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Bolbostetha andrei sp. nov., a new species from Ko Kut Island (Thailand) (Coleoptera: Tenebrionidae: Alleculinae: Alleculini)

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Abstract. A new species of Alleculini Laporte, 1840 - *Bolbostetha andrei* sp. nov. from Thailand (Ko Kut Island) is described and illustrated including male genitalia.

INTRODUCTION

The genus *Bolbostetha* Fairmaire 1896 with the type species *Bolbostetha soleata* Fairmaire 1896 was established by Fairmaire (1896). Borchmann (1910) knew only two species worldwide, Novák & Pettersson (2008) five species and Novák (2020a) six species from the Palaearctic Region. The genus comprises 50 species today (Novák 2008, 2020b, 2022 and 2024); 40 living in the Oriental Region and 10 species are known from the Palaearctic Region. Only two species are known from the territory of Thailand so far: *Bolbostetha huahinica* Novák, 2020 and *Bolbostetha thailandica* Novák, 2020.

A new species, *Bolbostetha andrei* sp. nov. is described, illustrated including male genitalia and compared with the most similar species, *Bolbostetha huahinica* Novák, 2020.

MATERIAL AND METHODS

Two important morphometric characteristics used for the descriptions of species of the subfamily Alleculinae, the 'ocular index' dorsally (Campbell & Marshall 1964) and 'pronotal index' (Campbell 1965), are used in this paper as well. The ocular index equals (100 × minimum dorsal distance between eyes) / (maximum width of head across eyes). The pronotal index is calculated as (100 × length of pronotum along midline) / (width across basal angles of pronotum).

'Type material' information is taken from recent locality labels.

In the list of type material, a slash (/) separates data in separate rows, a double slash separates data (//) on different labels.

The following collection codes are used:

ASGG André Skale, private collection, Gera, Germany;
NMEG Naturkundemuseum, Erfurt, Germany;
VNPC Vladimír Novák, private collection, Praha, Czech Republic.

Measurements of body parts and corresponding abbreviations used in the 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 with an Olympus SZ 40 stereoscopic microscope with continuous magnification and with the Soft Imaging System AnalySIS. Snapshots were taken by using camera Canon EOS 550 D and Canon Macro Photo Lens MP-E and software Helicon Focus 7.7.5.

TAXONOMY

Genus *Bolbostetha* Fairmaire, 1896

Type species: *Bolbostetha soleata* Fairmaire, 1896: 117.

Bolbostetha andrei sp. nov.
(Figs. 1, 3, 5, 7, 9, 11)

Type locality. Central Thailand, Trat Province, Ko Kut Island.

Type material. Holotype (♂): C- THAILAND Trat. Prov. / Ko Kut Isl., 21 - 27.XI.. / 2024, leg. A. Skale, (VNPC). Paratypes: (7 ♂♂, 12 ♀♀): same data as holotype, (ASGG, NMEG, VNPC). The types are provided with a printed red label: 'Bolbostetha / andrei sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2025'

Description of holotype. Habitus as in Fig. 1, body large-sized, elongate, *Leptura*-shaped, semi-matte, dorsal surface black with pale and dark setae, punctures and fine microgranulation, BL 12.03 mm. Widest at basal half of elytral length; BL/EW 3.17.

Head (Fig. 3) as wide as long, through the eyes approximately as wide as anterior margin, narrower than base of pronotum. Dorsal surface semi-matte with dense, coarse punctures and long, pale setae and microgranulation. Posterior part black, anterior part reddish brown. Clypeus reddish brown, transverse, surface with long, pale setae, fine microgranulation and small punctures, excised at middle of anterior margin. Mandibles large, reddish brown, glabrous, shiny, sides with long pale setae and apex blackish brown, HW 1.74 mm; HW/PW 0.65; HL (visible part) 1.74 mm. Eyes large, transverse, excised, space between eyes distinctly narrower than diameter of one eye or length of antennomere 1; OI equal to 20.46.

Antenna long (AL 10.32 mm, distinctly exceeding three quarters body length - AL(1-11)/BL 0.86). Antennomeres narrow, pale reddish brown, dorsal surface with recumbent, pale setae, dense, small and shallow punctures and microgranulation. Antennomeres 1-3 semi-matte, antennomeres 4-11 matte. Antennomere 2 shortest, antennomeres 4-11 longer than antennomere 3.

RLA(1-11): 0.57 : 0.23 : 1.00 : 1.67 : 1.40 : 1.33 : 1.33 : 1.27 : 1.20 : 1.20 : 1.03.
RL/WA(1-11): 2.27 : 1.27 : 5.00 : 7.14 : 6.00 : 6.67 : 8.00 : 7.60 : 7.20 : 7.20 : 7.75.

Maxillary palpus pale reddish brown, semi-matte, with long pale setae and very small, shallow punctures and fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere widely triangular.

Pronotum (Fig. 3) black, shiny, convex, bell-shaped, widest in basal half, narrower than elytra at humeri. Dorsal surface with pale setae, dense and coarse punctures with very fine microgranulation inside punctures. PL 2.27 mm; PW 2.67 mm; PI equal to 85.02. Border lines very narrow, margins distinct dorsally only in the middle of anterior margin not clearly conspicuous. Base bisinuate, anterior margin arcuate, anterior angles indistinct, posterior angles roundly obtuse.

Elytra. Black, elongate, slightly convex, matte, widest in basal half of elytral length. Dorsal surface with pale setae, elytral striae with coarse punctures, space between punctures narrower than diameter of punctures. Elytral intervals slightly convex, without punctures, with microgranulation. EL 8.02 mm; EW 3.79 mm; EL/EW 2.12.

Scutellum. Black, semi-elliptical, elevated up to level of elytra, semi-matte, with a few pale setae, punctures and microgranulation.

Elytral epipleura well-developed, black, with sparse, dark and pale setae and punctures, narrowing to ventrite 1, then relatively narrow leading toward parallel on apical part.

Legs. Long, blackish brown. Dorsal surface with pale setae and fine microgranulation. Protibiae (Fig. 5) dark reddish brown with angle near middle, excised in apical part and two teeth against each other on the inside. Pro- and metafemora with a few small tubercles ventrally. Tarsi pale reddish brown, protarsomeres 1-4, mesotarsomeres 2-4 and penultimate metatarsomere widened and lobed. RLT: 1.00 : 0.78 : 0.78 : 1.17 : 1.61 (protarsus); 1.00 : 0.80 : 0.64 : 0.68 : 1.04 (mesotarsus); 1.00 : 0.36 : 0.48 : 0.86 (metatarsus).

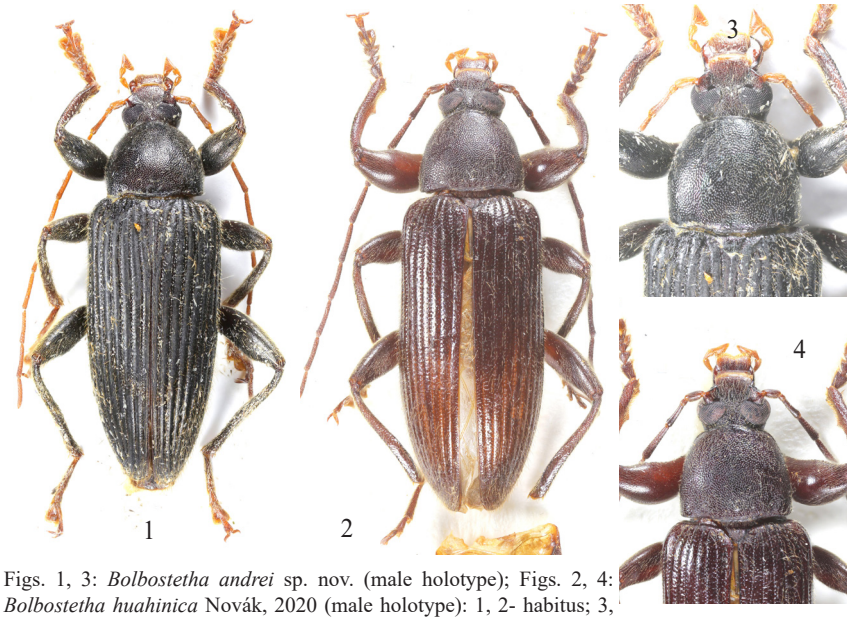
Protarsal claws pale reddish brown, with more than 40 teeth.

Ventral side of body black with pale setae. Abdomen (Fig. 7) black, shiny with pale setae and small punctures. Ultimate ventrite very slightly excised in sides.

Aedeagus (Figs. 9, 11) pale reddish brown, shiny. Basal piece slightly rounded laterally and narrowing in dorsal view. Apical piece narrow laterally and beak-shaped from dorsal and lateral views. Ratio of length of apical piece to length of basal piece in dorsal view 1: 3.11.

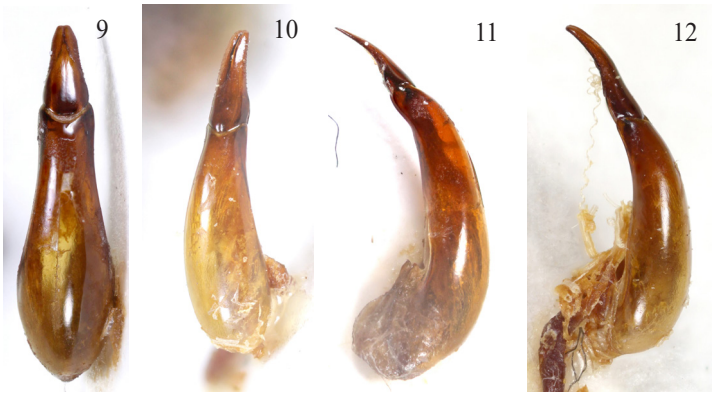
Female has no markings of sexual dimorphism on legs, antenna is shorter than in male (AL/BL 0.66) - reaching two thirds body length. Protarsal claws have less teeth than male.
Measurements of female body. BL 14.50 mm; HL 1.91 mm; HW 1.91 mm; OI 31.00; PL 2.78 mm; PW 3.29 mm; PI 84.50; EL 9.81 mm; EW 4.72 mm; AL 9.57 mm; AL/BL 0.66; HW/PW 0.58; BL/EW 3.07; EL/EW 2.08.
RLA(1-11): 0.52 : 0.28 : 1.00 : 1.51 : 1.39 : 1.44 : 1.45 : 1.41 : 1.32 : 1.27 : 1.15.
RL/WA(1-11): 1.83 : 2.00 : 5.67 : 8.10 : 7.89 : 8.22 : 7.79 : 8.47 : 9.00 : 8.06 : 6.88.

Variability. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=8). BL 13.26 mm (12.03-14.64 mm); HL 1.82 mm (1.71-1.95 mm); HW 1.84 mm (1.72-1.97 mm); OI 23.87 (20.46-27.31); PL 2.47



Figs. 1, 3: *Bolbostetha andrei* sp. nov. (male holotype); Figs. 2, 4: *Bolbostetha huahinica* Novák, 2020 (male holotype): 1, 2- habitus; 3, 4- head and pronotum.

Figs. 5, 7: *Bolbostetha andrei* sp. nov. (male paratype); Figs. 6, 8: *Bolbostetha huahinica* Novák, 2020 (male holotype): 5, 6- protibia; 7, 8- abdomen.



Figs. 9, 11: *Bolbostetha andrei* sp. nov. (male paratype); Figs. 10, 12: *Bolbostetha huahinica* Novák, 2020 (male holotype): 9, 10- aedeagus dorsal view; 11, 12- aedeagus, lateral view.

mm (2.27-2.80 mm); PW 2.94 mm (2.67-3.32 mm); PI 84.76 (82.51-86.81); EL 8.93 mm (8.02-9.89 mm); EW 4.18 mm (2.79-4.63 mm). Females (n=12). BL 13.30 mm (10.94-15.02 mm); HL 1.85 (1.52-2.05 mm); HW 1.86 mm (1.56-2.07 mm); OI 33.35 (31.00-34.83); PL 2.63 mm (2.19-2.93 mm); PW 3.18 mm (2.61-3.49 mm); PI 82.90 (80.25-85.17); EL 7.81 mm (7.05-10.15 mm); EW 4.48 mm (3.68-5.05 mm).

Differential diagnosis. Similar species is *Bolbostetha huahinica* Novák, 2020 (compared with male holotype) from Hua Hin Province from mainland of Thailand (Figs. 2, 4, 6, 8, 10, 12).

The new species *Bolbostetha andrei* sp. nov. is clearly different from the species *B. huahinica* mainly by colouring of the antenna (pale reddish brown) as in Figs. 1 and 3, by the elytral intervals without punctures, by the ultimate ventrite only slightly excised on sides (Fig. 7), by the shape of the protibiae (Fig. 5) and by the shape of the aedeagus (Figs. 9 and 11); while *B. huahinica* has antennae dark (Figs. 2 and 4), the elytral intervals have small punctures, the ultimate ventrite has distinct excision from both sides (Fig. 8), the shape of the protibiae is as in Fig. 6 and the shape of the aedeagus is as in Figs. 10 and 12.

Etymology. Patronymic, dedicated to the collector of the type series - André Skale (Gera, Germany), after his first name.

Distribution. Thailand (Ko Kut Island).

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