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TACHINID FLIES (*DIPTERA, TACHINIDAE*) OF WARSAW  
AND MAZOVIA

## ABSTRACT

The *Tachinidae* of the Mazovian Lowland (285 species) account for 65% of the total number of species occurring in Poland. In Warsaw 164 species occur, including 123 in the suburbs, and 107 in urban green areas, the latter being subdivided into parks (90 species), green areas of housing estates (30 species) and the centre of the town (47 species). Such groups are represented by the highest number of species as parasitoids of lepidopterans and beetles, with high ecological amplitudes, and also polyphages with large geographical ranges (Palearctic and Euro-Siberian).

## INTRODUCTION

Flies of the family *Tachinidae* are poorly known both in Poland and in the whole Palearctic. Tachinid flies of Mazovia and Warsaw have not been extensively studied so far. From Warsaw 42 species were known [2, 8, 11]. At present 164 species have been recorded in Warsaw.

From the Mazovian Lowland, 85 species have been recorded so far, including 23 species listed by Sznabl [11], nine species listed by Wiąckowski [13, 15], three species quoted by Miczulski and Koślińska [7], and single species quoted by Kuntze [5], Pawłowicz [10], Koehler [4], Szujewski [12], and the other species by Draber-Mońko [2, 8]. At present 285 tachinid flies are known from the Mazovian Lowland.

The objective of the work was to establish the species composition of tachinid flies living in the Mazovian Lowland and Warsaw, and to analyse their geographical distribution and ecology.

The present paper is mostly based on the materials collected in Warsaw in 1974—1978, and in the Mazovian Lowland in 1976—1978, by means of Moericke's traps suspended in tree crowns. The five-day and nine-day samples were taken throughout the growing season continuously. The present paper also includes the materials collected in the Mazovian Lowland for more than 20 years by means of traditional methods such as sweeping, light trapping, catching by entomological net, and raising hosts (hymenoptera, lepidoptera, and bugs). Also unpublished materials have been used, based on the materials collected in Mazovia and Warsaw almost 100 years

ago by Sznabl and Bykov. In the Mazovian Lowland, the material was collected by Moericke's traps in such localities as Hamernia (oak-hornbeam forest and carr), Radziejowice (a park), Wola Mrokowska, Młochów and Kampinos forest (mixed coniferous and pine forests).

In Warsaw the same method was used on the following sites. The suburbs: Ursynów (a park), allotments near Okęcie, Bielany (oak-hornbeam forest and carr), Jelonki and Białoleka Dworska (oak-hornbeam forest, carr, mixed coniferous forest, and pine forest); urban parks: Łazienki, Saxon Garden, Praga, and the Cemetery of Soviet Soldiers; green areas of housing estates: Wierzbno and Stawki; the centre of the town: Konstytucji Square and courtyards at Koszykowa and Wilcza streets.

The study area, methods and general premises of the work are characterized elsewhere [1, 6, 9, 16].

#### SPECIES COMPOSITION

In the Mazovian Lowland, the occurrence of 285 species of tachinid flies have been recorded (Table 5), which account for 65% of their fauna known from Poland. In Warsaw, 164 species have been caught, or 58% of the tachinid flies known from the Mazovian Lowland.

In Mazovia and in all types of urban green areas, there were 17 species: *Carcelia excisa*, *Nemorilla floralis*, *Winthemia quadripustulata*, *W. variegata*, *Rhacodineura pallipes*, *Bactromyia aurulenta*, *Phryxe erythrostroma*, *Ph. vulgaris*, *Exorista rustica*, *Bessa selecta*, *Meigenia bisignata*, *Cómpsilura concinnata*, *Siphona confusa*, *Solieria pacifica*, *Phythomyptera lacteipennis*, *Athrycia curvinnervis*, and *Thelaira nigripes*.

The highest number of species was found in the suburbs of Warsaw (123). In urban green areas 107 species were caught, including 90 in urban parks. The tachinid flies in green areas of housing estates are rather poor. Only 30 species were recorded there, thus less than in courtyards of the centre where 47 species were caught. At Konstytucji Square only single specimens of three species, *Bactromyia aurulenta*, *Elfia zonella* and *Thelaira nigripes* were caught.

#### ZOOGEOGRAPHICAL ANALYSIS

The Mazovian Lowland, like the whole Poland, is characterized by the greatest number of largely distributed, Palaearctic species, a smaller number of European species, and very low numbers of the species belonging to other geographical elements.

Mazovia, the suburbs of Warsaw and urban green areas support the greatest number of Palaearctic species, and smaller numbers of Euro-Siberian,

Table 1. Proportions of zoogeographical elements in tachinid flies of Warsaw and non-urban habitats of Mazovia  
(N — number of species)

Zoogeographical element	Mazovia		Warsaw									
			Suburbs		Urban green areas							
	Total				Parks		Housing estates		Town centre			
	N	%	N	%	N	%	N	%	N	%	N	%
Cosmopolitan	2	0.7	2	1.63	1	0.93	1	1.11	1	3.33	1	2.13
Holarctic	6	2.11	6	4.88	5	4.67	5	5.55	3	10.0	3	6.38
Palaeartic	135	47.37	58	47.15	54	50.47	47	52.22	18	60.0	27	57.45
Euro-Siberian	67	23.51	30	24.39	21	19.63	16	17.78	3	10.0	9	19.15
Boreal	18	6.32	4	3.25	4	3.74	3	3.33	1	3.33	1	2.13
European	36	12.63	13	10.57	11	10.28	10	11.11	1	3.33	3	6.38
Euro-Caucasian	1	0.35	1	0.81	1	0.93	0	0	0	0	1	2.13
Submediterranean	18	6.32	9	7.32	10	9.35	8	8.89	3	10.0	2	4.25
Mountain	2	0.7	0	0	0	0	0	0	0	0	0	0

Table 2. Proportions of groups with different ecological amplitudes in tachinid flies of Warsaw and non-urban habitats of Mazovia (N — number of species)

Group	Mazovia		Warsaw									
			Suburbs		Urban green areas							
	Total				Parks		Housing estates		Town centre			
	N	%	N	%	N	%	N	%	N	%	N	%
Eurytopic	35	12.28	20	16.26	19	17.76	17	18.89	10	33.33	14	29.79
Polytopic	118	41.40	64	52.03	58	54.21	47	52.22	12	40.00	26	55.32
Oligotopic	123	43.16	35	28.45	28	26.17	25	27.78	7	23.33	7	14.89
Stenotopic	9	3.16	4	3.25	2	1.87	1	1.11	1	3.33	—	—

European, boreal, submediterranean, and Holarctic species (Table 1). In the suburbs of Warsaw, the proportion of cosmopolitan and Holarctic species is higher, as well as the proportion of Euro-Siberian and submediterranean species is slightly increased as compared with Mazovia. Instead, the proportion of boreal and European species is lowered.

In urban green areas the proportion of Holarctic, Palaearctic and submediterranean species increases, while the proportion of boreal and Euro-Siberian species drops. In urban parks and in green areas of housing estates no Euro-Caucasian species have been recorded, and mountain species are absent in urban and suburban green (Table 1).

In urban parks and green areas of housing estates the proportion of Holarctic, submediterranean, and Palaearctic species increases, while the proportion of Euro-Siberian, European, and boreal species decreases.

In the centre of Warsaw, the proportion of Holarctic and Palaearctic species increases, and that of Euro-Siberian, European and submediterranean species drops.

## ECOLOGICAL ANALYSIS

### ECOLOGICAL AMPLITUDE

The greatest number of tachinid flies occurs in taiga and in the zone of mixed forests. In the Mazovian Lowland the highest number of oligotopic and polytopic species occurring in various types of forests have been recorded. There are not so many eury- and stenotopic species (Table 2). Almost 80% of the species of the families *Dexiinae* and *Phasiinae* mostly occur on open, insolated sites (meadows, wasteland, clearings).

In the suburbs of Warsaw and in urban green areas the proportions among groups of species with particular habitat requirements are similar. Polytopic species predominate in all the types of urban green areas in Warsaw. In the suburbs and urban parks the proportion of oligotopic species is higher than that of eurytopic species (Table 2).

### FEEDING HABITS

Adult tachinid flies are melliphagous insects, and their main food consists of nectar and pollen of plants of the families *Umbelliferae* and *Compositae*, and also of honeydew produced by aphids and scale insects. In addition, they utilize nectar and pollen of 30 other plant species [3].

In the Mazovian Lowland, the species feeding on nectar predominate, while the species feeding on nectar and honeydew are less abundant, and the least abundant being the species caught so far exclusively on honeydew (Table 3).

Table 3. Proportions of groups with different diet in tachinid flies of Warsaw and non-urban habitats of Mazovia  
(N — number of species)

Diet	Mazovia		Warsaw									
			Suburbs		Urban green areas							
	Total				Parks		Housing estates		Town centre			
	N	%	N	%	N	%	N	%	N	%	N	%
Honeydew, nectar and pollen	70	24.56	40	32.52	37	34.58	34	37.78	11	36.67	20	42.55
Nectar and pollen	194	68.07	77	62.60	63	58.88	49	54.44	18	60.00	24	51.07
Honeydew	21	7.37	6	4.88	7	6.54	7	7.78	1	3.33	3	6.38

Table 4. Proportions of trophic groups in tachinid flies of Warsaw and non-urban habitats of Mazovia  
(N — number of species)

Hosts of larvae	Mazovia		Warsaw									
			Suburbs		Urban green areas							
	N				%		Total		Parks		Housing estates	
			N	%			N	%	N	%	N	%
<i>Lepidoptera</i>	144	50.53	59	47.97	62	57.94	53	58.89	18	60.00	29	61.70
<i>Hymenoptera</i>	13	4.56	7	5.69	3	2.80	2	2.22	2	6.67	2	4.26
<i>Heteroptera</i>	27	9.48	11	8.94	1	0.94	—	—	—	—	1	2.13
<i>Coleoptera</i>	44	15.44	21	17.07	16	14.95	15	16.67	3	10.0	3	6.38
<i>Orthoptera</i>	1	0.35	—	—	—	—	—	—	—	—	—	—
<i>Dermoptera</i>	3	1.05	2	1.63	2	1.87	2	2.22	2	6.67	2	4.26
<i>Diptera</i>	3	1.05	1	0.81	—	—	—	—	—	—	—	—
<i>Chilopoda</i>	3	1.05	1	0.81	—	—	—	—	—	—	—	—
Polyphages (several orders of insects)	15	5.26	11	8.94	13	12.15	11	12.22	3	10.0	7	14.89
Unknown	32	11.23	10	8.13	10	9.35	7	7.78	2	6.67	3	6.38

Similar proportions of trophic groups can be found in the suburbs of Warsaw, in urban parks, and in green areas of housing estates. In urban green areas the proportion of the species feeding on honeydew and nectar is increased, in the centre of the town almost twice as much.

The larvae of tachinid flies are parasitoids of different invertebrates, particularly insects. Most larvae parasitize caterpillars of lepidopterans or larval *Symphyla*. They also rather frequently parasitize adult insects. For instance, *Viviania cinerea* of the subfamily *Exoristinae* parasitize adults of the genus *Carabus* (*Coleoptera*), and larval flies of the subfamily *Phasiinae* parasitize adult *Heteroptera* of the subfamilies *Pentatomidae* and *Cydnidae*, as well as *Coreidae*, *Lygeidae*, and *Nabidae*.

In Mazovia and urban green areas, tachinid flies parasitizing caterpillars of lepidopterans predominate. In Mazovia parasitoids of lepidopterans account for almost a half of all tachinid fly species. In urban green areas their proportion increases, reaching more than 60% in the centre of the town (Table 4).

In the Mazovian Lowland, suburbs of Warsaw, urban parks and in green areas of housing estates, parasitoids attacking beetles are most abundant, apart from the parasitoids of lepidopterans (Table 4). The centre of the town, however, is predominated by polyphagous species, i. e., attacking insects of different orders.

Subfamilies of *Tachinidae* are characterized by largely diversified food requirements (particularly in larval stages) and habitat requirements. For this reason, their particular subfamilies will be discussed separately. Most of the representatives of the subfamily *Salmaciinae* (75%) in their larval stage parasitize caterpillars of lepidopterans. Of their 86 species recorded from Mazovia, 39 species are known from the suburbs of Warsaw and almost a half from urban green areas. The subfamily *Exoristinae* consists of parasitoids of lepidopterans in 36% and of beetles in 25%. Of 66 species recorded from Mazovia, 30 occur in the suburbs of Warsaw, and more than a half in urban green areas. The subfamily *Tachininae* includes parasitoids of lepidopterans in 60% and parasitoids of beetles in 20%. Of their 92 species recorded from Mazovia, 37 inhabit the suburbs of Warsaw and 44 species urban green areas. In the subfamily *Dexiinae* all the species whose hosts are known belong to parasitoids of beetles. Of the ten species recorded from Mazovia, six occur in the suburbs of Warsaw and five in urban green areas. The subfamily *Phasiinae* mostly consists of parasitoids of *Heteroptera* (in 87%). Of the 31 species recorded from the Mazovian Lowland, 11 live in the suburbs of Warsaw, and nine, or 29%, in urban green areas. No flies of this subfamily were recorded from green areas of housing estates.



## ABUNDANCE

Tachinid flies are more abundant in Mazovia than in Warsaw. The following species are common in the Mazovian Lowland: *Blondelia nigripes*, *Campylochaeta inepta*, *Compsilura concinnata*, *Lypha dubia*, *Phryxe vulgaris*, and *Thelaira nigripes*. Rather abundant are such species as *Actia pillipennis*, *Bactromyia aurulenta*, *Bessa selecta*, *Carcelia excisa*, *Exorista rustica*, *Gonicocera versicolor*, *Nemorilla floralis*, *Pheballia glauca*, *Phorocera obscura*, *Phryxe erythrostroma*, and *Platymyia mitis*.

In the suburbs of Warsaw the following species predominated: *Actia nudibasis*, *Bactromyia aurulenta*, *Bessa selecta*, *Blondelia nigripes*, *Microsoma exigua*, *Campylochaeta inepta*, and *Phryxe erythrostroma*. Rather abundant are *Actia pillipennis*, *Cyzenis albicans*, *Linnaemyia pudica*, *Lypha dubia*, *Nemorilla floralis*, *Phebelia glauca*, *Phorocera assimilis*, *Ph. obscura*, *Pseudo-perichaeta insidiosa*, and *Thriarthia setipennis*.

In urban parks such species predominate as *Bactromyia aurulenta*, *Bessa selecta*, *Blondelia nigripes*, *Microsoma exigua*, *Eriothrix rufomaculata*, and *Peribeia fissicornis*. The rather abundant species consist of *Ctenophorocera pavidata*, *Phorocera obscura*, *Platymyia hortulana*, *Masicera silvatica*, and *Thriarthia setipennis*.

In green areas of housing estates, *Anthoica tibialis* was most frequently caught.

In the centre of the town the following species were rather abundant: *Anthoica tibialis*, *Compsilura concinnata*, *Lydella grisescens*, *Nemorilla floralis*, *Phryxe erythrostroma*, and *Winthemia variegata*.

The species common and abundant in both the Mazovian Lowland and Warsaw can be classified into two groups: the species common in the Mazovian Lowland and Warsaw, and the species numerous in the Mazovian Lowland and common in the suburbs of Warsaw and in urban green areas. In addition, some species are scarce in Mazovia and common in urban green areas of Warsaw.

In the Mazovian Lowland, the suburbs of Warsaw and in urban parks, there were three rather abundant species occurring in common: *Blondelia nigripes*, *Compsilura concinnata*, and *Campylochaeta inepta*. They have wide, Palaearctic distribution and belong to eurytopic and polyphagous species. Their larvae parasitize different groups of insects, and adults feed on nectar and honeydew of aphids.

Three species have been recorded which are abundant in the Mazovian Lowland and predominate in the suburbs and urban parks of Warsaw. These are *Bactromyia aurulenta*, *Bessa selecta*, and *Phryxe vulgaris*. All of them have large, Palaearctic distribution. Their larvae are parasites of caterpillars of lepidopterans and of larval hymenopterans. Adults feed on nectar and honeydew produced by aphids. All of them belong to eurytopic species.

Two species scarce in Mazovia predominate in the suburbs and urban parks of Warsaw. They feed on nectar and aphid honeydew. *Microsoma exigua* has a wide, Palaearctic distribution. It is an oligotopic species, the larvae of which parasitize beetles of the family *Curculionidae*. *Peribea fissicornis* is a boreal, oligotopic species whose larvae can parasitize several lepidopteran species.

#### CONCLUSIONS

Tachinid flies occurring in the Mazovian Lowland are represented by 285 species, thus by 121 species more than in Warsaw. In urban areas of Warsaw there are mostly parasitoids of lepidopterans and beetles and least parasitoids of heteropterans.

In Warsaw, most of the species have been recorded in old urban parks, while urban green areas of housing estates and the centre are much poorer in species.

In the Mazovian Lowland, there is the highest number of widely distributed Palaearctic species (about 90%).

In Warsaw, all the geographical elements known from Mazovia have been recorded. Urban green areas are most abundantly colonized by the species with large, Palaearctic and Holarctic distributions, as well as by cosmopolitan species. In the suburbs of Warsaw, 123 species have been recorded, thus less than a half of the species known from Mazovia. In urban parks and green areas of housing estates there are no Mediterranean and mountain species. The tachinid flies of urban green areas account for 16% of all the *Tachinidae* of Warsaw. No boreal species were recorded there. In the centre of Warsaw, there were 26% of the *Tachinidae* of Warsaw recorded, the mountain species being absent.

In the Mazovian Lowland more than 80% of the species occur in wooded areas or in their vicinity. The other species occur mostly on open, insolated sites. The eurytopic species account for about 13% of all the species, and stenotopic species for merely 3%. The highest number of species occurs in different types of forests. They account for about 43% of all the tachinid flies known from Mazovia. The number of oligotopic species is also high and they account for about 40% of the species recorded from the Mazovian Lowland. In all types of urban green areas of Warsaw, polytopic tachinid flies are represented by the greatest number of species. In the suburbs and urban parks of Warsaw, oligotopic species predominate over eurytopic. In green areas of housing estates, ubiquitous species account for about 31%, while oligotopic species for about 23% of all the species caught in this habitat. In the centre of Warsaw, ubiquitous species are twice as numerous as oligotopic species.

About 70% of the tachinid fly species recorded from the Mazovian

Lowland feed on nectar and pollen. These species predominate in the suburbs of Warsaw and in all the types of urban green areas. Tachinid flies feeding on nectar and aphid honeydew account for about 23% of the species known from Mazovia. This trophic group is represented by many species also in the suburbs and in urban areas. Tachinid flies feeding exclusively on honeydew are represented by the smallest number of species in the Mazovian Lowland and in Warsaw (about 7% of the species recorded from Mazovia).

In the Mazovian Lowland, the suburbs of Warsaw, and in urban parks, three species predominate: *Blondelia nigripes*, *Compsilura concinnata*, and *Campylochaeta inepta*.

#### SPECIES NEW TO THE MAZOVIAN LOWLAND

In Mazovia 200 species of *Tachinidae* not noted from this area before have been recorded. They are denoted by + in Table 5. They include 26 species new to the fauna of Poland.

*Bessa selecta* is one of the many species recorded for the first time from the Mazovian Lowland. This fly is a known parasite of larval *Tenthredinidae*, and particularly *Nematinae* (*Symphyta*). A non-injured cocoon of *Hemerobiidae* (*Neuroptera*) with a pupa of *Bessa selecta* inside was found under the bark of a birch in a mixed coniferous forest at Stara Miłosna, the Mazovian Lowland, on April 2, 1978. The adult tachinid fly emerged on April 15, 1978, leg. et cult. J. Sawoniewicz. It should be noted that it is the first known case of the parasitism of tachinid flies on *Neuroptera*.

#### SPECIES NEW TO THE FAUNA OF POLAND

##### *Carcelia laxifrons* Villeneuve, 1912

One male: Mazovian Lowland. Kampinos forest, pine forest, a pine, 5–10 August, 1976.

The species recorded from Europe, Caucasia, western Siberia, Mongolia and Japan. The larvae parasitize caterpillars of lepidopterans such as *Euproctis castrensis*, *Stilpnotia salicis*, *Dasychira fascelina*, and *Malacosoma castrensis*.

##### *Carcelia tibialis* (Robineau-Desvoidy, 1863)

Nine specimens: Mazovian Lowland. Warsaw-Ursynów, 7–20 September, 1974; Wilcza street, 31 July — 9 August, 1976.

The species recorded from Europe, Caucasia, Mongolia and Japan. Larvae parasitize caterpillars of *Arcta caja*. Also reared from a caterpillar of *Dasychira pudibunda* found at Rogów near Koluszki (Little Poland Upland), 9 September, 1954, leg. et cult. H. Szczepański.

##### *Winthemia speciosa* Egger, 1861

11 specimens: Mazovian Lowland. Warsaw — Cemetery of Soviet Soldiers, Praga park, Łazienki park, Saxon Garden, and Wilcza street. Caught from 21 June to 14 September.

The species noted from Europe, Siberia, and Mongolia. Larvae parasitize caterpillars of *Thametopoea processionea*.

*Zenillia dolosa* (Meigen, 1824)

Two specimens: Mazovian Lowland. Kampinos forest, mixed coniferous forest, a birch, 29 June—8 July, 1976, pine forest, an oak, 10—19 August, 1976.

The species noted from Europe, Caucasia, and Siberia. Larvae parasitize caterpillars of *Hyponomeuta evonymella*, *H. cognatella*, *H. padella*, *Cacoecia murinana*, *Depresaria furvella*, *Dasystoma salicella*, *Larentia impluviata*, *L. autumnalis*, *Pygaera neclusa*, *Pandemis heparana*, and *Thaumtopoea processionea*.

*Lydella thompsoni* Herting, 1959

Two specimens: Mazovian Lowland. Hamernia. oak-hornbeam forest, an oak, 21, 26 May, 1976. Warsaw—Cemetery of Soviet Soldiers, 10—24 September, 1974.

The species recorded from southern and central Europe, Caucasia, Transcaucasia, Mongolia, and Japan. Larvae parasitize caterpillars of the lepidopteran *Pyrausta nubilalis*.

*Phebellia clavelariae* Brauer et Bergenstamm, 1891

Two specimens: Mazovian Lowland. Ratajowo (Żwir), 17 August, 1902, leg. J. Sznabl. Warsaw-Białoleka Dworska, pine forest, a pine, 17—22 June, 1977.

The species recorded from central Europe and Mongolia. Larvae parasitize *Symphytia* such as *Pseudoclavellaria amerinae* and *Cimbex variabilis*.

*Phebellia glaucoides* Herting, 1961

One male: Mazovian Lowland. Żyrardów (Ruda Guzowska). 6 July, 1890, leg. J. Sznabl.

The species recorded from Europe, eastern Siberia (Czytyjski region), Sakhalin and Kuril Islands. Larval development not known.

*Phebellia stultia* (Zetterstedt, 1844)

Two males; Mazovian Lowland. Hamernia, oak-hornbeam forest, an oak, 16—21 July, 1976. Żwir (Ratajowo), 29 September, 1902, leg. J. Sznabl.

The species recorded from Europe and western Siberia. Larval development not known.

*Buguetia musca* Robineau-Desvoidy, 1847

One male: Mazovian Lowland. Otwock, 8 August, 1892, leg. W. Bykov.

The species recorded from southern Europe, Caucasia, Israel, and western Siberia. Larvae parasitize caterpillars of *Papilio machaon*.

*Pachystylum bremii* Macquart, 1848

Two specimens: Mazovian Lowland. Skierniewice, July, 1952. Warsaw-Wilanów, 18 June, 1955.

The species recorded from northern Europe and from mountains of Central Europe, Caucasus, north-western Soviet Union, western Siberia, and Mongolia.

*Urophylloides hemichaeta* (Brauer et Bergenstamm, 1899)

One female: Mazovian Lowland. Sochaczew-Trojanów, 26 May, 1956.

The species recorded only from Europe so far. Larval development not known.

*Medina multispinosa* Herting, 1971

Three specimens: Mazovian Lowland. Kampinos forest, June 1952. Warsaw-Białoleka Dworska, pine forest, a birch, 8—17 August 1976; Cemetery of Soviet Soldiers, 13—26 August, 1974.

The species recorded only from Europe so far. Larvae parasitize beetles of the family *Curculionidae*.

*Medina funebris* (Meigen, 1824)

Two specimens: Mazovian Lowland. Sochaczew-Trojanów, 19 May, 1966. Warsaw-Białoleka Dworska, mixed coniferous forest, a pine, 20—25 May, 1977.

The species known from Europe, Caucasia, and Japan. Larvae parasitize adult beetles of the family *Chrysomelidae* and *Coccinella septempunctata*.

*Aporotachina angelicae* (Meigen, 1824)

One male: Mazovian Lowland. Kampinos forest, 22 July, 1954.

The species known from Europe, Caucasia, and eastern Siberia (Czytyjski region). Larvae parasitize *Arge berberidis* (*Symphya*).

*Aporotachina latifrons* Jacentkovsky, 1945

One female: Mazovian Lowland. Sochaczew-Trojanów, 30 April, 1955.

The species noted from Europe and Transbaikalia. Larval development not known.

*Actia exoleta* (Meigen, 1824)

One specimen: Mazovian Lowland. Warsaw-Łazienki, 31 August — 14 September, 1974.

The species recorded from southern and central Europe. Larval development not known.

*Ceromyia flaviseta* Villeneuve, 1921

Three specimens: Mazovian Lowland. Hamernia, oak-hornbeam forest, a hornbeam, 23 June — 2 July, 1976.

The species recorded from central and eastern Europe. Larval development not known.

*Ceranthia pallida* Herting, 1959

Two specimens. Mazovian Lowland. Hamernia, oak-hornbeam forest, a hornbeam, 1—10 September, 1976. Warsaw-Bielany, carr, a lime, 26—31 May, 1977.

The species recorded from northern and central Europe and Kuril Islands. Larvae parasitize *Eupithecia denotata*.

*Linnaemyia olsufjevi* Zimin, 1954

One specimen: Mazovian Lowland. Skierniewice, July 1952.

The species recorded from Europe, Caucasia, Kazakhstan, Siberia, and Maritime Territory (USSR). Larval development not known.

*Eurythia juncta* (Zimin, 1957)

One specimen: Mazovian Lowland. Kampinos forest, mixed coniferous forest, an oak, 10—19 August, 1976.

The species known from Europe, Caucasia, Tuva, Yakutsia and Mongolia. Larval development not known.

*Elfia bohémica* (Kramer, 1907)

Two specimens. Mazovian Lowland. Hamernia, oak-hornbeam forest, a lime, 8—13 July, 1977, Warsaw-Łazienki, 17—31 August, 1974.

The species known from northern and central Europe. Larval development not known.

*Elfia canella* Herting, 1967

One specimen: Mazovian Lowland. Kampinos forest, pine forest, a birch, 10—15 June, 1976.

The species known from Europe, northern Kazakhstan, southern part of eastern Siberia, and from Mongolia.

*Phythomyptera lacteipennis* Villeneuve, 1934

43 specimens: Mazovian Lowland. Kampinos forest, mixed coniferous forest, a birch. Warsaw-Białoleka Dworska, oak-hornbeam, an oak and a hornbeam; carr, an alder; Ursynów; Cemetery of Soviet Soldiers; Łazienki; Saxon Garden; Praga park; Stawki; Wilcza street. Adults caught from 25 May to 14 October, in parks collected on chestnuts, maples, and limes.

The species known from southern Palaearctic. Larvae parasitize caterpillars of *Phthorimaea ocellatella*.

*Triartia legeri* (Villeneuve, 1908)

Two specimens: Mazovian Lowland. Kampinos forest, mixed coniferous forest, a pine, 26—31 May, 1977; 6—11 June, 1977.

The species known from southern France and Caucasia (Armenia). Larval development not known.

*Loewia brevifrons* (Rondani, 1856)

One specimen: Mazovian Lowland. Kampinos forest, mixed coniferous forest, a pine, 19 July — 28 July, 1977.

(Continued on p. 160)

Table 5. Check-list of *Tachinidae* (Diptera) species occurring in Warsaw and Mazovia

No.	Species	Mazovia	Warsaw				
			Suburban areas	Parks	Green areas in housing estates	Town centre	Other sampling areas
1	2	3	4	5	6	7	8
	<i>Salmaciinae</i>						
1	<i>Carcelia amphion</i> R.-D.	+	—	—	—	—	—
2	<i>Carcelia bombylans</i> R.-D.	+	—	—	—	—	—
3	<i>Carcelia excavata</i> (Zett.)	●	+	+	—	—	—
4	<i>Carcelia excisa</i> (Fall.)	+	+	+	+	+	—
5	<i>Carcelia laxifrons</i> Vill.	+	—	—	—	—	—
6	<i>Carcelia lucorum</i> (Meig.)	+	—	—	—	—	—
7	<i>Carcelia lucorum dubia</i> (B. B.)	+	+	—	—	+	—
8	<i>Carcelia polinosa</i> Mesn.	+	—	+	—	—	—
9	<i>Carcelia tibialis</i> (R.-D.)	+	+	—	—	+	—
10	<i>Nemosturmia amoena</i> (Meig.)	+	+	—	—	—	—
11	<i>Smidtia conspersa</i> (Meig.)	+	—	—	—	—	—
12	<i>Nemorilla floralis</i> (Fall.)	●	+	+	+	+	○
13	<i>Winthemia bohemani</i> (Zett.)	+	—	—	—	—	—
14	<i>Winthemia crassicornis</i> R.-D.	—	+	—	—	—	—
15	<i>Winthemia cruentata</i> (Rond.)	+	—	—	—	—	—
16	<i>Winthemia erythrura</i> (Meig.)	●	—	+	—	—	○
17	<i>Winthemia quadripustulata</i> (Fabr.)	+	+	+	+	+	+
18	<i>Winthemia speciosa</i> (Egg.)	—	—	+	+	+	—
19	<i>Winthemia variegata</i> (Meig.)	+	+	+	+	+	—
20	<i>Ctenophorocera pavidata</i> (Meig.)	●	+	+	—	—	—
21	<i>Ctenophorocera pumicata</i> (Meig.)	—	—	+	—	—	—
22	<i>Sturmia bella</i> (Meig.)	+	+	+	—	—	—
23	<i>Blepharipoda scutellata</i> (R.-D.)	●	+	+	—	+	—
24	<i>Drino atropivora</i> (R.-D.)	—	—	+	—	—	—
25	<i>Drino inconspicua</i> (Meig.)	●	+	—	—	—	—
26	<i>Drino lota</i> (Meig.)	+	—	—	—	—	—
27	<i>Drino vicina</i> (Zett.)	—	—	—	—	+	—
28	<i>Pexopsis aprica</i> (Meig.)	—	—	+	—	—	—
29	<i>Pseudoperichaeta insidiosa</i> (R.-D.)	●	+	—	—	—	—
30	<i>Rhacodineura pallipes</i> (Fall.)	+	+	+	+	+	+
31	<i>Elodia tragica</i> (Meig.)	+	+	—	—	—	—
32	<i>Rhacodineura nigripes</i> (R.-D.)	+	—	—	—	—	—
33	<i>Eurystaea scutellaris</i> (R.-D.)	+	+	—	—	—	—
34	<i>Bactromyia aurulenta</i> (Meig.)	+	+	+	+	+	+
35	<i>Buquetia musca</i> R.-D.	+	—	—	—	—	—
36	<i>Masicera cuculiae</i> R.-D.	+	—	+	—	—	—
37	<i>Masicera pratensis</i> (Meig.)	+	—	—	—	—	—

1	2	3	4	5	6	7	8
38	<i>Masicera silvatica</i> (Fall.)	+	+	+	—	—	—
39	<i>Ceromasia rubrifrons</i> (Macq.)	+	—	—	—	—	—
40	<i>Erycia festinans</i> (Meig.)	+	—	—	—	—	—
41	<i>Zenillia libatrix</i> (Panz.)	+	●	—	—	—	—
42	<i>Zenillia dolosa</i> (Meig.)	+	—	—	—	—	—
43	<i>Aplomyia confinis</i> (Fall.)	+	—	—	—	—	—
44	<i>Cyzenis albicans</i> (Fall.)	+	+	—	—	—	—
45	<i>Cyzenis jucunda</i> (Meig.)	+	+	—	—	—	—
46	<i>Phryno vetula</i> (Meig.)	+	—	—	—	—	—
47	<i>Frontina laeta</i> (Meig.)	+	—	—	—	—	○
48	<i>Clemelis pullata</i> (Meig.)	+	—	—	—	—	—
49	<i>Platymyia hortulana</i> (Meig.)	+	+	+	—	+	—
50	<i>Platymyia mitis</i> (Meig.)	●	+	+	—	—	+
51	<i>Platymyia nemestrina</i> (Meig.)	+	—	+	—	—	—
52	<i>Platymyia westermanni</i> (Zett.)	●	—	+	—	+	—
53	<i>Hübneria affinis</i> (Fall.)	+	+	—	—	+	○
54	<i>Prosopea nigricans</i> (Egg.)	+	—	—	—	—	—
55	<i>Phryxe erythrostroma</i> (Hart.)	+	+	+	+	+	+
56	<i>Phryxe heraclei</i> (Meig.)	—	+	+	—	—	—
57	<i>Phryxe longicauda</i> Wainwr.	—	+	+	—	—	—
58	<i>Phryxe nemea</i> (Meig.)	+	—	+	—	+	—
59	<i>Phryxe vulgaris</i> (Fall.)	+	+	+	+	+	+
60	<i>Cadurciella tritaeniata</i> (Rond.)	+	—	—	—	—	—
61	<i>Lydella grisescens</i> R.-D.	+	+	+	—	+	—
62	<i>Lydella stabulans</i> (Meig.)	+	—	+	—	—	—
63	<i>Lydella thompsoni</i> Hert.	+	—	+	—	—	—
64	<i>Erycilla ferruginea</i> (Meig.)	+	—	—	—	—	—
65	<i>Erycilla rutilla</i> (Meig.)	+	—	—	—	—	—
66	<i>Myxexoristops bicolor</i> (Vill.)	+	—	—	—	—	—
67	<i>Myxexoristops blondelli</i> (R.-D.)	—	+	—	—	—	—
68	<i>Myxexoristops bonsdorfi</i> (Zett.)	●	+	—	+	+	—
69	<i>Myxexoristops hertingi</i> Mesn.	+	+	—	—	—	—
70	<i>Myxexoristops obumbrata</i> (Pand.)	—	+	—	—	—	—
71	<i>Pachystylum breinii</i> Macq.	+	+	—	—	—	—
72	<i>Phebellia clavelariae</i> B. B.	+	+	—	—	—	+
73	<i>Phebellia fuscipennis</i> (R.-D.)	+	+	+	—	—	—
74	<i>Phebellia glauca</i> (Meig.)	+	+	—	—	—	+
75	<i>Phebellia glaucoides</i> Hert.	+	—	—	—	—	—
76	<i>Phebellia glirina</i> Rond.	+	+	+	—	—	—
77	<i>Phebellia stultta</i> (Zett.)	+	—	+	—	+	—
78	<i>Thelymyia saltuum</i> (Meig.)	+	—	—	—	—	—
79	<i>Brachychaeta strigata</i> (Meig.)	+	—	—	—	—	—
80	<i>Histochoeta marmorata</i> (Fabr.)	+	—	—	—	—	○
81	<i>Gonia capitata</i> (Deg.)	+	—	—	—	—	—
82	<i>Gonia divisa</i> Meig.	●	—	—	—	—	—
83	<i>Gonia ornata</i> Meig.	●	—	—	—	—	—
84	<i>Gonia sicula</i> (R.-D.)	+	—	—	—	—	—
85	<i>Spallanzania hebes</i> (Fall.)	+	—	—	—	—	—
86	<i>Spallanzania multisetosa</i> Rond.	+	—	—	—	—	—

1	2	3	4	5	6	7	8
	<i>Exoristiinae</i>						
87	<i>Exorista larvarum</i> (L.)	●	—	+	—	+	○
88	<i>Exorista pratensis</i> (R.-D.)	+	+	+	—	—	—
89	<i>Exorista rustica</i> (Fall.)	●	+	+	+	+	●
90	<i>Exorista verax</i> (R.-D.)	+	+	—	—	—	—
91	<i>Spoggosia echinura</i> (R.-D.)	+	—	—	—	—	—
92	<i>Spoggosia fasciata</i> (Egg.)	+	—	—	—	—	—
93	<i>Bessa parallela</i> (Meig.)	+	—	—	—	—	—
94	<i>Bessa selecta</i> (Meig.)	+	+	+	+	+	+
95	<i>Phorocera agilis</i> R.-D.	+	+	+	—	+	+
96	<i>Phorocera assimilis</i> (Fall.)	+	+	+	—	—	—
97	<i>Phorocera obscura</i> (Fall.)	+	+	+	—	—	—
98	<i>Diplostichus janithrix</i> (Hart.)	+	—	—	—	—	—
99	<i>Ligeriella aristata</i> (Vill.)	—	—	+	—	—	—
100	<i>Staurochaeta albocingulata</i> (Fall.)	●	—	—	—	—	—
101	<i>Perichaeta unicolor</i> (Fall.)	+	—	—	—	—	—
102	<i>Ligeria angusticornis</i> (Loew)	—	+	+	—	+	—
103	<i>Leiophora innoxia</i> (Meig.)	—	—	+	—	—	—
104	<i>Hyperecteina longicornis</i> (Fall.)	—	+	—	—	—	—
105	<i>Urophyloides hemichaeta</i> (B. B.)	+	—	—	—	—	—
106	<i>Trichoparia blanda</i> (Fall.)	+	+	—	—	—	—
107	<i>Trichoparia podomyia</i> (B. B.)	+	—	—	—	—	—
108	<i>Viviania cinerea</i> (Fall.)	+	—	—	—	—	—
109	<i>Meigenia bisignata</i> (Meig.)	+	+	+	+	+	+
110	<i>Meigenia incana</i> (Fall.)	+	+	+	—	—	—
111	<i>Meigenia majuscula</i> (Rond.)	○	—	—	—	—	—
112	<i>Meigenia mutabilis</i> (Fall.)	+	+	+	—	+	+
113	<i>Meigenia pilosa</i> (Bar.)	—	+	—	—	—	—
114	<i>Meigenia unicinnata</i> Mesn.	+	—	—	—	+	—
115	<i>Gastrolepta anthracina</i> (Meig.)	+	+	—	+	—	—
116	<i>Paratrixa polonica</i> B. B.	+	—	—	—	—	—
117	<i>Medina luctuosa</i> (Meig.)	+	+	+	—	—	—
118	<i>Medina multispinosa</i> Hert.	+	+	+	—	—	—
119	<i>Medina separata</i> (Meig.)	+	+	+	—	—	—
120	<i>Medina funebris</i> (Meig.)	+	+	—	—	—	—
121	<i>Medina collaris</i> (Fall.)	+	—	—	—	—	—
122	<i>Hemimacquartia paradoxa</i> B. B.	+	—	—	—	—	—
123	<i>Compsilura concinnata</i> (Meig.)	+	+	+	+	+	+
124	<i>Lecanipus bicinctus</i> (Meig.)	—	+	+	—	—	—
125	<i>Lecanipus leucomelas</i> (Meig.)	—	+	—	—	—	—
126	<i>Aporotachina angelicae</i> (Meig.)	+	—	—	—	—	—
127	<i>Aporotachina latifrons</i> Jacent.	+	—	—	—	—	—
128	<i>Blondelia inclusa</i> (Hart.)	+	—	—	—	—	—
129	<i>Blondelia nigripes</i> (Fall.)	●	+	+	—	+	●
130	<i>Oswaldia albisquamma</i> (Zett.)	+	—	—	—	—	—
131	<i>Oswaldia muscaria</i> (Fall.)	+	—	—	—	—	—
132	<i>Acemyia acuticornis</i> (Meig.)	●	—	—	—	—	—
133	<i>Goniocera versicolor</i> (Fall.)	●	—	+	—	—	—
134	<i>Actia crassicornis</i> (Meig.)	●	—	+	—	—	—
135	<i>Actia exoleta</i> (Meig.)	+	—	+	—	—	—



1	2	3	4	5	6	7	8
136	<i>Actia lamia</i> (Meig.)	+	+	+	—	—	—
137	<i>Actia maksymovi</i> Mesn.	+	—	—	—	—	—
138	<i>Actia nudibasis</i> Stein	●	+	—	—	—	+
139	<i>Actia pilipennis</i> (Fall.)	+	+	+	—	—	—
140	<i>Actia fissicornis</i> (Strobl)	+	+	+	—	—	—
141	<i>Ceromyia bicolor</i> (Meig.)	+	—	—	—	—	—
142	<i>Ceromyia flaviveta</i> Vill.	+	—	—	—	—	—
143	<i>Ceromyia nigrohalterata</i> Vill.	+	—	—	—	—	—
144	<i>Ceromyia siliacea</i> (Meig.)	+	+	—	—	—	—
145	<i>Ceranthia abdominalis</i> R.-D.	+	—	—	—	—	—
146	<i>Ceranthia pallida</i> Herting	+	+	—	—	—	—
147	<i>Siphona collini</i> Mesn.	+	—	—	—	+	—
148	<i>Siphona confusa</i> Mesn.	+	+	●	+	+	—
149	<i>Siphona cristata</i> (Fabr.)	+	—	—	—	+	—
150	<i>Siphona flavifrons</i> (Staeg.)	—	—	—	—	+	—
151	<i>Siphona geniculata</i> (Deg.)	●	—	—	—	—	○
152	<i>Siphona maculata</i> (Staeg.)	+	—	—	—	+	—
<i>Tachininae</i>							
153	<i>Tachina fera</i> (L.)	+	—	—	—	—	—
154	<i>Tachina grossa</i> (L.)	+	—	—	—	—	○
155	<i>Tachina ursina</i> (Meig.)	+	—	—	—	—	—
156	<i>Tachina vernalis</i> (R.-D.)	+	+	—	—	—	—
157	<i>Nowickia ferox</i> (Panz.)	+	—	—	—	—	○
158	<i>Peletieria popelii</i> (Portsch.)	+	—	—	—	—	—
159	<i>Peletieria prompta</i> (Meig.)	+	—	—	—	—	○
160	<i>Peletieria rubescens</i> (R.-D.)	●	+	—	—	—	○
161	<i>Germaria angustata</i> (Zett.)	+	+	—	—	—	—
162	<i>Nemorea pellucida</i> (Meig.)	+	—	—	—	—	—
163	<i>Lydina aenea</i> (Meig.)	+	+	+	—	—	—
164	<i>Lypha dubia</i> (Fall.)	+	+	+	—	—	+
165	<i>Linnaemyia compta</i> (Fall.)	+	—	—	—	—	—
166	<i>Linnaemyia haemorrhoidalis</i> (Fall.)	+	—	—	—	—	—
167	<i>Linnaemyia impudica</i> (Rond.)	—	+	+	—	—	—
168	<i>Linnaemyia olsufjevi</i> Zim.	+	—	—	—	—	—
169	<i>Linnaemyia picta</i> (Meig.)	—	—	+	—	—	—
170	<i>Linnaemyia pudica</i> (Rond.)	+	+	+	—	—	—
171	<i>Linnaemyia vulpina</i> (Fall.)	+	+	+	+	—	—
172	<i>Ernestia laevigata</i> (Meig.)	+	—	—	—	—	—
173	<i>Ernestia rudis</i> (Fall.)	+	+	—	—	—	○
174	<i>Meriania puparum</i> (Fabr.)	—	+	—	—	—	—
175	<i>Meriania vagans</i> (Meig.)	+	—	—	—	—	—
176	<i>Eurythia anthophila</i> (R.-D.)	+	+	+	—	—	●
177	<i>Eurythia caesia</i> (Fall.)	+	—	—	—	—	●
178	<i>Eurythia conjugata</i> (Zett.)	+	+	—	—	—	—
179	<i>Eurythia connivens</i> (Zett.)	+	—	+	+	+	—
180	<i>Eurythia consobrina</i> (Meig.)	+	+	—	+	—	+
181	<i>Eurythia juncta</i> (Zim.)	+	—	—	—	—	—
182	<i>Eurythia vivida</i> (Zett.)	+	—	—	—	—	—
183	<i>Gymnochaeta viridis</i> (Fall.)	+	—	—	—	—	—

1	2	3	4	5	6	7	8
184	<i>Zophomyia temula</i> (Scop.)	●	—	—	—	—	—
185	<i>Cleonice callida</i> (Meig.)	+	—	—	—	—	—
186	<i>Macquartia chalconota</i> (Meig.)	+	+	+	—	—	—
187	<i>Macquartia dispar</i> (Fall.)	+	+	+	—	—	—
188	<i>Macquartia grisea</i> (Fall.)	+	—	—	—	—	—
189	<i>Macquartia pubiceps</i> (Zett.)	+	+	+	—	—	—
190	<i>Macquartia nudigena</i> Mesn.	+	+	—	—	—	—
191	<i>Macquartia tenebricosa</i> (Meig.)	●	+	+	+	—	+
192	<i>Macquartia viridana</i> (R.-D.)	+	+	—	—	—	—
193	<i>Macroprosopa atrata</i> (Fall.)	+	—	—	—	—	—
194	<i>Bebricia praefica</i> (Meig.)	—	—	+	—	—	—
195	<i>Peletachina tibialis</i> (Fall.)	+	—	—	—	—	—
196	<i>Solieria fenestrata</i> (Meig.)	○	—	—	—	—	—
197	<i>Solieria innanis</i> (Fall.)	○	—	—	—	+	○
198	<i>Solieria pacifica</i> (Meig.)	+	+	+	+	+	—
199	<i>Bithia spreta</i> (Meig.)	○	—	—	—	—	—
200	<i>Aphria longirostris</i> (Meig.)	+	—	—	—	—	—
201	<i>Demoticus plebeius</i> (Fall.)	●	—	—	—	—	—
202	<i>Mintho compressa</i> (Fabr.)	—	—	—	—	—	○
203	<i>Mintho rufiventris</i> (Fall.)	+	—	—	—	+	+
204	<i>Elfia bohémica</i> (Kram.)	+	—	+	+	—	—
205	<i>Elfia canella</i> Hert.	+	—	—	—	—	—
206	<i>Elfia zonella</i> (Zett.)	+	+	+	—	+	+
207	<i>Phythomyptera lacteipennis</i> Vill.	+	+	+	+	+	—
208	<i>Phythomyptera nigrina</i> (Meig.)	●	+	—	—	—	—
209	<i>Loewia brevifrons</i> Rond.	+	—	—	—	—	—
210	<i>Loewia phaeoptera</i> (Meig.)	+	—	—	—	—	—
211	<i>Triarthia legeri</i> (Vill.)	+	—	—	—	—	—
212	<i>Triarthia setipennis</i> (Fall.)	+	+	+	—	+	—
213	<i>Dexiosoma caninum</i> (Fabr.)	+	—	—	—	—	—
214	<i>Microphthalma europea</i> (Egg.)	+	—	—	—	—	—
215	<i>Elocera delecta</i> (Meig.)	+	+	—	—	—	—
216	<i>Campylochaeta fuscineris</i> (Stein)	+	—	—	—	—	—
217	<i>Campylochaeta inepta</i> (Meig.)	●	+	+	—	+	+
218	<i>Campylochaeta praecox</i> (Meig.)	+	—	—	—	—	—
219	<i>Hyleorus elatus</i> (Meig.)	●	—	—	—	—	●
220	<i>Voria ruralis</i> (Fall.)	●	+	+	—	+	+
221	<i>Athrycia curvinervis</i> (Zett.)	●	●	+	+	+	—
222	<i>Athrycia impressa</i> (van der Wulp)	●	—	—	—	—	—
223	<i>Athrycia trepida</i> (Meig.)	●	●	+	+	—	—
224	<i>Cyrthophleba ruricola</i> (Meig.)	+	—	—	—	—	—
225	<i>Cyrthophleba vernalis</i> (Kram.)	—	+	—	—	—	—
226	<i>Kirbya moerens</i> (Meig.)	○	—	—	—	—	○
227	<i>Periscepsia carbonaria</i> (Panz.)	●	●	+	—	—	○
228	<i>Ramonda prunaria</i> (Rond.)	●	+	+	—	—	—
229	<i>Peteina erinaceus</i> (Fabr.)	●	+	—	+	—	●
230	<i>Blepharomyia pagana</i> (Meig.)	+	—	—	—	—	—
231	<i>Blepharomyia piliceps</i> (Zett.)	+	—	—	—	—	—
232	<i>Eriothrix accolus</i> Kol.	—	—	—	+	—	—
233	<i>Eriothrix appeninus</i> (Rond.)	●	—	—	—	—	—

1	2	3	4	5	6	7	8
234	<i>Eriothrix prolixa</i> (Meig.)	●	—	—	—	—	—
235	<i>Eriothrix rufomaculata rufomaculata</i> (Deg.)	●	+	+	—	+	+
236	<i>Eriothrix rufomaculata monochaeta</i> (Wainwr.)	●	—	+	—	—	—
237	<i>Thelaira leucozona</i> (Panz.)	○	—	—	—	—	—
238	<i>Thelaira nigripes</i> (Fabr.)	●	●	+	+	+	—
239	<i>Phyllomyia volvulus</i> (Fabr.)	+	—	—	—	—	—
240	<i>Dufouria chalybeata</i> (Meig.)	●	—	—	—	—	○
241	<i>Dufouria nigrita</i> (Fall.)	●	—	—	—	—	—
242	<i>Dufouria oclusa</i> (R.-D.)	●	●	—	—	—	—
243	<i>Microsoma exigua</i> (Meig.)	●	+	+	+	—	—
244	<i>Freraea gagatea</i> R.-D.	●	—	—	—	—	—
	<i>Dexiinae</i>						
245	<i>Billaea irrorata</i> (Meig.)	●	—	—	—	—	—
246	<i>Estheria bohemani</i> (Rond.)	●	+	+	—	—	—
247	<i>Estheria cristata</i> (R.-D.)	+	+	+	—	—	—
248	<i>Dexiomorpha petiolata</i> Bousd.	●	+	—	—	—	—
249	<i>Dexiomorpha picta</i> (Meig.)	●	—	—	—	—	—
250	<i>Dexia rustica</i> (Fabr.)	●	●	—	—	—	●
251	<i>Dexia vacua</i> (Fall.)	●	—	—	—	—	—
252	<i>Prosenia siberita</i> (Fabr.)	●	●	—	—	—	○
253	<i>Dinera grisescens</i> (Fall.)	●	+	+	+	—	●
254	<i>Phorostoma carnifrons</i> (Fall.)	●	—	—	—	—	—
	<i>Phasiinae</i>						
255	<i>Clytiomyia continua</i> (Panz.)	●	●	—	—	—	○
256	<i>Heliozeta pellucens</i> (Fall.)	●	—	—	—	—	—
257	<i>Chryseria helluo</i> (Fabr.)	●	—	—	—	—	—
258	<i>Subclytia rotundiventris</i> (Fall.)	+	—	—	—	—	—
259	<i>Gymnosoma clavatum</i> (Rohd.)	+	—	—	—	—	—
260	<i>Gymnosoma dolycoridis</i> Dup.	+	+	—	—	—	—
261	<i>Gymnosoma nudifrons</i> Hert.	+	+	—	—	—	—
262	<i>Gymnosoma rotundatum</i> (L.)	●	+	—	—	—	○
263	<i>Gymnosoma rungsi</i> Mesn.	+	—	—	—	—	—
264	<i>Gymnosoma verbekei</i> Mesn.	+	—	—	—	—	—
265	<i>Stylogymnomyia nitens</i> (Meig.)	●	—	—	—	—	●
266	<i>Pallasia globosa</i> (Fabr.)	●	—	—	—	—	—
267	<i>Xysta cana</i> (Meig.)	○	—	—	—	—	○
268	<i>Ectophasia rostrata</i> (Egg.)	●	+	—	—	—	○
269	<i>Ectophasia rubra</i> (Girschn.)	●	●	—	—	+	○
270	<i>Alophora aurulans</i> (Meig.)	○	—	—	—	—	—
271	<i>Alophora obesa</i> (Fabr.)	●	+	—	—	—	○
272	<i>Alophora pusilla</i> (Meig.)	●	+	—	—	—	○
273	<i>Redtenbacheria insignis</i> (Egg.)	●	—	—	—	—	—
274	<i>Leucostoma simplex</i> (Fall.)	●	+	—	—	—	—
275	<i>Cylindromyia auriceps</i> (Meig.)	●	+	—	—	—	—
276	<i>Cylindromyia brassicaria</i> (Fabr.)	●	—	—	—	—	○
277	<i>Cylindromyia brevicornis</i> (Loew)	●	●	—	—	—	—
278	<i>Cylindromyia intermedia</i> (Meig.)	●	—	—	—	—	—
279	<i>Cylindromyia interrupta</i> (Meig.)	●	—	—	—	—	—

1	2	3	4	5	6	7	8
280	<i>Cylindromyia pusilla</i> (Meig.)	○	—	—	—	—	—
281	<i>Phania vittata</i> (Meig.)	●	—	—	—	—	—
282	<i>Besseria bicolor</i> (Perr.)	●	—	—	—	—	—
283	<i>Weberia curvicauda</i> (Fall.)	●	—	—	—	—	—
284	<i>Weberia pseudofunesta</i> Vill.	●	—	—	—	—	—
285	<i>Strongylogaster celer</i> (Meig.)	●	—	—	—	—	—

The species so far recorded only from the Alps. Larval development not known.

*Gymnosoma rungsi* Mesnil, 1952

Five males and four females: Mazovian Lowland. Kampinos forest, 22 June—28 July, 1954—1955.

The species known from southern and central Europe, Ciscaucasia, Caucasia, Central Asia, the Pamirs, and the Far East.

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## RĄCZYCE (DIPTERA, TACHINIDAE) WARSZAWY I MAZOWSZA

### STRESZCZENIE

Na Nizinie Mazowieckiej występuje 285 gatunków rączyc, co stanowi 65% fauny tych muchówek znanych z Polski. W Warszawie złowiono 164 gatunki, czyli 58%, fauny Tachinidae znanych z Mazowsza. Na przedmieściach stolicy stwierdzono 123 gatunki rączyc, a w zieleni miejskiej 107 gatunków, w tym — 90 w parkach miejskich, 30 — w zieleni osiedlowej oraz 47 w centrum miasta (na placu Konstytucji występują trzy gatunki: *Bactromyia aurulenta*, *Elfia zonella* i *Thelaira nigripes*).

Dotychczas z Warszawy znane były 42 gatunki rączyc, obecnie wykazano ich 164. Z Niziny Mazowieckiej podawanych było 85 gatunków *Tachinidae*, w niniejszym opracowaniu wymieniono 200 gatunków wykazanych po raz pierwszy z Mazowsza (w Tab. 5 zostały one oznaczone znakiem +), w tym 26 gatunków jest nowych dla fauny Polski. Są to następujące muchówki z podrodziny *Salmaciinae*: *Carcelia laxifrons*, *C. tibialis*, *Winthemia speciosa*, *Zenilia dolosa*, *Lydella thompsoni*, *Phebellia clavellariae*, *Ph. stuleta*, *Buquetia musca* i *Pachystylum breinii*; z podrodziny *Exoristinae*: *Urophylloides hemichaeta*, *Medina funebris*, *M. multispinosa*, *Aporotachina angelicae*, *A. latifrons*, *Actia exoleta*, *Ceromyia flaviseta* i *Ceranthia pallida*; z podrodziny *Tachininae*: *Linnaemyia olsufjevi*, *Eurythia juncta*, *Elfia bohémica*, *E. canella*, *Phythomyptera lacteipennis*, *Tririthia legeri* i *Loewia brevifrons*; z podrodziny *Phasiinae* — *Gymnosoma rungsi*.

Na Mazowszu większość stanowią gatunki palearktyczne i euroszyberyjskie. Na przedmieściach Warszawy wzrasta udział procentowy gatunków kosmopolitycznych i holarktycznych, natomiast w zieleni miejskiej — gatunków holarktycznych, palearktycznych i submedyteraneńskich. Maleje udział gatunków euroszyberyjskich i borealnych.

Do zieleni miejskiej wnikają gatunki o dużej plastyczności ekologicznej i małej wybiórczości pokarmowej. Gatunki politopowe przeważają we wszystkich typach zieleni miejskiej. W centrum stwierdzono dwukrotnie więcej gatunków eurytopowych niż oligotopowych, oraz brak gatunków stenotopowych.

Na Mazowszu przeważają gatunki rączyc odżywiające się nektarem kwiatów. W zieleni miejskiej wzrasta udział procentowy gatunków odżywiających się spadzią i nektarem kwiatów. Zarówno na Mazowszu, jak i w zieleni miejskiej Warszawy przeważają parazytoidy motyli i chrząszczy, natomiast do centrum wnika najwięcej gatunków polifagicznych tzn. pasożytujących w różnych rzędach owadów. Podrodzina *Phasiinae* na Nizinie Mazowieckiej reprezentowana jest przez 31 gatunków, z których większość pasożytuje w pluskwiakach różnoskrzydłych, w centrum Warszawy stwierdzono tylko jeden gatunek tych muchówek.

Podano dwa nowe gatunki żywicielskie dla dwóch gatunków rączyc, a mianowicie, *Carcelia tibialis* wyhodowany został z gąsienicy motyla *Dasychira pudibunda* oraz *Bessa selecta* z oprzędu *Neuroptera*.

ЕЖЕМУХИ (*TACHINIDAE*, *DIPTERA*) ВАРШАВЫ И МАЗОВИИ

## РЕЗЮМЕ

*Tachinidae* Мазовии (285 видов) составляют 65% числа встречающихся в Польше. В Варшаве встречается всего 164 вида: в субурбиях — 123, в городской зелени — 107, в том числе в парках — 90, в зеленых насаждениях жилых микрорайонов — 30 и в центре города 47 видов. Преобладают среди них по количеству видов паразиты бабочек и жуков, характеризующиеся большой экологической пластичностью, а также полифаги с широким географическим ареалом (палеарктическим и европейско-сибирским).