

NEW ADDITIONS TO THE HOVERFLY FAUNA OF LITHUANIA (DIPTERA: SYRPHIDAE)

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Introduction

The hoverflies are a large family of flies, mimicking different aculeate hymenopterans and almost exclusively feeding upon flowers, whereas their larvae possess various feeding types, including entomophagy, phytophagy, or saprophagy, often being associated with rare species of herbs, or certain species of live over-mature trees, and were listed as indicator species for the identification of forests of European conservation value (Good, Speight, 1996). Species content of the family is presented thoroughly enough for most of European countries (Speight *et al.*, 2012). The local Lithuanian fauna comprises 271 recorded species (Pakalniškis *et al.*, 2006; Lutovinovas, 2007), though several dozens of species can be discovered.

New additions to the Lithuanian fauna of hoverflies, including a species threatened with extinction are presented herewith.

Material and methods

Malaise trap set was stated in the suitable habitats in different state protected areas of Lithuania in 2008. These include deciduous and mixed forests with over-mature trees. The flies were identified using the key to the European species (Veen, 2004). The list of Lithuanian species was compiled from two recent sources (Pakalniškis *et al.*, 2006; Lutovinovas, 2007). The taxonomy of the family follows Speight *et al.* (2012). The material is deposited in the private collection of the researcher (Vilnius).

List of localities

Plungė district (Žemaitija Nat. Park)	Godeliai	55°58'59"N 21°47'13"E
	Pamedinčiai	56°01'26"N 21°46'29"E
Tauragė district (Viešvilė Str. Nat. Res.)	Eičiai	55°09'50"N 22°28'29"E
Varėna district (Dzūkija Nat. Park)	Subartonys	54°12'11"N 24°10'52"E

Species list

Brachyopa bicolor (Fallén, 1817)

Pamedinčiai, 19–26 05 2008, 1♀ (leg. S. Kvašinskas); Subartonys, 05–12 05 2008, 1♀ (leg. M. Lapelė).

Palaeartic arboreal species, saproxylic larvae develop in sap runs of live over-mature deciduous trees (Rotheray, 1993).

***Brachyopa panzeri* Goffe, 1945**

Eičiai, 12–19 05 2008, 1♀ (leg. V. Uselis).

European subboreal species, saproxylic larvae develop in sap runs of live over-mature deciduous trees (Rotheray, 1993).

***Brachyopa vittata* Zetterstedt, 1843**

Pamedinčiai, 19–26 05 2008, 1♀ (leg. S. Kvašinskas).

Palaeartic arboreal species, saproxylic larvae develop in stumps and logs of over-mature *Picea* spp. (Rotheray, 1993).

***Cheilosia morio* (Zetterstedt, 1838)**

Godeliai, 28 04–05 05 2008, 1♀ (leg. S. Kvašinskas).

European subboreal species, saproxylic larvae excavate cavities in the sapwood of *Picea* spp., entering the cambium through wounds and bark beetles holes (Rotheray, 1993; Rotheray, Gilbert, 1999).

***Ferdinandea ruficornis* (Fabricius, 1775)**

Eičiai, 06 05–19 08 2008, 3♀ (leg. V. Uselis); Pamedinčiai, 21 07–04 08 2008, 2♂ (leg. S. Kvašinskas); Subartonys, 07–14 07 2008, 1♂ (leg. M. Lapelė).

Temperate Palaeartic species, saproxylic larvae associated with *Cossus* larvae in old deciduous trees; develop in moth burrows (Rotheray, 1993).

***Leucozona inopinata* Doczkal, 2000**

Pamedinčiai, 26 05–02 06 2008, 1♂ (leg. S. Kvašinskas).

Recently described widespread species (Veen, 2004), though less frequent than closely related *L. lucorum*, which larvae are aphid predators and found on tall herbs (Rotheray, 1993).

***Sphiximorpha subsessilis* (Illiger in Rossi, 1807)**

Eičiai, 09–16 06 2008, 1♀ (leg. V. Uselis).

European arboreal species, saproxylic larvae obtained from exuding sap of *Abies alba* (Rotheray *et al.*, 2006), adults also were observed ovipositing on the sap runs of the few over-mature deciduous trees (Speight, 2011).

Discussion

The local fauna of Lithuania was supplemented by seven species of the family Syrphidae. Six of them are saproxylic hoverflies and are treated as threatened species that are thought to be decreasing (Reemer, 2005; Speight, 2011).

Only one species belonging to Diptera order was formally suggested for the Red Data Book of Lithuania (Lutovinovas, 2009). The second species is provided in this publication. *Sphiximorpha subsessilis* (Fig. 1) was recorded from the northern distribution limits (Speight *et al.*, 2012) and was considered as highly localised and decreasing, threatened with extinction at European level, regarded endangered in several countries (Speight, 2011). Therefore, it is proposed here to be red-listed under the 1st category in Lithuania as well. The species is endangered by their association with old to over-aged trees, bearing wounds and releasing sap (Mazánek, Barták, 2005).

The total number of recorded species in Lithuania is thus 278 (Pakalniškis *et al.*, 2006; Lutovinovas, 2007), but there are at least thirty of unrecorded species that are expected as living in our area.



Figure 1. *Sphiximorpha subsessilis* from Viešvilė Str. Nat. Reserve (Eičiai)

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Lietuvos žiedmusių (Diptera: Syrphidae) faunos papildymas

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Santrauka

Lietuvos dvisparnių fauna papildyta septyniomis žiedmusių rūšimis (*Brachyopa bicolor*, *Brachyopa panzeri*, *Brachyopa vittata*, *Cheilosia morio*, *Ferdinandea ruficornis*, *Leucozona inopinata*, *Sphiximorpha subsessilis*), iš kurių šešios susijusios su senais medžiais ir daugelyje šalių laikomos nykstančiomis. Viena šių rūšių – *Sphiximorpha subsessilis* – aptikta šalia jos šiauriausio išplitimo ribos, visame areale laikoma ypatingai nykstančia, todėl siūloma įtraukti į Lietuvos raudonąją knygą.

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