Order Coleoptera, family Tenebrionidae

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INTRODUCTION

This paper deals exclusively with the subfamily Alleculinae, formerly family Alleculidae, presently one of the 10 subfamilies (Bouchard et al., 2005) of the great family of darkling beetles (Tenebrionidae). Borchmann (1910) listed 121 genera and 1075 species of this subfamily in his world catalogue of Coleoptera. Mader (1924) in „Catalogus Coleopterorum Regionis Palaearcticae" knew 38 genera and 455 species of this former family in the Palaearctic region. At present we know 43 genera from the Palaearctic region and near 680 species of Alleculinae were described (Novák, 2008 in prep.); more than 2.500 species and near 200 genera were recorded from the world up today.
We have only sporadic information about the Alleculinae of Arabic Peninsula. Pic (1923) recorded the species *Mycetocharina* (*Alleculopsis*) *ruficeps* from southwestern parts (Yemen: Aden), from Socotra island (Yemen) recently new genus *Socotralia* and three new species *S. brunnea*, *S. major* and *S. minor* (Novák, 2007a) were reported. A new genus *Cornucistela* and the species *Cornucistela serrata* were described by Campbell (1980) from Saudi Arabia. Muche (1982) reported four new species of the genus *Mycetocharina* (*M. arabica, M. braaschi, M. rufofusca and M. wittmeri*) and *Isomira* (*Asiomira*) *bicolorata* from Saudi Arabia and *Prionychus denticulata* from Saudi Arabia and Oman. *Hymenalia alenae* and *H. jakli* have recently been described from Yemen and Oman, respectively, and *Hymenalia denticulata* (Muche, 1982) was removed from the genus *Prionychus* (Novák, 2007b).
From the United Arab Emirates no species of the subfamily Alleculinae were known so far. Four species are here reported for first time. *Mycetocharina vanharteni* nov. spec. is described and illustrated.

MATERIALS AND METHODS

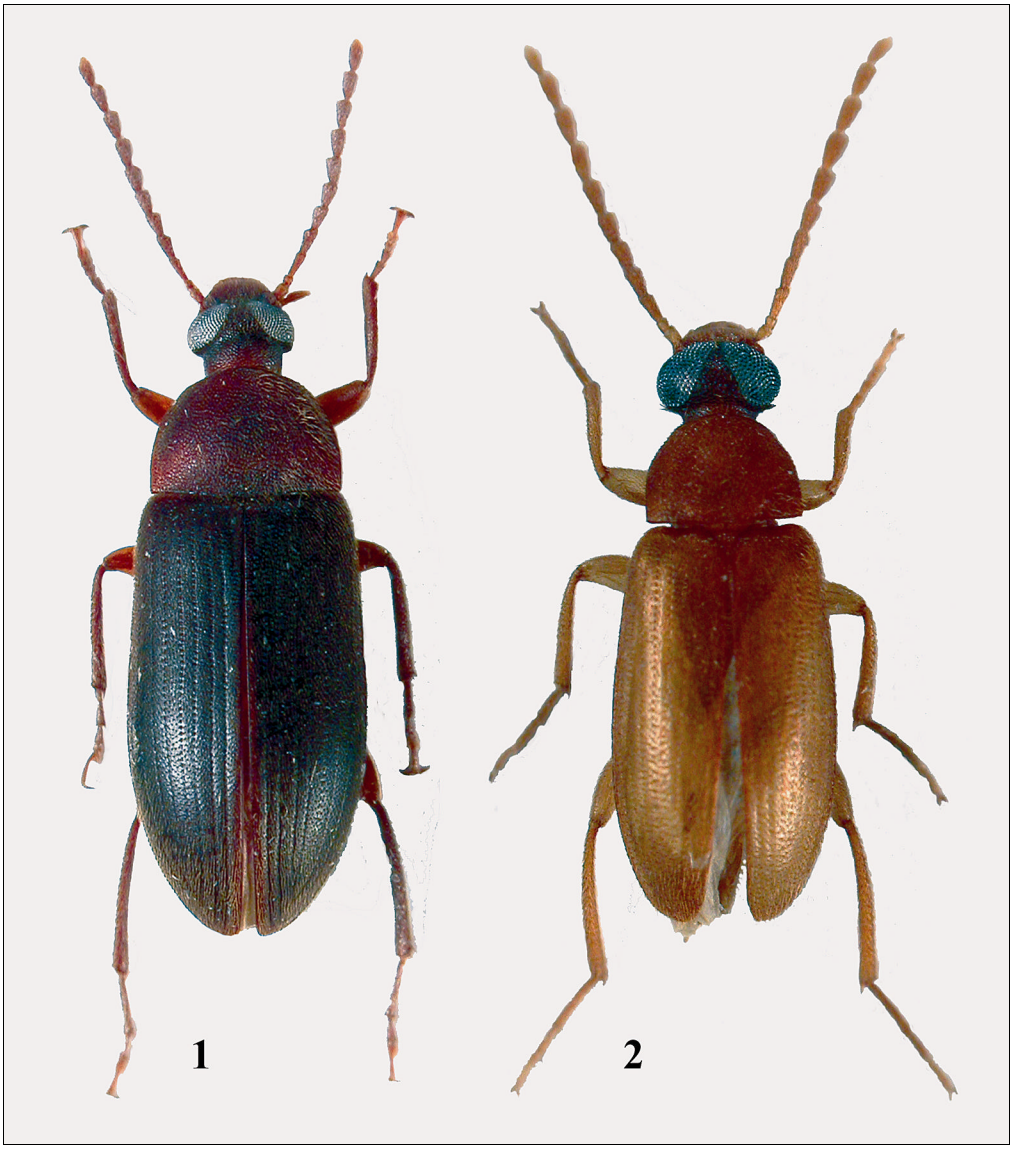
If not otherwise stated, the specimens have been collected by Antonius van Harten. They have been divided between the United Arab Emirates Invertebrate Collection, the collection of Vladimír Novák, Prague, Czech Republic and the National Museum, Prague, Czech Republic (NMPC).
Abbreviations used in the text: NARC = National Avian Research Centre; LT = light trap; WT = water trap.

SYSTEMATIC ACCOUNT

Subfamily **Alleculinae** Laporte, 1840

Tribe **Alleculini** Laporte, 1840

Hymenalia denticulata (Muche, 1982) (Plate 1)
Specimens examined: Sharjah x Khor Kalba, near tunnel, 2♂, 7♀, 16-31.i.2006, LT; 4♂, 21♀, 7-22.iii.2006, LT; 2♂, 6♀, 24-30.v.2006, LT; 3♂, 2♀, 31.v-7.vi.2006, LT. Wadi Safad, 1♀, 2-26.i.2006, WT; 3♂, 2♀, 31.i-21.ii.2006, LT; 5♂, 5♀, 21.ii-4.iii.2006, LT; 1♀, 17-24.vi.2006, LT; 1♀, 1-8.vii.2006, LT.
Length: 5-7.5 mm



Plates 1-2. 1: *Hymenalia denticulata* (Muche); 2: *Mycetocharina braaschi* Muche.

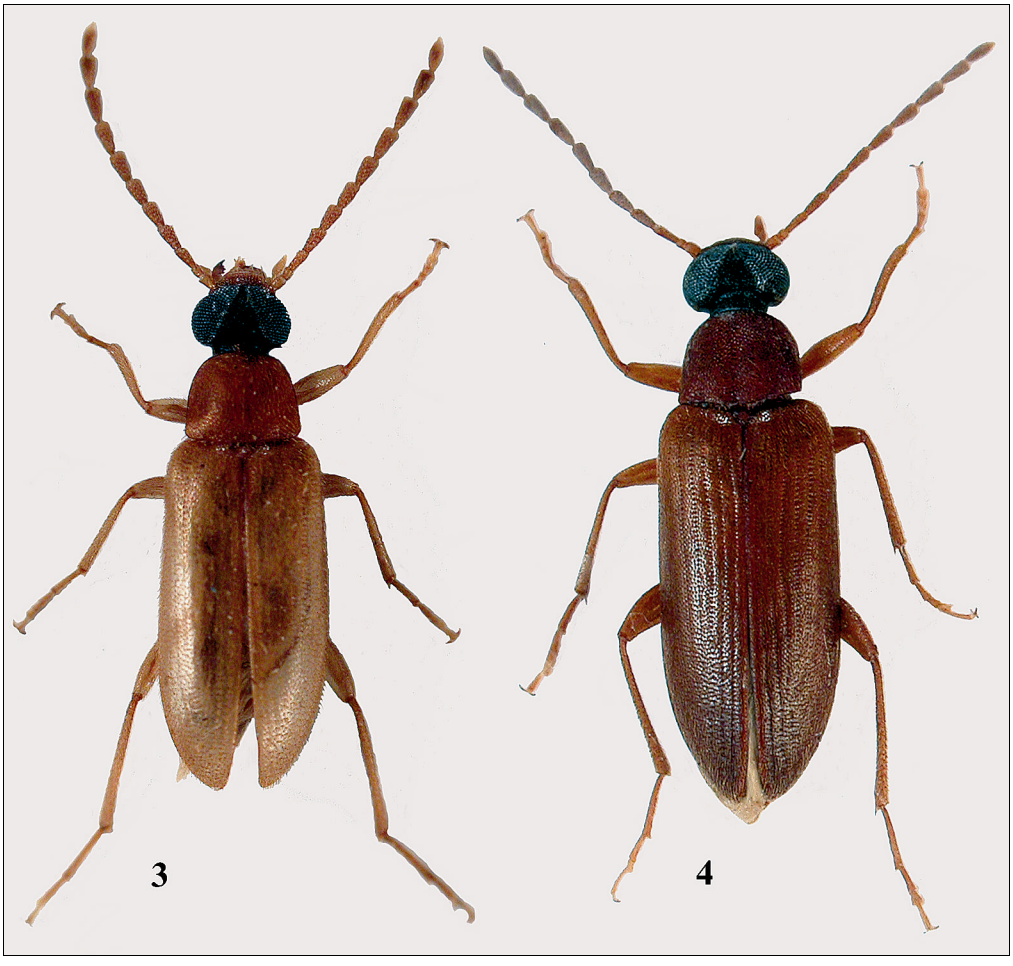
Remarks: *Hymenalia denticulata* (Muche, 1982) was recently removed from genus *Prionychus* Solier, 1835 (Novák, 2007b).
Distribution: Oman, Saudi Arabia, UAE.

Mycetocharina braaschi Muche, 1982 (Plate 2)
Specimens examined: Hatta, 1♂, 19-28.iii.2006, LT; 2♂, 1♀, 8-26.iv.2006, LT; 14♂, 2♀, 17-24.viii.2006, LT. Near Mahafiz, 3♂, 26-30.v.2006, LT; 12♂, 7-14.ix.2006, LT. Sharjah Desert Park, 1♂, 29.iii-6.iv.2005, LT; 1♂, 30.vi-21.vii.2005, LT; 1♂, 21.vii-5.viii.2005, LT; 9♂, 2♀, 20.x-

8.xi.2005, LT. Sharjah x Khor Kalba, near tunnel, 6♂, 7-22.iii.2006, LT. Wadi Maidaq, 4♂, 4♀, 27.iv-4.v.2006, LT; 11♂, 1-8.vii.2006, LT. Wadi Safad, 4♂, 17-24.vi.2006; 15♂, 1♀, 1-8.vii.2006, LT.
Length: 5-6 mm.
Distribution: Saudi Arabia, UAE.

Mycetocharina jelineki Novák, 2006 (Plate 3)
Specimens examined: Al-Ajban, 2♂, 27.v-26.vi.2006, LT. Fujairah, 1♀, 6.iv.-2.v.2005, LT. Hatta, 1♂, 19-28.iii.2006, LT. Sharjah x Khor Kalba, near tunnel, 7♂, 7-22.iii.2006, LT; 3♂, 1♀, 24-30.v.2006, LT. Wadi Maidaq, 3♂, 2-16.ii.2006, LT; 3♀, 7-14.iii.2006, LT; 5♂, 14.iii.2006, at light, leg. H. Pohl; 11♂, 9♀, 29.iii-10.iv.2006, WT; 2♂, 2♀, 27.iv-4.v.2006, LT. Wadi Safad, 1♂, 27.xi-22.xii.2006, LT.
Length: About 5 mm.
Distribution: Iran, UAE.

Mycetocharina vanharteni Novák **nov. spec.** (Plate 4, Figs 1-6)
Specimens examined: Holotype: ♂, United Arab Emirates, NARC, near Sweihan [24°24´N, 55°26´E], 14.iii-2.iv.2005, in light trap, leg. A. van Harten [NMPC]. Paratypes: 7♂, same dat; 6♂, same locality but 26.ii-2.iv.2006, LT. 3♂, al-Ajban, 26.ii-27.iii.2006, LT; 1♀, 26.ii-2.iv.2006, MT. 19♂, 5♀, near Mahafiz, 25.iii.2006, at light, leg. A. van Harten & K. Szpila. 12♂, 3♀, Sharjah Desert Park, 29.iii-6.iv.2005, 25.ii-25.iii.2006, LT; 33♂, 21♀, 17.ii-3.iii.2007, LT; 8♂, 1♀, 3-10.iii.2007, LT; 20♂, 22♀, 10-17.iii.2007, LT.
Description of the holotype: Elongate, narrow, from light brown to black head; body length 6.01 mm; 3.24 times longer than wide; widest near midlength of elytra.
Head. Relatively large, basal part black with sparse and short light setation, apical part dark brown covered in light, long and relatively dense setation, behind eyes with short and sparse dark setation, clypeus light yellowish brown. Widest across eyes, 1.14 mm (approximately 0.87 of pronotum base width). Head length (visible part) 1.10 mm. Ratio L/W (length/maximum width) 0.97. Eyes large, broad, dark and transverse, strongly excised, space between eyes very narrow, distinctly narrower than length of second antennomere. Ocular index 4.76. Mandibles light yellowish brown, apex and sides broadly darker. Basal and apical part of head densely punctuate, punctures relatively large and shallow, interspaces very narrow, not clearly conspicuous, inside of punctures with fine microsculpture, matt. Clypeus slightly shiny with very shallow large and not clearly conspicuous punctures.
Antennae. All antennomeres entirely light brown, matt, with short light setation, at apex antennomeres with a few longer setae. Antennomeres matt, with fine microsculpture and with shallow, clearly conspicuous punctures. Length 3.30 mm (reaching up 0.55 of body length). Second antennomere shortest; antennomere third shorter than antennomeres from fourth to tenth; antennomeres from fourth to tenth slightly serrate. Ratios of relative lengths of antennomeres from base to apex as follows: 0.61: 0.45: 1.00: 1.22: 1.20: 1.22: 1.22: 1.33: 1.59: 1.33: 1.39. Ratios L/W (length/maximum width) of antennomeres from base to apex as follows: 1.35: 1.15: 2.55: 2.82: 2.77: 3.26: 2.95: 2.83: 2.84: 2.72: 3.38.
Maxillary palpus. Universally light brown, same colour as antennae, legs and clypeus, distinctly lighter than other parts of body, with short and relatively dense light setation, second and penultimate palpomere with long light setae at inner part of apex; penultimate palpomere distinctly shorter than second and ultimate palpomere, broadest at apex.
Penultimate palpomere distinctly broadest at apex. Ultimate palpomere longly triangular. Ratios of relative lenghts of palpomeres from second to fourth from base to apex as follows: 1.63: 1.00: 1.75. Ratios L/W (length/maximum width) of palpomeres from second to fourth from base to apex as follows: 2.60: 1.68: 1.70.

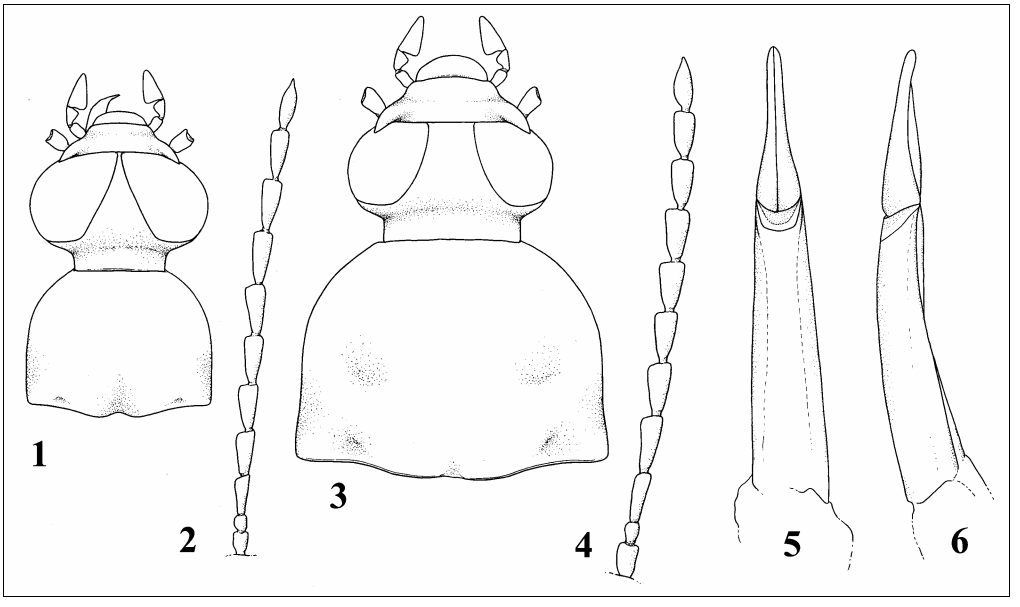


Plates 3-4. 3: *Mycetocharina jelineki* Novák; 4: *Mycetocharina vanharteni* nov. spec.

Pronotum. Universally light brown, slightly darker than elytron, with longer light setation. Margins distinct at base and at basal half of sides of pronotum, not clearly conspicuous against scutellum. Apical half of sides without distinct margins. Narrow, only slightly broader than head with eyes; 1.26 times broader its length; longest through the middle 1.00 mm; widest at base 1.26 mm. Pronotal index 79.66. Base of pronotum relatively straight, distinctly excised against scutellum, with two fine oblique basal impressions from both sides. Basal angles not rounded, distinctly obtuse angled with long ligth setae, sides stright, at apical half regularly rounded, apical angles not conspicuous, apex relatively straight. Punctures large and very shallow, not clearly conspicuous, interspaces very narrow, shiny. Underside of thorax light brown with shallow punctures and longer ligth setae in shallow punctures, interspaces with microsculpture, matt.

Elytron. Light brown, apical part darker with relatively short light setation. Setation of apical half distinctly denser. Elytral length 4.01 mm; widest near elytral half; width 1.86 mm. Ratio L/W (length/maximum width) 2.16. Rows of punctures in elytral stries clearly conspicuous.

Elytral intervals with distinct and relatively dense punctuation, punctures smaller than punctures in stries, interspaces with microsculpture, slightly shinning. Elytral epipleura well developed, light yellowish brown, lighter than elytron itself, basal part broad without setation with two rows of larger punctures, then regularly narrowed with light and relatively long light setation to first abdominal sternite, then runs parallel to rounded apex.
Scutellum regularly triangular, slightly darker than base of pronotum, with very shallow punctures and a few light setae, matt.
Legs. Universally light brown with dense and relatively short light setation. Femora stronger, tibia very narrow, narrowest at base, broadest at apex. Penultimate tarsomeres of each tarsi with membranous lobes. Ratios of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.61: 0.43: 0.36: 0.88; mesotarsus: 1.00: 0.55: 0.30: 0.38: 0.66; metatarsus: 1.00: 0.55: 0.24: 0.48.
Anterior tarsal claws both with 10 teeth.
Ventral side of body. Brown, abdomen distinctly darker, blackish brown, five segmented, with longer light setae in shallow punctures and with fine microsculpture, slightly matt; other parts distinctly lighter with longer light setae, shallow punctures and interspaces with microsculpture, more matt.
Aedeagus. Light yellowish brown, apical two third of basal piece and apical piece dorsally straight, basal third of basal piece regularly rounded, slightly shining. Basal piece relatively narrow and parallel. Apical piece approximately regularly largely triangular. Ratio of length of apical piece to length of basal piece 1: 2.7.
Variability of male paratypes: Space between eyes very narrow, distinctly narrower than length of second antennomere; third antennomere distinctly shorter than following antennomeres (4-11).
119 males: length 6.64 mm approximately (ranging from 4.88 to 7.43 mm); head length 1.05 mm approximately (ranging from 0.88 to 1.22 mm); head width 1.19 mm (ranging from 0.94 to 1.29 mm). Ocular index 4.88 approximately (ranging from 2.69 to 6.09). Pronotal length (in middle) 1.04 mm approximately (ranging from 0.78 to 1.29 mm); pronotal width at base 1.34 mm approximately (ranging from 1.01 to 1.66 mm). Pronotal index 77.11 approximately (ranging from 68.43 to 85.09). Elytral length 4.43 mm approximately (ranging from 2.93 to 5.28 mm); elytral width 1.91 mm approximately (ranging from 1.36 to 2.28 mm).
Female: Space between eyes distinctly broader, approximately same length as length of second antennomere; antennomeres from fifth to eleventh with approximately same length as antennomere third. Basal impresions of pronotum distinctly deeper. Anterior tarsal claws both with 6 teeth. Ratios of relative lengths of antennomeres from base to apex as follows: 0.60: 0.47: 1.00: 1.10: 0.97: 0.98: 1.00: 1.00: 1.00: 0.90: 1.02. Ratios L/W (length/maximum width) of antennomeres from base to apex as follows: 1.30: 1.29: 2.64: 2.46: 2.07: 1.90: 2.00: 1.93: 2.07: 2.00: 2.46. Ratios of relative lengths of tarsomeres from base to apex as follows: protarsus: 1.00: 0.50: 0.36: 0.56: 1.11; mesotarsus: 1.00: 0.49: 0.31: 0.34: 0.81; metatarsus: 1.00: 0.42: 0.23: 0.52.
57 females: length 7.92 mm approximately (ranging from 6.37 to 9.61 mm); head length 1.15 mm approximately (ranging from 0.96 to 1.33 mm); head width 1.16 mm (ranging from 1.04 to 1.26 mm). Ocular index 20.40 approximately (ranging from 16.34 to 24.04). Pronotal length (in middle) 1.31 mm approximately (ranging from 1.13 to 1.53 mm); pronotal width at base 1.69 mm approximately (ranging from 1.41 to 1.91 mm). Pronotal index 77.97 approximately (ranging from 70.80 to 83.62). Elytral length 5.30 mm approximately (ranging from 4.22 to 6.43 mm); elytral width 2.56 mm approximately (ranging from 2.01 to 3.07 mm).



Figs 1-6. *Mycetocharina vanharteni* nov. spec. 1: Head and pronotum of ♂ (holotype); 2: Antenna of ♂ (holotype); 3: Head and pronotum of ♀; 4: antennae of ♀; 5-6: ♂ aedeagus, dorsal and lateral view (holotype).

Differential diagnosis: *Mycetocharina vanharteni* nov. spec. differs from other species of the genus Mycetocharina mainly by black head and large, brown body; from closely related species *Mycetocharina afghanica* Muche, 1982 (species with dark head and body) by dark blackish brown abdominal sternites, by narrower space between eyes and by apical half of sides of pronotum without distinct margins. (*Mycetocharina afghanica* Muche, 1982 with light brown abdominal sternites, broader space between eyes and distinct margins at apical half of pronotum.)

Etymology: Dedicated to the collector of the type material, Antony van Harten.

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