



Erratum

Erratum to “A phylogeny of four mitochondrial gene regions suggests a revised taxonomy for Asian pitvipers (*Trimeresurus* and *Ovophis*)” [Mol. Phylogenet. Evol. 32 (2004) 83–100]

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The publisher regrets that numerous corrections were not incorporated correctly in Table 1. For the reader's convenience the correct Table 1 appears here.

In addition, on page 92, in line 2 of the last paragraph of Results, “Type 2” should read “Type 3.”

On page 93, in line 5 of the right-hand column, “Type 1” should read “Type 2.”

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Table 1

Hemipenis type and sources of information for all species of *Trimeresurus s.s.*, including those not represented in the present molecular analysis, and some species now allocated to different genera, where this may be in doubt

Current genus	Proposed genus	Species	DNA phylogeny	Hemipenis examined	Literature description ^a	Hemipenis type
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>albolabris</i>	Yes	Yes	1, 2, 3, 6, 7	Long papillose
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>andersoni</i>	Yes	No	2	Long papillose
<i>Trimeresurus</i>	<i>Trimeresurus</i>	<i>borneensis</i>	Yes	Yes	7 ^b	Type 2 spinose
<i>Trimeresurus</i>	<i>Trimeresurus</i>	<i>brongersmai</i>	No	No	None known	
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>cantori</i>	Yes	Yes	2	Long calyculate
<i>Trimeresurus</i>	<i>Protobothrops</i>	<i>cornutus</i>	Yes	No	8	Type 3 spinose
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>erythrurus</i>	Yes	Yes	1, 2, 3	Long papillose
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>fasciatus</i>	No	No	16	Long papillose
<i>Trimeresurus</i>	<i>Parias</i>	<i>f. flavomaculatus</i>	Yes	Yes	5	Long papillose
<i>Trimeresurus</i>	<i>Parias</i>	<i>f. mcgregori</i>	Yes	Yes	5	Long papillose
<i>Trimeresurus</i>	?	<i>gracilis</i>	Yes	No	15	Type 3 spinose
<i>Trimeresurus</i>	<i>Trimeresurus</i>	<i>gramineus</i>	Yes	Yes	1, 2	Type 2 spinose
<i>Trimeresurus</i>	<i>Viridovipera</i>	<i>gumprechtii</i>	Yes	Yes	10	Type 1 spinose
<i>Trimeresurus</i>	<i>Parias</i>	<i>hageni</i>	Yes	Yes	7	Long papillose ^c
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>insularis</i> ^d	Yes	Yes	3	Long calyculate
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>kanburiensis</i>	Yes	Yes	None	Long papillose
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>labialis</i>	No	No	2	Long papillose
<i>Trimeresurus</i>	<i>Peltopelor</i>	<i>macrolepis</i>	No	Yes	2	Long calyculate
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>macrops</i>	Yes	Yes	3, 7, 12	Long papillose
<i>Trimeresurus</i>	<i>Trimeresurus</i>	<i>malabaricus</i>	Yes	Yes	2	Type 2 spinose
<i>Trimeresurus</i>	<i>Parias</i>	<i>malcolmi</i>	Yes	No	None known	
<i>Trimeresurus</i>	<i>Viridovipera</i>	<i>medoensis</i>	Yes	No	6	Type 1 spinose ^f
<i>Trimeresurus</i>	<i>Popeia</i>	<i>popeiorum</i> ^g	Yes	Yes	1, 2, 3	Long calyculate
<i>Trimeresurus</i>	<i>Trimeresurus</i>	<i>puniceus</i>	Yes	Yes	None known	Type 2 spinose
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>purpureomaculatus</i>	Yes	Yes	1, 2, 3, 7	Long papillose
<i>Trimeresurus</i>	<i>Parias</i>	<i>schultzei</i>	Yes	Yes	5 ^h	Long papillose ^c
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>septentrionalis</i> ⁱ	Yes	Yes	3	Long papillose
<i>Trimeresurus</i>	<i>Viridovipera</i>	<i>stejnegeri</i>	Yes	Yes	1, 2, 3, 6, 13, 14, 15	Type 1 spinose
<i>Protobothrops</i>	<i>Trimeresurus</i>	<i>strigatus</i>	No	Yes	1, 2	Type 2 spinose
<i>Trimeresurus</i>	<i>Parias</i>	<i>sumatranus</i>	Yes	Yes	3	Long papillose ^c
<i>Trimeresurus</i>	<i>Himalayophis</i>	<i>tibetanus</i> ^e	Yes	Yes	11	Unique
<i>Trimeresurus</i>	<i>Trimeresurus</i>	<i>trigonocephalus</i>	Yes	No	2	Type 2 spinose
<i>Trimeresurus</i>	<i>Cryptelytrops</i>	<i>venustus</i> ^j	Yes	Yes	4, 7	Long papillose
<i>Trimeresurus</i>	<i>Viridovipera</i>	<i>vogeli</i>	Yes	Yes	9	Type 1 spinose
<i>Trimeresurus</i>	<i>Protobothrops</i>	<i>xiangchengensis</i>	No	No	6	Type 3 spinose
<i>Trimeresurus</i>	<i>Viridovipera</i>	<i>yunnanensis</i>	No	Yes	None known	Type 1 spinose

Note. The table also indicates their present generic allocation according to the EMBL reptile database, and their proposed generic allocation following the present analysis. Literature sources: (1) Pope and Pope, 1933; (2) Smith, 1943; (3) Regenass and Kramer, 1981; (4) Vogel, 1991; (5) Leviton, 1964; (6) Guo and Zhang, 2000; (7) Jintakune and Chanhome, 1995; (8) Hermann et al., in press; (9) David et al., 2001; (10) David et al., 2002; (11) Orlov and Helfenberger, 1997; (12) Kramer, 1977; (13) Mao et al., 1984; (14) Pope, 1935; (15) Hidetoshi Ota, unpublished manuscript; (16) David et al., 2003.

^a Numbers in italics indicate that the hemipenis is pictured.

^b Listed as *T. puniceus* in this publication; however, the Thai populations are referable to *T. borneensis* (W. Wüster, personal communication).

^c In these species, the papillae are not situated immediately above the fork, but are higher up in the forked region following a smooth region.

^d Listed by EMBL as a subspecies of *T. albolabris* but elevated to full species status by Giannasi et al. (2000).

^e *T. karanshahi* was synonymised with *T. tibetanus* by Tillack et al. (2003). The specimens included in this analysis were formerly identified as *T. karanshahi*, and the description of the hemipenis is based on these specimens. It differs from Type 3 spinose hemipenes by having relatively long lobes, with the largest spines being the most distal rather than proximal, and a substantial part of the distal end of the lobes is calyculate. Thus it appears almost as an intermediate between the spinose and non-spinose types of hemipenis found in *Trimeresurus s.s.*

^f Similar to Type 1 spinose except for length of forked region; see text for further discussion.

^g Includes the subspecies *T. p. barati* and *T. p. sabahi*.

^h The senior author has personally examined the specimen on which this description was based and can confirm that the hemipenis of this species was incorrectly described in this publication as it is based on a partly everted hemipenis, and the soft papillae have been described as spines.

ⁱ Listed by EMBL as a subspecies of *T. albolabris* but elevated to full species status by Giannasi et al. (2000).

^j Listed by EMBL as a synonym of *T. kanburiensis* but Malhotra and Thorpe (in press a) recently confirmed it as a distinct species. Many literature references to *T. kanburiensis* are likely to refer in fact to this taxon.