NEW RECORDS OF FOUR RARE SPECIES OF NEPTICULIDAE (LEPIDOPTERA) DISCOVERED IN WESTERN LITHUANIA

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Introduction

Nepticulidae (Lepidoptera: Nepticulidae) are highly specialized: larvae live inside plant tissues and are predominantly monophagous. Because of the concealed mining life-style of larvae, difficulty in imago rearing and very small size of adults, Nepticulidae are still poorly studied in many regions.

The general review of the Lithuanian fauna by A. Diškus published as a chapter in the monograph by Puplesis & Diškus (2003) includes a total of 73 species of Nepticulidae of the Lithuanian fauna. All other published papers dealing with Lithuanian Nepticulidae (Diškus & Juchnevič, 2001; Navickaitė & Diškus, 2008; Anisimov & Stonis, 2008; Diškus & Lensbergaitė, 2008; Navickaitė *et al*. 2011) provide no more species, except new distribution records.

The recent fieldwork in Klaipėda district and Palanga town (2009–2010) has resulted in the discovery of four rare species that are new to this area (*Stigmella tityrella, S. continuella, S. hemargyrella* and *Ectoedemia minimella*).

Material and Methods

All material was collected in 2009–2011, in Klaipėda distr. and Palanga t. by first author Arūnas Diškus (further – A.D.).

A detailed description of the method is given in Puplesis & Diškus (2003). Identification of species was made by all authors using leaf-mine samples, which are very specific and fully sufficient for species recognision (identification) for all four species presented in the current paper.

The taxonomic nomenclature of the species follows Puplesis, 1994 and Puplesis & Diškus, 2003. Provided distribution data are after Puplesis, 1994, van Nieukerken, 1996, Puplesis & Diškus, 2003, van Nieukerken *et al*., 2004, Diškus & Juchnevič, 2001, Navickaitė & Diškus, 2008, Anisimov & Stonis, 2008, Diškus & Lensbergaitė, 2008, and original.

List of localities

Klaipėda distr.	Giruliai f.	55°46'28,8"N, 21°05'04,2"E
	Brožiai	55°38'34,9"N, 21°33'48,9"E
Palanga t.	Nemirseta env.	55°51'57,7"N, 21°03'34,4"E

List of species

***Stigmella tityrella* (Stainton, 1854)**

Giruliai f., 25 09 2011, 7 empty leaf-mines; field-card and sample No. 5074 (A.D.)

***Stigmella continuella* (Stainton, 1856)**

Brožiai, 12 08 2009, 1 empty leaf-mine; field-card and sample No. 5071 (A.D.); Nemirseta env., 25 07 2009, 1 empty leaf-mine; field-card and sample No. 5070 (A.D.)

***Stigmella hemargyrella* (Kollar, 1832)**

Giruliai f., 25 09 2011, 1 empty leaf-mine; field-card and sample No. 5073 (A.D.)

***Ectoedemia minimella* (Zetterstedt, 1839)**

Klaipėda distr., Brožiai, 12 08 2009, 1 empty leaf-mine; field-card and sample No. 5072 (A.D.)

Discussion

All four recorded nepticulid species are rare or very rare in Lithuania, but widespread in Europe.

Stigmella tityrella is very rare, with very restricted distribution within Lithuania, but in areas where it occurs it may be abundant. Before the present discovery in Klaipėda distr. (Giruliai f.) it was known only from the Curronian Spit (Navickaite *et al*., 2011) and Šilutė distr. (Mikytai) (Puplesis & Diškus, 2003). General distribution is predominantly European; currently known from Spain, Ireland, Great Britain, France, Italy, Switzerland, Germany, Belgium, Luxemburg, Netherlands, Denmark, Sweden, Norway, Lithuania, Ukraine, Poland, Slovakia, Czech Rep., Austria, Hungary, Romania, Slovenia, Bulgaria, Greece; also found in the western Caucasus. Larvae mine leaves of *Fagus sylvatica* L.

Stigmella continuella is very rare, with very restricted distribution within Lithuania. Before the present discovery in Palanga t. (Nemirseta env.) and Klaipėda distr. (Brožiai), it was known only from Vilkaviškis distr. (Navickaitė & Diškus, 2008), Kaišiadorys, Trakai and Varėna distr. (Puplesis & Diškus, 2003). General distribution is probably trans-Palaearctic; the species widespread in Europe (known from Ireland, Great Britain, France, Switzerland, Germany, Belgium, Netherlands, Denmark, Sweden, Norway, Finland, Estonia, Lithuania, Northwestern and Central European Russia, Ukraine, Poland, Czech Rep., Austria, Hungary; it also occurs in East Asia (Far Eastern Russia, Primorskiy Kray). Larvae mine leaves of *Betula pendula* Roth, *B. pubescens* Ehrh.

Stigmella hemargyrella is very rare, with very restricted distribution within Lithuania. Before the present discovery in Klaipėda distr. (Giruliai f.) it was known only from Šilutė distr. (Mikytai) (Puplesis & Diškus, 2003). Other records of the species in Lithuania (Ivinskis, 2004) most likely belong not to *S. hemargyrella* but *S. tityrella*. *S. hemargyrella* is widelly distributed in Europe, currently known from Spain, Ireland, Great Britain, France (incl. Corsica), Italy, Switzerland, Germany, Belgium, Luxemburg, Netherlands, Denmark, Sweden, Lithuania, Ukraine, Poland, Slovakia, Czech Rep., Austria, Hungary, Romania, Croatia, Slovenia, Bulgaria and Greece. Larvae mine leaves of *Fagus sylvatica* L.

Ectoedemia minimella is rare, with very restricted distribution within Lithuania.

Before the present discovery in Klaipėda distr. (Brožiai) it was known only from Curronian Spit and Trakai distr. (Puplesis & Diškus, 2003; Navickaitė *et al*., 2010, 2011). General distribution is European, excluding southern areas of the continent; currently known from Ireland, Great Britain, France, Italy, Switzerland, Germany, Netherlands, Denmark, Sweden, Norway, Finland, Estonia, Latvia, Lithuania, Western and Northwestern European Russia, Poland, Czech Rep. and Austria. Larvae mine leaves of *Betula pubescens* Ehrh.

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Nauji duomenys apie keturių retų mažųjų gaubtagalvių rūšių (Lepidoptera, Nepticulidae) paplitimą vakarinėje Lietuvos dalyje

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Santrauka

2009–2011 atlikus lauko tyrimus Klaipėdos rajone (Girulių miške ir Brožių kaime) bei Palangos mieste (Nemirsetos apylinkėse), buvo išaiškintos naujos keturių mažųjų gaubtagalvių rūšių (*Stigmella tityrella, S. continuella, S. hemargyrella* ir *Ectoedemia minimella*) radavietės.

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