

## On the new and rare Microlepidoptera (Lepidoptera) in Polish fauna

TOMASZ BARAN

Department of Invertebrate Zoology, University of Rzeszów, Cegielniana 12,  
35-959 Rzeszów, Poland; e-mail: tbaran@univ.rzeszow.pl

**ABSTRACT.** For eighteen micro-moth species new distributional records are given. *Dichomeris rasilella* (HERRICH-SCHÄFFER, 1854) is for the first time reported from Poland. For *Coleophora pulmonariella* RAGONOT, 1874 the first reliable record is given. In addition, some diagnostic features of *Dichomeris rasilella* and *Coleophora pulmonariella* are also mentioned. In the paper, adult specimens of *Argyresthia pulchella* LIENIG & ZELLER, 1846, *Chrysoclista splendida* KARSHOLT, 1997, *Coleophora pulmonariella*, *Coleophora onopordiella* ZELLER, 1849, *Dichomeris rasilella* and *Wockia asperipunctella* (BRUAND, 1851), larval mines of *Argyresthia thuiella* (PACKARD, 1871) and *Monochroa sepicolella* (HERRICH-SCHÄFFER, 1854), as well as female genitalia, aedeagus and larval case of *Coleophora pulmonariella* are figured.

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

---

### INTRODUCTION

The latest comprehensive checklist of Polish Lepidoptera (BUSZKO & NOWACKI 2000) revealed among others that many regions of the country had not been sufficiently investigated in the past, as well as that many species, especially those of micro-moths had not been found again for even tens of years. Therefore, for a few years the author has been trying to fill this gap. In result of a recent field research, carried out predominantly in south eastern Poland in 2007, eighteen interesting records of Microlepidoptera have been found. In the article these faunistic data are presented. The seldom-collected moths treated here belong to the following families: Adelidae, Tineidae, Gracillariidae, Yponomeutidae, Elachistidae, Agonoxenidae, Scythrididae, Coleophoridae, Gelechiidae, Choreutidae, and Pterophoridae. From among recorded species, one of the gelechiids being a member of the

genus *Dichomeris* Hübner, 1818 has not been known in Polish fauna so far; on the other hand, for one of the *Coleophora* species until now there has not been dependable information on its occurrence in the country.

## SYSTEMATICS

### *Nematopogon adansoniella* (VILLERS, 1879) (Adelidae)

#### Material examined

Hermanowa (EA 73), 1 male, 3 females, 12 V, 2 males, 2 females 14 V 2007 (leg., coll. T. BARAN). The adult specimens have been flushed from chiefly young trees of *Fagus sylvatica* L. during the day.

The species is one of the most local adelid moths in Poland; it has so far been known only from the Bieszczady Mts., and Reptowo ad Stargard Szczeciński (WOJTUSIAK 1972, RAZOWSKI 1978). In the country, *Nematopogon adansoniella* seems to be associated exclusively with common beech forests.

### *Tinea steueri* PETERSEN, 1966 (Tineidae)

#### Material examined

Hermanowa (EA 73), 1 male (at light), 24 V 2007 (leg., coll. T. BARAN); Tyczyn (EA 73), 1 female (at light), 26 V 2007 (leg., coll. T. BARAN). The adults have been caught at edges of the Carpathian beech, and deciduous forests.

Hitherto, this rare moth has been recorded only from Sepólno Krajeńskie, Kamień Krajeński and Rychnowo – these records have been based on specimens reared from old owl pellets (BUSZKO & ŚLIWIŃSKI 1979).

### *Caloptilia fribergensis* (FRITZSCHE, 1871) (Gracillariidae)

#### Material examined

Dąbrówka Starzeńska ad Dynów (EA 91), 1 female, ex larva, 16 VII, 2 males, ex larva, 19 VII 2007 – host plant: *Acer pseudoplatanus* L. (leg., coll. T. BARAN). The larval shelters were found at rather wet edge of the Carpathian beech forest in the first days of July.

The gracillariid species has so far been known only from the Pieniny Mts. (BŁESZYŃSKI et al. 1965), a few sites in the Ojców National Park (BUSZKO 1992), as well as from Kazimierz Dolny and Rąblów (MAZURKIEWICZ 1999).

*Argyresthia thuiella* (PACKARD, 1871) (Yponomeutidae)**Material examined**

Rzeszów (EA 74), 1 male, ex larva, 7 V, 2 males, ex larva, 9 V, 3 males, 1 female, ex larva, 10 V, 1 male, ex larva, 12 V, 3 male, 2 females, ex larva, 13 V 2007 – host plant *Thuja occidentalis* L. (leg., coll. T. BARAN). The tenanted mines occurring mainly in terminal shoots of the host plant (Fig. 1) were encountered in urban parks, gardens, along pavements and roadsides during April.

This invasive micro-moth is originally a North American species that has been accidentally introduced to Western Europe in seventies of the 20<sup>th</sup> century. At present, it is known from many countries of western, southern and central parts of Europe although its rate of spreading is rather slow, especially in comparison with rate of recent expansions of other moths in Europe, e.g. *Phyllonorycter robiniella* (CLEMENS, 1859) or *Cameraria ohridella* (DESCHKA & DIMIĆ, 1986); this fact may be, among others, a result of monovoltinism of *Argyresthia thuiella*. In Poland, it has recently been found for the first time in few sites in most western part of the country: Gubin, Kostrzyn, Siekierki, and Słubice (BARANIAK & WALCZAK 2004). Present data indicate that the species may have started to colonize the country by anemochore dispersal from two separate trails, i.e. from Germany in the west, as well as from Slovakia in the southeast.



**Figs 1-2.** Larval mines. 1 – *Argyresthia thuiella* on *Thuja occidentalis*; 2 – *Monochroa sepicolella* on *Rumex thyrsiflorus*.

*Argyresthia pulchella* LIENIG & Zeller, 1846 (Yponomeutidae)

**Material examined**

Hermanowa (EA 73), 1 female (at light), 17 VII 2007 (leg., coll. T. BARAN). The adult (Fig. 3) has been caught at edge of the Carpathian beech forest.

Extremely local species recorded previously only from Mieroszów and the Pieniny Mts. (BŁESZYŃSKI et al. 1965, BARANIAK 1993).

*Argyresthia semitestacella* (CURTIS, 1833) (Yponomeutidae)

**Material examined**

Hermanowa (EA 73), 2 females, 15 VIII, 2 males, 20 VIII 2007 (leg., coll. T. BARAN). The adult specimens have been flushed from branches of *Fagus sylvatica* L. in the afternoons.

This rarely recorded *Argyresthia* species has so far been known from a few scattered, first of all outdated, historical records (BARANIAK 1993); comparatively not long ago, it was found only in the Las Piwnicki Reserve (BUSZKO 1991).

*Elachista occidentalis* FREY, 1882 (Elachistidae)

**Material examined**

Hermanowa (EA 73), 1 male, 28 VI, 3 males (2 of them at lighth), 17 VII 2007 (leg., coll. T. BARAN). The specimens have been caught in the Carpathian beech forest.

This rare elachistid moth is known merely from Glinki ad Toruń (BUSZKO 1990) and Nowa Dęba (Baran et al. 2007) in lowlands, as well as from the Pieniny Mts. (KAILA & VARALDA 2004).

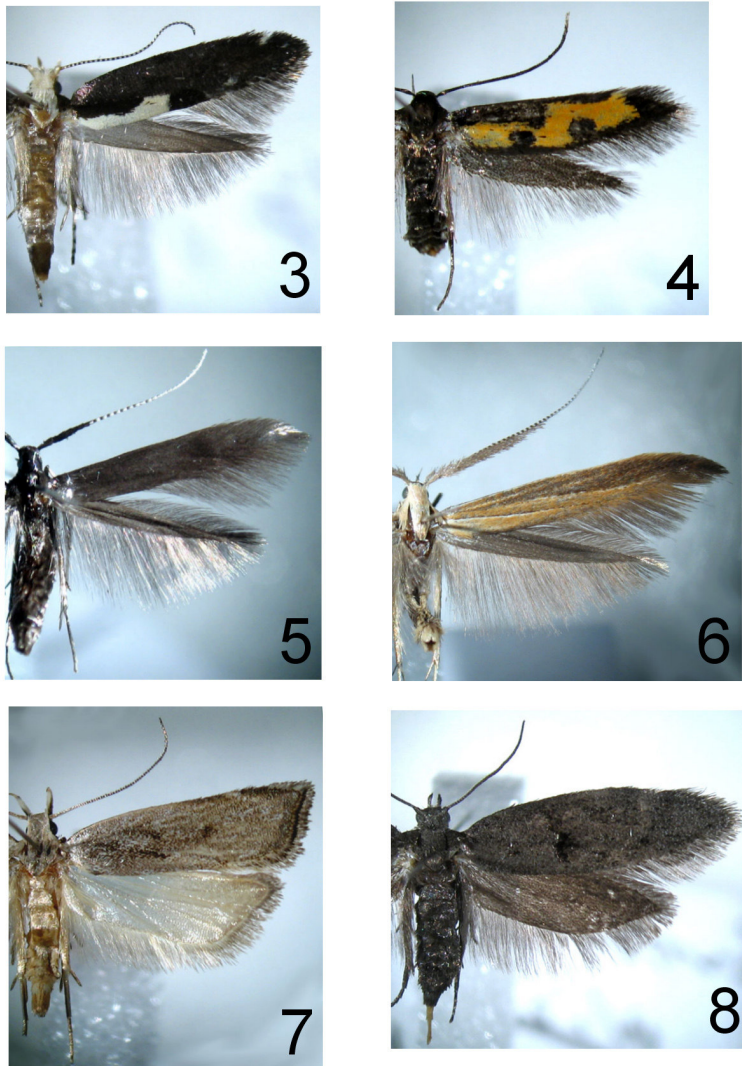
*Chrysoclista splendida* Karsholt, 1997 (Agonoxenidae)

**Material examined**

Tyczyn (EA 73), 1 female, 6 VI 2007 (leg., coll. T. BARAN). The adult (Fig. 4) has been caught sitting on the trunk of *Salix alba* L. during the day; the habitat was a rather moist meadow surrounded by numerous old willow trees.

The only reliable previous records of this extremely rare moth are those given by Riedl (1969; for *Chrysoclista lathamella* auct.): Gliwice and the Pieniny Mts. It is noteworthy that other local species of the genus *Chrysoclista* Stainton, 1854 – *Chrysoclista lathamella*

Fletcher, 1936 has been also found in the same place and on the same tree species a few years ago (BARAN 2003).



**Figs 3-8.** Adults. 3 – *Argyresthia pulchella* (female); 4 – *Chrysoclista splendida* (female); 5 – *Coleophora pulmonariella* (female); 6 – *Coleophora onopordiella* (male); 7 – *Dichomeris rasilella* (male); 8 – *Wockia asperipunctella* (female).

*Scythris potentillella* (ZELLER, 1847) (Scythrididae)

**Material examined**

Styków ad Głogów Małopolski (EA 66), 1 male, 1 female, 10 VI, 1 male, 30 VI 2007 (leg., coll. T. BARAN). The adult specimens have been collected in sandy place by sweeping xerothermic vegetation with a net.

The stenotopic scythridid previously recorded from some scattered localities only; in south eastern part of the country it has not been found so far (BARAN 2005).

*Coleophora pulmonariella* RAGONOT, 1874 (Coleophoridae)

**Material examined**

Rzeszów (EA 74), 1 female (Fig. 5), ex larva, 17 V, 1 male, ex larva, 19 V 2007 – host plant: *Myosotis palustris* (L.)L. em. Rchb. (leg., coll. T. BARAN). The cases (Fig. 12) with full-grown larvae were collected early in May; the habitat was a moist meadow with small stream situated at border of mixed forest.

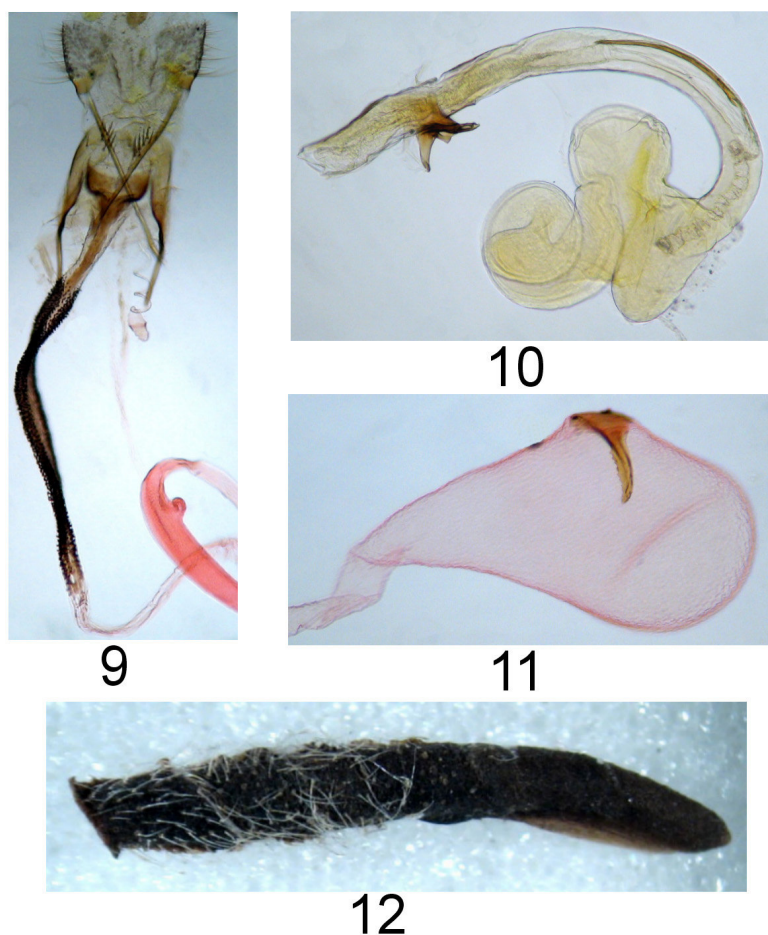
This is the first trustworthy record of this coleophorid moth in Poland as hitherto there have been no voucher specimens in collections confirming some outdated literature information on its occurrence in the country (see RAZOWSKI 1990). Externally, adults of *Coleophora pulmonariella* resemble those of *Coleophora albitarsella* Zeller, 1849. However, both species can be easily identified on the basis of their genitalia characteristics – in male genitalia, *C. pulmonariella* has longer, somewhat bent and slender cornutus (Fig. 10), and in female genitalia (Figs 9,11) it has distinctly longer spined section of ductus bursae (the section is almost twice longer than posterior apophyses).

*Coleophora onopordiella* ZELLER, 1849 (Coleophoridae)

**Material examined**

Tyczyn (EA 73), 2 males (Fig. 6), 27 VI 2007 (leg., coll. T. BARAN). The specimens have been collected on a sunny slope bordering on mixed forest.

In the past, this scarce species was often confused with *Coleophora wockella* ZELLER, 1849, and only recently three verified records have been given by RAZOWSKI (1990) – Podkowa Leśna, Kraków, and the Pieniny Mts.; furthermore, it has been also reported from Zyntranowa and Barwinek (BARANIAK 1996).



**Figs 9-12.** *Coleophora pulmonariella*. 9 – complex of ovipositor-segment 8-colliculum-spined section of ductus bursae; 10 – complex of aedeagus-juxta; 11 – corpus bursae with signum; 12 – mature larval case (length 9.8 mm).

*Monochroa cytisella* (CURTIS, 1837) (Gelechiidae)

**Material examined**

Głogów Małopolski (EA 65), 3 females, 30 VI 2007 (leg., coll. T. BARAN); Hermanowa (EA 73), 1 female (at light), 17 VII 2007 (leg., coll. T. BARAN). Tree adult speci-

mens have been flushed from fronds of fern – *Pteridium aquilinum* (L.) KUHN. The habitats were borders of the Carpathian beech, and mixed forests.

The rarely recorded species, previously reported from only a few scattered localities: the Wolin Island (HERING 1891), Stemplew (TOLL 1933), Zabierzów (SCHILLE 1930), Kraków-Podgórze (BŁESZYŃSKI 1950), the Borecka forest (BUSZKO in prep.).

***Monochroa sepicolella* (HERRICH-SCHÄFFER, 1854) (Gelechiidae)**

**Material examined**

Styków ad Głogów Małopolski (EA 66), 1 male, ex larva, 1 female, ex larva, 5 VII, 1 male, ex larva, 13 VII, 1 female, ex larva, 16 VII, 1 male, ex larva, 20 VII 2007 – host plant: *Rumex thyrsiflorus* Fing. (leg., coll. T. BARAN). The larval mines (Fig. 2) were collected in sandy, xerothermic place with some young pine trees in the second half of June.

This local gelechiid moth has hitherto been reported only from the Las Piwnicki Reserve (BUSZKO 1991) and the Borecka forest (BUSZKO in prep.).

***Dichomeris rasilella* (HERRICH-SCHÄFFER, 1854) (Gelechiidae)**

**Material examined**

The Broduszurki Reserve (EA 91), 1 male (Fig. 7), 19 VI 2007 (leg., coll. T. BARAN); Tyczyn (EA 73), 1 female (at light), 16 VII 2007 (leg., coll. T. BARAN). The specimens have been caught at edges of deciduous and mixed forests overgrowing with rich herbaceous vegetation.

*Dichomeris rasilella* is a new moth in Polish fauna. It is locally but widely distributed throughout the continent; in the northern part of Europe recorded only from Estonia, Latvia and Lithuania. From among central European members of the genus, the adult of *Dichomeris rasilella* may be comparatively easily diagnosed even without genitalia examination. Its rather small size (wingspan is about 14.5-15.5 mm), generally light, greyish brown ground colour of forewings mottled with dark brown, with more or less pronounced dark brown horizontal basal streak in fold, dark brown suffusion at apical part of costa, dark brown, contrasting and distinct cilia line, as well as pale hindwings somewhat darkened usually in most distal part are distinctive.

***Acompsia tripunctella* ([DENIS & SCHIFFERMÜLLER, 1775]) (Gelechiidae)**

**Material examined**

Dąbrówka Starzeńska ad Dynów (EA 91; 400 m), 3 males, 1 female, 2 VII 2007 (leg., coll. T. BARAN). The adults have been collected at sunny edge of mixed forest.



The species occurring in mountainous and submountainous regions has been previously found merely in Nowy Sącz, Rytro, Czarny Dunajec (SCHILLE 1930), the Tatra Mts. (STACH 1936), Równica Mt. (TOLL 1950), and in the Pieniny Mts. (BŁESZYŃSKI et al. 1965).

***Prochoreutis myllerana* (FABRICIUS, 1794) (Choreutidae)**

**Material examined**

Dzierżążnia (DD 43), 1 female, ex larva, 12 VIII 2007 – host plant: *Scutellaria galericulata* L. (leg., coll. T. BARAN). The larva was found in a moist meadow bordering on a stream late in June.

The very local moth, previously found only in the Wolin Island, Wrocław (TOLL 1956), and Wąwolnica (BARANIAK et al. 2001). It is worth noticing also that in Dzierżążnia the species has occurred together with other externally similar but much more numerous choreutid moth – *Prochoreutis sehestediana* (FABRICIUS, 1776), larvae of which fed on the same host plant as those of *Prochoreutis myllerana*.

***Wockia asperipunctella* (BRUAND, 1851) (Urodidae)**

**Material examined**

The Pieniny Mts. (DV 57): Sromowce Niżne (470 m), 1 female (Fig. 8) (at light), 15 VI 2007 (leg., coll. T. BARAN). The specimen was caught at rather wet edge of mixed forest.

The extremely rare micro-moth has so far been recorded merely from Oborniki Śląskie (WOCKE 1874), Kosyń (BUSZKO et al. 1996) and Janowiec (BARANIAK et al. 2001).

***Platyptilia capnodactylus* (ZELLER, 1841) (Pterophoridae)**

**Material examined**

Czarnorzeki ad Krosno (EA 51), 2 males, 1 female, 17 VI 2007 (leg., coll. T. BARAN).

The adults were collected by flushing from leaves of *Petasites* sp. in moist places and at banks of stream in the Carpathian beech forest.

This very local plume moth has been known mainly from a few localities in the Bieszczady Mts.; furthermore, it was also recorded only from Łądek-Zdrój and Ojców (BUSZKO 1986, RAZOWSKI 1995).

## REFERENCES

- BARAN T. 2003. New records of rare Microlepidoptera (Lepidoptera) from Tyczyn (SE Poland). *Wiad. Entomol.* **22**(2): 117-119. [In Polish]
- BARAN T. 2005. The Scythrididae (Lepidoptera: Gelechioidea) of Poland. *Polish Entomol. Monographs* **3**: 1-269.
- BARAN T., MAZURKIEWICZ A., PAŁKA K. 2007. Contribution to the knowledge of Elachistidae fauna (Lepidoptera: Gelechioidea) from south-eastern Poland. *Wiad. Entomol.* **26**(2): 103-113. [In Polish]
- BARANIAK E. 1993. Distribution of Argyresthiidae (Lepidoptera) in Poland. *Pol. Pismo ent.* **62**: 53-82.
- BARANIAK E. 1996. New data on the distribution and bionomics of *Coleophora onopordiella* ZELLER, 1849 (Lepidoptera, Coleophoridae). *Wiad. Entomol.* **15**(3): 191. [In Polish]
- BARANIAK E., MAZURKIEWICZ A., PAŁKA K. 2001. New localities of interesting Microlepidoptera in Poland. *Wiad. Entomol.* **19**(3-4): 161-168 [In Polish]
- BARANIAK E., WALCZAK U. 2004. Contribution to the knowledge of Yponomeutoidea (Lepidoptera). II. Distribution of *Argyresthia thuiella* Packard, 1871 (Lepidoptera: Argyresthidae) in Poland. *Bad. fizjogr. Pol. zach. C*, **50**: 79-82. [In Polish]
- BŁESZYŃSKI S. 1950. Fauna motyli Podgórek w okolicy Krakowa. *Mat. fizjogr. Kraju* **21**: 1-52.
- BŁESZYŃSKI S., RAZOWSKI J., ŻUKOWSKI R. 1965. Fauna motyli Pienin. *Acta zool. cracov.* **10**: 375-493.
- BUSZKO J. 1986. A review of Polish Pterophoridae (Lepidoptera). *Pol. Pismo ent.* **56**: 273-315.
- BUSZKO J. 1990. Studies on the mining Lepidoptera of Poland. IX. New records of Elachistidae. *Pol. Pismo ent.* **60**: 139-151.
- BUSZKO J. 1991. Motyle (Lepidoptera) rezerwatu Las Piwnicki. *Parki nar. Rez. Przyr.* **10**: 5-60.
- BUSZKO J. 1992. Studies on the mining Lepidoptera of Poland. XI. Remarks on some rare Gracillariidae. *Pol. Pismo ent.* **61**: 65-70.
- BUSZKO J. (in prep.). Motyle (Lepidoptera) Puszczy Boreckiej.
- BUSZKO J., JUNNILAINEN J., KAITILA J.P., NOWACKI J., NUPPONEN K., PAŁKA K. 1996. New and rare to the Polish fauna species of Lepidoptera recorded in south-eastern Poland *Wiad. entomol.* **15**(2): 105-115. [In Polish]
- BUSZKO J., NOWACKI J. (eds.) 2000. The Lepidoptera of Poland. A Distributional Checklist. *Polish Entomol. Monographs* **1**: 1-178.
- BUSZKO J., ŚLIWIŃSKI Z. 1979. New to the Polish fauna and rare Lepidoptera. *Pol. Pismo ent.* **49**: 653-662. [In Polish]
- HERING E. 1891. Ergänzungen und Berichtigungen zu F. O. Büttner's Pommerschen Mikrolepidopteren. *Stett. ent. Ztg.* **52**: 135-227.
- KAILA L., VARALDA P.G. 2004. The *Elachista juliensis* complex revised (*Elachistidae*). *Nota lepid.* **27**(2-3): 217-237.
- MAZURKIEWICZ A. 1999. New records of rare species of Gracillariidae (Lepidoptera) from south-eastern Poland. *Wiad. Entomol.* **18**(1): 57-58. [In Polish]
- RAZOWSKI J. 1978. Motyle (Lepidoptera) Polski. Część III – Heteroneura, Adeloidea. *Monogr. Fauny Polski* **8**: 1-137.
- RAZOWSKI J. 1990. Motyle (Lepidoptera) Polski. Część XVI – Coleophoridae. *Monogr. Fauny Polski* **18**: 1-270.
- RAZOWSKI J. 1995. Lepidoptera of the Ojców National Park. *Prądnik Prace Muz. Szafera* **9**: 179-215. [In Polish]
- RIEDL T. 1969. Matériaux pour la connaissance des Momphidae paléarctiques (Lepidoptera). Partie IX. *Revue des Momphidae européennes, y compris quelques espèces d'Afrique du Nord et du Proche-Orient.* *Pol. Pismo ent.* **39**: 635-919.

- SCHILLE F. 1930. Fauna Motyli Polski. II. Prace monogr. Kom. fizjogr. **7**: 1-358.
- STACH S. 1936. Microlepidoptera Tatr Polskich. Spr. Kom. fizjogr. **70**: 187-221.
- TOLL S. 1933. Wykaz Microlepidoptera znalezionych na terenie majątku Stemplew w latach 1919-1923. Pol. Pismo ent. **12**: 28-49.
- TOLL S. 1950. Przyczynek do fauny motyli t.zw. drobnych (Microlepidoptera) Beskidu Ustrońskiego. Pr. biol., Kraków 2. Studia nad florą i fauną Beskidu Ustrońskiego: 165-205.
- TOLL S. 1956. Motyle – Lepidoptera, Glyphipterygidae, Douglasidae. Klucze do oznaczania owadów Polski **27**(39-40): 1-50.
- WOCKE M.F. 1874. Verzeichnis der Falter Schlesiens. II. Microlepidoptera. Z. Ent., N. F. 4: 1-107.
- WOJTUSIAK J. 1972. Motyle – Lepidoptera, Adelidae. Klucze do oznaczania owadów Polski **27**(9): 1-52.

Received: 10, 2008

Accepted: 21, 2008