

Appendix 9. List of GenBank Accession Numbers of zodariid specimens sequenced in this study

With respective DNA numbers (arbitrary work numbers), localities, collection year and GenBank accession numbers. The sequences in bold represent paralogous copies that were removed from the FINAL combined analyses.

DNA	Species	Locality	Year	GenBank Accession Numbers				
				COI	H3	Act5C	18S	28S
Z003	<i>Systemoplacis vandami</i>	South Africa	2011	KY007907	KY008018	KY008178	KY007714	KY007810
Z005	<i>Caesetius inflatus</i>	South Africa	2008	KY007908	KY008019	/	KY007715	KY007811
Z009	<i>Heradida speculigera</i>	South Africa	2007	KY007909	KY008020	KY008179	KY007716	KY007812
Z010	<i>Psammorygma</i> sp.	South Africa	1999	KY007910	KY008021	/	KY007717	KY007813
Z015	<i>Asceua</i> sp.	South Africa	2011	KY007911	KY008022	KY008180	KY007718	KY007814
Z021	<i>Psammorygma</i> sp.	South Africa	2007	KY007912	KY008023	KY008181	KY007719	KY007815
Z023	<i>Chariobas</i> cf. <i>cylindraceus</i>	Democratic Republic of Congo	2010	KY007913	KY008024	/	KY007720	KY007816
Z025	<i>Mallinella</i> sp.AH002	Guinea	2011	KY007914	KY008025	KY008182	KY007721	KY007817
Z029	<i>Asceua lejeunei</i>	Guinea	2011	KY007915	KY008026	KY008183	KY007722	KY007818
Z032	<i>Dusmadiorea</i> sp.	Guinea	2011	KY007916	KY008027	KY008184	KY007723	KY007819
Z037	<i>Antillorea polli</i>	Curacao	2011	KY007917	KY008028	KY008185	KY007724	KY007820
Z041	<i>Acanthozodium quercicola</i>	Morocco	2011	KY007918	KY008029	KY008186	KY007725	KY007821
Z043	<i>Cydrela</i> cf. <i>spinifrons</i>	Namibia	2011	KY007919	KY008030	KY008187	KY007726	KY007822
Z044	<i>Mallinella</i> cf. <i>bifurcata</i>	China	2006	KY007920	KY008031	KY008188	KY007727	KY007823
Z045	<i>Hetaerica scenica</i>	Australia	2006	KY007921	KY008032	KY008189	KY007728	KY007824
Z046	<i>Pentastemon simplex</i>	Australia	2006	KY007922	KY008033	KY008190	KY007729	KY007825
Z047	<i>Platnickia elegans</i>	Chile	2008	KY007923	KY008034	KY008191	KY007730	KY007826
Z048	<i>Omucukia</i> sp.	Madagascar	2003	KY007924	KY008035	/	KY007731	KY007827
Z049	<i>Habronestes</i> sp.	Australia	2006	KY007925	KY008036	KY008192	KY007732	KY007828
Z050	<i>Diores</i> sp.	Madagascar	2009	KY007926	KY008037	KY008193	KY007733	KY007829
Z053	<i>Cryptothela</i> sp.	Australia	2006	KY007927	KY008038	/	KY007734	KY007830
Z056	<i>Rotundrela</i> sp.	South Africa	2010	KY007928	KY008039	KY008194	KY007735	KY007831
Z058	<i>Mallinella</i> sp.AH042	Guinea	2012	KY007929	KY008040	KY008195	KY007736	KY007832
Z065	<i>Cryptothelinae</i> sp.	Guinea	2012	KY007930	KY008041	/	KY007737	KY007833
Z068	<i>Mallinella octosignata</i>	Democratic Republic of Congo	2007	KY007931	KY008042	/	KY007738	KY007834
Z069	<i>Chariobas</i> sp.	South Africa	2006	KY007932	KY008043	KY008196	KY007739	KY007835
Z073	<i>Hermippus loricatus</i>	Democratic Republic of Congo	2011	KY007933	KY008044	/	KY007740	KY007836
Z075	<i>Selamia reticulata</i>	France	2012	KY007934	KY008045	KY008197	KY007741	KY007837
Z081	<i>Mallinella</i> sp.	Philippines	2011	KY007935	KY008046	/	KY007742	KY007838
Z086	<i>Mallinella panchoi</i>	Philippines	2011	KY007936	KY008047	/	KY007743	KY007839
Z087	<i>Asceua gruezi</i>	Philippines	2011	KY007937	KY008048	/	KY007744	KY007840
Z088	<i>Mallinella calilungae</i>	Philippines	2011	KY007938	KY008049	/	KY007745	KY007841
Z089	<i>Mallinella pricei</i>	Philippines	2011	KY007939	KY008050	KY008198	KY007746	KY007842
Z090	<i>Asceua</i> sp.2	Philippines	2011	KY007940	KY008051	/	KY007747	/
Z091	<i>Mallinella slaburuprica</i>	Philippines	2011	KY007941	KY008052	/	/	KY007843

Z093	<i>Asteron</i> sp.	Australia	2006	KY007942	KY008053	KY008199	KY007748	KY007844
Z096	<i>Lutica</i> sp.	Santa Catalina (USA)	2011	KY007943	KY008054	/	/	/
Z098	<i>Platnickia elegans</i>	Chile	2008	KY007944	KY008055	KY008200	KY007749	KY007845
Z100	<i>Suffascar albolineatus</i>	Madagascar	2009	KY007945	KY008056	KY008201	KY007750	KY007846
Z101	cf. <i>Aschema</i> sp.5	Madagascar	2006	KY007946	KY008057	KY008202	KY007751	KY007847
Z102	<i>Cybaeodamus</i> cf. <i>taim</i>	Chile	2008	KY007947	KY008058	KY008203	KY007752	KY007848
Z103	cf. <i>Aschema</i> sp.3	Madagascar	2006	KY007948	KY008059	/	KY007753	KY007849
Z105	<i>Omucukia madrela</i>	Madagascar	2005	KY007949	KY008060	/	KY007754	KY007850
Z107	<i>Parazodarion raddei</i>	United Emirate Arab	2009	KY007950	KY008061	/	KY007755	KY007851
Z108	<i>Akyttara homunculus</i>	Democratic Republic of Congo	2010	KY007951	KY008062	KY008204	KY007756	KY007852
Z130	<i>Cicynethus</i> cf. <i>acer</i>	Mozambique	2007	KY007952	KY008063	/	/	/
Z142	<i>Chariobas</i> sp.	South Africa	2005	KY007953	KY008064	/	/	/
Z148	<i>Mallinella vokrensis</i>	Cameroon	2007	KY007954	KY008065	KY008205	KY007757	KY007853
Z152	<i>Mallinella</i> sp.AH065	Kenya	2004	KY007955	KY008066	/	KY007758	KY007854
Z163	<i>Microdiores</i> sp.	Democratic Republic of Congo	2010	KY007956	KY008067	KY008206	KY007759	KY007855
Z193	cf. <i>Nostera</i> sp.	Australia	2008	KY007957	KY008068	KY008207	KY007760	KY007856
Z194	<i>Storena</i> sp.	Australia	2009	KY007958	KY008069	KY008208	KY007761	KY007857
Z195	<i>Habronestes grahami</i>	Australia	2009	KY007959	KY008070	KY008177	KY007762	KY007858
Z196	<i>Storosa tetrica</i>	Australia	2007	KY007960	KY008071	KY008209	KY007763	KY007859
Z198	<i>Neostorena</i> sp.	Australia	2011	KY007961	KY008072	KY008210	KY007764	KY007860
Z206	<i>Palfuria</i> sp.	South Africa	2009	KY007962	KY008073	KY008211	KY007765	KY007861
Z208	<i>Palindroma obmoimiombo</i>	Democratic Republic of Congo	2010	KY007963	KY008074	/	/	/
Z211	<i>Capheris abrupta</i>	South Africa	2003	KY007964	KY008075	/	KY007766	KY007862
Z212	<i>Cicynethus subtropicalis</i>	South Africa	2002	KY007965	KY008076	/	/	/
Z213	<i>Cydrela</i> sp.	Mozambique	2007	KY007966	/	/	/	/
Z214	<i>Cydrela</i> sp.	South Africa	2007	KY007967	/	/	/	/
Z221	<i>Hermippus</i> sp.	Mozambique	2007	KY007968	KY008077	/	KY007767	KY007863
Z223	<i>Mallinus nitidiventris</i>	South Africa	2005	KY007969	KY008078	KY008212	KY007768	KY007864
Z225	<i>Procydrela procursor</i>	South Africa	2005	KY007970	KY008079	/	KY007769	KY007865
Z228	<i>Systemoplacis</i> cf. <i>fagei</i>	South Africa	2005	KY007971	KY008080	/	KY007770	KY007866
Z230	<i>Systemoplacis fagei</i>	South Africa	2005	KY007972	/	/	/	/
Z231	<i>Systemoplacis septemguttatus</i>	Guinea Bissau	2009	KY007973	KY008081	/	KY007771	KY007867
Z235	<i>Pax islamita</i>	Israel	2007	KY007974	KY008082	/	KY007772	KY007868
Z236	<i>Amphileorus</i> sp.	Portugal	2005	/	KY008083	/	KY007773	KY007869
Z237	<i>Mallinella bidenticulata</i>	Thailand	2011	KY007975	KY008084	KY008213	KY007774	KY007870
Z239	<i>Mallinella</i> sp.	Vietnam	2012	KY007976	KY008112	/	/	KY007871
Z240	<i>Mallinella</i> sp.	Taiwan	2012	KY007977	KY008085	/	KY007775	/
Z241	<i>Heradion paradiseum</i>	Vietnam	2012	KY007978	KY008086	/	KY007776	KY007872
Z242	<i>Heliconilla</i> cf. <i>globularis</i>	Thailand	2011	KY007979	KY008087	/	KY007777	KY007873
Z243	<i>Australutica quaerens</i>	Australia	2009	KY007980	KY008088	KY008214	KY007778	KY007874
Z244	<i>Neostorena spirafera</i>	Australia	2008	KY007981	KY008089	/	KY007779	KY007875
Z245	<i>Ishania</i> sp.	Honduras	2008	KY007982	KY008090	/	KY007780	KY007876
Z246	<i>Ishania</i> sp.	Mexico	2008	KY007983	KY008091	/	/	/

Z248	<i>Ishania</i> sp.	Mexico	2008	KY007984	KY008092	/	KY007781	KY007877
Z249	<i>Hermippus</i> cf. <i>affinis</i>	Ethiopia	2012	KY007985	KY008093	/	KY007782	KY007878
Z251	<i>Ranops caprivi</i>	South Africa	2012	KY007986	KY008094	KY008215	KY007783	KY007879
Z252	<i>Ballomma erasmus</i>	South Africa	2012	KY007987	KY008095	KY008216	KY007784	KY007880
Z254	<i>Storenomorpha</i> sp.	Laos	2012	KY007988	KY008096	KY008217	KY007785	KY007881
Z255	<i>Storenomorpha</i> sp.	Laos	2012	KY007989	/	/	/	/
Z256	<i>Lutica</i> sp.	Santa Catalina (USA)	2011	KY007990	KY008097	KY008218	KY007786	KY007882
Z257	<i>Tenedos hoeferi</i>	Brazil	2007	KY007991	KY008098	/	KY007787	KY007883
Z259	<i>Epicratinus</i> sp.	Brazil	2007	KY007992	KY008099	/	KY007788	KY007884
Z266	<i>Cybaeodamus</i> sp.1	Brazil	2012	KY007993	KY008100	KY008219	KY007789	KY007885
Z267	<i>Cybaeodamus</i> sp.2	Brazil	2012	KY007994	KY008101	/	/	/
Z268	<i>Zodarion nitidum</i>	Israel	2011	KY007995	KY008102	KY008220	KY007790	KY007886
Z281	<i>Asceua</i> cf. <i>dispar</i>	Malaysia	2012	KY007996	KY008103	/	KY007791	KY007887
Z284	cf. <i>Aschema</i> sp.	Madagascar	2005	KY007997	KY008104	KY008221	KY007792	KY007888
Z286	<i>Zodarion</i> sp. (= <i>Diores</i> sp.)	Madagascar	2006	KY007998	KY008105	KY008222	KY007793	KY007889
Z287	<i>Leprolochus</i> cf. <i>parahybae</i>	Brazil	2012	KY007999	KY008106	/	KY007794	KY007890
Z288	<i>Leprolochus parahybae</i>	Brazil	2012	KY008000	KY008107	/	KY007795	KY007891
Z289	<i>Lachesana</i> cf. <i>blackwalli</i>	Turkey	2012	KY008001	KY008108	KY008223	KY007796	KY007892
Z290	<i>Mallinella vittiventris</i>	Burundi	2013	KY008002	KY008109	/	KY007797	KY007893
Z293	<i>Mallinella triplex</i>	Burundi	2013	KY008003	/	/	/	/
Z295	<i>Thaumastochilus termitomimus</i>	South Africa	2003	KY008004	KY008110	/	KY007798	KY007894
Z296	<i>Asceua gruezoi</i>	Philippines	2011	KY008005	KY008111	/	KY007799	KY007895
Z297	<i>Asceua</i> sp.3	Philippines	2011	KY008006	/	/	KY007800	KY007896
Z300	<i>Mallinella bicolor</i>	Ivory Coast	2002	KY008007	KY008113	/	/	KY007897
Z302	<i>Suffascar fianara</i>	Madagascar	2009	KY008008	KY008114	/	KY007801	KY007898
Z304	<i>Suffascar fianara</i>	Madagascar	2009	KY008009	KY008115	KY008224	KY007802	KY007899
Z305	<i>Antillorena polli</i>	Curacao	2011	KY008010	KY008116	/	KY007803	KY007900
Z307	cf. <i>Aschema</i> sp.3	Madagascar	2006	KY008011	KY008117	KY008225	KY007804	KY007901
Z309	<i>Leprolochus spinifrons</i>	Brazil	2012	KY008012	KY008118	/	KY007805	KY007902
Z310	<i>Leprolochus parahybae</i>	Brazil	2012	KY008013	KY008119	/	KY007806	KY007903
Z313	<i>Forsterella faceta</i>	New Zealand	2011	KY008014	KY008120	KY008226	KY007807	KY007904
Z314	<i>Forsterella faceta</i>	New Zealand	2011	KY008015	/	/	/	/
Z317	<i>Lachesana</i> sp.	Israel	2013	KY008016	KY008121	/	/	/
Z327	<i>Suffrica chawia</i>	South Africa	2004	/	KY008122	KY008227	KY007808	KY007905
Z329	<i>Tropizodium siam</i>	Thailand	2013	KY008017	KY008123	KY008228	KY007809	KY007906

Appendix 10. List of GenBank Accession Numbers of non-Zodariidae specimens sequenced during this study

With respective DNA numbers (arbitrary work numbers), localities, year collection and GenBank accession numbers. The sequences in bold represent paralogous copies that were removed from the FINAL combined analyses. The sequences marked with an asterisk are from Henrard & Jocqué (2016).

DNA	Family	Species	Locality	Year	GenBank Accession Numbers				
					COI	H3	Act5C	18S	28S
N43	Ctenidae	<i>Macroctenus nimba</i>	Guinea	2011	KT794244*	KT794286*	KY008168	KY008124	KY008136
Z094	Amaurobiidae	<i>Amaurobius ferox</i>	Belgium	2012	KY008149	KY008158	KY008169	KY008125	KY008137
Z131	Agelenidae	<i>Coelotes terrestris</i>	Belgium	2013	KT794257*	KT818787*	KY008170	KY008126	KY008138
Z135	Amaurobiidae	<i>Amaurobius obustus</i>	Slovenia	2012	KY008150	KY008159	KY008171	KY008127	KY008139
Z260	Corinnidae	<i>Procopius</i> sp.	Central African Republic	2008	/	KY008160	/		KY008140
Z261	Corinnidae	<i>Cambalida coriacea</i>	Guinea	2009	KY008151	KY008161	KY008172	KY008128	KY008141
Z282	Penestomidae	<i>Penestomus egazini</i>	South Africa	2006	KY008152	KY008162	/	KY008129	KY008142
Z283	Penestomidae	<i>Penestomus prendinii</i>	South Africa	2007	KY008153	KY008163	KY008173	KY008130	KY008143
Z285	Chummidae	<i>Chumma inquieta</i>	South Africa	2006	KY008154	KY008164	KY008174	KY008131	KY008144
Z301	Corinnidae	<i>Procopius aethiops</i>	Guinea	2012	KY008155	KY008165	/	KY008132	KY008145
Z306	Titanoecidae	<i>Titanoeca quadriguttata</i>	France	2013	KY008156	KY008166	KY008175	KY008133	KY008146
Z308	Titanoecidae	<i>Nurscia albomaculata</i>	France	2013	KT794258*	KT818788*	KY008176	KY008134	KY008147
Z320	Ammoxenidae	<i>Ammoxenus amphalodes</i>	South Africa	2014	KY008157	KY008167	/	KY008135	KY008148

Appendix 11. List of GenBank Accession Numbers of sequences extracted from GenBank

With respective accession numbers, organism names, isolates and sources. The frame represents sequences from different individuals of a same species assembled for the combined analyses. The sequences in bold represent paralogous copies that were removed from the FINAL multigene analyses.

Family	Species	Isolate	Reference	GenBank Accession Numbers				
				COI	H3	Act5C	18S	28S
Homalonychidae	<i>Homalonychus selenopoides</i>	15_9	Miller <i>et al.</i> , 2010	/	FJ949062	/	FJ948902-FJ948944	/
Homalonychidae	<i>Homalonychus selenopoides</i>	g343_SalsGap	Crews & Hedin, 2006	AY959935	/	/	/	JF411225
Homalonychidae	<i>Homalonychus selenopoides</i>	/	Vink <i>et al.</i> , 2005	/	/	EU522695	/	/
Phyxelididae	<i>Vidole capensis</i>	10_14	Miller <i>et al.</i> , 2010	FJ949022	FJ949059	/	FJ948899-FJ948941	AY959905
Phyxelididae	<i>Vidole capensis</i>	9023622	Polotow <i>et al.</i> , 2015	/	/	KM225180	/	/
Titanoecidae	<i>Goeldia</i> sp	T15	Griswold, Wood & Carmichael, 2012	JF411083	JF411123	/	JF411152	JF411188
Titanoecidae	<i>Nursia albofasciata</i>	LEGO_29_1	Jang & Hwang, unpublished	JN817214	/	/	JN816796	JN817004
Zoropsidae	<i>Tengella</i> sp	9047627	Polotow <i>et al.</i> , 2015	KM225123	KM225223	KM225172	/	KM225071
Zoropsidae	<i>Tengella radiata</i>	TRADIATA1	Spagna & Gillespie, 2008	DQ628622	DQ628649	/	DQ628720-DQ628757	DQ628684
Zoropsidae	<i>Zorocrates fuscus</i>	12	Polotow <i>et al.</i> , 2015	KM225133	KM225233	KM225183	/	KM225082
Zoropsidae	<i>Zorocrates fuscus</i>	/	Blackledge <i>et al.</i> , 2009	FJ607588	FJ607626	/	FJ607514	FJ607549
Zoropsidae	<i>Zoropsis spinimana</i>	9019845	Polotow <i>et al.</i> , 2015	KM225138	KM225238	KM225087	/	KM225188

Appendix 12. Models of sequence evolution

evaluated for each partition using PartitionFinder and displayed according to the phylogenetic analysis (Maximum Likelihood (ML) in Garli and Bayesian inference (BI) in MrBayes). PartitionFinder was used both on combined and individual alignments.

Marker	Combined-FINAL		Individual genes (no paralogs)		Individual genes (with paralogs)		Combined (with paralogs)	
	GARLI	MrBayes	GARLI	MrBayes	GARLI	MrBayes	GARLI	MrBayes
COL_pos1	GTR+I+G	GTR+I+G	GTR+I+G	GTR+I+G	\	\	GTR+I+G	GTR+I+G
COL_pos2	TIM+I+G	GTR+I+G	GTR+I+G	GTR+I+G	\	\	TIM+I+G	GTR+I+G
COL_pos3	HKY+I+G	HKY+I+G	TrN+G	HKY+G	\	\	HKY+I+G	HKY+I+G
H3_pos1	GTR+G	GTR+G	GTR+G	GTR+G	GTR+G	GTR+G	GTR+I+G	GTR+I+G
H3_pos2	JC+I	JC+I	K81+I	K80+I	TVMef+I	JC+I	TrNef+I+G	JC+I
H3_pos3	TVMef+I+G	SYM+I+G	TVMef+I+G	SYM+I+G	TVMef+I+G	SYM+I+G	TVMef+I+G	SYM+I+G
Act5C-1_pos1	GTR+G	GTR+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	GTR+I+G	GTR+I+G
Act5C-1_pos2	JC+I	JC+I	JC	JC	JC	JC	JC	JC+I
Act5C-1_pos3	TVM+I+G	GTR+I+G	TVM+I+G	GTR+I+G	GTR+I+G	GTR+I+G	TVM+I+G	GTR+I+G
Act5C-2_pos1	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	TrNef+I+G	SYM+I+G
Act5C-2_pos2	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	TrNef+I+G	SYM+I+G
Act5C-2_pos3	TVM+I+G	GTR+I+G	TVM+I+G	GTR+I+G	GTR+I+G	GTR+I+G	TVM+I+G	GTR+I+G
18S	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G	SYM+I+G
28S	GTR+I+G	GTR+I+G	GTR+I+G	GTR+I+G	GTR+I+G	GTR+I+G	TrN+I+G	GTR+I+G