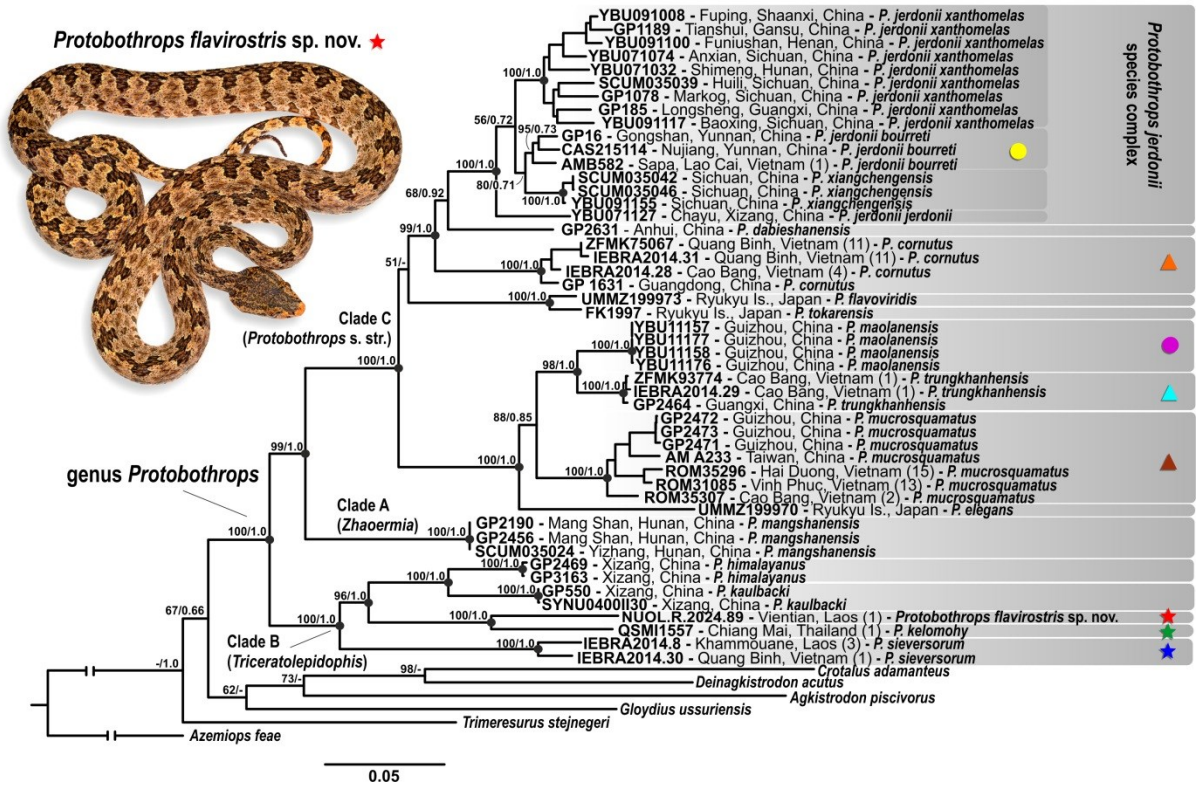
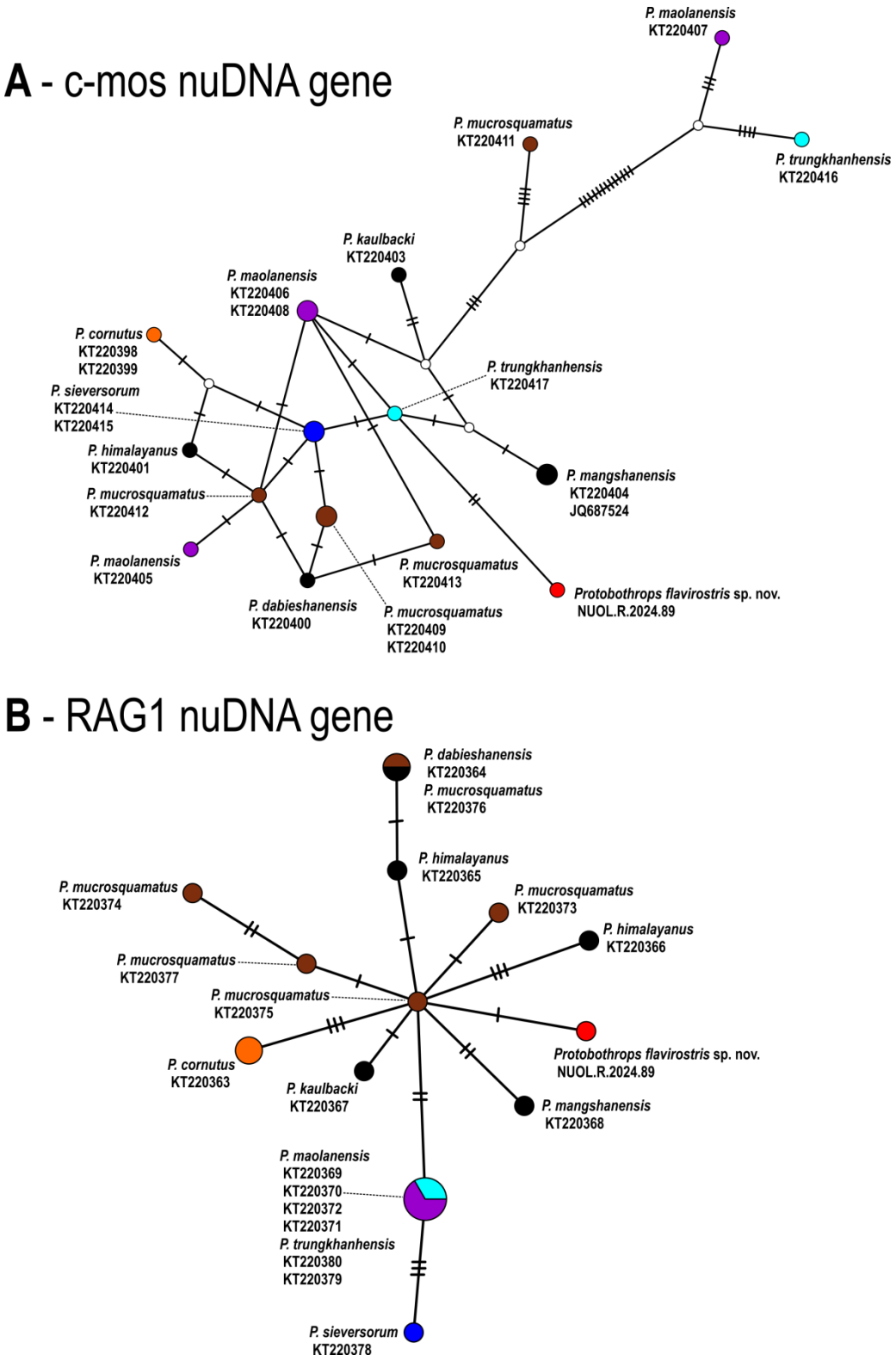


Supplementary Figure S1. Maximum Likelihood (ML) phylogenetic tree showing matrilineal genealogy of *Protobothrops* derived from the analysis of 4546 bp of cyt *b*, ND4, 12S rRNA, 16S rRNA, and COI mtDNA gene sequences. For voucher specimen information and GenBank accession numbers, see Table 1. Numbers at the nodes correspond to ML UFBS/BI PP support values, respectively. Species symbols and locality numbers correspond to those provided on the map in Fig. 1. Thumbnail shows the holotype of *Protobothrops flavirostris* **sp. nov.** in life in dorsal view; photograph by N. Maury.



Supplementary Figure S2. Nuclear allele median-joining network of c-mos (A, 584 bp) and RAG1 (B, 996 bp) nuclear gene haplotypes sequenced in the genus *Protobothrops*. Circle sizes are proportional to the number of samples/sequences; small open circles indicate hypothetical haplotypes (alleles). For voucher specimen information and GenBank accession numbers, see Table 1.

Supplementary Figure S3. The members of the genus *Protobothrops* in life (part I) – *Protobothrops flavirostris* **sp. nov.** from Vang Vieng, Vientiane, Laos (A); *P. cornutus* from Trang An, Ninh Binh, Vietnam (B); *P. dabieshanensis* from Yuexi, Anhui, China (C); *P. elegans* from Ishigaki, Okinawa, Japan (D); *P. flavoviridis* from Setochi, Kagoshima, Japan (E); *P. himalayanus* from Shigatse, Xizang, China (F); *P. jerdonii jerdonii* from Talle Valley, Arunachal Pradesh, India (G); *P. jerdonii bourreti* from Chieu Lau Thi Mt., Ha Giang, Vietnam (H); *P. jerdonii xanthomelas* from Nanyang, Henan, China (I). Photographs by: R. Grassby-Lewis (A); P. Pawangkhanant (B); Y.H. Xu (B, I); G. Vogel (D); K. Ito (E); J. J. Huang (F); A. Mishra (G); and L. P. Tran (H).

Supplementary Figure S4. The members of the genus *Protobothrops* in life (part II) – *Protobothrops kaulbacki* from Gongshan, Yunnan, China (A); *P. kelomohy* from Tha Song Yang, Tak, Thailand (B); *P. mangshanensis* from Nanling Mt., Guangzhou, China (C); *P. maolanensis* from Maolan NP, Guizhou, China (D); *P. mucrosquamatus* from Aizawl, Mizoram, India (E); *P. sieversorrum* from Phong Nha-Ke Bang NP, Quang Binh, Vietnam (F); *P tokarensis* from Toshima, Kagoshima, Japan (G); *P. trungkhanhensis* from Trung Khanh, Cao Bang, Vietnam (H); *P. xiangchengensis* from Kanbing, Sichuan, China (I). Photographs by: Y.H. Xu (A); T. Smith (B); Z.W. Jiang (C); R. Grassby-Lewis (D); G. Vogel (E, I); P. Pawangkhanant (F); T. Ito (G); and T.K. Cao (F).

Appendix I. Primers used in this study. F – forward primer, R – reverse primer.

Gene	Primer name	Sequence	Reference
cyt *b*	H14910 (F)	5'-GACCTGTGATMTGAAAAACCAYCGTT-3'	Dahn et al. 2018
	THRSN2 (R)	5'-CTTTGGTTTACAAGAACAATGCTTTA-3'	
ND4	Trim-ND4F (F)	5'-CACCTATGACTACCAAAAGCTCATGTAGAAGC-3'	Salvi et al. 2013
	Trim-ND4LEUR (R)	5'-CATTACTTTTACTTGGATTTGCACCA-3'	
12S-16S rRNA	Oligo12S2LM (F)	5'-ACACACCGCCCGTCACCCT-3'	Green et al. 2010
	Oligo16S5H (R)	5'-CTACCTTTGCACGGTTAGGATACCGCGGC-3'	
16S rRNA	16S1LM (F)	5'-CCGACTGTTGACCAAAAACAT-3'	Green et al. 2010
	16SH1 (R)	5'-TCCGGTCTGAACTCAGATCACGTAGG-3'	
COI	RepCOI-F (F)	5'-TNTTMTCAACNAACCACAAAGA-3'	Nagy et al. 2012
	RepCOI-R (R)	5'-ACTTCTGGRTGKCCAAARAATCA-3'	
c-mos	Snake_cmos_S77 (F)	5'-CATGGACTGGGATCAGTTATG-3'	Slowinski and Lawson 2002
	Snake_cmos_S78 (R)	5'-CCTTGGGTGTGATTTTCTCACCT-3'	
RAG1	RepRAG1-R13 (F)	5'-TCTGAATGGAAATTCAAGCTGTT-3'	Groth and Barrowclough 1999
	RepRAG1-R18 (R)	5'-GATGCTGCCTCGGTCGGCCACCTTT-3'	

Appendix II. PCR conditions for each DNA-marker used in this study. (Continues on the next page).

Marker:		**cyt b**			**ND4**			**COI**			**12S and 16S rRNA**		
Reference:		Dahn et al. (2018)			Salvi et al. (2013)			Nagy et al. (2012):			Green et al. (2010)		
№	**PCR step**		**t °C**	**time**		**t °C**	**time**		**t °C**	**time**		**t °C**	**time**
1	initial denaturation		94°C	5 min		92°C	3 min		94°C	3 min		94°C	5 min
2	denaturation	**10 cycles**	94°C	1 min	**16 cycles**	92°C	30 s	**40 cycles**	94°C	40 s	**35 cycles**	94°C	1 min
	annealing		50°C to 45°C (-0.5°C per cycle)	1 min		60°C to 52°C (-0.5°C per cycle)	30 s		48.5°C	30 s		55°C	1 min
	extension		72°C	1 min		72°C	1 min		72°C	1 min		72°C	1 min
3	denaturation	**24 cycles**	94°C	1 min	**20 cycles**	92°C	30 s						
	annealing		45°C	1 min		52°C	30 s						
	extension		72°C	1 min		72°C	1 min						
4	final extension		72°C	10 min		72°C	15 min		72°C	7 min		72°C	10 min
5	cooling		4°C	∞		4°C	∞		4°C	∞		4°C	∞

Appendix II. PCR conditions for each DNA-marker used in this study. (Continued).

Marker:		**c-mos**			**RAG1**		
Reference:			Slowinski and Lawson (2002):			Groth and Barrowclough (1999)	
№	**PCR step**		**t °C**	**time**		**t °C**	**time**
1	initial denaturation		94°C	3 min		94°C	2 min
2	denaturation	**35 cycles**	94°C	30 s	**40 cycles**	94°C	1 min
	annealing		52°C	40 s		57.2°C	1 min
	extension		72°C	1.5 min		72°C	1 min
3	denaturation						
	annealing						
	extension						
4	final extension		72°C	10 min		72°C	10 min
5	cooling		4°C	∞		4°C	∞

Appendix III. Sequences and voucher specimens of the genus *Protobothrops* and outgroup taxa used in this study.

Species	Museum No.	Locality	cyt *b*	ND4	12S	16S	COI	c-mos	RAG1	Source
Protobothrops flavirostris **sp. nov.**	NUOL.R.2024.89	Vang Vieng, Vientiane, Laos	PV033723	PV033726	PV033727		XXXXX	PV033724	PV033725	*this study*
P. cornutus	ZFMK 75067	Phong Nha–Ke Bang NP, Vietnam	AY294272	AY294262	AY294276	AY294267	—	—	—	Herrmann et al. 2004
P. cornutus	GP 1631	Guangdong, China	KT220304	KT220324	KT220266	KT220285	—	KT220398	—	Guo et al. 2016
P. cornutus	IEBR A2014.31	Quang Binh, Vietnam	KT220306	KT220326	KT220268	KT220287	—	—	—	Guo et al. 2016
P. cornutus	IEBR A2014.28	Cao Bang, Vietnam	KT220305	KT220325	KT220267	KT220286	—	KT220399	KT220363	Guo et al. 2016
P. dabieshanensis	GP 2631	Anhui, China	KT220307	KT220327	KT220269	KT220288	KP403646	KT220400	KT220364	Guo et al. 2016
P. elegans	UMMZ199970	Ryukyu Is., Japan	AY223575	U41893	AF057201	—	—	—	—	Parkinson et al. 2002
P. flavoviridis	UMMZ199973	Ryukyu Is., Japan	AY223574	U41894	AF057200	—	—	—	—	Parkinson et al. 2002
P. himalayanus	GP 2469	Xizang, China	KT220308	KT220328	KT220270	KT220289	—	KT220401	KT220365	Guo et al. 2016
P. himalayanus	GP 3163	Xizang, China	KT220309	KT220329	—	—	KP403647	—	KT220366	Guo et al. 2016
P. jerdonii	SCUM035039	Huili, Sichuan, China	EU809996	EU810018	—	—	KP403649	—	—	Guo et al. 2009; Liu et al. 2015
P. jerdonii	GP 16	Gongshan, Yunnan, China	HM567474	EU810020	AY763180	AY763199	—	—	—	Guo et al. 2006; Guo et al. 2009; Guo et al. 2011
P. jerdonii	CAS 215114	Nujiang, Yunnan, China	EU809999	EU810021	—	—	—	—	—	Guo et al. 2009
P. jerdonii	AM B582	Sapa, Vietnam	EU809984	EU810004	—	—	—	—	—	Guo et al. 2009
P. jerdonii	GP 185	Longsheng, Guangxi, China	HM567478	HM567410	—	—	—	—	—	Guo et al. 2011
P. jerdonii	YBU071032	Shimeng, Hunan, China	HM567484	HM567416	—	—	KP403651	—	—	Guo et al. 2011; Liu et al. 2015
P. jerdonii	YBU071074	Anxian, Sichuan, China	HM567495	HM567427	—	—	—	—	—	Guo et al. 2011
P. jerdonii	YBU071127	Chayu, Xizang, China	HM567503	HM567435	—	—	—	—	—	Guo et al. 2011
P. jerdonii	YBU091008	Fuping, Shaanxi, China	HM567514	HM567446	—	—	—	—	—	Guo et al. 2011
P. jerdonii	GP 1078	Markog, Sichuan, China	HM567525	HM567457	—	—	—	—	—	Guo et al. 2011
P. jerdonii	YBU091100	Funiushan, Henan,	HM567527	HM567459	—	—	KP403655	—	—	Guo et al. 2011;

		China								Liu et al. 2015
P. jerdonii	GP 1189	Tianshui, Gansu, China	HM567531	HM567463	—	—	—	—	—	Guo et al. 2011
P. jerdonii	YBU091117	Baoxing, Sichuan, China	HM567534	HM567466	—	—	—	—	—	Guo et al. 2011
P. kaulbacki	GP 550	Xizang, China	KT220310	KT220330	KT220271	KT220290	KP403658	KT220403	KT220367	Guo et al. 2016; Liu et al. 2015
P. kaulbacki	SYNU0400II30	Xizang, China	DQ666060	DQ666057	DQ666056	KT220402	KP403657	—		Guo et al. 2016; Liu et al. 2015
P. kelomohy	QSMI 1557	Sop Khong, Omkoi, Chiang Mai, Thailand	MK834284	—	—	MK830671	—	—	—	Sumontha et al. 2020
P. mangshanensis	GP 2190	Hunan, China	KT220311	KT220331	KT220272	KT220291	—	KT220404	—	Guo et al. 2016
P. mangshanensis	GP 2456	Hunan, China	KT220312	KT220332	KT220273	KT220292	—	—	—	Guo et al. 2016
P. mangshanensis	SCUM035024	Yizhang, Hunan, China	HM567537	HM567469			KP403659	JQ687524	KT220368	Guo et al. 2011; Guo et al. 2012; Guo et al. 2016; Liu et al. 2015
P. maolanensis	YBU11157	Guizhou, China	JN799401	JN799409	JN799405	JN799397	KP403660	KT220405	KT220369	Liu et al. 2012; Liu et al. 2015; Guo et al. 2016
P. maolanensis	YBU11158	Guizhou, China	JN799402	JN799410	JN799406	JN799398	KP403661	KT220406	KT220370	Liu et al. 2012; Liu et al. 2015; Guo et al. 2016
P. maolanensis	YBU11176	Guizhou, China	JN799403	JN799411	JN799407	JN799399	KP403662	KT220407	KT220371	Liu et al. 2012; Liu et al. 2015; Guo et al. 2016
P. maolanensis	YBU11177	Guizhou, China	JN799404	JN799412	JN799408	JN799400	KP403663	KT220408	KT220372	Liu et al. 2012; Liu et al. 2015; Guo et al. 2016
P. mucrosquamatus	AM A233	Taiwan, China	AF171897	AY294265	—	—	—	—	—	Malhotra and Thorpe 2004
P. mucrosquamatus	GP 2471	Guizhou, China	KT220313	KT220333	KT220274	KT220293	KP403672	KT220409	KT220373	Guo et al. 2016
P. mucrosquamatus	GP 2472	Guizhou, China	KT220314	KT220334	KT220275	KT220294	—	KT220410	KT220374	Guo et al. 2016
P. mucrosquamatus	GP 2473	Guizhou, China	KT220315	KT220335	KT220276	KT220295	—	KT220411	KT220375	Guo et al. 2016
P. mucrosquamatus	ROM31085	Vinh Phuc, Vietnam	KT220316	KT220336	KT220277	KT220297	—	—	—	Guo et al. 2016
P. mucrosquamatus	ROM35307	Cao Bang, Vietnam	KT220318	KT220338	KT220279	KT220298	—	KT220413	KT220377	Guo et al. 2016
P. mucrosquamatus	ROM35296	Hai Duong, Vietnam	KT220317	KT220337	KT220278	KT220296	—	KT220412	KT220376	Guo et al. 2016

P. sieversorum	IEBR KM 2012.8	Khammouane, Laos	KT220320	KT220340	KT220281	KT220300	—	KT220415		Guo et al. 2016
P. sieversorum	IEBR A 2014.30	Quang Binh, Vietnam	KT220319	KT220339	KT220280	KT220299	—	KT220414	KT220378	Guo et al. 2016
P. tokarensis	FK 1997	Ryukyu Is., Japan	AY223576	AY223628	AF057202	AF057249	—	—	—	Guo et al. 2016
P. trungkhanhensis	GP 2464	Guangxi, China	KT220321	KT220341	KT220282	KT220301	—	—	—	Guo et al. 2016
P. trungkhanhensis	ZFMK 93774	Cao Bang, Vietnam	KT220323	KT220343	KT220284	KT220303	—	KT220417	KT220380	Guo et al. 2016
P. trungkhanhensis	IEBR A 2014.29	Cao Bang, Vietnam	KT220322	KT220342	KT220283	KT220302	—	KT220416	KT220379	Guo et al. 2016
P. xiangchengensis	YBU091155	Sichuan, China	HM567540	HM567470	—	—	—	—	—	Guo et al. 2011
P. xiangchengensis	SCUM035042	Sichuan, China	DQ666061	DQ666058	AY763188	AY763207	KP403675	—	—	Guo et al. 2007; Guo et al. 2006 (unpublished); Liu et al. 2015
P. xiangchengensis	SCUM035046	Sichuan, China	DQ666062	DQ666059	AY763189	AY763208	KP403676	—	—	Guo et al. 2007; Guo et al. 2006 (unpublished); Liu et al. 2015
Trimeresurus stejnegeri	—	China	FJ752492	FJ752492	FJ752492	FJ752492	FJ752492	KX694793	MK194336	Lin et al. 2009 (unpublished); Alencar et al. 2016; Li et al. 2020
Deinagkistrodon acutus	—	China	KT225463	KT225463	KT225463	KT225463	KT225463	KX694782	MK194442	Hsieh et al. 2015 (unpublished); Alencar et al. 2016; Li et al. 2020
Gloydius ussuriensis	—	China	KP262412	KP262412	KP262412	KP262412	KP262412	JQ687520	MK194331	Xu and Zhao 2014 (unpublished), Guo et al. 2012; Li et al. 2020
Crotalus adamanteus	—	USA	MH626511	MH626511	MH626511	MH626511	MH626511	KX694780	JN621000	Wu 2019; Alencar et al. 2016; Anderson and Greenbaum 2012
Agkistrodon piscivorus	—	USA	DQ523161	DQ523161	DQ523161	DQ523161	DQ523161	KX694772	KX695059	Jiang et al. 2007; Alencar et al. 2016

Azemiops feae	—	China	KJ872487	KJ872487	KJ872487	KJ872487	KJ872487	KX694774	MK194320	Geng and Yan 2014 (unpublished); Alencar et al. 2016; Li et al. 2020

Appendix IV. Characteristics of analyzed single-marker DNA sequences and the proposed optimal evolutionary models for gene and codon partitions as estimated in PartitionFinder 2.1.1. Total length (in bp), number of conservative (Cons.), variable (Var.) and parsimony informative (Pars.-Inf.) sites, estimated Transition/Transversion bias (R), and nucleotide frequencies (in %) are given (data presented only for the ingroup). The optimal partitioning scheme and model fit was estimated as suggested by the Akaike information criterion (AIC).

No.	Gene	Total length	Cons.	Var.	Pars.-Inf.	R	A	T	C	G	Codon partition	Model
1	cyt *b*	1105 bp	649 bp	456 bp	384	6.29	30.0%	26.5%	32.7%	10.8%	cyt *b* - 1 cyt *b* - 2 cyt *b* - 3	HKY+I+G GTR+I+G GTR+I+G
2	ND4	861 bp	442	252	206	7.03	32.1%	23.8%	32.5%	11.7%	ND4 - 1 ND4 - 2 ND4 - 3	GTR+I+G HKY+I+G GTR+I+G
3	12S rRNA	520 bp	403	113	83	3.54	37.7%	19.7%	25.1%	17.7%	—	GTR+I+G
4	16S rRNA	1364 bp	1199	108	50	2.78	37.0%	23.4%	23.0%	16.7%	—	GTR+I+G
5	COI	656 bp	425	233	174	3.12	26.4%	26.4%	31.0%	16.2%	COI - 1 COI - 2 COI - 3	HKY+I+G GTR+I+G GTR+I+G
6	c-mos	584 bp	491	166	143	3.34	26.5%	26.2%	31.5%	15.7%	c-mos - 1 c-mos - 2 c-mos - 3	GTR+I+G GTR+I+G GTR+I+G
7	RAG1	996 bp	957	40	13	1.84	33.1%	24.6%	21.4%	21.0%	RAG1 - 1 RAG1 - 2 RAG1 - 3	GTR+I+G GTR+I+G GTR+I+G

Appendix V. Uncorrected *p*–distances (percentage) between the sequences of cyt *b* mtDNA gene of species of the genus *Protobothrops* included in the phylogenetic analyses.

	Species	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	*P. flavirostris* **sp. nov.**															
2	*P. kelomohy*	7.8%														
3	*P. cornutus*	12.6%	15.2%													
4	*P. dabieshanensis*	13.0%	15.4%	9.6%												
5	*P. elegans*	13.8%	15.6%	13.3%	13.4%											
6	*P. flavoviridis*	13.4%	16.6%	11.9%	9.1%	13.5%										
7	*P. himalayanus*	11.5%	11.8%	14.7%	14.6%	14.1%	13.1%									
8	*P. jerdonii*	12.8%	15.5%	9.6%	8.3%	12.2%	10.3%	14.6%								
9	*P. kaulbacki*	11.3%	11.0%	14.8%	14.2%	13.3%	14.0%	7.9%	13.9%							
10	*P. mangshanensis*	12.8%	14.5%	13.3%	11.9%	13.2%	12.2%	13.4%	11.7%	13.9%						
11	*P. maolanensis*	13.2%	14.1%	12.0%	10.7%	7.9%	11.2%	12.9%	9.9%	12.6%	11.7%					
12	*P. mucrosquamatus*	15.7%	15.2%	13.7%	13.9%	10.5%	12.6%	14.9%	12.8%	14.9%	14.2%	8.4%				
13	*P. sieversorum*	12.3%	13.1%	15.4%	14.3%	15.1%	16.1%	12.5%	14.6%	12.3%	12.6%	14.2%	17.3%			
14	*P. tokarensis*	13.4%	16.1%	11.1%	9.4%	13.8%	1.8%	13.4%	10.6%	13.9%	11.9%	11.9%	12.8%	16.1%		
15	*P. trungkhanhensis*	13.5%	15.7%	13.1%	12.8%	9.3%	12.8%	15.2%	12.1%	15.4%	13.1%	5.2%	8.7%	16.2%	13.1%	
16	*P. xiangchengensis*	13.2%	15.1%	10.1%	8.7%	12.7%	10.5%	14.8%	4.0%	14.7%	11.8%	10.4%	12.5%	15.5%	10.6%	11.5%

Appendix VI. List of localities of the genus *Protobothrops* in the Indochinese Region (including Laos, Thailand, and Vietnam) appearing on Fig. 1. Symbols: (I) = Locality number on the map; (II) = Occurrence verified by morphology data (yes/no); (III) = Occurrence verified by molecular data (yes/no); "?" = verification required.

Species	I	II	III	Location	Sources
P. flavirostris **sp. nov.**	1	yes	yes	Vang Vieng, Vientian, Laos (type locality)	this study
P. cornutus	1	yes	no	Sapa, Lao Cai, Vietnam (type locality)	Nguyen et al. (2009); Luu et al. (2015)
P. cornutus	2	yes	no	Van Ban, Lao Cai, Vietnam	Nguyen et al. (2009); Luu et al. (2015)
P. cornutus	3	yes	no	Quan Ba, Ha Giang, Vietnam	Nguyen et al. (2009); Luu et al. (2015)
P. cornutus	4	yes	yes	Ha Lang, Cao Bang, Vietnam	Guo et al. (2016)
P. cornutus	5	yes	no	Phu Yen, Son La, Vietnam	Pham et al. (2020)
P. cornutus	6	yes	no	Lac Son, Hoa Binh, Vietnam	https://www.inaturalist.org/observations/249319309
P. cornutus	7	yes	no	Trang An, Ninh Binh, Vietnam	Nguyen et al. (2009); Luu et al. (2015)
P. cornutus	8	yes	no	Cuc Phuong NP, Ninh Binh, Vietnam	https://www.inaturalist.org/observations/246024330
P. cornutus	9	yes	no	Cam Thuy, Thanh Hoa, Vietnam	https://www.inaturalist.org/observations/188484224
P. cornutus	10	yes	no	Vu Quang NP, Ha Tinh, Vietnam	https://www.inaturalist.org/observations/249321210
P. cornutus	11	yes	yes	Phong Nha-Ke Bang NP, Quang Binh, Vietnam	Guo et al. (2016)
P. cornutus	12	yes	no	Bach Ma NP, Thua Thien-Hue, Vietnam	Luu et al. (2015); https://www.inaturalist.org/observations/241056690
P. jerdonii	1	yes	yes	Sa Pa, Lao Cai, Vietnam (type locality of *Trimeresurus jerdonii meridionalis* Bourret, 1935)	Nguyen et al. (2009); Guo et al. (2016)
P. jerdonii	2	yes	no	Y Ty, Bat Xat, Lao Cai, Vietnam	Nguyen et al. (2009)
P. jerdonii	3	yes	no	Phong Tho, Lai Chau, Vietnam	Mai et al. (2021)
P. jerdonii	4	yes	no	Tam Duong, Lai Chau, Vietnam	Mai et al. (2021)
P. jerdonii	5	yes	no	Mu Cang Chai NR, Yen Bai, Vietnam	https://www.inaturalist.org/observations/209008130
P. jerdonii	6	yes	no	Chieu Lau Thi Mt, Ha Giang, Vietnam	this study
P. jerdonii	7	yes	no	Tay Con Linh Mt, Ha Giang, Vietnam	Nguyen & Poyarkov (2020)
P. kelomohy	1	yes	yes	Omkoi, Chiang Mai, Thailand (type locality)	Sumontha et al. (2020)
P. kelomohy	2	yes	no	Tha Song Yang, Tak, Thailand	Sumontha et al. (2020)
P. maolanensis?	1	yes	no	Tri Phuong, Trang Dinh, Lang Son, Vietnam	Kropachev et al. (2015)
P. maolanensis?	2	yes	no	Bac Me, Ha Giang, Vietnam	Pham et al. (2017)
P. maolanensis?	3	yes	no	Than Sa, Thai Nguyen, Vietnam	this study
P. mucrosquamatus	1	yes	no	Mau Son Mt, Lang Son, Vietnam	Nguyen et al. (2009); Yu et al. (2022)
P. mucrosquamatus	2	yes	yes	Phia Oac-Phia Den NP, Cao Bang, Vietnam	Nguyen et al. (2009); Guo et al. (2016)
P. mucrosquamatus	3	yes	no	Dong Van, Ha Giang, Vietnam	https://www.inaturalist.org/observations/214298805
P. mucrosquamatus	4	yes	no	Du Gia NR, Bac Me, Ha Giang, Vietnam	Nguyen et al. (2009); https://www.inaturalist.org/observations/214298805
P. mucrosquamatus	5	yes	no	Xin Man, Ha Giang, Vietnam	https://www.inaturalist.org/observations/249447133

P. mucrosquamatus	6	yes	yes	Na Hang NR, Tuyen Quang, Vietnam	Nguyen et al. (2009); Yu et al. (2022)
P. mucrosquamatus	7	yes	no	Kien Dai, Chiem Hoa, Tuyen Quang, Vietnam	https://www.inaturalist.org/observations/249448225
P. mucrosquamatus	8	yes	no	Ba Be NP, Bac Kan, Vietnam	Nguyen et al. (2009); https://www.inaturalist.org/observations/147256657
P. mucrosquamatus	9	yes	no	Bach Thong, Bac Kan, Vietnam	https://www.inaturalist.org/observations/249447876
P. mucrosquamatus	10	yes	no	Kim Hy NR, Bac Kan, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	11	yes	yes	Than Sa, Thai Nguyen, Vietnam	Nguyen et al. (2009); Yu et al. (2022)
P. mucrosquamatus	12	yes	no	Dai Tu, Thai Nguyen, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	13	yes	yes	Tam Dao NP, Vinh Phuc, Vietnam	Nguyen et al. (2009); Guo et al. (2016) https://www.inaturalist.org/observations/139769791
P. mucrosquamatus	14	yes	no	Lang Giang, Bac Giang, Vietnam	https://www.inaturalist.org/observations/249442707
P. mucrosquamatus	15	yes	yes	Chi Linh, Hai Duong, Vietnam	Nguyen et al. (2009); Guo et al. (2016)
P. mucrosquamatus	16	yes	no	Thuong Yen Cong, Quang Ninh, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	17	yes	no	Minh Chau, Van Don, Quang Ninh, Vietnam	https://www.inaturalist.org/observations/143490160
P. mucrosquamatus	18	yes	no	Cat Ba NP, Hai Phong, Vietnam	Nguyen et al. (2009); https://www.inaturalist.org/observations/237830570
P. mucrosquamatus	19	yes	no	Bac Ha, Lao Cai, Vietnam	https://www.inaturalist.org/observations/236017954
P. mucrosquamatus	20	yes	no	Van Ban, Lao Cai, Vietnam	Nguyen et al. (2009); https://www.inaturalist.org/observations/236017954
P. mucrosquamatus	21	yes	no	Ha Hoa, Phu Tho, Vietnam	https://www.inaturalist.org/observations/249445499
P. mucrosquamatus	22	yes	no	Thuan Chau, Son La, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	23	yes	no	Muong Bang, Phu Yen, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	24	yes	no	Van Ho, Son La, Vietnam	https://www.inaturalist.org/observations/249444582
P. mucrosquamatus	25	yes	no	Ba Vi NP, Ha Noi, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	26	yes	no	Hang Kia-Pa Co NR, Hoa Binh, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	27	yes	no	Tan Lac, Hoa Binh, Vietnam	https://www.inaturalist.org/observations/249447445
P. mucrosquamatus	28	yes	no	Huong Pagoda, My Duc, Ha Noi, Vietnam	https://www.inaturalist.org/observations/249446025
P. mucrosquamatus	29	yes	no	Cuc Phuong NP, Ninh Binh, Vietnam	Nguyen et al. (2009); https://www.inaturalist.org/observations/216031249
P. mucrosquamatus	30	yes	no	Trang An, Ninh Binh, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	31	yes	no	Pu Hu NR, Thanh Hoa, Vietnam	Nguyen et al. (2009); https://www.inaturalist.org/observations/247855805
P. mucrosquamatus	32	yes	no	Xuan Lien NR, Thanh Hoa, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	33	yes	no	Ky Son, Nghe An, Vietnam	https://www.inaturalist.org/observations/249448083
P. mucrosquamatus	34	yes	yes	Pu Mat NP, Nghe An, Vietnam	Nguyen et al. (2009); Yu et al. (2022)
P. mucrosquamatus	35	yes	no	Vu Quang NP, Ha Tinh, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	36	yes	no	Phong Nha-Ke Bang NP, Quang Binh, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	37	yes	no	Dong Chau-Khe Nuoc Trong NR, Quang Binh, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	38	yes	no	Bac Huong Hoa NR, Quang Tri, Vietnam	Nguyen et al. (2009)

P. mucrosquamatus	39	yes	no	Dakrong NR, Quang Tri, Vietnam	this study
P. mucrosquamatus	40	yes	no	Phong Dien NR, Thua Thien-Hue, Vietnam	https://www.inaturalist.org/observations/249445368
P. mucrosquamatus	41	yes	no	Sao La NR, Thua Thien-Hue, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	42	yes	no	Nam Dong, Thua Thien-Hue, Vietnam	https://www.inaturalist.org/observations/553001
P. mucrosquamatus	43	yes	no	Ba Na-Nui Chua NR, Da Nang, Vietnam	https://www.inaturalist.org/observations/249444308
P. mucrosquamatus	44	yes	no	Nui Thanh, Quang Nam, Vietnam	https://www.inaturalist.org/observations/240782739
P. mucrosquamatus	45	yes	no	Nam Tra My, Quang Ngai, Vietnam	https://www.inaturalist.org/observations/226667896
P. mucrosquamatus	46	yes	no	Ngoc Linh Mt, Kon Tum, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	47	yes	no	Kon Plong, Kon Tum, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	48	yes	no	Son Tay, Quang Ngai, Vietnam	https://www.inaturalist.org/observations/249447675
P. mucrosquamatus	49	yes	no	Ba To, Quang Ngai, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	50	yes	no	Kon Chu Rang NR, Gia Lai, Vietnam	Nguyen et al. (2009)
P. mucrosquamatus	51	yes	no	Hoai An, Binh Dinh, Vietnam	https://www.inaturalist.org/observations/249443922
P. mucrosquamatus	52	yes	no	Khanh Son, Khanh Hoa, Vietnam	https://www.inaturalist.org/observations/180242598
P. mucrosquamatus	53	yes	no	Chu Yang Sin NP, Dak Lak, Vietnam	this study
P. mucrosquamatus	54	yes	no	Nam Nung NP, Dak Nong, Vietnam	https://www.inaturalist.org/observations/249443687
P. mucrosquamatus	55	yes	no	Nhan Co, Gia Nghia, Dak Nong, Vietnam	https://www.inaturalist.org/observations/249443342
P. mucrosquamatus	56	yes	no	Di Linh, Lam Dong, Vietnam	Nguyen et al. (2020)
P. mucrosquamatus	57	yes	no	Gia Nghia, Lam Dong, Vietnam	https://www.inaturalist.org/observations/46338326
P. mucrosquamatus	58	yes	no	Da Mri, Bao Loc, Lam Dong, Vietnam	https://www.inaturalist.org/observations/182024210
P. mucrosquamatus	59	yes	no	Loc Nam, Bao Lam, Lam Dong, Vietnam	https://www.inaturalist.org/observations/218315175
P. mucrosquamatus	60	yes	no	Tan Phu, Dong Nai, Vietnam	Duong & Nguyen (2021)
P. mucrosquamatus	61	yes	no	Tanh Linh, Binh Thuan, Vietnam	this study
P. mucrosquamatus	62	yes	no	Huong Tich Mt, Ha Tinh, Vietnam	https://www.inaturalist.org/observations/249444938
P. mucrosquamatus	63	yes	no	Phou Chom Voy, Xaychamphone, Bolikhamsai, Laos	David et al. (2023)
P. mucrosquamatus	64	yes	no	Nakai-Nam Theun NP, Khammouane, Laos	David et al. (2023)
P. mucrosquamatus	65	yes	no	Him Nam No NPA, Khammoun, Laos	David et al. (2023)
P. mucrosquamatus	66	yes	no	Dakcheung, Xekong, Laos	Brakels et al. (2021)
P. mucrosquamatus	67	yes	no	Ban Luang, Nan, Thailand	Sumontha et al. (2020); this study
P. sieversorum	1	yes	yes	Phong Nha-Ke Bang NP, Quang Binh, Vietnam (type locality)	David et al. (2023)
P. sieversorum	2	yes	no	Ban Dou, Boulapha, Khammuon, Laos	David et al. (2023)
P. sieversorum	3	yes	yes	Him Nam No NPA, Khammuone, Laos	David et al. (2023)
P. sieversorum	4	yes	no	Ban Namtha, Khammuon, Laos	David et al. (2023)
P. sieversorum	5	yes	no	Konglor Cave, Khammuon, Laos	David et al. (2023)
P. sieversorum	6	yes	no	Nahin, Khammuon, Laos	David et al. (2023)
P. trungkhanhensis	1	yes	yes	Trung Khanh, Cao Bang, Vietnam (type locality)	Orlov et al. (2011)
P. trungkhanhensis	2	yes	no	Ha Lang, Cao Bang, Vietnam	this study
P. trungkhanhensis	3	yes	no	Huu Lien NR, Huu Lung, Lang Son, Vietnam	https://www.inaturalist.org/observations/118648873

Appendix VII. The proposed taxonomy of the genus *Protobothrops* Hoge & Romano-Hoge, 1983, recognizing three subgenera, with the list of the included species.

Genus *Protobothrops* Hoge & Romano-Hoge, 1983

Subgenus *Protobothrops* Hoge & Romano-Hoge, 1983 stat. nov.

Phylogenetic definition. The subgenus *Protobothrops* includes all species sharing a more recent common ancestor with *Protobothrops (Protobothrops) flavoviridis* (Hallowell, 1861) than with *Protobothrops (Zhaoermia) mangshanensis* (Zhao, 1990) and *Protobothrops (Triceratolepidophis) sieversorum* (Ziegler, Herrmann, David, Orlov & Pauwels, 2000).

Taxonomic content: 10 species, including:

Protobothrops (Protobothrops) cornutus (Smith, 1930)

Protobothrops (Protobothrops) dabieshanensis Huang, Pan, Han, Zhang, Hou, Yu, Zheng & Zhang, 2012

Protobothrops (Protobothrops) elegans (Gray, 1849)

Protobothrops (Protobothrops) flavoviridis (Hallowell, 1861)

Protobothrops (Protobothrops) jerdonii (Günther, 1875)

Protobothrops (Protobothrops) maolanensis Yang, Orlov & Wang, 2011

Protobothrops (Protobothrops) mucrosquamatus (Cantor, 1839)

Protobothrops (Protobothrops) tokarensis (Nagai, 1928)

Protobothrops (Protobothrops) trungkhanhensis Orlov, Ryabov & Nguyen, 2009

Protobothrops (Protobothrops) xiangchengensis (Zhao, Jiang & Huang, 1978)

Subgenus *Zhaoermia* Gumprecht & Tillack, 2004 stat. nov.

Phylogenetic definition. The subgenus *Zhaoermia* includes all species sharing a more recent common ancestor with *Protobothrops (Zhaoermia) mangshanensis* (Zhao, 1990) than with *Protobothrops (Protobothrops) flavoviridis* (Hallowell, 1861) and *Protobothrops (Triceratolepidophis) sieversorum* (Ziegler, Herrmann, David, Orlov & Pauwels, 2000).
Taxonomic content: single species:
Protobothrops (Zhaoermia) mangshanensis (Zhao, 1990)

Subgenus *Triceratolepidophis* Ziegler, Herrmann, David, Orlov & Pauwels, 2000 stat. nov.

Phylogenetic definition. The subgenus *Triceratolepidophis* includes all species sharing a more recent common ancestor with *Protobothrops (Triceratolepidophis) sieversorum* (Ziegler, Herrmann, David, Orlov & Pauwels, 2000) than with *Protobothrops (Protobothrops) flavoviridis* (Hallowell, 1861) and *Protobothrops (Zhaoermia) mangshanensis* (Zhao, 1990).
Taxonomic content: five species, including:
Protobothrops (Triceratolepidophis) flavirostris **sp. nov.**
Protobothrops (Triceratolepidophis) himalayanus Pan, Chettri, Yang, Jiang, Wang, Zhang & Vogel, 2013
Protobothrops (Triceratolepidophis) kaulbacki (Smith, 1940)
Protobothrops (Triceratolepidophis) kelomohy Sumontha, Vasaruchapong, Chomngam, Suntrarachun, Pawangkhanant, Sompan, Smits, Kunya & Chanhome, 2020
Protobothrops (Triceratolepidophis) sieversorum (Ziegler, Herrmann, David, Orlov & Pauwels, 2000)