

Review of the genus *Upinella* Mulsant, 1856 stat. nov. (Coleoptera: Tenebrionidae: Alleculinae)

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Taxonomy, description, redescription, new species, new genus, new status, new combinations, key, Coleoptera, Tenebrionidae, Alleculinae, *Upinella*, Palaearctic Region

Abstract. A new genus *Upinella* Mulsant, 1856 stat. nov. is redescribed and raised from the level of subgenus for the species *Upinella aterrima* (Rosenhauer, 1847) comb. nov., *Upinella cryptomeriae* (Lewis, 1895) comb. nov. (it is transferred from the subgenus *Allecula* Fabricius, 1801), *Upinella frankenbergeri* (Mařan, 1940) comb. nov., *Upinella fuliginosa* (Mäklin, 1875) comb. nov., *Upinella lanrenxiensis* (Masumoto, Akita & Lee, 2015) comb. nov. and *Upinella taiwana* (Masumoto, Akita & Lee, 2015) comb. nov. Four new species are described as new from China as *Upinella jiangxiica* sp. nov. from Jiangxi, *Upinella kubani* sp. nov. and *Upinella ruzickai* sp. nov. from Yunnan and *Upinella turnai* sp. nov. from Henan. All new species are illustrated and keyed with similar species. *Allecula melanaria* Mäklin, 1875 and *Allecula ussuriensis* Borchmann, 1937 are transferred from the subgenus *Upinella* Mulsant, 1856 to the subgenus *Allecula* Fabricius, 1801 as they were described originally. *Upinella aterrima* (Rosenhauer, 1847) is redescribed. New data on distribution of *Allecula melanaria* Mäklin, 1875 are added - Taiwan and Henan (China), as well as new data on distribution of *Upinella frankenbergeri* Mařan, 1940 - Taiwan (China). Male genitalia are shown for the first time for the species *Upinella cryptomeriae* (Lewis, 1895), *Upinella frankenbergeri* (Mařan, 1940) and *Allecula melanaria* Mäklin, 1875.

INTRODUCTION

The genus *Allecula* Fabricius, 1801 was established by Fabricius (1801) with type species *Allecula morio* Fabricius, 1801. The species of this genus have a worldwide distribution: Borchmann (1910) knew 151 species, Mader (1928) 29 species and Novák & Pettersson (2008) listed 65 species in three subgenera from the Palaearctic Region. Mulsant (1856) introduced new genus *Upinella* Mulsant, 1856 with type species *Upinella aterrima* (Rosenhauer, 1847); the new genus was also accepted by Jacquelin du Val (1863). Further authors listed *Upinella* as subgenus (Seidlitz 1896, Borchmann 1910, Mader 1928, Kaszab 1969 and Novák & Pettersson 2008). Genus *Allecula* comprises many different species, some new genera of Alleculinae were established on *Allecula* type species by Fairmaire (1897) and Seidlitz (1891) (*Borboesthes* Fairmaire, 1897; *Mycetocharina* Seidlitz, 1891). Some new genera of Alleculinae were described for the species similar to *Allecula* as *Asticostena* Fairmaire, 1897; *Bolbostetha* Fairmaire, 1896; *Dioxycula* Fairmaire, 1896; *Evaostetha* Novák, 2008; *Gerdacula* Novák, 2015; *Jaklia* Novák, 2010; *Kombacula* Novák, 2012; *Makicula* Novák, 2012; *Palpichara* Borchmann, 1932; *Petrostetha* Novák, 2008; *Potocula* Novák, 2012 (Borchmann 1932, Fairmaire 1896, 1897, Novák 2008, 2010, 2012, 2015). It is necessary to raise the subgenus *Upinella* Mulsant, 1856 up to the level of genera, because a group of species of subgenus *Upinella* has its own characters. These species differ mainly by large, robust body, elytra widest near two thirds or in middle of its length, matte dorsal surface of pronotum, elytral intervals glabrous and without punctuation or with sparse setation and very sparse and very small punctures, lateral margins of pronotum arcuate, almost broadest near middle, posterior angles of pronotum rounded, long tibia and long femora, and structure of filiform antenna (antennomere 2 shortest, antennomere 3 or 4 longest, antennomeres 5-11 shorter than antennomere 3, antennomeres 9-11 shorter than antennomeres 3-8).

The genus *Upinella* Mulsant, 1856 stat. nov. is redescribed and raised from the level of

subgenus for the species *Upinella aterrima* (Rosenhauer, 1847) comb. nov. as a type species, *Upinella cryptomeriae* (Lewis, 1895) comb. nov. (it is transferred from the subgenus *Allecula* Fabricius, 1801), *Upinella frankenbergeri* (Mařan, 1940) comb. nov., *Upinella fuliginosa* (Mäklin, 1875) comb. nov. and *Upinella lanrenxiensis* (Masumoto, Akita & Lee, 2015) comb. nov. and *Upinella taiwana* (Masumoto, Akita & Lee, 2015) comb. nov.

Four new species are described from China as *Upinella jiangxiica* sp. nov. from Jiangxi, *Upinella kubani* sp. nov. and *Upinella ruzickai* sp. nov. from Yunnan and *Upinella turnai* sp. nov. from Henan. All new species are illustrated and keyed with similar species.

Allecula melanaria Mäklin, 1875 and *Allecula ussuriensis* Borchmann, 1937 are transferred from the subgenus *Upinella* Mulsant, 1856 to the subgenus *Allecula* Fabricius, 1801 as they were described originally. *Upinella aterrima* (Rosenhauer, 1847) is redescribed.

New data on distribution of *Allecula melanaria* Mäklin, 1875 are added - Taiwan and Henan (China), as well as new data on distribution of *Upinella frankenbergeri* (Mařan, 1940) – Taiwan (China).

Male genitalia are shown for the first time for the species *Upinella cryptomeriae* (Lewis, 1895), *Upinella frankenbergeri* Mařan, 1940 and *Allecula melanaria* Mäklin, 1875.

MATERIAL AND METHODS

Two important morphometric characteristics are used for descriptions of species of the subfamily Alleculinae: the 'ocular index' dorsally (Campbell & Marshall 1964) is calculated by measuring the minimum distance between the eyes and dividing this value by the maximum dorsal width across eyes, the quotient resulting from this division is converted into an index by multiplying by 100 and 'pronotal index' (Campbell 1965) expresses the ratio of the length of the pronotum along the midline to the width at the basal angles, this ratio is multiplied by 100 for convenience in handling. They are also employed in the present work.

The following codens are used in the paper:

HNHM Hungarian Natural History Museum, Budapest, Hungary;

KMTJ private collection of Kimio Masumoto, Tokio, Japan;

NMPC National Museum, Praha, Czech Republic;

VNPC private collection of Vladimír Novák, Praha, Czech Republic;

ZMUH collection of Zoologisches Institut und Museums der Universität Hamburg, Germany;

ZSMG Zoologische Staatssammlung München, Germany.

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

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); AED - ratios of length between apical piece (1.00) and basal piece.

Other abbreviations used: bf= black frame; bl= blue label; gl= green label; hb= handwritten black; oyl= orange yellow label; pb= printed black; rl= red label; wl= white label; wyl=white yellow label.

Moreover, a double slash (//) separates data on different labels and a slash (/) data in different lines.

TAXONOMY

REDESCRIPTION OF THE GENUS *UPINELLA* MULSANT, 1856 STAT. NOV.

genus *Upinella* Mulsant, 1856: 17.

subgenus *Upinella* Mulsant, 1856: Borchmann, 1910: 9; Mader, 1928: 901.

Type species: *Allecula aterrima* Rosenhauer, 1847: 122.

Redescription. Habitus of male as in Figs. 1, 6, 11, 16, 21, 26, 34, 37, 40. Dorsal surface black or blackish brown, glabrous or with sparse setation, with fine microgranulation without punctuation or with sparse very small punctures, matte. Body relatively large, elongate oval, BL from 7-18 mm, widest near two thirds or in the middle of elytral length, ratio BL/EW more than 2.70. Head (Figs. 2, 7, 12, 22, 27, 35, 38, 41) relatively narrow, with fine and dense microgranulation, shallow punctuation, punctures small-sized. Posterior part black, with a few dark setae behind eyes, anterior part and clypeus often paler. Head widest across eyes, distinctly narrower than pronotum. Eyes relatively large, transverse, distinctly excised. Space between eyes relatively narrow, OI 22-42. Antenna (Figs. 3, 8, 13, 23, 28, 36, 39, 42) relatively long, narrow, filiform reaching 0.55-0.82 body length, almost with short setation, fine microgranulation and punctuation. Antennomere 2 shortest, antennomere 3 or 4 longest, 5-11 distinctly shorter than antennomere 3, antennomeres 9-11 distinctly shorter than antennomeres 3-8. Maxillary palpus dark brown, with pale setation and microgranulation. Palpomeres 2-4 distinctly widest at apex, penultimate palpomere shorter than palpomere 2 and ultimate palpomere. Ultimate palpomere in form of long triangle, axe-shaped. Pronotum (Fig. 2, 7, 12, 22, 27, 35, 38, 41) from dark brown to black, glabrous or with sparse setation, at base distinctly narrower than elytron at base, with fine microgranulation, impunctate or with very fine and very sparse punctuation, punctures very small, matte. Widest almost near middle, PI more than 73. Borders complete and distinct. Posterior margin finely bisinuate. Posterior angles obtuse, arcuate, anterior angles indistinct, rounded, lateral margins more or less regularly arcuate. Dorsal surface of elytra glabrous or with sparse setation, from dark brown to black, almost widest near two thirds elytral length. EL/EW ratio equal to 1.85. Elytral striae with distinct rows of small-sized punctures. Surface of elytral intervals with very fine microgranulation, impunctate or with very small, sparse punctures, matte. Elytral intervals slightly vaulted. Elytral epipleura well developed. Scutellum with fine microgranulation, matte. Legs long and narrow, with setation and microgranulation. Protarsomere and mesotarsomeres 3 and 4 and metatarsomere 3 of each tarsus distinctly widened with membranous lobes. Meso- and metatarsomere 1 longest. Anterior tarsal claws with only a few visible teeth. Aedeagus (Figs. 4, 5, 9, 10, 14, 15, 19, 20, 24, 25) pale brown, slightly shiny. Basal piece large and long, longer than relatively short apical piece.

Female. Without distinct differences, only body more robust, antennae slightly shorter and space between eyes slightly wider than those in males.

Differential diagnosis. Species of the genus *Upinella* Mulsant, 1856 are similar to the species of the genus *Allecula* Fabricius, 1801. They differ mainly by combinations of the characters: large, robust body, elytra widest near two thirds or in middle of its length, matte dorsal surface of pronotum, elytral intervals glabrous and without punctuation or with sparse setation and very sparse and very small punctures, lateral margins of pronotum arcuate, almost broadest near middle, posterior angles of pronotum rounded, long tibia and long femora, structure of filiform antenna (antennomere 2 shortest, antennomere 3 or 4 longest, antennomeres 5-11

shorter than antennomere 3, antennomeres 9-11 shorter than antennomeres 3-8). Species of *Allecula* have almost narrower body with elytra widest near base, dorsal surface slightly shiny with setation and punctuation, lateral margins of pronotum in basal half parallel, tibiae and femora shorter, and antennomeres 5-11 approximately as long as or longer than antennomeres 3 or 4.

Distribution. Europe: Armenia, Austria, Bosnia Herzegovina, Bulgaria, Croatia, Greece, Hungary, Italy, Romania, Russia, Southern European Territory of Russia, Ukraine, Serbia and Montenegro. Asia: China (Henan, Jiangxi, Fukien, Taiwan, Yunnan), Japan.

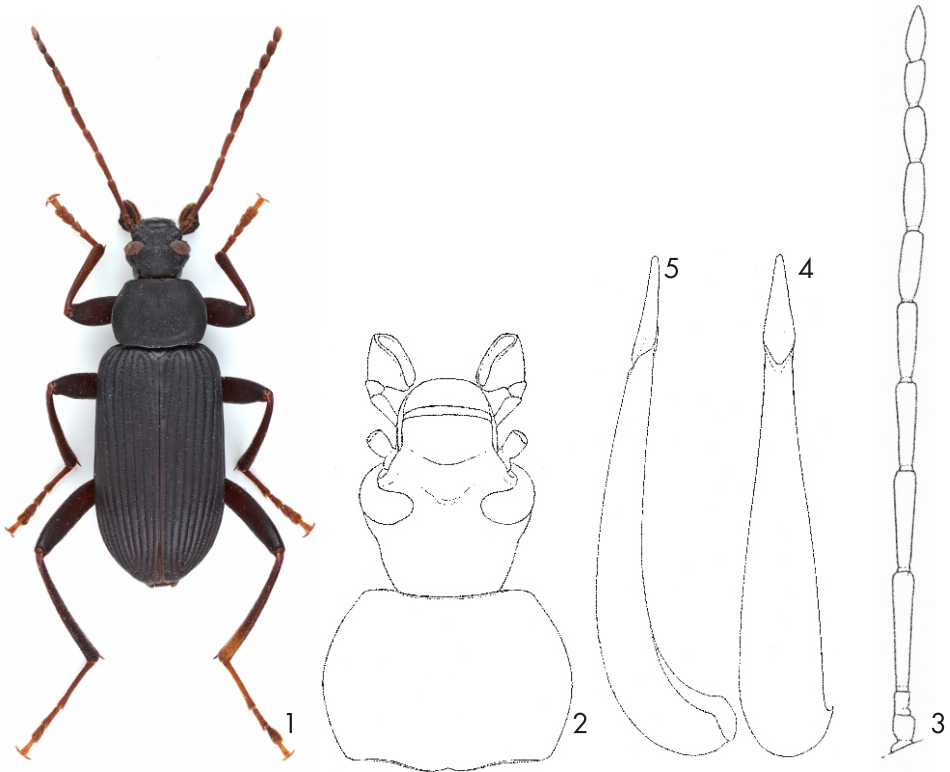
KEY TO THE SPECIES

- A (B) Dorsal surface of pronotum and elytral intervals with setation and punctuation, each of antennomeres 9-11 as long as or longer than antennomeres 3 or 4. *Allecula* Fabricius, 1801
- B (A) Dorsal surface of pronotum and elytral intervals without setation and punctuation or only with sparse setae and sparse very small punctures, each of antennomeres 9-11 distinctly shorter than antennomeres 3 or 4. *Upinella* Mulsant, 1856
- 1 (2) Dorsal surface of elytra with transverse wrinkles, lateral margins of pronotum broadly arcuate at apical half, pronotum widest at two thirds from base to apex. Habitus as in Fig. 34, head and pronotum (Fig. 35), antenna (Fig. 36). China (Yunnan). *Upinella ruzickai* sp. nov.
- 2 (1) Dorsal surface of elytra without wrinkles, pronotum widest near middle with more or less regularly arcuate lateral margins. 3
- 3 (4) Elytral intervals with setation and very small but distinct punctures. 5
- 4 (3) Elytral intervals without distinct setation and distinct punctures. 13
- 5 (6) Male protibia slightly but distinctly excised on inner side. 7
- 6 (5) Male protibia normal, narrow, without excision on inner side. 9
- 7 (8) Antennomere 4 approximately as long as length of antennomere 3 or 5. China (Taiwan).
..... *Upinella taiwana* (Masumoto, Akita & Lee, 2015)
- 8 (7) Antennomere 4 distinctly longer than length of antennomere 3 or 5. China (Taiwan).
..... *Upinella lanrenxiensis* (Masumoto, Akita & Lee, 2015)
- 9 (10) Disc of pronotum with very sparse and very shallow punctuation. Habitus as in Fig. 21, head and pronotum (Fig. 22), antenna (Fig. 23), aedeagus (Figs. 24, 25). China (Jiangxi).
..... *Upinella jiangxiica* sp. nov.
- 10 (9) Disc of pronotum with denser and coarser punctuation. 11
- 11 (12) Space between eyes wider (OI equal to 34), distinctly wider than length of antennomere 1. Habitus as in Fig. 16, head and pronotum (Fig. 17), antenna (Fig. 18), aedeagus (Figs. 19, 20). China (Gansu, Taiwan), Japan, South Korea. *Upinella fuliginosa* (Mäklin, 1875)
- 12 (11) Space between eyes narrower (OI equal to 24), approximately as wide as antennomere 1 long. Habitus as in Fig. 11, head and pronotum (Fig. 12), antenna (Fig. 13), aedeagus (Figs. 14, 15). China (Fujian, Taiwan). *Upinella frankenbergeri* (Mařan, 1940)
- 13 (14) Protarsomeres 1-4 of male strongly widened, male protibia slightly excised on inner side. Habitus as in Fig. 6, head and pronotum (Fig. 7), antenna (Fig. 8), aedeagus (Figs. 9, 10). Japan.
..... *Upinella cryptomeriae* (Lewis, 1895)
- 14 (13) Protarsomeres 3 and 4 widened, protibia without excision or bent on inner side. 15
- 15 (16) Space between eyes wide (OI near 42). Antennomeres 9-11 very short and wide, 0.44-0.52 as long as antennomere 3 and only 1.77-2.21 longer than wide. Habitus as in Fig. 1, head and pronotum (Fig. 2), antenna (Fig. 3), aedeagus (Figs. 4, 5). Europe. *Upinella aterrima* (Rosenhauer, 1847)
- 16 (15) Space between eyes narrower (OI 29-33). Antennomeres 9-11 slightly longer and narrower, 0.53-0.65 as long as length of antennomere 3 and 2.47-3.17 longer than wide. 17
- 17 (18) Base of pronotum at middle straight, metatarsomere 1 shorter than metatarsomeres 2-4 together, anterior tarsal claws with 5 visible teeth. Habitus as in Fig. 26, head and pronotum (Fig. 27), antenna (Fig. 28). China (Yunnan). *Upinella kubani* sp. nov.
- 18 (17) Base of pronotum at middle arcuate, metatarsomere 1 approximately as long as length of metatarsomeres 2-4 compiled, anterior tarsal claws with 7 visible teeth. Habitus as in Fig. 37, head and pronotum (Fig. 38), antenna (Fig. 39). China (Henan). *Upinella turnai* sp. nov.

***Upinella aterrima* (Rosenhauer, 1847) comb. nov.**

(Figs. 1-5)

Allecula aterrima Rosenhauer, 1847: 122. Küster, 1849: 58; Bach, 1856: 228; Redtenbacher, 1858: 622, 1003; Baudi, 1877: 6; Seidlitz, 1896: 35; Borchmann, 1910: 9; Mader, 1928: 901; Novák & Pettersson, 2008: 320.
Upinella aterrima Mulsant, 1856: 18. Jacquelin du Val, 1863: 342.



Figs. 1-5: *Upinella aterrima* (Rosenhauer, 1847) comb. nov. (male): 1- habitus; 2- head and pronotum; 3- antenna; 4- aedeagus, dorsal view; 5- aedeagus, lateral view.

Material examined. (1 ♂): wyl: Krstec, Bulgaria / Ing. Flor. Hanuš [pb], (VNPC).

Redescription. Habitus of male as in Fig. 1. Dorsal surface glabrous, matte, from brown to black. Body smaller, elongate oval, BL 8.50 mm, widest near two thirds elytral length, maximum width 3.12 mm, BL/EW 2.72. Head (Fig. 2) relatively narrow, with fine and dense microgranulation, shallow punctuation, punctures small-sized. Posterior part black, with a few dark setae behind eyes, anterior part with a few brown setae before clypeus. Clypeus slightly paler with pale brown setation. Mandibles with a few pale and dark setae, shiny, basal part with fine microgranulation. Head widest across eyes, HW 1.46 mm, HW/PW approximately 0.79; HL (visible part) 1.31 mm. Eyes relatively large, transverse, distinctly excised. Space between eyes relatively wide, distinctly wider than diameter of one eye, distinctly wider than length of antennomere 1 or 2, OI equal to 41.80. Antenna (Fig. 3). Relatively long, AL 5.12 mm, AL/BL

0.60, dark brown, with short setation, fine microgranulation and punctuation. Antennomeres slightly shiny, antennomere 2 shortest, antennomere 3 longest, 4-11 distinctly shorter than antennomere 3, antennomeres 8-11 distinctly shorter than antennomeres 3-8. RLA (1-11) equal to 0.36 : 0.18 : 1.00 : 0.90 : 0.75 : 0.72 : 0.71 : 0.63 : 0.48 : 0.44 : 0.52. RL/WA (1-11) equal to 1.48 : 1.36 : 5.62 : 4.71 : 3.73 : 3.34 : 2.97 : 2.27 : 1.90 : 1.77 : 2.21. Maxillary palpus dark brown, with microgranulation, punctuation and sparse, pale setation, shiny. Palpomeres 2-4 distinctly widest at apex, penultimate palpomere shorter than palpomere 2 and ultimate palpomere. Ultimate palpomere in form of long triangle, axe-shaped. Pronotum (Fig. 2) blackish brown, glabrous, at base distinctly narrower than elytron at base, with fine microgranulation, very fine and sparse punctuation, punctures very small, matte. PL 1.61 mm in middle, widest near middle, HW at base 1.46 mm. PI equal to 87.50. Borders complete and distinct. Posterior margin very finely bisinuate. Posterior angles obtuse, arcuate, anterior angles indistinct, rounded, lateral margins regularly arcuate. Anterior margin more or less straight, very finely excised at middle. Dorsal surface of elytra glabrous, unicolored blackish brown, EL 5.58 mm; EW 3.02 mm, widest near two thirds elytral length. EL/EW ratio equal to 1.85. Elytral striae with distinct rows of small-sized punctures, separated approximately by interspace as wide as diameter of punctures. Surface of elytral intervals with very fine microgranulation, impunctate, matte. Elytral intervals slightly vaulted. Elytral epipleura well developed, as colour as elytron itself, with a row of large punctures in basal half, narrowing to ventrite 1, in apical half leads parallel. Scutellum black, roundly triangular, with a fine microgranulation. Legs long and narrow, tibia and femora brown, with dark setation, setation of femora sparser. Tarsi distinctly paler, with pale setation. Tibia and tarsi with fine microgranulation, tibia with punctuation, femora with microrugosities. Tibia long and narrow, dilated anteriorly. Protarsomere and mesotarsomeres 3 and 4 and metatarsomere 3 of each tarsus distinctly widened, with membranous lobes. RLT: 1.00 : 0.59 : 0.46 : 0.59 : 1.09 (protarsus), 1.00 : 0.44 : 0.42 : 0.39 : 0.61 (mesotarsus), and 1.00 : 0.41 : 0.32 : 0.48 (metatarsus). Both anterior tarsal claws with 6 visible teeth. Ventral side of body blackish brown, with sparse punctuation, punctures small-sized. Abdomen dark brown, slightly shiny, with sparse dark setae in middle and sparse pale setae near sides of ventrites. Ventrites with very fine microgranulation, and relatively sparse punctuation, punctures very small and shallow. Ventrite 5 in the middle of apex distinctly roundly excised. Aedeagus (Figs. 4, 5) pale brown with fine microgranulation, shiny. Basal piece slightly rounded laterally and narrowing dorsally, 3.84 times longer than apical piece. Apical piece relatively short, elongate triangular, in dorsal and lateral view.

Distribution. Armenia, Austria, Bosnia Herzegovina, Bulgaria, Croatia, Greece, Hungary, Italy, Romania, Russia, Southern European Territory of Russia, Ukraine, Serbia and Montenegro.

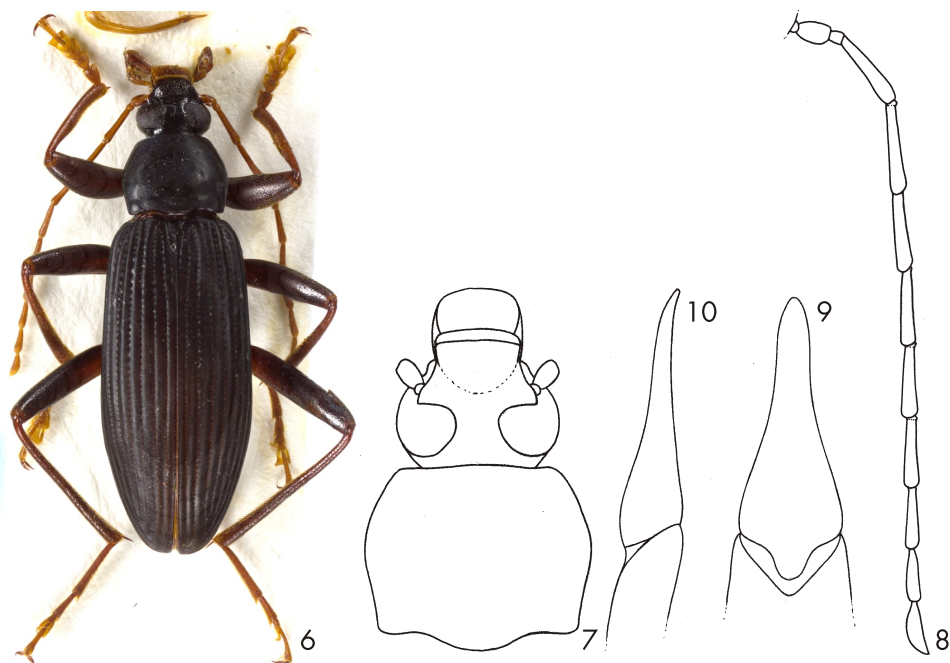
Upinella cryptomeriae (Lewis, 1895) comb. nov.

(Figs. 6-10)

Allecula cryptomeriae Lewis, 1895: 250.

Material examined. (1 ♂): wl: JAPAN ; Nara-ken / Kamikitayama-mura / Mt.Oodaigahara / 1500m, 14.VI.2008 / Katsumi AKITA leg. [pb] // bl: K. AKITA / Collection / KAC 39374 [pb] // wl: *Allecula (Upinella) / cryptomeriae* / Lewis, 1895 / Det. K. Akita, 2014 [pb], (VNPC); (1 ♂): wl: Japan (Fukushima) / SHINDENHARA / W. Suzuki lgt., 28.7.1977 [hb], (VNPC).

Remarks. Habitus of male as in Fig. 6. Dorsal surface (pronotum and elytra) black, glabrous, matte, with fine microgranulation. Body large, elongate, from pale brown to black, widest near two thirds elytral length. Head (Fig. 7) widest across eyes, black, shiny with punctuation, microgranulation, anterior part and clypeus with denser pale setation. Space between eyes narrow, wider than length of antennomere 1. Antenna narrow, filiform (Fig. 8). Lateral margins of pronotum arcuate (Fig. 7), dorsal surface with sparse punctuation, punctures very small. Elytral striae with rows of small punctures, elytral intervals without punctures. Protibia slightly excised on inner side, protarsomeres 1-4 strongly widened. Pro- and mesotarsomere 3 and 4 and metatarsomere 3 lobed. Both anterior tarsal claws with 9 visible teeth. Aedeagus as in Figs. 9 and 10, basal piece 3.97 times longer than apical piece. Species distinctly belongs to the genus *Upinella* Mulsant.



Figs. 6-10: *Upinella cryptomeriae* (Lewis, 1895) comb. nov. (male): 6- habitus; 7- head and pronotum; 8- antenna; 9- aedeagus, dorsal view; 10- aedeagus, lateral view.

Measurements of body parts (male): BL 14.16 mm, HL (visible part) 2.01 mm, HW 2.19 mm, Ol equal to 23.86, PL 2.26 mm, PW at base 2.74 mm, Pl equal to 82.48, EL 9.89 mm, EW 4.44 mm, EL/EW 2.23, BL/EW 3.19, AL 9.29 mm, AL/BL 0.66, HW/PW 0.73. RLA (1-11): 0.35 : 0.16 : 1.00 : 1.01 : 0.94 : 0.89 : 0.90 : 0.78 : 0.69 : 0.65 : 0.61. RL/WA (1-11): 1.58 : 1.05 : 5.00 : 5.26 : 4.89 : 5.00 : 4.76 : 4.09 : 4.22 : 3.52 : 3.31. RLT: 1.00 : 0.83 : 1.06 : 1.03 : 1.75 (protarsus), 1.00 : 0.52 : 0.52 : 0.66 : 1.08 (mesotarsus), and 1.00 : 0.42 : 0.31 : 0.54 (metatarsus).

Distribution. Japan.

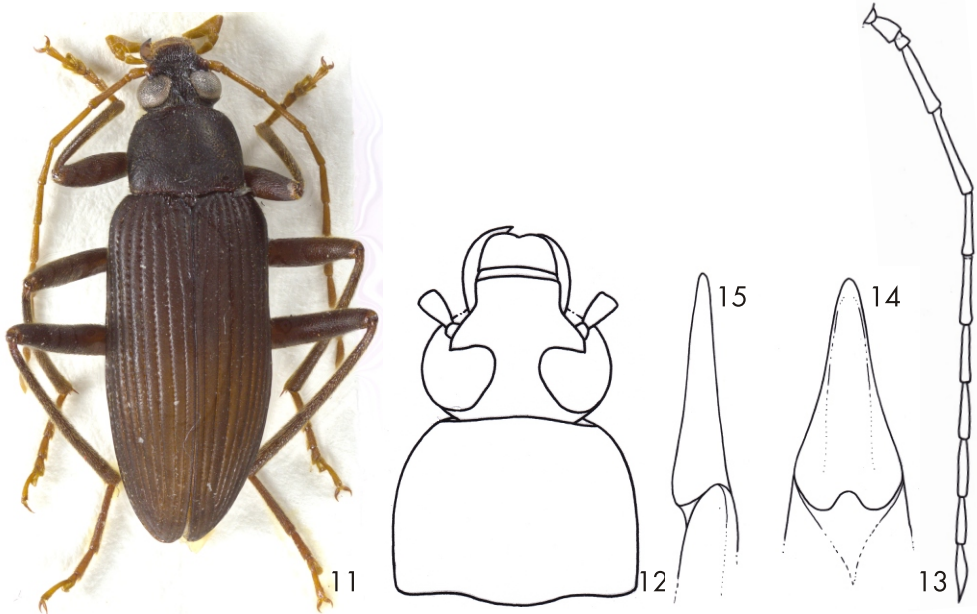
***Upinella frankenbergeri* (Mařan, 1940) comb. nov.**
(Figs. 11-15)

Allecula frankenbergeri Mařan, 1940: 168.

Type material. Holotype (♂): wl: YENPINGFU / FUKIEN [pb] // wl with bf: China / Reitter [pb] // wl: *Allecula typus* ♂ / Frankenbergeri m. [hb] // rl: Holotypus [pb] // oyl: Mus. Nat. Pragae / inv. [pb] 18490 [hb]; (NMPC).

Type condition. Type specimen glued on white label. Right antenna is missed, left antenna with antennomeres 1-6.

New material examined. (1 ♂ 1 ♀): wl: CHINA Fujian Prov. / SHAOWU env. / 13.-16.6.1991 / lgt. Nikodým, Červenka [pb], (VNPC); (1 ♂): wl: Taiwan: Hsinchu / Guanwu / 07.VII.2007, leg. Y.-L. Lin [pb], (KMTJ); (1 ♂): wl: Taiwan: Pingtung / Shuanliu / 04.V.2005, leg. J.-F. Tsai [pb], (KMTJ); (1 ♂ 1 ♀): wl: Taiwan: Pingtung / Shansi / 11.IX.2014.leg.Y.-T.Chung [pb], (KMTJ); (1 ♀): wl: Taiwan: Pingtung / Tahanshan / 28.VIII.2010. leg.Y.-L. Lin [pb], (KMTJ); (1 ♂): wl: Taiwan: Nantou / Hsitou / 17.III.2004.leg.H.-Y. Lee [pb], (KMTJ); (1 ♂): wl: Taiwan: Nantou / Aowanta / 10.VII.2010,leg.Y.-T. Wang [pb], (1 ♂ 2 ♀♀): wl: Taiwan: Taichung / Da keng / 23.IV.2009 night. Y.-T. Wang [pb], (KMTJ); (1 ♂): wl: Taiwan: Taichung / Tahsuehshan / 24.IV.2012,leg.C.-F.Lee [pb], (KMTJ); (1 ♀): wl: Taiwan: Ilan / Fushan / 13.IV.2011,leg.C.-F. Lee [pb], (KMTJ); (1 ♀): wl: TAIWAN, Taitung Co. / Yanping, secondary / disturbed / deciduous forest, // 28. V. 2008 / leg. L. Dányi, / Z. Korsós & E. Lazányi [pb], (HNHM).



Figs. 11-15: *Upinella frankenbergeri* (Mařan, 1940) comb. nov. (male): 11- habitus; 12- head and pronotum; 13- antenna; 14- aedeagus, dorsal view; 15- aedeagus, lateral view.

Remark. Habitus of male as in Fig. 11. Dorsal surface (pronotum and elytra) matte, with fine microgranulation, sparse setation and distinct punctuation. Body large, elongate, from pale brown to black, widest near two thirds of elytral length. Head (Fig. 12) widest across eyes, black, shiny with punctuation, microgranulation, clypeus pale brown with denser pale setation. Space between eyes narrow, as wide as length of antennomere 1. Antenna narrow, filiform (Fig. 13). Lateral margins of pronotum slightly arcuate (Fig. 12), dorsal surface with punctuation, punctures small. Elytral striae with rows of small punctures, elytral intervals with very small and sparse

punctures. Protibia straight, protarsomeres 1 and 2 narrow. Pro- and mesotarsomere 3 and 4 and metatarsomere 3 lobed. Both anterior tarsal claws with 7 visible teeth. Aedeagus as in Figs. 14 and 15, basal piece 2.67 times longer than apical piece. Species distinctly belongs to the genus *Upinella* Mulsant.

Measurements of body parts (male): BL 13.58 mm, HL 1.79 mm, HW 2.24 mm, OI equal to 24.04, PL 2.25 mm, PW 2.99 mm, PI equal to 75.31, EL 9.54 mm, EW 4.35 mm, EL/EW 2.19, AL 10.04, AL/BL 0.74, BL/EW 3.12, HW/PW 0.75. RLA (1-11): 0.45 : 0.16 : 1.00 : 1.32 : 0.96 : 0.97 : 0.87 : 0.82 : 0.82 : 0.69 : 0.77. RL/AW (1-11): 2.05 : 0.94 : 5.00 : 7.39 : 5.21 : 5.11 : 4.60 : 4.11 : 4.22 : 4.00 : 4.44. RLT: 1.00 : 0.57 : 0.52 : 0.63 : 1.27 (protarsus), 1.00 : 0.45 : 0.35 : 0.35 : 0.81 (mesotarsus), 1.00 : 0.40 : 0.29 : 0.48 (metatarsus).

Distribution. China (Fujian). New record for Taiwan.

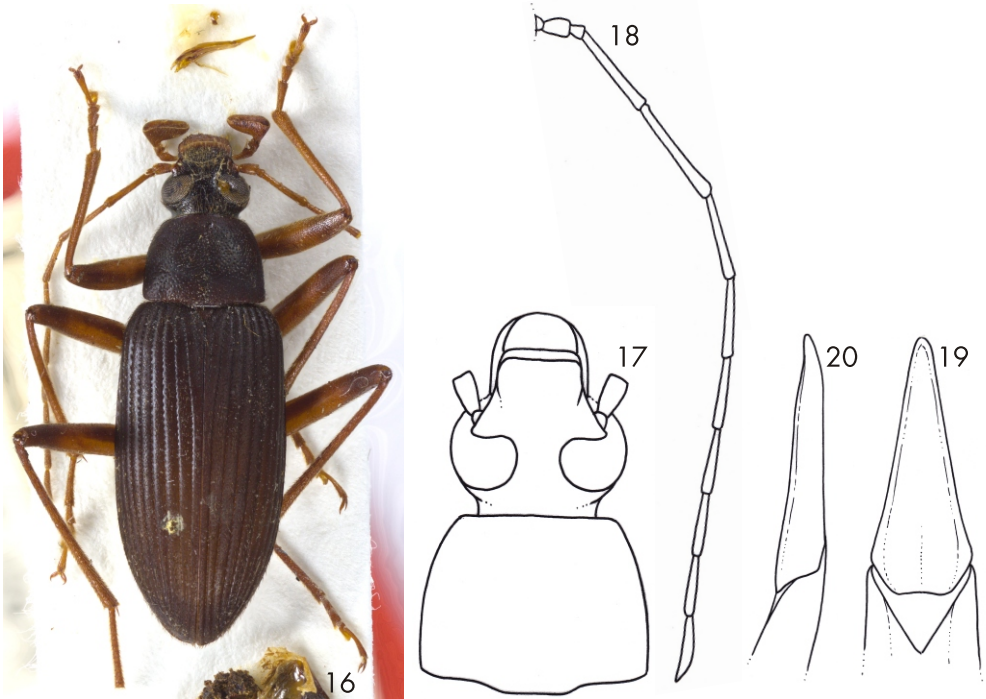
***Upinella fuliginosa* (Mäklin, 1875) comb. nov.**

(Figs. 16-20)

Allecula fuliginosa Mäklin, 1875: 666. Lewis, 1895: 251; Mader, 1928: 901.

Allecula obscura Harold, 1878: 132. Synonymized by Borchmann, 1910: 11.

Allecula velutina Marseul, 1876: 322. Seidlitz, 1896: 35 [in subgenus *Upinella* – *A. fuliginosa* is not listed]; synonymized by Borchmann, 1910: 11.



Figs. 16-20: *Upinella fuliginosa* (Mäklin, 1875) comb. nov. (male): 16- habitus; 17- head and pronotum; 18- antenna; 19- aedeagus, dorsal view; 20- aedeagus, lateral view.

Type material examined. Holotype (♂): wl: Japan / Hagi / Hiluo [hb] // rl with bf: Holotypus [pb] ♀ [hb] / *Allecula fuliginosa* Mäkl. / velutina Mars. [hb] / Zool. Staatssammlg. München [pb] // wl with bf: fuliginosa / Typ Mklin / velutina / Typ Mklin [hb], (ZSMG).

Type condition. Type specimen on pin, left antenna has only antennomere 1, right antenna with antennomeres 1-6. Left metatarsus is missing.

New material examined. (2 ♂♂): wl with bf: Unzen Shimabara / Japan Reitter [pb] // wl: *Upinella fuliginosa* / D 2369 [hb], (NMPC, VNPC); (1 ♀): wl: Japan 1955 / Osaka / Sh. Mizobe lgt. [pb] // *Allecula fuliginosa* Mäkl. [hb], (VNPC); (1 ♀): wl: JAPAN, Honshu / Kansai Hiei Zan, 800m, / Kyōto env., 28.iii.2006 / T. Lackner lgt. [pb], (VNPC); (1 ♂): wl: JAPAN; Nara-ken / Nara-shi, Kasuga - / yama, 100-200m / 28. V. 2007 / Katsumi Akita leg. [pb] // bl: K. AKITA / Collection / KAC 86635 [pb] // wl: *Allecula (Upinella) fuliginosa* / Mäklin, 1875 / Det. K. Akita, 2014 [pb], (VNPC); (1 ♀): wl: BEPPU / N.O.-KIUSHIU [pb] // wl with bf: Japan / Reitter. [pb], (NMPC); (1 ♀): wl: Japan (Kyoto pref.) / Kyoto city, 23.5. / W. Suzuki lgt. 1978 [pb], (NMPC).

Remark. Habitus of male as in Fig. 16. Dorsal surface (pronotum and elytra) matte, with fine microgranulation, sparse setation and distinct punctuation. Body large, elongate, from pale brown to black, widest near two thirds elytral length. Head (Fig. 17) widest across eyes, black, shiny with punctuation, microgranulation, clypeus pale brown with denser pale setation. Space between eyes narrow, as wide as length of antennomere 1. Antenna narrow, filiform (Fig. 18), antennomere 2 shortest, antennomere 4 longest, antennomeres 5-11 shorter than antennomere 3, each of antennomeres 9-11 distinctly shorter than each of antennomeres 5-8. Lateral margins of pronotum slightly arcuate (Fig. 17), dorsal surface with punctuation, punctures small. Elytral striae with rows of small punctures, elytral intervals with very small and sparse punctures. Protibia straight, protarsomeres 1 and 2 narrow. Pro- and mesotarsomere 3 and 4 and metatarsomere 3 lobed. Both anterior tarsal claws with 7 visible teeth. Aedeagus as in Figs. 19 and 20, basal piece 2.67 times longer than apical piece. Species distinctly belongs to the genus *Upinella* Mulsant. Aedeagus Maeda and Nakane 1988: 9 (fig. 2).

Measurements of body parts (male): BL 13.44 mm; HL 1.71 mm; HW 2.26 mm; OI 34.01; PL 2.34 mm; PW 3.20 mm; PI 73.08; EL 9.39 mm; EW 4.58 mm; AL 11.03; AL/BL 0.82; BL/EW 2.93; AED 1 : 2.71.

RLA (1-11): 0.36 : 0.15 : 1.00 : 1.21 : 0.92 : 0.84 : 0.79 : 0.75 : 0.68 : 0.67 : 0.72. RL/WA (1-11): 1.95 : 1.31 : 7.16 : 8.38 : 6.83 : 6.64 : 6.25 : 4.88 : 5.17 : 4.81 : 5.00. RLT: 1.00 : 0.50 : 0.26 : 0.54 : 1.40 (protarsus), 1.00 : 0.42 : 0.31 : 0.34 : 0.80 (mesotarsus), 1.00 : 0.39 : 0.30 : 0.53 (metatarsus).

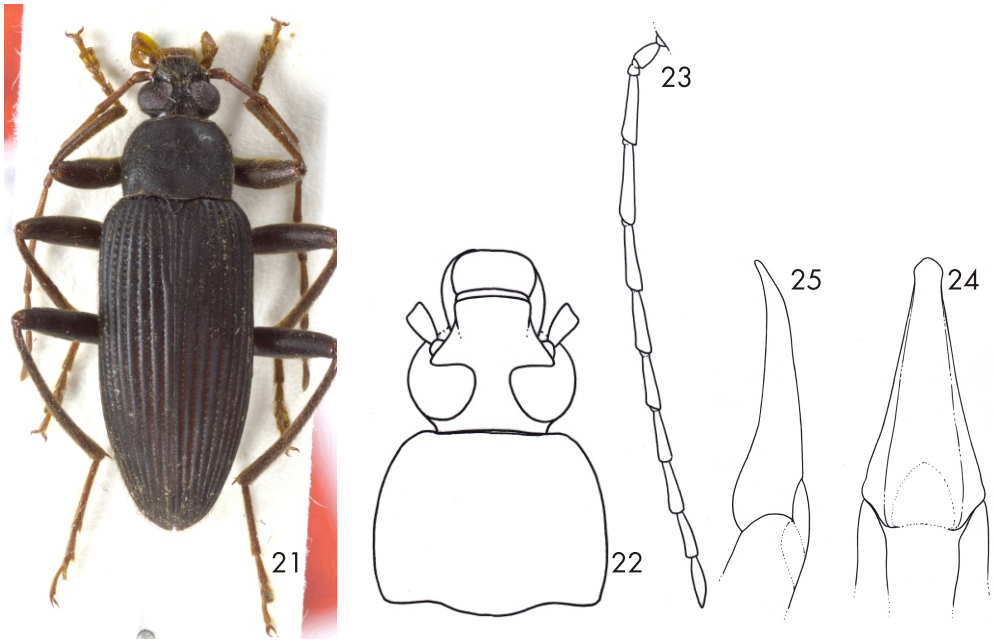
Distribution. China (Gansu, Taiwan), Japan, South Korea.

Upinella jiangxiica sp. nov.

(Figs. 21-25)

Type locality. China, prov. Jiangxi, Jinggang Shan Mts., Baiyinhu vill. env., 26°36.8'N, 114°11.1'E, 800 m.

Type material. Holotype: (♂): wl: CHINA, Jiangxi prov., 23-29.iv.2011 / Jinggang Shan Mts. / Baiyinhu vill. env. / (stream valley; wet rock; at light) / 26°36.8'N, 114°11.1'E, 800 m / M. Fikáček & J. Hájek leg. [pb], (NMPC). The holotype is provided with printed red label: *Upinella jiangxiica* sp. nov. / HOLOTYPUS / V. Novák det. 2015.



Figs. 21-25: *Upinella jiangxiica* sp. nov. (male holotype): 21- habitus; 22- head and pronotum; 23- antenna; 24- aedeagus, dorsal view; 25- aedeagus, lateral view.

Description of holotype. Habitus of male holotype as in Fig. 21. Dorsal surface sparsely setaceous and punctuated, with fine microgranulation. Body relatively large, elongate, from pale brown to black, BL 13.65 mm, widest near middle of elytral length, maximum width (EW) 4.41 mm, BL/EW 3.10.

Head (Fig. 22) black, with fine microgranulation and shallow punctuation. Posterior part matter, with sparser, pale and dark setation, behind eyes with long dark setae. Anterior part with denser punctuation and denser and longer ochre yellow setation, shiner. Clypeus pale brown with denser and longer ochre yellow setation. Head widest across eyes, HW 2.26 mm, HW/PW 0.75, HL (visible part) 1.73 mm. Mandibles brown with sides darker. Eyes large, transverse, distinctly excised. Space between eyes narrow, distinctly narrower than diameter of one eye, approximately as wide as length of antennomere 1; OI equal to 22.22.

Antenna (Fig. 23) filiform, narrow, unicolored reddish brown, relatively long, AL 10.33 mm, AL/BL 0.76, with relatively dense pale setation, microgranulation and punctuation. Antennomeres 9-11 distinctly shorter than antennomeres 3-8. Antennomere 2 shortest, antennomere 3 longest.

RLA (1-11): 0.35 : 0.16 : 1.00 : 1.19 : 0.96 : 0.87 : 0.93 : 0.82 : 0.73 : 0.70 : 0.67.

RL/WA (1-11): 1.41 : 0.89 : 4.32 : 6.73 : 5.42 : 4.41 : 4.39 : 5.00 : 4.28 : 4.29 : 4.30.

Maxillary palpus pale brown, with microgranulation, shallow punctuation, and long, ochre yellow setation. Palpomeres distinctly widest at apex, penultimate palpomere shorter than palpomere 2 and ultimate palpomere. Ultimate palpomere in form of long triangle, axe-shaped.

Pronotum (Fig. 22) black, with very fine microgranulation, pale brown setation near lateral margins and sparse punctuation, matte. Punctures very small and shallow. Distinctly narrower

than elytra at base, widest near middle of lateral margins, PL 2.18 mm, PW at base 3.02 mm. PI equal to 72.19. Borders complete and distinct. Posterior margin bisinuate. Posterior angles roundly obtuse, anterior angles rounded, lateral margins only regularly arcuate. Anterior margin more or less straight.

Elytra unicolored black, with sparse, pale setation, denser near apex and lateral margins, EL 9.74 mm; EW 4.41 mm, widest near two thirds elytral length. EL/EW ratio equal to 2.21. Elytral striae with distinct rows of small-sized punctures, separated by diameter approximately as wide as punctures in striae. Surface of elytral intervals with very fine microgranulation and very sparse and very small punctures, matte. Elytral intervals slightly vaulted.

Elytral epipleura well developed, as colour as elytron itself, with relatively large punctures and sparse pale setae, regularly narrowing to ventrite 1 (here narrowest) in basal half, in apical half parallel-sided.

Scutellum black, as colour as elytron itself, roundly pentagonal, with fine microgranulation and a few very small punctures.

Legs long and narrow with ochre yellow setation, microgranulation and punctuation. Femora and tibia dark brown, tarsi reddish brown. Protarsomeres and mesotarsomeres 3 and 4 and metatarsomere 3 of each tarsus distinctly widened with membranous lobes. RLT: 1.00 : 0.55 : 0.58 : 0.64 : 1.27 (protarsus), 1.00 : 0.41 : 0.39 : 0.43 : 0.69 (mesotarsus), and 1.00 : 0.43 : 0.33 : 0.53 (metatarsus).

Both anterior tarsal claws with 8 visible teeth.

Ventral side of body black, with sparse, pale setae and sparse, small punctures. Abdomen blackish brown, with fine microgranulation, relatively long and dense pale setation, and dense punctuation, punctures small.

Aedeagus (Figs. 17, 18) robust, pale brown, shiny. Basal piece rounded laterally and slightly narrowing dorsally, 3.60 times longer than apical piece. Apical piece elongate, beak-shaped in dorsal and lateral views.

Female. Unknown.

Differential diagnosis. (For further details see the key above). *Upinella jiangxiica* sp. nov. differs from similar species *Upinella ruzickai* sp. nov., *Upinella cryptomeriae* (Lewis, 1895) comb. nov., *Upinella aterrima* (Rosenhauer, 1847) comb. nov., *Upinella kubani* sp. nov. and *Upinella turnai* sp. nov. mainly by its elytral intervals with setation and very small punctures; while *U. ruzickai*, *U. cryptomeriae*, *U. aterrima*, *U. kubani* and *U. turnai* have elytral intervals glabrous and without distinct punctures or with transverse wrinkles. *U. jiangxiica* differs from a similar species *Upinella fuliginosa* (Mäklin, 1875) comb. nov. and *Upinella frankenbergeri* (Mařan, 1940) comb. nov. mainly by shape of aedeagus and disc of pronotum with very sparse and very shallow punctuation; while *U. fuliginosa* and *U. frankenbergeri* have disc of pronotum has denser and coarser punctuation.

Etymology. Toponymic, named after the type locality – province Jiangxi (China).

Distribution. China (Jiangxi).

***Upinella kubani* sp. nov.**

(Figs. 26-28)

Type locality. China, Yunnan prov., Yulongshan mts., Baishui, 27°08' N 100°14' E, 2900-3500 m.**Type material.** Holotype (♀): wl: CHINA, Yunnan prov. / 27°08' N 100°14' E, 2900- / Yulongshan mts. -3500m / BAISHUI 7.-12.VII.1900 / Vít Kubáň leg. [pb], (VNPC). The holotype is provided with printed red label: *Upinella kubani* sp. nov. / HOLOTYPUS / V. Novák det. 2015.Figs. 26-28: *Upinella kubani* sp. nov. (female holotype): 26- habitus; 27- head and pronotum; 28- antenna.

Description of holotype. Habitus of female holotype as in Fig. 26. Dorsal surface (pronotum and elytra) glabrous, impunctate, with fine microgranulation. Body relatively large, elongate, from pale brown to blackish brown, BL 12.88 mm, widest near two thirds elytral length, maximum width (EW) 3.99 mm, BL/EW 3.29.

Head (Fig. 27) with fine microgranulation. Posterior part blackish brown, more matte, with sparse, short, pale setae, shallow punctuation, punctures sparse and very small. Anterior part brown, with denser punctuation and denser ochre yellow setation, shiny. Clypeus pale brown, with denser and longer ochre yellow setation and fine, dense punctuation. Head widest across eyes, HW 2.18 mm, HW/PW 0.81, HL (visible part) 1.76 mm. Mandibles brown with black sides. Eyes large, transverse, distinctly excised. Space between eyes narrow, as wide as diameter of one eye, distinctly wider than length of antennomere 1; OI equal to 33.33.

Antenna (Fig. 28) filiform, relatively long, AL 7.06 mm, AL/BL 0.55, with relatively long and dense ochre yellow setation, microgranulation and punctuation. Antennomeres 1-4 slightly shiny, reddish brown, antennomeres 5-11 brown, more matte, antennomeres 9-11 distinctly shorter and slightly wider than antennomeres 3-8. Antennomere 2 shortest, antennomere 3 longest.

RLA (1-11): 0.36 : 0.23 : 1.00 : 0.98 : 0.82 : 0.80 : 0.73 : 0.72 : 0.66 : 0.62 : 0.65.

RL/WA (1-11): 1.25 : 1.25 : 4.60 : 4.72 : 3.27 : 3.83 : 3.12 : 3.48 : 3.17 : 2.88 : 2.88.

Maxillary palpus pale brown, with microgranulation, shallow punctuation, punctures small-sized, and ochre yellow setation and a few long setae at apex of palpomeres 2 and 3. Palpomeres distinctly widest at apex, penultimate palpomere shorter than palpomere 2 and ultimate palpomere. Ultimate palpomere in form of long triangle, axe-shaped.

Pronotum (Fig. 27) blackish brown, glabrous, without distinct punctures, with very fine microgranulation, matte, at base distinctly narrower than elytra at base. Longest at middle, widest near middle of lateral margins, PL 2.04 mm, PW at base 2.69 mm. PI equal to 75.86. Borders complete and distinct, only in the middle of anterior margin not clearly conspicuous. Posterior margin bisinuate. Posterior angles roundly obtuse, anterior angles rounded, lateral margins only slightly arcuate. Anterior margin more or less straight.

Elytra glabrous, unicolored dark brown, EL 9.08 mm; EW 3.99 mm, widest near two thirds elytral length. EL/EW ratio equal to 2.28. Elytral striae with distinct rows of small-sized punctures, separated by diameter approximately as wide as punctures in striae. Surface of elytral intervals with very fine microgranulation, matte. Elytral intervals slightly vaulted.

Elytral epipleura well developed, glabrous, as colour as elytron itself, with one row of punctures, regularly narrowing to ventrite 1 in basal half, in apical half parallel-sided.

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

Legs long and narrow with ochre yellow setation, setation of tibiae and tarsi denser than those of femora. Femora and tibiae dark brown, with small punctures and microrugosities, tarsi with microgranulation, pale brown. Protarsomeres and mesotarsomeres 3 and 4 and metatarsomere 3 of each tarsus distinctly widened, with membranous lobes. RLT: 1.00 : 0.49 : 0.60 : 0.76 : 1.33 (protarsus), 1.00 : 0.28 : 0.36 : 0.43 : 0.87 (mesotarsus), and 1.00 : 0.44 : 0.34 : 0.57 (metatarsus).

Both anterior tarsal claws with 6 visible teeth.

Ventral side of body reddish brown, with a few very short, pale setae and a few small punctures. Abdomen brown, sides of ventrites 3 and 4 and ventrite 5 distinctly paler. Ventrites with fine microgranulation, very small, shallow punctures and short and sparse, pale setae.

Male. Unknown.

Differential diagnosis. (For further details see the key above). *Upinella kubani* sp. nov. differs from similar species *Upinella fuliginosa* (Mäklin, 1875) comb. nov., *Upinella frankenbergeri* (Mařan, 1940) comb. nov., *Upinella jiangxiica* sp. nov. and *Upinella ruzickai* sp. nov. mainly by its elytral intervals glabrous and without distinct punctures; while *U. fuliginosa*, *U. frankenbergeri*, *U. jiangxiica* and *U. ruzickai* have elytral intervals with setation and very small punctures or distinct wrinkles. *U. kubani* is clearly different from a similar species *Upinella cryptomeriae* (Lewis, 1895) comb. nov. mainly by its male protarsomeres 1 and 2 narrow and male protibia not excised at inner side; while *U. cryptomeriae* has male protarsomere 1-4 strongly widened and male protibia distinctly excised at inner side. *U. kubani* clearly differs from similar species *Upinella aterrima* (Rosenhauer, 1847) comb. nov. mainly by narrow space between eyes (OI near 33) and antennomeres 9-11 longer and narrower; while *U. aterrima* has space between eyes wider (OI near 42) and antennomeres 9-11 are very short and wide. *U. kubani* is clearly different from a similar species *Upinella turnai* sp. nov. mainly by its base of pronotum in middle straight and metatarsomere 1 shorter than length of metatarsomeres 2-4 together; while *U. turnai*

has base of pronotum in middle distinctly arcuate and metatarsomere 1 approximately as long as metatarsomeres 2-4 together.

Etymology. The new species is dedicated to the collector – Vítězslav Kubáň (NMPC), my good friend and excellent specialist in beetle family Buprestidae.

Distribution. China (Yunnan).

Upinella lanrenxiensis (Masumoto, Akita & Lee, 2015) comb. nov.

Allecula (*Upinella*) *lanrenxiensis* (Masumoto, Akita & Lee, 2015): 307.

Type locality. China, Taiwan, Pingtung, Kenting National Park, Lanrenxi.

Remark. Figures of habitus and male genitalia (see Masumoto, Akita & Lee, 2015: 309: figs. 4, 11 and 12).

Allecula melanaria Mäklin, 1875 (Figs. 29-33)

Allecula melanaria Mäklin, 1875: 669. Borchmann, 1910: 11; Mader, 1928: 902.

Allecula rufipes Marseul, 1876: 322. Synonymized by Borchmann, 1910: 11; Mader, 1928: 902.

Type material. Holotype of *Allecula melanaria* Mäklin, 1875: (♀): wl: Japan / Hagi / Hiller [hb] // wl: Sammlung Haag- / Ruthenberg [pb] // rl: Holotype [pb] / *Allecula* / *melanaria* / Mäkl. [hb] / Staatssamml. München [pb] // wl with bf: *melanaria* / Typ. Mäklin [hb], [ZSMG].

Holotype of *Allecula rufipes* Marseul, 1876: (♂): wl: Japan / Hagi / Hiller [hb] // wl: Sammlung Haag- / Ruthenberg [pb] // rl: Holotype [pb] / *Allecula* / *melanaria* / *rufipes* / Mars. [hb] / Staatssamml. München [pb] // wl with bf: *rufipes* / Typ. Mrsl. [hb], [ZSMG].

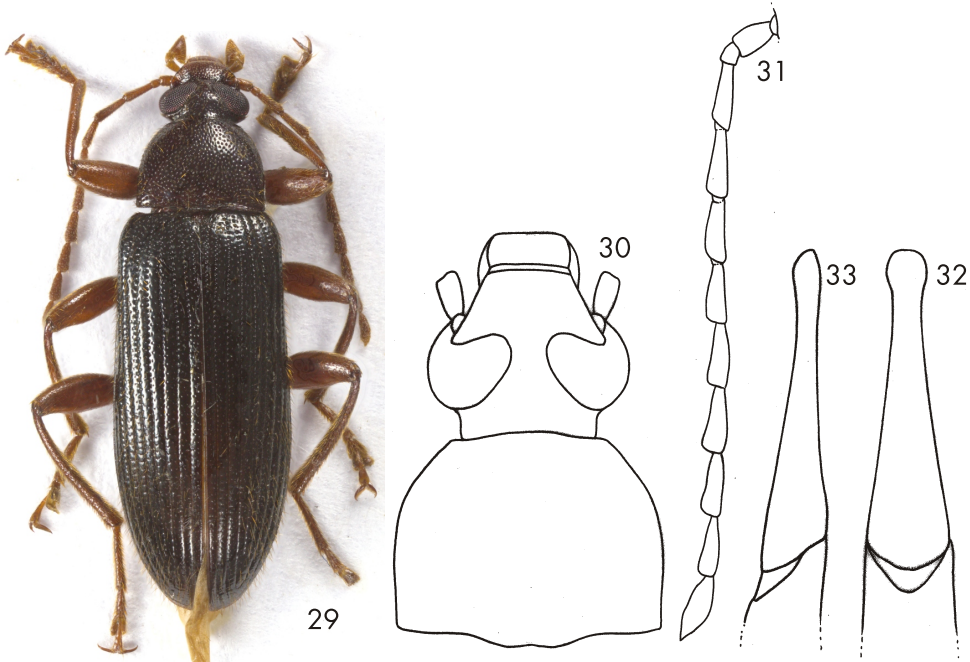
Type condition. [*Allecula melanaria*]: type specimen on pin, left antennomeres 6-11 and right antennomeres 5-11 are missing. Both anterior and left posterior legs are missing, only right posterior leg is complete.

[*Allecula rufipes*]: type specimen on pin, left antennomeres 8-11 and right antennomeres 5-11 are missing. Legs complete.

Other material examined. (1 ♂): wl: JAPAN, Hokkaido / Sapporo env. / Noporo Virgin Forest / x.2009, T. Lackner leg. [pb], (VNPC); (1 ♀): wl: same data as penultimate, but near Sapporo, / 4.VIII.2011, at night [pb], (VNPC); (1 ♂): wl: TAIWAN, Ilan county, / Mingchih Forest / Recreation Area, 1200 m, [pb] // at light, / 5.IV.2002, leg. Gy. Fábian & O. Merkl [pb], (HNHM); (1 ♂): wl: Fushian Botanical / Garden, Yuanshan / Yilan, TAIWAN / 29 – III – 2014, M. KIUCHI leg. [pb] // gl with bf: Coll. Masumoto / 2014 [pb], (KMTJ); (1 ♀): wl: China, W Henan, 16.-18.V / Funiu Shan, 33°31'N 111°56'E / BAOTIANMAN, 1500-1750m / Jaroslav Turna leg., 2008 [pb], (VNPC).

Remarks. Habitus of male holotype as in Fig. 29. Dorsal surface with dense punctuation and long, ochre yellow setation, shiny. Punctures relatively large. Body large, elongate, from reddish brown to blackish brown. Head (Fig. 30) widest across eyes, shiny, blackish brown posterior part and reddish brown anterior part and clypeus. Space between eyes narrow, slightly narrower than length of antennomere 1. Antenna narrow (Fig. 31), antennomeres 4-10 slightly serrate, antennomere 4 longest, antennomeres 5-11 approximately as long as antennomere 3. Pronotum widest at base, lateral margins of pronotum parallel in posterior half (Fig. 30), dorsal surface with punctuation, punctures large and coarse. Elytral striae with rows of large punctures, elytral intervals with punctures smaller than those in striae. Protibia straight, protarsomeres 2-4, mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. Both anterior tarsal claws

with 29 visible teeth. Aedeagus as in Figs. 32 and 33, basal piece 3.28 times longer than apical piece. Species distinctly belongs to the genus *Allecula* (Fabricius).



Figs. 29-33: *Allecula melanaria* Mäklin, 1875 (male): 29- habitus; 30- head and pronotum; 31- antenna; 32- aedeagus, dorsal view; 33- aedeagus, lateral view.

Measurements of body parts (male): BL 10.05 mm, HL (visible part) 1.05 mm, HW 1.48 mm, Ol equal to 20.61, PL 1.58 mm, PW at base 2.11 mm, Pl equal to 74.88, EL 7.42 mm, EW 2.93 mm, EL/EW ratio equal to 2.53, AL 5.62 mm, AL/BL 0.56, BL/EW 3.43, HW/PW 0.70. RLA (1-11): 0.51 : 0.33 : 1.00 : 1.12 : 1.06 : 1.07 : 1.02 : 1.02 : 0.98 : 0.92 : 1.04. RL/WA (1-11): 2.19 : 1.41 : 4.00 : 4.47 : 4.37 : 3.25 : 3.18 : 3.18 : 5.04 : 3.37 : 3.49. RLT: 1.00 : 0.57 : 0.81 : 0.96 : 1.58 (protarsus), 1.00 : 0.48 : 0.54 : 0.50 : 0.92 (mesotarsus), and 1.00 : 0.38 : 0.34 : 0.57 (metatarsus).

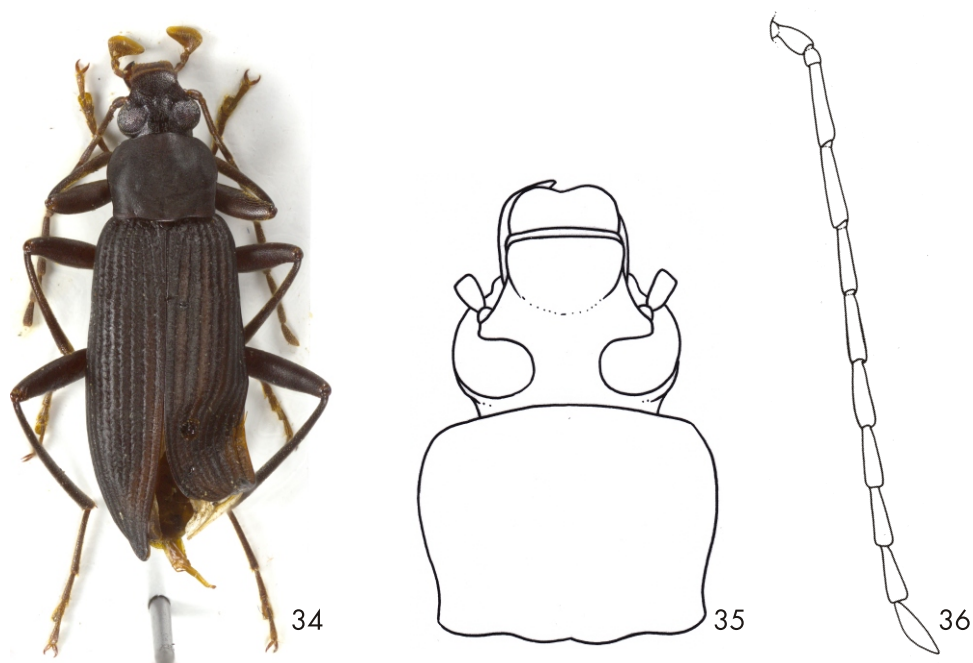
Distribution. China (Fujian), Japan, South Korea. New records for Henan and Taiwan (China).

Upinella ruzickai sp. nov.

(Figs. 34-36)

Type locality. China, Yunnan province, Jizu Shan Mt., env. of Shanzhi, Zhusheng Si monastery, 25°57.7'N, 100°23.6'E, 2180 m.

Type material. Holotype: (♀): wl: CHINA: Yunnan province, / Shanzhi env., 22.-24.VI.2007 / Jizu Shan Mt., / Zhusheng Si monastery, / 25°57.7'N 100°23.6'E, 2180 m, / J. Hájek & J. Růžička leg. [pb] // individually collected on soil, on vegetation, on trunks, in stream; in the night, dense mixed forest / (with dominant Pinus, Quercus / and Rhododendron) [pb], (NMPC). The holotype is provided with printed red label: *Upinella ruzickai* sp. nov. / HOLOTYPE / V. Novák det. 2015.



Figs. 34-36: *Upinella ruzickai* sp. nov. (female holotype): 34-habitus; 35-head and pronotum; 36-antenna.

Description of holotype. Habitus of female holotype as in Fig. 34. Dorsal surface matte, with microgranulation, glabrous, with very small and sparse punctures (pronotum) and transverse wrinkles (elytra). Body relatively large, elongate, from reddish brown to blackish brown, BL 11.41 mm, widest near two thirds of elytral length, EW 3.75 mm, BL/EW 3.04.

Head (Fig. 35) with distinct microgranulation and relatively dense and shallow punctuation, punctures small. Posterior part blackish brown, with very sparse, short setae between eyes, and a few dark setae behind eyes. Anterior part dark brown and clypeus reddish brown with denser, ochre yellow setation. Head widest across eyes, HW 1.91 mm, HW/PW 0.81, HL (visible part) 1.48 mm. Eyes large, transverse, distinctly excised. Space between eyes narrow, narrower than diameter of one eye, distinctly wider than length of antennomere 1, OI equal to 28.22.

Antenna (Fig. 36) filiform and relatively long, AL 7.03 mm, AL/BL 0.62, reddish brown, with relatively dense, ochre yellow setation, microgranulation and punctuation. Antennomeres 1-4 slightly shiny, reddish brown, slightly paler than matter brown antennomeres 5-11. Antennomere 2 shortest, antennomeres 9-11 distinctly shorter than each of antennomeres 3-8.

RLA (1-11): 0.43 : 0.19 : 1.00 : 1.04 : 0.89 : 0.87 : 0.82 : 0.80 : 0.77 : 0.72 : 0.77.

RL/WA (1-11): 1.76 : 0.96 : 4.89 : 5.63 : 4.73 : 4.50 : 4.17 : 3.90 : 3.99 : 3.78 : 3.28.

Maxillary palpus pale brown, with microgranulation, shallow punctuation, punctures small-sized, and ochre yellow setation and a few long setae at apex of palpomeres 2 and 3. Palpomeres distinctly widest at apex, penultimate palpomere shorter than palpomere 2 and ultimate palpomere. Ultimate palpomere in form of long triangle, axe-shaped.

Pronotum (Fig. 35) blackish brown, glabrous, with fine microgranulation and very small, sparse punctures, matte. Longest at middle, PL 1.89 mm, widest near two thirds of lateral margins from

base to apex, PW at base 2.23 mm. PI equal to 80.20. Borders complete and distinct. Posterior margin bisinuate. Posterior angles roundly obtuse, anterior angles indistinct, rounded, lateral margins regularly widened in basal half, broadly arcuate in apical half. Anterior margin slightly arcuate at middle.

Elytra glabrous, unicolored blackish brown, EL 8.04 mm; EW 3.75 mm, widest near two thirds elytral length from base to apex. EL/EW 2.14. Elytral striae with distinct rows of small-sized punctures. Surface of elytral intervals with transverse wrinkles and microgranulation, matte. Elytral intervals slightly vaulted.

Elytral epipleura well developed, glabrous, dark reddish brown, slightly paler than elytron itself, with one row of large punctures in basal half, narrowing to metasternum, then parallel-sided.

Scutellum blackish brown, slightly pentagonal, with fine microgranulation, matte.

Legs long and narrow, with microgranulation, ochre yellow setation and punctuation, punctures small. Setation of femora and posterior half of tibia sparser than setation of tarsi and anterior half of tibia. Tibia and femora dark brown, tarsi reddish brown. Protarsomeres and mesotarsomeres 3 and 4 and metatarsomere 3 of each tarsus distinctly widened, with membranous lobes. RLT: 1.00 : 0.65 : 0.61 : 0.84 : 1.47 (protarsus), 1.00 : 0.50 : 0.45 : 0.46 : 0.79 (mesotarsus), and 1.00 : 0.46 : 0.36 : 0.58 (metatarsus).

Both anterior tarsal claws with 7 visible teeth.

Ventral side of body dark brown, with sparse and short pale setae and sparse, small punctures. Abdomen distinctly paler, reddish brown, with short and sparse, pale setae, sparse punctuation, punctures small.

Male. Unknown.

Differential diagnosis. (For further details see the key above). *Upinella ruzickai* sp. nov. differs from all known *Upinella* species by elytral intervals with transverse wrinkles; while other *Upinella* species have elytral intervals only with / or without small punctures.

Etymology. The new species is dedicated to one of the collectors – Jan Růžička (Praha, Czech Republic), my friend and excellent specialist in beetle families Agyrtidae, Leiodidae and Silphidae.

Distribution. China (Yunnan).

***Upinella taiwana* (Masumoto, Akita & Lee, 2015) comb. nov.**

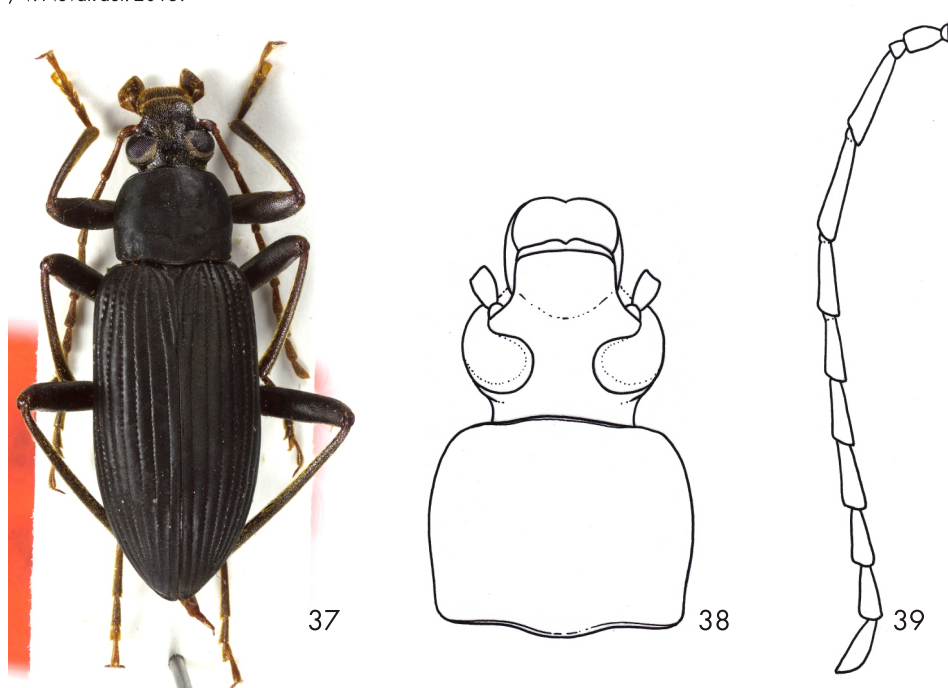
Allecula (*Upinella*) *taiwana* (Masumoto, Akita & Lee, 2015): 306.

Type locality. China, Taiwan, Pingtung, Kenting National Park, Lanrenxi.

Remark. Figures of habitus and male genitalia (see Masumoto, Akita & Lee, 2015: 309: figs. 3, 9 and 10).

***Upinella turnai* sp. nov.**

(Figs. 37-39)

Type locality. China, west Henan, Funiu Shan, 33°42'N, 112°15'E, Shirensan, 1400-1800m.**Type material.** Holotype: (♀): China, W Henan, 9.V.2006 / Funiu Shan, 33°42'N 112°15'E / SHIRENSHAN, 1400-1800m / Jaroslav Turna leg., (VNPC). The holotype is provided with printed red label: *Upinella turnai* sp. nov. / HOLOTYPE / V. Novák det. 2015.Figs. 37-39: *Upinella turnai* sp. nov. (female holotype): 37-habitus; 38-head and pronotum; 39-antenna.

Description of holotype. Habitus of female holotype as in Fig. 37. Dorsal surface (pronotum and elytra) glabrous, impunctate, with fine microgranulation. Body relatively large, elongate, from reddish brown to black, BL 14.44 mm, widest near two thirds elytral length, EW 4.74 mm, BL/EW 3.05.

Head (Fig. 38) with dense punctation, fine microrugosities and longer ochre yellow setation, slightly shiny. Posterior part black, with dark setation behind eyes. Anterior part dark brown, with denser setation. Clypeus reddish brown with denser and longer setation. Head widest across eyes, HW 2.50 mm, HW/PW approximately 0.78. HL (visible part) 2.13 mm. Mandibles brown with blackish brown margins. Eyes large, transverse, distinctly excised. Space between eyes narrow, distinctly narrower than diameter of one eye, distinctly wider than length of antennomere 1; OI equal to 29.20.

Antenna (Fig. 39) narrow and relatively long, AL 8.24 mm, AL/BL 0.57 body length, reddish brown with relatively dense, ochre yellow setation, microgranulation and punctation. Antennomeres 1-7 slightly shiny, antennomeres 8-11 more matte, antennomeres 5-11 distinctly shorter and slightly wider than antennomeres 3 or 4. Antennomere 2 shortest, antennomere 3 longest.

RLA (1-11): 0.38 : 0.20 : 1.00 : 0.96 : 0.70 : 0.69 : 0.68 : 0.62 : 0.65 : 0.53 : 0.56.

RL/WA (1-11): 1.56 : 1.12 : 4.70 : 5.63 : 3.96 : 3.46 : 3.31 : 3.04 : 3.07 : 2.50 : 2.47.

Maxillary palpus reddish brown, with microgranulation, and relatively dense and long, ochre yellow setation. Palpomeres distinctly widest at apex, penultimate palpomere shorter than palpomere 2 and ultimate palpomere. Ultimate palpomere dark brown, in form of long triangle, axe-shaped.

Pronotum (Fig. 38) blackish brown, with very fine microgranulation and very small and very sparse punctures each with very short setae, matte, at base distinctly narrower than elytra at base. Longest at middle, widest near middle of lateral margins, PL 2.58 mm and widest at base, PW at base 3.20 mm. PI equal to 80.63. Borders complete and distinct. Posterior margin bisinuate, base near middle with two oblique impressions from both sides. Posterior angles roundly obtuse, anterior angles rounded, lateral margins only slightly arcuate in apical half. Anterior margin slightly arcuate at middle.

Elytra glabrous, unicolored black, EL 9.73 mm; EW 4.74 mm, widest near two thirds elytral length. EL/EW ratio equal to 2.05. Elytral striae with distinct rows of small-sized punctures, separated by diameter approximately as wide as punctures in striae. Surface of elytral intervals with very fine microgranulation, without punctures, matte. Elytral intervals slightly vaulted.

Elytral epipleura well developed, black, regularly narrowing to ventrite 1 in basal half, with one row of punctures up to end of ventrite 3, in apical half parallel-sided.

Scutellum black, as colour as elytron itself, pentagonal, with fine microgranulation and a few short, pale setae.

Legs long and narrow, with small punctures and microgranulation, with ochre yellow setation, setation of black tibia and reddish brown tarsi denser than those in black femora. Protarsomeres and mesotarsomeres 3 and 4 and metatarsomere 3 of each tarsus distinctly widened with membranous lobes. RLT: 1.00 : 0.57 : 0.56 : 0.78 : 1.34 (protarsus), 1.00 : 0.46 : 0.34 : 0.42 : 0.68 (mesotarsus), and 1.00 : 0.48 : 0.30 : 0.60 (metatarsus).

Both anterior tarsal claws with 7 and 8 visible teeth.

Ventral side of body black, prosternum with a few small punctures with very short, pale setae. Meso- and metasternum with larger punctures with long ochre yellow setae. Abdomen dark brown with denser ochre yellow setation and denser punctuation than those in metasternum, punctures distinctly larger.

Male. Unknown.

Differential diagnosis. (For further details see the key above). *Upinella turnai* sp. nov. differs from similar species *Upinella fuliginosa* (Mäklin, 1875) comb. nov., *Upinella frankenbergeri* (Mařan, 1940) comb. nov., *Upinella jiangxiica* sp. nov. and *Upinella ruzickai* sp. nov. mainly by its elytral intervals glabrous and without distinct punctures or with transverse wrinkles; while *U. fuliginosa*, *U. frankenbergeri*, *U. jiangxiica* and *U. ruzickai* have elytral intervals with setation and very small punctures or distinct wrinkles. *U. turnai* is clearly different from a similar species *Upinella cryptomeriae* (Lewis, 1895) comb. nov. mainly by its male protarsomeres 1 and 2 narrow and male protibia not excised at inner side; while *U. cryptomeriae* has male protarsomeres 1-4 strongly widened and male protibia distinctly excised at inner side. *U. turnai* clearly differs from similar species *Upinella aterrima* (Rosenhauer, 1847) comb. nov. mainly by narrow space between eyes (OI near 33) and antennomeres 9-11 longer and narrower; while

U. aterrima has space between eyes wider (OI near 42) and antennomeres 9-11 are very short and wide. *U. turnai* is clearly different from a similar species *Upinella kubani* sp. nov. mainly by its base of pronotum in middle distinctly arcuate and metatarsomere 1 approximately as long as metatarsomeres 2-4 together; while *U. kubani* has base of pronotum in middle straight and metatarsomere 1 shorter than length of metatarsomeres 2-4 together.

Etymology. The new species is dedicated to the collector – Jaroslav Turna (Čechy pod Kosířem, Czech Republic), my friend and specialist in beetle family Tenebrionidae.

Distribution. China (Henan).

Allecula ussuriensis Borchmann, 1937

(Figs. 40-44)

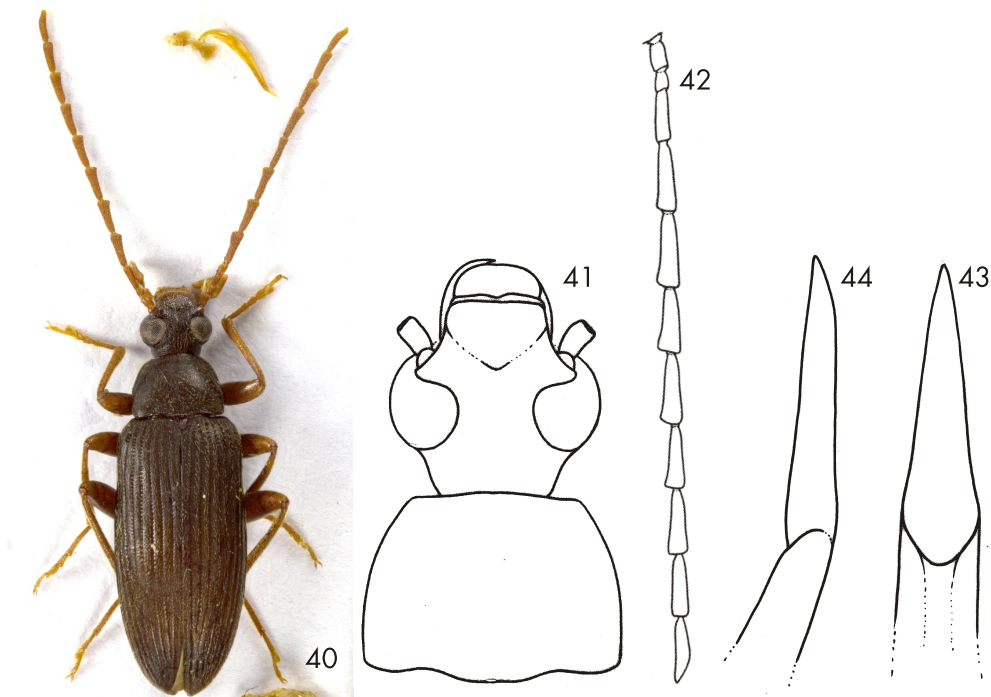
Allecula ussuriensis Borchmann, 1937: 210.

Allecula mandshurica Mařan, 1940: 169.

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* / mandshurica ♂ or ♀ / m. n. [hb] / rl with bf: Typus [pb], (NMPC).

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



Figs. 40-44: *Allecula ussuriensis* Borchmann, 1937 (male): 40- habitus; 41- head and pronotum; 42- antenna; 43- aedeagus, dorsal view; 44- aedeagus, lateral view.

Remarks. Habitus of male holotype as in Fig. 40. Dorsal surface with dense punctuation, microgranulation and shorter, ochre yellow setation, matte. Body smaller, elongate, narrow, parallel, widest near elytral half, from reddish brown to blackish brown. Head (Fig. 41) widest across eyes, shiny, blackish brown posterior part, dark reddish brown anterior part and pale brown clypeus with dense punctuation, punctures small. Space between eyes narrow, approximately as wide as diameter of one eye. Antenna narrow (Fig. 42), antennomeres 4-10 slightly serrate, antennomere 4 longest, antennomeres 4-11 distinctly longer than antennomere 3. Pronotum widest at base, lateral margins of pronotum parallel in posterior half (Fig. 41), dorsal surface with punctuation, punctures very small and shallow. Elytral striae with rows of small punctures, elytral intervals with very small punctures. Protibia straight, protarsomeres 3 and 4, penultimate meso- and metatarsomere widened and lobed. Both anterior tarsal claws with 6 visible teeth. Aedeagus as in Figs. 43 and 44, basal piece 5.06 times longer than apical piece. Species distinctly belongs to the genus *Allecula* (Fabricius).

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. 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).

Distribution. China (Northeast Territory), North Korea, Russia (East Siberia, Far East), South Korea.

CHECK-LIST OF THE SPECIES OF THE GENUS *UPINELLA* MULSANT, 1856

genus *Upinella* Mulsant, 1856: 17 type species *Allecula aterrima* Rosenhauer, 1847

| | |
|---|---|
| <i>Upinella aterrima</i> (Rosenhauer, 1847) | Armenia, Austria, Bosnia Herzegovina, Bulgaria, Croatia, Greece, Hungary, Italy, Romania, Russia, Southern European Territory of Russia, Ukraine, Serbia and Montenegro |
| <i>Upinella cryptomeriae</i> (Lewis, 1895) | Japan |
| <i>Upinella frankenbergeri</i> (Mařan, 1940) | China (Fujian, Taiwan) |
| <i>Upinella fuliginosa</i> (Mäklin, 1875) | China (Gansu, Taiwan), Japan, South Korea |
| = <i>obscura</i> Harold, 1878 | |
| = <i>velutina</i> Marseul, 1876 | |
| <i>Upinella jiangxiica</i> sp. nov. | China (Jiangxi) |
| <i>Upinella kubani</i> sp. nov. | China (Yunnan) |
| <i>Upinella lanrenxiensis</i> (Masumoto, Akita & Lee, 2015) | China (Taiwan) |
| <i>Upinella ruzickai</i> sp. nov. | China (Yunnan) |
| <i>Upinella taiwana</i> (Masumoto, Akita & Lee, 2015) | China (Taiwan) |
| <i>Upinella turnai</i> sp. nov. | China (Henan) |

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