

BRACHYCEROUS FLY (DIPTERA) SPECIES NEW FOR THE LITHUANIAN FAUNA

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Introduction

Till present, 2116 species of Brachycerous flies are recorded from Lithuania. They belong to 67 families of in total 90 known in Lithuania families of Diptera. A common species *Mydaea electa* (Muscidae) unfortunately was omitted in the recently published checklist of Lithuanian Diptera (Pakalniškis *et al.*, 2006), although this species was reported in an earlier publication discussing the Diptera distribution in Lithuania (Lutovinovas *et al.*, 2003).

The fauna of species assigned to the families Stratiomyidae, Bombyliidae and Syrphidae is studied relatively well in our country (Lutovinovas, 2004, 2006; Lutovinovas *et al.*, 2003). The families Muscidae and Tachinidae have got less attention of the entomologists, while the fauna of the rest of the Diptera families is poorly known in Lithuania. In this paper we present the new faunistic data of the Lithuanian Diptera fauna.

Material and methods

The material was collected by the author during field expeditions from April to September in 1994–2007. Insects were collected in different habitats using an entomological net or Malaise trap. Some specimens were received as loan from the Tadas Ivanauskas Zoological Museum (Kaunas) and from the collection of the Institute of Ecology of Vilnius University (Vilnius).

The identification of Brachycerous flies was made using the keys presented in G.Ya. Bey-Bienko (1969, 1970) and L. Papp & B. Darvas (1998). Additionally the keys presented in R. Bańkowska (1973) and M. Kozánek & P. Lauterer (1987) were used to identify the Pipunculidae species, and H.-P. Tshorstnig & B. Herting (1994) to identify Tachinidae. The nomenclature of the species and the distribution data follows T. Pape (2007) and L. Papp & B. Darvas (1997, 1998). The species list of the Lithuanian Diptera fauna is taken from S. Pakalniškis *et al.* (2006).

The data on locality, collection date and number of collected specimens, together with some other data is given. The specimens are deposited in the collection of Masaryk University in Brno, Czech Republic (E.L.) and in the Tadas Ivanauskas Zoological Museum in Kaunas, Lithuania.

Data on localities

Anykščiai district	Užunvėžiai	55°26'N, 25°08'E;
Biržai district	Kilučiai env.	56°10'N, 24°47'E;

Elektrėnai municipality	Daugirdiškės env Pakalniškės env.	54°38'N, 24°44'E; 54°45'N, 24°45'E;
Kaišiadoriai district	Kruonis	54°45'N, 24°19'E;
Kaunas district	Dubravos Miškas f. Noreikiškės	54°53'N, 24°08'E; 54°54'N, 23°51'E;
Kaunas town		no exact locality;
Klaipėda district	Šalpėnai	55°33'N, 21°42'E;
Lazdijai district	Vartai env.	54°24'N, 23°29'E;
Marijampolė district	Buktos Giria f.	54°26'N, 23°25'E;
Molėtai district	Gruodžiai env. Pumpučiai Siesartis	55°15'N, 25°15'E; 55°13'N, 25°16'E; 55°10'N, 25°15'E;
Neringa town	Nida	55°18'N, 21°00'E;
Šakiai district	Lekėčiai	55°03'N, 23°23'E;
Švenčionys district	Baluoša bog	54°53'N, 25°48'E;
Trakai district	Aukštadvaris env. Čižiūnai Semeliškių Miškas f. Žaizdriai	54°34'N, 24°31'E; 54°36'N, 24°34'E; 54°40'N, 24°39'E; 54°37'N, 24°53'E;
Varėna district	Merkinė Trasninkas	54°09'N, 24°12'E; 54°50'N, 24°16'E;
Vilnius district	Dūkštų Ažuolynas f. Piktakonys env.	54°49'N, 24°57'E; 54°33'N, 25°24'E;
Vilnius town	Markučiai Šeškinė Vilkpėdė Visoriai	54°40'N, 25°20'E; 54°43'N, 25°15'E; 54°39'N, 25°14'E; 54°45'N, 25°16'E;
Zarasai district	Antalieptė	55°39'N, 25°52'E.

List of species

STRATIOMYIDAE

Oxycera nigricornis Olivier, 1812

Markučiai, 02–09 08 2004, 1 ♀ (Malaise trap in opening of deciduous forest, E.L.).

BOMBYLIIDAE

Lomatia lateralis (Meigen, 1820)

Vilkpėdė, 20 07 2007, 1 ♀; Visoriai, 13 07 2006, 1 ♀ (both near dry forest, E.L.).

PIPUNCULIDAE

Cephalops (Cephalops) aeneus Fallén, 1810

Markučiai, 04 06 2004, 1 ♂, 16 08 2004, 1 ♂ 1 ♀ (near deciduous forest, E.L.).

Cephalops (Cephalops) vittipes (Zetterstedt, 1844)

Markučiai, 06–13 06 2004, 1 ♀ (Malaise trap in opening of deciduous forest, E.L.), 04 06 2004, 1 ♂, 15 06 2005, 4 ♂ 2 ♀, 22 06 2005, 1 ♂ (all near deciduous forest, E.L.).

Cephalops (Parabeckerias) obtusinervis (Zetterstedt, 1844)

Dūkštų Ažuolynas f., 29 07 2006, 1 ♀ (edge of *Quercus-Picea* forest, E.L.).

***Cephalops (Semicephalops) carinatus* (Verrall, 1901)**

Markučiai, 14 08 2003, 1♂1♀, 19 08 2003, 3♂ 3♀, 30 08 2004, 2♀, 28 07 2005, 1♂ (all near deciduous forest, E.L.), 16–22 08 2004, 3♀ (Malaise trap in opening of deciduous forest, E.L.).

***Cephalops (Semicephalops) subultimus* Collin, 1956**

Gruodžiai env., 26 08 2002, 1♀ (dry meadow, E.L.).

***Cephalops (Semicephalops) ultimus* (Becker, 1900)**

Pumpučiai, 21 08 2002, 1♀ (edge of *Quercus-Picea* forest, E.L.).

***Eudorylas fuscipes* (Zetterstedt, 1844)**

Gruodžiai env., 08 07 2002, 4♂, 06 08 2002, 1♂; Pumpučiai, 31 08 2002, 1♂ (both E.L.).

***Eudorylas inferus* Collin, 1956**

Markučiai, 29 06 2004, 1♂, 04 07 2004, 1♂ (near deciduous forest, E.L.).

***Eudorylas subfascipes* Collin, 1956**

Gruodžiai env., 04 06 2006, 1♀ (edge of mixed forest, E.L.); Markučiai, 02 05 2004, 3♂, 16 05 2004, 1♀, 23 05 2004, 1♂, 23 05 2005, 1♂1♀ (edge of deciduous forest, E.L.), 03–06 05 2004, 1♀; 15–23 05 2004, 1♂, 23–30 05 2004, 1♀ (Malaise trap in opening of deciduous forest, E.L.).

SYRPHIDAE

***Criorhina berberina* (Fabricius 1805)**

Čižiūnai, 22 07 2007, 1♀ (bushes near roadside, E.L.).

***Criorhina ranunculi* (Panzer 1804)**

Visoriai, 25 05 2007, 1♀ (on the path in mixed forest, E.L.).

ANTHOMYIIDAE

***Botanophila discreta* (Meigen, 1826)**

Markučiai, 16 05 2004, 2♂ (edge of deciduous forest, E.L.).

***Delia cardui* (Meigen, 1826)**

Markučiai, 02–09 08 2004, 1♂ (Malaise trap in opening of deciduous forest, E.L.).

***Lasiomma strigilatum* (Zetterstedt, 1838)**

Šeškinė, 11 04 2002, 1♂ (on blowing *Salix*, E.L.).

***Leucophora cinerea* Robineau-Desvoidy, 1830**

Gruodžiai env., 13 07 2002, 1♂ (dry meadow, E.L.).

***Leucophora obtusa* (Zetterstedt, 1838)**

Markučiai, 06 04 2004, 1♂, 11 04 2004, 1♂, 16 05 2004, 1♀ (near deciduous forest, E.L.)

***Pegomya rufina* (Fallén, 1825)**

Visoriai, 07 04 2004, 1♂ (dry meadow with shrubs, E.L.).

***Pegomya setaria* (Meigen, 1826)**

Gruodžiai env., 17 06 2002, 1♂ (lakeside with *Alnus-Salix* trees, E.L.).

***Pegomya testacea* (De Geer, 1776)**

Visoriai, 14 07 2007, 1♂ (edge of mixed forest, E.L.).

FANNIIDAE

***Piezura graminicola* (Zetterstedt, 1846)**

Markučiai, 26 06–04 07 2004, 1♂ (Malaise trap in opening of deciduous forest, E.L.).

MUSCIDAE

***Hebecnema nigra* (Robineau-Desvoidy, 1830)**

Lekėčiai, 19–25 10 1998, 1♂, 25 10–01 11 1998, 1♂ (leg. R. Ferenca); Nida, 13 08 2006, 1♀ (leg. O. Dumčius).

***Hebecnema umbratica* (Meigen 1826)**

Kaunas, 19 08 1998, 1♀; Kilučiai env., 26–27 05 2005, 1♂ (leg. O. Dumčius).

***Hebecnema vespertina* (Fallén, 1823)**

Antalieptė, 09 06 2005, 1♂ (leg. O. Dumčius); Kruonis, 10 06 1999, 1♀ (leg. A. Meržijevskis); Noreikiškės, 28 05 1999, 1♂ 1♀ (leg. O. Dumčius).

***Helina cothurnata* (Rondani 1866)**

Lekėčiai, 19–25 04 1999, 1♀ (leg. R. Ferenca).

***Thricops diaphanus* (Wiedemann, 1817)**

Noreikiškės, 05 06 1997, 1♂ (leg. O. Dumčius).

TACHINIDAE

***Blepharomyia angustifrons* Herting, 1971**

Kruonis, 05 05 2002, 1♂ (leg. A. Meržijevskis).

***Brachicheta strigata* (Meigen, 1824)**

Gruodžiai env., 30 04 2007, 1♀ (in the grass in *Malus-Pyrus* garden, E.L.).

***Chetogena fasciata* (Egger, 1856)**

Baluoša bog, 15 04–13 05 1999, 1 spec. (pitfall trap in a raised bog, leg. D. Dapkus).

***Cylindromyia pilipes* (Loew, 1844)**

Kaunas, 14 08 2004, 1♂ (leg. P. Ivinskis); Piktakonys env., 21 07 2007, 1♂ (edge of mixed forest, E.L.).

***Cyzenis jucunda* (Meigen, 1838)**

Dubravos Miškas f., 12–18 04 1999, 2♂, 19–25 04 1999, 1♂ (leg. R. Ferenca); Dūkštų Ažuolynas f., 15 04 2007, 1♂ (*Quercus-Picea* forest, E.L.); Kruonis, 02 06 2001, 1♀ (leg. A. Meržijevskis).

***Drino galii* (Brauer & Bergenstamm, 1891)**

Čižiūnai, 17 07 2007, 1♀ (bushes near roadside, E.L.).

***Drino inconspicua* (Meigen, 1830)**

Merkinė, 22 08 1998, 1♂ (leg. O. Dumčius).

***Erycia fatua* (Meigen, 1824)**

Semeliškių Miškas f., 17 07 2007, 1♀ (edge of mixed forest, E.L.); Pakalniškės env., 22 07 2007, 1♂ (bushes near roadside, E.L.).

***Erycia festinans* (Meigen, 1824)**

Šalpėnai, 21 07 1999, 1♂ (leg. R. Ferenca).

***Gonia ornata* Meigen, 1826**

Trasninkas, 04 05 2005, 1♀ (leg. P. Ivinskis).

***Loewia foeda* (Meigen, 1824)**

Vartai env., 15 07 2007, 1♂ (edge of deciduous forest, E.L.); Daugirdiškės env., 17 07 2007, 1♂ (bushes near roadside, E.L.).

***Lophosia fasciata* Meigen, 1824**

Aukštadvaris env., 18 07 2007, 1♀ (deciduous forest, E.L.); Buktos Giria f., 15–22 07 2007, 1♀ (Malaise trap in opening of deciduous forest, E.L.).

***Meigenia dorsalis* (Meigen, 1824)**

Piktakonys env., 21 07 2007, 1♂ (edge of mixed forest, E.L.).

***Myxexoristops blondeli* (Robineau-Desvoidy 1830)**

Visoriai, 18 05 2007, 1♀ (mixed forest, E.L.).

***Nemoraea pellucida* (Meigen, 1824)**

Čižiūnai, 17–29 07 2007, 3♂ (bushes near roadside, E.L.).

***Nilea hortulana* (Meigen, 1824)**

Čižiūnai, 22 07 2007, 1♂ (bushes near roadside, E.L.).

***Pseudoperichaeta palesoidea* (Robineau-Desvoidy, 1830)**

Vartai env., 15 07 2007, 1♂ (edge of deciduous forest, E.L.).

***Rhacodinella apicata* (Pandellé, 1896)**

Žaizdriai, 17 07 2007, 1♂ 1♀ (opening of mixed forest, E.L.).

***Senometopia separata* (Rondani, 1859)**

Dūkštų Ažuolynas f., 22 07 2007, 1♂ (edge of *Quercus-Picea* forest, E.L.).

***Subclytia rotundiventris* (Fallén, 1820)**

Buktos Giria f., 15 07 2007, 1♂ (edge of deciduous forest, E.L.); Piktakonys env., 21 07 2007, 1♂ (edge of mixed forest, E.L.).

***Tachina ursina* Meigen, 1824**

Lekėčiai, 26 04 1999, 1♀; Užunvėžiai, 04 05 1994, 1♂ (leg. R. Ferenc); Visoriai, 18 05 2007, 1♀ (in meadow in mixed forest, E.L.).

***Winthemia bohemani* (Zetterstedt, 1844)**

Buktos Giria f., 23 07 2007, 1♂ (edge of deciduous forest, E.L.).

Discussion

This study presents faunistic data on 49 newly recorded species of Brachycerous flies for the Lithuanian fauna. They are assigned to 34 genera which belong to eight families (twelve genera are new for our fauna). Special attention in this paper is paid to the family Tachinidae. 22 species, which form almost half of the presented newly recorded species, belong to this family.

Soldier flies (Stratiomyidae) represent a medium-sized family of Diptera, particularly diverse in wet habitats of warm climate (e.g. Oriental region) (Papp & Darvas, 1997). 33 species were already known from Lithuania (Pakalniškis *et al.*, 2006). The newly recorded species is restricted to the Western Palaearctic.

Bee flies (Bombyliidae) are a large family of Diptera. Most of the species are restricted to arid and semiarid areas of warm climate (Papp & Darvas, 1997). Only 15 species were hitherto known from Lithuania with a similar amount of species known from the Nordic countries (Pakalniškis *et al.*, 2006; Pape, 2007). The newly recorded species *Lomatia lateralis* has Palaearctic distribution (Pape, 2007).

Big-headed flies (Pipunculidae) are a medium size family of Diptera. 23 species were hitherto known from Lithuania (Pakalniškis *et al.*, 2006). 92 species are known from Latvia (Pape, 2007), so the available data from Lithuania represent only a little part of the Pipunculidae fauna to be expected in this country. Most of the newly recorded species are known from many European countries. Only *Cephalops (S.) ultimus* is known northwards to Latvia, while the rest of the species are distributed more northwardly (Pape, 2007). *C. (C.) aeneus*, *C. (C.) vittipes*, *C. (P.) obtusinervis*, *C. (S.) carinatus*, *Eudorylas fuscipes*, and *E. subfuscipes* are known from the Eastern Palaearctic as well, while *C. (S.) subultimus*, *C. (S.) ultimus* and *E. inferus* are restricted to the Western Palaearctic (Pape, 2007).

Hoverflies (Syrphidae) are amongst the largest and best studied Diptera families. 269 species were known from Lithuania (Pakalniškis *et al.*, 2006) until now – the number of

species is quite similar to that of the Nordic countries (Pape, 2007). *Criorhina ranunculi* is known from Europe northwards to Latvia, Sweden and Norway, while the record of *C. berberina* is the northernmost point in Europe eastwards from the Baltic sea. Both species are restricted to the Western Palaearctic (Pape, 2007).

Anthomyiidae is a medium size family of Diptera, best represented in the Holarctic Region (Papp & Darvas, 1998). Data from Lithuania is mostly confined to substantial pests and includes 44 species (Pakalniškis *et al.*, 2005; 2006), which represents possibly only about a fifth of the real number. Eight newly found species are known from many European countries (Pape, 2007).

Fanniidae is a small family and is poorly studied in Lithuania (Pakalniškis *et al.*, 2006). 10 species were known here and they represent possibly about a fifth of the actual number. The newly recorded *Piezura graminicola* is known from many European countries, also from the Eastern Palaearctic and the Nearctic Region (Pape, 2007).

True flies (Muscidae) are among the largest Diptera families and are well represented in all zoogeographic regions, but poorly studied in Lithuania. 114 species were known until now and most of them were recorded recently (Dumčius & Pakalniškis 2004; 2006; Lutovinovas, 2004, 2006). All five species presented in this report are known from many European countries (Pape, 2007).

Tachinidae is undoubtedly the largest family of Brachycerous flies worldwide, but are poorly studied in Lithuania. 180 species were known from our country (Pakalniškis *et al.*, 2006) and most of them were recorded only recently (Lutovinovas, 2004, 2006). Additionally, 22 species are presented in this report. The global distribution of these species is not known very well (Pape, 2007). Most of the species are recorded from many European countries, while the record of *Cylindromyia pilipes* is amongst the northernmost points in Europe. There are only a few records of *Blepharomyia angustifrons*, *Chetogena fasciata* and *Rhacodinella apicata* in Europe (Pape, 2007).

In total, there are 2165 Brachycerous fly species in Lithuania.

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Correction of misidentified species

The species *Vibrissina debilitata* (Pandellé, 1896), mentioned by the author in the previous source (Lutovinovas, 2006) is incorrect because of misidentification. The correct name of this species is *Vibrissina turrita* (Meigen, 1824) and should be corrected.

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Naujos Lietuvos faunos musinių dvisparnių (Diptera) rūšys

E. LUTOVINOVAS

Santrauka

Šiame straipsnyje pateikiami duomenys apie 49 naujas Lietuvos faunos musinių dvisparnių rūšis, 12 naujų genčių ir vieną pošeimį. Ištaisyta viena apibūdinimo klaida. Vabzdžiai surinkti autoriaus bei pasinaudota žinomų entomologinių kolekcijų medžiaga iš T. Ivanausko Zoologijos Muziejaus ir Vilniaus universiteto Ekologijos instituto. Rezultate Lietuvos musinių dvisparnių faunoje žinomos 2165 rūšys.

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