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## Studies on the mining *Lepidoptera* of Poland. X. Mining *Lepidoptera* of Toruń and surrounding areas

[with 1 text—fig.]

Badania nad motylami minującymi Polski. X. Motyle minujące Torunia i okolic

**Abstract.** The present paper contains a review of species of mining *Lepidoptera* collected in the town of Toruń and its surroundings within the period 1977—1988. In the course of field investigations 293 species have been recorded. Full data on their host plants, habitats and phenology are given. *Stigmella dorsiguttella* (JOH.), *Leucoptera aceris* (FUCHS) and *Elachista triseriatella* STT. have in the mentioned area their single localities in Poland.

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### I. INTRODUCTION

Mining *Lepidoptera* are understood merely as an ecological group of insects, the larvae of which bore galleries in plant tissues. This group is composed of representatives of various families, sometimes not very closely related. Because of feeding inside of plant tissues, mining insects are frequently regarded as internal plant parasites (NOWAKOWSKI, 1954; BEIGER, 1969).

The mining way of living has been known since long to the entomologists, but they have not paid special attention to the ecological importance of the phenomenon. Hyponomology as an independent branch of ecological studies first developed at the end of 19<sup>th</sup> c. (BRISCHKE, 1881). As regarding methodology, two different approaches in studies on the mining insects can be distinguished. The ecological approach is concentrated on mines, and it is only

after mines and animals reared from them that lists of species are compiled. Such research usually concerns all orders of miners (NOWAKOWSKI, 1954), but is in some circumstances differentiated either to those mining leaves of the herb layer (BEIGER, 1960, 1965) or leaves of arboreal vegetation (MINTUS & SIWEK, 1979). The taxonomic approach is performed by specialists of various groups. To study a species composition of a particular taxonomic group, not only mines-collecting, but all the methods available, including search for adults, cocoons or externally living larvae, are applied. What concerns *Lepidoptera*, an extensive research of miners was carried out by ADAMCZEWSKI during World War II in Masovia (ADAMCZEWSKI, 1947, 1949) and continued several years later in Białowieża National Park (ADAMCZEWSKI, 1950).

*Nepticulidae*, being one of the richest in species family of miners, became the subject of special studies undertaken by TOLL (1932, 1934) and BORKOWSKI (1975). The first author also investigated Polish *Coleophoridae*; many species of which are miners (TOLL, 1958).

My own studies on the mining *Lepidoptera* of the Toruń Basin were carried out in the years 1977—1988. All the data included in this paper stem from my own field research. The area was, however, previously investigated by lepidopterists, but only with respect to the so-called *Macrolepidoptera* (PRÜFFER & SOŁTYS, 1974). The species composition stated in the Toruń Basin can be analyzed retrospectively by comparison with faunistic data from Bydgoszcz and vicinity obtained by TOLL in years 1925—1933 (TOLL, 1937) in similar kind of habitats.

I owe my best thanks to Dr. L. RUTKOWSKI for his permanent support in widening my botanic knowledge as well as for help in determination of some host plants.

## II. INVESTIGATED AREA

The area under study is situated in the eastern part of the Toruń Basin — a geographical mesoregion in regional division after KONDRACKI (1978). Because of the absence of natural boundaries, an area covering four 10 km squares has been arbitrarily delimited. According to UTM grid system, these squares bear the following codes: CD 37, CD 38, CD 47, CD 48 (fig. 1).

The surface relief of the area is diversified. The landscape consists of a valley basin of the Vistula River and of a moraine plateau. The moraine plateau is rather flat and covered by arable fields. The Vistula valley is considerably incised in moraine sediments, its slopes attain up to 50 m in height, and are frequently cut by transversal erosive ravines. Extensive fields of inland dunes developed on riverine sandy terraces. Within the town limits the original relief is considerably affected by man's activities, especially in the urban area (NIEWIAROWSKI & TOMCZAK, 1969).

The climate features of the Toruń Basin show a transitional character be-





Fig. 1. The map of the investigated area

tween the atlantic climate of western Europe, and the continental climate of eastern Europe and Asia (WÓJCIK & ZIEMBIŃSKA, 1984). The mean annual air temperature in Toruń is  $7.5^{\circ}\text{C}$ , with minimum in January ( $-3.2^{\circ}\text{C}$ ) and maximum in July ( $18.0^{\circ}\text{C}$ ). The temperature is largely influenced by the neighbourhood of the Vistula River. In the valley close to the river, mean annual temperature is about  $0.5^{\circ}\text{C}$  higher than on the moraine plateau. Insolation generally exceeds mean values for Polish lowland. The region has the lowest values of rainfall in Poland, delimited by annual isohyet of 550 mm, but, in decade 1951–1960 the mean value of the rainfall was only 482 mm (ZIEMBIŃSKA, 1969). However, most of the precipitation occurs in the warm season (IV–IX). Mean annual relative humidity is about 80%. On the slopes of the Vistula valley exposed to the south there occur local microclimatic conditions promoting the development of xerothermic habitats. Climate in the centre of the town is characterized by a higher mean annual temperature and a lower relative air humidity (KUBICKA & al., 1986).

The vegetation period is relatively long and lasts, on average, 218 days (WÓJCIK & ZIEMBIŃSKA, 1984).

Because of diversified landscape, soil conditions and human activity, a great

variety of plant communities have developed in the area, providing a number of suitable habitats for miners. The nomenclature of the plant communities was derived from a guide for the identification of Polish plant communities by MATUSZKIEWICZ (1981), and a review of the most prominent communities generally follows the compilation given by CEYNOWA-GIELDON (1984).

Primeval vegetation has been since long transformed by man for his agricultural or urban purposes and the majority of now-existing plant communities is of secondary origin. Previously, the moraine plateau and slopes of the valley were grown by broad-leaved woodlands, dominated by oak-hornbeam forest, but, because of significant fecundity of the soil, the woodlands were replaced by cultivated crop fields. The remains of such kind of forest are preserved in Las Piwnicki forest reservation. On the sandy riverine terraces previously grown by mixed oak-pine forests, now only extensive pine monocultures occur. On the flooded terrace, large complexes of willow-poplar carrs were turned into fresh meadows.

The present vegetation can be roughly classified to such categories as woodlands, grasslands, urban parks and urban green.

The woodlands are dominated by various kinds of pine forests. The most common is fresh pine forest (*Peucedano-Pinetum*) with the dominance of *Deschampsia flexuosa* (L.) TRIN. in the herb layer. Less common is dry pine forest (*Cladonio-Pinetum*). Suburban area is relatively rich in mixed pine-oak forests (*Quercu roboris-Pinetum*). In warmer places among mixed oak-pine forest there remain small stands of xerothermal oak forest (*Potentillo albae-Quercetum*). In flooded plain of the Vistula River there occur complexes of willow-poplar carr (*Salici-Populetum*), ash-elm carr (*Fraxino-Ulmetum*) and alder carr (*Circae-Alnetum*), frequently accompanied by a willow thicket of *Salix viminalis* L. and *S. amygdalina* L. Wet places in flooded plain and shallow depressions in moraine plateau are grown by small complexes of alder forest (*Carici elongatae-Alnetum*).

Of the variety of grasslands those of xerothermic character prevail. Steppe vegetation mainly occurs on deforested steep slopes of the Vistula valley. The most typical association, although occurring in Toruń vicinity in somewhat impoverished form, is *Potentillo-Stipetum*. Another kind of grassland occurs on inland dunes. It is represented by associations *Spergulo vernalis-Corynephoretum* and *Festuco-Koelerietum glaucae*. In some places there occur isolated patches of heaths (*Arctostaphylo-Callunetum*). Moist meadows situated most frequently on the flooded plain belong to the classes *Arrhenatheretalia* and *Molinietalia*. Remarkable is the absence of peat bogs.

In anthropogenically-altered habitats there occur various synanthropic plant communities mainly belonging to the classes *Chenopodietea*, *Secalietea*, *Plantaginetea maioris* and *Artemisietea*. More detailed identification of communities within their range is not possible because of accidental species composition, initial stages of the development or far-advanced degradation processes. Also ecotone situations could not be satisfactorily classified.

Urban parks in respect to their structural features resemble suburban forests, but are usually more carefully cultivated. Often a number of exotic trees and shrubs is planted among representatives of the native flora (KOWNAS & SIENICKA, 1957). Cultivation treatments usually affect negatively the herb layer, eliminating more vulnerable resident plant species and facilitating the expansion of adventives.

Urban green consists exclusively of planted and cultivated plants with regrowth of weed plant communities naturally adapted to local environmental conditions (KUBICKA & al., 1986). In comparison with urban parks, the number of plant species is very low. In the town centre, along main roads and around larger industrial arrangements, an impact of air pollution upon the plants is noticeable (WILKOŃ-MICHALSKA, 1984).

### III. MATERIALS AND METHODS

The range of species considered to be miners has been estimated on the basis of HERING's work (1957). The systematic arrangement of families follows recently published catalogues (NIEUKERKEN, 1986; SCHNACK, 1985; VIVES MORENO, 1988). For the purposes of this paper only qualitative data were provided. The presence of 293 species has been stated; species representation within families is given in the table I.

Table I

Specification of the number of species within families

Family	Number of species	Family	Number of species
<i>Eriocraniidae</i>	3	<i>Plutellidae</i>	1
<i>Opostegidae</i>	2	<i>Acrolepiidae</i>	3
<i>Nepticulidae</i>	72	<i>Cemistomidae</i>	4
<i>Heliozelidae</i>	4	<i>Lyonetiidae</i>	3
<i>Incurvariidae</i>	3	<i>Elachistidae</i>	31
<i>Tischeriidae</i>	7	<i>Coleophoridae</i>	41
<i>Psychidae</i>	1	<i>Momphidae</i>	7
<i>Gracillariidae</i>	68	<i>Cosmopterigidae</i>	1
<i>Phyllocnistidae</i>	2	<i>Gelechiidae</i>	8
<i>Roeslerstammiidae</i>	2	<i>Tortricidae</i>	5
<i>Bucculatricidae</i>	12	<i>Pyrilidae</i>	6
		Total	293

Field research was carried out from early spring to late autumn, largely utilizing literature information on phenology, bionomics, host plants and habitats. Most of the work was devoted to collecting both tenanted and vacated mines, as well as larvae of later instars feeding on surface of the leaves or in



shelters made of twisted, bent and rolled leaves. Apart from the larvae, also adult specimens were captured. Generally they were obtained by sweeping with net over the herbaceous vegetation. Also the lower branches of trees and bushes were shaken in order to dislodge hidden moths. In suitable places, collecting at light was performed. As far as possible, each locality was visited several times in a season. The mines were preliminary determined just on the spot and in cases when their determination was not certain, representative samples of each kind were taken for further rearing. Suitable notes on host plants and habitat properties accompanied the data on reared moths.

Rearing methods largely correspond to those recommended by BORKOWSKI (1969). Still in the field, each species was placed in a separate polyethylene bag or glass container in order to avoid further identification problems. Rearing procedures depended on the size of the samples, pupation requirements of the larvae and phenology. Single mines were kept in small glass tubes firmly closed, while numerous samples were usually placed in jam jars with twist-off lids. Elachistids larvae mining in leaves of grasses and sedges were reared in long (about 20 cm) glass tubes, one side being closed with a wet lump of soft paper supplying water for leaves, the opposite side tied with a nylon stocking. For larvae of Nepticulids, a thin layer of rough-cut peat-moss was put on the bottom of rearing container. Some Gelechiids and Momphids required a layer of pure sand for successful pupation. The humidity in rearing glasses was permanently controlled to keep plants from going dessicated or mouldy. After the larvae had left the mines and pupated in suitable places, the leaves were removed and dried for herbarium. Overwintering larvae or pupae were kept outdoor in order to expose them to frost influence. Emergence of adults in case of species hibernating in pupal stage was usually accelerated by placing pupae into laboratory conditions still in winter months.

Mines and reared specimens were almost always sufficient for determination; in some cases, however, in order to confirm the determination, a genital study was required.

#### IV. LIST OF SPECIES

##### *Eriocraniidae*

##### *Eriocrania subpurpurella* (HAWORTH, 1828)

Localities: CD 37 Toruń—Bielany. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka, Toruń-Wrzesy.

Host plant: *Quercus robur* L.

Habitat: natural deciduous forests, suburban mixed forests, urban parks.

Phenology: tenanted mines were found in the first half of June. Adults

were collected during the day and attracted to light from mid-April to the beginning of May.

Distribution: Europe. In Poland widely distributed in lowland.

*Eriocrania sparrmannella* (BOSC, 1791)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 48 Papowo Toruńskie.

Host plants: *Betula pendula* ROTH, *B. pubescens* EHRH.

Habitat: deciduous and mixed forests. More common in suburban area.

Phenology: tenanted mines were found from mid-June to the first days of July.

Distribution: Central and North Europe. In Poland widely distributed in lowland and in lower montane elevations.

*Eriocrania semipurpurella* (STEPHENS, 1835)

Locality: CD 37 Toruń-Bielany.

Host plant: *Betula pendula* ROTH.

Habitat: suburban mixed forests.

Phenology: tenanted mines were found in the beginning of June.

Distribution: West and Central Europe. In Poland widely spread in lowland and in submontane regions.

*Opostegidae*

*Opostega auritella* (HÜBNER, 1813)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: swampy vegetation at the edges of ponds and streams.

Phenology: a single adult specimen has been collected on 18 VII 1987.

Distribution: western part of Palaearctic Region up to western Siberia. In Poland known from scattered localities in lowland.

*Opostega crepusculella* ZELLER, 1839

Locality: CD 38 Las Piwnicki Reserve.

Habitat: swampy vegetation at the edges of ponds and streams.

Phenology: a single adult specimen has been collected on 16 VI 1986.

Distribution: western part of Palaearctic Region up to eastern Siberia.

*Nepticulidae**Enteucha acetosae* (STANTON, 1854)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Rumex acetosa* L., *R. acetosella* L.

Habitat: sunny slopes, old gravel pits, roadsides. Restricted to sandy places.

Phenology: tenanted mines were found in two or three generations from the end of May to mid-October.

Distribution: Central and West Europe including Great Britain. In Poland spread in lowland and in mountains up to 1300 m a.s.l. (BORKOWSKI, 1975).

*Stigmella lapponica* (WOCKE, 1862)

Locality: CD 38 Toruń-Wrzosy.

Host plant: *Betula pubescens* EHRH.

Habitat: suburban mixed forests.

Phenology: several empty mines have been found in July 1984.

Distribution: Europe. In Poland common in northern districts, in southern lowland very local. Occurs also in lower montane elevations.

*Stigmella confusella* (WOOD & WALSINGHAM, 1894)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Wrzosy.

Host plant: *Betula pubescens* EHRH.

Habitat: suburban mixed forsts.

Phenology: several empty mines have been found in July 1984 and 1986.

Distribution: West, Central and North Europe. In Poland spread in lowland and in lower mountains. More common in areas of northern lakelands.

*Stigmella frøyella* (HEYDEN, 1858)

Localities: CD 37 Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie. CD 38 Toruń-Barbarka. CD 47 Toruń-Stawki.

Host plant: *Convolvulus arvensis* L.

Habitat: various kind of waste land, sunny xerothermic slopes. Common in very polluted spots along streets with very intense traffic.

Phenology: tenanted mines occur in two generations, in June—July and in September.

Distribution: South and Central Europe. In Poland known from scattered localities in lowland and in lower montane elevations, mainly in man's settlements.



*Stigmella tiliae* (FREY, 1856)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Różankowo, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Stawki. CD 48 Papowo Toruńskie.

Host plants: *Tilia cordata* MILL., *T. platyphyllos* SCOP., *T. tomentosa* MOENCH, *T. euchlora* C. KOCH.

Habitat: natural and suburban forests, urban parks, streetside green.

Phenology: tenanted mines appeared in two generations, in July and again in September—October.

Distribution: Europe. In Poland widely spread in lowland and in lower altitudes in mountains.

*Stigmella betulicola* (STANTON, 1856)

Localities: CD 37 Cierpice, Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Czerniewice. CD 48 Toruń-Przedmieście Mokre.

Host plants: *Betula pendula* ROTH, *B. pubescens* EHRH.

Habitat: suburban mixed forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September—October.

Distribution: Europe. In Poland widely distributed all over the lowland and mountains.

*Stigmella luteella* (STANTON, 1857)

Locality: CD 37 Toruń-Bielany.

Host plant: *Betula pendula* ROTH.

Habitat: suburban mixed forests.

Phenology: several empty mines have been found at the end of July 1987.

Distribution: Europe. In Poland known from scattered localities in lowland and in lower montane elevations.

*Stigmella glutinosae* (STANTON, 1858)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plant: *Alnus glutinosa* (L.) GAERTN.

Habitat: alder forests, prefers sunny forest edges.

Phenology: tenanted mines occur in two generations, in July and in September—October.

Distribution: Europe. In Poland spread over the whole lowland and submontane regions.

*Stigmella alnetella* (STANTON, 1856)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Alnus glutinosa* (L.) GAERTN.

Habitat: alder forests, prefers shadowy places.

Phenology: tenanted mines were found at the end of September and in the first days of October.

Distribution: West, Central and North Europe. In Poland known from scattered localities in lowland and in submontane regions.

*Stigmella microtheriella* (STANTON, 1854)

Localities: CD 37 Cierpice, Toruń-Bielany. CD 38 Las Piwnicki Reserve (Buszko, 1977), Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Carpinus betulus* L., *Corylus avellana* L.

Habitat: deciduous and mixed forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September—October.

Distribution: Europe. In Poland widely distributed in lowland and in lower mountains.

*Stigmella prunetorum* (STANTON, 1855)

Localities: CD 37 Kąkol, Toruń-Bielany, Toruń-Przedmieście Bydgoskie CD 38 Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo.

Host plants: *Prunus cerasifera* EHRH., *P. cerasus* L., *P. avium* L., *P. spinosa* L.

Habitat: shrubberies along sunny forest edges, urban parks, orchards, urban green.

Phenology: tenanted mines occur in two generations, in July and in September—October.

Distribution: Europe. In Poland distributed all over the lowland and lower mountains.

*Stigmella aceris* (FREY, 1857)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Stawki.

Host plants: *Acer platanoides* L., *A. campestre* L.

Habitat: suburban deciduous forests, urban parks.

Phenology: tenanted mines were found in two generations, from mid-June to the beginning of July and from mid-August to the first days of September.

Adults were collected in a large number on tree trunks in the first days of May 1983, in the next years the species became rare. From autumn mines adults hatched still in September and they were distinctly darker than those collected in the spring. It is still an open question if this species hibernates here in the adult stadium.

Distribution: South and Central Europe. In Poland found in scattered localities in lowland and in lower mountains.

*Stigmella malella* (STANTON, 1854)

Localities: CD 37 Toruń-Bielany. CD 38 Piwnice, Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Czerniewice, Toruń-Kaszczynek, Toruń-Stawki. CD 48 Konieczynka.

Host plants: *Malus domestica* BORKH., *M. sylvestris* MILL.

Habitat: various kind of suburban forests, urban parks, orchards, street-side green.

Phenology: noticed in two generations. Tenanted mines were collected from mid-June to mid-July and in September—October.

Distribution: Europe. In Poland everywhere common, in mountains attains altitudes up to 900 m a.s.l. (BORKOWSKI, 1975).

*Stigmella rhannella* (HERRICH-SCHÄFFER, 1860)

Localities: CD 37 Kąkol, Toruń-Bielany, Wielka Nieszawka. CD 38 Toruń-Barbarka. CD 47 Toruń-Stawki.

Host plant: *Rhamnus cathartica* L.

Habitat: sunny slopes, roadsides, prefers xerothermic places.

Phenology: occurs in two generations. Tenanted mines were collected in July and again in September—October.

Distribution: South and Central Europe, Asia Minor. In Poland recorded from scattered localities in the whole lowland (BORKOWSKI, 1975).

*Stigmella cathartica* (STANTON, 1853)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórż. CD 38 Las Piwnicki Reserve. CD 47 Toruń-Rubinkowo.

Host plant: *Rhamnus cathartica* L.

Habitat: deciduous and mixed suburban forests. Prefers rather shadowy places.

Phenology: two generations a year present. Tenanted mines were found in July and again in September—October.

Distribution: South and Central Europe, Great Britain. In Poland widely distributed all over the lowland.



*Stigmella centifoliella* (ZELLER, 1848)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Bielawy, Toruń-Kaszczonek.

Host plants: *Rosa canina* L., *R. rubiginosa* L., *R. glauca* POURR., *R. shevardii* DAVIES, *R. rugosa* THUNB., *R. multiflora* THUNB. and various cultivated races.

Habitat: sunny forest edges, roadsides, urban parks, gardens, flower beds in urban green.

Phenology: tenanted mines appeared in two generations, from mid-June to mid-July and again in September—October. Generally very abundant.

Distribution: Europe, Asia Minor. In Poland occurs locally in thermically favourable places in lowland, often in larger towns. It is remarkable that the other *Rosa*-feeding species — *S. anomalella* (GÖZE) has not been found in the investigated area, although being very common in adjacent areas lying on moraine plateau.

*Stigmella ulmivora* (FOLOGNE, 1860)

Localities: CD 37 Mała Nieszawka, Wielka Nieszawka, Toruń-Bielany Toruń-Przedmieście Bydgoskie. CD 47 Toruń-Stawki, Toruń-Rubinkowo. CD 48 Toruń-Przedmieście Mokre.

Host plants: *Ulmus minor* MILL., *U. glabra* HUDS.

Habitat: sunny roadsides, exposed slopes, urban parks.

Phenology: tenanted mines appeared in two generations, in July and in September—October.

Distribution: South and Central Europe. In Poland occurs in the whole lowland and in lower montane elevations (BORKOWSKI, 1975).

*Stigmella paradoxa* (FREY, 1858)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Wrzosy. CD 48 Łysomice.

Host plant: *Crataegus monogyna* JACQ.

Habitat: sunny forest edges, shrubberies along roadsides.

Phenology: only one generation a year. Tenanted mines were collected from the end of May to mid-June.

Distribution: South and Central Europe. In Poland found very locally in thermically favourable places in southern lowland and in lower mountains (BORKOWSKI, 1975).

*Stigmella crataegella* (KLIMESCH, 1936)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Wielka Nieszawka. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Rubinkowo. CD 48 Łysomice.

Host plants: *Crataegus monogyna* JACQ., *C. curvisepala* LINDM.

Habitat: suburban mixed forests, sunny slopes, roadside shrubberies, urban parks. In some places even more abundant than *S. hybnerella* (HBN.).

Phenology: only one generation a year present. Tenanted mines were found in July.

Distribution: Europe, except for Iberian Peninsula and northern regions (SCHOORL et al., 1985). In Poland widely distributed in lowland except for NE districts (BUSZKO, 1987).

*Stigmella magdalenae* (KLIMESCH, 1950)

Localities: CD 37 Cierpice, Toruń-Bielany.

Host plant: *Sorbus aucuparia* L.

Habitat: suburban mixed forests.

Phenology: tenanted mines were found in July. Only one generation a year present.

Distribution: Europe. In Poland widely distributed in lowland and in mountains up to 1400 m a.s.l. (BORKOWSKI 1975).

*Stigmella nylandriella* (TENGSTRÖM, 1848)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve.

Host plant: *Sorbus aucuparia* L.

Habitat: suburban mixed forests.

Phenology: tenanted mines were found in July.

Distribution: Europe. In Poland widely distributed all over the country, in mountains attains altitudes up to 1600 m a.s.l. (BORKOWSKI, 1975).

*Stigmella oxyacanthella* (STANTON, 1854)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve. CD 47 Toruń-Stawki. CD 48 Papowo Toruńskie.

Host plants: *Crataegus monogyna* JACQ., *C. curvisepala* LINDM., *Malus domestica* BORKH., *Sorbus aucuparia* L.

Habitat: suburban mixed forests, urban parks, orchards, urban green.

Phenology: tenanted mines appeared in one generation in September—October.

Distribution: Central and North Europe, Great Britain, locally in South Europe (SHOORL et al., 1985). In Poland widely distributed in the whole lowland and lower montane elevations.

*Stigmella pyri* (GLITZ, 1865)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo. CD 48 Papowo Toruńskie.

Host plant: *Pyrus communis* L.

Habitat: sunny forest edges, urban parks, shrubberies along roadsides.

Phenology: only one generation a year. Tenanted mines were collected from the end of August to the end of September.

Distribution: Central Europe, Great Britain, locally in South Europe (SCHOORL & al., 1985). In Poland its distribution is still insufficiently known because of confusion with *S. oxyacanthella* (HEIN.) and *S. minusculella* (H.-S.).

***Stigmella minusculella* (HERRICH-SCHÄFFER, 1855)**

Localities: CD 37 Cierpice, Kąkol, Toruń-Bielany. CD 38 Rozgarty, Olek, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Kaszczonek, Toruń-Rubinkowo, Złotorya.

Host plant: *Pyrus communis* L.

Habitat: sunny forest edges, shrubberies along roadsides, urban parks.

Phenology: mines were found in two generations, in June—July and in September—October. A very common species in the investigated area.

Distribution: Central and South Europe, Great Britain (SCHOORL & al., 1985). In Poland widely distributed in the whole lowland and in lower mountains.

***Stigmella desperatella* (FREY, 1856)**

Localities: CD 37 Cierpice, Glinki, Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Czerniewice, Toruń-Rubinkowo.

Host plants: *Malus sylvestris* MILL., *M. domestica* BORKH., *Pyrus communis* L.

Habitat: various kind of suburban forests, roadside shrubberies, urban parks, orchards. Prefers seedlings and young trees.

Phenology: tenanted mines were found in two generations, in July and in September—October.

Distribution: Central Europe, Great Britain, locally in South Europe (SCHOORL & al., 1985). In Poland widely distributed in the whole lowland and in lower montane elevations.

***Stigmella hybnerella* (HÜBNER, 1796)**

Localities: CD 37 Przysiek, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie, Wielka Nieszawka. CD 38 Olek, Las Piwnicki Reserve, Różankowo, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Kaszczonek, Toruń-Rubinkowo, Toruń-Stawki. CD 48 Konieczynka, Łysomice.

Host plants: *Crataegus monogyna* JACQ., *C. curvisepala* LINDM., *C. laevigata* (POIR.)DC.



Habitat: various kind of suburban forests, urban parks, shrubberies along roadsides, urban green.

Phenology: tenanted mines appeared in two generations, in June—July and again from mid-August to the end of September.

Distribution: Europe. In Poland very common in the whole lowland and in submontane regions.

*Stigmella floslactella* (HAWORTH, 1828)

Localities: CD 37 Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (Buszko, 1977).

Host plants: *Corylus avellana* L., *C. colurna* L.

Habitat: natural deciduous and mixed forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September—October.

Distribution: Europe. In Poland spread over the whole lowland and lower montane elevations.

*Stigmella carpinella* (HEINEMANN, 1862)

Localities: CD 37 Cierpice, Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy.

Host plant: *Carpinus betulus* L.

Habitat: natural deciduous oak-hornbeam forests.

Phenology: occurs in two generations. Tenanted mines appeared from the end of June to mid-July and again in September—October.

Distribution: West and Central Europe. In Poland widely distributed in lowland and in submontane regions.

*Stigmella tityrella* (STANTON, 1854)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Fagus sylvatica* L.

Habitat: suburban deciduous forests, urban parks.

Phenology: two generations a year present. Tenanted mines were collected in July and in September—October.

Distribution: West, Central and South Europe. Widely spread over western and southern parts of lowland and mountains up to 1100 m a.s.l. In NE districts only scattered localities.

*Stigmella salicis* (STANTON, 1854)

Localities: CD 37 Toruń-Podgórz, Toruń-Bielany. CD 38 Toruń-Barbarka. CD 48 Papowo Toruńskie.

Host plants: *Salix aurita* L., *S. cinerea* L.

Habitat: wet places at the edges of alder forests, mixed suburban forests.

Phenology: occurs in two generations. Tenanted mines were found in July and in September-October.

Distribution: Europe. In Poland spread over the whole area, in mountains attains altitudes up to 1700 m a.s.l.

***Stigmella myrtillella* (STANTON, 1857)**

Localities: CD 38 Olek, Las Piwnicki Reserve (BUSZKO, 1977).

Host plant: *Vaccinium myrtillus* L.

Habitat: mixed pine-oak forest.

Phenology: tenanted mines were found in two generations, in July and in September-October.

Distribution: Europe. In Poland found in the entire area, in mountains attains altitudes up to 1600 m a.s.l.

***Stigmella zelleriella* (SNELLEN, 1875)**

Localities: CD 38 Toruń-Barbarka. CD 48 Łysomice (BUSZKO, 1987).

Host plant: *Salix rosmarinifolia* L.

Habitat: wet places along roadsides and railway tracks.

Phenology: two generations a year present. Tenanted mines were found in July and again in September-October.

Distribution: Central and North Europe (NIEUKERKEN, 1983 a). Distribution in Poland is still insufficiently known. So far recorded from four localities in different parts of the country.

***Stigmella obliquella* (HEINEMANN, 1862)**

Localities: CD 37 Kąkol, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie, Wielka Nieszawka. CD 38 Różankowo. CD 47 Toruń-Rubinkowo, Toruń-Stawki, Złotoria.

Host plants: *Salix alba* L., *S. amygdalina* L., *S. fragilis* L., *S. triandra* L., *S. purpurea* L., *S. rosmarinifolia* L.

Habitat: riverine willow-poplar carrs, wet places along roadsides, stream and pond edges.

Phenology: two generations a year present. Tenanted mines were found in July and again in September-October.

Distribution: Europe. Widely distributed in Polish lowland and in lower mountains.

***Stigmella trimaculella* (HAWORTH, 1828)**

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Olek, Toruń-Barbarka. CD 47 Toruń-Stawki, Toruń-Rubinkowo. CD 48 Toruń-Przedmieście Mokre.

Host plants: *Populus nigra* L., *P. × canadensis* MOENCH, *P. × berolinensis* DIPP., *P. simonii* CARR., *P. alba* L., and various hybrids of balsam poplars.

Habitat: riverine willow-poplar carrs, urban parks, streetside green. Seems to be resistant to heavy traffic and industrial pollution.

Phenology: appears in two generations. Tenanted mines were collected in July and September—October.

Distribution: Europe. In Poland distributed in lowland and in submontane regions.

*Stigmella assimilella* (ZELLER, 1848)

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plant: *Populus tremula* L.

Habitat: forest edges, prefers young trees.

Phenology: occurs in two generations. Tenanted mines were found in July and in September—October.

Distribution: West, Central and North Europe. In Poland widely distributed in lowland and in lower montane elevations.

*Stigmella sorbi* (STANTON, 1861)

Locality: CD 37 Toruń-Bielany.

Host plant: *Sorbus aucuparia* L.

Habitat: suburban mixed forest.

Phenology: only one generation a year. Tenanted mines were found at the end of May and in the beginning of June.

Distribution: Europe. In Poland distributed all over the area, in mountains attains altitudes up to 1600 m a.s.l. (BORKOWSKI, 1975).

*Stigmella plagicolella* (STANTON, 1854)

Localities: CD 37 Mała Nieszawka, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Piwnice, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza, Grabowiec, Toruń-Rubinkowo, Toruń-Stawki, Toruń-Śródmieście. CD 48 Łysomice, Papowo Toruńskie.

Host plants: *Prunus cerasifera* EHRH., *P. spinosa* L., *P. domestica* L.

Habitat: sunny forest edges, shrubs along roadsides, orchards, urban green.

Phenology: occurs in two generations. Tenanted mines were found from mid-June to mid-July and again in September—October.

Distribution: Europe. In Poland common everywhere except for high mountains.



*Stigmella lemniscella* (ZELLER, 1839)

(S. marginicolella STANTON, 1853)

Localities: CD 37 Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve. CD 47 Grabowiec, Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie.

Host plants: *Ulmus laevis* PALL., *U. minor* MILL., *U. glabra* HUDS.

Habitat: various kind of suburban forests, urban parks, sunny slopes, shrubs along roadsides.

Phenology: occurs in two generations. Tenanted mines were found from mid-June to mid-July and again in September—October.

Distribution: Europe. In Poland spread over the whole lowland and lower mountains.

*Stigmella continuella* (STANTON, 1856)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Wrzosy.

Host plants: *Betula pubescens* EHRH., *B. pendula* ROTH.

Habitat: suburban mixed forests, prefers young trees.

Phenology: empty mines have been found in September 1984.

Distribution: Central and North Europe. In Poland known from scattered localities in lowland. More common in northern districts.

*Stigmella splendidissimella* (HERRICH-SCHÄFFER, 1855)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (BUSZKO, 1977). CD 47 Brzoza, Toruń-Czerniewice, Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie.

Host plants: *Rubus caesius* L., *R. idaeus* L.

Habitat: various kind of suburban forests, urban parks.

Phenology: occurs in two generations. Tenanted mines were found in July and in September—October.

Distribution: Europe. Widely distributed all over Poland, in mountains attains altitudes of 1400 m a.s.l.

*Stigmella aeneofasciella* (HERRICH-SCHÄFFER, 1855)

Locality: CD 38 Toruń-Barbarka.

Host plant: *Agrimonia eupatoria* L.

Habitat: roadsides in mixed forest, prefers shadowy spots.

Phenology: several tenanted mines have been found in the first days of October 1986.

Distribution: Europe. In Poland spread over the whole area, in mountains attains altitudes up to 1800 m a.s.l.

*Stigmella incognitella* (HERRICH-SCHÄFFER, 1855)(S. *pomella* VAUGHAN, 1858)

Localities: CD 47 Toruń-Stawki, Toruń-Śródmieście.

Host plants: *Malus domestica* BORKH., *M. × purpurea* (BARBIER) REHD.

Habitat: neglected orchards, urban green.

Phenology: a few mines have been collected in the first days of October 1983.

Distribution: Europe. In Poland widely distributed in lowland and in lower mountains (BORKOWSKI, 1975).

*Stigmella hemargyrella* (KOLLAR, 1832)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Fagus silvatica* L.

Habitat: suburban deciduous forests, urban parks.

Phenology: tenanted mines were found from mid-June to the beginning of July and from mid-August to mid-September. Adults were found on tree trunks in the first days of May.

Distribution: West, Central and locally South Europe. In Poland common in western lowland and in mountains up to 1100 m a.s.l. Very local in NE districts.

*Stigmella speciosa* (FREY, 1857)

Localities: CD 37 Toruń-Bielany, Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy.

Host plant: *Acer pseudoplatanus* L.

Habitat: shadowy suburban forests, urban parks.

Phenology: tenanted mines were found in the second half of June and from mid-August to the beginning of September.

Distribution: West, Central and South Europe. In Poland occurs locally in western and southern parts of lowland. Common in submontane regions.

*Stigmella basiguttella* (HEINEMANN, 1862)

Localities: CD 37 Glinki, Mała Nieszawka, Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 48 Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural and suburban mixed forests, urban parks.

Phenology: appears in two generations. Tenanted mines were found in July and in September–October.

Distribution: Europe (BORKOWSKI, 1972). Distributed in the whole area of Poland except for higher mountains.

*Stigmella dorsiguttella* (JOHANSSON, 1971)

Locality: CD 37 Toruń-Bielany (BUSZKO, 1987).

Host plant: *Quercus robur* L.

Habitat: suburban mixed forests.

Phenology: several tenanted mines have been found at the end of September 1979.

Distribution: known from scattered localities all over Europe. In Poland recorded only from the above mentioned site.

*Stigmella ruficapitella* (HAWORTH, 1828)

Localities: CD 37 Cierpice, Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Piwnice, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 48 Łysomice, Popowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: various kind of suburban forests, urban parks.

Phenology: tenanted mines occur in two generations, from mid-June to the end of July and again in September—October.

Distribution: Europe. In Poland spread over the whole lowland and submontane regions (BORKOWSKI, 1975).

*Stigmella samiatella* (ZELLER, 1839)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Quercus robur* L.

Habitat: natural and suburban mixed forests, urban parks.

Phenology: several tenanted mines have been found in September—October. Two adult specimens have been collected at light on 1 VI 1979 and 26 VI 1987.

Distribution: South and Central Europe, southern Scandinavia (BORKOWSKI, 1972). In Poland occurs locally in lowland and in lower mountains (BORKOWSKI, 1975).

*Stigmella roborella* (JOHANSSON, 1971)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Rubinkowo. CD 48 Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.



Habitat: natural and suburban mixed forests, urban parks, streetside green.

Phenology: two generations a year present, tenanted mines were found in July and in September—October.

Distribution: Europe. In Poland known from the whole lowland and from lower montane elevations.

*Trifurcula immundella* (ZELLER, 1839)

Localities: CD 38 Toruń-Barbarka. CD 48 Papowo Toruńskie.

Host plant: *Cytisus scoparius* (L.) LINK.

Habitat: sunny forest edges densely grown with broom.

Phenology: tenanted mines under epidermis of the twigs were found from October until April next year. Adults were flushed from broom bushes in the first half of June 1984.

Distribution: South, West and Central Europe. In Poland recorded from several places in western and southern lowland. Also found in lower montane elevations (BORKOWSKI, 1975).

*Parafomoria helianthemella* (HERRICH-SCHÄFFER, 1860)

Locality: CD 38 Toruń-Barbarka (BUSZKO, 1987).

Host plant: *Helianthemum nummularium* (L.) MILL.

Habitat: xerothermic grassland on sunny slopes and in old gravel pits.

Phenology: tenanted mines appeared in two generations, in June—July and September—October.

Distribution: South and locally Central Europe (NIEUKEERKEN, 1983 b). In Poland known from scattered localities in southern lowland, mainly on calcareous ground.

*Bohemannia pulverosella* (STAINTON, 1849)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve. CD 47 Toruń-Stawki.

Host plant: *Malus domestica* BORKH.

Habitat: wild growing apple trees in suburban and natural mixed forests.

Phenology: tenanted mines were found from mid-June to mid-July.

Distribution: Europe. In Poland widely distributed in the whole lowland and in submontane areas.

*Ectoedemia sericopeza* (ZELLER, 1839)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Pigża, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Grabowiec, Toruń-Bielawy, Toruń-Kaszczerok, Toruń-Stawki.

Host plant: *Acer platanoides* L.

Habitat: natural and suburban deciduous forests, urban parks, roadside trees.

Phenology: pupal cocoons were found on trunks of *Acer platanoides* L. in early May. Adults were collected in the same places in the second half of May. Mines in fruits were found from the end of June until mid-August.

Distribution: Europe, North America. In Poland common in the whole lowland and in submontane regions.

***Ectoedemia lousella* (SIRCOM, 1849)**

(*E. sphendamni* HERING, 1937)

Locality: CD 37 Toruń-Bielany.

Host plant: *Acer campestre* L.

Habitat: urban parks, suburban mixed forests.

Phenology: pupal cocoons were found on trunks of *Acer campestre* L. in the first half of May. Adults appeared in the same places about mid-May. Mines in fruits were found in July.

Distribution: Central Europe. In Poland known from scattered localities in southern lowland and in lower mountains (BORKOWSKI, 1975).

***Ectoedemia decentella* (HERRICH-SCHÄFFER, 1855)**

Localities: CD 37 Toruń-Osiedle Młodych. CD 38 Toruń-Barbarka.

Host plant: *Acer pseudoplatanus* L.

Habitat: sunny forest edges, urban parks.

Phenology: pupal cocoons were found on tree trunks in May. One adult specimen has been collected on 12 VI 1984.

Distribution: Central Europe and Great Britain. In Poland found in several localities in lowland and in lower mountains (BORKOWSKI, 1975).

***Ectoedemia albibimaculella* (LARSEN, 1927)**

Locality: CD 37 Glinki.

Habitat: inland dunes grown by *Calluna vulgaris* (L.) HULL. and *Arctostaphylos uva-ursi* (L.) SPRENG.

Phenology: one specimen has been obtained by sweeping over the patches of *A. uva-ursi* on 5 VI 1988.

Distribution: North and locally Central Europe. In Poland found in Puszcza Kampinoska forest near Warsaw (ADAMCZEWSKI, 1947, 1949).

***Ectoedemia weaveri* (STANTON, 1855)**

Locality: CD 37 Glinki.

Host plant: *Vaccinium vitis-idaea* L.

Habitat: shadowy spots in pine forest.

Phenology: several mines with spined cocoons were found in late May 1984.

Distribution: Europe. Known from scattered localities all over Poland, in mountains up to 1700 m a.s.l.

*Ectoedemia septembrella* (STANTON, 1849)

Localities: CD 37 Kąkol, Przysiek, Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Hypericum perforatum* L., *H. maculatum* CRANTZ.

Habitat: glades and clearings in pine forest, roadsides, sunny forest edges.

Phenology: occurs in two generations, tenanted mines were found in July and in September—October.

Distribution: western part of Palaearctic Region. In Poland known from the whole area. In mountains attains 1500 m a.s.l.

*Ectoedemia* sp. (? *longicaudella* KLIMESCH, 1953)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka.

Host plants: *Quercus robur* L., *Q. petraea* (MATT). LIEBL.

Habitat: sunny forest edges.

Phenology: full grown larvae were found in June.

Comments. The identity of this species was not possible to be clarified because of lack of reared or collected specimens. The presence of two species, namely *E. atrifrontella* (STR.) and *E. longicaudella* KLIM. is possible. However, the latter one has been recorded in Poland and probably mines from Toruń area belong to this species.

*Ectoedemia intimella* (ZELLER, 1848)

Localities: CD 37 Toruń-Podgórz. CD 47 Toruń-Stawki.

Host plants: *Salix cinerea* L., *S. fragilis* L., *S. amygdalina* L., *S. alba* L., *S. viminalis* L.

Habitat: moist places in mixed forests, riverine willow-poplar carrs, roadsides.

Phenology: tenanted mines were found in October.

Distribution: Europe. In Poland spread over the whole lowland. Occurs also in mountains up to 800 m a.s.l.

*Ectoedemia hannoverella* (GLITZ, 1872)

Localities: CD 37 Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Toruń-Przedmieście Mokre.



Host plants: *Populus nigra* L., *P. × canadensis* MOENCH.

Habitat: riverine willow-poplar carrs, urban parks, roadsides, streetside green.

Phenology: tenanted mines appeared from mid-September to the end of October.

Distribution: Central and South Europe (NIEUKERKEN, 1985). In Poland widely distributed in lowland and in submontane regions.

***Ectoedemia turbidella* (ZELLER, 1848)**

(*E. populiabae* M. HERING, 1935)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Toruń-Barbarka. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie, Toruń-Przedmieście Mokre.

Host plants: *Populus alba* L., *P. × canescens* (AIT.) SM.

Habitat: riverine willow-poplar carrs, urban parks, streetside green. Prefers old trees.

Phenology: tenanted mines were found from mid-September to the end of October.

Distribution: Europe, North Iran. In Poland spread over the whole lowland and locally in submontane regions.

***Ectoedemia klimeschi* (SKALA, 1933)**

Localities: CD 37 Glinki, Mała Nieszawka, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Toruń-Barbarka. CD 47 Toruń-Stawki.

Host plants: *Populus alba* L., *P. × canescens* (AIT.) SM.

Habitat: riverine willow-poplar carrs, urban parks, forest edges. Prefers saplings and young trees.

Phenology: tenanted mines were found from late September till end of October.

Distribution: Southeast and Central Europe (NIEUKERKEN, 1985). In Poland recorded from several places in lowland and submontane regions.

***Ectoedemia argyropeza* (ZELLER, 1839)**

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 48 Łysomice, Papowo Toruńskie.

Host plant: *Populus tremula* L.

Habitat: suburban mixed forests, urban parks.

Phenology: tenanted mines appeared from mid-September until November.

Distribution: Europe except for Iberian Peninsula. In Poland common in lowland and in lower mountains.

*Ectoedemia albifasciella* (HEINEMANN, 1871)

Localities: CD 37 Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural and suburban mixed forests, urban parks, streetside green.

Phenology: tenanted mines appeared from the beginning of August until end of September.

Distribution: Europe. In Poland widely distributed in lowland and in submontane regions.

*Ectoedemia subbimaculella* (HAWORTH, 1828)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 48 Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural and suburban mixed forests, urban parks.

Phenology: tenanted mines were found from the end of September until end of October.

Distribution: Europe, except for northern regions. In Poland spread over the whole lowland and lower montane elevations.

*Ectoedemia heringi* (TOLL, 1934)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Quercus petraea* (MATT.) LIEBL., *Q. robur* L.

Habitat: oak forests (*Potentillo albae-Quercetum*), suburban mixed forests, urban parks.

Phenology: tenanted mines were found in October.

Distribution: South and Central Europe. In Poland found locally in warm places in lowland (BORKOWSKI, 1975).

*Ectoedemia agrimoniae* (FREY, 1858)

Localities: CD 38 Toruń-Barbarka, Toruń-Wrzosy.

Host plant: *Agrimonia eupatoria* L.

Habitat: sunny slopes and forest edges.

Phenology: tenanted mines were collected from late September to the end of October.

Distribution: South and Central Europe. In Poland occurs locally in warm places along valley slopes of main rivers.

*Ectoedemia atricollis* (STANTON, 1857)

Locality: CD 38 Las Piwnicki Reserve.

Host plants: *Malus domestica* BORKH., *Crataegus monogyna* JACQ.

Habitat: shady places in mixed forests, neglected orchards.

Phenology: tenanted mines were found in September.

Distribution: Europe. In Poland occurs in lowland and in lower montane elevations. More common in southern and western districts.

*Ectoedemia arcuatella* (HERRICH-SCHÄFFER, 1855)

Localities: CD 38 Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Fragaria vesca* L., *F. viridis* DUCHESNE.

Habitat: shadowy places in deciduous forest, especially along roadsides.

Phenology: tenanted mines were collected in August and September.

Distribution: Europe. In Poland known from scattered localities in lowland and in mountains (BORKOWSKI, 1975).

*Ectoedemia rubivora* (WOCKE, 1860)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve. CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plant: *Rubus caesius* L.

Habitat: shadowy places in deciduous forests, urban parks.

Phenology: tenanted mines were found from the second half of September to the beginning of October.

Distribution. Europe. In Poland distributed all over the lowland (BORKOWSKI, 1975).

*Ectoedemia occultella* (LINNAEUS, 1767)

(*E. argentipedella* ZELLER, 1839)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza. CD 48 Papowo Toruńskie.

Host plants: *Betula pendula* ROTH, *B. pubescens* EHRH.

Habitat: natural and suburban mixed forests.

Phenology: tenanted mines were found from mid-August to the end of October.

Distribution: Europe. Spread over the entire area of Poland. In mountains reaches the mountain dwarf pine zone of about 1700 m a.s.l.

*Heliozelidae**Heliozela sericiella* (HAWORTH, 1828)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.



Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: mixed suburban forests. Prefers sunny forest edges.

Phenology: tenanted mines were found in July. Adults were collected during the day in the first half of May.

Distribution: Europe. In Poland recorded in scattered localities in lowland.

*Heliozela resplendella* (STANTON, 1851)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plant: *Alnus glutinosa* (L.) GAERTN.

Habitat: alder carrs, wet places along roadsides. Prefers young trees.

Phenology: tenanted mines were found in August—September.

Distribution: Europe. In Poland widely distributed in lowland and in lower mountains.

*Heliozela hammoniella* SORHAGEN, 1885

(*H. betulae* auct.)

Locality: CD 37 Toruń-Bielany.

Host plant: *Betula pendula* ROTH.

Habitat: suburban forests. Prefers small birches growing in sunny spots.

Phenology: Several empty mines have been found in the second half of September 1984.

Distribution: spread over northern and central parts of Europe. In Poland recorded from Kłodzko vicinity (GROSCHKE, 1939). Own field investigations resulted in many new records mainly in NE districts. RAZOWSKI (1978) does not mention this species in his monograph of Polish *Adeloidea*.

*Antispila metalella* (DENIS & SCHIFFERMÜLLER, 1775)

(*A. Pfeifferella* auct.)

Localities: CD 37 Toruń-Podgórz. CD 38 Olek, Las Piwnicki Reserve. CD 47 Toruń-Stawki.

Host plant: *Cornus sanguinea* L.

Habitat: shadowy places in riverine willow-poplar carrs, deciduous forests along streams.

Phenology: tenanted mines were found in July.

Distribution: Europe. In Poland known from scattered localities in lowland and in lower montane elevations.

*Incurvariidae**Incurvaria oehlmanniella* (HÜBNER, 1796)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: deciduous and mixed forests with rich herb layer.

Phenology: adults were collected by sweeping from the vegetation and attracted to light in June.

Distribution: Europe except its southern part. In Poland widely distributed all over the country (RAZOWSKI, 1978).

*Incurvaria pectinea* HAWORTH, 1828

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka.

Host plant: *Betula pendula* ROTH.

Habitat: suburban forests. Prefers sunny forest edges.

Phenology: adults were collected during the day from mid-April to mid-May. Mines were found in June.

Distribution: Europe without its southern part. In Poland widely distributed in the whole area.

*Incurvaria masculella* (DENIS & SCHIFFERMÜLLER, 1775)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka.

Habitat: deciduous and mixed forests in suburban area. Prefers shadowy places.

Phenology: adult specimens were collected during the day in May.

Distribution: Europe. Widely distributed in the whole area of Poland.

*Tischeriidae**Tischeria ekebladella* (BJERKANDER, 1795)

Localities: CD 37 Cierpice, Mała Nieszawka, Przysiek, Toruń-Przedmieście Bydgoskie, Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Rubinkowo. CD 48 Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous forests, mixed suburban forests, urban parks.

Phenology: tenanted mines were found from July to October. In some

years two generations a year appeared. Adults were collected in May—June, in some years also in August.

Distribution: western part of Palaearctic Region up to Ural Mts. Common everywhere in Polish lowland and in highlands.

*Tischeria dodonaea* STANTON, 1858

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous forests, mixed suburban forests, urban parks.

Phenology: tenanted mines were found in September—October.

Distribution: Europe, Caucasus. In Poland spread over the whole lowland except for NE parts. Also found in highlands.

*Tischeria decidua* WOCKE, 1876

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Wrzosy.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: suburban mixed forests.

Phenology: tenanted mines were found from mid-August to mid-September. In 1988 the species was very abundant being even more plentiful than *T. ekebladella* (BJERK.).

Distribution: South, locally Central Europe, Caucasus. In Poland found in several localities in western and southern lowland.

*Tischeria marginea* (HAWORTH, 1828)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Rubus caesius* L., *R. idaeus* L., *R. plicatus* WEIHE et NEES.

Habitat: exposed slopes, sunny forest edges.

Phenology: tenanted mines were found from mid-September to the late autumn. Adults were swept from herbaceous plants in the first half of May.

Distribution: Europe, Asia Minor. In Poland occurs in the whole lowland except its northern parts.

*Tischeria heinemanni* WOCKE, 1871

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Stawki.

Host plants: *Rubus caesius* L., *Agrimonia eupatoria* L.

Habitat: shadowy places in mixed forests.

Phenology: tenanted mines were found from August until late autumn.



Distribution: Central and locally North Europe. In Poland widely distributed in lowland except for NE regions, locally also in lower montane elevations.

*Tischeria gaunacella* DUPONCHEL, 1842

Localities: CD 37 Kąkol, Toruń-Bielany. CD 47 Toruń-Rubinkowo.

Host plants: *Prunus spinosa* L., *P. domestica* L., *P. cerasus* L.

Habitat: sunny slopes, scrub along exposed roadsides, neglected orchards.

Phenology: tenanted mines were collected from mid-September to late autumn.

Distribution: Central and South Europe, Asia Minor. In Poland recorded locally in lowland except for its northern regions. Distributed mainly along warm river valleys.

*Tischeria angusticolella* DUPONCHEL, 1842

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Toruń-Barbarka. CD 47 Toruń-Kaszczonek, Toruń-Rubinkowo.

Host plants: *Rosa canina* L., *R. rubiginosa* L., *R. rugosa* THUNB. and cultivated races.

Habitat: sunny forest edges, roadsides, flower beds in urban parks.

Phenology: tenanted mines were found from mid-August to late autumn. In some favourable years mines appeared in July producing two generations a year.

Distribution: western part of Palaearctic Region without its northern areas. In Poland occurs locally in southern and western parts of lowland as well as in lower mountains.

*Psychidae*

*Apterona crenulella* (BRUAND, 1853)

Locality: CD 38 Toruń-Barbarka.

Habitat: dry grassland along railway track.

Phenology: several larval cases were found on telegraph posts in August 1979.

Distribution: South and Central Europe, Caucasus. In Poland recorded from scattered localities in lowland.

*Gracillariidae*

*Caloptilia elongella* (LINNAEUS, 1761)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Toruń-Barbarka, Las Piwnicki Reserve. CD 47 Toruń-Stawki.

Host plants: *Alnus glutinosa* (L.) GAERTN., *A. incana* (L.) MOENCH.

Habitat: alder forests, riverine willow-poplar carrs.

Phenology: mines and larval shelters of rolled leaves were found in July and in September. Adults were collected at light and flushed from shrubberies in September—October and in May.

Distribution: Holarctic Region. In Poland widely distributed all over the country except for higher mountains.

*Caloptilia betulicola* (M. HERING, 1928)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka, Toruń-Wrzosy.

Host plant: *Betula pendula* ROTH.

Habitat: suburban mixed forests, frequently on young trees.

Phenology: mines and larval shelters of rolled leaves were found in August—September.

Distribution: temperature belt of Palaearctic Region from Great Britain to Far East of USSR (KUZNETSOV, 1981). In Poland occurs in lowland and in lower mountains. More common in northern part of the country.

*Caloptilia alchimiella* (SCOPOLI, 1763)

Localities: CD 37 Cierpice, Toruń-Bielany. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka, Toruń-Wrzosy. CD 48 Łysomice.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: deciduous and mixed forests, urban parks, often on small bushes and offshoots.

Phenology: appeared in two generations. Larvae in conical shelters were found in July and from mid-August to the beginning of October. Adults were collected from mid-May to mid-June and in August.

Distribution: western part of Palaearctic Region up to Central Asia (KUZNETSOV, 1981). In Poland widely distributed in lowland and in submontane regions.

*Caloptilia robustella* JÄCKH, 1972

Localities: CD 37 Toruń-Bielany (BUSZKO & ŚLIWIŃSKI, 1979). CD 38 Las Piwnicki Reserve (BUSZKO, 1987).

Host plant: *Quercus robur* L.

Habitat: deciduous and mixed forests. Prefers sunny forest edges.

Phenology: mines and larvae in conical shelters were found in September—October. Adults were collected at light and flushed from oak bushes from the end of May to the middle of June and in the first half of August. Generally more rare than *C. alchimiella* (Scop.).

Distribution: Central and South Europe. In Poland recorded otherwise only from Bielinek Reserve (BUSZKO, 1987).

*Caloptilia hemidactylella* (DENIS & SCHIFFERMÜLLER, 1775)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Stawki, Toruń-Przedmieście Jakubskie.

Host plants: *Acer platanoides* L., *A. campestre* L., *A. pseudoplatanus* L., *A. saccharinum* L.

Habitat: suburban mixed forests, urban parks.

Phenology: mines and larvae in conical shelters were found in two generations in July and from mid-August to mid-September. Adults were flushed from bushes in September.

Distribution: Europe. In Poland occurs locally in the whole lowland.

*Caloptilia stigmatella* (FABRICIUS, 1781)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Stawki. CD 48 Łysomice.

Host plants: *Salix amygdalina* L., *S. fragilis* L., *S. purpurea* L., *S. viminalis* L., *Populus alba* L. *P. nigra* L., *P. × canadensis* MOENCH, *P. tremula* L.

Habitat: riverine willow-poplar carrs, wet places along roadsides.

Phenology: mines and larvae in shelters of twisted leaves were found from mid-July to the beginning of October. Apparently two generations a year present.

Distribution: Palaearctic Region. In Poland distributed all over the country except for high mountains.

*Gracillaria syringella* (FABRICIUS, 1794)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Łysomice, Papowo Toruńskie.

Host plants: *Syringa vulgaris* L., *Ligustrum vulgare* L., *Fraxinus excelsior* L.

Habitat: urban green, gardens, urban parks, roadsides in suburban forests, ash-elm carrs.

Phenology: two generations a year present. Tenanted mines and larvae in rolled leaves were found in July and again in September–October. Adults were collected by flushing from lilac bushes and attracted to light in May–June and in August.

Distribution: Europe, Asia Minor. In Poland very common all over the lowland and lower montane elevations.



*Aspilapteryx tringipennella* (ZELLER, 1839)

Localities: CD 38 Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Stawki.

Host plant: *Plantago lanceolata* L.

Habitat: moist meadows.

Phenology: tenanted mines were found in October. One adult specimen has been collected at light on 18 VIII 1978. In 1979 mines appeared in a large number but in the next years they become rare again.

Distribution: western part of Palaearctic Region up to Central Asia (KUZNETSOV, 1981). In Poland recorded locally in lowland and in lower mountains.

*Calybites phasianipennella* (HÜBNER, 1813)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy. CD 48 Łysomice.

Host plants: *Polygonum hydropiper* L., *P. mite* SCHRANK.

Habitat: edges of ponds and streams, wet places along roadsides, especially in deciduous forests.

Phenology: mines and larval shelters were found in September. Several adult specimens have been collected at light in July and October.

Distribution: Palaearctic Region. In Poland widely distributed in lowland and in submontane regions.

*Calybites auroguttella* (STEPHENS, 1835)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Hypericum perforatum* L., *H. maculatum* CRANTZ.

Habitat: sunny slopes, roadsides, forest edges, gravel pits, clearings and glades in pine forest.

Phenology: occurs in two generations. Larvae in shelters of twisted leaves were found in July and in September—October. Adults were swept from the herbaceous vegetation in May.

Distribution: Europe, Asia Minor. In Poland widely spread in lowland and in lower montane elevations.

*Calybites quadrisignella* (ZELLER, 1839)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka.

Host plant: *Rhamnus cathartica* L.

Habitat: exposed slopes, sunny forest edges.

Phenology: tenanted mines and larvae in shelters of rolled leaves were found from mid-August till end of September.

Distribution: South and Central Europe, Asia Minor. In Poland known from several localities in southern and western parts of the country.

*Acrocercops brongiardella* (FABRICIUS, 1798)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: mixed forests, prefers sunny forest edges.

Phenology: several tenanted and empty mines have been found at the beginning of July 1979 and 1983.

Distribution: western part of Palaearctic Region up to Central Asia (KUZNETSOV, 1981). In Poland recorded from several scattered localities in southern and western parts of lowland. ■

*Dialectica imperialella* (ZELLER, 1847)

Localities: CD 38 Las Piwnicki Reserve, Toruń-Wrzosy (BUSZKO, 1987).

Host plants: *Pulmonaria angustifolia* L., *Symphytum officinale* L.

Habitat: warm oak forest (*Potentillo albae-Quercetum*), wet places with rich herbaceous vegetation along ponds and streams.

Phenology: tenanted mines were found in September. Several adult specimens have been collected by sweeping over the herbs in May—June.

Distribution: South and Central Europe, Asia Minor. In Poland recorded from several places in western and southern parts of the country.

*Spulerina simploniella* (FISCHER VON RÖSLERSTAMM, 1844)

Localities: CD 38 Toruń-Barbarka, Toruń-Wrzosy (BUSZKO, 1987).

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: sunny forest edges, newly afforested clearings with oak offshoots.

Phenology: tenanted mines were found from the beginning of May to mid-June.

Distribution: South and Central Europe, Asia Minor. In Poland known from few localities in central part of lowland.

*Ornixola caudulatella* (ZELLER, 1839)

Locality: CD 37 Toruń-Bielany.

Habitat: inland dunes with bushes of *Salix acutifolia* WILLD.

Phenology: One specimen has been flushed from *S. acutifolia* on 11 VI 1981.

Distribution: Palaearctic Region from Central Europe to Far East of USSR (KUZNETSOV, 1981). In Poland known from several scattered localities in lowland.

*Callisto denticulella* (THUNBERG, 1794)

Localities: CD 37 Glinki, Kąkol, Toruń-Bielany, Toruń-Przedmieście Bydgoskie, Wielka Nieszawka. CD 38 Las Piwnicki Reserve, Toruń-Wrzośy. CD 47 Brzoza, Toruń-Czerniewice, Toruń-Rubinkowo, Toruń-Stawki.

Host plants: *Malus domestica* BORKH., *M. sylvestris* MILL.

Habitat: orchards, streetside green, urban parks, suburban forests.

Phenology: tenanted mines appeared in June. Larvae under turned down edge of a leaf were found from late June to mid-August. Adults were collected from mid-May to the first days of June.

Distribution: Europe, Asia Minor, introduced to North America (KUZNETSOV, 1981). Spread over the entire area of Poland except for higher montane elevations (BUSZKO & BARANIAK, 1987).

*Parornix anglicella* (STANTON, 1850)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Podgórz. CD 38 Olek, Las Piwnicki Reserve, Różankowo. CD 47 Toruń-Kaszczynek, Toruń-Stawki. CD 48 Koniczynka, Łysomice.

Host plants: *Crataegus monogyna* JACQ., *C. laevigata* (POIR.) DC., *C. curvisepala* LINDM.

Habitat: shrubberies along roadsides, urban parks, suburban mixed forests.

Phenology: mines and tenanted larval shelters were found in two generations, in July and from late August to the end of September. Adult specimens were collected at light from mid-May to the first days of June and again in July.

Distribution: Holarctic Region (KUZNETSOV, 1981). In Poland occurs in the whole area except for high mountains.

*Parornix devoniella* (STANTON, 1850)

Localities: CD 37 Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Corylus avellana* L., *C. colurna* L.

Habitat: natural deciduous forests, urban parks.

Phenology: mines and tenanted larval shelters were found in July and in September—October. Adults were collected at light from mid-May to mid-June.

Distribution: Europe, Asia Minor. In Poland widely distributed in lowland and in lower mountains.

*Parornix carpinella* (FREY, 1861)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve.

Host plant: *Carpinus betulus* L.



Habitat: natural deciduous oak-hornbeam forests.

Phenology: mines and tenanted larval shelters were found in July and in September. Adults were collected at light and found on trunks of hornbeam in May.

Distribution: Central and South Europe, Great Britain. In Poland widely distributed in lowland and in submontane regions.

***Parornix betulae* (STANTON, 1854)**

Localities: CD 37 Glinki, Przysiek, Toruń-Bielany. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Wrzosy, Toruń-Barbarka.

Host plants: *Betula pendula* ROTH, *B. pubescens* EHRH.

Habitat: suburban mixed forests.

Phenology: mines and tenanted larval shelters were found in two generations, in July and in September—October.

Distribution: Palaearctic Region (KUZNETSOV, 1981). In Poland spread all over the lowland and lower montane elevations.

***Parornix scoticella* (STANTON, 1850)**

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plant: *Sorbus aucuparia* L.

Habitat: suburban mixed forests, urban parks.

Phenology: mines and tenanted larval shelters appeared in July and in September. Adults were attracted to light in May—June.

Distribution: Europe. In Poland known from the whole area of the country, in mountains up to 1400 m a.s.l.

***Parornix finitimella* (ZELLER, 1850)**

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Śródmieście.

Host plants: *Prunus cerasifera* EHRH., *P. spinosa* L., *P. domestica* L.

Habitat: shrubberies along roadsides, forest edges, urban parks, streetside green, especially common on hedges.

Phenology: two generations a year present. Mines and tenanted larval shelters were found in July and in September—October. Adults were collected at light from mid-May to mid-June.

Distribution: Europe, Asia Minor. In Poland widely distributed in lowland and in submontane regions.

***Parornix torquillella* (ZELLER, 1850)**

Localities: CD 37 Mała Nieszawka, Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Stawki.

Host plants: *Prunus spinosa* L., *P. cerasifera* EHRH., *P. domestica* L.

Habitat: shrubberies along roadsides, sunny forest edges.

Phenology: mines and tenanted larval shelters were found in July and again in September—October. Adults were collected at light from mid-May to mid-June.

Distribution: Europe, Asia Minor. In Poland recorded from lowland and submontane regions.

*Parornix anguliferella* (ZELLER, 1847)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka.

Host plant: *Pyrus communis* L.

Habitat: shrubberies along roadsides, suburban mixed forests.

Phenology: mines and tenanted larval shelters were found in August—September. Pupal cocoons on the upper side of leaves of the host plant were collected in September—October. One adult specimen has been attracted to light on 26 VI 1987.

Distribution: Central and South Europe, Asia Minor. In Poland known from several localities in central, western and southern parts of lowland.

*Phyllonorycter harrisella* (LINNAEUS, 1761)

Localities: CD 37 Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza. CD 48 Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous forests, suburban mixed forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September—October. Adult specimens were collected on tree trunks in May.

Distribution: Europe, Asia Minor. In Poland spread over the whole lowland and submontane regions.

*Phyllonorycter roboris* (ZELLER, 1839)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous forests, suburban mixed forests, urban parks. Prefers sunny forest edges.

Phenology: tenanted mines occur in two generations, in July and in September—October. Adults were collected on tree trunks in May.

Distribution: Europe, Asia Minor. Common in Polish lowland except its NE districts. Known also from submontane regions.

*Phyllonorycter muelleriella* (ZELLER, 1839)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous forests, suburban mixed forests, urban parks.

Phenology: two generations a year present. Tenanted mines were found in July and in September—October. Sometimes from mines collected in July adults hatched first in spring of the next year. Adults were collected on tree trunks in May.

Distribution: Europe, Asia Minor. In Poland known from lowland and lower montane elevations.

*Phyllonorycter heegeriella* (ZELLER, 1846)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Bielany, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Czerniewice, Toruń-Rubinkowo. CD 48 Łysomice.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous forests, suburban mixed forests, urban parks. Found in almost all habitats where oaks occur.

Phenology: tenanted mines appeared in two generations, in July and in September—October. Adults were collected on tree trunks in May.

Distribution: Europe, Asia Minor. Common everywhere in the entire area of Poland except for higher mountains.

*Phyllonorycter tenerella* (JOANNIS, 1915)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Wrzosy.

Host plant: *Carpinus betulus* L.

Habitat: natural deciduous oak-hornbeam forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September—October. Adults were found on trunks of hornbeam in May.

Distribution: Europe. In Poland widely distributed in lowland and in lower montane elevations.

*Phyllonorycter quercifoliella* (ZELLER, 1839)

Localities: CD 37 Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Piwnice, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 48 Łysomice, Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous oak-hornbeam forests, suburban mixed forests, urban parks, streetside green.



Phenology: two generations a year present. Tenanted mines were found in July and in September—October. Adults were found on tree trunks in May.

Distribution: Europe, Asia Minor, North Africa. In Poland widely distributed all over the country except for higher mountains.

*Phyllonorycter oxyacanthae* (FREY, 1856)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Wrzosy, Toruń-Barbarka. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Łysomice.

Host plants: *Crataegus monogyna* JACQ., *C. laevigata* (POIR.) DC., *C. curvisepala* LINDM., *C. crus-galli* L., *C. intricata* LANGE, *Pyrus communis* L.

Habitat: shrubberies along roadsides, suburban mixed forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September—October. Adults were found on tree trunks and flushed from hawthorn bushes in May.

Distribution: Europe, Asia Minor. In Poland spread over the whole lowland and lower montane elevations.

*Phyllonorycter sorbi* (FREY, 1855)

Localities: CD 37 Cierpice, Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Czerniewice, Toruń-Stawki.

Host plants: *Sorbus aucuparia* L., *S. intermedia* (EHRH.) PERS., *Prunus padus* L.

Habitat: riverine willow-poplar carrs, natural deciduous forests, suburban mixed forests, urban parks.

Phenology: two generations a year present. Tenanted mines were collected in July and in September—October.

Distribution: Central, East and North Europe, Asia Minor. In Poland common in the whole lowland, in mountains attains altitudes of 1600 m a.s.l.

*Phyllonorycter blancardella* (FABRICIUS, 1781)

Localities: CD 37 Kąkol, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie, CD 38 Olek, Piwnice, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Rubinkowo, Toruń-Stawki, Toruń-Śródmieście. CD 48 Koniczynka.

Host plants: *Malus domestica* BORKH., *M. sylvestris* MILL.

Habitat: orchards, roadsides with apple trees, urban parks, suburban mixed forests.

Phenology: tenanted mines appeared in two generations, in July and in September—October.

Distribution: western part of Palaearctic Region up to the western Siberia. Introduced to North America (KUZNETSOV, 1981). In Poland common in the whole lowland and in submontane regions.

*Phyllonorycter spinicolella* (ZELLER, 1846)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Brzoza, Toruń-Rubinkowo. CD 48 Papowo Toruńskie.

Host plants: *Prunus spinosa* L., *P. cerasifera* EHRH., *P. domestica* L.

Habitat: shrubberies along roadsides, sunny forest edges, neglected orchards.

Phenology: two generations a year present. Tenanted mines were found in July and in September—October.

Distribution: Europe, Asia Minor. In Poland widely distributed all over the lowland and lower mountains.

*Phyllonorycter cerasicolella* (HERRICH-SCHÄFFER, 1855)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Czerniewice, Toruń-Rubinkowo.

Host plants: *Prunus cerasus* L., *P. avium* L., *P. mahaleb* L.

Habitat: orchards, roadsides with cherry trees.

Phenology: tenanted mines occur in two generations, in July and in September—October.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland spread in the whole lowland and in submontane regions.

*Phyllonorycter corylifoliella* (HÜBNER, 1796)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza. CD 48 Łysomice.

Host plants: *Betula pendula* ROTH, *B. pubescens* EHRH.

Habitat: suburban mixed forests. Prefers sunny forest edges.

Phenology: tenanted mines were found in two generations, in July and in September—October. Several adult specimens have been collected on tree trunks in May.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland spread over the whole lowland and lower montane elevations. A rare species.

*Phyllonorycter viminetorum* (STAINTON, 1854)

Localities: CD 37 Przysiek, Toruń-Przedmieście Bydgoskie. CD 47 Toruń-Stawki.

Host plant: *Salix viminalis* L.

Habitat: willow thicket in flooded plain along Vistula River.

Phenology: two generations a year present. Tenanted mines were found in July and from September till November.

Distribution: West and Central Europe. In Poland known from scattered localities in lowland.

***Phyllonorycter salictella* (ZELLER, 1846)**

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Różankowo, Toruń-Barbarka. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Łysomice.

Host plants: *Salix purpurea* L., *S. alba* L., *S. amygdalina* L., *S. fragilis* L., *S. acutifolia* WILLD., *S. viminalis* L., *S. rosmarinifolia* L.

Habitat: riverine willow-poplar carrs, willow thicket on flooded plain, wet places along roadsides, urban parks.

Phenology: two generations a year present. Tenanted mines were found in July and from late August till October.

Distribution: Palaearctic Region (KUZNETSOV, 1981). In Poland common everywhere in lowland and in lower mountains.

***Phyllonorycter salicicolella* (SIRCOM, 1848)**

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Salix aurita* L., *S. cinerea* L.

Habitat: wet places along roadsides, prefers open habitats.

Phenology: tenanted mines were found in two generations, in July and in September—October. One adult specimen has been collected at light on 17 V 1980.

Distribution: Palaearctic Region (KUZNETSOV, 1981). In Poland known from the whole lowland and submontane regions.

***Phyllonorycter dubitella* (HERRICH-SCHÄFFER, 1855)**

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve. CD 48 Papowo Toruńskie.

Host plant: *Salix caprea* L.

Habitat: suburban mixed forests.

Phenology: mines occur in two generations, in July and in September—October. One adult specimen has been collected at light on 16 V 1980.

Distribution: Central, East and North Europe, Great Britain (KUZNETSOV, 1981). In Poland widely distributed in lowland and in lower montane elevations.



*Phyllonorycter cavella* (ZELLER, 1846)

Localities: CD 38 Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Śródmieście.

Host plants: *Betula pubescens* EHRH., *Prunus serrulata* LINDL.

Habitat: suburban mixed forests, urban green.

Phenology: tenanted mines were found in October.

Distribution: Palaearctic Region (KUZNETSOV, 1981). In Poland occurs locally in lowland, more common in northern districts.

*Phyllonorycter scopariella* (ZELLER, 1846)

Locality: CD 38 Toruń-Barbarka (BUSZKO, 1987).

Host plant: *Cytisus scoparius* (L.) LINK.

Habitat: sunny forest edges densely grown with broom.

Phenology: empty mines were found under the epidermis of broom twigs. Several adult specimens have been flushed from broom bushes on 11 and 12 VI 1984.

Distribution: West, Central and South Europe. In Poland known from several places in western and southern lowland and highlands.

*Phyllonorycter maestingella* (MÜLLER, 1764)

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka.

Host plant: *Fagus silvatica* L.

Habitat: suburban mixed forests, urban parks.

Phenology: tenanted mines appeared in two generations, in July and in September—October. Adults were found on tree trunks in May.

Distribution: West, Central and South Europe, Caucasus. In Poland very common in western and southern lowland and in mountains up to 1200 m a.s.l. In NE districts only scattered localities.

*Phyllonorycter coryli* (NICELLI, 1851)

Localities: CD 37 Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve.

Host plants: *Corylus avellana* L., *C. colurna* L.

Habitat: natural deciduous forests, urban parks.

Phenology: occurs in two generations, tenanted mines were found in July and in September—October. Two specimens have been collected at light on 27 V 1980 and 5 VI 1981.

Distribution: Europe, Armenia (KUZNETSOV, 1981). In Poland widely distributed in lowland and in lower montane elevations.

*Phyllonorycter esperella* (GÖZE, 1783)(Ph. *quinnata* FOURCROY, 1785)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy.

Host plant: *Carpinus betulus* L.

Habitat: natural deciduous oak-hornbeam forests, urban parks.

Phenology: two generations a year present. Tenanted mines were collected in July and in September—October. Adults were found on hornbeam trunks and attracted to light in May.

Distribution: Europe, Asia Minor. In Poland distributed all over the lowland and lower montane elevations.

*Phyllonorycter strigulatella* (LIENIG & ZELLER, 1846)

Localities: CD 37 Toruń-Podgórz. CD 38 Toruń-Barbarka. CD 47 Toruń-Czerniewice, Toruń-Stawki.

Host plant: *Alnus incana* (L.) MOENCH.

Habitat: riverine willow-poplar carrs, wet places along roadsides.

Phenology: tenanted mines appeared in two generations, in July and in September—October. Adults were found on tree trunks in May.

Distribution: Palaearctic Region (KUZNETSOV, 1981). In Poland spread over the whole area, in mountains attains altitudes of 1100 m a.s.l.

*Phyllonorycter rajella* (LINNAEUS, 1758)

Localities: CD 37 Przysiek, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plant: *Alnus glutinosa* (L.) GAERTN.

Habitat: alder forests.

Phenology: two generations a year present. Tenanted mines were found in July and September—October.

Distribution: Europe. In Poland known from the whole lowland.

*Phyllonorycter quinqueguttella* (STAINTON, 1851)

Localities: CD 38 Toruń-Barbarka. CD 48 Łysomice.

Host plant: *Salix rosmarinifolia* L.

Habitat: wet places along roadsides and railway tracks.

Phenology: two generations a year present. Tenanted mines appeared in July and in September—October.

Distribution: North and Central Europe, Great Britain. In Poland known from several scattered localities in lowland. Especially common on *Salix arenaria* L. growing on sandy dunes along sea shore.

*Phyllonorycter medicaginella* (GERASIMOV, 1930)

Localities: CD 37 Kąkol, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Toruń-Wrzosy (BUSZKO, 1936). CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plants: *Medicago falcata* L., *M. sativa* L., *M. lupulina* L., *Melilotus alba* MED. *M. officinalis* (L.) PALL.

Habitat: various kind of waste land, roadsides, railway embankments.

Phenology: tenanted mines occur in 2—3 generations from July to November.

Distribution: Central, South and East Europe, Central Asia. In Poland distributed in western and southern lowland, mainly along wide river valleys.

*Phyllonorycter lautella* (ZELLER, 1846)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve. CD 48 Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural deciduous oak-hornbeam forests, mixed suburban forests. Prefers shadowy places. Mines usually in leaves of seedlings.

Phenology: two generations a year present. Tenanted mines were found in July and in September—October.

Distribution: Europe, Asia Minor. In Poland distributed all over the lowland.

*Phyllonorycter ulmifoliella* (HÜBNER, 1817)

Localities: CD 37 Glinki, Przysiek, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (BUSZKO, 1977), Toruń-Barbarka, Toruń-Wrzosy. CD 48 Konieczynka, Łysomice, Papowo Toruńskie, Toruń-Przedmieście Mokre.

Host plants: *Betula pendula* ROTH, *B. pubescens* EHRL.

Habitat: suburban mixed forests, urban parks.

Phenology: occurs in two generations. Tenanted mines were found in July and in September—October. Adults were collected on tree trunks and attracted to light in May.

Distribution: Palaearctic Region (KUZNETSOV, 1981). In Poland common in the whole lowland and in lower mountains.

*Phyllonorycter emberizaepennella* (BOUCHÉ, 1834)

Localities: CD 37 Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plants: *Lonicera xylosteum* L., *L. tatarica* L., *Symphoricarpos albus* (L.) S. F. BLAKE.



**Habitat:** suburban forests, urban parks, streetside green.

**Phenology:** tenanted mines appeared in two generations, in July and in September—October. Adults were flushed from host plant bushes in the second half of May.

**Distribution:** western part of Palaearctic Region up to Central Asia. In Poland widely distributed in lowland, in mountains attains altitudes up to 1400 m a.s.l.

*Phyllonorycter tristrigella* (HAWORTH, 1828)

**Locality:** CD 37 Toruń-Bielany.

**Habitat:** suburban mixed forest.

**Phenology:** the sole specimen has been found on tree trunk on 27 V 1978.

**Distribution:** Europe. In Poland known from scattered localities in lowland.

*Phyllonorycter schreberella* (FABRICIUS, 1781)

**Localities:** CD 37 Mała Nieszawka, Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie.

**Host plants:** *Ulmus minor* MILL., *U. glabra* HUDS.

**Habitat:** sunny slopes, shrubberies along roadsides, suburban forests.

**Phenology:** tenanted mines appeared in two generations, in July and in September—October. Adults were found on tree trunks in late May.

**Distribution:** western part of Palaearctic Region up to Central Asia. In Poland widely distributed in lowland and in lower montane elevations.

*Phyllonorycter stettinensis* (NICELLI, 1852)

**Localities:** CD 37 Przysiek, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzesy. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie.

**Host plant:** *Alnus glutinosa* (L.) GAERTN.

**Habitat:** alder forests, prefers sunny forest edges.

**Phenology:** tenanted mines were found in two generations, in July and in September—October. Adults were collected on tree trunks from mid-May to mid-June.

**Distribution:** West and Central Europe, South Scandinavia. In Poland known from the whole lowland and submontane regions.

*Phyllonorycter froelichiella* (ZELLER, 1839)

**Localities:** CD 37 Przysiek, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie, Wielka Nieszawka. CD 38 Las Piwnicki Reserve (BUSZKO,

1977), Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie.

Hosts plant: *Alnus glutinosa* (L.) GAERTN.

Habitat: alder forests.

Phenology: tenanted mines were found in September—October. Adult specimens were collected on tree trunks from late May to mid-June.

Distribution: Europe. In Poland spread over the whole lowland and submontane regions.

***Phyllonorycter nicellii* (STANTON, 1851)**

Localities: CD 37 Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (BUSZKO, 1977).

Host plants: *Corylus avellana* L., *C. colurna* L.

Habitat: natural deciduous oak-hornbeam forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September—October.

Distribution: West and Central Europe, southern part of Scandinavia (KUZNETSOV, 1981). In Poland widely distributed in lowland and in lower montane elevations.

***Phyllonorycter kleemannella* (FABRICIUS, 1781)**

Localities: CD 37 Przysiek, Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie, Wielka Nieszawka. CD 38 Las Piwnicki Reserve (BUSZKO 1977), Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie.

Host plant: *Alnus glutinosa* (L.) GAERTN.

Habitat: alder forests.

Phenology: tenanted mines appeared in two generations, in July and in September—October. Adults were collected on tree trunks from mid-May to the first days of June.

Distribution: Europe, Asia Minor. In Poland widely distributed in the whole lowland and in submontane regions.

***Phyllonorycter acerifoliella* (ZELLER, 1839)**

Locality: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 47 Brzoza.

Host plant: *Acer campestre* L.

Habitat: suburban mixed forests, urban parks.

Phenology: two generations a year present. Tenanted mines appeared in July and in September—October.

Distribution: West, Central and South Europe. In Poland known from several localities in western part of lowland.

*Phyllonorycter platanoidella* (JOANNIS, 1920)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Rubinkowo, Toruń-Stawki.

Host plant: *Acer platanoides* L.

Habitat: natural deciduous forests, suburban mixed forests, urban parks, streetside green.

Phenology: tenanted mines were found in two generations, in July and in September-October. Adults were collected on tree trunks in May.

Distribution: western part of Palaearctic Region. In Poland widely distributed in lowland and in lower montane elevations.

*Phyllonorycter geniculella* (RAGONOT, 1874)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Czerniewice, Toruń-Rubinkowo.

Host plant: *Acer pseudoplatanus* L.

Habitat: suburban mixed forests, urban parks.

Phenology: tenanted mines were found in two generations, in July and in September-October. Adults were collected on tree trunks in the second half of May.

Distribution: Europe, Armenia. Widely distributed in the whole Polish lowland and in mountains up to 1200 m a.s.l. In NE districts only scattered localities.

*Phyllonorycter connexella* (ZELLER, 1846)

Localities: CD 37 Toruń-Przedmieście Bydgoskie. CD 47 Toruń-Stawki.

Host plants: *Populus nigra* L., *P. × canadensis* MOENCH, *P. × berolinensis* DIPP., various hybrids of balsam poplars, *Salix fragilis* L., *S. alba* L., *S. viminalis* L.

Habitat: riverine willow-poplar carrs, willow thicket in flooded plain along Vistula River, urban parks, streetside green.

Phenology: tenanted mines were found in two generations, in July and in September-October. Adults were collected on tree trunks in the second half of May.

Distribution: western part of Palaearctic Region. In Poland occurs in lowland and in lower montane elevations.



*Phyllonorycter agilella* (ZELLER, 1846)

Localities: CD 37 Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Stawki.

Host plant: *Ulmus laevis* PALL.

Habitat: suburban mixed forests, urban parks.

Phenology: produces two generations a year. Tenanted mines were found from July to October.

Distribution: Europe, South Ural, Central Asia (KUZNETSOV, 1981). In Poland recorded from scattered localities in the whole lowland.

*Phyllonorycter comparella* (DUPONCHEL, 1843)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 47 Toruń-Stawki.

Host plants: *Populus alba* L., *P. × canescens* (AIT.) SM.

Habitat: riverine willow-poplar carrs, urban parks, streetside green.

Phenology: occurs in two generations. Tenanted mines were found in July and in September—October. Adults were observed on tree trunks in May and in the first half of August.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland found locally in lowland, mainly in river valleys.

*Phyllonorycter sagitella* (BJERKANDER, 1790)

Localities: CD 37 Glinki. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plant: *Populus tremula* L.

Habitat: suburban mixed forests, prefers sunny forest edges.

Phenology: tenanted mines were found in two generations, in July and in September.

Distribution: Palaearctic Region up to Baikal area (KUZNETSOV, 1981). In Poland widely distributed in lowland and in lower mountains.

*Phyllonorycter pastorella* (ZELLER, 1846)

Localities: CD 37 Toruń-Barbarka, Toruń-Przedmieście Bydgoskie. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Łysomice.

Host plants: *Salix fragilis* L., *S. alba* L.

Habitat: riverine willow-poplar carrs, wet places along roadsides.

Phenology: tenanted mines were found in two generations, in July and in September—October.

Distribution: Palaearctic Region. In Poland spread over the entire area except for higher mountains.

***Phyllonorycter apparella* (HERRICH-SCHÄFFER, 1855)**

Localities: CD 38 Las Piwnicki Reserve, Toruń-Wrzosy.

Host plant: *Populus tremula* L.

Habitat: suburban forests, prefers forest edges.

Phenology: several tenanted mines have been found in the middle of July 1988. Apparently did not occur in the investigated area in the foregoing years.

Distribution: Palaearctic Region from Central Europe to the Far East of USSR. In Poland recently recorded from NE districts (BUSZKO 1987), but in 1988 appeared also in many localities in Central and NW Poland.

***Phyllonorycter populifoliella* (TREITSCHKE, 1833)**

Localities: CD 37 Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek. CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plants: *Populus nigra* L., *P. × canadensis* MOENCH, *P. × berolinensis* DIPP.

Habitat: occurs mainly in urbanized area. Mines were found almost everywhere on planted poplars in urban parks and streetside green. Tolerable to heavy traffic and industrial pollution.

Phenology: tenanted mines were found in two generations, in June—July and from the end of August to mid-October.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland recorded in the whole lowland, generally in larger towns.

***Phyllocnistidae******Phyllocnistis saligna* (ZELLER, 1839)**

Localities: CD 37 Toruń-Podgórz, Wielka Nieszawka. CD 47 Toruń-Stawki.

Host plants: *Salix purpurea* L., *S. fragilis* L., *S. amygdalina* L.

Habitat: riverine willow-poplar carrs, wet places along roadsides.

Phenology: tenanted mines were found from early August to the end of September. Adults appeared from the end of August to mid-October.

Distribution: western part of Palaearctic Region. In Poland found everywhere in lowland and in lower montane elevations.

***Phyllocnistis unipunctella* (STEPHENS, 1834)**

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Toruń-Barbarka. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Toruń-Przedmieście Mokre.

Host plants: *Populus nigra* L., *P. × canadensis* MOENCH, *P. × berolinensis* DIPP., *P. simonii* CARR., and various hybrids of balsam poplars.

**Habitat:** found almost everywhere with planted or wild growing poplars. In years of population outbreak (1977 and 1979) was very abundant. Tolerable to heavy traffic and industrial pollution.

**Phenology:** tenanted mines occur in two generations, in June—July and again from the end of August to the beginning of October.

**Distribution:** western part of Palaearctic Region. In Poland spread over the whole country except for higher mountains. The present distribution in Poland is a result of the common practice of poplar planting along roadsides and in urban green areas.

### *Roeslerstammiidae*

#### *Roeslerstammia exlebelli* (FABRICIUS, 1787)

**Locality:** CD 38 Las Piwnicki Reserve.

**Habitat:** natural deciduous oak-hornbeam forest.

**Phenology:** two specimens have been collected at light on 31 VII 1978 and 15 VIII 1980

**Distribution:** western part of Palaearctic Region. In Poland widely spread in lowland and in submontane regions.

#### *Roeslerstammia pronubella* (DENIS & SCHIFFERMÜLLER, 1775)

**Locality:** CD 38 Las Piwnicki Reserve.

**Habitat:** natural deciduous oak-hornbeam forest.

**Phenology:** occurs in two generations in May—June and in August. Collected infrequently at light.

**Distribution:** South and Central Europe. In Poland known apart from above mentioned locality only from Silesia (WOCKE, 1874) and Pieniny Mts. (BLESZYŃSKI & al., 1965)

### *Bucculatricidae*

#### *Bucculatrix cristatella* ZELLER, (1839)

**Localities:** CD 37 Glinki, Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy.

**Host plant:** *Achillea millefolium* L.

**Habitat:** open grassland, prefers rather dry places.

**Phenology:** two generations a year present. Externally feeding larvae were found in the second half of April, adults were collected during the day in May and in August.

**Distribution:** Europe. In Poland occurs locally in lowland and in lower montane elevations.



***Bucculatrix nigricomella* ZELLER, (1839)**

Localities: CD 38 Olek, Las Piwnicki Reserve.

Host plant: *Leucanthemum vulgare* LAM.

Habitat: grassy places in clearings and at forest edges.

Phenology: tenanted mines were found at the beginning of July. One adult specimen has been collected at light on 7 VI 1978.

Distribution: Europe: In Poland widely distributed in lowland and in submontane regions.

***Bucculatrix gnaphaliella* (TREITSCHKE, 1833)**

Locality: CD 38 Toruń-Barbarka.

Host plant: *Helichrysum arenarium* (L.) MOENCH.

Habitat: sandy places with xerothermic plant communities.

Phenology: pupal cocoons were found on host plants in the second half of May. Adults were collected by sweeping over the vegetation in June.

Distribution: Europe. In Poland occurs locally in lowland.

***Bucculatrix noltei* PETRY, 1912**

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo, Toruń-Stawki. CD 48 Papowo Toruńskie.

Host plant: *Artemisia vulgaris* L.

Habitat: various kind of waste land with weed plant communities. Especially common in suburban areas.

Phenology: occurs in two generations, mines and externally feeding larvae were found in July and again in September.

Distribution: South and locally Central Europe. In Poland spread in the whole lowland except for mountains and NE districts.

***Bucculatrix artemisiella* HERRICH-SCHÄFFER, 1855**

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Toruń-Barbarka, Toruń-Wrzosy.

Host plant: *Artemisia campestris* L.

Habitat: sandy places with xerothermic grassland, especially sunny slopes, roadsides, old gravel pits, open waste land.

Phenology: mines and externally feeding larvae occur in two generations, in April and again in July. Pupal cocoons were found in the first half of August.

Distribution: Europe. Known from scattered localities in Polish lowland.

***Bucculatrix frangutella* (GÖZE, 1783)**

(*B. frangulella* auct.)

Localities: CD 37 Kąkol, Mała Nieszawka, Wielka Nieszawka, Toruń-Bielany, Toruń-Podgórz. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Rubinkowo. CD 48 Papowo Toruńskie.

Host plants: *Rhamnus cathartica* L., *Frangula alnus* MILL.

Habitat: alder carrs, sunny slopes, various kind of suburban mixed forests.

Phenology: mines and externally feeding larvae were found from the beginning of August to the end of September. Adult specimens were flushed from bushes in the first half of June.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland widely distributed in lowland and in lower montane elevations.

***Bucculatrix albedinella* (ZELLER, 1839)**

Localities: CD 37 Mała Nieszawka, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Lulkowo. CD 47 Toruń-Stawki. CD 48 Toruń-Mokre.

Host plant: *Ulmus minor* MILL.

Habitat: exposed slopes, sunny forest edges, roadsides, urban parks.

Phenology: mines and externally feeding larvae appeared in two generations, in July and in September.

Distribution: Europe, Asia Minor. Occurs locally in the whole Polish lowland and in lower montane elevations.

***Bucculatrix bechsteinella* (BECHSTEIN & SCHARFENBERG, 1805)**

(*B. crataegi* ZELLER, 1839)

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Różankowo, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Podgórz.

Host plants: *Crataegus monogyna* JACQ., *C. curvisepala* LINDM., *Pyrus communis* L., *Sorbus aucuparia* L., *S. intermedia* (EHRH.) PERS., *Malus domestica* BORKH., *Amelanchier spicata* (LAM.) C. KOCH.

Habitat: orchards, urban parks, suburban forests. Prefers sunny places.

Phenology: mines and externally feeding larvae were found in two generations, from mid-June to mid-July and again in September—October. Adult specimens were collected at light and flushed from thorn bushes in May.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland widely distributed in lowland and in lower montane elevations.

***Bucculatrix ulmella* ZELLER, 1848**

Localities: CD 37 Cierpice, Toruń-Bielany, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 48 Papowo Toruńskie.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural and suburban deciduous forests, urban parks.

Phenology: mines and externally feeding larvae were found in two generations in July and in September—October. Adult specimens were found on tree trunks in May.

Distribution: Europe: In Poland spread all over the lowland.

*Bucculatrix ulmifoliae* M. HERING, 1930

Localities: CD 37 Mała Nieszawka, Wielka Nieszawka, Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie. CD 47 Toruń-Stawki. CD 48 Łysomice, Toruń-Przedmieście Mokre.

Host plant: *Ulmus minor* MILL.

Habitat: exposed slopes, sunny forest edges, roadsides, urban parks.

Phenology: mines and externally feeding larvae were found in two generations, in July and in September—October.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland occurs locally in thermically favourable places in lowland.

*Bucculatrix cidarella* (ZELLER, 1839)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Stawki.

Host plant: *Alnus glutinosa* (L.) GAERTN.

Habitat: alder forests, prefers sunny forest edges.

Phenology: mines and externally feeding larvae were found from the second half of August to the end of September.

Distribution: Europe, Central Asia. In Poland distributed in the entire lowland and in lower montane elevations.

*Bucculatrix thoracella* (THUNBERG, 1794)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy, CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plants: *Acer platanoides* L., *A. campestre* L., *Tilia cordata* MILL., *T. platyphyllos* SCOP.

Habitat: natural and suburban forests, urban parks, streetside green. The species is extraordinarily resistant to traffic pollution and is common on linden trees at most crowded streets.

Phenology: mines and externally feeding larvae were found in two generations, in July and from the end of August to the first days of October. Adults were found on tree trunks in May.

Distribution: Europe. In Poland spread over the whole lowland and lower montane elevations.



*Yponomeutidae****Yponomeuta sedella* TREITSCHKE, 1832***(Y. vigintipunctata auct.)*

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Sedum telephium* L.

Habitat: sunny slopes with xerothermic vegetation.

Phenology: tenanted mines and externally feeding larvae were found in September and October. Adults were collected infrequently at light in July and August.

Distribution: Palaearctic Region. In Poland occurs in lowland and in lower montane elevations.

***Cedestis gysseleniella* ZELLER, 1839**

Locality: CD 38 Las Piwnicki Reserve.

Habitat: suburban pine and mixed forests.

Phenology: several adult specimens have been collected at light in June and July.

Distribution: Europe. In Poland known from scattered localities in lowland and in highlands.

***Cedestis subfasciella* (STEPHENS, 1834)**

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Habitat: pine and mixed forests in suburban area.

Phenology: three specimens were collected at light on 13 VIII 1980 and 26 VI 1987.

Distribution: Europe. In Poland spread in lowland and in lower montane elevations.

***Ocnerostoma pinariella* ZELLER, 1847**

Localities: CD 37 Toruń-Bielany, CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Pinus sylvestris* L.

Habitat: pine forests of various age.

Phenology: tenanted mines were found in May. Adults were attracted to light in July.

Distribution: Europe. In Poland found locally in lowland, but less common than *O. friesei* Sv.

*Ocneristoma friesei* SVENSSON, 1966

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Pinus sylvestris* L.

Habitat: pine forests, prefers sunny forest edges and young trees.

Phenology: tenanted mines were found in two generations, in September—October and again in June—July. Adults were collected during the day and attracted to light from late April to mid-May and in July—August.

Distribution: Europe. In Poland known from many localities in the whole lowland.

*Atemelia torquatella* (ZELLER, 1846)

Localities: CD 37 Toruń-Bielany. CD 47 Toruń-Stawki.

Host plants: *Betula pubescens* EHRH., *Ulmus minor* MILL.

Habitat: suburban forests, prefers sunny forest edges.

Phenology: tenanted mines were found in September—October.

Distribution: western part of Palaearctic Region up to Ural Mts. In Poland known from scattered localities in lowland.

*Prays fraxinellus* (BJERKANDER, 1784)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: ash-elm carrs (*Fracino-Ulmetum*) at the pond edges.

Phenology: adult specimens were collected infrequently at light from early June to the end of July.

Distribution: temperature climatic belt of Palaearctic Region from Great Britain to Far East of USSR. In Poland found locally in lowland and in lower montane elevations.

*Plutellidae**Plutella xylostella* (LINNAEUS, 1758)

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Habitat: gardens, various kind of waste land, open grassland.

Phenology: adults of several generations were collected from mid-May to October.

Distribution: the species is known to be a cosmopolitan element. Occurs in the whole area of Poland including highest peaks of Tatra Mts.

*Acrolepiidae**Digitivalva valeriella* (SNELLEN, 1878)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: adult specimens were collected at light in two generations, in June and again in August.

Distribution: Europe. In Poland occurs locally in the whole lowland.

*Acrolepiopsis assectella* (ZELLER, 1839)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest. In this habitat the species is only an accidental element as its usual occurrence is confined to gardens and various kind of farmland.

Phenology: one adult specimen has been collected at light on 30 V 1980.

Distribution: Europe. In Poland common in lowland and in lower montane elevations.

*Acrolepia autumnitella* CURTIS, 1838

(*A. pygmaeana* auct.)

Localities: CD 37 Toruń-Bielany, Toruń Podgórz, Wielka Nieszawka. CD 38 Las Piwnicki Reserve.

Host plant: *Solanum dulcamara* L.

Habitat: alder carrs and alder swamps (*Carici elongatae-Alnetum*).

Phenology: tenanted mines were found from beginning of August to the end of September. In 1984 the species was very abundant, in the next years became rare again.

Distribution: South and Central Europe. In Poland widely distributed in lowland.

*Cemiostomidae**Leucoptera spartifoliella* (HÜBNER, 1813)

Localities: CD 38 Toruń Barbarka. CD 48 Papowo Toruńskie.

Host plant: *Cytisus scoparius* (L.) LINK.

Habitat: sunny forest edges densely grown with broom.

Phenology: tenanted mines were found from October till mid-May. Cocoons with pupae appeared from mid-May to the first days of June. During the se-



vere winter 1986/1987 the species has been completely exterminated together with its host plant by heavy frosts.

Distribution: South, West and Central Europe. In Poland occurs locally in lowland except for NE districts.

*Leucoptera aceris* (FUCHS, 1903)

Locality: CD 38 Toruń-Wrzosy (BUSZKO & ŚLIWIŃSKI, 1979).

Habitat: streetsides with mapple trees (*Acer platanoides* L.).

Phenology: adult specimens were collected on tree trunks in June.

Distribution: South and locally Central Europe. In Poland known only from above mentioned locality.

*Leucoptera lotella* (STANTON, 1859)

Localities: CD 37 Toruń-Podgórz, Wielka Nieszawka. CD 38 Las Piwnicki Reserve, Toruń Barbarka.

Host plant: *Lotus uliginosus* SCHKUHR.

Habitat: wet meadows, especially along ditch edges.

Phenology: tenanted mines were found in two not clearly separated generations from mid-June to the end of September.

Distribution: West and South Europe. In Poland common in NW part of the country where the larva feeds on *L. uliginosus* SCHKUHR and *L. corniculatus* L. In SE districts the larva feeds on *Coronilla varia* L. Probably there are two trophic races with disjunction in Central Poland.

*Leucoptera lustratella* (HERRICH-SCHÄFFER, 1855)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Brzoza, Toruń-Rubinkowo. CD 48 Łysomice.

Host plants: *Hypericum perforatum* L., *H. maculatum* CRANTZ.

Habitat: various kind of meadows, forest edges, roadsides.

Phenology: tenanted mines were collected in two generations, in June—July and in September—October.

Distribution: Central Europe. In Poland spread all over the lowland and lower montane elevations.

*Lyonetiidae*

*Lyonetia clerkella* (LINNAEUS, 1758)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Stawki.

Host plants: *Malus domestica* BORKH., *M. sylvestris* MILL., *Prunus cera-*

*sus* L., *P. avium* L., *P. padus* L., *P. serotina* EHRH., *P. domestica* L., *P. spinosa* L., *Sorbus aucuparia* L., *Crataegus monogyna* JACQ., *Betula pendula* ROTH.

Habitat: orchards, suburban forests, urban parks, streetside green, riverine willow-poplar carrs.

Phenology: tenanted mines were found in two generations, in July and again from mid-August to the beginning of October. One adult specimen has been collected on 22 V 1980. In 1977 the species was very abundant.

Distribution: Palaearctic Region. In Poland occurs in the entire area except for high mountains.

### *Lyonetia prunifoliella* (HÜBNER, 1796)

Localities: CD 37 Cierpice, Toruń-Bielany. CD 38 Toruń-Barbarka, Toruń-Wrzosy. CD 48 Papowo Toruńskie.

Host plants: *Betula pendula* ROTH, *Prunus cerasifera* EHRH., *Malus domestica* BORKH.

Habitat: suburban forests, urban parks, orchards, streetside green.

Phenology: tenanted mines were found in August—September.

Distribution: Palaearctic Region. In Poland occurs in the entire lowland and in lower montane elevations.

### *Bedellia somnulentella* (ZELLER, 1847)

Localities: CD 37 Toruń-Bielany, Toruń-Osiedle Młodych. CD 47 Toruń-Stawki.

Host plant: *Convolvulus arvensis* L.

Habitat: various kind of waste land, often on hedges grown with trailing bindweed. Apparently not sensitive to heavy traffic and industrial pollution.

Phenology: tenanted mines appeared in August—September. During its population outbreak in 1977 the species was very plentiful.

Distribution: Holarctic Region. In Poland found in the whole lowland except for NE districts.

## *Elachistidae*

### *Mendesia farinella* (THUNBERG, 1794)

Localities: CD 38 Las Piwnicki Reserve (BUSZKO, in press).

Habitat: natural deciduous oak-hornbeam forest.

Phenology: two specimens have been collected at light on 5 VI 1980 and 23 V 1981.

Distribution: Europe, North Africa. In Poland recorded from several places in central and western parts of the country.

*Perittia obscurepunctella* (STANTON, 1848)

Localities: CD 37 Toruń-Bielany, Toruń-Osiedle Młodych (BUSZKO, in press).

Host plant: *Lonicera tatarica* L.

Habitat: urban parks and streetside green, seems to be resistant to heavy traffic and industrial pollution.

Phenology: tenanted mines were found in the second half of June. One specimen has been collected on 4 V 1988.

Distribution: Central and West Europe. In Poland recorded otherwise only from Poznań (TOLL, 1947) and Czołków (BUSZKO, in press).

*Perittia herrichiella* (HERRICH-SCHÄFFER, 1855)

Locality: CD 37 Toruń-Osiedle Młodych.

Host plants: *Lonicera xylosteum* L., *L. tatarica* L.

Habitat: urban parks, streetside green.

Phenology: tenanted mines were collected in July.

Distribution: Europe. In Poland widely distributed in lowland and in lower montane elevations (BUSZKO, in press).

*Elachista regificella* SIRCOM, 1849

Locality: CD 38 Las Piwnicki Reserve (BUSZKO, 1977 — as *Elachista gleichenella*).

Host plant: *Luzula pilosa* (L.) WILLD.

Habitat: shadowy places in mixed forest.

Phenology: tenanted mines were found in the first days of May.

Distribution: Europe. Known from almost all parts of Poland.

*Elachista poae* STANTON, 1855

Localities: CD 37 Przysiek, Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Glyceria maxima* (HARTM.) HOLMB.

Habitat: swampy vegetation at the edges of ponds and streams.

Phenology: tenanted mines were found in April and in the beginning of May. One adult specimen has been attracted to light on 10 VI 1980.

Distribution: West, Central and North Europe. In Poland known from several localities in various parts of lowland.

*Elachista alpinella* STANTON, 1854

Locality: CD 38 Las Piwnicki Reserve.

Host plant: *Carex acutiformis* EHRL.

Habitat: swampy vegetation at the edges of ponds and streams.



Phenology: tenanted mines were found from mid-May to the end of June. One adult specimen has been obtained by sweeping over the vegetation on 12 VIII 1987.

Distribution: Europe. In Poland is known to occur in few localities in lowland and in submontane regions.

*Elachista luticomella* ZELLER, 1839

Locality: CD 38 Las Piwnicki Reserve.

Host plants: *Dactylis glomerata* L., *D. aschersoniana* (GRAEBN.) THELL.

Habitat: natural deciduous forests, shadowy places along forest edges.

Phenology: tenanted mines were found from the beginning of April to mid-May.

Distribution: Europe. In Poland known from almost all parts of lowland.

*Elachista griseella* (DUPONCHEL, 1843)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Toruń-Barbarka. CD 47 Toruń-Czerniewice, Toruń-Stawki (BUSZKO, 1989).

Host plants: *Elymus repens* (L.) GOULD, *Calamagrostis epigejos* (L.) ROTH, *Dactylis glomerata* L., *Festuca rubra* L.

Habitat: moist places mainly in flooded plain, prefers nitrophilous plant communities.

Phenology: tenanted mines were found from mid-April to the first days of May. Adults were swept from the herb layer in June.

Distribution: South Europe, locally also in Central Europe. In Poland known from several localities situated along main river valleys.

*Elachista albifrontella* (HÜBNER, 1817)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Elymus repens* (L.) GOULD. *Agrostis canina* L., *Alopecurus pratensis* L., *Arrhenatherum elatius* (L.) BEAUV., *Calamagrostis epigejos* (L.) ROTH, *Dactylis glomerata* L., *Deschampsia cespitosa* (L.) BEAUV., *Festuca rubra* L., *Avenula pubescens* (HUDS.) DUMORT., *Poa pratensis* L., *P. trivialis* L.

Habitat: various kind of grassland, especially in forest clearings and glades, neglected urban parks, roadsides. Prefers rather shadowy situations.

Phenology: tenanted mines were found from the end of April to mid-May. Adults were collected from late May to the beginning of July.

Distribution: Europe. In Poland distributed all over the lowland, in mountains occurs up to 1370 m a.s.l. One of the most common Elachistid species in Poland.

*Elachista nobilella* ZELLER, 1839

Localities: CD 37 Glinki. CD 38 Olek, Las Piwnicki Reserve.

Host plant: *Deschampsia flexuosa* (L.) TRIN.

Habitat: shady places in coniferous and mixed forests.

Phenology: tenanted mines were collected at the end of April and in the first days of May. Several adult specimens were collected during the day on 5 VI 1988

Distribution: Europe. In Poland local in lowland, more common in mountains.

*Elachista apicipunctella* STANTON, 1849

Localities: CD 37 Toruń-Przedmieście Bydgoskie. CD 38 Las Piwnicki Reserve (BUSZKO, in press).

Host plants: *Milium effusum* L., *Festuca gigantea* (L.) VILL., *Deschampsia cespitosa* (L.) BEAUV., *Dactylis glomerata* L., *D. aschersoniana* (GRAEBN.) THELL. *Brachypodium sylvaticum* (HUDS.) BEAUV., *Arrhenatherum elatius* (L.) BEAUV.

Habitat: natural deciduous forests, especially of the community *Tilio-Carpinetum*

Phenology: tenanted mines were collected from mid-October to the end of November. Adults were attracted to light in the first half of June.

Distribution: Europe. In Poland occurs locally in the entire area including subalpine forest zone.

*Elachista subnigrella* DOUGLAS, 1853

Locality: CD 38 Las Piwnicki Reserve.

Host plant: *Avenula pubescens* (HUDS.) DUMORT.

Habitat: dry, sunny places along forest edges and glades.

Phenology: tenanted mines were found at the end of April. Adults appeared from mid-May to the beginning of June.

Distribution: Europe. In Poland occurs locally in lowland.

*Elachista herrichii* FREY, 1859

(*E. reutliana* FREY, 1859)

Locality: CD 37 Glinki (BUSZKO, in press).

Habitat: inland dunes with heath and xerothermic grassland.

Phenology: only one specimen has been collected during the day on 4 V 1988.

Distribution: Central Europe. In Poland reported from several localities in Poprad Valley in Beskid Sądecki Mts. (SCHILLE, 1917). However, these determinations should be confirmed by new field investigations.

*Elachista humilis* ZELLER, 1850

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Deschampsia cespitosa* (L.) BEAUV.

Habitat: moist places in drained alder carrs, neglected fresh meadows.

Phenology: tenanted mines occur in early May. Adult specimens were collected at light in the first half of June.

Distribution: Europe. In Poland distributed in the whole area including subalpine forest zone.

*Elachista canapennella* (HÜBNER, 1813)

(*E. pulchella* HAWORTH, 1828)

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Habitat: glades and clearings in both deciduous and mixed forests, prefers places with rich herb layer.

Phenology: several specimens have been collected by sweeping from the vegetation in the second half of May.

Distribution: North and Central Europe. In Poland found locally in lowland.

*Elachista cerusella* (HÜBNER, 1796)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Las Piwnicki Reserve. CD 47 Toruń-Rubinkowo, Toruń-Stawki.

Host plants: *Elymus repens* (L.) GOULD., *Phalaris arundinacea* L., *Phragmites australis* (CAV.) TRIN. ex STEUDEL, *Bromus inermis* LEYSS., *Calamagrostis epigejos* (L.) ROTH, *Alopecurus pratensis* L., *Dactylis glomerata* L.

Habitat: moist places, especially glades in deciduous forest, roadsides, clearings in willow-poplar carr, banks of streams and ditches.

Phenology: occurs in two generations. Tenanted mines were found from mid-April to the first days of May and again in July. Adults were collected from late May to the end of June and again in July—August.

Distribution: West and Central Europe, Asia Minor. In Poland common in the whole lowland and in lower montane elevations.

*Elachista argentella* (CLERCK, 1759)

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Podgórz. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Czerniewice, Toruń-Stawki. CD 48 Toruń-Przedmieście Mokre.

Host plants: *Festuca rubra* L., *F. trachyphylla* (HACK.) KRAJINA, *Poa pratensis* L., *Calamagrostis epigejos* (L.) ROTH, *Elymus repens* (L.) GOULD, *Leymus arenarius* (L.) HOCHST., *Avenula pubescens* (HUDS.) DUMORT., *A. pratensis* (L.) DUMORT., *Koeleria grandis* BESS & GORSKI, *K. glauca* (SPRENG.) DC.



Habitat: dry open grassland, especially clearings and glades in the forest, roadsides, old gravel pits, sunny slopes.

Phenology: tenanted mines were found from the beginning of April to the first days of May. Adults were collected from the end of May to the beginning of July.

Distribution: Palaearctic Region. In Poland widely distributed in lowland and in lower montane elevations.

*Elachista pollinariella* ZELLER, 1839

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Czerniewice, Toruń-Stawki, Złotoria. CD 48 Papowo Toruńskie.

Host plant: *Festuca rubra* L.

Habitat: sunny slopes, roadsides, old gravel pits, also lawns in the town. In years of outbreak of its population caused locally severe damage to the lawns.

Phenology: tenanted mines were found from late April to mid-May. Adults were collected from the end of May to the beginning of July.

Distribution: East and Central Europe. In Poland widely distributed all over the lowland.

*Elachista triseriatella* STAINTON, 1854

Locality: CD 38 Toruń-Barbarka (BUSZKO, in press).

Habitat: xerothermic grassland in an old gravel pit.

Phenology: a single specimen has been captured on 26 VII 1987.

Distribution: known from southern Sweden and Great Britain. Distribution in Central and South Europe is not exactly known because of confusion with *E. dispunctella* (DUP.). This is the only known locality in Poland.

*Elachista dispunctella* (DUPONCHEL, 1843)

Locality: CD 37 Toruń-Bielany (BUSZKO, in press).

Habitat: xerothermic grassland on inland dunes.

Phenology: two specimens have been collected on 19 V 1984 and 25 V 1985.

Distribution: West and Central Europe. In Poland previously reported from Wrocław vicinity (WOCKE, 1874) and Szczecin (HERING, 1891).

*Elachista dispilella* ZELLER, 1839

Locality: CD 37 Toruń-Bielany.

Habitat: xerothermic grassland on inland dunes.

Phenology: two specimens were collected on 25 V 1978 and 26 V 1987.

Distribution: Europe. In Poland found on scattered localities in southern and western lowland.

*Elachista unifasciella* (HAWORTH, 1828)

Locality: CD 38 Las Piwnicki Reserve.

Host plant: *Dactylis aschersoniana* (GRAEBN.) THELL.

Habitat: deciduous oak-hornbeam forest.

Phenology: mines with young larvae were found in November. After hibernation larvae fed until mid-May without changing the mine.

Distribution: Central and South Europe. In Poland known from lowland, more common in NE of the country.

*Elachista revinctella* ZELLER, 1850

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Deschampsia cespitosa* (L.) BEAUV., *Milium effusum* L.

Habitat: moist forest glades, shady places in alder and oak-hornbeam forest.

Phenology: tenanted mines were found in May. Adults were collected at light in July.

Distribution: western part of Palaearctic Region. In Poland known from the entire area including alpine meadows zone.

*Elachista bisulcella* (DUPONCHEL, 1843)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve.

Host plant: *Calamagrostis epigejos* (L.) ROTH.

Habitat: grassy places at forest edges.

Phenology: tenanted mines were found in the first days of May. Adults were collected in July and August.

Distribution: Europe. Known from scattered localities in Polish lowland.

*Elachista pullicomella* ZELLER, 1839

Localities: CD 37 Glinki, Toruń-Bielany, Toruń-Podgórz. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Poa pratensis* L., *P. annua* L., *Festuca rubra* L., *F. trachyphylla* (HACK.) KRAJINA.

Habitat: grassy places at forest edges, roadsides. Prefers rather dry habitats.

Phenology: tenanted mines were found in April and first days of May. Adults were collected from late May to the end of June.

Distribution: Europe. In Poland spread locally over the whole lowland.

*Elachista bedellella* (SIRCOM, 1848)

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Las Piwnicki Reserve.

Host plant: *Festuca trachyphylla* (HACK.) KRAJINA.

Habitat: xerothermic grassland, mainly in open sandy places.

Phenology: tenanted mines were found in two generations, from mid-April to the first days of May and again in June. Adults were collected from mid-May to mid-June and in the second half of July.

Distribution: Europe. In Poland occurs locally in the whole lowland.

*Biselachista cinereopunctella* (HAWORTH, 1828)

Locality: CD 37 Glinki (BUSZKO, in press).

Host plant: *Carex ericetorum* POLL.

Habitat: xerothermic sandy places among young pine forest.

Phenology: tenanted mines were found in April, several adult specimens have been collected in the late afternoon on 5 VI 1988.

Distribution: Central and South Europe. In Poland known otherwise from Tatra Mts. (BUSZKO and BARANIAK, 1989).

*Biselachista freyi* (STAUDINGER, 1870)

Locality: CD 37 Glinki (BUSZKO, in press).

Host plant: *Carex ericetorum* POLL.

Habitat: inland dunes with xerothermic grassland among scattered young pine trees.

Phenology: tenanted mines were found in May—June, two adult specimens have been found on 25 VII 1987.

Distribution: Central and South Europe. In Poland recorded previously only from Tatra Mts. (BUSZKO and BARANIAK, 1989).

*Biselachista utonella* (FREY, 1856)

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Carex acutiformis* EHRH., *C. paniculata* L., *C. hirta* L., *C. echinata* MURR.

Habitat: wet meadows, swampy vegetation at ponds and streams, moist forest glades.

Phenology: tenanted mines were found from late May to mid-June. Adult specimens were collected at light from the end of June to the first days of August.

Distribution: North and Central Europe. In Poland found in several localities in lowland and in lower montane elevations.

*Biselachista albidella* (NYLANDER, 1848)

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.



Habitat: swampy meadows.

Phenology: adult specimens were collected at light from the end of June to mid-August.

Distribution: Europe. In Poland occurs in the whole lowland and in lower montane elevations.

*Cosmiotes freyerella* (HÜBNER, 1825)

Localities: CD 37 Toruń-Bielany, Toruń-Podgórz, Toruń-Przedmieście Bydgoskie. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Poa annua* L., *P. pratensis* L., *P. trivialis* L., *P. nemoralis* L.

Habitat: moist meadows, forest clearings, shady places in alder forests.

Phenology: tenanted mines were found in two generations, from mid-April to the first days of May and again in June. Adults were collected from mid-May to the beginning of June.

Distribution: Europe. In Poland distributed all over the country.

*Coleophoridae*

*Coleophora lutipennella* (ZELLER, 1838)

Locality: CD 38 Las Piwnicki Reserve.

Host plants: *Quercus robur* L., *Q. petraea* (MATT.) LIEBL.

Habitat: natural and planted suburban forests, urban parks.

Phenology: mines and tenanted larval cases were found in June. Adult specimens were captured at light from the beginning of July to mid-August.

Distribution: Europe, Asia Minor. Widely distributed in the whole Polish lowland.

*Coleophora spiraeella* REBEL, 1916

Localities: CD 37 Toruń-Bielany. CD 47 Toruń-Stawki, Toruń-Śródmieście.

Host plant: *Spiraea* × *vanhouttei* ZAB.

Habitat: hedges in various kind of urban green.

Phenology: mines and tenanted larval cases were found in September.

Distribution: Central Europe. In Poland known on the base of one old record from Nowy Sącz (TOLL, 1952), but in own field research found in many localities in lowland, mainly in the large towns. The species seems to be resistant to traffic and industrial pollution.

*Coleophora gryhipennella* (HÜBNER, 1796)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka. CD 47 Toruń-Rubinkowo.

Host plants: *Rosa canina* L., *R. rubiginosa* L.

Habitat: sunny forest edges, also in urban parks.

Phenology: mines and tenanted larval cases were found in September—October.

Distribution: Europe. In Poland widely distributed in lowland and in lower montane elevations.

*Coleophora flavipennella* (DUPONCHEL, 1843)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: adult specimens were collected at light from the end of June to the beginning of August.

Distribution: Europe, Asia Minor. In Poland occurs in the entire lowland.

*Coleophora limosipennella* (DUPONCHEL, 1843)

Locality: CD 38 Toruń-Bielany.

Host plants: *Ulmus minor* MILL., *U. glabra* HUDS.

Habitat: roadsides, sunny forest edges.

Phenology: tenanted mines were found in July—August. Cases with hibernating larvae were encountered sometimes spoon on twigs of the host plant.

Distribution: Europe, Asia Minor. In Poland occurs frequently in the whole lowland.

*Coleophora milvipennis* ZELLER, 1839

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous forest.

Phenology: several specimens have been collected at light in July.

Distribution: Europe, Asia Minor, Japan. In Poland known from several localities in western part of lowland.

*Coleophora badiipennella* (DUPONCHEL, 1843)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve.

Host plant: *Ulmus minor* MILL.

Habitat: natural and cultivated suburban forests.

Phenology: mines and tenanted larval cases were found in May. Adult specimens were collected infrequently at light in June.

Distribution: Europe. In Poland known from scattered localities in western part of lowland.

*Coleophora siccifolia* STANTON, 1856

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: one specimen has been collected at light on 13 VII 1980.

Distribution: Central and South Europe. In Poland known from scattered localities in lowland.

*Coleophora serratella* (LINNAEUS, 1761)

(*C. fuscedinella* ZELLER, 1849)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka, Las Piwnicki Reserve (BUSZKO, 1977).

Host plants: *Alnus glutinosa* (L.) GAERTN., *Betula pendula* ROTH.

Habitat: natural and cultivated suburban forests, urban parks.

Phenology: mines and tenanted larval cases were found in late May. Adult specimens were collected at light in late June.

Distribution: Holarctic Region. In Poland widely distributed in lowland and lower montane elevations.

*Coleophora spinella* (SCHRANK, 1802)

(*C. cerasivorella* PACKARD, 1870; *C. serratella* auct.)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka. CD 47 Toruń-Kaszczonek. CD 48 Konieczynka.

Host plants: *Crataegus monogyna* JACQ., *C. laevigata* (POIR.) DC., *C. curvisepala* LINDM., *Malus domestica* BORKH., *M. sylvestris* MILL., *Sorbus aucuparia* L., *Pyrus communis* L., *Prunus mahaleb* L.

Habitat: orchards, urban parks, streetside green, roadsides in countryside, various kind of suburban forests.

Phenology: mines and tenanted larval cases were found in June. Adults were collected at light in July.

Distribution: Holarctic Region. In Poland common everywhere except for higher montane elevations.

*Coleophora arctostaphyli* MEDER, 1933

Locality: CD 37 Glinki.

Habitat: heaths with patches of *Arctostaphylos uva-ursi* (L.) SPRENG. on inland dunes.

Phenology: several specimens have been collected during the day on 27 V 1986 and 26 VI 1987.

Distribution: North, Central and West Europe. In Poland recorded only from Puszcza Kampinoska Forest near Warszawa (ADAMCZEWSKI, 1947).



*Coleophora viminetella* ZELLER, 1849

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: only one specimen has been collected at light on 26 VII 1980.

Distribution: Europe. Widely spread in Polish lowland and in lower montane elevations.

*Coleophora vitisella* GREGSON, 1856

Localities: CD 37 Glinki. CD 47 Toruń-Czerniewice.

Host plant: *Vaccinium vitis-idaea* L.

Habitat: shady and moist places in pine forests of various age.

Phenology: mines and larval cases were found in October and in April—May.

Distribution: North, West and Central Europe. In Poland known from scattered localities all over the country including high mountains.

*Coleophora violacea* (STRÖM, 1783)

(*C. hornigi* TOLL. 1952)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: only one specimen has been captured at light on 17 VI 1980.

Distribution: Europe. In Poland recorded from Poznań district (TOLL, 1952).

*Coleophora juncicolella* STANTON, 1851

Locality: CD 37 Glinki.

Habitat: heaths on inland dunes.

Phenology: several adult specimens have been caught by sweeping over the heather on 5 VII 1988.

Distribution: North and Central Europe, locally also in South Europe. In Poland known from few localities in western part of lowland.

*Coleophora lineolea* (HAWORTH, 1828)

Locality: CD 37 Toruń-Bielany.

Host plant: *Ballota nigra* L.

Habitat: various kind of waste land, roadsides.

Phenology: mines and tenanted larval cases were found in late May and in the beginning of June.

Distribution: Europe. In Poland recorded from several places in western part of lowland.

*Coleophora hemerobiella* (SCOPOLI, 1763)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Crataegus monogyna* JACQ., *Malus domestica* BORKH.

Habitat: various kind of suburban forests, roadsides, orchards in built-up areas.

Phenology: mines and tenanted larval cases were found from early June to the first days of July. Adults were collected at light in July.

Distribution: Europe. In Poland spread everywhere in lowland and in lower montane elevations.

*Coleophora lithargyrinella* ZELLER, 1849

(*C. olivacella* STAINTON, 1854)

Locality: CD 38 Las Piwnicki Reserve (BUSZKO, 1977).

Host plant: *Stellaria holostea* L.

Habitat: shady spots in natural deciduous oak-hornbeam forest.

Phenology: mines and tenanted larval cases were found in May.

Distribution: West, Central and North Europe. In Poland recorded from scattered localities in lowland and in mountains.

*Coleophora colutella* (FABRICIUS, 1794)

(*C. crocinella* TENGSTROM, 1848)

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka.

Host plants: *Lotus corniculatus* L., *Coronilla varia* L., *Astragalus glycyphyllos* L.

Habitat: glades in light mixed forest, roadsides, sunny forest edges.

Phenology: mines and tenanted larval cases were found from late May to mid-June. Adult specimens were collected at light and during the day at the end of June.

Distribution: Europe. Known from several scattered localities in Polish lowland and in lower mountains.

*Coleophora trifariella* ZELLER, 1849

Locality: CD 38 Toruń-Barbarka.

Habitat: sunny forest edges densely grown with broom — *Cytisus scoparius* (L.) LINK.

Phenology: three specimens were flushed from the broom on 11 and 18 VI 1984.

Distribution: Europe. In Poland recorded from Oborniki Śląskie (WOCKE, 1874) and from Poznań district (TOLL, 1952).

*Coleophora bilineatella* ZELLER, 1849

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Cytisus scoparius* (L.) LINK.

Habitat: sunny forest edges densely grown with broom.

Phenology: mines and tenanted larval cases were found in June. Adult specimens were collected at light in July.

Distribution: Europe. In Poland known from several localities in western part of lowland.

*Coleophora albicostella* (DUPONCHEL, 1842)

Locality: CD 38 Toruń-Barbarka.

Habitat: xerothermic grassland in an old gravel pit.

Phenology: two specimens have been collected at light on 26 VI 1987.

Distribution: South and Central Europe, Asia Minor. In Poland recorded from Nowy Sącz, Poznań (TOLL, 1952) and Kraków vicinity (RAZOWSKI & PALIK, 1969).

*Coleophora bernouliella* (GÖZE, 1783)

(*C. anatipennella* HÜBNER, 1796)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve.

Host plant: *Malus domestica* BORKH.

Habitat: mixed suburban forests, also found in orchards in densely build-up area.

Phenology: mines and tenanted larval cases were found from the end of May to mid-June. Adults were collected at light from the end of June to the first days of August.

Distribution: Europe, Iran. Common in the whole area of Poland except for high mountains.

*Coleophora kuehnella* (GÖZE, 1783)

(*C. palliatella* ZINCKEN, 1813)

Localities: CD 37 Przysiek. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Quercus robur* L.

Habitat: natural and suburban deciduous and mixed forests. Prefers sunny forest edges.

Phenology: tenanted mines and larvae were found in June. Adults were collected infrequently at light in July.

Distribution: Europe, Caucasus. Widely distributed in Polish lowland.

*Coleophora betulella* HEINEMANN & WOCKE, 1877

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Habitat: natural oak-hornbeam forest, mixed forests with young birch trees.



Phenology: three specimens have been collected at light on 22 VI 1978, 7 VII 1980 and 26 VI 1987.

Distribution: Europe. In Poland recorded only from Katowice vicinity (TOLL, 1952).

*Coleophora zelleriella* HEINEMANN, 1854

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: only one specimen has been collected at light on 17 VII 1987.

Distribution: Europe, Iran, Japan. In Poland known only from Wrocław vicinity (WOCKE, 1874).

*Coleophora currucipennella* ZELLER, 1839

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: adults were collected infrequently at light from mid-June to the end of July.

Distribution: Europe, Asia Minor. In Poland occurs in lowland and in lower montane elevations.

*Coleophora pyrrhulipennella* ZELLER, 1839

Locality: CD 37 Glinki.

Host plant: *Calluna vulgaris* (L.) HULL.

Habitat: heaths on inland dunes.

Phenology: tenanted larval cases were found in April—May, several adult specimens have been swept from heather on 5 VI 1988.

Distribution: Europe. In Poland recorded in several localities in lowland.

*Coleophora vibicigerella* ZELLER, 1839

Localities: CD 37 Glinki. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Artemisia campestris* L.

Habitat: open xerothermic grassland on sandy ground.

Phenology: mines and tenanted larval cases were found in the second half of May. Adults were collected from mid-June to mid-July.

Distribution: Europe, North Africa, Manchuria. In Poland found in scattered localities in lowland.

*Coleophora caelebipennella* ZELLER, 1839

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plants: *Artemisia campestris* L., *Helichrysum arenarium* (L.) MOENCH.

Habitat: sunny slopes, glades in dry pine forest, old gravel pits, roadsides. Prefers xerothermic places on sandy ground.

Phenology: mines and tenanted larval cases were found in June. Adults were swept from the herbaceous vegetation and attracted to light from the end of June to the first days of August.

Distribution: Europe, Asia Minor, North Africa. In Poland known from many localities in lowland.

***Coleophora ochrea* (HAWORTH, 1828)**

Locality: CD 38 Toruń-Barbarka.

Host plant: *Helianthemum nummularium* (L.) MILL.

Habitat: xerothermic grassland in an old gravel pit.

Phenology: mines and tenanted larval cases were collected in June. Adult specimens appeared from mid-July to the beginning of August.

Distribution: South and locally Central Europe, North Africa, Asia Minor. In Poland recorded from Głogów vicinity (WOCKE, 1874) and in Skoleczanka Reserve near Kraków (RAZOWSKI & PALIK, 1969).

***Coleophora lixella* ZELLER, 1849**

Localities: CD 38 Olek, Las Piwnicki Reserve.

Host plant: *Dactylis glomerata* L.

Habitat: sunny slopes and warm forest edges with xerothermic plant communities.

Phenology: mines and tenanted larval cases were found in June. One specimen has been collected at light on 3 VIII 1980.

Distribution: Europe, Asia Minor. In Poland found in many localities all over the country except for higher mountains.

***Coleophora laricella* (HÜBNER, 1817)**

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve.

Host plant: *Larix decidua* MILL.

Habitat: everywhere on larches, prefers young trees in suburban forests.

Phenology: mines and tenanted larval cases were found from late May to the end of June. Adult specimens were collected at light from the end of May to the middle of July.

Distribution: Europe, Japan, North America. In Poland occurs commonly in the whole area.

***Coleophora solitariella* ZELLER, 1849**

Locality: CD 38 Las Piwnicki Reserve.

Habitat: shady places in natural deciduous oak-hornbeam forest.

Phenology: a single specimen has been collected at light on 17 VII 1987.

Distribution: North and Central Europe. In Poland found in scattered localities in lowland (BEIGER, 1960).

***Coleophora pennella* (DENIS & SCHIFFERMÜLLER, 1775)**

(*C. onosomella* BRAHM, 1791)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Anchusa officinalis* L., *Echium vulgare* L.

Habitat: sandy places with xerothermic vegetation, especially sunny slopes and old gravel pits.

Phenology: mines and tenanted larval cases were found in May and June. Adults were swept from the vegetation and attracted to light from mid-June to the end of July.

Distribution: Europe, Asia Minor. In Poland spread over the entire area of the country except for higher mountains.

***Coleophora therinella* TENGSTRÖM 1848**

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Cirsium arvense* (L.) SCOP.

Habitat: moist meadows with rich herbaceous vegetation, glades in alder forest.

Phenology: mines and tenanted larval cases were found in September—October. Three adult specimens were collected at light on 7, 16 and 20 VII 1980.

Distribution: Europe, Asia Minor, Japan. In Poland found in several spots in lowland (TOLL, 1952) and in Pieniny Mts. (BŁESZYŃSKI & al., 1965).

***Coleophora gnaphalii* ZELLER, 1839**

Localities: CD 38 Olek, Toruń-Barbarka.

Host plant: *Helichrysum arenarium* (L.) MOENCH.

Habitat: sandy places with xerothermic grassland.

Phenology: mines and tenanted larval cases were found in June.

Distribution: Europe. In Poland recorded from Silesia (WOCKE, 1874) and from Poznań (TOLL, 1952).

***Coleophora peribenanderi* TOLL, 1943**

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Habitat: moist meadows and glades with rich herbaceous vegetation.

Phenology: collected during the day by sweeping from the vegetation as well as attracted to light from mid-May to mid-July.

Distribution: Europe. In Poland recorded from Katowice and Grudziądz vicinity (TOLL, 1952) as well as from Pieniny Mts. (BŁESZYŃSKI & al., 1965).



***Coleophora trochilella* (DUPONCHEL, 1843)***(C. troglodytella auct.)*

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Wrzosy.

Host plants: *Artemisia vulgaris* L., *Tanacetum vulgare* L.

Habitat: various kind of waste land.

Phenology: mines and tenanted larval cases were found in May. One specimen has been captured at light on 2 VIII 1980.

Distribution: Europe. Known from scattered localities all over Polish lowland.

***Coleophora directella* ZELLER, 1849**

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Toruń-Barbarka, Toruń-Wrzosy.

Host plants: *Artemisia campestris* L., *Achillea millefolium* L., *A. pannonica* SCHEELE.

Habitat: sunny slopes, old gravel pits, roadsides. Prefers sandy places.

Phenology: mines and tenanted larval cases were found in May and June.

Distribution: Europe. In Poland found in scattered localities in lowland.

***Coleophora saponariella* HEEGER, 1848**

Localities: CD 37 Toruń-Bielany. CD 38 Toruń-Barbarka. CD 47 Toruń-Rubinkowo.

Host plant: *Saponaria officinalis* L.

Habitat: roadsides and sunny forest edges in suburban forests.

Phenology: mines and tenanted larval cases were found from July to September. Adults were collected from mid-May to the beginning of June.

Distribution: South and Central Europe. In Poland recorded from Wrocław vicinity (WOCKE, 1874) and from Poznań (TOLL, 1947). Own field research provided a lot of records from central and western parts of Poland.

***Momphidae******Mompha langiella* (HÜBNER, 1796)**

Locality: CD 38 Las Piwnicki Reserve (BUSZKO, 1977 — as *Mompha epilobiella*).

Host plant: *Epilobium hirsutum* L.

Habitat: swampy vegetation around ponds.

Phenology: tenanted mines were found in June and in the first days of

July. Adults were swept from herbaceous vegetation in July and August.

Distribution: Europe. In Poland spread all over the country except for higher montane elevations.

*Mompha terminella* (HUMPHREYS & WESTWOOD, 1845)

Locality: CD 38 Las Piwnicki Reserve (BUSZKO, 1977 — as *Mompha locupletella*).

Host plant: *Circaea alpina* L.

Habitat: moist deciduous forest (*Tilio-Carpinetum stachyetosum* and *Ficario-Ulmetum*).

Phenology: tenanted mines were found in September. In 1987 the species was very abundant. One adult specimen has been collected on 25 VIII 1973.

Distribution: West and Central Europe, North America. In Poland known from scattered localities in lowland and in lower montane elevations (RIEDL, 1984).

*Mompha raschkiella* (ZELLER, 1839)

Locality: CD 37 Toruń-Bielany.

Host plant: *Epilobium angustifolium* L.

Habitat: weed plant communities in suburban forests.

Phenology: several tenanted mines have been found in the first half of August 1986.

Distribution: western part of Palaearctic Region up to Siberia. In Poland occurs in the whole area, in mountains attains altitudes up to 1500 m a.s.l.

*Mompha miscella* (DENIS & SCHIFFERMÜLLER, 1775)

Localities: CD 37 Glinki. CD 38 Toruń-Barbarka.

Host plant: *Helianthemum nummularium* (L.) MILL.

Habitat: sunny slopes and old gravel pits with xerothermic grassland.

Phenology: occurs in two generations. Tenanted mines were found in July. Adult specimens were collected in May and again from late July to the end of August.

Distribution: South and locally Central Europe, Asia Minor, Caucasus and western Siberia. In Poland found in several places in central and southern lowland (RIEDL, 1967).

*Mompha ochraceella* (CURTIS, 1839)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: swampy vegetation around ponds.

Phenology: several adult specimens have been flushed from the thicket

of *Epilobium hirsutum* L. in the last days of June 1986. Attracted also to light in July.

Distribution: South and Central Europe. In Poland known from several localities in lowland (RIEDL, 1984).

*Mompha propinquella* (STANTON, 1851)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: swampy vegetation around ponds.

Phenology: only one adult specimen has been flushed from the thicket of *Epilobium hirsutum* L. on 28 VI 1986.

Distribution: Central and North Europe. In Poland known from several localities in lowland (RIEDL, 1967).

*Mompha epilobiella* (DENIS & SCHIFFERMÜLLER, 1775)

Locality: CD 38 Las Piwnicki Reserve.

Host plant: *Epilobium hirsutum* L.

Habitat: wet places around ponds and streams.

Phenology: tenanted mines and larvae of various instars were found in June and in the first half of July. Adults were collected from late June until next spring.

Distribution: Europe. In Poland occurs in the whole lowland and in submontane regions.

*Cosmopterigidae*

*Cosmopterix zieglerella* (HÜBNER, 1810)

Localities: CD 37 Toruń-Bielany. CD 47 Toruń-Stawki.

Host plant: *Humulus lupulus* L.

Habitat: alder carrs and adjacent, usually transformed by man habitats.

Phenology: tenanted mines were found from mid-August to mid-September.

Distribution: Palaearctic Region. In Poland known from scattered localities in lowland (RIEDL, 1967).

*Gelechiidae*

*Chrysoesthia drurella* (FABRICIUS, 1775)

(*Ch. hermannella* auct.)

Localities: CD 37 Toruń-Bielany, Toruń-Osiedle Młodych. CD 38 Las Piwnicki Reserve.

Host plants: *Chenopodium album* L., *Atriplex patula* L., *A. nitens* SCHKUHR.



Habitat: various kind of wastel and, especially common along pavements and roadsides in the city.

Phenology: tenanted mines were found in June—July and August—September. Adults were swept from the vegetation in May.

Distribution: Palaearctic Region, also in North America. Spread all over Polish territory except for higher montane elevations.

*Chrysoesthia sexguttella* (THUNBERG, 1794)

Localities: CD 37 Mała Nieszawka, Toruń-Bielany, Toruń-Osiedle Młodych, Toruń-Przedmieście Bydgoskie, Wielka Nieszawka. CD 38 Toruń Wrzosey. CD 47 Toruń-Stawki.

Host plants: *Chenopodium album* L., *Atriplex patula* L., *A. nitens* SCHKUHR.

Habitat: various kind of waste land in villages and in the city. Tolerable to heavy traffic and industrial pollution.

Phenology: tenanted mines were found in two generations, in June—July and in August—September.

Distribution: western part of Palaearctic Region up to Siberia. In Poland common everywhere in lowland and lower mountains.

*Recurvaria nanella* (DENIS & SCHIFFERMÜLLER, 1775)

Localities: CD 37 Toruń-Bielany. CD 47 Toruń-Śródmieście.

Host plants: *Malus domestica* BORKH., *Prunus domestica* L., *P. mahaleb* L., *P. serrulata* LINDL.

Habitat: orchards, urban parks and suburban forests. Prefers forest edges.

Phenology: tenanted mines were found in September and October.

Distribution: western part of Palaearctic Region up to Baikal area, North America. In Poland occurs in the whole area except for higher mountains.

*Exoteleia dodecella* (LINNAEUS, 1758)

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy.

Host plant: *Pinus sylvestris* L.

Habitat: dry pine forests of various age. Prefers sunny forest edges.

Phenology: tenanted mines were found in April and May. Adults were collected at light from the beginning of June to the end of July.

Distribution: western part of Palaearctic Region. Introduced to North America. In Poland common everywhere in pine forests.

*Scrobipalpa acuminatella* (SIRCOM, 1850)

Locality: CD 38 Las Piwnicki Reserve.

Host plant: *Cirsium oleraceum* (L.) SCOP.

Habitat: wet meadow with rich herbaceous vegetation.

Phenology: tenanted mines were found in the second half of September. Several adult specimens have been collected at light from mid-May to mid-June.

Distribution: western part of Palaearctic Region up to Central Asia. In Poland known from many localities in lowland and lower montane elevations.

*Caryocolum huebneri* (HAWORTH, 1828)

Locality: CD 38 Las Piwnicki Reserve.

Host plant: *Stellaria holostea* L.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: empty mines and full grown larvae in shelters of spoon leaves were found in the second half of May. Adult specimens were collected at light in August.

Distribution: North and Central Europe. In Poland found in several localities in central and western parts of the country (BEIGER, 1984).

*Caryocolum tricolorellum* (HAWORTH, 1812)

Locality: CD 38 Las Piwnicki Reserve.

Host plant: *Stellaria holostea* L.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: tenanted mines appeared from October to March of the next year. Full grown larvae in shelters of spoon leaves were found at the beginning of May. Two adults have been collected at light on 12 VI 1979.

Distribution: Europe. In Poland occurs in scattered localities in lowland (BEIGER, 1984)

*Aproaerema anthyllidella* (HÜBNER, 1813)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: natural deciduous oak-hornbeam forest.

Phenology: two specimens have been collected at light on 26 VII 1980 and 24 V 1981.

Distribution: South and Central Europe, Asia Minor. In Poland found in scattered localities both in lowland and in mountains.

*Tortricidae*

*Cnephasia stephensiana* (DOUBLEDAY, 1849)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Habitat: various kind of forest and non forest habitats with rich herb layer.

Phenology: adults were collected at light and flushed from the vegetation from the end of June to mid-August.

Distribution: Palaearctic Region. Common in the entire area of Poland.

*Cnephasia asseclana* (DENIS & SCHIFFERMÜLLER, 1775)

(*C. interjectana*, HAWORTH, 1811)

Localities: CD 37 Glinki, Toruń-Bielany. CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Host plant: *Tussilago farfara* L.

Habitat: various kind of forest and non forest habitats with rich herb layer.

Phenology: adult specimens were collected at light and flushed from the vegetation from mid-June to mid-August. One of the most common species in the area.

Distribution: western part of Palaearctic Region up to western Siberia, North America. In Poland common in the whole country.

*Cnephasia incertana* (TREITSCHKE, 1835)

Localities: CD 37 Toruń-Bielany. CD 38 Las Piwnicki Reserve.

Habitat: various kind of deciduous and mixed forests with rich herb layer.

Phenology: adults were collected at light and flushed from the vegetation from mid-June to the end of July.

Distribution: Europe and Asia Minor. Found in the whole area of Poland.

*Argyroploce arbutella* (LINNAEUS, 1758)

Locality: CD 37 Glinki. CD 47 Toruń-Czerniewice.

Host plant: *Arctostaphylos uva-ursi* (L.) SPRENG.

Habitat: heathland with patches of *A. uva-ursi* on inland dunes.

Phenology: mines with young larvae were found in April and June. Adults were collected in early May and in June—July.

Distribution: North, East and locally Central Europe. In Poland is known from scattered localities in lowland and in highlands (RAZOWSKI, 1983).

*Gypsonoma oppressana* (TREITSCHKE, 1835)

Localities: CD 38 Toruń-Wrzosy. CD 47 Toruń-Stawki.

Host plant: *Populus* × *canadensis* MOENCH.

Habitat: riverine willow-poplar carrs (*Salici-Populetum*) as well as various kind of urban green with planted poplars.

Phenology: tenanted mines were found in the first half of September. Adults were observed on tree trunks in the second half of June.



Distribution: western part of Palaearctic Region up to Central Asia. In Poland known from scattered localities in lowland and in lower mountains (RAZOWSKI, 1987).

### *Pyralidae*

#### *Elophila nymphaeata* (LINNAEUS, 1758)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: small, shallow ponds and streams densely grown with macrophytes.

Phenology: adults were collected when flying over their habitats as well as attracted to light from the end of May to mid-September.

Distribution: Palaearctic Region. In Poland common in lowland and in lower montane elevations.

#### *Cataclysta lemnata* (LINNAEUS, 1758)

Localities: CD 37 Toruń-Podgórz. CD 38 Las Piwnicki Reserve.

Habitat: small, shallow ponds and slowly running streams covered with *Lemna* L.

Phenology: adult specimens were observed when flying over the water surface as well collected at light from the end of May to the beginning of September.

Distribution: western part of Palaearctic Region. In Poland common everywhere in lowland.

#### *Nymphyla stagnata* (DONOVAN, 1806)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: small, shallow ponds and streams densely grown with macrophytes.

Phenology: only one specimen has been collected at light on 4 VIII 1980.

Distribution: Palaearctic Region. In Poland found in scattered localities all over the lowland.

#### *Schoenobius forficellus* (THUNBERG, 1794)

Localities: CD 38 Las Piwnicki Reserve, Toruń-Barbarka.

Habitat: wet meadows, boggy plant communities at the edges of ponds and streams.

Phenology: adult specimens were collected at light from the end June to mid-August.

Distribution: Europe. In Poland occurs commonly in lowland.

*Calamotropha paludella* (HÜBNER, 1824)

Locality: CD 38 Las Piwnicki Reserve.

Habitat: boggy places around ponds and streams.

Phenology: two specimens have been collected at light on 7 and 17 VII 1981.

Distribution: Palaearctic Region. In Poland spread all over the lowland (BŁESZYŃSKI, 1956).

*Epascestria pustulalis* (HÜBNER, 1823)

Localities: CD 37 Toruń-Bielany. CD 38 Olek, Las Piwnicki Reserve, Toruń-Barbarka, Toruń-Wrzosy. CD 47 Toruń-Rubinkowo.

Host plant: *Anchusa officinalis* L.

Habitat: sunny glades and forest edges. Prefers dry places.

Phenology: tenanted mines were collected from the end of May to mid-June. Adults appeared from mid-June to Mid-July.

Distribution: South and Central Europe, Asia Minor. Known from scattered localities in Polish lowland (BUSZKO & ŚLIWIŃSKI, 1979).

## V. REMARKS ON ECOLOGY AND ZOOGEOGRAPHY

The principles of the spatial distribution of mining *Lepidoptera* in habitats were discussed in detail by ADAMCZEWSKI (1950) on the basis of studies carried out in climax habitats of Białowieża National Park. For the most important factor (apart from the host plants), regulating not only the vertical distribution of particular species, but also their preference in respect to structural features of a habitat, ADAMCZEWSKI regarded the light intensity. Less important meaning was ascribed to humidity conditions. He mentioned, however, that not all the species are to the similar degree influenced by these factors.

In the area of present investigations climax habitats do not occur. Almost all habitats are more or less transformed by man, with plant communities often having transitional character. Forests harbour the largest number of species. Many of them found also sufficient ecological conditions to occur in urban parks, orchards and on streetside trees. These species are native in the area. Also to the group of native species should be referred those inhabiting open wet habitats, such as wet meadows and swamps.

On the other hand, shrubby xerothermic habitats and xerothermic grasslands are colonized by the species associated with steppe or steppe-forest vegetation immigrated from southern or southeastern parts of Europe. Their advent is a consequence of far reaching deforestation and replacement of forest habitat by dry waste land.

Habitat preference in respect to the most typical habitats is shown in the table II.

Table II

Habitat preference by mining *Lepidoptera* in Toruń and its neighbourhood

Habitat	Number of species
Deciduous oak-hornbeam forest	41
Mixed oak-pine forest	126
Pine forest	8
Alder forest	16
Willow-poplar carr	19
Xerothermic shrubs	28
Xerothermic grassland	45
Moist grassland and swamps	35
Urban parks	88
Urban green	52

Distribution ranges of the majority of species treated in this paper are still inadequately known, thus an analysis of the composition of zoogeographical elements seems to be not reasonable. It can only be stated, that the native in the area, arboreal and swampy species make about 78% of the whole number of species recorded.

Comparing present list of species with that published by TOLL (1937), one can notice only insignificant differences. Almost all the species collected by TOLL have been found also during the present studies. More attention deserve species which appeared in limits of Toruń Basin after TOLL's explorations. Especially remarkable are *Bucculatrix noltei* PETRY and *Phyllo-norycter medicaginella* (GRSM.). *B. noltei* PETRY colonized this area probably about 1950—1960, because several years earlier it was noticed in Poznań vicinity (TOLL, 1947). *P. medicaginella* (GRSM.). is rather a recent newcomer and its appearance in the area can be estimated for 1980—1984. Both species are associated with various kind of waste land and are being still in expansion.

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Praca zawiera wykaz gatunków motyli minujących zebranych w okresie 1977—1988 w Toruniu i okolicy. Na podstawie poszukiwania min oraz połowów imagines wykazano 293 gatunki. Podano rośliny pokarmowe, środowiska oraz okres pojawu min i imagines. Stosunkowo wysoka liczba gatunków stwierdzona na badanym terenie jest odzwierciedleniem dużego zróżnicowania środowiskowego, a szczególnie różnorodności zbiorowisk roślinnych, zarówno o charakterze prawie naturalnym, jak i typowo antropogenicznym. Większość gatunków reprezentuje faunę od dawna zdomowioną na tym obszarze i związaną głównie ze zbiorowiskami leśnymi oraz bagiennymi. Gatunki te zasiedlają również parki miejskie, ogrody oraz w mniejszym stopniu środowiska zieleni miejskiej. Gatunki występujące w środowiskach zarośli kserotermicznych oraz stepowych muraw kserotermicznych są niewątpliwie obcego pochodzenia. Pojawiły się na tym terenie po wyniszczeniu lasów i rozprzestrzenieniu się roślinności stepowej na stokach doliny Wisły. Porównując skład gatunkowy stwierdzony obecnie z wykazem gatunków podanym przez S. TOLLA z okolic Bydgoszczy stwierdzono, że prawie wszystkie gatunki złowione przez niego znaleziono także podczas obecnych badań. Dwa gatunki, mianowicie *Bucculatrix noltei* PETRY i *Phyllonorycter medicaginella* (GRSM.) zasiedliły obszar Kotliny Toruńskiej stosunkowo niedawno, *B. noltei* PETRY prawdopodobnie w latach 1950—1960, a *P. medicaginella* (GRSM.) w latach 1980—1984. Gatunki *Stigmella dorsiguttella* (JOH.), *Leucoptera aceris* (FUCHS) i *Elachista triseriatella* STT. mają na omawianym obszarze jedyne stanowiska w Polsce.

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