

Braconid wasps (*Hymenoptera, Braconidae*) reared from mining
*Lepidoptera**¹

Męczelkowate (*Hymenoptera, Braconidae*) wyhodowane z motyli minujących
(*Lepidoptera*)¹

PIOTR MARCZAK¹, JAROSŁAW BUSZKO²

¹ Instytut Zoologii PAN, ul. Wilcza 64, 00-679 Warszawa

² Instytut Biologii UMK, Zakład Ekologii Zwierząt, ul. Gagarina 9, 87-100 Toruń

ABSTRACT. Studies on parasitoids living on larvae of leaf-miners resulted in obtaining 29 species of Braconid wasps reared from mining *Lepidoptera*. Out of them 23 are for the first time recorded from Poland. For each species essential information on hosts, hosts' food plants and localities are given.

The present paper includes data concerning Braconid wasps obtained by rearing from lepidopterous leaf-miners on the occasion of studies on mining *Lepidoptera* of Poland carried out in the period 1984–1989.

There were reared all groups of hymenopterous parasitoids, and the first part of results referred to *Chalcidoidea* has already been published several years ago (VIDAL, BUSZKO, 1990). In the course of studies 1141 specimens of Braconid wasps were reared. Almost all these specimens are stored in Zoological Institute – National Zoological Museum in Warsaw.

For each species full records concerning hosts, hosts' food plants, localities (with UTM grid system codes) and share of sexes are given. As *Braconidae* are still very poorly investigated in Poland among 29 recorded species as many as 23 are new to the Polish fauna. Approach based on rearing provided also many new host records.

Acknowledgements: authors wish to express their sincere gratitude to Dr J. PAPP for verification of some determinations.

* Druk pracy w 100% sfinansowany przez Uniwersytet Mikołaja Kopernika w Toruniu.

List of species*Colastes braconius* HALIDAY, 1833

- Ectoedemia septembrella* (STT.) – *Hypericum perforatum* L. – EE67 Danowo.
- Parornix betulae* (STT.) – *Betula pendula* ROTH – CD38 Toruń-Barbarka.
- Phyllonorycter acerifoliella* (ZELL.) – *Acer campestre* L. – XU21 Poznań-Rusałka.
- Phyllonorycter cavella* (ZELL.) – *Betula pendula* ROTH – EE17 Gązwa Reserve.
- Phyllonorycter cerasicolella* (H. – S.) – *Prunus cerasus* L. – EE58 Giżycko.
- Phyllonorycter comparella* (DUP.) – *Populus alba* L. – CD37 Toruń-Przedmieście Bydgoskie.
- Phyllonorycter coryli* (NIC.) – *Corylus avellana* L. – EE58 Giżycko.
- Phyllonorycter dubitella* (H. – S.) – *Salix caprea* L. – EE48 Giżycko-Twierdza.
- Phyllonorycter esperella* (GÖZE) (= *quinnata* JOANN.) – *Carpinus betulus* L. – EE48 Giżycko-Twierdza.
- Phyllonorycter froelichiella* (ZELL.) – *Alnus glutinosa* (L.) Gaerten. – XU30 Poznań-Dębina.
- Phyllonorycter geniculella* (RAG.) – *Acer pseudoplatanus* L. – CE90 Tama Brodzka, EE59 Gajewo.
- Phyllonorycter harrisella* (L.) – *Quercus robur* L., *Q. petraea* (MATT.) LIEBL. – CD07 Dziki Ostrów Reserve, CE55 Opalenie, CE65 Białki, CE75 Pawlice, DC66 Radziejowice, DC87 Podkowa Leśna, EC18 Warszawa-Park im. Jana III Sobieskiego.
- Phyllonorycter heegeriella* (ZELL.) – *Quercus robur* L., *Q. petraea* (MATT.) LIEBL. – CD38 Toruń-Wrzosy, CE55 Opalenie, CE65 Białki, DC66 Radziejowice, DC84 Modrzewina Reserve, DC87 Podkowa Leśna, DD80 Palmiry, EC18 Warszawa-Park im. Jana III Sobieskiego, ED20 Klembów.
- Phyllonorycter insignitella* (ZELL.) – *Trifolium pratense* L. – EE48 Giżycko-Twierdza.
- Phyllonorycter lautella* (ZELL.) – *Quercus robur* L. – CD38 Toruń-Wrzosy, CE65 Białki, DC41 Spała Reserve, EE48 Giżycko-Twierdza, FD74 Hajnówka.
- Phyllonorycter maestingella* (MÜLL.) – *Fagus sylvatica* L. – CE75 Pawlice.
- Phyllonorycter platanoidella* (JOANN.) – *Acer platanoides* L. – EF48 Giżycko-Twierdza.
- Phyllonorycter quercifoliella* (ZELL.) – *Quercus robur* L., *Q. petraea* (MATT.) LIEBL. – CD07 Dziki Ostrów Reserve, CD38 Toruń-Wrzosy, CE55 Opalenie, CE65 Białki.
- Phyllonorycter roboris* (ZELL.) – *Quercus robur* L. – CD07 Dziki Ostrów Reserve, CE55 Opalenie, DD80 Palmiry.
- Phyllonorycter salicicolella* (SIRC.) – *Salix aurita* L. – CE64 Włocławek-Leopoldowo.

- Phyllonorycter salicella* (ZELL.) – *Salix alba* L., *S. a. „Tristis”* – CD37 Toruń-Przedmieście Bydgoskie.
- Phyllonorycter saportella* (DUP.) – *Quercus robur* L. – CD07 Dziki Ostrów Reserve.
- Phyllonorycter schreberella* (FABR.) – *Ulmus glabra* Huds., *U. carpinifolia* GLED. – CD73 Włocławek, CE75 Pawlice.
- Phyllonorycter sorbi* (FREY) – *Sorbus intermedia* PERS. – CD37 Toruń-Bielany.
- Phyllonorycter tenerella* (JOANN.) – *Carpinus betulus* L. – CD37 Toruń-Bielany, CE81 Górale, EE48 Giżycko-Twierdza.
- Elachista humilis* ZELL. – *Deschampsia caespitosa* (L.) P. B. – FV04 Wetlina.
- Mompha raschkiella* (ZELL.) – *Chamaenerion angustifolium* (L.) SCOP. – EE68 Kruklin.
- Cosmopterix scribaiella* (ZELL.) – *Phragmites communis* TRIN. – CD07 Dziki Ostrów Reserve, CD29 Dąbrowa Chełmińska, Gzin, CD35 Bąkowo, EE59 Spytkowo Reserve, XU34 Międzylesie.
142♂♂, 212♀♀.

A common species, widely distributed in Palaearctic Region (TOBIAS, 1986). In Poland recorded by NIEZABIZOWSKI (1910) from Tatra Mts. Specialized parasitoid of *Phyllonorycter* HBN. and some other small leaf-mining Lepidoptera and occasionally also of Diptera.

Colastes gracilis PAPP, 1975

- Phyllonorycter heegeriella* (ZELL.) – *Quercus robur* L., *Q. petraea* (MATT.) LIEBL. – CE55 Opalenie, CE65 Białki, DC66 Radziejowice, DD80 Palmiry, EC18 Warszawa-Park im. Jana III Sobieskiego, ED20 Klembów.
7♂♂, 5♀♀.

The species has been distinguished from the previous one not long ago, and because of great similarity was most probably confused with it. So far it was found in Austria, Romania and Bulgaria (PAPP, 1975), Known also from USSR (TOBIAS, 1986). First record from Poland and also first host record.

Colastes vividus PAPP, 1975

- Tischeria heinemanni* WOCKE – *Rubus caesius* L. – CD37 Toruń-Bielany.
1♀.

So far the species has been known from Hungary where it was reared from *Phyllonorycter cerasicolella* (H. – S.). First record from Poland and new host record.

Rhysipolis decorator (HALIDAY, 1836)

- Mompha raschkiella* (ZELL.) – *Chamaenerion angustifolium* (L.) SCOP. – EE68 Kruklin.
5♂♂.

The species is known from Palaearctic Region. First record from Poland. New host record.

Rhysipolis hariolator (HALIDAY, 1836)

Caloptilia alchimella (SCOP.) – *Quercus robur* L. – CD37 Toruń-Bielany.
Parornix betulae (STT.) – *Betula pubescens* EHRH. – DE05 Siemany.
Parornix devoniella (STT.) – *Corylus avellana* L. – DC41 Spała Reserve, DC84
Modrzewina Reserve, EE58 Giżycko.

Parornix scoticaella (STT.) – *Sorbus aucuparia* L. – CE80 Małki.
Parornix torquillella (ZELL.) – *Prunus spinosa* L. – CD37 Toruń-Bielany.
Phyllonorycter heegeriella (ZELL.) – *Quercus robur* L. – DD80 Kaliszki Reserve,
EC34 Wilkowyja.

Cosmopterix zieglerella (HBN.) – *Humulus lupulus* L. – CB36 Załęcze Wielkie.
7 ♂♂, 3 ♀♀.

Distributed in Palaearctic Region (SHENEFELT, 1975). First record from Poland. *Parornix scoticaella* (STT.), *P. torquillella* (ZELL.), *Phyllonorycter heegeriella* (ZELL.), *Cosmopterix zieglerella* (HBN.) – new host records.

Gnaptodon decoris (FÖRSTER, 1862)

Stigmella freyella (HEYD.) – *Convolvulus arvensis* L. – CD37 Toruń-Osiedle
Młodych.

Stigmella myrtillella (STT.) – *Vaccinium myrtillus* L. – EE21 Wykrot.

Stigmella poterii (STT.) – *Vaccinium myrtillus* L. – EE21 Wykrot.

Stigmella poterii (STT.) – *Potentilla erecta* (L.) HAMPE – FB49 Garbatówka.

Stigmella sanguisorbae WOCCKE – *Sanguisorba officinalis* L. – FB49 Garbatówka.

Stigmella sorbi (STT.) – *Sorbus aucuparia* L. – DV25 Tatra Mts.: Dolina Białego,
1200 m a. s. l.

Stigmella splendidissimella (H. – S.) – *Fragaria vesca* L. – EE33 Karwica.

Paraformia helianthemella (H. – S.) – *Helianthemum nummularium* (L.) DUN.
– CD38 Toruń-Barbarka.

Bohemannia pulverosella (STT.) – *Malus silvestris* (L.) MILL. – EF70 Puszczka
Borecka.

9 ♂♂, 2 ♀♀.

Distributed over Palaearctic Region (ACHTELBERG, 1983). First record from Poland. The species is known as a parasitoid of *Nepticulidae* inhabiting herbaceous plants and small shrubs. *Stigmella freyella* (HEYD.), *S. myrtillella* (STT.), *S. sanguisorbae* (WOCCKE), *S. sorbi* (STT.), *Paraformia helianthemella* (H. – S.) and *Bohemannia pulverosella* (STT.) – new host records.

Gnaptodon pumilio (NEES, 1834)

Stigmella aeneofasciella (H. – S.) – *Agrimonia eupatoria* L. – EE48 Giżycko-Twierdza.

Stigmella lemniscella (ZELL.) – *Ulmus carpinifolia* GLED. – CD47 Toruń-Stawki.

Stigmella pyri (GLITZ) – *Pyrus communis* L. – CD64 Włocławek-Leopoldowo.

Stigmella rhamnella (H. – S.) – *Rhamnus cathartica* L. – CD05 Dobieszewice,
CE21 Zbocza Płutowskie Reserve, XU89 Ślesin.
Stigmella salicis (STT.) – *Salix cinerea* L. – FC60 Kołacze.
6 ♂♂, 10 ♀♀.

The species is known from Palaearctic Region. First record from Poland.
Specialized mainly in *Nepticulidae* mining leaves of trees (ACHTELBERG, 1983).
Stigmella lemniscella (ZELL.) and *S. pyri* (GLITZ) – new host records.

Bracon osculator NEES, 1811

Ectoedemia agrimoniae (FREY) – *Agrimonia eupatoria* L. – XU99 Bydgoszcz-Opławiec.

Coleophora colutella (FABR.) (= *crocinella* TGSTR.) – *Lotus corniculatus* L.
– CD38 Toruń-Barbarka.

Coleophora spinella (SCHR.) (= *serratella* auct.) – *Crataegus monogyna* JACQ.
– CD36 Suchatówka, CD37 Toruń-Bielany.

19 ♀♀.

Distributed in the whole Palaearctic Region (TOBIAS, 1986). In Poland recorded from Elbląg district where it was reared from a larva inhabiting larch cone (SKRZYPCKA, 1978). The species is known as a parasitoid of mining *Coleophoridae*.

Orgilus rugosus (NEES, 1834)

Coleophora spinella (SCHR.) (= *serratella* auct.) – *Crataegus monogyna* JACQ.
– CD36 Suchatówka, CD37 Toruń-Bielany.

1 ♂, 1 ♀.

Distributed in Palaearctic Region (TAEGER, 1988). First record from Poland and new host record.

Agathis semiaciculata IVANOV, 1899

Coleophora onobrychiella ZELL. (= *arenariella* ZELL.) – *Astragalus arenarius* L.
– DE86 Ruszajny.

1 ♂, 2 ♀♀.

The species with Palaearctic distribution range. First record from Poland.
This is also first record of its host (NIXON, 1986).

Agathis sp.

(aff. *duplicata* SHESTAKOV, 1932)

(aff. *montana* SHESTAKOV, 1928)

Coleophora ochrea (HAW.) – *Helianthemum nummularium* (L.) DUN. – CD38
Toruń-Barbarka.

1 ♀.

The species of this group are known from central and eastern parts of Palaearctic Region. Nothing was known until now about their hosts (TOBIAS, 1986).

Microchelonus excavatus TOBIAS, 1972

Elachista gangabella ZELL. – *Brachypodium pinnatum* (L.) P. B. – CE21 Zbocza Płutowskie Reserve.

Cosmopterix scribaiella (ZELL.) – *Phragmites communis* TRIN. – EE59 Spytkowo Reserve, XU34 Międzylesie.

6 ♂♂, 4 ♀♀.

Until now the species was known from eastern part of Palaearctic Region (TOBIAS, 1986). First record from Poland. This is also first record of its hosts.

Microchelonus sp.

(aff. *subcontractus* ABDINBEKOVA, 1971)

(aff. *contractus* NEES, 1816)

(aff. *basalis* CURTIS, 1837)

Tischeria szoecsi KASY – *Sanguisorba officinalis* L. – FB87 Brzeźno Reserve, FC40 Jezioro Moszne Reserve.

12 ♂, 2 ♀.

Species of this group are known to occur in Palaearctic Region (SHENEFELT, 1973). First record from Poland and new host record.

Microchelonus sp.

(aff. *latrunculus* MARSCH, 1885)

Elachista poae STT. – *Glyceria aquatica* (L.) WAHLB. – CD19 Strzyżawa.

1 ♂.

Species of this group occur in Palaearctic Region (SHENEFELT, 1973). First record from Poland and new host record.

Microchelonus sp.

(aff. *pusillus* SZEPLIGETI, 1908)

Elachista pollinariella ZELL. – *Festuca rubra* L. – CD37 Toruń-Podgórz.

Elachista revinctella ZELL. – *Deschampsia caespitosa* (L.) P. B. – CD38 Las Piwnicki Reserve.

2 ♀.

The related species is known only from Hungary (TOBIAS, 1986). Nothing was known until now about its hosts.

Acaelius erythronotus (FÖRSTER, 1851)

Stigmella hybnerella (HBN.) – *Crataegus monogyna* JACQ. – CD37 Toruń-Bielany, CD38 Różankowo, CD46 Służewo, CE21 Zbocza Płutowskie Reserve.

Stigmella lemniscella (ZELL.) – *Ulmus carpinifolia* GELD. – CD73 Kulin Reserve.

Stigmella minusculella (H. – S.) – *Pyrus communis* L. – EE47 Jagodne Wielkie.

Stigmella obliquella (HEIN.) – *Salix fragilis* L., *S. alba* „*Tristis*” – CB63 Częstochowa-Śródmięście, CD08 Brzoza, CD64 Włocławek-Leopoldowo, CE65 Kwidzyn.

Stigmella plagicolella (STT.) – *Prunus spinosa* L., *P. cerasifera* EHRH. – CB73 Częstochowa-Ossona, CD37 Toruń-Bielany, CD68 Chełmonie, EE49 Antonowo, VU46 Bielinek Reserve.

Stigmella pyri (GLITZ) – *Pyrus communis* L. – CD25 Gąski, CD26 Lipionka, EE47 Jagodne Wielkie.

Stigmella roborella (JOH.) – *Quercus robur* L. – CE65 Kwidzyn, CE66 Podzamcze, CE75 Pawlice.

Stigmella ruficapitella (HAW.) – *Quercus robur* L. – CD37 Toruń– Bielany, CE65 Kwidzyn.

Stigmella salicis (STT.) – *Salix cinerea* L. – CE95 Olbrachtówko.

Stigmella trimaculella (HAW.) – *Populus × canadensis* MOENCH – CD25 Modliborzyce.

Ectoedemia decentella (H. – S.) – *Acer pseudoplatanus* L. – EB03 Święty Krzyż.

Ectoedemia louisella (SIRC.) – *Acter campestre* L. – CD37 Toruń-Bielany.

Ectoedemia sericepeza (ZELL.) – *Acter platanoides* L. – CD37 Toruń-Bielany, EE58 Giżycko.

36 ♂♂, 35 ♀♀.

Distributed in Palaearctic Region (TOBIAS, 1986). First record from Poland. The wasp is known as a specialized parasitoid of *Nepticulidae*.

Acaelius subfasciatus HALIDAY 1833

Stigmella anomalella (GÖZE) – *Rosa pomifera* HERRM., *R. tomentosa* SM., *R. rubrifolia* VILL. – EE48 Giżycko-Twierdza, EE58 Giżycko, EF50 Pozezdrze, EE67 Wyłudki, FB63 Skierbieszów.

Stigmella betulicola (STT.) – *Betula pubescens* EHRH. – CE93 Kociołek Reserve, FB94 Garbatówka.

Stigmella centifoliella (ZELL.) – *Rosa canina* L., *R. omissa* DESEGL. – CD73 Włocławek, XU88 Zamość, XU96 Knieja.

Stigmella desperatella (FREY). – *Pyrus communis* L. – CD38 Toruń-Wrzosy, CD64 Włocławek-Leopoldowo.

- Stigmella dryadella* (HOFM.) – *Dryas octopetala* L. – DV15 Tatra Mts.: Kominiarski Wierch, 1650 m a.s.l.; DV25 Tatra Mts.: Giewont, 1700 m a.s.l.; Kopa Kondracka, 2000 m a.s.l.
- Stigmella freyella* (HEYD.) – *Convolvulus arvensis* L. – CD37 Toruń-Osiedle Młodych.
- Stigmella glutinosae* (STT.) – *Alnus glutinosa* (L.) GAERTN. – CE65 Kwidzyn.
- Stigmella hybnerella* (HBN.) – *Crataegus monogyna* JACQ. – DE78 Studnica, 48 Giżycko-Twierdza.
- Stigmella lediella* (SCHLEICH) – *Ledum palustre* L. – CD29 Linie Reserve.
- Stigmella myrtillaella* (STT.) – *Vaccinium myrtillus* L. – EF60 Jakunówko.
- Stigmella obliquella* (HEIN.) – *Salix fragilis* L., *S. amygdalina* L. – CD37 Toruń-Przedmieście Bydgoskie, EF82 Gołdap.
- Stigmella oxyacanthella* (STT.) – *Crataegus monogyna* JACQ. – XU89 Ślesin.
- Stigmella paradoxa* (FREY) – *Crataegus monogyna* JACQ. – CD37 Toruń-Bielany.
- Stigmella plagicolella* (STT.) – *Prunus spinosa* L., *P. cerasifera* EHRH. – CD37 Toruń-Bielany, CE32 Świecie, DE66 Olsztyn, EE37 Ryn, EE69 Jeziorkowskie, Kruklanki, VU46 Bielinek Reserve, XU79 Nakło, XU89 Ślesin.
- Stigmella pretiosa* (HEIN.) – *Geum montanum* L. – DV25 Tatra Mts.: Kopa Kondracka, 2000 m a.s.l.
- Stigmella pyri* (GLITZ) – *Pyrus communis* L. – CD64 Włocławek-Leopoldowo, EE47 Jagodne Wielkie.
- Stigmella salicis* (STT.) – *Salix caprea* L. – EE69 Kruklanki.
- Stigmella tiliae* (FREY) – *Tilia cordata* MILL. – CE65 Kwidzyn.
- Stigmella tityrella* (STT.) – *Fagus sylvatica* L. – DE05 Siemiany, EF60 Jakunówko.
- Stigmella trimaculella* (HAW.) – *Populus nigra* L. – CD37 Toruń-Bielany.
- Trifurcula thymi* (SZÖCS) – *Thymus marschallianus* WILLD., *T. pannonicus* ALL. – DA69 Pińczów, DA78 Skorocice, DS79 Siesławice.
- Parafomoria helianthemella* (H. – S.) – *Helianthemum nummularium* (L.) DUN. – CB72 Góry Towarne.
- Ectoedemia argyropeza* (ZELL.) – *Populus tremula* L. – CD38 Toruń-Barbarka, XV68 Laska.
- Ectoedemia hannoverella* (GLITZ.) – *Populus nigra* L. – CD47 Toruń-Stawki.
- Ectoedemia klimeschi* (SKALA) – *Populus alba* L. – CD37 Toruń-Przedmieście Bydgoskie.
- Ectoedemia occultella* (L.) – *Betula pendula* ROTH., *B. pubescens* EHRH. – EE17 Marcinkowo, EE19 Tołkiny, EE39 Parcz.
- Ectoedemia septembrella* (STT.) – *Hypericum perforatum* L., *H. maculatum* CR. – DV25 Tatra Mts.: Dolina Małej Łąki, 1400 m a.s.l., XU97 Łabiszyn.
- Ectoedemia sericopeza* (ZELL.) – *Acer platanoides* L. – CD37 Toruń-Bielany.
- Ectoedemia turbidella* (ZELL.) – *Populus alba* L. – CD47 Toruń-Stawki.

Ectoedemia weaveri (STT.) – *Vaccinium vitis-idaea* L. – DV15 Tatra Mts.: Kominiarski Wierch, 1750 m a.s.l.
Leucoptera lustratella (H. – S.) – *Hypericum perforatum* L. – CD38 Toruń-Barbarka..
93 ♂♂, 74 ♀♀.

Widely distributed in Palaearctic Region (TOBIAS, 1986). From Poland recorded by KARCZEWSKI (1962). Common parasitoid of *Nepticulidae*.

Lissogaster parvistriga (THOMSON, 1895)

Cosmopterix scribaiella (ZELL.) – *Phragmites communis* TRIN. – CD29 Gzin, Linie Reserve, CD35 Bąkowo, XU34 Międzylesie.
Cosmopterix zieglerella (HBN.) – *Humulus lupulus* L. – CD47 Toruń-Stawki.
2 ♂♂, 7 ♀♀.

Distributed in Palaearctic region (SHENEFELT, 1973). Both species of *Cosmopterix* HBN. are for the first time recorded as hosts of *L. parvistriga* (THOMS.).

Dolichogenidea cheles (NIXON, 1972)

Caloptilia friburgensis (FRITSCHE) – *Acer pseudoplatanus* L. – DA16 Ojców.
Caloptilia rufipennella (HBN.) – *Acer pseudoplatanus* L. – DV25 Tatra Mts.: Nosal, 1150 m a.s.l.
3 ♀♀.

Distributed in northern and central parts of Europe (TOBIAS, 1986; NIXON, 1972). First record from Poland. *C. friburgensis* (FRITSCHE) is a new host for this species (PAPP, 1988).

Dolichogenidea seriphia (NIXON, 1972)

Parectopa ononidis (ZELL.) – *Ononis spinosa* L. – DA69 Pińczów.
1 ♂.

Distributed in Central Europe and southern parts of Ukraine (TOBIAS, 1986). First record from Poland. Also new host record (PAPP, 1988).

Pholetesor bicolor NEES, 1834

Phyllonorycter comparella (DUP.) – *Populus alba* L. – CD37 Toruń-Przedmieście Bydgoskie.
Phyllonorycter connexella (ZELL.) – *Populus nigra* L. – CD47 Toruń-Stawki.
Phyllonorycter froelichiella (ZELL.) – *Alnus glutinosa* (L.) Gaerten. – CE65 Kwidzyn, VU46 Bielinek Reserve.
Phyllonorycter harrisella (L.) – *Quercus robur* L. – DC66 Radziejowice.
Phyllonorycter heegeriella (ZELL.) – *Quercus robur* L. – DC66 Radziejowice,

DC84 Modrzewina Reserve, CE65 Białki.

Phyllonorycter kleemannella (FABR.) – *Alnus glutinosa* (L.) GAERTEN. – VU46 Bielinek Reserve.

Phyllonorycter rajella (L.) – *Alnus glutinosa* (L.) GAERTEN. – EE67 Danowo.

Phyllonorycter strigulatella (LIEN. et ZELL.) – *Alnus incana* (L.) Moench – CD38 Toruń-Barbarka, CD47 Toruń-Stawki, CE31 Klamry.

20 ♂♂, 37 ♀♀.

Widely distributed in Palaearctic Region. In Poland found by MICZULSKI (1967). The species is known as a parasitoid of *Gracillariidae* and *Elachistidae* (PAPP, 1988). *Phyllonorycter connexella* (ZELL.), *P. harrisella* (L.), *P. heegeriella* (ZELL.), *P. rajella* (L.) and *P. strigulatella* (LIEN. et ZELL.) – new host records.

Pholetesor circumscriptus (NEES, 1834)

Calybites auroguttella (STEPH.) – *Hypericum perforatum* L. – CD38 Toruń-Barbarka, EF60 Jakunówko.

Parornix finitimella (ZELL.) – *Prunus cerasifera* EHRH. – EE58 Giżycko.

Parornix torquillella (ZELL.) – *Prunus cerasifera* EHRH., *P. spinosa* L. – CD29 Gzin, CE14 Tleń.

Phyllonorycter cerasicolella (H. – S.) – *Prunus mahaleb* L. – CD28 Smolno, CD37 Toruń-Bielany, EE48 Giżycko-Twierdza, FD39 Białystok-Bacieczki.

Phyllonorycter connexella (ZELL.) – *Populus × berolinensis* DIPP. – CD09 Bydgoszcz-Leśna.

Phyllonorycter junoniella (ZELL.) – *Vaccinium vitis-idaea* L. – CF17 Odargowo, DV15 Tatra Mts.: Smreczyński Staw, 1230 m a.s.l., Kominiarski Wierch, 1750 m a.s.l., EE59 Sołdany.

Phyllonorycter lantanella (SCHR.) – *Viburnum lantana* L., *V. opulus* L. – XU21 Poznań-Rusałka.

Phyllonorycter spinicolella (ZELL.) – *Prunus spinosa* L. – CD38 Las Piwnicki Reserve, DC41 Spała Reserve, VU46 Bielinek Reserve.

Stephensia brunnichella (L.) – *Satureia vulgaris* (L.) FRITSCH. – DA69 Młodzawy Duże, EF70 Puszcza Borecka, Lipowy Jar Reserve.

Elachista apicipunctella STT. – *Milium effusum* L. – CD38 Las Piwnicki Reserve.

Elachista gleichenella (FABR.) – *Luzula pilosa* (L.) WILLD. – EE59 Sołdany.

Elachista poae STT. – *Glyceria aquatica* (L.) WAHLB. – CD37 Toruń-Przedmieście Bydgoskie.

Elachista regificella (SIRC.) – *Luzula pilosa* (L.) WILLD. – EF60 Żabinka.

Elachista revinctella ZELL. – *Sesleria tatrae* (DEGEN) DEYL., *Festuca drymeja* M. et K. – DV15 Tatra Mts.: Dolina Jaworzynka, 1100 m a.s.l., EV86 Duszatyn.

9 ♂♂, 76 ♀♀.

Widely distributed in Palaearctic Region. In Poland previously recorded by KADŁUBOWSKI (1981). A common solitary parasitoid of *Phyllonorycter* HBN. and some allied families of mining Lepidoptera (NIXON, 1973). Here frequently encountered on *Elachistidae*. *Parornix finitilella* (ZELL.), *Elachista apicipunctella* STT., *E. regificella* (SIRC.) and *E. revinctella* ZELL. – new host records.

Pholetesor elpis (NIXON, 1973)

Caloptilia rufipennella (HBN.) – *Acter pseudoplatanus* L. – DV25 Tatra Mts.:
Nosal, 1150 m a.s.l.
1 ♂.

Distributed in Palaearctic Region (TOBIAS, 1986). First record from Poland and new host record.

Pholetesor (?) laetus (MARSHALL, 1885)

Caloptilla hemidactylella (DEN. et SCHIFF.) – *Acer platanoides* L. – EE58
Giżycko.
Phyllonorycter strigulatella (LIEN. et ZELL.) – *Alnus incana* (L.) MOENCH – EE48
Giżycko-Twierdza.
2 ♂♂, 6 ♀♀.

Distributed in western part of Palaearctic Region (TOBIAS, 1986). First record from Poland. Both Gracillariid species are for the first time mentioned as hosts for this species (PAPP, 1988; TOBIAS, 1986).

Pholetesor nanus (REINHARD, 1880)

Phyllonorycter connexella (ZELL.) – *Salix fragilis* L. – EE48 Giżycko-Twierdza.
Phyllonorycter quinqueguttella (STT.) – *Salix arenaria* L. – CF52 Gdańsk-Stogi.
Phyllonorycter salicicolella (SIRC.) – *Salix cinerea* L. – CD08 Brzoza.
Phyllonorycter salictella (ZELL.) – *Salix fragilis* L., *S. nigricans* SM. – CE65
Kwidzyn, EE58 Giżycko.

Phyllonorycter ulmifoliella (HBN.) – *Betula nana* L. – CD29 Linie Reserve.
15 ♀♀.

Distributed in Palaearctic Region (TOBIAS, 1986). First record from Poland. *Phyllonorycter connexella* (ZELL.) and *P. quinqueguttella* (STT.) – new host records.

Pholetesor vimenorum (WESMAEL, 1837)

Elachista albifrontella (HBN.) – *Agropyron repens* (L.) P. B. – CD37 To-
ruń-Bielany, EV86 Duszatyn.
Elachista apicipunctella STT. – *Milium effusum* L., *Festuca gigantea* (L.) VILL.
– CD38 Las Piwnicki Reserve, EE59 Gajewo.

Elachista bifasciella TREIT. – *Calamagrostis arundinacea* (L.) ROTH., *C. villosa* (CHAIX) GMEL., *Deschampsia caespitosa* (L.) P. B. – DV15 Tatra Mts.: Dolina Kościeliska, 1000 m a.s.l.; DV25 Tatra Mts.: Dolina Strążyska, 1000 m a.s.l.; Dolina Małej Łąki, 1100 m a.s.l.

Elachista cerusella (HBN.) – *Phalaris arundinacea* L. – CD19 Wielka Kępa Ostromecka Reserve.

Elachista compsa TR. – O. – *Melica nutans* L. – EF70 Puszczka Borecka.

Elachista dimicatella REBEL – *Deschampsia caespitosa* (L.) P. B. – DV15 Tatra Mts.: Dolina Kościeliska, 1000 m a.s.l.; DV25 Tatra Mts., Wielki Kopieniec, 1300 m a.s.l.

Elachista gangabella ZELL. – *Brachypodium pinnatum* (L.) P. B. – CE20 Zbocza Piutowskie Reserve.

Elachista gleichenella (FABR.) – *Carex silvatica* Huds. – EV86 Bieszczady Mts.: Chryszczata, 700 m. a.s.l., Duszatyn.

Elachista griseella (DUP.) – *Agropyron repens* (L.) P. B. – CD37 Toruń-Bielany, CD47 Toruń-Stawki.

Elachista nobilella ZELL. – *Deschampsia flexuosa* (L.) TRIN. – CD38 Las Piwnicki Reserve.

Elachista poae STT. – *Glyceria aquatica* (L.) WAHLB. – CD38 Las Piwnicki Reserve.

Elachista regificella (SIRC.) – *Luzula pilosa* (L.) WILLD – EE59 Sołdany.

Cosmiotes freyerella (HBN.) – *Poa annua* L., *P. trivialis* L. – CD37 Toruń-Podgórz, CD38 Las Piwnicki Reserve.

46 ♂♂, 49 ♀♀.

Distributed in the whole Palaearctic Region (TOBIAS, 1986). First record from Poland. The species is known to be a parasitoid of *Elachistidae* (TOBIAS, 1986). *Elachista compsa* TR. – O., *E. dimicatella* REBEL, *E. gangabella* ZELL. and *E. griseella* (DUP.) – new host records.

Deuterixys rimulosus (NIEZABITOWSKI, 1910)

Stigmella anomalella (GÖZE) – *Rosa pomifera* HERRM. – EE58 Kożuchy Wielkie.

Bucculatrix gnaphaliella (TREIT.) – *Helichrysum arenarium* (L.) MOENCH – XU34 Nienawiszcz.

Bucculatrix nigricomella (ZELL.) – *Leucanthemum vulgare* LAM. – EE59 Spytkowo, EE79 Puszczka Borecka, EE88 Dunajek, EF70 Puszczka Borecka.

12 ♂♂, 16 ♀♀.

The species has been described on the basis of Polish specimens from Rytro (NIEZABITOWSKI, 1910). A parasitoid of the larvae of small moths. All *Lepidoptera* – species mentioned above are for the first time quoted as hosts of this species.

Mirax dryochares MARSHALL, 1898

Ectoedemia agrimoniae (FREY) – *Agrimonia eupatoria* L. – CE21 Kiełp, CE66 Podzamcze.

Ectoedemia septembrella (STT.) – *Hypericum perforatum* L. – EF60 Jakunówko, FE39 Wigry.

Ectoedemia weaveri (STT.) – *Vaccinium vitis-idaea* L. – CD28 Smolno, CD37 Glinki, EE34 Ruciane-Nida.

5 ♂♂, 16 ♀♀.

The species is known from Central Europe. New to the Polish fauna.
Specialized parasitoid of *Nepticulidae*.

Mirax rufilabris HALIDAY, 1833

Stigmella aeneofasciella (H. – S.) – *Agrimonia eupatoria* L. – EE46 Dziubiele, XU79 Nakło.

Stigmella betulicola (STT.) – *Betula pubescens* EHRH. – EF60 Jakunówko.

Stigmella salicis (STT.) – *Salix cinerea* L. – CF44 Gdynia-Kępa Redłowska.

Ectoedemia agrimoniae (FREY) – *Agrimonia eupatoria* L. – CE10 Trzęsacz, CE21 Kiełp, CE65 Kwidzyn.

Ectoedemia hannoverella (GLITZ) – *Populus nigra* L., *P. n. 'Italica'*, *P. × canadensis* MOENCH – CD47 Toruń-Stawki.

Ectoedemia septembrella (STT.) – *Hypericum perforatum* L. – CD38 Las Piwnicki Reserve, EE48 Giżycko-Twierdza, FE39 Wigry.

Ectoedemia weaveri (STT.) – *Vaccinium vitis-idaea* L. – CD28 Smolno, CD37 Glinki, EE34 Ruciane-Nida.

42 ♂♂, 77 ♀♀.

Distributed in Palaearctic Region. New to the Polish fauna. The species is specialized to parasitize on *Nepticulidae*.

STRESZCZENIE

Praca zawiera wykaz 29 gatunków mączekowatych uzyskanych przy okazji hodowli motyli minujących. Z nich 23 są nowe dla fauny Polski, co świadczy o słabym zbadaniu faunistycznym *Braconidae* Polski. Dla każdego gatunku podano pełny wykaz żywicieli i ich roślin pokarmowych, a także wykaz stanowisk (z kodami UTM) gdzie zbierano materiały. Materiał będący dokumentacją niniejszej pracy i zawierający 1141 osobników przechowywany jest w Muzeum Instytutu Zoologii PAN w Warszawie.

REFERENCES

ACHTELBERG C. VAN, 1983: Revisionary notes on the subfamily *Gnaptodontinae*, with description of eleven new species (Hymenoptera, Braconidae). Tijdschr. Ent., 126: 25–57.

- KADŁUBOWSKI W., 1981: Kompleks pasożytniczy szrotówka *Lithocolletis blanchardella* (F.) (*Lep. Gracillariidae*) w zachodniej Polsce. Pol. Pismo Ent., **51**: 493–499.
- KARCZEWSKI J., 1962: Znaczenie borówki czernicy (*Vaccinium myrtillus* L.) dla entomocenozy leśnej. Folia Forest. Pol., ser. A, **9**: 1–200.
- MICZULSKI B., 1967: Błonkówki (*Hymenoptera*) w biocenozie upraw rzepaku. Część III. Męczelkowate (*Braconidae* i mszycarzowate (*Aphidiidae*)). Pol. Pismo Ent., **37**: 167–191.
- NIEZABITOWSKI E., 1910: Materyał do fauny Brakonidów Polski. Cz. I. *Braconidae* zebrane w Galicyi. Spraw. Kom. Fizjogr. PAU, **44**: 47–106.
- NIXON G. E. J., 1972: A revision of the north-western European species of the *laevigatus*-group of *Apanteles* FÖRSTER (*Hymenoptera, Braconidae*). Bull. Ent. Res., **62**: 701–743.
- NIXON G. E. J., 1973: A revision of the north-western European species of the *vitripennis*, *pallipes*, *octonarius*, *triangulator*, *fraternus*, *formosus*, *parasitellae*, *metacarpalis* and *circumscriptus*-groups of *Apanteles* FÖRESTER (*Hymenoptera, Braconidae*). Bull. Ent. Res., **63**: 169–230.
- NIXON G. E. J., 1986: A revision of the European *Agathidinae* (*Hymenoptera: Braconidae*). Bull. Brit. Mus. Nat. Hist. (Ent.), **52**, 3: 183–242.
- PAPP J., 1975: Three new European species of *Colastes* HAL. with taxonomic remarks (*Hymenoptera: Braconidae, Exothecinae*). Acta Zool. Hung., **21**: 411–423.
- PAPP J., 1988: A survey of the European species of *Apanteles* FORST. (*Hymenoptera, Braconidae: Microgasterinae*). XI. „Homologization” of the species-group of *Apanteles* s. l. with Mason's generic taxa. Checklist of genera. Parasitoid/host list 1. Ann. Hist.-Nat. Mus. Hung., **80**: 145–175.
- SHENEFELT R. D., 1972: *Braconidae 4, Microgasterinae: Apanteles*. Hym. Cat. (n. ed.), **7**: 429–668.
- SHENEFELT R. D., 1973: *Braconidae 5–6, Microgasterinae, Ichneutinae, Cheloninae*. Hym. Cat. (n. ed.), **9–10**: 669–936.
- SHENEFELT R. D., 1975: *Braconidae 8, Exotecinae, Rogadinae*. Hym. Cat. (n. ed.), **12**: 1115–1262.
- SKRZYPCKA M., 1978: Przegląd owadów znalezionych w szyszkach modrzewi: europejskiego – *Larix decidua* MILL. i polskiego – *L. polonica* RAC. w Polsce. Pol. Pismo Ent., **48**: 543–563.
- TAEGER A., 1988: Die *Orgilus*-Arten der Paläarktis (*Hymenoptera, Braconidae*). Akademie der Landwirtschaftswissenschaften der DDR, Berlin.
- TOBIAS V. I., 1986: *Hymenoptera, Braconidae* (first part). Keys for the identification of insects of the European part of USSR, Vol. III: *Hymenoptera*, part 4. 501 pp. (in Russian).
- VIDAL S., BUSZKO J., 1990: Studies on the mining *Lepidoptera* of Poland. VIII. Chalcidid wasps reared from mining *Lepidoptera* (*Hymenoptera, Chalcidoidea*). Pol. Pismo Ent., **60**: 73–103.