

NEW RECORDS OF FANNIIDAE AND MUSCIDAE (DIPTERA) FROM LITHUANIA

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Introduction

Fanniidae and Muscidae are closely related families that chiefly are inhabitants of natural and semi-natural habitats and only a small part of them are adapted to cultural ecosystems. Nevertheless, several species belong even to the well known synanthropic forms that have a certain hygienic, medical and veterinary importance. Altogether 11 species of Fanniidae and 119 species of Muscidae were recently treated in the national checklist of flies and one additional publication (Pakalniškis *et al.*, 2006; Lutovinovas, 2008). Further faunistic news are presented herewith.

Material and Methods

The basic part of the material is deposited in the collection of the first author of this report and the extant of that in Kaunas T. Ivanauskas Zoological Museum (Lithuania). The material was collected in 1996–2008 episodically. Sweeping and Malaise traps were used in the field (in the state protected areas mainly), while less number of specimens were obtained from indoors in many places and by several collectors. The flies were identified using keys to the European species (Rozkošný *et al.*, 1997; Gregor *et al.*, 2002). The list of Lithuanian species was compiled from two recent sources (Pakalniškis *et al.*, 2006; Lutovinovas, 2008). The taxonomy of both families follows Pont (2004).

List of localities

Jurbarkas district	Viešvilė env., Viešvilė Nat. R.	55°04'N, 22°23'E
Kaišiadoriai district	Kruonis	54°45'N, 24°19'E
Kaunas city	Kačerginė	54°56'N, 23°43'E
	Kleboniškis	54°57'N, 23°56'E
	Lampėdžiai	54°54'N, 23°49'E
	no exact locality	-
Kaunas district	Noreikiškės	54°54'N, 23°51'E
	Raudondvaris	54°56'N, 23°46'E
	Ringovė	55°30'N, 23°29'E
Lazdijai district	Meteliai Reg. P., Širvinto Miškas f.	54°16'N, 23°45'E
Lazdijai district	Veisiejai Reg. P., Šlavantėlis lake	54°07'N, 23°39'E
	Veisiejai	54°06'N, 23°42'E
Marijampolė district	Žuvintas B. R., Buktos Giria f.	54°26'N, 23°25'E
Molėtai district	Gruodžiai	55°15'N, 25°15'E
Palanga city	Mončiškės	56°10'N, 21°40'E

Plungė district	Žemaitija Nat. P., Godeliai	55°61'N, 21°40'E
	Pamedlinčiai	55°55'N, 21°45'E
Rokiškis district	Sartai Reg. P., Vosynos	55°47'N, 25°48'E
Šakiai district	Juškinės Miškas f.	55°01'N, 23°26'E
Švenčioniai district	Labanoras Reg. P., Padumblė	55°14'N, 25°45'E
Tauragė district	Viešvilė Nat. R., Eičiai	55°10'N, 22°29'E
Ukmergė district	Vidiškiai	55°18'N, 24°51'E
Varėna district	Sarapiniškės	54°21'N, 24°32'E
Varėna district	Dzūkija Nat. P., Mikalaučiškė lake	54°11'N, 24°07'E
	Subartonių Miškas f.	54°11'N, 24°09'E
Vilnius city	Šeškinė	54°43'N, 25°15'E
	Visoriai	54°45'N, 25°16'E
Vilnius city	Pavilniai Reg. P., Markučiai	54°40'N, 25°20'E
Vilnius city	Verkiai Reg. P., Verkiai	54°44'N, 25°18'E
Vilnius district	Neris Reg. P., Dūkštų Ažuolynas f.	54°49'N, 24°57'E
Zarasai district	Sartai Reg. P., Jaskoniškių Miškas f.	55°46'N, 25°52'E

List of species

FANNIIDAE

Fannia armata (Meigen, 1826)

Kleboniškis, 11 06 2003, 1♀ (leg. O. Dumčius).

Euro-Siberian aggressive secretophages, molesting cattle in pastures, larvae in dung, mushrooms and decaying vegetable matter (Rozkošný *et al.*, 1997).

Fannia hirticeps (Stein, 1892)

Jaskoniškių Miškas f., 05 05 2004, 1♀ (leg. R. Ferenca).

Holarctic, though in the Nearctic Region known only in Alaska, Euro-Siberian in the Palaearctic, absent in the southern parts of Europe (Rozkošný *et al.*, 1997).

Fannia incisurata (Zetterstedt, 1838)

Eičiai, 07–14 04 2008, 1♂ (leg. V. Uselis).

Almost cosmopolitan hemisynanthropic species that possess a distinct hygienic and veterinary importance, larvae in dung, mushrooms, decaying matter, nests of animals and may cause myiases (Rozkošný *et al.*, 1997).

Fannia mollissima (Haliday, 1840)

Mikalaučiškė lake, 01 04–12 05 2008, 3♂ (leg. M. Lapelė).

Holarctic, Euro-Siberian in the Palaearctic, in the southern parts of Europe chiefly in submontane and montane areas, larvae in decaying vegetable matter (Rozkošný *et al.*, 1997).

Fannia rondanii (Strobl, 1893)

Kačerginė, 13 06 1999, 2♀; Ringovė, 20 05 1998, 2♀; Šlavantėlis lake, 25 07 1998, 1♂1♀ (all leg. O. Dumčius).

Holarctic, larvae in dung and decaying vegetable matter (Rozkošný *et al.*, 1997).

Fannia tuberculata (Zetterstedt, 1849)

Vosynos, 07 05 2004, 1♂ (leg. R. Ferenca).

Holarctic, Euro-Siberian in the Palaearctic, absent in the southern parts of Europe, larvae in decaying vegetable matter (Rozkošný *et al.*, 1997).

MUSCIDAE

Subfamily Azeliinae

***Azelia cilipes* (Haliday, 1838)**

Eičiai, 18 07 2006, 1♂; Juškinės Miškas f., 06 07 2006, 1♂ (both leg. R. Ferenca); Gruodžiai, 16 08 2008, 1♂ (leg. E. Lutovinovas); Viešvilė env., 21 06 2007, 3♂ (leg. O. Dumčius).

Holarctic, predacious larvae in cattle excrement (Gregor *et al.*, 2002).

***Azelia zetterstedtii* Rondani, 1866**

Viešvilė env., 21 08 2007, 1♀ (leg. O. Dumčius).

Holarctic, predacious larvae in cattle excrement (Gregor *et al.*, 2002).

***Hydrotaea parva* Meade, 1889**

Kruonis, 01 08 1998, 1♂1♀ (leg. A. Meržijevskis).

Palaeartic (Gregor *et al.*, 2002).

***Hydrotaea similis* Meade, 1887**

Gruodžiai, 05 06 2002, 1♂ (leg. E. Lutovinovas).

Palaeartic, hemisynanthropic (Gregor *et al.*, 2002).

***Muscina pascuorum* (Meigen, 1826)**

Mikalaučiškė lake, 01–14 04 2008, 1♀ (leg. M. Lapelė); Šeškinė, 01 04 2001, 1♀; 31 03–02 05 2002, 2♀; 01 04 2003, 2♀; 11–22 08 2004, 1♂1♀ (all leg. E. Lutovinovas); Širvinto Miškas f., 02–09 04 2008, 1♀ (leg. I. Kondratavičiūtė); Viešvilė env., 28 03–07 04 2008, 1♀; 23–30 04 2008, 1♀ (both leg. V. Uselis).

Holarctic, hemisynanthropic, predacious larvae in decaying matter (Gregor *et al.*, 2002).

Subfamily Coenosiinae

***Coenosia agromyzina* (Fallén, 1825)**

Kaunas, 19 08 1998, 2♀; Noreikiškės, 16 06 1997, 1♂; Raudondvaris, 05 07 1997, 1♀ (all leg. O. Dumčius).

West Palaeartic (Gregor *et al.*, 2002).

***Coenosia bilineella* (Zetterstedt, 1838)**

Klebaniškis, 11 06 2003, 1♂ (leg. O. Dumčius).

Palaeartic (Gregor *et al.*, 2002).

***Coenosia femoralis* (Robineau-Desvoidy, 1830)**

Juškinės Miškas f., 06 07 2006, 1♂ (leg. R. Ferenca).

European (Gregor *et al.*, 2002).

***Coenosia humilis* Meigen, 1826**

Sarapiniškės, 07–15 08 2000, 1♂ (leg. O. Dumčius).

Holarctic and Oriental (Gregor *et al.*, 2002).

***Coenosia lineatipes* (Zetterstedt, 1845)**

Mončiškės, 14 06 2001, 1♀ (leg. R. Ferenca).

European, absent in the southern parts of Europe (Gregor *et al.*, 2002).

***Coenosia sexpustulata* Rondani, 1866**

Kačerginė, 31 07 1996, 1♀; 17 05 1998, 1♀; Lampėdžiai, 24 07 1996, 1♀; Vidiškiai, 30 06 2004, 1♀ (all leg. O. Dumčius).

European, absent in the north (Gregor *et al.*, 2002).

***Limnophora nigripes* (Robineau-desvoidy, 1830)**

Buktos Giria f., 18 08 2006, 1♀ (leg. E. Lutovinovas).

Holarctic (Gregor *et al.*, 2002).

***Limnophora riparia* (Fallén, 1824)**

Veisiejai, 10 08 2002, 1 ♀ (leg. O. Dumčius).

Palearctic, larvae predacious upon black-flies (Simuliidae) in streams in the rich growth of mosses (Gregor *et al.*, 2002).

***Limnophora triangula* (Fallén, 1825)**

Visoriai, 15 08 2006, 1 ♀ (leg. E. Lutovinovas).

Palearctic (Gregor *et al.*, 2002).

***Lispocephala erythrocerata* (Robineau-Desvoidy, 1830)**

Eičiai, 28 03–29 04 2008, 4 ♂ 2 ♀; Viešvilė env., 28 03–07 04 2008, 1 ♂ 1 ♀ (both leg. V. Uselis); Padumblė, 31 03–07 04 2008, 9 ♂ 4 ♀ (leg. A. Aliukonis); Širvinto Miškas f., 09–16 04 2008, 1 ♂ (leg. I. Kondratavičiūtė).

Holarctic and Oriental (Gregor *et al.*, 2002).

***Macrorchis meditata* (Fallén, 1825)**

Markučiai, 17 07 2006, 1 ♀ (leg. E. Lutovinovas).

Euro-Siberian (Gregor *et al.*, 2002).

***Spilogona pacifica* (Meigen, 1826)**

Šeškinė, 08 06 2005, 1 ♂ (leg. E. Lutovinovas).

Holarctic, Euro-Siberian in the Palearctic (Gregor *et al.*, 2002).

***Spilogona solitaria* (Collin, 1921)**

Šeškinė, 08 08 2004, 1 ♀ (leg. E. Lutovinovas).

European, absent in the north (Gregor *et al.*, 2002).

Subfamily Muscinae***Eudasyphora cyanicolor* (Zetterstedt, 1845)**

Eičiai, 28 03–07 04 2008, 12 ♂ 1 ♀; 14–29 04 2008, 7 ♂ 4 ♀; Viešvilė env., 28 03–15 04 2008, 9 ♂ 4 ♀ (all leg. V. Uselis); Godeliai, 29 03–07 04 2008, 1 ♂ 2 ♀; Pamedlinčiai, 28 03–28 04 2008, 6 ♂ 1 ♀ (both leg. S. Kvašinskas); Kamintiškė, 31 03–14 04 2008, 1 ♂ 1 ♀; Mikalauciškė lake, 01–21 04 2008, 36 ♂ 5 ♀ (both leg. M. Lapelė); Padumblė, 31 03–14 04 2008, 5 ♂ 1 ♀ (leg. A. Aliukonis).

Holarctic and hemisynanthropic, larvae coprophagous (Gregor *et al.*, 2002).

***Neomyia viridescens* (Robineau-Desvoidy, 1830)**

Godeliai, 29 03–07 04 2008, 5 ♂; Pamedlinčiai, 28 03–05 05 2008, 6 ♂ 2 ♀ (both leg. S. Kvašinskas); Mikalauciškė lake, 01–21 04 2008, 22 ♂ 3 ♀ (leg. M. Lapelė); Viešvilė env., 28 03–15 04 2008, 4 ♂; 23–30 04 2008, 1 ♂ (both leg. V. Uselis).

Palearctic and sylvatic species, larvae coprophagous (Gregor *et al.*, 2002).

Subfamily Mydaeinae***Brontaea humilis* (Zetterstedt, 1860)**

Eičiai, 28 03–06 05 2008, 9 ♀; Viešvilė env., 28 03–07 04 2008, 8 ♀ (both leg. V. Uselis); Godeliai, 28 03–07 04 2008, 4 ♀; Pamedlinčiai, 28 03–07 04 2008, 2 ♀ (both leg. S. Kvašinskas); Kruonis, 22 04 2001, 1 ♂ 2 ♀ (leg. A. Meržijevskis); Mikalauciškė lake, 01–14 04 2008, 1 ♀ (leg. M. Lapelė); Padumblė, 31 03–07 04 2008, 7 ♀ (leg. A. Aliukonis); Širvinto Miškas f., 02–09 04 2008, 1 ♀ (leg. I. Kondratavičiūtė).

Holarctic, larvae in horse dung (Gregor *et al.*, 2002).

Subfamily Phaoniinae***Helina celsa* (Harris, 1780)**

Mikalauciškė l., 21 04–05 05 2008, 2 ♂ (leg. M. Lapelė).

Euro-Siberian (Gregor *et al.*, 2002).

***Helina intermedia* (Villeneuve, 1899)**

Gruodžiai, 10 09 2004, 1 ♀ (leg. E. Lutovinovas).

European, absent in the north (Gregor *et al.*, 2002).

***Phaonia consobrina* (Zetterstedt, 1838)**

Eičiai, 22–29 04 2008, 1 ♂ (leg. V. Uselis).

Holarctic, Euro-Siberian in the Palaearctic, in the southern parts of Europe chiefly in submontane and montane areas (Gregor *et al.*, 2002).

***Phaonia fuscata* (Fallén, 1825)**

Eičiai, 22 04–06 05 2008, 1 ♂ 1 ♀; Viešvilė env., 23–30 04 2008, 1 ♀ (both leg. V. Uselis); Mikalaučiškė lake, 01–21 04 2008, 2 ♂ 1 ♀ (leg. M. Lapelė); Širvinto Miškas f., 02–16 04 2008, 10 ♂; 30 04–28 05 2008, 6 ♂ 1 ♀ (leg. I. Kondratavičiūtė).

Palaearctic, predacious larvae in soil and moss of broad-leaved forests (Gregor *et al.*, 2002).

***Phaonia liliputa* Zinovjev, 1990**

Markučiai, 26 07–02 08 2004, 1 ♀ (leg. E. Lutovinovas).

Palaearctic, but still known only from a few localities in Mongolia and Central Europe (Gregor *et al.*, 2002).

***Phaonia subfuscinervis* (Zetterstedt, 1838)**

Eičiai, 15 05 2007, 1 ♀ (leg. O. Dumčius).

Holarctic, Euro-Siberian in the Palaearctic and apparently sub-boreal in Europe (Gregor *et al.*, 2002).

***Phaonia trimaculata* (Bouché, 1834)**

Širvinto Miškas f., 07–14 05 2008, 1 ♂ (leg. I. Kondratavičiūtė).

West Palaearctic, predacious larvae on herbaceous plants in deciduous forests (Gregor *et al.*, 2002).

Discussion

Six species of Fanniidae and 28 species of Muscidae are recorded as new for the Lithuanian fauna. These numbers raise the total number of species up to 17 and 147 for the Fanniidae and the Muscidae, respectively. Meantime, 51 and 295 species are known from Finland and 63 and 291 species from the Czech Republic (Pont, 2004). Compared with these countries the level of faunistic research in Lithuania seems to be relatively low and about three times more Fanniidae and twice more Muscidae may be expected as really occurring in Lithuania (including new records in this paper).

Fannia armata, *F. incisurata*, *Eudasyphora cyanicolor* and *Neomyia viridescens* are known as abundant communicative species in the other countries (Gregor *et al.*, 2002). Their absence in the national checklist of flies (Pakalniškis *et al.*, 2006) proves the poor knowledge of the “house flies” fauna from the area. *Phaonia subfuscinervis* is a sub-boreal species, only recently recorded in Central Europe (Barták *et al.*, 2004), while *Coenosia sexpustulata*, *Helina intermedia* and *Spilogona solitaria* are a rather southern species, with the records from Lithuania serving as an important data for a better knowledge of their distribution in the continent. The record of *Phaonia liliputa* is amongst the most exciting findings in Lithuania. It was only recently found in Europe from the Czech Republic and Switzerland (Gregor *et al.*, 2003; Barták *et al.*, 2004), and is still absent in the lists of all the rest of the European countries (Pont, 2004).

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Nauji duomenys apie Lietuvos Fanniidae ir Muscidae šeimų fauną (Diptera)

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Santrauka

Pateikiami duomenys apie 34 naujas Lietuvos entomofaunos dvisparnių rūšis, priklausančias giminingoms išvietinių ir tikrųjų musių šeimoms. Dalis šių rūšių (*Fannia armata*, *F. incisurata*, *Eudasyphora cyanicolor* ir *Neomyia viridescens*) yra gausūs komunikatyvūs vabzdžiai, turintys medicininę ir veterinarinę svarbą, o tai, kad vis dar aptinkama nemažai naujų Lietuvos faunai rūšių, tik parodo labai menką šių šeimų iširtumą Lietuvoje. Kitoms rūšims (*Coenosia sexpustulata*, *Helina intermedia* ir *Spilogona solitaria*) nustatytos šiaurinės paplitimo ribos. Tačiau įdomiausias radinys yra ypatingai reta *Phaonia liliputa*, kuri iki šiol Europoje buvo aptikta tiktai Čekijoje ir Šveicarijoje.

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