

New Alleculinae from China (Coleoptera: Tenebrionidae)

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Abstract

Hymenalia murzini sp. n., *Hymenalia wrasei* sp. n. and *Pseudohymenalia* gen. n. with the species *Pseudohymenalia turnai* sp. n. and *Pseudohymenalia yunnanica* sp. n. from China (Yunnan and Hubei) are described, illustrated and compared with similar species. *Pseudohymenalia* gen. n. belongs to the subtribe *Gonoderina* Seidlitz, 1896 with four genera in China, *Isomira* Mulsant, 1856, *Microcistela* Pic, 1904, *Paracistela*, Borchmann, 1942, *Pseudocistela* Crotch, 1873 from which *Pseudohymenalia* gen. n. differs by the anterior and middle tarsomere 3 and posterior tarsomere 2 lobed; while in *Isomira*, *Microcistela*, *Paracistela* and *Pseudocistela* no tarsomere is lobed. Species of this new genus differ from the species of the subtribe *Alleculina* Laporte, 1840 by lobed anterior and middle tarsomeres 3 and posterior tarsomere 2, while species of subtribe *Alleculina* Laporte, 1840 (genus *Hymenalia* Mulsant, 1856) have lobed penultimate tarsomeres of each tarsi.

Zusammenfassung

Hymenalia murzini sp. n., *Hymenalia wrasei* sp. n. und *Pseudohymenalia* gen. n. mit den Arten *Pseudohymenalia turnai* sp. n. und *Pseudohymenalia yunnanica* sp. n. aus China (Yunnan und Hubei) werden beschrieben, abgebildet und mit nahe verwandten Arten verglichen. *Pseudohymenalia* gen. n. gehört zur Subtribus *Gonoderina* Seidlitz, 1896. In China kommen vier Gattungen vor: *Isomira* Mulsant, 1856, *Microcistela* Pic, 1904, *Paracistela*, Borchmann, 1942, *Pseudocistela* Crotch, 1873 von denen sich *Pseudohymenalia* gen. n. durch die gelappten vorderen und mittleren 3. Tarsenglieder und das hintere 2. Tarsenglied unterscheidet, die bei *Isomira*, *Microcistela*, *Paracistela* und *Pseudocistela* immer ungelappt sind. Die Arten der neuen Gattung unterscheiden sich von Arten der Subtribus *Alleculina* Laporte, 1840 ebenfalls durch die genannten gelappten Tarsenglieder, da die Arten des Subtribus *Alleculina* Laporte, 1840 (Gattung *Hymenalia* Mulsant, 1856) nur Ausklappungen an den vorletzten Tarsengliedern besitzen.

Key words: Coleoptera, Tenebrionidae, Alleculinae, *Hymenalia*, *Pseudohymenalia*, taxonomy, new genus, new species, Palearctic region

Introduction

MULSANT (1856) described the genus *Hymenalia* in 1856. This palearctic genus belongs to the subtribe *Alleculina* Laporte, 1840. BORCHMANN (1910) knew 11 species, MADER (1928) 16 species, and NOVÁK & PETERSSON (2008) listed 33 species of the genus *Hymenalia*. NOVÁK (2007) has recently described five new species of this genus. DUBROVINA (1975) has described a new subgenus *Nikomenalia* and divided the remaining species of the genus into 3 groups. Species included into the first and second group are distributed in Europe, northern Africa and Asia and differ from the species of subgenus *Nikomenalia* and species of the third group mainly by a more or less semicircular pronotum with sides rounded or regularly narrowing in the posterior half and by the upper part of body with distinct setation. Species of the third group and subgenus *Nikomenalia* (with glabrous and shiny upper part of body and with sides of pronotum at posterior half parallel) are distributed in the eastern or south-eastern part of the Palearctic region. DUBROVINA (1975) included in the second group the species *Hymenalia graeca* Seidlitz, 1896, *H. gravida* Küster, 1850, *H. morio* L. Redtenbacher, 1849, *H. rufipes* Fabricius, 1792 and *H. zoufali* Mañan, 1935. *Hymenalia castaneipennis* Fairmaire, 1884 and *H. smirnovi* Dubrovina, 1978 were added later. Two new species, *Hymenalia murzini* sp. n. and *Hymenalia wrasei* sp. n., both from China (Yunnan), are the first species from eastern part of Palearctic region belonging to the second group sensu DUBROVINA (1975). Both new species are described, illustrated and compared with the typical species of this group - *Hymenalia rufipes* Fabricius.

Species of the subtribe *Alleculina* Laporte, 1840 differ from the species of the subtribe *Gonoderina* Seidlitz, 1896 (including the species of the genus *Isomira* and

its subgenus *Asiomira* Dubrovina, 1973 and the species of *Pseudohymenalia* gen. nov.) by having the penultimate tarsomeres of each tarsus distinctly, more or less broadly lobed. *Pseudohymenalia* gen. n. with *Pseudohymenalia yunnanica* sp. n. as the type species and *P. turnai* sp. n. clearly belong to the subtribe *Gonoderina* Seidlitz, 1896. Both new species are similar to the *Asiomira* species (only one *Asiomira* species was known from China - *Isomira* (*Asiomira*) *stoetzneri* Muche, 1981) and *Hymenalia* species of the second group sensu DUBROVINA (1975) in having the upper part of body distinctly setose, the pronotum semicircular or near semicircular, the space between eyes of males narrow, and males with very short antennomeres 2 and 3. They differ from *Hymenalia* Mulsant, 1856 and *Isomira* (*Asiomira*) by having lobed tarsomeres 3 (anterior and middle) and 2 (posterior). *Isomira* s. str. species do not have lobed tarsomeres. Both new species are described and illustrated.

Material and methods

Material from China (Yunnan and Hubei) was collected from 2003 to 2007 by S. Murzin, S. Murzin & I. Shokhin, J. Turna, A. Pütz and D. W. Wrase.

The types are provided with a printed red label: '*Hymenalia murzini* sp. n. or *Hymenalia wrasei* sp. n. or *Pseudohymenalia turnai* sp. n. or *Pseudohymenalia yunnanica* sp. n. HOLOTYPUS [resp. PARATYPUS] V. Novák det. 2008'.

Two important morphometric characteristics used for the descriptions of species of the subfamily Alleculinae are employed: the 'ocular index' dorsally (Campbell & Marshall 1964), 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 the 'pronotal index' (Campbell 1965), the ratio of the length of the pronotum along the midline to the width at the posterior angles, this ratio is multiplied by 100 for convenience.

The following codens are used in the paper:

APEG	Andreas Pütz, Eisenhüttenstadt, Germany;
NME	Naturkundesmuseum Erfurt, Germany;
SMTD	Staatliches Museum für Tierkunde, Dresden, Germany;
VNPC	Vladimír Novák private collection, Praha, Czech Republic.

The new species has been compared with the following type material deposited in SMTD:

Isomira (*Asiomira*) *stoetzneri* Muche, 1981: Holotype (♂): white label 'Szetschwan' / 'Kwanhsien' / 'Exp. Stötzner' [printed in black] // white label '1989' [printed in black] '27' [black handwritten] // white label 'Staatl Museum für' [printed in black] / 'Tierkunde Dresden' [printed in black] // red label 'Holotypus' [black handwritten] / 'Isomira' [black handwritten] / '(Asiomira)' [black handwritten] / 'stötzneri m' [black handwritten] / 'det.Muche 19' [printed in black] '81' [black handwritten], (SMTD); Paratypes (1 ♂, 1 ♀) same labels but red label with 'Paratypus' [black handwritten], (SMTD). Moreover, a double slash (//) separates data on different labels and a slash (/) data in different lines.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continual magnification.

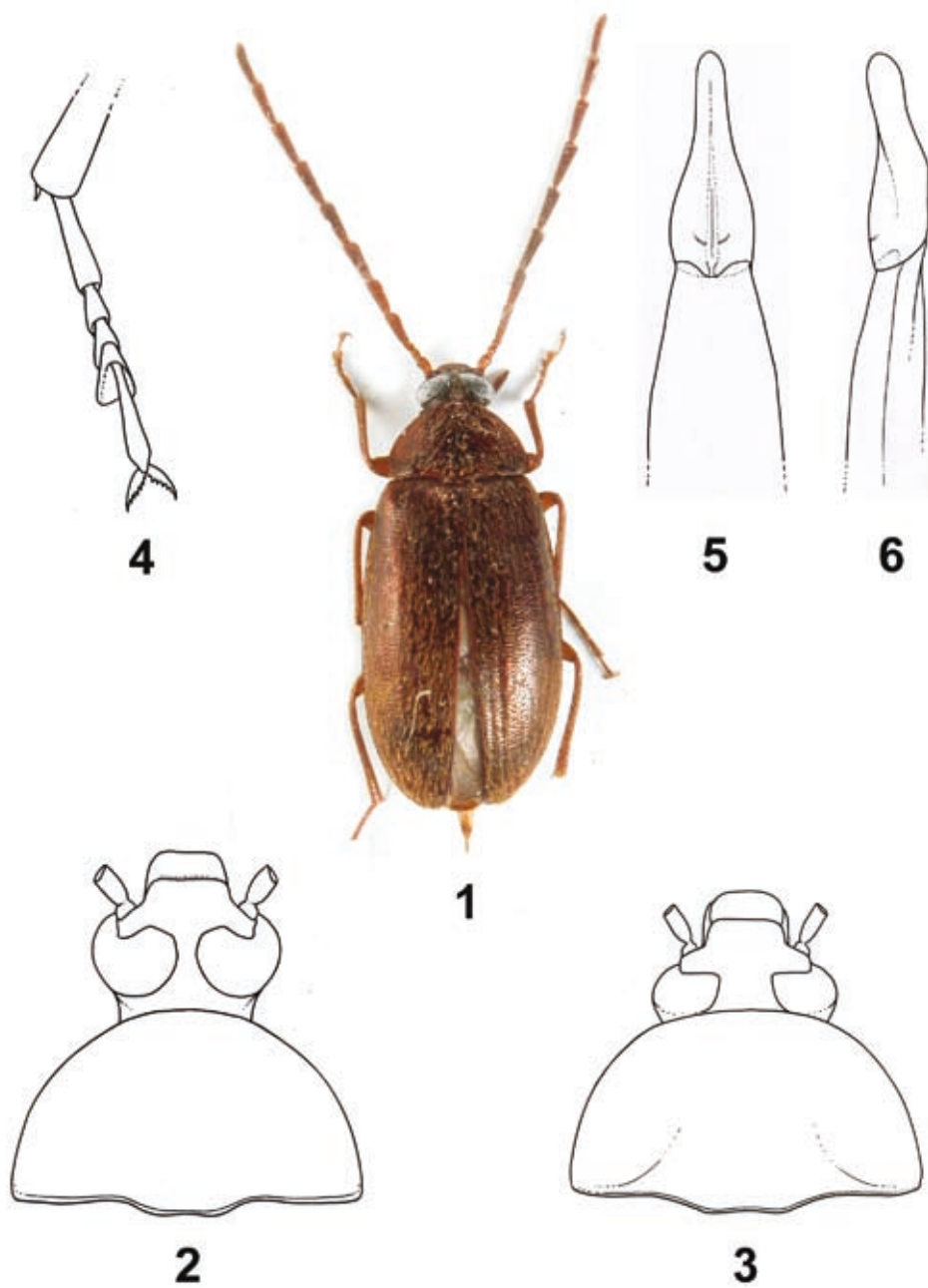
Descriptions

Hymenalia murzini sp. n. (Figs 1–6)

Type material. **Holotype** (♂) labelled: CHINA, W Yunnan prov., 54 km E Tengchong, 2150 m, 04–09. xi.2004, S. Murzin leg., (VNPC); Paratypes: (5 ♂♂, 1 ♀): same data as holotype, (VNPC); (4 ♂♂, 1 ♀): CHINA, W Yunnan prov., mts. 60 km E Tengchong, 2300 m, 14–19.v.2006, S. Murzin & I. Shokhin leg., (VNPC); (1 ♂): CHINA: Yunnan, (CH07-25), Nujiang Lisu Aut. Pref. Salween side valley 5km S Fugong, road SS 228 km 223, under stones, moist embankment, 8. VI. 2007, leg. A. Pütz, (APEG).

Description of holotype. Body elongately oval, brown, with dense light setation, habitus as in Fig. 1. Length 7.18 mm, 2.75 times longer than wide.

Head (Fig. 2). Unicolorous brown, posterior part with shorter light setation, anterior part with longer light setation. Eyes large, dark, transverse, excised, vertex between eyes very narrow, distinctly narrower than length of antennomere 2. Head widest across eyes 1.18 mm; width (across eyes) approximately 0.58 of the pronotal base width. Length of head (visible part) 1.21 mm. Ocular index equal to 7.79. Posterior half without clearly conspicuous punctures, surface with microgranulation, rugose, slightly shiny. Anterior half with



Figs 1-6: *Hymenalia murzini* sp. n.: 1 – Habitus of male (Holotype), 2 – Head and pronotum of male (Holotype); 3 – Head and pronotum of female; 4 – Anterior tarsi of male; 5 – Aedeagus, dorsal view; 6 – Aedeagus, lateral view.

sparse punctures bearing relatively longer light setae; with microgranulation, rugose, slightly shiny. Clypeus not excised, longest in the middle.

Antenna. Longer (reaching 0.74 of body length) 5.34 mm, with shorter and relatively dense light setation, rugose, matt. Antennomeres 1–3 slightly shiny, antennomeres 4–11 matter. Antennomeres 5–11 slightly darker. Antennomeres 4–11 with small punctures and microgranulation. Antennomeres 2 and 3 distinctly shorter; antennomeres 4–10 distinctly broader at apex, slightly serrate. Ratios of relative lengths of antennomeres 1–11 equal to 2.00 : 1.45 : 1.00 : 4.45 : 4.81 : 5.36 : 5.72 : 5.90 : 5.63 : 5.45 : 5.63. Length/maximum width ratios of antennomeres 1–11 equal to 1.69 : 1.45 : 1.00 : 2.88 : 2.95 : 3.47 : 3.70 : 3.42 : 3.88 : 3.53 : 3.91.

Maxillary palpus. Brown, slightly shiny with light setation, apex of penultimate and second palpomeres with longer light setae. Ultimate palpomere with microgranulation, rugose, shiny, broadest at base, knife-shaped. Second and penultimate palpomeres broader at apex, penultimate palpomere shorter than second or ultimate palpomere. Ratios of relative lengths of palpomeres 2–4 equal to 1.67 : 1.00 : 2.74. Length/maximum width of palpomeres 2–4 equal to 2.92 : 1.56 : 2.88.

Pronotum (Fig. 2). Unicolorous brown, almost semi-circular, slightly shiny with light setation; 1.74 times as wide as head including eyes, longest in the middle 1.10 mm and widest near base 2.05 mm. Pronotal index equal to 53.98. Border complete; posterior margin bisinuate, against scutellum straight. Posterior angles rounded, slightly obtuse-angled, lateral margins rounded. Anterior angles not conspicuous, anterior margin rounded. Surface shallowly punctate, punctures large, interspaces very narrow, shiny. Punctures inside with slight granulation, pronotum slightly shiny.

Ventral side of body brown, concolorous with dorsal side, with light setation. Abdomen five-segmented, slightly shiny, with microgranulation. Abdominal segments 3 and 4 slightly excised near sides at posterior border.

Elytron. Unicolorous brown, with light setation, slightly shiny, 4.87 mm long and 2.61 mm wide, slightly broader than pronotum, widest approximately at two thirds from base. Length/maximum width ratio equal to 1.87. Surface punctate, with microgranulation, elytral striae indistinct, punctures large, separated by less than one diameter. Elytral epipleura well-developed, brown with light setation, evenly narrowing in posterior half,

in anterior half before abdominal sternite 5 parallel, then narrowing to rounded apex.

Scutellum pentagonal, brown slightly lighter than elytra, with darker margins, slightly shiny with light setation.

Legs. Unicolorous pale brown, with pale brown setation, slightly shiny. Femora thicker than tibia. Tibia very narrow, slightly dilated at apex. Tarsomeres of all tarsi narrow. Anterior tarsi as in Fig. 4. Penultimate tarsomere of each tarsus slightly broader and with membranous lobes. Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to 1.00 : 0.39 : 0.38 : 0.60 : 1.47 (protarsus), 1.00 : 0.52 : 0.28 : 0.30 : 0.75 (mesotarsus), and 1.00 : 0.33 : 0.24 : 0.53 (metatarsus). Both anterior tarsal claws with 7 visible teeth.

Aedeagus (Figs 5 and 6). Pale yellowish brown, slightly shiny. Basal piece 4.83 times as long as apical piece, relatively narrow, slightly narrowing dorsally in apical half. Base of apical piece more than twice broader than rounded apex of apical piece dorsally.

Female. Body more oval, antennae shorter, reaching only 0.63 of the body length. Antennomere 2 shortest, antennomere 3 distinctly longer than antennomere 2. Space between eyes distinctly broader, ocular index approximately 33.65. Head and pronotum as in Fig. 3. Both anterior tarsal claws with 7 visible teeth.

Ratios of relative lengths of antennomeres 1–11 equal to 0.92 : 0.83 : 1.00 : 1.63 : 2.13 : 1.92 : 2.21 : 2.13 : 2.04 : 2.04 : 2.13.

Length/maximum width ratios of antennomeres 1–11 equal to 1.69 : 1.82 : 2.00 : 2.60 : 3.40 : 3.06 : 2.79 : 2.83 : 3.27 : 3.77 : 3.92.

Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to 1.00 : 0.47 : 0.40 : 0.53 : 1.31 (protarsus), 1.00 : 0.44 : 0.29 : 0.37 : 0.85 (mesotarsus), and 1.00 : 0.27 : 0.30 : 0.56 (metatarsus).

Variability. The type specimens vary somewhat in size; each character is given as its mean value, with full range in parentheses.

Males ($n = 11$). Length 7.13 mm (6.70–7.33 mm); head length 1.06 mm (0.93–1.21 mm); head width 1.17 mm (1.10–1.22 mm); ocular index 9.30 (5.78–11.81). Pronotal length (along midline) 1.15 mm (1.08–1.20 mm); pronotal width at base 2.06 mm (1.94–2.17 mm). Pronotal index 55.72 (53.98–57.44). Elytral length 4.92 mm (4.65–5.14 mm); elytral width 2.63 mm (2.41–2.82 mm).

Females ($n = 2$). Length 7.70 mm (7.63–7.77 mm); head length 0.91 mm (0.86–0.96 mm); head width 1.22 mm

(1.20–1.23 mm). Ocular index 33.65 (31.80–35.50). Pronotal length (along midline) 1.37 mm (1.37–1.37 mm); pronotal width at base 2.37 mm (2.36–2.37 mm). Pronotal index 57.79 (57.61–57.96). Elytral length 5.42 mm (5.40–5.44 mm); elytral width 2.96 mm (2.91–3.01 mm).

Differential diagnosis. *Hymenalia murzini* sp. nov. clearly differs from *Pseudohymenalia turnai* sp. n. and *P. yunnanica* sp. n. and similar species of subgenus *Asiomira* Dubrovina by having penultimate tarsomere of each tarsi lobed (new species of the new genus *Pseudohymenalia* with lobed anterior and middle tarsomere 3 and posterior tarsomere 2; species of subgenus *Asiomira* Dubrovina without lobed tarsomeres). From *Hymenalia wrasei* sp. n. and *H. rufipes* Fabricius *H. murzini* sp. n. clearly differs by the very narrow space between eyes – narrower than length of antennomere 2, while *H. rufipes* and *H. wrasei* sp. n. have the space between eyes distinctly broader than the length of antennomere 2.

Name derivation. Dedicated to one of the collectors, Sergei Murzin.

Distribution. China: Yunnan.

Hymenalia wrasei sp. n. (Figs 7–12)

Type material. Holotype (♂) labelled: CHINA (N Yunnan) Dali Bai Nat. Aut. Pref., 1 km W Dali old town creek valley at foothill of Diancang Shan, 2170 m, 25°41.9'N/100°08.4'E (ruderal place), 28.VIII/1. IX./3.IX.2003, Wrase (18), (NME); Paratypes: (1 ♂ 8 ♀ ♀): same data as holotype, (NME, VNPC).

Description of holotype. Body elongately oval, pale brown with dense light setation, shiny, habitus as in Fig. 7. Length 6.19 mm, 2.49 times longer than wide.

Head (Fig. 8). Unicolorous pale brown, mandibles slightly darker, with dense, longer light setation, posterior part with dense and relatively deep and coarse punctuation, punctures of posterior part larger, punctuation of anterior part more shallow, punctures distinctly smaller. Eyes large, dark, transverse, deeply excised, vertex between eyes narrow, but distinctly wider than length of antennomere 2. Head widest across eyes 1.09 mm; width (across eyes) approximately 0.51 of the width of the pronotal base. Length of head (visible part) 0.81 mm. Ocular index equal to 19.75. Clypeus not excised, longest in the middle.

Antenna. Unicolorous pale brown, longer (reaching 0.63 of body length) 3.91 mm, with dense light setation and small punctures, rugose, matt. Antennomeres 1–3 slightly shiny, antennomeres 4–11 more matt. Antennomeres 2 and 3 distinctly shorter, antennomere 2 shortest; antennomeres 4–10 distinctly broader at apex, slightly serrate. Ratios of relative lengths of antennomeres 1–11 equal to 1.13 : 0.81 : 1.00 : 2.44 : 2.63 : 2.63 : 2.50 : 2.67 : 2.63 : 2.67 : 2.75. Legth/maximum width ratios of antennomeres 1–11 equal to 1.50 : 1.18 : 1.45 : 3.54 : 3.00 : 3.50 : 2.50 : 2.87 : 3.00 : 3.07 : 3.67.

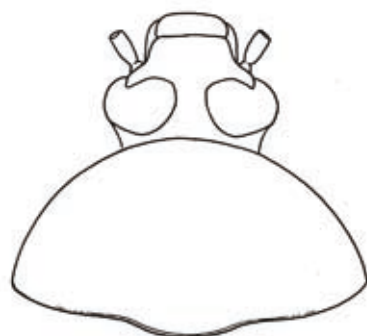
Maxillary palpus. Unicolorous pale brown, slightly shiny with light setation, setation of ultimate palpomere denser. Apex of penultimate and second palpomeres with longer light setae. Ultimate palpomere with microgranulation, rugose, shiny, broadest at base, knife-shaped. Second and penultimate palpomeres broadest at apex, penultimate palpomere shorter than second or ultimate palpomeres. Ratios of relative lengths of palpomeres 2–4 equal to 2.06 : 1.00 : 2.97. Length/maximum width of palpomeres 2–4 equal to 2.52 : 1.10 : 2.18.

Pronotum (Fig. 8). Unicolorous pale brown, more transverse than semicircular, slightly shiny with longer and denser light setation; 1.97 times as wide as head including eyes, longest in the middle 1.10 mm and widest near base 2.15 mm. Pronotal index equal to 51.22. Border complete, against scutellum indistinct; posterior margin slightly bisinuate, against scutellum distinctly rounded. Posterior angles rounded, slightly obtuse-angled, lateral margins rounded. Anterior angles inconspicuous, anterior margin rounded. Surface punctate, punctures smaller, interspaces broader than diameter of punctures, shiny.

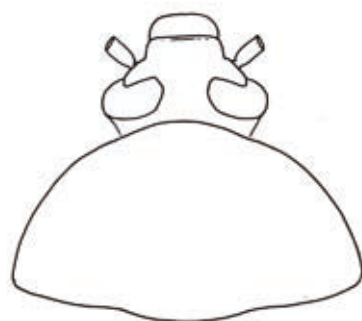
Ventral side of body unicolorous brown, concolorous with dorsal side. Abdomen with relatively sparse short light setation, slightly shiny, with microgranulation.

Elytron. Unicolorous pale brown with short light setation, 4.28 mm long and 2.49 mm wide, widest at base. Length/maximum width ratio equal to 1.72. Surface punctate, punctures in elytral striae conspicuous, separated by less than one diameter. Elytral intervals with relatively dense, smaller punctures and microgranulation, slightly shiny. Elytral epipleura well-developed, pale brown with short light setation, evenly narrowing in posterior half, in apical half from metasternum to abdominal sternite 5 parallel, then narrowing to rounded apex.

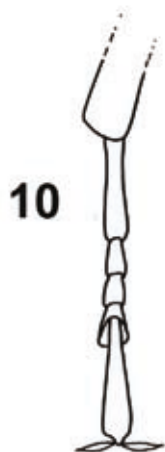
Scutellum pale brown, concolorous with elytra, margins darker, triangular with light setation.



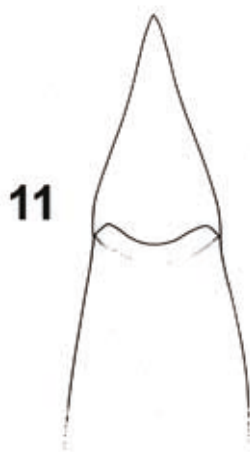
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9



10



11



12

Figs 7-12: *Hymenalia wrasei* sp. n.: 7 - Habitus of male (Holotype), 8 - Head and pronotum of male (Holotype); 9 - Head and pronotum of female; 10 - Anterior tarsi of male; 11 - Aedeagus, dorsal view; 12 - Aedeagus, lateral view.

Legs. Unicolorous pale brown, with light setation. Femora thicker than tibia. Tibia very narrow, slightly dilated at apex. Outer border of anterior tibia with distinct row of smaller teeth. Tarsomeres of all tarsi narrow. Anterior tarsi as in Fig. 10. Penultimate tarsomere of each tarsus with membranous lobes. Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to 1.00 : 0.82 : 0.47 : 0.61 : 2.10 (protarsus), 1.00 : 0.50 : 0.41 : 0.37 : 0.82 (mesotarsus), and 1.00 : 0.30 : 0.24 : 0.54 (metatarsus). Both anterior tarsal claws with 7 visible teeth. Aedeagus (Figs 11 and 12). Small, broad, pale yellowish brown, distinctly shiny. Basal piece 2.18 times as long as apical piece, broadest near half of basal piece, narrowing very slightly to apex dorsally. Apical piece longly triangular, base relatively broad, apex dorsally v-shaped.

Female. Antennae slightly shorter, reaching only 0.54 of the body length. Space between eyes distinctly broader, ocular index approximately 30.26. Antennomere 3 longer. Head and pronotum as in Fig. 9. Both anterior tarsal claws with 6 visible teeth.

Ratios of relative lengths of antennomeres 1–11 equal to 1.00 : 0.57 : 1.00 : 1.61 : 1.65 : 1.70 : 1.70 : 1.65 : 1.70 : 1.61 : 1.87.

Length/maximum width ratios of antennomeres 1–11 equal to 1.77 : 1.30 : 2.55 : 3.36 : 4.22 : 3.90 : 3.90 : 3.80 : 3.90 : 3.70 : 3.91.

Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to 1.00 : 0.48 : 0.55 : 0.76 : 1.55 (protarsus), 1.00 : 0.38 : 0.26 : 0.29 : 0.89 (mesotarsus), and 1.00 : 0.30 : 0.24 : 0.51 (metatarsus).

Variability. The type specimens vary somewhat in size; the mean is given for each character, with full range in parentheses.

Males (n = 2). Length 6.38 mm (6.19–6.57 mm); head length 0.85 mm (0.81–0.89 mm); head width 1.12 mm (1.09–1.14 mm); ocular index 18.40 (17.05–19.75). Pronotal length (along midline) 1.13 mm (1.10–1.15 mm); pronotal width at base 2.26 mm (2.15–2.37 mm). Pronotal index 49.85 (48.48–51.22). Elytral length 4.41 mm (4.28–4.53 mm); elytral width 2.60 mm (2.49–2.71 mm).

Females (n = 8). Length 6.98 mm (6.61–7.58 mm); head length 0.88 mm (0.84–0.97 mm); head width 1.16 mm (1.11–1.23 mm). Ocular index 30.26 (26.81–34.28). Pronotal length (along midline) 1.25 mm (1.18–1.42 mm); pronotal width at base 2.46 mm (2.35–2.67 mm). Pronotal index 50.96 (49.57–52.96). Elytral length 4.85 mm (4.54–5.19 mm); elytral width 2.86 mm (2.73–3.07 mm).

Differential diagnosis. *Hymenalia wrasei* sp. n. clearly differs from *Pseudohymenalia turnai* sp. n. and *P. yunnanica* sp. n. and species of subgenus *Asiomira* Dubrovina by having the penultimate tarsomere of each tarsus lobed (*Pseudohymenalia* gen. n. with lobed anterior and middle tarsomere 3 and posterior tarsomere 2; subgenus *Asiomira* Dubrovina without lobed tarsomeres). *H. wrasei* sp. n. clearly differs from *H. murzini* sp. n. by the broader space between eyes – broader than length of antennomere 2, while *H. murzini* sp. n. has the space between eyes distinctly narrower than the length of antennomere 2. *H. wrasei* sp. n. distinctly differs from *H. rufipes* Fabricius by shape and diameter of the aedeagus (Figs 11 and 12), by the shape of the body (*H. wrasei* with elytra approximately parallel-sided), and by colour, which is pale brown, while *H. rufipes* has oval elytra – broadest near elytral two-thirds and dark brown body. Aedeagus of *H. rufipes* as in Figs 25 and 26.

Name derivation. Dedicated to the collector D. W. Wrase.

Distribution. China: Yunnan.

Pseudohymenalia gen. n.

Type species. *Pseudohymenalia yunnanica* sp. n.

Description. Body longitudinally oval, general shape (Fig. 19) *Asiomira*-like. Head (Fig. 20) narrower than pronotum. Eyes very large, transverse, deeply excised; vertex between eyes very narrow. Clypeus relatively narrow, transverse. Antennae longer, distinctly exceeding half of body length, antennomeres 1 and 4–11 distinctly longer than wide, antennomeres 4–10 slightly serrate, antennomeres 2 and 3 shorter than antennomeres 4–11. Antennomere 3 shortest, approximately as long as wide. Maxillary palpus with longitudinally triangular ultimate palpomere. Penultimate palpomere shortest. Pronotum (Fig. 20) broadest at base, distinctly wider than long. Posterior angles slightly roundedly rectangular, base bisinuate and straight against scutellum. Borders distinct, anterior angles indistinct, side borders and anterior border more or less regularly rounded. Elytra longitudinally oval, broadest near the middle. Scutellum smaller, pentagonal. Elytral epipleura well-developed. Abdomen five-segmented. Legs narrow, tibia slightly dilated anteriorly. Tarsomeres very narrow, only ante-

rior tarsomere 3, middle tarsomere 3 and posterior tarsomere 2 slightly broadened and distinctly lobed. Penultimate tarsomeres of each tarsus without broadened membranous lobes. Tibia very narrow, slightly dilated at apex, with two longer thorns at inner side of apex. Outer border of anterior tibia with distinct row of small teeth. Male genitalia (Figs 23, 24) small, pale yellowish brown, with microgranulation, slightly shiny.

Female. Antennae shorter, antennomeres narrower, antennomere 3 distinctly longer than antennomere 2. Space between eyes distinctly broader.

Differential diagnoses. *Pseudohymenalia* gen. n. belongs to the subtribe *Gonoderina* Seidlitz, 1896 with four genera in China, *Isomira* Mulsant, 1856, *Microcistela* Pic, 1904, *Paracistela*, Borchmann, 1942, *Pseudocistela* Crotch, 1873 from which *Pseudohymenalia* gen. n. differs by the anterior and middle tarsomere 3 and posterior tarsomere 2 lobed; while in *Isomira*, *Microcistela*, *Paracistela* and *Pseudocistela* no tarsomere is lobed. Species of this new genus differ from the species of the subtribe *Alleculina* Laporte, 1840 by lobed anterior and middle tarsomeres 3 and posterior tarsomere 2, while species of subtribe *Alleculina* Laporte, 1840 (genus *Hymenalia* Mulsant, 1856) have lobed penultimate tarsomeres of each tarsi.

Etymology. Compound name – *pseudo-* (false) and *=Hymenalia-* indicating the resembling appearance to *Hymenalia* species. Gender: feminine.

Distribution. China: Hubei, Yunnan.

Pseudohymenalia turnai sp. n. (Figs 13–18)

Type material. Holotype (♂) labelled: China, W Hubei, MUYUPING S env., 31°45'N 110°4'E, – 1300 m, 18.v.2004, Jaroslav Turna leg., (VNPC); Paratypes: (4 ♂♂, 3 ♀♀): same data as holotype, (VNPC). (1 ♂, 1 ♀): CHINA (Yunnan), Dali Bai Auton. Pref., Wuliang Shan, 9 km SW Weishan, 2450–2500 m, 25°10'14"N /100°14'22"E (sec. oak/pine for., beaten from trees and bushes), 13.vi.2007, D. W. Wrase (35D), (NME).

Description of holotype. Unicolorous brown, with light setation, habitus as in Fig. 13. Body length 5.16 mm, width 1.82 mm, body 2.84 times longer than wide.

Head (Fig. 14) short, unicolorous brown, with relatively dense and long light setation. Eyes large, dark, transverse, emarginate, with narrow interspace between eyes. Ocular index equal to 21.90. Head widest across eyes 0.97 mm, approximately 0.49 times as wide as pronotal base. Length of head (visible part) 0.72 mm. Head with smaller punctures, slightly shiny.

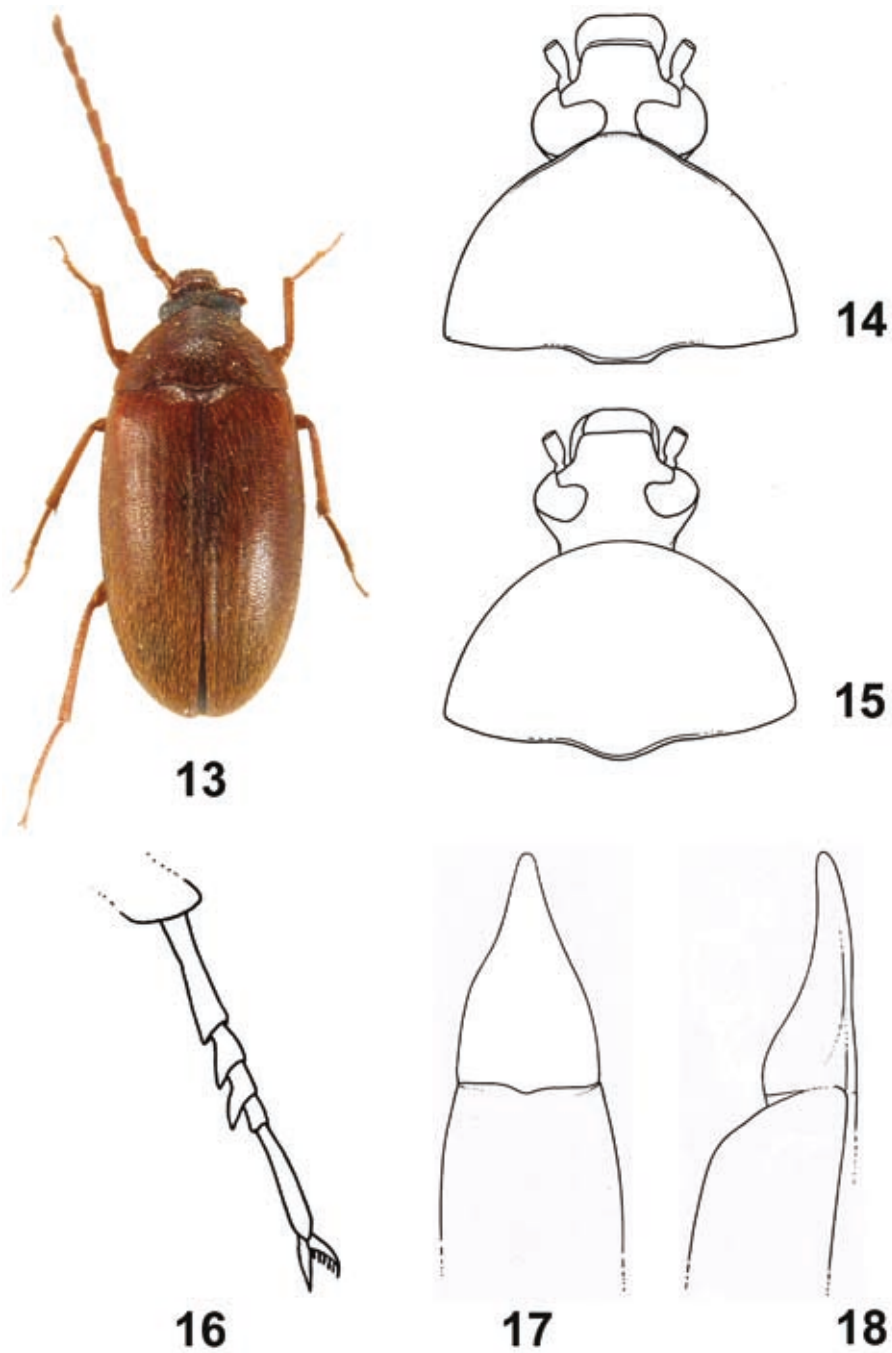
Antenna. Relatively long 3.51 mm (reaching 0.68 of body length), all antennomeres unicolorous brown, slightly paler than elytra and pronotum, with relatively shorter and denser light setation. Antennomeres slightly rugose, with microgranulation, antennomeres 2 and 3 short, antennomere 3 shortest, antennomeres 4–10 conspicuously widened at apex, distinctly serrate, matt; antennomeres 3–11 with relatively shallow, dense and light punctures, dull; antennomeres 1–3 slightly shiny. Ratios of relative lengths of antennomeres 1–11 equal to 1.88 : 1.25 : 1.00 : 4.25 : 4.63 : 4.75 : 5.13 : 5.13 : 4.88 : 4.88 : 5.13. Length/maximum width ratios of antennomeres 1–11 equal to 1.15 : 0.83 : 0.80 : 2.43 : 2.84 : 2.71 : 3.15 : 3.42 : 3.54 : 3.00 : 3.72.

Maxillary palpus. Unicolorous pale brown, slightly shiny with sparse and longer light setation, setation of ultimate palpomere denser. Ultimate palpomere shiny, broadest at base, longly triangular, knife-shaped. Second and penultimate palpomeres broadest at apex, penultimate palpomere shorter than second or ultimate palpomeres. Ratios of relative lengths of palpomeres 2–4 equal to 1.93 : 1.00 : 3.07. Length/maximum width of palpomeres 2–4 equal to 1.69 : 1.04 : 1.54.

Pronotum (Fig. 14). Unicolorous brown, slightly longer than semicircular, slightly shiny with denser pale brown setation; 2.04 times wider than head including eyes, longest in the middle 1.13 mm and widest at the base 1.97 mm. Pronotal index equal to 57.35. Border complete, indistinct against scutellum; posterior margin distinctly bisinuate, against scutellum distinctly rounded. Posterior angles rounded rectangular, lateral margins rounded. Anterior angles inconspicuous, anterior margin rounded. Surface punctate, punctures small, interspaces narrower than diameter of punctures, shiny.

Ventral side of body brown, abdomen paler. Abdomen five-segmented, with relatively sparse and shorter light setation, slightly shiny, with microgranulation and inconspicuous, shallow punctures.

Elytron. Unicolorous brown with dense, shorter pale brown setation, 3.31 mm long and 1.82 mm wide, widest



Figs 13–18: *Pseudohymenalia turnai* sp. n.: 13 – Habitus of male (Holotype), 14 – Head and pronotum of male (Holotype); 15 – Head and pronotum of female; 16 – Anterior tarsi of male; 17 – Aedeagus, dorsal view; 18 – Aedeagus, lateral view.

near the middle. Length/maximum width ratio equal to 1.82. Surface punctate, punctures dense and shallow, elytral striae indistinct. Elytral epipleura well developed, slightly paler than elytra and ventral side of body, with pale brown sparse light setation, slightly narrowing in posterior half, in apical half from metasternum to abdominal sternite 5 parallel, then narrowing to a rounded apex.

Scutellum brown, concolorous with elytra, margins darker, borders slightly rounded, triangular with a few pale brown setae.

Legs. Unicolorous brown, with pale brown, longer and dense setation. Femora thicker than tibia. Tibia very narrow, slightly dilated at apex, with two longer thorns at inner side of apex. Outer border of anterior tibia with distinct row of small teeth. Tarsomeres narrow, anterior and middle tarsomere 3 and posterior tarsomere 2 lobed and slightly broader. Anterior tarsi as in Fig. 16. Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to $1.00 : 0.47 : 0.57 : 0.40 : 1.09$ (protarsus), $1.00 : 0.33 : 0.24 : 0.19 : 0.59$ (mesotarsus), and $1.00 : 0.24 : 0.14 : 0.39$ (metatarsus). Both anterior tarsal claws with 5 visible teeth.

Aedeagus (Figs 17 and 18). Pale yellowish brown, distinctly shiny. Basal piece 2.33 times as long as apical piece, slightly rounded at basal half laterally. Apical piece with one lateral side nearly straight and the second side finely roundedly excised laterally in apical half and finely slightly convex near apex. Base of apical piece approximately as wide as apex of basal piece dorsally. Apical piece longly triangular, narrowing to apex in dorsal view.

Female. Antennae shorter, reaching only 0.53 of the body length. Antennomeres 4–10 indistinctly serrate, shorter. Space between eyes broad, approximately of same length as antennomere 4. Ocular index approximately 39.20. Head and pronotum as in Fig. 15. Both anterior tarsal claws with 5 visible teeth.

Ratios of relative lengths of antennomeres 1–11 equal to $1.14 : 0.71 : 1.00 : 1.86 : 1.86 : 2.07 : 2.14 : 2.07 : 2.07 : 2.00 : 2.36$.

Length/maximum width ratios of antennomeres 1–11 equal to $1.45 : 1.25 : 1.75 : 2.88 : 2.60 : 2.63 : 3.00 : 2.63 : 3.22 : 2.54 : 3.66$.

Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to $1.00 : 0.62 : 0.62 : 0.37 : 1.13$ (protarsus), $1.00 : 0.32 : 0.31 : 0.22 : 0.62$ (mesotarsus), and $1.00 : 0.26 : 0.19 : 0.44$ (metatarsus).

Variability. The type specimens vary somewhat in size; each character is given as its mean value, with full range in parentheses.

Males ($n = 6$). Length 5.19 mm (5.01–5.48 mm); head length 0.75 mm (0.69–0.86 mm); head width 0.97 mm (0.95–0.99 mm); ocular index 17.38 (15.71–21.90). Pronotal length (along midline) 1.18 mm (1.13–1.21 mm); pronotal width at base 2.01 mm (1.97–2.04 mm). Pronotal index 58.56 (57.04–60.71). Elytral length 3.30 mm (3.22–3.39 mm); elytral width 1.89 mm (1.82–1.95 mm).

Females ($n = 4$). Length 5.74 mm (5.44–6.11 mm); head length 0.74 mm (0.65–0.86 mm); head width 1.01 mm (0.98–1.08 mm). Ocular index 39.20 (36.73–40.28). Pronotal length (along midline) 1.32 mm (1.24–1.42 mm); pronotal width at base 2.25 mm (2.08–2.38 mm). Pronotal index 58.84 (56.17–60.00). Elytral length 3.30 mm (3.22–3.39 mm); elytral width 1.89 mm (1.82–1.95 mm).

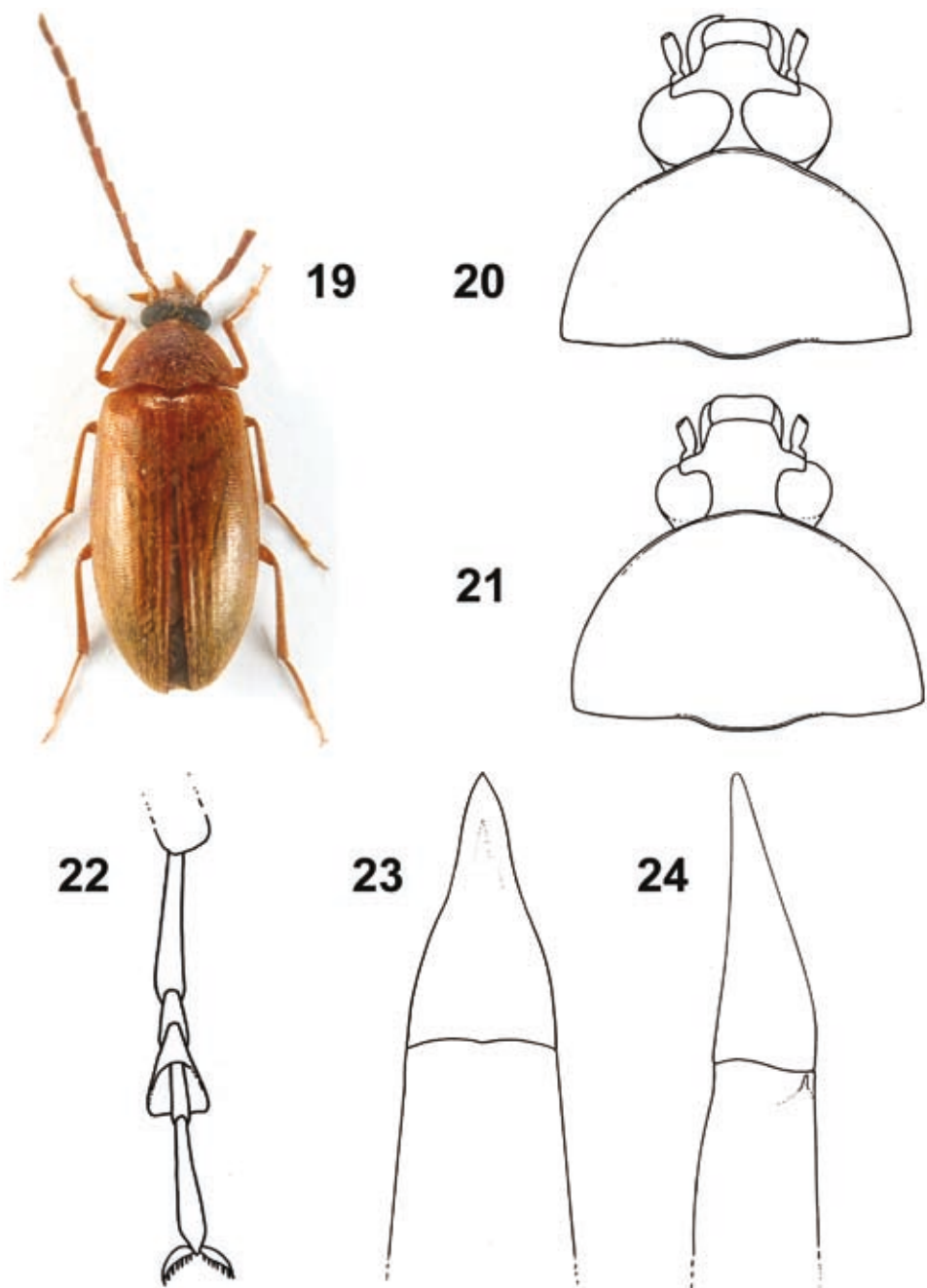
Differential diagnosis. *Pseudohymenalia turnai* sp. n. differs from *P. yunnanica* sp. n. (see below) by a smaller and more oval body and mainly by a broader space between the eyes (distinctly broader than length of antennomere 2). *P. yunnanica* sp. n. has a larger and more elongate body and a very narrower space between the eyes, which is distinctly narrower than length of antennomere 2.

Name derivation. Dedicated to my friend Jaroslav Turna (specialist in Tenebrionidae), collector of the new species.

Distribution. China: Hubei, Yunnan.

Pseudohymenalia yunnanica sp. n. (Figs 19–24)

Type material. Holotype (♂) labelled: CHINA, W Yunnan prov., mts. 60 km E Tengchong, 2300 m, 14-19.v.2006, S. Murzin & I. Shokhin leg., (VNPC); Paratypes: (1 ♂, 4 ♀ ♀): same data as holotype, (VNPC); (4 ♂ ♂, 3 ♀ ♀): CHINA (Yunnan), Baoshan Pref., Gaoligong Shan, 29 km ESE Tengchong, $24^{\circ}55'37''\text{N}/98^{\circ}45'09''\text{E}$, 2350 m (devast. decid. forest, beaten from shrubs), 1.VI.2007, D. W. Wrase (15 A) (NME, VNPC); (2 ♂ ♂, 2 ♀ ♀): CHINA: Yunnan [CH07-15], Baoshan Pref., Gaoligong Shan, 29 km ESE Tengchong, 2350 m, $24^{\circ}55'37''\text{N}/98^{\circ}45'09''\text{E}$, dev. decid. forest, litter, wood, fungi sifted, 1.VI.2007, leg. A. Pütz, (APEG, VNPC).



Figs 19–24: *Pseudohymenalia yunnanica* sp. n.: 19 – Habitus of male (Holotype), 20 – Head and pronotum of male (Holotype); 21 – Head and pronotum of female; 22 – Anterior tarsi of male; 23 – Aedeagus, dorsal view; 24 – Aedeagus, lateral view.

Description of holotype. Body elongate, slightly oval, pale brown with short light setation, slightly shiny, habitus as in Fig. 19. Length 5.60 mm, 3.11 times longer than wide.

Head (Fig. 20). Posterior part brown, anterior part pale brown, both with light setation. Surface slightly shiny with microgranulation and sparse and shallow punctation, punctures relatively small. Mandibles shiny, borders of mandibles slightly darker. Eyes very large, dark, transverse, deeply excised, vertex between eyes very narrow, distinctly narrower than length of antennomere 2, approximately of same length as antennomere 3. Head widest across eyes 1.06 mm; width (across eyes) approximately 0.55 of the pronotal base width. Length of head (visible part) 0.86 mm. Ocular index equal to 6.01.

Antenna. Pale brown, long (reaching 0.85 of body length) 4.75 mm, with dense, shorter light setation. Antennomeres 1–3 slightly paler and shiny, antennomeres 4–11 rugose, with distinct punctuation, matt. Antennomeres 2 and 3 distinctly shorter, antennomere 3 shortest; antennomeres 4–10 distinctly broader at apex, slightly serrate. Ratios of relative lengths of antennomeres 1–11 equal to 2.00 : 1.40 : 1.00 : 5.00 : 5.10 : 5.00 : 5.40 : 5.70 : 5.20 : 5.20 : 5.40. Length/maximum width ratios of antennomeres 1–11 equal to 1.54 : 1.55 : 1.00 : 3.33 : 3.19 : 2.94 : 3.00 : 3.56 : 3.46 : 3.46 : 4.50.

Maxillary palpus pale brown, slightly paler than apical part of head and antennomeres 4–11, concolorous with antennomeres 1–3, with short, sparse, light setation, penultimate palpomere and palpomere 2 with a few longer setae at apex. Palpomere 2 longest, penultimate palpomere shortest, both distinctly broader at apex, ultimate palpomere longly triangular, knife-shaped. Ratios of relative lengths of palpomeres 2–4 equal to 2.20 : 1.00 : 3.80. Length/maximum width ratios of palpomeres 2–4 equal to 2.54 : 1.20 : 2.00.

Pronotum (Fig. 20) unicolorous pale brown, slightly shiny with relatively longer and denser pale brown setation, 1.82 times as wide as head across eyes, nearly semicircular, longest in the middle 1.08 mm and widest at the base 1.93 mm. Pronotal index equal to 56.05. Border almost complete, only in the middle of anterior part indistinct; posterior margin bisinuate, against scutellum rounded. Posterior angles rounded rectangular, lateral margins rounded anteriorly. Anterior angles inconspicuous. Surface densely and shallowly punctate, punctures smaller, interspaces shiny, with fine granulation, slightly shiny.

Elytra unicolorous pale brown with pale brown short setation, setation near base, apex and sides distinctly denser, 3.66 mm long and 1.80 mm wide, slightly broader than pronotum, widest near the middle. Length/maximum width ratio equal to 2.03. Surface punctate with microgranulation, slightly shiny, elytral striae not clearly conspicuous. Elytral epipleura well developed, concolorous with elytra evenly narrowing in basal half, in apical half before abdominal sternite 5 parallel, then narrowing to rounded apex.

Scutellum pentagonal, brown, concolorous with elytra. Legs unicolorous pale brown, with dense light setation. Femora thicker than tibia. Tibia very narrow, slightly dilated at apex, with two long thorns at inner side of apex. Outer border of anterior tibia with distinct row of small teeth. Tarsomeres of all tarsi narrow, lobed tarsomeres slightly broader. Anterior and middle tarsomeres 3 and posterior tarsomere 2 lobed. Anterior tarsi as in Fig. 22. Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to 1.00 : 0.48 : 0.63 : 0.43 : 1.00 (protarsus), 1.00 : 0.33 : 0.30 : 0.23 : 0.56 (mesotarsus), and 1.00 : 0.23 : 0.21 : 0.41 (metatarsus). Both anterior tarsal claws with 5 visible teeth.

Ventral side of body brown, abdomen five-segmented, pale brown, concolorous with dorsal side. Abdomen with relatively shorter light setation, slightly shiny, with shallow punctures and microgranulation.

Aedeagus (Figs. 23, 24). Pale yellowish brown, distinctly shiny. Basal piece 2.52 times as long as apical piece, slightly rounded at basal half laterally. Apical piece with one lateral side nearly straight and the opposite side at first straight, then from the third narrowing to apex. Base of apical piece approximately as wide as apex of basal piece dorsally. Apical piece approximately longly triangular, narrowing to apex in dorsal view.

Female. Body larger, more oval, antennae shorter, reaching only 0.69 of body length. Space between eyes broader, approximately of same length as antennomeres 2 and 3 together. Ocular index approximately 39.40. Head and pronotum as in Fig. 21. Both anterior tarsal claws with 5 visible teeth.

Ratios of relative lengths of antennomeres 1–11 equal to 1.00 : 0.67 : 1.00 : 2.09 : 2.00 : 1.95 : 2.05 : 2.05 : 1.90 : 1.95 : 2.00.

Length/maximum width ratios of antennomeres 1–11 equal to 1.50 : 1.40 : 2.33 : 4.00 : 3.81 : 3.15 : 3.31 : 3.31 : 2.86 : 3.72 : 3.81.

Ratios of relative lengths of tarsomeres 1–5 and 1–4 equal to 1.00 : 0.50 : 0.61 : 0.39 : 1.04 (protarsus), 1.00 : 0.34 : 0.37 : 0.25 : 0.47 (mesotarsus), and 1.00 : 0.29 : 0.17 : 0.40 (metatarsus).

Variability. The type specimens vary somewhat in size; each character is given as its mean value, with full range in parentheses.

Males (n = 8). Length 6.20 mm (5.60–6.44 mm); head length 0.83 mm (0.74–0.86 mm); head width 1.03 mm (1.01–1.06 mm); ocular index 9.34 (6.01–11.47). Pronotal length (along midline) 1.03 mm (0.94–1.08 mm); pronotal width at base 1.84 mm (1.80–1.93 mm). Pronotal index 55.85 (51.77–59.17). Elytral length 4.34 mm (3.66–4.63 mm); elytral width 2.19 mm (1.86–2.39 mm).

Females (n = 9). Length 6.01 mm (5.79–6.55 mm); head length 0.74 mm (0.60–0.97 mm); head width 1.00 mm (0.91–1.08 mm); ocular index 39.40 (35.09–44.19). Pronotal length (along midline) 1.14 mm (1.00–1.24 mm); pronotal width at base 2.02 mm (1.81–2.12 mm). Pronotal index 55.57 (50.79–58.34). Elytral length 4.13 mm (3.65–4.82 mm); elytral width 2.25 mm (2.04–2.46 mm).

Differential diagnosis. *Pseudohymenalia yunnanica* sp. n. differs from the *P. turnai* sp. n. by a larger and more elongate body and mainly by a very narrow space between eyes – distinctly narrower than the length of anten-

nomere 2, while *P. turnai* sp. n. has a smaller and more oval body and a broader space between the eyes, that is distinctly broader than the length of antennomere 2.

Name derivation. Named after the province of its collecting sites – Yunnan (China).

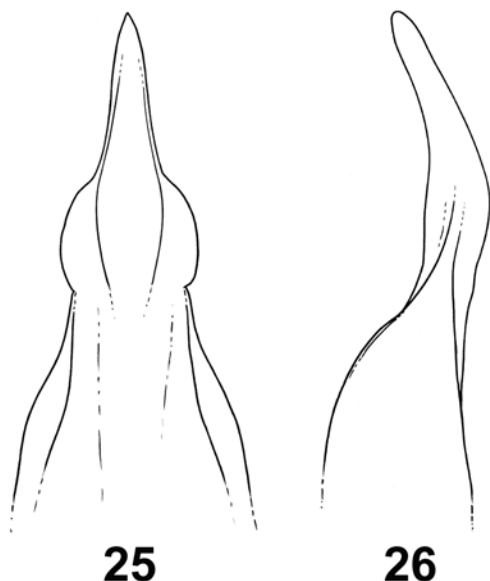
Distribution. China: Yunnan.

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Sincere thanks are due to Olaf Jäger (SMTD) for the loan of type material under his care and Matthias Hartmann (NME) for loan of new material of Alleculinae. Special thanks are due to Luboš Dembický (Brno, Czech Republic) for making digital photographs and Zuzana Čadová (Liberec, Czech Republic) for the excellent drawings.

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Figs 25, 26: *Hymenalia rufipes* Fabricius, 1792: 25 – Aedeagus, dorsal view; 26 – Aedeagus, lateral view.

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SINGER, D. (2008): Welcher Vogel ist das? – Franckh-Komos Verlags-GmbH & Co. KG, Stuttgart, kartoniert, 19,5 x 13,5 cm, 432 Seiten, 1410 Farbfotos, 396 farbige Verbreitungskarten, ISBN 978-3-440-11415-5, Preis 19,95 €.

Heerscharen von Fotografen haben im Verein mit moderner Foto- und Drucktechnik längst das Vorurteil gegenüber Foto-Bestimmungsbüchern ad absurdum geführt. Der vorliegende Band aus der Reihe Kosmos Naturführer ist dafür ein Beispiel. Er behandelt weitgehend vollständig alle regelmäßig in Europa auftretenden Vogelarten.

Zu Beginn wird der Nutzer kurz über Vogeltopographie informiert und bekommt einen übersichtlichen Schlüssel zu den Vogelfamilien. Im Hauptteil werden auf 396 Seiten die einzelnen Arten vorgestellt. Die Arttexte enthalten präzise Aussagen zum Gesamteindruck (Rubrik: „typisch“), zu Merkmale, ähnlichen Arten, zur Stimme, zum Verhalten, zum Vorkommen, zur Fortpflanzung und Nahrung. Dies alles gedrängt auf einer halben Seite zwingt zu treffender Kürze und kleiner, aber noch leserlicher Schrift. Jedem Arttext sind 3 bis 5 Fotos des betreffenden Vogels gegenübergestellt.

Die Fotos sind von ausgezeichneter Qualität. Sie zeigen typische Merkmale sowie unterschiedliche Geschlechter oder Alterskennzeichen. In Verbindung mit dem Text ist bei den meisten Arten eine sichere Bestimmung möglich. Jedem Arttext ist eine farbige Verbreitungskarte beige-fügt, die bei der Begrenzung auf eine Größe von 2 x 2 cm natürlich nur grobe Auskunft über Brut- und Überwinterungsbiete liefern kann. In der Kopfzeile findet man neben dem deutschen und wissenschaftlichen Namen auch die englische und französische Bezeichnung des Vogels sowie Angaben zum Status und zum Auftreten in Deutschland. Der aufklappbare Umschlag liefert auf der Innenseite erklärende Abbildungen zur Morphologie des Vogels (Schwanz, Schnabel, Flügel, Beine) sowie Verhaltensweisen (Flugarten, Flugweise, Bewegungen, Sitzplätze). Trotz der Fülle an Information und trotz Hochglanzpapier halten sich Größe und Gewicht in Grenzen, so daß das Buch auch noch im Rucksack Platz hat.

Insgesamt reiht es sich würdig in die vordere Reihe der bisherigen Feldführer ein. Es kann jedem Vogelbeobachter und allen Vogelliehabern wärmstens empfohlen werden.

Herbert Grimm

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