

**A TAXONOMIC LIST OF NEPTICULIDAE (LEPIDOPTERA)
RECORDED IN THE ŠALČININKAI DISTRICT, A HITHERTO
LARGELY UNSTUDIED AREA IN SOUTHEASTERN LITHUANIA**

AGATA SKORB, ARŪNAS DIŠKUS, JONAS RIMANTAS STONIS

Vytautas Magnus University, Studentų St. 39, Vilnius 08106, Lithuania.
E-mail: diskus.biotaxonomy@gmail.com

Introduction

Nepticulidae (or pygmy moths) are known as very specialized Lepidoptera: their larvae live inside green tissues of plants and are predominantly monophagous, though some of them are oligophagous (Diškus & Stonis, 2012). The first general review of the Lithuanian fauna by A. Diškus was published as a chapter in a monograph by Puplesis & Diškus (2003), and it was followed by an amply illustrated monograph by Diškus & Stonis (2012) and a doctoral thesis by Asta Navickaitė (Navickaitė *et al.*, 2014). Although, from a geographical point of view, all the above-mentioned publications covered almost the entire territory of Lithuania, some areas, notably the southeastern region, including the Šalčininkai District, were largely neglected because of insufficient studies and lack of material.

In 2011–2013 some Nepticulidae research was done in the Šalčininkai District by the bachelor student A. Bobnis, who recorded 35 Nepticulidae species (Bobnis, *unpublished*). Our recent leaf-mine collecting in the Šalčininkai District (2015–2018) resulted in the discovery of additional 23 species (in total, 58 species) and the first review of the Nepticulidae fauna of this previously largely unstudied area of southeastern Lithuania.

Material and Methods

The material treated in the current paper was collected in 2015–2018 by Agata Skorb in the following localities of the Šalčininkai District:

Locality	Coordinates (LAT, LONG)
Eišiškės	54.17033, 25.00163
The Gornostajiškės Village	54.17527, 25.03658
The Dumblė Forest	54.14919, 25.02827
The Panezdiliai Forest	54.21294, 24.97925
The Paraistis Forest	54.21719, 25.06213
The Navickiškės Forest	54.22455, 25.10897
The Nevainionys Forest	54.29266, 24.98194

The material is deposited in the collection of the former Lithuanian University of Educational Sciences (currently the Vytautas Magnus University) and in a private collection of Agata Skorb.

The species were identified by Arūnas Diškus and Agata Skorb mostly using the

collected leaf-mine samples, a majority of which were highly specific. The male and/or female adults as well as male and female genitalia were also used for identification of the species when the reared material was available.

Methods and protocols for collecting, dissecting and identifying species are outlined in Diškus & Stonis (2012) and Stonis *et al.* (2014).

List of species

***Johanssoniella acetosae* (Stainton, 1854)** (Fig. 1)

Eišiškės, 13 08 2015, 123 leaf mines on *Rumex acetosa*, field card no. 018 (leg. A. Skorb); 19 07 2016, 6 ♂, 5 ♀, and 223 leaf mines with mining larvae or empty on *R. acetosa* (leg. A. Skorb); The Gornostajiškės Village, 18 09 2016, 15 leaf mines on *R. acetosa*, field card no. 018.

Remarks. Previously the species was listed as *Enteucha acetosae* (see Johansson *et al.*, 1990; Puplėsis, 1994; Puplėsis & Diškus, 2003; Diškus & Stonis, 2012). Recently a transfer to *Johanssoniella* was made by Stonis *et al.*, 2018. Although in Lithuania larvae of *J. acetosae* mine leaves of *Rumex acetosa* L. and *R. acetosella* L., in Šalčininkai District only leaf mines on *R. acetosa* were detected.

***Stigmella lapponica* (Wocke, 1862)** (Fig. 2)

The Dumbłė Forest, 18 09 2016, 1 old empty leaf mine on *B. pendula*, field card no. 193; Eišiškės, 17 07 2015, 1 leaf mine on *Betula pendula*, field card no. 011; 26 06 2015, 2 leaf mines on *B. pendula*, field card no. 029; 23 06 2016, 6 leaf mines on *B. pendula*, field card no. 093; 27 06 2016, 9 leaf mines on *B. pendula*, field card no. 096; 11 08 2016, 8 leaf mines on *B. pendula*, field card no. 154; The Navickiškės Forest, 24 07 2016, 26 leaf mines on *B. pendula*, field card no. 134; 24 07 2016, 4 leaf mines on *B. pubescens*, field card no. 135; The Panezdiliai Forest, 15 07 2016, 6 leaf mines on *B. pendula*, field card no. 124.

***Stigmella confusella* (Wood & Walsingham, 1894)** (Fig. 5)

The Navickiškės Forest, 24 07 2016, 35 leaf mines on *Betula pendula*, field card no. 138; 09 09 2017, 3 leaf mines on *B. pendula*, field card no. 372.

***Stigmella freyella* (Heyden, 1858)** (Fig. 3)

Eišiškės, 27 06 2016, 21 leaf mines on *Convolvulus arvensis*, field card no. 102; 19 07 2016, 10 leaf mines on *C. arvensis*, field card no. 131; 26 06 2017, 1 ♀, 9 leaf mines on *C. arvensis*, field card no. 252.

***Stigmella tiliae* (Frey, 1856)** (Fig. 6)

Eišiškės, 17 07 2015, 10 leaf mines on *Tilia cordata*, field card no. 008; 27 06 2016, 15 leaf mines on *T. cordata*, field card no. 100; 11 07 2016, 15 leaf mines on *T. cordata*, field card no. 119; 16 09 2016, 7 leaf mines on *T. cordata*, field card no. 190; 27 07 2017, 2 leaf mines on *T. cordata*, field card no. 299; 27 07 2017, 3 leaf mines on *T. europaea*, field card no. 300; 07 08 2017, 2 leaf mines on *T. cordata*, field card no. 317; 07 08 2017, 4 leaf mines on *T. europaea*, field card no. 318; 20 10 2017, 37 leaf mines on *T. cordata*, field card no. 453; The Gornostajiškės Village, 06 08 2017, 3 leaf mines on *T. cordata*, field card no. 312.

***Stigmella microtheriella* (Stainton, 1854)** (Fig. 11)

The Dumbłė Forest, 01 07 2016, 3 leaf mines on *C. avellana*, field card no. 110; 09 07 2017, 4 leaf mines on *C. avellana*, field card no. 276; 14 08 2017, 26 leaf mines on *C. avellana*, field card no. 330; 14 08 2017, 13 leaf mines on *C. avellana*, field

card no. 337; 07 10 2017, 5 leaf mines on *C. avellana*, field card no. 420; Eišiškės, 13 08 2015, 9 leaf mines on *Corylus avellana*, field card no. 020; 27 06 2016, 3 leaf mines on *C. avellana*, field card no. 098; 07 08 2017, 6 leaf mines on *C. avellana*, field card no. 319; 20 10 2017, 7 leaf mines on *C. avellana*, field card no. 458; The Navickiškės Forest, 24 07 2016, 7 leaf mines on *C. avellana*, field card no. 137; 24 07 2016, 13 leaf mines on *C. betulus*, field card no. 139; 01 10 2016, 1 ♀, 24 leaf mines on *C. betulus*, field card no. 226; 01 10 2016, 7 leaf mines on *C. avellana*, field card no. 225; 09 09 2017, 11 leaf mines on *C. betulus*, field card no. 366; 09 09 2017, 15 leaf mines on *C. avellana*, field card no. 368; 20 10 2017, 4 leaf mines on *C. avellana*, field card no. 438; 20 10 2017, 3 leaf mines on *C. betulus*, field card no. 440; The Nevainionys Forest, 18 09 2015, 1 leaf mine on *C. betulus*, field card no. 034; 07 10 2017, 19 leaf mines on *C. avellana*, field card no. 428; The Panezdiliai Forest, 12 07 2017, 10 leaf mines on *C. avellana*, field card no. 287; 01 09 2017, 22 leaf mines on *C. avellana*, field card no. 358; 23 09 2017, 7 leaf mines on *C. avellana*, field card no. 396; The Paraistis Forest, 27 09 2015, 10 leaf mines on *Carpinus betulus*, field card no. 049; 04 10 2015, 1 leaf mine on *C. avellana*, field card no. 064; 09 09 2017, 3 leaf mines on *C. avellana*, field card no. 377; 09 09 2017, 4 leaf mines on *C. betulus*, field card no. 378.

***Stigmella betulicola* (Stainton, 1856)** (Fig. 8)

The Dumblė Forest, 28 08 2016, 5 leaf mines on *B. pendula*, field card no. 163; Eišiškės, 17 07 2015, 1 leaf mine on *Betula pendula*, field card no. 010; The Paraistis Forest, 27 09 2015, 2 leaf mines on *B. pubescens*, field card no. 051.

***Stigmella alnetella* (Stainton, 1856)** (Figs. 10)

The Panezdiliai Forest, 04 10 2015, 6 leaf mines on *Alnus glutinosa*, field card no. 071.

***Stigmella luteella* (Stainton, 1857)** (Fig. 12)

Eišiškės, 26 09 2015, 2 leaf mines on *Betula pendula*, field card no. 043; 14 10 2016, 3 leaf mines on *B. pendula*, field card no. 238; The Nevainionys Forest, 18 09 2015, 1 leaf mine on *B. pendula*, field card no. 031; 16 10 2016, 1 ♂, 5 leaf mines on *B. pendula*, field card no. 244; The Paraistis Forest, 27 09 2015, 7 leaf mines on *B. pendula*, field card no. 045.

***Stigmella glutinosae* (Stainton, 1858)** (Fig. 14)

The Panezdiliai Forest, 04 10 2015, 11 leaf mines on *Alnus glutinosa*, field card no. 070.

***Stigmella nivenburgensis* (Preissecker, 1942)** (Fig. 16)

Eišiškės, 20 09 2015, 1 leaf mine on *Salix fragilis*, field card no. 037; 10 10 2015, 4 leaf mines on *S. fragilis*, field card no. 075; 14 10 2016, 3 leaf mines on *S. fragilis*, field card no. 236; 20 10 2017, 22 leaf mines on *S. fragilis*, field card no. 446; The Gornostajiškės Village, 20 09 2015, 2 leaf mines on *S. fragilis*, field card no. 053.

***Stigmella prunetorum* (Stainton, 1855)** (Fig. 15)

Eišiškės, 09 07 2015, 4 leaf mines on *Cerasus vulgaris*, field card no. 003; 17 07 2015, 2 leaf mines on *C. vulgaris*, field card no. 007; 26 09 2015, 1 ♂, 1 leaf mine on *Prunus* sp., field card no. 044; 27 06 2016, 2 leaf mines on *P. sp.*, field card no. 099; 27 06 2016, 6 leaf mines on *C. vulgaris*, field card no. 101; 28 06 2016, 34 leaf mines on *C. vulgaris*, field card no. 105; 04 07 2016, 10 leaf mines on *C. avium*, field card no. 112; 14 07 2016, 11 leaf mines on *C. vulgaris*, field card no. 120; 16 07 2016, 15 leaf mines on *C. avium*, field card no. 126; 16 09 2016, 5 leaf mines on *C. vulgaris*,

field card no. 183; 23 09 2016, 6 leaf mines on *P. sp.*, field card no. 201; 24 09 2016, 11 leaf mines on *C. avium*, field card no. 205; 26 06 2017, 2 leaf mines on *P. spp.*, field card no. 255; 30 06 2017, 6 leaf mines on *C. vulgaris*, field card no. 260; 08 07 2017, 15 leaf mines on *C. vulgaris*, field card no. 273; 09 07 2017, 54 leaf mines on *C. vulgaris*, field card no. 281; 11 07 2017, 45 leaf mines on *C. vulgaris*, field card no. 282; 27 07 2017, 6 leaf mines on *C. avium*, field card no. 302; 09 08 2017, 15 leaf mines on *C. vulgaris*, field card no. 325; 20 08 2017, 18 leaf mines on *C. vulgaris*, field card no. 341; 17 09 2017, 4 leaf mines on *C. vulgaris*, field card no. 383; 17 09 2017, 16 leaf mines on *C. avium*, field card no. 385; 01 10 2017, 31 leaf mines on *C. vulgaris*, field card no. 411; 07 10 2017, 8 leaf mines on *C. avium*, field card no. 415; 15 10 2017, 5 leaf mines on *C. avium*, field card no. 432; 28 10 2017, 6 leaf mines on *C. vulgaris*, field card no. 471; The Gornostajiškės Village, 24 09 2017, 2 leaf mines on *P. sp.*, field card no. 406; The Panezdiliai Forest, 14 08 2017, 9 leaf mines on *C. vulgaris*, field card no. 338; 20 10 2017, 71 leaf mines on *C. vulgaris*, field card no. 444.

***Stigmella aceris* (Frey, 1857)** (Fig. 17)

Eišiškės, 23 07 2015, 2 leaf mines on *Acer platanoides*, field card no. 013; 23 06 2016, 5 leaf mines on *A. platanoides*, field card no. 092; 27 06 2016, 6 leaf mines on *A. platanoides*, field card no. 095; 11 07 2016, 12 leaf mines on *A. platanoides*, field card no. 113; 11 08 2016, 5 leaf mines on *A. platanoides*, field card no. 155; 27 06 2017, 9 leaf mines on *A. platanoides*, field card no. 258; 03 07 2017, 4 leaf mines on *A. platanoides*, field card no. 270; The Gornostajiškės Village, 18 09 2016, 8 old empty leaf mines on *A. platanoides*, field card no. 198; 02 07 2017, 3 leaf mines on *A. platanoides*, field card no. 264; 06 08 2017, 11 leaf mines on *A. platanoides*, field card no. 308; 01 09 2017, 29 old empty leaf mines on *A. platanoides*, field card no. 351.

***Stigmella nylandriella* (Tengström, 1848)** (Fig. 22)

The Dumblių Forest, 21 06 2016, 6 leaf mines on *S. aucuparia*, field card no. 087; 21 06 2016, 6 leaf mines on *S. aucuparia*, field card no. 087; 09 07 2017, 2 leaf mines on *S. aucuparia*, field card no. 280; Eišiškės, 09 07 2015, 2 leaf mines on *Sorbus aucuparia*, field card no. 005; 17 07 2015, 1 leaf mine on *S. aucuparia*, field card no. 009; 19 07 2016, 1 leaf mine on *S. aucuparia*, field card no. 132; The Paraistis Forest, 25 09 2016, 5 leaf mines with feeding larvae on *S. aucuparia*, field card no. 207; 14 07 2017, 7 leaf mines on *S. aucuparia*, field card no. 291; 09 09 2017, 3 leaf mines with feeding larvae on *S. aucuparia*, field card no. 380.

***Stigmella oxyacanthella* (Stainton, 1854)** (Figs. 23, 26)

Eišiškės, 09 10 2015, 2 leaf mines on *Malus domestica*, field card no. 072; 15 10 2015, 2 leaf mines on *M. domestica*, field card no. 077; 01 09 2016, 14 leaf mines on *M. domestica*, field card no. 170; 11 09 2016, 7 leaf mines on *M. domestica*, field card no. 174; 17 09 2016, 1 leaf mine on *Pyrus communis*, field card no. 192; 23 09 2016, 9 leaf mines on *M. domestica*, field card no. 204; 30 09 2016, 16 leaf mines on *M. domestica*, field card no. 214; 30 09 2016, 2 leaf mines on *P. communis*, field card no. 220; 13 10 2016, 24 leaf mines on *M. domestica*, field card no. 232; 21 10 2016, 27 leaf mines on *M. domestica*, field card no. 245; 21 08 2017, 2 leaf mines on *M. domestica*, field card no. 344; 17 09 2017, 6 leaf mines on *M. domestica*, field card no. 382; 17 09 2017, 7 leaf mines on *Cerasus avium*, field card no. 384; 22 09 2017, 1 ♂, 1 ♀, 9 leaf mines on *M. domestica*, field card no. 388; 30 09 2017, 2 ♂, 2 ♀, 23

leaf mines on *M. domestica*, field card no. 410; 07 10 2017, 4 leaf mines on *M. domestica*, field card no. 413; 15 10 2017, 17 leaf mines on *M. domestica*, field card no. 429.

***Stigmella minusculella* (Herrich-Schäffer, 1855)** (Figs. 24, 25)

The Dumblių Forest, 01 07 2016, 6 leaf mines on *P. pyraster*, field card no. 111; 11 09 2016, 11 leaf mines on *P. pyraster*, field card no. 177; 09 07 2017, 30 leaf mines on *P. pyraster*, field card no. 278; 14 08 2017, 62 leaf mines on *P. pyraster*, field card no. 332; Eišiškės, 21 07 2015, 7 leaf mines on *Pyrus communis*, field card no. 012, 19 07 2016, 4 leaf mines on *P. communis*, field card no. 129; 12 08 2016, 25 leaf mines on *P. communis*, field card no. 159; 26 06 2017, 6 leaf mines on *P. communis*, field card no. 254; 01 07 2017, 7 leaf mines on *P. communis*, field card no. 261; 04 07 2017, 7 leaf mines on *P. communis*, field card no. 271; 26 07 2017, 15 leaf mines on *P. communis*, field card no. 294; 31 07 2017, 16 leaf mines on *P. communis*, field card no. 303; 06 08 2017, 12 leaf mines on *P. communis*, field card no. 306; 10 08 2017, 10 leaf mines on *P. communis*, field card no. 326; 21 08 2017, 28 leaf mines on *P. communis*, field card no. 343; The Gornostajiškės Village, 01 09 2017, 2 leaf mines on *P. communis*, field card no. 353; The Navickiškės Forest, 01 10 2016, 4 leaf mines on *P. pyraster*, field card no. 224; The Nevainionys Forest, 18 09 2015, 5 leaf mines on *P. pyraster*, field card no. 032; The Panezdiliai Forest, 28 08 2016, 2 leaf mines on *P. pyraster*, field card no. 169; 28 08 2016, 2 leaf mines on *P. pyraster*, field card no. 169; 12 07 2017, 35 leaf mines on *P. pyraster*, field card no. 288; 14 08 2017, 149 leaf mines on *P. pyraster*, field card no. 340; 23 09 2017, 6 leaf mines on *P. pyraster*, field card no. 400; The Paraistis Forest, 04 10 2015, 2 leaf mines on *P. pyraster*, field card no. 062.

***Stigmella desperatella* (Frey, 1856)** (Fig. 27)

The Paraistis Forest, 04 10 2015, 1 leaf mine on *Malus sylvestris*, field card no. 063; 25 09 2016, 1 ♂, 1 ♀, 7 leaf mines on *M. sylvestris*, field card no. 212.

***Stigmella pyri* (Glitz, 1865)** (Figs. 28, 29)

The Dumblių Forest, 07 08 2016, 15 leaf mines on *P. pyraster*, field card no. 147; 11 09 2016, 3 leaf mines on *P. pyraster*, field card no. 180; Eišiškės, 30 06 2016, 6 leaf mines on *Pyrus communis*, field card no. 106; 01 07 2016, 14 leaf mines on *P. communis*, field card no. 107; 19 07 2016, 14 leaf mines on *P. communis*, field card no. 128; 31 07 2016, 4 leaf mines on *P. communis*, field card no. 144; 08 08 2016, 9 leaf mines on *P. communis*, field card no. 149; 09 09 2016, 11 leaf mines on *P. communis*, field card no. 171; 17 09 2016, 12 leaf mines on *P. communis*, field card no. 191; 30 09 2016, 5 leaf mines on *P. communis*, field card no. 215; 13 10 2016, 10 leaf mines on *P. communis*, field card no. 233; 09 09 2017, 20 leaf mines on *P. communis*, field card no. 381; 17 09 2017, 28 leaf mines on *P. communis*, field card no. 387; 22 09 2017, 38 leaf mines on *P. communis*, field card no. 390; 30 09 2017, 4 ♂, 7 ♀, 40 leaf mines on *P. communis*, field card no. 409; 07 10 2017, 13 leaf mines on *P. communis*, field card no. 412; 15 10 2017, 22 leaf mines on *P. communis*, field card no. 433; The Panezdiliai Forest, 22 06 2016, 1 leaf mine on *P. pyraster*, field card no. 089; 28 08 2016, 31 leaf mine on *P. pyraster*, field card no. 168; 01 09 2017, 26 leaf mines on *P. pyraster*, field card no. 361; 23 09 2017, 5 leaf mines on *P. pyraster*, field card no. 399; The Paraistis Forest, 04 10 2015, 2 leaf mines on *P. pyraster*, field card no. 061.

***Stigmella magdalenae* (Klimesch, 1950)** (Fig. 30)

The Dumbłè Forest, 12 06 2016, 23 leaf mines on *S. aucuparia*, field card no. 082; 21 06 2016, 15 leaf mines on *S. aucuparia*, field card no. 086; 07 08 2016, 6 leaf mines on *S. aucuparia*, field card no. 145; 09 07 2017, 10 leaf mines on *S. aucuparia*, field card no. 279; Eišiškės, 08 07 2015, 1 leaf mine on *Sorbus intermedia*, field card no. 076; 19 07 2016, 22 leaf mines on *S. aucuparia*, field card no. 130; The Navickiškės Forest, 24 07 2016, 64 leaf mines on *S. aucuparia*, field card no. 136; The Nevainionys Forest, 28 06 2015, 3 leaf mines on *S. aucuparia*, field card no. 060; The Panezdiliai Forest, 15 07 2016, 8 leaf mines on *S. aucuparia*, field card no. 122; 12 07 2017, 63 leaf mines on *S. aucuparia*, field card no. 286; The Paraistis Forest, 25 09 2016, 10 old empty leaf mines on *S. aucuparia*, field card no. 208; 14 07 2017, 26 leaf mines on *S. aucuparia*, field card no. 290.

***Stigmella hybnerella* (Hübner, 1796)** (Fig. 20)

Eišiškės, 13 08 2015, 13 leaf mines on *Crataegus monogyna*, field card no. 019. 21 06 2016, 3 leaf mines on *C. monogyna*, field card no. 085; 27 06 2016, 14 leaf mines on *C. monogyna*, field card no. 097; 28 07 2016, 8 leaf mines on *C. monogyna*, field card no. 143; 12 08 2016, 7 leaf mines on *C. monogyna*, field card no. 160; 16 09 2016, 17 leaf mines on *C. monogyna*, field card no. 186; 07 08 2017, 19 leaf mines on *C. monogyna*, field card no. 320; 25 08 2017, 7 leaf mines on *C. monogyna*, field card no. 347.

***Stigmella anomalella* (Göze, 1783)** (Fig. 21)

The Dumbłè Forest, 11 09 2016, 7 leaf mines on *R. rugosa*, field card no. 178; 14 08 2017, 17 leaf mines on *R. rugosa*, field card no. 327; Eišiškės, 23 07 2015, 7 leaf mines on *Rosa rugosa*, field card no. 014; 13 08 2015, 6 leaf mines on *R. rugosa*, field card no. 021; 11 07 2016, 13 leaf mines on *R. rugosa*, field card no. 114; 16 09 2016, 1 ♂, 3 ♀, 6 leaf mines on *R. rugosa*, field card no. 185; 03 07 2017, 4 leaf mines on *R. rugosa*, field card no. 269; 27 07 2017, 7 leaf mines on *R. rugosa*, field card no. 298; 07 08 2017, 7 leaf mines on *R. rugosa*, field card no. 321.

***Stigmella catharticella* (Stainton, 1853)** (Fig. 7)

The Panezdiliai Forest, 14 08 2017, 1 leaf mine on *Rhamnus cathartica*, field card no. 339; 01 09 2017, 4 leaf mines on *R. cathartica*, field card no. 363; 23 09 2017, 1 ♂, 1 ♀, 43 leaf mines on *R. cathartica*, field card no. 397; 22 10 2017, 2 leaf mines on *R. cathartica*, field card no. 470.

***Stigmella malella* (Stainton, 1854)** (Fig. 4)

The Dumbłè Forest, 07 08 2016, 2 leaf mines on *M. domestica*, field card no. 148; 09 07 2017, 2 leaf mines on *M. domestica*, field card no. 275; 14 08 2017, 9 leaf mines on *M. domestica*, field card no. 328; Eišiškės, 14 08 2015, 6 leaf mines on *Malus domestica*, field card no. 022; 26 09 2015, 3 leaf mines on *M. domestica*, field card no. 040; 09 10 2015, 3 leaf mines on *M. domestica*, field card no. 073; 19 06 2016, 5 leaf mines on *M. domestica*, field card no. 083; 08 08 2016, 11 leaf mines on *M. domestica*, field card no. 150; 12 08 2016, 10 leaf mines on *M. domestica*, field card no. 157; 17 08 2016, 31 leaf mines on *M. sylvestris*, field card no. 161; 23 08 2016, 8 leaf mines on *M. domestica*, field card no. 162; 11 09 2016, 15 leaf mines on *M. domestica*, field card no. 172; 11 09 2016, 3 leaf mines on *M. sylvestris*, field card no. 176; 16 09 2016, 8 leaf mines on *M. domestica*, field card no. 187; 30 09 2016, 10 leaf mines on *M. domestica*, field card no. 218; 26 06 2017, 27 leaf mines on *M. domestica*, field card no. 251; 27 06 2017, 22 leaf mines on *M. domestica*, field card

no. 257; 04 07 2017, 2 leaf mines on *M. domestica*, field card no. 272; 27 07 2017, 7 leaf mines on *M. domestica*, field card no. 301; 06 08 2017, 14 leaf mines on *M. domestica*, field card no. 307; 09 08 2017, 42 leaf mines on *M. domestica*, field card no. 323; 21 08 2017, 1 ♂, 3 ♀, 43 leaf mines on *M. domestica*, field card no. 342; 25 08 2017, 23 leaf mines on *M. domestica*, field card no. 348; The Gornostajškės Village, 18 09 2016, 4 leaf mines on *M. domestica*, field card no. 199; 01 09 2017, 7 leaf mines on *M. domestica*, field card no. 352; 24 09 2017, 2 leaf mines on *M. domestica*, field card no. 407; The Navickiškės Forest, 09 09 2017, 20 leaf mines on *M. sylvestris*, field card no. 371; The Panezdiliai Forest, 04 10 2015, 9 leaf mines on *M. sylvestris*, field card no. 068; 01 09 2017, 16 leaf mines on *M. domestica*, field card no. 360.

***Stigmella viscerella* (Stainton, 1853)** (Fig. 31)

The Gornostajškės Village, 11 09 2016, 2 old empty leaf mines on *Ulmus glabra*, field card no. 181; 18 09 2016, 4 old empty leaf mines on *U. glabra*, field card no. 196; 24 09 2017, 9 old empty leaf mines on *U. glabra*, field card no. 404; 15 10 2017, 2 old empty leaf mines on *U. glabra*, field card no. 435.

***Stigmella ulmivora* (Fologne, 1860)** (Fig. 18)

The Gornostajškės Village, 02 07 2017, 3 leaf mines on *Ulmus glabra*, field card no. 263.

***Stigmella trimaculella* (Haworth, 1828)** (Fig. 32)

Eišiškės, 13 08 2015, 4 leaf mines on *Populus nigra*, field card no. 016; 31 08 2015, 10 leaf mines on *P. nigra*, field card no. 025; 20 09 2015, 3 leaf mines on *P. nigra*, field card no. 036; 12 08 2016, 1 leaf mine on *P. nigra*, field card no. 156; 28 10 2016, 5 leaf mines on *P. nigra*, field card no. 248; 07 08 2017, 2 leaf mines on *P. nigra*, field card no. 322.

***Stigmella assimilella* (Zeller, 1848)** (Fig. 9)

The Nevainionys Forest, 18 09 2015, 2 leaf mines on *Populus tremula*, field card no. 033.

***Stigmella salicis* (Stainton, 1854)** (Fig. 19)

Eišiškės, 16 09 2016, 4 leaf mines on *Salix cinerea*, field card no. 188; 20 10 2017, 1 leaf mine on *S. caprea*, field card no. 451; The Navickiškės Forest, 24 07 2016, 3 leaf mines on *S. cinerea*, field card no. 140; The Panezdiliai Forest, 08 10 2016, 2 leaf mines on *S. cinerea*, field card no. 229; 12 07 2017, 4 leaf mines on *S. cinerea*, field card no. 283; 23 09 2017, 5 leaf mines on *S. cinerea*, field card no. 402; The Paraistis Forest, 27 09 2015, 1 leaf mine on *S. caprea*, field card no. 050; 25 09 2016, 1 leaf mine on *S. cinerea*, field card no. 213.

***Stigmella myrtillella* (Stainton, 1857)** (Fig. 13)

The Nevainionys Forest, 27 09 2015, 1 leaf mine on *Vaccinium myrtillus*, field card no. 056; 04 10 2015, 1 leaf mine on *V. myrtillus*, field card no. 065.

***Stigmella obliquella* (Heinemann, 1862)** (Fig. 33)

Eišiškės, 20 09 2015, 1 leaf mine on *Salix fragilis*, field card no. 035; 10 10 2015, 1 leaf mine on *S. fragilis*, field card no. 074; 14 10 2016, 2 leaf mines on *S. fragilis*, field card no. 235; 20 10 2017, 5 leaf mines on *S. fragilis*, field card no. 448; The Gornostajškės Village, 20 09 2015, 1 leaf mine on *S. fragilis*, field card no. 052; 15 10 2017, 3 leaf mines on *S. fragilis*, field card no. 436.

***Stigmella floslactella* (Haworth, 1828)** (Fig. 34)

The Dumblių Forest, 07 08 2016, 1 ♀, 1 leaf mine on *Corylus avellana*, field card no.

146; 09 07 2017, 2 leaf mines on *C. avellana*, field card no. 277; 14 08 2017, 3 leaf mine on *C. avellana*, field card no. 331; 07 10 2017, 2 leaf mines on *C. avellana*, field card no. 421; The Navickiškės Forest, 24 07 2016, 1 leaf mine on *C. avellana*, field card no. 133; 09 09 2017, 16 leaf mines on *C. avellana*, field card no. 367; The Nevainionys Forest, 07 10 2017, 4 leaf mines on *C. avellana*, field card no. 427; The Panezdiliai Forest, 01 09 2017, 18 leaf mines on *C. avellana*, field card no. 357; 23 09 2017, 6 leaf mines on *C. avellana*, field card no. 395.

***Stigmella carpinella* (Heinemann, 1862)** (Fig. 35)

The Navickiškės Forest, 09 09 2017, 1 ♂, 7 ♀, 25 leaf mines on *C. betulus*, field card no. 365; 23 09 2017, 11 leaf mines on *C. betulus*, field card no. 401; The Paraistis Forest, 09 09 2017, 2 leaf mines on *Carpinus betulus*, field card no. 379.

***Stigmella lemniscella* (Zeller, 1839)** (Fig. 38)

The Gornostajiskės Village, 18 09 2016, 1 ♂, 7 leaf mines on *Ulmus glabra*, field card no. 197; 02 07 2017, 5 leaf mines on *U. glabra*, field card no. 262; 06 08 2017, 5 leaf mines on *U. glabra*, field card no. 311; 01 09 2017, 6 leaf mines on *U. glabra*, field card no. 349; 24 09 2017, 31 leaf mines on *U. glabra*, field card no. 403.

***Stigmella continuella* (Stainton, 1856)** (Fig. 37)

The Dumblė Forest, 15 07 2016, 3 leaf mines on *Betula pendula*, field card no. 121; 14 08 2017, 2 leaf mines on *B. pendula*, field card no. 329; The Panezdiliai Forest, 15 07 2016, 2 leaf mines on *B. pendula*, field card no. 123; The Paraistis Forest, 29 07 2015, 7 leaf mines on *B. pendula*, field card no. 042; 29 07 2015, 2 leaf mines on *B. pubescens*, field card no. 054.

***Stigmella incognitella* (Herrich-Schäffer, 1855)** (Fig. 43)

Eišiškės, 11 09 2016, 1 leaf mine on *Malus domestica*, field card no. 175; 30 09 2016, 3 leaf mines on *M. domestica*, field card no. 216; 14 10 2016, 2 leaf mines on *M. domestica*, field card no. 239; 07 10 2017, 4 leaf mines on *M. domestica*, field card no. 414; 15 10 2017, 4 leaf mines on *M. domestica*, field card no. 430.

***Stigmella aeneofasciella* (Herrich-Schäffer, 1855)** (Fig. 39)

The Gornostajiskės Village, 15 10 2017, 1 ♂, 10 leaf mines on *Agrimonia eupatoria*, field card no. 434.

***Stigmella splendidissimella* (Herrich-Schäffer, 1855)** (Fig. 36)

The Dumblė Forest, 18 09 2016, 2 leaf mines on *R. saxatilis*, field card no. 194; Eišiškės, 31 08 2015, 1 leaf mine on *Rubus idaeus*, field card no. 023; 25 09 2015, 1 leaf mine on *R. idaeus*, field card no. 039; The Nevainionys Forest, 27 09 2015, 2 leaf mines on *R. idaeus*, field card no. 057; 27 09 2015, 1 leaf mine on *R. saxatilis*, field card no. 058; 04 10 2015, 3 leaf mines on *R. saxatilis*, field card no. 067; 16 10 2016, 1 leaf mine on *R. idaeus*, field card no. 241; 07 10 2017, 2 leaf mines on *R. saxatilis*, field card no. 424; 07 10 2017, 4 leaf mines on *R. idaeus*, field card no. 425; 22 10 2017, 10 leaf mines on *R. idaeus*, field card no. 465; The Panezdiliai Forest, 24 06 2015, 1 leaf mine on *Fragaria vesca*, field card no. 001; 22 06 2016, 5 leaf mines on *F. vesca*, field card no. 088; 23 09 2017, 9 leaf mines on *R. idaeus*, field card no. 398; 20 10 2017, 8 leaf mine on *R. idaeus*, field card no. 443.

***Stigmella pretiosa* (Heinemann, 1862)** (Fig. 40)

The Panezdiliai Forest, 20 10 2017, 7 leaf mines on *Geum rivale*, field card no. 441.

***Stigmella lonicerarum* (Frey, 1857)** (Fig. 41)

The Navickiškės Forest, 01 10 2016, 1 ♀, 3 leaf mines on *Lonicera xylosteum*, field card no. 227.

***Stigmella plagicolella* (Stainton, 1854)** (Fig. 42)

Eišiškės, 06 09 2015, 8 leaf mines on *Prunus* sp., field card no. 027; 23 09 2016, 9 leaf mines on *P. spp.*, field card no. 202; 26 06 2017, 27 leaf mines on *P. spp.*, field card no. 253; The Gornostajiškės Village, 06 08 2017, 15 leaf mines on *P. sp.*, field card no. 309; 01 09 2017, 9 leaf mines on *P. sp.*, field card no. 350; 24 09 2017, 8 leaf mines on *P. sp.*, field card no. 405.

***Stigmella sorbi* (Stainton, 1861)** (Fig. 46)

The Dumblė Forest, 12 06 2016, 43 leaf mines on *S. aucuparia*, field card no. 081; 11 06 2017, 37 leaf mines on *S. aucuparia*, field card no. 249; Eišiškės, 09 07 2015, 1 leaf mine on *Sorbus aucuparia*, field card no. 004; The Panezdiliai Forest, 24 06 2015, 3 leaf mines on *S. aucuparia*, field card no. 002; 11 06 2017, 4 leaf mines on *S. aucuparia*, field card no. 250; The Paraistis Forest, 14 07 2017, 6 leaf mines on *S. aucuparia*, field card no. 292.

***Stigmella ruficapitella* (Haworth, 1828)** (Fig. 45)

The Dumblė Forest, 01 07 2016, 3 leaf mines on *Q. robur*, field card no. 108; 07 10 2017, 20 leaf mines on *Q. robur*, field card no. 416; Eišiškės, 11 07 2016, 3 leaf mines on *Quercus robur*, field card no. 117; 11 08 2016, 2 leaf mines on *Q. robur*, field card no. 153; 14 10 2016, 6 leaf mines on *Q. robur*, field card no. 234; 03 07 2017, 4 leaf mines on *Q. robur*, field card no. 268; 27 07 2017, 5 leaf mines on *Q. robur*, field card no. 296; 07 08 2017, 3 leaf mines on *Q. robur*, field card no. 316; 20 10 2017, 12 leaf mines on *Q.s robur*, field card no. 455; The Navickiškės Forest, 24 07 2016, 4 leaf mines on *Q. robur*, field card no. 141; 24 07 2016, 4 leaf mines on *Q. robur*, field card no. 141; 09 09 2017, 114 leaf mines on *Q. robur*, field card no. 369; The Nevainionys Forest, 18 09 2015, 1 leaf mine on *Q. robur*, field card no. 030; The Panezdiliai Forest, 28 08 2016, 1 leaf mine on *Q. robur*, field card no. 166; 12 07 2017, 38 leaf mines on *Q. robur*, field card no. 285; 14 08 2017, 89 leaf mines on *Q. robur*, field card no. 335; 01 09 2017, 76 leaf mines on *Q. robur*, field card no. 356; 23 09 2017, 5 ♂, 3 ♀, 76 leaf mines on *Q. robur*, field card no. 394; 22 10 2017, 8 leaf mine on *Q. robur*, field card no. 469; The Paraistis Forest, 25 09 2016, 4 leaf mines on *Q. robur*, field card no. 210; 14 07 2017, 19 leaf mines on *Q. robur*, field card no. 289; 09 09 2017, 14 leaf mines on *Q. robur*, field card no. 376.

***Stigmella basiguttella* (Heinemann, 1862)** (Fig. 48)

The Dumblė Forest, 07 10 2017, 1 leaf mine on *Q. robur*, field card no. 418; Eišiškės, 27 06 2016, 2 leaf mines on *Quercus robur*, field card no. 104; 11 07 2016, 2 leaf mines on *Q. robur*, field card no. 115; 27 07 2017, 9 leaf mines on *Q. robur*, field card no. 295; 07 08 2017, 6 leaf mines on *Q. robur*, field card no. 314; 20 10 2017, 3 leaf mines on *Q. robur*, field card no. 447; The Panezdiliai Forest, 14 08 2017, 6 leaf mines on *Q. robur*, field card no. 334; 01 09 2017, 6 leaf mines on *Q. robur*, field card no. 355; 23 09 2017, 3 leaf mines on *Q. robur*, field card no. 393.

***Stigmella roborella* (Johansson, 1971)** (Fig. 47)

The Dumblė Forest, 01 07 2016, 3 leaf mines on *Q. robur*, field card no. 109; 07 10 2017, 4 leaf mines on *Q. robur*, field card no. 417; Eišiškės, 09 07 2015, 1 leaf mine on *Quercus robur*, field card no. 006; 11 07 2016, 5 leaf mines on *Q. robur*, field card no. 116; 11 08 2016, 5 leaf mines on *Q. robur*, field card no. 151; 16 09 2016, 6 leaf mine on *Q. robur*, field card no. 189; 27 07 2017, 37 leaf mines on *Q. robur*, field card no. 297; 07 08 2017, 23 leaf mine on *Q. robur*, field card no. 313; 22 08 2017, 18 leaf mines on *Q. robur*, field card no. 345; 20 10 2017, 45 leaf mine on *Q.*

robur, field card no. 456; The Navickiškės Forest, 09 09 2017, 19 leaf mines on *Q. robur*, field card no. 373; The Panezdiliai Forest, 28 08 2016, 1 leaf mine on *Q. robur*, field card no. 167; 14 08 2017, 20 leaf mines on *Q. robur*, field card no. 333; 23 09 2017, 11 leaf mines on *Q. robur*, field card no. 392; The Paraistis Forest, 27 09 2015, 2 leaf mines on *Q. robur*, field card no. 047; 25 09 2016, 3 leaf mines on *Q. robur*, field card no. 209; 09 09 2017, 12 leaf mines on *Q. robur*, field card no. 375.

***Bohemannia pulverosella* (Stainton, 1849)** (Fig. 49)

Eišiškės, 17 07 2015, 1 leaf mine on *Malus domestica*, field card no. 015; 09 06 2016, 1 leaf mine on *M. domestica*, field card no. 080; 20 06 2016, 5 leaf mines on *M. domestica*, field card no. 084; 26 06 2016, 5 leaf mines on *M. domestica*, field card no. 094; 16 07 2016, 6 leaf mines on *M. domestica*, field card no. 125; 26 06 2017, 2 leaf mines on *M. domestica*, field card no. 256; 28 06 2017, 4 leaf mines on *M. domestica*, field card no. 259; 02 07 2017, 5 leaf mines on *M. domestica*, field card no. 266; 26 07 2017, 5 ♀, 21 leaf mines on *M. domestica*, field card no. 293; 31 07 2017, 7 leaf mines on *M. domestica*, field card no. 304; 06 08 2017, 8 leaf mines on *M. domestica*, field card no. 305; 09 08 2017, 22 leaf mines on *M. domestica*, field card no. 324; The Gornostajiškės Village, 06 08 2017, 8 leaf mines on *M. domestica*, field card no. 310; The Dumblė Forest, 09 07 2017, 13 leaf mines on *M. sylvestris*, field card no. 274; The Panezdiliai Forest, 22 06 2016, 2 leaf mines on *M. domestica*, field card no. 090; 12 07 2017, 5 leaf mines on *M. sylvestris*, field card no. 284.

***Ectoedemia argyropeza* (Zeller, 1839)** (Fig. 44)

The Dumblė Forest, 07 10 2017, 37 leaf mines on *P. tremula*, field card no. 422; Eišiškės, 08 11 2015, 5 leaf mines on *Populus tremula*, field card no. 017; 25 10 2015, 1 leaf mine on *P. tremula*, field card no. 078; 01 11 2015, 1 leaf mine on *P. tremula*, field card no. 079; The Navickiškės Forest, 01 10 2016, 3 leaf mines on *P. tremula*, field card no. 223; 09 09 2017, 6 leaf mines on *P. tremula*, field card no. 370; 20 10 2017, 20 leaf mines on *P. tremula*, field card no. 439; The Nevainionys Forest, 16 10 2016, 3 leaf mines on *P. tremula*, field card no. 242; 22 10 2017, 59 leaf mines on *P. tremula*, field card no. 466; The Panezdiliai Forest, 08 10 2016, 19 leaf mines on *P. tremula*, field card no. 230; 20 10 2017, 52 leaf mines on *P. tremula*, field card no. 445; 22 10 2017, 1 ♀, 88 leaf mines on *P. tremula*, field card no. 467; The Paraistis Forest, 27 09 2015, 1 leaf mine on *P. tremula*, field card no. 048; 25 09 2016, 11 leaf mines on *P. tremula*, field card no. 206.

***Ectoedemia turbidella* (Zeller, 1848)** (Fig. 50)

The Panezdiliai Forest, 22 10 2017, 5 leaf mines on *Populus alba*, field card no. 468.

***Ectoedemia intimella* (Zeller, 1848)** (Figs. 51, 62)

The Dumblė Forest, 07 10 2017, 1 leaf mine on *S. caprea*, field card no. 423; Eišiškės, 30 09 2016, 6 leaf mines on *Salix caprea*, field card no. 219; 28 10 2016, 7 leaf mines on *S. caprea*, field card no. 247; 20 10 2017, 4 ♂, 28 leaf mines on *S. caprea*, field card no. 449; 20 10 2017, 1 leaf mine on *S. fragilis*, field card no. 450; 20 10 2017, 2 leaf mines on *S. cinerea*, field card no. 452; The Nevainionys Forest, 16 10 2016, 5 leaf mines on *S. caprea*, field card no. 240.

***Ectoedemia hannoverella* (Glitz, 1872)** (Fig. 53)

Eišiškės, 16 09 2016, 7 leaf mines on *Populus nigra*, field card no. 182; 30 09 2016, 35 leaf mines on *P. nigra*, field card no. 217; 28 10 2016, 20 leaf mines on *P. nigra*, field card no. 246; 20 10 2017, 152 leaf mines on *P. nigra*, field card no. 457.

***Ectoedemia subbimaculella* (Haworth, 1828)** (Fig. 52)

Eišiškės, 20 10 2017, 1 leaf mine on *Quercus robur*, field card no. 437; The Navickiškės Forest, 01 10 2016, 1 leaf mine on *Q. robur*, field card no. 222.

***Ectoedemia albifasciella* (Heinemann, 1871)** (Fig. 54)

The Dumblių Forest, 07 10 2017, 6 leaf mines on *Q. robur*, field card no. 419; Eišiškės, 28 07 2016, 1 leaf mine on *Quercus robur*, field card no. 142; 11 08 2016, 11 leaf mines on *Q. robur*, field card no. 152; 16 09 2016, 17 leaf mines on *Q. robur*, field card no. 184; 14 10 2016, 4 leaf mines on *Q. robur*, field card no. 237; 07 08 2017, 11 leaf mines on *Q. robur*, field card no. 315; 22 08 2017, 14 leaf mines on *Q. robur*, field card no. 346; 20 10 2017, 29 leaf mines on *Q. robur*, field card no. 454; The Navickiškės Forest, 09 09 2017, 1 leaf mine on *Q. robur*, field card no. 374; The Panezdiliai Forest, 04 10 2015, 1 leaf mine on *Q. robur*, field card no. 069; 28 08 2016, 1 leaf mine on *Q. robur*, field card no. 165; 01 09 2017, 5 leaf mines on *Q. robur*, field card no. 354; 23 09 2017, 4 leaf mines on *Q. robur*, field card no. 391; 20 10 2017, 3 leaf mines on *Q. robur*, field card no. 442; The Paraistis Forest, 25 09 2016, 3 leaf mines on *Q. robur*, field card no. 211.

***Ectoedemia arcuatella* (Herrich-Schäffer, 1855)** (Fig. 55)

The Dumblių Forest, 11 09 2016, 3 leaf mines on *Fragaria vesca*, field card no. 179; The Nevainionys Forest, 07 10 2017, 5 leaf mines on *F. vesca*, field card no. 426; The Panezdiliai Forest, 28 08 2016, 2 leaf mines on *F. vesca*, field card no. 164; 14 08 2017, 37 leaf mines on *F. vesca*, field card no. 336; 01 09 2017, 119 leaf mines on *F. vesca*, field card no. 362; The Paraistis Forest, 27 09 2015, 10 leaf mines on *F. vesca*, field card no. 046.

***Ectoedemia atricollis* (Stainton, 1857)** (Fig. 57)

Eišiškės, 26 09 2015, 5 leaf mines on *Malus domestica*, field card no. 041; 11 09 2016, 7 leaf mines on *M. domestica*, field card no. 173; 23 09 2016, 6 leaf mines on *M. domestica*, field card no. 203; 01 10 2016, 2 leaf mines on *M. domestica*, field card no. 221; 17 09 2017, 18 leaf mines on *M. domestica*, field card no. 386; 22 09 2017, 9 leaf mines on *M. domestica*, field card no. 389; 30 09 2017, 9 leaf mines on *M. domestica*, field card no. 408; 15 10 2017, 3 leaf mines on *M. domestica*, field card no. 431; The Panezdiliai Forest, 01 09 2017, 4 leaf mines on *M. sylvestris*, field card no. 359.

***Ectoedemia rubivora* (Wocke, 1860)** (Fig. 56)

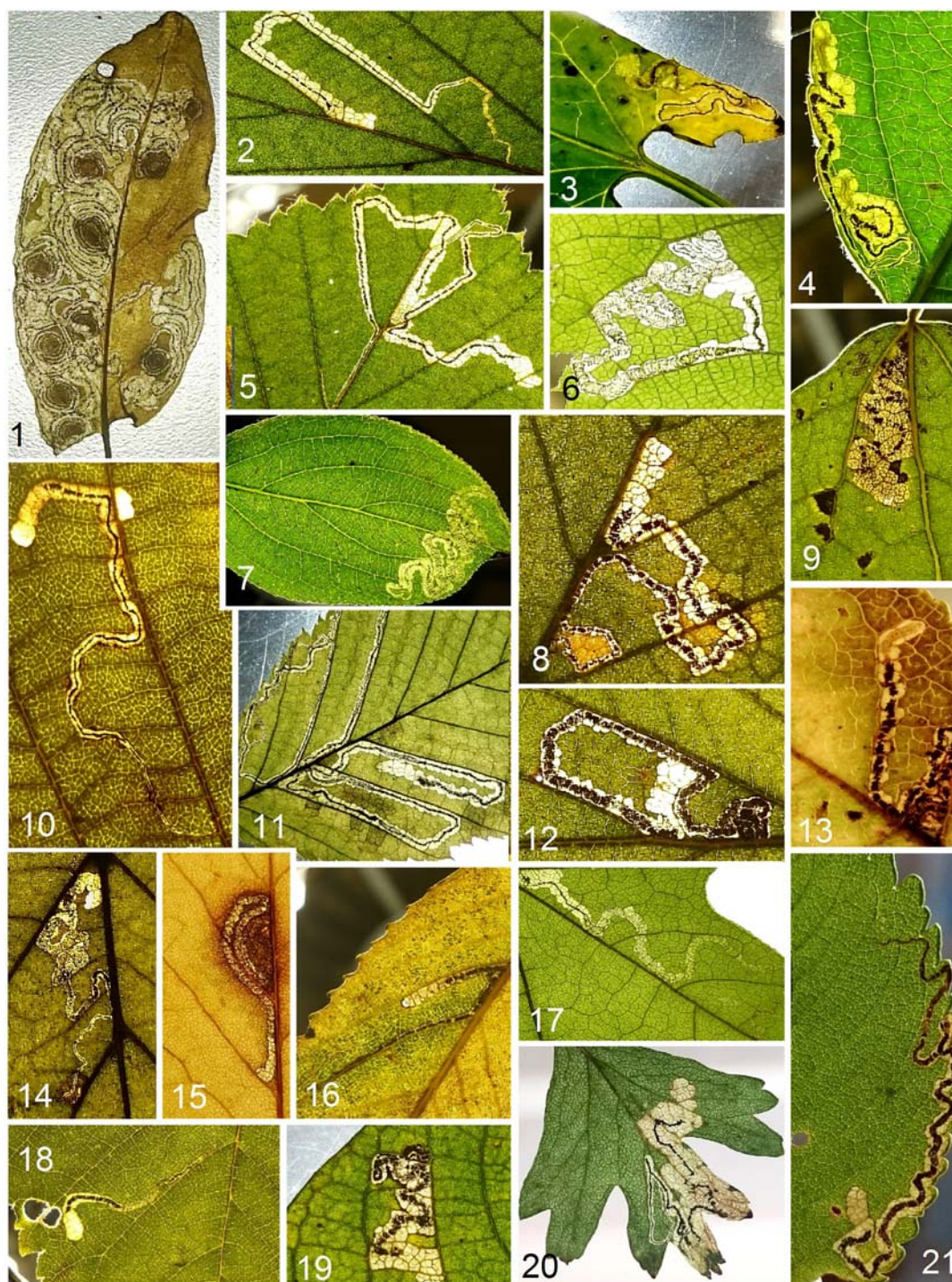
The Dumblių Forest, 18 09 2016, 12 leaf mines on *Rubus saxatilis*, field card no. 195; The Nevainionys Forest, 27 09 2015, 4 leaf mines on *R. saxatilis*, field card no. 059; 04 10 2015, 4 leaf mines on *R. saxatilis*, field card no. 066.

***Ectoedemia occultella* (Linnaeus, 1767)** (Fig. 60)

Eišiškės, 31 08 2015, 1 leaf mine on *Betula pendula*, field card no. 026; 14 09 2015, 1 leaf mine on *B. pendula*, field card no. 028; 13 10 2016, 12 leaf mines on *B. pendula*, field card no. 231; The Nevainionys Forest, 16 10 2016, 2 leaf mines on *B. pendula*, field card no. 243; The Panezdiliai Forest, 08 10 2016, 4 leaf mines on *B. pendula*, field card no. 228.

***Fomoria septembrella* (Stainton, 1849)** (Fig. 61)

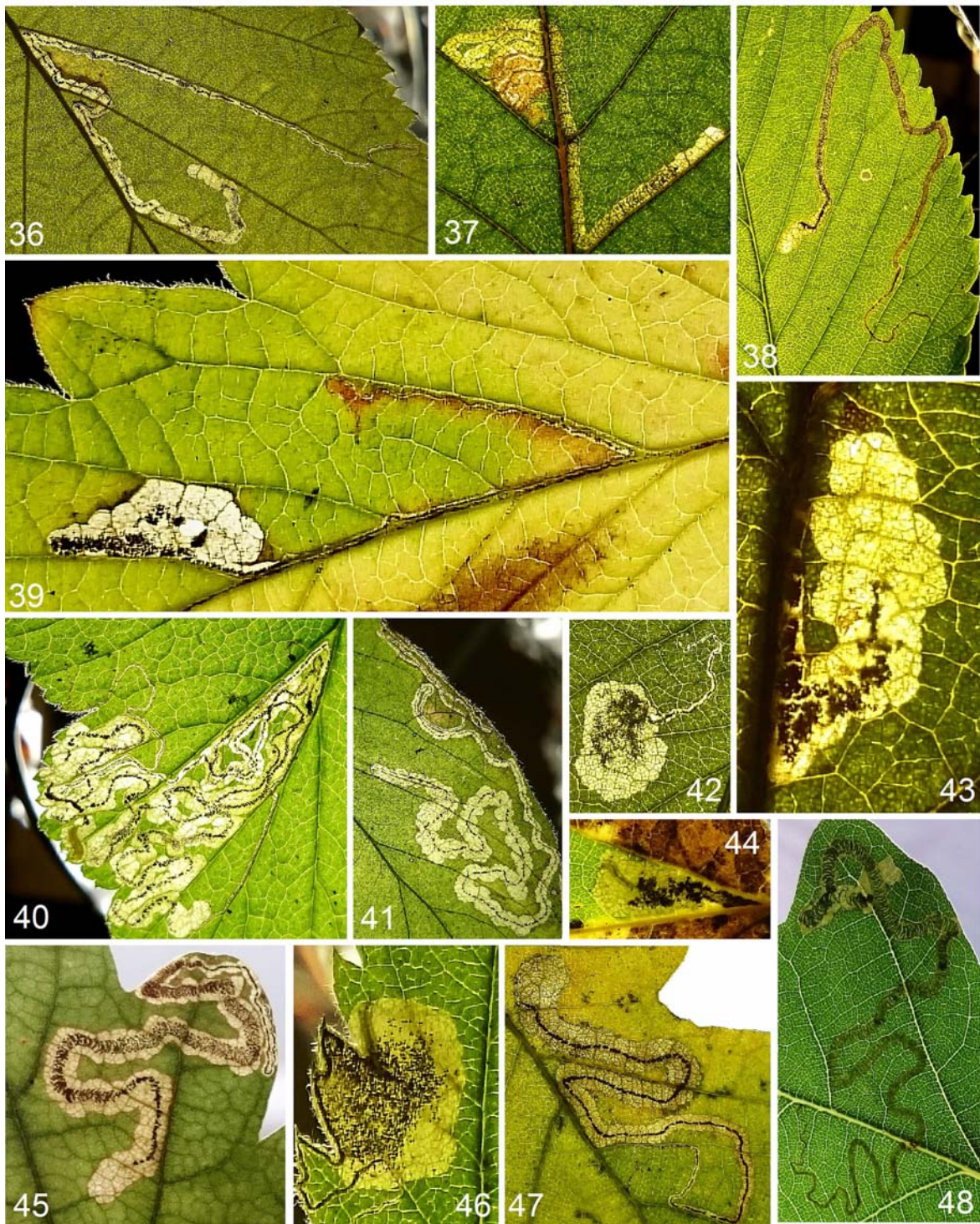
Eišiškės, 20 09 2015, 1 leaf mine on *Hypericum perforatum*, field card no. 038; The Panezdiliai Forest, 01 09 2017, 7 leaf mines on *H. perforatum*, field card no. 364.



Figs. 1–21. Leaf mines. 1 – *Johanssoniella acetosae* on *Rumex acetosa*; 2 – *Stigmella lapponica* on *Betula pendula*; 3 – *S. freyella* on *Convolvulus arvensis*; 4 – *S. malella* on *Malus domestica*; 5 – *S. confusella* on *B. pendula*; 6 – *S. tiliae* on *Tilia cordata*; 7 – *S. catharticella* on *Rhamnus cathartica*; 8 – *S. betulicola* on *B. pendula*; 9 – *S. assimilella* on *Populus tremula*; 10 – *S. alnetella* on *Alnus glutinosa*; 11 – *S. microtheriella* on *Carpinus betulus*; 12 – *S. luteella* on *B. pendula*; 13 – *S. myrtillella* on *Vaccinium myrtillus*; 14 – *S. glutinosae* on *A. glutinosa*; 15 – *S. prunetorum* on *Cerasus avium*; 16 – *S. nivenburgensis* on *Salix fragilis*; 17 – *S. aceris* on *Acer platanoides*; 18 – *S. ulmivora* on *Ulmus glabra*; 19 – *S. salicis* on *S. cinerea*; 20 – *S. hybnerella* on *Crataegus monogyna*; 21 – *S. anomalella* on *Rosa rugosa*.



Figs. 22–35. Leaf mines. 22 – *Stigmella nyllandriella* on *Sorbus aucuparia*; 23 – *S. oxyacanthella* on *Malus domestica*; 24 – *S. minusculella* on *Pyrus pyraster*; 25 – *S. minusculella* on *P. communis* 26 – *S. oxyacanthella* on *Cerasius avium*; 27 – *S. desperatella* on *M. sylvestris*; 28 – *S. pyri* on *Pyrus communis*; 29 – *S. pyri* on *P. pyraster*; 30 – *S. magdalenae* on *S. aucuparia*; 31 – *S. viscerella* on *Ulmus glabra*; 32 – *S. trimaculella* on *Populus nigra*; 33 – *S. obliquella* on *Salix fragilis*; 34 – *S. floslactella* on *Corylus avellana*; 35 – *S. carpinella* on *Carpinus betulus*.



Figs. 36–48. Leaf mines. 36 – *Stigmella splendidissimella* on *Rubus idaeus*; 37 – *S. continuella* on *Betula pendula*; 38 – *S. lemniscella* on *Ulmus glabra*; 39 – *S. aeneofasciella* on *Agrimonia eupatoria*; 40 – *S. pretiosa* on *Geum rivale*; 41 – *S. lonicerarum* on *Lonicera xylosteum*; 42 – *S. plagicolella* on *Prunus* sp.; 43 – *S. incognitella* on *Malus domestica*; 44 – *Ectoedemia argyropeza* on *Populus tremula*; 45 – *S. ruficapitella* on *Quercus robur*; 46 – *S. sorbi* on *Sorbus aucuparia*; 47 – *S. roborella* on *Q. robur*; 48 – *S. basiguttella* on *Q. robur*.



Figs. 49–62. Leaf mines. 49 – *Bohemannia pulverosella* on *Malus domestica*; 50 – *Ectoedemia turbidella* on *Populus alba*; 51 – *E. intimella* on *Salix caprea*; 52 – *E. subbimaculella* on *Quercus robur*; 53 – *E. hannoverella* on *P. nigra*; 54 – *E. albifasciella* on *Q. robur*; 55 – *E. arcuatella* on *Fragaria vesca*; 56 – *E. rubivora* on *Rubus saxatilis*; 57 – *E. atricollis* on *Malus sylvestris*; 58 – *Etainia seciropeza* on *Acer platanoides*; 59 – *Fomoria weaveri* on *Vaccinium vitis-idaea*; 60 – *Ectoedemia occultella* on *Betula pendula*; 61 – *Fomoria septembrella* on *Hypericum perforatum*; 62 – *Ectoedemia intimella* on *Salix cinerea*.

***Fomoria weaveri* (Stainton, 1855)** (Fig. 59)

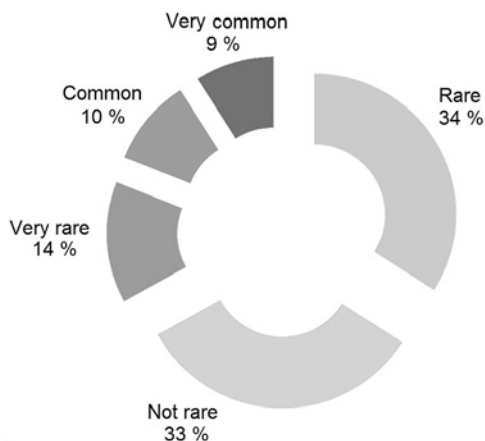
The Dumbłė Forest, 21 11 2015, 1 leaf mine on *Vaccinium vitis-idaea*, field card no. 024; 27 09 2015, 1 leaf mine on *V. vitis-idaea*, field card no. 055; 22 04 2017, 1 ♂, 5 leaf mines on *V. vitis-idaea*, field card no. 472.

***Etainia sericopeza* (Zeller, 1839)** (Fig. 58)

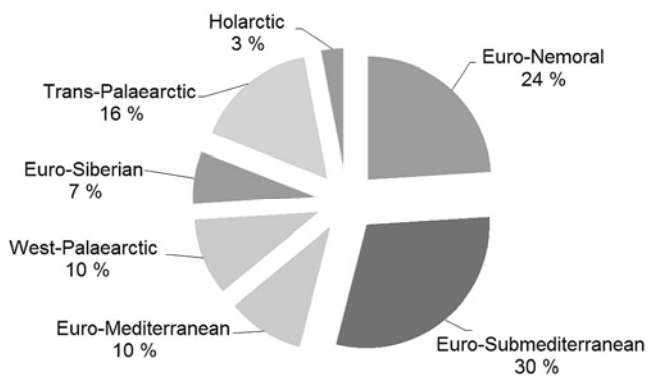
Eišiškės, 23 06 2016, 5 leaf mines on *Acer platanoides*, field card no. 091; 27 06 2016, 2 ♂, 40 leaf mines on *A. platanoides*, field card no. 103; 11 07 2016, 17 leaf mines on *A. platanoides*, field card no. 118; 03 07 2017, 2 ♂, 43 leaf mines on *A. platanoides*, field card no. 267.

Discussion

In total, 58 species of Nepticulidae were recorded in the Šalčininkai District, i.e. about 74% of such species known within the fauna of Lithuania. During the studies in the Šalčininkai District, new hostplants, previously unknown for the Lithuanian fauna, were discovered for the following ten species: *Stigmella oxyacanthella* (on *Cerasus avium*, Fig. 26); *S. minusculella* and *S. pyri* (on *Pyrus pyraster*, Figs. 24, 29); *S. desperatella* (Fig. 27), *Ectoedemia atricolis* (Fig. 57) and *Bohemannia pulverosella* (on *Malus sylvestris*); *Stigmella viscerella* (on *Ulmus glabra*, Fig. 31); *S. trimaculella* and *Ectoedemia hannoverella* (on *Populus nigra*, Figs. 32, 53); and *E. intimella* (on *Salix cinerea*, Fig. 62).



63



64

Figs. 63–64. Species occurrence and chorology of the studied Nepticulidae in the Šalčininkai District. 63 – species occurrence; 64 – chorological groups.

In total, the fauna of Nepticulidae studied in the Šalčininkai District is associated with hostplants from 13 families. Many of the Nepticulidae were found on Rosaceae (20 species). According to the trophic specialization, most of the Nepticulidae species are monophagous (40 species), and other are oligophagous.

According to the 'Formula of Evaluation of Abundance and Occurrence of Leaf-miners' (see Diškus & Stonis, 2012: 52–54), 34% of the species recorded in the Šalčininkai District are rare, 14% are very rare (known from a single and restricted

locality), and only about 9% of the species are very common (Fig. 63).

Previously, in the chorological analysis, each species of pygmy moths of the Lithuanian fauna was ranked according to their distribution pattern (Navickaitė *et al.*, 2014). We analyzed the species discovered in the Šalčininkai District using the same ranking system. The studied fauna falls into seven chorological groups, the largest of which are the Euro-Submediterranean (17 species or 30%) and the Euro-Nemoral (14 species or 24%) (Fig. 64).

Acknowledgments

This study was conducted as a very small fraction of the Research Project of the Biosystematics Research Group of the Lithuanian University of Educational Sciences supported in part by the Research Foundation of the former Lithuanian University of Educational Sciences (2018).

References

- Diškus A., Stonis J. R. 2012. *Lietuvos endobiontiniai vabzdžiai. Nepticulidae faunos taksonominė, chorologinė ir trofinė charakteristika*. Monografija. Kaunas: Lututė.
- Johansson R., Nielsen E. S., Nieukerken E. J. van, Gustafsson B. 1990. The Nepticulidae and Opostegidae (Lepidoptera) of North West Europe. *Fauna Entomologica Scandinavica* 23 (1/2): 1–739.
- Navickaitė A., Diškus A., Stonis J. R. 2014. What is new and most interesting about the Nepticulidae of the Crimea and Lithuania. In Stonis J. R., Hill S. R., Diškus A., Auškalnis T. (eds.). *Selected abstracts and papers of the First Baltic International Conference on Field Entomology and Faunistics*. Vilnius, Edukologija Publishers, 96–117.
- Puplesis R. 1994. *The Nepticulidae of Eastern Europe and Asia: western, central and eastern parts*. Leiden: Backhuys Publishers.
- Puplesis R., Diškus A. 2003. *The Nepticuloidea & Tischerioidea (Lepidoptera) – a global review, with strategic regional revisions*. Kaunas: Lututė Publishers.
- Stonis J. R., Diškus A., Remeikis A., Navickaitė A. 2014. Study methods of Nepticulidae: micro-mounts of genitalia structures. In Stonis J. R., Hill S. R., Diškus A., Auškalnis T. (eds.). *Selected abstracts and papers of the First Baltic International Conference on Field Entomology and Faunistics*. Vilnius, Edukologija Publishers, 32–35.
- Stonis J. R., Diškus A., Remeikis A., Solis M. A. 2018. The American *Brachinepticula* gen. nov. and *Manoneura* Davis (Nepticulidae): a new generic concept based on a reinforced cathrema in the phallus. *Biologija*, 64 (2): 99–128.

Taksonominis Nepticulidae (Lepidoptera) rūšių, aptiktų Šalčininkų rajone, viename iki šiol mažiausiai tyrinėtų Lietuvos vietovių, sąrašas

A. SKORB, A. DIŠKUS, J. R. STONIS

Santrauka

2015–2018 m. Šalčininkų rajone buvo aptiktos 58 mažųjų gaubtagalvių (Nepticulidae) rūšys (apie 74 proc. Lietuvos faunos), kurios mitybos požiūriu yra susijusios su 13 mitybinių augalų šeimų. Šalčininkų rajone buvo nustatyti nauji, iki šiol Lietuvos faunoje nežinomi mitybiniai augalai dešimčiai mažųjų gaubtagalvių rūšių: *Stigmella oxyacanthella* (pirmą kartą Lietuvoje aptikta ant *Cerasus avium*); *S. minusculella* ir *S. pyri* (ant *Pyrus pyraster*), *S. desperatella*, *Ectoedemia atricolis* ir *Bohemannia pulverosella* (ant *Malus sylvestris*), *Stigmella viscerella* (ant *Ulmus glabra*), *S. trimaculella* ir *Ectoedemia hannoverella* (ant *Populus nigra*), *E. intimella* (ant *Salix cinerea*). Straipsnyje taip pat trumpai apibendrinami Šalčininkų rajone aptiktos faunos aptinkamumo bei chorologinės priklausomybės duomenys.

Received: 6 November, 2018