

RARE AND VERY RARE FOR LITHUANIAN FAUNA SPECIES OF MOTH (LEPIDOPTERA)

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Introduction

Lepidoptera (butterflies and moths) are one of the most diverse and species-rich groups of organisms. Currently, the number of described species is close to 160.000, but it is estimated that the true number of species could be as high as half a million (van Nieukerken *et al.*, 2011). The Lepidoptera in Lithuania are not comprehensively investigated. The last catalogue of Lithuanian Lepidoptera includes 2423 species (Aarvik, 2017, Ivinkis, Rimšaitė, 2018). This article presents data on 52 rare species of moths (Lepidoptera) registered in 15 administrative districts and municipalities of Lithuania. The species *Cauchas rufimitrella*, *Monopis imella*, *Bucculatrix demaryella*, *Swammerdamia caesiella*, *Bryotropha affinis* and *Phycita roborella* were recorded in Lithuania for the second time.

Material and Methods

The material was collected by the author of this report Brigita Paulavičiūtė (B.P.). The rest of species were collected by Vytautas Inokaitis (V.I.), Vitalijus Bačianskas (V.B.), Romas Ferenca (R.F.), Giedrius Švitra (G.Š.) and Kazimieras Martinaitis (K.M.).

Lepidoptera were collected using an entomological net and light trapping at night (160W–500W DRL type bulb lamps were used) in different parts of Lithuania. The geographical coordinates were measured using a Garmin eTrex GPS receiver. The material is deposited in the collection of Kaunas T. Ivanauskas Zoological Museum. Species were identified using the following sources: Traugott-Olsen & Nielsen, (1977), Zaguliaev *et al.* (1978), Danilevskij *et al.* (1981), Razowski (1990), Hannemann (1995), Puplesis (1994), Emmet (1996, 2002, 2002), Gielis (1996), Huemer & Karsholt (1999, 2010), Elsner *et al.* (1999), Emmet & Langmaid (2002), Sruoga & Ivinskis (2005), Tokár *et al.* 2005, Slamka (2006, 2008, 2013), Bengtsson & Johansson (2008, 2011), Gaedike (2015). Rariness of species was established according to the check-list of Lepidoptera of Lithuania (Ivinskis, 2004).

List of localities

Locality	Administrative district	Coordinates (LAT, LONG)
Armeniškiai	Jurbarkas district	55.075165, 23.212494
Belvederis	Jurbarkas district	54.939191, 23.723055
Braziūkai	Kaunas district	54.901561, 23.483917
Dubravos Miškas f.	Kaunas district	54.847137, 24.077562
Gastilonių Miškas f.	Kaišiadorys district	54.877262, 24.179069

Grobštas Nat. R.	Neringa mun.	55.284931, 20.973452
Jonava	Jonava district	55.072087, 24.285943
Jovariškės	Trakai district	54.65241, 24.87764
Juodkrantė (1)	Neringa mun.	55.545761, 21.119908
Juodkrantė (2)	Neringa mun.	55.524514, 21.096147
Kaunas (1)	Kaunas district	54.904578, 23.913688
Kaunas (2)	Kaunas district	54.922229, 24.037777
Karčiupis	Kaišiadorys district	54.907836, 24.138926
Katra	Varėna district	53.992694, 24.586032
Kruopiai	Akmenė district	56.261956, 22.998215
Lapnugaris Landscape Reserve	Neringa mun.	55.288284, 20.974777
Lomankos Miškas f.	Kaunas district	54,963343, 23,769996
Netoniai	Kaunas district	54.939191, 23.723053
Pajūrio Miškas f.	Kaunas district	54.830061, 23.621665
Pakretuonė	Švenčionys district	55.268569, 26.041143
Pamieriai	Kaišiadorys district	54.881546, 24.264972
Preila	Neringa mun.	55.523848, 21.096464
Punios Šilas f.	Alytus district	54.515376, 24.085294
Puvočiai	Varėna district	54.118062, 24.305834
Slydžiai	Šiauliai district	55.02797, 23.44917
Šventoji	Palanga mun.	55.999776, 21.07966
Tervydoniai	Šakiai district	55.027985, 23.449159
Trakų Miškas f.	Švenčionys district	55.020616, 26.092442
Vidzgiris Botanical Reserve	Alytus district	54.381761, 24.006927
Vaiguvos Miškas f.	Kaišiadorys district	54.777987, 24.200527
Viečiūnų Miškas f.	Druskininkai mun.	54.05111, 24.06667
Viešvilė Nat. R.	Tauragė district	55.137452, 22.399277

List of species

NEPTICULIDAE

Ectoedemia subbimaculella (Haworth, 1828)

Gastilonių Miškas f., 20 06 2007, 1♂ (B.P.).

ADELIDAE

Cauchas rufimitrella (Scopoli, 1763)

Grobštas Nature Reserve, 26 05 2008, 1♂; Juodkrantė (1), 27 05 2008, 1 spec. (B.P.).

TINEIDAE

Triaxomera fulvimitrella (Sodoffsky, 1830)

Armeniškai, 07 06 2019, 1♂ (R.F.).

Monopis imella (Hübner, 1813)

Jovariškės, 12 05 2018, 1♂ (G.Š.).

BUCCULATRICIDAE

Bucculatrix albedinella (Zeller, 1839)

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

***Bucculatrix demaryella* (Duponchel, 1840)**

Braziūkai, 30 05 2010, 1♂ (B.P.); Dubravos Miškas f., 06 06 2007, 1♂.

***Bucculatrix ulmella* Zeller, 1848**

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

GRACILLARIIDAE

***Caloptilia betulicola* (M. Hering, 1928)**

Kaunas, 16 04 2018, 1♂ (V.I.).

***Caloptilia robustella* Jäckh, 1972**

Lomankos Miškas f., 30 07 2018, 1♂ (B.P.); Punios Šilas f., 03 05 2018, 1♂ (V.B.).

***Aspilapteryx tringipennella* (Zeller, 1839)**

Tervydoniai, 16 08 2008, 1♂ (R.F.).

***Acrocercops brongniardella* (Fabricius, 1798)**

Vidzgiris Botanical Reserve, 18 12 2019, 1♂ (K.M.).

***Phyllonorycter coryli* (Nicelli, 1851)**

Kaunas (1), 14 04 2018, 1♂ (V.I.).

***Phyllonorycter lautella* (Zeller, 1846)**

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

***Phyllonorycter salicicolellus* (Sircom, 1848)**

Kruopiai, 05 07 2007, 1♂ (B.P.).

***Phyllonorycter stettinensis* (Nicelli, 1852)**

Grobštas Nature Rezerve, 28 05 2008, 1♂ (B.P.); Juodkrantė (1), 27 05 2008, 2♂;

Lapnugaris Landscape Reserve, 27 05 2008, 1♂ (R.F.).

***Phyllocnistis saligna* (Zeller, 1839)**

Jonava, 31 07 2017, 1♂ (V.P.).

YPONOMEUTIDAE

***Swammerdamia caesiella* (Hübner, 1796)**

Pakretuonė, 12 08 2017, 1♂ (V.P.).

YPSOLOPHIDAE

***Ypsolopha lucella* (Fabricius, 1775)**

Tervydoniai, 08 07 2017, 1♀ (R.F.).

PLUTELLIDAE

***Rhigognostis incarnatella* (Steudel, 1873)**

Belvederis, 22 10 2019, 1 spec. (V.I.); Kaunas (1), 05 04 2016, 1 spec.; Netoniai, 12 10 2018, 1♂.

LYONETIIDAE

***Lyonetia ledi* Wocke, 1859**

Viešvilė Nat. R., 31 07 2008, 1♂ (B.P.).

DEPRESSARIIDAE

***Agonopterix ciliella* (Stainton, 1849)**

Trakų Miškas f., 11 09 2018, 1♂ (G.Š.).

***Agonopterix liturosa* (Haworth, 1811)**

Slydžiai, 24 07 2011, 1♂ (B.P.).

ELACHISTIDAE

***Elachista exactella* (Herrich-Schäffer, 1855)**

Juodkrantė (1), 21 05 2005, 1 spec.; Preila, 04 06 2005, 1 spec. (B.P.).

***Elachista bisulcella* (Duponchel, 1843)**

Šventoji, 22 08 2019, 1♀ (R.F.).

***Elachista freyerella* (Hübner, 1825)**

Pamieriai, 21 05 2005, 2 spec. (1♂, 1♀); Vaiguvo Miškas f., 04 07 2007, 4 spec. (B.P.).

***Elachista nobilella* Zeller, 1839**

Grobštas Nat. R., 25 05 2009, 1 spec. (R.F.); Juodkrantė (2), 04 06 2005, 1♂ (B.P.).

***Elachista tengstromi* Kaila, Bengtsson, Sulc & Junnilainen, 2001**

Karčiupis, 20 06 2007, 1♂ (B.P.).

***Elachista utonella* Frey, 1856**

Grobštas Nat. R., 26 05 2008, 2♂ (B.P.); Karčiupis, 20 06 2007, 1♂; Tervydoniai, 10 08 2019, 1♀ (R.F.).

OECOPHORIDAE

***Crassa tinctella* (Hübner, 1796)**

Kaunas (1), 28 05 2016, 1♀ (V.I.).

***Harpella forficella* (Scopoli, 1763)**

Kaunas (1), 06 07 2006, 1 spec.; 09 07 2015, 1 spec.; 27 07 2015, 1 spec.; Pajūrio Miškas f., 21 07 2015, 1 spec.; Puvočiai, 25 07 2019, 1 spec. (V.I.); Tervydoniai, 16 07 2018, 1 spec; 18 07 2018, 1 spec. 21 07 2018, 1 spec. (R.F.).

COLEOPHORIDAE

***Coleophora ibipennella* Zeller, 1849**

Tervydoniai, 22-23 07 2018, 1♂ (R.F.).

GELECHIIDAE

***Monochroa sepicolella* (Herrich-Schäffer, 1854)**

Braziūkai, 07 08 2008, 1♂ (B.P.).

***Bryotropha senectella* (Zeller, 1839)**

Braziūkai, 20 07 2011, 3♂ (B.P.).

***Bryotropha affinis* (Haworth, 1828)**

Juodkrantė (1), 21 06 2007, 1♀ (R.F.).

***Gelechia muscosella* Zeller, 1839**

Braziūkai, 20 07 2011, 1♂ (B.P.); Kaunas (1), 11 07 2018, 1♀ (V.I.).

***Scrobipalpa artemisiella* (Treitschke, 1833)**

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

***Scrobipalpa proclivella* (Fuchs, 1886)**

Braziūkai, 20 11 2007, 1♀ (B.P.).

***Brachmia inornatella* (Douglas, 1850)**

Braziūkai, 20 07 2011, 1♂ (B.P.).

PTEROPHORIDAE

***Adaina microdactyla* (Hübner, 1813)**

Punios Šilas f., 03 05 2018, 1♂ (V.B.).

PYRALIDAE

***Synaphe punctalis* (Fabricius, 1775)**

Jovariškės, 12 05 2018, 1 spec.; Katra, 05 08 2018, 2 spec. (G.Š.).

***Dioryctria sylvestrella* (Ratzeburg, 1840)**

Tervydoniai, 04 07 2015, 1 spec.; 25 07 2015, 1 spec. (R.F.).

***Phycita roborella* (Denis & Schiffermüller, 1775)**

Jovariškės, 12 05 2018, 1♂ (G.Š.)

***Episcythrastris tetricella* (Denis & Schiffermüller, 1775)**

Viečiūnų Miškas f., 03 05 2018, 2♂ (V.I.).

***Assara terebrella* (Zincken, 1818)**

Kaunas (1), 20 07 2018, 1♂ (V.I.).

***Scoparia basistrigalis* Knaggs, 1866**

Katra, 29 06 2018, 1♀ (G.Š.).

***Eudonia laetella* (Zeller, 1846)**

Kaunas (1), 14 06 2017, 1♂; Kaunas (2), 17 06 2017, 1♀ (V.I.).

***Eudonia mercurella* (Linnaeus, 1758)**

Viečiūnų Miškas f., 01 09 2016, 1♀ (V.I.).

***Euchromius ocella* (Haworth, 1811)**

Kaunas (1), 19 09 2018, 1♂ (V.I.).

***Catoptria verellus* (Zincken, 1817)**

Jovariškės, 12 05 2018, 1♂ (G.Š.).

***Udea accolalis* (Zeller, 1867)**

Trakų Miškas f., 11 09 2018, 1♂ (G.Š.).

***Ecpyrrhorhoe rubiginalis* (Hübner, 1796)**

Jovariškės, 12 05 2018, 1♀ (G.Š.).

***Diasemia reticularis* (Linnaeus, 1761)**

Braziūkai, 20 07 2011, 2 spec. (B.P.); Lomankos Miškas f., 30 07 2018, 1 spec. (B.P.); Tervydoniai, 21 07 2018, 1 spec. (R.F.).

Discussion

These studies present the faunistic data on 52 rare and very rare moth's species in Lithuania. The species belong to 14 families of Lepidoptera. Mostly rarest species have been detected from Adelidae, Bucculatricidae, Yponomeutidae, Gelechiidae, Pyralidae families. *Cauchas rufimitrella*, *Monopis imella*, *Bucculatrix demaryella*, *Swammerdamia caesiella*, *Bryotropha affinis* and *Phycita roborella* were recorded for the second time in Lithuania.

Cauchas rufimitrella (Scopoli, 1763) is a diurnal moth which belong to Adelidae family. This moth is widely spread in all Europe, except Portugal, Ukraine and southern part of the Balkan Peninsula (Karsholt & Nieukerken, 2013). *C. rufimitrella* was found only in one place - Širvintos district (Alionys) and it is very rare species in Lithuania. Larvae of this moth live on *Cardamine pratensis* L., *Allaria*, *Sisymbrium*. The single generation flies in May and June (Ivinskis, 2004). This species can be identified by the combination of the brassy green forewings and the yellow crown (Huisman *et al.*, 2004). *Monopis imella* (Hübner, 1813) is the moth from Tineidae family. *M. imella* is widespread in all Europe (Karsholt & Nieukerken, 2013). It's very rare species in Lithuania and was found only in Kaunas (Ivinskis, 2004). Adults occur between June and September, possibly in two generations. The larvae feed on refuse of animal origin, such as wool or hair, and are sometimes found in birds' nests (Gaedike *et al.*, 2010). *Bucculatrix demaryella* (Duponchel, 1840) is a moth of the family Bucculatricidae. Species is found in most of Europe (except the Iberian Peninsula and parts of the Balkan Peninsula), Russia (Karsholt & Nieukerken, 2013). *B. demaryella* was found once in southern part of Lithuania, Varėna district (Musteika) and it is still very rare in Lithuania. (Ivinskis, 2004). Adults of moths are on wings from May to early June in one generation per year (Ivinskis, 2004). The larvae of *B. demaryella* feed on *Betula nana*, *Betula pendula*, *Betula pubescens* and *Corylus avellana*. They mine the leaves of their host plant. Larvae can be found from

June to July (Patočka & Turčani, 2005; Biesenbaum, 2010). *Swammerdamia caesiella* (Hübner, 1796) belongs to the family Yponomeutidae. It is widely distributed in all Europe (Karsholt & Nieuwerkerken, 2013). In Lithuania it is very locally species and was found in the environs of the lake Budas in Vilkaviškis district. They are on wings from May to June and again in August in two generations per year (Ivinskis, 2004). The larvae feed on *Betula* species (Patočka & Turčani, 2005). *Bryotropha affinis* (Haworth, 1828) is the moth of the Gelechiidae family. A fairly common species throughout most of all Europe (Karsholt & Nieuwerkerken, 2013). This species was found in Ignalina district (Antagavė) and until now it is very rare species in Lithuania. The moths are on the wings in June and July (Ivinskis, 2004). The larvae feed on mosses, often on walls during the early part of the year. (Patočka & Turčani, 2005). *Phycita roborella* (Denis & Schiffermüller, 1775) is a moth of the family Pyralidae. This species is distributed in most of European countries (Karsholt & Nieuwerkerken, 2013). *P. roborella* was detected once in Molėtai district (Šakimas) and it is local and very rare in Lithuania (Ivinskis, 2004). The moth flies in one generation from the end of June to September. The caterpillars feed on oak, apple and pear (Patočka & Turčani, 2005, Baldizzone & Scalercio 2018).

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Retos ir labai retos Lietuvos faunos drugių (Lepidoptera) rūšys

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Santrauka

Straipsnyje pateikiami duomenys apie retas ir labai retas Lietuvos faunai drugių rūšis. Kartu pateikiama informacija apie rūšių radvietes nurodant tyrimų koordinatas, rinkimų datas ir pateikiamų rūšių stebėtų individų skaičių.

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