



## TWO NEW SPECIES OF THE FAMILY SCATHOPHAGIDAE (DIPTERA) FROM THE CZECH AND SLOVAK REPUBLICS

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**Abstract.** Two new species from the Czech and Slovak Republics are described, i.e. *Coniosternum nelsoni* sp. n. from the Central Bohemia and *Norellisoma ivanae* sp. n. from Tatry Mts. Diagnoses of these two species are given and important diagnostic characters are figured.

■ Diptera, Scathophagidae, taxonomy, *Coniosternum*, *Norellisoma*, new species, Palaearctic region.

### INTRODUCTION

The genus *Coniosternum* BECKER was originally described by Becker (1894) with the type-species *Scatophaga obscura* FALLÉN, 1819. The differences between the *Scatophaga* MEIGEN, 1803 and *Coniosternum* BECKER, 1894 genera are difficult to detect, e.g. Gorodkov (1986) recognises only the genus *Scatophaga*. Others authors (Sack 1937, Hackman 1956 and Šifner 1981, 2003) recognise two separate genera. The differences have been recently confirmed by methods using molecular data (Bernasconi et al. 2000).

Recently, 8 species of the genus *Coniosternum* BECKER, 1894 have been recorded including key differences (cf. Šifner 1981), and 17 species of the genus *Norellisoma* WAHLGREN, 1917 have been described or redescribed in the Palaearctic region. Simultaneously, 3 species of the genus *Conisternum* and 7 species of the genus *Norellisoma* have been mentioned or described in the Czech and Slovak Republics (Šifner 1997, 2003).

In this paper, all localities by code of grid mapping according to Zelený (1972) are indicated.

### SYSTEMATIC PART

***Coniosternum nelsoni* sp. n.**

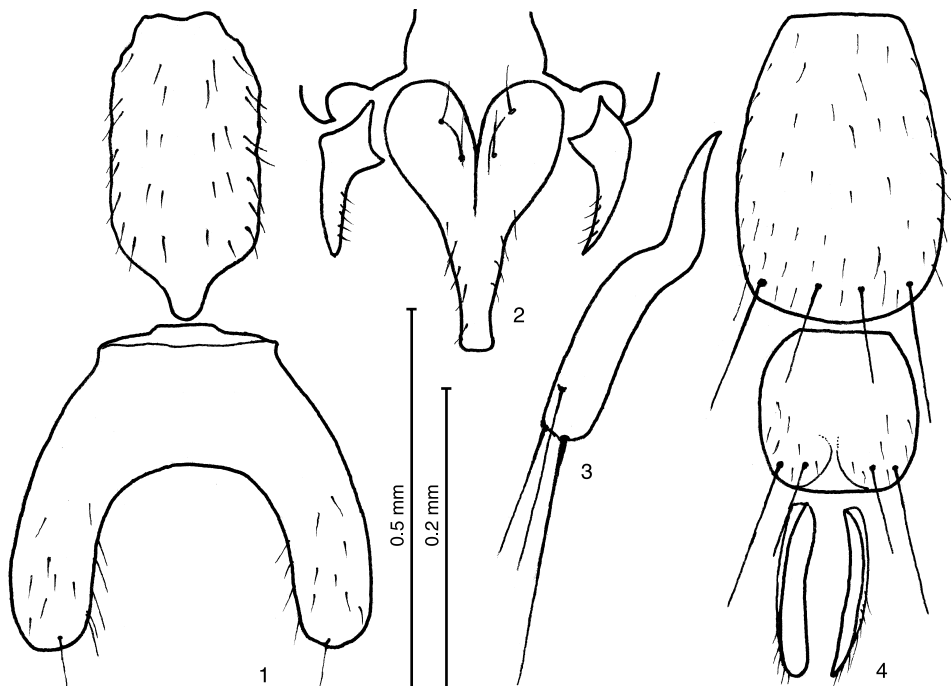
(Figs 1–4)

**Holotype:** male, Czech Republic, 5950, Chyňava, 10 km N of Beroun, Skalka hill with a little pool, 417 m a.s.l., vegetation about a dung-hill on field, 1. 11. 2002, Šifner leg.

**Allotype:** female, identical data.

**Paratypes:** 3 ♂ ♀, 3 ♂ ♀, 1.11.2002; 1 ♂, 13. 11. 2002; 3 ♂ ♀, 3 ♂ ♀, 21. 11. 2002; 1 ♂, 29. 11. 2002; 1 ♂, 1. 12. 2002; 1 ♂, 26.10.2001 (all leg. and coll. Šifner).

**Diagnosis:** Body length 5–6 mm, ground colour dark. Head: in lower third yellow-brown, orbital setae 3, frontal setae 4, orbits dark but grey dusted, parafacials, face and

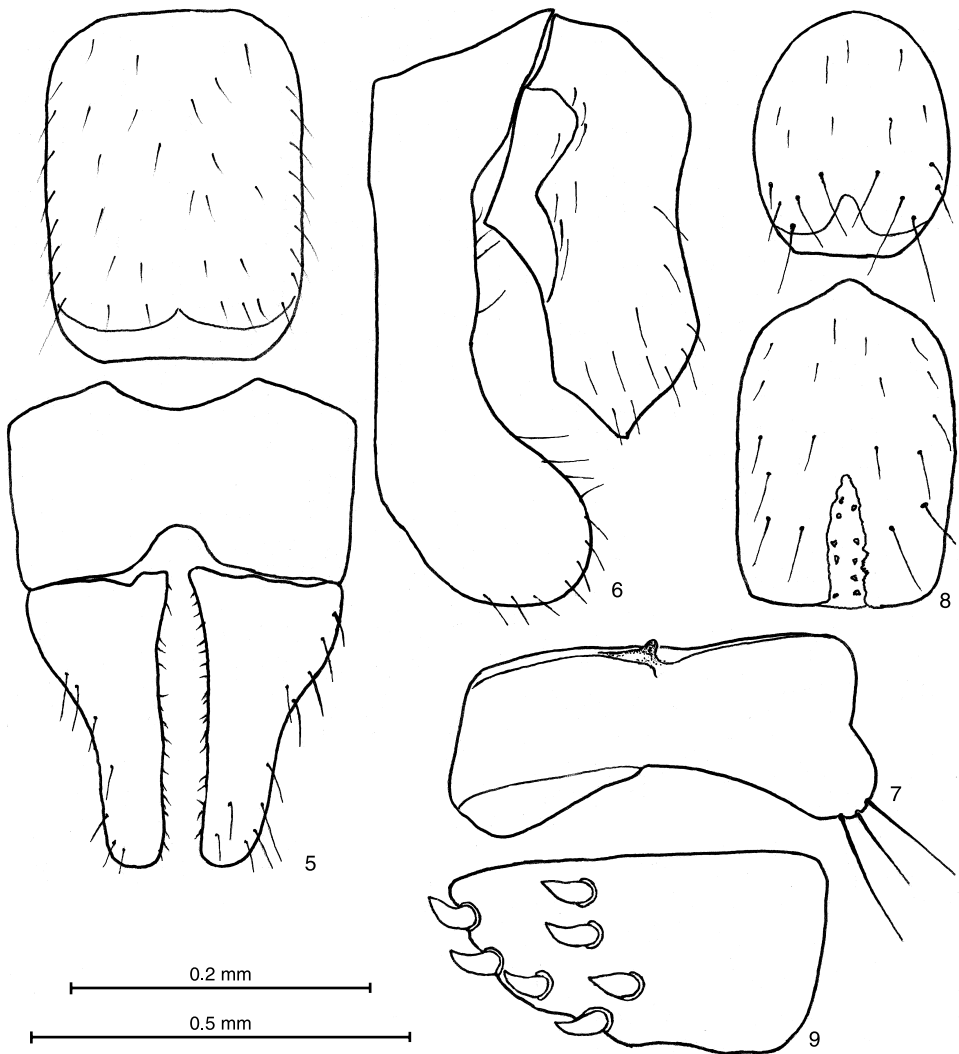


Figs 1–4. *Coniosternum nelsoni* sp. n., paratypes: (1) 4<sup>th</sup> and 5<sup>th</sup> abdominal sternites of male; (2) surstyli and cerci of male; (3) right praegonite of male; (4) 6<sup>th</sup>–8<sup>th</sup> abdominal sternites of female (Scale 0.5 mm: Figs 1, 2, 4; scale 0.2 mm: Fig. 3.).

genae brown, scapus, pedicellus and first flagellomere dark, arista bare and thickened basally, palpi yellow, genae brown with yellowish hairs. Thorax – acrostichal setae sparse, number of dorsocentral setae 5, humeral setae 2, presutural seta 1, intraalar setae 2, prealar seta 1, supraalar seta 1, postalar setae 2, two pairs of scutellar setae in equal size, notopleural setae 2, mesopleural setae 3–4, katepisternal seta 1, katepisternum in lower part with long yellow hairs, wings hyaline, both cross-veins not darkened, all femora yellow-brown apically. Abdomen: male – 4<sup>th</sup> sternite prolonged, caudally with a projection, lobes of 5<sup>th</sup> sternite long, slightly arched inwards and without distinct bristles (Fig. 1), surstylus short and pointed apically, cerci fused and narrowed apically (Fig. 2), praegonite with two apical bristles and one subapical on inner side (Fig. 3); female – 8<sup>th</sup> sternites long, 7<sup>th</sup> more or less circular, 6<sup>th</sup> prolonged, both sternites with four bristles caudally (Fig. 4).

**Differential diagnosis:** The species *Coniosternum nelsoni* sp. n. differs from the nearest species *Coniosternum jezeki* ŠIFNER, 1981 by the following characters: *Coniosternum nelsoni* sp.n., male – surstyli fused and narrowed apically, praegonite with three bristles, i.e. two apical and one subapical on inner side, female – 8<sup>th</sup> sternite long; *Coniosternum jezeki* ŠIFNER, 1981, male – cerci separated and large apically, praegonite with two apical bristles, female – 8<sup>th</sup> sternites short.

**Derivatio nominis:** The name of this species is dedicated to my colleague and friend, Scottish entomologist J. M. Nelson (Edinburgh).



Figs 5–9. *Norellisoma ivanae* sp. n., male, holotype: (5) 4<sup>th</sup> and 5<sup>th</sup> abdominal sternites; (6) surstylus and circus; (7) praegonite. *Norellisoma ivanae* sp. n., female, paratype: (8) 6<sup>th</sup> and 7<sup>th</sup> abdominal sternites; (9) 8<sup>th</sup> abdominal sternite (Scale 0.5 mm: Figs 5, 6, 8, 9; scale 0.2 mm: Fig. 7.).

*Norellisoma ivanae* sp. n.  
(Figs 5–9)

Holotype: male, Slovakia, 6784, Tatry Mts, Roháčská dolina valley, 1200 m a.s.l., 24. 6. 1980, Šifner leg.

Allotype: female, identical data.

Paratypes: 2 ♀, identical data (all leg. and coll. Šifner).

Diagnosis: Body length 6–7 mm, ground colour dark. Head: orbital setae 2, frontal setae 2–3, frontal vitta yellow-brown, orbits dark, parafacials, face and genae brown to dark

brown, scapus and pedicellus yellow, first flagellomere dark but its inner side yellow to yellow-white, arista black and sparsely pubescent, vibrissal callus with one vibrissa only, palpi yellow. Thorax: acrostichal setae sparse and very short, number of dorsocentral setae 5, humeral seta 1, presutural seta 1, intraalar setae 2–3 very short, supraalar seta 1, postalar setae 2, 1 pair of discal scutellar setae, notopleural setae 2, mesopleural setae 1–2, anepisternal and prostigmal setae only hairlike, katepisternal seta 1, all femora black and only yellow to brown apically, all tibiae and tarsomeres yellow to brown, veins of wings brown. Abdomen: male – 4<sup>th</sup> sternite rectangular, sparsely bristled and slightly sclerotized caudally, lobes of 5<sup>th</sup> sternite long and narrowed apically with short bristles medially (Fig. 5), surstylus slightly arched inwards and enlarged apically, cercus long and pointed apically in lateral and caudal view (Fig. 6), praegonite wide, with three apical bristles (Fig. 7); female – 6<sup>th</sup> sternite more or less oval, 7<sup>th</sup> sternite slightly divided caudally into two sclerites, with four distinct bristles (Fig. 8), 8<sup>th</sup> sternite with seven thorns in apical half (Fig. 9).

**Differential diagnosis:** The species *Norellisoma ivanae* sp. n. differs from the nearest species *Norellisoma femorale* (LOEW, 1864) by the following characters: *Norellisoma ivanae* sp. n. – first flagellomere dark but on inner side yellow to yellow-white, praegonite of male with three apical bristles and 4<sup>th</sup> sternite abdominal is long and rectangular, 6<sup>th</sup> sternite abdominal of female is oval. *Norellisoma femorale* (LOEW, 1864) – first flagellomere entire dark, praegonite of male with two apical bristles and 4<sup>th</sup> abdominal sternite of male is more or less six – angle, 6<sup>th</sup> abdominal sternite of female is very indented proximally.

**Derivatio nominis:** The name is derived from the name Ivana.

## REFERENCES

- Bernasconi, M. V. et al. (2000): The use of mitochondrial DNA sequences in insect taxonomy: examples from the Scathophagidae (Diptera, Calypttratae). – Bol. della Soc. ticinese di Scienze naturali, 87: 45–48.
- Gorodkov, K. B. (1986): Family Scathophagidae. pp. 11–41. – In: Soós A., Papp. L. (eds), Catalogue of Palaearctic Diptera., Vol. 11, Akadémiai Kiadó, Budapest, 346 pp.
- Hackman, W. (1956): The Scatophagidae (Diptera) of Eastern Fennoscandia. – Soc. pro Fauna et Flora Fennica, Fauna Fennica II., Helsingforsiae, 67 pp.
- Sack, P. (1937): 62a. Cordyluridae. – In: E. Lindner (ed.), Die Fliegen der Paläarktischen Region. Vol. 7, Stuttgart, 103 pp.
- Šifner, F. (1981): Les résultats de l'expédition entomologique Tchécoslovaque – iranienne à l'Iran en 1973. Diptera: Scathophagidae. (Avec la description d'une espèce nouvelle du genre *Coniosternum* d'Albanie et avec le tableau analytique des espèces du genre *Coniosternum* Becker, 1894 paléarctiques). – Acta Entomol. Musei Nat. Pragae, 40: 95–104.
- Šifner, F. (1997): Scathophagidae, pp. 89–90. – In: Chvála, M. (ed.): Check list of Diptera (Insecta) of the Czech and Slovak Republics. Karolinum – Charles University Press, Prague, 130 pp.
- Šifner, F. (2003): The family Scathophagidae (Diptera) of the Czech and Slovak Republics (with notes on selected Palaearctic taxa). – Acta Musei Nat. Pragae, Ser. B, Nat. Hist., 59:(1–2) 1–90.
- Zelený, J. (1972): Návrh členění Československa pro faunistický výzkum. [Entwurf einer Gliederung der Tschechoslowakei für Zwecke der Faunistischer Vorschung] – Zprávy Čs. Společ. Entomol. ČSAV, 8: 3/16 (in Czech, German abstr.)