# A contribution to knowledge of Alleculinae (Coleoptera: Tenebrionidae) fauna of Myanmar, with description of a new species and *Fifinoides chinensis* gen. and sp. nov.

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Taxonomy, new genus, new species, descriptions, Coleoptera, Tenebrionidae, Alleculinae, Alleculini, Cteniopodini, Allecula, Borbonalia, Borboresthes, Fifinoides, Gerdacula, Psis, Cteniopinus, Oriental Region, Myanmar

Abstract. A new genus of Alleculinae Fifinoides gen. nov. with the species Fifinoides chinensis sp. nov. (Chin State) and the species Borbonalia kachinica sp. nov. (Kachin State), Borbonalia langeri sp. nov. (Chin State), Borboresthes pulchra sp. nov. (Chin and Kachin States, Laos), Borboresthes volkeri sp. nov. and Borboresthes vulpes sp. nov. (both from Kachin State), Gerdacula emawbumica sp. nov. (Kachin State), Psis myanmarensis sp. nov. (Kachin State), Cteniopinus sp. nov., Cteniopinus voluta sp. nov. all from Kachin State and Cteniopinus conus sp. nov. from Chin State. The new genus and new species are described, illustrated and compared with similar genera or similar species known from Myanmar. A new distributional data for species Allecula arunachalica Novák, 2017 (Myanmar, Kachin State) is added. The species of the genus Borbonalia Novák, 2014 are listed for the first time from the Oriental Region.

#### INTRODUCTION

Alleculine fauna of Myanmar (earlier known as Burma) are poorly explored. Only Borchmann (1938 and 1941), Fairmaire (1896) and Pic (1925) described some species in the genera Allecula Fabricius, 1801, Apalmia Fairmaire, 1896, Bolbostetha Fairmaire, 1896, Borboresthes Fairmaire, 1897, Paracistela Borchmann, 1941 and Cistelina Seidlitz, 1896.

I got a new material from Myanmar collected by German coleopterists in Chin State (West Myanmar) and Kachin State (North Myanmar).

New species are described as follows: Borbonalia kachinica sp. nov. (Kachin State), Borbonalia langeri sp. nov. (Chin State), Borboresthes pulchra sp. nov. (Chin and Kachin States, Laos), Borboresthes volkeri sp. nov. and Borboresthes vulpes sp. nov. (both from Kachin State), Fifinoides chinensis gen. and sp. nov. from Chin State, Gerdacula emawbumica sp. nov. (Kachin State), Psis myanmarensis sp. nov. (Kachin State), Cteniopinus cypraea sp. nov., Cteniopinus lambis sp. nov., Cteniopinus voluta sp. nov. all from Kachin State and Cteniopinus conus sp. nov. from Chin state. All new species are illustrated and compared with similar species.

New distributional data for species *Allecula arunachalica* Novák, 2017 (Myanmar, Kachin State) are added. Species of the genus *Borbonalia* Novák, 2014 are listed for the first time from the Oriental Region.

## 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 ( $100 \times 100 \times 10$ 

Material examined was collected in Myanmar (Chin and Kachin States in years 2006, 2008, 2010 and 2015.

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

The following collection codes are used:

KMTJ private collection of Kimio Masumoto, Tokio, Japan;

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 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**

## Alleculini Laporte, 1840

## genus Allecula Fabricius, 1801

# Allecula arunachalica Novák, 2017

(Figs. 1-5)

Allecula arunachalica Novák, 2017: 21.

Type locality. Northeastern India, Dirang Vicinity in Arunachal Pradesch, 27°21-23′N, 92°13-16′E, 1400 - 1700 m.

**Material examined.** (1  $\footnote{a}$ ): MYANMAR (Burma) / Provinz Kachin State; 3 km NW / Three River Junction (Thone chaung sone) / N 26° 22′14.9′′ E 098°41′04.2′′ / 3.X.2010 (H=2.450 m; LF) / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC).

**Remarks.** Examined male specimen is in main morphological characters similar to the holotype specimen from Arunachal Pradesh (see figs. 1- habitus; 2- head and pronotum; 3- antenna; 4 and 5- aedeagus in Novák 2017: 22). OI equal to 14.06 (in holotype 15.20); PI equal to 74.24 (in holotype 79.56); antennomeres 4-11 more than twice longer than antennomere 3. Basal half of posterior femora orange (in holotype black).

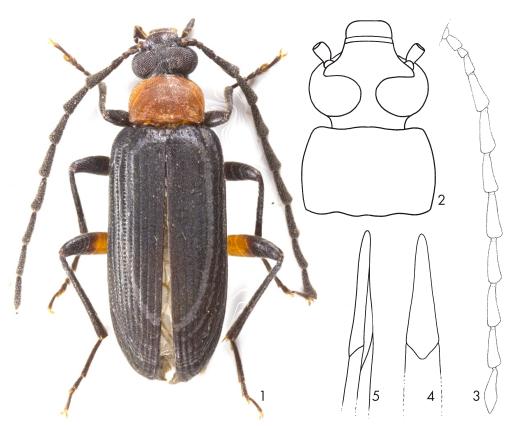
Measurements of examined male. BL 6.67 mm; HL 1.06 mm; HW 1.19 mm; OI 14.06; PL 0.98 mm; PW 1.32 mm; PI 74.24; EL 4.63 mm; EW 2.06 mm; AL 5.52 mm; AL/BL 0.83; HW/PW 0.80; BL/EW 3.24; EL/EW 2.25; AED 1: 3.96.

RLA(1-11): 0.90: 0.47: 1.00: 2.14: 2.17: 2.12: 2.31: 2.38: 2.28: 2.12: 2.26.

RL/WA(1-11): 2.08: 1.17: 2.15: 2.36: 2.80: 2.80: 3.05: 3.29: 4.00: 4.56: 5.04.

RLT: 1.00:0.48:0.37:0.59:1.12 (protarsus), 1.00:0.42:0.30:0.28:0.67 (mesotarsus), 1.00:0.32:0.21:0.50 (metatarsus).

**Distribution.** Bhutan, India (Arunachal Predesch). New for territory of Myanmar.



Figs. 1-5. Allecula arunachalica Novák, 2017 (male from Myanmar): 1- Habitus; 2- head and pronotum; 3- antenna; 4-aedeagus, dorsal view; 5-aedeagus, lateral view.

## genus Borbonalia Novák, 2014

## Borbonalia kachinica sp. nov.

(Figs. 6-9)

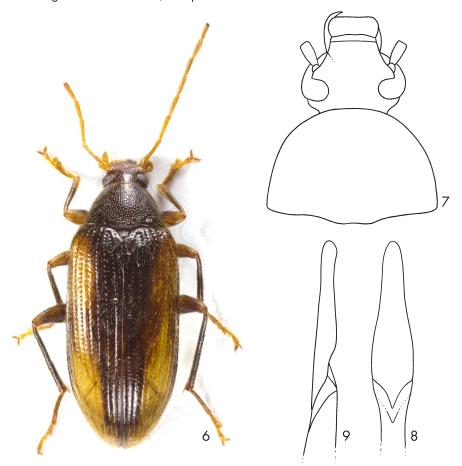
**Type locality.** Myanmar, Kachin state, 3 km NW of Three River Junction (Thone chaung sone), N 26° 22′14.9′′, E 098°41′04.2′′.

**Type material.** Holotype (3): MYANMAR (Burma) / Provinz Kachin State; 3 km NW / Three River Junction (Thone chaung sone) / N 26° 22′14.9′′ E 098°41′04.2′′ / 3.X.2010 (H=2.450 m; LF) / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). Paratypes: (1  $\,^\circ$ ): same data as holotype, but N 26° 23′12.6′′ E 098°39′36.3′′ / 2.X.2010 (H=2.044 m, (VNPC); (1  $\,^\circ$ ): MYANMAR (Burma) / Provinz Kachin State / Mt. Emaw Bum nach Kanphant / 28.V.2006 / leg. Michael Langer // Waldcamp - Holzmeiler / H=2.358 m / N 26°09′232′′ / E 098°31′164′′, (VNPC). The types are provided with a printed red label: 'Borbonalia / kachinica sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020′.

**Description of holotype.** Habitus as in Fig. 6, body elongate, slightly oval, convex, dorsal surface shiny, from ochre yellow to dark brown, with punctuation, very fine microgranulation and pale setation, BL 7.58 mm. Widest in two thirds of elytra length; BL/EW 2.84.

Head (Fig. 7) relatively small, slightly wider than long. Posterior part shiny with long, sparse,

pale setae, dorsal surface with sparse punctures and sparse microgranulation, distinctly darker than anterior part. Anterior half with microgranulation, setation and denser punctuation than in posterior part and with microrugosities near insertions of antenna. Clypeus ochre yellow, rather matte, with long and dense, pale setation, straight in apex. Mandibles glabrous dorsally, shiny, lateral margins dark. HW 1.10 mm; HW/PW 0.60. HL (visible part) 0.97 mm. Eyes transverse, excised, space between eyes wide, distinctly wider than diameter of one eye and approximately as wide as length of antennomere 3; OI equal to 50.00.



Figs. 6-9. Borbonalia kachinica sp. nov. (male holotype): 6- Habitus; 7- head and pronotum; 8- aedeagus, dorsal view; 9-aedeagus, lateral view.

Antenna. Ochre yellow, filiform, antennomeres narrow, with long, pale setation and microgranulation. Antennomere 2 shortest, antennomeres 4-8 distinctly longer than antennomere 3, antennomeres 3-8 more than 4 times longer than wide.

RLA(1-8): 0.43 : 0.27 : 1.00 : 1.43 : 1.08 : 1.21 : 1.18 : 1.12. RL/WA(1-8): 1.29 : 1.16 : 4.61 : 6.61 : 5.00 : 5.56 : 5.16 : 4.65.

Maxillary palpus ochre yellow, rather matte, with long, pale setae. Palpomeres 2 and 3

narrowest at base, widest in apex. Ultimate palpomere widely triangular.

Pronotum (Fig. 7) dark brown, wide, widest in base, distinctly narrower than elytra at base, convex. Dorsal surface with dense and long, semierect, pale setation and dense punctuation, punctures large, intervals between punctures very narrow and shiny. Border lines narrow, but distinct. Lateral and anterior margins arcuate. Posterior margin finely bisinuate, anterior angles indistinct, posterior angles roundly rectangular or very slightly obtuse. PL 1.04 mm; PW 1.82 mm; PI equal to 57.14.

Elytron parallel, convex, widest near two thirds elytra length. Dorsal surface shiny, bicolor (dark brown longitudinal strip and lateral margins, rest ochre yellow as in Fig. 1), with long, pale, semierect setation. Elytral striae with distinct rows of large and coarse punctures, elytral intervals slightly convex with very fine microgranulation and very small punctures. EL 5.57 mm; EW 2.67 mm; EL/EW 2.09.

Scutellum. Blackish brown, pentagonal shape, rather matte, with microgranulation and long, pale setae.

Elytral epipleura well developed, blackish brown in basal part, with a few pale setation and punctures, distinctly narrowing to ventrite 1, then reddish brown leads parallel.

Legs long and narrow, pale reddish brown. Dorsal surface with dense, pale setation, small and shallow punctures and microgranulation. Pro- and mesotarsomeres 3 and 4 and metatarsomeres 3 distinctly widened and lobed. RLT: 1.00: 0.54: 0.56: 0.75: 1.53 (protarsus), 1.00: 0.33: 0.29: 0.40: 0.93 (mesotarsus), 1.00: 0.28: 0.24: 0.57 (metatarsus).

Anterior tarsal claws with 14 and 15 visible teeth.

Ventral side of body dark brown, with pale setation and punctures. Abdomen with sparse, pale setae, fine microgranulation and sparse, shallow punctures. Ventrites 1 and 2 dark reddish brown, ventrites 3 and 4 dark brown, ultimate ventrite reddish brown in basal half and with ochre yellow apical part.

Aedeagus (Figs. 8 and 9). Ochre yellow, slightly shiny. Basal piece slightly rounded in lateral view and slightly narrowing in dorsal view. Apical piece elongate and roundly triangular from dorsal view and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 3.26.

**Female** without distinct differences, only anterior tarsal claws have 7 visible teeth.

Measurements of female body. BL  $7.51\,\text{mm}$ ; HL  $1.02\,\text{mm}$ ; HW  $1.17\,\text{mm}$ ; OI 50.20; PL  $1.06\,\text{mm}$ ; PW  $2.04\,\text{mm}$ ; PI 51.96; EL  $5.43\,\text{mm}$ ; EW  $2.84\,\text{mm}$ ; AL(1-11)  $4.46\,\text{mm}$ ; AL(1-11)/BL 0.59; BL/EW 2.64; HW/PW 0.57; EL/EW 1.91.

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RLA(1-11): 0.59 : 0.39 : 1.00 : 1.49 : 1.09 : 1.06 : 1.02 : 1.03 : 0.89 : 0.93 : 0.96.

RL/WA(1-11): 1.89 : 1.59 : 4.09 : 7.88 : 5.44 : 5.59 : 5.41 : 4.65 : 4.44 : 5.25 : 5.38.

RLT: 1.00 : 0.56 : 0.56 : 0.64 : 1.68 (protarsus); 1.00 : 0.24 : 0.35 : 0.38 (metatarsus).
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**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Females (n=2). BL 7.80 mm (7.51-8.09 mm); HL 1.05 mm (1.02-1.07 mm); HW 1.20 mm (1.17-1.23 mm); OI 49.43 (48.65-50.20); PL 1.11 mm (1.06-1.15 mm); PW 2.14 mm (2.04-2.23 mm); PI 51.77 (51.57-51.96); EL 5.65 mm (5.43-5.87 mm); EW 3.02 mm (2.84-3.19 mm).

**Differential diagnosis.** No species of *Borbonalia* is known from the territory of Myanmar or in the Oriental Region. Species with pale spots in apical part of elytron are known from China as

Borbonalia brancuccii Novák, 2014, Borbonalia murzini Novák, 2014 and Borbonalia tibetica Novák, 2014.

Borbonalia kachinica sp. nov. distinctly differs from similar species B. brancuccii Novák, 2014, B. murzini Novák, 2014 and B. tibetica Novák, 2014 mainly by dorsal surface of elytron ochre yellow with dark spots (species from China have dorsal surface of elytron dark with small pale spots in apical part), by shape of pronotum and shape of apical piece of aedeagus.

*B. kachinica* is clearly different from a species *Borbonalia langeri* sp. nov. mainly by dorsal surface of elytron of two color (as in Fig. 6) and antennomeres 3-10 of one color; while *B. langeri* has dorsal surface of elytron of one color and apex of dark antennomeres 3-10 is pale.

**Etymology.** Toponymic, named after Kachin State in Myanmar.

**Distribution.** Myanmar (Kachin State). The first species of the genus *Borbonalia* ocurring in the Oriental Region.

# Borbonalia langeri sp. nov.

(Figs. 10-13)

**Type locality.** Myanmar, Chin state, Chin Hills, 20 miles camp (Horn Bird Station).

**Type material.** Holotype (♂): MYANMAR (Burma) / Chin State; Chin Hills / 20 miles camp / (Horn Bird Station) / 27. - 30. VI. 2008 / leg. M. Langer, (VNPC). Paratypes: (3 ♂♂): same data as holotype, (VNPC); (2 ♂♂, 1 ♀): MYANMAR (Burma) / Chin State; Chin Hills / 30 miles camp / (Orchid Station) / 24. - 27. VI. 2008 / leg. M. Langer, (VNPC). The types are provided with a printed red label: 'Borbonalia / langeri sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020'.

**Description of holotype.** Habitus as in Fig. 10, body elongate, parallel, convex, dorsal surface dark brown, slightly shiny, with punctuation, fine microgranulation and pale setation, BL 6.68 mm. Wides near middle elytra length; BL/EW 2.60.

Head (Fig. 11) dark brown, relatively small, wider than long, dorsal surface with long, pale setation and microgranulation, rather matte. Posterior part with denser punctuation than in anterior half, punctures medium sized and relatively shallow. Clypeus ochre yellow, with long, pale setation. HW 1.09 mm; HW/PW 0.61. HL (visible part) 0.83 mm. Eyes transverse, excised, space between eyes wide, distinctly wider than diameter of one eye and slightly wider than length of antennomere 3; OI equal to 44.49.

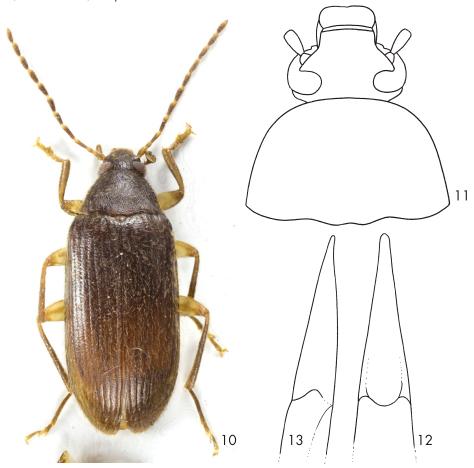
Antenna. Relatively short (AL 3.70 mm, slightly exceeding half body length, AL/BL 0.55), antennomeres narrow, filiform, with long setation, microgranulation and shallow punctures. Antennomeres 1 and 2 ochre yellow, slightly shiny, rest of antennomeres brown with ochre yellow apex, rather matte. Antennomere 2 shortest, antennomere 3 almost two times longer than antennomere 2, antennomere 4 longest, each of antennomeres 4-10 distinctly longer than antennomere 3 and slightly widened anteriorly. Antennomeres 3-11 more than 3 times longer than wide.

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RLA(1-11): 0.99: 0.53: 1.00: 1.45: 1.33: 1.32: 1.28: 1.36: 1.28: 1.19: 1.36.
RL/WA(1-11): 2.21: 1.70: 3.37: 4.39: 3.57: 3.12: 3.36: 4.00: 3.97: 3.11: 3.58.
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Maxillary palpus pale brown, rather matte, with pale setae. Palpomeres 2 and 3 distinctly widened anteriorly. Ultimate palpomere widely triangular and distinctly darker than penultimate.

Pronotum (Fig. 11) brown, widest at base, slightly narrower than elytra in humeri, convex. Dorsal surface rather matte, with dense and long, recumbent, pale setation and dense, shallow punctuation, punctures large. Border lines narrow, but distinct. Lateral and anterior margins

arcuate. Posterior margin bisinuate, anterior angles indistinct, posterior angles obtuse. PL 1.01 mm; PW 1.79 mm; PI equal to 56.43.



Figs. 10-13. Borbonalia langeri sp. nov.: Figs. 10, 11: male holotype: 10- Habitus; 11- head and pronotum; 12- aedeagus, dorsal view; 13- aedeagus, lateral view.

Elytron elongate, parallel, convex, widest near middle elytra length. Dorsal surface shiny, brown, with long, pale setation. Rows of punctures in elytral striae distinct, punctures small. Elytral intervals slightly convex, with microgranulation and shallow punctures as large as those in striae. EL 4.84 mm; EW 2.57 mm; EL/EW 1.88.

Scutellum. Dark brown, pentagonal shape, shiny, with microgranulation and long, pale setae. Elytral epipleura well developed, dark brown, with long and relatively dense, pale setation, narrowing to ventrite 1, then leads wide and parallel.

Legs long and narrow, femora ochre yellow, tibiae and tarsi slightly darker than femora. Dorsal surface with pale setation, very small punctures and microgranulation. Protibiae stronger, more widespread anteriorly than mesotibiae. Pro- and mesotarsomeres 3 and 4 and metatarsomeres 3 widened and lobed. RLT: 1.00: 0.58: 0.95: 0.86: 1.66 (protarsus), 1.00: 0.27: 0.23: 0.32:

0.93 (mesotarsus), 1.00: 0.38: 0.37: 0.69 (metatarsus).

Inner anterior tarsal claw with 12 visible teeth, outer anterior tarsal claw has no teeth.

Ventral side of body dark brown, with pale setation and punctures. Abdomen pale brown with relatively sparse, pale setation, fine microgranulation and small, shallow punctures. Ultimate ventrite ochre yellow with deep triangular impression in apex.

Aedeagus (Figs. 12 and 13). Ochre yellow, slightly shiny. Basal piece rounded in lateral view and widest in middle from dorsal view. Apical piece elongate triangular and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 2.78.

**Female** antenna is shorter than in male (reaching about half body length AL/BL(1-10) 0.44). Both anterior tarsal claws 7 visible teeth.

Measurements of female body. BL 6.87 mm; HL 0.86 mm; HW 1.07 mm; OI 46.79; PL 0.99 mm; PW 1.80 mm; PI 55.00; EL 5.02 mm; EW 2.68 mm; AL(1-10) 2.99 mm; AL(1-10)/BL 0.44; BL/EW 2.56; HW/PW 0.59; EL/EW 1.87.

RLA(1-10): 0.82: 0.55: 1.00: 1.38: 1.18: 1.18: 1.17: 1.17: 1.02: 1.02.

RL/WA(1-10): 1.75: 1.65: 3.53: 3.95: 3.55: 3.74: 3.50: 3.04: 2.91: 3.05.

RLT: 1.00: 0.54: 0.57: 0.61: 1.59 (protarsus); 1.00: 0.23: 0.23: 0.50 (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 5.03 mm (4.95-5.11 mm); HL 0.83 mm (0.82-0.86 mm); HW 1.05 mm (1.02-1.09 mm); OI 42.06 (38.79-44.60); PL 1.05 mm (0.99-1.10 mm); PW 1.68 mm (1.47-1.79 mm); PI 62.74 (56.43-67.35); EL 4.80 mm (4.64-4.91 mm); EW 2.47 mm (2.37-2.57 mm).

**Differential diagnosis.** No species of *Borbonalia* is known from the territory of Myanmar or in the Oriental Region.

Borbonalia langeri sp. nov. is clearly different from similar a species *B. kachinica* mainly by dorsal surface of elytron of one color (as in Fig. 10) and by pale apex of dark antennomeres 3-10; while *B. kachinica* has dorsal surface of elytron of two color and antennomeres 3-10 of one color.

**Etymology.** Patronymic, named after collector of type series Michael Langer (Germany).

**Distribution.** Myanmar (Chin State). The second species of *Borbonalia* occuring in the Oriental Region.

## genus Borboresthes Fairmaire, 1897

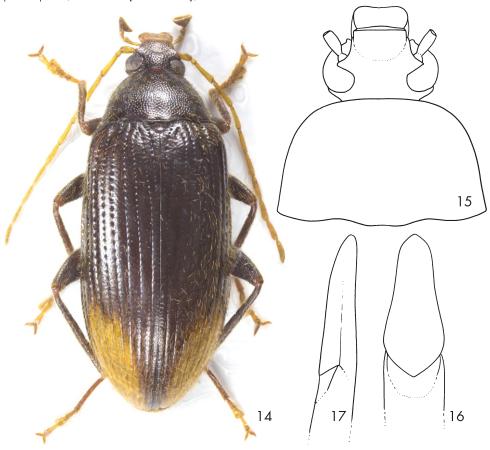
# Borboresthes pulchra sp. nov.

(Figs. 14-17)

**Type locality.** Myanmar, Kachin state, Three River Junction, N 26° 23′12.6′′, E 098°39′36.3′′, 2044 m.

**Type material.** Holotype (3): MYANMAR (Burma) / Provinz Kachin State; 3 km NW / Three River Junction (Thone chaung sone) / N 26° 23′12.6′′ E 098°39′36.3′′ / 2.X.2010 (H=2.044 m; LF) / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). Paratypes: (4  $\,\%\,$ 3, 1  $\,\varphi$ ): same data as holotype, (VNPC); (1  $\,\%$ ): MYANMAR (Burma), Provinz Kachin State / Kanphant/Grenze zu China / N 26° 08′51.2′′ E 098°34′58.2′′ / 1. X. 2010 (H = 1.642 m; LF) / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC); (1  $\,\%$ ): MYANMAR (Burma) / Chin State; Chin Hills / 30 miles camp / (Orchid Station) / 24.

27. VI. 2008 / leg. M. Langer, // N 21°29′47.0′′ / E 093°47′21.9′′ / H = 2.495 m (NF), (VNPC). (1  $\, \bigcirc$ ): MYANMAR (Burma) / Provinz Kachin State / ca. 30 km N von Pangwa; (H = 2.255 m; TF) / 29.-30.IX.+6.X.2010 / N 25° 43′52.4′′ E 098°24′06.0′′ / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC); (1  $\, \bigcirc$ ): Myanmar (Burma) / Chin State; Chin Hills / 20 miles camp / (Horn Bird Station) / 27. - 30. VI. 2008 / leg. M. Langer // N 21°25′15.2′′ / E 093°47′21.5′′ / H = 2.350 m (NF), (VNPC); (1  $\, \bigcirc$ ): LAOSXieng Khouang / Phou Sam Soum / alt. 2103 m / 19.142559° 103.784050° / 13 V 2019 / leg. H. WAKAHARA / Permit: 08/05/2019, (KMTJ). The types are provided with a printed red label: 'Borboresthes / pulchra sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020′.



Figs. 14-17. Borboresthes pulchra sp. nov.: Figs. 14, 15: male holotype: 14-Habitus; 15-head and pronotum; 16-aedeagus, dorsal view; 17-aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 14, body elongate oval, convex, dorsal surface from ochre yellow to dark blackish brown, shiny, with punctuation, fine microgranulation and long, pale setation, BL 8.92 mm. Widest near middle elytra length; BL/EW 2.60.

Head (Fig. 15) relatively small, wider than long, dorsal surface with sparse, pale setae, dense punctuation and microgranulation, shiny. Posterior part dark reddish brown, with coarser punctuation, darker than reddish brown anterior half, punctures medium sized. Clypeus with small, shallow punctures, microgranulation and denser and shorter pale setation than those in anterior part. HW 1.36 mm; HW/PW 0.54. HL (visible part) 1.09 mm. Eyes transverse, excised,

space between eyes wide, distinctly wider than diameter of one eye and slightly narrower than length of antennomere 3; OI equal to 44.88.

Antenna. Long, ochre yellow (AL 5.66 mm, almost reaching two thirds body length, AL/BL 0.64), antennomeres narrow, filiform, with long, pale setation, microgranulation and very small, shallow punctures. Antennomere 2 shortest, antennomeres 1-4 slightly shiny, antennomeres 5-11 rather matte, antennomere 3 four times longer than antennomere 2, antennomeres 4 distinctly longer than antennomere 3. Antennomeres 3-11 more than 4 times longer than wide.

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RLA(1-11): 0.57: 0.24: 1.00: 1.19: 1.04: 0.95: 0.96: 1.02: 0.89: 0.84: 1.02.
RL/WA(1-11): 2.38: 1.38: 5.04: 6.00: 5.04: 4.70: 5.04: 5.59: 5.40: 5.05: 5.59.
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Maxillary palpus ochre yellow, with pale setae and microgranulation. Palpomeres 2 and 3 distinctly widened anteriorly. Ultimate palpomere widely triangular and distinctly darker than penultimate.

Pronotum (Fig. 15) blackish brown, widest at base, as wide as elytra in humeri, almost semicircular, convex, shiny. Dorsal surface with long, pale setation and dense punctuation, punctures coarse and relatively large, distinctly larger than those in posterior part of head, intervals between punctures narrow, narrower than diameter of punctures. Border lines narrow, but distinct. Lateral margins regularly narrowing in basal half, rounded in apical part, anterior margins arcuate. Posterior margin bisinuate, anterior angles indistinct, posterior angles slightly obtuse. PL 1.26 mm; PW 2.50 mm; PI equal to 50.40.

Elytron bicolor (blackish brown with large, ochre yellow spot in apical third as in Fig. 14), elongate oval, convex, widest near middle elytra length. Dorsal surface shiny, with long, semierect, pale setation. Rows of punctures in elytral striae distinct, punctures relatively large and coarse. Elytral intervals slightly convex, with very fine microgranulation and very small punctures. EL 6.57 mm; EW 3.43 mm; EL/EW 1.90.

Scutellum. Blackish brown, roundly triangular, slightly shiny, with microgranulation and a few long setae.

Elytral epipleura well developed, blackish brown, with pale setae and punctures, narrowing to metaventrite, then leads narrow and parallel.

Legs long and narrow, blackish brown, tarsi distinctly paler from pale brown to reddish brown. Dorsal surface with pale setation, very small punctures and microgranulation. Pro- and mesotarsomeres 3 and 4 and metatarsomeres 3 widened and lobed. RLT: 1.00: 0.50: 0.66: 0.66: 1.58 (protarsus), 1.00: 0.28: 0.26: 0.47: 0.90 (mesotarsus), 1.00: 0.28: 0.31: 0.61 (metatarsus).

Anterior tarsal claws with 19 and 21 visible teeth.

Ventral side of body blackish brown, with short, pale setae and punctures. Abdomen shiny, blackish brown with a few pale setae, microgranulation and dense punctuation, punctures small and shallow. Ultimate ventrite rather matte with ochre yellow spot in middle.

Aedeagus (Figs. 16 and 17). Ochre yellow, rather matte. Basal piece rounded in lateral view and narrowing from dorsal view. Apical piece short and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 5.08.

**Female** without distinct differences, only antenna is slightly shorter and antennomeres 4-11 are much longer than antennomere 3. Anterior tarsal claws have 8 visible teeth.

Measurements of female body. BL 9.68 mm; HL 1.19 mm; HW 1.49 mm; OI 49.12; PL 1.30 mm; PW 2.69 mm; PI 48.33; EL 7.19 mm; EW 3.82 mm; AL(1-11) 5.37 mm; AL(1-11)/BL 0.56; BL/EW 2.53; HW/PW 0.55; EL/EW 1.88.

RLA(1-11): 0.93: 0.54: 1.00: 2.02: 1.56: 1.63: 1.57: 1.59: 1.46: 1.39: 1.56.

RL/WA(1-11): 1.85: 1.53: 3.00: 6.41: 5.60: 5.87: 5.67: 5.73: 5.27: 4.17: 4.00. RLT: 1.00: 0.56: 0.82: 0.86: 1.56 (protarsus); 1.00: 0.37: 0.37: 0.53: 0.99 (mesotarsus); 1.00: 0.32: 0.32: 0.56 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Specimens (n=11). BL 9.61 mm (8.92-10.13 mm); HL 1.16 mm (1.09-1.19 mm); HW 1.45 mm (1.36-1.49 mm); OI 45.81 (43.24-49.12); PL 1.31 mm (1.14-1.55 mm); PW 2.58 mm (2.48-2.70 mm); PI 50.85 (44.19-59.62); EL 7.15 mm (6.57-7.40 mm); EW 3.67 (3.43-3.88 mm).

**Differential diagnosis.** Similar species with dorsal surface of elytra of two color are *Borboresthes brunneopictus* Borchmann, 1942 and *Borboresthes neptis* Borchmann, 1942 from northeast Myanmar (Kambaiti) and *Borboresthes quadrimaculatus* Novák, 2016 from Vietnam (Lao Cai province).

Borboresthes pulchra sp. nov. distinctly differs from the species B. brunneopictus and B. neptis mainly by large body (BL approximately 9.61 mm); while B. brunneopictus has BL 7.5-8 mm and B. neptis 6-6.5 mm.

B. pulchra clearly differs from similar species B. quadrimaculatus mainly by elytron with two apical spots, space between eyes wider than length of on eye (OI approximately 46), apical piece of aedeagus (Figs. 16 and 17) and body slightly narrower than body of B. quadrimaculatus, which has elytron with two basal and apical spots (see Novák 2016: 41: fig. 29) and aedeagus is as in figs. 31, 32 (Novák 2016: 41) and space between eyes is as wide as diameter of one eye.

**Etymology.** Named after its original dorsal view, from Latin *pulchra* (beautiful).

**Distribution.** Laos (Xieng Khouang Province), Myanmar (Kachin State).

# Borboresthes volkeri sp. nov.

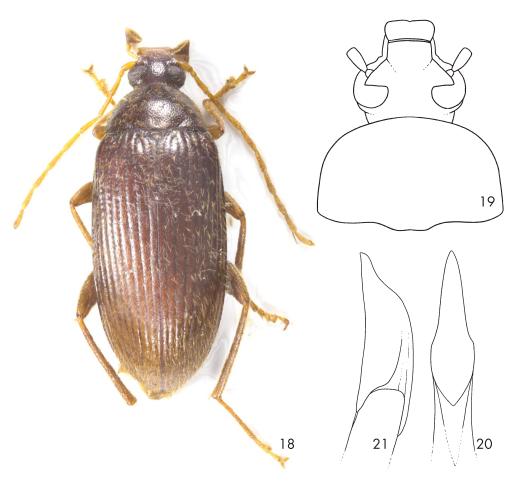
(Figs. 18-21)

**Type locality.** Myanmar, Kachin state, Three River Junction, N 26° 23′12.6′′, E 098°39′36.3′′, 2044 m.

**Type material.** Holotype (3): MYANMAR (Burma) / Provinz Kachin State / Three River Junction (Thone chaung sone) / N 26° 23′12.6′′ E 098°39′36.3′′ / 2. X. 2010 (H=2.044 m; LF) / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). Paratypes:  $(5\ 3\ 3, 1\ \varsigma)$ : same data as holotype, (VNPC). The types are provided with a printed red label: 'Barboresthes / volkeri sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020′.

**Description of holotype.** Habitus as in Fig. 18, body elongate oval, convex, dorsal surface from reddish brown to dark reddish brown, slightly shiny, with punctuation, fine microgranulation and long, pale setation, BL 7.29 mm. Widest near middle elytra length; BL/EW 2.70.

Head (Fig. 19) relatively small, wider than long, dorsal surface with sparse, pale setae, dense punctuation and microgranulation, shiny. Posterior part darker with coarser punctuation than reddish brown anterior half, punctures medium sized. Clypeus pale reddish brown, with pale setation, denser than in anterior part. Mandibles pale brown, rounded laterally. HW 1.14 mm; HW/PW 0.55. HL (visible part) 0.98 mm. Eyes transverse, excised, space between eyes wide, slightly wider than diameter of one eye and slightly narrower than length of antennomere 3; OI equal to 35.87.



Figs. 18-21. Borboresthes volkeri sp. nov.: Figs. 18, 19: male holotype: 18- Habitus; 19- head and pronotum; 20- aedeagus, dorsal view; 21- aedeagus, lateral view.

Antenna. Long, ochre yellow (AL 4.79 mm, reaching two thirds body length, AL/BL 0.66), antennomeres narrow, filiform, with long, pale setation, microgranulation and shallow punctures. Antennomere 2 shortest, antennomere 3 almost three times longer than antennomere 2, antennomeres 4-11 distinctly longer than antennomere 3. Antennomeres 3-11 more than 4 times longer than wide.

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RLA(1-11): 0.75 : 0.35 : 1.00 : 1.28 : 1.28 : 1.18 : 1.25 : 1.21 : 1.19 : 1.09 : 1.14.
RL/WA(1-11): 2.13 : 1.36 : 4.05 : 4.96 : 4.96 : 4.55 : 4.24 : 4.12 : 4.39 : 4.02 : 4.20.
```

Maxillary palpus ochre yellow, with pale setae and microgranulation. Palpomeres 2 and 3 slightly shiny distinctly widened anteriorly. Ultimate palpomere widely triangular and distinctly darker than penultimate.

Pronotum (Fig. 19) brown, widest in base, as wide as elytra in humeri, almost semicircular, convex, shiny. Dorsal surface with long, pale setation and dense, shallow punctuation, punctures small, intervals between punctures wider than diameter of punctures. Border lines narrow, but

distinct. Lateral and anterior margins arcuate. Posterior margin bisinuate, anterior angles indistinct, posterior angles obtuse. PL 1.00 mm; PW 2.06 mm; PI equal to 48.54.

Elytron reddish brown, elongate oval, convex, widest near middle elytra length. Dorsal surface shiny, with long, pale setation. Rows of punctures in elytral striae distinct, punctures medium sized. Elytral intervals convex, with microgranulation. EL 5.31 mm; EW 2.70 mm; EL/EW 2.01.

Scutellum. Reddish brown, roundly triangular, rather matte, with microgranulation and a few long, pale setae.

Elytral epipleura well developed, dark reddish brown, with long, pale setae and punctures, narrowing to metaventrite, then leads wide and parallel.

Legs long and narrow, pale reddish brown, femora ochre yellow. Dorsal surface with pale setation, very small punctures and microgranulation. Pro- and mesotarsomeres 3 and 4 and metatarsomeres 3 widened and lobed. RLT: 1.00: 0.47: 0.61: 0.67: 1.46 (protarsus), 1.00: 0.34: 0.25: 0.34: 0.72 (mesotarsus), 1.00: 0.22: 0.21: 0.46 (metatarsus).

Both anterior tarsal claws with 12 visible teeth.

Ventral side of body reddish brown, with pale setae and punctures. Abdomen dark reddish brown with a few pale setae, microgranulation and dense punctuation, punctures small and shallow. Ultimate ventrite reddish brown near base and pale brown in apex.

Aedeagus (Figs. 20 and 21). Ochre yellow, shiny. Basal piece rounded in lateral view and narrowing from dorsal view. Apical piece elongate triangular from dorsal view and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 4.50.

**Female** without distinct differences. Anterior tarsal claws have 8 visible teeth.

Measurements of female body. BL 8.26 mm; HL 1.10 mm; HW 1.29 mm; OI 37.14; PL 1.19 mm; PW 2.32 mm; PI 51.29; EL 5.97 mm; EW 3.03 mm; AL(1-11) 4.97 mm; AL(1-11)/BL 0.60; BL/EW 2.73; HW/PW 0.56; EL/EW 1.97.

```
RLA(1-11): 0.79 : 0.34 : 1.00 : 1.31 : 1.11 : 1.13 : 1.14 : 1.07 : 1.01 : 1.02 : 0.96. 
RL/WA(1-11): 2.75 : 1.57 : 4.04 : 6.35 : 5.68 : 5.50 : 5.29 : 5.78 : 5.77 : 5.50 : 5.17. 
RLT: 1.00 : 0.47 : 0.40 : 0.68 : 2.04 (protarsus); 1.00 : 0.22 : 0.12 : 0.42 (metatarsus).
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**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Specimens (n=7). BL7.77 mm (7.29-8.26 mm); HL1.04 mm (0.98-1.10 mm); HW1.21 mm (1.14-1.29 mm); OI35.03 (30.11-37.14); PL1.12 mm (1.00-1.20 mm); PW2.14 mm (2.06-2.32 mm); PI52.46 (48.54-57.28); EL5.61 mm (5.31-5.97 mm); EW2.84 mm (2.70-3.03 mm).

**Differential diagnosis.** A similar species is *Borboresthes metatarsalis* Borchmann, 1942 from south Shan State (Myanmar). *Borboresthes volkeri* sp. nov. clearly differs from the similar species *B. metatarsalis* mainly by ochre yellow antenna; while *B. metatarsalis* has antenna dark reddish brown.

**Etymology.** Patronymic, named after first name of my friend, German coleopterist Volker Gollkowski (Oelsnitz, Germany).

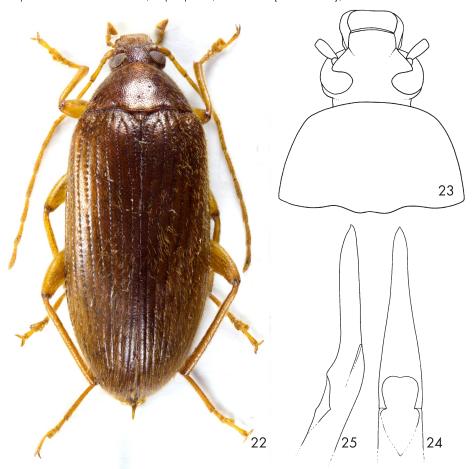
**Distribution.** Myanmar (Kachin State).

# Borboresthes vulpes sp. nov.

(Figs. 22-25)

Type locality. Myanmar, Kachin state, Three River Junction, N 26° 23′12.6′′, E 098°39′36.3′′, 2044 m.

Type material. Holotype  $\{3\}$ : MYANMAR (Burma) / Provinz Kachin State / Three River Junction (Thone chaung sone) / N 26° 23′12.6′′ E 098°39′36.3′′ / 2. X. 2010 (H=2.044 m; LF) / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). Paratypes:  $\{2, 3, 2, 9\}$ : same data as holotype, (VNPC);  $\{1, 3\}$ : MYANMAR (Burma) / Provinz Kachin State / Pangwa env. (LF) (H = 2.450 m) / 28. IX. 2010 / N 25° 37′42.3′′ E 098°23′22.5′′ / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC);  $\{1, 3\}$ : MYANMAR (Burma) / Provinz Kachin State / ca. 30 km N von Pangwa / 29.30.IX.+6.X.2010 (H = 2.255 m; LF) / N 25° 43′52.4′′ E 098°24′06.0′′ / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). The types are provided with a printed red label: 'Barboresthes' vulpes sp. nov. / HOLOTYPUS for PARATYPUSI / V. Novák det. 2020′.



Figs. 22-25. Borboresthes vulpes sp. nov.: Figs. 22, 23: male holotype: 22-Habitus; 23-head and pronotum; 24-aedeagus, dorsal view; 25-aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 22, body large, elongate oval, convex, dorsal surface from pale reddish brown to reddish brown, shiny, with punctuation, fine microgranulation and semierect, pale setation, BL 10.76 mm. Widest near middle elytra length; BL/EW 2.85.

Head (Fig. 23) relatively small, wider than long, dorsal surface with sparse, long, pale setation, dense punctuation and microgranulation, shiny. Posterior part reddish brown, distinctly darker with coarser punctuation than pale reddish brown anterior half, punctures medium sized. Clypeus pale reddish brown, with pale setation, microgranulation and small punctures, distinctly smaller than those in anterior part. Mandibles ochre yellow with base, apex and rounded lateral margins darker, glabrous dorsally with a few pale setae on sides. HW 1.50 mm; HW/PW 0.57; HL (visible part) 1.35 mm. Eyes transverse, excised, space between eyes wide, slightly wider than diameter of one eye and slightly narrower than length of antennomere 3; OI equal to 41.56.

Antenna. Long (AL 6.72 mm, distinctly exceeding half body length, AL/BL 0.63), antennomeres narrow, filiform, with long, pale setation, microgranulation and small, shallow punctures. Antennomeres 1-4 ochre yellow, slightly shiny, antennomeres 5-11 pale brown, rather matte. Antennomere 2 shortest, antennomere 3 almost three times longer than antennomere 2, antennomeres 4-11 distinctly longer than antennomere 3. Antennomeres 3-11 more than 4 times longer than wide.

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RLA(1-11): 0.67 : 0.35 : 1.00 : 1.65 : 1.30 : 1.29 : 1.21 : 1.28 : 1.20 : 1.20 : 1.21 . 
RL/WA(1-11): 2.78 : 1.56 : 4.31 : 7.71 : 5.80 : 5.76 : 5.91 : 5.50 : 5.58 : 5.15 : 4.86 .
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Maxillary palpus ochre yellow, with pale setae and microgranulation. Palpomeres 2 and 3 slightly shiny distinctly widened anteriorly. Ultimate palpomere widely triangular and slightly darker than penultimate.

Pronotum (Fig. 23) reddish brown, widest in base, as wide as elytra in humeri, almost semicircular, convex, shiny. Dorsal surface with long, pale setation and dense, shallow punctuation, punctures small, approximately as large as those in posterior part of head, intervals between punctures narrow, somewhere as wide as diameter of punctures. Border lines narrow, but distinct. Lateral margins regularly narrowing, arcuate in apical third, anterior margin arcuate. Posterior margin bisinuate, anterior angles indistinct, posterior angles slightly obtuse. PL 1.37 mm; PW 2.65 mm; PI equal to 51.67.

Elytron reddish brown, elongate oval, convex, widest near middle elytra length. Dorsal surface shiny, with long, pale setation. Rows of punctures in elytral striae distinct, punctures medium sized, distinctly larger than those in pronotum. Elytral intervals slightly convex, with microgranulation and dense, very small punctures. EL 8.04 mm; EW 3.78 mm; EL/EW 2.13.

Scutellum. Reddish brown, roundly triangular, slightly shiny, with microgranulation and a few long setae.

Elytral epipleura well developed, reddish brown, with long, pale setae and punctures, narrowing to ventrite 1, then leads narrow and parallel.

Legs ochre yellow, long and narrow. Dorsal surface with pale setation, very small punctures and microgranulation. Pro- and mesotarsomeres 3 and 4 and metatarsomeres 3 widened and lobed. RLT: 1.00: 0.40: 0.72: 0.75: 1.26 (protarsus), 1.00: 0.31: 0.39: 0.40: 0.84 (mesotarsus), 1.00: 0.32: 0.29: 0.53 (metatarsus).

Both anterior tarsal claws with 13 visible teeth.

Ventral side of body reddish brown, with short, pale setae and punctures. Abdomen reddish brown with a few short, pale setae, microgranulation and dense punctuation, punctures small and shallow.

Aedeagus (Figs. 24 and 25). Ochre yellow, rather matte. Basal piece slightly rounded in lateral view and narrowing dorsally. Apical piece elongate triangular from dorsal view and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1:3.44.

**Female** has body more robust, wider, antenna is slightly shorter and space between eyes slightly wider than in male. Anterior tarsal claws have 8 or 9 visible teeth.

Measurements of female body. BL 11.76 mm; HL 1.47 mm; HW 1.65 mm; OI 45.89; PL 1.65 mm; PW 3.30 mm; PI 50.00; EL 8.74 mm; EW 4.29 mm; AL(1-11) 6.37 mm; AL(1-11)/BL 0.54; BL/EW 2.77; HW/PW 0.50; EL/EW 2.04.

RLA(1-11): 0.61 : 0.27 : 1.00 : 1.34 : 1.21 : 1.21 : 1.06 : 1.14 : 1.06 : 1.01 : 1.09. RL/WA(1-11): 2.07 : 1.23 : 5.05 : 7.11 : 6.42 : 6.42 : 5.63 : 6.20 : 5.35 : 6.95 : 5.79. RLT: 1.00 : 0.45 : 0.53 : 0.72 : 1.93 (protarsus); 1.00 : 0.28 : 0.29 : 0.70 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Specimens (n=7). BL 11.04 mm (10.03-11.86 mm); HL 1.44 mm (1.31-1.58 mm); HW 1.61 mm (1.47-1.78 mm); OI 42.00 (37.47-47.95); PL 1.49 mm (1.25-1.75 mm); PW 2.97 mm (2.74-3.30 mm); PI 48.67 (43.86-54.09); EL 8.11 mm (7.44-8.74 mm); EW 4.00 (3.57-4.48 mm).

**Differential diagnosis.** A similar species is *Borboresthes obscurus* Borchmann, 1942 from Kambaiti (Northeast Myanmar). *Borboresthes vulpes* sp. nov. clearly differs from the similar species *B. obscurus* mainly by antennomere 4 1.65 times in male and 1.34 times in female longer than antennomere 3, antennomere 11 approximately as long as antennomere 10 and elytral epipleura wide in base; while *B. obscurus* has antennomere 4 shorter than antennomere 3, antennomere 11 is shorter than antennomere 10 and elytral epipleura is narrow.

**Etymology.** Named after its original dorsal view, in our country we say "reddish like a fox", from Latin *vulpes*.

**Distribution.** Myanmar (Kachin State).

# Fifinoides gen. nov.

(Figs. 26-32)

**Type species:** Fifinoides chinensis sp. nov.

**Description.** Habitus as in Fig. 26, body outline as in Fig. 28, body relatively small, wide, oval, strongly convex, sides arcuate, dorsal surface with punctuation, fine microgranulation, rugosities and long, dense setation, slightly shiny. Widest near half elytra length. Head (Fig. 29) relatively small, transverse, slightly wider than long, with dense and long setation and dense, coarse punctuation, punctures medium sized. Intervals between punctures very narrow, shiny. Apex of anterior part with fine microgranulation. Clypeus shiny, almost glabrous with very fine microgranulation, apex finely excised. Mandibles shiny, with very small punctures, glabrous from dorsal view, sides with setae. Eyes relatively large, transverse, excised, space between eyes wide, distinctly wider than length of one eye, wider than length of each antennomere. Antenna (Fig. 30) longer, distinctly exceeding half body length, antennomeres with setation, very fine microgranulation and sparse, small punctures. Antennomeres 4-11 distinctly longer than antennomere 3, antennomeres 3-10 slightly widened anteriorly. Antennomere 2 shortest. Ultimate and penultimate antennomeres distinctly shorter than each of antennomeres 5-9. Maxillary palpus pale brown, rather matte, with long setae. Ultimate palpomere shoe-shaped, with very small punctures, palpomeres 2 and 3 distinctly dilated anteriorly. Pronotum (Fig. 29)

transverse, almost semicircular, at base approximately as wide as elytron in base, convex, more matter than elytron. Dorsal surface with dense and long, semierect setation, microgranulation and dense, coarse punctuation, interspaces between punctures very narrow. Border lines very narrow, but distinct and complete, lateral borders from dorsal view not conspicuous. Lateral and anterior margins arcuate, posterior margin bisinuate, anterior angles indistinct, posterior angles roundly obtuse. Ventral side of body with setation and punctures. Ventrites with setation, microgranulation and dense punctuation, punctures small and shallow, slightly shiny. Elytron dark brown, wide, oval, strongly convex, widest near middle, shiny. Dorsal surface with long setation. Elytral striae with distinct rows of coarse punctures, slightly larger than those in disc of pronotum, elytral intervals convex, with microgranulation, rugosities and small punctures, distinctly smaller than those in striae. Scutellum roundly triangular with long setae, punctures and microgranulation, shiny. Elytral epipleura well-developed, with setae and punctures in basal part, regularly narrowing to ventrite 1, then in apical part leads parallel. Legs narrow, with dense and long setation, small punctures and microgranulation. Pro- and mesotarsomeres 3, 4 and metatarsomere 3 widened and lobed. Anterior tarsal claws with visible teeth. Aedeagus as in Figs. 31 and 32.

**Female.** Habitus as in Fig. 27, without distinct differences, ultimate and penultimate antennomeres approximately as long as each of antennomeres 5-9, protarsal claws with less teeth than in male.

**Differential diagnosis.** Similar genera in the subtribe Alleculina Laporte, 1840 are *Borbonalia* Novák, 2014 and *Fifina* Novák, 2019. Species of the new genus *Fifinoides* gen. nov. distinctly differs by further characters: body strongly convex, wide, widest in the middle of elytron, pronotum transverse, almost semicircular, lateral and anterior margins of pronotum arcuate, antennomeres 4-11 longer than antennomere 3, antennomeres 3-11 slightly, but distinctly widened anteriorly, ultimate palpomere shoe-shaped.

Species of *Borbonalia* have body more flat, more narrow, lateral margins of pronotum are more parallel, antennomeres are narrow, filiform and ultimate palpomere is triangular.

Species of *Fifina* have body widest near three fifth elytra length, narrow, more flat, lateral margins of pronotum are parallel, pronotum is rectangular, antennomeres are narrow, filiform, antennomeres 5-11 are shorter than antennomere 3.

**Etymology.** Compound name from *Fifin-* - resembling a similarity with genus *Fifina* Novák, 2018 and masculine ending -oides. Gender: masculine.

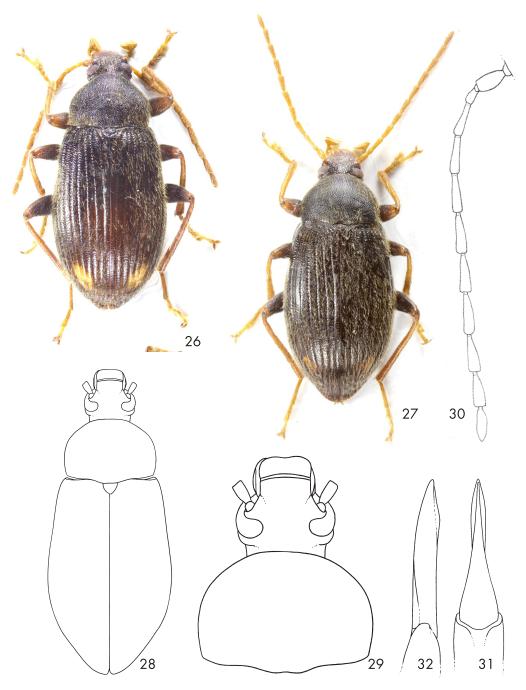
**Distribution.** Myanmar (Chin State).

# Fifinoides chinensis sp. nov.

(Figs. 26-32)

Type locality. Myanmar, Chin State, Chin Hills.

**Type material.** Holotype (3): MYANMAR (Burma) / Chin State; Chin Hills / 30 miles camp / (Orchid Station) / 24. - 27. VI. 2008 / leg. M. Langer, (VNPC). Paratype: (1  $\stackrel{\frown}{}$ ): same data as holotype, (VNPC). The types are provided with a printed red label: 'Fifinoides / chinensis sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020'.



Figs. 26-32. Fifinoides chinensis sp. nov.: 26, 28-32: male holotype, 27: female paratype: 26- Habitus of male; 27- habitus of female; 28- outline of male body; 29- head and pronotum; 30- antenna; 31- aedeagus, dorsal view; 32- aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 26, body outline (Fig. 28), body relatively small, wide, oval, strongly convex, sides arcuate, dorsal surface from ochre yellow to dark brown, with punctuation, fine microgranulation, rugosities and long, dense, ochre yellow setation, slightly shiny, apex of elytra with ochre yellow spots. BL 8.31 mm. Widest near half elytra length; BL/EW 2.48.

Head (Fig. 29) reddish brown, relatively small, transverse, slightly wider than long, with dense and long, ochre yellow setation and dense, coarse punctuation, punctures medium sized. Intervals between punctures very narrow, shiny. Apex of anterior part with fine microgranulation, distinctly paler than posterior part. Clypeus shiny, pale reddish brown, almost glabrous with very fine microgranulation, apex finely excised. Mandibles shiny, partly darker than clypeus, with very small punctures, glabrous from dorsal view, sides with pale setae. Widest through the eyes, HW 1.36 mm; HW/PW 0.58. HL (visible part) 1.29 mm. Eyes relatively large, transverse, excised, space between eyes wide, distinctly wider than length of one eye, wider than length of each antennomere; OI equal to 49.65.

Antenna (Fig. 30). Longer (AL 4.96 mm, distinctly exceeding half body length, AL/BL 0.60), antennomeres with pale setation, very fine microgranulation and sparse, small punctures. Antennomeres 1-3 ochre yellow, slightly shiny, antennomeres 4-11, pale brown, rather matte, distinctly longer than antennomere 3, antennomeres 3-10 slightly widened anteriorly. Antennomere 2 shortest. Ultimate and penultimate antennomeres distinctly shorter than each of antennomeres 5-9.

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RLA(1-11): 0.61 : 0.42 : 1.00 : 1.06 : 1.26 : 1.18 : 1.30 : 1.31 : 1.24 : 1.08 : 1.08 : RL/WA(1-11): 1.67 : 1.65 : 3.21 : 3.07 : 3.90 : 3.03 : 3.16 : 3.93 : 3.73 : 3.35 : 3.23 :
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Maxillary palpus pale brown, rather matte, with long, pale setae. Ultimate palpomere shoeshaped, with very small punctures, palpomeres 2 and 3 distinctly dilated anteriorly.

Pronotum (Fig. 29). Dark brown, transverse, almost semicircular, at base approximately as wide as elytron in base, convex, more matte than elytron. Dorsal surface with dense and long, semierect, ochre yellow setation, microgranulation and dense, coarse punctuation, interspaces between punctures very narrow. Border lines very narrow, but distinct and complete, lateral borders from dorsal view not conspicuous. Lateral and anterior margins arcuate, posterior margin bisinuate, anterior angles indistinct, posterior angles roundly obtuse. PL 1.61 mm; widest in middle, PW 2.35 mm; Pl equal to 68.51.

Ventral side of body dark brown with pale setation and punctures. Abdomen reddish brown, penultimate ventrite darker and ultimate ventrite paler than ventrites 1-3. Ventrites with pale setation, microgranulation and dense punctuation, punctures small and shallow, slightly shiny.

Elytron dark brown with ochre yellow spot in the middle of apex (as in Fig. 30), wide, oval, strongly convex, widest near middle, shiny. Dorsal surface with long, ochre yellow setation. Elytral striae with distinct rows of coarse punctures, slightly larger than those in disc of pronotum, elytral intervals convex, with microgranulation, rugosities and small punctures, distinctly smaller than those in striae. EL 5.41 mm; EW 3.35 mm. EL/EW 1.62.

Scutellum. Dark brown as elytron itself, roundly triangular with long ochre yellow setae, microgranulation and punctures, shiny.

Elytral epipleura well-developed, with pale setae and punctures in basal part dark brown, regularly narrowing to ventrite 1, then in apical part reddish brown leads parallel.

Legs narrow, with dense and long, ochre yellow setation, small punctures and microgranulation. Tarsi pale brown, tibiae pale reddish brown and femora reddish brown, proand mesotarsomeres 3, 4 and metatarsomere 3 widened and lobed. RIT: 1.00: 0.89: 0.96:

1.46 : 2.50 (protarsus), 1.00 : 0.33 : 0.34 : 0.59 : 1.49 (mesotarsus), 1.00 : 0.39 : 0.33 : 0.73 (metatarsus).

Anterior tarsal claws with 14 visible teeth.

Aedeagus (Figs. 31 and 32). Ochre yellow, slightly shiny. Basal piece rounded in dorsal view. Apical piece narrowly triangular in dorsal view, knife-shaped laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 2.36.

 $\label{eq:Female} \textbf{Female} \ \ (\text{Fig. } 27) \ \ \text{without} \ \ \text{distinct} \ \ \text{differences,} \ \ \text{ultimate} \ \ \text{and} \ \ \text{penultimate} \ \ \text{antennomeres} \ \ \text{approximately as long as each of antennomeres} \ 5-9, \ \text{anterior tarsal claws have 6 visible teeth}. \ \ \text{BL } 8.51 \ \ \text{mm}; \ \text{HL } 1.36 \ \ \text{mm}; \ \text{HW } 1.43 \ \ \text{mm}; \ \text{Ol } 50.61; \ \text{PL } 1.50 \ \ \text{mm}; \ \text{PW } 2.57 \ \ \text{mm}; \ \text{Pl } 63.29; \ \text{EL } 5.65 \ \ \text{mm}; \ \text{EW } 3.38 \ \ \text{mm}; \ \text{AL } 5.00 \ \ \text{mm}; \ \text{AL/BL } 0.59; \ \text{HW/PW } 0.56; \ \text{BL/EW } 2.52; \ \text{EL/EW } 1.67. \ \ \text{RLA(1-11): } 0.81: 0.51: 1.00: 1.22: 1.12: 1.18: 1.22: 1.22: 1.23: 1.14: 1.22. \ \ \text{RL/WA(1-11): } 1.90: 1.54: 3.48: 3.71: 3.28: 3.31: 3.42: 3.07: 3.10: 2.96: 3.42. \ \ \text{RLT: } 1.00: 0.71: 0.88: 1.12: 2.14 \ \ \text{(protarsus), } 1.00: 0.38: 0.38: 0.50: 1.20 \ \ \text{(mesotarsus), } 1.00: 0.36: 0.32: 0.77 \ \ \text{(metatarsus).}$ 

**Differential diagnosis.** See differential diagnosis in *Fifinoides* gen. nov.

**Etymology.** Toponymic, named after Chin State in Myanmar.

**Distribution.** Myanmar (Chin State).

## genus Gerdacula Novák, 2015

## Gerdacula emawbumica sp. nov.

(Figs. 33-36)

Type locality. Myanmar, Kachin State, Camp im Wald, Strasse von Kanphant zum Mt. Emaw Bum.

**Type material.** Holotype (3): MYANMAR (Burma) / Provinz Kachin State / Camp im Wald, Strasse von / Kanphant zum Mt. Emaw Bum / 25. V. 2006 / leg. Michael Langer, (VNPC). Paratypes: (2 33, 6 99): same data as holotype, (VNPC). The types are provided with a printed red label: 'Gerdacula / emawbumica sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020'.

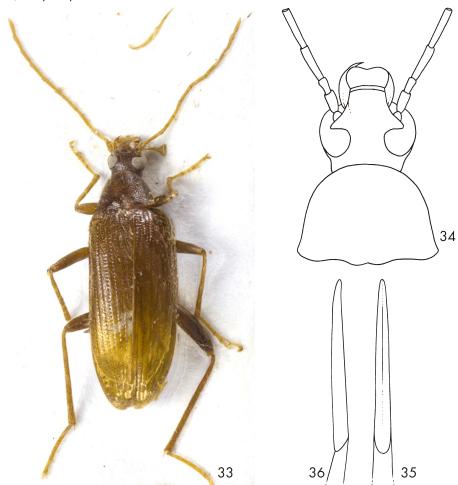
**Description of holotype.** Habitus as in Fig. 33, body small, narrow, elongate, sides parallel, very slightly convex, dorsal surface from pale brown to brown, with punctuation, microgranulation, long and recumbent, pale setation; BL 7.39 mm. Widest near half elytra length; BL/EW 3.37.

Head (Fig. 34) relatively small, rather matte, approximately as wide as long, with long, recumbent, pale setation, microgranulation and punctuation. Punctuation of brown posterior part denser and punctures coarser than in reddish brown or pale reddish brown anterior half. Intervals between punctures in posterior part narrower than in anterior part. Clypeus half heart shaped, pale brown, rather matte, with fine microgranulation and pale setae, apex arcuate and excised in middle. Widest through the eyes, HW 1.04 mm; HW/PW 0.68. HL (visible part) 1.04 mm. Eyes relatively large, transverse, excised, space between eyes approximately as wide as diameter of one eye, wider than length of antennomere 1, narrower than length of each antennomere 3-11; Ol equal to 33.88.

Antenna. Ochre yellow, rather matte (AL 4.55mm, not reaching two thirds body length, AL/BL

0.62), antennomeres narrow, filiform, with pale setation, very fine microgranulation and sparse, very small punctures. Antennomeres 4-11 distinctly longer than antennomere 3. Antennomere 2 shortest.

RLA(1-11): 0.75: 0.41: 1.00: 1.20: 1.20: 1.23: 1.20: 1.24: 1.09: 1.09: 1.18. RL/WA(1-11): 2.20: 1.67: 3.87: 5.50: 6.29: 5.63: 5.18: 5.69: 5.71: 4.44: 4.83.



Figs. 33-36. Gerdacula emawbumica sp. nov. (male holotype): 33-Habitus of male holotype; 34-head and pronotum of male holotype; 35-aedeagus, dorsal view; 36-aedeagus, lateral view.

Maxillary palpus ochre yellow, rather matte with microgranulation and pale setation. Ultimate palpomere widely triangular, palpomeres 2 and 3 distinctly dilated anteriorly.

Pronotum (Fig. 34). Dark brown, bell shaped, very slightly convex, widest at base, slightly narrower than elytron in base. Dorsal surface with long, pale setation, microgranulation and dense punctuation, punctures relatively large, distinctly larger than those in head. Disc with shallow impression in the middle of antescutellar area. Interspaces between punctures narrow,

shiny. Border lines very narrow, but distinct. Lateral margins straight, slightly excised before posterior angles and arcuate in apical third, anterior margins arcuate, posterior margin bisinuate. Anterior angles indistinct, posterior angles obtuse. PL 1.02 mm; PW 1.56 mm; PI equal to 65.39.

Ventral side of body with a few pale setae. Prothorax and mesoventrite dark brown with punctures, metaventrite pale brown. Abdomen pale brown, shiny, with a few pale setae, fine microgranulation and microrugosities and sparse, very small punctures.

Elytra brown, distinctly paler than pronotum, narrow, elongate, sides parallel, widest near middle, slightly convex, shiny. Dorsal surface with recumbent, pale setation. Elytral striae with distinct rows of coarse punctures, distinctly larger and coarser than those in disc of pronotum, elytral interspaces with punctures distinctly smaller and shallower than those in striae and with microgranulation. EL 5.33 mm; EW 2.19 mm. EL/EW 2.43.

Scutellum. Brown as elytron itself, roundly triangular with microgranulation and small punctures. Elytral epipleura well-developed with punctures, reddish brown in basal part, regularly narrowing to ventrite 1 (here narrowest), than regularly widening to apex.

Legs pale brown, long and narrow, surface with long, pale setation, microgranulation and shallow punctures. Tibiae finely widened anteriorly. Pro- and mesotarsomeres 3, 4 and metatarsomere 3 slightly widened and lobed. Metatarsomere 1 distinctly longer than metatarsomeres 2-4 together. RLT: 1.00:0.44:0.26:0.39:0.99 (protarsus), 1.00:0.36:0.26:0.25:0.69 (mesotarsus), 1.00:0.31:0.12:0.46 (metatarsus).

Anterior tarsal claws with 10 visible teeth.

Aedeagus (Figs. 35 and 36). Pale brown. Basal piece rounded laterally, narrow from dorsal view. Apical piece very narrow, knife shaped in lateral view. Ratio of length of apical piece to length of basal piece from dorsal view 1: 3.15.

**Female** has body more robust and wider, antenna is shorter, space between eyes wider than in male. Protarsal claws with 7 visible teeth.

Measurements of female body. BL 7.63 mm; HL 1.04 mm; HW 1.06 mm; OI 44.31; PL 1.03 mm; PW 1.49 mm; PI 69.13; EL 5.56 mm; EW 2.65 mm; AL 4.25 mm; AL/BL 0.56; HW/PW 0.71; BL/EW 2.88; EL/EW 2.10.

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 \begin{array}{l} RLA(1-1\,1):\,0.82:\,0.43:\,1.00:\,1.45:\,1.23:\,1.20:\,1.24:\,1.27:\,1.05:\,1.09:\,1.13.\\ RL/WA(1-1\,1):\,2.30:\,1.60:\,4.00:\,5.79:\,4.93:\,4.79:\,4.96:\,5.07:\,4.21:\,4.36:\,4.50.\\ RLT:\,1.00:\,0.43:\,0.36:\,0.41:\,1.02 \ (protarsus);\,1.00:\,0.38:\,0.20:\,0.42 \ (metatarsus). \end{array}
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**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=3). BL  $7.30 \, \text{mm}$  ( $7.17-7.39 \, \text{mm}$ ); HL  $1.05 \, \text{mm}$  ( $1.04-1.06 \, \text{mm}$ ); HW  $1.07 \, \text{mm}$  ( $1.06-1.08 \, \text{mm}$ ); OI  $33.05 \, (32.74-33.88)$ ; PL  $0.97 \, \text{mm}$  ( $0.93-1.02 \, \text{mm}$ ); PW  $1.51 \, \text{mm}$  ( $1.46-1.56 \, \text{mm}$ ); PI  $63.88 \, (61.18-65.39)$ ; EL  $5.29 \, \text{mm}$  ( $5.16-5.39 \, \text{mm}$ ); EW  $2.35 \, \text{mm}$  ( $2.19-2.46 \, \text{mm}$ ). Females (n=6). BL  $7.58 \, \text{mm}$  ( $6.99-8.10 \, \text{mm}$ ); HL  $1.05 \, \text{mm}$  ( $0.90-1.19 \, \text{mm}$ ); HW  $1.06 \, \text{mm}$  ( $0.92-1.21 \, \text{mm}$ ); OI  $39.22 \, (34.04-44.31)$ ; PL  $1.03 \, \text{mm}$  ( $0.89-1.10 \, \text{mm}$ ); PW  $1.54 \, \text{mm}$  ( $1.41-1.63 \, \text{mm}$ ); PI  $66.97 \, (63.12-69.23)$ ; EL  $5.51 \, \text{mm}$  ( $5.20-5.81 \, \text{mm}$ ); EW  $2.69 \, \text{mm}$  ( $2.56-2.89 \, \text{mm}$ ).

**Differential diagnosis.** Only species *Gerdacula communis* (Borchmann, 1942) is known from the territory of Myanmar or in the Oriental Region.

Gerdacula emawbumica sp. nov. is clearly different from the similar species G. communis mainly by antennomere 4 distinctly longer than antennomere 3, by antenna ochre yellow; while

G. communis has antennomere 4 as long as antennomere 3 and base of antenna is paler than following antennomeres.

**Etymology.** Toponymic, named after the type locality - Mount Emaw Bum in Kachin State.

**Distribution.** Myanmar (Kachin State).

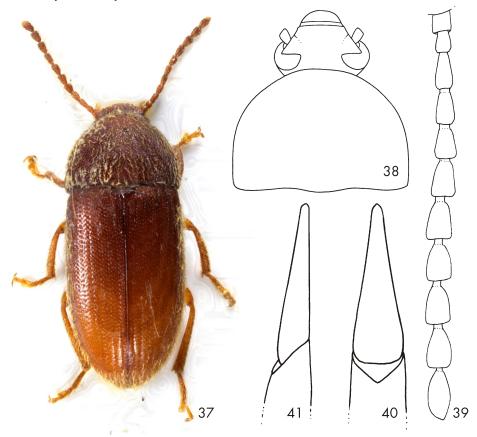
## genus Psis Novák, 2019

## Psis myanmarensis sp. nov.

(Figs. 37-41)

Type locality. Myanmar, China State, Chin Hills.

**Type material.** Holotype (3): MYANMAR (Burma) / Provinz Kachin State / Strasse von Bhamo nach Schwegu / 05. VI. 2006 / leg. Michael Langer, (VNPC). The types are provided with a printed red label: 'Psis / myanmarensis sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020'.



Figs. 37-41. *Psis myanmarensis* sp. nov. (male holotype): 37- Habitus; 38- head and pronotum; 39- antenna; 40- aedeagus, dorsal view; 41- aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 37, body small, elongate oval, sides parallel, convex, dorsal surface from reddish brown to dark brown, with punctuation, microgranulation, long and dense, pale setation; BL 4.99 mm. Widest near half elytra length; BL/EW 2.79.

Head (Fig. 38) brown, relatively small, transverse, matte, distinctly wider than long, with long, pale setation, microgranulation and punctuation, punctures relatively large and coarse. Intervals between punctures narrow. Clypeus brown, matte, with fine microgranulation and pale setae, apex arcuate. Widest through the eyes, HW 0.94 mm; HW/PW 0.51; HL (visible part) 0.58 mm. Eyes relatively large, transverse, excised, space between eyes relatively wide, distinctly wider than length of one eye, wider than length of each antennomere; OI equal to 48.84.

Antenna (Fig. 39). Short, brown, rather matte (AL 1.95 mm, not reaching half body length, AL/BL 0.39), antennomeres with long, pale setation, very fine microgranulation and sparse punctures. Antennomeres 3-10 distinctly widened anteriorly. Ultimate antennomere longest, drop shaped, widest before apex. Antennomere 2 shortest.

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RLA(1-11): 1.06: 0.60: 1.00: 1.09: 0.98: 1.14: 1.28: 1.27: 1.31: 1.32: 1.47.
RL/WA(1-11): 1.94: 1.40: 2.33: 1.73: 1.68: 1.67: 1.75: 1.74: 1.82: 1.69: 2.20.
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Maxillary palpus brown, rather matte with microgranulation. Ultimate palpomere widely triangular, palpomeres 2 and 3 distinctly dilated anteriorly.

Pronotum (Fig. 38). Dark brown, matte, transverse, almost semicircular, strongly convex, widest at base slightly wider than elytron in base. Dorsal surface with dense and long, semierect, pale setation, dense and shallow punctuation, punctures relatively large, interspaces between punctures narrow. Border lines very narrow, not clearly conspicuous from dorsal view. Lateral and anterior margins arcuate, posterior margin bisinuate, anterior angles indistinct, posterior angles obtuse. PL 1.29 mm; PW 1.85 mm; PI equal to 69.73.

Ventral side of body dark reddish brown with short pale setation. Abdomen reddish brown, with dense, recumbent, pale setation, fine microgranulation and dense punctuation, punctures small and shallow, shiny.

Elytra reddish brown, distinctly paler than pronotum, slightly elongate oval, sides more parallel, widest near middle, slightly convex, slightly shiny. Dorsal surface near lateral margins with long, semierect, pale setation. Elytral striae with distinct rows of small punctures, distinctly coarser than those in disc of pronotum, elytral interspaces with fine microgranulation and dense punctuation, punctures distinctly smaller than those in striae. EL 3.12 mm; EW 1.79 mm. EL/EW 1.74.

Scutellum. Reddish brown as elytron itself, triangular with microgranulation and punctures.

Elytral epipleura well-developed, reddish brown as elytron itself, with long pale setation narrowing to ventrite 1 than relatively wide leads parallel.

Legs reddish brown, short, relatively strong, with dense and long, pale setation, small punctures and microgranulation. Outer edge of protibiae with strong, short setae, meso- and metatibiae distinctly widened anteriorly. Pro- and mesotarsomeres 3, 4 and metatarsomere 3 widened and lobed. RLT: 1.00: 0.50: 1.00: 1.23: 1.91 (protarsus), 1.00: 0.49: 0.49: 0.75: 1.15 (mesotarsus), 1.00: 0.38: 0.45: 0.76 (metatarsus).

Anterior tarsal claws with 8 visible teeth.

Aedeagus (Figs. 40 and 41). Yellow, rather matte. Basal piece slightly narrowing dorsally. Apical piece elongate triangular dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1:3.82.

#### Female unknown.

**Differential diagnosis.** No species of *Psis* Novák, 2019 is known from territory of Myanmar. Similar species is *Psis nanensis* Novák, 2019 from Thailand and Malaysia.

New species *Psis myanmarensis* sp. nov. clearly differs from similar species *P. nanensis* mainly by shallower and larger punctuation of pronotum and by wider and shorter antennomeres 5-10 RL/WA 1.67-1.82; while *P. nanensis* has punctures of pronotum smaller, denser and coarser and antennomeres 5-10 are longer and narrower RL/WA 1.88-2.29.

**Etymology.** Toponymic, named after country of its origin - Myanmar.

**Distribution.** Myanmar (Chin State).

## Cteniopodini Solier, 1835

## genus Cteniopinus Seidlitz, 1896

## Cteniopinus conus sp. nov.

(Figs. 42-47)

Type locality. Western Myanmar, Chin State, 4 km W of Thaing Gnin village, N 23°12′10.2′′, E 93°48′11.2′′, 2100 m.

**Type material.** Holotype (3): Myanmar (West), Burma, Chin State, / ca. 4 km W Thaing Gnin village / N  $23^{\circ}12^{\circ}10.2^{\circ}12^{\circ}10.2^{\circ}12^{\circ}10.2^{\circ$ 

**Description of holotype.** Habitus as in Fig. 42, body elongate oval, ochre yellow, slightly shiny, dorsal surface glabrous with punctuation and rugosities, BL 7.87 mm. Widest near two thirds elytra length; BL/EW 2.83.

Head (Fig. 43) ochre yellow, long, distinctly longer than wide, shiny, widest through the eyes, approximately as wide as anterior margin of pronotum. Dorsal surface almost glabrous, with dense punctuation, punctures in posterior part distinctly larger than those in anterior half or in clypeus. Apical part of anterior half with very fine microgranualtion. Clypeus heart shaped, with a few long, pale setae and fine microgranulation, apex excised. Mandibles ochre yellow with blackish brown apex, glabrous dorsally, shiny, with a few pale setae on sides. HW 1.08 mm; HW/PW 0.63; HL (visible part) 1.50 mm. Eyes small, slightly excised, space between eyes wide, distinctly wider than diameter of one eye; distinctly wider than length of each antennomere. OI equal to 68.14.

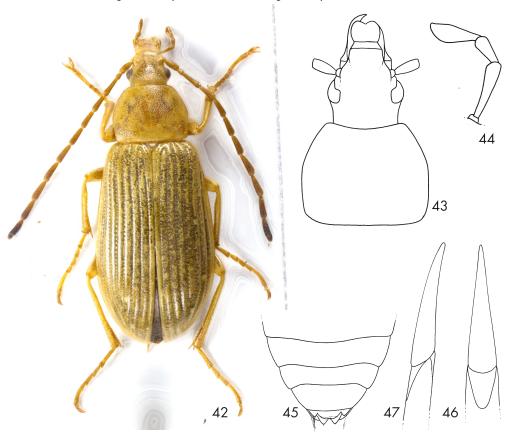
Antenna narrow, distinctly exceeding half body length (AL 4.85 mm; AL/BL 0.62), antennomeres ochre yellow with short, pale setation, dense punctuation, punctures very small. Antennomeres 5-8 slightly and antennomeres 9-11 distinctly darker than antennomeres 1-4. Apical half of antennomere 10 and apical three fourth of ultimate antennomere dark brown. Antennomere 2 shortest, antennomeres 6-11 longer than antennomere 3, antennomeres 4 and 5 slightly shorter than antennomere 3.

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RLA(1-11): 0.73 : 0.31 : 1.00 : 0.99 : 0.96 : 1.05 : 1.12 : 1.17 : 1.12 : 1.08 : 1.18.
RL/WA(1-11): 2.38 : 1.28 : 3.47 : 3.53 : 3.40 : 3.52 : 3.87 : 3.94 : 3.74 : 3.61 : 3.97.
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Maxillary palpus (Fig. 44) ochre yellow, slightly shiny, with microgranulation, pale setae and sparse punctures. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex. Penultimate and ultimate palpomeres slightly darker than palpomere 2, ultimate palpomere

widened apically, longly axe-shaped.

Pronotum (Fig. 43) ochre yellow, glabrous, shiny, widest near middle of lateral margins, slightly narrower than base of elytra. Dorsal surface with dense punctuation, punctures small. PL 1.38 mm; PW 1.71 mm; Pl equal to 80.70. Border lines narrow and complete. Lateral margins angled in middle, straight in basal part, narrowing in apical half. Base straight, anterior margin roundly excised. Posterior angles roundly obtuse, anterior angles finely obtuse.



Figs. 42-47. Cteniopinus conus sp. nov.: Figs. 42-44: male holotype: 42- Habitus; 43- head and pronotum; 44- maxillary palpus; 45- abdomen; 46- aedeagus, dorsal view; 47- aedeagus, lateral view.

Elytra. Ochre yellow with irregular blackish spots and parts, elongate oval, slightly shiny, glabrous. EL 4.99 mm; EW 2.78 mm; EL/EW 1.80. Rows of punctures in elytral striae distinct, punctures in rows small, coarser and as large as those in pronotum. Elytral intervals distinctly convex with very small punctures and transverse rugosities.

Scutellum. Ochre yellow, triangular, slightly shiny with dense punctuation, punctures very small. Elytral epipleura well-developed, ochre yellow, widest near base, narrow and parallel from middle of metaventrite.

Legs. Ochre yellow, thin and long, with small punctures and pale setation. Penultimate tarsomeres not widened and without lobes. RLT: 1.00: 0.59: 0.65: 0.72: 2.94 (protarsus), 1.00

: 0.61 : 0.52 : 0.42 : 1.53 (mesotarsus), 1.00 : 0.52 : 0.42 : 0.94 (metatarsus).

Anterior tarsal claws with more than 10 visible teeth.

Ventral side of body ochre yellow, with darker parts. Abdomen ochre yellow with darker parts, surface with pale setation, fine microgranulation and dense punctuation, punctures small. Ultimate ventrite excised in apex as in Fig. 45.

Aedeagus (Figs. 46 and 47) ochre yellow, shiny. Basal piece rounded laterally, narrowing in anterior part from dorsal view. Apical piece narrowly triangular dorsally and knife-shaped laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1:2.17.

**Female** with body wider and larger and antenna is shorter than in male and anterior tarsal claws with 7 teeth. Ultimate ventrite not excised.

Measurements of female body. BL 10.08 mm; HL 1.88 mm; HW 1.37 mm; OI 69.34; PL 1.84 mm; PW 2.44 mm; PI 75.41; EL 6.66 mm; EW 3.89 mm; AL 5.37 mm; AL/BL 0.53; HW/PW 0.56; BL/EW 2.59; EL/EW 1.71.

 $\begin{array}{l} RLA(1-11): \ 0.82: \ 0.32: \ 1.00: \ 1.09: \ 1.01: \ 1.01: \ 1.05: \ 1.07: \ 1.07: \ 1.11: \ 1.42. \\ RL/WA(1-11): \ 2.39: \ 1.26: \ 3.62: \ 3.15: \ 2.96: \ 2.85: \ 2.96: \ 3.24: \ 3.24: \ 3.36: \ 4.32. \\ RLT: \ 1.00: \ 0.43: \ 0.43: \ 0.54: \ 1.93 \ (protarsus); \ 1.00: \ 0.50: \ 0.47: \ 0.90 \ (metatarsus). \\ \end{array}$ 

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=40). BL  $7.88\,$  mm (6.87-8.96 mm); HL  $1.45\,$  mm (1.28-1.74 mm); HW  $1.13\,$  mm (1.08-1.20 mm); OI  $66.64\,$  (63.16-69.46); PL  $1.44\,$  mm (1.37-1.60 mm); PW  $1.82\,$  mm (1.71-1.92 mm); PI  $77.63\,$  (74.75-80.70); EL  $4.99\,$  mm (4.40-5.62 mm); EW  $2.84\,$  mm (2.60-3.12 mm). Females (n= 26). BL  $9.64\,$  mm (9.31-10.08 mm); HL  $1.72\,$  mm (1.60-1.88 mm); HW  $1.26\,$  mm (1.17-1.37 mm); OI  $65.28\,$  (62.09-69.34); PL  $1.73\,$  mm (1.65-1.84 mm); PW  $2.25\,$  mm (2.14-2.44 mm); PI  $77.12\,$  (75.41-79.91); EL  $6.29\,$  mm (6.06-6.66 mm); EW  $3.80\,$  mm (3.65-3.89 mm).

**Differential diagnosis.** Similar species from Myanmar are *Cteniopinus cypraea* sp. nov., *Cteniopinus lambis* sp. nov. and *Cteniopinus voluta* sp. nov.

Cteniopinus conus sp. nov. distinctly differs from the similar species *C. cypraea* mainly by dorsal surface rather matte, by pronotum with dense and coarse punctuation, by teeth in protarsal claws normally equipped, by shape of excision of ultimate ventrite (Fig. 45) and by shape of apical piece of aedeagus (Figs. 46, 47); while *C. cypraea* has dorsal surface strongly shiny, disc of pronotum has sparser and shallower punctuation, teeth in protarsal claws of male are in middle stacked together, excisison of ultimate ventrite is as in Fig. 51 and shape of apical piece of aedeagus is as in Figs. 52 and 53.

C. conus is clearly different from the similar species C. lambis mainly by smaller body, by shape of pronotum (widest near middle), by more convex elytral intervals, by teeth in protarsal claws of male normally equipped, by shape of excision of ultimate ventrite (Fig. 45) and by shape of apical piece of aedeagus (Figs. 46, 47); while C. lambis has larger body, pronotum is widest near base, elytral intervals are more flat, protarsal claws of male are in middle stacked together, excisison of ultimate ventrite is as in Figs. 57 and shape of apical piece of aedeagus is as in Figs. 58 and 59.

C. conus distinctly differs from the similar species C. voluta mainly by larger punctures on disc of pronotum, by more convex elytral intervals, by teeth in protarsal claws of male normally equipped, by metatibiae straight, by shape of excision of ultimate ventrite (Fig. 45) and by shape of apical piece of aedeagus (Figs. 46, 47); while C. voluta has smaller punctures on disc of

pronotum, elytral intervals are more flat, protarsal claws of male are in middle stacked together, metatibiae are distinctly bent, excisison of ultimate ventrite is as in Fig. 57 and shape of apical piece of aedeagus is as in Figs. 58 and 59.

**Etymology.** The name of this species, a noun in apposition, is the Latin generic name of marine gastropod mollusk Textile cone *Conus textile* Linnaeus, 1758.

**Distribution.** Myanmar (Chin State).

## Cteniopinus cypraea sp. nov.

(Figs. 48-53)

Type locality. Myanmar, province Kachin State, environ of Pangwa, N 25° 37′42.3′′, E 098°23′22.5′′, 2450 m.

**Type material.** Holotype (3): MYANMAR (Burma) / Provinz Kachin State / Pangwa env. (TF) (H = 2.450 m) / 28.1X. 2010 / N  $25^{\circ}$  37'42.3'' E  $098^{\circ}$ 23'22.5'' / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). Paratypes: (14 33, 17 99): same data as holotype, (VNPC). The types are provided with a printed red label: 'Cteniopinus / cypraea sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020'.

**Description of holotype.** Habitus as in Fig. 48, body elongate oval, ochre yellow with dark spots, strongly shiny, dorsal surface with very short, sparse, pale setation, punctuation, rugosities and fine microgranulation, BL 8.64 mm. Widest near half elytra length; BL/EW 2.57.

Head (Fig. 49) ochre yellow, long, shiny, distinctly longer than wide, approximately as long as pronotum, through the eyes approximately as wide as anterior part of pronotum. Dorsal surface with dense punctuation, punctures small. Apex of anterior part with a few setae and fine microgranulation. Clypeus heart shaped with long, pale setae and microgranulation, apex excised. Mandibles glabrous, shiny, with blackish brown apex and a few pale setae on sides. HW 1.37 mm; HW/PW 0.72; HL (visible part) 1.54 mm. Eyes small, slightly excised, space between eyes wide, distinctly wider than diameter of one eye; distinctly wider than length of each antennomere. OI equal to 63.24.

Antenna narrow, slightly exceeding half body length (AL 5.01 mm; AL/BL 0.58), antennomeres with short setation, very small punctures and fine microgranulation. Antennomeres 1-3 or 4 pale brown, antennomeres 1-6 slightly shiny, antennomeres 5-9 brown, antennomeres 10 and 11 dark brown with base paler. Antennomeres 3-10 finely widened anteriorly, antennomere 2 shortest, antennomere 11 longest, widest before apex.

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RLA(1-11): 0.83 : 0.39 : 1.00 : 1.03 : 1.01 : 1.03 : 1.00 : 0.99 : 0.89 : 1.06 : 1.26.
RL/WA(1-11): 2.73 : 1.56 : 3.41 : 3.19 : 2.94 : 3.09 : 3.30 : 3.06 : 2.59 : 3.09 : 4.31.
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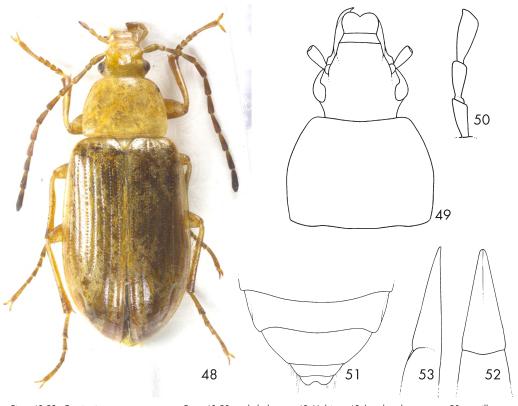
Maxillary palpus (Fig. 50) ochre yellow, slightly shiny, with fine microgranulation, short setae and small punctures. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex. Ultimate palpomere longer and darker than penultimate, widened apically, long axe-shaped.

Pronotum (Fig. 49) ochre yellow, widest near middle of lateral margins, slightly narrower than base of elytra. Dorsal surface shiny, with very short, sparse, pale setae, very fine microgranulation and relatively dense punctuation, punctures small, interspaces between punctures wider than diameter of punctures. PL 1.55 mm; PW 2.14 mm; PI equal to 72.42. Border lines narrow and complete. Lateral margins straight in basal part, narrowing in apical half. Base very finely bisinuate, anterior margin distinctly excised. Posterior and anterior angles obtuse.

Elytra. Ochre yellow with irregular darker spots (as in Fig. 48), widely elongate, strongly shiny, with a few very short, pale setae. EL 5.55 mm; EW 3.36 mm; EL/EW 1.65. Rows of punctures in

elytral striae clearly distinct, punctures in rows small, but larger than those in pronotum. Elytral intervals slightly convex with very small punctures and transverse rugosities.

Scutellum. Ochre yellow, triangular, slightly shiny with pale setation, microgranulation and small punctures.



Figs. 48-53. Cteniopinus cypraea sp. nov.: Figs. 48-50: male holotype: 48- Habitus; 49- head and pronotum; 50- maxillary palpus; 51- abdomen; 52- aedeagus, dorsal view; 53- aedeagus, lateral view.

Elytral epipleura well-developed, yellow, widest near base, regularly narrowing to ventrite 1, then narrow, parallel.

Legs. Ochre yellow, thin and long, tarsi slightly darker, apex of tibiae pale reddish brown. Surface with small punctures and short dark setation. Mesotibiae distinctly double bent in inner side, protarsomeres 1-4 wider than mesotarsomeres 1-4. Penultimate tarsomeres not widened and without lobes. RLT: 1.00: 0.55: 0.60: 0.59: 2.20 (protarsus), 1.00: 0.60: 0.57: 0.49: 1.38 (mesotarsus), 1.00: 0.84: 0.50: 0.92 (metatarsus).

Anterior tarsal claws with 18 and 20 visible teeth, in middle stacked together.

Ventral side of body from yellow to ochre yellow, with dense punctuation, punctures very small. Abdomen yellow with dark spots, pale, recumbent setation, fine microgranulation and punctuation, punctures very small and shallow. Ultimate ventrite excised in apex as in Fig. 51.

Aedeagus (Figs. 52 and 53) yellow, slightly shiny. Basal piece strong, rounded laterally, narrowing in apical part from dorsal view. Apical piece longitudinally triangular dorsally and

laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 4.74.

**Female** with protarsomeres 1-4 approximately as wide as mesotarsomeres 1-4, body more robust, slightly wider, antenna is slightly shorter than in male, protarsal claws not stacked together, with 7 teeth. Ultimate ventrite not excised.

Measurements of female body. BL 9.35 mm; HL 1.57 mm; HW 1.41 mm; OI 71.23; PL 1.52 mm; PW 2.19 mm; PI 69.41; EL 6.26 mm; EW 3.68 mm; AL 4.94 mm; AL/BL 0.53; HW/PW 0.64; BL/EW 2.54; EL/EW 1.70.

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 \begin{array}{l} RLA(1-11): \ 0.92: \ 0.42: \ 1.00: \ 0.87: \ 0.89: \ 0.92: \ 0.96: \ 1.01: \ 0.99: \ 1.04: \ 1.35. \\ RL/WA(1-11): \ 2.43: \ 1.63: \ 3.36: \ 2.78: \ 2.54: \ 3.24: \ 3.38: \ 3.75: \ 4.06: \ 3.85: \ 5.26. \\ RLT: \ 1.00: \ 0.64: \ 0.48: \ 0.57: \ 2.18 \ (protarsus); \ 1.00: \ 0.54: \ 0.50: \ 0.37: \ 1.31 \ (mesotarsus); \ 1.00: \ 0.50: \ 0.31: \ 0.97 \ (metatarsus). \\ \end{array}
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**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 15). BL 8.06 mm (7.40-8.64 mm); HL 1.39 mm (1.24-1.54 mm); HW 1.25 mm (1.12-1.37 mm); OI 65.28 (62.30-69.50); PL 1.39 mm (1.20-1.55 mm); PW 1.88 mm (1.60-2.14 mm); PI 73.92 (71.32-76.64); EL 5.26 mm (4.96-5.55 mm); EW 3.09 mm (2.74-3.36 mm). Females (n= 17). BL 8.76 mm (8.31-9.35 mm); HL 1.49 mm (1.44-1.57 mm); HW 1.34 mm (1.30-1.41 mm); OI 65.59 (60.10-71.23); PL 1.49 mm (1.45-1.53 mm); PW 2.07 mm (2.00-2.19 mm); PI 72.16 (69.41-75.00); EL 5.78 mm (5.34-6.26 mm); EW 3.49 mm (3.32-3.68 mm).

**Differential diagnosis.** Similar species from Myanmar are *Cteniopinus conus* sp. nov., *Cteniopinus lambis* sp. nov. and *Cteniopinus voluta* sp. nov.

Cteniopinus cypraea sp. nov. distinctly differs from the similar species *C. conus* mainly by dorsal surface strongly shiny, by disc of pronotum with sparser and shallower punctuation by teeth in protarsal claws of male stacked together in middle, by excisison of ultimate ventrite as in Fig. 51 and shape of apical piece of aedeagus (Figs. 52 and 53); while *C. conus* has dorsal surface rather matte, pronotum has dense and coarse punctuation, teeth in protarsal claws of male are normally equipped, shape of excision of ultimate ventrite is as in Fig. 45 and shape of apical piece of aedeagus is as in Figs. 46, 47.

C. cypraea is clearly different from the similar species C. lambis mainly by smaller body, by dorsal surface strongly shiny and by excision of ultimate ventrite as in Fig. 51 and shape of apical piece of aedeagus (Figs. 52 and 53); while C. lambis has larger body, dorsal surface is slightly shiny and shape of excision of ultimate ventrite is as in Fig. 57 and shape of apical piece of aedeagus is as in Figs. 58, 59.

C. cypraea distinctly differs from the similar species C. voluta mainly by dorsal surface strongly shiny, by metatibiae almost straight, by excisison of ultimate ventrite as in Fig. 51 and shape of apical piece of aedeagus (Figs. 52 and 53); while C. voluta has dorsal surface rather matte, metatibiae of male are distinctly bent, shape of excision of ultimate ventrite is as in Fig. 63 and shape of apical piece of aedeagus is as in Figs. 64, 65.

**Etymology.** The name of this species, a noun in apposition, is the Latin generic name of marine gastropod mollusk Tiger cowrie *Cypraea tigris* Linnaeus, 1758.

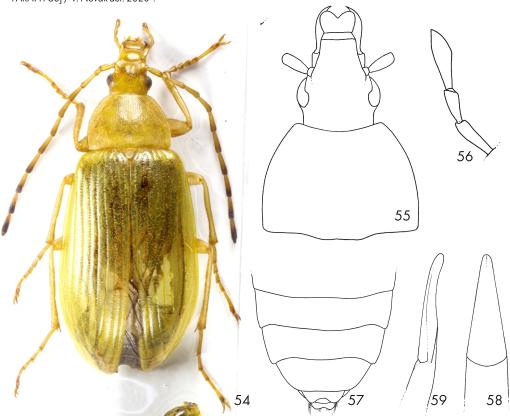
**Distribution.** Myanmar (Kachin State).

# Cteniopinus lambis sp. nov.

(Figs. 54-59)

Type locality. Myanmar, Kachin State, environ of Pangwa, N 25° 37′ 42.3′′ E 098°23′22.5′′, 2450 m.

**Type material.** Holotype [ $\circlearrowleft$ ]: MYANMAR (Burma) / Provinz Kachin State / Pangwa env. (TF) (H = 2.450 m) / 28. IX. 2010 / N 25° 37′42.3′′ E 098°23′22.5′′ / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). Paratypes: {1  $\circlearrowleft$ , 3  $\circlearrowleft$ 2; same data as holotype, (VNPC). The types are provided with a printed red label: 'Cteniopinus / lambis sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020'.



Figs. 54-59. Cteniopinus lambis sp. nov.: Figs. 54-56: male holotype: 54- Habitus; 55- head and pronotum; 56- maxillary palpus; 57- abdomen; 58- aedeagus, dorsal view; 59- aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 54, body elongate oval, from yellow to ochre yellow, slightly shiny, dorsal surface with very short, recumbent, pale setation, punctuation, rugosities and fine microgranulation, BL 9.87 mm. Widest near half elytra length; BL/EW 2.58.

Head (Fig. 55) ochre yellow, long, shiny, distinctly longer than wide, longer than pronotum, through the eyes widest, approximately as wide as anterior part of pronotum. Dorsal surface of posterior part almost glabrous with dense punctuation, anterior part with a few pale setae, sparser punctuation, punctures smaller. Clypeus heart shaped, ochre yellow with denser setation than in apex of anterior part of head, apex excised. Mandibles ochre yellow, glabrous, shiny,

with blackish brown apex. HW 1.32 mm; HW/PW 0.63; HL (visible part) 1.82 mm. Eyes small, slightly excised, space between eyes wide, distinctly wider than diameter of one eye; distinctly wider than length of each antennomere. OI equal to 71.27.

Antenna narrow, slightly exceeding half body length (AL 5.50 mm; AL/BL 0.56), antennomeres with short setation, very small punctures and microgranulation. Antennomeres 1-5 ochre yellow, antennomers 6-11 bicolor (ochre yellow with dark brown or blackish brown apex or apical part). Antennomere 2 shortest, antennomere 11 longest, widest before apex. Antennomeres 4 slightly shorter than antennomere 3, antennomeres 6-11 longer than antennomere 3.

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RLA(1-11): 0.68 : 0.34 : 1.00 : 0.97 : 1.01 : 1.12 : 1.12 : 1.21 : 1.18 : 1.15 : 1.27.
RL/WA(1-11): 2.41 : 1.70 : 4.75 : 3.08 : 3.11 : 3.77 : 3.88 : 4.18 : 3.94 : 3.97 : 4.39.
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Maxillary palpus (Fig. 56) ochre yellow, slightly shiny, with microgranulation and setation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex. Ultimate palpomere longer than penultimate, widened apically, longly axe-shaped.

Pronotum (Fig. 55) ochre yellow, widest in basal angles, slightly narrower than base of elytra, dorsal surface shiny, with very short, pale, recumbent setation (distinct mainly near lateral margins) and dense punctuation, punctures small. PL 1.54 mm; PW 2.11 mm; PI equal to 72.99. Border lines narrow and complete. Lateral margins arcuate, base very finely bisinuate, anterior margin distinctly excised. Posterior angles slightly roundly obtuse, anterior angles obtuse.

Elytra. Yellow with grayish shadows, widely elongate, slightly shiny, with very short, recumbent, pale setation. EL 6.51 mm; EW 3.82 mm; EL/EW 1.70. Rows of punctures in elytral striae clearly distinct, punctures in rows very small, distinctly smaller than those in pronotum. Elytral intervals very finely convex with very small punctures, microgranulation and fine transverse rugosities.

Scutellum. Ochre yellow, triangular, with small, shallow punctures and microgranulation.

Elytral epipleura well-developed, yellow, slightly narrowing from base to metaventrite, then relatively wide leads parallel.

Legs. Ochre yellow, thin and long, with small punctures, fine microgranulation and dark, short setation. Penultimate tarsomeres not widened and without lobes. RLT: 1.00:0.63:0.67:0.75:2.51 (protarsus), 1.00:0.54:0.38:0.36:1.21 (mesotarsus), 1.00:0.49:0.43:0.77 (metatarsus).

Anterior tarsal claws with 16 visible teeth, in middle stacked together.

Ventral side of body ochre yellow, with pale setation and punctuation, punctures very small, metaventrite with black spots. Abdomen ochre yellow with blackish spots, ventrites with pale setation, microgranulation and punctuation, punctures very small and shallow. Ultimate ventrite excised in apex as in Fig. 57.

Aedeagus (Figs. 58 and 59) ochre yellow, slightly shiny. Basal piece strong, rounded laterally, narrowing in dorsal view. Apical piece elongate triangular dorsally, knife-shaped in lateral view. Ratio of length of apical piece to length of basal piece from dorsal view 1: 4.84.

**Female** with body slightly wider, antenna slightly shorter than in male, protarsal claws not stacked together, with 9 visible teeth. Ultimate ventrite not excised.

Measurements of female body. BL 12.51 mm; HL 2.18 mm; HW 1.58 mm; OI 72.73; PL 1.86 mm; PW 2.83 mm; PI 65.72; EL 8.47 mm; EW 4.86 mm; AL 5.58 mm; AL/BL 0.45; HW/PW 0.56; BL/EW 2.57; EL/EW 1.74.

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RLA(1-11): 0.80: 0.30: 1.00: 0.88: 0.87: 0.87: 0.92: 0.96: 0.97: 0.99: 1.17.

RL/WA(1-11): 2.59: 1.04: 3.04: 2.66: 2.55: 2.51: 3.00: 3.00: 3.04: 3.22: 3.68.

RLT: 1.00: 0.58: 0.51: 0.53: 2.02 (protarsus); 1.00: 0.40: 0.33: 0.78 (metatarsus).
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**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 8.77 mm (7.67-9.57 mm); HL 1.68 mm (1.53-1.82 mm); HW 1.22 mm (1.11-1.32 mm); OI 67.14 (63.01-71.27); PL 1.37 mm (1.20-1.54 mm); PW 1.85 mm (1.59-2.11 mm); PI 74.73 (72.99-76.47); EL 5.73 mm (4.94-6.51 mm); EW 3.28 mm (2.73-3.82 mm). Females (n= 3). BL 12.18 mm (11.68-12.51 mm); HL 2.18 mm (2.04-2.31 mm); HW 1.58 mm (1.48-1.67 mm); OI 69.50 (64.84-72.73); PL 1.75 mm (1.64-1.86 mm); PW 2.80 mm (2.55-3.01 mm); PI 62.72 (64.84-72.73); EL 8.25 mm (8.00-8.47 mm); EW 4.61 mm (4.21-4.86 mm).

**Differential diagnosis.** Similar species from Myanmar are *Cteniopinus conus* sp. nov., *Cteniopinus cypraea* sp. nov. and *Cteniopinus voluta* sp. nov.

C. lambis sp. nov. is clearly different from the similar species C. conus mainly by larger body, by pronotum widest near base, by elytral intervals more flat, by protarsal claws of male in middle stacked together, by excisison of ultimate ventrite as in Fig. 57 and by shape of apical piece of aedeagus (Figs. 58 and 59); while C. conus has smaller body, pronotum is widest near middle, elytral intervals are more convex, teeth in protarsal claws of male are normally equipped, shape of excision of ultimate ventrite is as in Fig. 45 and shape of apical piece of aedeagus is as in Figs. 46, 47.

*C. lambis* is clearly different from the similar species *C. cypraea* mainly by larger body, by dorsal surface slightly shiny, by shape of excision of ultimate ventrite as in Fig. 57 and by shape of apical piece of aedeagus as in Figs. 58, 59; while *C. cypraea* has smaller body, dorsal surface is strongly shiny, excision of ultimate ventrite is as in Fig. 51 and shape of apical piece of aedeagus is as in Figs. 52 and 53.

C. lambis distinctly differs from the similar species C. voluta mainly by metatibiae of male almost straight, by shape of excision of ultimate ventrite as in Fig. 56 and by shape of apical piece of aedeagus as in Figs. 57, 58; while C. voluta has metatibiae of male distinctly bent, shape of excision of ultimate ventrite is as in Fig. 63 and shape of apical piece of aedeagus is as in Figs. 64, 65.

**Etymology.** The name of this species, a noun in apposition, is the Latin generic name of marine gastropod mollusk Spider conch *Lambis lambis* (Linnaeus, 1758).

**Distribution.** Myanmar (Kachin State).

# Cteniopinus voluta sp. nov.

(Figs. 60-65)

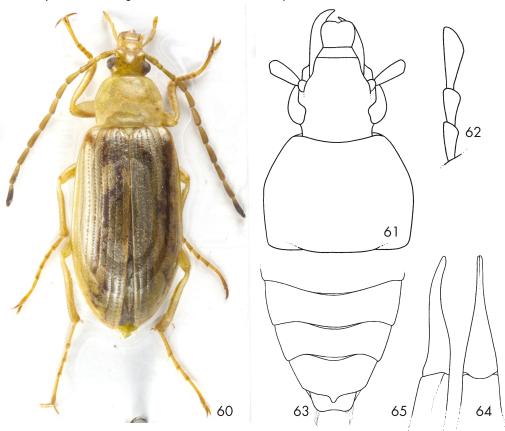
**Type locality.** Myanmar, Kachin State, N 26°09′23.2′′ E 098°31′16.4′′, 2344 m.

**Type material.** Holotype (3): MYANMAR (Burma) / Provinz Kachin State (Holzmeilercamp) / N 26°09′23.2″ E 098°31′16.4″ / 5.X. 2010 (H ca. 2.344 m, TF) / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). Paratypes: (7  $\eth \eth$ , 6  $\mathbf{9}\mathbf{9}$ ): same data as holotype, (VNPC); (3  $\eth \eth$ ): MYANMAR (Burma) / Provinz Kachin State / Pangwa env. (TF) (H = 2.450 m) / 28. IX. 2010 / N 25° 37′42.3″ E 098°23′22.5″ / leg. Michael Langer, S. Naumann & S. Löffler, (VNPC); (1  $\eth$ , 2  $\mathbf{9}\mathbf{9}$ ): MYANMAR (Burma) / Provinz Kachin State / Pastrase Mt.Emaw Bum zum Holzmeilercamp / 5. X. 2010 (H ca. 2.700 m, TF), leg. Michael Langer, S. Naumann & S. Löffler, (VNPC). The types are provided with a printed red label: 'Cteniopinus / voluta sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2020'.

**Description of holotype.** Habitus as in Fig. 60, body elongate oval, from yellow to ochre yellow with darker spots, rather matte, dorsal surface with short, recumbent, pale setation, punctuation, rugosities and fine microgranulation, BL 9.05 mm. Widest near two thirds elytra

length; BL/EW 2.93.

Head (Fig. 61) ochre yellow, long, shiny, distinctly longer than wide, slightly longer than pronotum, through the eyes widest, approximately as wide as anterior part of pronotum. Dorsal surface almost glabrous, with microgranulation and dense punctuation, punctures small. Anterior part with a few pale setae. Clypeus heart shaped, with long, pale setae, apex excised. Mandibles ochre yellow, glabrous dorsally, shiny, reddish brown apical part and blackish brown apex with a few pale setae on sides. HW 1.30 mm; HW/PW 0.71; HL (visible part) 1.58 mm. Eyes small, transverse, slightly excised, space between eyes wide, distinctly wider than diameter of one eye; distinctly wider than length of each antennomere. OI equal to 65.67.



Figs. 60-65. Cteniopinus voluta sp. nov.: Figs. 60-62: male holotype: 60- Habitus; 61- head and pronotum; 62- maxillary palpus; 63- abdomen; 64- aedeagus, dorsal view; 65- aedeagus, lateral view.

Antenna narrow, reaching almost two thirds body length (AL 5.70 mm; AL/BL 0.63), antennomeres with short setation, very small punctures and microgranulation. Antennomeres 1-5 ochre yellow, antennomeres 6-10 pale brown, antennomere 11 blackish brown with pale brown base. Antennomere 2 shortest, antennomere 11 longest, widest before apex. Antennomeres 3-10 slightly widened anteriorly.

RLA(1-11): 0.70: 0.40: 1.00: 0.96: 0.97: 0.99: 1.03: 1.17: 1.11: 1.16: 1.28.

RL/WA(1-11): 2.45 : 2.15 : 4.36 : 3.76 : 3.42 : 2.92 : 3.29 : 3.77 : 3.56 : 4.07 : 4.12.

Maxillary palpus (Fig. 62) yellow, shiny, with short setation and very small punctures. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex. Ultimate palpomere longer than penultimate, widened apically, long axe-shaped.

Pronotum (Fig. 61) yellow, matte, almost glabrous, widest in middle of lateral margins, narrower than base of elytra, dorsal surface with microgranulation, dense punctuation, punctures small and shallow. PL 1.43 mm; PW 1.82 mm; PI equal to 78.57. Border lines narrow and complete. Lateral margins arcuate, base very finely bisinuate, anterior margin distinctly excised. Posterior and anterior angles obtuse.

Elytra. Ochre yellow with irregular blackish spots, elongate oval, rather matte, with very short, recumbent, pale setation. EL 6.04 mm; EW 3.09 mm; EL/EW 1.96. Rows of punctures in elytral striae clearly distinct, punctures in rows small, but coarser and larger than those in pronotum. Elytral intervals slightly convex with very small punctures, microgranulation and transverse rugosities.

Scutellum. Yellow, roundly triangular, with longer setae and microgranulation, matte.

Elytral epipleura well-developed, yellow, widest near base, distinctly narrowing to ventrite 2, then narrow and parallel.

Legs. Ochre yellow, long, with fine microgranulation and short, darker setation. Protibiae slightly bent, meso- and metatibiae with two margins in inner side, metatibiae distinctly bent. Protarsomeres 1-4 slightly wider than meso- and matatarsomeres 1-4. Penultimate tarsomeres not widened and without lobes. RLT: 1.00: 0.48: 0.62: 0.78: 3.64 (protarsus), 1.00: 0.66: 0.61: 0.66: 1.73 (mesotarsus), 1.00: 0.53: 0.50: 1.11 (metatarsus).

Anterior tarsal claws with more than 30 visible teeth, in middle stacked together.

Ventral side of body yellow with dark spots, with short, pale setation and very small punctures. Abdomen yellow with blackish spots, surface with pale setation, fine microgranulation and punctuation, punctures very small and shallow. Ultimate ventrite excised in apex as in Fig. 63.

Aedeagus (Figs. 64 and 65) yellow, shiny. Basal piece strong, rounded laterally, narrowing in dorsal view. Apical piece narrowly triangular dorsally (apex very narrow), beak-shaped in lateral view. Ratio of length of apical piece to length of basal piece from dorsal view 1: 4.85.

**Female** with body slightly wider than in male, protarsomeres 1-4 not wider than mesotarsomeres 1-4 and metatibiae not bent, anterior tarsal claws with 9 teeth, not stacked together in middle. Ultimate ventrite not excised.

Measurements of female body. BL 10.20 mm; HL 1.67 mm; HW 1.38 mm; OI 67.84; PL 1.63 mm; PW 2.22 mm; PI 73.42; EL 6.40 mm; EW 3.84 mm; AL 6.67 mm; AL/BL 0.65; HW/PW 0.62; BL/EW 2.66; EL/EW 1.80.

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RLA(1-11): 0.77: 0.34: 1.00: 1.04: 1.17: 1.20: 1.21: 1.24: 1.19: 1.24: 1.41.
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RL/WA(1-11): 2.35: 1.26: 4.38: 4.29: 3.91: 4.20: 4.05: 4.35: 3.95: 4.35: 4.71.

RLT: 1.00:0.75:0.64:0.52:2.25 (protarsus), 1.00:0.40:0.53:0.43:1.35 (mesotarsus), 1.00:0.47:0.34:0.82 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 15). BL 9.34 mm (8.92-10.09 mm); HL 1.62 mm (1.58-1.71 mm); HW 1.39 mm (1.30-1.41 mm); OI 64.15 (62.38-65.07); PL 1.49 mm (1.43-1.59 mm); PW 2.00 mm (1.82-2.20 mm); PI 74.70 (71.92-78.72); EL 6.23 mm (5.82-6.79 mm); EW 3.30 mm (3.08-3.56 mm). Females (n= 17). BL 11.43 mm (9.85-12.95 mm); HL 1.81 mm (1.60-2.08 mm); HW 1.49 mm (1.32-1.72 mm); OI 65.40 (64.02-67.84); PL 1.74 mm (1.46-1.74 mm); OI 1.81 mm (1.41 mm); OI 1.41 mm

1.97 mm; PW 2.45 mm (2.22-2.85 mm); PI 70.93 (66.32-76.06); EL 7.89 mm (6.79-8.98 mm); EW 4.16 mm (3.66-4.63 mm).

**Differential diagnosis.** Similar species from Myanmar are *Cteniopinus conus* sp. nov., *Cteniopinus cypraea* sp. nov. and *Cteniopinus lambis* sp. nov.

Cteniopinus voluta sp. nov. distinctly differs from the similar species *C. conus* mainly by smaller punctures on disc of pronotum, by more flat elytral intervals, by protarsal claws of male in middle stacked together, by metatibiae distinctly bent, by excision of ultimate ventrite as in Fig. 57 and shape of apical piece of aedeagus (Figs. 58 and 59); while *C. conus* has larger punctures on disc of pronotum, elytral intervals are more convex, teeth in protarsal claws of male are normally equipped, metatibiae of male are straight, shape of excision of ultimate ventrite is as in Fig. 45 and shape of apical piece of aedeagus is as in Figs. 46, 47.

C. voluta is clearly different from the similar species C. cypraea mainly by dorsal surface rather matte, metatibiae of male distinctly bent, by shape of excision of ultimate ventrite as in Fig. 63 and shape of apical piece of aedeagus as in Figs. 64, 65; while C. cypraea has dorsal surface strongly shiny, metatibiae of male are almost straight, excision of ultimate ventrite is as in Fig. 51 and shape of apical piece of aedeagus is as in Figs. 52 and 53.

C. voluta distinctly differs from the similar species C. lambis mainly by metatibiae of male distinctly bent, by shape of excision of ultimate ventrite as in Fig. 63 and by shape of apical piece of aedeagus as in Figs. 64, 65; while C. lambis has metatibiae of male almost straight, shape of excision of ultimate ventrite is as in Fig. 56 and shape of apical piece of aedeagus is as in Figs. 57,58.

**Etymology.** The name of this species, a noun in apposition, is the Latin generic name of marine aastropod molusc Hebrew volute *Voluta ebraea* Linnaeus, 1758.

# **Distribution.** Myanmar (Kachin State).

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