

Table S1. Sequences used in the molecular phylogenetic analyses. Authorships of the sequences downloaded from GenBank are indicated by lowercase letters^{a-k} and the relevant publications are listed below. Sequences that were not available for analyses are indicated by ×.

Species	Gene							
	<i>COI</i>	<i>EF-1α</i>	<i>WGL</i>	<i>GAPDH</i>	<i>RpS5</i>	<i>IDH</i>	<i>MDH</i>	<i>CAD</i>
SEMATURIDAE								
<i>Coronidia orithea</i>	GU828523 ^c , GU828327 ^c	GU828869 ^c , GU829171 ^c	×	GU829715 ^c	GU830559 ^c	GU829914 ^c	GU830247 ^c	GU828035 ^c
<i>Sematura luna</i>	GU828862 ^c , GU929824 ^c	GU829165 ^c , GU829427 ^c	×	GU829912 ^c	GU830809 ^c	GU830240 ^c	GU830554 ^c	GU828322 ^c
URANIIDAE								
<i>Balantiucha mutans</i>	GU828806 ^c , GU929776 ^c	GU829111 ^c , GU829388 ^c	GU829665 ^c	GU829881 ^c	×	GU830187 ^c	GU830505 ^c	GU828278 ^c
<i>Lobogethes interrupta</i>	GU828807 ^c , GU929777 ^c	GU829112 ^c , GU829389 ^c	GU829666 ^c	GU829882 ^c	×	GU830188 ^c	GU830506 ^c	GU828279 ^c
<i>Urania leilus</i>	DQ018927 ^j	DQ018898 ^j	DQ018868 ^j	×	EU141430 ⁱ	EU141589 ⁱ	EU141653 ⁱ	EU141351 ⁱ
<i>Chrysiridia rhipheus</i>	GU828839 ^c , GU929803 ^c	GU829140 ^c , GU829410 ^c	GU829690 ^c	GU829900 ^c	GU830788 ^c	GU830219 ^c	GU830530 ^c	JF785274 ^g
GEOMETRIDAE								
Archiearinae								
<i>Archiearis notha</i>	KX343539 ^f	KX343683 ^f	KX343624 ^f	×	KX343275 ^f	KX343349 ^f	×	×
<i>Archiearis parthenias</i>	KX343538 ^f	DQ018899 ^j	KX343623 ^f	EU141485 ⁱ	EU141381 ⁱ	EU1415392 ⁱ	EU141604 ⁱ	JF785273 ^g
Geometrinae								
<i>Geometra papilionaria</i>	KX343540 ^f	GU580809 ^k	KX343625 ^f	GU580821 ^k	GU830656 ^c	GU830046 ^c	KX343746 ^f	KX343819 ^f
<i>Hemithea aestivaria</i>	KX788614 ^a	KX788718 ^a	JF785123 ^g	JF785454 ^g	JF785007 ^g	JF785531 ^g	JF784898 ^g	JF785256 ^g
<i>Jodis lactearia</i>	MG767763 ^b	MG768161 ^b	MG767317 ^b	MG767567 ^b	MG767394 ^b	MG768382 ^b	MG768003 ^b	MG768546 ^b
<i>Jodis putata</i>	KX343541 ^f	KX343684 ^f	GU593342 ^k	KX343408 ^f	JF784987 ^g	GU580853 ^k	KX343747 ^f	KX343820 ^f
Ennominae								
<i>Abraxas grossulariata</i>	HQ340174 ^e	HQ340207 ^e	HQ340234 ^e	HQ340216 ^e	×	JF785523 ^g	×	JF785240 ^g
<i>Abraxas sylvata</i>	MH423813 [*]	GU580800 ^k	GU593336 ^k	GU580830 ^k	GU580668 ^k	MH423823 [*]	MH423826 [*]	MH423829 [*]

<i>Alsophila aescularia</i>	GU580755 ^k	GU580794 ^k	GU593332 ^k	×	×	GU580856 ^k	GU830326 ^c	×
<i>Biston betularia</i>	EF206681 ^h	EF206673 ^h	GU829589 ^c	GU580832 ^k	GU580670 ^k	GU580867 ^k	GU830417 ^c	JF785230 ^g
<i>Cabera exanthemata</i>	KX788605 ^a	KX788710 ^a	×	JF785452 ^g	JF785001 ^g	JF785509 ^g	JF784892 ^g	JF785216 ^g
<i>Cleora cinctaria</i>	GU580763 ^k	GU580801 ^k	GU593337 ^k	GU580831 ^k	GU580669 ^k	GU580866 ^k	JF784867 ^g	JF785215 ^g
<i>Lomaspilis marginata</i>	GU580777 ^k	GU580813 ^k	×	JF785434 ^g	GU580685 ^k	GU580877 ^k	JF784865 ^g	JF785212 ^g
<i>Lomographa temerata</i>	MH423814 [*]	HQ340210 ^e	HQ340237 ^e	MH423818 [*]	HQ340228 ^e	HQ340220 ^e	×	MH423830 [*]
<i>Macaria notata</i>	MH423815 [*]	MH423816 [*]	MH423817 [*]	MH423819 [*]	MH423821 [*]	MH423824 [*]	MH423827 [*]	MH423831 [*]
<i>Plagodis dolabraria</i>	KX788622 ^a	KX788726 ^a	KX788764 ^a	KX788747 ^a	KX788788 ^a	KX788643 ^a	KX788809 ^a	KX788598 ^a
<i>Thalaina angulosa</i>	GU828797 ^c , GU929767 ^c	GU829103 ^c , GU829382 ^c	GU829656 ^c	GU829875 ^c	×	GU830178 ^c	GU830498 ^c	GU828271 ^c
Larentiinae								
<i>Cidaria fulvata</i>	KX343553 ^f	KX343692 ^f	KX343632 ^f	KX343421 ^f	KX343286 ^f	KX343360 ^f	KX343759 ^f	KX343832 ^f
<i>Eupithecia subfuscata</i>	KX343576 ^f	KX343709 ^f	KX343647 ^f	KX343437 ^f	KX343306 ^f	KX343374 ^f	KX343773 ^f	KX343851 ^f
<i>Larentia clavaria</i>	KX343583 ^f	KX343715 ^f	KX343653 ^f	KX343443 ^f	KX343313 ^f	GU830070 ^c	GU830387 ^c	JF785226 ^g
<i>Trichopteryx carpinata</i>	EU443349 ^d	EU443287 ^d	EU443308 ^d	KX343461 ^f	KX343335 ^f	KX343395 ^f	KX343806 ^f	JF785229 ^g
<i>Xanthorhoe montanata</i>	KX343615 ^f	KX343738 ^f	KX343675 ^f	KX343468 ^f	KX343342 ^f	KX343402 ^f	KX343812 ^f	KX343887 ^f
Sterrhinae								
<i>Cyclophora punctaria</i>	EU443361 ^d	EU443298 ^d	EU443318 ^d	×	KX788769 ^a	KX788629 ^a	KX788791 ^a	KX788584 ^a
<i>Idaea aversata</i>	EU443357 ^d	EU443294 ^d	EU443315 ^d	KX343410 ^f	KX343277 ^f	KX343351 ^f	KX343749 ^f	KX343822 ^f
<i>Rhodostrophia vibicaria</i>	EU443354 ^d	EU443292 ^d	EU443313 ^d	×	KX788771 ^a	KX788630 ^a	KX788792 ^a	KX788585 ^a
<i>Scopula immutata</i>	KX788627 ^a	KX788731 ^a	KX788767 ^a	MH423820 [*]	MH423822 [*]	MH423825 [*]	MH423828 [*]	MH423832 [*]
<i>Timandra griseata</i>	EU443362 ^d	EU443299 ^d	EU443319 ^d	KX788733 ^a	KX788772 ^a	KX788631 ^a	JF784893 ^g	JF785252 ^g

* This study

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