

Supplementary material

Table S1. Genbank sequences utilized in this study.

Taxa	Locality	Voucher	Cyt-b	ND4
<i>Agkistrodon bilineatus</i>	Costa Rica, Guanacaste	WWL	AY223613	AF156585
<i>Agkistrodon contortrix</i>	USA, Ohio, Athens Co.	Moody 338	AY223612	AF156576
<i>Agkistrodon piscivorus</i>	USA, South Carolina	CLP-30	AY223615	AF156578
<i>Agkistrodon taylori</i>	Mexico, Tamaulipas	CLP-140	AY223614	AF156580
<i>Atractus lasallei</i>	Colombia, Antioquia	MHUA 14368	GQ334480	GQ334581
<i>Atropoides indomitus</i>	Honduras, Olancho	ENS-10630	DQ061194	DQ061219
<i>Atropoides mexicanus</i>	Costa Rica, San Jose	CLP-168	AY223584	U41871
<i>Atropoides nummifer</i>	Mexico, Puebla,	ENS-10515	DQ061195	DQ061220
<i>Atropoides occiduus</i>	Guatemala, Escuintla	UTA-R-29680	AY220315	AY220338
<i>Atropoides olmec</i>	Mexico, Veracruz	UTA-R-14233	AY220322	AY220345
<i>Atropoides picadoi</i>	Costa Rica, Alajuela, Varablanca	CLP-45	AY223593	U41872
<i>Bothriechis aurifer</i>	Guatemala	UTA-R35031	DQ305466	DQ305483
<i>Bothriechis bicolor</i>		UTA-R34156	DQ305467	DQ305484
<i>Bothriechis lateralis</i>	Costa Rica, Acosta	MZUCR-11155	AY223588	U41873
<i>Bothriechis marchi</i>	Guatemala, Zacapa, Cerro del Mono	UTA-R52959	DQ305469	DQ305486
<i>Bothriechis nigroviridis</i>	Costa Rica, San Gerondo de Dota	MZUCR-11151	AY223589	AY223635
<i>Bothriechis rowleyi</i>	Mexico, Cerro Baúl	JAC 13295	DQ305468	DQ305485
<i>Bothriechis schlegelii</i>	Costa Rica, Cariblanco de Sarapiquí	MZUCR-11149	AY223590	AY223636
<i>Bothriechis schlegelii</i>	Ecuador, Pichincha	FHGO Live coll.	AF292573	AF292611
<i>Bothriechis supraciliaris</i>	San Vito, Costa Rica		DQ305470	DQ305487
<i>Bothriechis thalassinus</i>	Guatemala, Zacapa	UTA-R52958	DQ305465	DQ305482
<i>Bothriopsis taeniata</i>	Suriname		AY223592	AY223637
<i>Bothrops asper</i>	Costa Rica, Limon	WW 1318	EU624301	EU624210
<i>Bothrops asper</i>	Costa Rica, San Jose	MZUCR-11152	AY223599	U41876
<i>Bothrops atrox</i>		WWW-743	AY223598	AY223641
<i>Cerrophidion godmani</i>	Costa Rica, San Jose	MZUCR-11153	AY223578	U41879
<i>Cerrophidion godmani</i>	Guatemala, Huehuetenango	UTA-R-42237	EU684282	EU684299
<i>Cerrophidion godmani</i>	Guatemala, Quetzaltenango	ENS-8350	EU684283	EU684300
<i>Cerrophidion godmani</i>	Honduras, Francisco Morazan	ENS-10632	EU684286	EU684301
<i>Cerrophidion petlalcalensis</i>	Mexico, Veracruz, Orizaba	ENS-10528	DQ061202	DQ061227
<i>Cerrophidion tzotzilorum</i>	Mexico, Chiapas, Las Rosas	ENS-10529	DQ061203	DQ061228
<i>Crotalus atrox</i>	USA, Texas, Jeff Davis Co.	CLP-64	AY223608	AY223646
<i>Crotalus durissus</i>	Venezuela	ROM	18138	AF259178
<i>Crotalus durissus collilineatus</i>	Brazil, Mato Grosso	IB 58460	AY704811	AY704861
<i>Crotalus durissus culminatus</i>	Mexico, Morelos	3291	AY704830	AY704880
<i>Crotalus durissus durissus</i>	Mexico, Chiapas	2065	AY704833	AY704883

<i>Crotalus durissus durissus</i>	Mexico, Veracruz	1	AY704831	AY704881
<i>Crotalus durissus tzabcan</i>	Belize, Corozal	255, P. Singfield live coll.	AY704806	AY704856
<i>Crotalus ruber</i>	USA, California, Riverside CO.	ROM18207	AF259191	
<i>Crotalus tigris</i>	USA, Arizona, Pima Co.	CLP169	AY223606	AF156574
<i>Dipsas pratti</i>	Colombia, Antioquia	MHUA 14278	GQ334482	GQ334583
<i>Gloydius shedaoensis</i>	China, Liaoning	ROM-20468	AY223566	AY223623
<i>Gloydius ussuriensis</i>	China, Jilin	ROM-20452	AY223565	AY223622
<i>Imantodes cenchoa</i>	Colombia, Antioquia	MHUA 14290	GQ334484	GQ334585
<i>Imantodes inornatus</i>	Colombia, Antioquia	MHUA 14540	GQ334488	GQ334589
<i>Lachesis melanocephala</i>	Costa Rica		U96018	U96028
<i>Lachesis muta</i>	Peru	Cadle 135	AY223604	AY223644
<i>Lachesis stenophrys</i>	Costa Rica, Limon	UMMZ 176987	AY223603	U41885
<i>Leptodeira annulata annulata</i>	Suriname, Para	BPN 963	GQ334493	GQ334594
<i>Leptodeira annulata cussiliris</i>	Guatemala, San Marcos	UTA R-53305	GQ334501	GQ334603
<i>Leptodeira annulata rhombifera</i>	Honduras, El Paraiso	UTA R-41255	GQ334509	GQ334611
<i>Leptodeira bakeri</i>	Aruba	Avid 023858355	GQ334515	GQ334618
<i>Leptodeira frenata</i>	Mexico, Guerrero	LSUMZ 39524	EF078579	EF078531
<i>Leptodeira maculata</i>	Mexico, Jalisco	UTA R-53323	GQ334521	GQ334624
<i>Leptodeira nigrofasciata</i>	Costa Rica	ASL 190	GQ334525	GQ334628
<i>Leptodeira nigrofasciata</i>	Mexico, Guerrero	MVZ 241573	EF078581	EF078533
<i>Leptodeira punctata</i>	Mexico, Sinaloa	UTA R-51974	EF078577	EF078529
<i>Leptodeira septentrionalis ornata</i>	Colombia, Antioquia	MHUA 14423	GQ334532	GQ334636
<i>Leptodeira s. ornata</i>	Costa Rica, Limon	ICP 1089	GQ334540	GQ334645
<i>Leptodeira s. ornata</i>	Costa Rica, Punta Arenas	MSM PH 90	GQ334539	GQ334644
<i>Leptodeira s. polysticta</i>	Guatemala, Escuintla	UTA R-46878	GQ334545	GQ334650
<i>Leptodeira s. polysticta</i>	Guatemala, Peten	UTA R-46125	GQ334547	GQ334652
<i>Leptodeira splendida bressoni</i>	Mexico, Nayarite	UTA R-53595	GQ334549	GQ334655
<i>Leptomicrogaster narducci</i>	Ecuador, Napo	KU 202955	EF137412	EF137404
<i>Micrurus fulvius</i>	USA, Florida, Liberty Co.	CAS-214347	EF137413	EF137405
<i>Micrurus mipartitus</i>	Panama, Cocle	CH-5377	EF137414	EF137406
<i>Micrurus surinamensis</i>	Brazil, Rondonia	OMNH-37596	EF137415	EF137407
<i>Ninia atrata</i>	Colombia, Caldas	MHUA 14452	GQ334553	GQ334659
<i>Ophryacus melanurus</i>	Mexico	UTA-R34605	AY223587	AY223634
<i>Ophryacus undulatus</i>	Mexico	CLP-73	AY223586	AY223633
<i>Ovophis monticola</i>	China, Yunnan	CAS 215050	DQ305462	DQ305480
<i>Porthidium arcosae</i>	Ecuador, Manabí	WWW-750	AY223582	AY223631
<i>Porthidium dunni</i>	Mexico, Oaxaca	ENS-9705	AY223581	AY223630
<i>Porthidium hespere</i>	Mexico, Michoacan	MZFC 19742	EU017534	EU016098
<i>Porthidium lansbergi</i>	Venezuela, Isla Margarita	WES	DQ061205	DQ061230
<i>Porthidium nasutum</i>	Costa Rica	MZUCR-11150	AY223579	U41887
<i>Porthidium ophryomegas</i>	Costa Rica, Guanacaste	UMMZ-210276	AY223580	U41888
<i>Porthidium porrasi</i>	Costa Rica, Puntarenas, Sierpe	MSM	DQ061211	DQ061236
<i>Porthidium yucatanicum</i>	Mexico, Yucatán	JAC-24438	DQ061215	DQ061244
<i>Rhinocerophis alternatus</i>		DLP-2879	AY223601	AY223642
<i>Sinomicrurus kelloggii</i>		ROM-37080	EF137417	EF137409
<i>Sinomicrurus mccllellandi</i>		ROM-35245	EF137418	EF137410
<i>Sistrurus catenatus</i>	USA, Texas, Haskel Co.	Moody-502	AY223610	AY223648
<i>Trimorphodon biscutatus</i>	Mexico, Oaxaca	JAC 24309		DQ497525
<i>Trimorphodon lyrophanes</i>	USA, California, Inyo Co.	JMM 79		DQ497506
<i>Trimorphodon lyrophanes</i>	Mexico, Baja California Sur	ROM 34073		DQ497514

<i>Trimorphodon paucimaculatus</i>	Mexico, Sinaloa	UTA-R 52929	DQ497498
<i>Trimorphodon paucimaculatus</i>	Mexico, Jalisco	UTA-R 52654	DQ497494
<i>Trimorphodon quadruplex</i>	Guatemala, Zapaca	ENS 10800	DQ497541
<i>Trimorphodon wilkinsonii</i>	USA, Texas, Presidio Co.	TLJ 338	DQ497492



Figure S1. Ultrametric trees obtained with Beast. The green solid lines represents the tree with fossil constraints (AT analysis) and the blue dashed lines represents the tree without fossil constraints (RT analysis). The RT tree was standardized to the root of the AT analysis.