

Table S1. Habitat information, sizes, and details of spinning behaviours for embiopteran species videotaped for 1 h sessions in artificial arenas in the laboratory. Samples marked "a" were analyzed beyond the hour because individuals started to spin at the end of the trial; b = individuals filmed in different locations although the same type of arenas were used; c = individuals were reluctant to spin and were filmed in different arenas as described in the text. V = ventral spinning. D = dorsal spinning. See text for explanation of spin details and Supporting Figure 2 for images of the arenas.

Species	Family (following Miller et al. 2012)	Arena (with more complete spinning in bold)	Habitat Where Young are Raised	Total # filmed	# Scored for Spin Details	Mean Time (s) Spent Spinning in 1h Trials
<i>Anisembia texana</i> (Melander)	Anisembiidae	Burrow	Mixed	5	3	742
<i>Anisembia texana</i>		Chamber		4	0	9.8
<i>Archembia</i> sp. Ross	Archembiidae	Burrow	Arboreal	5	4	551
<i>Archembia</i> sp.		Chamber		6	5	1117
<i>Metoligotoma incompta</i> (Ross)	Australembiidae	Burrow	Leaf Litter	5	4	705
<i>Metoligotoma incompta</i>		Chamber		4	1	320
<i>Metoligotoma pentanesiana</i> Davis		Burrow	Leaf litter/Subterranean	5	5	617
<i>Metoligotoma pentanesiana</i>		Chamber		5	3 ^a	43
<i>Antipaluria urichi</i> (Saussure)	Clothodidae	Burrow	Arboreal	4	4	643
<i>Antipaluria urichi</i>		Chamber		4	4	1384
<i>Clothoda</i> near <i>longicauda</i> Enderlein		Burrow	Arboreal	NA ^b	2	NA
<i>Clothoda</i> near <i>longicauda</i>		Chamber		NA	4	NA
<i>Embia nuragica</i> Stefani	Embiidae 1&2	Burrow	Leaf Litter	7	5	675
<i>Embia nuragica</i>		Chamber		5	3	58
<i>Oedembia</i> sp. Inthanon Ross	Embiidae 3	Burrow	Arboreal	5	5	NA
<i>Notoligotoma hardyi</i> Friederichs	Notoligotomidae	Chamber	Arboreal	5	5	807
<i>Aposthonia borneensis</i> (Hagen)	Oligotomidae	Burrow	Arboreal	4	4	578
<i>Aposthonia borneensis</i>		Chamber		3	2	609
<i>Aposthonia ceylonica</i> (Enderlein)		Burrow	Arboreal	5	4	535
<i>Aposthonia ceylonica</i>		Chamber		5	5	432
<i>Eosembia auripecta</i> Ross		Burrow	Arboreal	4	4	209
<i>Eosembia auripecta</i>		Chamber		6	5	166
<i>Haploembia solieri</i> Ramb.		Burrow	Leaf litter/Subterranean	6	6	1274
<i>Haploembia solieri</i>		Chamber		5	5	526
<i>Haploembia tarsalis</i> (Ross)		Burrow	Leaf litter/Subterranean	NA ^c	3	38.52
<i>Haploembia tarsalis</i>		Chamber				0
<i>Lobosembia mandibulata</i> . Ross		Burrow	Arboreal	5	5	518
<i>Lobosembia mandibulata</i>		Chamber		5	1	548

Species	Family (following Miller et al. 2012)	Arena (with more complete spinning in bold)	Habitat Where Young are Raised	Total # filmed	# Scored for Spin Details	Mean Time (s) Spent Spinning in 1h Trials
<i>Oligotoma nigra</i> (Hagen)		Burrow	Mixed	5	5	735
<i>Oligotoma nigra</i>		Chamber		7	7	720
<i>Oligotoma saundersii</i> Westwood		Burrow	Mixed	6	5	436
<i>Oligotoma saundersii</i>		Chamber		5	3	672
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	Ptilocerembiidae	Burrow	Mixed	5	4	435
<i>Ptilocerembia thaidina</i>		Chamber		4	0	0
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly		Burrow	Arboreal	NA ^c	5	824
<i>Ptilocerembia catherinae</i>		Chamber		5	4	NA
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	Scelembiidae	Chamber	Arboreal	5	5	849
<i>Gibocercus napoa</i> Ross		Chamber	Arboreal	5	4	NA ^b
<i>Neorhagadochir moreliensis</i> (Ross)		Chamber	Arboreal	5	5	522

Species	Time (s) Spent Spinning in 1h Trials (SE)	Mean # Spin Steps (±SE)	Maximum # Steps	Minimum # Steps	# Scored & Used in Analysis of Phylogenetic Signal	D Near to Same	D Near to Adjacent Near
<i>Anisembia texana</i> (Melander)	443	4991 (1878)	6869	3113	2	0.14078	0.01517
<i>Anisembia texana</i>	10				0		
<i>Archembia</i> sp. Ross	195	1567 (123)	2362	882	4	0.08378	0.20902
<i>Archembia</i> sp.	229	2299 (666)	4817	851	5	0.10030	0.07871
<i>Metoligotoma incompta</i> (Ross)	326	3330 (988)	6112	1883	4	0.05778	0.17365
<i>Metoligotoma incompta</i>	286	2356			1	0.03715	0.16890
<i>Metoligotoma pentanesiana</i> Davis	116	1329 (326)	2285	353	5	0.05782	0.13327
<i>Metoligotoma pentanesiana</i>	41	1267 (466)	2027	418	3	0.09573	0.14516
<i>Antipaluria urichi</i> (Saussure)	100	1253 (286)	1456	643	4	0.09210	0.10689
<i>Antipaluria urichi</i>	47	2785 (161)	3230	2435	4	0.11113	0.07649
<i>Clothoda</i> near <i>longicauda</i> Enderlein		1348 (519)	1868	829	2	0.23926	0.12588
<i>Clothoda</i> near <i>longicauda</i>		3191 (717)	4782	1882	4	0.08275	0.11088
<i>Embia nuragica</i> Stefani	253	3617 (183)	2800	2434	2	0.67295	0.21691
<i>Embia nuragica</i>	34	403 (170)	574	233	2	0.02170	0.24291
<i>Oedembia</i> sp. Inthanon Ross		2918 (667)	4914	766	5	0.02960	0.11333
<i>Notoligotoma hardyi</i> Friederichs	87	4198 (536)	5231	2780	5	0.10355	0.08805
<i>Aposthonia borneensis</i> (Hagen)	234	2454 (547)	3300	1428	3	0.03936	0.08702
<i>Aposthonia borneensis</i>	300	2264 (553)	3469	788	2	0.10522	0.05672
<i>Aposthonia ceylonica</i> (Enderlein)	145	1914 (392)	2748	855	4	0.07056	0.06651
<i>Aposthonia ceylonica</i>	276	2715 (1447)	4163	1268	2	0.16653	0.21674
<i>Eosembia auripecta</i> Ross	76	593 (202)	999	161	4	0.06598	0.07806
<i>Eosembia auripecta</i>	78	1019 (399)	1713	328	3	0.18259	0.28360
<i>Haploembia solieri</i> Ramb.	350	5768 (1233)	8878	1636	6	0.03170	0.23154
<i>Haploembia solieri</i>	235	2461 (929)	3881	714	3	0.13350	0.23815
<i>Haploembia tarsalis</i> (Ross)	33.8	1097 (233)	1371	632	3	0.07661	0.28110
<i>Haploembia tarsalis</i>							
<i>Lobosembia mandibulata</i> . Ross	235	1951 (561)	2938	399	4	0.03547	0.05320
<i>Lobosembia mandibulata</i>	134	1356			1	0.07722	0.14749

Species	Time (s)	Mean # Spin Steps (±SE)	Maximum # Steps	Minimum # Steps	# Scored & Used in Analysis of Phylogenetic Signal	D Near to Same	D Near to Adjacent Near
	Spent Spinning in 1h Trials (SE)						
<i>Oligotoma nigra</i> (Hagen)	157	2485 (595)	3688	1149	4	0.04708	0.17642
<i>Oligotoma nigra</i>	127	3001 (420)	4284	1777	5	0.09739	0.05058
<i>Oligotoma saundersii</i> Westwood	160	1962 (582)	2600	218	3	0.04331	0.07609
<i>Oligotoma saundersii</i>	267	3927 (1396)	6335	1496	3	0.12370	0.14633
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	173	1179 (345)	2048	378	4	0.14924	0.04677
<i>Ptilocerembia thaidina</i>	0				0		
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	163	1821 (501)	3436	725	5	0.04236	0.14542
<i>Ptilocerembia catherinae</i>		307 (145)	587	96	3	0.02253	0.04928
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	39	328 (145)	587	96	4	0.13769	0.24475
<i>Gibocercus napoa</i> Ross		2921 (1045)	5716	708	4	0.07329	0.14774
<i>Neorhagadochir moreliensis</i> (Ross)	135	1172 (245)	1903	857	4	0.13625	0.12693

Species	D Near to Reach	D Near to Adjacent Reach	D Near to Adjacent Cross	D Reach to Same	D Reach to Adjacent Near, Reach,Paw, Cross	D Reach to Paw	D Reach to Adjacent Cross	D Reach to Side
<i>Anisembia texana</i> (Melander)	0.04059	0.00867	0.00049	0.00931	0.09113	0.02734	0.00015	0.00008
<i>Anisembia texana</i>								
<i>Archembia</i> sp. Ross	0.02455	0.02875	0.01775	0.07874	0.03610	0.00000	0.00243	0.00000
<i>Archembia</i> sp.	0.01631	0.00447	0.00000	0.13474	0.00929	0.00000	0.00000	0.02482
<i>Metoligotoma incompta</i> (Ross)	0.00842	0.01708	0.02305	0.06435	0.02007	0.00000	0.01042	0.00040
<i>Metoligotoma incompta</i>	0.01123	0.01382	0.00086	0.13693	0.01771	0.00043	0.02635	0.02073
<i>Metoligotoma pentanesiana</i> Davis	0.01625	0.02365	0.02600	0.03121	0.03429	0.00623	0.01268	0.00048
<i>Metoligotoma pentanesiana</i>	0.01180	0.02617	0.01541	0.04476	0.02426	0.00789	0.01127	0.01158
<i>Antipaluria urichi</i> (Saussure)	0.02131	0.00556	0.01507	0.07455	0.01006	0.00035	0.00013	0.00000
<i>Antipaluria urichi</i>	0.01899	0.00789	0.00121	0.06575	0.01547	0.00009	0.00026	0.01565
<i>Clothoda near longicauda</i> Enderlein	0.02532	0.02101	0.00055	0.11777	0.02475	0.00027	0.00137	0.00137
<i>Clothoda near longicauda</i>	0.02902	0.02860	0.00036	0.20708	0.04100	0.00012	0.00000	0.03139
<i>Embia nuragica</i> Stefani	0.00812	0.00760	0.00022	0.00022	0.02810	0.00000	0.00000	0.00000
<i>Embia nuragica</i>	0.02890	0.02231	0.00365	0.06695	0.05548	0.00000	0.00091	0.06239
<i>Oedembia</i> sp. Inthanon Ross	0.01049	0.02473	0.00705	0.13007	0.03511	0.00003	0.00578	0.00831
<i>Notoligotoma hardyi</i> Friederichs	0.01017	0.00699	0.00046	0.13273	0.01395	0.00008	0.00012	0.02564
<i>Aposthonia borneensis</i> (Hagen)	0.00908	0.00799	0.00098	0.11706	0.01378	0.00000	0.00041	0.00994
<i>Aposthonia borneensis</i>	0.01046	0.00538	0.00532	0.11164	0.00750	0.00000	0.00143	0.01434
<i>Aposthonia ceylonica</i> (Enderlein)	0.01111	0.00864	0.00499	0.12582	0.00719	0.00000	0.00232	0.01238
<i>Aposthonia ceylonica</i>	0.01081	0.00918	0.00061	0.06954	0.01129	0.00024	0.00012	0.00524
<i>Eosembia auripecta</i> Ross	0.01403	0.00856	0.00022	0.15880	0.01402	0.00022	0.00000	0.00354
<i>Eosembia auripecta</i>	0.01345	0.01785	0.00082	0.14774	0.01586	0.00075	0.00055	0.01487
<i>Haploembia solieri</i> Ramb.	0.00722	0.02018	0.00193	0.05485	0.02273	0.00006	0.00164	0.00482
<i>Haploembia solieri</i>	0.02412	0.01613	0.00221	0.14430	0.02350	0.00012	0.00058	0.01813
<i>Haploembia tarsalis</i> (Ross)	0.03381	0.01960	0.00049	0.19908	0.02423	0.00000	0.00000	0.00128
<i>Haploembia tarsalis</i>								
<i>Lobosembia mandibulata</i> . Ross	0.01455	0.01103	0.00010	0.23011	0.02716	0.00010	0.00000	0.01649
<i>Lobosembia mandibulata</i>	0.01081	0.01081	0.00386	0.09344	0.01390	0.00077	0.00077	0.01853

Species	D Near to Reach	D Near to Adjacent Reach	D Near to Adjacent Cross	D Reach to Same	D Reach to Adjacent Near, Reach,Paw, Cross	D Reach to Paw	D Reach to Adjacent Cross	D Reach to Side
<i>Oligotoma nigra</i> (Hagen)	0.01496	0.03867	0.00036	0.13096	0.05553	0.00000	0.00051	0.01831
<i>Oligotoma nigra</i>	0.01618	0.00181	0.00000	0.12563	0.00548	0.00006	0.01255	0.00089
<i>Oligotoma saundersii</i> Westwood	0.01535	0.01176	0.00110	0.13207	0.01722	0.00028	0.00056	0.01061
<i>Oligotoma saundersii</i>	0.01666	0.00456	0.00005	0.09285	0.00466	0.00009	0.00000	0.01490
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	0.01604	0.03315	0.00169	0.01223	0.22452	0.00000	0.00081	0.00000
<i>Ptilocerembia thaidina</i>								
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	0.00908	0.01356	0.04392	0.06532	0.01814	0.01806	0.00829	0.00574
<i>Ptilocerembia catherinae</i>	0.00062	0.00633	0.00015	0.00916	0.00618	0.00000	0.00204	0.00077
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	0.01989	0.00598	0.00000	0.06695	0.00365	0.00000	0.00000	0.02456
<i>Gibocercus napoa</i> Ross	0.01301	0.01129	0.00009	0.16774	0.02719	0.00026	0.00000	0.03998
<i>Neorhagadochir moreliensis</i> (Ross)	0.02325	0.01322	0.00000	0.23206	0.02240	0.00000	0.00000	0.06310

Species	D Cross to Adjacent	D Side to Same	D Side to Back	D Side to Paw, Reach, Near	D Back to Back	D Back to Side	D Over to Over	V Near to Same
<i>Anisembia texana</i> (Melander)	0.00120	0.00000	0.00000	0.00047	0.00000	0.00000	0.00000	0.17694
<i>Anisembia texana</i>								
<i>Archembia</i> sp. Ross	0.02183	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01276
<i>Archembia</i> sp.	0.00000	0.04106	0.02314	0.02339	0.01440	0.00950	0.06029	0.09337
<i>Metoligotoma incompta</i> (Ross)	0.03338	0.00126	0.00017	0.00057	0.00045	0.00012	0.00029	0.04855
<i>Metoligotoma incompta</i>	0.04320	0.07084	0.01641	0.02376	0.04406	0.01555	0.03024	0.00391
<i>Metoligotoma pentanesiana</i> Davis	0.03856	0.00095	0.00000	0.00024	0.00000	0.00000	0.00000	0.07902
<i>Metoligotoma pentanesiana</i>	0.02438	0.01424	0.01780	0.00967	0.00938	0.00582	0.03435	0.02911
<i>Antipaluria urichi</i> (Saussure)	0.01813	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.08384
<i>Antipaluria urichi</i>	0.00132	0.03678	0.02174	0.01918	0.04853	0.01120	0.01429	0.07208
<i>Clothoda near longicauda</i> Enderlein	0.00164	0.00109	0.00000	0.00164	0.00000	0.00000	0.00000	0.11667
<i>Clothoda near longicauda</i>	0.00060	0.14486	0.02706	0.04489	0.02820	0.02255	0.02364	0.01104
<i>Embia nuragica</i> Stefani	0.00040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.02104
<i>Embia nuragica</i>	0.00274	0.00538	0.08034	0.05711	0.01440	0.00953	0.11058	0.00000
<i>Oedembia</i> sp. Inthanon Ross	0.01336	0.00642	0.00566	0.00965	0.00295	0.00371	0.00204	0.05468
<i>Notoligotoma hardyi</i> Friederichs	0.00066	0.04349	0.02544	0.02588	0.01822	0.01140	0.02124	0.02925
<i>Aposthonia borneensis</i> (Hagen)	0.00175	0.02294	0.01117	0.01083	0.00727	0.00521	0.02359	0.06046
<i>Aposthonia borneensis</i>	0.00000	0.00888	0.01273	0.01946	0.00918	0.00874	0.03435	0.07635
<i>Aposthonia ceylonica</i> (Enderlein)	0.00794	0.03076	0.00975	0.01402	0.00691	0.00347	0.01823	0.05808
<i>Aposthonia ceylonica</i>	0.00073	0.01496	0.01039	0.00898	0.00556	0.00483	0.03780	0.05855
<i>Eosembia auripecta</i> Ross	0.00045	0.00329	0.00152	0.00380	0.00152	0.00152	0.00000	0.07593
<i>Eosembia auripecta</i>	0.00192	0.01919	0.01600	0.01755	0.00501	0.00362	0.03804	0.04458
<i>Haploembia solieri</i> Ramb.	0.00333	0.00519	0.00363	0.00426	0.00282	0.00184	0.00380	0.03270
<i>Haploembia solieri</i>	0.00194	0.02678	0.01976	0.02012	0.01617	0.00642	0.04324	0.01171
<i>Haploembia tarsalis</i> (Ross)	0.00049	0.00152	0.00051	0.00101	0.00000	0.00025	0.00000	0.05844
<i>Haploembia tarsalis</i>								
<i>Lobosembia mandibulata</i> . Ross	0.00010	0.03932	0.01007	0.01803	0.00295	0.00339	0.00196	0.06125
<i>Lobosembia mandibulata</i>	0.00463	0.01776	0.01931	0.02394	0.00232	0.01081	0.02548	0.06950

Species	D Cross to Adjacent	D Side to Same	D Side to Back	D Side to Paw, Reach, Near	D Back to Back	D Back to Side	D Over to Over	V Near to Same
<i>Oligotoma nigra</i> (Hagen)	0.00065	0.02729	0.01079	0.01710	0.00403	0.00422	0.01143	0.02313
<i>Oligotoma nigra</i>	0.00000	0.00000	0.01650	0.00240	0.02068	0.00007	0.00058	0.08252
<i>Oligotoma saundersii</i> Westwood	0.00139	0.01013	0.00826	0.01081	0.00202	0.00292	0.01973	0.07255
<i>Oligotoma saundersii</i>	0.00005	0.00673	0.01768	0.01975	0.00224	0.00911	0.03375	0.08191
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.14535
<i>Ptilocerembia thaidina</i>								
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	0.00487	0.00373	0.00550	0.00756	0.00245	0.00261	0.00021	0.05515
<i>Ptilocerembia catherinae</i>	0.00000	0.00030	0.00417	0.00000	0.00202	0.00081	0.00149	0.00000
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	0.00000	0.04080	0.03900	0.03018	0.05983	0.00699	0.08578	0.01220
<i>Gibocercus napoa</i> Ross	0.00018	0.01909	0.04050	0.03911	0.00610	0.00708	0.04221	0.01608
<i>Neorhagadochir moreliensis</i> (Ross)	0.00000	0.00359	0.06502	0.06148	0.00281	0.01374	0.06689	0.00040

Species	V Near to Adjacent Near	V Near to Reach	V Near to Adjacent Cross	V Near to Adjacent Paw	V Near to Paw	V Reach to Same	V Reach to Adjacent Near, Reach & Paw	V Reach to Adjacent Cross
<i>Anisembia texana</i> (Melander)	0.01743	0.03364	0.00074	0.00232	0.00968	0.01208	0.11606	0.00017
<i>Anisembia texana</i>								
<i>Archembia</i> sp. Ross	0.03771	0.02366	0.00928	0.00000	0.00000	0.12250	0.00700	0.00089
<i>Archembia</i> sp.	0.07041	0.01309	0.01131	0.00027	0.00061	0.12081	0.01277	0.00069
<i>Metoligotoma incompta</i> (Ross)	0.15044	0.01628	0.02959	0.00065	0.00017	0.09356	0.01897	0.00969
<i>Metoligotoma incompta</i>	0.10787	0.00180	0.00240	0.00601	0.00090	0.00631	0.01292	0.00150
<i>Metoligotoma pentanesiana</i> Davis	0.21914	0.01388	0.07857	0.00471	0.00119	0.02017	0.03172	0.02198
<i>Metoligotoma pentanesiana</i>	0.09935	0.01057	0.03734	0.00139	0.00139	0.05520	0.00676	0.00555
<i>Antipaluria urichi</i> (Saussure)	0.16989	0.04161	0.05930	0.00000	0.00000	0.11724	0.01321	0.00124
<i>Antipaluria urichi</i>	0.12544	0.02598	0.01188	0.00194	0.00196	0.05254	0.02688	0.00097
<i>Clothoda near longicauda</i> Enderlein	0.06362	0.01855	0.02927	0.00000	0.00000	0.06320	0.00739	0.00000
<i>Clothoda near longicauda</i>	0.01140	0.00469	0.00159	0.00016	0.00047	0.03358	0.00406	0.00021
<i>Embia nuragica</i> Stefani	0.01201	0.00043	0.00000	0.00022	0.00022	0.00000	0.00310	0.00000
<i>Embia nuragica</i>	0.01551	0.00000	0.00000	0.00000	0.00000	0.00365	0.00091	0.00000
<i>Oedembia</i> sp. Inthanon Ross	0.19752	0.01217	0.03609	0.00653	0.00269	0.07061	0.01731	0.00637
<i>Notoligotoma hardyi</i> Friederichs	0.15652	0.02124	0.00311	0.00029	0.00031	0.11631	0.02212	0.00048
<i>Aposthonia borneensis</i> (Hagen)	0.10582	0.01096	0.01541	0.01200	0.00406	0.12702	0.01688	0.00167
<i>Aposthonia borneensis</i>	0.12289	0.00000	0.01128	0.00039	0.00081	0.11754	0.01467	0.00149
<i>Aposthonia ceylonica</i> (Enderlein)	0.07168	0.01042	0.01586	0.00656	0.00485	0.13277	0.01521	0.01355
<i>Aposthonia ceylonica</i>	0.08941	0.00314	0.02948	0.00521	0.00282	0.06478	0.00643	0.00134
<i>Eosembia auripecta</i> Ross	0.10845	0.02946	0.01858	0.00051	0.00025	0.24725	0.01875	0.01123
<i>Eosembia auripecta</i>	0.02131	0.00370	0.00594	0.00000	0.00069	0.04780	0.00089	0.00061
<i>Haploembia solieri</i> Ramb.	0.22062	0.01052	0.03452	0.01170	0.00293	0.07591	0.02239	0.01578
<i>Haploembia solieri</i>	0.06094	0.00314	0.00953	0.00316	0.00060	0.04762	0.00625	0.00215
<i>Haploembia tarsalis</i> (Ross)	0.09622	0.01504	0.01046	0.00054	0.00074	0.08712	0.01284	0.00054
<i>Haploembia tarsalis</i>								
<i>Lobosembia mandibulata</i> . Ross	0.11509	0.03062	0.00642	0.00117	0.00154	0.16898	0.03399	0.00057
<i>Lobosembia mandibulata</i>	0.15907	0.00618	0.00927	0.00232	0.00463	0.08108	0.00386	0.00077

Species	V Near to Adjacent Near	V Near to Reach	V Near to Adjacent Cross	V Near to Adjacent Paw	V Near to Paw	V Reach to Same	V Reach to Adjacent Near, Reach & Paw	V Reach to Adjacent to Cross
<i>Oligotoma nigra</i> (Hagen)	0.07771	0.00524	0.00825	0.00378	0.00038	0.04090	0.03071	0.01209
<i>Oligotoma nigra</i>	0.19296	0.02179	0.01369	0.00300	0.00139	0.09589	0.01901	0.00061
<i>Oligotoma saundersii</i> Westwood	0.11189	0.01447	0.01448	0.00791	0.00483	0.15249	0.02217	0.00355
<i>Oligotoma saundersii</i>	0.15900	0.01092	0.01411	0.00067	0.00257	0.06854	0.00815	0.01126
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	0.07081	0.00555	0.00319	0.00000	0.00025	0.00125	0.06723	0.00012
<i>Ptilocerembia thaidina</i>								
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	0.25972	0.00854	0.05440	0.00161	0.00277	0.04906	0.02353	0.00893
<i>Ptilocerembia catherinae</i>	0.00000	0.00000	0.00000	0.00000	0.00000	0.00091	0.00000	0.00000
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	0.03203	0.00207	0.00460	0.00014	0.00047	0.02149	0.00173	0.00011
<i>Gibocercus napoa</i> Ross	0.07017	0.00666	0.00231	0.00170	0.00097	0.07707	0.01962	0.00015
<i>Neorhagadochir moreliensis</i> (Ross)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00093	0.00000	0.00000

Species	V Paw to		V Paw to Same	V Paw to Reach	V Paw to Near	V Cross to Adjacent	D Back	D Cross
	V Reach to Side	Side, Back, Over						
<i>Anisembia texana</i> (Melander)	0.00023	0.00017	0.00654	0.00885	0.01056	0.00390	0.00570	0.03735
<i>Anisembia texana</i>								
<i>Archembia</i> sp. Ross	0.00000	0.00000	0.00000	0.00000	0.00000	0.02190	0.00000	0.02195
<i>Archembia</i> sp.	0.00198	0.00192	0.00634	0.00013	0.00096	0.01625	0.04658	0.00000
<i>Metoligotoma incompta</i> (Ross)	0.00049	0.00003	0.00117	0.00043	0.00012	0.03960	0.00070	0.03359
<i>Metoligotoma incompta</i>	0.00000	0.00000	0.00331	0.00000	0.00120	0.00511	0.06834	0.04287
<i>Metoligotoma pentanesiana</i> Davis	0.00024	0.00000	0.00071	0.00048	0.00093	0.09765	0.00000	0.03897
<i>Metoligotoma pentanesiana</i>	0.00104	0.00104	0.01958	0.00294	0.00000	0.04384	0.03118	0.03040
<i>Antipaluria urichi</i> (Saussure)	0.00000	0.00000	0.00000	0.00000	0.00000	0.07971	0.00000	0.01937
<i>Antipaluria urichi</i>	0.00062	0.00015	0.00647	0.00259	0.00583	0.02219	0.07759	0.00078
<i>Clothoda</i> near <i>longicauda</i> Enderlein	0.00000	0.00000	0.00000	0.00000	0.00000	0.03969	0.00000	0.00335
<i>Clothoda</i> near <i>longicauda</i>	0.00079	0.00083	0.00596	0.00093	0.00050	0.00256	0.06037	0.00096
<i>Embia nuragica</i> Stefani	0.00000	0.00000	0.00000	0.00000	0.00043	0.00000	0.00000	0.00693
<i>Embia nuragica</i>	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.09701	0.00523
<i>Oedembia</i> sp. Inthanon Ross	0.00064	0.00081	0.00995	0.00232	0.00327	0.04575	0.01169	0.01103
<i>Notoligotoma hardyi</i> Friederichs	0.00189	0.00077	0.00448	0.00085	0.00000	0.00448	0.05064	0.00065
<i>Aposthonia borneensis</i> (Hagen)	0.00174	0.00700	0.08554	0.00558	0.00424	0.02501	0.02148	0.00173
<i>Aposthonia borneensis</i>	0.00000	0.00000	0.00000	0.00710	0.00000	0.02055	0.02497	0.00789
<i>Aposthonia ceylonica</i> (Enderlein)	0.00369	0.01110	0.05875	0.00497	0.00326	0.03596	0.01791	0.00879
<i>Aposthonia ceylonica</i>	0.00041	0.00049	0.03008	0.00378	0.00224	0.03494	0.02247	0.00096
<i>Eosembia auripecta</i> Ross	0.00127	0.00025	0.00102	0.00127	0.00181	0.05042	0.00325	0.00000
<i>Eosembia auripecta</i>	0.00000	0.00207	0.00743	0.00034	0.00034	0.00738	0.02398	0.00235
<i>Haploembia solieri</i> Ramb.	0.00053	0.00113	0.02793	0.00463	0.00237	0.05068	0.00738	0.00355
<i>Haploembia solieri</i>	0.00018	0.00009	0.01547	0.00354	0.00012	0.01172	0.03765	0.00390
<i>Haploembia tarsalis</i> (Ross)	0.00025	0.00000	0.00339	0.00177	0.00025	0.01048	0.00076	0.00049
<i>Haploembia tarsalis</i>								
<i>Lobosembia mandibulata</i> . Ross	0.00068	0.00000	0.01232	0.00431	0.00123	0.01378	0.01320	0.00010
<i>Lobosembia mandibulata</i>	0.00541	0.00309	0.01236	0.00463	0.00309	0.01081	0.02950	0.00516

Species	V Paw to		V Paw to Same	V Paw to Reach	V Paw to Near	V Cross to Adjacent	D Back	D Cross
	V Reach to Side	Side, Back, Over						
<i>Oligotoma nigra</i> (Hagen)	0.00143	0.00035	0.00880	0.00291	0.00016	0.02115	0.01964	0.00085
<i>Oligotoma nigra</i>	0.00036	0.00000	0.02145	0.00352	0.00034	0.02086	0.12755	0.00000
<i>Oligotoma saundersii</i> Westwood	0.00131	0.00683	0.05986	0.00532	0.00472	0.02458	0.01376	0.00141
<i>Oligotoma saundersii</i>	0.00000	0.00083	0.01815	0.00365	0.00213	0.02703	0.02727	0.00005
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	0.00000	0.00000	0.00000	0.00062	0.03339	0.00000	0.00000	0.01386
<i>Ptilocerembia thaidina</i>								
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	0.00145	0.00031	0.00428	0.00129	0.00109	0.02919	0.00814	0.00754
<i>Ptilocerembia catherinae</i>	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.14240	0.00114
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	0.00251	0.00007	0.00361	0.00125	0.00011	0.00474	0.10026	0.00000
<i>Gibocercus napoa</i> Ross	0.00099	0.00000	0.00533	0.00216	0.00050	0.00276	0.05719	0.00135
<i>Neorhagadochir moreliensis</i> (Ross)	0.00026	0.00000	0.00103	0.00000	0.00000	0.00000	0.07830	0.00000

Species	D Near	D Over	D Paw	D Reach	D Side	V Back	V Cross	V Near
<i>Anisembia texana</i> (Melander)	0.20996	0.00301	0.00080	0.17225	0.01632	0.00124	0.04483	0.27066
<i>Anisembia texana</i>								
<i>Archembia</i> sp. Ross	0.36921	0.00000	0.00000	0.13841	0.00000	0.00000	0.03838	0.15547
<i>Archembia</i> sp.	0.20569	0.08285	0.00046	0.18093	0.09000	0.00048	0.02032	0.19463
<i>Metoligotoma incompta</i> (Ross)	0.28201	0.00041	0.00000	0.10207	0.00218	0.00078	0.05412	0.33922
<i>Metoligotoma incompta</i>	0.24024	0.03820	0.00042	0.21222	0.12351	0.00000	0.01358	0.19397
<i>Metoligotoma pentanesiana</i> Davis	0.25956	0.00023	0.00000	0.08469	0.00141	0.00000	0.10359	0.41737
<i>Metoligotoma pentanesiana</i>	0.28265	0.05099	0.00533	0.12645	0.06212	0.00214	0.05289	0.18040
<i>Antipaluria urichi</i> (Saussure)	0.24937	0.00000	0.00000	0.10593	0.00000	0.00000	0.08035	0.37573
<i>Antipaluria urichi</i>	0.21309	0.02917	0.00000	0.12787	0.08793	0.00171	0.02617	0.22358
<i>Clothoda near longicauda</i> Enderlein	0.41714	0.00000	0.00000	0.16688	0.00294	0.00000	0.06849	0.25276
<i>Clothoda near longicauda</i>	0.26526	0.03299	0.00000	0.32310	0.21882	0.00000	0.00493	0.03290
<i>Embia nuragica</i> Stefani	0.90804	0.00000	0.00000	0.03752	0.00000	0.00000	0.00164	0.03642
<i>Embia nuragica</i>	0.33426	0.17467	0.00000	0.21225	0.14696	0.00000	0.00000	0.02003
<i>Oedembia</i> sp. Inthanon Ross	0.20196	0.00446	0.00000	0.21068	0.02587	0.00037	0.05096	0.33902
<i>Notoligotoma hardyi</i> Friederichs	0.21759	0.04139	0.00023	0.18206	0.09404	0.00440	0.00832	0.22380
<i>Aposthonia borneensis</i> (Hagen)	0.14929	0.03138	0.00000	0.14995	0.04468	0.00730	0.05361	0.22520
<i>Aposthonia borneensis</i>	0.20157	0.04684	0.00442	0.15463	0.04232	0.00010	0.04902	0.26108
<i>Aposthonia ceylonica</i> (Enderlein)	0.16772	0.02494	0.00000	0.16177	0.05473	0.00055	0.05619	0.18300
<i>Aposthonia ceylonica</i>	0.41308	0.04659	0.00060	0.09918	0.03508	0.00072	0.05259	0.19617
<i>Eosembia auripecta</i> Ross	0.12002	0.00025	0.00000	0.11962	0.01079	0.00100	0.12345	0.24543
<i>Eosembia auripecta</i>	0.50788	0.05092	0.00189	0.19884	0.05183	0.00236	0.00817	0.07552
<i>Haploembia solieri</i> Ramb.	0.29365	0.00584	0.00036	0.09192	0.01381	0.00052	0.05846	0.32497
<i>Haploembia solieri</i>	0.42267	0.05628	0.00128	0.20892	0.06542	0.00000	0.01184	0.09140
<i>Haploembia tarsalis</i> (Ross)	0.41512	0.00026	0.00000	0.25331	0.00104	0.00024	0.01128	0.19381
<i>Haploembia tarsalis</i>								
<i>Lobosembia mandibulata</i> . Ross	0.11920	0.00851	0.00010	0.28973	0.06613	0.00000	0.01417	0.23635
<i>Lobosembia mandibulata</i>	0.26844	0.03982	0.00442	0.14159	0.06268	0.00147	0.01327	0.25885

Species	D Near	D Over	D Paw	D Reach	D Side	V Back	V Cross	V Near
<i>Oligotoma nigra</i> (Hagen)	0.29676	0.02286	0.00000	0.23151	0.06078	0.00181	0.02924	0.17767
<i>Oligotoma nigra</i>	0.87044	0.23766	0.00058	0.82646	0.28557	0.00113	0.16743	1.60195
<i>Oligotoma saundersii</i> Westwood	0.15829	0.02099	0.00082	0.16508	0.02719	0.00126	0.03972	0.28614
<i>Oligotoma saundersii</i>	0.30073	0.04914	0.00051	0.13123	0.04360	0.00142	0.03542	0.27656
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	0.25622	0.00000	0.00000	0.26074	0.00000	0.00000	0.04453	0.33319
<i>Ptilocerembia thaidina</i>								
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	0.26814	0.00062	0.00000	0.16214	0.02130	0.00073	0.02792	0.37656
<i>Ptilocerembia catherinae</i>	0.51695	0.12990	0.00057	0.12946	0.07334	0.00000	0.00000	0.00000
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	0.42787	0.11448	0.00000	0.12369	0.10927	0.01006	0.00533	0.05409
<i>Gibocercus napoa</i> Ross	0.22554	0.09389	0.01944	0.19395	0.06240	0.01145	0.04085	0.11117
<i>Neorhagadochir moreliensis</i> (Ross)	0.31452	0.12554	0.00027	0.35058	0.12696	0.00000	0.00000	0.00053

Species	V Over	V Paw	V Reach	V Side	Step Diversity	Total Dorsal Steps/ Total Steps	Side, Back + Over/Total Dorsal Steps
<i>Anisembia texana</i> (Melander)	0.00015	0.04189	0.19328	0.00257	0.80077	0.44539	0.06848
<i>Anisembia texana</i>							
<i>Archembia</i> sp. Ross	0.00000	0.00000	0.27657	0.00000	0.66315	0.52958	0.00000
<i>Archembia</i> sp.	0.01132	0.00946	0.14401	0.00874	0.81037	0.60700	0.37016
<i>Metoligotoma incompta</i> (Ross)	0.00000	0.00432	0.17875	0.00185	0.74928	0.42096	0.01697
<i>Metoligotoma incompta</i>	0.00000	0.03396	0.03141	0.00127	0.83443	0.72581	0.31871
<i>Metoligotoma pentanesiana</i> Davis	0.00000	0.01189	0.08114	0.00023	0.69776	0.38556	0.00707
<i>Metoligotoma pentanesiana</i>	0.00082	0.03315	0.08255	0.00632	0.81094	0.64174	0.19535
<i>Antipaluria urichi</i> (Saussure)	0.00000	0.00000	0.16924	0.00000	0.72327	0.37467	0.00000
<i>Antipaluria urichi</i>	0.00000	0.02589	0.12559	0.00521	0.84432	0.58150	0.34108
<i>Clothoda</i> near <i>longicauda</i> Enderlein	0.00000	0.00000	0.08844	0.00000	0.70872	0.59031	0.00597
<i>Clothoda</i> near <i>longicauda</i>	0.00000	0.00985	0.04526	0.00556	0.75592	0.90150	0.35615
<i>Embia nuragica</i> Stefani	0.00000	0.00041	0.00391	0.00000	0.15905	0.95753	0.00000
<i>Embia nuragica</i>	0.00000	0.00000	0.00958	0.00000	0.70032	0.97038	0.42500
<i>Oedembia</i> sp. Inthanon Ross	0.00000	0.03010	0.11058	0.00328	0.77537	0.46568	0.82937
<i>Notoligotoma hardyi</i> Friederichs	0.00386	0.00725	0.15606	0.00971	0.81804	0.58660	0.34908
<i>Aposthonia borneensis</i> (Hagen)	0.00204	0.12079	0.16764	0.02491	0.84862	0.39851	0.33971
<i>Aposthonia borneensis</i>	0.00179	0.04036	0.16291	0.00210	0.82333	0.48265	0.25356
<i>Aposthonia ceylonica</i> (Enderlein)	0.00009	0.09420	0.18830	0.04182	0.84428	0.43586	0.31612
<i>Aposthonia ceylonica</i>	0.00036	0.04630	0.08269	0.00321	0.74756	0.61796	0.17663
<i>Eosembia auripecta</i> Ross	0.00000	0.00556	0.26279	0.10784	0.71223	0.25394	29.42602
<i>Eosembia auripecta</i>	0.00754	0.01099	0.05648	0.00124	0.62786	0.83770	0.17420
<i>Haploembia solieri</i> Ramb.	0.00029	0.06788	0.12732	0.00387	0.76131	0.41649	0.07011
<i>Haploembia solieri</i>	0.00000	0.03328	0.06508	0.00228	0.74177	0.79612	0.20054
<i>Haploembia tarsalis</i> (Ross)	0.00024	0.00555	0.11607	0.00183	0.70630	0.67097	0.00647
<i>Haploembia tarsalis</i>							
<i>Lobosembia mandibulata</i> . Ross	0.00000	0.02126	0.23007	0.00119	0.75658	0.49696	0.15919
<i>Lobosembia mandibulata</i>	0.01622	0.02507	0.10988	0.02360	0.82136	0.55162	0.31417

Species	V Over	V Paw	V Reach	V Side	Step Diversity	Total Dorsal Steps/ Total Steps	Side, Back + Over/Total Dorsal Steps
<i>Oligotoma nigra</i> (Hagen)	0.00007	0.02386	0.12913	0.00583	0.76020	0.63240	0.17887
<i>Oligotoma nigra</i>	0.00450	0.18818	0.67170	0.01686	0.80751	0.46965	0.28241
<i>Oligotoma saundersii</i> Westwood	0.00183	0.07100	0.19641	0.01611	0.80185	0.38753	0.20181
<i>Oligotoma saundersii</i>	0.00034	0.02863	0.10398	0.00111	0.79037	0.55253	0.22190
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	0.00000	0.00024	0.09122	0.00000	0.64967	0.53082	0.00000
<i>Ptilocerembia thaidina</i>							
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	0.00000	0.00812	0.11449	0.00431	0.70784	0.42830	0.06881
<i>Ptilocerembia catherinae</i>	0.00000	0.00000	0.00625	0.00000	0.61677	0.99375	0.34780
<i>Conicerembia septentrionalis</i> (Mariño & Márquez)	0.00568	0.00541	0.02911	0.01474	0.74263	0.87558	0.40548
<i>Gibocercus napoa</i> Ross	0.01407	0.04307	0.11441	0.01122	0.82964	0.65375	0.40701
<i>Neorhagadochir moreliensis</i> (Ross)	0.00000	0.00150	0.00155	0.00025	0.72780	0.99618	0.33244

Species	Side, Back + Over/ Total Steps	Tarsal circumference/ headwidth	Bodylength (cm)	Headwidth (mm)
<i>Anisembia texana</i> (Melander)	0.02898	3.540	0.990	0.987
<i>Anisembia texana</i>				
<i>Archembia</i> sp. Ross	0.00000	3.916	1.260	1.653
<i>Archembia</i> sp.	0.23996	3.916	1.260	1.653
<i>Metoligotoma incompta</i> (Ross)	0.00591	3.271	1.180	1.084
<i>Metoligotoma incompta</i>	0.23132	3.271	1.180	1.084
<i>Metoligotoma pentanesiana</i> Davis	0.00188	3.198	1.170	1.366
<i>Metoligotoma pentanesiana</i>	0.15356	3.198	1.170	1.366
<i>Antipaluria urichi</i> (Saussure)	0.00000	3.755	1.533	1.972
<i>Antipaluria urichi</i>	0.20484	3.755	1.533	1.972
<i>Clothoda</i> near <i>longicauda</i> Enderlein	0.00294		2.000	
<i>Clothoda</i> near <i>longicauda</i>	0.31773		2.000	
<i>Embia nuragica</i> Stefani	0.00000	3.589	1.296	1.441
<i>Embia nuragica</i>	0.41864	3.589	1.296	1.441
<i>Oedembia</i> sp. Inthanon Ross	0.38052	3.168	1.250	1.227
<i>Notoligotoma hardyi</i> Friederichs	0.20404	3.519	1.040	0.713
<i>Aposthonia borneensis</i> (Hagen)	0.13179	3.185	1.041	1.165
<i>Aposthonia borneensis</i>	0.11812	3.185	1.041	1.165
<i>Aposthonia ceylonica</i> (Enderlein)	0.14004	3.184	0.805	0.924
<i>Aposthonia ceylonica</i>	0.10842	3.184	0.805	0.924
<i>Eosembia auripecta</i> Ross	0.12313	3.880	1.790	1.861
<i>Eosembia auripecta</i>	0.13787	3.880	1.790	1.861
<i>Haploembia solieri</i> Ramb.	0.03170	3.464	0.986	1.133
<i>Haploembia solieri</i>	0.16163	3.464	0.986	1.133
<i>Haploembia tarsalis</i> (Ross)	0.00437	3.440	0.900	1.138
<i>Haploembia tarsalis</i>				
<i>Lobosembia mandibulata</i> . Ross	0.08903	3.582	1.310	1.574
<i>Lobosembia mandibulata</i>	0.17330	3.582	1.310	1.574

Species	Side, Back + Over/ Total Steps	Tarsal circumference/ headwidth	Bodylength (cm)	Headwidth (mm)
<i>Oligotoma nigra</i> (Hagen)	0.11099	3.441	0.986	1.018
<i>Oligotoma nigra</i>	0.13465	3.441	0.986	1.018
<i>Oligotoma saundersii</i> Westwood	0.08114	3.311	0.995	0.972
<i>Oligotoma saundersii</i>	0.12289	3.311	0.995	0.972
<i>Ptilocerembia thaidina</i> Poolprasert & Edgerly	0.00000	3.541	1.280	1.527
<i>Ptilocerembia thaidina</i>				
<i>Ptilocerembia catherinae</i> Poolprasert & Edgerly	0.03030	3.539	1.580	1.935
<i>Ptilocerembia catherinae</i>	0.34564	3.539	1.580	1.935
<i>Conicercembia septentrionalis</i> (Mariño & Márquez)	0.35449	3.259	1.508	1.329
<i>Gibocercus napoa</i> Ross	0.25022		1.300	
<i>Neorhagadochir moreliensis</i> (Ross)	0.33106	3.312	1.100	1.417