

Supplemental Tables

Sup. Table 1. Sequences and voucher specimens of the genus *Trimeresurus* and outgroup taxa used in this study.

№	Sample ID	Genbank accession number			Species	Country	Locality	References
		cyt <i>b</i>	ND4	16S rRNA				
1	RIM-0078	—	PQ658817	PQ654051	<i>T. (T.) erythrochloris</i> sp. nov.	Thailand	Sa Kaeo, Klong Hat, Tham Khao Siwa Cave	<i>this study</i>
2	RIM-0079	PQ658816	PQ658818	PQ654052	<i>T. (T.) erythrochloris</i> sp. nov.	Thailand	Sa Kaeo, Klong Hat, Tham Khao Siwa Cave	<i>this study</i>
3	ZMMU Re-17680	PP766216	PP779472	PP792705	<i>T. (Trimeresurus) cyanolabris</i>	Vietnam	Ninh Thuan, Nui Chua N.P.	Idiiatullina et al. 2024c
4	ZMMU Re-17681	PP766217	PP779473	—	<i>T. (Trimeresurus) cyanolabris</i>	Vietnam	Ninh Thuan, Nui Chua N.P.	Idiiatullina et al. 2024c
5	ZMMU Re-17855	PP766218	PP779474	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Nakhon Ratchasima, Pak Chong	Idiiatullina et al. 2024c
6	ZMMU Re-17856	PP766219	PP779475	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Bangkok	Idiiatullina et al. 2024c
7	ZMMU Re-17857	PP766220	PP779476	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Bangkok	Idiiatullina et al. 2024c
8	ZMMU Re-17858	PP766221	PP779477	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Ayutthaya	Idiiatullina et al. 2024c
9	TMA7	AB920254	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Bangkok	Supikamolteni et al. 2015
10	TMA14	AB920255	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Ratchaburi	Supikamolteni et al. 2015
11	TMA19	AB920256	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Ratchaburi	Supikamolteni et al. 2015
12	TMA20	AB920257	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Ratchaburi	Supikamolteni et al. 2015
13	TMA21	AB920258	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Ratchaburi	Supikamolteni et al. 2015
14	TMA24	AB920259	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Ratchaburi	Supikamolteni et al. 2015
15	TMA31	AB920260	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	Nakhon Ratchasima	Supikamolteni et al. 2015
16	TMA35	AB920261	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	—	Supikamolteni et al. 2015
17	TMA37	AB920263	—	—	<i>T. (Trimeresurus) macrops</i>	Thailand	—	Supikamolteni et al. 2015
18	A69	—	KR021052	KR021118	<i>T. (Trimeresurus) macrops</i>	Thailand	Petchabun	Mrinalini et al. 2015
19	B27	AF517184	AF517219	AF517176	<i>T. (Trimeresurus) macrops</i>	Thailand	Bangkok	Creer et al. 2003
20	B35	—	KR021050	KR021116	<i>T. (Trimeresurus) macrops</i>	Thailand	Central Thailand	Mrinalini et al. 2015
21	B93	—	KR021065	KR021132	<i>T. (Trimeresurus) macrops</i>	Thailand	Nakhon Ratchasima	Mrinalini et al. 2015
22	ZMMU Re-17859	PP766222	PP779478	—	<i>T. (Trimeresurus) cardamomensis</i>	Thailand	Chanthaburi, Khitchakut, Kra Thing waterfall	<i>this study</i>
23	B442	—	KR021071	KR021138	<i>T. (Trimeresurus) cardamomensis</i>	Cambodia	Koh Kong	Mrinalini et al. 2015
24	B443	—	KR021070	KR021137	<i>T. (Trimeresurus) cardamomensis</i>	Cambodia	Koh Kong	Mrinalini et al. 2015
25	B567	—	KR021080	KR021146	<i>T. (Trimeresurus) cardamomensis</i>	Cambodia	Koh Kong	Mrinalini et al. 2015
26	B568	—	KR021081	KR021147	<i>T. (Trimeresurus) cardamomensis</i>	Cambodia	Koh Kong	Mrinalini et al. 2015
27	B66	—	KR021062	KR021129	<i>T. (Trimeresurus) cardamomensis</i>	Thailand	Chanthaburi	Mrinalini et al. 2015
28	B67	—	KR021061	KR021128	<i>T. (Trimeresurus) cardamomensis</i>	Thailand	Chanthaburi	Mrinalini et al. 2015
29	LSUHC10089	—	KX660618	KX660220	<i>T. (Trimeresurus) cardamomensis</i>	Cambodia	Cardamon Mt.	Figueroa et al. 2016
30	ZMMU Re-14431	OR470578	OR470542	OR471640	<i>T. (Trimeresurus) rubeus</i>	Vietnam	Lam Dong, Bao Loc	Idiiatullina et al. 2023
31	B523	—	KR021073	—	<i>T. (Trimeresurus) rubeus</i>	Vietnam	Southern Vietnam	Mrinalini et al. 2015

32	B561	—	KR021075	KR021141	<i>T. (Trimeresurus) rubeus</i>	Cambodia	Mondolkiri, O'Rang	Mrinalini et al. 2015
33	B562	—	KR021074	KR021140	<i>T. (Trimeresurus) rubeus</i>	Cambodia	Mondolkiri, O'Rang	Mrinalini et al. 2015
34	B564	—	KR021079	KR021145	<i>T. (Trimeresurus) rubeus</i>	Cambodia	Mondolkiri, O'Rang	Mrinalini et al. 2015
35	B71	—	KR021063	KR021130	<i>T. (Trimeresurus) rubeus</i>	Vietnam	Southern Vietnam	Mrinalini et al. 2015
36	B72	—	GQ428484	GQ428468	<i>T. (Trimeresurus) rubeus</i>	Vietnam	Southern Vietnam	Malhotra et al. 2010
37	B73	—	KR021064	KR021131	<i>T. (Trimeresurus) rubeus</i>	Vietnam	Southern Vietnam	Mrinalini et al. 2015
38	ZMMU ISS-074 / LSUH C8602	OR470564	KX660619	KX660222	<i>T. (Trimeresurus) honsonensis</i>	Vietnam	Kien Giang, Hon Son Is.	Idiiatullina et al. 2023; Figueroa et al. 2016
39	ZMMU Re-17231	OR470575	OR470545	PP032807	<i>T. (Trimeresurus) kuiburi</i>	Thailand	Prachuap Khiri Khan, Kuiburi, Wat Khao Daeng	Idiiatullina et al. 2023; Idiiatullina et al. 2024a
40	ZMMU Re-17664	OR470567	OR470535	OR471627	<i>T. (Trimeresurus) kraensis</i>	Thailand	Chumphon, Wat Tham Sanook temple	Idiiatullina et al. 2023
41	ZMMU Re-17212	OR470570	OR470547	OR471632	<i>T. (Trimeresurus) venustus</i>	Thailand	Krabi, Mueang Krabi, Tiger Cave viewpoint	Idiiatullina et al. 2023
42	ZMMU Re-17667	OR470579	OR470553	OR471634	<i>T. (Trimeresurus) kanburiensis</i>	Thailand	Kanchanaburi, Sai Yok, Khao Yai N.P.	Idiiatullina et al. 2023
43	B522	—	AY289231	AY352737	<i>T. (Trimeresurus) kanburiensis</i>	Thailand	Kanchanaburi	Malhotra & Thorpe 2003
44	ZMMU Re-17661	OR470557	OR470538	OR471621	<i>T. (Trimeresurus) ciliaris</i>	Thailand	Trang, Palian, Thum Khao Ting	Idiiatullina et al. 2023
45	QSMI Tpur74 / CAS 212246	OR470556	AY352772	OR471642	<i>T. (Trimeresurus) ayeyarwadyensis</i>	Myanmar	Ayeyarwade, Mwe Hauk	Malhotra & Thorpe 2004a; Idiiatullina et al. 2023
46	AM A85	AF171899	U41891	AY352741	<i>T. (Trimeresurus) cantori</i>	India	Nicobar	Malhotra & Thorpe 2004a; Kraus et al. 1996
47	CAS243566AM A20	ON804490	ON804505	—	<i>T. (Trimeresurus) erythrurus</i>	Myanmar	Rangoon	Malhotra & Thorpe 2004a; Chan et al. 2022
48	AM B487	AY352755	AY352818	AY352724	<i>T. (Trimeresurus) septentrionalis</i>	Nepal	Kathmandu	Malhotra & Thorpe 2004a
49	QSMI TA091164	OR470562	OR470536	OR471641	<i>T. (Trimeresurus) albolabris</i>	Thailand	Bangkok	Idiiatullina et al. 2023
50	ZMMU NAP- 11772	OR470580	OR470554	OR471643	<i>T. (Trimeresurus) guoi</i>	Thailand	Nan, Doi Phu Kha Mt.	Idiiatullina et al. 2023
Outgroups								
51	AUP-01988	OR470561	OR470555	AF517181	<i>T. (Viridovipera) gumprechtii</i>	Thailand	Loei	Idiiatullina et al. 2023; Creer et al. 2003
52	B416 / CHS824	AY352765	AY352831	MK194252	<i>T. (Viridovipera) medoensis</i>	China	Tibet, Motuo	Malhotra & Thorpe 2004; Li et al. 2020
53	CHS 677	MK201269	—	MK194143	<i>T. (Viridovipera) stejnegeri</i>	China	Fujian, China	Li et al. 2020
54	AM B97	AY059574	AF517225	AF517183	<i>T. (Viridovipera) vogeli</i>	Laos	Champasak, Pakxong	Creer et al. 2003
55	SCUM 035045 / CHS 644 (SYS r001235)	EF597522	EF597528	MK194535	<i>T. (Viridovipera) yunnanensis</i>	China	Yunnan, Ailaoshan	Dawson et al. 2008; Li et al. 2020
56	AM B4 / CHS 895	AY352764	AY352830	MK194293	<i>T. (Parias) flavomaculatus</i>	Philippines	—	Malhotra & Thorpe 2004; Li et al. 2020
57	AM B33 / 16hageNS	AY059567	AY059585	MG561492	<i>T. (Parias) hageni</i>	Indonesia	—	Malhotra & Thorpe 2004
58	B349	AY371832	AY371861	AY371786	<i>T. (Parias) malcolmi</i>	Malaysia	Sabah	Sanders et al. 2004

59	B210	AY352756	AY352819	AY352725	<i>T. (Parias) schultzei</i>	Philippines	—	Malhotra & Thorpe 2004
60	B368	AY371824	AY371865	AY371792	<i>T. (Parias) sumatranus</i>	Indonesia	Sumatra	Sanders <i>et al.</i> 2004
61	ZMMU Re-16158	OR470572	OR470544	OR471638	<i>T. (Popeia) sabahi fucatus</i>	Malaysia	Pahang, Fraser's Hill	Idiiatullina <i>et al.</i> 2023
62	ZMMU Re-16761	OR470573	OR470546	OR471639	<i>T. (Popeia) popeiorum</i>	Myanmar	Kachin, Indawgyi N.R.	Idiiatullina <i>et al.</i> 2023
63	AUP-00061	OR470571	OR470534	OR471637	<i>T. (Popeia) lanna</i>	Thailand	Chiang Mai, Doi Inthanon N.P.	Idiiatullina <i>et al.</i> 2023
64	B467	AY371807	AY371851	AY371781	<i>T. (Popeia) phuketensis</i>	Thailand	Phang Nga	Sanders <i>et al.</i> 2006
65	ZMMU Re-17668	OR470574	OR470550	OR471636	<i>T. (Popeia) tenasserimensis</i>	Thailand	Ratchaburi, Suan Phueng	Idiiatullina <i>et al.</i> 2023
66	B345	AY371811	AY371849	AY371775	<i>T. (Popeia) nebularis</i>	Malaysia	Pahang, Cameron Highlands	Malhotra & Thorpe 2004
67	APF/SFRI-1871	MK720609	—	MK722155	<i>T. (Himalayophis) arunachalensis</i>	India	—	Captain <i>et al.</i> 2019
68	B258	AY352749	AY352810	AY352715	<i>T. (Himalayophis) tibetanus</i>	Nepal	—	Malhotra & Thorpe 2004
69	GP 07	HQ850448	HQ850449	HQ850446	<i>T. (Sinvoipera) sichuanensis</i>	China	Sichuan	Guo & Wang, 2011
70	B301	AY352754	AY352817	AY352722	<i>Craspedocephalus borneensis</i>	Malaysia	Sabah	Malhotra & Thorpe 2004
71	B213	AY352757	AY352820	AF517177	<i>Craspedocephalus puniceus</i>	Indonesia	—	Creer <i>et al.</i> 2003
72	B261	AY352762	AY352828	AY352732	<i>Peltopelorus gramineus</i>	India	—	Malhotra & Thorpe 2004
73	A218	AY059569	AY352829	AY059564	<i>Peltopelorus malabaricus</i>	India	—	Malhotra & Thorpe 2004
74	A58 / RAP 0453	KC347479	AY059597	AY059565	<i>Peltopelorus trigonocephalus</i>	Sri Lanka	—	Malhotra & Thorpe 2004; Pyron <i>et al.</i> 2013
75	B499	AY352747	AY352808	KJ872487	<i>Azemiops feae</i>	China	—	Malhotra & Thorpe 2004

Sup. Table 2. Comparison of morphological characters of *Trimeresurus erythrochloris* sp. nov. with other species of the *Trimeresurus kanburiensis* species complex. **Remarks:** Diagnostic differences from the new species are marked in bold; M = males, F = females

<i>Trimeresurus</i> Species	max SVL (mm) in M	max SVL (mm) in F	TaL/TL (M)	TaL/TL (F)	VEN (M)	VEN (F)	SC (M)	SC (F)	DSR	Dorsum colour in life	Subocular streak in males	Ventrolateral body stripe	Ventral colour	Iris colour	Tail colour	Distribution	Sources
<i>erythrochloris</i> sp. nov.	425	545	0.21 (n=1)	0.16 (n=1)	164 (n=1)	172 (n=1)	67 (n=1)	54 (n=1)	23–21–15	grass-green with reddish brown bands	present	present, red and white	pale creamish-green	golden yellow	brown with dark purplish-brown crossbars	Thailand (Central)	this study
<i>cardamomensis</i>	535	458	0.17–0.20 (\bar{x} =0.19, n=5)	0.14–0.17 (\bar{x} =0.15, n=4)	165–170 (\bar{x} =167.0, n=5)	168–175 (\bar{x} =171.8, n=5)	60–75 (\bar{x} =67.0, n=5)	58–63 (\bar{x} =59.8, n=4)	23(21)–21–15	uniformly grass-green	present	present, red and white	green yellow	golden yellow	brick red, one-third (male) to half (female) distance to the vent on ventral surface	Cambodia (Southwestern), Thailand (Eastern), Vietnam (Phu Quoc Island)	Malhotra <i>et al.</i> (2011); Idiiatullina <i>et al.</i> (2024c)
<i>ciliaris</i>	360	333	0.17 (n=4)	0.13 (n=1)	172–175 (\bar{x} =173.0, n=4)	171 (n=1)	59–63 (n=2)	52 (n=1)	17–17–15	emerald-green with reddish brown bands	absent	absent	creamy white	olive-green with brown horizontal stripe	dark brown mottled with rusty spots	Thailand (Southern)	Idiiatullina <i>et al.</i> (2023, 2024a)
<i>cyanolabris</i>	478	638	0.18–0.21 (\bar{x} =0.19, n=3)	0.13–0.15 (\bar{x} =0.14, n=12)	166–175 (\bar{x} =171.0, n=3)	169–178 (\bar{x} =174.2, n=12)	71–75 (\bar{x} =72.7, n=3)	52–62 (\bar{x} =57.3, n=12)	21(23)–21–15	uniformly bright grass-green	absent	indistinct, white	green blue	golden yellow	brick red with a faint margin on lateral side of tail	Vietnam (South Central Coast)	Idiiatullina <i>et al.</i> (2024c)
<i>honsoensis</i>	523	557	0.23 (n=1)	0.15–0.16 (n=2)	186 (n=1)	183–186 (n=2)	74 (n=1)	54–58 (n=2)	23(25)–21–15	straw-yellow with zig-zagged, irregular, dark-brown bands	absent	absent	dull-white anteriorly, darker posteriorly	orange centrally and brown peripherally	orange-colored with irregular dark bands	Vietnam (Hon Son Island)	Grismer <i>et al.</i> (2008)
<i>kanburiensis</i>	412	572	0.17 (n=1)	0.12–0.14 (\bar{x} =0.13, n=5)	172 (n=1)	170–178 (\bar{x} =174.3, n=5)	59 (n=1)	46–51 (\bar{x} =48.3, n=4)	21(23)–19–15	olive-grayish with dark olive-brown bands	absent	present, discontinuous, olive-brown	creamy white	brown, slightly golden	olive-brown blotches	Thailand (Western)	Smith (1943); David <i>et al.</i> (2004); Idiiatullina <i>et al.</i> (2023,

																	2024a)
<i>kraensis</i>	328	459	0.17 (n=1)	0.14–0.15 (\bar{x} =0.15, n=3)	167 (n=1)	169–171 (\bar{x} =170.3, n=3)	62 (n=1)	52–54 (\bar{x} =53.0, n=3)	21–21–15	dark/bottle green with red/purple bands	absent	always present, discontinuous, reddish brown	pale creamish-green	slight copper	brown with dark purplish-brown crossbars	Thailand (Southern)	Idiiatullina et al. (2023, 2024a)
<i>kuiburi</i>	376	451	0.17–0.19 (\bar{x} =0.18, n=4)	0.13–0.14 (n=2)	164–166 (\bar{x} =165.5, n=4)	164–171 (n=2)	63–65 (\bar{x} =64.5, n=4)	51–53 (n=2)	21(23)–19–15	bottle green with red/purple bands	present, concave white	absent	pale green	copper	red with some thin lighter bands	Thailand (Western)	Idiiatullina et al. (2023, 2024a)
<i>macrops</i>	557	570	0.17–0.22 (\bar{x} =0.19, n=39)	0.13–0.17 (\bar{x} =0.15, n=25)	158–173 (\bar{x} =165.0, n=49)	159–173 (\bar{x} =166.5, n=26)	63–75 (\bar{x} =68.6, n=40)	50–62 (\bar{x} =56.1, n=25)	21(23)–21(20)–15	uniformly bluish green, grass green or yellow-green	present	present, red and white	green yellow	golden yellow	brick red, dorsally extending to vent, with clear margin on lateral side of tail	Thailand (Northern, Central, Northeastern), Laos (Central, Southern), Cambodia (Northern)	Idiiatullina et al. (2024c)
<i>rubeus</i>	586	499	0.21–0.22 (\bar{x} =0.22, n=2)	0.15–0.19 (\bar{x} =0.17, n=5)	164–171 (\bar{x} =167.5, n=2)	158–163 (\bar{x} =159.8, n=5)	78–80 (\bar{x} =79.0, n=2)	54–69 (\bar{x} =61.6, n=5)	21–21–15	uniformly dark to grass-green	present	present, red and white	green yellow	bright or deep reddish-orange	orange-red (males with blotches on the distal half of the tail)	Vietnam (Southern of Langbiang plateau); Cambodia (Eastern)	Idiiatullina et al. (2024c)
<i>venustus</i>	490	456	0.16–0.19 (\bar{x} =0.18, n=12)	0.14–0.15 (\bar{x} =0.15, n=4)	166–175 (\bar{x} =170.9, n=14)	173–181 (\bar{x} =177.3, n=4)	60–75 (\bar{x} =67.5, n=13)	51–57 (\bar{x} =54.3, n=4)	21(25)–19(21)–15	dark/bottle green with red/purple bands	absent	present, continuous or discontinuous, red	pale green	yellowish-brown/gold	brown with dark purplish-brown crossbars	Thailand (Southern)	Idiiatullina et al. (2023, 2024a)