

**New genera of Alleculinae (Coleoptera: Tenebrionidae: Alleculinae: Alleculini)
from the Oriental Region. Part X - *Bobisthes* gen. nov.**

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Abstract. A new genus of Alleculinae *Bobisthes* gen. nov. with the species *Bobisthes bellator* sp. nov. (type species) from Cambodia, Laos, Myanmar and Thailand is described and illustrated. The new genus is compared with similar genera *Borboresthes* Fairmaire, 1897 and *Bobina* Novák, 2015.

INTRODUCTION

The tenth part of descriptions of new Alleculinae genera from the Oriental Region follows previous works by the present author (Novák 2009, 2010, 2011, 2016a, b, 2017, 2018a, b, c).

The new genus *Bobisthes* gen. nov. is described to include the new species *Bobisthes bellator* sp. nov. from Cambodia, Laos, Myanmar and Thailand.

The new genus is compared with similar genera *Borboresthes* Fairmaire, 1897 and *Bobina* Novák, 2015. The differentiating characters are mainly strong femora and tibiae, protibiae of male with club-shaped extensions, lateral and anterior margins of pronotum arcuate, ultimate antennomere arcuate, half drop shaped, widest near middle, male antennomeres 4-10 distinctly widest in apex, apex of elytron rounded and ultimate ventrite of male with a V-shaped excision.

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 $(100 \times \text{minimum dorsal distance between eyes}) / (\text{maximum width of head across eyes})$. 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 or examined material, a slash (/) separates data in separate rows.

The following collection codens are used:

IRSNB Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium;
NHMB Naturhistorisches Museum, Basel, Switzerland;
VNPC private collection of Vladimír Novák, Praha, Czech Republic;

ZSMG Zoologische Staatssammlung, München, Germany.

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 ($1=1.00$).

Other abbreviations used in text are as follows: bf= black frame, wl= white label, yl= yellow label.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continuous magnification and with 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 5.2.

TAXONOMY

***Bobisthes* gen. nov.**

Type species: *Bobisthes bellator* sp. nov.

Description. Habitus as in Fig. 1, body strong, elongate oval, slightly convex, dorsal surface with punctuation, microgranulation and pale setation, BL (males) 9.3-10.3. Widest near one third elytra length; BL/EW 2.98. Head (Fig. 2) relatively small, slightly wider than long, with fine microgranulation, long, pale setation and dense punctuation, punctures medium-sized. Clypeus with small, shallow punctures, dense, pale setation and microrugosities, apex straight. Mandibles strong and shiny. Eyes large, transverse, excised, space between eyes narrow, approximately as wide as or slightly narrower than diameter of one eye, approximately as wide as length of antennomere 1 and distinctly narrower than length of antennomere 3; OI (in males) 28.3-34.5. Antennae (Fig. 3) long, distinctly exceeding half body length, with relatively long, dense, recumbent, pale setation, fine microgranulation and shallow punctures. Antennomere 2 shortest, antennomere 4 longest, each of antennomeres 4-11 distinctly longer than antennomere 3. Ultimate antennomere arcuate, half drop shaped, widest near middle. Maxillary palpus slightly shiny, with long and relatively dense, pale setation and fine microgranulation. Ultimate palpomere widely triangular. Pronotum (Fig. 2) transverse, slightly longer than semicircular, with long and relatively sparse, semierect setae and dense punctuation, punctures small, approximately as large as in head, interspaces between punctures narrow, with microgranulation, dorsal surface matte. Border lines narrow, but distinct and complete. Lateral margins arcuate, anterior margin slightly arcuate, posterior margin bisinuate, anterior angles indistinct, posterior angles rectangular. Ventral side of body with punctuation and short pale setation. Abdomen with long pale setation, ventrites 1-3 paler than ultimate and penultimate ventrites. Ultimate ventrite v-shaped excised (as in

Fig. 5). Elytron elongate oval, widest near middle. Dorsal surface with dense, semierect, relatively long, pale setation, matte. Elytral striae with distinct rows of medium sized punctures distinctly larger than those in disc of pronotum, elytral interspaces slightly convex, with microgranulation and very small, sparse and shallow punctures. Scutellum transverse, broadly triangular with microgranulation and a few pale setae. Elytral epipleura well developed, with pale setae and one row of large punctures in basal part, regularly narrowing to ventrite 1, then relatively wide with dense pale setation leading parallel. Femora and tibiae strong, with relatively dense and long, pale setation, very small punctures and microgranulation. Protibiae with club shaped extensions (Fig. 4). Pro- and mesotarsomeres 3, 4 and metatarsomere 3 widened and lobed. Both anterior tarsal claws with 25 visible teeth. Aedeagus (Figs. 6 and 7) large and robust, pale reddish brown, shiny. Basal piece slightly arcuate laterally and slightly narrowing dorsally. Apical piece very short, beak-shaped dorsally and laterally.

Female. Without distinct differences, only both anterior tarsal claws with 11 visible teeth, protibiae without club shaped extensions, ultimate ventrite without v-shaped excision and antennomeres 4-10 more filiform, narrower than in male RL/WA almost more than 4.

Differential diagnosis. Species of new genus *Bobisthes* gen. nov. are similar to those of the genus *Borboresthes* Fairmaire, 1897 and *Bobina* Novák, 2015.

Species of *Bobisthes* differ from species of *Borboresthes* mainly by habitus more elongate, only slightly oval (as in Fig. 1), by femora and tibiae strong, male protibiae with club-shaped extensions (Fig. 4), by ultimate antennomere arcuate, half drop shaped, widest near middle, male antennomeres 4-10 distinctly widest in apex and ultimate ventrite of male with v-shaped excision (Fig. 5); while *Borboresthes* species have habitus almost oval, convex, egg-shaped, femora and tibiae are narrower and thicker than in *Bobisthes*, protibiae in males are without club-shaped extensions, males without V-shaped excision on ultimate ventrite, ultimate antennomere is usually narrow (not arcuate and widest in middle) and antennomeres 4-10 are more filiform and narrower than in *Bobisthes*.

Species of *Bobisthes* are distinctly different from species of *Bobina* mainly by dorsal surface of body matte, by lateral and anterior margin of pronotum arcuate, by anterior angles of pronotum indistinct and posterior angles rectangular, by male protibiae with club shaped extensions (Fig. 4), by ultimate antennomere arcuate, half drop shaped, widest near middle, male antennomeres 4-10 distinctly widest in apex, by apex of elytra rounded and ultimate ventrite of male with V-shaped excision (Fig. 5); while *Bobina* species have dorsal surface shiny or slightly shiny, lateral margins of pronotum straight or very slightly arcuate, anterior margin is usually excised, anterior angles of pronotum are distinct, posterior angles are sharp, protibiae of males are usually bent, antenna is narrow, filiform, also ultimate antennomere is narrow, apex of elytron usually ended by short extension and ultimate ventrite is without excision.

Etymology. The compound name formed by “*Bobī*” marking similarity to the genus *Bobina* Novák, 2015 and the ending - “*sthes*” marking similarity to the genus *Borboresthes* Fairmaire, 1897. Gender: masculine.

Distribution. Cambodia, Laos, Myanmar, Thailand.

***Bobisthes bellator* sp. nov.**

(Figs. 1-7)

Type locality. Myanmar, Pegu State, Toungoo.

Type material. Holotype (♂): wl: 29-31.V.2003 / BURMA – PEGU State / TOUNGOO / KLÍCHA M. Lgt., (VNPC). Paratypes: (2 ♀♀): same data as holotype, (VNPC); (1 ♂, 1 ♀): yl: Coll. I.R.Sc.N.B. / CAMBODIA / (Bat Tambang Prov.) / Prek Toal (Tonled sap / lake) day catch / 06-VII-2005 / Leg. I. Var, (IRSCNB); (1 ♂): yl: Coll. I.R.Sc.N.B. / CAMBODIA Prek Toal / (Tonled Sap Lake) / 27.V.2003 – Light trap / Leg. J. Constant, K. / Smets & P. Grootaert, (VNPC); (1 ♂): THAILAND occ. / SANGKHLABURI / REJSEK 29.10.1994, (VNPC); (1 ♀): wl with bf: THAI, 28.IV.-6.V.1991 / UMPHANG riv. 1000m / 16°07'N 99°00'E / Vít Kubáň leg. / wl with bf: Thailand 91 / „Thanom Thong Chai“ / D. Král & V. Kubáň, (NHMB); (1 ♂): wl: Laos 1963 / Umgeb. Vanky, (ZSMG) (1 ♂): wl: Laos 1963 / Umgeb. Paklay, (ZSMG). The types are provided with a printed red label: 'Bobisthes / bellator sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2018'.

Description of holotype. Habitus as in Fig. 1, body strong, elongate oval, slightly convex, dorsal surface from pale reddish brown to dark brown, with punctuation, microgranulation and ochre yellow setation, BL 10.34 mm. Widest near one third elytra length; BL/EW 2.98.

Head (Fig. 2) relatively small, slightly wider than long, with fine microgranulation, long, ochre yellow setation and dense punctuation, punctures medium sized. Posterior part brown or reddish brown, with sparse pale setae, distinctly darker than reddish brown or pale reddish brown anterior part. Clypeus pale reddish brown with small, shallow punctures, dense, ochre yellow setation and microrugosities, apex straight. Mandibles strong, pale reddish brown with sides and apex dark, shiny. HW 1.67 mm; HW/PW 0.62. HL (visible part) 1.58 mm. Eyes large, transverse, excised, space between eyes approximately as wide as diameter of one eye, approximately as wide as length of antennomere 1 and distinctly narrower than length of antennomere 3; OI equal to 32.32.

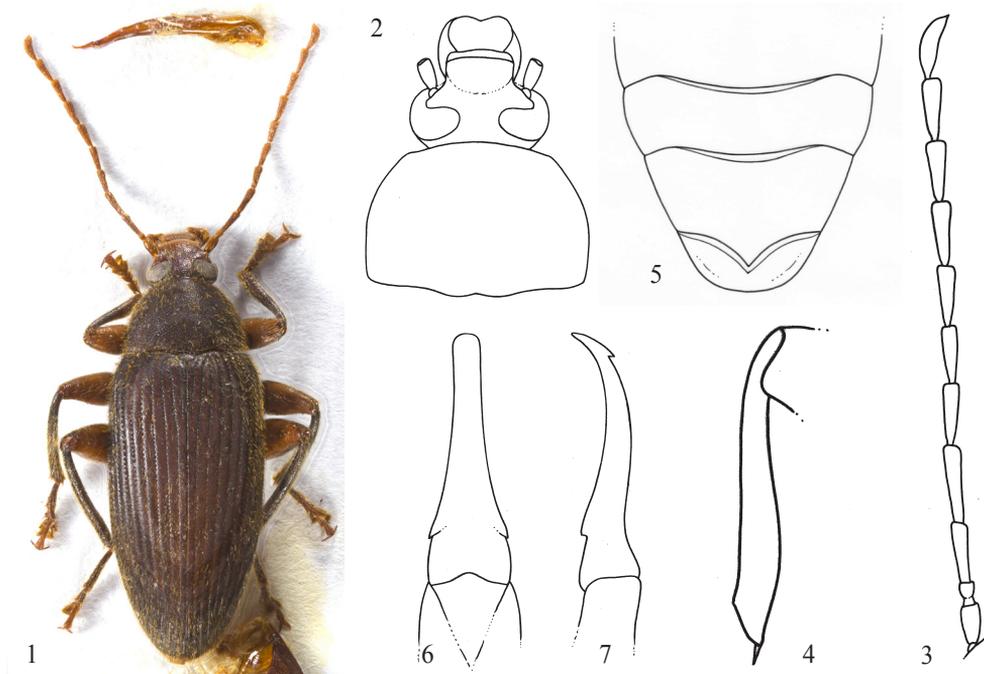
Antennae (Fig. 3). Long (AL 5.82 mm, distinctly exceeding half body length AL/BL 0.56), with relatively long, dense, ochre yellow, recumbent setation, fine microgranulation and shallow punctures. Antennomeres 1 and 2 pale reddish brown and slightly shiny, antennomeres 3 and 4 more matte, dark reddish brown, antennomeres 5-11 reddish brown, matte. Antennomere 2 shortest, antennomere 4 longest, each of antennomeres 4-11 distinctly longer than antennomere 3. Ultimate antennomere arcuate, half drop shaped, widest near middle.

RLA(1-11): 0.74 : 0.33 : 1.00 : 1.27 : 1.01 : 1.02 : 1.07 : 1.16 : 1.07 : 1.08 : 1.19.

RL/WA(1-11): 2.03 : 1.50 : 3.77 : 4.38 : 3.36 : 3.27 : 3.07 : 3.20 : 3.18 : 3.46 : 3.81.

Maxillary palpus pale brown, slightly shiny, with long and relatively dense, ochre yellow setation and fine microgranulation. Ultimate palpomere widely triangular, palpomeres 2 and 3 distinctly dilated anteriorly.

Pronotum (Fig. 2). Dark brown, transverse, slightly longer than semicircular, with long and relatively sparse, semierect, ochre yellow setae, dense punctuation, punctures small, approximately as large as in head, interspaces between punctures narrow, with microgranulation, matte. Border lines narrow, but distinct and complete. Lateral margins



Figs. 1-7: *Bobisthes bellator* sp. nov.; Figs. 1-4: male holotype: 1- habitus; 2- head and pronotum; 3- antenna; 4- anterior tibia; 5- ultimate and penultimate ventrites of male; 6- aedeagus, dorsal view; 7- aedeagus, lateral view.

arcuate, anterior margin slightly arcuate, posterior margin bisinuate, anterior angles indistinct, posterior angles rectangular. PL 1.70 mm; PW 2.69 mm; PI equal to 63.20.

Ventral side of body blackish brown with punctuation and short pale setation. Abdomen with long pale setation, distinctly denser near sides than in middle, ventrites 1-3 reddish brown with microgranulation and dense shallow punctuation, punctures small, shiny. Ultimate and penultimate ventrites blackish brown, punctuation indistinct, matte. Ultimate ventrite V-shaped excised as in Fig. 5.

Elytron dark reddish brown, elongate oval, widest near middle. Dorsal surface with dense, semierect, ochre yellow, relatively long setation, matte. Elytral striae with distinct rows of medium sized punctures distinctly larger than those in disc of pronotum, elytral interspaces slightly convex, with microgranulation and very small, sparse and shallow punctures. EL 7.06 mm; EW 3.47 mm. EL/EW 2.04.

Scutellum. Dark brown, transverse, broadly triangular with microgranulation and a few pale setae.

Elytral epipleura well developed, reddish brown, with pale setae and one row of large punctures in basal part, regularly narrowing to ventrite 1, then relatively wide with dense pale setation leads parallel.

Legs long and strong, with relatively dense and long, ochre yellow setation, very small punctures and microgranulation. Femora strong, pale reddish brown, tibiae, meso- and

metatarsomeres 1 and 2 black, rest of tarsomeres brown, tibiae slightly dilated anteriorly, protibiae with club shaped extensions (Fig. 4). Pro- and mesotarsomeres 3, 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.67 : 0.74 : 0.86 : 1.25 (protarsus); 1.00 : 0.34 : 0.46 : 0.52 : 0.83 (mesotarsus); 1.00 : 0.29 : 0.35 : 0.57 (metatarsus).

Both anterior tarsal claws with 25 visible teeth.

Aedeagus (Figs. 6 and 7). Large and robust, pale reddish brown, shiny. Basal piece slightly arcuate laterally and slightly narrowing dorsally. Apical piece very short, beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 7.77.

Female without distinct differences, only both anterior tarsal claws with 11 visible teeth, protibiae without club shaped extension, ultimate ventrite without v-shaped excision and antennomeres 4-10 more filiform, narrower than in male RL/WA almost more than 4.

Measurements. BL 9.47 mm; HL 1.48 mm; HW 1.54 mm; OI 34.17; PL 1.69 mm; PW 2.60 mm; PI 65.00; EL 6.60 mm; EW 3.45 mm; AL(1-11) 5.66 mm; AL(1-11)/BL 0.60; BL/EW 2.75; HW/PW 0.59; EL/EW 1.91.

RLA(1-11): 0.75 : 0.35 : 1.00 : 1.21 : 0.94 : 0.95 : 1.07 : 1.11 : 1.05 : 1.06 : 1.18.

RL/WA(1-11): 1.94 : 1.32 : 3.77 : 6.82 : 4.59 : 4.16 : 4.24 : 4.00 : 3.96 : 4.00 : 4.08.

RLT: 1.00 : 0.67 : 0.67 : 0.71 : 1.58 (protarsus); 1.00 : 0.49 : 0.48 : 0.63 (metatarsus).

Variability. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=6). BL 9.66 mm (9.29-10.34 mm); HL 1.49 mm (1.37-1.58 mm); HW 1.52 mm (1.45-1.67 mm); OI 31.16 (28.32-34.51); PL 1.56 mm (1.42-1.70 mm); PW 2.49 mm (2.37-2.69 mm); PI 62.47 (57.72-65.71); EL 6.64 mm (6.45-7.06 mm); EW 3.31 mm (3.19-3.47 mm). Females (n=4). BL 9.59 mm (9.34-9.98 mm); HL 1.48 mm (1.45-1.51 mm); HW 1.53 mm (1.51-1.54 mm); OI 34.35 (33.05-35.83); PL 1.59 mm (1.54-1.69 mm); PW 2.67 mm (2.60-2.85 mm); PI 61.08 (58.99-65.00); EL 6.59 mm (6.34-6.88 mm); EW 3.50 mm (3.38-3.75 mm).

Etymology. From Latin *bellator* (it means 'warrior').

Distribution. Cambodia, Laos, Myanmar, Thailand.

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