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

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Abstract. A new genus of Alleculinae *Erzika* gen. nov. with the species *Erzika tamdaoica* sp. nov. as a type species from Vietnam and *Erzika turaica* sp. nov. from India (Meghalaya state) are described, illustrated and compared with similar genera.

INTRODUCTION

Fairmaire (1897) described the genus *Borboresthes* Fairmaire, 1897. There is also a similar genus, *Borborella* Novák, 2020, with its type species *Borborella hergovitsi* Novák, 2020. Species of both genera have elongate oval or egg-shaped body. A new genus of Alleculinae is described here as *Erzika* gen. nov. to include the following species: *Erzika tamdaoica* sp. nov. as a type species from Vietnam (Tam Dao in Vinh Phu province) and *Erzika turaica* sp. nov. from India (Meghalaya state). Species of the new genus *Erzika* differ from the species of *Borboresthes* mainly by the body narrow, elongate oval, by ultimate palpomere widely triangular, shoe-shaped, by longest antennomere 3 (distinctly longer than antennomere 4), by anterior tarsal claws of male with a few teeth; while species of the genus *Borboresthes* have the body more or less oval, egg-shaped, ultimate palpomere triangular, antennomere 4 longer than antennomere 3, and anterior tarsal claws of male have more numerous teeth. The species of the new genus *Erzika* is clearly different from the species of the genus *Borborella* mainly by the ultimate palpomere widely triangular, shoe-shaped, by longest antennomere 3 (distinctly longer than antennomere 4), by anterior tarsal claws of male short with a few teeth and by not strongly widened protarsomeres; while species of the genus *Borborella* have the ultimate palpomere triangular, antennomere 4 longer than antennomere 3 and anterior tarsal claws of male long with almost 40 teeth, and protarsomeres 3 and 4 strongly widened and lobed, transverse.

The new genus *Erzika* gen. nov. is compared with the two similar genera *Borborella* and *Borboresthes* and both species *Erzika tamdaoica* sp. nov. and *Erzika turaica* sp. nov. are described, illustrated and compared together.

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 the '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).

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

The following collection codes are used:

NHMB collection of 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).

Other abbreviations are used as follows: pb = printed black; 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

DESCRIPTION OF THE GENUS *ERZIKA* GEN. NOV.

***Erzika* gen. nov.**

(Figs. 1-12)

Type species. *Erzika tamdaoica* sp. nov.

Description. Habitus as in Figs. 1 or 7, body short and narrow, elongate oval, convex, dorsal surface slightly shiny, with pale setation, punctuation and fine microgranulation, widest near middle elytra length. Head (Figs. 2 and 8) approximately as wide as long, widest through the eyes, distinctly narrower than pronotum at base. Dorsal surface slightly shiny with long, pale setation and punctuation. Eyes large, transverse, slightly excised, space between eyes narrow, approximately as wide as diameter of one eye; narrower than length of antennomere 3. Antenna (Figs. 3 and 9) slightly exceeding half body length, antennomeres rather matte, narrow, filiform, antennomeres 2-10 slightly widened apically, with long, pale, recumbent setation, microgranulation and small punctures. Antennomere 2 shortest, ultimate antennomere widest at middle, half drop-shaped, antennomeres 4-11 distinctly shorter than antennomere 3. Maxillary palpus (Figs. 4 and 10) with pale setation and fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere widely triangular, shoe-shaped. Pronotum (Fig. 2 and 8) wide, transverse, almost semicircular, convex, shiny, at base as wide as elytra at humeri. Dorsal surface with pale setation, very fine microgranulation and dense punctuation. Border lines distinct, narrow. Lateral margins straight in basal part, arcuate in apical half. Anterior margin arcuate, base bisinuate. Posterior angles obtuse, anterior angles indistinct. Elytra long and narrow, elongate oval, slightly convex, slightly shiny, widest near middle, with long, pale setation. Elytral epipleura well developed, with pale setae and punctures, widest near base, distinctly narrowing to ventrite 1, then relatively wide, leading parallel in apical part. Legs long, narrow, surface with fine microgranulation and pale setation. Protibiae slightly dilated anteriorly. Femora stronger. Penultimate tarsomeres widened and lobed. Metatarsomere 1 distinctly longer than metatarsomeres 2-4 together. Both anterior tarsal claws with only a few visible teeth. Aedeagus (Figs. 5, 6 and 11, 12) relatively long and narrow. Basal piece rounded laterally and narrowing in dorsal view. Apical piece elongate triangular in dorsal view, knife-shaped dorsally and laterally.

Female without distinct differences, only body more robust, slightly wider than in male.

Differential diagnosis. The most similar genera are *Borborella* Novák, 2020 and *Borboresthes* Fairmaire, 1897.
Erzika gen. nov. is clearly different from species of *Borborella* mainly by the ultimate palpomere widely triangular, shoe-shaped, by the longest antennomere 3 (distinctly longer than antennomere 4), by the anterior tarsal claws of male small with a few teeth and by the not strongly widened protarsomeres; while species of the genus *Borborella* have the ultimate palpomere triangular, antennomere 4 longer than antennomere 3 and anterior tarsal claws of male long, with almost 40 teeth, and protarsomeres 3 and 4 strongly widened and lobed, transverse.
Erzika gen. nov. clearly differs from species of the genus *Borboresthes* Fairmaire, 1897 mainly by the body narrow, elongate oval, by the ultimate palpomere widely triangular, shoe-shaped, by the longest antennomere 3 (distinctly longer than antennomere 4, by anterior tarsal claws of male with a few teeth; while species of the genus *Borboresthes* have the body more or less oval, egg-shaped, the ultimate palpomere triangular, antennomere 4 longer than antennomere 3, and anterior tarsal claws of male have more numerous teeth.

Etymology. Named after a dog, our new four-legged friend, a female French Bulldog Erzika.

Distribution. India (Meghalaya), Vietnam (Vinh Phu province, Tam Dao).

***Erzika tamdaoica* sp. nov.**

(Figs. 1-6)

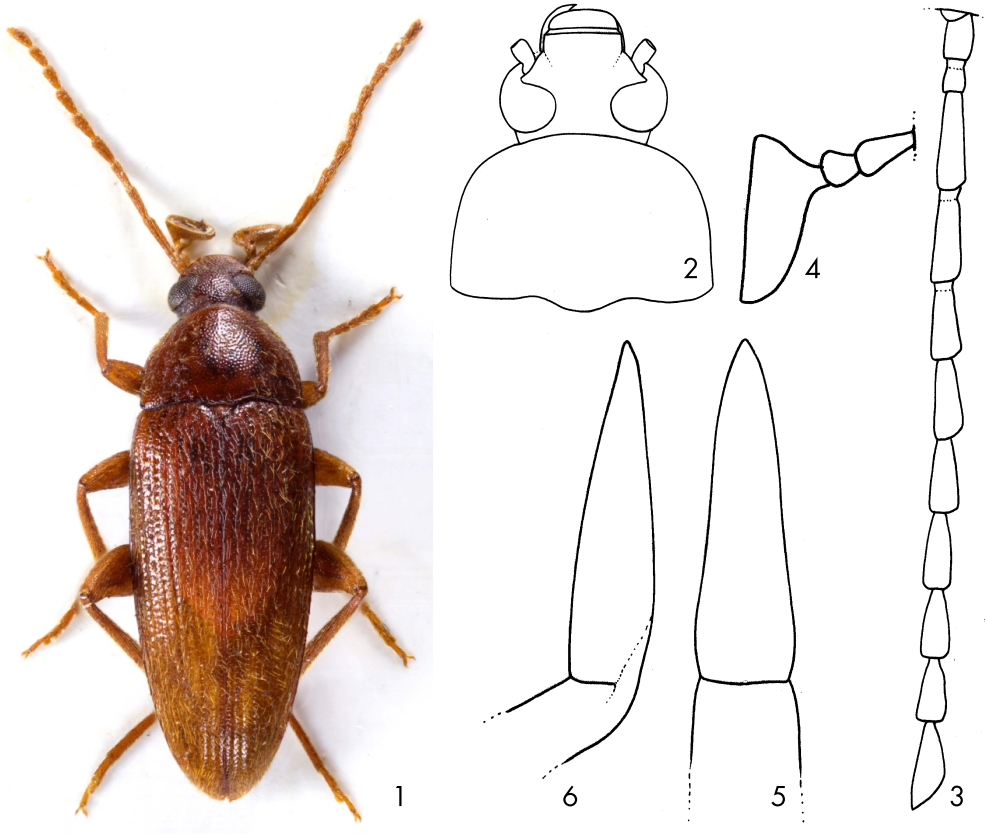
Type locality. North Vietnam, Vin Phu province, Tam Dao.

Type material. Holotype (♂): wl: N. VIETNAM (Tonkin) / TAMDAO (pr. VINHPHU) / 2.-11.6.1985 / Vít Kubáň leg. [pb] // yl: Freiwilliger / Museumsverein / Basel 1987 [pb], (NHMB). Paratypes: (1 ♂): same data as holotype, (VNPC); (1 ♀): wl: Vietnam, Tam dao / 27.5-2.6.1986 / Vinh phu prov. lgt. J. Rybníček [pb], (VNPC). The types are provided with a printed red label: ´Erzika / tamdaoica sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020´.

Description of holotype. Habitus as in Fig. 1, body relatively short and narrow, elongate oval, slightly convex, dorsal surface reddish brown, slightly shiny, with pale setation, punctuation and fine microgranulation, BL 6.40 mm. Widest near middle elytra length; BL/EW 3.25.

Head (Fig. 2) reddish brown, approximately as wide as long, widest through the eyes, distinctly narrower than pronotum at base. Dorsal surface slightly shiny with long, pale setation and punctuation. Posterior part with indistinct microgranulation, with dense, coarse punctures, distinctly larger and denser than those in anterior half. Anterior part with fine microgranulation, clypeus distinctly paler than anterior part. HW 1.06 mm; HW/PW 0.60; HL (visible part) 1.02 mm. Eyes large, transverse, slightly excised, space between eyes narrow, approximately as wide as diameter of one eye; narrower than length of antennomere 3; OI equal to 36.08.

Antenna (Fig. 3). Reddish brown, rather matte (slightly exceeding half body length, AL 3.32 mm; AL/BL 0.52), antennomeres narrow, filiform (antennomeres 2-10 very slightly widened apically), with long, pale, recumbent setation, microgranulation and small punctures. Antennomere 2 shortest, ultimate antennomere widest at middle, half drop-shaped, antennomeres 4-11 distinctly shorter than antennomere 3.
RLA(1-11): 0.40 : 0.33 : 1.00 : 0.94 : 0.80 : 0.80 : 0.77 : 0.78 : 0.70 : 0.64 : 0.82.
RL/WA(1-11): 1.41 : 1.42 : 3.93 : 4.12 : 3.25 : 2.76 : 2.59 : 2.78 : 2.42 : 2.28 : 3.32.



Figs. 1-6. *Erzika tamdaoica* sp. nov. (male holotype): 1- habitus; 2- head and pronotum; 3- antenna; 4- maxillary palpus; 5- aedeagus, dorsal view; 6- aedeagus, lateral view.

Maxillary palpus (Fig. 4) reddish brown, with pale setation and fine microgranulation. Palpomeres 2 and 3 rather matte, distinctly narrowest at base and widest at apex, ultimate palpomere shiny, widely triangular, shoe-shaped.

Pronotum (Fig. 2) reddish brown, wide, transverse, almost semicircular, convex, shiny, at base as wide as elytra at humeri. Dorsal surface with relatively long, pale setation, very fine microgranulation and dense punctuation, punctures relatively large. Intervals between punctures narrow, distinctly narrower than diameter of punctures. PL 1.10 mm; PW 1.76 mm; PI equal to 62.50. Border lines distinct, narrow. Lateral margins straight in basal part, arcuate in apical half. Anterior margin arcuate, base bisinuate. Posterior angles obtuse, anterior angles indistinct.

Elytra. Reddish brown, long and narrow, elongate oval, slightly convex, slightly shiny, widest near middle, with long, pale setation. EL 4.03 mm; EW 1.88 mm; EL/EW 2.17. Elytral striae with not clearly distinct rows of punctures. Elytral interspaces with fine microgranulation and punctures.

Scutellum. Reddish brown, triangular, shiny, with a few setae.

Elytral epipleura well developed, reddish brown, with pale setae and punctures, widest near base, distinctly narrowing to ventrite 1, relatively wide, leading parallel in apical part.

Legs long, narrow, reddish brown, surface with fine microgranulation and pale setation. Protibiae slightly dilated anteriorly. Femora stronger. Penultimate tarsomeres widened and lobed. Metatarsomere 1 distinctly longer than metatarsomeres 2-4 together. RLT: 1.00 : 0.51 : 0.43 : 0.51 : 0.92 (protarsus), 1.00 : 0.35 : 0.24 : 0.30 : 0.50 (mesotarsus), 1.00 : 0.28 : 0.21 : 0.34 (metatarsus).

Both anterior tarsal claws with 4 visible teeth.

Ventral side of body with punctures, prothorax reddish brown, mesoventrite and metaventrite dark reddish brown. Abdomen brown, rather matte, with pale setation, fine microgranulation and dense punctuation, punctures small. Ultimate ventrite with rounded impression in the middle of apex.

Aedeagus (Figs. 5, 6) pale brown, relatively long and narrow, slightly shiny. Basal piece rounded laterally and narrowing in dorsal view. Apical piece elongate triangular in dorsal view, knife-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece in dorsal view 1: 6.40.

Female without distinct differences, only body more robust and slightly wider than in male.
Measurements of female body. BL 7.62 mm; HL 1.23 mm; HW 1.28 mm; OI 33.87; PL 1.17 mm; PW 2.09 mm; PI 55.98; EL 5.22 mm; EW 2.48 mm; AL 3.75 mm; AL/BL 0.49; HW/PW 0.60; BL/EW 3.07; EL/EW 1.63.
RLA(1-11): 0.47 : 0.24 : 1.00 : 0.93 : 0.70 : 0.74 : 0.75 : 0.75 : 0.64 : 0.61 : 0.75.
RL/WA(1-11): 2.11 : 1.21 : 4.48 : 4.48 : 3.15 : 3.00 : 2.94 : 2.53 : 2.41 : 2.47 : 2.94.
RLT: 1.00 : 0.45 : 0.50 : 0.66 : 1.27 (protarsus), 1.00 : 0.29 : 0.16 : 0.28 : 0.54 (mesotarsus), 1.00 : 0.27 : 0.23 : 0.38 (metatarsus).

Variability. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 2). BL 6.19 mm (5.98-6.40 mm); HL 1.01 mm (1.00-1.02 mm); HW 1.05 mm (1.04-1.06 mm); OI 35.53 (34.98-36.08); PL 1.03 mm (0.95-1.10 mm); PW 1.73 mm (1.69-1.76 mm); PI 59.36 (56.21-62.50); EL 4.16 mm (4.03-4.28 mm); EW 1.93 mm (1.88-1.97 mm).

Differential diagnosis. A similar species is *Erzika turaica* sp. nov. from India (Meghalaya state).
Erzika tamdaoica sp. nov. clearly differs from the similar species *E. turaica* mainly by reddish brown dorsal surface of body, by lateral margins of pronotum narrowing in basal part, by rows of punctures in elytral striae not clearly distinct and by shape of aedeagus as in Figs. 5 and 6; while *E. turaica* has dorsal surface of body blackish brown, lateral margins of pronotum straight in basal half, rows of punctures in elytral striae distinct and aedeagus is as in Figs. 11 and 12.

Etymology. Toponymic, named after type locality Tam Dao in Vinh Phu province (Vietnam).

Distribution. Vietnam (Vinh Phu province).

Erzika turaica sp. nov.

(Figs. 7-12)

Type locality. Northeastern India, Meghalaya, 3 km of Tura, 25°30´N 90°14´E, 1150 m.

Type material. Holotype (♂): wl: NE INDIA, Meghalaya 2002 / 3 km TURA, 25°30´N 90°14´E / 1150 m, 6.-12.v.2002 / M. Trýzna & P. Benda lgt. [pb], (VNPC). The type is provided with a printed red label: ´Erzika / turaica sp. nov. / HOLOTYPUS / V. Novák det. 2020´.

Description of holotype. Habitus as in Fig. 7, body relatively short and narrow, elongate oval, slightly convex, dorsal surface from pale brown to blackish brown, shiny, with pale setation, fine microgranulation and punctuation. BL 7.49 mm. Widest near middle elytra length; BL/EW 3.02.

Head (Fig. 8) blackish brown, approximately as wide as long, widest through the eyes, distinctly narrower than pronotum at base. Dorsal surface shiny with pale setation and dense punctuation, intervals between punctures distinctly narrower than diameter of punctures. Posterior part with indistinct microgranulation, anterior part with fine microgranulation, apex distinctly paler than posterior part. Clypeus pale reddish brown with very small punctures and pale setae shorter than those in anterior part. HW 1.28 mm; HW/PW 0.62; HL (visible part) 1.25 mm. Eyes large, transverse, slightly excised, space between eyes narrow, approximately as wide as diameter of one eye; narrower than length of antennomere 3; OI equal to 33.46.

Antenna (Fig. 10). Reddish brown, rather matte (slightly exceeding half body length, AL(1-10) 3.76 mm; AL(1-10)/BL 0.50), antennomeres narrow, filiform (antennomeres 2-10 very slightly widened apically), with long, pale, recumbent setation, microgranulation and small punctures. Antennomere 2 shortest, antennomere 3 longest, antennomeres 4-10 distinctly shorter than antennomere 3.

RLA(1-10): 0.44 : 0.33 : 1.00 : 0.90 : 0.84 : 0.77 : 0.81 : 0.76 : 0.70 : 0.68.

RL/WA(1-10): 1.52 : 1.81 : 5.14 : 4.04 : 2.94 : 3.07 : 2.81 : 2.65 : 2.45 : 2.52.

Maxillary palpus (Fig. 10) pale brown, rather matte, with pale setation and fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere, widely triangular, shoe-shaped.

Pronotum (Fig. 8) blackish brown, wide, transverse, almost semicircular, convex, shiny, at base as wide as elytra at humeri. Dorsal surface with relatively long, pale setation, very fine microgranulation and dense punctuation, punctures relatively small. Intervals between punctures narrow, distinctly narrower than diameter of punctures. PL 1.27 mm; PW 2.07 mm; PI equal to 61.35. Border lines distinct, narrow. Lateral margins straight in basal part, arcuate in apical half. Anterior margin arcuate, base bisinuate. Posterior angles obtuse, anterior angles indistinct.

Elytra. Blackish brown, long and narrow, elongate oval, slightly convex, slightly shiny, widest near middle, with long, pale setation. EL 4.97 mm; EW 2.48 mm; EL/EW 2.00. Elytral striae with distinct rows of punctures. Elytral interspaces slightly convex with microgranulation and very small punctures.

Scutellum. Blackish brown, roundly triangular, with sparse microgranulation, coarse punctures and a few pale setae, shiny.

Elytral epipleura well developed, blackish brown, with pale setae and punctures, widest near base, distinctly narrowing to metaventrite, then relatively wide, leading parallel in apical part.

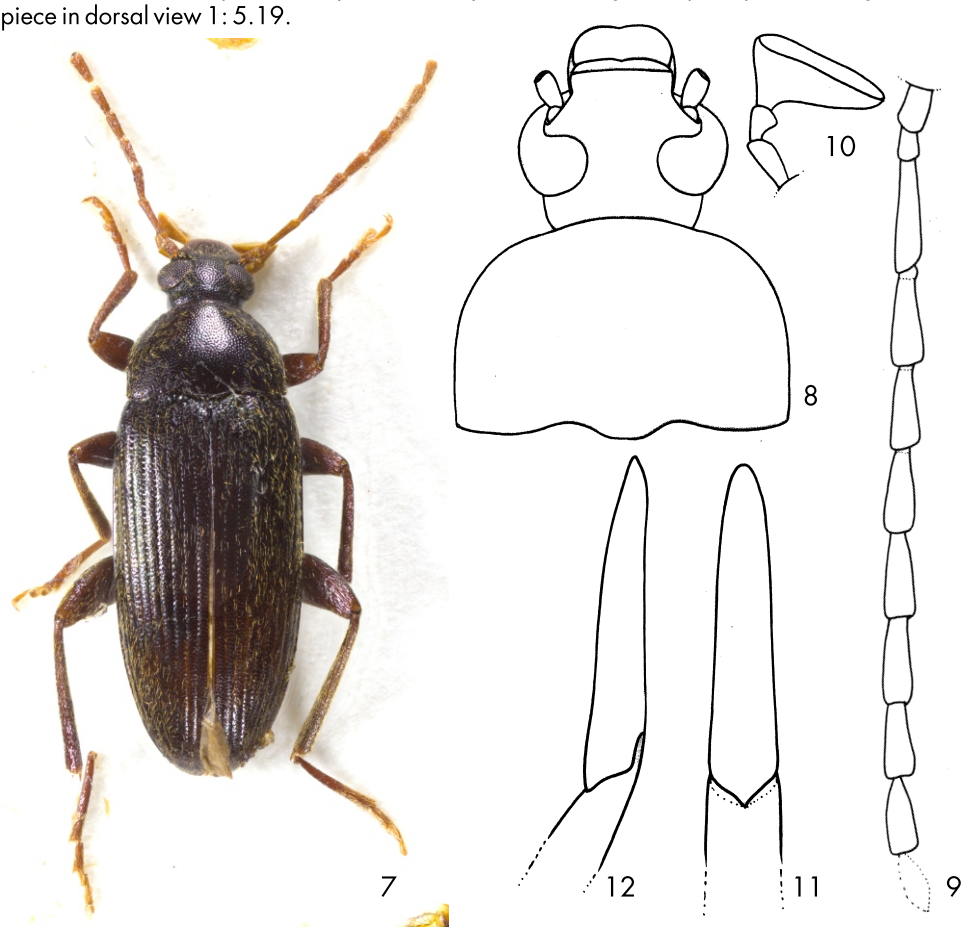
Legs long, narrow, reddish brown, tarsi pale reddish brown, surface with fine microgranulation, very small punctures and pale setation. Protibiae slightly dilated anteriorly. Femora stronger. Penultimate tarsomeres widened and lobed. Metatarsomere 1 distinctly longer than metatarsomeres 2-4 together. RLT: 1.00 : 0.52 : 0.39 : 0.65 : 1.04 (protarsus), 1.00 : 0.31 : 0.24 : 0.26 : 0.53 (mesotarsus), 1.00 : 0.32 : 0.18 : 0.40 (metatarsus).

Anterior tarsal claws with 4 visible teeth.

Ventral side of body blackish brown, with punctures. Abdomen blackish brown, slightly shiny,

with pale setation, fine microgranulation and dense punctuation, punctures very small. Ultimate ventrite reddish brown with rounded shallow, pale brown impression in the middle of apex.

Aedeagus (Figs. 11, 12) ochre yellow, relatively long and narrow, rather matte. Basal piece rounded laterally and narrowing in dorsal view. Apical piece short, elongate triangular from dorsal view, knife-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece in dorsal view 1: 5.19.



Figs. 7-12. *Erzika turaica* sp. nov. (male holotype): 7- habitus; 8- head and pronotum; 9- antenna; 10- maxillary palpus; 11- aedeagus, dorsal view; 12- aedeagus, lateral view.

Differential diagnosis. A similar species is *Erzika tamdaoica* sp. nov. from Vietnam (Vinh Phu province).

Erzika turaica sp. nov. clearly differs from the similar species *E. tamdaoica* mainly by dorsal surface of body blackish brown, by lateral margins of pronotum straight in basal half, by rows of punctures in elytral striae distinct and by shape of aedeagus (Figs. 11 and 12); while *E. tamdaoica* has dorsal surface of body reddish brown, lateral margins of pronotum narrowing in basal part, rows of punctures in elytral striae not clearly distinct and shape of aedeagus is as in Figs. 5 and 6.

Etymology. Toponymic, named after type locality Tura in Meghalaya state (India).

Distribution. India (Meghalaya state).

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