

Specimens examined

Accession number	Collection locality	μCT
<i>Boaedon arabicus</i>		
NHMUK BM 1946.1.21.94	Schaf Ravine, Upper Kushabi, S. W. Arabia	*
NHMUK BM 1946.1.21.96	El Kuba, Amin Country, S. W. Arabia	*
NHMUK BM 1946.1.21.95	Dthala, Aden Hinterland, Yemen	*
NHMUK BM 1946.1.21.93	El Kuba, Amin Country, S. W. Arabia	*
<i>Boaedon bedriagae</i>		
NHMUK BM 1946.1.23.14	St. Tome	*
<i>Boaedon bipraeocularis</i>		
NHMUK BM 1946.1.23.17	Lake Tanganyika, Tanzania	*
NHMUK BM 1946.1.23.18	Rabai Hills, Mombasa, Kenya	*
NHMUK BM 1946.1.23.19	Lake Tanganyika, Tanzania	*
<i>Boaedon capensis</i>		
NHMUK BM 97.11.16.11	South Africa	*
ZFMK 018626	Epping, Cape [Western Cape] Province, South Africa	*
<i>Boaedon fuliginosus</i>		
NHMUK BM 2017.1215	gutter on the north of Legon Hill, Greater Accra, Accra, Ghana	
NHMUK BM 2017.232	Annule/Christian Village, DOR Achimota-Legon, Accra, Greater Accra, Ghana	
NHMUK BM 2017.1216	gutter near Zoology Dept. and Volta Hall, Greater Accra, Accra, Ghana	
NHMUK BM 2017.1218	gutter near zoo Dept., Legon, Accra, Greater Accra, Ghana	
NHMUK BM 2017.1219	Legon, Accra, Greater Accra, Ghana	
NHMUK BM 2017.1222	Achimota Folly, Greater Accra, Accra, Ghana	
NHMUK BM 2017.1225	Kisseman Village, Accra, Greater Accra, Ghana	
NHMUK BM 2017.1764	Achimota School, Accra, Greater Accra, Ghana	
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<i>Boaedon geometricus</i>		

NHMUK BM 1946.1.10.36	Seychelles	*
<i>Boaedon 'lineatus'</i>		
MRAC R.28368	Dundo, Angola	
MRAC R.28369	Dundo, Angola	
MRAC R.28370	Dundo, Angola	
MRAC R.28371	Dundo, Angola	
MRAC R.28372	Dundo, Angola	
MRAC R.28373	Dundo, Angola	
MRAC R.17413	Dundo, Angola	
MRAC R.17414	Dundo, Angola	
MRAC R.17415	Dundo, Angola	
MRAC R.17416	Dundo, Angola	
MRAC R.17417	Dundo, Angola	
MRAC R.27884	Lukonzolwa [Democratic Republic of the Congo]	
MRAC R.27459	Environs de Léopoldville [Democratic Republic of the Congo]	
MRAC R.21525	Bolobo [Democratic Republic of the Congo]	
MRAC R.11575	Léopoldville [Democratic Republic of the Congo]	
MRAC R.11591	Elisabethville [Democratic Republic of the Congo]	
MRAC R.11645	Matadi [Democratic Republic of the Congo]	
MRAC R.12229	Bunia [Democratic Republic of the Congo]	
MRAC R.16003	Kamina [Democratic Republic of the Congo]	
MRAC R.16329	Kamina [Democratic Republic of the Congo]	
MRAC R.16815	Kakanda, Katanga [Democratic Republic of the Congo]	
MRAC R.17195	Kaniama (Katanga) [Democratic Republic of the Congo]	
MRAC R.17196	Kaniama (Katanga) [Democratic Republic of the Congo]	
MRAC R.19436	Kakanda, via Mutaka, Katanga [Democratic Republic of the Congo]	
MRAC R.19437	Kakanda, via Mutaka, Katanga [Democratic Republic of the Congo]	
MRAC R.27884	Lukonzolwa [Democratic Republic of the Congo]	
<i>Boaedon lineatus</i>		
MNHN-RA 6537	Bissao, Guinée Bissau	
MNHN-RA 6562	Côte d'Or, Guinée supérieure [Ghana]	
ZFMK 023366	Achimota, Accra, Greater Accra, Ghana	*
<i>Boaedon maculatus</i>		
NHMUK BM 1946.1.23.15	Bihen, British Somaliland [Republic of Somalia]	*
<i>Boaedon mendesi</i>		
NHMUK BM 1946.1.23.13	Prince's Island	*
<i>Boaedon mentalis</i>		
NHMUK BM	Damara Land [Damaraland, Namibia]	*

1946.1.21.92		
<i>Boaedon olivaceus</i>		
MRAC R.28374	Dundo, Angola	
NHMUK BM 1858.4.20.16	Fernando Po [Bioko], Equatorial Guinea	*
ZFMK 05405	Fernando Po [Bioko], Equatorial Guinea	*
ZFMK 031638	Kama am Rhembo-Fluß, Gabon	*
<i>Boaedon sp.</i>		
MRAC R.15521	Thysville, Congo Belge [Democratic Republic of the Congo]	
MRAC R.15595	Libenge, Congo Belge [Democratic Republic of the Congo]	
MRAC R.15597	Libenge, Congo Belge [Democratic Republic of the Congo]	
MRAC R.16097	Bosobolo, Congo Belge [Democratic Republic of the Congo]	
MRAC R.16174	Gabu, Congo Belge [Democratic Republic of the Congo]	
MRAC R.20546	Jadotville, Congo Belge [Democratic Republic of the Congo]	
MRAC R.21939	Katako Kombe, Congo Belge [Democratic Republic of the Congo]	
MRAC R.28530	Kumba, Congo Belge [Democratic Republic of the Congo]	
MRAC R.15114	Léopoldville, Congo Belge [Democratic Republic of the Congo]	
ZFMK 103151	Kafa, Bonga, Bamboo Forest, Ethiopia	*
ZFMK 103152	Kafa, Bonga, Bamboo Forest, Ethiopia	
ZFMK 103153	Kafa, Bonga, Bamboo Forest, Ethiopia	
<i>Boaedon variegatus</i>		
NHMUK BM 1867.7.23.23	Benguela, Angola	*
<i>Boaedon virgatus</i>		
MRAC R.2405	Temvo [Democratic Republic of the Congo]	
MRAC R.2829	Ganda Sundi [Democratic Republic of the Congo]	
MRAC R.2424	Makaia N'Tete [Democratic Republic of the Congo]	
MRAC R.19216	Shinka [Democratic Republic of the Congo]	
MRAC R.19163	Rég. forestière Mbola [Democratic Republic of the Congo]	
NHMUK BM 1946.1.23.9	W. Africa	*
ZFMK 075116	Mount Nlonako, Ekomtolo, Cameroon	*
<i>Lamprophis aurora</i>		
UMMZ 61580	Western Cape, South Africa	*
ZFMK 053456	W Pretoria, Transvaal, South Africa	*
<i>Lamprophis fiskii</i>		

NHMUK BM 1946.1.21.95	Touw's River, South Africa	*
<i>Lamprophis fuscus</i>		
NHMUK BM 1946.1.12.43	Cape of Good Hope, South Africa	*
<i>Elaiophis inornatus comb. n.</i>		
MRAC R.16684	Cape of Good Hope, South Africa	
MRAC R.16685	Durban, South Africa	
NMB R6900	Geduldsriver, dist. Port Elizabeth, South Africa	
NMB R7257	Gonubie, NE of East London, E. Cape, South Africa	
NHMUK BM 1858.4.11.5	Port Natal, South Africa	*
NHMUK BM 1855.10.16.354	South Africa	*
ZFMK 032712	Haut's Bay, Cape Town, South Africa	*
<i>Lycodonomorphus bicolor</i>		
NHMUK BM 1946.1.7.81	Lake Tanganyika	*
NHMUK BM 1946.1.7.82	Lake Tanganyika	
NHMUK BM 1946.1.7.83	Lake Tanganyika	
NHMUK BM 1946.1.7.84	Lake Tanganyika	
NHMUK BM 1946.1.7.85	Lake Tanganyika	
NHMUK BM 1946.1.7.86	Lake Tanganyika	
<i>Lycodonomorphus laelupi</i>		
MRAC R.17647	Station d'Etudes, plateau des Kundelungu, alt.1750 m., Ht. Katanga [Democratic Republic of the Congo]	*
<i>Lycodonomorphus laevisissimus</i>		
NMB 11137	Mooiplaas village, Eerstehoek Dist, Mpumalanga, South Africa	
NMB 11620	Farm Abraham's Rust (7/329), Sasolburg Dist., Free State, South Africa	
NHMUK BM 1946.1.12.78	Unknown locality	*
<i>Lycodonomorphus rufulus</i>		
NMB R10839	Farm Bambooshoek, Sterkstroom Dist., Eastern Cape, South Africa	
NMB R10840	Farm Bambooshoek, Sterkstroom Dist., Eastern Cape, South Africa	
NMB R10870	Farm Bambooshoek, Sterkstroom Dist., Eastern Cape, South Africa	

UMMZ 126980	Zimbabwe	*
ZFMK 074857	South Africa	*
<i>Lycodonomorphus whytii</i>		
NHMUK BM 1946.1.13.93	Fort Hill, Nyasaland [Malawi]	*
<i>Boaedon subtaeniatus</i>		
MRAC R.2625	Luluabourg, St-Joseph, Congo Belge [Democratic Republic of the Congo]	
MRAC R.3062	Lomami, Etat Indép. du Congo [Democratic Republic of the Congo]	
MRAC R.3077	Lomami, Congo Belge [Democratic Republic of the Congo]	
MRAC R.11862	Kumungu, Congo Belge [Democratic Republic of the Congo]	
MRAC R.14578	Léopoldville, Congo Belge [Democratic Republic of the Congo]	
MRAC R.14678	Kalina, Léopoldville, Congo Belge [Democratic Republic of the Congo]	
MRAC R.14856	village Keseki, près de Kwamouth, Congo Belge [Democratic Republic of the Congo]	
MRAC R.14857	village Keseki, près de Kwamouth, Congo Belge [Democratic Republic of the Congo]	
MRAC R.14864	village Keseki, près de Kwamouth, Congo Belge [Democratic Republic of the Congo]	*
MRAC R.17411	région de Dundo, Angola	
MRAC R.17412	région de Dundo, Angola	
NHMUK BM 1953.1.5.51	Kalina, Léopoldville, Congo Belge [Democratic Republic of the Congo]	*
<i>Boaedon upembae</i>		
MRAC R.4963	Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5161	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5162	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5166	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5171	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5172	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5173	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5201	Nyonga, Congo Belge [Democratic Republic of the Congo]	*
MRAC R.5205	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5208	Nyonga, Congo Belge [Democratic Republic of the Congo]	

MRAC R.5214	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5218	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5270	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5271	Nyonga, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5322	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5323	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5324	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5325	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5327	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5328	Nyonga, fl. Luapula, Congo Belge [Democratic Republic of the Congo]	
MRAC R.5487	Kina Mwema, Congo Belge [Democratic Republic of the Congo]	

GenBank accession numbers of nucleotide sequences used in the phylogenetic analyses of this study

16S rRNA

Alopecion: AY611890 (*A. guttatum*); **Boaedon:** KX277253 (*B. olivaceus*), MT577792 (*Boaedon* sp.), MT577789 (*Boaedon* sp.), MT577788 (*Boaedon* sp.), MT577790 (*Boaedon* sp.), MT577793 (*Boaedon* sp.), MT577782 (*B. olivaceus*), MT577787 (*B. radfordi*), MT577786 (*B. perisilvestris*), MT577794 (*Boaedon* sp.), MT577795 (*Boaedon* sp.), MT577736 (*B. angolensis*), MT577730 (*B. angolensis*), MT577727 (*B. angolensis*), MT577728 (*B. angolensis*), MT577765 (*B. fuliginosus*), MT577769 (*B. fuliginosus*), MT577768 (*B. fuliginosus*), MT577766 (*B. fuliginosus*), MT577764 (*B. fuliginosus*), MT577770 (*B. fuliginosus*), MT577767 (*B. fuliginosus*), MT577799 (*B. variegatus*), MT577801 (*B. variegatus*), MT577741 (*B. branchi*), MT577758 (*B. capensis*), MT577751 (*B. capensis*), MT577754 (*B. capensis*), MT577752 (*B. capensis*), MT577753 (*B. capensis*), MT577750 (*B. capensis*), MT577749 (*B. capensis*), MT577747 (*B. capensis*), MT577746 (*B. capensis*), MT577745 (*B. capensis*), MT577744 (*B. capensis*), MT577743 (*B. capensis*), MT577748 (*B. capensis*), MT577781 (*B. mentalis*), MT577778 (*B. mentalis*), MT577775 (*B. mentalis*), MT577774 (*B. mentalis*), MT577777 (*B. mentalis*); MT577771 (*B. geometricus*); **Bofa:** OM162157 (*B. erlangeri*); **Bothrolycus:** AY611859 (*B. ater*); **Elaiophis** gen. n. AY611891 (*E. inornatus*), **Lycodonomorphus:** OM413896 (*L. obscuriventris*), FJ404199 (*L. rufulus*); **Lycophidion:** FJ404197 (*L. laterale*).

C-mos

Alopecion: HQ207094 (*A. guttatum*); HQ207098 (*A. guttatum*); AY611981 (*A. guttatum*); DQ486179 (*A. guttatum*), HQ207099 (*A. guttatum*), HQ207096 (*A. guttatum*); **Boaedon:** AY611953 (*B. olivaceus*), KM519739 (*B. olivaceus*), KM519738 (*B. olivaceus*), FJ387206 (*B. mentalis*), KM519748 (*B. radfordi*), HQ207104 (*B. fuliginosus*), KM519735 (*B. fuliginosus*), FJ387205 (*B. lineatus*), HQ207080 (*B. fuliginosus*), KM519745 (*B. fuliginosus*), KM519736 (*B. fuliginosus*), AF471143 (*B. fuliginosus*), HQ207071 (*B. fuliginosus*), KM519746 (*B. fuliginosus*), KM519744 (*B. fuliginosus*), KM519733 (*B. fuliginosus*), AY611917 (*B. virgatus*), HQ207085 (*B. fuliginosus*), AY611986 (*B. capensis*), DQ486163 (*B. fuliginosus*), AY611972 (*B. fuliginosus*), HQ207074 (*B. fuliginosus*), HQ207079 (*B. fuliginosus*); **Bofa:** OM162156 (*Bofa erlangeri*); **Bothrolycus:** AY611950 (*Bothrolycus ater*); **Bothrophthalmus:** AY611965 (*Bothrophthalmus brunneus*), AF471129 (*B. lineatus*); **Elaiophis** gen. n.: HQ207084 (*Elaiophis inornatus*); AY611982 (*Elaiophis inornatus*); **Gonionotophis:** AY611952 (*Gonionotophis brussauxi*); **Gracililima:** AY611987 (*Gracililima nyassae*); **Lamprophis:** FJ387203 (*Lamprophis fiskii*), DQ486178 (*L. fiskii*), AY611985 (*L. fuscus*), HQ207101 (*L. aurora*); **Limaformosa:** AF471099 (*Limaformosa unicolor*), DQ486172 (*L. unicolor*); **Lycodonomorphus:** OM387033 (*Lycodonomorphus obscuriventris*); HQ207081 (*L. rufulus*); FJ387200 (*L. rufulus*), DQ486162 (*L. laevisissimus*); FJ387201 (*L. whytii*); **Lycophidion:** FJ387198 (*Lycophidion laterale*), AF471144 (*L. ornatum*), AY611930 (*L. capense*), AY611984 (*L. capense*), DQ486168 (*L. capense*); **Mehelya:** AY611954 (*Mehelya poensis*); AY611927 (*M. stenophthalmus*); **Pseudoboodon:** DQ486174 (*Pseudoboodon lemniscatus*); **Outgroup:** FJ387207 (*Duberria lutrix*), DQ486161 (*D. lutrix*), AF471138 (*D. lutrix*).

Cyt b

Alopecion: HQ207140 (*A. guttatum*), HQ207137 (*A. guttatum*), DQ486355 (*A. guttatum*), HQ207135 (*A. guttatum*), HQ207136 (*A. guttatum*), AY612072 (*A. guttatum*), HQ207139 (*A. guttatum*), HQ207138 (*A. guttatum*); **Boaedon:** AY612008 (*Boaedon virgatus*); HQ207122 (*B. fuliginosus*), HQ207126 (*B. fuliginosus*), HQ207114 (*B. fuliginosus*), HQ207117 (*B.*

fuliginosus), HQ207105 (*B. fuliginosus*), KM519715 (*B. radfordi*), KM519717 (*B. olivaceus*), KM519704 (*B. olivaceus*); **Bofa**: OM162155 (*Bofa erlangeri*); **Bothrolycus**: AY612041 (*B. ater*); **Bothrophthalmus**: AF471090 (*Bothrophthalmus lineatus*), AY612056 (*B. brunneus*); **Elaiophis** gen. n.: HQ207121 (*Elaiophis inornatus*), HQ207133 (*E. inornatus*); **Gracililima**: AY612078 (*Gracililima nyassae*); **Gonionotophis**: AY612043 (*Gonionotophis. brussauxi*); **Hormonotus**: FJ404296 (*Hormonotus modestus*); **Inyoka**: HQ207130 (*Inyoka swazicus*), HQ207131 (*I. swazicus*), DQ486356 (*I. swazicus*), HQ207123 (*I. swazicus*), HQ207142 (*I. swazicus*); **Lamprophis**: HQ207127 (*Lamprophis fuscus*); HQ207127 (*L. fuscus*), AY612076 (*L. fuscus*), HQ207125 (*L. aurora*), HQ207143 (*L. aurora*), FJ404301 (*L. fiskii*), DQ486354 (*L. fiskii*), HQ207124 (*L. fiskii*); **Lycodonomorphus**: DQ486338 (*Lycodonomorphus laevisissimus*), OM387031 (*L. obscuriventris*), HQ207144 (*L. rufulus*), FJ404299 (*L. rufulus*), HQ207111 (*L. rufulus*), HQ207118 (*L. rufulus*); **Lycophidion**: AF471086 (*Lycodonomorphus ornatum*), FJ404297 (*L. laterale*), DQ486344 (*L. capense*), FJ404298 (*L. nigromaculatum*); **Mehelya**: AY612018 (*Mehelya stenophthalmus*); **Pseudoboodon**: DQ486350 (*Pseudoboodon lemniscatus*); **Outgroup**: DQ486337 (*Duberria lutrix*), DQ486334 (*Psammophis crucifer*), DQ486347 (*Prosymna ruspolii*), DQ486353 (*Buhomea procterae*), AF217828 (*Aspidelaps scutatus*), AY188008 (*Atractaspis bibronii*).

ND4

Alopecion: HQ207182 (*Alopecion guttatum*), DQ486330 (*A. guttatum*), HQ207181 (*A. guttatum*), HQ207180 (*A. guttatum*), HQ207178 (*A. guttatum*), HQ207177 (*A. guttatum*); **Boaedon**: DQ486315 (*Boaedon fuliginosus*), HQ207152 (*B. fuliginosus*), HQ207162 (*B. fuliginosus*), HQ207151 (*B. fuliginosus*), HQ207156 (*B. fuliginosus*), HQ207164 (*B. fuliginosus*), HQ207161 (*B. fuliginosus*), HQ207154 (*B. fuliginosus*), HQ207168 (*B. fuliginosus*), HQ207186 (*B. fuliginosus*), HQ207155 (*B. fuliginosus*), HQ207157 (*B. fuliginosus*), HQ207148 (*B. fuliginosus*), HQ207147 (*B. fuliginosus*), HQ207159 (*B. fuliginosus*), HQ207183 (*B. fuliginosus*), HQ207150 (*B. fuliginosus*); **Bofa**: OM162154 (*Bofa erlangeri*); **Bothrolycus**: FJ404347 (*Bothrolycus ater*); **Inyoka**: DQ486331 (*Inyoka swazicus*), HQ207165 (*I. swazicus*), HQ207184 (*I. swazicus*), HQ207173 (*I. swazicus*), HQ207174 (*I. swazicus*); **Lamprophis**: HQ207167 (*Lamprophis aurora*), HQ207185 (*L. aurora*), HQ207169 (*L. fuscus*), DQ486329 (*L. fiskii*), HQ207166 (*L. fiskii*); **Limaformosa**: DQ486324 (*Limaformosa capensis*); **Elaiophis** gen. n.: HQ207175 (*Elaiophis inornatus*), HQ207171 (*E. inornatus*), HQ207172 (*E. inornatus*), HQ207176 (*E. inornatus*), HQ207170 (*E. inornatus*), HQ207163 (*E. inornatus*); **Lycodonomorphus**: OM387032 (*Lycodonomorphus obscuriventris*), HQ207160 (*L. rufulus*), HQ207153 (*L. rufulus*), DQ486314 (*L. laevisissimus*); **Pseudoboodon**: DQ486325 (*Pseudoboodon lemniscatus*); **Outgroup**: LR798655 (*Duberria lutrix*), LR798653 (*D. lutrix*), LR798657 (*D. lutrix*), LR798651 (*D. lutrix*), LR798656 (*D. lutrix*), LR798654 (*D. lutrix*), LR798652 (*D. lutrix*), DQ486308 (*D. lutrix*), DQ486240 (*D. lutrix*), DQ486208 (*D. lutrix*), LR798674 (*D. lutrix*), DQ486251 (*D. lutrix*), DQ486244 (*D. lutrix*), DQ486245 (*D. lutrix*), DQ486243 (*D. lutrix*), DQ486310 (*Psammophis crucifer*), DQ486199 (*P. crucifer*).