

Table S2. Species numbers of Lymantriinae genus-level taxa and the number of host plant orders used.

Genus names (Lymantriinae)	Species numbers (Lymantriinae)	Order numbers (Host plants)
<i>Daplasa</i>	5	unknown
<i>Arctornis</i>	155	14
<i>Ruanda</i>	3	1
<i>Eloria</i>	70	5
<i>Euproctoides</i>	5	unknown
<i>Locharna</i>	5	5
<i>Kuromondokuga</i>	4	4
<i>Pida</i>	13	1
<i>Leucoma</i>	46	12
" <i>Leucoma</i> " <i>sericea</i>	1	2
<i>Perina</i>	6	3
" <i>Leucoma</i> " <i>chrysocele</i>	1	unknown
<i>Ivela</i>	3	4
<i>Olapa</i>	18	4
<i>Caviria</i>	13	8
<i>Thagona</i>	39	6
<i>Imaus</i>	2	unknown
<i>Cispia</i>	13	2
<i>Dura</i>	25	unknown
<i>Crorema</i>	17	2
<i>Sarsina</i>	7	3

<i>Lymantria</i>	170	34
<i>Aroa</i>	18	5
<i>Hemerophanes</i>	6	1
<i>Ilema</i>	30	16
<i>Mylantria</i>	1	4
<i>Griveaudyria</i>	2	1
<i>Calliteara</i>	45	28
<i>Laelia</i>	100	6
<i>Pantana</i>	33	1
<i>Neomardara</i>	2	unknown
<i>"Olene" & "Telochurus"</i>	11	5
<i>Cifuna</i>	5	9
<i>Dasychira</i>	16	10
<i>Psalis</i>	11	11
<i>Teia</i>	18	21
<i>Olene</i>	26	25
<i>Orgyia</i>	62	38
<i>Albaraccina</i>	2	1
<i>Bembina</i>	6	4
<i>Lacida</i>	7	unknown
<i>Micromorphe</i>	6	2
<i>"Euproctis"1</i>	20	14
<i>"Euproctis"2</i>	1	1
<i>"Euproctis"3</i>	1	unknown
<i>Somena</i>	6	22
<i>Kidokuga</i>	2	7

<i>Orvasca</i>	28	20
<i>Sphrageidus</i>	3	20
<i>Nygmia</i>	55	15
<i>Arna</i>	14	16
<i>Artaxa</i>	33	15
<i>Toxoproctis</i>	30	11
<i>Euproctis</i>	9	14

Table S3. Most polyphagous species in each contrast in Table 2

Sister pairing	MP1	HR1	MP2	HR2
<i>Somena-Kidokuga</i>	<i>S. scintillans</i>	22	<i>K. piperita</i>	7
<i>(Arna+Artaxa+Toxoproctis+Euproctis)-Nygmia</i>	<i>Arna bipunctapex</i>	14	<i>N. xanthomela</i>	7
<i>Calliteara-Griveaudyria</i>	<i>C. horsfieldi</i>	18	<i>G. ila</i>	1
<i>Laelia-Pantana</i>	<i>L. coenosa</i>	4	<i>P. substrigosa</i> etc.	1
<i>Orgyia-Olene</i>	<i>O. leucostigma</i>	25	<i>O. mendosa</i>	20
<i>Aroa-Hemerophanes</i>	<i>A. difficilis</i> etc.	2	<i>H. enos</i> etc.	1
<i>Lymantria-(Sarsina+Crorema)</i>	<i>L. dispar</i>	25	<i>S. violascens</i>	3
<i>Leucoma-(Ivela+Perina+?Leucoma)</i>	<i>L. salicis</i>	6	<i>P. nuda</i>	3
<i>(Locharna+Kuromondokuga)-Pida</i>	<i>L. strigipennis</i> etc.	4	<i>Pida spp.</i>	1
<i>Eloria-Ruanda</i>	<i>E. torrida</i> etc.	3	<i>R. nuda</i>	1

Notes: MP1 = Most polyphagous species in clade with highest total host diversity, with its host range HR1 (number of orders);

MP2 = Most polyphagous species in clade with lowest host diversity, with its host range HR2