New species of *Allecula* Fabricius, 1801 (Coleoptera: Tenebrionidae: Alleculinae) from Palaearctic and Oriental Regions

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Taxonomy, new species, description, Coleoptera, Tenebrionidae, Alleculinae, Allecula, Palaearctic and Oriental Regions, Bhutan, China, India, Vietnam

Abstract. New species of the genus *Allecula* Fabricius, 1801 are described as *Allecula arunachalica* sp. nov. from Bhutan and India (Arunachal Pradesh), *Allecula guangdongica* sp. nov. from China (Guangdong), *Allecula jaroslavi* sp. nov. from China (Fujian, Jiangxi), *Allecula lijiangica* sp. nov. and *Allecula yipinglangica* sp. nov. from China (Yunnan), *Allecula sichuanica* sp. nov. from China (Sichuan, Shaanxi) and *Allecula vietnamica* sp. nov. from North Vietnam. The new species are described, illustrated and compared with the species *Allecula coreana* Kolbe, 1886 and *Allecula ussuriensis* Borchmann, 1937. New distributional data for the species *Allecula coreana* Kolbe, 1886 are added - China (Hebei, Shaanxi) and North Korea.

INTRODUCTION

The genus Allecula was introduced by Fabricius (1801) for Allecula morio (Fabricius 1787), originally described as Cistela Geoffroy, 1762. The species of this genus have a worldwide distribution (Borchmann 1910, Novák 2014). Mader (1928) knew 27 species, Novák & Pettersson (2008) listed 65 species in three subgenera from the Palaearctic Region; only five species have been known from the western part of the Palaearctic Region. Later were described three new species by Novák et al. (2011, 2012) from traps for saproxylic beetles in Turkey and Italy. Last species was described by Novák (2016) from Abkhazia. From the eastern part of the Palaearctic Region seven new species were described by Akita & Masumoto (2012, 2015) from Japan and two new species from Taiwan (Masumoto et all. 2017).

The new species described as Allecula arunachalica sp. nov. from Bhutan and India (Arunachal Pradesh), Allecula guangdongica sp. nov. from China (Guangdong), Allecula jaroslavi sp. nov. from China (Fujian, Jiangxi), Allecula lijiangica sp. nov. and Allecula yipinglangica sp. nov. from China (Yunnan), Allecula sichuanica sp. nov. from China (Sichuan, Shaanxi) and Allecula vietnamica sp. nov. from North Vietnam are illustrated, and compared together and with the species Allecula coreana Kolbe, 1886 and Allecula ussuriensis Borchmann, 1937.

New distributional data for the species *Allecula coreana* Kolbe, 1886 are added - China (Hebei, Shaanxi) and North Korea.

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 ($100 \times 100 \times 10$

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

The following collection codens are used:

NMEG Naturkundemuseum, Erfurt, Germany; NMPC National Museum, Praha, Czech Republic;

VNPC private collection of Vladimír Novák, Praha, Czech Republic; ZMUH Zoologisches Museum und Universität, Hamburg, Germany.

Measurements of body parts and corresponding abbreviations used in text are as follows: AL-total antennae length, BL-maximum body length, EL-maximum elytral length, EW-maximum elytral width, HL-maximum length of head (visible part), HW-maximum width of head, OI-ocular index dorsally, PI-pronotal index dorsally, PL-maximum pronotal length, PW-pronotal width at base, RLA-ratios of relative lengths of antennomeres 1-11 from base to apex (3=1.00), RL/WA-ratios of length / maximum width of antennomeres 1-11 from base to apex, RLT-ratios of relative lengths of tarsomeres 1-5 respectively 1-4 from base to apex (1=1.00).

Other abbreviations used in text are as follows: bf - black frame, hb - handwritten black, pb - printed black, rl - red label, wl - white label.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continuous magnification and with Soft Imaging System AnalySIS.

TAXONOMY

Genus Allecula Fabricius, 1801

Allecula arunachalica sp. nov.

(Figs. 1-5)

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

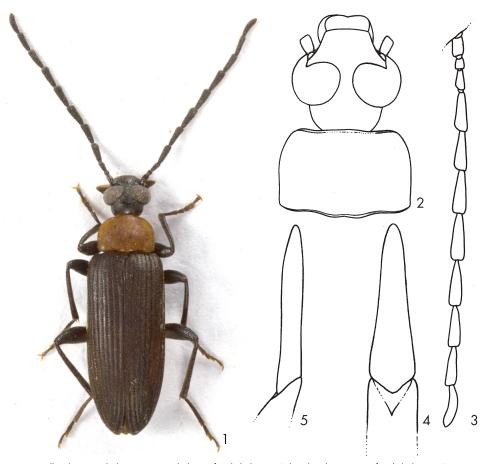
Type material. Holotype (3): NE INDIA; ARUNACHAL PR. / DIRANG vicinity; $1550\pm150\text{m}/27^{\circ}21^{\prime}-23^{\prime}$ N $92^{\circ}13^{\prime}-16^{\prime}E$ / L. Dembický leg.; 1.-9.vi.2004, (VNPC). Paratypes: $\{1\ 3\}$: same data as holotype, (VNPC); $\{1\ 3\}$: BHUTAN, W; Umg. / Thimpu, $01.-18.\ /\ VII.1988$, $2500\ \text{m}/\ \text{leg}$. C. Holzschuh, (NMEG). The types are provided with a printed red label: 'Allecula arunachalica sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2016'.

Description of holotype. Habitus as in Fig. 1, body small, elongate, narrow, parallel, from orange to black, dorsal surface setose, with punctuation and very fine microgranulation, rather matte. BL 6.89 mm. Widest near base of elytra, BL/EW 3.59.

Head (Fig. 2) relatively small, as wide as long, black, elongate, slightly narrower than pronotum, dorsal surface with pale setation, dense and shallow punctuation and fine microgranulation, clypeus brown. HL (visible part) 1.19 mm; HW 1.19 mm; HW/PW 0.87. Eyes very large, transverse, deeply excised, space between eyes very narrow, distinctly narrower than diameter of one eye or length of antennomere 3, slightly wider than length of antennomere 2; Ol equal to 15.20.

Antenna (Fig. 3). Long, antennomeres relatively narrow, with dark setation, microgranulation and punctures, AL(1-11) 4.29 mm; AL(1-11)/BL 0.63. Antennomeres 1-3 short, brown, slightly shiny. Antennomere 1 partly with pale setae, antennomeres 4-10 longer, matte, slightly dilated apically. Antennomere 2 shortest, antennomeres 4-11 each distinctly longer than antennomere 3. Antennomeres 4-10 more than 3 times longer than wide in apex.

RLA (1-11): 0.85 : 0.63 : 1.00 : 2.02 : 2.24 : 2.35 : 2.46 : 2.38 : 2.28 : 2.15 : 2.15 : 2.15 . RL/WA (1-11): 1.60 : 1.13 : 1.94 : 3.24 : 3.44 : 3.10 : 3.32 : 3.29 : 3.27 : 3.46 : 3.64.



Figs. 1-5: Allecula arunachalica sp. nov.: 1- habitus of male holotype; 2- head and pronotum of male holotype; 3- antenna of male holotype; 4- aedeagus, dorsal view; 5- aedeagus, lateral view.

Maxillary palpus brown, with pale setae and fine microgranulation. Palpomeres 2, 3 distinctly narrowest at base and widest in apex. Ultimate palpomere large, longly triangular, shoe-shaped.

Pronotum (Fig. 2). Unicolored orange, matte, with golden yellow setation, shallow and dense punctuation and very fine microgranulation; punctures relatively large, interspaces between punctures very narrow. PL 1.09 mm; PW 1.37 mm; Pl equal to 79.56. Border lines very narrow, in the middle of anterior margin indistinct. Lateral margins slightly arcuate in apical half, base finely bisinuate. Anterior margin more or less straight. Posterior angles obtuse, anterior angles almost indistinct. Base with two, oblique, shallow furrows.

Ventral side of body with short, pale setation and punctures. Prothorax orange, meso- and metathorax dark blackish brown. Abdomen dark blackish brown, slightly shiny, with long, pale setation and small punctures and distinct microgranulation. Ultimate ventrite with distinct larger furrow in middle.

Elytron. Dark blackish brown, narrow, elongate, at base distinctly wider than pronotum at base, dorsal surface rather matte, with pale setation. Elytral striae with distinct rows of small-sized

punctures, elytral intervals with very fine microgranulation and sparse, very small and shallow punctures. EL 4.61 mm; EW 1.92 mm. EL/EW 2.40.

Scutellum dark blackish brown as elytron itself, roundly triangular, with fine microgranulation and pale setae.

Elytral epipleura. Well developed, blackish brown as elytron itself, widest at base, with pale setae, regularly narrowing to ventrite 1, then relatively wide, leading parallel.

Legs black, narrow, long, with longer, ochre yellow setation, microgranulation and punctuation, punctures small. Protarsomeres and mesotarsomes 4 and metatarsomeres 3 slightly widened and distinctly lobed. Tarsal claws pale brown. RLT: 1.00:0.50:0.39:0.50:1.15 (protarsus); 1.00:0.37:0.27:0.28:0.70 (mesotarsus); 1.00:0.33:0.21:0.48 (metatarsus).

Anterior tarsal claws with 4 visible teeth.

Aedeagus (Figs. 4, 5). Relatively short, ochre yellow, slightly shiny. Basal piece slightly rounded laterally and narrowing dorsally. Apical piece elongate, triangular, beak-shaped dorsally and narrow, elongate laterally. Ratio of length of apical piece to length of basal piece 1: 4.24.

Female. Unknown.

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 7.04 mm (6.89-7.38 mm); HL 1.25 mm (1.19-1.28 mm); HW 1.22 mm (1.19-1.24 mm); OI 17.31 (15.20-18.61); PL 1.06 mm (0.98-1.11 mm); PW 1.42 mm (1.37-1.51 mm); PI 74.87 (71.53-79.56); EL 4.81 mm (4.61-5.00 mm); EW 2.02 mm (1.92-2.09 mm).

Differential diagnosis. Allecula arunachalica sp. nov. distinctly differs from species Allecula coreana Kolbe, 1886, Allecula lijiangica sp. nov., Allecula jaroslavi sp. nov., Allecula sichuanica sp. nov., Allecula vietnamica sp. nov., Allecula ussuriensis Borchmann, 1937 and Allecula vipinglangica sp. nov. mainly by space between eyes very narrow (OI 15-19), distinctly narrower than diameter of one eye and by antennomere 3 more than twice shorter than each of antennomeres 4-11.

A. arunachalica is clearly different from similar species Allecula guangdongica sp. nov. mainly by shape of aedeagus and colouring of dorsal surface (orange pronotum and dark blackish brown elytron); while A. guangdongica has pronotum brown and elytron bicolour (ochre yellow and brown).

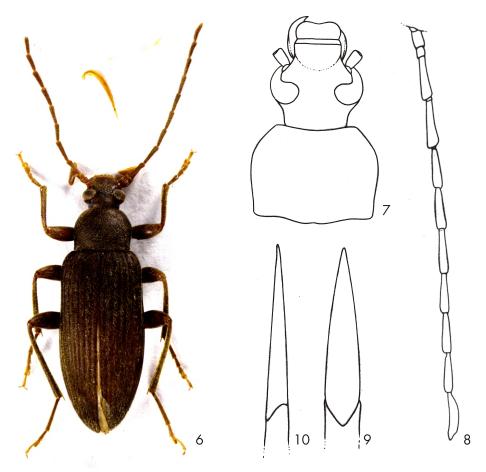
Etymology. Toponymic, named after Arunachal Pradesh in North India.

Distribution. Bhutan, India (Arunachal Pradesh).

Allecula coreana Kolbe, 1886

(Figs. 6-10)

Material examined. (10 spec.): CHINA, Hebei, 1000 m / Shijiazhuang, Taihang mts. / Jingxing, Xinzhuang, 2003 / P. Zahradník lgt., 13.-20.vii, (VNPC); (1 spec.): China, E Hebei, 17.VI. / 40.4N 118.9E 2001 / Qinglong S env. / Jaroslav Turna leg., (VNPC); (9 spec.): China, centr. Shanxi / Chao Shan 37.1 N 112.4 E / 25km SE Pingyao 4.-5.VII. / Jaroslav Turna leg., 2001, (VNPC); (3 spec.): China, prov. Shaanxi / Qiling Shan Mts., Honztzenzy / vill. env., VI.-VII.2000, 1500 m / Plutenko lgt., (VNPC); (1 spec.): Seishin - Olto / Nord-Korea / A. Kriecheldorff [pb] // Allecula / coreana Kolbe [hb], (NMPC).



Figs. 6-10: Allecula coreana Kolbe, 1886 (male): 6-habitus; 7-head and pronotum; 8-antenna; 9-aedeagus, dorsal view; 10-aedeagus, lateral view.

Measurements of body parts. (3): BL 9.07 mm; BL/EW 3.15; HL 1.08 mm; HW 1.49 mm; OI 40.40; PL 1.44 mm; PW 1.94 mm; PI 74.23; EL 6.55 mm; EW 2.88 mm; AL 6.49 mm; AL/BL 0.72; AED 1: 4.71; EL/EW 2.27; HW/PW 0.77.

RLA (1-11): 0.42: 0.23: 1.00: 1.13: 0.96: 0.97: 0.98: 0.97: 0.92: 0.89: 1.04.

 $RL/WA\ (1-11):\ 1.55:\ 1.18:\ 4.55:\ 4.15:\ 3.95:\ 3.91:\ 4.15:\ 4.20:\ 3.98:\ 3.85:\ 4.74.$

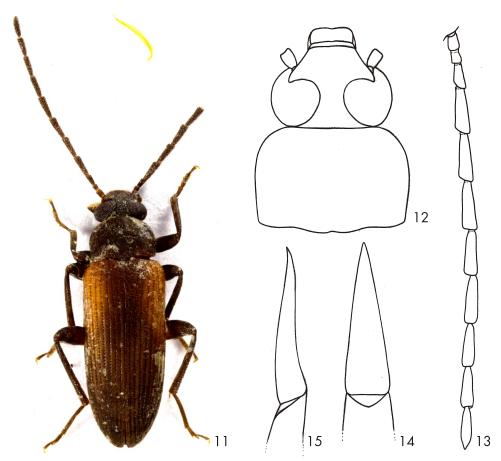
RLT: 1.00: 0.52: 0.48: 0.55: 0.98 (protarsus); 1.00: 0.41: 0.30: 0.34: 0.77 (mesotarsus); 1.00: 0.33: 0.30: 0.48 (metatarsus). Anterior tarsal claws with 6 visible teeth.

Distribution. South Korea. New for China (Hebei, Shaanxi) and North Korea.

Allecula guangdongica sp. nov. (Figs. 11-15)

Type locality. China, Guangdong province, West of Qixing, Heishiding nature reserve, 23°27.9′N, 111°54.3′E, 190 m.

Type material. Holotype (♂): CHINA Guangdong prov. / W of Qixing, Heishiding nature reserve / (forested stream valley; at light) / 23°27.9′N, 111°54.3′E, 190 m / M. Fikáček & J. Hájek leg., (NMPC). The type is provided with a printed red label: 'Allecula guangdongica sp. nov. / HOLOTYPUS / V. Novák det. 2016'.



Figs. 11-15: Allecula guangdongica sp. nov. (holotype): 11- habitus; 12- head and pronotum; 13- antenna; 14- aedeagus, dorsal view; 15- aedeagus, lateral view.

Description of holotype. Habitus as in Fig. 11, body small, elongate, narrow, parallel, from pale brown to black, dorsal surface with very short pale setation, punctuation and microgranulation, rather matte. BL 5.82 mm. Widest near middle of elytra length, BL/EW 3.38.

Head (Fig. 12) relatively small, slightly wider than long, with pale setation, posterior part black with large, coarse and dense punctuation, anterior part brown with punctuation and distinct microgranulation, clypeus distinctly paler. HL (visible part) 0.98 mm; HW 1.11 mm; HW/PW 0.82. Eyes very large, transverse, deeply excised, space between eyes very narrow, approximately as wide as length of antennomere 3, distinctly wider than length of antennomere 2; Ol equal to 21.59.

Antenna (Fig. 13). Long, antennomeres relatively narrow, antennomeres 1 and 2 with sparse pale setae, slightly shiny, antennomeres 3-11 matte, with dense and relatively long, grey setation,

fine microgranulation and punctures, AL(1-11) 4.31 mm; AL(1-11)/BL 0.74. Antennomere 2 shortest, antennomeres 4-11 each distinctly longer than antennomere 3.

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RLA (1-11): 0.82: 0.57: 1.00: 1.98: 1.98: 2.13: 2.07: 2.07: 1.86: 1.77: 2.00. RL/WA (1-11): 1.84: 1.39: 2.33: 3.47: 3.83: 3.61: 3.52: 4.14: 3.85: 3.41: 4.31.
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Maxillary palpus dark brown, with dark setae and fine microgranulation. Palpomeres 2, 3, distinctly narrowest at base and widest in apex. Ultimate palpomere darker, large, longly triangular, shoe-shaped.

Pronotum (Fig. 12). Dark brown, matte, with pale setation, microgranulation and dense punctuation; punctures medium-sized. PL 0.82 mm; PW 1.36 mm; PI equal to 60.29. Border lines narrow, but distinct. Lateral margins straight in basal half, arcuate in apical half, base finely bisinuate. Anterior margin more or less straight. Posterior angles slightly obtuse, anterior angles indistinct. Base with two, oblique, shallow furrows.

Ventral side of body brown, with short, pale setation and punctures. Abdomen brown, shiny, with pale setation, shallow punctuation and fine microgranulation. Ultimate and penultimate ventrites distinctly darker, ultimate ventrite with shallow excision in middle.

Elytron narrow, elongate, parallel, at base slightly wider than pronotum at base, dorsal surface matte, with pale setation. Elytral striae with distinct rows of medium-sized punctures, elytral intervals with very fine microgranulation, sparse, small and shallow punctures. Elytral intervals 3-5 in basal half and anterior part brown, elytral intervals near lateral margins in basal part ochre yellow (as in Fig. 11). EL 4.02 mm; EW 1.72 mm. EL/EW 2.34.

Scutellum dark brown as pronotum, triangular, with fine microgranulation and pale setae.

Elytral epipleura. Well developed, pale brown, widest in base, with punctures and pale setae in basal half, regularly narrowing to ventrite 1, then relatively wide, leading parallel.

Legs dark brown, narrow, long, with pale setation, microgranulation and punctuation. Penultimate tarsomeres of each tarsus slightly widened and distinctly lobed. RLT: 1.00: 0.43: 0.35: 0.49: 1.09 (protarsus); 1.00: 0.24: 0.22: 0.41 (metatarsus).

Anterior tarsal claws with 4 visible teeth.

Aedeagus (Figs. 14, 15). Ochre yellow, shiny. Basal piece slightly rounded laterally and slightly narrowing dorsally. Apical piece elongate, triangular dorsally, beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1: 4.62.

Female. Unknown.

Differential diagnosis. Allecula guangdongica sp. nov. distinctly differs from species Allecula coreana Kolbe, 1886, Allecula lijiangica sp. nov., Allecula jaroslavi sp. nov., Allecula sichuanica sp. nov., Allecula vietnamica sp. nov., Allecula ussuriensis Borchmann, 1937 and Allecula yipinglangica sp. nov. mainly by space between eyes very narrow (OI 21.6), distinctly narrower than diameter of one eye and by antennomere 3 almost twice shorter than each of antennomeres 4-11.

A. guangdongica is clearly different from similar species Allecula arunachalica sp. nov. mainly by shape of aedeagus and colouring of dorsal surface (brown pronotum and bicolour elytron); while A. arunachalica has pronotum orange and elytron dark blackish brown.

Etymology. Toponymic, named after the type locality - Guangdong province in China.

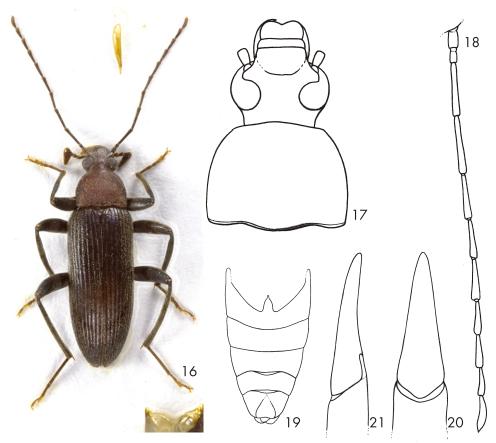
Distribution. China (Guangdong).

Allecula jaroslavi sp. nov.

(Figs. 16-21)

Type locality. China, Fujian, Ziyungdongshan, 25°46′N 117°20′E, 700-1100 m.

Type material. Holotype [♂]: China, Fujian c., 700-1100m / Ziyungdongshan, NW slopes / 25°46′N 117°20′E, 29.IV. / Jaroslav Turna leg., 2008, (VNPC). Paratypes: {1 ♂ 1 ♀}: same data as holotype, but 31.V.2008, (VNPC); {1 ♀}: China, N Fujian, 1.-4.VI. / FENGSHUI GUAN / 27.9N 117.85E, - 1700m / Jaroslav Turna leg., 2004, (VNPC); {1 ♂}: CHINA, Jiangxi prov., 24.iv.2011 / Jinggang Shan Mts. / Xiaoxidong (at light) / 26°28.0′N, 114°12.9′E, 342 m / M. Fikáček & J. Hájek leg., (NMPC). The types are provided with a printed red label: 'Allecula jaroslavi sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2016'.



Figs. 16-21: Allecula jaroslavi sp. nov.: 16- habitus of male holotype; 17- head and pronotum of male holotype; 18- antenna of male holotype; 19- abdomen of male holotype; 20- aedeagus, dorsal view; 21- aedeagus, lateral view.

Description of holotype. Habitus as in Fig. 16, body relatively small, elongate, narrow, parallel, from reddish brown to black, dorsal surface with short pale setation, with punctuation microgranulation, slightly shiny. BL 8.82 mm. Widest near middle of elytra length, BL/EW 3.60.

Head (Fig. 17) relatively small, slightly longer than wide, reddish brown with pale setae, coarse and dense punctuation, punctures medium-sized, interspaces between punctures narrow and

shiny. Clypeus distinctly paler, elongate, with longer pale setation, very sparse and shallow punctuation and fine microgranulation, punctures small. HL (visible part) 1.42 mm; HW 1.33 mm; HW/PW 0.71. Eyes large, transverse, deeply excised, space between eyes narrow, approximately slightly wider than diameter of one eye; slightly wider than length of antennomeres 1 and 2 together, distinctly narrower than length of antennomere 3; OI equal to 38.52.

Antenna (Fig. 18). Long, narrow, filiform, dark brown, with relatively dense and short, pale setation, fine microgranulation and punctures, AL(1-11) 5.88 mm; AL(1-11)/BL 0.67. Antennomeres 1 and 2 short, slightly shiny. Antennomeres 3-10 longer, matte, slightly dilated apically. Antennomere 2 shortest, antennomeres 5-11 each distinctly shorter than antennomere 3. Antennomeres 3-9 more than 4 times longer than wide in apex.

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RLA (1-11): 0.35 : 0.20 : 1.00 : 1.04 : 0.84 : 0.81 : 0.78 : 0.67 : 0.66 : 0.55 : 0.63.
RL/WA (1-11): 2.00 : 1.29 : 5.94 : 6.88 : 4.97 : 4.56 : 4.36 : 4.00 : 4.03 : 3.40 : 3.60.
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Maxillary palpus reddish brown, with pale setation, shiny. Palpomeres distinctly narrowest in base and widest in apex. Ultimate palpomere large, longly triangular, shoe-shaped.

Pronotum (Fig. 17). Reddish brown with pale setation and very dense punctuation, punctures small. PL 1.32 mm, PW 1.88 mm, PI equal to 70.21. Border lines narrow, but distinct. Lateral margins arcuate, base finely bisinuate. Anterior margin very slightly arcuate. Posterior angles roundly rectangular, anterior angles almost indistinct. Base with two, oblique, shallow furrows.

Ventral side of body with short, pale setation and punctures, prosternum and mesosternum reddish brown, metasternum distinctly darker. Abdomen (Fig. 19) blackish brown, slightly shiny, with pale setation, small punctuation and fine microgranulation. Ultimate ventrite with large and deep, triangularly shaped impression in middle.

Elytron. Blackish brown, narrow, elongate, in base distinctly wider than pronotum in base, dorsal surface slightly shiny, with short and dense, pale setation. Elytral striae with distinct rows of medium-sized punctures, punctures distinctly larger than punctures in pronotum, elytral intervals with microgranulation and sparse, very small and shallow punctures. EL 6.08 mm; EW 2.45 mm. EL/EW 2.48.

Scutellum reddish brown, pentagonally shaped, with fine microgranulation and a few pale setae, shiny.

Elytral epipleura. Well developed, blackish brown as elytron itself, with pale setation. Relatively narrow with one row of punctures in basal part, regularly narrowing to ventrite 1, then relatively wide leads parallel.

Legs blackish brown, narrow, long, with short, pale setation, microgranulation and punctuation, punctures very small. Tarsi slightly paler. Protarsomeres and mesotarsomes 3 and 4 and metatarsomeres 3 slightly widened and distinctly lobed. RLT: 1.00:0.41:0.34:0.47:0.87 (protarsus); 1.00:0.30:0.30:0.31:0.36:0.60 (mesotarsus); 1.00:0.28:0.24:0.37 (metatarsus).

Anterior tarsal claws with 5 visible teeth.

Aedeagus (Figs. 20, 21). Ochre yellow, slightly shiny. Basal piece slightly rounded laterally and narrowing dorsally. Apical piece elongate triangular dorsally and beak-shaped laterally. Ratio of length of apical piece to length of basal piece 1: 4.08.

Female. Without distinct differences, only space between eyes slightly wider than in male, anterior tarsal claws with 5 teeth.

Variability. Specimen from Jiangxi has pronotum blackish brown. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=3). BL 7.38 mm (6.95-7.72 mm); HL 1.35 mm (1.28-1.42 mm); HW 1.34 mm (1.33-1.42 mm); HW 1.34 mm); HW 1.34 mm (1

 $1.35 \, \text{mm}$); OI $39.93 \, (38.52-41.33)$; PL $1.36 \, \text{mm} \, (1.32-1.39 \, \text{mm})$; PW $1.84 \, \text{mm} \, (1.80-1.88 \, \text{mm})$; PI $73.72 \, (70.21-77.22)$; EL $6.09 \, \text{mm} \, (6.08-6.09 \, \text{mm})$; EW $2.45 \, \text{mm} \, (2.44-2.45 \, \text{mm})$. Females (n=2). BL $8.61 \, \text{mm} \, (8.52-8.69 \, \text{mm})$; HL $1.26 \, \text{mm} \, (1.24-1.28 \, \text{mm})$; HW $1.34 \, \text{mm} \, (1.33-1.34 \, \text{mm})$; OI $46.72 \, (46.40-47.04)$; PL $1.21 \, \text{mm} \, (1.17-1.25 \, \text{mm})$; PW $1.86 \, \text{mm} \, (1.80-1.91 \, \text{mm})$; PI $65.35 \, (61.26-69.44)$; EL $6.14 \, \text{mm} \, (6.03-6.24 \, \text{mm})$; EW $2.56 \, \text{mm} \, (2.52-2.60 \, \text{mm})$.

Differential diagnosis. Males of *Allecula jaroslavi* sp. nov. distinctly differ from similar species *Allecula arunachalica* sp. nov., *Allecula coreana* Kolbe, 1886, *Allecula guangdongica* sp. nov., *Allecula lijiangica* sp. nov., *Allecula sichuanica* sp. nov., *Allecula vietnamica* sp. nov. and *Allecula ussuriensis* Borchmann, 1937 mainly by ultimate ventrite with large, rounded, deep impression in middle.

A. jaroslavi is clearly different from similar species Allecula yipinglangica sp. nov. mainly by shape of aedeagus, shape of pronotum (widest in base) and by shape of impression of ultimate ventrite.

Etymology. Named after the first name of the collector of main part of type material - Jaroslav Turna (Čechy pod Kosířem, Czech Republic).

Distribution. China (Fujian, Jiangxi).

Allecula lijiangica sp. nov.

(Figs. 22-26)

Type locality. China, Yunnan, Heishu, 35 km N of Lijiang, 27°13′N, 100°95′E.

Type material. Holotype (♂): China Yunnan, 1.-19.VII. / HEISHU 27.13N 100.95S / 35 km N of Lijiang / *legit*. S. Bečvář 1992, (VNPC). The types are provided with a printed red label: 'Allecula lijiangica sp. nov. / HOLOTYPUS / V. Novák det. 2016'.

Description of holotype. Habitus as in Fig. 22, body small, elongate, narrow, parallel, from pale brown to blackish brown, dorsal surface with very short pale setation, with punctuation and very fine microgranulation, rather matte. BL 8.05 mm. Widest near middle of elytra length, BL/EW 3.46.

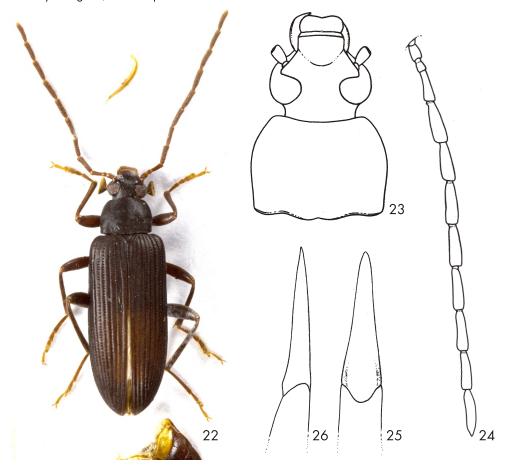
Head (Fig. 23) relatively small, as wide as long, posterior part black with short and sparse pale setae, larger, coarser and denser punctuation, anterior part reddish brown with smaller punctuation, denser and longer, pale setation and distinct microgranulation, clypeus pale brown, elongate, with longer pale setation, very sparse and shallow punctuation and fine microgranulation. HL (visible part) 1.25 mm; HW 1.26 mm; HW/PW 0.80. Eyes large, transverse, deeply excised, space between eyes narrow, slightly wider than diameter of one eye or length of antennomere 3; OI equal to 38.87.

Antenna (Fig. 24). Long, antennomeres relatively narrow, with dense and short, pale setation, fine microgranulation and punctures, AL(1-11) 6.08 mm; AL(1-11)/BL 0.76. Antennomeres 1-3 brown, slightly shiny. Antennomeres 4-10 longer, matte, slightly dilated apically. Antennomere 2 shortest, antennomeres 4-11 each distinctly longer than antennomere 3. Antennomeres 5-11 more than 4 times longer than wide in apex.

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RLA (1-11): 0.82 : 0.42 : 1.00 : 1.63 : 1.73 : 1.79 : 1.79 : 1.90 : 1.88 : 1.79 : 1.82.
RL/WA (1-11): 1.77 : 1.22 : 2.68 : 3.41 : 4.64 : 4.14 : 4.00 : 4.23 : 4.35 : 4.44 : 4.69.
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Maxillary palpus brown, with pale setae and fine microgranulation. Palpomeres 2, 3 reddish

brown, distinctly narrowest in base and widest in apex. Ultimate palpomere darker, large, broadly triangular, shoe-shaped.



Figs. 22-26: Allecula lijiangica sp. nov. (holotype): 22- habitus; 23- head and pronotum; 24- antenna; 25- aedeagus, dorsal view; 26- aedeagus, lateral view.

Pronotum (Fig. 23). Blackish brown, matte, with very short pale setation, very fine microgranulation and shallow and dense punctuation; punctures small. PL 1.11 mm; PW 1.57 mm; Pl equal to 70.38. Border lines narrow, but distinct. Lateral margins slightly arcuate, base finely bisinuate. Anterior margin more or less straight or slightly excised. Posterior angles roundly obtuse, anterior angles almost indistinct. Base with two, oblique, shallow furrows.

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

Elytron. Blackish brown, narrow, elongate, in base distinctly wider than pronotum in base, dorsal surface matte, with very short pale setation. Elytral striae with distinct rows of small-sized punctures, elytral intervals with very fine microgranulation and sparse, very small and shallow punctures. EL 5.69 mm; EW 2.33 mm. EL/EW 2.44.

Scutellum blackish brown as elytron itself, broadly triangular, with fine microgranulation and a few short, pale setae.

Elytral epipleura. Well developed, blackish brown as elytron itself, widest at base, with one row of punctures in basal half, regularly narrowing to ventrite 1, then relatively wide, leading parallel.

Legs narrow, long, with pale setation, microgranulation and punctuation, punctures very small. Femora and tibia brown, tarsi distinctly paler - pale brown. Protarsomeres and mesotarsomeres 4 and metatarsomeres 3 slightly widened and distinctly lobed. RLT: 1.00:0.53:0.48:0.52:1.21 (protarsus); 1.00:0.38:0.27:0.30:0.49 (mesotarsus); 1.00:0.32:0.22:0.52 (metatarsus). Anterior tarsal claws with 6 visible teeth.

Aedeagus (Figs. 25, 26). Relatively short, narrow, ochre yellow, slightly shiny. Basal piece slightly rounded laterally and slightly narrowing dorsally. Apical piece narrow, elongate, triangular dorsally and laterally. Ratio of length of apical piece to length of basal piece 1: 5.06.

Female. Unknown.

Differential diagnosis. Allecula lijiangica sp. nov. distinctly differs from species Allecula arunachalica sp. nov. and Allecula guangdongica sp. nov. mainly by space between eyes approximately as wide as diameter of one eye, antennomere 3 only 1.6-1.9 times shorter than each of antennomere 4-9 and by dorsal surface unicolor; while A. arunachalica and A. guangdongica have space between eyes distinctly narrower than dimeter of one eye (OI 15-22), antennomere 3 twice shorter than each of antennomere 4-9 and by dorsal surface bicolour. Males of A. lijiangica is clearly different from species Allecula jaroslavi sp. nov. and Allecula yipinglangica sp. nov. mainly by ultimate ventrite without impression in middle; while males of A. jaroslavi and A. yipinglangica has distinct large and deep impression in the middle of ultimate ventrite.

A. lijiangica clearly differs from species Allecula coreana Kolbe, 1886, Allecula sichuanica sp. nov. and Allecula vietnamica sp. nov. mainly by each of antennomere 4-11 1.6-1.9 times longer than antennomere 3; while A. coreana, A. sichuanica and A. vietnamica have antennomere 3 longer or as long as each of antennomeres 4-11.

A. *lijiangica* is clearly different from species *Allecula ussuriensis* Borchmann, 1937 mainly by pronotum widest near middle, antennomeres 3-9 narrow, antennomeres 4-11, tibia and femora dark brown; while *A. ussuriensis* has pronotum widest at base, antennomeres 3-9 slightly serrate in apex, antenna, tibia and femora are pale reddish brown.

Etymology. Toponymic, named after the type locality - town Lijiang in Yunnan.

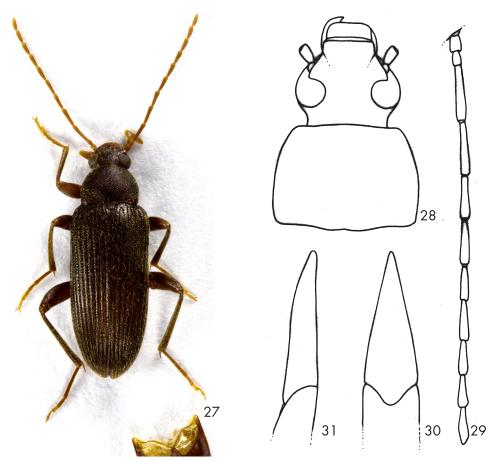
Distribution. China (Yunnan).

Allecula sichuanica sp. nov.

(Figs. 27-31)

Type locality. China, Northeastern Sichuan, pass 20 km NE of Wanyuan, 32°2′N, 108°2′E, 1500 m.

Type material. Holotype (3): China, NE Sichuan, 22.VI. / road Wanyuan - Chengkou / pass 20 km NE WANYUAN / 32.2N 108.2E, - 1500m / Jaroslav Turna leg., 2000, (VNPC). Paratypes: (1 3): same data as holotype, (VNPC); (1 3): China - Shaanxi 1900m; / TAIBASHAN Range, / HOUZHENZI vill. env. 33°53′N / 107°49′E, 1-12.08. 1999 / leg. Siniaev & A. Plutenko, (VNPC). The types are provided with a printed red label: 'Allecula sichuanica sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2016′.



Figs. 27-31: Allecula sichuanica sp. nov.: 27- habitus of male holotype; 28- head and pronotum of male holotype; 29-antenna of male holotype; 30-aedeagus, dorsal view; 31-aedeagus, lateral view.

Description of holotype. Habitus as in Fig. 27, body small, elongate, narrow, parallel, from pale brown to dark brown, dorsal surface with pale setation, with punctuation and very fine microgranulation, slightly shiny. BL 7.32 mm. Widest near base of elytra, BL/EW 3.30.

Head (Fig. 28) relatively small, with pale setation, slightly wider than long, posterior part dark brown with larger and coarser punctuation than distinctly paler anterior part and clypeus. HL (visible part) 1.16 mm; HW 1.25 mm; HW/PW 0.79. Eyes large, transverse, excised, space between eyes narrow, approximately as wide as length of antennomere 3, distinctly wider than diameter of one eye; Ol equal to 47.48.

Antenna (Fig. 29). Long, narrow, filiform, pale brown, with dense, pale setation, fine microgranulation and punctures, AL(1-11) 4.85 mm; AL(1-11)/BL 0.66. Antennomeres 1 and 2 short, antennomeres 1-7 slightly shiny, antennomeres 8-11 rather matte. Antennomeres 3-11 long, slightly dilated apically. Antennomere 3 longest, antennomeres 5-11 distincty shorter than antennomere 3 or 4. Antennomeres 3-6 more than 4 times longer than wide in apex.

RLA (1-11): 0.29 : 0.28 : 1.00 : 0.97 : 0.80 : 0.85 : 0.76 : 0.71 : 0.67 : 0.64 : 0.67. RL/WA (1-11): 1.58 : 1.54 : 5.07 : 5.07 : 4.56 : 5.00 : 3.72 : 3.48 : 3.28 : 3.79 : 3.96. Maxillary palpus pale brown, with pale setae and fine microgranulation. Palpomeres 2, 3 distinctly narrowest at base and widest in apex. Ultimate palpomere large, longly triangular, shoe-shaped.

Pronotum (Fig. 28). Dark brown, with pale setation, very fine microgranulation and dense and coarse punctuation; punctures large, interspaces between punctures very narrow, shiny. PL 1.08 mm; PW 1.59 mm; PI equal to 67.93. Border lines narrow, but distinct. Lateral margins slightly arcuate, base finely bisinuate. Anterior margin more or less straight. Posterior angles roundly obtuse, anterior angles almost indistinct. Base with two, oblique, shallow furrows.

Ventral side of body reddish brown, with sparse and short, pale setae and punctures. Abdomen brown, shiny, with dense punctuation, punctures small. Ultimate ventrite pale brown, distinctly paler than penultimate one.

Elytron. Dark brown, narrow, elongate, in base widest, distinctly wider than pronotum in base, dorsal surface slightly shiny, with dense and relatively long pale setation. Elytral striae with distinct rows of large and coarse punctures, elytral intervals slightly convex with very fine microgranulation and sparse, very small and shallow punctures. EL 5.08 mm; EW 2.22 mm. EL/EW 2.29.

Scutellum brown, pentagonally shaped, with punctures and a few pale setae, shiny.

Elytral epipleura. Well developed, brown, widest in base, with one row of punctures and pale setae, regularly narrowing to ventrite 1, then relatively wide, leading parallel.

Legs reddish brown, narrow, long, shiny, with pale setation and punctuation, punctures small. Tarsi distinctly paler - pale brown. Protarsomeres and mesotarsomeres 4 and metatarsomeres 3 slightly widened and distinctly lobed. RLT: 1.00: 0.46: 0.44: 0.52: 1.05 (protarsus); 1.00: 0.33: 0.25: 0.21: 0.50 (mesotarsus); 1.00: 0.31: 0.28: 0.47 (metatarsus).

Anterior tarsal claws with 5 visible teeth.

Aedeagus (Figs. 30, 31). Relatively short, ochre yellow, slightly shiny. Basal piece slightly rounded laterally, narrow and parallel dorsally. Apical piece elongate, triangular dorsally and beak-shaped laterally. Ratio of length of apical piece to length of basal piece 1: 3.77.

Female. Unknown.

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 7.39 mm (7.32-7.44 mm); HL 1.14 mm (1.11-1.16 mm); HW 1.23 mm (1.22-1.25 mm); OI 48.19 (47.48-48.65); PL 1.14 mm (1.08-1.17 mm); PW 1.64 mm (1.59-1.70 mm); PI 69.16 (67.93-70.73); EL 5.21 mm (5.08-5.31 mm); EW 2.28 mm (2.22-2.34 mm)

Differential diagnosis. Allecula sichuanica sp. nov. distinctly differs from species Allecula arunachalica sp. nov., Allecula guangdongica sp. nov. mainly by space between eyes distinctly wider than diameter of one eye (OI 48), antennomere 3 is longest (distinctly longer than each of antennomeres 4-11) and by dorsal surface unicolor; while A. arunachalica and A. guangdongica have space between eyes distinctly narrower than dimeter of one eye (OI 15-22), antennomere 3 twice shorter than each of antennomeres 4-11 and by dorsal surface bicolour.

Males of A. sichuanica is clearly different from species Allecula jaroslavi sp. nov. and Allecula yipinglangica sp. nov. mainly by ultimate ventrite without impression in middle; while males of A. jaroslavi and A. yipinglangica have distinct large and deep impression in the middle of ultimate ventrite.

A. sichuanica clearly differs from species Allecula lijiangica sp. nov. and Allecula ussuriensis Borchmann, 1937 mainly by antennomere 3 longer than each of antennomeres 5-11; while A. lijiangica and A. ussuriensis have antennomere 3 shorter than each of antennomeres 5-11.

A. sichuanica is distinctly different from similar species Allecula vietnamica sp. nov. mainly by sides of pronotum finely arcuate and disc with coarse punctuation; while A. vietnamica has sides of pronotum strongly arcuate and disc with shallow punctuation.

A. sichuanica clearly differs from species Allecula coreana Kolbe, 1886 mainly by smaller body and dorsal surface of elytra shiny; while A. coreana has larger body and dorsal surface of elytra matte.

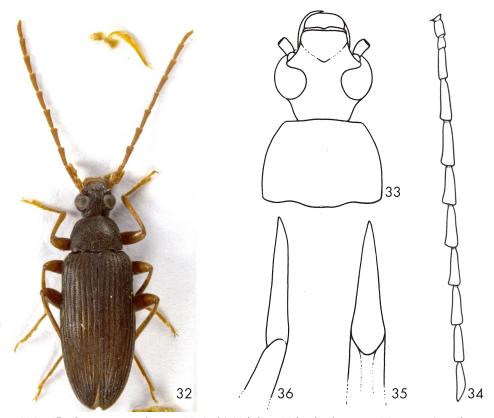
Etymology. Toponymic, named after the type locality - Sichuan province in China.

Distribution. China (Shaanxi, Sichuan).

Allecula ussuriensis Borchmann, 1937

(Figs. 32-36)

Allecula ussuriensis Borchmann, 1937: 210. Allecula mandshurica Mařan, 1940: 169.



Figs. 32-36: Allecula ussuriensis Borchmann, 1937 (male): 32-habitus; 33-head and pronotum; 34-antenna; 35-aedeagus, dorsal view; 36-aedeagus, lateral view.

Type locality. Ussuri, Sutschan.

Type material. Allecula ussuriensis Borchmann, 1937: syntype: {1 ♂}: wl: Sutschan / Ussuri [pb] // rl: Type [pb] // wl: All. / ussuriensis Bm [hb] // wl: Sammlung / F. Borchmann / Eing. Nr. 5, 1943" [pb], (ZMUH). Allecula mandshurica Mařan, 1940: 2 syntypes: (1 ♂ 1 ♀): wl: Mandschurei / Weischache / Mai 1938 [pb] // wl: Allecula typus / mandschurica ♂ or ♀ / m. n. [hb] / rl with bf: Typus [pb], (NMPC).

New material examined. (1 3): wl: SU USSURI reg. / KAMENYUSCHKA / 24-27. 7. 89 / lgt. S. Bečvář [pb], (VNPC).

Measurements of body parts (male): BL 8.25 mm; HL 1.20 mm; HW 1.47 mm; OI 32.79; PL 1.24 mm; PW 1.83 mm; PI 67.76; EL 5.81 mm; EW 2.68 mm; AL 6.45 mm; AL/BL 0.78; HW/PW 0.80; BL/EW 3.08; EL/EW 2.17.

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RLA (1-11): 0.45: 0.36: 1.00: 1.34: 1.31: 1.32: 1.28: 1.30: 1.23: 1.15: 1.22. RL/WA (1-11): 1.61: 1.54: 3.73: 3.06: 2.83: 2.96: 3.41: 3.30: 3.07: 3.31: 5.07. RLT: 1.00: 0.42: 0.42: 0.67: 0.90 (protarsus), 1.00: 0.40: 0.30: 0.30: 0.68 (mesotarsus), 1.00: 0.32: 0.23: 0.49 (metatarsus). Anterior tarsal claws with 5 and 4 visible teeth.
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Distribution. China (Northeast Territory), North Korea, Russia (East Siberia, Far East), South Korea.

Allecula vietnamica sp. nov.

(Figs. 37-41)

Type locality. North Vietnam, province Ninh Binh, Cuc Phuong National Preserve, 90 km NW of Hanoi, N20°14′24′′, E105°42′53, 190 m.

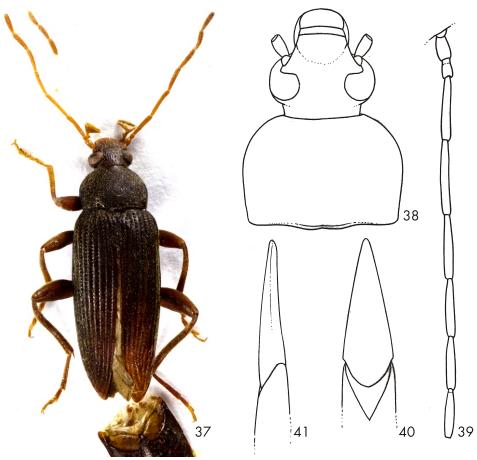
Type material. Holotype (3): N-VIETNAM Ninh Binh / Prov.90km SW Hanoi, vic. / Cuc Phuong NP, 190m, / primates rescue centre, N20°14′24′′, E105°42′53′′ / 19.-25.IV.2012, leg. A. Weigel, (NMEG). Paratypes: (2 spec.): same data as holotype, (NMEG, VNPC); (1 3): N-VIETNAM Cao Bang / vic. Tinh Tuc, Son Do / Nui Pia Oac Natural R. // N $22^\circ37'55''$, E $105^\circ52'98''$ / 09.-15.V.2014, by light / 850-1300m,leg. A.Weigel, (NMEG); (1 $\mathfrak P$): N-VIETNAM, Cao Bang Pr. / vic. Vin Den, Nui pia Oac / Nature Res., 10-.15.V.2014 / N $22^\circ33.53'$, E $105^\circ52'3/900$ -.1300 m, leg. A. Weigel, (NNPC); (1 spec.): N-VIETNAM Haiphong / Caat Ba Island, vic. Cat Ba / NP,190m, 24-.IV.2012 / N $20^\circ47'55''$, E $106^\circ60'$ / leg. A.Weigel, (NMEG). The types are provided with a printed red label: 'Allecula vietnamica sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2016'.

Description of holotype. Habitus as in Fig. 37, body small, elongate, narrow, parallel, from pale brown to blackish brown, dorsal surface with pale setation, punctuation and microgranulation, rather matte. BL 7.48 mm. Widest near middle of elytra length, BL/EW 3.10.

Head (Fig. 38) relatively small, slightly wider than long, with pale setation, posterior part blackish brown with dense and shallow punctuation and microgranulation, punctures small, anterior part reddish brown with coarser punctuation, and microrugosities, clypeus pale brown. HL (visible part) 0.94 mm; HW 1.19 mm; HW/PW 0.68. Eyes large, transverse, excised, space between eyes narrow, distinctly wider than length of one eye, narrower than length of antennomere 3, distinctly wider than length of antennomeres 1 or 2; OI equal to 43.81.

Antenna (Fig. 39). Long, narrow, pale brown, with dense and long, pale setation, fine microgranulation and punctures, AL(1-11) 6.00 mm; AL(1-11)/BL 0.80. Antennomeres 1 and 2 short, antennomeres 1-4 slightly shiny. Antennomeres 5-11 rather matte. Antennomere 2 shortest, antennomeres 4 longest, antennomeres 6-11 shorter than antennomere 3. Antennomeres 3-11 more than 3 times longer than wide in apex.

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RLA (1-11): 0.52 : 0.22 : 1.00 : 1.24 : 1.02 : 0.94 : 0.88 : 0.87 : 0.74 : 0.70 : 0.76.
RL/WA (1-11): 2.39 : 1.38 : 5.24 : 7.10 : 5.69 : 5.42 : 5.23 : 4.43 : 3.97 : 3.79 : 3.79
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Figs. 37-41: Allecula vietnamica sp. nov.: 37- habitus of male holotype; 38- head and pronotum of male holotype; 39- antenna of male holotype; 40- aedeagus, dorsal view; 41- aedeagus, lateral view.

Maxillary palpus pale brown, with pale setae and small punctures. Palpomeres 2, 3 distinctly narrowest at base, with long setae and widest in apex. Ultimate palpomere large, longly triangular, shoe-shaped.

Pronotum (Fig. 38). Blackish brown, matte, with pale setation, fine microgranulation, dense and shallow punctuation; punctures medium-sized. PL 1.16 mm; PW 1.76 mm; PI equal to 66.67. Border lines narrow, but distinct. Lateral margins arcuate, pronotum widest approximately in middle (1.87 mm); base finely bisinuate. Anterior margin very slightly excised, distinctly narrower than base. Posterior angles obtuse, anterior angles almost indistinct. Base with two, oblique, very shallow furrows.

Ventral side of body brown, with short, pale setae. Abdomen brown, shiny, with pale setation, dense punctuation and very fine microgranulation, punctures small-sized. Ultimate and penultimate ventrites distinctly paler.

Elytron. Dark brown, narrow, elongate, parallel, dorsal surface matte, with pale setation. Elytral striae with distinct rows of medium-sized punctures, elytral intervals slightly convex, with fine microgranulation. EL 5.38 mm; EW 2.41 mm; EL/EW 2.23.

Scutellum blackish brown as elytron itself, roundly triangular, with fine microgranulation.

Elytral epipleura. Well developed, dark brown as elytron itself, with short and sparse pale setae, widest at base, with one row of medium-sized punctures in basal half, regularly narrowing to ventrite 1, then relatively wide, leading parallel.

Legs reddish brown, narrow, long, with pale setation and small punctures. Protarsi, mesotarsi and metatarsomeres 3 and 4 distinctly paler - pale brown. Protarsomeres and mesotarsomeres 4 and metatarsomeres 3 slightly widened and distinctly lobed. RLT: 1.00:0.49:0.39:0.47:1.05 (protarsus); 1.00:0.20:0.16:0.22:0.39 (mesotarsus); 1.00:0.40:0.22:0.42 (metatarsus).

Anterior tarsal claws with 6 visible teeth.

Aedeagus (Figs. 40, 41). Relatively short, ochre yellow, shiny. Basal piece slightly rounded laterally and slightly narrowing dorsally. Apical piece elongate, triangular, beak-shaped dorsally and narrow, elongate laterally. Ratio of length of apical piece to length of basal piece 1: 4.52.

Female. Without distinct differences, female slightly robust than male, space between eyes slightly wider, anterior tarsal claws with 5 and 6 teeth.

Variability. One male and one female with pale brown dorsal surface of elytra and reddish brown pronotum. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=4). BL 7.38 mm (6.95-7.72 mm); HL 0.94 mm (0.91-0.99 mm); HW 1.20 mm (1.15-1.24 mm); Ol 45.14 (42.67-47.39); PL 1.10 mm (1.02-1.18 mm); PW 1.72 mm (1.64-1.78 mm); PI 64.14 (61.40-66.67); EL 5.34 mm (5.02-5.68 mm); EW 2.36 mm (2.14-2.47 mm). Females (n=2). BL 2.16 mm (2.16-2.16 mm); HL 2.16 mm (2.16-2.16 mm); Ol 2.16 mm); Ol 2.16 mm (2.16-2.16 mm); PI 2.16 mm); PW 2.16 mm (2.16-2.16 mm); PI 2.16 mm); PI 2.16 mm (2.16-2.16 mm); PI 2.16 mm); PI 2.16 mm (2.16-2.16 mm); PI 2.16 mm);

Differential diagnosis. Allecula vietnamica sp. nov. distinctly differs from species Allecula arunachalica sp. nov., Allecula guangdongica sp. nov. mainly by space between eyes distinctly wider than diameter of one eye (OI 42-60), antennomere 3 is distinctly longer than each of antennomere 6-11 and by dorsal surface unicolor; while A. arunachalica and A. guangdongica have space between eyes distinctly narrower than diameter of one eye (OI 15-22), antennomere 3 almost twice shorter than each of antennomere 6-11 and by dorsal surface bicolour.

Males of A. vietnamica is clearly different from species Allecula jaroslavi sp. nov. and Allecula yipinglangica sp. nov. mainly by ultimate ventrite without impression in middle; while males of A. jaroslavi and A. yipinglangica have distinct large and deep impression in the middle of ultimate ventrite.

A. vietnamica clearly differs from species Allecula lijiangica sp. nov. and Allecula ussuriensis Borchmann, 1937 mainly by antennomere 3 longer than each of antennomeres 6-11; while A. lijiangica and A. ussuriensis have antennomere 3 shorter than each of antennomeres 6-11.

A. vietnamica is distinctly different from similar species A. sichuanica sp. nov. and Allecula coreana Kolbe, 1886 mainly by sides of pronotum more arcuate and disc with shallow punctuation; while A. sichuanica and A. coreana have sides of pronotum finely arcuate and disc with coarse punctuation.

Etymology. Toponymic, named after the state, where it was collected - Vietnam.

Distribution. Vietnam.

Allecula yipinglangica sp. nov. (Figs. 42-47)

Type locality. China, Yunnan prov., Yipinglang, 25°04′N, 101°55′E, 1800-2000 m.

Type material. Holotype (3): YUNNAN 1800-2000m / 25.04N 101.55E / YIPINGLANG 17-20.6. / Vít Kubáň leg. 1994, (VNPC). The types are provided with a printed red label: 'Allecula yipinglangica sp. nov. / HOLOTYPUS / V. Novák det. 2016'.

Description of holotype. Habitus as in Fig. 42, body small, elongate, narrow, parallel, from pale brown to blackish brown, dorsal surface with short pale setation, punctuation and very fine microgranulation, rather matte. BL 9.06 mm. Widest near middle of elytra length, BL/EW 3.43.

Head (Fig. 43) relatively small, slightly longer than wide, with pale setation and dense punctuation, punctures small, interspaces narrow, shiny. Posterior part blackish brown, anterior part reddish brown, clypeus pale brown with microrugosities, without distinct punctuation. HL (visible part) 1.53 mm; HW 1.39 mm; HW/PW 0.70. Eyes large, transverse, excised, space between eyes relatively narrow, but distinctly wider than diameter of one eye, wider than length of antennomere 2, narrower than length of antennomere 3; OI equal to 38.51.

Antenna (Fig. 44). Long, narrow, filiform, matte, brown with dense, pale setation, fine microgranulation and punctures, AL(1-11) 5.15 mm; AL(1-11)/BL 0.57. Antennomeres 1 and 2 short, antennomere 2 shortest. Antennomere 4 longest. Antennomeres 4-11 distinctly shorter than antennomere 3, antennomeres 4-10 slightly dilated apically. Antennomeres 3-6 more than 4 times longer than wide in apex.

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RLA (1-11): 0.33 : 0.21 : 1.00 : 0.89 : 0.71 : 0.73 : 0.67 : 0.62 : 0.59 : 0.53 : 0.56.
RL/WA (1-11): 1.77 : 1.19 : 6.46 : 6.19 : 4.03 : 4.00 : 3.30 : 3.53 : 2.97 : 2.97 : 3.74.
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Maxillary palpus brown, with pale setae and punctuation, punctures very small. Palpomeres 2, 3 distinctly narrowest in base and widest in apex. Ultimate palpomere large, longly triangular, shoe-shaped.

Pronotum (Fig. 43). Blackish brown, matte, transverse, widest in two thirds from base to apex, with pale setation, very fine microgranulation and dense punctuation; punctures small. PL 1.30 mm; PW 1.99 mm; PI equal to 65.33. Border lines narrow, but distinct, only in the middle of anterior margin not clearly conspicuous. Lateral margins straight in basal half, arcuate in apical half, base finely bisinuate. Anterior margin slightly excised. Posterior angles roundly obtuse, anterior angles almost indistinct. Base with two, oblique, shallow furrows.

Ventral side of body dark brown, with short, pale setation and small punctures. Abdomen (as in Fig. 45) black, shiny, with pale setation, fine microgranulation and dense punctuation, punctures small. Ultimate ventrite with large, and deep impression in middle.

Elytron. Brown, narrow, elongate, in base distinctly wider than pronotum in base, dorsal surface matte, with pale setation. Elytral striae with distinct rows of medium-sized punctures, distinctly larger than those in pronotum surface. Elytral intervals with very fine microgranulation and sparse, very small and very shallow punctures. EL 6.23 mm; EW 2.64 mm. EL/EW 2.36.

Scutellum brown as elytron itself, broadly triangular, with fine microgranulation.

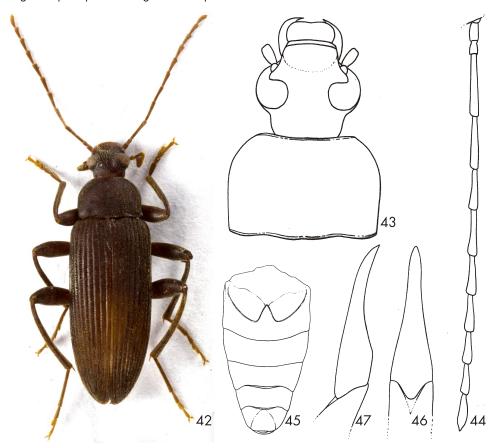
Elytral epipleura. Well developed, with pale brown setation, widest in base, blackish brown, with one row of punctures in basal half, regularly narrowing to ventrite 1, then pale brown relatively wide leads parallel in apical half.

Legs blackish brown, narrow, long, with pale setation, fine microgranulation and punctuation, punctures small. Ultimate and penultimate tarsomeres distinctly paler - pale brown. Protarsomeres 3 and 4 and penultimate meso- and metatarsomeres slightly widened and distinctly lobed.

RLT: 1.00:0.44:0.44:0.56:0.93 (protarsus); 1.00:0.40:0.34:0.30:0.64 (mesotarsus); 1.00:0.34:0.22:0.42 (metatarsus).

Anterior tarsal claws with 6 visible teeth.

Aedeagus (Figs. 46, 47). Ochre yellow, slightly shiny. Basal piece strongly rounded laterally and narrowing dorsally. Apical piece elongate, beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1: 3.37.



Figs. 42-47: Allecula yipinglangica sp. nov. (holotype): 42- habitus; 43- head and pronotum; 44- antenna; 45- abdomen; 46- aedeagus, dorsal view; 47- aedeagus, lateral view.

Female. Unknown.

Differential diagnosis. Allecula yipinglangica sp. nov. distinctly differs from similar species Allecula arunachalica sp. nov., Allecula coreana Kolbe, 1886, Allecula guangdongica sp. nov., Allecula lijiangica sp. nov., Allecula sichuanica sp. nov., Allecula vietnamica sp. nov. and Allecula ussuriensis Borchmann, 1937 mainly by ultimate ventrite with large, and deep impression in middle.

A. yipinglangica is clearly different from similar species Allecula jaroslavi sp. nov. mainly by shape of aedeagus, and by shape of impression of ultimate ventrite.

Etymology. Toponymic, named after the type locality - Yipinglang in Yunnan (China).

Distribution. China (Yunnan).

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REFERENCES

- AKITA K. & MASUMOTO K. 2012: New or little-known Tenebrionid beetles (Coleoptera, Tenebrionidae) from Japan. (11) Description of seven new species, up-grading of a subspecies to the rank, and a new distributional record of a species. *Elytra, Tokyo,* (n. ser.) (2011) 1: 275-294.
- AKITA K. & MASUMOTO K. 2015: New or Little-known Tenebrionid Species (Coleoptera) from Japan (18) Descriptions of New Taxa and Proposal for New Treatments. Elytra, Tokyo, New Series 5(2): 429-448.
- BORCHMANN F. 1910: Pars 3: Alleculidae. Ín: JUNK W. & SCHENKLING S. (eds.): Coleopterorum Catalogus. W. Junk, Berlin, 80 pp.
- BORCHMANN F. 1937: Neue Alleculiden aus dem Deutschen Entomologischen Institut, Berlin-Dahlem. (Coleoptera.). Arbeiten über Morphologische und Taxonomische Entomologie (3) 4: 210-231.
- CAMPBELL J. M. 1965: A revision of the genus Charisius (Coleoptera: Alleculidae). The Coleopterist's Bulletin 19: 41-56.
- CAMPBELL J. M. & MARSHALL J. D. 1964: The ocular index and its applications to the taxonomy of the Alleculidae (Coleoptera). The Coleopterist's Bulletin 18: 42.
- FABRICIUS J. C. 1787: Mantissa insectorum sistens eorum species nuper detectas adiectis characteribus generis, differentiis, specificis, emendationibus, observationibus. Tom 1. Hafniae: C. G. Proft, xx + 348 pp.
- FABRICIUS J. C. 1801: Systema eleutheratorum secundum, ordines, genera, species adiectis synonymis, locis, observationibus, descriptionibus. Tomus II. Kiliae: Binliopolii Academici Novi, 687 pp.
- GEOFFROY E. L. 1762: Histoire abrégée des insectes qui se trouvent aux environs de Paris; dans laquelle ces animaux sout rangés suivant un ordre méthodique. [1762-1763] Tome première. Paris: Durand, xxviii + 523 pp. + 22 pls.
- KOLBE H. J. 1886: Beiträge zur Kenntniss der Coleopteren-Fauna Koreas, bearbeitet auf Grund der von Herrn Dr. C. Gottsche während der Jahre 1883 und 1884 in Korea veranstalteten Sammlung; nebst Bemerkungen über die zoogeographischen Verhältnisse dieses Faunengebietes und Untersuchungen über einen Sinnesapparat im Gaumen von Misolampidius morio. Archiv für Naturgeschichte 1: 139-240.
- MADER L. 1928: Alleculidae. Columns 901-913. In: WINKLER A. (ed.) 1924-1932: Catalogus Coleopterorum Regionis Palaearcticae. Wien: Winkler & Wagner, 1698 pp.
- MAŘAN J. 1940: Generis Allecula Fabr. regionis Palaearkticae orientalis species novae. Sborník Entomologického Oddělení Národního Musea v Praze (191) 18: 168-171.
- MASUMOTO K., NOVÁK V., LEE Ch.-F. & AKITA K., 2017: A Revisional Study of the Subfamily Alleculinae (Coleoptera: Tenebrionidae) of Taiwan. Miscellaneous Reports of the Hiwa Museum for Natural History 58(2): 1-46 + 2 plates.
- NOVÁK V. 2014: Brouci čeledi potemníkovití (Tenebrionidae) střední Europy. Beetles of the family Tenebrionidae of the Central Europe. Praha: Academia, 418 pp. (in Czech and English).
- NOVÁK V. 2016: Allecula olexai sp. nov. (Coleoptera: Tenebrionidae: Alleculinae) from Abkhazia. Acta Societatis Zoologica Bohemica 80: 123-126.
- NOVÁK V. & PETTERSSON R. 2008: Subfamily Alleculinae. Pp.: 319-339. In: LÖBL I. & A. SMETANA (eds): Catalogue of Palaearctic Coleoptera, Vol. 5. Tenebrionoidea. Stenstrup: Apollo Books, 670 pp.
- NOVÁK V., JANSSON N., AVCI M., SARIKAYA O., COSKUN M., ATAY E. & GŰRKAN T. 2011: New Allecula species (Coleoptera: Tenebrionidae: Alleculinae) from Turkey. Studies and Reports, Taxonomical Series 7(1-2): 335-346.
- NOVÁK V., JANSSON N., CHIARI S., ZAULI A., AUDISIO P. & CARPANETO G. M. 2012: A new species of *Allecula* (Coleoptera: Tenebrionidae: Alleculinae) from cork oak stands of Italy. *Zootaxa* 3483: 29-38.

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