	0.103	0.099	(3) Holloway, 1976
B-RS	Mt. Kinabalu Radio Station	5.5*	116.5*	63	16	0.382	0.047	0.243	0.119	(3) Holloway, 1976
B-TU	Tuaran	5.5*	116.5*	116	20	0.447	0.171	0.424	0.360	(3) Holloway, 1976

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B-PORC	Poring Hot Springs	6.05	116.70	325	29	0.049	-0.051	-0.017	-0.051	(3) Schulze, 2000
B-B1	Labi road	4.5*	114.5*	89	16	0.328	0.314	0.321	0.335	(3) Tennent, 1991
B-B2	Labi road	4.5*	114.5*	187	32	0.413	0.271	0.376	0.511	(3) Tennent, 1991
B-B3	Labi road	4.5*	114.5*	295	30	0.515	0.349	0.484	0.524	(3) Tennent, 1991
B-B4	Labi road	4.5*	114.5*	86	21	0.555	0.469	0.479	0.456	(3) Tennent, 1991
B-B6	Sungai Keduan	4.5*	114.5*	116	21	0.233	0.337	0.280	0.427	(3) Tennent, 1991
B-B7	Bukit Bahak	4.5*	114.5*	416	34	0.137	0.092	0.157	0.174	(3) Tennent, 1991
B-B8	Bukit Ladan	4.5*	114.5*	1478	50	0.483	0.139	0.461	0.429	(3) Tennent, 1991
B-B9	Bukit Toraja	4.5*	114.5*	296	26	0.240	-0.004	0.145	0.226	(3) Tennent, 1991
B-S1	Bintulu (100km north)	3*	113.5*	86	16	0.123	0.211	0.238	0.295	(3) Tennent, 1991
B-S3	Gunung Serapi	1.5*	110.5*	1159	45	0.412	0.127	0.370	0.298	(3) Tennent, 1991
B-S5	Gunung Berumput	1.5*	109.5*	82	16	0.389	0.379	0.430	0.413	(3) Tennent, 1991
B-S6	Gunung Perigi	1.5*	109.5*	155	24	-0.158	-0.019	-0.079	-0.086	(3) Tennent, 1991
B-S7	Limbang	4.5*	115.5*	558	40	0.527	0.117	0.414	0.312	(3) Tennent, 1991
B-SAY2	Sayap	6.23	116.53	46	22	0.130	0.144	0.124	0.225	(3) Zaidi & Chong, 1995
B-BAR	Barito Ulu	-0.05	113.98	175	36	-0.183	-0.208	-0.249	-0.276	(2) GM
B-MUL1	Gn. Mulu	4.5*	114.5*	70	15	0.542	0.440	0.455	0.520	(2) JDH
B-MUL14	Gn. Mulu	4.5*	114.5*	22	13	0.431	0.440	0.441	0.599	(2) JDH
B-MUL17	Gn. Mulu	4.5*	114.5*	122	21	0.401	0.462	0.441	0.319	(2) JDH
B-MUL8	Gn. Mulu	4.5*	114.5*	36	14	0.173	0.065	0.188	0.260	(2) JDH
F-BAJ2	Ngada region	-8.694	120.955	81	20	0.073	-0.077	0.008	-0.051	(1) JB
F-BAJ3	Ngada region	-8.875	121.014	122	20	-0.282	-0.409	-0.304	-0.246	(1) JB
F-KEL1	Kelimutu	-8.749	121.850	121	21	0.499	0.588	0.353	0.002	(1) JB
L-LOM1	Gn. Rinjani	-8.301	116.409	29	14	0.185	0.609	0.115	0.184	(2) UB

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N-PNG3	Saureri	-7.883	147.133	40	17	0.091	0.104	0.166	-0.129	(2) UB
N-IJ2	Nabire, 54kmS	-3.367	135.483	23	13	-0.154	0.008	-0.008	0.112	(2) UB
N-IJ3	Sentani	-2.569	140.514	39	16	-0.334	-0.324	-0.343	-0.231	(2) UB
N-PAV	Pass Valley	-4.11	138.95	207	18	-0.141	0.018	0.059	0.071	(2) HvM
N-UBR	Ubrub	-3.73	140.80	149	28	0.065	0.043	0.151	0.222	(2) HvM
P-GEN1	Genting	3.359	101.794	37	18	0.135	0.074	0.162	0.247	(1) JB
P-KED	Kedah	6.5*	100.5*	185	24	0.284	0.263	0.225	0.058	(2) AM
SE4	Gn. Kobipoto	-2.5*	129.5*	62	13	-0.095	-0.131	-0.015	-0.343	(2) JDH
SU11	Edwards camp	0.5*	123.5*	36	13	0.383	0.184	0.284	0.183	(2) JDH
SU7	Hog's Bag	0.5*	123.5*	26	13	0.299	0.195	0.196	0.400	(2) JDH
V-HOA	Sa Pa	22.5*	103.5*	3223	67	0.472	0.175	0.454	0.334	(2) TL

Regional commonness estimates

(see Fig. 1 in main text for location)

Region	Species	Source
Thailand (northwest, mostly Chiang Mai Prov.)	157	(1) IJK
Peninsula Malaysia (Genting Highlands)	72	(2) HB
Sumatra	114	(3) Diehl, 1982
Philippines	121	(3) Treadaway, 2000
New Guinea (Jayapura and Cyclops Mtns.)	46	(2) HvM

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