

On interesting species of micro-moths (Lepidoptera) from Poland

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ABSTRACT. For eleven species of order Lepidoptera new faunistic records from Poland are given. *Elachista fulgens* PARENTI, 1983 is reported from the country for the first time; information on its diagnostic characters and habitat preferences are also provided. *Carex acutiformis* Ehrh. is a potential host-plant of *Elachista fulgens* in Poland. The occurrence of *Scythris picaepennis* (HAWORTH, 1828) within territory of Poland has been confirmed owing to discovery of female specimens in the Pieniny Mts.; previously, this scythridid moth has been considered to belong to Polish fauna on the basis of exclusively old and unverified literature data. The second record of *Epinotia kochiana* (HERRICH-SCHÄFFER, 1851), third record of *Crociosema plebejana* ZELLER, 1847, and fourth record of *Pristerognatha fuligana* (DENIS & SCHIFFERMÜLLER, 1775) from Poland are given too.

KEY WORDS: Lepidoptera, Microlepidoptera, faunistics, new records, Poland.

INTRODUCTION

Microlepidopteran fauna of Poland is still poorly investigated. It is a result of the fact that, among others, this large, informal group of taxa of Lepidoptera is taxonomically complicated and rather difficult to master. In consequence, it is a subject of research of comparatively few professional as well as amateur lepidopterists.

In the present paper, new faunistic data on moths belonging to four superfamilies – Incurvarioidea, Yponomeutoidea, Gelechioidea, and Tortricoidea are presented. One of the extremely local elachistid moths – *Elachista fulgens* has not been reported from the country so far; moreover, the first reliable record of *Scythris picaepennis* from Poland is also given.

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SYSTEMATICS

Nemophora ochsenheimerella (HÜBNER, 1813) (Adelidae)

Material examined

Hermanowa (EA 73), 3 males, 8 females (Fig. 1), 29 V, 3 females, 4 VI 2008 (leg., coll. T. BARAN). The specimens have been collected flying around young trees of *Abies alba* Miller growing in the Carpathian beech forest. In the same site, but slightly earlier in season, another rare adelid moth was encountered – *Nematopogon adanskiella* (VILLERS, 1879) (BARAN 2008).

In last decades, *Nemophora ochsenheimerella* was known only from a few localities: the Pieniny Mts. (BŁESZYŃSKI et al. 1965), the Międzyrzeki Reserve (leg. J. BUSZKO), and the Jata Reserve (BARANOWSKI & BARAN 2004); older data concern Silesia region.

Argyresthia illuminatella ZELLER, 1839 (Yponomeutidae)

Material examined

Hermanowa (EA 73), 1 male (Fig. 2), 29 V, 1 female, 4 VI 2008 (leg., coll. T. BARAN). The specimens have been flushed from branches of *Abies alba* Miller growing in the Carpathian beech forest; in the studied site, the species co-occurred with *Argyresthia fundella* (FISCHER von RÖESLERSTAMM, 1835).

Hitherto, *Argyresthia illuminatella* was recorded from a few scattered localities situated mainly in south and south western parts of the country (BARANIAK 1993).

***Depressaria emeritella* STANTON, 1849**
(Depressariidae)

Material examined

Tyczyn (EA 73), 1 female (Fig. 3), ex larva, 15 VIII, 1 male, ex larva, 16 VIII, 1 male, ex larva, 1 female, ex larva, 17 VIII, 1 male, ex larva, 1 female, ex larva, 22 VIII, 1 male, ex larva, 24 VIII 2008 – host plant: *Tanacetum vulgare* L. (leg., coll. T. BARAN). The habitats were sunny borders of mixed forest and abandoned fields. Searching for leaf-shelters with larvae seems to be the best way to find the species (Fig. 9).

The only reliable records of this depressariid moth are those given by BUSZKO (1991, 1992): the Las Piwnicki Reserve, Giżycko, the Borecka Forest, as well as those published by SZELĄG (2003): Wieluń, the Jodłowice Reserve, the Wąwóz Lipa Reserve, and Mokra ad Mrozów.

***Elachista distigmatella* FREY, 1859**
(Elachistidae)

Material examined

Styków ad Głogów Małopolski (EA 66), 10 males, 8 females, 10 VI, 5 males, 3 females, 11 VI, 6 males, 3 females, 14 VI, 1 male, 5 VII 2008 (leg., coll. T. BARAN). The habitat was sandy edge of young pine forest.

From Poland, the species has for the first time been reported only recently by BARAN (2005a) from six scattered places; since then, it was also found in Oblasy (BARAN et al. 2007).

***Elachista fulgens* PARENTI, 1983**
(Elachistidae)

Material examined

Dzierżążnia (DD 43), 1 male, 3 females, 23 VII, 7 males, 3 females, 26 VII, 2 males, 6 females, 28 VII, 3 males, 3 females, 31 VII 2007, 1 male, 1 female, 22 V, 2 males, 18 VII, 3 males, 22 VII 2008 (leg., coll. T. BARAN). The specimens have been collected during sunny days (early in afternoons) by sweeping leaves of *Carex acutiformis* EHRH. with a net; thus, this *Carex* species is most likely the food-plant of the larvae. The habitat was moist meadow bordering the Płonka river (Fig. 11). The meadow was overgrown predominantly with *Carex acutiformis* EHRH., *Carex acuta* L., *Phalaris arundinacea* L., *Glyceria maxima* (HARTMAN) HOLMB., *Solanum dulcamara* L., *Scutellaria galericulata* L., *Epilobium hirsutum* L., *Lythrum salicaria* L., *Lysimachia vulgaris* L., *Symphytum officinale* L.,

as well as with *Alnus glutinosa* (L.) GAERTNER, and some bushes of *Prunus padus* L. The capture dates indicate that the species fly in two broods in the country.

Elachista fulgens is a new moth in Polish fauna. Its distribution is insufficiently known because taxonomic status of *Elachista arnoldi* (KOSTER, 1993) appears to be unresolved still; these two taxa are sometimes treated to be distinct or conspecific. Originally, *Elachista fulgens* was described on the basis of material coming from Japan (PARENTI 1983); then, it was reported also from Europe, namely from Italy (KOSTER 1993; PARENTI 1996) and Germany (BIESENBAUM 1995; KOSTER, pers. comm.). In 1993, KOSTER described taxon *Elachista arnoldi* basing on specimens collected in Netherlands, close to the German border (KOSTER op. cit.). Two years later, BIESENBAUM (1995) has synonymised this taxon with *Elachista fulgens*. On the other hand, both taxa are considered to be valid on 'The Fauna Europaea Web Service' (*Elachista arnoldi* is mentioned from Netherlands and Germany, and *Elachista fulgens* is reported from Italy) (KAILA 2004). The author has not had opportunity to examine the type specimens of *Elachista arnoldi*. However, he has compared his material with photographs of type specimens of *Elachista fulgens* published by Sugisima (2005). This comparison revealed that there were no significant differences in genitalia structure between Japanese and Polish individuals. Consequently, the Polish specimens have been determined as *Elachista fulgens*.

The species may be diagnosed by the following characters: wingspan 5.5 – 7.8 mm (females often larger than male). Forewing (Fig. 4) rather narrow, generally brown blackish, somewhat glossy, with silver metallic pattern consisting of median fascia, as well as costal and tornal spots. Tornal spot comparatively small, and costal one elongate, oblique, ending just before dorsum. In male genitalia (Figs 12-15), valva almost parallel-sided, comparatively narrow, somewhat bent distally; aedeagus rather stout, tapering, slightly bent distally and basally (more or less S-shaped), with spoon-like apical part and narrow spindle-like cornutus. In female genitalia (Figs 16-17), sclerotisation of colliculum short, extended from inception of ductus seminalis to about one third or to almost half length of most posterior part (a fragment between the inception and antrum) of ductus bursae.

***Scythris picaepennis* (HAWORTH, 1828)**

(Scythrididae)

Material examined

The Pieniny Mts., Jaworki (DV 67), 1 female (Fig. 5), 12 VII 2008 (leg., coll. T. BARAN). The habitat was xerothermic grassland next to calcareous rocks. The specimen was collected during sunny day by sweeping low vegetation with a net.

In recent review of Polish scythridid moths (BARAN 2005), the species was treated to belong to Polish fauna. Nevertheless, this statement was based only on two, out-dated literature records, and the author had never found voucher specimens of this species in collections to confirm its occurrence in the country. Furthermore, *Scythris picaepennis* was often

confused with *Scythris potentillella* (ZELLER, 1847) in the past. Both taxa, however, can be differentiated even on the basis of external features - the former has clearly wider hindwings in relation to width of forewings as compared with the latter – see BARAN (op. cit.).

For these reasons, the present finding of *Scythris picaepennis* is the first trustworthy record of this micro-moth from Poland.

***Mompha subbistrigella* (Haworth, 1828)**

(Momphidae)

Material examined

Tyczyn (EA 73), 1 male (Fig. 6), 11 VIII 2006, 2 females, 9 IV 2007, 1 female, 6 VI 2008 (leg., coll. T. BARAN). The overwintering specimens (captured in April) were found in a garage (on the wall); remaining individuals were collected during the day by sweeping vegetation next to mixed forest.

In last years, *Mompha subbistrigella* was recorded only from three localities: Wąwolnica, Lubowierz, and Świdnik (MAZURKIEWICZ & PAŁKA 2003). Old but verified data concern also the Równica Mt. and surroundings of Nowy Sącz (RIEDL 1967). Other literature information is rather unreliable as this species is often confused with *Mompha sturnipennella* (TREITSCHKE, 1833).

***Pristerognatha penthinana* (GUENÉE, 1845)**

(Tortricidae)

Material examined

Hermanowa (EA 73), 1 male, ex larva, 22 VIII 2007 – host plant: *Impatiens noli-tangere* L. (leg., coll. T. BARAN). The habitat was moist place next to small stream in the Carpathian beech forest.

The species was previously known from only few, mainly out-dated records (RAZOWSKI 1983). Recently found merely from two localities of northern Poland – Gajewo ad Giżycko (leg. J. BUSZKO in: RAZOWSKI 2001) and the Borecka Forest (BUSZKO 2008).

***Pristerognatha fuligana* (DENIS & SCHIFFERMÜLLER, 1775)**

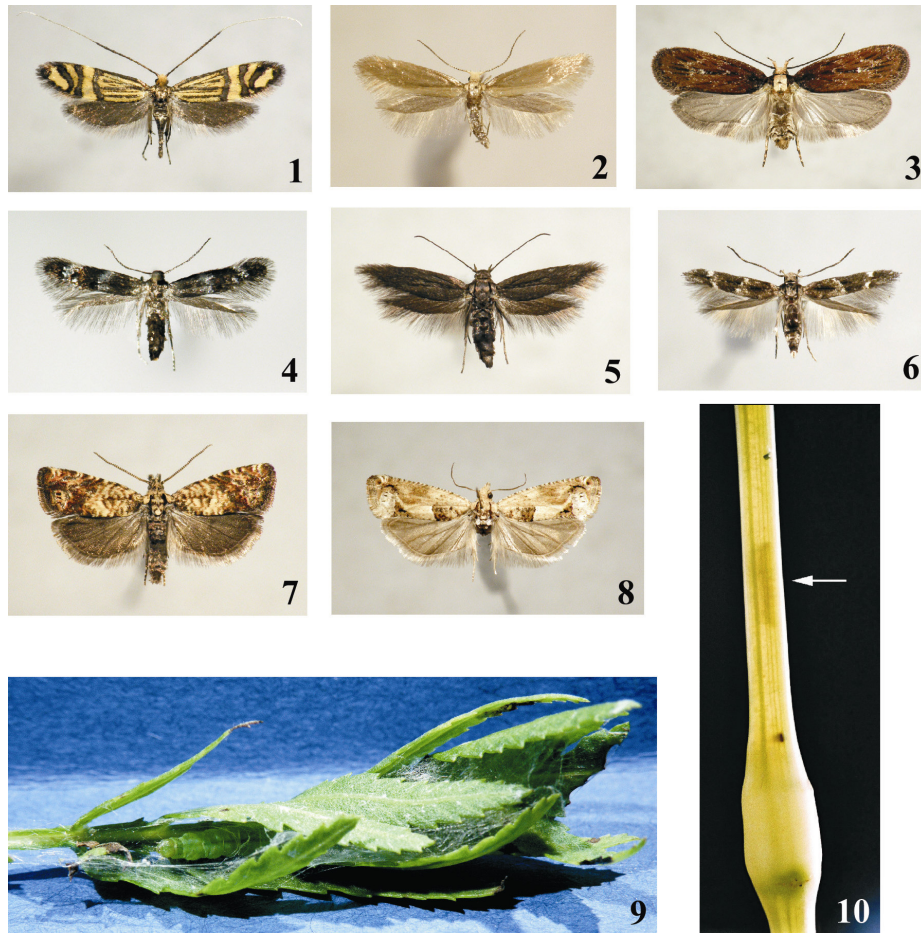
(Tortricidae)

Material examined

Hermanowa (EA 73), 1 female, ex larva, 3 VIII 2007 – host plant: *Impatiens noli-tangere* L. (leg., coll. T. BARAN). The habitat was moist place next to small stream in the Carpathian beech forest. The larva of this very local tortricid moth was found in the same

place as that of preceding member of genus *Pristero gnatha* – larval stage of both taxa is stem-borer (Fig. 10).

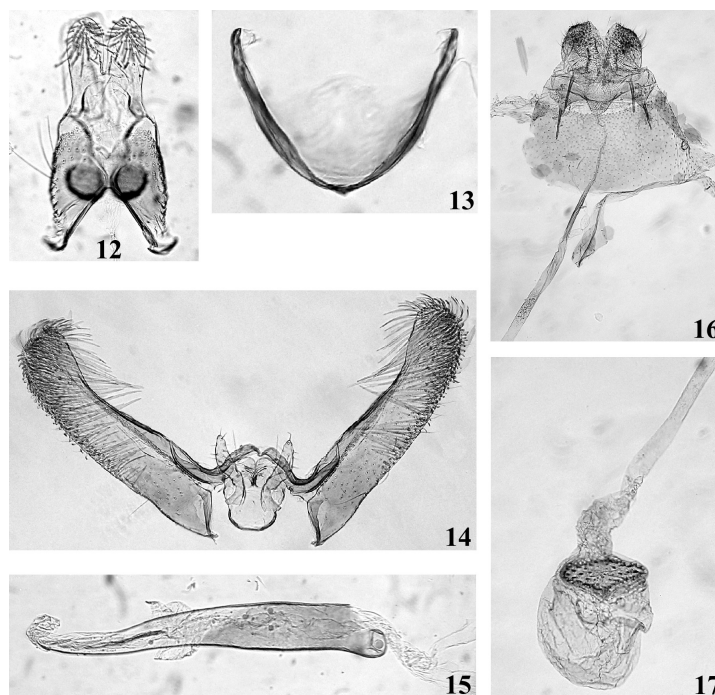
RAZOWSKI (1983) mentioned two old but verified records for *Pristero gnatha fuligana* from Poland – Lubczyna ad Szczecin and Duszniki Zdrój; moreover, it was found also in the Borecka Forest (BUSZKO 2008).



Figs 1-10. Adults and larvae. 1 – female adult of *Nemophora ochsenheimerella*; 2 – male adult of *Argyresthia illuminatella*; 3 – female adult of *Depressaria emeritella*; 4 – female adult of *Elachista fulgens*; 5 – female adult of *Scythris picaepennis*; 6 – male adult of *Mompha subbistrigella*; 7 – male adult of *Epinotia kochiana*; 8 – female adult of *Crociosema plebejana*; 9 – larva of *Depressaria emeritella* in spun and rolled leaf of *Tanacetum vulgare*; 10 – larva of tortricid genus *Pristero gnatha* (pointed) within stalk of *Impatiens nolti-tangere*.



Fig. 11. Habitat and locality of *Elachista fulgens* in Poland.



Figs 12-17. Genitalia of *Elachista fulgens*. 12-15. Male genitalia. 12 – tegumen; 13 – vinculum; 14 – complex of valvae-juxta-digitate processes; 15 – aedeagus. 16-17. Female genitalia. 16 – complex of ovipositor-segment 8-antrum-colliculum-posterior part of ductus bursae; 17 – complex of anterior part of ductus bursae-corpus bursae.

***Epinotia kochiana* (HERRICH-SCHÄFFER, 1851)**

(Tortricidae)

Material examined

The Góry Pieprzowe Reserve (EB 51), 1 female, 18 V, 1 male (Fig. 7), 4 females, 31 V, 1 male, ex larva, 14 VI 2008 – host plant: *Salvia pratensis* L. (leg., coll. T. BARAN). The habitat was strongly insolated slope covered with xerothermic vegetation.

In the country, this stenotopic moth has so far been known only from one locality situated close to eastern border of the country – the Gródek Reserve (BUSZKO et al. 1996).

***Crociosema plebejana* ZELLER, 1847**

(Tortricidae)

Material examined

Rzeszów (EA 74), 1 female (Fig. 8), 22 IX 2001 (leg., coll. T. BARAN). The habitat was a meadow bordering gardens, shrubberies, and the Wisłok river.

Crociosema plebejana is local tortricid moth in Europe, although it is widespread over the World; furthermore, in some regions (e.g. in Australia, USA) it can periodically cause serious damage in cotton fields (larvae feed on plants of family Malvaceae). In Poland the species is known only from two old records – Bydgoszcz (Zamczysko) and Ligota Tworkowska ad Racibórz (RAZOWSKI 1987).

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