

DATA ON 3 NEW AND 6 RARE GELECHIIDAE MOTH SPECIES (LEPIDOPTERA: GELECHIIDAE) FOR LITHUANIA

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Introduction

The Gelechiidae (Lepidoptera: Gelechioidea) include species that are pests of agriculture and forestry as well as species of biological and ecological interest. It is one of the largest families of microlepidoptera and includes more than 4600 described species in the world referred to about 500 genera in four subfamilies (Hodges, 1999). About 1500 species occur in the Palearctic Region (Piskunov, 1990), and about 690 species occur in the Nearctic Region, although only 30% of the species in the latter are estimated to be described (Hodges, 1983, 1999). A large number of species are also present in the Oriental, Neotropical, Afrotropical, and Australian Regions (Becker, 1984; Common, 1990; Heppner, 1991; Nielsen & Common 1991; Park, 1992). Gelechiidae is one of the least known families of micromoths in Europe, with only more than 600 species (Huemer & Karsholt, 1999). The last catalogue of Lithuanian Lepidoptera includes 163 species of this family (Ivinskis & Rimšaitė, 2018).

This article presents data on 3 new (*Metzneria aestivella*, *Syncopacma larseniella*, *Acompsia schmidtellus*) and 6 rare for the Lithuanian fauna species of Gelechiidae. Species were collected from 9 administrative districts and municipalities of Lithuania.

Material and Methods

The material was collected in different parts of Lithuania: in Kazlų Rūda and Neringa municipalities, Jonava, Kaunas, Tauragė, Varėna and Vilnius administrative districts. Insects were collected using an entomological net and light trapping at night (160W–500W DRL type bulb lamp was used). The species were collected by Brigita Paulavičiūtė (B.P.), Giedrius Švitra (G.Š.), Vaida Paznekaitė (V.P.) and Vytautas Inokaitis (V.I.). The material was identified by Brigita Paulavičiūtė.

The geographical coordinates were measured using a Garmin eTrex GPS receiver. The material is deposited in the collection of the Kaunas T. Ivanauskas Museum of Zoology. Species were identified using the following sources: Huemer & Karsholt (1999, 2010, 2013), Elsner *et al.* (1999). Rarity categories have been established according to the checklist of Lepidoptera of Lithuania (Ivinskis, 2004; Ivinskis & Rimšaitė, 2018).

List of localities

Locality	Administrative district	Coordinates (LAT, LONG)
Bradeliškės	Vilnius district	54.82452, 24.94517
Braziūkai	Kaunas district	54.907783, 23.474718
Jovariškės	Trakai district	54.65241, 24.87764
Juodkrantė	Neringa mun.	55.545957, 21.119798
Katra	Varėna district	53.992694, 24.586032
Lokėnėlių Miškas f.	Jonava district	55.09546, 24.37448
Lomankos Miškas f.	Kaunas district	54.963343, 23.769996
Runkių Miškas f.	Kazlų Rūda mun.	54.812257, 23.517778
Viešvilė Nat. R.	Tauragė district	55.179949, 22.461193

List of species

GELECHIIDAE

****Metzneria aestivella* (Zeller, 1839)**

Runkių Miškas f., 01 07 2016, 1♂ (V.I.).

***Monochroa elongella* (Heinemann, 1870)**

Bradeliškės, 25 07 2015, 1♂ (G.Š.).

***Eulamprotes atrella* (Denis & Schiffermüller, 1775)**

Jovariškės, 12 05 2018, 1♂ (G.Š.).

***Bryotropha desertella* (Douglas, 1850)**

Katra, 12 05 2018, 2♂ (G.Š.).

***Bryotropha galbanella* (Zeller, 1839)**

Juodkrantė, 14 07 2004, 1 spec. (B.P.); Braziūkai 30 06 2009, 1♂ (B.P.).

***Bryotropha basaltinella* (Zeller, 1839)**

Katra, 05 08 2018, 2♀ (G.Š.).

***Gelechia muscosella* Zeller, 1839**

Lomankos Miškas f., 30 07 2018, 1♂ (B.P.).

****Syncopacma larseniella* Gozmány, 1957**

Viešvilė Nat. R., 28 07 2008, 1♂ (B.P.).

****Acompsia schmidtellus* (Heyden, 1848)**

Lokėnėlių Miškas f., 07 07 2017, 1♂ (V.P.).

Discussion

Gelechiidae moths are not comprehensively investigated in Lithuania. New species are published almost every year.

Metzneria aestivella (Zeller, 1839) is spread widely from the Canary Islands throughout Europe to Central Asia (Elsner *et al.*, 1999). This species already is known in many European countries: Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, The Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Crete, Latvia, Macedonia, Malta, Poland, Portugal, Romania, Russia, Sardinia, Serbia, Sicily, Slovakia, Slovenia, Spain, Sweden, Switzerland, the Netherlands (Karsholt & Nieuwerkerken, 2013; Aarvik *et al.*, 2017). The moth wingspan is usually 11-14 mm (Fig. 1). Adults are very similar to *M. lappella* and

M. metzneriella. *M. aestivella* differs with lack the black discal spot on the forewing (Solly, 2019). Larva feeds on *Carlina spp.* and *Tanacetum corybosum* (Patočka & Turčáni, 2005). The species is local and the adults fly during June and July (Elsner *et al.*, 1999).



Fig. 1. *Metzneria aestivella* (Zeller, 1839) (Runkių Miškas f., 01 07 2016, ♂ V. Inokaitis).



Fig. 2. *Syncopacma larseniella* Gozmány, 1957 (Viešvilė Nat. R. (2), 28 07 2008, ♂ B. Paulavičiūtė).



Fig. 3. *Acompsia schmidtellus* (Heyden, 1848) (Lokėnėlių Miškas f., 07 07 2017, ♂ V. Paznekaitė)

Genus Syncopacma contains several species which are virtually impossible to distinguish except by genitalia dissection. *Syncopacma larseniella* Gozmány, 1957 is mostly distributed in north-west and Central Europe: Austria, Belgium, Britain, Russia, the Czech Republic, Denmark, France, Germany, Luxemburg, Poland, Portugal, Romania, Slovakia, Spain, Switzerland, The Netherlands (Elsner *et al.*, 1999; Karsholt & Nieuwerkerken, 2013; Baraniak *et al.*, 2014; Aarvik *et al.*, 2017). Moths of this species

show a less distinct pale fascia on the forewing underside and lack the pale spot on the hindwing underside (Fig. 2) (Lewis, 2016). Wingspan of *S. larseniella* usually is 11–14 mm. Larvae feed on *Lotus corniculatus* in a spinning between leaves. The adults fly during June and July (Mackay, 2019).

Acompsia schmidtellus (Heyden, 1848) is found locally in central, eastern and southern Europe: Austria, Belgium, Britain, the Czech Republic, Denmark, France, Germany, Italy, Luxemburg, Portugal, Russia, Sardinia, Slovakia, Spain, Switzerland, the Netherlands. In the east, the range extends to Ukraine (Karsholt & Nieuwerkerken, 2013; Aarvik *et al.*, 2017). Wingspan of the moths is usually 14–16 mm (Fig. 3). Forewing is light orange-brown, mottled with some black scales; two or three black spots are distributed as follows: one distinct in the cell, one indistinct (sometimes missing) above it, and one rather indistinct (rarely missing) at the end of the cell; a small patch of black scales at tornus; an indistinct light fascia from outside tornus to costa; termen emarginated below apex, with a fine, black line; cilia concolorous with forewing; hindwing grey, with yellow cilia. (Karsholt & Riedl, 1996). Larva feeds on *Origanum vulgare*, folding a leaf and spinning it together, only leaving a small entrance in each end, through which it rapidly disappears if disturbed. Adults fly during June and late August (Huemer & Karsholt, 2002).

Acknowledgements

I would like to thank Mr. Kazimieras Martinaitis (Kaunas T. Ivanauskas Museum of Zoology) for photos.

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Nauji duomenys apie 3 naujas ir 6 retas Gelechiidae drugių rūšis (Lepidoptera: Gelechiidae) Lietuvoje

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Santrauka

Straipsnyje pateikiami duomenys apie 3 naujas ir 6 retas Gelechiidae šeimos rūšis Lietuvos teritorijoje. *Metzneria aestivella*, *Syncopacma larseniella*, *Acompsia schmidtellus* yra naujos Lietuvos faunos drugių rūšys. Straipsnyje pateikta kiekvienos rūšies sugavimo vieta, data, individų skaičius ir rinkėjai.

Received: 24 October, 2019