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Revalidation of *Natrix clerki* Wall, 1925, an overlooked species in the genus *Amphiesma* Duméril, Bibron & Duméril, 1854 (Squamata: Natricidae)

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Abstract

Natrix clerki Wall, 1925, previously known from its sole holotype and considered a synonym of *Amphiesma parallelum* (Boulenger, 1890), is resurrected in the genus *Amphiesma* on the basis of the analysis of morphological variation in 28 specimens of “*Amphiesma parallelum*” auctorum, plus six living, unvouchered specimens discovered in Arunachal Pradesh and Nagaland, India, and one vouchered specimen from Talle Valley in Arunachal Pradesh. Specimens from northeast India (Nagaland), northern Myanmar, and China (Yunnan), previously identified as *Amphiesma parallelum* either in the literature or in museum’s catalogues, are also here referred to *A. clerki*. The holotype of *Amphiesma clerki* is redescribed. As a consequence, the definition of *Amphiesma parallelum* is modified. *A. parallelum* inhabits the Khasi Hills and Naga Hills in Northeast India, whereas *A. clerki* has a wider range in the Eastern Himalayas, northern Myanmar and Yunnan (China). *Amphiesma clerki* differs from *A. parallelum* by its longer tail, dorsal scales more strongly keeled, scales of the first dorsal scale row strongly keeled vs. smooth, a postocular streak not interrupted at the level of the neck, and a much more vivid pattern on a darker background colour. Characters of species of the *Amphiesma parallelum* group, i.e. *A. clerki*, *A. parallelum*, *A. bitaeniatum*, *A. platyceps* and *A. sieboldii* are compared. A key to this group is provided.

Key words: Reptilia, Nepal, India, Myanmar, China, taxonomy

Introduction

The taxonomy of the Asian natricid genus *Amphiesma* Duméril, Bibron & Duméril, 1854 remains in a state of flux, with several species described or resurrected during the last 15 years (David & Das 2003; David *et al.* 2005, 2007, 2010, 2013; Ziegler & Quyet 2006). Currently, this large genus is composed of 42 species. Malnate (1960) addressed the systematics of this genus, previously considered a synonym of the large genus *Natrix* Laurenti, 1768. Malnate defined a group named as “*Amphiesma khasiense* species group” that included *A. khasiense* (Boulenger, 1890), *A. craspedogaster* (Boulenger, 1899), *A. popei* (Schmidt, 1925), *A. pryeri* (Boulenger, 1887), *A. sauteri* (Boulenger, 1909), *A. vibakari* (Boie, 1826), *A. venningi* (Wall, 1910) as well as *A. parallelum* (Boulenger, 1890) and related species. However, Malnate (1960) had pointed out that *Amphiesma parallelum* and the related, striped species differed from other members of his “*A. khasiense* group” by their abruptly and strongly enlarged posterior maxillary teeth. On the basis of these characters, David *et al.* (2013) referred *Amphiesma parallelum* and related species into a distinct, informal species group, that currently includes *Amphiesma parallelum* (Boulenger, 1890), *A. bitaeniatum* (Wall, 1925), *A. octolineatum* (Boulenger, 1904), *A. platyceps* (Blyth, 1854), and *A. sieboldii* (Günther, 1860). Furthermore, *A. metusia* Inger, Zhao, Shaffer & Wu, 1990, a striped species, is tentatively referred to this group due to its color pattern. Species of the *A. parallelum* group, that inhabit the Himalayas and

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APPENDIX. Additional examined specimens.

Amphiesma bitaeniatum ($n = 21$). **Myanmar**. AMNH 48468, “Huton, Kachin Hills, Burma”, now Huton, Kachin State; BMNH 1925.9.17.3, BMNH 1925.12.22.19, “Huton, Kachin Hills, Burma”, now in Kachin State; BMNH 1946.1.13.58, “Kutkai, North Shan States, Burma: 6000 feet”, now Kutkai, Shan State. – **People’s Republic of China. Yunnan Province**. BMNH 1946.1.13.56, “Hotha Valley, Yunnan”, now the valley around Husa, Longchuan County; ZSI 8532, ZSI 8534–36, ZSI 8540, “Hotha, Yunnan”, now Husa, Longchuan County; BMNH 1946.1.21.87, “Sanda, Upper Irrawady”, now Lianghe County; CAS 215037, Nu Jiang Nature Reserve near Pianma, on western slope of Gaoligongshan (26°00’03.2N–98°39’41.6E), ca 7,800 ft, Nu Jiang Xian; SMNH 1259, Yunnan; ZMB 28951, no precise locality; ZSI 8531, “Muangla Valley”, now Muangla, Lianghe County; ZSI 8539, “Ponsee”, now Pengxi, Yinjiang County. **Guangxi Autonomous Province**. 1 specimen, M.W. LAU’s collection (no number), Cenwanglao Shan. – **Thailand**. THNHM 25698 (ex CTNRC 980506), Doi Inthanon, Chiang Mai Province. — **Vietnam. Lào Cai Province**. BMNH 1930.11.16.5, “Fan-Si-Pan, Lao Kay, Tongking”, now Mt. Phang Si Pang; MNHN 1999.9090, vicinity of Sapa; ROM 38098, Lao Cai.

Amphiesma metusia ($n = 10$). **People’s Republic of China. Sichuan Province**. BMNH 1911.12.19.1, “Szechuan”; CAS 195196–195197, vicinity of elev. 2400 m, 9.5 km north of Tuowu (28°49’N - 102°17’E), on the Hanyuan to Xichang Road, then 1.4 km NNE of dirt road, Liangshan Yizu Autonomous Prefecture; FMNH 18722, “Hsiao Yang Chi”, Sichuan; FMNH 170647, “Sikang”, now eastern Sichuan; FMNH 232805, 9 km west of Bin Ling, Wa Shan Camp, Hongya Xian; FMNH 232806, Hongya Xian; USNM 69926–69927, near Washan; ZMB 27866, Washan.

Amphiesma octolineatum ($n = 52$). **People’s Republic of China. Yunnan Province**. AMNH 21022, AMNH 21024, “Lichiang-fu, 8500 ft”, now Lijiang Naxizu Zizhixian; AMNH 21050, AMNH 21051, “Yunnan: Tengyueh”, now Tengchong County; AMNH 35210, “Yunnan: Hsin Kai”, Yunnan Province; AMNH 66653, “Yunnan: Kunming”; BMNH 1904.11.29.16–20, “Ku-taing Fu”, now Gudong; BMNH 1905.1.30.62, “Tongchuan-fu, Yunnan”, now Dongchuan County; BMNH 1905.5.30.16–20, BMNH 1946.1.12.60, BMNH 1946.1.13.46, BMNH 1946.1.13.57, “Yunnan Fou”, now Kunming; CAS 64272, “Yunnan”; NMW 22486:1–13, “Yungning, Yung Pe, Likiang, Yunnan, S. China” now in Lijiang Naxizu Zizhixian; ZMB 65438–65444, ZMB 65571, ZMB 65576, ZMB 65579, ZMB 65582–65584, “Talifu W-Yunnan”, now Dali County. **Sichuan Province**. MNHN 1912.0267–0271, “Mianning (2000 mètres)”, now Mianning County (28°35’N–102°11’E). **Guizhou Province**. SMNH 2527, Yin River, Fanjing Shan, Hengyuanzi, 1,800 m. – No precise locality. MNHN 1905.0289, MNHN 1907.0012, “Chine”.

Amphiesma platyceps ($n = 8$). **India. Jammu and Kashmir**. MNHN 1988.6484, above Doda, between Makambagi and Ularbagi, Udamphur District, at about 2,800 m; ZMB 7293, “Kashmir”. **Himachal Pradesh**. NMW 18569, NMW18570:1–2, “Simla and Kulu (Himalaya)”, now Shimla and Kullu (Syntypes of *Zamenis himalayanus* Steindachner, 1867). **Sikkim**. FMNH 15827, “Mangpu, Sikkim”. **West Bengal**. NMW 22383:2, NMW 22383:5, Darjeeling.

Amphiesma sieboldii ($n = 23$). **Nepal**. BMNH 1913.5.22.1, “Maikola Valley, E. Nepal”, now Mai Kola; CAS 90690, “Nepal: above Deppur (Elev. 5500 Ft)”; FMNH 109762, Amp Pipal, 4000'; FMNH 131966, Chapagaon, Kathmandu Valley; FMNH 131967, Kathmandu Valley; FMNH 190856, Arun Valley, at Num Bridge across Arun River; FMNH 204499, above Num, 6400' in forest area; FMNH 204500–504, no precise localities; MHNG 1355.72–73, Astam, near Hyangcha, 1600m; MNHN 2003.3614, east of Mounasko Pass, between Surkie Pass and Chheskam, Eastern Region, 2400 m; ZMB 4551, “Himalaya”; ZMB 10231, Sikkim. – **India. West Bengal**. CAS-SU 15973, Darjeeling; NMW 22383:1, NMW 22383:3–4, Darjeeling. – **People’s Republic of China. Xizang Autonomous Region (Tibet)**. CAS 177474, elev. 2,000–2,100 m, between Chinese check point at Zhangmu (Khasa) (28°07’N–85°59’E) and the Nepal border on the Lhasa-Kathmandu Rd., Xigaze Prefecture; CAS 177672–177673, elev. 2,300–2,500 m, between Chinese check point at Zhangmu (Khasa) (28°07’N–85°59’E) and the Nepal border on the Lhasa-Kathmandu Rd., Xigaze Prefecture.