

Table S2. Morphological data matrix used in the analyses.

Taxon	Characters																																																													
	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5															
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5																
<i>Friesea mirabilis</i>	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0													
<i>Pseudachorutes palmiensis</i>	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	1	0	0	1	0	0	0	0											
<i>Morulodes serratus</i>	1	0	2	1	2	0	1	1	1	1	1	2	1	1	1	1	3	0	0	0	1	1	1	0	1	1	1	1	1	1	0	0	0	1	0	0	1	0	0	1	0	0	1	2	3	0	1	0	0	1	0	1	2	1								
<i>Paranura sexpunctata</i>	2	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	1	2	1	2	1	2	3	1	1	1	1	1	0	1	0	0									
<i>Nahuanura ce</i>	3	0	0	0	0	0	1	2	2	2	0	0	0	2	0	0	4	1	1	0	1	1	1	0	2	1	1	1	1	1	0	0	0	1	1	0	1	0	0	0	2	2	1	1	2	?	?	1	1	1	1	2	0	0	0							
<i>Oregonanura cascadiensis</i>	2	0	1	2	2	0	1	2	2	1	1	1	0	1	0	0	1	0	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	2	0	1	2	3	0	1	1	1	1	0	0	0	0							
<i>Sensillanura austriaca</i>	3	1	2	1	2	0	1	1	1	1	1	1	0	2	0	0	1	0	0	0	1	1	1	0	2	1	1	1	1	0	1	0	0	1	1	1	1	0	0	1	1	1	0	1	2	3	0	1	1	1	1	2	0	1	0	1						
<i>Americanura mexicana</i>	3	1	1	2	2	0	1	1	1	1	1	1	1	2	2	1	1	1	0	0	1	1	1	0	2	1	1	1	1	0	1	0	0	1	1	1	1	0	0	1	2	1	2	1	2	3	0	1	1	1	1	2	0	0	0	1						
<i>Palmanura mirabilis</i>	3	0	1	2	2	0	0	0	1	0	1	1	1	2	2	1	0	1	1	0	1	1	3	1	0	1	1	1	1	0	1	0	0	1	1	1	1	0	0	1	2	1	2	1	2	3	0	1	1	1	1	2	1	2	0	1						
<i>Tabasconura tapijulapana</i>	3	0	1	2	2	0	1	1	1	1	1	1	0	2	1	0	1	0	0	1	1	3	1	0	1	1	1	1	1	1	0	0	1	1	1	1	0	0	1	1	1	2	1	2	3	0	1	1	1	1	2	1	0	0	1							
<i>Honduranura centraliamericana</i>	3	0	2	1	2	0	1	2	1	1	1	2	1	1	2	1	0	0	1	0	1	1	1	0	1	1	1	1	1	0	1	0	0	1	1	1	1	0	0	0	2	1	0	1	2	3	0	1	1	1	1	1	0	0	0	1						
<i>Coecoloba plumleyi</i>	3	1	1	2	2	0	0	0	0	0	0	0	1	2	0	1	0	1	0	1	1	1	0	2	1	1	1	1	0	0	0	1	1	0	0	1	1	0	0	1	0	2	1	2	3	1	1	0	0	0	2	0	0	0	1							
<i>Hemilobella rounsevelli</i>	2	0	2	1	2	1	0	1	1	1	1	1	1	1	0	0	2	0	0	0	1	1	1	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	2	2	1	2	3	1	1	1	1	1	2	0	1	0	1							
<i>Sulobella yoshii</i>	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1	1	0	0	2	1	1	1	1	0	0	0	?	1	1	1	1	0	0	0	1	1	2	1	2	3	1	1	1	1	1	1	0	0	0	1						
<i>Telobella kemiri</i>	2	0	0	0	0	0	0	1	0	1	1	1	1	2	0	1	0	0	1	1	1	1	0	2	1	1	1	1	0	0	0	?	1	0	1	1	0	0	0	1	0	2	1	2	3	1	1	1	0	1	2	0	1	0	1							
<i>Yuukianura judithae</i>	3	1	1	0	2	1	0	1	1	0	1	1	0	1	0	0	3	0	0	1	1	1	1	0	2	1	1	1	1	0	0	0	1	1	0	0	1	0	0	1	0	2	1	2	3	1	1	0	0	1	2	0	0	0	1							
<i>Paralobella breviseta</i>	2	0	3	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	0	2	0	0	0	1	1	1	0	1	1	1	1	1	0	0	0	1	1	1	0	1	0	0	0	1	1	2	1	2	3	1	1	0	0	1	1	0	1	0	1			
<i>Lobellina weineræ</i>	2	0	3	1	1	1	0	1	1	0	1	1	1	1	1	0	0	1	0	1	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	0	1	1	0	0	0	1	0	2	1	2	3	1	1	1	0	1	1	0	0	0	1					
<i>Neanura muscorum</i>	2	0	2	2	1	0	1	1	1	1	1	1	1	2	2	0	1	0	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	0	1	2	3	0	1	1	1	1	0	0	0	0	1						
<i>Deutonura phlegrea</i>	3	0	2	1	2	0	1	1	1	1	1	1	2	1	1	2	0	2	0	0	0	1	1	1	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	0	1	2	3	0	1	1	1	1	0	1	1	1	1					
<i>Thaumanura carolii</i>	2	0	2	1	2	0	1	2	1	1	1	1	0	1	0	0	4	0	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	2	1	2	1	1	1	1	1	1	0	0	0	0	1						
<i>Monobella grassei grassei</i>	3	0	2	1	2	0	1	2	2	2	1	2	2	1	2	0	4	0	0	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	0	1	2	3	0	1	1	1	1	1	1	0	1						
<i>Vietnura caerulea</i>	3	0	1	2	2	0	1	1	2	1	1	2	1	0	2	1	0	1	1	1	1	1	3	1	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	0	1	2	3	0	1	1	1	1	0	1	1	1	1					
<i>Edoughnura rara</i>	3	0	2	1	2	0	1	2	1	1	1	1	2	1	0	0	4	1	0	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	1	0	1	1	0	0	0	2	0	1	1	2	3	0	1	0	0	1	0	0	1	0	1					
<i>Xylanura oregonensis</i>	2	0	2	1	2	0	2	0	1	1	1	1	0	1	0	0	1	0	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	0	1	2	3	0	1	1	1	1	0	0	0	0	1						
<i>Ghirkanura chernovae</i>	3	0	2	1	2	0	1	2	1	1	1	1	2	1	2	1	0	1	1	0	1	1	1	2	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	1	2	1	?	?	?	?	?	1	1	1	2	2	1	0	0
<i>Intricatonura fjellbergi</i>	2	0	1	2	2	0	1	1	1	1	1	1	2	1	1	0	1	1	1	1	1	1	3	1	0	1	1	1	1	0	0	0	0	1	1	1	1	0	1	1	2	1	1	1	2	3	1	1	1	1	1	0	0	1	1	1						
<i>Paravietnura notabilis</i>	3	0	1	2	2	0	1	1	2	1	1	2	1	0	2	1	0	1	0	0	1	1	3	1	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	1	1	2	2	1	1	2	3	0	1	1	1	1	0	1	2	1	1					
<i>Australonura grossi</i>	3	1	2	1	2	0	1	1	1	1	1	1	2	1	2	0	3	1	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	2	2	1	2	3	0	1	1	1	1	1	0	0	0	1							
<i>Himalmeria gurgung</i>	3	1	1	2	2	0	1	2	2	2	1	1	1	0	2	0	4	1	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	1	2	2	1	2	1	0	1	1	1	1	1	0	0	0	0						
<i>Zelandanura bituberculata</i>	3	1	1	2	2	0	1	1	2	1	1	1	2	1	2	1	1	0	0	0	1	1	1	0	2	1	1	1	1	0	0	0	0	1	1	?	1	0	0	?	?	1	2	1	2	3	0	1	1	1	1	2	0	1	0	0						
<i>Caledonura tillierae</i>	3	1	1	2	2	0	1	2	2	2	1	2	1	0	2	1	0	1	1	0	1	1	3	1	0	1	1	1	1	0	0	0	0	1	1	?	1	0	0	?	?	2	2	1	2	3	0	1	1	1	1	2	0	1	0	1						
<i>Cameronura delamarei</i>	3	1	1	2	2	0	1	2	1	1	1	2	1	1	2	1	1	0	0	1	1	1	1	0	2	1	1	1	1	0	0	0	0	1	0	1	1	0	0	0	2	0	2	1	2	3	1	1	1	1	1	0	1	1	1							
<i>Ectonura lata</i>	3	1	2	1	2	0	2	1	2	1	1	1	0	0	2	1	1	0	0	0																																										



*Cameronura delamarei*  
*Ectonura lata*  
*Galanura agnieskae*  
*Paleonura epiphytica*  
*Pronura pomorskii*  
*Vitronura mascula*  
*Bilobella carpatica*  
*Itanura brasiliensis*

0001012111101111213121102111112000000001?1?11  
0000011111101101103010102111112100000001?1?11  
10000121111011101051111011111200000000101111  
000101111110110110511110211111200100000100001  
101201211110111110421120101111200100000101111  
100201211110111110511110211111210100001101011  
100111211110111110312220111111200100010100011  
0000011111101101103011102111112000000001?1?11