

**Smicromyrme pilisensis sp. n. from Hungary
(Hymenoptera: Mutillidae)**

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Abstract – A new species of velvet ants, *Smicromyrme pilisensis* sp. n. is described from Hungary. With 7 figures.

Key words – Hymenoptera, Mutillidae, Hungary, velvet ants, new species.

INTRODUCTION

During the revision of the Mutillidae of Hungary, a few peculiar female specimens were collected in the lower part of the Pilis Mountains, in the administrative area of the village Pilisborosjenő, and one conspecific female was found in the private collection of the senior author with the village Pákozd as collecting locality. Based on the works of BAJÁRI (1956), BOGUSCH (2006), INVREA (1964), LELEJ (1985, 2002), LELEJ & SCHMID-EGGER (2005), LELEJ & YILDIRIM (2009) and PETERSEN (1988), it was impossible to identify them. Later, the junior author recognized a male specimen of an unknown species from the village Sósút, from the same private collection. These specimens apparently represent one morphospecies of female and one morphospecies of male belonging to the subgenus *Astomyrme* SCHWARTZ, 1984, and it is believed that they are the opposite sexes of one species which is described below. No other species of *Astomyrme* is known to occur in Hungary.

Abbreviations of depositories – BMNH = Natural History Museum, London, United Kingdom; CJM = private collection of JÓZSEF MUSKOVITS, Budapest, Hungary; HNHM = Hungarian Natural History Museum, Budapest, Hungary; IBSS = Institute of Biology and Soil Science, Vladivostok, Russia.

***Smicromyrme (Astomyrme) pilisensis* sp. n.**
(Figs 1, 3, 4, 6)

Type material – Holotype (female): “HUNG., Pest county, Pilisborosjenő, Malom-dűlő, 21.VI.2008, leg. J. Muskovits”; “Holotypus ♀ *Smicromyrme pilisensis* Muskovits et Lelej, 2010” [red label]. The holotype is deposited in the collection of the Hungarian Natural History Museum (Hym. Typ. No. 15001). Paratypes. 30 females: HUNG., Pest county, Pilisborosjenő, Malom-dűlő, 5.IX.2006 (1, CJM); same locality and collector, 8.V.2007, leg. J. MUSKOVITS (1, HNHM, Hym. Typ. No. 15002); same locality and collector, 21.V.2007 (1, BMNH, 1, HNHM, Hym. Typ. No. 15003, 2, CJM); same locality and collector, 26.V.2007 (2, CJM); same locality and collector, 31.V.2007 (1, HNHM, Hym. Typ. No. 15004, 1, CJM); same locality and collector, 4.VI.2007 (1, IBSS, 1, CJM); same locality and collector, 23.VI.2007 (1, IBSS); same locality and collector, 30.VI.2007 (1, IBSS); same locality and collector, 1.VII.2007 (2, CJM); same locality and collector, 19.VIII.2007 (1, CJM); same locality and collector, 7.X.2007 (1, CJM); same locality and collector, 8.V.2008 (2, CJM); same locality and collector, 17.V.2008 (1, BMNH, 1, CJM); same locality and collector, 26.V.2008 (2, CJM); same locality and collector, 10.VII.2008 (1, HNHM, Hym. Typ. No. 15005, 1, CJM); same locality and collector, 1.IX.2008 (1, IBSS); same locality and collector, 11.V.2009 (1, HNHM, Hym. Typ. No. 15006, 1, CJM); HUNG., Fejér county, Pákozd, Sár-hegy, 22.VIII.2008, leg. J. MUSKOVITS (1, HNHM, Hym. Typ. No. 15007). 1 male: HUNG, Pest county, Sósút, 1.VIII.2007, leg. J. MUSKOVITS leg. (1, HNHM, Hym. Typ. No. 15008).

Description – Female (Fig. 1). Body length 5.5–8.0 mm. Head, in dorsal view, rounded behind eyes, about 1.25 times wider than mesosoma. Frons and vertex coarsely and densely punctate. Clypeus convex with small median basal tubercle. Flagellomere 1 about 1.2 times longer than wide. Length ratio of pedicel and three first flagellomeres 0.5:1.0:1.0:1.0. Maxillary palps more than 2 times longer than mandibular length. Mandibles tridentate with two small (sometimes barely visible) inner denticles (Fig. 4). Mesosoma quadrangular in shape, 1.25 times longer than wide; anterior and posterior angles nearly rectangular, sharp. Mesosoma coarsely and densely punctate, scutellar scale scarcely visible, V-shaped, but present. Metasomal segment 1 about 4 times wider than long. Metasomal tergum 2 with long lateral felt line, sternum 2 with much shorter lateral felt line. Metasomal segment 2 densely punctate. Pygidium oblong-ovate in shape, with wrinkles more or less winding or straight with apex smooth shiny (Fig. 6).

Vertex, occiput and other parts of head black, with dark recumbent and scattered long erect setae. Antennae rusty red, with brown scape. Mandibles rusty-brown basally, darkening toward apex. Palps brown. Legs chestnut-brown, with silvery erect setae. Mesosoma

rusty red, with mixed recumbent short rusty red, and scattered erect dark setae. Metasoma black, with scattered dark erect long setae. Tergum 2 basally with median and two lateral whitish spots, median oblong spot almost touch anterior margin; posteriorly with whitish band, which medially triangularly widened. Tergum 3 entirely covered by whitish band of pubescence. Terga 1, 4 and 5 with black setae only. Felt lines on tergum 2 and sternum 2 whitish.

Male (Fig. 3). Body length 9.0 mm. Body robust. Head with developed postero-lateral corners (dorsal view). Ocelli small. Ratio of postocellar distance to oculo-ocellar distance 0.9. Clypeus concave with weak preapical two lateral and median tubercles. Mandible tridentate without ventro-basal tooth. Flagellomere 1 0.53 times flagellomere 2, the latter equal to flagellomere 3. Mesosoma more or less rectangular. Forewing slightly darkened, more darkened distad of cells. Posterior border of pterostigma thickened. Forewing venation see Fig. 7. Posterior border of second submarginal cell (*2r-m*) weakly thickened. Propodeum posteriorly abrupt. Posterior coxa mesally carinate, carina not acuminate apically. Genital volsella not longer than penial valva. Head and antennae black, mesosoma rusty red with black mesopleuron beneath. Legs black with chestnut tarsi. Body and legs with sparse recumbent yellowish setae which form fringe on posterior border of metasomal terga 1–4 and sterna 2–6 and weak band on terga 2 and 3, terga 4 and 5 with mixed recumbent and erect yellowish setae.



Figs 1–2. Habitus of females, 1 = *Smicromyrme pilisensis* sp. n., 2 = *Smicromyrme triangularis* (RADOSZKOWSKI, 1865)

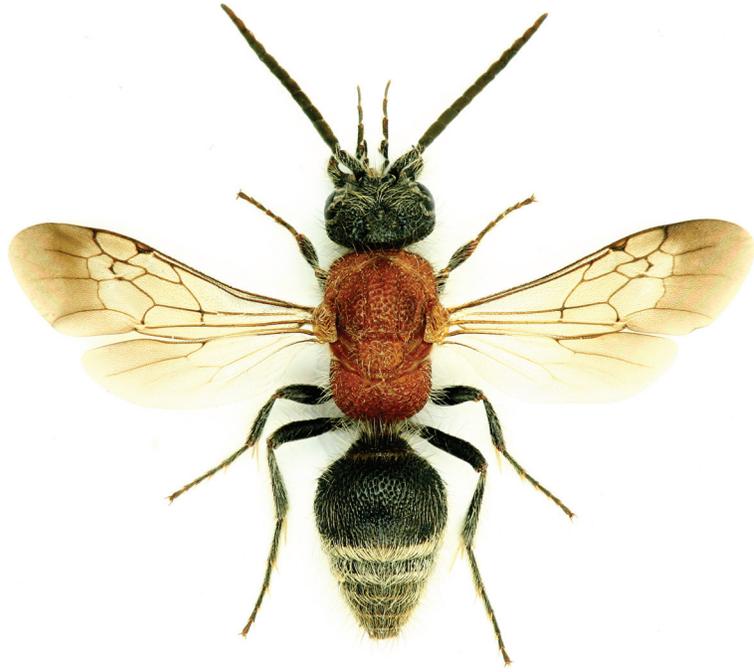
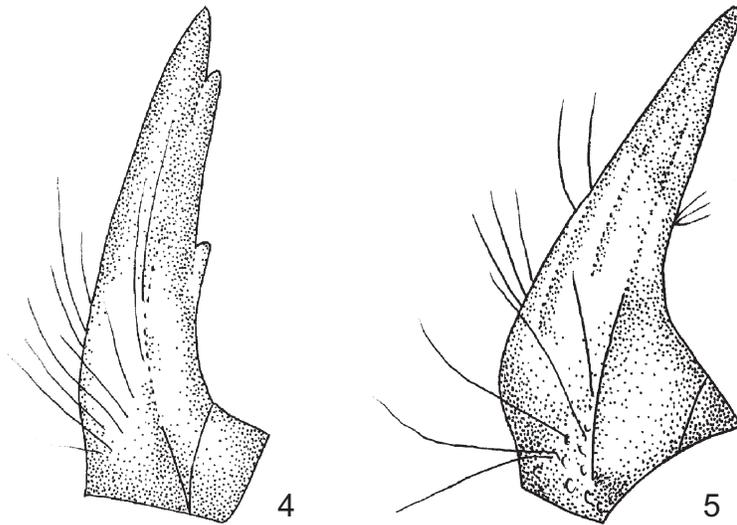
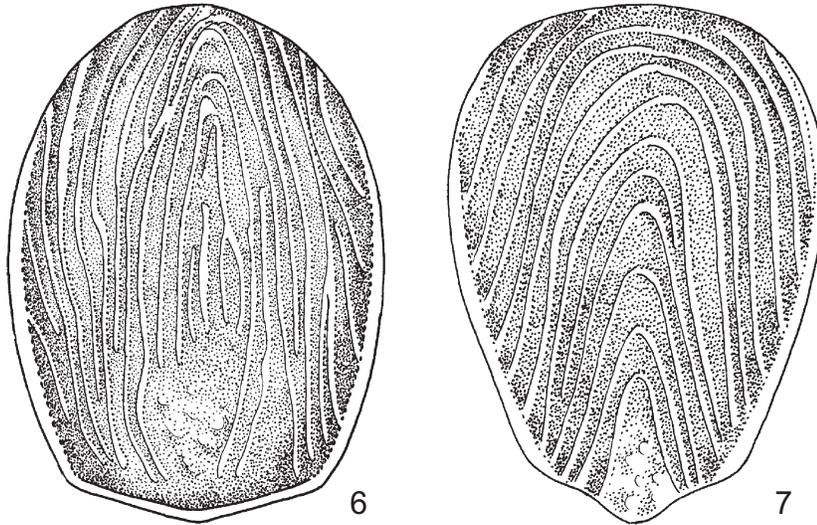


Fig. 3. Habitus of male *Smicromyrme pilisensis* sp. n.



Figs 4–5. Mandible of females, 4 = *Smicromyrme pilisensis* sp. n., 5 = *Smicromyrme triangularis* (RADOSZKOWSKI, 1865)



Figs 6–7. Pygidial plate of females, 6 = *Smicromyrme pilisensis* sp. n., 7 = *Smicromyrme triangularis* (RADOSZKOWSKI, 1865)

Diagnosis – The female of the new species is closely related to one of *Smicromyrme* (*Astomyrme*) *ausonius* INVREA, 1950 (female from Liguria, Italy is studied, not occurring in Hungary), but differs by having larger body size (3.0–6.0 mm in *S. ausonius*), by having wide V-shaped scarcely visible scutellar scale (well visible scale-like in *S. ausonius*), by having dense elongate punctures on metasomal tergum 2 (rounded sparser punctures in *S. ausonius*). The male of the new species is similar to that of *S. ausonius* INVREA, 1950, but differs by having genital volsella not longer than penial valva (distinctly longer in *S. ausonius*), by having mesosoma rusty red with black mesopleuron beneath (at least propodeum black in *S. ausonius*), by having more abundant pale setae (black setae on tegula and scutum, and sparser whitish setae on metasoma in *S. ausonius*).

Of the species known to occur in Hungary, the female of the new species is similar to the female of *Smicromyrme triangularis* (RADOSZKOWSKI, 1865), the differences between them are given in the table below.

	<i>Smicromyrme pilisensis</i> sp. n.	<i>Smicromyrme triangularis</i> (RADOSZKOWSKI, 1865)
Mandibles	Sharp, tridentate, with two small denticles on inner edge (Fig. 4)	Sharp, mostly without denticles (Fig. 5)
Antennae	Scape dark, other parts of antennae reddish-brown, not darkening toward apex	Scape dark, other parts of antennae reddish-brown, darkening toward apex
Head	Vertex with sparse black setae only	Vertex with recumbent yellowish setae
Mesosoma	Anterior angles more or less rectangular (Fig. 1); dorsum (lateral view) slightly convex, coarsely punctate	Anterior angles rounded (Fig. 2); dorsum (lateral view) almost straight, densely punctate
Scutellar scale	Scarcely visible, V-shaped, but present	Wide, nail-like, about 1/6 times shorter than width of propodeum
Legs	Chestnut brown, femora not darker	Chestnut brown, femora darker
Pygidial plate	Oblong-ovate, with wrinkles more or less winding or straight, apex more or less smooth, shiny (Fig. 6)	Triangular, widened basally, distinctly bordered, with longitudinal wrinkles reaching apex (Fig. 7)
Body length	5.5-8.0 mm	3.0-6.0 mm

Etymology – The specific epithet (a Latin adjective) refers to the Pilis Mountains in Hungary, located to north-west direction from Budapest, where most of the specimens were found.

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