

INITIAL DATA ON FUNGUS GNATS (DIPTERA, MYCETOPHILIDAE) OF LITHUANIA

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Abstract. There are 25 species of fungus gnats (Diptera, Mycetophilidae) registered in Lithuania. 22 of them are new for the Lithuanian fauna. All these species belong to 5 subfamilies. In this work the check-list of found in Lithuania species is presented. For each species information on its locality, finding date, the number of collected specimens, sex and, for many species, fungi genus and species, biotopes are pointed out.

Key words: Diptera, Mycetophilidae, ecology, fauna

INTRODUCTION

Fungus gnats (Mycetophilidae) is one of the most abundant families of Diptera order. There are more than 3000 described species, with a world-wide distribution (Krivosheina et al., 1986). It is a specific group of insects widely distributed in coniferous, deciduous and mixed forests, where they can be seen from early spring till late autumn. The most characteristic feature of the larvae is mycetophagia (it is especially evident in Mycetophilinae subfamily). Imagos are aphagous or they feed on nectar (Sakharova, 1977).

Fungus gnats due to their abundance and way of feeding play an important role in the biocenoses of forests as initial destructors of fungus fruit-bodies and distributors of fungus spores.

At present, Mycetophilidae family is subdivided into 7 subfamilies: Mycomyinae, Sciophilinae, Gnoristinae, Metanepsiinae, Leiinae, Mycetophilinae, Manotinae (Zaitsev, 1994). Species found in Lithuania belong to 5 subfamilies.

In Lithuania this group of insects is poorly investigated. Only 3 species of fungus gnats have been registered (Valenta, Podėnas, 1985; Podėnas, 1988; Pakalniškis, Podėnas, 1992) until now: *Mycomya pseudoapicalis* (Landrock), *Exechia nigroscutellata* Landrock, *Boletina dispecta* Dziedzicki.

The purpose of this work is to present some initial data on the fauna of fungus gnats in Lithuania.

MATERIAL AND METHODS

The data were collected in 8 administrative districts of Lithuania: Pakruojis district (v. Laborai), Prienai district

(v. Stanuliškės), Šalčininkai district (v. Papiškės), Širvintos district (v. Pajuodžiai), Švenčionys district (v. Meškerinė, v. Pažeimenė, v. Obelų Ragas), Trakai district (v. Pastrėvys), Varėna district (v. Darželiai, v. Margionys, v. Maskauka, v. Puvočiai), Vilnius district (v. Gudeliai) and environs of Vilnius (Smėlynė, Verkiiai, Visoriai).

Imagos were caught using an entomological net. Fruit-bodies of fungi with the larvae of fungus gnats were collected and placed into jars filled with damp peat and covered with thick material. Expupate imagos were collected with an exhaustor and fastened with pins.

All the collected material is kept in the Institute of Ecology, Akademijos 2, Vilnius.

RESULTS

From the material collected in 1997 we managed to describe 23 species of fungus gnats (Diptera, Mycetophilidae); 22 species of them were new for Lithuania. For *Exechia nigroscutellata*, which was registered earlier (S. Podėnas, 1988), a new locality and new species of host-fungus were established. Imagos of four species of fungus gnats were swept with an entomological net, 20 species were reared from damaged by the larvae fungi. The largest number of species (16) were reared from Basidiomycetes Agaricales s. 1. Clements, 4 species of fungus gnats were reared from Basidiomycetes, Agaricales s. 1., Boletales, 2 species were reared from Basidiomycetes, Aphyllophorales. *Cordyla sixi* Bar., *Mycetophila fungorum* Deg. and *Sciophila lutea* Macq. were expupate both in Basidiomycetes Agaricales s. 1. Clements and Basidiomycetes, Agaricales s. 1., Boletales. *Exechia pallida*

Stann and *Mycetophila luctuosa* Mg. were reared from unidentified fungi.

New host-fungi genera or species were established for *Coelosia tenella* (Ztt.), *Allodiopsis domestica* Mg., *Mycetophila flava* Win., *M. signatoides* Dz.

CHECK-LIST OF SPECIES

F. Mycetophilidae

Subf. Sciophilinae

1. *Sciophila lutea* (Macquart, 1826)

Prienai distr., Stanuliškės, 04 09 1997, *Gyrodon lividus* (Fr.) Sacc., imago 26 09 1997, 1♂; Švenčionys distr., Meškerinė, 28 07 1997, *Russula* sp., imago 05 08 1997, 1♂; Varėna distr., Margionys, 13 08 1997, *Lactarius deliciosus* (Fr.) S.F. Gray, imago 30 08 1997, 2♂, Puvočiai, 31 05 1997, *Suillus granulatus* (Fr.) O. Kuntze, imago 18 06 1997, 1♂.

Subf. Gnoristinae

2. *Coelossia tenella* (Zetterstedt, 1852)

Varėna distr., Darželiai, 28 09 1997, *Tricholoma flavovirens* (Fr.) Lund., imago 04 11 1997, 1♂, leg. R. Sprangauskaitė.

The species *Tarnania tarnanii* Dz. emerged from the latter sample together with the species *C. tenella* (Ztt.).

Subf. Leiinae

3. *Leia bilineata* (Winnertz, 1863)

Vilnius, Verkiai, 12 05 1997, *Phellinus* sp., imago 19 06 1997, 1♂.

4. *Leia picta* (Meigen, 1830)

Vilnius distr., Gudeliai, 27 06 1997, 1♂, leg. S. Pakalniškis. Mixed forest.

Subf. Mycetophilinae

5. *Allodiopsis domestica* (Meigen, 1830)

Vilnius, Smėlynė, 05 10 1997, *Lepiota clypeolaria* (Fr.) Kummer, imago 14 11 1997, 2♂.

6. *Brevicornu sericoma* (Meigen, 1830)

Vilnius, Verkiai, 07 07 1997, 1♂, deciduous forest.

7. *Cordyla fusca* (Meigen, 1804)

Švenčionys distr., Meškerinė, 28 07 1997, *Russula* sp., imago 05 07 1997, 1♂; Varėna distr., Margionys, 13 08 1997, *Russula* sp., imago 21-23 08 1997, 6♀4♂.

8. *Cordyla sixi* (Barendrecht, 1938)

Švenčionys distr., Pažeimenė, 17 09 1997, *Amanita citrina* (Schff.) S. F. Gray, imago 29 09 1997, 2♀1♂; Varėna distr., Maskauka, 21 09 1997, *Boletus pinicola* Vitt., imago 08 10 1997, 2♀2♂, leg. S. Pakalniškis.

9. *Exechia dorsalis* (Staeger, 1840)

Širvintos distr., Pajuodžiai, 11 09 1997, *Collybia* sp., imago 01 10 1997, 2♂, leg. S. Pakalniškis; Švenčionys distr., Obelų Ragas, 26 09 1997, *Hygrophorus* sp., imago 13 10 1997, 1♂, leg. S. Pakalniškis.

10. *Exechia fusca* (Meigen, 1804)

Varėna distr., Darželiai, 28 09 1997, *Russula* sp., imago 14 10 1997, 1♂, leg. R. Sprangauskaitė.

11. *Exechia nigroscutellata* (Landrock, 1912)

Švenčionys distr., Obelų Ragas, 26 09 1997, *Lactarius torminosus* (Fr.) S. F. Gray, imago 10-13 10 1997, 4♀1♂, leg. S. Pakalniškis.

12. *Exechia seriata* (Meigen, 1830)

Varėna distr., Margionys, 12 08 1997, imago 18 08 1997, 1♂.

13. *Tarnania fenestralis* (Meigen, 1818)

Švenčionys distr., Obelų Ragas, 26 09 1997, *Cortinarius armillatus* (Fr.) Fr., imago 17-21 10 1997, 3♀1♂; *Hygrophorus* sp., imago 13 10 1997, 1♂, leg. S. Pakalniškis.

14. *Tarnania tarnanii* (Dziedzicki, 1910)

Varėna distr., 28 09 1997, *Tricholoma flavovirens* (Fr.) Lund., imago 10-14 10 1997, 7♀1♂, leg. R. Sprangauskaitė.

The species *Coelosia tenella* (Ztt.) emerged from the latter sample together with the species *T. tarnanii* Dz.

15. *Mycetophila blanda* (Winnertz, 1863)

Varėna distr., Margionys, 13 08 1997, *Lactarius deliciosus* (Fr.) S. F. Gray, imago 20-23 08 1997, 4♀1♂.

16. *Mycetophila flava* (Winnertz, 1863)

Vilnius, Smėlynė, 14 09 1997, *Pleurotus* sp., imago 24-26 09 1997, 2♀3♂.

17. *Mycetophila fungorum* (De Geer, 1776)

Pakruojis distr., Laborai, 25 09 1997, *Lyophyllum decastes* (Fr.) Sing., imago 07-10 10 1997, 2♂, leg. S. Pakalniškis; Prienai distr., Stanuliškės, 04 09 1997, 2♀, leg. S. Pakalniškis; Prienai distr., Stanuliškės, 04 09 1997, 2♀, alder grove. Šalčininkai distr., Papiškės, 23 09 1997, imago 14 10 1997, 3♂, leg. S. Pakalniškis; Švenčionys distr., Meškerinė, 28 08 1997, *Russula* sp., imago 05 08 1997, 2♀; Švenčionys distr., Obelų Ragas, 26 09 1997, *Amanita muscaria* (Fr.) Hooker, imago 13-17 09 1997, 3♀8♂, leg. S. Pakalniškis; Švenčionys distr., Pažeimenė, 17 09 1997, 2♀2♂, mixed forest; Trakai distr., Pastrėvys, 18 09 1997, *Amanita muscaria* (Fr.) Hooker, imago 06 10 1997, 1♀1♂, leg. S. Pakalniškis; Varėna distr., Darželiai, 28 09 1997, *Russula emetica* (Fr.) Sing., imago 14 10 1997, 2♀, leg. R. Sprangauskaitė; Varėna distr., Margionys, 12-13 08 1997, *Russula* sp., imago 19 08 – 11 09 1997, 19♀11♂; 12 08 1997, *Suillus* sp., imago 20 08 1997, 1♀; Varėna distr., Puvočiai, 06-08 07 1997, *Russula* sp., imago 17-20 07 1997, 3♀1♂; 20 08 97, *Russula* sp., imago 28 07 1997, 1♀1♂; Vilnius, Smėlynė, 22 06 1997, *Suillus granulatus* (Fr.) O. Kuntze, imago 28 06 – 01 07 1997, 5♀3♂; 27 07 1997, *Russula* sp., imago 05 08 1997, 2♀; 07 09 1997, 1♀, mixed forest; Vilnius, Visoriai, 09 09 1997, *Macrolepiota procera* (Fr.) Sing., imago 19-22 09 1997, 2♀1♂.

Species *Cordyla fusca* Mg., *Mycetophila strigatoides* Landr., *Sciophila lutea* Macq. emerged together with the species *M. fungorum* Deg.

18. *Mycetophila ichneumonea* (Say, 1823)

Varėna distr., Darželiai, 28 09 1997, *Lactarius torminosus* (Fr.) S. F. Gray, imago 17 10 1997, 2♀1♂, leg. R. Sprangauskaitė.

19. *Mycetophila laeta* (Walker, 1848)

Pakruojis distr., Laborai, 25 09 1997, *Fomitopsis* sp., imago 12 10 1997, 3♀4♂, leg. V. Jonaitis.

20. *Mycetophila luctuosa* (Meigen, 1830)

Prienai distr., Stanuliškės, 04 09 1997, imago 15 09 1997, 2♀1♂.

21. *Mycetophila signatoides* (Dziedzicki, 1884)

Prienai distr., Stanuliškės, 04 09 1997, *Gyrodont lividus* (Fr.) Sacc., imago 16-17 09 1997, 6♀2♂.

22. *Mycetophila strigatoides* (Landrock, 1927)

Pakruojis distr., Laborai, 25 09 1997, *Lyophyllum decastes* (Fr.) Sing., imago 07-10 10 1997, 11♀7♂, leg. S. Pakalniškis.

The species *Mycetophila fungorum* Deg. emerged from the latter sample together with the species *M. strigatoides* Landr.

23. *Zygomia humeralis* (Wiedemann, 1817)

Vilnius, Verkiai, 07 07 1997, 1♂, deciduous forest.

CONCLUSIONS

1. At present, there are 25 species of fungus gnats (Diptera, Mycetophilidae) registered in Lithuania. 22 species of fungus gnats are new in the fauna of Lithuania. New genera or species of host-fungi were established for 18 species of Mycetophilidae family. 4 species of fungus gnats were found in new food-fungi.
2. Found out fungus gnats usually feed on the fungi of *Lactarius* (4) and *Russula* (4) genera. *Mycetophila fungorum* species was registered in 7 districts feeding on the fungi of 5 genera. This species often live together with other species of fungus gnats.

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Pirmos žinios apie Lietuvos grybinius uodukus (Diptera, Mycetophilidae)

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Santrauka

Šiuo metu Lietuvoje užregistruotos 25 rūšys grybinių uodukų (Diptera, Mycetophilidae), priklausančios 5 pošeimiams. 22 iš jų – naujos Lietuvos faunai. Darbe pateikiamas rastų rūšių sąrašas. Nurodyta kiekvienos rūšies radimo vieta, data, rastųjų individų skaičius, lytis, daugelio rūšių – mitybinio grybo gentis ar rūšis, biotopas.

Первые сведения о грибных комарах (Diptera, Mycetophilidae) Литвы

Й. Римшаите

Резюме

Приводится перечень из 23 видов грибных комаров (Diptera, Mycetophilidae) Литвы, 22 из них – новые для фауны Литвы. В Литве в настоящее время зарегистрировано 25 видов. Для каждого вида указаны место и дата нахождения, количество и пол собранных индивидов, также некоторые данные о биотопе и кормовом субстрате.

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