

NEW SPECIES OF GENUS *AMPHIMENES* BATES, 1873 (COLEOPTERA, CARABIDAE, LEBIINAE) FROM LAOS AND MALAYSIA

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Abstract

The genus *Amphimenes* Bates, 1873 is recorded for China, Laos and Malaysia for the first time. Two new species are described and illustrated: *A.* (s. str.) *kmecoi* sp. n. from Malaysia, and *A.* (s. str.) *hartmanni* sp. n. from Laos. *A.* (*Amblops*) *marginicollis* Fedorenko, 2019 is recorded for China (Yunnan) for the first time.

Keywords: *Amphimenes*, new species, new records.

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INTRODUCTION

The genus *Amphimenes* Bates, 1873 was recently redescribed and revised by Fedorenko (2010) and Fedorenko (2019). There are currently 34 known species (Anichtchenko 2024), most of which have been recently described by Fedorenko (2010), Fedorenko (2014), Fedorenko (2019) and Hunting & Yang (2019), with ambiguous status of *A. minutus* Fedorenko, 2010. Many new species are expected in this genus. In this paper I provide descriptions of new two species, and new additional records of the genus from China, Laos and Malaysia.

MATERIAL AND METHODS

All measurements were made using Nikon SMZ 745T stereomicroscope. Measurements of the total body length (TL) were made from

the front of the clypeus to the apex of elytra. The other measurements were taken at respective maxima, greatest width of the head (HW), labrum (LL, LW), pronotum (PL, PW) and elytron (EL, EW). Dn – distance between base of elytron and discal pore n=1, 2, and 3. The label data of type specimens are reported from pinhead to pinpoint in quotation marks with label lines divided by a single slash and separate labels indicated by a double slash. White label color and rectangular shape, however, were not explicitly noted. All remaining pertinent variants are reported within brackets.

Specimens mentioned here are deposited in the following collections:

DUBC—Daugavpils University Beetle Collection, Latvia.

NME—Naturkundemuseum Erfurt, Germany (M. Hartmann).

Male and female genitalia preparation stored in DMHF (Dimethyl hydantoin formaldehyde resin dissolved in water).

The illustrations were made using a Canon EOS 6D digital camera with a Canon MP-E 65mm macro lens, using StackShot macro rail system and Helicon Focus software, and subsequently edited in Photoshop CC 2019. High-resolution images of species and additional material are available at the “Carabidae of the World” web project (<https://carabidae.org/taxa/amphimenes-bates-1873>).

RESULTS

Amphimenes (s. str.) *kmecoi* sp. n.

(Figs. 1, 3, 4)

Material. Holotype, male: “12.-30.4.2007 Malaysia / Ringlet 926 m.n.m. / N 04°23 E 101°22 / Kremítovský”, “Holotype / *Amphimenes* (s.str.) / *kmecoi* sp.n. / des. Anichtchenko A. 24 [red label, handwritten]” (DUBC).

Diagnosis. This new species is the most southern known representative of the genus, and seems to present transitory features between the subgenus *Amblops* Andrewes, 1931 and the “*medius* – group” of the subgenus *Amphimenes* s. str. (in sense of Fedorenko 2019). With *Amblops* it shares the indistinct temples, and with the nominotypical subgenus shares the transversally rugose intervals of elytra. By the small body size and the aedeagus strongly dilated in ventral view the new species is closely related to *A.* (s. str.) *medius* Fedorenko 2010, known from Southern Vietnam, but can be easily distinguished from it by the indistinct temples, the very narrow margins of pronotum and the occurrence of three discal pores on elytra.

Description. Body length 5.0 mm. Dorsum black, mouthparts, legs and antennae light brown, clypeus and labrum brown (Fig. 1). Gula, trochanters and coxa brownish-red.

Eyes moderately convex, temples indistinct; posterior supraorbital seta situated in distance equal to radius of eye back. Labrum incised anteriorly. Frontal foveae shallow. Microreticulation isodiametric, smoothed on the vertex. Antennae moderately long, surpassing base of pronotum by last joint only.

Pronotum 1.19 times as wide as long, 1.41 times as wide as head, with front angles protruding but slightly rounded apically; sides slightly angulate in front of lateral pore, slightly sinuate before hind angles; not reflexed between lateral pore and anterior angle, very slightly reflexed towards hind angles; lateral margin very narrow, especially so anteriorly. Hind angles straight. Base of pronotum is almost straight. Mid-line reaching anterior border, superficial on the disc, much deeper where adjoining basal transverse depression, latter distinctly separated from a very convex disc; lateral basal foveae indistinct, paramedian foveae flat and almost indistinct. Microreticulation on the disc strong, consist of polygonal meshes, towards the sides meshes becomes almost isodiametric, and towards hind angles meshes turns into small tubercles.

Elytra oval, 1.37 times as long as wide, 1.56 times as wide as pronotum, broadest at about middle, with shoulders strongly rounded; fused along midline; apical truncature hardly sinuate between a rounded outer angle and a pointed apex. Three discal setigerous pores: D1/EL=0.15, D2/EL=0.73 and D3/EL=0.95. All elytral striae deep, crenulato-punctate, intervals strongly transversally striate. Microreticulation strongly transverse, surface slightly iridescent. Hind wings reduced.

Ventral segments smooth, impunctate. Metepisternum short, sub square. Last metasomere with one distal pair of ventral setae only. Claws with four denticles, basal one much smaller. Basal third of male profemur without ventral tubercle.

Aedeagus (Figs. 3-4): median lobe robust, abruptly bent near basal orifice, strongly inflated on left side in ventral view; apical lamella

spatulate, with a rounded tip. Endophallus without distinct structures.

Etymology. This species is named after my friend and colleague Rudolf Kmeco (Czechia),

who kindly provided a lot of interesting material for determination.

Distribution. Known only from the type locality in Malaysia.



Figures 1-2. Habitus of *Amphimenes* in dorsal view. 1 – *A. (s. str.) kmecoi* sp. n., Holotype. 2 – *A. (s. str.) hartmanni* sp. n., holotype. Images courtesy A. Anichtchenko.

***Amphimenes (s. str.) hartmanni* sp. n.**
(Figs. 2, 5, 6)

Material. Holotype, male: “NE – Laos, Pr. Hua Phan / Ban Saleui, Phou Pan (Mt.) / ~ 20°12N, 104°01E / 31.V.2011, 1300-1900m, / local collector”, “collection / NATURKUNDE - / MUSEUM ERFURT [yellow label]”, “Holotype / *Amphimenes (s.str.) / hartmanni* sp.n. / des. Anichtchenko A. 24 [red label, handwritten]” (NME).

Diagnosis. This new species belongs to the

“*piceolus*”-group sensu Fedorenko (2019). In general appearance, by the reduced hind-wings and the shape of aedeagus it is closely related to *A. (s. str.) asahinai* Nakane, 1957, known from Taiwan, from which it can be distinguished by the small size, the narrow lateral margins of pronotum and the shape of median lobe of aedeagus, curved before the middle in lateral view, and wide in dorsal view.

Description. Body length 4.5 mm. Dorsum brown, mouthparts, legs and antennae light brown, clypeus and labrum brown (Fig. 2).

Gula, trochanters and coxa brownish-red.

Eyes flattened, temples about half as long as eye; posterior supraorbital seta situated in distance equal to radius of eye back. Labrum slightly incised. Frontal foveae shallow. Microreticulation consists of polygonal meshes. Antennae long, surpassing base of pronotum by two and half last joints.

Pronotum 1.25 times as wide as long, 1.42 times as wide as head, with front angles slightly protruding and rounded apically; sides slightly angulate in front of lateral pore, weakly sinuate before hind angles; not reflexed between lateral pore and anterior angle, very slightly reflexed towards hind angles; lateral margin narrow, gradually expanding from anterior angles towards hind angles. Hind angles obtuse. Base of pronotum slightly protruding backwards. Mid-line reaching anterior border, superficial on the disc. Basal foveae flat and indistinct. Microreticulation on the disc very strong, almost isodiametric, towards the sides meshes becomes stronger, and towards hind angles meshes turns into small tubercles.

Elytra oval, 1.32 times as long as wide, 1.66 times as wide as pronotum, broadest at about middle, with shoulders strongly rounded; not

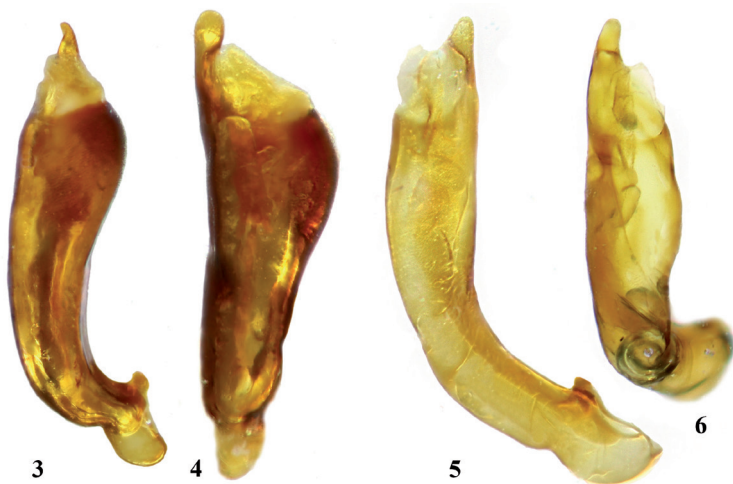
fused along midline; apical truncature moderately sinuate between a rounded outer angle and a pointed apex. Three discal setigerous pores: $D1/EL=0.32$, $D2/EL=0.78$ and $D3/EL=0.94$. All elytral striae deep, gently punctate, intervals moderately transversally striate, on the disc of elytra transverse striation becomes weak. Microreticulation strongly transverse. Hind wings reduced.

Ventral segments smooth, impunctate. Metepisternum short, subsquare. Last metatarsomere with two distal pairs of ventral setae. Claws with four denticles, basal one much smaller. Basal third of male profemur with obtuse and wide ventral tubercle.

Aedeagus (Figs. 5-6): median lobe elongate, in lateral view evenly rounded dorsally and bended at an obtuse angle before the middle ventrally; apical lamella elongate, with a rounded tip. Endophallus without distinct structures.

Etymology. This new species is named for Matthias Hartmann, Coleoptera specialist, and Managing Director at Naturkundemuseum Erfurt (Germany).

Distribution. Known only from type locality in Laos.



Figures 3-6. Aedeagus structure of *Amphimenes* in lateral and dorsal view. 3-4 – *A. (s. str.) kme-coi* sp. n. 5-6 – *A. (s. str.) hartmanni* sp. n. Images courtesy A. Anichtchenko.

***Amphimenes (Amblops) marginicollis* Fedorenko, 2019**

Material. 1 male: “China, Yunnan/Honghe, Qibaofeng, 1350m, 23°4’4.2N 103°23’46.9E, 17.vi.2018, A. Weigel leg.” (NME); 1 male: “China, Yunnan/Honghe, Qibaofeng, 1350m, 23°4’4.2N 103°23’47E, 13.v.2018, EKL, leg. L.Z. Meng (QBF13)” (NME); 1 female: “China, Yunnan/Honghe, Gulinqin, 585m, 22°43’51N, 103°59’35E, 07.V.2019, leg. L.Z. Meng FIT5” (NME).

Diagnosis. Species easily recognizable by the unique combination of red pronotum (except for narrow dark stripe along mid-line) with black head and elytra (Fig. 7). The structure of the aedeagus in this species is unique. The median lobe is greatly expanded in the middle, weakly sclerotized in this place on right side and has a membranous window.

Distribution. Previously, this species was known from type locality only (N Vietnam, Nghe An Prov.). This is the first country record for China.



Figure 7. Habitus of *Amphimenes (Amblops) marginicollis* Fedorenko, 2019. Image courtesy A. Anichtchenko.

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