

ELEVEN SPECIES OF SCIAROIDEA (DIPTERA) NEW TO THE LITHUANIAN FAUNA

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Introduction

Seven families are included to the Sciaroidea in Europe. Five of them, *viz.* Bolitophilidae, Diadocidiidae, Ditomyiidae, Keroplatidae and Mycetophilidae, are covered by “fungus gnats” as a common name, the family Sciaridae are called “dark-winged fungus gnats” or “black midges” and the family Cecidomyiidae are known as “gall midges” or “gall gnats”.

Fungus gnats *sensu lato* (i.e. all families of Sciaroidea excl. Cecidomyiidae) are small to medium sized nematoceros humpbacked Diptera. They are common and abundant in forest ecosystems and have two seasons of activity – May-June and August-September – in the boreal and temperate regions of northern hemisphere. The majority of fungus gnats are associated with fruit bodies and/or mycelium of fungi during their larval stage (Jakovlev, 1994) but several species, especially those within the Sciaridae, also feed on living plants. More than 7500 species of fungus gnats are known worldwide (Evenhuis *et al.*, 2007), and more than 1700 species are known from Europe (Chandler, 2010; Heller & Menzel, 2010). The Lithuanian list of fungus gnats (Sciaroidea excl. Cecidomyiidae) comprises 235 species so far, including 9 species of Bolitophilidae, 2 species of Ditomyiidae, 2 species of Diadocidiidae, 19 species of Keroplatidae, 187 species of Mycetophilidae and 16 species of Sciaridae (Pakalniškis *et al.*, 2006; Rimšaitė, 2010).

Material and Methods

Part of the material was collected by Olavi Kurina (O.K.) during a short trip to Lithuania in June 2010 from two localities in the Curonian spit, and from Alytus and Utena districts. Supplementary material was collected by Jolanta Rimšaitė (J.R.) from Vilnius area and from Elektrėnai, Ukmergė, Kretinga, Šalčininkai and Raseiniai districts. The material was collected mostly by sweep netting and preserved in 70% ethyl alcohol, in which it is still preserved in most cases. When preparations of terminalia were needed, they were prepared using a method described by Kurina (2003) and stored as glycerine preparation in polyethylene micro-vials with silicone stoppers. These particular specimens were dry-mounted from alcohol according to method described by Vockeroth (1966) The preparations of terminalia were attached to the same entomological pin. Few specimens including their terminalia were slide mounted in Euparal medium following the procedure described by Hippa & Vilkamaa (1991).

The material is deposited in the following collections:

IZBE – Institute Agricultural and Environmental Sciences, Estonian University of Life Sciences (former Institute of Zoology and Botany), Tartu, Estonia;

MZH – Zoological Museum, Finnish Museum of Natural History, Helsinki, Finland;

NRCIE – Nature Research Centre, Institute of Ecology, Vilnius, Lithuania.

List of localities

Alytus distr.	Seirijai	54°12'55,9"N, 23°51'37,1"E
Elektrėnai city		54°47'14,2"N, 24°42'14,1"E
Kretinga distr.	Palanga	55°59'18,8"N, 21°06'13,4"E
Neringa municipality	Nida	55°17'57,4"N, 20°58'55,3"E
	Smiltynė	55°41'54,3"N, 21°06'55,8"E
Raseiniai distr.	Ariogala	55°17'15"N, 23°26'32"E
Šalčininkai distr.	Šilinės f.	54°15'N, 25°43'E
Ukmergė distr.	Zujai	55°16'46,1"N, 24°51'00,9"E
Utena distr.	Zarasai	55°42'20,5"N, 26°10'45,2"E
Vilnius city	Pilaitė	54°41'47,1"N, 25°11'24,8"E
	Verkiai	54°45'18,7"N, 25°18'29,7"E

Results and discussion

BOLITOPHILIDAE

Bolitophila (Cliopisa) occlusa Edwards, 1913

Material: 5♀♀, Seirijai 4km-SE, 19 06 2010, sweeping (O.K.) [IZBE].

Although only females we studied, there are no doubts about the species identity. The characters of wing venation, especially because CuA₂ ends in A₁, allow a safe determination of the material (cf. Zaitzev, 1994). The species is widely distributed in Europe and recorded also from Eastern Palaearctics (Chandler, 2010). Within neighbouring countries it is recorded from Estonia, Latvia, Poland and European part of Russia (Chandler, 2010).

KEROPLATIDAE

Macrocera centralis Meigen, 1818

Material: 1♂, Smiltynė, 19 VI 2010, sweeping (O.K.) [IZBE]; 1♂, Ariogala 3,5 km-NW, 05 VI 2000, sweeping (J.R.) [NRCIE]; 1♀, Verkiai, 12 VI 2000, sweeping (J.R.) [NRCIE].

Similar to *M. maculata* Meigen, 1818 that has the antennae just slightly longer than body, while they are 3 times as long as body in *M. centralis*. The species has dark and distinctive central band on wings, starting under thickened apical portion of vein R₁ and reach vein CuA₂. *M. centralis* is widely distributed in Europe and recorded also from Eastern Palaearctic and Near East (Chandler, 2010). Within neighbouring countries it is recorded from Estonia, Latvia, Poland, and North and North-West parts of Russia (Chandler, 2010).

Macrocera stigmoides Edwards, 1925

Material: 1♂ 3♀♀, Smiltynė, 19 VI 2010, sweeping (O.K.) [IZBE]; 5♂♂ 7♀♀, Zujai, 13 VI 2000, sweeping (J.R.) [NRCIE].

The species is similar to *M. stigma* Curtis, 1837 that was recorded in Lithuania by

Ivinskis *et al* (2004). *M. stigmoides* is distinguished by longer antennae (in males 3 times as long as the body) and a different arrangement of the macrotrichae on the wing (see also Stackelberg, 1945). The enlarged apical part of R₁ is unicoloured light brown, while it is darkened shortly before the apex in *M. stigma*. The species is widely distributed in Europe and recorded also from Eastern Palaearctics (Chandler, 2010). Within neighbouring countries it is recorded from Estonia, Latvia, Poland, Ukraine and North and NW parts of Russia (Chandler, 2010).

***Macrocera vittata* Meigen, 1830**

Material: 2♂♂, Smiltynė, 19 VI 2010, sweeping, (O.K.) [IZBE].

The species is widely distributed in Europe and recorded also from Eastern Palaearctics (Chandler, 2010). Within neighbouring countries it is recorded from Estonia, Latvia, Poland, Ukraine and European part of Russia (Chandler, 2010).

***Orfelia fasciata* (Meigen, 1804)**

Material: 1♂, Nida, 19 VI 2010, on indoors window (O.K.) [IZBE]; 1♂, Zarasai 5km-SW, 21 VI 2010, sweeping (O.K.) [IZBE]; 2♂♂, Pilaitė, 09 VI 1999, sweeping (J.R.) [NRCIE]; 2♂♂, Elektrėnai 3 km-SE, 05 VI 2000, sweeping (J.R.) [NRCIE]; 1♂, Verkiai, 29 V 2000, sweeping (J.R.) [NRCIE]; 1♂ 4♀♀, Zujai, 13 VI 2000, sweeping (J.R.) [NRCIE]; 1♂, Palanga 8 km-N, 14 VI 2000, sweeping (J.R.) [NRCIE]; 7♂♂ 5♀♀, Šilinės forest, 13 VI 2002, sweeping (J.R.) [NRCIE].

A widely distributed European species, within neighbouring countries it is recorded from Estonia and Poland (Evenhuis, 2006; Chandler, 2010).

MYCETOPHILIDAE

***Cordyla parvipalpis* Edwards, 1925**

Material: 1♂, Zarasai 5km-SW, 21 VI 2010, sweeping (O.K.) [IZBE].

This species belongs to the *C. semiflava* species-group as determined by Kurina (2001) and differs from other species in this group by details of male terminalia especially by short ventral appendage of gonostylus. Distributed widely in Palaearctic region and within neighbouring countries it is recorded from Estonia, Latvia, and European part of Russia (Chandler, 2010).

SCIARIDAE

***Bradysia longicubitalis* (Lengersdorf, 1924)**

Material: 2♂♂, Zarasai 5km-SW, 21 VI 2010, sweeping (O.K.) [MZH].

A European species, within neighbouring countries it is recorded from Latvia, Sweden (Heller & Menzel, 2010; Heller *et al.*, 2009) and Finland (Tuomikoski, 1960; as *B. cinereovittata* Frey).

***Phytosciara (Dolichosciara) flavipes* (Meigen, 1804)**

Material: 9♂♂ 5♀♀, Seirijai 4km-SE, 19 VI 2010, sweeping (O.K.) [MZH]; 23♂♂, Zarasai 5km-SW, 21 VI 2010, sweeping (O.K.) [MZH].

A widely distributed European species, within neighbouring countries it is recorded from Latvia, Poland (Heller & Menzel, 2010), Finland (Tuomikoski, 1960) and Sweden (Heller *et al.*, 2009).

***Pseudolykoriella paludum* (Frey, 1948)**

Material: 1♂, Seirijai 4km-SE, 19 VI 2010, sweeping (O.K.) [MZH].

A fragmentarily distributed European species, it is found in Finland (Tuomikoski, 1960) and Sweden (Heller *et al.*, 2009).

***Trichosia (Trichosia) acrotricha* Tuomikoski, 1960**

Material: 1♂, Smiltynė, 19 VI 2010, sweeping (O.K.) [MZH]; 2♂♂, Zarasai 5km-SW, 21 VI 2010, sweeping (O.K.) [MZH].

A European species, within neighbouring countries it is recorded from Latvia, Poland (Heller & Menzel, 2010), Finland (Tuomikoski, 1960) and Sweden (Heller *et al.*, 2009).

***Trichosia (Trichosia) edwardsi* Lengersdorf, 1930**

Material: 1♂, Seirijai 4km-SE, 19 VI 2010, sweeping (O.K.) [MZH].

A fragmentarily distributed European species, it is recorded from Sweden (Heller *et al.*, 2009).

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Vienuolika naujų Lietuvos faunos Sciaroidea (Diptera) rūšių

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Santrauka

Pateikiami duomenys apie vienuolika Sciaroidea antšeimio rūšių, naujų Lietuvos faunai – vieną iš Bolitophilidae, keturias Keroplatidae, vieną Mycetophilidae ir penkias iš Sciaridae šeimos. Trumpai aptariamas šių rūšių paplitimas bei sistematika.

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