New and rare records of soldier flies (Diptera: Stratiomyidae) from the Czech Republic

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Abstract: Two *Oxycera* species are reported from Czech Republic from the vicinity of Prague. *Oxycera germanica* (Szilády, 1932) is recorded from Czech Republic for the second time and *Oxycera nigricornis* Olivier, 1812 is reported from Bohemia for the first time. Their distribution, history of the records in Czech Republic and basic diagnostic characters are provided.

Key words: Diptera, Stratiomyidae, Stratiomyinae, *Oxycera*, faunistics, distribution, Czech Republic, Bohemia

Introduction

The soldier flies, Stratiomyidae, are relatively known and diverse family of lower Brachycera. The European species are medium to big-sized, stout or flattened flies, often with distinct yellow, white or greenish pattern on black background, or with green or blue metallic colouration. This colouration is highly variable interspecifically, especially in species with larvae developing in water. Morphologically, they are characterized by very small distal cell with M-veins indistinct towards to wing margin (Rozkošný 1982). In contrast to other lower brachycerans, larvae of soldier flies are saprophagous, living in a variety of habitats: they inhabit soil litter, compost, cow dung, decaying wood or streaming and stagnant water (Rozkošný 1982). Adults, as typical nectar feeders, are found on a wide range of flowering plants, especially umbels alongside water margins but also in open sunny places.

Currently, 66 Stratiomyidae species are listed from the Czech Republic (56 from Bohemia and 62 from Moravia) in the Diptera checklist (Rozkošný 2009). Roháček & Hora (2013) added one species for the fauna of the Czech Republic (Moravia) – the invasive black soldier fly *Hermetia illucens* (Linnaeus, 1758). Thus, current numbers of species are 67 for the Czech Republic, 56 from Bohemia and 63 from Moravia. The record provided here expands the number of species known from Bohemia to 57.

Material and methods

Specimens were examined with an Olympus SZX10 binocular microscope. Photographs of specimens were taken by Canon 5DSR with MPE-65 macro lens and combined from multiple layers using Helicon Focus Pro 5.3, then edited in Corel PHOTO-PAINT X6 and CorelDRAW X6. Soldier fly material was identified by the authors following key of Rozkošný (1983) and is now deposited in National Museum in Prague (NMPC). The nomenclature used here follows Woodley (2001).

Distributional data follow Rozkošný (1983, 2004) and are supplemented by data of Mason (2013).

Results

Oxycera germanica (Szilády, 1932)

(Figs 1–2)

Material examined: CZECH REPUBLIC: Bohemia centr.: Čelákovice env., Lipovka res., MT [=Malaise trap], 3.–17.vii.1993, 1♀, J. Macek lgt. **Second record from Czech Republic.**

Distribution. *Oxycera germanica* is very rare Palaearctic species distributed mainly in North Africa and western half of Europe. Existing records are from Czech Republic (Bohemia – Rozkošný *et al.* 2001), France, Germany, Greece (Crete only), Italy (mainland only – Mason 2013), Spain, Switzerland, the Netherlands, Ukraine and Algeria.

Diagnostic characters. *O. germanica* is closely related to *Oxycera morrisii* Curtis, 1833, characterized by the absence of silvery-white stripes along eye-margins on face and entirely yellow fore tibiae and at least partly yellow fore tarsi in females (Rozkošný 1983).

Note. The first record (single male specimen) was reported by Rozkošný *et al.* (2001) from locality Libouš II. located in surface coal mine Nástup close to Březno village in north Bohemia.

Figs 1–2: *Oxycera germanica* (Szilády, 1932), female habitus. **1** – dorsal view; **2** – lateral view. Photographs by T. Vendl.

Oxycera nigricornis Olivier, 1812

(Figs 3–6)

Material examined: CZECH REPUBLIC: Bohemia centr.: Čelákovice env., Lipovka res., MT [=Malaise trap], 3.–17.vii.1993, 3♂♂ 4♀♀, J. Macek lgt.; Praha, Vinoř, Vinořský park, 6.viii.1978, 1♀, J. Strejček lgt. **First records from Bohemia.**

Distribution. *Oxycera nigricornis* is an uncommon Palearctic species (but could be locally abundant) distributed mainly in central and south Europe, with few records from northern part of Europe. Existing records are from Austria, Belgium, Bulgaria, Czech Republic (Moravia), Denmark, France, Germany, Greece, Great Britain, Hungary, Ireland, Italy (including Sardinia and Sicily – while Mason (2013) does not mention this species from Sicily), Lichtenstein, Poland, Slovakia, Sweden, Switzerland, the Netherlands and Ukraine.

Diagnostic characters. *O. nigricornis* is a small species with abdominal side-markings fused along lateral margin, the males having large yellow spot on notopleura, while the females having mesonotal stripes which are fused with humeral spots (Rozkošný 1983).

Note. *Oxycera nigricornis* was firstly collected in Moravia by Czižek in Brno-Černovice (in 1918 and 1919) and then by Olejníček in Valtice in 1971 (Dušek & Rozkošný 1974) and also in Lednice (Rozkošný 1983, date of record unspecified). Most recently, *O. nigricornis* was found close to Čížov village in Podyjí NP (south Moravia) in 2001 and 2004 (Rozkošný *et al.* 2005).

Figs 3–6: *Oxycera nigricornis* Olivier, 1812, adults. **3** – male, lateral view; **4** – male, dorsal view; **5** – female, lateral view; **6** – female, dorsal view. Photographs by T. Vendl.

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Nové a vzácné nálezy bráněnkovitých (Diptera: Stratiomyidae) z České Republiky

Článek uvádí výskyt dvou druhů rodu *Oxycera* (Diptera: Stratiomyidae) z České Republiky (Praha a okolí) na základě revize materiálu uloženého ve sbírce Národního Muzea v Praze. Velmi vzácný druh *Oxycera germanica* (Szilády, 1932) byl v České Republice nalezen podruhé, jde o první samici z území České Republiky. Druh *Oxycera nigricornis* Olivier, 1812 byl poprvé zaznamenán z území Čech. U obou druhů je shrnuta historie nálezů v České Republice a jsou poskytnuty údaje o jejich rozšíření v rámci jejich areálů.

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