

***Pseudohymenalia bicolor* sp. nov. (Coleoptera: Tenebrionidae: Alleculinae: Gonoderini) from Yunnan, China**

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**Abstract.** A new species of the genus *Pseudohymenalia* Novák, 2008 from China (Yunnan Province) is described as *Pseudohymenalia bicolor* sp. nov. New species is described, illustrated and compared with similar species from Yunnan.

**Key words.** Taxonomy, new species, description, Coleoptera, Tenebrionidae, Alleculinae, Gonoderini, *Pseudohymenalia*, Yunnan Province, China, Palaeartic Region.

INTRODUCTION

Novák (2008) described the genus *Pseudohymenalia* with the type species *Pseudohymenalia yunnanica* Novák, 2008. Species in this genus are known from the south-eastern Palaeartic Region (China) and northern parts of the Oriental Region (Laos, Vietnam). Currently there are nine species in the Palaeartic Region (Novák 2008, 2016, Novák & Pettersson 2008, Masumoto et al. 2019) and further four species in the Oriental Region (Novák 2016).

A new species from China (Yunnan province) is described as *Pseudohymenalia bicolor* sp. nov. reflecting its main feature, a bicoloured (= dichromatic) dorsal surface. This species is illustrated and compared with similar species living in Yunnan Province (*P. turnai* Novák, 2008, *P. viktorai* Novák, 2016, *P. xihouica* Novák, 2016, and *P. yunnanica* Novák, 2008).

MATERIAL AND METHODS

Two important morphometric characteristics used to describe species in the subfamily Alleculinae, the ‘ocular index’ (Campbell & Marshall 1964) and ‘pronotal index’ (Campbell 1965), are also used in this paper. The ocular index equals  $(100 \times \text{minimum dorsal distance between eyes} / (\text{maximum width of head across eyes}))$ . The pronotal index is calculated as  $(100 \times \text{length of pronotum along midline} / (\text{width across basal angles of pronotum}))$ .

In the list of type material, a slash (/) separates data in separate rows. The following collection codes are used:

NHMB – Naturhistorisches Museum, Basel, Switzerland;  
VNPC – private collection of Vladimír Novák, Praha, Czech Republic.

Measurements of body parts and corresponding abbreviations used in text are as follows: AL – total antennae length, BL – maximum body length, EL – maximum elytral length, EW – maximum elytral width, HL – maximum length of head (visible part), HW – maximum width of head, OI – ocular index dorsally, PI – pronotal index dorsally, PL – maximum pronotal length, PW – pronotal width at base, RLA – ratios of relative lengths of antennomeres 1–11 from base to apex (3=1.00), RL/WA – ratios of length / maximum width of antennomeres 1–11 from base to apex, RLT – ratios of relative lengths of tarsomeres 1–5 respectively 1–4 from base to apex (1=1.00).

Measurements were made using an Olympus SZ 40 stereoscopic microscope with continuous magnification and the Soft Imaging System AnalySIS. Photographs were taken using a Canon EOS 550 D camera and Canon Macro Photo Lens MP-E and software Helicon Focus 5.2.

## TAXONOMY

### *Pseudohymenalia bicolor* sp. nov. (Figs. 1–3)

TYPE LOCALITY. China, southeast of Yunnan province, Guangnan, Kuisheng, 23°59'N, 105°03'E, 1500 m a. s. l.

TYPE MATERIAL. **Holotype** (♂): “China, SE Yunnan prov. / Guangnan, KUI SHENG / 23°59'N 105°03'E, 1500m / Jatua leg., 26. V. 2017”, (VNPC). – **Paratypes**: (2 ♂♂, 1 ♀): same data as holotype, (VNPC), (1 ♂): “CHINA, Yunnan prov. / 60 km SEE Kunming / SHILIN (Stone Forest) / 3.–4. vii. 1990 / Vít Kubáň leg.”, (NHMB).

The types are provided with a printed red label: “Pseudohymenalia / bicolor sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020”.

**DESCRIPTION OF HOLOTYPE** (♂). Habitus as in Fig. 1, body small, wide, oval, egg-shaped, strongly convex, dorsal surface from pale brown to blackish brown, slightly shiny, with dense punctuation, dense, recumbent, pale setation and microgranulation, BL 5.31 mm. Widest near two thirds elytra length; BL/EW 2.29.

Head (Fig. 2) reddish brown, wide, transverse, distinctly wider than long, shiny, widest through the eyes. Dorsal surface with pale setation, sparse and coarse, relatively small punctures, distinctly larger than those on pronotum. Anterior part with microrugosities, clypeus with microgranulation, apex straight. Mandibles reddish brown, with sides and apex darker, slightly shiny, glabrous dorsally. HW 1.03 mm; HW/PW 0.52; HL (visible part) 0.70 mm. Eyes very large, transverse, distinctly excised, space between eyes very narrow, slightly narrower than length of antennomere 2; OI equal to 5.90.

Antenna relatively long, distinctly exceeding half body length, AL 3.13 mm; AL/BL 0.59, antennomeres 1–3 pale brown, with pale setation, slightly shiny, antennomeres 4–11 dark blackish brown, rather matte, with dark, dense and recumbent setation, microgranulation and small punctures, antennomeres 4–10 distinctly widest in apex. Antennomere 2 shortest, antennomere 11 longest, each antennomere longer than antennomere 3.

RLA (1–11): 1.86 : 1.23 : 1.00 : 4.09 : 4.14 : 4.00 : 4.09 : 4.36 : 4.09 : 4.09 : 4.55.

RL/WA (1–11): 1.32 : 1.17 : 0.96 : 2.57 : 2.53 : 2.32 : 2.65 : 3.10 : 3.46 : 3.21 : 4.55.

Maxillary palpus reddish brown, slightly shiny, with pale setae and very small punctures. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere knife-shaped.

Pronotum (Fig. 2) reddish brown, wide, transverse, convex, almost semicircular, shiny, approximately as wide as basal humera of elytra. Dorsal surface with long and dense, pale, recumbent setation, fine microgranulation and dense punctuation, punctures small. PL 1.31 mm; PW 1.98 mm; PI equal to 66.09. Border lines narrow and distinct. Posterior angles obtuse, anterior angles indistinct. Lateral and anterior margins arcuate, base bisinuate.

Elytra. Blackish brown, oval, strongly convex, widest near half elytra length, shiny. EL 3.30 mm; EW 2.30 mm; EL/EW 1.44. Dorsal surface with long, dense, recumbent, pale setation, microgranulation and dense punctuation, punctures small. Rows of punctures on elytral striae indistinct. Epipleura well-developed, reddish brown with pale setae and punctures.

Scutellum. Reddish brown with margins dark blackish brown, almost semicircular, with coarse punctures and a few pale setae, shiny.

Legs. Pale reddish brown, narrow, with pale setation and microgranulation. Tarsomeres narrow, pro- and mesotarsomeres 3 distinctly lobed, penultimate tarsomeres not widened and lobed. RLT: 1.00 : 0.46 : 0.35 : 0.31 : 1.39 (protarsus), 1.00 : 0.37 : 0.28 : 0.16 : 0.70 (mesotarsus), 1.00 : 0.38 : 0.17 : 0.46 (metatarsus).

Both anterior tarsal claws with 6 visible teeth.

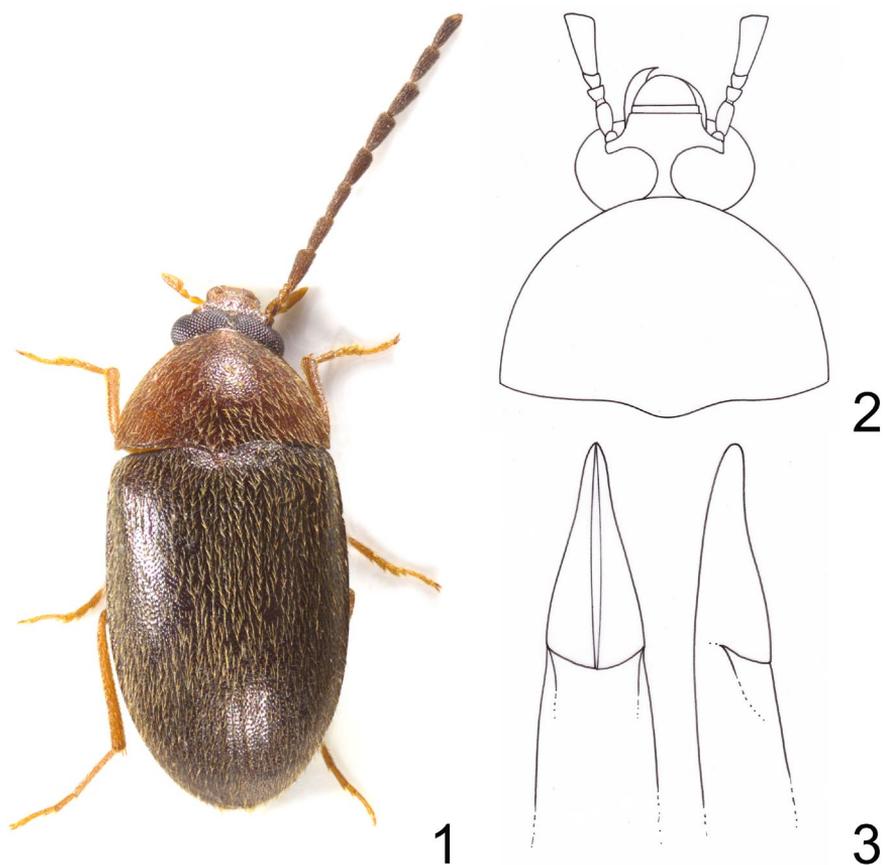
Ventral side of body reddish brown with pale setation and punctuation. Abdominal ventrites dark reddish brown, shiny, with pale, recumbent setation, microgranulation and dense punctuation, punctures small.

Aedeagus (Fig. 3) ochre yellow, rather matte. Phallobasis rounded laterally, slightly narrowing in dorsal view. Parameres triangular in dorsal view, beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 2.98.

SEXUAL DIMORPHISM. Female has space between eyes wider (OI 23) than in male, antennomere 3 is longer than antennomere 2 and both anterior tarsal claws has only 4 teeth.

Measurements of female body. BL 5.49 mm; HL 0.68 mm; HW 0.98 mm; OI 23.08; PL 1.33 mm; PW 2.10 mm; PI 63.33; EL 3.48 mm; EW 2.32 mm; AL 5.49 mm; HW/PW 0.47; BL/EW 2.37; EL/EW 1.50. RLA (1–8): 1.38 : 0.84 : 1.00 : 2.03 : 1.81 : 2.16 : 2.16 : 2.19.

RL/WA (1–8): 1.91 : 1.17 : 1.39 : 2.32 : 1.81 : 2.26 : 2.09 : 2.19. RLT: 1.00 : 0.29 : 0.25 : 0.17 : 0.65 (mesotarsus), 1.00 : 0.36 : 0.17 : 0.49 (metatarsus).



Figs. 1–3. *Pseudohymenalia bicolor* sp. nov. 1 – Habitus of male holotype; 2 – head and pronotum of male holotype; 3 – aedeagus, dorsal and lateral view.

VARIABILITY. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=4). BL 5.26 mm (5.13–5.34 mm); HL 0.70 mm (0.69–0.70 mm); HW 1.02 mm (1.01–1.03 mm); OI 6.07 (5.52–6.79); PL 1.25 mm (1.18–1.31 mm); PW 1.94 mm (1.87–1.98 mm); PI 64.45 (63.10–66.09); EL 3.31 mm (3.26–3.37 mm); EW 2.16 mm (2.07–2.30 mm).

DIFFERENTIAL DIAGNOSIS. Similar species from China (Yunnan) are *Pseudohymenalia turnai* Novák, 2008, *P. viktorai* Novák, 2016, *P. xihouica* Novák, 2016 and *P. yunnanica* Novák, 2008. *Pseudohymenalia bicolor* sp. nov. clearly differs from species from China (Yunnan) mainly by its bicoloured dorsal surface and very narrow space between eyes (OI in males is approximately 6).

NAME DERIVATION. New species is named after its main feature – bicoloured (= dicromatic) dorsal surface.

DISTRIBUTION. China (Yunnan).

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