



Two new genera of the family Scathophagidae (Diptera) from the Czech Republic¹

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Abstract. Two new monotypic genera of the family Scathophagidae are described from the Czech Republic: *Julienomyia* gen. nov. with the type species *Julienomyia miroslavi* sp. nov. and *Gabreta* gen. nov. with the type species *Gabreta macai* sp. nov. Comments on generic classification, differential diagnoses of both genera and species involved are given, and important diagnostic characters are illustrated.

Key words. Diptera, Scathophagidae, *Julienomyia*, *Gabreta*, taxonomy, new genus, new species, Palaearctic region, Czech Republic

INTRODUCTION

The Palaearctic fauna of the family Scathophagidae currently contains 50 genera and 242 to 247 valid species, depending on opinion of particular author (Ozerov 2010, 2013, 2014, Ozerov & Krivosheina 2013, Šifner 2008, 2009a,b, 2012, 2013a,b). In addition to these taxa, I describe here two new genera and two new species, *Julienomyia miroslavi* gen. et sp. nov. and *Gabreta macai* gen. et sp. nov. based on newly collected material from the southern part of Bohemia. Nowadays, 86 species in 38 genera are listed from the Czech Republic.

MATERIAL AND METHODS

The adult of species *Julienomyia miroslavi* gen. et sp. nov. was collected by sweeping, the adult of species *Gabreta macai* gen. et sp. nov. was collected using beer traps. The localities are accompanied with codes of Central European grid mapping (Ehrendorfer & Hamann 1965) following Zelený (1972) and Pruner & Mika (1996).

TAXONOMY

***Julienomyia* gen. nov.**

TYPE SPECIES. *Julienomyia miroslavi* sp. nov., here designated.

¹ urn:lsid:zoobank.org:pub:B1558B61-47AE-4E6E-8035-8AE146A591B7

DIAGNOSIS. Principal diagnostic characters of the new genus are as follow: (i) one katapisternal bristle; (ii) palpi small but distinctly enlarged without apical or subapical bristles; (iii) fore femora distinctly thickened; (iv) cerci and surstyli of equal length; (v) tarsomeres of all legs black.

DIFFERENTIAL DIAGNOSIS. *Julienomyia* gen. nov. can be separated from other genera of the tribe Amaurosomini by characters summarized in following key.

ETYMOLOGY. I dedicate this genus to my cousin Julie Jirásek née Jungmann (Svatá, Czech Republik). The gender is feminine.

***Julienomyia miroslavi* sp. nov.**

(Figs. 1-3)

TYPE MATERIAL. Holotype: ♂, Czech Republic: Bohemia, Sezimovo Ústí (6654), Luna Nature Monument (NE border of the town), about 400 m a.s.l., 1 July 2010, Jan Máca leg. Type material is currently in my private collection, which will be deposited in the National Museum, Prague, Czech Republic. Figures are based on holotype, abdomen was dissected and stored in a microvial with glycerol on the same pin.

DESCRIPTION. **Male.** Body length 4 mm. Ground colour dark brown. *Head.* Three orbital bristles, three frontal bristles, outer vertical and inner vertical bristles long, scapus and pedicellus black, first flagellomere black and three times longer than wide, arista bare, frontal vitta dark brown, gena, frontoorbital plate, face dark and distinctly white dusted, one strong vibrissa, palpi yellow. *Thorax.* Acrostichal bristles sparse, five dorsocentral bristles, one long and one short humeral bristles, two scutellar bristles of equal size, two notopleural bristles, one proepisternal and one stigmatal bristles, one katapisternal bristle. All legs yellow, all tarsomeres black, wings hyaline. *Abdomen.* Sternite 3 more or less rectangular, distinctly narrowed caudally with one pair of long bristles, sternite 4 more or less oval with fine marginal setae, sternite 5 with long lobes (Fig. 1), cerci and surstyli of equal length nad cerci in caudal third contacted medially (Figs. 2 and 3), praegonite wide and pointed apically, postgonite distinctly arched, epiphalus only moderately arched and rounded apically (Fig. 4). **Female** unknown.

ETYMOLOGY. I dedicate this species to my son Miroslav.

HABITAT. A relatively steet slope exposed to the south, above the Kozský brook. Locality with gneiss rocks and/or pine wood, mostly covered by xerophilous grassy vegetation.

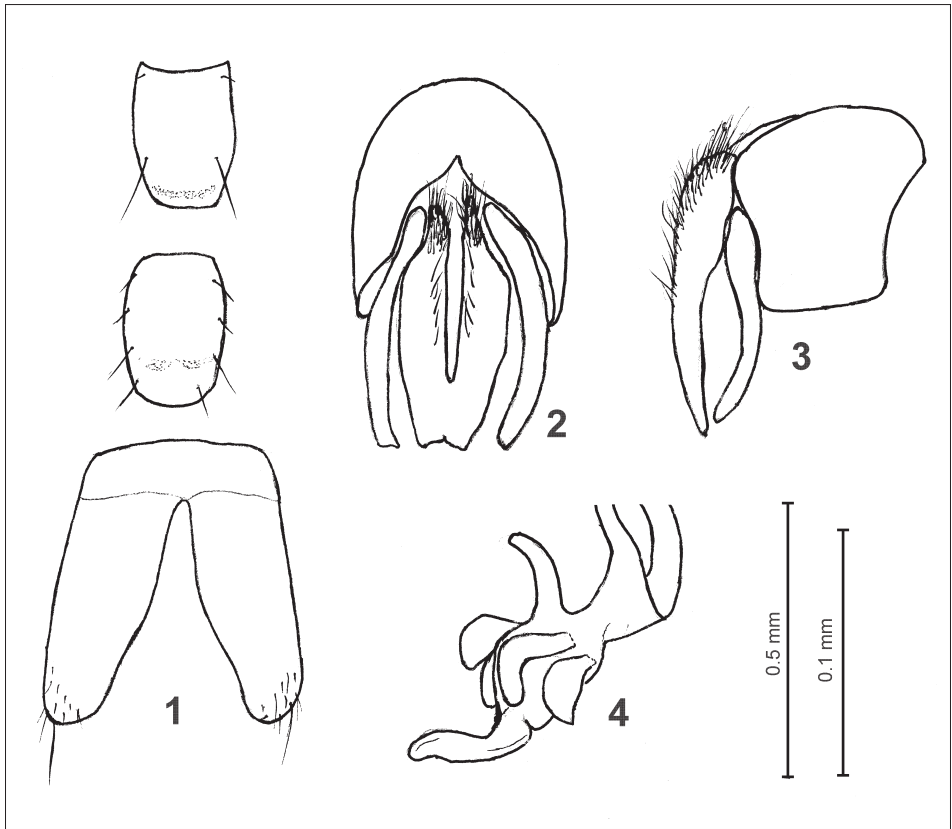
DISTRIBUTION. Known only from the Czech Republic.

***Gabreta* gen. nov.**

TYPE SPECIES. *Gabreta macai* sp. nov., here designated.

DIAGNOSIS. Principal characters of the new genus are as follows: (i) two katapisternal bristles in posterior position; (ii) one pair of scutellar bristles; (iii) surstyli long and narrow; (iv) cerci short and contacted medially; (v) praegonite of male with two bristles.

DIFFERENTIAL DIAGNOSIS. *Gabreta* gen. nov. can be separated from other genera of the tribe Amaurosomini by characters summarized in the following key.



Figs. 1-4. *Julienomyia miroslavi* gen. et sp. nov., ♂, holotype: 1 – abdominal sternites 3 to 5; 2-3 – cerci and surstyli (2 – caudal view, 3 – lateral view); 4 – penis apparatus with epiphallus, praegonites and postgonites. Scale bars: 0.5 mm (Figs. 1-3), 0.1 mm (Fig. 4).

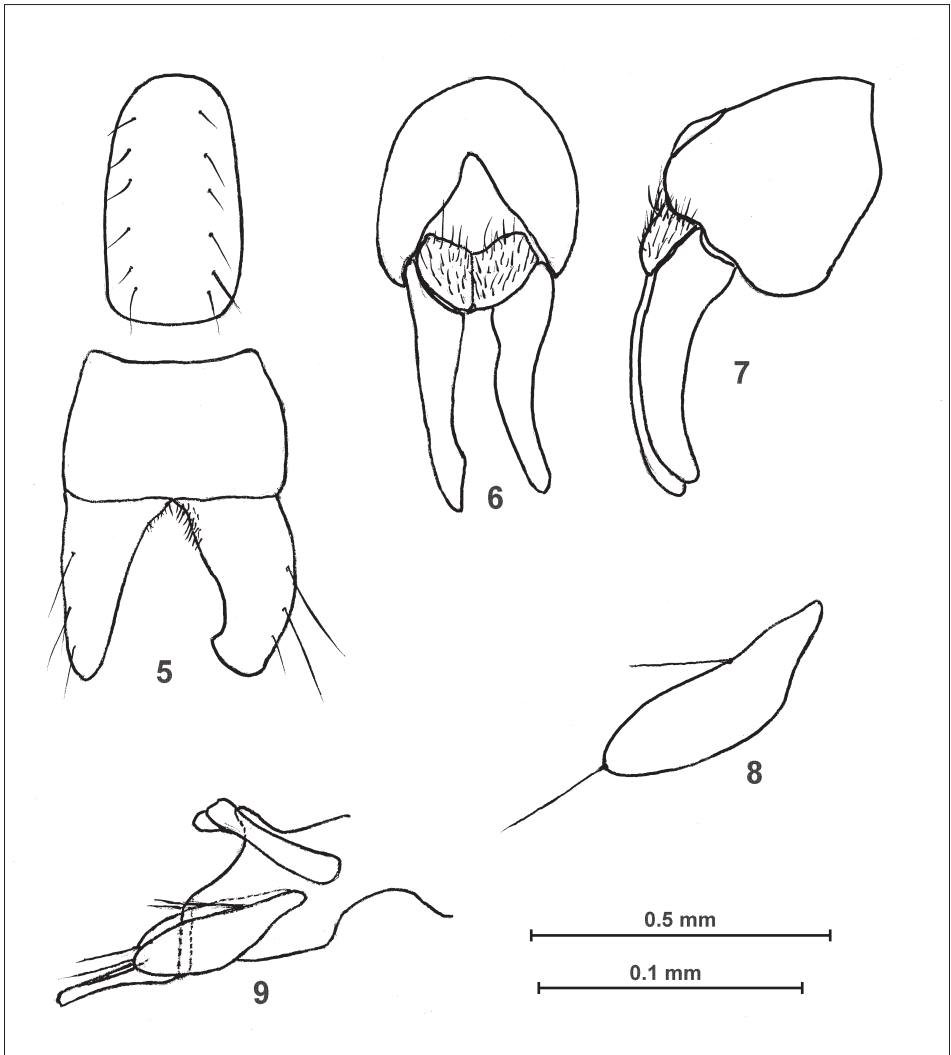
ETYMOLOGY. The name of this genus is derived from the historical Latin name of the Šumava Mts. – Silva Gabreta, the place of discovery of this new genus. The gender is feminine.

***Gabreta macai* sp. nov.**

(Figs. 4-8)

TYPE MATERIAL. Holotype: ♂, Czech Republic: Bohemia, Modrava (6946), Modravská Medvědí Mt., ca. 1200 m a.s.l., beer trap (exposed during preceding week), 15 July 2014, Jan Máca leg. The type material is currently in my private collection, wish to be deposited in the National Museum, Prague, Czech Republic. Figures are based on holotype; abdomen was dissected and stored in a microvial with glycerol on the same pin.

DESCRIPTION. **Male.** Body length 4 mm. Ground colour dark brown. *Head.* Two orbital and three frontal bristles, scapus and pedicel black, first flagellomere black and two times longer than wide, arista bare, frontal vitta, fronto-orbital plate, face, and gena brown,



Figs. 5-9. *Gabreta macai* gen. et sp. nov., ♂, holotype: 5 – abdominal sternites 4 to 5; 6 – cerci and surstyli (caudal view); 7 – cerci and surstyli (lateral view); 8 – left praegonite; 9 – penis apparatus with epiphalus, praegonites and postgonites. Scale bars: 0.5 mm (Figs. 5-7, 9), 0.1 mm (Fig. 8).

palpus yellow without setae. *Thorax.* Acrostichal bristles sparse, five dorsocentral bristles, two humeral and two praealar bristles, one pair of scutellar bristles, two notopleural bristles, one proepisternal and stigmatical bristles, two katepisternal bristles in posterior position, fore legs dark to black, mid and hind legs brown to yellow-brown. *Abdomen.* Sternite 4 more or less rectangular with five bristles marginally, lobes of sternite 5 long, narrow in caudal view, moderately arched and pointed (Fig. 5), cerci

short, contacted medially and covered by short and dense bristles (caudal view, Fig. 6), surstyli narrow and moderately arched in lateral view (Fig. 7), male praegonite wide with one apical and one dorsal bristles (Fig. 8), postgonite straight, only moderately enlarged apically, epiphalus short (Fig. 9). **Female** unknown.

ETYMOLOGY. I dedicate this species to my friend and first collector Jan Máca (Veselí nad Lužnicí, Czech Republic), Czech entomologist and specialist in Drosophilidae and Loncheidae.

HABITAT. More or less plain plateau at the hill, deforested some 150 let ago, yet not developed into a regular wood, with vegetation like in the subalpine zone, with dominating shrubs of *Vaccinium myrtillus* intermixed with some grasses and sedges. Solitary spruces are mostly less than 10 m high.

DISTRIBUTION. Known only from the Czech Republic.

KEY TO GENERA OF TRIBE AMAUROSOMINI

I place both the new genera tentatively in the tribe Amaurosomini (cf. Šifner 2003, 2008), especially due to the presence of proepisternal and stigmatical bristles and the absence of apical or subapical setae on the palpus.

- 1 One or two katepisternal bristles. 2
- Three katepisternal bristles. 5
- 2 One katepisternal bristle. 3
- Two katepisternal bristles in posterior position. 4
- 3 Anepimeron with short bristle in its central part. *Miroslava* Šifner, 1999
- Anepimeron without short bristle. *Gabreta* gen. nov.
- 4 Two pairs of scutellar bristles. Wings darkened in anterior margin. Praegonite of male without bristles. Lobes of male sternite 5 rounded apically. *Gonatherus* Rondani, 1856
- One pair of scutellar bristles. Wings not darkened. Praegonite of male with one bristle apical and one bristle dorsal (Fig. 7). Lobes of male sternite 5 pointed ventrally (Fig. 4). *Julienomyia* gen. nov.
- 5 One pair of scutellar bristles. Fore femora always without short bristles on its inner side. *Orthachaeta* Becker, 1894
- Two pairs of scutellar bristles. Fore femora with short bristles on its inner side. *Amaurosoma* Becker, 1894

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REFERENCES

- Ehrendorfer F. & Hamann U., 1965: Vorschläge zu einer floristischen Kartierung von Mitteleuropa. – *Berichte der Deutschen Botanischen Gesellschaft* 78: 35-50.
- Ozerov A.L., 2010: Five new species of Scathophagidae (Diptera) from Russia. – *Russian Entomological Journal* 19: 157-166.
- Ozerov A.L., 2013: Description of five new species and notes on taxonomy of Scathophagidae (Diptera). – *Russian Entomological Journal* 22: 81-89.
- Ozerov A.L., 2014: The primary types of Scathophagidae (Diptera) in the Museum für Naturkunde Berlin, and Senckenberg Deutsches Entomologisches Institut, Germany. – *Zoosystematics and Evolution* 90: 33-43.
- Ozerov A.L. & Krivosheina M.G., 2013: The types of the family Scathophagidae (Diptera) at the Zoological Institute, Russian Academy of Sciences, St.-Petersburg, Russia. – *Zoosystematica Rossica* 22: 141-149.
- Pruner L. & Míka P., 1996: Seznam obcí a jejich částí v České republice s čísly mapových polí pro síťové mapování fauny [List of settlements in the Czech Republic with associated map field codes for faunistic grid mapping system]. – *Klapalekiana* 32, Supplementum: 1-175. [In Czech.]
- Šifner F., 2003: The family Scathophagidae (Diptera) of the Czech and Slovak Republics (with notes on selected Palaearctic taxa). – *Acta Musei Nationalis Pragae, Series B – Historia Naturalis* 59: 1-90.
- Šifner F., 2008: A catalogue of the Scathophagidae (Diptera) of the Palaearctic region, with notes on their taxonomy and faunistics. – *Acta Entomologica Musei Nationalis Pragae* 48: 111-196.
- Šifner F., 2009a: Addition and correction to the catalogue of the Scathophagidae (Diptera) of the Palaearctic region. – *Acta Entomologica Musei Nationalis Pragae* 49: 293-295.
- Šifner F. 2009b: Two new genera of the family Scathophagidae (Diptera). – *Acta Entomologica Musei Nationalis Pragae* 49: 287-292.
- Šifner F., 2012: *Mirekiana* gen. nov., a new genus of dung flies (Diptera: Scathophagidae) from the Czech Republic. – *Journal of the National Museum (Prague), Natural History Series* 181: 15-19.
- Šifner F., 2013a: Three new species of the family Scathophagidae (Diptera) from the Czech Republic and Slovakia. – *Journal of the National Museum (Prague), Natural History Series* 182: 35-50.
- Šifner F., 2013b: *Coniosternum kovari* sp. nov. from Tajikistan, with key to Palaearctic species of *Coniosternum* (Diptera: Scathophagidae). – *Klapalekiana* 49: 205-218.
- Zelený J., 1972: Návrh členění Československa pro faunistický výzkum [Proposal of a divisioning of Czechoslovakia for faunistic research]. – *Zprávy Československé Společnosti Entomologické při ČSAV* 8: 3-16. [In Czech.]