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A new species of *Mycomya* RONDANI from Siberia (Diptera: Mycetophilidae)

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Abstract. Three species of the genus and subgenus *Mycomya* RONDANI are recored from Yakutia, a province of Russian Siberia: *Mycomya* (*Mycomya*) *fornicata* (LUNDSTRÖM, 1911), *Mycomya* (*Mycomya*) *tenuis* (WALKER, 1856) and a new species described herein.

Key words: Mycetophilidae, *Mycomya*, new species, Siberia, Yakutia.

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I. INTRODUCTION

The genus *Mycomya* RONDANI belongs to the subfamily Mycomyinae within the Mycetophilidae. Most information on the characteristics and classification of *Mycomya* was provided by VÄISÄNEN (1984) in his monumental monograph of this genus, dealing with 164 Holarctic species. Since then, new species were described from Europe (PAPP 2003), Himalaya (VÄISÄNEN 1996), South Africa (VÄISÄNEN 1994) and from China (WU & YANG 1990, 1995a, b; WU et al. 2001, and the literature cited therein), and recently the genus comprises c. 220 species.

Fossil record of Mycetophilidae reaches the Lower Cretaceous (BLAGODEROV & ARILLO 2002; BLAGODEROV & GRIMALDI 2004). The genus *Mycomya* is known since the Upper Eocene; several species were described by MEUNIER from the Baltic amber (MEUNIER 1904, 1916).

On a field expedition to Yakutia, eastern part of Russian Siberia, several specimens of *Mycomya* were collected by W. KRZEMIŃSKI. They represent two known and one new species described below.

Terminology of wing venation in Mycetophilidae is not established, and currently four systems are in use. Their thorough review, as well as plausible homology, was presented by BLADOGEROV & GRIMALDI (2004), and the nomenclature of these authors is applied herein. The terminology of genitalia follows VÄISÄNEN (1984) and VOCKEROTH (1981).

Abbreviations:

ISEZ – Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Kraków, Poland.

II. SYSTEMATIC PART

Family: Mycetophilidae EDWARDS 1924

Subfamily: Mycomyinae TUOMIKOSKI 1966

Genus: *Mycomya* RONDANI 1856

Subgenus: *Mycomya* RONDANI 1856

Species group: *ornata* (sensu VÄISÄNEN 1984)

Mycomya* (*Mycomya*) *blagoderovi n. sp.

Figs 1-2

D i a g n o s i s. Male genitalia of this species key to the *ornata* group of species, as diagnosed by VÄISÄNEN (1984). Wing characteristic by Sc ending in R1 beyond mid of small cell. Male genitalia: two narrow, divergent finger like appendages at tergal side; basal lobe of gonostylus large, broadly ovate, with two combs of five cones; synsclerite with two large submedian appendages of leaf shape. Parameres of size and shape comparable to submedian appendages. Female: sternite 8 only shallowly emarginated into two terminal lobes, with a small central tooth between them. Sternite 10 long, reaching end of first cercus in lateral view.

E t y m o l o g y. The new species name is dedicated toVladimir A. BLAGODEROV, a world known specialist of fossil and Recent Mycetophilidae, with thanks for a very helpful website *sciaroidea.info*.

M a t e r i a l e x a m i n e d. Holotype male, Russia: Yakutia, Aldan riv., left shore, 20 km, below Dzhabarika-Khaia; 27. VIII.1990 (coll. W. KRZEMIŃSKI). Housed in ISEZ. Paratype female, same data.

D e s c r i p t i o n. Body color of male and female: head dark brown; first segments of antenna yellow, from second flagellomere on darkening gradually to brown. Scutum, scutellum, mesanepisternum, mesokatepisternum and laterotergite brown, contrasting with light brown mediotergite and pale yellow coxae. Haltere pale, including knob. Femora 2 and 3 light yellowish, remainder of legs darker, light brown. Wing membrane light brown infuscated.

Head. Antenna entirely preserved in female, as long as head and thorax together (Fig. 1B). Scape twice as long as wide, and equal in size to first flagellomere; pedicel half as short as wide and slightly wider than scape. First flagellomere thickest of all, twice as long as wide; second flagellomere smaller, but of similar proportions.

Thorax: scutellum with two long setae; all lateral sclerites without setae.

Legs: coxa 1 of male without the “ornate” patch of setae (and in accordance with remark of VÄISÄNEN (1984) that this patch is absent from some non-European species of the

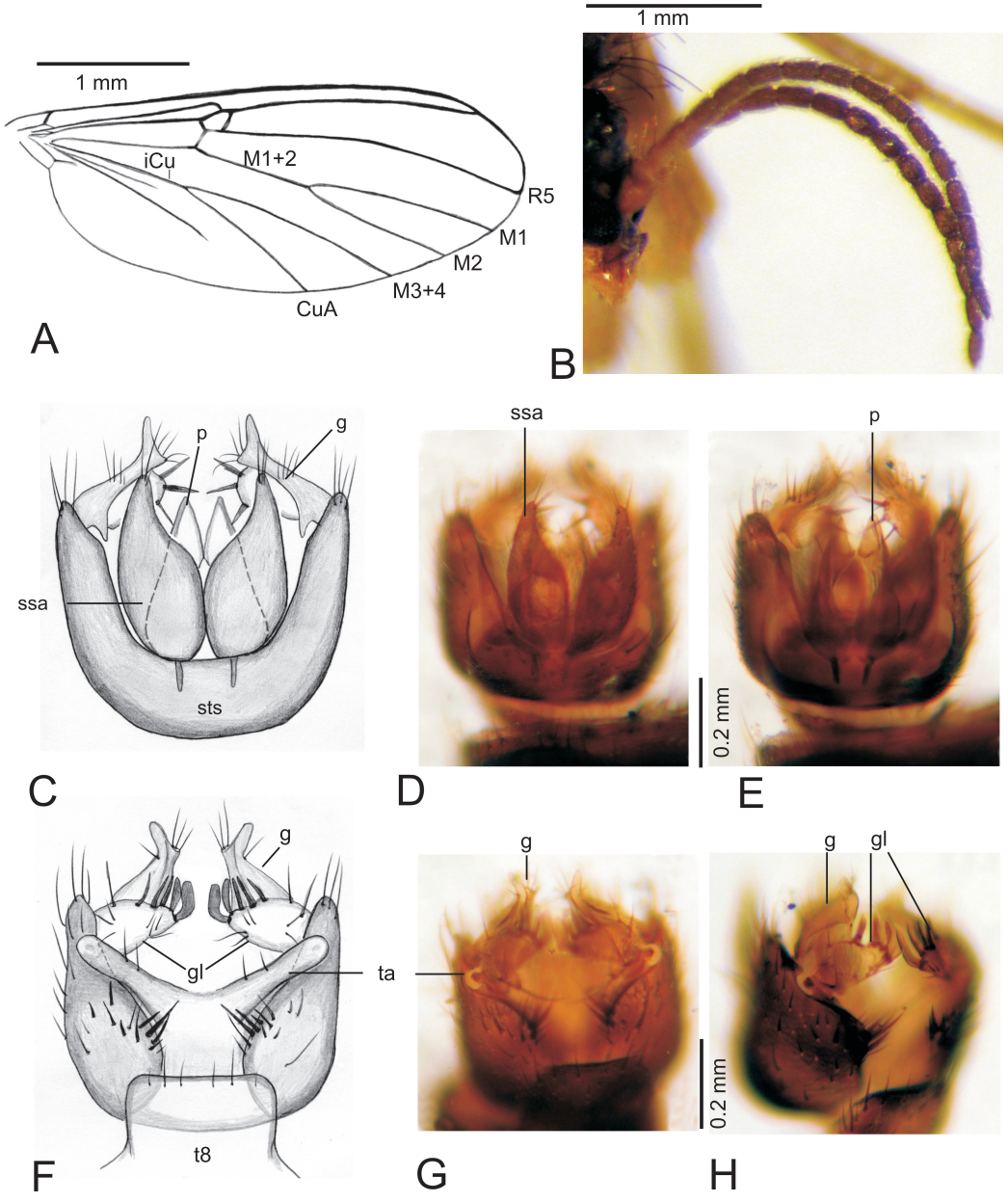

Fig. 1. *Mycomya (Mycomya) blagoderovi*, n. sp. A, C-E – holotype, male. A, wing; C-E – genitalia, sternal view; F-G – tergal view; H – laterotergal view (g – gonostyle; gl – lobe on gonostyle; p – paramere; ssa – sternal submedian appendage; sts – sternal synsclerite; t8 – tergite 8; ta – tergal appendage).

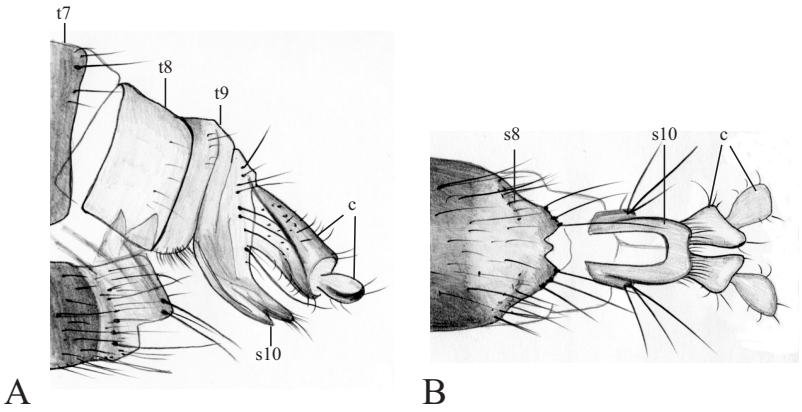

Fig. 2. *Mycomya* (*Mycomya*) *blagoderovi*, n. sp., paratype female, genitalia: A – lateral view; B – sternal view (c – cerci; s8, s10 – sternite 8, 10; t7, t8, t9 – tergites 7-9).

ornata group). Fore legs are missing in holotype; basitarsus/tibia length ratio in remaining legs are: bt2/t2 = 0.92; bt3/t3 = 0.64. Similar proportions in the female.

Wing (Fig. 1A) 3.6 mm long in male, 3.7 in female. C ending in tip of R5 at wing apex. Sc ending in R1 at about distal third of small cell; small cell trapezoid, only 1.5x as long as wide (measures taken across longest and widest sections, respectively). fork of iCu into M3+4 and CuA distinctly proximal to fork of M1+2. M petiole short; M1+2/M1 = 0.62, M1+2/M2 = 0.75. Cu petiole of medium length; Cu/M3+4 equals 0.67, iCu/CuA equals 0.97 (in terminology of VÄISÄNEN (1984) vein iCu corresponds to Cu, M3+4 to Cu1, and CuA to Cu2). Hypopygium (Fig. 1C-H). Tergal view (Fig. 1F-G): central processus divided into two narrow, divergent finger like appendages. Tergum deeply excised, with two groups of strong bristles on both sides. Gonostylus in lateral view broad, bent in mid to ventral side, with two groups of short setae: at the bending point and near the apex. Basal lobe of gonostylus (*gl* in Fig. 1F, H) is large, broadly ovate, with two combs of 5 cones on both sides and additional strong bristles. Sternal view (Fig. 1C-D): synsclerite with two characteristic, very large submedian appendages of leaf shape, ending sharp, slightly emarginated at mesal apical sides, and provided with apical group of four stronger setae. Parameres (Fig. 1E) of size and shape comparable to submedian appendages: large, leaf like in sternal view. Aedeagus apparently small, not distinguishable.

Female genitalia (Fig. 2). Sternite 8 only shallowly emarginated into two terminal lobes provided with three strong bristles (Fig. 2B); between lobes a small central triangular protrusion is present, not described earlier in this genus. Sternite 10 long, reaching end of first cercus in lateral view (Fig. 2A). First cercus large, broadly cylindrical; second cercus small, ovate.

Species group: *marginata* (sensu VÄISÄNEN)

Mycomya* (*Mycomya*) *fornicata (LUNDSTRÖM, 1911)

Mycomya fornicata (LUNDSTRÖM, 1911): VÄISÄNEN: 168-170; Fig. 567-577 (older recodrs therein)

Mycomya fornicata (LUNDSTRÖM, 1911): LANDROCK 1926-1927: 46

Sciophila fornicata LUNDSTRÖM, 1911: 395.

Material examined. Russia: Yakutia, Aldan riv., left shore, 20km, below Dzhabarika-Khaia; 27. VIII.1990 – 1 male (coll. W. KRZEMIŃSKI). Housed in ISEZ.

This Palaearctic species is already known from Siberia (various localities in VÄISÄNEN 1984).

Species group: *tenuis* (sensu VÄISÄNEN 1984)

Mycomya* (*Mycomya*) *tenuis (WALKER, 1856)

VÄISÄNEN p. 115-119: Fig.362-369; older records and full list of synonyms therein

Sciophila tenuis WALKER, 1856: 37

Material examined. Russia: Yakutia, Aldan riv., left shore, 20km, below Dzhabarika-Khaia; 27. VIII.1990 – 1 male (coll. W. KRZEMIŃSKI). Housed in ISEZ.

The species, according to VÄISÄNEN (1984), is recorded from Scandinavia to Roumania and Hungary, and from Great Britain to European part of Russia (Sankt Petersburg; in the literature also a former name: Leningrad is in use); however, till now not known from outside Europe. This single male extends distribution of *M. tenuis* to far eastern Asia.

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REFERENCES

BLAGODEROV V., ARILLO A. 2002. New Sciaroidea (Insecta Diptera) in Lower Cretaceous amber from Spain. *Studia dipterologica*, **9**: 3-12.

BLAGODEROV V., GRIMALDI D. 2004. Fossil Sciaroidea (Diptera) in Creataceous Ambers, Exclusive of Cecidomyiidae, Sciaridae, and Keroplatidae. *American Museum Novitates*, **27**(34331): 1-76.

MEUNIER F. 1916. Beitrag zur Monographie der Mycetophiliden und Tipuliden des Bernsteins. *Zeitschrift der Deutschen Geologischen Gesellschaft* (A), **68**: 477-493.

PAPP L. 2003. Foundations for faunistics of *Mycomya* Rondani of Hungary (Diptera: Mycetophilidae). *Folia entomologica hungarica*, **64**: 297-307.

VÄISÄNEN R. 1984. A monograph of the genus *Mycomya* Rondani in the Holarctic region (Diptera, Mycetophilidae). *Acta Zoologica Fenica*, **177**: 1-346.

VÄISÄNEN R. 1994 New Mycomyinae from South Africa (Diptera: Mycetophilidae). *Entomologica Fenica*, **15**: 13-26.

VÄISÄNEN R. 1996 New *Mycomya* species from the Himalayas (Diptera: Mycetophilidae): 1. Subgenus *Mycomya*. *Entomologica Fenica*, **29**: 99-132.

VOCKEROTH J. R. 1981. Mycetophilidae. [In:] J. F. McALPINE, B. V. PETERSON, G. E . SHEWELL, H. J. TESKEY, J. R. VOCKEROTH, D. M. WOOD. (Coord.) – Manual of Nearctic Diptera. Canada Department of Agriculture Research Branch Monograph **27**(1): 223-246.

WU H., YANG C. 1990. Two new species of Mycetophilids (Diptera: Mycetophilidae) from Mongolia. *Entomotaxonomia*, **12**: 275-278.

WU H., YANG C. 1995a. Two new species of Mycomya (Diptera: Mycetophilidae) from Shanxi province, north China. *Entomotaxonomia*, **17**: 47-50.

WU H., YANG C. 1995b. A new species of the genus *Mycomya* from Sichuan province, China (Diptera: Mycetophilidae). *Acta Zootaxonomica Sinica*, **20**: 232-233.

WU H., ZHENG L., XU H. 2001. Three new species of the *Mycomya* in China (Diptera: Mycetophilidae). *Acta Zootaxonomica Sinica*, **26**: 269-272.