New Hymenalia species (Coleoptera: Tenebrionidae: Alleculinae) from China and Oriental Region

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INTRODUCTION

Mulsant (1856) described the genus Hymenalia in 1856. This Palaearctic genus belongs to the subtribe Alleculina Laporte, 1840. Mader (1928) listed 16 species, and Novák & Pettersson (2008) listed 33 species in two subgenera of the genus Hymenalia. In 2010, Novák recently described five new species of the genus from Iran, Yemen and Oman. Later two new species from China (Novák 2008) and twelve new species from China and North Vietnam (Novák 2010). A new Hymenalia minuta species group exclusive from China (Yunnan) is designated. Species of this group have similar ratios of antennomeres as species in the H. rufipes group, but males have wide space between eyes (OI higher than 60). Further species: Hymenalia darjeelingica sp. nov. from China (Yunnan) and Hymenalia thailandica sp. nov. from Thailand (Novák 2017). Hymenalia klapperichi Pic, 1955, the first species of the Oriental Region, is described and compared with similar species.

New data on Hymenalia becvari Novák, 2010, H. holschuli Novák, 2010, H. coraci Novák, 2010, H. kalderich Novák, 2010, H. okavango Novák, 2010, H. wuliangica nov. sp. from China (Yunnan) and H. yunnanica nov. sp. from China (Yunnan) are added. All new species are illustrated and compared with similar species.
MATERIAL AND METHODS

Two important morphometric characteristics used for the descriptions of species of the subfamily Alleculinae, the ‘ocular index’ dorsally (Campbell & Marshall 1964) and ‘pronotal index’ (Campbell 1965), are also used in the present paper well. The ocular index equals \((100 \times \text{minimum dorsal distance between eyes}) / \text{(maximum width of head across eyes)}\). The pronotal index is calculated as \((100 \times \text{length of pronotum along midline}) / \text{(width across basal angles of pronotum)}\).

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

The following codens are used:

- KMTJ private collection of Kimio Masumoto, Tokyo, Japan;
- NHMB Naturhistorische Museum Basel, Switzerland;
- NMEG Naturkundemuseum, Erfurt, Germany;
- NMTJ National Museum, Tokyo, Japan;
- RFLC private collection of René Fouqué, Liberec, Czech Republic;
- VNPC private collection of Vladimír Novák, Praha, Czech Republic.

Measurements of body parts and corresponding abbreviations used in text are as follows:

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

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

TAXONOMY

_Hymenalia becvari_ Novák, 2010

_Hymenalia becvari_ Novák, 2010: 194.

**Remark.** High colour variability, specimens are from ochre yellow to dark brown, pronotum with same colour or paler or darker than elytra, sometimes orange with pale brown or dark brown elytra.

*Hymenalia bocaki* Novák, 2010


**New material examined.** (1 ♂  1 ♀): YUNNAN 2000-2800m / 25.11N 100.24E / WEIBAO SHAN mts. / W slope 25-28/6.92 / Vit Kubán leg., (NHMB); (1 ♂): YUNNAN 2000-3000m / 27.20N 100.11E / HABASHAN mts. / SE slope 10-13/7. / David Král leg. 92, (VNPC).

*Hymenalia darjeelingica* sp. nov.

(Figs. 1-5)

**Type locality.** India, Darjeeling district, Nashe, 1200 m.

**Type material.** Holotype: (♂): India / Darjeeling D. / Ch. J. Rai // Nashe / 1200m (KPG) / 2.XI.1985, (NHMB). Paratypes: (1 ♂): same data as holotype, (VNPC); (2 ♀♀): India / Darjeeling D. / Ch. J. Rai // Purbong / 900 m (KPG) / 1.XI.85, (NHMB, VNPC). The types are provided with a printed red label: 'Hymenalia darjeelingica sp. nov. HOLOTYPUS [or PARATYPUS] V. Novák det. 2015'.

**Description of holotype.** Habitus as in Fig. 1, body elongate-oval, from pale brown to dark brown, slightly shiny, dorsal surface setate, BL 6.58 mm. Widest near half of elytral length; BL/EW 2.39.

Head (Fig. 2). Posterior part dark brown, with pale brown setation, shiny, with dense punctuation, punctures medium-sized. HW 1.08 mm; HW/PW 0.52; HL (visible part) 0.73 mm. Eyes large, transverse, distinctly excised, space between eyes very narrow; very slightly wider than length of antennomere 2 or 3; OI equal to 12.69.

Antennae (Fig. 2). Long, AL 4.67 mm; AL/BL 0.71. Antennomeres brown with pale brown setation. Antennomeres 1-3 slightly shiny with fine microgranulation, antennomeres 4-11 matte with punctuation and microgranulation, antennomeres 4-10 distinctly serrate. Antennomere 2 shortest, antennomere 3 only slightly longer than antennomere 2.


RL/WA (1-11): 2.00 : 1.00 : 1.00 : 3.20 : 3.20 : 3.52 : 3.52 : 3.53 : 3.54 : 4.33 : 5.65.

Maxillary palpus. Pale brown with short, pale brown setation. Palpomeres 2, 3 distinctly narrowest at base and broadest at apex with a few long pale brown setae. Ultimate palpomere longly triangular.

Pronotum (Fig. 2). Reddish brown, semicircular, with microgranulation, small-sized, shallow punctures and relatively dense and long, pale brown setation. PL 0.99 mm; PW 2.06 mm; PL equal to 48.06. Border lines complete, lateral margins rounded, base bisinuate. Posterior angles distinct, anterior angles indistinct, rounded.


Elytron. Reddish brown, widest near half elytral length, dorsal surface with pale brown
setation, shiny. EL 4.86 mm; EW 2.75 mm. EL/EW 1.77. Elytral striae with distinct rows of small-sized punctures, interspaces between punctures in rows approximately as wide as diameter of punctures. Elytral intervals with very small punctures and fine microgranulation.

Scutellum. Reddish brown, as colour as elytron itself, sides distinctly darker, triangular, shiny, with microgranulation.

Elytral epipleura. Pale brown, distinctly paler than elytron itself, shiny, with pale brown setation, broadest near base, slightly narrowing to metasternum, then wide and parallel.

Figs. 1-5: *Hymenalia darjeelingica* sp. nov.: 1- Habitus of male holotype; 2- head, pronotum and antennomeres 1-4 of male holotype; 3- head, pronotum and antennomeres 1-4 of female; 4- aedeagus, dorsal view; 5- aedeagus, lateral view.
Legs. Reddish brown, relatively narrow and long, with dense and short, pale brown setation, posterior part of tibia slightly paler. Tibia very slightly widened to apex. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.46 : 0.38 : 0.48 : 1.11 (protarsus); 1.00 : 0.46 : 0.32 : 0.41 : 1.08 (mesotarsus); 1.00 : 0.32 : 0.25 : 0.53 (metatarsus).

Both anterior tarsal claws with 6 teeth.

Aedeagus (Figs. 4, 5). Small, pale brown. Basal piece slightly rounded laterally and slightly narrowing dorsally. Apical piece broadly triangular dorsally and beak-shaped laterally. Ratio of length of apical piece to length of basal piece 1: 2.27.

**Female** (Fig. 3). Brown, antennomere 3 distinctly longer than those in male and distinctly longer than antennomere 2. Space between eyes distinctly wider than those in male.

**Variation.** Some types with paler legs and antennae than holotype. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=2). BL 6.42 mm (5.64-7.19 mm); HL 0.69 mm (0.64-0.73 mm); HW 1.12 mm (1.03-1.20 mm); OI 26.66 (24.22-29.10), PL 1.01 mm (0.86-1.16 mm); PW 1.98 mm (1.66-2.30 mm); PI 50.89 (50.20-51.58); EL 4.74 mm (4.09-5.39 mm); EW 2.72 mm (2.58-2.86 mm). Females (n=2). BL 7.48 mm (7.37-7.58 mm); HL 0.72 mm (0.71-0.73 mm); HW 1.20 mm (1.18-1.21 mm); OI 28.33 (27.20-29.46), PL 1.23 mm (1.21-1.25 mm); PW 2.42 mm (2.42-2.42 mm); PI 50.98 (50.20-51.75); EL 5.53 mm (5.43-5.62 mm); EW 3.12 mm (3.08-3.15 mm).

**Differential diagnosis.** *Hymenalia darjeelingica* sp. nov. with dorsal surface setated, distinctly belongs to the *Hymenalia rufipes* species group. We know further three species of this group from eastern Asia: *Hymenalia murzini* Novák, 2008, *Hymenalia thailandica* sp. nov. and *Hymenalia wrasei* Novák, 2008. Male of *H. darjeelingica* differs from male of *H. murzini* by its shape of the aedeagus and mainly by antennomere 2 shortest; while male of *H. murzini* has antennomere 3 shortest. Male of *H. darjeelingica* is clearly different from male of *H. wrasei* by its narrower space between eyes (OI equal to 12.69) and antennomere 1 more than twice longer than antennomere 3; while male of *H. wrasei* has a wider space between eyes (OI equal to 18.40) and antennomere 1 approximately as long as antennomere 3. *H. darjeelingica* differs from species *H. thailandica* mainly by distinct rows of small punctures in elytral striae and smaller and coarser punctuation of head; while *H. thailandica* has rows of punctures in elytral striae indistinct and punctuation of head larger and shallower.

**Name derivation.** Toponymic, named after the type locality province Darjeeling (India).

**Distribution.** India (Darjeeling).

*Hymenalia habashanica* Novák, 2010

(Fig. 6)


Female characters. Body more oval, space between eyes wider than those in male, antennomere 3 only slightly shorter than antennomere 4. BL 7.23 mm; HL 0.99 mm; HW 1.26 mm; OI equal to 44.03; PL 1.18 mm; PW 2.04 mm; PI equal to 57.60; EL 5.06 mm; EW 2.88 mm. Both anterior tarsal claws with 6 teeth.

**Hymenalia holzschuhi** Novák, 2010


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Female characters. Body more oval, larger and wider than those in male, space between eyes wider than those in male. BL 5.67 mm; HL 0.68 mm; HW 1.04 mm; OI equal to 29.87; PL 0.89 mm; PW 1.65 mm; PI equal to 53.94; EL 4.10 mm; EW 2.58 mm. Both anterior tarsal claws with 6 teeth.

**Hymenalia horaki** Novák, 2010

*(Fig. 7)*


Female characters. Body more oval, larger and wider than those in male, space between eyes wider than those in male. BL 5.67 mm; HL 0.68 mm; HW 1.04 mm; OI equal to 29.87; PL 0.89 mm; PW 1.65 mm; PI equal to 53.94; EL 4.10 mm; EW 2.58 mm. Both anterior tarsal claws with 6 teeth.
Hymenalia (Nikomenalia) jinshanica sp. nov.  
(Figs. 8-11)

Type locality. China, Yunnan, Jinsha river, 27°18´N, 100°12´E, 2050 m.

Type material. Holotype: (♂): YUNNAN 2050m / 27.18N 100.12E / JINSHA riv. 15.6. / Vit Kubáň leg. 1993, (NHMB). Paratypes: (4 ♂♂ 2 ♀♀ + 2 spec.): same data as holotype, (NHMB, VNPC); (2 ♂♂ 1 ♀): YUNNAN 1950-2050m / 27.18N 100.14E / DAJU, Jinsha r. / 7-10.7.92 / Vit Kubáň leg., (NHMB, VNPC). The types are provided with a printed red label: 'Hymenalia (Nikomenalia) jinshanica sp. nov. HOLOTYPUS [or PARATYPUS] V. Novák det. 2015'.

Description of holotype. Habitus as in Fig. 8, body small, elongate-oval, from pale brown to black, dorsal surface glabrous, shiny, BL 3.53 mm. Widest near two thirds of elytral length; BL/EW 2.44.

Head (Fig. 9). Black, shiny, with sparse, pale brown setation and relatively dense punctuation, punctures medium-sized. Clypeus distinctly paler than posterior part of head.

Figs. 8-11: Hymenalia (Nikomenalia) jinshanica sp. nov.: 8- Habitus of male holotype; 9- head, pronotum and antennomeres 1-4 of male holotype; 10- aedeagus, dorsal view; 11- aedeagus, lateral view.
HW 0.77 mm; HW/PW 0.63; HL (visible part) 0.64 mm. Eyes small, transverse, distinctly excised, space between eyes very broad; slightly wider than anterior part of head; OI equal to 70.71.

Antennae (Fig. 9). Long, AL 1.93 mm; AL/BL 0.55. Antennomeres 1-3 pale brown, slightly shiny, with sparse, pale brown setation, antennomeres 4-11 more matte with dense and darker setation, punctuation and microgranulation. Antennomere 2 shortest, antennomere 3 only slightly longer than antennomere 2.

RLA (1-11): 1.05 : 0.57 : 1.00 : 1.43 : 1.52 : 1.57 : 1.67 : 1.95 : 1.95 : 1.81 : 2.10.

Maxillary palpus shiny, with short pale brown setation. Palpomeres 2-4 distinctly narrowest at base and broadest at apex. Palpomeres 2 and 3 pale brown, ultimate palpomere reddish brown, triangular, axe-shaped.

Pronotum (Fig. 9). Black, transverse, dorsal surface shiny, glabrous with relatively sparse punctuation, punctures small-sized, interspaces between punctures wide. PL 0.66 mm; PW 1.02 mm; PI equal to 64.67. Border lines complete, only in middle of anterior margin indistinct. Lateral margins rounded, broadest near middle, base straight. Posterior and anterior angles not clearly conspicuous, obtuse.

Ventral side of body. Dark brown, shiny with sparse, short, pale brown setation and punctuation, punctures relatively large. Abdomen brown with sparse, pale brown setation, sparse punctuation, longitudinal rugosities and irregular microgranulation.

Elytron. Dorsal surface black, glabrous, shiny, widest near two thirds of elytral length. EL 2.23 mm; EW 1.45 mm. EL/EW 1.54. Elytral striae with distinct rows of relatively large punctures, interspaces between punctures in rows narrow, narrower or as wide as diameter of punctures. Elytral intervals with very small sporadic punctures and fine microgranulation.

Scutellum. Broadly triangular, dark blackish brown, shiny, glabrous, with a few small punctures.

Elytral epipleura. Blackish brown, shiny, glabrous, broadest near base, regularly narrowing to ventrite 1, then leading parallel.

Legs. Pale brown, with dense and short pale brown setation, microgranulation and punctuation, femora distinctly darker. Tibia slightly widened to apex. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.52 : 0.67 : 0.76 : 1.57 (protarsus); 1.00 : 0.54 : 0.50 : 0.81 : 1.58 (mesotarsus); 1.00 : 0.47 : 0.55 : 0.81 (metatarsus).

Both anterior tarsal claws with 5 teeth.

Aedeagus (Figs. 10, 11). Ochre yellow, more matte. Basal piece rounded laterally and slightly narrowing dorsally. Apical piece short, narrow, beak-shaped laterally and dorsally. Ratio of length of apical piece to length of basal piece 1: 4.89.

Female. Dorsal surface without distinct differences, antennomere 3 only slightly shorter than antennomere 4.

Variation. Some types with paler legs and antennae than holotype. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=7). BL 3.82 mm (3.53-4.08 mm); HL 0.56 mm (0.52-0.64 mm); HW
0.85 mm (0.77-0.88 mm); OI 69.95 (66.67-73.05); PL 0.73 mm (0.66-0.92 mm); PW 1.12 mm (1.02-1.18 mm); PI 66.28 (63.16-71.36); EL 2.48 mm (2.23-2.73 mm); EW 1.63 mm (1.45-1.81 mm). Females (n=3). BL 3.84 mm (3.68-4.00 mm); HL 0.71 mm (0.70-0.71 mm); HW 0.86 mm (0.84-0.87 mm); OI 74.59 (72.84-76.33), PL 0.77 mm (0.72-0.81 mm); PW 1.15 mm (1.09-1.21 mm); PI 66.33 (65.57-67.09); EL 2.37 mm (2.26-2.48 mm); EW 1.64 mm (1.63-1.64 mm).

**Differential diagnosis.** The new species *Hymenalia jinshanica* sp. nov. distinctly belongs to the subgenus *Nikomenalia* Dubrovina, 1975. *H. (N.) jinshanica* differs from a similar species *Hymenalia (Nikomenalia) schawalleri* Novák, 2010 mainly by its very wide space between eyes (OI in males near 70), wider pronotum and more arcuate lateral margins of pronotum; while *H. (N.) schawalleri* has the space between eyes narrower, only slightly wider than diameter of one eye (OI in males near 36), pronotum narrower and lateral margins of pronotum less arcuate. *H. (N.) jinshanica* is distinctly different from the species *Hymenalia (Nikomenalia) impunctaticollis* Dubrovina, 1975 from northern parts of China mainly by pronotum distinctly punctuate; while *H. (N.) impunctaticollis* has pronotum without clear and distinct punctuation. *H. (N.) jinshanica* distinctly differs from similar species *Hymenalia (Nikomenalia) kaszabi* (Muche, 1972) and *Hymenalia (Nikomenalia) medvedevi* Dubrovina, 1975 from northern China and Mongolia mainly by its wider space between eyes (OI from 70 to 76) and antennomere 3 distinctly shorter than antennomere 4; while *H. (N.) kaszabi* and *H. (N.) medvedevi* have the space between eyes narrower (OI near 50) and antennomere 3 only slightly shorter than antennomere 4.

**Name derivation.** Toponymic, after the type locality Jinsha River (China: Yunnan).

**Distribution.** China (Yunnan).

*Hymenalia klapperichi* Pic, 1955

(Figs. 12-16)


*Hymenalia klapperichi tschungseni* Pic, 1955: 30. syn. nov.


**Remark.** (6 ♂♂ 3 ♀♀) with the same colouration as *Hymenalia klapperichi tschungseni* Pic, 1955. These specimens with the same morphological characters as *Hymenalia klapperichi* Pic, 1955 (as can be seen in: Novák 2010: 227 (Figs. 34-38). Figures 40-42 in Novák (2010: 228) were erroneously taken from a male of other species from Sichuan (Mt. Emei) and morphological characters are different.

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**Hymenalia leigongshanica** sp. nov.

(Figs. 17-21)

**Type locality.** China, Guizhou prov., Leigongshan, Xijiang.

**Type material.** Holotype: (♂): CHINA, W GUIZHOU prov. / LEIGONGSHAN, Xijiang / 29 May - 2 Jun 1997 / 1200-1900 m, Bolm lgt., (NHMB); (4 ♂♂ 2 ♀♀): same data as holotype (NHMB, VNPC). The types are provided with a printed red label: 'Hymenalia leigongshanica sp. nov. HOLOTPUS [or PARATYPUS] V. Novák det. 2015'.

**Description of holotype.** Habitus as in Fig. 17, body small, elongate-oval, dorsal surface dark blackish brown, glabrous, shiny, BL 6.16 mm. Widest near two thirds of elytral length; BL/EW 2.54.

Head (Fig. 18). Black, shiny, with large and coarse punctures, anterior part and clypeus
with sparse and long, golden yellow setae. Clypeus distinctly paler than posterior part of head. HW 1.14 mm; HW/PW 0.71; HL (visible part) 0.82 mm. Eyes large, transverse, distinctly excised, space between eyes very narrow; slightly narrower than antennomere 2 long; OI equal to 5.34.

Antennae (Fig. 18). Long, blackish brown, AL 4.67 mm; AL/BL 0.76. Antennomeres 1-3 slightly shiny, with sparse, pale brown setae, fine microgranulation and microrugosities, antennomeres 4-11 matter, with dense and short, pale brown setation, punctuation and microgranulation. Antennomeres 4-10 slightly serrate, distinctly widest at apex. Antennomere 2 shortest, antennomere 3 only slightly longer than antennomere 2.

RLA (1-11): 1.37 : 0.74 : 1.00 : 2.53 : 3.09 : 3.16 : 3.44 : 3.61 : 3.54 : 3.40 : 3.72.


Maxillary palpus shiny, pale brown, with relatively short, golden yellow setation. Palpomeres 2-4 distinctly narrowest at base and broadest at apex. Ultimate palpomere distinctly darker, triangular, axe-shaped.

Figs. 17-21: Hymenalia leigongshanica sp. nov.: 17- Habitus of male holotype; 18- head, pronotum and antennomeres 1-4 of male holotype; 19- head, pronotum and antennomeres 1-4 of female; 20- aedeagus, dorsal view; 21- aedeagus, lateral view.
Pronotum (Fig. 18). Blackish brown, transverse, dorsal surface shiny, glabrous with relatively sparse punctuation, punctures small-sized, interspaces between punctures wide. PL 0.84 mm; PW 1.60 mm; PI equal to 52.77. Border lines complete, only in middle of anterior margin indistinct. Lateral margins straight in posterior part, arcuate in anterior part, base finely bisinuate. Posterior angles rectangular, anterior angles arcuate.

Ventral side of body. Dark brown with sparse punctures and sparse and short pale setation. Abdomen dark brown with sparse pale brown setae, shiny with rugosities and microgranulation, more dull.

Elytron. Dorsal surface dark blackish brown, glabrous, shiny, widest near two thirds of elytral length. EL 4.50 mm; EW 2.43 mm; EL/EW 1.85. Elytral striae with distinct rows of medium-sized punctures, interspaces between punctures in rows narrow, narrower than diameter of punctures. Elytral intervals slightly convex, with very small sporadic punctures.

Scutellum. Relatively large, dark blackish brown, shiny, glabrous, with a few small punctures.

Elytral epipleura. Blackish brown, shiny, glabrous, broadest near base, narrowing to ventrite 1, then leading parallel.

Legs. Narrow, dark brown, with dense and short pale brown setation, microgranulation and punctuation, femora distinctly thicker than tibia. Tibia slightly widened to apex. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.39 : 0.64 : 1.32 (protarsus); 1.00 : 0.39 : 0.45 : 0.99 (mesotarsus); 1.00 : 0.28 : 0.25 : 0.51 (metatarsus).

Both anterior tarsal claws with 6 visible teeth.

Aedeagus (Figs. 20, 21). Ochre yellow, slightly shiny. Basal piece slightly rounded laterally and slightly narrowing dorsally. Apical piece narrow laterally, beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1: 2.34.

Female (Fig. 19). Brown, antennomere 3 distinctly longer than those in male and distinctly longer than antennomere 2. Space between eyes distinctly wider than those in male.

Variation. Some types with paler legs and antennae than holotype. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=5). BL 5.96 mm (5.73-6.16 mm); HL 0.80 mm (0.75-0.85 mm); HW 1.11 mm (1.06-1.14 mm); OI 8.93 (5.34-11.86), PL 0.85 mm (0.81-0.87 mm); PW 1.53 mm (1.49-1.60 mm); PI 55.47 (52.77-58.49); EL 4.31 mm (4.17-4.50 mm); EW 2.38 mm (2.28-2.45 mm). Females (n=2). BL 6.93 mm (6.78-7.07 mm); HL 1.03 mm (0.98-1.07 mm); HW 1.15 mm (1.11-1.18 mm); OI 37.72 (37.30-38.14), PL 1.02 mm (1.00-1.04 mm); PW 1.92 mm (1.89-1.94 mm); PI 53.10 (51.46-54.73); EL 4.88 mm (4.76-5.00 mm); EW 2.86 mm (2.85-2.87 mm).

Differential diagnosis. Hymenalia leigongshanica sp. nov. distinctly belongs to Hymenalia rufipennis species group according to Dubrovina (1975). The male of H. leigongshanica differs from male of Hymenalia holzschuhi Novák, 2010, Hymenalia jaroslavi Novák, 2010, Hymenalia klapperichi Pic, 1955 and Hymenalia palidipennis Pic, 1926 mainly by antennomere 3 distinctly longer than antennomere 2; while males of H. holzschuhi, H.
jaroslavi, *H. klapperichi* and *H. palidipennis* have antennomere 3 approximately as long as antennomere 2. Male of *H. leigongshanica* is clearly different from males of *Hymenalia merkli* Novák, 2010 and *Hymenalia rufipennis* Marseul, 1876 mainly by its shape of the aedeagus and very narrow space between eyes, which is distinctly narrower than the length of antennomere 2; while males of *H. merkli* and *H. rufipennis* have the space between eyes as wide as or wider than the length of antennomere 2.

**Name derivation.** Toponymic, after the type locality Leigongshan mountains (China: Guizhou).

**Distribution.** China (Guizhou).

*Hymenalia minuta* Pic, 1910

(Fig. 22)


**New material examined.** (1  ♂ 6 ♀♀ + 2 spec.): YUNNAN, 5.-8. vii.1996, / 28°06´N 98°54´E, 2700 m, / Hengduan mts-part MEILI, / Vít Kubáň leg., (NHMB, VNPC).

**Female characters.** Antennomere 3 distinctly longer than antennomere 2 and longer than those in male. BL 5.22 mm; HL 0.78 mm; HW 1.01 mm; OI equal to 69.89; PL 0.96 mm; PW 1.54 mm; PI equal to 62.46; EL 3.48 mm; EW 2.03 mm.

Fig. 22: *Hymenalia minuta* Pic, 1910 (female): 22- Head, pronotum and antennomeres 1-4.

*Hymenalia pseudominuta* sp. nov.

(Figs. 23-27)

**Type locality.** China, Yunnan, Dali, Cangshan mts.


**Description of holotype.** Habitus as in Fig. 23, body elongate-oval, from brown to black, shiny, dorsal surface glabrous, body length 4.52 mm. Widest near half of elytral length; BL/EW 2.27.

Head (Fig. 24). Black, glabrous, shiny, with dense punctuation and a few pale brown setae. HW 0.91 mm; HW/PW 0.66; HL (visible part) 0.58 mm. Eyes small, transverse, distinctly
excised, space between eyes very broad; as wide as anterior part of head; OI equal to 60.15.

Antennae (Fig. 24). Long, AL(1-9) 2.31 mm, AL/BL 0.51. Antennomeres dark blackish brown. Antennomeres 1-3 shiny with sparse, pale brown setation, antennomeres 4-9 matte with short and dense dark setation and microgranulation, distinctly serrate. Antennomeres 4-11 with dense punctuation. Antennomere 2 shortest, antennomere 3 only slightly longer than antennomere 2.

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\begin{align*}
RLA (1-9): & 1.50 : 0.83 : 1.00 : 3.00 : 2.89 : 3.28 : 3.33 : 3.72 : 3.67. \\
\end{align*}
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Pronotum (Fig. 24). Black, transverse, shiny, glabrous with relatively dense punctuation, punctures medium-sized. PL 0.88 mm; PW 1.37 mm; PI equal to 64.55; Border lines complete, only in middle of anterior margin indistinct. Lateral margins and base rounded. Posterior and anterior angles distinct, rounded and obtuse.

Ventral side of body dark blackish brown, with sparse, pale setation. Abdomen dark blackish brown with sparse, pale setation and sparse punctures.

Elytron. Black, widest near half of elytral length, dorsal surface glabrous, shiny. EL 3.06 mm; EW 1.99 mm. EL/EW 1.54. Elytral striae with distinct rows of medium-sized punctures, interspaces between punctures in rows narrow, narrower than or as wide as diameter of punctures. Elytral intervals with very small sporadic punctures, with fine microgranulation.

Scutellum. Broadly triangular, dark blackish brown, shiny, glabrous.

Elytral epipleura. Blackish brown, shiny, glabrous, broadest near base, regularly narrowing to elytral apex.

Legs. Dark brown, with dense and short pale brown setation, posterior part of tibia slightly paler. Tibia slightly widened to apex. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.79 : 0.79 : 1.07 : 1.57 (protarsus); 1.00 : 0.44 : 0.44 : 0.67 : 1.38 (mesotarsus); 1.00 : 0.40 : 0.35 : 0.74 (metatarsus).

Both anterior tarsal claws with 5 teeth.

Aedeagus (Figs. 26, 27). Relatively small, pale brown, slightly shiny. Basal piece rounded laterally and slightly narrowing dorsally. Apical piece triangular dorsally and beak-shaped laterally. Ratio of length of apical piece to length of basal piece 1: 3.89.

**Female** (Fig. 25). Antennomere 3 distinctly longer than those in male and distinctly longer than antennomere 2, only slightly shorter than antennomere 4. Both anterior tarsal claws with 4 visible teeth.

**Variation.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=3). BL 4.47 mm (4.34-4.54 mm); HL 0.54 mm (0.50-0.58 mm); HW 0.93 mm (0.91-0.95 mm); OI 63.72 (60.15-66.29), PL 0.84 mm (0.82-0.88 mm); PW 1.35 mm (1.34-1.37 mm); PI 62.73 (61.54-64.55); EL 3.08 mm (2.98-3.21 mm); EW 1.93 mm (1.81-2.00 mm). Females (n=2). BL 4.41 mm (4.39-4.43 mm); HL 0.55 mm (0.54-0.55 mm); HW 0.92 mm (0.91-0.92 mm); OI 69.63 (69.01-70.24), PL 0.82 mm (0.81-0.82 mm); PW 1.37 mm (1.36-1.38 mm); PI 59.58 (58.59-60.56); EL 3.05 mm (3.03-3.07 mm); EW 1.98 mm (1.95-2.00 mm).

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Differential diagnosis. New species *Hymenalia pseudominuta* sp. nov. distinctly belonging to *Hymenalia minuta* species group; males differ from males of *Hymenalia minuta* Pic, 1910 mainly by shape of aedeagus and antennomere 3 distinctly longer than antennomere 2; while males of *H. minuta* have antennomere 3 approximately as long as antennomere 2.

Name derivation. Compound name - *pseudo*- (false) and -*minuta*- indicating the resembling appearance to species *Hymenalia minuta*.

Distribution. China (Yunnan).
Hymenalia (Nikomenalia) schawalleri Novák, 2010

Hymenalia (Nikomenalia) schawalleri Novák, 2010: 216.


Hymenalia thailandica sp. nov. (Figs. 28-32)

Type locality. Thailand, Chiang Mai, Doi Suthep.


Description of holotype. Habitus as in Fig. 28, body relatively large, elongate-oval, reddish brown, dorsal surface with pale brown setation, shiny, BL 7.64 mm. Widest near half elytral length; BL/EW 2.60.

Head (Fig. 29). Relatively small, with pale brown setation, microgranulation, relatively dense and shallow punctuation, punctures medium-sized. Posterior part brown, anterior part and clypeus reddish brown, distinctly paler than posterior part of head. HW 1.23 mm; HW/PW 0.50; HL (visible part) 1.08 mm. Eyes large, transverse, distinctly excised, space between eyes very narrow; slightly wider than length of antennomere 2 or 3; OI equal to 16.67.

Antennae (Fig. 29). Long, reddish brown, with short, pale brown setation, microgranulation, punctuation, matte. AL 5.38 mm; AL/BL 0.70. Antennomeres 1-3 very slightly shiny, antennomeres 4-10 distinctly serrate. Antennomere 2 shortest, antennomere 3 only slightly longer than antennomere 2.

RLA (1-11): 1.61 : 0.83 : 1.00 : 3.57 : 3.74 : 4.35 : 4.44 : 4.70 : 4.52 : 4.35 : 4.44.
RL/WA (1-11): 1.48 : 0.95 : 1.05 : 2.41 : 2.39 : 2.78 : 2.83 : 3.18 : 3.15 : 3.33 : 3.46.

Maxillary palpus pale brown, matter, with pale brown setation. Palpomeres 2-4 distinctly narrowest at base and broadest at apex. Ultimate palpomere, longly triangular, knife-shaped.

Pronotum (Fig. 29). Brown, transverse, almost semicircular, dorsal surface slightly shiny, with long and dense pale brown setation, fine microgranulation and dense punctuation, punctures medium-sized and shallow, interspaces between punctures relatively narrow. PL 1.27 mm; PW 2.48 mm; PI equal to 51.21. Border lines complete, distinct. Lateral margins rounded, broadest near bisinuate base. Posterior angles roundly rectangular, anterior angles indistinct.

Ventral side of body. Brown, with greyish white setation, prothorax with dense punctuation. Abdomen brown with greyish white setation, fine microgranulation and very fine punctuation. Ultimate and penultimate ventrites distinctly paler than ventrites 1-3.

Elytron. Dorsal surface reddish brown, shiny, with dense and long pale brown setation,
widest near half elytral length. EL 5.29 mm; EW 2.94 mm; EL/EW 1.80. Elytral striae without distinct rows of punctures, surface with dense punctuation, punctures small-sized.

Scutellum. Broadly triangular, reddish brown, shiny, with long pale brown setation and dense punctuation.

Elytral epipleura. Brown, as colour as elytron itself, slightly shiny, with pale brown setation, broadest near base, regularly narrowing to mesothorax, then leading more or less parallel.

Legs. Reddish brown, with dense and long, pale brown setation, microgranulation and punctuation. Tibia slightly widened to apex. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.38 : 0.38 : 0.47 : 1.40 (protarsus); 1.00 : 0.39 : 0.37 : 0.40 : 0.89 (mesotarsus); 1.00 : 0.39 : 0.26 : 0.54 (metatarsus).

Both anterior tarsal claws with 6 distinct teeth.

**Female** (Fig. 30). Space between eyes wider than those in male, distinctly wider than length of antennomere 1. Antennomere 3 distinctly longer than antennomere 2.

**Variation.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n = 7). BL 7.14 mm (6.66-7.64 mm); HL 0.99 mm (0.93-1.08 mm); HW 1.20 mm (1.17-1.23 mm); OI 18.87 (16.67-20.77); PL (along midline) 1.20 mm (1.08-1.28 mm); PW at base 2.35 mm (2.24-2.48 mm); PI 51.07 (48.00-53.59); EL 4.95 mm (4.61-5.29 mm); EW 2.86 mm (2.69-2.94 mm). Females (n = 5). BL 7.78 mm (7.63-8.00 mm); HL 1.03 mm (1.00-1.09 mm); HW 1.25 mm (1.16-1.33 mm); OI 35.34 (30.77-38.09); PL (along midline) 1.34 mm (1.27-1.41 mm); PW at base 2.78 mm (2.41-3.03 mm); PI 48.49 (46.43-52.81); EL 5.41 mm (5.29-5.60 mm); EW 3.28 mm (5.29-5.60 mm).

**Differential diagnosis.** *Hymenalia thailandica* sp. nov. with dorsal surface setated, distinctly belongs to *Hymenalia rufipes* species group. We know further three species of this group from eastern Asia: *Hymenalia darjeelingica* sp. nov., *Hymenalia murzini* Novák, 2008 and *Hymenalia wrasei* Novák, 2008. Males of *H. thailandica* differ from males of *H. darjeelingica* by shape of aedeagus and by indistinct rows of punctures in elytral striae and large and more shallow punctures on head; while *H. darjeelingica* has distinct rows of small punctures in elytral striae and smaller and coarser punctuation of head. Males of *H. thailandica* are clearly different from males of *H. murzini* by shape of aedeagus and mainly by antennomere 2 shortest; while males of *H. murzini* have antennomere 3 shortest. Males of *H. thailandica* differ from males of *H. wrasei* by shape of aedeagus and antennomeres 4-11 3.5-4.5 times longer than antennomere 3; while males of *H. wrasei* have antennomeres 4-11 only 2.4-2.8 times longer than antennomere 3.

**Name derivation.** Toponymic, after the country of its occurrence - Thailand.

**Distribution.** Thailand.

*Hymenalia wuliangica* Novák, 2010

(Fig. 33)


Fig. 33: *Hymenalia wuliangica* Novák, 2010: 33- Head, pronotum and antennomeres 1-4 of female.
Female characters. Antennomere 3 distinctly longer than antennomere 2 and distinctly longer than those in the male. The antenna shorter, the space between eyes wider, the pronotum wider and the body more oval than those in male. BL 7.41 mm; HL 0.85 mm; HW 1.17 mm; OI equal to 45.16; PL 1.19 mm; PW 2.11 mm; PI equal to 56.40; EL 5.37 mm; EW 2.98 mm.

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