

## Contribution to the knowledge of *Hymenalia badia* species group from the Palaearctic Region (Coleoptera: Tenebrionidae: Alleculinae)

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### Taxonomy, new species, description, new distribution, Coleoptera, Tenebrionidae, Alleculinae, *Hymenalia*, Palaearctic Region

**Abstract.** New species *Hymenalia afghanica* sp. nov. from Afghanistan, *Hymenalia kadleci* sp. nov. from Jordan, *Hymenalia orszuliki* sp. nov. from Iran and *Hymenalia pseudojakli* sp. nov. and *Hymenalia zabidica* sp. nov. from Yemen, distinctly belonging to the first *Hymenalia badia* species group according to Dubrovina (1975), are described and illustrated. *Hymenalia obscuripennis* Pic, 1905 is redescribed here and male genitalia of the species *Hymenalia basalis* (Faust, 1876) and *Hymenalia obscuripennis* Pic, 1905 are shown for the first time. *Hymenalia basalis* (Faust, 1876) is newly recorded for territory of Turkmenistan.

### INTRODUCTION

Mulsant (1856) described the genus *Hymenalia* in 1856. This genus belongs to the subtribe *Alleculina* Laporte, 1840. Borchmann (1910) knew 11 species, Mader (1928) 16 species, and Novák & Pettersson (2008) listed 33 species in two subgenera of the genus *Hymenalia*. Novák (2007) recently described five new species of this genus from Iran, Yemen and Oman, later two new species from China (Novák 2008) and seventeen new species from China, North India, North Vietnam and Thailand (Novák 2010, 2015).

New species *Hymenalia afghanica* sp. nov. from Afghanistan, *Hymenalia kadleci* sp. nov. from Jordan, *Hymenalia orszuliki* sp. nov. from Iran and *Hymenalia pseudojakli* sp. nov. and *Hymenalia zabidica* sp. nov. from Yemen, distinctly belonging to the first - *Hymenalia badia* species group according to Dubrovina (1975), are described, illustrated and compared with similar species.

*Hymenalia obscuripennis* Pic, 1905 is here redescribed and male genitalia of the species *Hymenalia basalis* (Faust, 1876) and *Hymenalia obscuripennis* Pic, 1905 are shown for the first time. *Hymenalia basalis* (Faust, 1876) is newly recorded for territory of Turkmenistan.

### MATERIAL AND METHODS

Two important morphometric characteristics used for the descriptions of species of the subfamily Alleculinae, the 'ocular index' dorsally (Campbell & Marshall 1964) and 'pronotal index' (Campbell 1965), are used in this paper as well. The ocular index equals  $(100 \times \text{minimum dorsal distance between eyes}) / (\text{maximum width of head across eyes})$ . 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 slash (/) separates data in separate rows, a double slash (/ /) separates different labels.

The following collection codens are used:

- KOFC private collection of Kamil Orszulik, Frýdek-Místek, Czech Republic;
- NMPC National Museum, Praha, Czech Republic;
- RFLC private collection of René Fouqué, Liberec, Czech Republic;

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

ZSMG Zoologische Staatssammlung München, Germany.

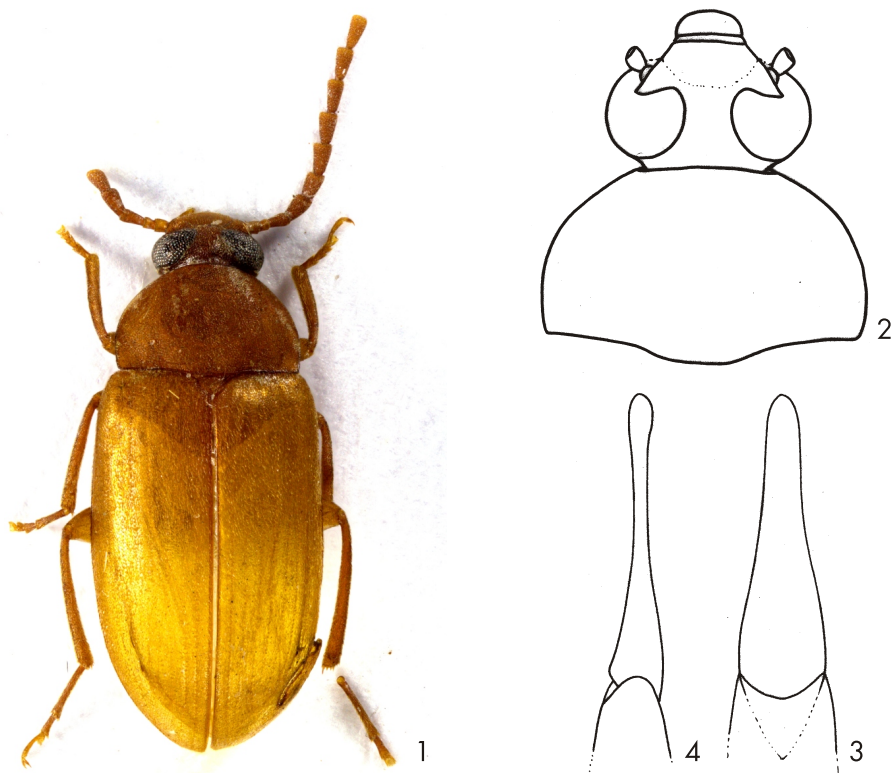
Measurements of body parts and corresponding abbreviations used in text are as follows: AL - total antennae length, BL - maximum body length, EL - maximum elytral length, EW - maximum elytral width, HL - maximum length of head (visible part), HW - maximum width of head, OI - ocular index dorsally, PI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

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

#### TAXONOMY

### *Hymenalia afghanica* sp. nov.

(Figs. 1-4)



Figs. 1-4. *Hymenalia afghanica* sp. nov.: 1- habitus of male holotype; 2- head and pronotum of male holotype; 3- aedeagus, dorsal view; 4- aedeagus, lateral view.

**Type locality.** East Afghanistan, Sarobi, 1100 m.

**Type material.** Holotype (♂): O. Afghanistan / Sarobi 1100 m / 4.VI.61 / leg. G. Ebert, (ZSMG).

**Description of holotype.** Habitus as in Fig. 1, body oval, from ochre yellow to brown, matter, dorsal surface setose, BL 5.85 mm. Widest near half elytral length; BL/EW 2.39.

Head (Fig. 2) relatively wide, slightly wider than anterior margin of pronotum, dorsal surface with short, yellow setation, dense and shallow punctuation and fine microgranulation. Punctures small-sized, interspaces between punctures very narrow, shiny. HL (visible part) 0.59 mm; HW 1.19 mm; HW/PW 0.62. Posterior half reddish brown, anterior part and clypeus distinctly pale brown. Eyes large, transverse, strongly excised, space between eyes narrow; distinctly wider than length of antennomere 2, approximately as wide as length of antennomere 3 or as wide as diameter of one eye; OI equal to 31.47.

Antennae. Relatively short, with short, yellow setation, punctuation and fine microgranulation, AL(1-10) 2.83 mm; AL(1-10)/BL 0.48. Antennomeres 1, 2 pale brown, slightly shiny. Antennomeres 3-10 matter and distinctly serrate. Each of antennomeres 4-10 distinctly longer than antennomere 3. Antennomere 2 shortest, antennomere 10 longest.

RLA (1-10): 0.73 : 0.48 : 1.00 : 1.13 : 1.08 : 1.35 : 1.37 : 1.46 : 1.38 : 1.48.

RL/WA (1-10): 1.27 : 1.04 : 1.93 : 1.55 : 1.56 : 1.75 : 1.78 : 2.17 : 2.00 : 2.48.

Maxillary palpus. Pale brown, with short, yellow setation, slightly shiny. Palpomeres 2, 3 distinctly narrowest at base and widest at apex, with a few long pale brown setae. Ultimate palpomere triangular, axe-shaped.

Pronotum (Fig. 2). Semicircular, reddish brown, distinctly darker than elytron, with short and dense yellow setation, dense shallow punctuation and microgranulation. Space between punctures very narrow, not clearly distinct. PL 1.16 mm; PW 1.93 mm; PI equal to 59.85. Border lines complete, only in middle of anterior margin not clearly distinct, lateral margins widely arcuate, base finely bisinuate. Anterior margin almost straight. Posterior angles distinctly obtuse, anterior angles indistinct.

Ventral side of body with short, pale setation and dense punctuation. Prosternum pale brown distinctly darker than ochre yellow meso- and metasternum. Abdomen pale brown with yellow setation and fine microgranulation. Ultimate and penultimate ventrites distinctly darker.

Elytron. Ochre yellow, suture very narrowly darker, widest near half of elytral length, dorsal surface with dense and short yellow setation, microgranulation and irregular punctuation, punctures small and very shallow, slightly shiny. EL 4.10 mm; EW 2.45 mm. EL/EW 1.88. Elytral striae and elytral intervals indistinct.

Scutellum. Triangular, ochre yellow, slightly shiny, with microgranulation and yellow setae.

Elytral epipleura. Well developed, pale brown, with ochre yellow setae and larger punctures, widest near base, distinctly narrowing to ventrite 1, then wide and parallel, narrowing near ventrite 5.

Legs. Ochre yellow, slightly shiny, with dense, yellow setation, microgranulation and punctuation, punctures very small. Tibia and tarsi relatively narrow. Femora stronger. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLt: 1.00 : 0.61 : 0.39 : 0.66 : ? (protarsus); 1.00 : 0.35 : 0.18 : 0.25 : ? (mesotarsus); 1.00 : 0.35 : 0.20 : 0.52 (metatarsus).

Anterior tarsal claws with 8 visible teeth.

Aedeagus (Figs. 3-4). Small, ochre yellow, shiny. Basal piece rounded laterally and slightly narrowing dorsally. Apical piece elongate, narrowly triangular dorsally and beak-shaped laterally. Ratio of length of apical piece to length of basal piece 1 : 2.00.

**Female.** Unknown.

**Differential diagnosis.** *Hymenalia afghanica* sp. nov. distinctly belongs to the *Hymenalia badia* group according to Dubrovina (1975) and differs from all other species of *Hymenalia badia* species group by its colour of dorsal surface of elytra (pale brown) and mainly by relatively wide body BL/EW 2.4; in all other species is ratio BL/EW 2.8-2.9.

**Etymology.** Toponymic, after the country of the type locality - Afghanistan.

**Distribution.** Afghanistan.

### *Hymenalia alenae* Novák, 2007

*Hymenalia alenae* Novák, 2007: 152.

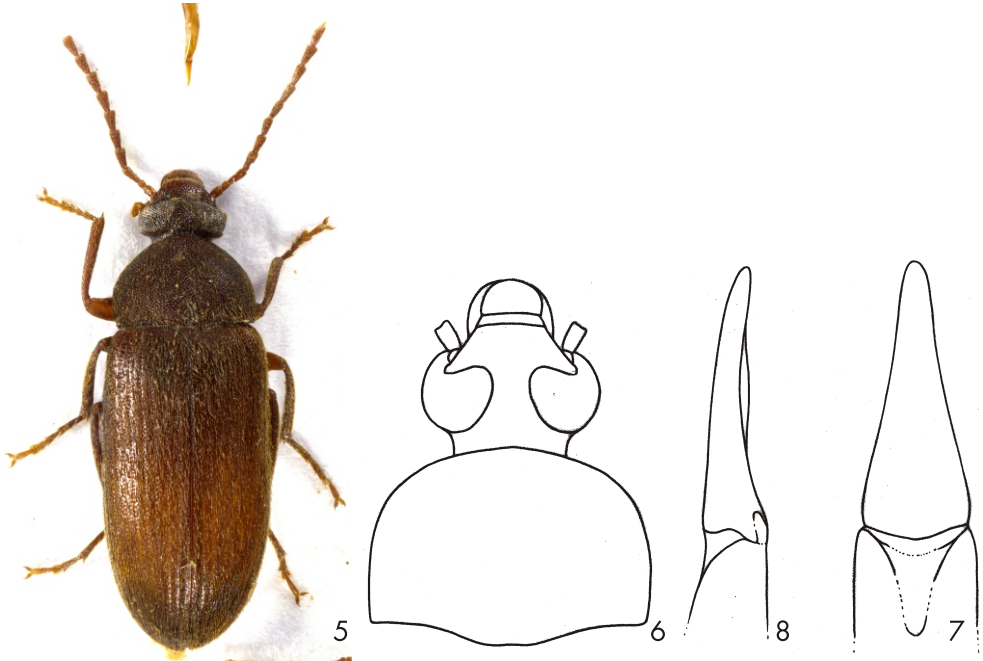
**New material examined.** (3 ♂♂ 2 ♀♀): YEMEN - Wadi Anis / 60 km SW San'ā, / 15°00'N, 44°09'E, 1522 m / S. Kadlec leg. 7.x.2005, (NMPC, VNPC).

**Distribution.** Iran.

### *Hymenalia basalis* (Faust, 1877)

(Figs. 5-8)

*Allecula basalis* Faust, 1877: 320.



Figs. 5-8. *Hymenalia basalis* (Faust, 1877): 5- habitus of male; 6- head and pronotum of male; 7- aedeagus, dorsal view; 8- aedeagus, lateral view.

**Material examined.** (7 ♂♂ 5 ♀♀): IRAN, 17-18.V.2006 / Khorasan Razni Prov. / 7 km E Bazangan / (stream valley; at light) / 36°16.9'N 60°31.3'E; 740 m / Jiří Hájek & Pavel Chvojka leg., (NMPC, VNPC); (3 ♂♂ 1 ♀): IRAN - Golestan Prov. / FARSEYAN / S. Kadlec leg., vi.2000, (NMPC, VNPC); (3 ♂♂ 2 ♀♀): IRAN - Fars Prov. / SIVAND (NE Shiraz) / 30°08'N, 52°5'E, 1770 m / S. Kadlec leg., 15.vii.2004, (NMPC, VNPC); (1 ♂ 4 ♀♀): S IRAN, prov. Fārs / Sivand NE Širāz, 1770 m / N30°08'E 52°55', 15.VII.2004 / leg. Petr Kabátek, (NMPC, VNPC); (2 ♂♂): IRAN SW, Buyer Ahmad - o- Kuhgiluye prov. / Yasuj env. 9 km S / 28-30.6.2003 1800-2300 m / Ivo Jeniš leg., (RFLC, VNPC); (1 ♀): IRAN Buyer Ahmad-o- / Kuhgiluye prov. / N 30°52', E 51°29', / SISAHT, 2405 m, NW Yasug / S. Kadlec leg. 23.vii.2004, (NMPC); (2 ♂♂ 8 ♀♀): USSR, Azerbaijan / GOBUSTAN, Bejugdas / 22.-24.6.1987 / J. Růžička & A. Hlasová lgt., (NMPC, VNPC); (6 ♂♂ 6 ♀♀): TURKMENISTAN SW / Kopet dagh Mts. W, / Garrygula env., PARKHAI / 16.-31.viii.1997 / J. Miatleuski leg., (VNPC).

**Remark.** Habitus of male as in Fig. 5, body elongate oval, brown, densely punctate, with dense golden yellow setation, head and pronotum (Fig. 6), space between eyes distinctly narrower than length of antennomere 3. Aedeagus as in Figs. 7 and 8. Anterior tarsal claws with 10-11 visible teeth.

Other measurements of body length (male specimen from Iran): BL 7.17 mm, HL 0.80 mm, HW 1.24 mm, OI equal to 20.51, PL 1.33 mm, PW 2.06 mm, PI equal to 64.32, EL 5.04 mm, EW 2.50 mm, AL 3.23 mm, AL/BL 0.45, HW/PW 0.60, BL/EW 2.87, EL/EW 2.02; AED 1: 3.28.  
 RLA (1-11): 0.66 : 0.27 : 1.00 : 0.86 : 0.82 : 0.90 : 0.93 : 1.04 : 1.00 : 1.00 : 1.25.  
 RL/WA (1-11): 1.50 : 0.87 : 2.81 : 2.03 : 1.71 : 1.83 : 1.94 : 2.30 : 2.21 : 2.43 : 3.96.  
 RLt: 1.00 : 0.63 : 0.54 : 0.75 : 1.73 (protarsus); 1.00 : 0.48 : 0.32 : 0.44 : 0.80 (mesotarsus); 1.00 : 0.38 : 0.19 : 0.61 (metatarsus).

**Distribution.** Armenia, Azerbaijan, Iran. New to Turkmenistan.

### *Hymenalia denticulata* (Muche, 1982)

*Prionychus denticulatus* Muche, 1982: 122.

**Other material examined.** (1 ♂): SULTANATE of OMAN / Dhofar prov., Wadi / Rakhut, 0-50 m, 8.- / 10.ix.2007; J. Horáč leg., (VNPC); (1 ♂): OMAN, Dhofar prov. / Jabal al Qamar / 3 kmW of Rakhut, alt. 65m / 16°45'19"N 53°23'48"E / lgt. Fouquč René, 11.IV.2013, (RFLC); (1 ♂ 3 ♀♀): OMAN, Dhofar prov. / Wadi Darbat / 7km NE of Taqah, alt. 200m / 17°05'05"N 54°26'02"E / lgt. Fouquč René, 12.IV.2013, (RFLC); (1 ♂): UAE Sharjah x Khor Kalba / 7.-22.iii.2006, 24 59 N; / 56 09 E; in light traps / A. van Harten lgt., (VNPC).

**Remark.** Habitus as in fig. 6 (Novák 2007: 156), maxillary palpus (fig. 9), pronotum (fig. 10) and aedeagus (fig. 11) in Muche (1982: 118).

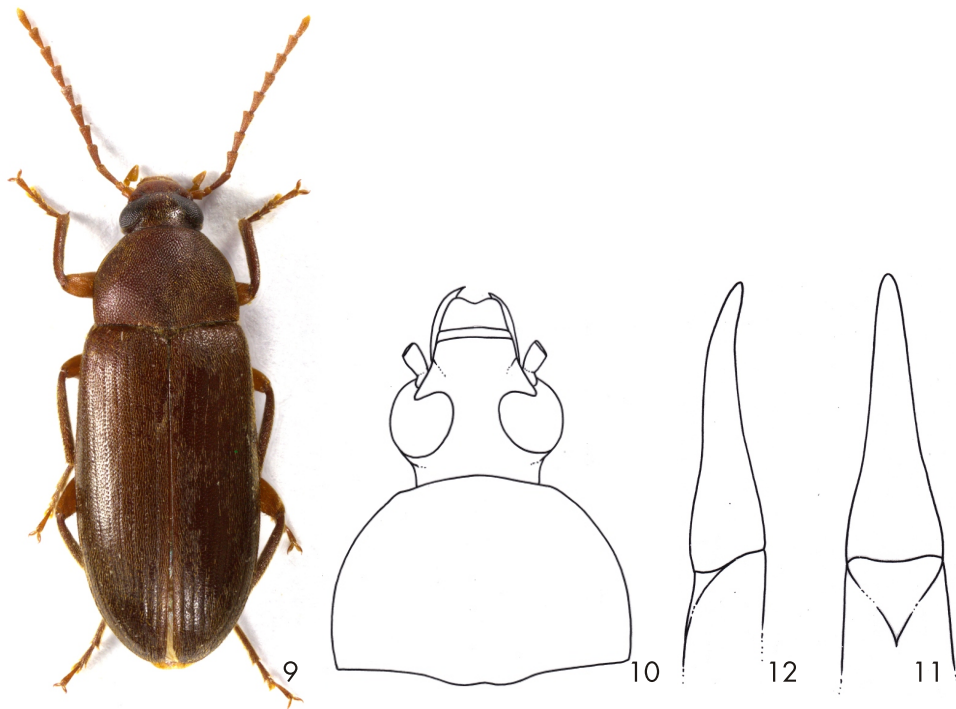
Other measurements of body length (male specimen from Oman): BL 6.83 mm, HL 0.78 mm, HW 1.17 mm, OI equal to 14.40, PL 1.36 mm, PW 2.01 mm, PI equal to 67.42, EL 4.69 mm, EW 2.36 mm, AL 2.85 mm, AL/BL 0.42, HW/PW 0.58, BL/EW 2.89, EL/EW 1.99; AED 1: 2.73.

RLA (1-11): 0.56 : 0.42 : 1.00 : 1.01 : 0.91 : 0.90 : 0.98 : 0.99 : 1.05 : 1.02 : 1.19.  
 RL/WA (1-11): 1.30 : 1.18 : 2.50 : 2.03 : 1.73 : 1.75 : 1.85 : 1.94 : 1.87 : 2.00 : 2.66.  
 RLt: 1.00 : 0.74 : 0.60 : 0.86 : 2.11 (protarsus); 1.00 : 0.56 : 0.37 : 0.41 : 1.01 (mesotarsus); 1.00 : 0.36 : 0.20 : 0.59 (metatarsus).

**Distribution.** Arab Emirates, Oman, Saudi Arabia.

***Hymenalia iranica* Novák, 2007***Hymenalia iranica* Novák, 2007: 159.**New material examined.** (4 ♂♂ 2 ♀♀): IRAN, Kerman prov. / 65 km N SABZAVARAN, / 29°05'N, 57°32'E, 2707 m, / S. Kadlec leg. 21.vii.2004, (NMPC, VNPC).**Distribution.** Iran.***Hymenalia jakli* Novák, 2007***Hymenalia jakli* Novák, 2007: 163.**New material examined.** (7 ♂♂ 3 ♀♀): SULTANATE of OMAN / Dhofar prov., Wadi / Rakhut, 0-50 m, 8.- / 10.ix.2007; J. Horák leg., (NMPC, VNPC); (4 ♂♂ 9 ♀♀): SULTANATE OF OMAN / DHOFAR prov. / WADI AL MUGHSAYL / 6.-8.9.2007 / J. Horák leg., (NMPC, VNPC); (9 ♂♂ 14 ♀♀): SULTANATE OF OMAN / DHOFAR prov. / JABAL SAMHAN / 3.-6.9.2007. cca 1100m / J.Horák leg., (NMPC, VNPC); (2 ♂♂): YEMEN - Kushum al Ain / 50 km SE HISS AL ABR, / 15°52'N, 47°40'E, 745 m / S. Kadlec leg. 9.x.2005, (NMPC, VNPC); (2 ♀♀): N YEMEN, Kushum al Ain / 50 km SE HISS AL ABR, / 15°52'N, 47°40'E, 745 m / 9.x.2005, lgt. P. Kabátek, (NMPC, VNPC).**Distribution.** Oman, Yemen.***Hymenalia kadleci* sp. nov.**

(Figs. 9-12)

Figs. 9-12. *Hymenalia kadleci* sp. nov.: 9- habitus of male holotype; 10- head and pronotum of male holotype; 11- aedeagus, dorsal view; 12- aedeagus, lateral view.

**Type locality.** S Jordan, Dānā N Ash / Shawbak, N30°39' E35°37' / 1153 m.

**Type material.** Holotype (♂): S JORDAN, Dānā N Ash / Shawbak, N30°39' E35°37' / 1153 m, 25.V.2008, / lgt. S. Kadlec, (NMPC). Paratypes: (1 ♂ 1 ♀): same data as holotype, but leg. P. Kabátek, (VNPC); (1 ♂ 1 ♀): N JORDAN, al-Thudaybah / NW al-Ramtha, / 29.V.2008. lgt. S. Kadlec, (NMPC).

**Description of holotype.** Habitus as in Fig. 9, body elongate-oval, from pale brown to brown, slightly shiny, dorsal surface setaceous, BL 8.88 mm. Widest near three fifth elytral length; BL/EW 2.66.

Head (Fig. 10). Relatively narrow, slightly wider than anterior margin of pronotum, dorsal surface with short, pale brown setation and dense punctuation, punctures medium-sized, interspaces between punctures very narrow, shiny. HW 1.54 mm; HW/PW 0.60; HL (visible part) 0.78 mm. Posterior half brown with longer dark setation behind eyes, anterior part and clypeus distinctly paler. Eyes large, transverse, strongly excised, space between eyes narrow; distinctly wider than length of antennomere 2, narrower than length of antennomere 3; OI equal to 28.67.

Antennae relatively short, with pale brown setation (AL 4.11 mm; AL/BL 0.46). Antennomeres 1, 2 pale brown, slightly shiny with microgranulation. Antennomeres 3-11 matter, with fine microgranulation and punctuation. Antennomeres 4-10 distinctly serrate and shorter than antennomere 3. Antennomere 2 shortest, antennomere 11 longest.

RLA (1-11): 0.51 : 0.33 : 1.00 : 0.91 : 0.83 : 0.87 : 0.89 : 0.91 : 0.89 : 0.87 : 0.98.

RL/WA (1-11): 1.33 : 1.25 : 2.92 : 2.38 : 2.29 : 2.17 : 1.86 : 1.92 : 2.11 : 2.17 : 3.77.

Maxillary palpus. Ochre yellow, with golden yellow setation and microgranulation, slightly shiny. Palpomeres 2, 3 distinctly narrower in base and broadest in apex with a few long pale brown setae. Ultimate palpomere triangular, axe-shaped.

Pronotum (Fig. 10). Brown, approximately semicircular, with short and dense golden yellow setation, dense punctuation, punctures relatively large and shallow, space between punctures very narrow. PL 1.83 mm; PW 2.59 mm; PI equal to 70.83. Border lines complete, lateral margins very slightly rounded, base slightly bisinuate. Posterior angles slightly obtuse, anterior angles indistinct, rounded.

Ventral side of body. Brown, slightly shiny with short and sparse, pale setation and punctuation, punctures small. Abdomen brown with pale setation, small punctures and microgranulation. Ultimate and penultimate ventrites distinctly darker.

Elytron. Brown, widest near three fifth elytral length, dorsal surface with dense and short golden yellow setation, slightly shiny. EL 6.27 mm; EW 3.34 mm. EL/EW 1.88. Elytral striae with distinct rows of small-sized punctures. Elytral intervals with small punctures as large as in elytral striae and with fine microgranulation.

Scutellum. Small, triangular, brown, as colour as elytron itself, slightly shiny, with microgranulation and punctures.

Elytral epipleura. Well developed, brown, slightly shiny, with ochre yellow setation, broadest near base, distinctly narrowing to ventrite 1, then wide and parallel, narrowing near ventrite 5.

Legs. Slightly shiny, with microgranulation and punctuation, punctures very small. Tibia and tarsi relatively narrow, brown, with dense and relatively long, ochre yellow setation. Femora strong, pale brown. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLt: 1.00 : 0.68 : 0.54 : 0.69 : 1.51 (protarsus); 1.00 : 0.39 : 0.33 : 0.29 : 0.81 (mesotarsus); 1.00 : 0.38 : 0.25 : 0.41 (metatarsus).

Anterior tarsal claws with 12 and 13 teeth.

Aedeagus (Figs 11, 12). Small, pale brown. Basal piece rounded laterally and slightly narrowing dorsally. Apical piece narrowly triangular dorsally and beak-shaped laterally. Ratio of length of apical piece to length of basal piece 1 : 3.17.

**Female.** Antennae slightly shorter than those in male (AL/BL 0.41). Anterior tarsal claws with 8 and 9 teeth.

RLA (1-11): 0.44 : 0.36 : 1.00 : 0.89 : 0.80 : 0.86 : 0.87 : 0.86 : 0.80 : 0.87 : 1.06.

RL/WA (1-11): 1.04 : 1.25 : 2.90 : 2.33 : 1.83 : 2.04 : 1.92 : 1.88 : 1.69 : 1.92 : 3.22.

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=3). BL 7.86 mm (7.14-8.88 mm); HL 0.80 mm (0.76-0.87 mm); HW 1.35 mm (1.24-1.54 mm); OI 32.29 (28.67-34.64), PL 1.55 mm (1.38-1.83 mm); PW 2.23 mm (2.02-2.59 mm); PI 69.63 (68.18-70.83); EL 5.54 mm (5.00-6.27 mm); EW 2.87 mm (2.58-3.34 mm). Females (n=2). BL 8.96 mm (7.97-9.94 mm); HL 1.07 mm (0.94-1.19 mm); HW 1.47 mm (1.27-1.67 mm); OI 31.47 (29.38-33.55), PL 1.82 mm (1.55-2.09 mm); PW 2.57 mm (2.24-2.90 mm); PI 70.70 (69.40-71.99); EL 6.07 mm (5.48-6.66 mm); EW 3.35 mm (2.87-3.83 mm).

**Differential diagnosis.** *Hymenalia kadleci* sp. nov. distinctly belonging to the *Hymenalia badia* group according to Dubrovina (1975). Similar species are *Hymenalia basalis* (Faust, 1877), *Hymenalia orszuliki* sp. nov. and *Hymenalia obscuripennis* Pic, 1905. *Hymenalia kadleci* sp. nov. differs from them by its large and robust body (BL 7.14-9.94 mm), by antennomere 3 longer than each of antennomeres 4-11 and by male claws of ultimate protarsomeres with 12 or 13 teeth; while *H. basalis*, *H. orszuliki* and *H. obscuripennis* have BL from 6-7.30 mm, some of antennomeres 4-10 longer than antennomere 3 and male claws of ultimate protarsomere have only 9-11 teeth.

**Name derivation.** New species is dedicated to one of the collectors - Stanislav Kadlec (†).

**Distribution.** Jordan.

### *Hymenalia obscuripennis* Pic, 1905

(Figs. 13-16)

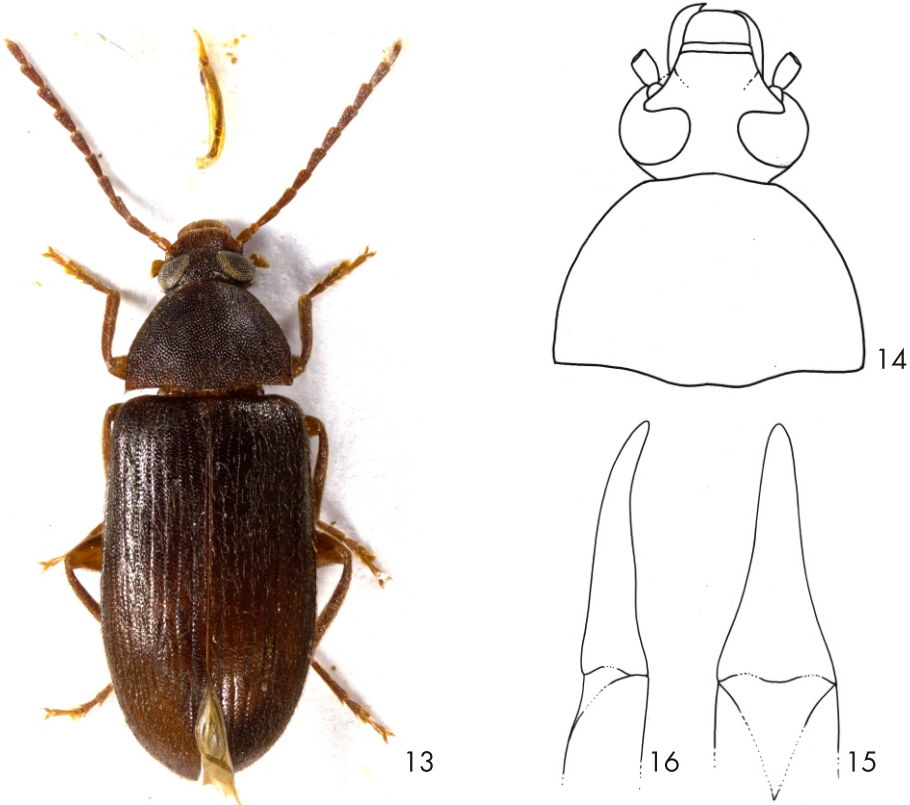
*Hymenalia obscuripennis* Pic, 1905: 162.

**Material examined.** (1 ♂): TR -W- 1990 / Bergama 1-2.V. / Strnad Jan lgt., [male examined], (VNPC). (1 ♂): Tr.27-29.5.1995 / Kargıcak p. Silifke / Lgt. Kopecký, (VNPC).

**Redescription.** Habitus as in Fig. 13, body elongate-oval, from pale brown to blackish brown, slightly shiny, dorsal surface setose, BL 7.30 mm. Widest near half elytral length; BL/EW 2.57. Head (Fig. 14) relatively wide, approximately as wide as anterior margin of pronotum. Posterior part dark brown with longer dark setation behind eyes, dorsal surface between eyes with pale setation and dense punctuation, punctures medium-sized and coarse, interspaces between punctures very narrow, punctures inside with very fine microgranulation, shiny. Anterior part distinctly paler, punctuation shallower, punctures smaller, interspaces between punctures wider, with distinct microgranulation, shiny. Clypeus pale brown with microgranulation and long golden



yellow setae. HW 1.31 mm; HW/PW 0.60; HL (visible part) 0.84 mm. Eyes large, transverse, strongly excised, space between eyes narrow, approximately as wide as diameter of one eye or as wide as length of antennomere 3; OI equal to 32.86.



Figs. 13-16. *Hymenalia obscuripennis* Pic, 1905: 13- habitus of male holotype; 14- head and pronotum of male holotype; 15- aedeagus, dorsal view; 16- aedeagus, lateral view.

Antennae relatively short, brown, with pale brown setation, fine microgranulation and sparse punctuation (AL 3.54 mm; AL/BL 0.48). Antennomeres 1, 2 paler, slightly shiny. Antennomeres 3-11 more matte, antennomeres 4-10 distinctly serrate. Antennomere 2 shortest, antennomere 11 longest. RLA (1-11): 0.63 : 0.46 : 1.00 : 0.99 : 0.96 : 0.94 : 1.00 : 1.09 : 1.08 : 1.07 : 1.23. RL/WA (1-11): 1.84 : 2.20 : 3.63 : 2.55 : 2.17 : 2.21 : 2.34 : 2.32 : 2.53 : 2.67 : 3.87. Maxillary palpus pale brown, with pale setation and microgranulation, shiny. Palpomeres 2, 3 distinctly narrowest at base and widest at apex, ultimate palpomere triangular, axe-shaped. Pronotum (Fig. 14) approximately semicircular, dorsal surface dark brown, with pale brown setation and dense punctuation, shiny. Punctures medium sized and relatively coarse, inside with fine microgranulation, space between punctures very narrow. PL 1.39 mm; PW 2.17 mm; PI equal to 64.06. Border lines incomplete, lateral margins up to one third from posterior angles parallel, then arcuate, base bisinuate. Posterior angles rectangular, anterior angles indistinct, rounded. Ventral side of body with dense, large punctures and sparse pale brown setation. Prosternum dark brown, meso- and metasternum reddish brown. Abdomen blackish brown with

pale brown setation, small, dense punctures and sparse, fine microgranulation. Elytron blackish brown, widest near middle of elytral length, dorsal surface with pale brown setation, fine microgranulation, slightly shiny. EL 5.08 mm; EW 2.84 mm; EL/EW 1.79. Elytral striae with distinct rows of small-sized punctures. Elytral intervals with relatively dense punctation, punctures shallow and smaller than those in striae. Scutellum small, triangular, reddish brown, distinctly paler than elytron itself, shiny, with microgranulation, punctures and setae. Elytral epipleura well developed, brown, slightly shiny, with pale brown setation and small punctures, widest near base, narrowing to ventrite 3, and then leading parallel. Legs reddish brown, slightly shiny, with dense pale brown setation, microgranulation and punctation. Tibia and tarsi relatively narrow, femora stronger. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.64 : 0.56 : 0.74 : 1.45 (protarsus); 1.00 : 0.55 : 0.40 : 0.54 : 1.01 (mesotarsus); 1.00 : 0.32 : 0.20 : 0.43 (metatarsus). Anterior tarsal claws with 9 visible teeth. Aedeagus (Figs. 15-16) ochre yellow, shiny. Basal piece slightly rounded laterally and almost parallel dorsally. Apical piece narrowly triangular dorsally and beak-shaped laterally. Ratio of length of apical piece to length of basal piece 1 : 2.88.

**Remark.** Examined material was compared with type material of *Hymenalia obscuripennis* Pic, 1905 stored in Pic's collection in MNHN (Paris).

**Distribution.** Turkey.

***Hymenalia orszuliki* sp. nov.**  
(Figs. 17-20)

**Type locality.** Iran, Bandar-e Ganeve.

**Type material.** Holotype (♂): IRAN 11.5.1999 / Bandar-e Ganeve / lgt. Orszulik, (VNPC); Paratypes: (3 ♀♀): same data as holotype, (KOFCC, VNPC).

**Description of holotype.** Habitus as in Fig. 17, body elongate-oval, from pale brown to brown, slightly shiny, dorsal surface with golden yellow setation, BL 6.01 mm. Widest near half of elytral length; BL/EW 2.77.

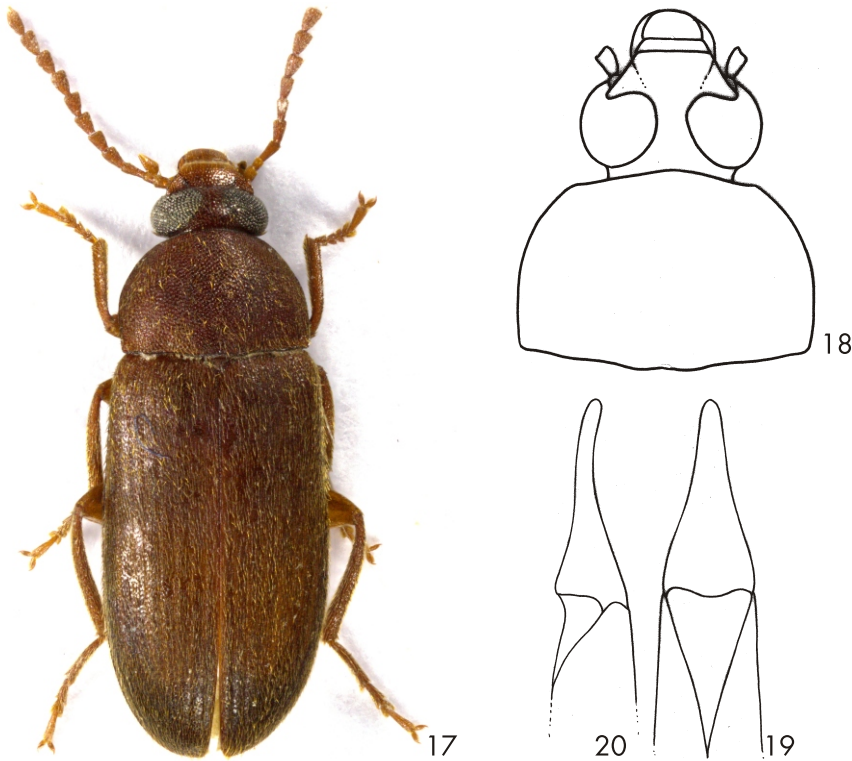
Head (Fig. 18). Relatively wide, dorsal surface with microgranulation and dense punctation, punctures medium-sized, interspaces between punctures very narrow, shiny. HW 1.16 mm; HW/PW 0.64; HL (visible part) 0.77 mm. Posterior half brown with pale setae between eyes and dark setae behind eyes, anterior part and clypeus pale brown. Eyes large, transverse, strongly excised, space between eyes narrow; distinctly wider than length of antennomere 2, narrower than length of antennomere 3; OI equal to 19.61.

Antennae brown, relatively short, with pale setation, punctation and fine microgranulation (AL 2.40 mm; AL/BL 0.40), antennomeres 1, 2 distinctly paler and slightly shiny. Antennomeres 3-11 matter, antennomeres 4-10 distinctly serrate and less than twice longer than wide, antennomeres 8-11 distinctly longer than antennomere 3. Antennomere 2 shortest, antennomere 11 longest.

RLA (1-11): 0.63 : 0.57 : 1.00 : 1.02 : 0.96 : 0.96 : 0.94 : 1.14 : 1.08 : 1.04 : 1.41.

RL/WA (1-11): 1.29 : 1.40 : 2.33 : 1.72 : 1.52 : 1.47 : 1.35 : 1.60 : 1.56 : 1.42 : 2.16.

Maxillary palpus. Pale brown, with pale setation and microgranulation, slightly shiny. Palpomeres 2, 3 distinctly narrowest at base and broadest at apex, with a few long pale brown setae. Ultimate palpomere triangular, axe-shaped.



Figs. 17-20. *Hymenalia orszuliki* sp. nov.: 17- habitus of male holotype; 18- head and pronotum of male holotype; 19- aedeagus, dorsal view; 20- aedeagus, lateral view.

Pronotum (Fig. 18). Brown, slightly convex, with longer, golden yellow setation, dense punctation, punctures relatively large and coarse, inside with fine microgranulation, space between punctures very narrow, shiny. PL 1.27 mm; PW 1.81 mm; PI equal to 70.17. Border lines complete, lateral margins slightly widened from base to the middle, then arcuate, base slightly bisinuate, anterior margin rounded. Posterior angles slightly obtuse, anterior angles indistinct, rounded.

Ventral side of body. Reddish brown, with pale setation and punctation, punctures small. Abdomen brown with golden yellow setation, microgranulation and punctation, punctures small. Ultimate and penultimate ventrites dark brown.

Elytron. Brown, widest near half of elytral length, dorsal surface with dense golden yellow setation and fine microgranulation. EL 3.97 mm; EW 2.17 mm. EL/EW 1.83. Rows of punctures in elytral striae indistinct. Elytral intervals with small, shallow punctures.

Scutellum. Small, triangular, brown, as colour as elytron itself, with microgranulation and long, pale setae.

Elytral epipleura. Well developed, brown, as elytron itself, with pale setae and large punctures, widest near base, distinctly narrowing to ventrite 1, then wide and parallel, narrowing near ventrite 5.

Legs. Brown, slightly paler than dorsal surface, lightly shiny, with microgranulation, dense,

golden yellow setation and punctuation, punctures very small. Tibia and tarsi relatively narrow, femora stronger. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.60 : 0.92 : 0.84 : 1.41 (protarsus); 1.00 : 0.46 : 0.31 : 0.36 : 0.94 (mesotarsus); 1.00 : 0.42 : 0.27 : 0.54 (metatarsus).

Anterior tarsal claws with 11 visible teeth.

Aedeagus (Figs. 19-20). Ochre yellow, shiny. Basal piece rounded laterally and distinctly narrowing dorsally. Apical piece narrowly triangular dorsally, beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1 : 3.59.

**Female.** Without distinct differences, only space between eyes slightly wider and both anterior tarsal claws with 6 visible teeth.

RLA (1-11): 0.74 : 0.42 : 1.00 : 1.08 : 0.92 : 0.92 : 0.97 : 1.02 : 1.08 : 1.06 : 1.32.

RL/WA (1-11): 1.61 : 1.13 : 2.62 : 2.58 : 2.00 : 1.83 : 1.59 : 1.67 : 1.79 : 1.81 : 2.75.

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Females (n=3). BL 6.05 mm (5.85-6.35 mm); HL 0.68 mm (0.60-0.74 mm); HW 1.11 mm (1.08-1.15 mm); OI 23.31 (21.37-25.16), PL 1.11 mm (1.05-1.16 mm); PW 1.77 mm (1.68-1.87 mm); PI 60.11 (59.81-60.27); EL 4.26 mm (4.06-4.51 mm); EW 2.20 mm (2.09-2.34 mm).

**Differential diagnosis.** *Hymenalia orszuliki* sp. nov. distinctly belongs to the *Hymenalia badia* group according to Dubrovina (1975). Similar species are *Hymenalia basalis* (Faust, 1877), *Hymenalia kadleci* sp. nov. and *Hymenalia obscuripennis* Pic, 1905. *H. orszuliki* clearly differs from the species *H. kadleci* mainly by smaller body (near 6 mm) and by narrower space between eyes (OI of male equal to 19.6) and by 11 teeth of male claws of ultimate protarsomere; while *H. kadleci* has larger and robust body (7.14-9.94 mm), space between eyes wider (OI of male 28.67-34.64) and 12 or 13 teeth of male claws of ultimate protarsomere. *H. orszuliki* is clearly different from the species *H. basalis* mainly by elytra shorter and wide (EL/EW 1.8) and by antennomeres 4-10 shorter and wider (RL/WA 1.4-1.7); while *H. basalis* has elytra longer and narrower (EL/EW 2.0) and antennomeres 4-10 longer and narrower (RL/WA 1.7-2.4). *H. orszuliki* clearly differs from the species *H. obscuripennis* mainly by narrower space between eyes (OI 19.6), by antennomeres 4-10 shorter and wider (RL/WA 1.4-1.7) and by 11 teeth of male claws of ultimate protarsomere; while *H. obscuripennis* has wider space between eyes (OI 32.9), antennomeres 4-10 longer and narrower (RL/WA 2.2-2.7) and male claws of ultimate protarsomere with 9 teeth.

**Name derivation.** New species is dedicated to the collector - Kamil Orszulik (Frýdek-Místek, Czech Republic).

**Distribution.** Iran.

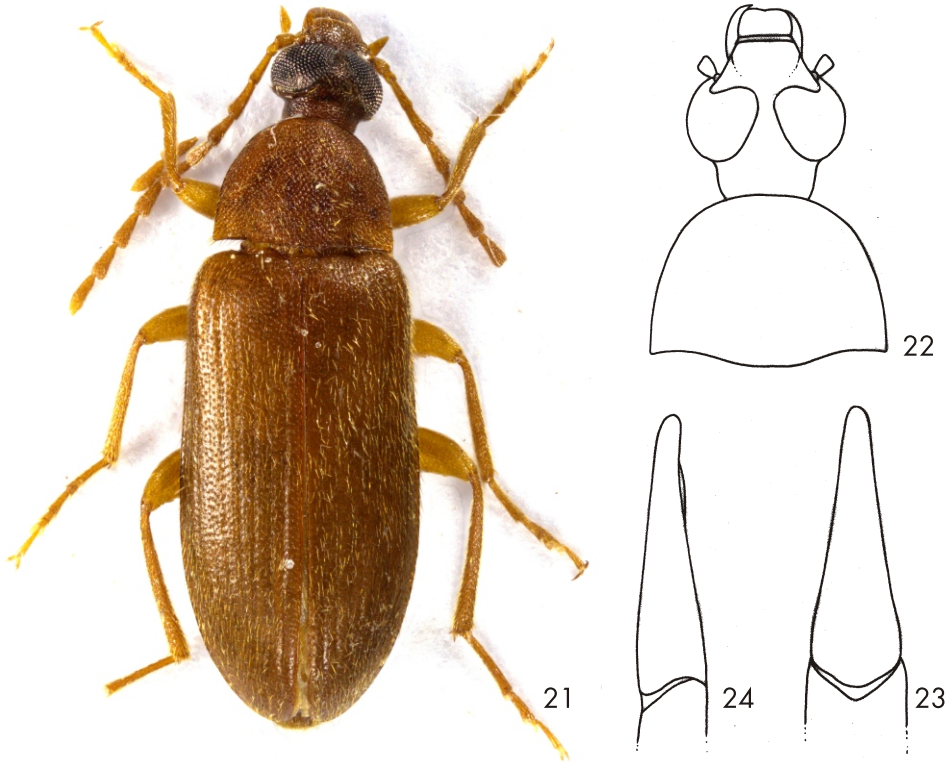
### *Hymenalia pseudojakli* sp. nov.

(Figs. 21-24)

**Type locality.** Yemen, Al Hudaydah gov., Jabal Bura valley forest NP, 14°52'N, 43°24'E, 225-600 m.

**Type material.** Holotype (♂): YEMEN - Al Hudaydah gov. / Jabal Bura valley forest NP / 14°52'N, 43°24'E, / 30.x.-

1.xi.2005, S. Kadlec leg., 225-600 m, (NMPC); Paratypes: (3 ♂♂ 7 ♀♀): same data as holotype, (NMPC, VNPC); (1 ♀): W YEMEN, Jabal Bura' NEE / Al Hudaydah, N14°53' / E43°26', 557 m, 19.- / 21.III.2007, lgt. P. Kabátek, (VNPC).



Figs. 21-24. *Hymenalia pseudojakli* sp. nov.: 21- habitus of male holotype; 22- head and pronotum of male holotype; 23- aedeagus, dorsal view; 24- aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 21, body elongate-oval, from ochre yellow to brown, slightly shiny, dorsal surface setaceous, BL 5.64 mm. Widest near middle of elytral length; BL/EW 2.86.

Head (Fig. 22). Relatively narrow, approximately as wide as anterior margin of pronotum, dorsal surface with short, pale setation and dense punctuation, punctures small-sized, interspaces between punctures narrow, shiny. HW 0.92 mm; HW/PW 0.63; HL (visible part) 0.78 mm. Posterior part brown with longer pale brown setae behind eyes, anterior part and clypeus pale brown with fine microgranulation. Eyes large, transverse, strongly excised, space between eyes very narrow; approximately as wide as antennomere 2 long, OI equal to 15.67.

Antennae relatively short, unicolored pale brown, with golden yellow setation, fine microgranulation and punctuation (AL 2.93 mm; AL/BL 0.52). Antennomeres 1, 2 slightly shiny, antennomeres 3-11 matter. Antennomeres 4-10 slightly serrate, antennomere 4, 5, 7-11 longer than antennomere 3. Antennomere 2 shortest, antennomere 11 longest.

RLA (1-11): 0.56 : 0.51 : 1.00 : 1.22 : 1.09 : 0.97 : 1.07 : 1.19 : 1.23 : 1.20 : 1.45.

RL/WA (1-11): 1.58 : 1.73 : 3.29 : 2.85 : 2.60 : 2.45 : 2.55 : 2.42 : 2.51 : 2.48 : 3.02.

Maxillary palpus. Ochre yellow, with relatively sparse, pale setation and very fine microgranulation, shiny. Palpomeres 2, 3 distinctly narrowest in base and widest in apex. Ultimate palpomere triangular, axe-shaped.

Pronotum (Fig. 22). Reddish brown, distinctly longer than semicircular, bell-shaped, with sparse and longer golden yellow setation, dense punctation, punctures medium sized, space between punctures very narrow. PL 1.00 mm; PW 1.46 mm; PI equal to 68.49. Border lines complete, lateral margins straight in basal half, distinctly arcuate in anterior half, base very finely bisinuate. Posterior angles rectangular, anterior angles indistinct, rounded.

Ventral side of body with sparse pale setation and dense punctation, punctures small sized. Prosternum reddish brown, meso- and metasternum distinctly paler. Abdomen pale brown with long, pale setation, fine microgranulation and punctation, punctures very small and shallow. Ultimate and penultimate ventrites dark brown.

Elytron. Reddish brown, slightly shiny, widest near middle of elytral length, dorsal surface with longer, golden yellow setation, fine microgranulation and dense punctation, punctures small and shallow. EL 3.86 mm; EW 1.97 mm. EL/EW 1.96. Elytral striae not clearly conspicuous, elytral intervals flat.

Scutellum. Small, pentagonal, as colour as elytron itself, shiny, with fine microgranulation, punctures and setae.

Elytral epipleura. Well developed, brown, as colour as elytron itself, slightly shiny, with relatively long, golden yellow setation and small punctures, widest near base, distinctly narrowing to ventrite 1, then leading parallel.

Legs. Ochre yellow, slightly shiny, with relatively long, golden yellow setation, fine microgranulation and punctation, punctures small. Tibiae and tarsi relatively narrow, femora stronger. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.64 : 0.42 : 0.60 : 1.16 (protarsus); 1.00 : 0.52 : 0.26 : 0.26 : 0.82 (mesotarsus); 1.00 : 0.35 : 0.15 : 0.50 (metatarsus).

Anterior tarsal claws with 8 visible teeth.

Aedeagus (Figs. 23, 24). Ochre yellow, shiny. Basal piece rounded laterally and slightly narrowing dorsally. Apical piece narrowly triangular dorsally, beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1 : 2.06.

**Female.** Without distinct differences, only space between eyes slightly wider and both anterior tarsal claws with 6 or 7 visible teeth.

RLA (1-11): 0.52 : 0.43 : 1.00 : 1.01 : 1.04 : 1.08 : 1.15 : 1.13 : 1.18 : 1.04 : 1.30.

RL/WA (1-11): 1.21 : 1.31 : 2.93 : 2.29 : 2.76 : 2.07 : 2.12 : 2.28 : 2.45 : 2.10 : 3.12.

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=4). BL 5.87 mm (5.64-5.98 mm); HL 0.82 mm (0.73-0.92 mm); HW 1.00 mm (0.92-1.04 mm); OI 16.50 (15.67-17.55), PL 1.06 mm (1.00-1.11 mm); PW 1.52 mm (1.46-1.57 mm); PI 69.92 (68.49-70.54); EL 3.99 mm (3.86-4.17 mm); EW 2.11 mm (1.97-2.20 mm). Females (n=8). BL 6.78 mm (5.61-7.97 mm); HL 0.91 mm (0.80-1.10 mm); HW 1.05 mm (0.87-1.21 mm); OI 10.82 (7.52-13.47), PL 1.16 mm (0.94-1.37 mm); PW 1.71 mm (1.39-2.03 mm); PI 68.81 (63.89-74.78); EL 4.71 mm (3.79-5.54 mm); EW 2.45 mm (1.99-2.83 mm).

**Differential diagnosis.** *Hymenalia pseudojakli* sp. nov. distinctly belongs to the *Hymenalia*

*badia* group according to Dubrovina (1975). Similar species is *Hymenalia jakli* Novák, 2007. *H. pseudojakli* clearly differs from the species *H. jakli* mainly by wider space between eyes (OI of male equal to 16.5) and by only 8 teeth of male claws of ultimate protarsomere and by antennomeres 4-10 longer and narrower (RL/WA 2.4-2.9); while *H. jakli* has narrower space between eyes (OI of male equal to 10.3), male claws of ultimate protarsomere with 13 teeth and antennomeres 4-10 shorter and wider (RL/WA 2.0-2.4).

**Name derivation.** Compound name - *pseudo*- (false) and *-jakli*- indicating the resemblance in appearance between the new species and *Hymenalia jakli*.

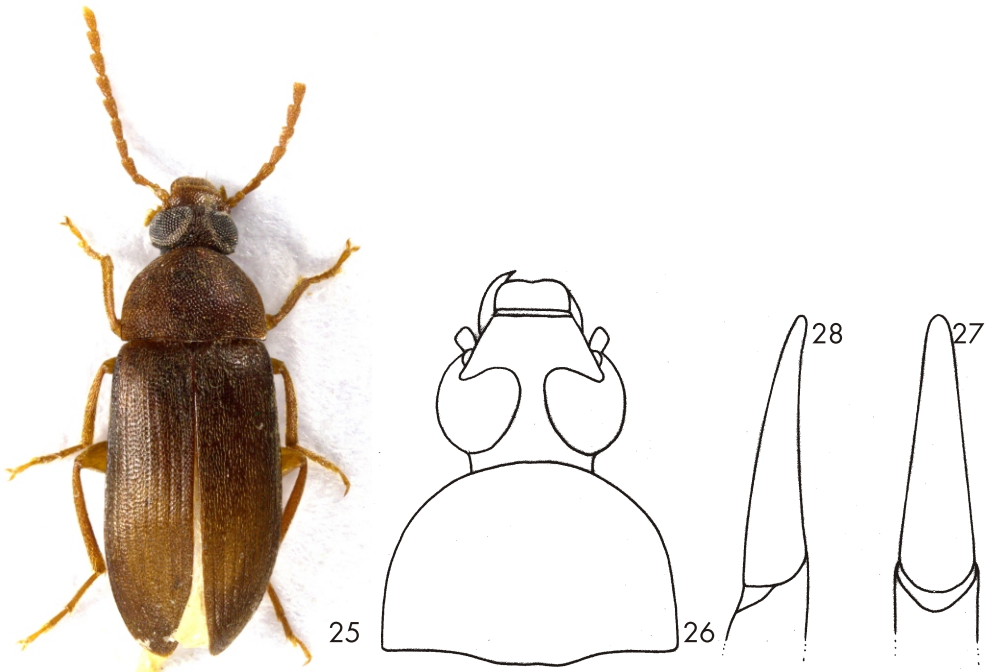
**Distribution.** Yemen.

***Hymenalia zabidica* sp. nov.**

(Figs. 25-28)

**Type locality.** South western Yemen, Wādi Zabīd, N14°09' E43°31', 325 m.

**Type material.** Holotype (♂): SW Yemen, Wādi Zabīd, / E Zabīd, 22.III.2007, / N14°09' E43°31', 325 m, / lgt. S. Kadlec // ex coll. S. Kadlec / National Museum / Prague, Czech Republic,, (NMPC). Paratypes: (5 ♂♂): same data as holotype, (NMPC, VNPC); (2 ♂♂): SW YEMEN, Wādi Zabīd E / Zabīd, N14°09' E43°31', / 325 m, 22.III.2007, / lgt. P. Kabátek, (VNPC); (1 ♂ 3 ♀♀): W Yemen, JABAL BURĀ' / NEE Al Hodaydah, / N14°52' E43°24', 261-600 m / 9.-11.IV.2007, lgt. S. Kadlec // ex coll. S. Kadlec / National Museum / Prague, Czech Republic, (NMPC, VNPC); (1 ♂): W YEMEN, Jabal Bura' NEE / Al Hodaydah, N14°52' / E43°24', 261-600 m / 9.-11.IV.2007, lgt. P. Kabátek, (VNPC).



Figs. 25-28. *Hymenalia zabidica* sp. nov.: 25- habitus of male holotype; 26- head and pronotum of male holotype; 27- aedeagus, dorsal view; 28- aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 25, body elongate-oval, from pale brown to blackish brown, slightly shiny, dorsal surface setaceous, BL 6.68 mm. Widest near two thirds elytral length; BL/EW 2.84.

Head (Fig. 26). Relatively narrow, dorsal surface with short, pale brown setation and dense punctuation, punctures medium-sized and coarse, interspaces between punctures very narrow, with fine microgranulation, shiny. HW 1.24 mm; HW/PW 0.62; HL (visible part) 0.97 mm. Posterior half blackish brown with longer dark setae behind eyes, anterior part and clypeus distinctly paler with longer golden yellow setae. Eyes large, transverse, strongly excised, space between eyes narrow; approximately as wide as length of antennomere 2, narrower than length of antennomere 3; OI equal to 16.34.

Antennae relatively short, pale brown with pale setation, fine microgranulation (AL 3.05 mm; AL/BL 0.46). Antennomeres 1, 2 slightly shiny, antennomeres 3-11 matter, with fine punctuation. Antennomeres 4-10 distinctly serrate, antennomeres 4-6 shorter than antennomere 3, antennomeres 7-11 longer than antennomere 3. Antennomere 2 shortest, antennomere 11 longest.

RLA (1-11): 0.48 : 0.35 : 1.00 : 0.96 : 0.87 : 0.99 : 1.06 : 1.07 : 1.06 : 1.02 : 1.26.

RL/WA (1-11): 1.00 : 0.86 : 2.36 : 1.79 : 1.82 : 2.18 : 2.06 : 2.00 : 1.94 : 2.13 : 2.75.

Maxillary palpus. Pale brown, with pale setation, slightly shiny. Palpomeres 2, 3 distinctly narrowest at base and widest at apex. Ultimate palpomere triangular, axe-shaped.

Pronotum (Fig. 26). Blackish brown, approximately semicircular, with short and dense golden yellow setation, dense punctuation, punctures relatively large, inside with fine microgranulation, space between punctures very narrow, shiny. PL 1.36 mm; PW 2.01 mm; PI equal to 67.63. Border lines complete, lateral margins arcuate, base slightly bisinuate. Posterior angles slightly rectangular, anterior angles indistinct, rounded.

Ventral side of body. Reddish brown, with short, pale setation and punctuation, punctures small. Abdomen pale brown with pale setation, small, shallow punctures and microgranulation.

Elytron. Blackish brown, widest near two thirds elytral length, dorsal surface with dense and short golden yellow setation, slightly shiny. EL 4.35 mm; EW 2.35 mm. EL/EW 1.85. Elytral striae with distinct rows of small-sized punctures. Elytral intervals with fine microgranulation and small punctures as large as punctures in elytral striae.

Scutellum. Small, triangular, brown, as colour as elytron itself, slightly shiny, with microgranulation, punctures and pale setae.

Elytral epipleura. Well developed, brown, slightly shiny, with pale setae and large punctures, widest near base, distinctly narrowing to ventrite 1, then wide and parallel, narrowing near ventrite 5.

Legs. Slightly shiny, with microgranulation and pale setation. Tibia and tarsi relatively narrow, with dense and relatively long setation, femora stronger, with sparse setation. Penultimate tarsomere of each tarsus distinctly widened and lobed. RLT: 1.00 : 0.59 : 0.46 : 1.06 : 2.82 (protarsus); 1.00 : 0.51 : 0.38 : 0.46 : 0.97 (mesotarsus); 1.00 : 0.43 : 0.27 : 0.53 (metatarsus).

Anterior tarsal claws with 9 visible teeth.

Aedeagus (Figs. 27, 28). Small, pale brown, shiny. Basal piece rounded laterally and distinctly narrowing dorsally. Apical piece narrowly triangular dorsally and beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece 1 : 2.85.

**Female.** Without distinct differences, only both anterior tarsal claws with 6 visible teeth.

RLA (1-11): 0.51 : 0.32 : 1.00 : 0.87 : 0.95 : 0.90 : 0.88 : 0.92 : 0.88 : 0.90 : 1.00.



RL/WA (1-11): 1.19 : 1.00 : 3.19 : 1.88 : 2.34 : 2.03 : 2.45 : 2.26 : 1.81 : 1.79 : 2.26.

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=10). BL 5.88 mm (5.13-6.68 mm); HL 0.72 mm (0.65-0.97 mm); HW 1.07 mm (0.95-1.24 mm); OI 16.26 (14.11-18.13), PL 1.18 mm (1.02-1.36 mm); PW 1.80 mm (1.56-2.01 mm); PI 65.77 (63.89-67.63); EL 3.99 mm (3.46-4.35 mm); EW 2.14 mm (1.86-2.35 mm). Females (n=3). BL 5.98 mm (5.70-6.14 mm); HL 0.77 mm (0.71-0.85 mm); HW 1.04 mm (1.00-1.08 mm); OI 15.03 (12.50-18.03), PL 1.11 mm (1.05-1.17 mm); PW 1.81 mm (1.76-1.86 mm); PI 61.32 (59.81-63.96); EL 4.10 mm (3.90-4.27 mm); EW 2.20 mm (2.17-2.25 mm).

**Differential diagnosis.** *Hymenalia zabidica* sp. nov. distinctly belongs to the *Hymenalia badia* group according to Dubrovina (1975). Similar species are *Hymenalia alenae* Novák, 2007 and *Hymenalia denticulata* (Muche, 1982). *H. zabidica* clearly differs from the species *H. alenae* mainly by narrower space between eyes (OI 16.3), by antennomeres 7-10 longer than antennomere 3, by shorter and wider antennomeres 4-10 (RL/WA 1.8-2.2); while *H. alenae* has space between eyes wider (OI 24.3), antennomere 3 longer than antennomere 4-10 and antennomeres 4-10 are narrower and longer (RL/WA 2.0-2.3). *H. zabidica* is clearly different from the species *H. denticulata* mainly by its smaller body, narrower and longer antennomeres 4-10 (RL/WA 1.8-2.2), and anterior tarsal claws with 9 teeth; while *H. denticulata* has larger body, antennomeres 4-10 wider and shorter (RL/WA 1.7-2.0) and anterior tarsal claws with 11 teeth.

**Name derivation.** Toponymic, named after the type locality - Wādī Zabīd in Southwestern Yemen.

**Distribution.** Yemen.

ACKNOWLEDGEMENTS. Sincere thanks are due to Jiří Hájek (NMPC) for the loan of material under his care. My thanks are extended to Petr Kabátek (Praha, Czech Republic) for donating new material. Special thanks are due to Zuzana Čadová (Liberec, Czech Republic) for excellent drawings.

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*Published: 31.1.2016*