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Mirekiana gen. nov., a new genus of dung flies (Diptera: Scathophagidae) from the Czech Republic

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Abstract. A new genus of the family Scathophagidae from the Czech Republic is described: *Mirekiana* gen. nov. with the type species *Cleigastra anthrax* Schiner, 1864. *Mirekiana anthrax* (Schiner, 1864) comb. nov. from the Palaearctic Region is redescribed, diagnostic characters are given and figured. Comments on generic classification, differential diagnosis of the new genus and nearest genera are given and basic diagnostic characters are illustrated.
Key words. Diptera, Scathophagidae, *Mirekiana* gen. nov., taxonomy, faunistics, Czech Republic, Palaearctic Region.

INTRODUCTION

The Palaearctic fauna of the subfamily Delininae is currently known to contain five genera and 13 species (Šifner 2008, Ozerov 2009), including four species with Holarctic distribution (Vockeroth 1965). The species of the genus *Delina* Robineau-Desvoidy, 1830 were revised by Ozerov (2009), who placed all species excluding *Delina nigrita* (Fallén, 1819) in the genus *Neochirosia* Malloch, 1917. One of these species, *Delina anthrax* (Schiner, 1864), is considerably different from remaining congeners. I redescribe this species on the basis of specimens from localities with a growth of *Veratrum album* ssp. *lobelianum* in the Czech Republic with emphasis on characters on the legs of males, the genitalia of both sexes and the shape of the abdominal sternites of females. I propose a new genus *Mirekiana* gen. nov., to accommodate these findings.

MATERIAL AND METHODS

The abbreviations and terms used in the text are as follows: NP – National Park, NNR – National Nature Reserve, NR – Nature Reserve, PLA – Protected Landscape Area, MT – Malaise traps, YPT – yellow pan water traps. All specimens mentioned in this paper are deposited in the author's collection. Morphological terms follow Papp & Darvas (2000).

Genus *Mirekiana* gen. nov.

Type species. *Cleigastra anthrax* Schiner, 1864, by present designation

Diagnosis. Principal diagnostic characters of the new genus are as follows: (i) postpronotal callus with two bristles, its front part with 8–12 spine-like additional short bristles; (ii) double rows of very short spine-like anteroventral bristles on fore and mid femora of males; (iii) single row of 8–10 long and fine ventral bristles on fore femora of females; (iv) fore tibiae and all tarsomeres of both sexes yellow or yellow-brown, the whole body black and shiny in both sexes; (v) male pregonite prolonged, with short and black fine apical bristles (Fig. 1); (vi) male distiphallus with two long sabre-like and apically pointed projections (Fig. 1); (vii) female sternite 8 fused with tergite 8, densely bristled apically, permathecae spherical (Fig. 2)

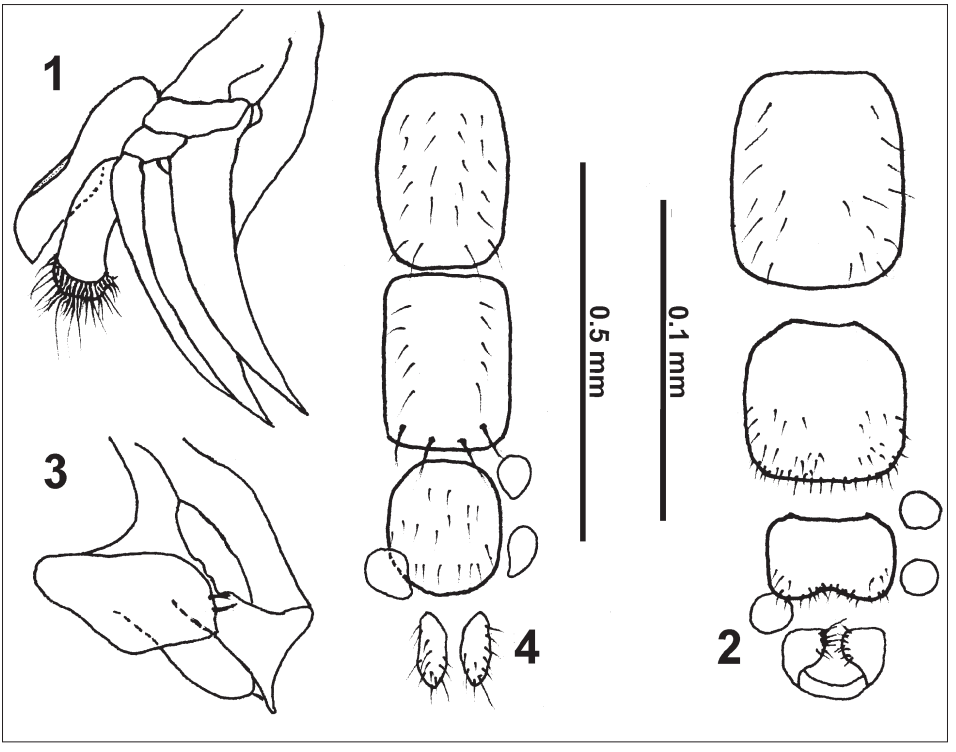
Differential diagnosis. *Mirekiana* gen. nov. can be separated from other genera of the subfamily Delininae by characters summarised in the following key.

1. One katepisternal bristle . . . . . ***Americina*** Malloch, 1923, ***Leptopa*** Zetterstedt, 1838, ***Micropselapha*** Becker, 1894
– Two or three katepisternal bristles 2
2. Two katepisternal bristles . . . . . ***Delina*** Robineau-Desvoidy, 1830
– Three katepisternal bristles 3
3. Postpronotal callus with 2–4 short fine bristles in front part, one row of long anteroventral bristles on fore and mid femora of both sexes, male pregonite large (Fig. 3), female sternite 8 bipartite, both parts prolonged and small, with fine bristles only (Fig. 4), three spermathecae weakly prolonged. . . . . ***Neochirosia*** Malloch, 1917
– Postpronotal callus with 8–12 spine-like short bristles in front part, double rows of very short spine-like anteroventral bristles on fore and mid femora of males, male pregonite prolonged with short and black fine apical bristles (Fig. 1), male distiphallus with two long sabre-like, apically pointed projections (Fig. 1), female sternite 8 fused with tergite 8 and densely bristled apically (Fig. 2), three spermathecae spherical. . . . . ***Mirekiana*** gen. nov.

Etymology. I dedicate this genus to my son Mirek. Gender is feminine.

Comments. The placement of *Chylizosoma sellatum* Hackman, 1956 in the genus *Delina* (cf. Gorodkov 1986: 38) was accepted by the author on the basis of published data only (cf. Šifner 2008: 86), without a possibility of a verification. The species *Delina veratri* (Hendel, 1925) was synonymized by Šifner (2003, 2008) with *Delina nigriceps* (Becker, 1894), but Ozerov (2009) revalidated it as a separate species. I accept this act although I have some doubts. I accept without reservation that *Chirosia cepelaki* Teschner, 1978 is identical with *D. nigriceps* Becker (cf. Šifner 2008: 175) or with *D. veratri* Hendel (sensu Ozerov 2009: 239).

The number of spine-like bristles on postpronotal lobes is not a crucial character; these bristles may be not present in some genera as well as some species (*Gimnomera* spp.).



Figs. 1–2. ***Mirekiana anthrax*** **(Schiner), comb. nov.: 1 – male pregonite and distiphallus; 2 – female abdominal sternites 5–8 with spermathecae.**

Figs. 3–4. ***Neochirosia atrifrons*** **(Coquillett): 3 – male pregonite and distiphallus; 4 – female abdominal sternites 5–8 with spermathecae.**

Scale bars: 0.5 mm (Figs. 2–4); 0.1 mm (Figs. 1–3).

Under these circumstances, I regard the following characters as basic and significant: the number of katepisternal bristles, the shape and the size of the palpus, the shape and number of bristles on pregonite and postgonite of males and the shape of abdominal sternites of both sexes and, to a lesser degree, the shape of distyli and cerci of males.

Mirekiana anthrax (Schiner, 1864), comb. nov.

(Figs 1–2)

Cleigastra anthrax Schiner, 1864: 11.

Cleigastra carbonaria Pokorny, 1887: 411.

Neochirosia anthrax (Schiner): Ozerov (2009): 237 (new combination).

Material examined. Czech Republic: Bohemia: Krkonoše Mts (NP), Úpské řašeliniště NNR, peat bog, 21.–22.vi.1966, 7 ♂♂ 5 ♀♀;11.vi.1970, 1 ♂; 20.vii.1975, 4 ♂♂ 6 ♀♀; 7.vii.1976, 2 ♂♂ 2♀♀; 21.vii.1976, 1 ♀; Obří důl [valley], 23.vi.1970, 4 ♂♂ 4 ♀♀; 6.vii.1976, 23 ♂♂ 9 ♀♀; 27.vii.1978, 1 ♀ [meadow]; Modrý důl [valley], 10.viii.1965,

3 ♀♀; 23.vi.1970, 2 ♂♂ 1 ♀; 8.vii.1976, 4 ♂♂ 2 ♀♀; Labský důl [valley], 20.vi.1963, 18 ♂♂ 9 ♀♀, all Šifner leg.; Růžová hora Mt., 11.vi.1964, 2 ♂♂ 1 ♀, Doskočil leg.; Pančická louka [meadow], 10.vi.1963, 5 ♂♂ 3 ♀♀, Doskočil et al. leg.; Rýchory Mt., 12.v.1974, 1 ♂ 4 ♀♀, Vaněk leg.; valley of Bílé Labe river, 11.vi.1997, 2 ♂♂ 3 ♀♀, Pavlíková leg.; Orlické hory Mts. (PLA), Bukačka NNR, YPT, 12.–31.v.1997, 1 ♂ 1 ♀; 26.v.–9.vi.1997, 2 ♂♂ 21 ♀♀; Hořečky NR, MT, 14.v.2009, 1 ♀, all Hájek leg.; Jizerské hory Mts. (PLA), rašeliniště Jizery [peat bog of Jizera river], MT, 5.vi.–14.viii.2002, 2 ♂♂, Vonička & Preisler leg. Moravia: Jeseníky Mts, Velká kotlina [valley], 24.v.1972, 9 ♂♂ 19 ♀♀, Šifner leg.. Slovakia: Vysoké Tatry Mts., Polská Tomanová, 3.vii.1997, 10 ♂♂ 5 ♀♀, Materna leg.; Malá Fatra Mts., Štefanová-Stohové poľany, 17.v.1975, 16 ♂♂ 32 ♀♀; Stoh Mt., 1200 m a.s.l., 20.vi.1973, 3 ♂♂ 1 ♀, all Šifner leg.

Redescription. Body length 7–10 mm. Ground colour black, in most cases shiny, first tibiae and all tarsomeres of both sexes yellow to yellow-brown. Head. Three orbital bristles; 3–4 frontal bristles; frontal vitta, orbits, parafacials, genae, face, scape and pedicel black, first flagellomere rounded acically, arista shortly pubescent only, vibrissal callus with one or two vibrissae together with 4-6 short bristles, palpy short, black with two fine bristles (apical and subapical). Thorax. Acrostichal bristles partly multinumerous, five dorsocentral bristles (2+3), postpronotal callus with two bristles and in the front part with 8–12 of spine-like short bristles, 2 pairs of scutellar bristles; *male*: double rows of very short spine-like anteroventral bristles on fore and mid femora; *female*: only single row of 8–10 long ventral bristles on fore femora. Abdomen. *Male*. Sternites 3 and 4 more or less rectangular, sternite 4 frequently with short and dense bristles mediocaudally, sternite 5 with short lobes and medially shortly bristles (cf. Šifner 2003), pregonite prolonged with short and black fine bristles, distiphallus with two long sabre-like and apically pointed projections (Fig.1). *Female*. Sternite 5 rectangular, sternite 6 more or less quadrate, sternite 7 short with short bristles caudally and medially, sternites 8 fused with tergite 8, densely bristled apically and sometimes weakly sclerotized (Fig. 2).

Distribution. Austria, Bosnia-Herzegovina, Bulgaria, Montenegro, Czech Republic, Denmark, France, Germany, Hungary, Poland, Slovakia, Spain, Switzerland (Šifner 2008: 175), Italy, Romania (Ozerov 2009: 237).

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