

NEW SPECIES OF ELACHISTIDAE (LEPIDOPTERA) IN MOLĖTAI DISTRICT

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Introduction

The Elachistidae are small moths, with wingspans between 4 and 20 mm. Adults often cryptic in their appearance and larvae are obligate leaf miners with hidden lifestyle. Most species feed on monocots (grasses or sedges), but some species feed on dicotyledonous plants (Traugott-Olsen & Nielsen, 1977; Parenti & Varalda, 1994).

The Elachistidae fauna of Lithuania has been rather poor known for a long time, and it is from the last three decades only that the investigations have become more intense. First revision of Lithuanian Elachistidae species was published only in 2005 (Sruoga & Ivinskis, 2005). Altogether 39 species, placed in three genera, have been described and illustrated. Among these, only 7 species (*Elachista alpinella* Stainton, 1854, *E. albifrontella* (Hübner, 1817), *E. canapennella* (Hübner, 1813), *E. maculicerusella* (Bruand, 1859), *E. argentella* (Clerck, 1759), *E. pollinariella* Zeller, 1839 and *E. adscitella* Stainton, 1851) were reported from Molėtai district. Later, one more species, *Elachista luticomella* Zeller, 1839, was added from Šakimas village in the southern part of the district (Sruoga & Ivinskis, 2011). The aim of this paper is to provide new data on morphology and distribution of Elachistidae in Molėtai district.

Material and Methods

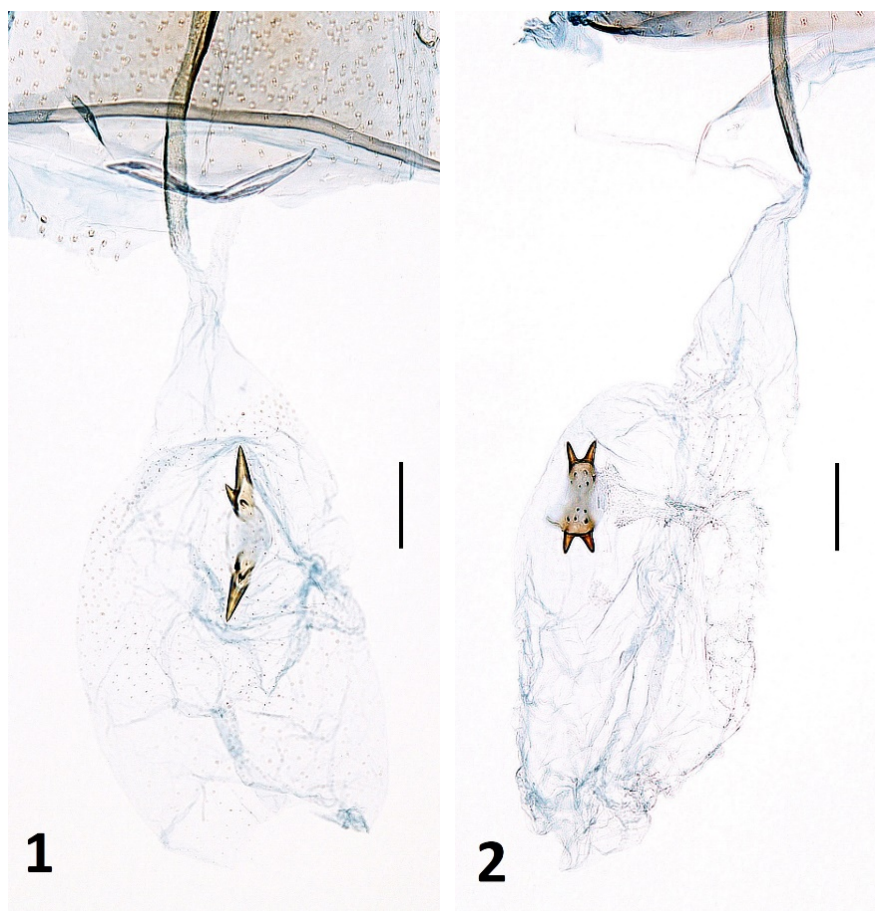
Moths were collected by netting and sweeping with an entomological net in twilight. The specimens were collected by Asta Seletytė (A.S.) and Virginijus Sruoga (V.S.).

Genitalia for identification purposes were prepared following the method described by Robinson (1976) and Sruoga & Ivinskis (2005). The genital morphology was examined using Novex B and Leica DM 2500 microscopes. The photographs of genitalia were made using a Leica DM2500 microscope and a Leica DFC420 digital camera.

The specimens and genitalia slides discussed here are deposited at the Department of Biology and Chemistry, Lithuanian University of Educational Sciences, Vilnius, Lithuania.

List of localities

Locality	Administrative district	Coordinates (LAT, LONG)
Molėtai env.	Molėtai district	55.23631, 25.49017
Padobužė	Molėtai district	55.21401, 25.38642
Stalėriškiai	Molėtai district	55.17791, 25.26261



Figures 1, 2. Signum of *Elachista freyerella* from Lithuania: 1) genitalia slide VS279, Vilnius, Verkiiai, 29 05 1988, P. Ivinskis leg.; 2) genitalia slide VS472, Molėtai distr., Stalėriškiai, 06 06 2017 (A.S.). Scale bar 0.1 mm.

List of records

Perittia farinella (Thunberg, 1794)

Stalėriškiai, 03 06 2017, 1♂ (A.S.).

Stephensia brunnichella (Linnaeus, 1767)

Padobužė, 22 05 2017, 1♂ (V.S.).

Elachista apicipunctella Stainton, 1849

Molėtai env., 04 06 2017, 1♀ (V.S.).

Elachista freyerella (Hübner, 1805)

Stalėriškiai, 05 06 2015, 1♀; 16 06 2015, 1♂; 29 07 2015, 1♀; 30 07 2015, 1♂, 1♀; 02 08 2015, 1♀; 03 08 2015, 2♀; 06 08 2015, 1♂, 1♀; 21 05 2017, 1♂; 27 05 2017, 7♂; 30 05 2017, 2♂, 2♀; 06 06 2017, 1♂, 2♀; 10 06 2017, 1♂, 1♀ (A.S.).

Elachista consortella Stainton, 1851

Stalėriškiai, 05 06 2015, 1♀; 10 06 2015, 1♂; 06 08 2015, 1♂ (A.S.).

Discussion

In this paper we provide new distributional data for 5 species of Elachistidae, rising to 13 the total number of elachistid species reported from Molėtai district. These species

are rather widely distributed in Europe but because of lack adequate collecting efforts in Lithuania, distributional data remain rather scarce.

Perittia farinella is a rare species in Lithuania, known mainly from southern and eastern parts of the country. Earlier it was known only from 13 localities in 8 administrative districts (Sruoga & Ivinskis, 2005, 2011).

Stephensia brunnichella is a very rare species in Lithuania, earlier was recorded only from two localities in Kaišiadorys administrative district (Sruoga & Diškus, 2001) and Kėdainiai administrative district (Sruoga & Ivinskis, 2011). These are the firstly reported adults of the first generation of this species.

Elachista apicipunctella is a rare species in Lithuania, earlier was known only from 11 localities in 6 administrative districts (Ostrauskas, 2001; Sruoga & Ivinskis, 2005, 2011).

E. freyerella is Holarctic species and is not rare in Lithuania, but still was known only from 14 administrative districts (Sruoga & Ivinskis, 2005, 2011).

The signum in the *E. freyerella* species group mostly is rounded or oval sclerotised plate with pair of large opposite teeth and few small accessory teeth (Fig. 1). In one female specimen (06 06 2017) we discovered a quite unusual shape of signum, with two pairs of large teeth and few very small teeth (Fig. 2). Such variation is very rare, still is noted only in *E. nipponicella* Sugisima from Japan (Sugisima, 2006).

Elachista consortella is very rare species in Lithuania, earlier was known only from 6 localities in 6 administrative districts (Sruoga & Ivinskis, 2005; Ostrauskas *et al.*, 2010a, b).

Acknowledgments

We are thankful to dr. A. Rocienė for her help in preparing photos.

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Naujos Elachistidae (Lepidoptera) rūšys Molėtų rajone

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Santrauka

Straipsnyje pateikiami duomenys apie 5 Molėtų rajonui naujas Elachistidae rūšis. Iš viso šiame rajone dabar yra registruota 13 Elachistidae rūšių. Nurodoma drugių sugavimo vieta, laikas, individų skaičius bei rinkėjas. Pirmą kartą nustatyta neįprasta *Elachista freyerella* patelės signos forma. Tyrimų medžiaga saugoma Lietuvos edukologijos universitete, Biologijos ir Chemijos katedroje.

Received: 14 September, 2017