

NEW RECORDS OF MYCETOPHILIDAE (DIPTERA) REARED FROM MACROFUNGI IN ESTONIA

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Abstract. Data on 20 fungivorous Mycetophilid species are given, eleven of them being new to Estonia: *Phthinia winnertzi* Mik, *Sciophila modesta* A. Zaitzev, *S. varia* Winn., *Docosia gilvipes* (Walk.), *Leia bimaculata* (Mg.), *Mycetophila strobli* Laštovka, *M. uninata* Zett., *Allodia (A.) embla* Hack., *A. (A.) septentrionalis* Hack., *Rymosia setiger* Dz. and *Tarnania fenestralis* (Mg.). *Phthinia winnertzi* Mik and *Leia bilineata* (Winn.) were reared from macrofungi for the first time.

Key words: *Diptera*, *Mycetophilidae*, Estonia.

Mycetophilidae are the most frequent *Diptera* in macrofungi and they are the main component of the fungivorous insect complex. Mycetophilid eggs or larvae can be found already in young mushrooms.

There are known 161 species of *Mycetophilidae* in Estonia (Dampf, 1924; Lackschewitz, 1937; Kurina, 1991, 1992); 42 of them have been reared from macrofungi (Kurina, 1991, 1992). In this paper additional material about 20 fungivorous species is presented, eleven of them are new to Estonia. Two species, *Phthinia winnertzi* Mik, 1869, and *Leia bilineata* (Winnertz, 1863), have been recorded from fungi for the first time.

The imagines of *Mycetophilidae* were reared on fungi. The method of rearing can be found in an earlier paper (Kurina, 1991).

The material for the present work was collected at 18 sites in Estonia: Audaku in the Viidumäe State Nature Reserve on the Island of Saaremaa (1988, 1992); the Island of Abruka (1991); Orissaare on the Island of Saaremaa (1993); the islands of Muhu (1993) and Vormsi (1991, 1992); Oonga (1992, 1993); Virtsu (1991), Puhtu (1991) and Laelatu (1991), both near Virtsu; Kabli (1991); the Nigula State Nature Reserve (1990, 1991, 1992, 1993); Varudi (1992); Kohala (1992); the Järvelja Experimental Forestry Enterprise (1989); Tiksoja, near Tartu (1993); Vapramäe (1992) and Tamsa-Altmae (1993), both near Elva (1993); Pikasilla (1993).

The material is deposited at the Zoological Museum of the University of Tartu. Asterisks before Mycetophilid names in the species list indicate new species to Estonia.

Data on the host fungi of Mycetophilid species in the following list are mainly based on Krivosheina et al. (Кривошеина et al., 1986), if not shown otherwise. The method of treatment of *Agaricales* s.l. and *Agaricales* s. str. has been given by Urbonas et al., (1986).

LIST OF SPECIES

1. Mycomya cinerascens (Macquart, 1826)

Dampf, 1924: 43; Lackschewitz, 1937: 9.

Edwards (1925) has reared the adults of this species on larvae feeding on *Stereum* sp.

New material: Tiksoja, *Cortinarius* sp., 12. 09. 1993, 1 ♂ emerged 24. 09. 1993.

***2. Pththinia winnertzi** Mik, 1869

Earlier records about feeding lacking.

New material: Nigula, *Russula flava*, 22. 08. 1991, 1 ♀ emerged 17. 09. 1991.

3. Sciophila lutea Macquart, 1826

Lackschewitz, 1937: 15.

Polyphagous. Feeding on many species of *Ascomycetes*, *Basidiomycetes* and *Gasteromycetes*. The larvae of *S. lutea* Macq. were recorded on the surface of the fruit-bodies of *Aphyllorphorales* by A. Zaitsev (Зайцев, 1982).

New material: Nigula, ex *Amanita porphyria*, *Russula paludosa*, *R. emetica* var. *emetica* and *Lactarius torminosus*; Varudi, ex *Lactarius deliciosus*; Tamsa-Altmae, ex *Lactarius deterrimus*. Total 12 ♂.

***4. Sciophila modesta** A. Zaitsev, 1982

Formerly registered on *Gyromitra* and *Verpa* (*Ascomycetes*).

New material: Nigula, *Lactarius helvius*, 06. 08. 1990, 1 ♂ emerged 07. 09. 1990.

***5. Sciophila varia** Winnertzi, 1863

Feeding on many species of *Basidiomycetes*.

New material: Abruha, *Hydnum repandum*, 10. 09. 1991, 9 ♂ ♂ emerged 10. 10. 1991; Virtsu, *H. repandum*, 31. 08. 1991, 1 ♂ emerged 24. 09. 1991.

6. Coelosia tenella (Zetterstedt, 1852)

Lackschewitz, 1937: 16.

Formerly reared from fungi belonging to many genera of *Ascomycetes*, *Aphyllorphorales* and *Agaricales* s. l.

New material: Nigula, ex *Russula paludosa*, *R. emetica* var. *emetica*, *R. decolorans* and *Suillus granulatus*. Total 3 ♂ ♂ 3 ♀ ♀.

***7. Docosia gilvipes** (Walker, 1856)

Formerly registered on many species of *Ascomycetes* and *Basidiomycetes*. Originally material from twelve species of fungi.

New material: Orissaare, ex *Tricholoma terreum*, *Pholiota squarrosa*, *Pholiota* sp., *Russula delica*; Nigula ex *Cortinarius* sp., *Russula vinosa*, *R. paludosa*, *R. decolorans*, *Amanita porphyria* (from two fruit-bodies); Järvelja, ex *Leccinum aurantiacum*, *Tricholoma album*; Tamsa-Altmae, ex *Macrolepiota procera*. Total 20 ♂ ♂ 33 ♀ ♀.

8. Leia bilineata (Winnertzi, 1863)

Lackschewitz, 1937: 20.

According to Hutson et al. (1980) the species has been found from the nest of *Sciurus vulgaris* and also under the bark of an oak. My records are the first ones on fungi.

New material: Laelatu, *Piptoporus betulinus*, 30. 08. 1991, 1 ♂ emerged 21. 09. 1991; *Phellinus igniarius*, 30. 08. 1991, 1 ♂ emerged 16. 09. 1991.

***9. *Leia bimaculata* (Meigen, 1804)**

According to literature data (Hutson et al., 1980; Халидов, 1984; Кривошеина et al., 1986) from *Cantharellus*, *Craterellus*, *Hydnum* (*Aphylliphorales*) and on many species of *Agaricales* s.l. The most frequent fungivorous *Leia* species.

New material: Puhtu, *Polyporus squamosus*, 12. 08. 1992, 1 ♀ emerged 07. 09. 1992.

***10. *Mycetophila strobli* Laštovka, 1972**

Earlier registered on many species of *Agaricales* s.l.

Previously 13 specimens of this species collected at Audaku in 1988 were misidentified by me as *Mycetophila ichneumonea* Say, 1823 (Kurina, 1991). In my old material of *M. ichneumonea* Say, 70 specimens from Audaku, Kābli, Nigula, and Jārvselja had been determined correctly.

New material: Audaku *Russula delica*, 03. 08. 1988, 13 ♂ ♂ emerged 13. 08. 1988; Virtsu, *Lactarius torminosus*, 31. 08. 1991, 1 ♂ emerged 24. 09. 1991.

***11. *Mycetophila uninotata* Zetterstedt, 1852**

Earlier known on *Cortinarius* and *Lactarius* (Hackman, Meinander, 1979).

New material: Nigula, *Cortinarius* sp., 22. 08. 1991, 3 ♂ ♂ emerged 01. 09. 1991.

***12. *Allodia (Allodia) embla* Hackman, 1971**

Earlier reared only from *Inocybe*.

New material: Vormsi, *Laccaria laccata*, 27. 08. 1992, 1 ♂ ♂ emerged 25. 09. 1992.

13. *Allodia (Allodia) lugens* (Wiedemann, 1817)

Lackschewitz, 1937: 34.

Polyphagous. Feeding on many species of the *Agaricales* s.l. (Hackman, Meinander, 1979; Халидов, 1984). By Krivošeina et al. (Кривошеина et al., 1986) also on the *Ascomycetes*. According to my original data, in Estonia from 16 species of the *Agaricales* s.l. New material from *Paxillus involutus*, *Hygrophoropsis aurantiaca*, *Laccaria laccata*, *Tricholoma terreum*, *Oudemansiella platyphylla*, *Amanita porphyria*, *Inocybe* sp., *Hebeloma mesophaeum*, *H. sp.*, *Gymnopilus penetrans*, *Russula aurata*, *R. emetica* var. *betularum*, *R. integra*, *R. sp.*, *Lactarius rufus*, *L. torminosus*; Audaku, Orissaare, Vormsi, Oonga, Puhtu, Laelatu, Nigula, Kohala, Tiksoja, and Vapramäe all in all 50 ♂ ♂.

14. *Allodia (Allodia) ornaticollis* Meigen, 1818

Lackschewitz, 1937: 34.

A species closely related to *A. (A.) pyxidiformis* A. Zaitsev distinguished only by the hypopygium (Зайцев, 1983). Formerly recorded on fungi of 30 genera of *Agaricales* s.l. and also on *Gyromitra* and *Morchella*. Some of these reports may be erroneous, and these specimens may belong to the species *A. (A.) pyxidiformis*.

New material: Nigula, *Russula flava*, 22. 08. 1991, 1 ♂ emerged 01. 09. 1991; Tiksoja, *Tricholoma terreum*, 12. 09. 1993, 7 ♂ ♂ emerged 26. 09. 1993.

***15. *Allodia (Allodia) septentrionalis* Hackman, 1971**

According to Yakovlev (Яковлев, 1986) this species is known only as existing on *Laccaria laccata*.

New material: Tiksoja, *Tricholoma terreum*, 12. 09. 1993, 3 ♂ ♂ emerged 27. 09. and 01. 10. 1993.

16. *Rymosia affinis* Winnertz, 1863

Dampf, 1924: 43; Lackschewitz, 1937: 32.

The species has been previously recorded on a variety of *Agaricales* s. str. and also on *Ramaria*.

New material: Orissaare, *Cortinarius* sp., 02. 10. 1993, 2 ♂♂ emerged 21. 10. 1993; Vormsi, *Entoloma* sp., 26. 08. 1992, 2 ♂♂ emerged 11. 09. and 13. 09. 1992.

***17. *Rymosia setiger* Dziedzicki, 1910**

According to Dely-Draskovits (1974), on *Cortinarius* and *Ramaria*.

New material: Audaku, *Sarcodon imbricatus*, 04. 09. 1992, 3 ♂♂ 4 ♀♀ emerged 26. 09 and 30. 09. 1992.

18. *Allodiopsis (Allodiopsis) domestica* (Meigen, 1830)

Lackschewitz, 1937: 29 (*Rhymosia domestica* Meig.)

Formerly reared on the fungi of 13 genera of *Agaricales* s.l. The species is common on *Tricholomataceae*.

New material: Vormsi, ex *Clitocybe gibba*, *Entoloma* sp., *Hebeloma edurum*; Puutu, *Entoloma* sp.; Kabli, ex *Clitocybe cavipes*. Total 14 ♂♂.

19. *Exechia confinis* Winnertz, 1863

Dampf, 1924: 43; Lackschewitz, 1937: 22.

According to Hackman and Meinander (1979), *Exechia* sp. pr. *confinis* has been found regularly on *Paxillus involutus*.

New material: from five fruit bodies of *Paxillus involutus*; Muhu, Oonga, Kohala, Tamsa-Altmae, and Pikasilla, all in all 6 ♂♂.

***20. *Tarnania fenestralis* (Meigen, 1818)**

Earlier found on 13 species of *Agaricales* s.l., by Dely-Draskovits (1974), also on *Ramaria*.

New material: Abruha, ex *Cortinarius* sp.; Orissaare, ex *Pleurotus ostreatus* and *Cortinarius* sp.; Kohala, ex *Clitocybe rivulosa*; Uhtna, ex *Clitocybe odora*. Total 20 ♂♂.

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MAKROSEENTEST VÄLJAKASVATATUD SEENESÄÄSKLASTE (DIPTERA, MYCETOPHILIDAE) UUED LEIUD EESTIS

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Senini oli Eestis sugukonnast *Mycetophilidae* teada 161 liiki, nendest 42 oli välja kasvatatud seentest. Käesolevaga lisandub viimastele veel 20 liiki, millest 11 on leitud Eestist esmakordselt. Kahe liigi, *Phthinia winnertzi* Mik, 1869 ja *Leia bilineata* (Winnertz, 1863), valmikuid ei ole seentest varem välja kasvatatud.

НОВЫЕ ДАННЫЕ О ГРИБНЫХ КОМАРАХ (DIPTERA, MYCETOPHILIDAE), ВЫВЕДЕННЫХ В ЭСТОНИИ ИЗ МАКРОМИЦЕТОВ

Олави КУРИНА

До сих пор в Эстонии из семейства *Mycetophilidae* был известен 161 вид, среди которых 42 выведены из плодовых тел макромицетов. В настоящей работе к ним добавлено еще 20 мицетобионтных видов, при этом 11 из них новые для Эстонии. Два вида (*Phthinia winnertzi* Mik, 1869 и *Leia bilineata* (Winnertz, 1863)) выведены впервые из макромицетов.