

On the Identity and Taxonomic Status of *Coluber nuthalli* Theobald, 1868, with Redescription of the Type Specimens of *Coluber nuthalli* and *Elaphis yunnanensis* Anderson, 1879 (Reptilia, Squamata, Colubridae)

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Abstract The taxa *Coluber nuthalli* Theobald, 1868 and *Elaphis yunnanensis* Anderson, 1879 are compared and re-described, based on the examination of their type material. The morphological similarities of these two taxa revealed them as conspecific. *Elaphis yunnanensis* Anderson is thus declared as a protected name (*nomen conservandum*) with priority over *C. nuthalli* Theobald (*nomen oblitum*). A lectotype for *Elaphis yunnanensis* is designated and described. The validity of *yunnanensis* as subspecies name in combination with *Orthriophis taeniurus* (Cope) will be discussed. A key to the subspecies of *O. taeniurus* is provided.

Keywords Reptilia, Serpentes, Colubridae: *Elaphis yunnanensis* Anderson (nomen protectum), *Coluber nuthalli* Theobald (nomen oblitum), *Elaphe* auct., *Orthriophis taeniurus yunnanensis*; taxonomy, morphology; China, Myanmar

1. Introduction

Theobald (1868a) described *Coluber nuthalli* based upon a single specimen from “Birma”. After its description, the name was rarely used as valid, all prior to 1877 (Theobald, 1868b; Nicholson, 1874; Theobald, 1876). Boulenger (1890) listed *C. nuthalli* as a questionable synonym of *Coluber helena* Daudin, 1803, but corrected this later (1894) in his “Catalogue of snakes” in accordance with the statement given by Sclater (1891a, 1891b) and placed it in the synonymy of *Coluber taeniurus* Cope, 1861. This view was accepted by subsequent authors (e.g. Smith, 1943; Das *et al.*, 1998; Wallach *et al.*, 2014). Stejneger (1907) mentioned that different geographic forms of *C.*

taeniurus exist. Rendahl (1937) first listed *taeniurus*, *vaillantii*, *andersoni*, *schmackeri* and *grabowskyi* as subspecies of *Coluber taeniurus* without consideration of Theobald’s *nuthalli* as valid taxon. In his monographic review of the genus *Elaphe*, Schulz (1996) recognized 7 subspecies of the Oriental Beauty Snake and listed *Coluber nuthalli* as questionable synonym of *Elaphe taeniura* ssp., which allegedly came from Myanmar and Thailand.

Blyth (1854) described *Coluber vittacaudatus* from a single specimen from the vicinity of “Darjiling” (West Bengal State of India). Das *et al.* (1998) listed it as valid species due to a personal communication received from V. Wallach and this assessment was adopted by subsequent authors (Das, 2003; Guptha *et al.*, 2012; Walmiki *et al.*, 2012; Seetharamaraju and Srinivasulu, 2013; Sharma *et al.*, 2013). Whitaker and Captain (2004) declared it to be “unclear where the taxon should be placed”. Wallach *et al.* (2014) classified the taxon under *Argyrogena*

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Werner, 1924. Schätti *et al.* (2014) remarked that the taxon *Coluber vittacaudatus* Blyth could possibly be a senior synonym of *Orthriophis taeniurus yunnanensis* (Anderson, 1879), and of *O. taeniurus* (Cope, 1861) as well. Color and pattern described by Blyth (1854) for the holotype of *C. vittacaudatus* show some similarities to *Orthriophis t. yunnanensis* but the lepidosis data are divergent (*C. vittacaudatus*: 220 ventrals, 19 dorsal scales [fide Blyth 1854]; *O. t. yunnanensis*: minimum 236 ventrals, 23–25 neck and mid-body dorsals [fide Schulz 1996, 2010]). The type specimen of *Coluber vittacaudatus* is not mentioned by Theobald (1868a) or Sclater (1891b) in their catalogues for the collections of the Asiatic Society of Bengal and The Indian Museum (Kolkata). The type is regarded as lost by Das *et al.* (1998; Das personal communication 2005) and no further specimen has been recorded since. For these reasons, an objective assessment of the status of *Coluber vittacaudatus* at this point is not possible.

Based on morphological, organ topographic and biochemical data Utiger *et al.* (2002) transferred the widespread Oriental Beauty Snake, *Elaphe taeniura* into the new genus *Orthriophis*. The taxonomy of *Orthriophis taeniurus* and its subspecies complex has recently been under investigation (Schulz, 2010). This resulted in the description of a new subspecies, *Orthriophis taeniurus callicyanous* and introduction of a new replacement name for *Coluber taeniurus pallidus* Rendahl, 1937, viz. *Orthriophis taeniurus helfenbergeri*. However, the current described subspecies *O. t. callicyanous* and *O. t. helfenbergeri* are distinct from *C. nuthalli* (see Schulz, 2010). The taxonomic status of *Coluber nuthalli* Theobald, 1868 remains unclear so far and is the subject of this investigation.

2. Material and methods

This contribution is based on a study of 54 preserved specimens (see Appendix) from the following institutions. Acronyms used follow Leviton *et al.* (1985): BMNH, The Natural History Museum, (former British Museum [Natural History]) London, UK; CAS, California Academy of Science, Department of Herpetology, San Francisco CA, USA; CTNRC, Center for Thai National Reference Collections, Bangkok, Thailand; KIZ, Kunming Institute of Zoology, Kunming, Yunnan, China; NHRM, Naturhistoriska Riksmuseet, Stockholm, Sweden; PKS, private collection Schulz, Würselen, Germany; RMNH, Naturalis Biodiversity Center (former Rijkmuseum van Natuurlijke Historie), Leiden, The Netherlands; SMF,

Senckenberg-Museum, Frankfurt a.M., Germany; USNM, National Museum of Natural History, Smithsonian Institution, Washington, USA; ZISP, Department of Herpetology, Zoological Institute of Russian Academy of Science, St. Petersburg, Russia; ZMB, Museum für Naturkunde Berlin, Germany; ZSI, Zoological Survey of India, Kolkata, India.

Dorsal scale rows were counted at one head-length behind the head, at mid-body, and at one head-length anterior to the anal scute. The mid-body scale count was taken at half of the total number of ventral scales. Ventrals were counted according to Dowling (1951). The terminal scute is excluded from the number of subcaudals. Values for symmetric head characters are given in left/right order.

3. Results

New investigations and the re-examination of the holotype of *Coluber nuthalli* Theobald, 1868 and its direct comparison with two syntypes of *Elaphis yunnanensis* Anderson, 1879 have shown, that there are no distinct differences between the two taxa with regard to either lepidosis, colouration or colour pattern, suggesting the latter taxon to be a synonym of the former.

3.1 *Coluber nuthalli* Theobald, 1868 Theobald's (1868a) description is based upon a single juvenile specimen collected in "Birma" and donated to the museum of the Asiatic Society of Bengal by Col. Nuthall. Colonel (later Major General) William Frost Nuthall was stationed between 1849 and 1853 in Akyab [Akjib, Tsit-htwe or Sittwe, Rakhaing (formerly Arakan) State, Myanmar] commanding the Arrakan Battalion and later until the end of the 1860's commanding the Pegu Light Infantry [later Her Majesty's Indian Forces (Bengal Infantry)]. In his "Catalogue of the reptiles of British Birma [...]" Theobald (1868b) restricted the type locality of *C. nuthalli* to "Pegu [...] probably from Prome district" [= Pyay, Bago Division, Myanmar]. The zoological collection of the Asiatic Society of Bengal was transferred to The Indian Museum (Calcutta) in 1866 and since 1916 is part of the Zoological Survey of India, Kolkata, where the holotype is still housed (Roonwal, 1963; Das *et al.*, 1998).

3.1.1 Redescription of the holotype of *C. nuthalli* (Figure 1 A–E) ZSI 7238, type locality: "Pegu" [= Bago, Bago Division, Myanmar], restricted by Theobald (1868b).

Measurements and sex: 512 mm total length (snout-vent length 422 mm; tail length 90 mm); head length 18.3 mm, head width 9.8 mm; juvenile male.

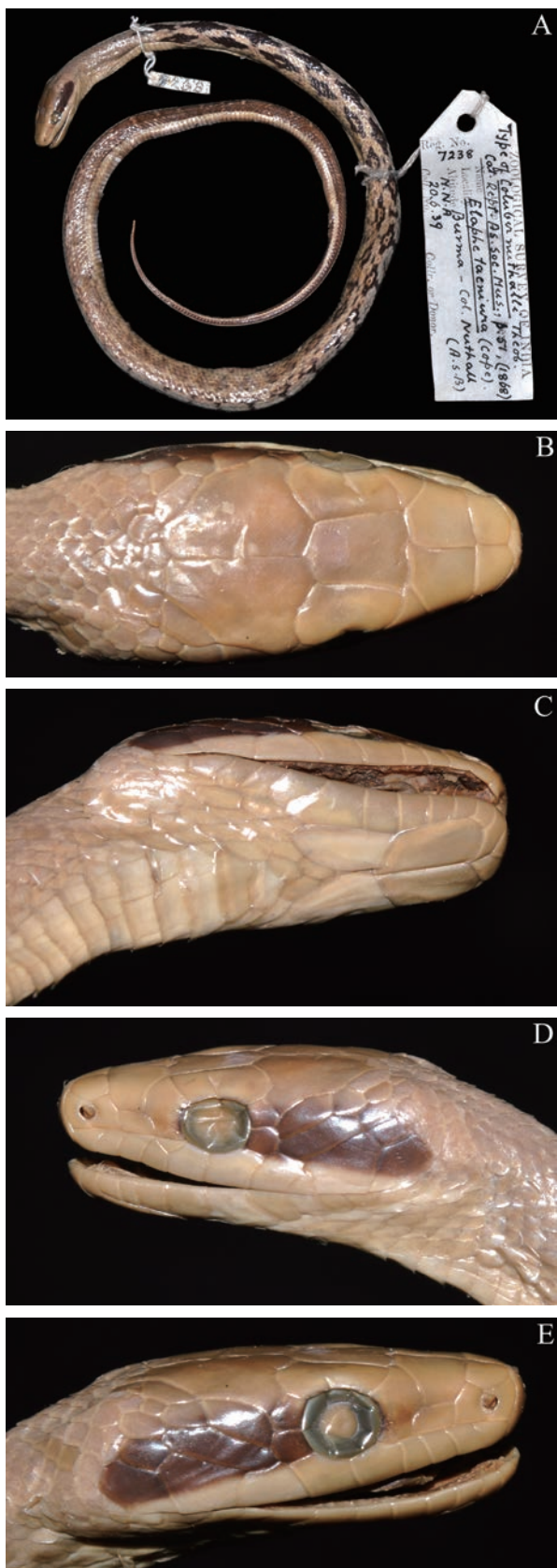


Figure 1 Holotype of *Coluber nuthalli*, ZSI 7238. A: Dorsal view; B: Head dorsal view; C: Head ventral view; D: Head lateral left; E: Head lateral right.

Lepidosis: 9/9 supralabials with the 5th and 6th in contact with the eye; 1 presubocular between the 4th and 5th supralabials on the left side, absent on the right side; 12/12 infralabials; 2+3/2+3 temporals; 1/1 preocular in contact with frontal, 2/2 postoculars; dorsal scales in 23-23-17 rows; 2 preventrals, 243 ventrals; 90 subcaudals; anal plate divided.

Colouration and pattern: Ground colour of body greyish-brown; top of the head unpatterned; a dark band passes angularly from behind the eye till the margin of jaw. It covers the lower half of the upper postocular, the entire lower postocular, most of both anterior temporals and the upper portions of supralabials 8 and 9, some dark shading is also seen on the lower portions of the upper two posterior temporals and the entire lower posterior temporal scale. The holotype is unpatterned in the anterior part of the body till two head lengths behind the head; dark blotches in four rows on the anterior part of the body, of which the mid-dorsal blotches are connected in butterfly-shapes with light centres posteriorly; posterior mid-dorsal part of the body with a light coloured stripe (3–4 dorsals wide); two dark lateral stripes starts at the level of ventral 148 and end on the tip of the tail; on the posterior half of the body the dark lateral stripes are interspaced with faint light bands descending towards the ventrals; ventral surface yellowish-cream and unpatterned in neck region, following by mottled brown intensely towards mid-body.

3.2 *Elaphis yunnanensis* Anderson, 1879 *Elaphis yunnanensis* was described by John Anderson (1879) from a series of three specimens captured during the Yunnan Expedition in “Momien” [Chinese: Teng-yue-chow, Tengyueh, or Tengchong]. During that time the small walled city occupied a site on a plateau at the left bank of the Tahó River at approximately 1600 m a.s.l. Sladen’s (1870) report and the “Narrative of the two Expeditions [...]” by Anderson (1876) as well as his introduction to the “Anatomical and zoological researches [...]” (Anderson, 1879) let to conclude, that the syntypes of *E. yunnanensis* were collected during the first Expedition, more exactly during their 6 weeks stay in Momien from June to July 13, 1868. This is supported by an appendix list “Reptiles collected by Dr. J. Anderson in the Yunan Expedition, 1867–1868” published in the Curator’s report in May 1869 [dated as June 14, 1869] of the “Minutes [...] of The Indian Museum” (Anderson, 1869b). In this note, Anderson introduced beside some others, the new name “*Compsosoma leopardum*, n. sp., Andr.” and completed it by an indication of three specimens with a locality given as “Momein”. The name *Compsosoma*

leopardum doubtless refers to the three specimens later described by Anderson (1879) as *Elaphis yunnanensis*, because no other snake species collected at Momien during the Yunnan Expeditions in 1868 or 1875 contains a series of 3 specimens. The name *Compsosoma leopardum* (nomen nudum) was never used again and according to the 'Code' Art. 12 (I.C.Z.N., 1999) the conditions as a valid name are not met.

In the Curator's report of May 1869 Anderson (1869a) noted: "The reptiles collected by me in the Yunan Expedition have been deposited in the Museum. The collection comprise 60 species and varieties, illustrated by 220 specimens". This collection also included three *Elaphis yunnanensis* syntypes (originally ZSI 4180–4182 fide Sclater, 1891b). One of these specimens is now kept in the collection of the Natural History Museum London (BMNH 1946.6.2.1), and another in the collection of the Zoological Survey of India, Kolkata (ZSI 4181). According to Das *et al.* (1998) the whereabouts of the third syntype is unknown, and a recent search for this specimen by two of us (AD, FT) in the holdings of the ZSI and BMNH collections was unsuccessful.

Anderson (1879) mentioned that *E. yunnanensis* is closely allied to *E. taeniurus* Cope and Boulenger (1890) placed it the synonymy of the latter. This was followed by some subsequent authors (Sclater, 1891b; Pope, 1935; Smith, 1943; Zhao and Adler, 1993; Zhao and Yang, 1997; Zhao *et al.*, 1998; Zhao, 2006; Yang and Rao, 2008; Li *et al.* 2010; Wallach *et al.* 2014). Contrary to that, *yunnanensis* has been first used as valid subspecies name of *Elaphe taeniura* by Schmidt (1927) and this opinion was followed by numerous authors (Mell, 1929, 1931; Bourret, 1936; Rendahl, 1937; Trutnau, 1988; Das, 1994; 1996; 1997; Das and Andrews, 1997; David and Vogel, 1996; Schulz, 1996; Cox *et al.*, 1998a; Cox *et al.*, 1998b; Das *et al.* 1998; Orlov *et al.*, 2000; Ryabov and Popovskaya, 2000; Ryabov, 2001; Iskandar and Colijn, 2002; Nietzke and Kornacker, 2002; Ziegler, 2002; Fuchs and Fuchs, 2003; Mahler and Kearney, 2006; Ikeda, 2007; Toriba 2007), or in combination as *Orthriophis taeniurus yunnanensis* (Gumprecht, 2003; David *et al.*, 2004; Gumprecht, 2004; Nabhitabhata *et al.*, 2004; Whitaker and Captain, 2004; Whitaker, 2006; Gumprecht, 2007; Ziegler *et al.*, 2007; Price and Li, 2008; Nguyen *et al.*, 2009; Agarwal *et al.* 2010; Das, 2010; Luo *et al.* 2010: 78; Orlov *et al.* 2010; Schulz, 2010; Teynié and David, 2010; Das, 2013; Schulz, 2013; Wangyal, 2013). In accordance with the 'Code' (ICZN 1999, Articles 74.1. and 74.7.) we choose specimen BMNH 1946.6.2.1 as lectotype of *Elaphis yunnanensis* Anderson, 1879.

3.2.1 Redescription of the lectotype of *E. yunnanensis* (Figure 2 A–F) BMNH 1946.6.2.1, Type locality: "Momien" [Momein, Tengchong County, Baoshan Prefecture, Yunnan Province, China].

Measurements and sex: 1484 mm total length (snout-vent length 1202 mm, tail length 282 mm); head length 34 mm; head width 18 mm; adult male.

Lepidosis: 8/8 supralabials with the 4th and 5th in contact with the eye; 1/1 preocular; 1/1 small presubocular between the 3rd and 4th supralabial; 11/11 infralabials, 1st–6th (left side) and 1st–5th (right side) in contact with the anterior inframaxillary scale; 2+4/2+4 temporals; 2/2 postoculars; dorsal scales in 23-23-19 rows; distinct developed paired apical pits present throughout body and tail; 2 preventrals, 250 ventrals; 93 subcaudals; anal plate divided.

Colouration and pattern: Pattern and colouration are very similar to *C. nuthalli*: Body colour greyish-brown; top of the head unpatterned; a dark band passes angularly from behind the eye until the margin of jaw covering the postoculars, temporals and last two supralabials (see Figures 2 E, 2 F); unpatterned on the anterior part of the body, until two head lengths behind the head; dark blotches in four rows at the anterior part of the body, of which the mid-dorsal blotches are 'butterfly-shaped' – paired triangles with the apices touching along the vertebral scale row. From the ninth blotch, the triangles have pale central spots. The posterior mid-dorsal part of the body has a light coloured stripe (3–4 dorsals wide); there are two dark lateral stripes until the tip of the tail; in the posterior half of the body the dark lateral stripes are interspaced with faint light bands descending towards the ventrals; ventral surface yellowish and unpatterned in the neck region, followed by mottled dark grey intensely towards mid-body. Starting on the fore-body a series of dark brown blotches along the outer edges of the ventrals merge from mid-body level to a continuous line until the tip of tail.

3.2.2 Redescription of the paralectotype of *E. yunnanensis* (Figure 3 A–E) ZSI 4181; locality as for the lectotype.

Measurements and sex: 1462 mm total length (snout-vent length 1197 mm, tail length 265 mm); head length 33 mm; head width 14 mm; female.

Lepidosis: 9/9 supralabials with the 5th and 6th in contact with the eye; 1/1 small presubocular on each side between the 4th and 5th supralabials; 11/11 infralabials; 2+3/2+2 temporals; 1/1 preocular marginally separated from frontal, 2/2 postoculars; dorsal scales in 23-23-19 rows; 1 preventral, 255 ventrals; 85 subcaudals; anal

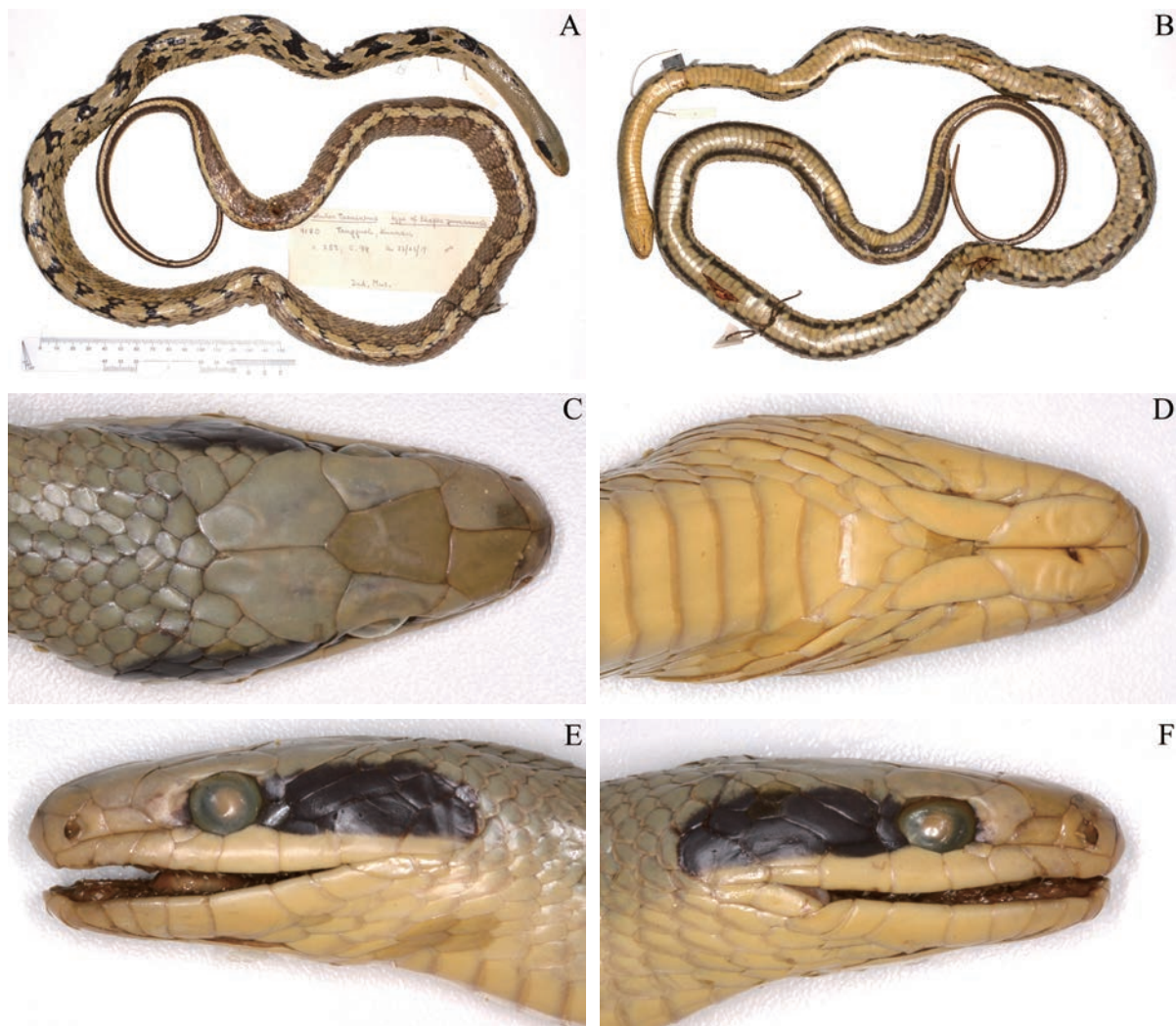


Figure 2 Lectotype of *Elaphis yunnanensis*, BMNH 1946.6.2.1. A: Dorsal view; B: Ventral view; B: Head dorsal view; C: Head ventral view; D: Head lateral left; E: Head lateral right.

plate divided.

Colouration and pattern: The colour and pattern correspond to those of the lectotype (BMNH 1946.6.2.1) and the holotype of *C. nuthalli* (ZSI 7238).

Synonymy/Chresonymy list of *Orthriophis taeniurus yunnanensis* (Anderson, 1879)

C.[oluber] Nuthalli Theobald, 1868a, p. 51; type locality: “Pegu”, [nomen oblitum].

C.[oluber] Nuthalli. – Theobald, 1876, p. xxii (Appendix), [incorrect subsequent spelling].

Composoma leopardum Anderson, 1870, p. 45; type locality: “Momein”, [nomen nudum].

Elaphis yunnanensis Anderson, 1879, p. 813; type locality: “Momien”, [nomen conservandum]; lectotype BMNH 1946.6.2.1 by present designation.

Elaphe taeniura yunnanensis. – Schmidt, 1927, p. 533, [new comb.].

[*Elaphe*] *taeniura yunnanensis.* – Mell, 1929, pp. 16 and 35, [incorrect subsequent spelling].

Coluber taeniurus yunnanensis. – Rendahl, 1937, p. 20, [new comb.].

[*Coluber*] *t.[aeniurus] andersoni* Rendahl, 1937, p. 20 (table), [nomen novum, nomen substitutum pro *Elaphis yunnanensis*].

Elaphe taeniura ssp. – Schulz, 1987, pp. 28–29 [fig. p. 29].

Elaphe taeniura taeniura. – Schulz, 1996, p. 257 [partim: Anhui, Beijing, Hebei, and Hunan Provinces, China].

Orthriophis taeniurus yunnanensis. – Gumprecht, 2004, p. 2 [new comb.].

4. Discussion

Schulz (1996, 2010) split the subspecies of the *Orthriophis taeniurus* complex (formerly *Elaphe taeniura*) in two

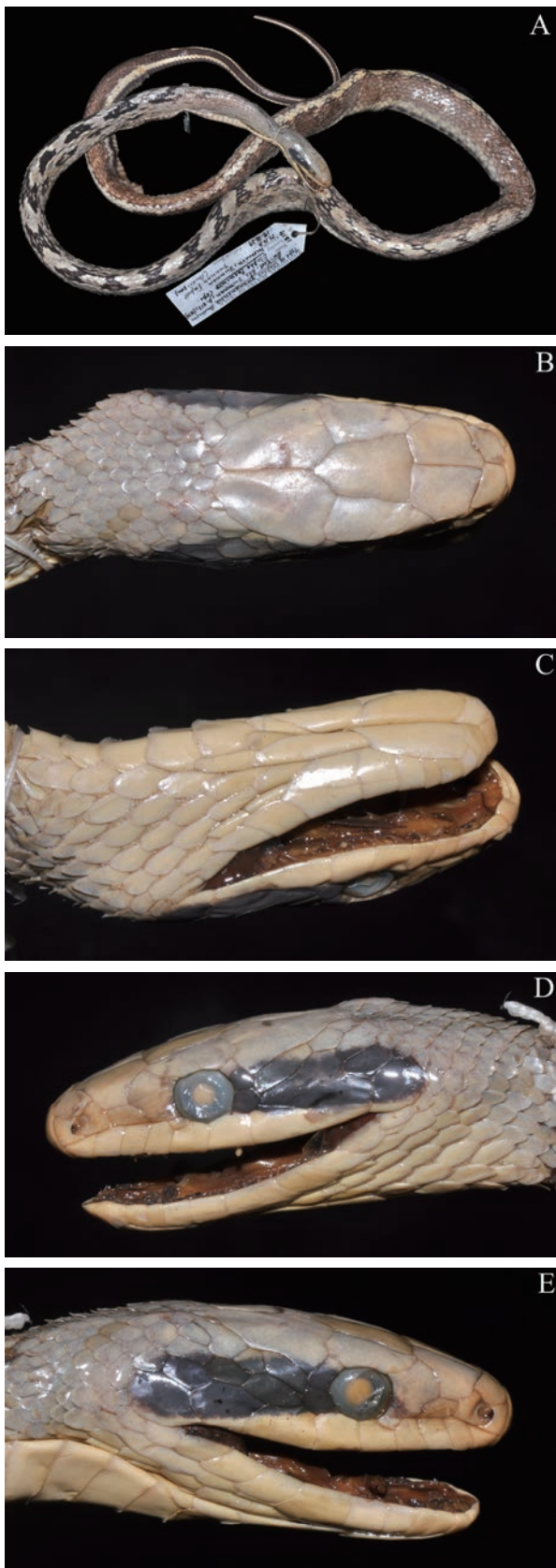


Figure 3 Paratype of *Elaphis yunnanensis*, ZSI 4181. A: Dorsal view; B: Head dorsal view; C: Head ventral view; D: Head lateral left; E: Head lateral right.

geographic groups: Indochinese subspecies (*friesi*, *mocquardi*, *schmackeri*, *taeniurus* and *yunnanensis*) and Indomalayan subspecies (*callicyanous*, *grabowskyi*, *helfenbergeri* and *ridleyi*). These two groups are mainly distinguished on the base of their ventral counts, dorsal scale count around the neck and their body form: Indochinese subspecies (225–262 ventrals, 23–25 dorsals, body compressed); Indomalayan subspecies (272–305 ventrals, 25–29 dorsals, body strongly compressed). *Orthriophis taeniurus yunnanensis* was grouped within the Indochinese subspecies with a count of 236–260 ventrals, 89–120 subcaudals, and 23 mid-body dorsal scale rows. A special lepidosis feature of *yunnanensis* is the absence of a small presubocular shield on one or both sides in some specimens from Myanmar and Yunnan, China. The other subspecies of the Indochinese group very rarely show this feature or even, but also rarely, have a second presubocular on one or both sides. Toward north and east of the distribution *yunnanensis* can also have 2 presuboculars, which appear either on one or both sides of head but these are rare exceptions.

The absence of presuboculars on one or both sides is a character that intensifies in the southern part of the distribution. In the members of the Indomalayan group, except in *callicyanous*, this characteristic is well known to be relatively constant (Schulz, 2010).

According to Schulz (1996, 2010) the number of supralabials in *yunnanensis* vary between 7 and 10. However, a number of 7 and 10 can be considered as rare. Usually 8 to 9 supralabials, with the 4th and 5th or 5th and 6th in contact with the lower edge of the eye. A dorsal scale count of 23 at the neck is rare in *yunnanensis* but sometimes present in *taeniurus*. All other subspecies of the Indochinese group have 25 dorsals at the neck. *Orthriophis t. callicyanous* can be found with 27–29 dorsals around the neck, rarely with 25. All other subspecies of the Indomalayan group show 27–29 dorsals around the neck.

Orthriophis taeniurus yunnanensis is known to occur in Bhutan, China, India, Laos, Myanmar, Thailand and Vietnam (Teynié and David, 2010; Schulz, 2013) and is distinguished from all other subspecies of the Indochinese group by the combination of the following features: dorsum unpatterned 2–3 head lengths behind the head; dorsal blotches elongated and mid-dorsally connected in a butterfly-shape, blotches often with light centres; vertebral stripe 1–4 dorsals wide, narrower toward the tail; tongue reddish-brown or black; 25 (rarely 23) dorsal scale rows at the neck.

5. Conclusions

Since Sclater (1891a, b) and Boulenger (1894), who relegated *Coluber nuthalli* Theobald to the synonymy of *Elaphe taeniura* auct., only a few authors mention Theobald's specific name, always as synonym (Smith, 1943; Das *et al.*, 1998, Schulz, 1996, 2010). In application of Art. 23.9.1., Art. 23.9.2 and Art. 23.9.6 (Reversal of precedence) of the 'Code' (I.C.Z.N., 1999), we herewith state that to our best knowledge, *Coluber nuthalli* Theobald, 1868 has not been used as a valid name after 1899. Its junior secondary synonym *Elaphis yunnanensis* Anderson, 1879, however, was used as a valid name of the Yunnan Beauty Snake in combination as *Elaphe taeniura yunnanensis* or *Orthriophis taeniurus yunnanensis* in at least 40 publications by 24 different senior authors between 1988 and 2013 (see list above). We declare *yunnanensis* Anderson, as published in the binomen *Elaphis yunnanensis*, a protected name (nomen protectum) with priority over *Coluber nuthalli* Theobald (nomen oblitum).

Key to the subspecies of *Orthriophis taeniurus* (modified from Schulz, 2010)

(DSR: dorsal scale rows; SubC: subcaudals; VStripe: width of vertebral stripe in number of dorsal scales)

- 1A.** Body compressed; 225–262 ventrals **2**
1B. Body very distinctly compressed; 272–305 ventrals ...
 **3**
2A. Dorsal pattern H-shaped, ladder-like interconnected,
 or fragmented **4**
2B. Dorsal markings butterfly-shaped, VStripe 4; neck
 without pattern for 1–3 head-lengths **5**
2C. Dorsal markings butterfly-shaped and elongated;
 VStripe 4; neck without pattern for 3–4 head-lengths
 *mocquardi*
3A. Ground colour ochre to light grey; head bluish-grey
 or grey; ventrals monochrome **6**
3B. Ground colour yellowish-olive, grey or cyan; head
 matching body in colour **7**
4A. Snout 3–3.5 times of the eye diameter; VStripe 3
 *schmackeri*
4B. Snout 2.5 times of the eye diameter; VStripe 5
 *taeniurus*
5A. Large oval spots; neck without pattern for 1–2 head
 lengths; tongue bluish-black *friesi*
5B. Elongated spots often with light centre; neck without
 pattern for 2–3 head lengths; tongue reddish-brown to
 black *yunnanensis*
6A. No dorsal spots; lateral stripes without transverse
 bands; SC 105–122; DSR at neck 29 *ridleyi*

6B. Dorsal spots indistinct; lateral stripes segmented by
 light transverse bands; SubC 82–97; DSR at neck 27.....
 *helfenbergeri*

7A. Dorsal markings butterfly-shaped and elongated;
 lateral stripes light in colour; VStripe 3; SC 116–125
 *callicyanous*

7B. Dorsal pattern indistinct, usually reticulated; VStripe
 2; SubC 92–114 *grabowskyi*

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Appendix 1 Material examined

Orthriophis taeniurus callicyanous

CTNRC without no. (Khao Soi Dao Tai, Pong Nam Ron, Chanthaburi, Thailand, coll. date 28.11.1971); RSA N25785ZISP (Son Kim, Ha Tinh); ZFMK 81450 (holotype of *Orthriophis taeniurus callicyanous*, Ky Anh-Ke, Ha Tinh, Vietnam); ZFMK 86360 (paratype of *Orthriophis taeniurus callicyanous*, Phong Nha-Ke Bang National Park, Quang Binh, Vietnam).

Orthriophis taeniurus grabowskyi

BMNH 79.7.2.3 (Pajo, Sumatra); BMNH 1915.12.2.35 (Sungai Kumbang, Korinchi, Sumatra, 4200 feet); BMNH 1946.1.7.34 (syntype of *Elaphis grabowskyi*, SE Borneo); BMNH 1946.1.7.36 (syntype of *Elaphis grabowskyi*, SE Borneo); BMNH 1978.1966 ("Deer Cave", Gunung Mulu National Park, Borneo); RMNH 4694 (Balum, Muara Labu, Padang, Sumatra); SMF 22440 (Redelong, Atjeh, Sumatra); ZMB 7796 (Borneo); ZMB 30903 (Langkat, Sumatra).

Orthriophis taeniurus helfenbergeri

BMNH 1938.8.7.42 (Muang Fang, Thailand); CAS 235825 („Panlaung-Pyadalin Cave Wildlife Sanctuary“, Ya-ne Village, Yangan Township, Taunggyi District, Myanmar); CTNRC without number (Kaen Krachan Dam, Thailand); NHRM 23013 (holotype of *Coluber taeniurus pallidus*, Kawkareik, Dawna Hills [= Dawna Range], Kayin [Karen], Myanmar).

Orthriophis taeniurus ridleyi

BMNH 1977.1962 (2 miles before Ringlet on main road to Tapah, Malaysia); BMNH 1977.1963 (on main road to Fraser's Hill, Malaysia); PKS 19 („Thailand“); PKS 34 („Malaysia“); PKS 66 („Malaysia“).

Orthriophis taeniurus schmackeri

SMF 18411 (holotype of *Coluber schmackeri* Boettger, Yaeyama, Ryu-Kyu Archipelago, Japan).

Orthriophis taeniurus taeniurus

BMNH 1988.233 ("China"); BMNH 1910.9.11.19 (southern Fujian, China); BMNH 1988.234 ("China"); BMNH 97.11.16.5 (Chusan Island, China); RMNH 442 (northern coast of China); SMF 18405 (Wuhung River, Shanghai); USMN 14608 („Korea“).

Orthriophis taeniurus yunnanensis

BMNH 1946.6.2.1 (lectotype of *Elaphis yunnanensis*, "Momien", Yunnan, China); BMNH 1974.870-871, 2 ex. (Pangnamdin, Myanmar); BMNH 1974.872 (Htingnon, 26°36'N 97°52'E, 3000 feet, Myanmar); BMNH 1909.10.30.6 (Kunming, Yunnan, China); BMNH 1936.7.4.37 (SE-Tibet); BMNH 94.9.11.19 (Darjeeling, India); BMNH 74.7.7.6-8, 3 ex. (western Hills of Beijing, China); CAS 214896 (little village on east bank of Salween River approx. 10 km north of Gongshan, Nu Jiang Prefecture, Yunnan Province, China, 27 48 21.4 N, 98 41 03.9 E, 4950 ft.); PKS 70 (Yunnan, China); PKS 72 (Yunnan, China); ZSI 16634 (Yunnan, China); ZSI 4181 (paralectotype of *Elaphis yunnanensis*, "Momien", Yunnan, China), ZSI 16665 (Yunnan, China); ZSI 7238 (holotype of *Coluber nuthalli*, "Pegu", Myanmar); ZSI 8412 (Chinchona Plantation, Darjeeling, India).

Orthriophis taeniurus ssp.

BMNH 1912.3.19.1 (Kebo, between Mekong and Salween, China); KIZ 80II013, 80II330, 80I340-80I341 (4 ex.), KIZ two specimens without number (Deqen, Yunnan, China, 3000 m a.s.l.).