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ICHNEUMONIDAE (HYMENOPTERA) OF WARSAW
AND MAZOVIA

ABSTRACT

From non-urban habitats of Mazovia and from Warsaw 965 species of *Ichneumonidae* have been recorded, including 780 species from non-urban habitats. From the suburbs of Warsaw 553 species are known, and from urban green areas 381 species, including 344 species from parks, 106 from green areas of housing estates and 109 from the centre of the town. Thus the number of species decreases with growing urban pressure. This factor also reduced the number of species in most of the seven guilds of parasitoids associated with specific host groups. Parasitoids of aphidophagous predators are an exception, the number of their species not being reduced in urban green areas. No effect of urban pressure on the proportion of different zoogeographical elements in *Diplazontinae* was recorded.

INTRODUCTION

The *Ichneumonidae* of Poland are relatively well known but unevenly studied. More than 2,500 species have already been recorded, and it is estimated that their number only slightly exceed 3,000. The *Ichneumonidae* of Warsaw and Mazovia are much less known than those living in other regions of Poland.

From non-urban habitats of Mazovia 249 species have so far been recorded. Data on their occurrence can be found in faunal papers of different types [1, 2, 5, 6], in taxonomic papers [8, 15—18, 20, 34], in papers dealing with the biology of parasitoids and their hosts [4, 7, 10, 11, 14, 22—24, 27—32], and in zoocoenological papers [19, 25]. Also the list of nine species recorded from Rogów near Koluszki [9, 29] is used here, since this locality adjoins the edge of Mazovia, thus it can be expected that the animals living there also occur in Mazovia.

In Warsaw the best known area is Białoleka Dworska, a suburbium of Warsaw, from which 320 ichneumon fly species have been recorded, and their habitat preferences and hosts are indicated [21]. From other suburban habitats less than 20 species have been recorded [1, 2, 5—7, 18, 20, 22]. No special studies were carried out in urban green areas, only single species being noted there [18, 20].

The objective of the paper was to determine the species composition of the *Ichneumonidae* of Warsaw and non-urban habitats of Mazovia, to present a zoogeographical analysis of *Diplazontinae* and an ecological analysis of all the species recorded. An attempt is made to recognize more important regularities in the development of the fauna subject to urban pressure.

To prepare the list of species occurring in Warsaw and Mazovia, the data were used from the literature cited above, the materials in the collection of the Institute of Zoology PAS, collected by many workers for the recent 30 years, and the materials collected in 1974—1978 within the programme "The effect of urban pressure on the fauna", realized by the Zoocoenological Department of the Institute of Zoology PAS. These last materials consists of insects caught in crowns of tress such as oaks, limes, alders, birches, and pines by means of Moericke's traps, and also in the herb layer by means of Barber's traps and sweep nets.

The study area in Mazovia and in the suburbs covered various habitat types ranging from wet meadows, carrs, and oak-hornbeam forests to different coniferous forests. Urban green areas of Warsaw are generally located on the site of an oak-hornbeam forest, only the central part of the Łazienki park and the Praga park being located on the site of carrs. The materials were collected near the following localities:

Non-urban habitats of Mazovia: Hamernia (an oak-hornbeam forest and a carr), Radziejowice (a park), Młochów, Kampinos forest (pine forest, mixed coniferous forest, and wet meadows), Łomna, Dziekanów Leśny, Podkowa Leśna, Biała forest, Chylice (alfalfa field), and many other sites, including Rogów near Koluszki.

Warsaw: suburbs — Ursynów (a park and wet meadow), allotments near Okęcie, Bielany (an oak-hornbeam forest and a carr), Jelonki, Białołęka Dworska (an oak-hornbeam forest, a carr, a mixed coniferous forest, and a pine forest), the sides of the Vistula river; urban parks — Łazienki, Praga Park, Saxon Garden, Cemetery of Soviet Soldiers; park of the Agricultural University at Al. Niepodległości street; green areas of housing estates Wierzbno and Stawki: centre of the town — Konstytucji Square, courtyard green at Koszykowa and Piękna streets, and in front of the Institute of Zoology at Wilcza street.

The study areas, methods, and general problems underlying the work are characterized in detail elsewhere [3, 12, 13, 26].

Nearly 15 500 specimens of *Ichneumonidae* have been identified, this accounting for about 80% of the material collected.

In the present paper also the materials collected by T. Plewka and T. Huflejt are used. Many species have been identified or verified by Dr. J. F. Aubert (Paris), Mr. E. Diller (München), Dr. I. D. Gauld (London), Prof. G. H. Heinrich (Dryden, Maine), Mr. R. Hinz (Einbeck), Dr. K. Horstmann (Würzburg), Mr. M. Idar (Uppsala), Dr. D. R. Kasparyan (Leningrad), and Dr. A. P. Rasnitsyn (Moscow). I am deeply grateful to all of them for their help and co-operation.

SPECIES COMPOSITION

From both Warsaw and Mazovia, 965 species of *Ichneumonidae* have been recorded, including 454 species new to Mazovia and 25 species new to Poland (Tabs 2 and 3). They represent almost 30% of the species known from Poland and probably about 50% of the species occurring in Mazovia. Not all subfamilies have been worked out to the same extent. Almost the whole material has been identified for *Ichneumonidae*, *Diplazontinae*, *Ephialtinae*, *Adelognathinae*, *Xoridinae*, *Cremastinae*, *Ophioninae*, *Anomalinae*, *Acaenitinae*, and a few smaller subfamilies. For many other, larger families only a part of the material has been identified. The *Orthocentrinae* have not been analysed at all.

The number of species of *Ichneumonidae* decreases from Mazovia, through the suburbs to the centre of the town (Tabs 2 and 3). In the suburbs there have been recorded 71%, in urban green areas only 50%, and in the centre 14% of the species known from Mazovia. Within urban green areas, parks are characterized by the highest number of species. It is three times as high as the number of species in green areas of housing estates or in the centre of the town.

The number of species of the family *Diplazontinae* follows a different pattern. It slightly increases from 25 in Mazovia to 27 in the suburbs and in urban green areas, being lower for particular types of urban green areas as it ranges from 16 to 24 species (Tab. 1). In sum, urban green areas and the centre of the town are inhabited by 25 species, this being the same figure as for Mazovia.

There are 43 species inhabiting both Mazovia and particular habitats of Warsaw, which account for 4.5% of the total number of species recorded.

ZOOGEOGRAPHICAL ANALYSIS OF *DIPLAZONTINAE*

Geographical ranges of the species of the subfamily *Diplazontinae* are relatively well known. The species recorded here have been classified into four zoogeographical elements (Tab. 1). The number of species with large ranges such as cosmopolitan and Holarctic and their percentage in the total number of species recorded from particular habitats are generally slightly higher than for the species with smaller ranges such as Palaearctic and European. Proportions among particular elements are similar in Mazovia, the suburbs, and in urban green areas. Only in the centre of the town there was an increase in the proportion of European species at the expense of Holarctic ones.

Table 1. Proportions of zoogeographical elements in *Diplazontinae* 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	4	16	5	18	4	15	4	17	4	25	3	17
Holarctic	12	48	11	41	11	41	10	42	7	44	6	33
Palaeartic	2	8	1	4	2	7	2	8	—	—	1	6
European	7	28	10	37	10	37	8	33	5	31	8	44
Total	25		27		27		24		16		18	

ECOLOGICAL ANALYSIS

Particular species of *Ichneumonidae* differ in their ecological requirements. Adults are melliphages feeding on nectar and pollen. Only few species additionally feed on hemolymph of larval insects. Females of many species, e.g. *Ichneumoninae*, overwinter in decaying stumps and tree trunks, in litter, sward or in stems of perennial plants. The larvae of *Ichneumonidae* parasitize insects of different taxonomic groups and *Aranei*. Females infest larvae and pupae of insects, while egg cocoons or adult individuals of *Aranei*. Most parasitoid species have many morphological adaptations (e.g.) the length of ovipositor) limiting the spectrum of available hosts. Some species are specialized in attacking different cocoons of both insects and *Aranei*, other find hosts in wood, litter, etc. Often a time overlapping is needed in the occurrence of parasitoid females and various developmental stages of hosts (larvae, pupae, etc.). When the parasitoid-host coincidence is disturbed, for instance, as a result of differences in response to environmental factors or due to the elimination of any host of a definite parasitoid generation, this parasitoid can be completely eliminated from the habitat.

According to the general view, the occurrence of some species in definite habitats is mostly determined by their specific ecological requirements, particularly of adults. These are usually specialized parasitoids, associated with one or a few, often closely related, host species. Thus such parasitoids can occur and find their hosts only in specific habitats. Some species characterized by a high ecological tolerance inhabit various habitats in which they can find their hosts. Most of them have a rich spectrum of hosts.

Ichneumonidae can be classified into eurytopic and stenotopic species as far as their ecological amplitude is concerned, and into the species associated with open habitats, transitional habitats, and wooded (forest) habitats as far as their habitat preference is concerned. Eurytopic species occur in different habitats. They include most of the parasites of aphidophagous predators, such as *Diplazon laetatorius*, *D. tetragonus*, *Bathythrix pellucidator*, *Charitopes chrysopae*, etc. Stenotopic species include most of the parasitoids of xylophages. Here also belong *Cratichneumon viator*, a specialized parasitoid of *Bupalus piniarius* L., which like its host occur only in coniferous forests. The species closely associated with open habitats include *Banchus falcatorius*, *Ichneumon sarcitorius*, representatives of the genera *Amblyteles* Wesm., *Ctenichneumon* Thoms., *Diphyus* Kriechb., and other related parasites attacking insects of the genus *Agrostis* O. (*Lepidoptera*) living in soil or sward. Some species are associated with particular layers of the habitat, such as epigeon, herb layer, shrubs and trees. Saprothagous and parasitic epigeon flies are attacked by the species of the genera *Phygadeuon*, *Mesoleptus*, *Atractodes*, and others. Most *Tryphoninae*

and *Ctenopelmatinae* are associated with herbs and grasses. In the crowns of pines a specific ichneumon fly community was recorded associated with the fauna of pines, like *Exoteleia dodecella* L., *Ocnerostoma pinia-riellum* Zell. and *Aranei* [19].

No sufficient data are available to characterize the recorded ichneumonid species according to these classifications. In the present paper their classification into trophic groups will be considered in more detail. All the species collected have been divided into the guilds of parasitoids associated with various biotic host groups [33]. The following guilds have been distinguished (Tab. 2):

— parasitoids of xylophages and cambiophages: *Dolichomitus* spp., *Townesia* sp., *Flavopimpla* spp., *Delomerista* spp., *Liotryphon* spp., *Pseudoryssa* spp., *Rhyssini*, *Poemenini*, *Xoridinae*, *Acaenitinae*, *Helcostizus* sp., *Cubocephalus* spp., and *Bathythrix* sp.

— parasitoids of leaf mining and folding and gallforming phytophages: *Scambus* spp., some *Coccygomimus* spp., *Apechthis* spp., *Idiogramma* sp., *Grypocentrus* spp., *Phytodietus* spp., some *Lathrolestes* spp., some *Banchinae*, *Stilbopinae*, some *Campopleginae*, some *Phygadeuontinae* (*Ischnus* spp., *Caenocryptus* sp., *Pycnocryptus* sp., *Gelis albipalpis* ex *Microlepidoptera* on *Tilia* sp.), *Cremastinae*, most *Campopleginae*, some *Tersilochinae*, most *Metopiinae*, *Collyria* sp., *Orthopelma* sp., and *Phaeogenini*.

— parasitoids of exophytophages. *Lepidoptera*: *Ichneumoninae* (without *Phaeogenini*), *Apechthis* sp., *Coccygomimus* sp., *Acropimpla* sp., *Gregopimpla* sp., *Iseropus* sp., *Ophioninae*, *Anomalinae*, some *Banchinae*, some *Campopleginae*, some *Phygadeuontinae*; *Symphyta*; most *Ctenopelmatinae* (including *Lathrolestes luteolator*, a parasitoid of *Selandia annulipes* Kl. occurring on *Tilia* sp.), some *Tryphoninae*, *Adelgnathinae*, some *Phygadeuontinae*.

— parasitoids of general predators. *Aculeata*: *Aritriani* spp., *Nematopodius* sp., *Xylophrurus* spp., *Neorhacodes* sp., *Perithous* spp., *Raphidioptera*: *Tropistes* sp., *Nemeritis* spp., *Aranei*: some *Gelis* spp., *Aclastus* spp., *Trychosis* spp., *Idiolispa* sp., *Agasthenes* sp., *Gnyptomorpha* sp., *Xiphulcus* sp., *Tromatobia* spp., *Zaglyptus* spp., *Clistopyga* spp., and *Polysphinctini*.

— parasitoids of aphidophagous predators: *Diplazontinae*, *Ethelurgus sodalis*, *Bathythrix pellucidator*, *Phygadeuon ovalis* (parasitoids of aphidophagous *Syrphidae*): *Dichrogaster* spp., *Charitopes* spp., *Brachycyrtus ornatus* (parasitoids of *Neuroptera*).

— parasitoids of parasitoids (parasitoids of the second order): *Mesochorinae*, *Eucerus* sp., *Phygadeuontinae* — *Lysibia* sp., *Acrolyta* spp., *Encrateola* sp., *Hemiteles* spp., some *Bathythrix* spp., and others.

— ecopolyphagous parasitoids: e.g. *Gelis areator* and *G. cintus* attacking different cocoons (e.g. of *Symphyta*, parasitoids, *Aranei* and larvae of *Lepidoptera* living in different types of cases. *G. areator* was also recorded from pupae of *Syrphidae* and from *Neuroptera*. *Polytribax arrogans* is a parasitoid of *Lepidoptera* and a superparasitoid. Similarly *Itopectis*

alternans and *I. maculatus* parasitise different *Lepidoptera*. They have been recorded from *Coleoptera*, *Symphyta*, *Diptera* and are often parasitoids of the second order.

The *Ichneumonidae* parasitizing other host groups or the hosts of which are not known (other hosts in Tab. 2) account for 8—10% of the total number of species. Here there are species attacking melliphages, two or three such species being recorded from Mazovia and the suburbs of Warsaw (*Acroricnus stylator*, *Sphagophage vesparum*, and ?*Stenarella gladiator*). Also parasitoids of different saprophages are included here. Coprophagous *Syrphidae* (*Diptera*) can be parasitized by *Acanthocryptus* spp., phytophages (*Byrrhidae*, *Coleoptera*) probably by *Barycnemis* spp. (cult. E. Nowakowski). Among the species whose hosts are not known there are mostly parasitoids of phytophagous, saprophagous and parasitic *Diptera* (*Phygadeuon* spp., *Stilpnus* spp., *Mesoleptus* spp., *Atractodes* spp.), and parasitoids probably attacking different cocoons (*Mastrus* spp., *Isadelphus* spp., *Gelis* spp.).

The number of species in particular guilds of *Ichneumonidae* generally decreased along the transect from non-urban habitats of Mazovia to the centre of the town but not at the same rate for particular guilds. The number of species in the guild of the parasitoids attacking leaf mining and folding phytophages was reduced to one-sixth in the centre of the town and in green areas of housing estates as compared with Mazovia, while the number of the species parasitizing exophytophages was reduced to one-seventeenth. The number of parasitoids of aphidophagous predators in urban green areas was equal to that in Mazovia, and in the suburbs even a little higher. The proportion of the species belonging to this guild increased from 5% in Mazovia to 23—24% in green areas of housing estates and in the centre. Also the relative number of the species attacking mining phytophages slightly increased.

In Mazovia and in the suburbs the guild attacking exophytophages was represented by the highest number and percentage of species, then there were parasitoids of mining phytophages. This situation was largely changed in urban green areas. The parasitoids of mining phytophages consisted of a larger number and proportion of species than the parasitoids of exophytophages, and the number of parasitoids of aphidophagous predators was maintained at a high level. Within urban green areas, the predominance of the parasitoids attacking mining phytophages over the parasitoids attacking exophytophages increased towards the centre of the town.

The increase in urban pressure has shown to be a factor markedly reducing the number of species in almost all guilds of ichneumon flies. Not all of them equally responded to growing urban pressure. Parasitoids of exophytophages were impoverished in species at a much higher rate than parasitoids of mining phytophages. This resulted from a decrease in the number and often density of host species, as well as from differences in their tolerance to environmental factors. A different situation was noted

Table 2. Proportions of parasitoid guilds associated with different host groups in *Ichneumonidae* of Warsaw and non-urban habitats of Mazovia (*N*—number of species)

Parasitoids of	Mazovia		Warsaw									
			Suburbs		Urban green areas							
	Total				Parks		Housing estates		Town centre			
	N	%	N	%	N	%	N	%	N	%	N	%
xylophages and cambio- phages	50	6	33	6	12	3	10	3	1	12	3	3
leaf mining and folding or gallforming phytopha- ges	186	24	142	26	126	33	110	32	28	26	33	30
exophytophages:												
<i>Lepidoptera</i>	219	28	136	25	67	17	63	18	11	10	15	13
<i>Symphyta</i>	126	16	79	14	37	10	34	10	7	7	5	5
Total	345	44	215	39	104	27	97	28	18	17	20	18
general predators	37	5	40	7	31	8	28	8	8	8	7	6
aphidophages	36	5	42	8	40	11	36	11	26	24	25	23
parasitoids	48	6	32	6	30	8	31	9	12	11	10	9
other hosts	70	9	42	7	32	8	27	8	10	10	9	9
Ecopolyphages	8	1	7	1	6	2	5	1	3	3	2	2
Total	780		553		381		344		106		109	

for parasitoids of aphidophagous predators. The number of species in parks was not reduced as compared with that in Mazovia, and only slightly reduced in green areas of housing estates and in the centre of the town. As a result the proportion of the species of this guild increased in relation to the total number of species. This situation is possible due to a high density of aphids and, consequently, their predators in the town.

Some species of *Ichneumonidae* are closely associated with man, thus they can be considered as typical, synanthropic species. They include *Venturia canescens*, a parasitoid of *Ephestia kuehniella* Zell., *Xenolytus bitinctus*, a parasitoid of pests of stored food, and species of the genus *Stilpnus* Grav., often parasitic on synanthropic *Diptera*, e.g. *S. gagates* was raised from *Fannia canicularis* L. (cult. H. Schnee). It is probable that many other species are parasitic on synanthropic invertebrates.

Most of the species of *Ichneumonidae* are scarce. Occasionally some species are locally abundant. For instance, in an oak-hornbeam forest in Hamernia there was a mass appearance of *Stilbops vetula*, a species parasitizing *Microlepidoptera*. In Mazovia and in the suburbs more abundant species accounted for 3—4% of the total number of species reaching 20—25. In urban green areas their proportion increased to 70%, a highest proportion of 8% (26 species) being noted in parks, 5% in green areas of housing estates (*Dichrogaster aestivalis*, *Gelis albipalpis*, *Charitopes chrysopae*, *C. clausus*, and *Nemeritis lativentris*), and 3% in the centre of the town (*Gelis spinula*, *Campoplex restrictor*, and *Nemeritis lativentris*).

CONCLUSIONS

Urban pressure largely modifies the species composition of *Ichneumonidae*. It has a direct effect on parasitoids and an indirect one, through their hosts — it determines the richness of plant cover and, consequently, the spectrum and density of hosts.

In non-urban habitats of Mazovia and in Warsaw there have been 965 species of *Ichneumonidae* recorded. From non-urban habitats of Mazovia 780 species are known. The number of species decreases towards the centre of the town, being 553 in the suburbs, and 381 in urban green areas, including 344 species in parks, 106 in green areas of housing estates, and 109 in the centre. About 4.5% of the total number of species are common to Mazovia, the suburbs, and urban habitats of Warsaw.

The subfamily *Diplazontinae* is dominated by the species with large geographical ranges (cosmopolitan and Holarctic). Urban pressure only slightly modified proportions among particular zoogeographical elements occurring in the study habitats.

Urban pressure represents a barrier for most species of the parasitoid guilds associated with specific hosts. The number of species markedly

dropped along the transect from non-urban habitats of Mazovia to the centre of the town. Parasitoids of exophytophages are eliminated at a much higher rate than parasitoids of mining phytophages. This is related to a decrease in the number and density of host species, and to a limiting effect of various factors such as lack of non-polluted honeydew, or lack of suitable sites for wintering females, etc.

A different situation was noted in the case of the guild of parasitoids associated with aphidophagous predators. No species were eliminated from this guild in urban green areas, and in this relation their proportion increased there as compared with non-urban habitats of Mazovia. This was possible due to the fact that their hosts are abundant in the suburbs and in urban habitats and, moreover, these parasitoids are characterized by a high ecological tolerance. These are eurytopic species with large geographical ranges and living in different habitats. Here many species of *Diplazontinae* can be quoted as an example. They occur in every places where their hosts live. The high species diversity of the parasitoids attacking aphidophagous predators, thus beneficial insects, is not useful from the point of view of plant protection in urban green areas.

The species more abundant in urban green areas generally are not abundant in Mazovia, except for *Gelis albipalpis*, *Charitopes chrysopae*, *Nemeritis lativentris*, and *Leptocampoplex cremastoides*, which are relatively abundant everywhere.

SPECIES NEW TO THE FAUNA OF POLAND

Scambus phragmitidis Perkins, 1957

Material (one female): Warsaw — Bródno, ex *Lipara rufitarsis* Lew. (Diptera, Chloropidae), reeds in a moor, leg. et cult. E. Stanisławska.

Known from England — ex *Lipara lucens* Meig., and France.

Liotryphon ruficollis (Desvignes, 1856)

Material (four females, one male): Hamernia — oak-hornbeam forest and carr, Łomna — mixed coniferous forest, August—September.

Recorded from England, the Federal Republic of Germany, Belgium, France, Spain, and Switzerland.

Delomerista novita (Cresson, 1970)

Material (one female): Biała forest, Leszczydół, 3 July, 1975, leg. T. Huflejt.

Recorded from the Holarctic.

Diacritus aciculatus (Vollenhoven, 1878)

Material (two females): Kampinos forest, Truskaw, 10 July, 1977, leg. T. Huflejt.

Recorded from England, Finland, the Federal Republic of Germany, France, Rumania.

Netelia caucasicus (Kokujev, 1899)

Material (one male): Łomna — field station of the Institute of Zoology PAS, 19 May, 1975, leg. J. Sawoniewicz.

Recorded from the Palaearctic.

Erromenus tarsator Aubert, 1969

Material (two females): Hamernia — a carr, Warsaw — Radość, June, det. A. Kasparyan.
Recorded from Europe, the U.S.S.R. — Siberia.

Tryphon brevipetiolaris Uchida, 1955

Material (one female): Rogów near Koluszki, 12 July, 1967, leg. J. Sawoniewicz, det. D. Kasparyan.
Known from the Palaearctic.

Smicroplectrus excisus Kerrich, 1952

Material (one female, one male): Biała forest — Laski, Warsaw — on the Vistula, June, det. D. Kasparyan.
Recorded from Europe.

Smicroplectrus perkinsorum Kerrich, 1952

Material (one male): Warsaw — Marysinek, May, leg. J. Sawoniewicz. Known from the Palaearctic.

Cteniscus hofferi Gregor, 1937

Material (two females): Rogów near Koluszki, August—September, leg. T. Huflejt.
Known from Europe.

Adelognathus granulatus Perkins, 1941

Material (one female): Hamernia — an oak-hornbeam forest, 29 September — 8 October, 1976.
Recorded from Sweden, England and Ireland.

Dichrogaster crassicornis Horstmann, 1976

Material (one female): Warsaw — Nowolipki, 2—16 July, 1976.
Recorded from Czechoslovakia.

Dichrogaster mandibularis Horstmann, 1973

Material (two females): Warsaw-Wierzbno and Jelonki.
Recorded from Sweden and the Federal Republic of Germany.

Endasys talizkii (Telenga, 1961)

Material (29 females): Warsaw — allotments near Okęcie, June.
Recorded from the U.S.S.R.

Lethades laricis Hinz, 1976

Material (one female): Rogów near Koluszki, 5 May, 1968, leg. J. Sawoniewicz, det. R. Hinz.
Recorded from Switzerland and Austria.

Trematopygodes spiniger Hinz, 1976

Material (two females): Hamernia — an oak-hornbeam forest, 25 March, 1977: Młochów, 25 August, 1977, det. R. Hinz.
Recorded from the Federal Republic of Germany.

Campoplex investigator (Habermehl, 1923)

Material (seven females, one male): Hamernia — an oak-hornbeam forest, Warsaw—Łazienki park, June, August—October.
Recorded from the Federal Republic of Germany and France.

Diadegma appositor Aubert, 1970

Material (one female): Warsaw-Konstytucji Square, 18 September — 7 October, 1975, det. K. Horstman.
Recorded from France.

Diadegma neomajalis Horstmann, 1969

Material (four females): Hamernia (an oak-hornbeam forest and a carr), Warsaw—Łazienki park, June and October, det. K. Horstmann.

Recorded from Sweden and the Federal Republic of Germany.

Probles neoversutus (Horstmann, 1967)

Material (14 females, 15 males): Mroków, Warsaw — Institute of Zoology PAS at Wilcza street, Nowolipki, Wierzbno, Saxon Garden, Cemetery of Soviet Soldiers, Praga Park, Łazienki park, August—September.

Recorded from Europe.

Tersilochus obscurator Aubert, 1959

Material (four females): Hamernia (a carr), Łomna (an alder swamp), Warsaw—Łazienki park, April—May.

Recorded from Europe.

Carria paradoxa Schmiedeknecht, 1924

Material (three females, two males): Kampinos forest, Łomna — a mixed coniferous forest, 21—30 April, 1977.

Recorded from England.

Barichneumon krapinensis (Schmiedeknecht, 1929)

Material (one female): Kampinos forest, Dziekanów Leśny, a pine forest, leg. J. Sawoniewicz, det. A. Rasnitsyn.

Recorded from Yugoslavia.

Ichneumon caproni Perkins, 1953

Material (one female): Podkowa Leśna, 14 August, 1952, leg. J. Głowacki, det. A. Rasnitsyn.

Recorded from England, the Federal Republic of Germany, and France.

Dicaelotus suspectus Perkins, 1953

Material (two females, two males): Kampinos forest, Łomna, (mixed coniferous forest); Warsaw-Ursynów, Pyry, Bielany, July—October, det. E. Diller.

Recorded from England and Sweden.

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Table 3. Check-list of *Ichneumonidae* (Hymenoptera) 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>Ephialtinae</i>							
1	<i>Exerister roborator</i> (Fabr.)	●	—	—	—	—	—
2	<i>Scambus annulata</i> (Kiss)	●	●	+	+	+	—
3	<i>Scambus arundinator</i> (Fabr.)	●	—	—	—	—	—
4	<i>Scambus brevicornis</i> (Grav.)	+	—	+	—	—	—
5	<i>Scambus buolianae</i> (Hartig)	+	●	—	—	—	—
6	<i>Scambus calobata</i> (Grav.)	●	●	+	—	—	—
7	<i>Scambus detrita</i> (Holmgr.)	●	●	+	—	—	—
8	<i>Scambus diluta</i> (Ratz.)	—	—	+	—	—	—
9	<i>Scambus nigricans</i> (Thoms.)	●	+	—	—	—	—
10	<i>Scambus phragmitidis</i> Perkins	—	+	—	—	—	—
11	<i>Scambus planata</i> (Hartig)	+	●	+	—	—	—
12	<i>Scambus sagax</i> (Hartig)	●	●	+	—	—	—
13	<i>Scambus strobilorum</i> (Ratz.)	○	—	—	—	—	—
14	<i>Scambus vesicarius</i> (Ratz.)	+	●	—	—	—	—
15	<i>Pimpla manifestator</i> (L.)	○	●	+	—	—	—
16	<i>Liotryphon crassisetus</i> (Thoms.)	—	—	+	—	—	—
17	<i>Liotryphon punctulatus</i> (Ratz.)	—	●	+	—	—	—
18	<i>Liotryphon ruficollis</i> (Desv.)	+	—	—	—	—	—
19	<i>Townesia tenuiventris</i> (Holmgr.)	+	—	—	+	—	—
20	<i>Dolichomitus agnoscendus</i> (Roman)	●	—	+	—	—	—
21	<i>Dolichomitus atratus</i> (Rudow)	—	●	—	—	—	—
22	<i>Dolichomitus imperator</i> (Kriechb.)	○	●	—	—	—	—
23	<i>Dolichomitus mesocentrus</i> (Grav.)	○	●	—	—	—	—
24	<i>Dolichomitus messor</i> (Grav.)	—	+	—	—	—	—
25	<i>Dolichomitus ?populneus</i> (Ratz.)	+	●	+	—	+	—
26	<i>Dolichomitus terebrans</i> (Ratz.)	○	—	—	—	—	—
27	<i>Dolichomitus tuberculatus</i> (Fourcr.)	○	—	—	—	—	—
28	<i>Acropimpla pictipes</i> (Grav.)	+	●	+	—	—	—
29	<i>Gregopimpla inquisitor</i> (Scop.)	●	●	+	—	+	—
30	<i>Iseropus stercorator</i> (Fabr.)	+	+	—	—	—	—
31	<i>Tromatobia oculatoria</i> (Fabr.)	—	●	+	—	—	—
32	<i>Tromatobia ornata</i> (Grav.)	+	—	—	—	—	—
33	<i>Tromatobia ovivora</i> (Bohem.)	+	●	+	—	+	—
34	<i>Zaglyptus multicolor</i> (Grav.)	+	●	+	+	—	—
35	<i>Zaglyptus varipes</i> (Grav.)	+	●	—	+	—	—

1	2	3	4	5	6	7	8
36	<i>Schizopyga flavifrons</i> Holmgr.	—	—	+	—	—	—
37	<i>Clistopyga canadensis</i> Prov.	—	+	—	—	—	—
38	<i>Clistopyga incitator</i> (Fabr.)	+	●	+	+	+	—
39	<i>Piogaster</i> sp.	—	+	+	—	—	—
40	<i>Oxyrrhexis carbonator</i> (Grav.)	+	+	+	—	—	—
41	<i>Polysphincta boops</i> Tschek	+	+	+	—	—	—
42	<i>Polysphincta tuberosa</i> (Grav.)	○	—	—	—	—	—
43	<i>Sinarachna anomala</i> (Holmgr.)	+	+	+	—	—	—
44	<i>Zatypoda albicoxa</i> (Walker)	+	●	+	—	+	—
45	<i>Zatypoda bohemani</i> (Holmgr.)	—	●	+	+	—	—
46	<i>Zatypoda discolor</i> (Holmgr.)	○	—	—	—	—	—
47	<i>Zatypoda gracilis</i> (Holmgr.)	+	●	+	—	+	—
48	<i>Itopectis alternans</i> (Grav.)	●	●	+	+	+	—
49	<i>Itopectis insignis</i> Perkins	+	●	—	—	—	—
50	<i>Itopectis maculator</i> (Fabr.)	●	●	+	—	—	—
51	<i>Itopectis tunetana</i> (Schmiedekn.)	—	—	—	—	—	+
52	<i>Itopectis viduata</i> (Grav.)	●	—	—	—	—	—
53	<i>Apechthis compuctor</i> (L.)	●	●	—	—	—	—
54	<i>Apechthis quadridentata</i> (Thoms.)	+	●	+	—	—	—
55	<i>Apechthis rufata</i> (Gmel.)	●	●	+	—	—	—
56	<i>Coccygomimus aquilonius</i> (Cress.)	+	●	—	—	—	—
57	<i>Coccygomimus conmixta</i> (Kiss)	+	●	—	—	—	—
58	<i>Coccygomimus contemplator</i> (Müll.)	●	●	+	+	—	—
59	<i>Coccygomimus geniculatus</i> (Hensch)	+	●	—	—	—	—
60	<i>Coccygomimus instigator</i> (Fabr.)	●	●	+	+	—	+
61	<i>Coccygomimus spuria</i> (Grav.)	+	—	+	—	—	—
62	<i>Coccygomimus turionellae</i> (L.)	●	●	+	+	+	—
63	<i>Theronia atalantae</i> (Poda)	○	+	+	—	—	—
64	<i>Delomerista mandibularis</i> (Grav.)	—	—	+	—	—	—
65	<i>Delomerista novita</i> (Cress.)	+	—	—	—	—	—
66	<i>Flavopimpla cicatricosa</i> (Ratz.)	+	—	—	—	—	—
67	<i>Pseudorhyssa alpestris</i> (Holmgr.)	○	—	—	—	—	—
68	<i>Pseudorhyssa maculicoxis</i> Kriechb.	—	+	—	—	—	—
69	<i>Diacritus aciculatus</i> (Voll.)	+	—	—	—	—	—
70	<i>Perithous divinator</i> (Rossi)	●	+	+	—	—	—
71	<i>Perithous mediator</i> (Fabr.)	●	+	+	—	—	—
72	<i>Perithous septemcinctorius</i> (Thunb.)	●	+	+	—	—	—
73	<i>Poemenia brachyura</i> Holmgr.	—	+	—	—	—	—
74	<i>Poemenia collaris</i> (Haupt)	○	●	—	—	—	—
75	<i>Poemenia hectica</i> (Grav.)	●	●	+	—	—	—
76	<i>Poemenia notata</i> Holmgr.	—	+	—	—	—	—
77	<i>Neoxorides collaris</i> (Grav.)	○	—	—	—	—	—
78	<i>Deuteroxorides albitarsus</i> (Grav.)	+	+	—	—	—	—
79	<i>Rhyssa amoena</i> (Grav.)	○	—	—	—	—	—
80	<i>Rhyssa persuasoria</i> (L.)	●	+	—	—	—	—
81	<i>Rhyssella approximator</i> (Fabr.)	+	●	—	—	—	—
82	<i>Megarhyssa gigas</i> (Laxm.)	+	—	—	—	—	—
83	<i>Megarhyssa perlata</i> (Christ)	+	+	—	—	—	—
84	<i>Megarhyssa superba</i> (Schrank)	○	—	—	—	—	—

1	2	3	4	5	6	7	8
	<i>Tryphoninae</i>						
85	<i>Phytodietus femoralis</i> Holmgr.	+	+	—	—	—	—
86	<i>Phytodietus rufipes</i> Holmgr.	+	●	—	—	—	—
87	<i>Phytodietus segmentator</i> Grav.	●	+	+	+	—	—
88	<i>Netelia caucasicus</i> (Kok.)	+	—	—	—	—	—
89	<i>Netelia fuscicornis</i> (Holmgr.)	○	—	—	—	—	—
90	<i>Netelia nigricarpus</i> (Thoms.)	+	●	—	—	—	—
91	<i>Netelia ocellaris</i> (Thoms.)	○	—	—	—	—	—
92	<i>Netelia opaculus</i> (Thoms.)	○	—	—	—	—	—
93	<i>Netelia tarsatus</i> (Brischke)	●	+	+	—	—	—
94	<i>Netelia testacea</i> (Grav.)	+	+	+	—	+	—
95	<i>Netelia virgata</i> (Foucr.)	—	—	—	—	+	—
96	<i>Neliopisthus elegans</i> (Ruthe)	+	●	+	—	—	—
97	<i>Thymaris tener</i> (Grav.)	+	●	+	—	—	—
98	<i>Hybophanes scabriculus</i> (Grav.)	+	—	+	—	—	—
99	<i>Grypocentrus albipes</i> Ruthe	+	●	—	—	—	—
100	<i>Grypocentrus apicalis</i> Thoms.	+	—	—	—	—	—
101	<i>Grypocentrus basalis</i> Ruthe	+	●	+	—	—	—
102	<i>Grypocentrus incisulus</i> Ruthe	—	●	—	—	—	—
103	<i>Polyblastus conthurnatus</i> (Grav.)	●	●	—	—	—	—
104	<i>Polyblastus macrocentrus</i> Thoms.	+	●	+	—	—	—
105	<i>Polyblastus varitarsus</i> (Grav.)	+	—	—	—	—	—
106	<i>Polyblastus westringi</i> Holmgr.	—	—	+	—	—	—
107	<i>Ctenochira marginata</i> (Holmgr.)	—	—	+	—	—	—
108	<i>Ctenochira propinqua</i> (Grav.)	+	—	—	—	—	—
109	<i>Ctenochira sanguinatoria</i> (Ratz.)	+	+	+	—	—	—
110	<i>Erromenus bibulus</i> Kasp.	+	●	+	—	—	—
111	<i>Erromenus calcator</i> (Müll.)	—	+	—	—	—	—
112	<i>Erromenus punctulatus</i> Holmgr.	+	—	—	—	—	—
113	<i>Erromenus tarsator</i> Aub.	+	+	—	—	—	—
114	<i>Erromenus zonarius</i> (Grav.)	+	—	—	—	—	—
115	<i>Neleges proditor</i> (Grav.)	—	+	—	—	—	—
116	<i>Monoblastus brachyacanthus</i> (Gmel.)	+	—	—	—	—	—
117	<i>Monoblastus caudatus</i> Hartig	+	—	—	—	—	—
118	<i>Monoblastus luteomarginatus</i> (Grav.)	—	●	—	—	—	—
119	<i>Monoblastus marginellus</i> (Grav.)	—	+	—	—	—	—
120	<i>Dyspetes arrogator</i> Heinr.	+	+	—	—	—	—
121	<i>Cosmoconus ceratophorus</i> (Thoms.)	+	●	—	—	—	—
122	<i>Cosmoconus elongator</i> (Fabr.)	—	+	—	—	—	—
123	<i>Cosmoconus meridianator</i> Aub.	+	●	+	—	—	—
124	<i>Tryphon auricularis</i> Thoms.	+	●	—	—	—	—
125	<i>Tryphon bidentatus</i> Steph.	+	●	+	—	—	—
126	<i>Tryphon brevipetiolaris</i> Uchida	+	—	—	—	—	—
127	<i>Tryphon exclamatoris</i> Grav.	+	+	—	—	—	—
128	<i>Tryphon nigrinus</i> Brischke	+	—	—	—	—	—
129	<i>Tryphon obtusator</i> (Thunb.)	+	●	+	—	—	—
130	<i>Tryphon relator</i> (Thunb.)	+	●	—	—	—	—
131	<i>Tryphon rutilator</i> (L.)	+	+	—	—	—	—
132	<i>Tryphon subsulcatus</i> Holmgr.	+	—	—	—	—	—
133	<i>Tryphon thomsoni</i> Roman	+	●	—	—	+	—

1	2	3	4	5	6	7	8
134	<i>Tryphon trochanteratus</i> Holmgr.	●	+	—	—	—	—
135	<i>Kristotomus laetus</i> (Grav.)	—	●	—	—	—	—
136	<i>Kristotomus pumilio</i> (Holmgr.)	+	—	—	—	—	—
137	<i>Kristotomus ridibundus</i> (Grav.)	+	+	—	—	—	—
138	<i>Kristotomus triangulatorius</i> (Grav.)	+	—	—	—	—	—
139	<i>Cycasis rubiginosus</i> (Grav.)	+	●	—	—	—	—
140	<i>Exyston pratorum</i> (Woldst.)	+	—	—	—	—	—
141	<i>Exyston sponsorius</i> (Fabr.)	+	+	—	—	—	—
142	<i>Smicroplectrus bohemani</i> (Holmgr.)	—	+	—	—	—	—
143	<i>Smicroplectrus erosus</i> (Holmgr.)	+	●	—	—	—	—
144	<i>Smicroplectrus excisus</i> Kerrich	+	+	—	—	—	—
145	<i>Smicroplectrus perkinsorum</i> Kerrich	—	+	—	—	—	—
146	<i>Acrotomus succinctus</i> (Grav.)	—	●	—	—	—	—
147	<i>Cteniscus hofferi</i> Gregor	+	—	—	—	—	—
148	<i>Cteniscus uncinatus</i> (Holmgr.)	+	—	—	—	—	—
149	<i>Exenterus amictorius</i> (Panz.)	+	—	—	—	—	—
150	<i>Exenterus ictericus</i> (Grav.)	+	—	—	—	—	—
151	<i>Idiogramma euryops</i> Schmiedekn.	—	●	—	—	—	—
152	<i>Eucerus pruinosus</i> (Grav.)	+	●	+	—	—	—
153	<i>Brachycyrtus ornatus</i> Kriechb.	—	+	+	—	—	—
	<i>Adelognathinae</i>						
154	<i>Adelognathus brevicornis</i> Holmgr.	+	+	—	—	—	—
155	<i>Adelognathus chrysopygus</i> (Grav.)	+	—	+	—	—	—
156	<i>Adelognathus dorsalis</i> (Grav.)	+	●	+	—	—	—
157	<i>Adelognathus facialis</i> Thoms.	—	●	+	—	—	—
158	<i>Adelognathus granulatus</i> Perkins	+	—	—	—	—	—
159	<i>Adelognathus laevicollis</i> Thoms.	+	+	+	—	—	—
160	<i>Adelognathus nigricornis</i> Thoms.	+	—	—	—	—	—
161	<i>Adelognathus pallipes</i> Holmgr.	+	●	+	—	—	—
162	<i>Adelognathus tetracinctorius</i> (Thunb.)	—	—	+	+	—	—
163	<i>Adelognathus</i> sp.	+	—	—	—	—	—
	<i>Xoridinae</i>						
164	<i>Ischnoceros caligatus</i> (Grav.)	+	●	—	—	—	—
165	<i>Ischnoceros rusticus</i> (Geoff.)	—	●	—	—	—	—
166	<i>Odontocolon dentipes</i> (Gmel.)	●	●	—	—	—	—
167	<i>Odontocolon geniculatus</i> (Kriechb.)	+	+	—	—	—	—
168	<i>Odontocolon rufiventris</i> (Holmgr.)	+	—	—	—	—	—
169	<i>Odontocolon thomsoni</i> (Clément)	—	+	—	—	—	—
170	<i>Xorides ater</i> (Grav.)	○	—	—	—	—	—
171	<i>Xorides brachylabis</i> (Kriechb.)	●	—	—	—	—	—
172	<i>Xorides filiformis</i> (Grav.)	—	+	—	—	—	—
173	<i>Xorides fuligator</i> (Thunb.)	○	—	—	—	—	—
174	<i>Xorides irrigator</i> (Fabr.)	●	—	—	—	—	—
175	<i>Xorides praecatorius</i> (Fabr.)	+	●	+	—	—	—
176	<i>Xorides securicornis</i> (Holmgr.)	+	—	+	—	—	—
177	<i>Gonophonus scaber</i> (Grav.)	+	—	—	—	—	—

1	2	3	4	5	6	7	8
	<i>Phygadeuontinae</i>						
178	<i>Encrateola laevigata</i> (Ratz.)	●	●	+	+	—	—
179	<i>Encrateola mediovittata</i> (Schmiedekn.)	+	+	+	—	—	—
180	<i>Eudelus simillimus</i> (Taschenb.)	●	●	+	—	—	—
181	<i>Acrolyta capreola</i> (Thoms.)	○	—	—	—	—	—
182	<i>Acrolyta distincta</i> (Bridgm.)	+	●	+	—	—	—
183	<i>Acrolyta marginata</i> (Bridgm.)	●	●	+	+	+	—
184	<i>Acrolyta submarginata</i> (Bridgm.)	●	●	+	+	+	—
185	? <i>Acrolyta infirmus</i> (Grav.)	○	—	—	—	—	—
186	<i>Diaglyptidea conformis</i> (Gmel.)	+	●	+	+	—	—
187	<i>Diaglyptidea</i> sp.	+	+	—	—	—	—
188	<i>Lysibia nana</i> (Grav.)	●	●	+	+	+	—
189	<i>Obisiphaga dimidiatipennis</i> (Schmiedekn.)	+	—	—	—	—	—
190	<i>Xiphulcus floricolor</i> (Grav.)	—	●	+	+	—	—
191	<i>Hemiteles bipunctator</i> (Thunb.)	—	+	—	—	—	○
192	<i>Hemiteles similis</i> (Gmel.)	●	+	—	+	+	—
193	<i>Aclastus gracilis</i> (Thoms.)	+	●	+	—	—	—
194	<i>Aclastus micator</i> (Grav.)	+	—	—	—	—	—
195	<i>Aclastus minutus</i> (Bridgm.)	+	—	—	—	—	—
196	<i>Aclastus solutus</i> (Thoms.)	—	—	+	—	—	—
197	<i>Polyaulon paradoxus</i> (Zett.)	—	●	+	—	—	—
198	<i>Polyaulon</i> sp.	+	+	—	—	—	—
199	<i>Xenolytus bitinctus</i> (Gmel.)	+	+	+	+	+	—
200	<i>Dichrogaster aestivali</i> (Grav.)	+	●	+	+	+	—
201	<i>Dichrogaster crassicornis</i> Horstm.	—	+	—	—	—	—
202	<i>Dichrogaster genalis</i> (Haberm.)	—	—	●	—	—	—
203	<i>Dichrogaster liostylus</i> (Thoms.)	+	+	—	—	—	—
204	<i>Dichrogaster longicaudatus</i> (Thoms.)	+	●	+	+	+	—
205	<i>Dichrogaster mandibularis</i> Horstm.	—	+	—	+	—	—
206	<i>Dichrogaster nigrothorax</i> Horstm.	—	●	+	+	—	—
207	<i>Gelis acarorum</i> (L.)	+	●	—	—	—	—
208	<i>Gelis agilis</i> (Fabr.)	+	●	—	—	—	—
209	<i>Gelis albipalpus</i> (Thoms.)	+	●	+	+	+	—
210	<i>Gelis areator</i> (Panz.)	●	●	+	+	+	—
211	<i>Gelis ?bicolor</i> (Vill.)	+	—	—	—	—	—
212	<i>Gelis carnifex</i> (Först.)	+	●	+	—	—	—
213	<i>Gelis cinctus</i> (L.)	●	●	+	○	—	—
214	<i>Gelis cursitans</i> (Fabr.)	+	—	—	—	—	—
215	<i>Gelis fasciatus</i> (Fabr.)	+	—	—	—	—	—
216	<i>Gelis fasciipennis</i> (Brischke)	+	—	—	—	—	—
217	<i>Gelis femoralis</i> (Brischke)	○	—	—	—	—	—
218	<i>Gelis fallax</i> (Först.)	○	—	—	—	—	—
219	<i>Gelis gonatopinus</i> (Thoms.)	+	●	—	—	—	—
220	<i>Gelis instabilis</i> (Först.)	+	●	—	—	—	—
221	<i>Gelis longicaudatus</i> (Thoms.)	+	+	—	—	—	—
222	<i>Gelis melanogaster</i> (Thoms.)	○	—	—	—	—	—
223	<i>Gelis ruficornis</i> (Thunb.)	○	—	—	—	—	—
224	<i>Gelis rugifer</i> (Thoms.)	+	—	—	—	—	—
225	<i>Gelis pilosulus</i> (Thoms.)	○	—	—	—	—	—
226	<i>Gelis spinula</i> (Thoms.)	+	+	+	+	+	—

1	2	3	4	5	6	7	8
227	<i>Gelis ?sulcatus</i> (Blunck)	—	●	+	+	+	—
228	<i>Gelis vagans</i> (Ol.)	+	+	—	—	—	—
229	<i>Catalytus fulveolatus</i> (Grav.)	+	—	—	—	—	—
230	<i>Agasthenes stagnalis</i> (Thoms.)	+	—	—	—	—	—
231	<i>Gnypetomorpha aperta</i> (Thoms.)	—	●	+	—	—	—
232	<i>Zoophthorus graculus</i> (Grav.)	+	—	+	—	—	—
233	<i>Zoophthorus cynipinus</i> (Thoms.)	+	●	+	—	+	—
234	<i>Zoophthorus dodecellae</i> (Obrt., Šed.)	●	●	●	—	—	—
235	<i>Zoophthorus hilarellus</i> (Schmiedekn.)	—	—	+	+	—	—
236	<i>Zoophthorus phankuchi</i> (Sm. v. B.)	+	●	+	—	—	—
237	<i>Odontoneura</i> sp.	+	+	—	—	—	—
238	<i>Mastrus castaneus</i> (Taschenb.)	+	●	+	—	—	○
239	<i>Mastrus pictipes</i> (Grav.)	+	—	—	—	—	—
240	<i>Mastrus sordipes</i> (Grav.)	+	●	+	+	—	—
241	<i>Mastrus tenuicosta</i> (Thoms.)	+	+	—	—	—	—
242	<i>Mastrus varicoxis</i> (Taschenb.)	+	+	+	—	—	—
243	<i>Mastrus</i> sp.	—	+	—	—	—	—
244	<i>Isadelphus coriarius</i> (Taschenb.)	—	+	—	—	—	—
245	<i>Isadelphus gallicola</i> (Bridgm.)	+	+	+	+	—	—
246	<i>Isadelphus inimicus</i> (Grav.)	+	●	+	—	—	—
247	<i>Micromonodon tener</i> (Kriechb.)	+	●	+	—	—	—
248	<i>Helcostizus restaurator</i> (Fabr.)	○	+	—	—	—	—
249	<i>Lochetica westoni</i> (Bridgm.)	+	+	+	—	+	—
250	<i>Rhembobius perscrutator</i> (Thunb.)	+	+	+	—	—	—
251	<i>Rhembobius quadrispinus</i> (Grav.)	●	+	+	—	—	—
252	<i>Ethelurgus sodalis</i> (Taschenb.)	●	●	+	+	+	—
253	<i>Medophron ?recurvus</i> (Thoms.)	+	—	—	—	—	—
254	<i>Endasys erythrogaster</i> (Grav.)	●	●	+	+	—	—
255	<i>Endasys parviventris</i> (Grav.)	+	—	—	—	—	—
256	<i>Endasys talitzkii</i> (Tel.)	—	+	—	—	—	—
257	<i>Amphibulus gracilis</i> Kriechb.	+	—	—	—	—	—
258	<i>Glyphicnemis profligator</i> (Fabr.)	●	●	+	—	—	—
259	<i>Glyphicnemis clypealis</i> (Thoms.)	—	—	+	—	—	—
260	<i>Charitopes brunneus</i> (Morley)	—	●	+	+	+	—
261	<i>Charitopes chrysopae</i> (Brischke)	+	●	+	+	+	—
262	<i>Charitopes clausus</i> (Thoms.)	+	●	+	+	+	—
263	<i>Charitopes ?crassicornis</i> (Grav.)	+	+	+	—	—	—
264	<i>Bathythrix aerea</i> (Grav.)	●	●	●	—	—	○
265	<i>Bathythrix argentata</i> (Grav.)	—	—	●	—	—	—
266	<i>Bathythrix claviger</i> (Taschenb.)	●	●	—	—	—	—
267	<i>Bathythrix decipiens</i> (Grav.)	●	●	—	—	—	—
268	<i>Bathythrix fragilis</i> (Grav.)	●	●	—	—	—	—
269	<i>Bathythrix maculata</i> (Hellén)	●	●	—	—	—	—
270	<i>Bathythrix lamina</i> (Thoms.)	●	●	—	—	—	—
271	<i>Bathythrix linearis</i> (Grav.)	●	—	—	—	—	—
272	<i>Bathythrix margaretae</i> Sawon.	●	—	—	—	—	—
273	<i>Bathythrix pellucidator</i> (Grav.)	●	●	●	●	●	—
274	<i>Bathythrix pleuralis</i> Sawon.	—	—	●	—	—	—
275	<i>Bathythrix prominens</i> (Strobl)	●	●	—	—	—	—
276	<i>Bathythrix sphegina</i> (Grav.)	●	●	—	—	—	—

1	2	3	4	5	6	7	8
277	<i>Bathythrix strigosa</i> (Thoms.)	●	●	●	—	—	—
278	<i>Bathythrix tenuis</i> (Grav.)	●	●	—	—	—	—
279	<i>Bathythrix thomsoni</i> (Kerrich)	●	●	●	+	●	○
280	<i>Tropistes falcatus</i> (Thoms.)	+	●	—	—	—	—
281	<i>Orthizema ?flavicornis</i> (Schmiedekn.)	—	●	—	—	—	—
282	<i>Orthizema subannulatum</i> (Bridgmn.)	+	●	—	—	—	—
283	<i>Tricholinum ischnocerus</i> (Thoms.)	●	—	—	—	—	—
284	<i>Uchidella</i> sp.	+	●	+	—	—	—
285	<i>Gnotus chionops</i> (Grav.)	+	●	+	—	+	—
286	<i>Gnotus tenuipes</i> (Grav.)	●	+	—	+	—	○
287	<i>Stibeutes heinemanni</i> (Först.)	—	●	+	—	—	—
288	<i>Theroscopus esenbeckii</i> (Grav.)	+	●	—	—	—	—
289	<i>Theroscopus pedestris</i> (Fabr.)	●	●	+	—	—	—
290	<i>Theroscopus rufulus</i> (Gmel.)	●	+	+	+	—	—
291	<i>Theroscopus semicroceus</i> (Schmiedekn.)	+	+	+	+	+	—
292	<i>Phygadeuon geniculatus</i> Kriechb.	○	—	—	—	—	—
293	<i>Phygadeuon hercynicus</i> Grav.	○	—	—	—	—	—
294	<i>Phygadeuon monodon</i> Thoms.	○	—	—	—	—	—
295	<i>Phygadeuon ovatus</i> Grav.	+	●	+	—	—	—
296	<i>Phygadeuon vagans</i> Grav.	○	—	—	—	—	—
297	<i>Phygadeuon variabilis</i> Grav.	—	—	—	—	+	—
298	<i>Phygadeuon rotundipennis</i> Thoms.	—	●	—	—	—	—
299	<i>Phygadeuon wiesmanni</i> Sachtl.	○	—	—	—	—	—
300	<i>Stilpnus blandus</i> Grav.	—	●	+	+	—	—
301	<i>Stilpnus crassicornis</i> Thoms.	—	+	—	—	—	+
302	<i>Stilpnus gagates</i> (Grav.)	●	●	+	+	+	—
303	<i>Stilpnus pavoniae</i> (Scop.)	+	●	+	—	—	—
304	<i>Stilpnus ?retritus</i> Först.	+	●	—	+	—	—
305	<i>Stilpnus subzonulus</i> Först.	+	●	+	—	—	—
306	<i>Stilpnus tenebricosus</i> (Grav.)	—	—	+	—	+	—
307	<i>Mesoleptus flavipes</i> (Thoms.)	○	—	—	—	—	—
308	<i>Mesoleptus laevigatus</i> (Grav.)	○	—	—	—	—	—
309	<i>Mesoleptus marginatus</i> (Thoms.)	○	—	—	—	—	—
310	<i>Mesoleptus splendens</i> Grav.	○	—	—	—	—	—
311	<i>Cremnodes atricapillus</i> (Grav.)	+	—	+	—	—	—
312	<i>Cremnodes</i> sp.	+	●	+	+	—	—
313	<i>Demopheles corruptor</i> (Taschenb.)	+	+	+	—	+	—
314	<i>Javra tricinctus</i> (Grav.)	+	●	—	—	—	—
315	<i>Parmortha parvula</i> (Grav.)	●	—	—	—	—	—
316	<i>Parmortha pleuralis</i> (Thoms.)	+	●	—	—	—	—
317	<i>Cubocephalus anatorius</i> (Grav.)	●	+	—	—	—	—
318	<i>Cubocephalus associator</i> (Thunb.)	+	+	—	—	—	—
319	<i>Cubocephalus distinctor</i> (Thunb.)	+	—	—	—	—	—
320	<i>Cubocephalus leucopsis</i> (Grav.)	○	—	—	—	—	—
321	<i>Cubocephalus nigriventris</i> (Thoms.)	+	●	—	—	—	—
322	<i>Cubocephalus sperator</i> (Müll.)	+	●	—	—	—	—
323	<i>Cubocephalus sternocerus</i> (Thoms.)	+	—	—	—	—	—
324	<i>Echthrus reluctator</i> (L.)	○	—	—	—	—	—
325	<i>Oresbius arridens</i> (Grav.)	+	+	+	+	—	—
326	<i>Oresbius leucopsis</i> (Grav.)	+	●	—	—	—	—

1	2	3	4	5	6	7	8
327	<i>Oresbius subguttatus</i> (Grav.)	○	—	—	—	—	—
328	<i>Polytribax arrogans</i> (Grav.)	●	●	+	—	—	—
329	<i>Polytribax rufipes</i> (Grav.)	+	—	—	—	—	—
330	<i>Giraudia griseescens</i> (Grav.)	+	—	—	—	—	—
331	<i>Schenkia graminicola</i> (Grav.)	+	●	—	—	—	—
332	<i>Schenkia spinolae</i> (Grav.)	○	—	—	—	—	—
333	<i>Pleolophus basizonus</i> (Grav.)	●	●	—	—	—	—
334	<i>Pleolophus isomorphus</i> (Schmiedekn.)	+	—	—	—	—	—
335	<i>Pleolophus sericans</i> (Grav.)	○	—	—	—	—	—
336	<i>Aptesis abdominator</i> (Grav.)	+	●	+	—	—	—
337	<i>Aptesis ?albulatorius</i> (Grav.)	+	—	—	—	—	—
338	<i>Pleolophus brachypterus</i> (Grav.)	—	●	—	—	—	—
339	<i>Aptesis femoralis</i> (Thoms.)	—	—	+	—	—	—
340	<i>Aptesis nigrocinctus</i> (Grav.)	●	●	+	+	+	—
341	<i>Aptesis ?terminatus</i> (Grav.)	—	●	+	—	—	—
342	<i>Aptesis varius</i> (Pfankuch)	—	●	—	—	—	—
343	<i>Thrybitus unguulatus</i> (Grav.)	+	—	—	—	—	—
344	<i>Agrothereutes abbreviator</i> (Fabr.)	+	●	—	—	—	—
345	<i>Agrothereutes adustus</i> (Grav.)	○	—	—	—	—	—
346	<i>Agrothereutes ?fumipennis</i> (Grav.)	—	+	—	—	—	—
347	<i>Agrothereutes magretti</i> (Kriechb.)	—	●	—	—	—	—
348	<i>Agrothereutes mandator</i> (Fabr.)	●	—	—	—	—	—
349	<i>Agrothereutes ?quadricinctus</i> (Strobl)	○	—	—	—	—	—
350	<i>Gambrus carnifex</i> (Grav.)	+	+	—	—	—	—
351	<i>Gambrus incubitor</i> (L.)	+	—	+	—	—	—
352	<i>Gambrus tricolor</i> (Grav.)	+	—	+	—	—	—
353	<i>Aritranis confector</i> (Grav.)	+	+	+	—	—	—
354	<i>Aritranis coxator</i> (Tschek)	—	●	—	—	—	—
355	<i>Aritranis fugitivus</i> (Grav.)	+	●	+	+	—	—
356	<i>Aritranis nigripes</i> (Grav.)	+	—	—	—	—	—
357	<i>Aritranis signatorius</i> (Fabr.)	+	+	—	—	—	—
358	<i>Pycnocyrtus director</i> (Thunb.)	●	●	+	+	+	—
359	<i>Idiolispa analis</i> (Grav.)	●	—	+	—	—	—
360	<i>Trychosis glabricula</i> (Thoms.)	+	—	—	—	—	—
361	<i>Trychosis legator</i> (Thunb.)	●	●	—	—	—	+
362	<i>Trychosis mesocastana</i> (Tschek)	●	—	—	—	—	—
363	<i>Trychosis neglecta</i> (Tschek)	+	—	—	—	—	—
364	<i>Trychosis pauper</i> (Thunb.)	+	—	—	—	—	—
365	<i>Trychosis priesneri</i> van Rossem	○	—	—	—	—	—
366	<i>Trychosis tristator</i> (Tschek)	+	●	—	—	—	—
367	<i>Apsilops cinctorius</i> (Fabr.)	○	—	+	—	—	—
368	<i>Ischnus alternator</i> (Grav.)	+	—	+	—	—	—
369	<i>Ischnus inquisitorius</i> (Müll.)	●	●	+	—	—	—
370	<i>Ischnus insulanus</i> (Krieger)	+	●	—	—	—	—
371	<i>Caenocyrtus rufiventris</i> (Grav.)	—	—	+	—	—	+
372	<i>Buathra laborator</i> (Thunb.)	○	●	—	—	—	—
373	<i>Iramoplex armator</i> (Fabr.)	●	●	+	+	—	—
374	<i>Iramoplex diana</i> (Grav.)	—	+	—	—	—	—
375	<i>Iramoplex inculcator</i> (L.)	●	+	—	—	—	+
376	<i>Iramoplex spiralis</i> (Geoff.)	+	+	—	—	—	—

1	2	3	4	5	6	7	8
377	<i>Itamoplex moschator</i> (Fabr.)	○	—	—	—	—	—
378	<i>Itamoplex titubator</i> (Thunb.)	—	—	+	—	—	—
379	<i>Itamoplex viduatorius</i> (Fabr.)	●	●	+	—	—	—
380	<i>„Cryptus“ tarsoleucus</i> Schrank	○	—	—	—	—	—
381	<i>Xylophrurus dentatus</i> (Taschenb.)	+	●	—	—	—	—
382	<i>Xylophrurus dispar</i> (Thunb.)	+	—	—	—	—	—
383	<i>Listrognathus mactator</i> (Thunb.)	+	●	—	—	—	—
384	<i>Listrognathus pubescens</i> (Fonsc.)	○	—	—	—	—	—
385	<i>Ateleute linearis</i> (Fabr.)	+	+	—	—	—	—
386	<i>Stenarella gladiator</i> (Scop.)	●	+	—	—	—	—
387	<i>Nematopodius formosus</i> Grav.	+	—	—	—	—	—
388	<i>Acroricnus stylator</i> (Thunb.)	+	—	—	—	—	—
389	<i>Sphecophaga vesparum</i> (Curt.)	●	●	—	—	—	—
	<i>Neorhacodinae</i>						
390	<i>Neorhacodes enslini</i> (Ruschka)	—	—	●	—	—	—
	<i>Stilbopinae</i>						
391	<i>Stilbops abdominalis</i> (Grav.)	+	—	—	—	—	—
392	<i>Stilbops limneriaeformis</i> Schmiedekn.	+	—	—	—	—	—
393	<i>Stilbops vetula</i> (Grav.)	+	+	—	—	—	—
	<i>Banchinae</i>						
394	<i>Apophua bipunctoria</i> (Thunb.)	●	+	+	—	—	—
395	<i>Glypta ceratites</i> (Grav.)	+	—	—	—	—	—
396	<i>Glypta consimilis</i> Holmgr.	●	●	—	—	—	—
397	<i>Glypta extincta</i> Ratz.	+	●	—	—	—	—
398	<i>Glypta haesitator</i> Grav.	○	—	—	—	—	—
399	<i>Glypta heterocera</i> Thoms.	—	●	—	—	—	—
400	<i>Glypta incisa</i> Grav.	○	—	—	—	—	—
401	<i>Glypta longicauda</i> Hartig	+	●	+	—	—	—
402	<i>Glypta mensurator</i> (Fabr.)	+	—	—	—	—	—
403	<i>Glypta nigrina</i> (Desv.)	+	●	+	+	—	—
404	<i>Glypta resinanae</i> Hartig	●	—	—	—	—	—
405	<i>Glypta salsolicola</i> Schmiedekn.	—	+	—	—	—	—
406	<i>Glypta scutellaris</i> Thoms.	—	—	+	—	—	—
407	<i>Lissonota antennalis</i> Thoms.	+	●	—	—	—	—
408	<i>Lissonota biguttata</i> Holmgr.	+	●	—	—	+	—
409	<i>Lissonota clypeator</i> (Grav.)	+	●	+	—	—	—
410	<i>Lissonota coracinus</i> (Gmel.)	+	●	+	+	+	—
411	<i>Lissonota deversa</i> Grav.	+	●	+	—	+	—
412	<i>Lissonota dubia</i> Holmgr.	—	●	+	+	+	—
413	<i>Lissonota extrema</i> Hedw.	—	+	+	—	—	—
414	<i>Lissonota folli</i> Thoms.	+	+	+	—	—	—
415	<i>Lissonota fundator</i> (Thunb.)	+	+	+	—	—	—
416	<i>Lissonota gracilipes</i> Thoms.	+	—	—	—	—	—
417	<i>Lissonota ?impressor</i> Grav.	—	●	—	—	+	—
418	<i>Lissonota insignita</i> Grav.	●	+	—	—	—	—
419	<i>Lissonota nigridens</i> Thoms.	—	—	+	—	—	—
420	<i>Lissonota parallela</i> Grav.	●	●	+	—	—	—

1	2	3	4	5	6	7	8
421	<i>Lissonota picticoxis</i> Schmiedekn.	+	●	+	—	—	—
422	<i>Lissonota proxima</i> Fonsc.	+	●	+	—	—	—
423	<i>Lissonota quadrinotata</i> Grav.	—	—	—	+	—	—
424	<i>Lissonota saturator</i> (Thunb.)	+	—	—	—	—	—
425	<i>Lissonota strigifrons</i> Schmiedekn.	+	—	—	—	—	—
426	<i>Lissonota uncinata</i> Holmgr.	○	—	—	—	—	—
427	<i>Lissonota variabilis</i> Holmgr.	●	—	—	—	—	—
428	<i>Menicus catenator</i> (Panz.)	+	●	+	+	—	—
429	<i>Menicus nitidus</i> (Grav.)	○	—	—	—	—	—
430	<i>Menicus ulbrichti</i> Ulbr.	—	+	—	—	—	—
431	<i>Teleutaea striata</i> (Grav.)	+	+	—	—	—	—
432	<i>Alloplasta piceator</i> (Thunb.)	+	—	—	—	—	—
433	<i>Alloplasta</i> sp.	+	+	—	—	—	—
434	<i>Cryptopimpla calceolata</i> (Grav.)	—	●	—	—	—	—
435	<i>Cryptopimpla errabunda</i> (Grav.)	+	+	—	—	—	—
436	<i>Cryptopimpla quadrilineata</i> (Grav.)	—	—	+	—	—	—
437	<i>Exetastes adpressorius</i> (Thunb.)	+	+	+	—	—	—
438	<i>Exetastes atrator</i> (Forst.)	—	●	—	+	+	—
439	<i>Exetastes fornicator</i> (Fabr.)	+	+	—	—	—	—
440	<i>Exetastes gracilicornis</i> Grav.	+	—	—	—	—	—
441	<i>Exetastes illusor</i> Grav.	+	●	—	—	—	—
442	<i>Exetastes laevigator</i> (Vill.)	+	—	—	—	—	—
443	<i>Exetastes nigripes</i> Grav.	●	●	—	—	—	—
444	<i>Exetastes notatus</i> Holmgr.	—	+	—	—	—	—
445	<i>Banchus falcatorius</i> (Fabr.)	+	—	—	—	—	—
446	<i>Banchus femoralis</i> Thoms.	○	—	—	—	—	—
<i>Ctenopelmatinae</i>							
447	<i>Ctenopelma gagatinum</i> (Kriechb.)	—	●	—	—	—	—
448	<i>Ctenopelma rufiventre</i> (Grav.)	+	—	—	—	—	—
449	<i>Xenoschesis fulvipes</i> (Grav.)	+	—	+	—	—	—
450	<i>Notopygus nigricornis</i> Kriechb.	—	—	+	—	—	—
451	<i>Lethades laricis</i> Hinz	+	—	—	—	—	—
452	<i>Trematopygus lethierryi</i> Thoms.	+	—	—	—	—	—
453	<i>Trematopygus melanocerus</i> (Grav.)	+	—	—	—	—	—
454	<i>Trematopygus spiniger</i> Hinz	+	—	—	—	—	—
455	<i>Trematopygus vellicans</i> (Grav.)	—	+	—	—	—	—
456	<i>Rhorus chrysopus</i> (Gmel.)	+	—	—	—	—	—
457	<i>Rhorus exstriatorius</i> (Grav.)	+	—	—	—	—	—
458	<i>Rhorus haemorrhoidicus</i> (Hartig)	+	—	—	—	—	—
459	<i>Rhorus longicornis</i> (Holmgr.)	+	●	—	—	—	—
460	<i>Phaestus anomalus</i> (Brischke)	+	●	+	+	—	—
461	<i>Syntactus minor</i> (Holmgr.)	+	—	—	—	—	—
462	<i>Pion fortipes</i> (Grav.)	+	+	—	—	—	—
463	<i>Rhaestus rufipes</i> (Holmgr.)	+	—	—	—	—	—
464	<i>Sympherta antilope</i> (Grav.)	+	—	+	—	—	—
465	<i>Sympherta ullrichi</i> (Tschek)	+	●	—	—	—	—
466	<i>Synocetes anterior</i> (Thoms.)	—	+	—	—	—	—
467	<i>Perilissus buccinator</i> Holmgr.	+	—	—	—	—	—
468	<i>Perilissus filicornis</i> (Grav.)	+	●	+	—	—	—

1	2	3	4	5	6	7	8
469	<i>Perilissus grandiceps</i> Thoms.	—	—	+	—	—	—
470	<i>Perilissus lucidulus</i> Holmgr.	+	●	—	—	—	—
471	<i>Perilissus lutescens</i> Holmgr.	+	●	—	—	—	—
472	<i>Perilissus rufoniger</i> (Grav.)	+	●	—	—	—	—
473	<i>Perilissus sericeus</i> (Grav.)	—	+	—	—	—	—
474	<i>Absyrtus vicinator</i> (Thunb.)	○	—	—	—	—	—
475	<i>Opheltes glaucopterus</i> (L.)	+	—	—	—	—	○
476	<i>Lathrolestes clypeatus</i> (Zett.)	+	●	—	—	—	—
477	<i>Lathrolestes bipunctatus</i> (Bridgm.)	+	●	+	—	—	—
478	<i>Lathrolestes luteolator</i> (Grav.)	+	●	+	+	+	—
479	<i>Lathrolestes macropygus</i> (Holmgr.)	+	●	—	—	—	—
480	<i>Scolobates auriculatus</i> (Fabr.)	+	—	—	—	—	—
481	<i>Lagarotis erythrocerus</i> (Grav.)	+	—	—	—	—	—
482	<i>Barytarbes adpropinquator</i> (Grav.)	+	—	—	—	—	—
483	<i>Barytarbes laeviusculus</i> Thoms.	—	●	—	—	—	—
484	<i>Alexeter niger</i> (Grav.)	+	—	—	—	—	—
485	<i>Perispuda sulphurata</i> (Grav.)	+	—	—	—	—	—
486	<i>Lamachus frutetorum</i> (Hartig)	+	+	—	—	—	—
487	<i>Rhinotorus compactor</i> (Thunb.)	+	—	—	—	—	—
488	<i>Rhinotorus leucostomus</i> (Grav.)	—	+	+	—	—	—
489	<i>Rhinotorus mesocastaneus</i> (Thoms.)	+	—	—	—	—	—
490	<i>Rhinotorus subimpressus</i> (Thoms.)	—	+	—	—	—	—
491	<i>Mesoleius variegatus</i> (Jur.)	+	●	—	—	—	—
492	<i>Mesoleptidea prosoleucus</i> (Grav.)	+	—	—	—	—	—
493	<i>Synomelix scutulata</i> (Hartig)	+	—	—	—	—	—
494	<i>Pantorhaestes xanthostomus</i> (Grav.)	+	—	—	—	—	—
495	<i>Hadrodactylus bidentulus</i> Thoms.	—	+	—	—	—	—
496	<i>Hadrodactylus femoralis</i> (Holmgr.)	○	—	—	—	—	—
497	<i>Hadrodactylus flavifrontator</i> (Thunb.)	+	—	—	—	—	—
498	<i>Hadrodactylus fugax</i> (Grav.)	●	—	—	—	—	—
499	<i>Hadrodactylus insignis</i> (Kriechb.)	○	—	—	—	—	—
500	<i>Hadrodactylus nigrifemur</i> Thoms.	+	—	—	+	—	—
501	<i>Hadrodactylus tiphæe</i> (Geoff.)	○	—	—	—	—	—
502	<i>Hadrodactylus villosulus</i> Thoms.	+	—	—	—	—	—
503	<i>Hypsantyx lituratori</i> (L.)	+	—	—	—	—	—
504	<i>Phobetres atomator</i> (Müll.)	+	+	+	—	—	—
505	<i>Euryproctus geniculatus</i> (Grav.)	+	—	—	—	—	—
506	<i>Euryproctus sinister</i> Brischke	—	+	+	—	—	—
<i>Campopleginae</i>							
507	<i>Campoplex borealis</i> (Zett.)	+	—	+	—	—	—
508	<i>Campoplex difformis</i> (Gmel.)	○	—	—	—	—	—
509	<i>Campoplex investigator</i> (Hab.)	+	—	+	—	—	—
510	<i>Campoplex lyratus</i> (Thoms.)	+	+	+	—	—	—
511	<i>Campoplex mutabilis</i> (Holmgr.)	●	—	—	—	—	—
512	<i>Campoplex ramidulus</i> (Brischke)	+	—	—	—	—	—
513	<i>Campoplex restrictor</i> Aub.	+	●	+	+	+	—
514	<i>Campoplex rothi</i> (Holmgr.)	●	—	+	—	—	—
515	<i>Campoplex rufinator</i> Aub.	+	●	+	+	+	—
516	<i>Venturia canescens</i> (Grav.)	●	—	—	—	—	●

1	2	3	4	5	6	7	8
517	<i>Venturia transfuga</i> (Grav.)	—	+	+	+	—	—
518	<i>Casinarina ischnogaster</i> Thoms.	+	—	—	—	—	—
519	<i>Charops cantator</i> (Degeer)	—	—	+	—	—	—
520	<i>Sesioplex cerophagus</i> (Grav.)	—	●	+	—	—	—
521	<i>Lathroplex clypealis</i> (Thoms.)	+	—	+	—	—	—
522	<i>Nemeritis ?aequilis</i> Horstm.	—	●	—	—	—	—
523	<i>Nemeritis brevicauda</i> Horstm.	●	—	+	—	—	—
524	<i>Nemeritis breviventris</i> Horstm.	○	—	—	—	—	—
525	<i>Nemeritis caudatula</i> Thoms.	+	●	+	—	—	—
526	<i>Nemeritis fallax</i> (Grav.)	—	●	+	—	—	—
527	<i>Nemeritis lativentris</i> Thoms.	+	●	+	+	+	—
528	<i>Nemeritis macrocentra</i> (Grav.)	+	●	—	—	—	—
529	<i>Nemeritis obscuripes</i> Horstm.	●	●	+	—	—	—
530	<i>Nemeritis scaposa</i> Horstm.	○	—	—	—	—	—
531	<i>Nemeritis silvicola</i> Horstm.	—	●	+	—	+	—
532	<i>Nemeritis ?specularis</i> Horstm.	+	●	—	—	—	—
533	<i>Bathyplectes cingulata</i> (Brischke)	○	—	—	—	—	—
534	<i>Leptocampoplex cremastoides</i> (Holmgr.)	●	●	+	+	+	—
535	<i>Spudastica krieckbaumeri</i> (Bridgm.)	+	+	—	—	—	—
536	<i>Synetaeris alpina</i> Horstm.	+	—	—	—	—	—
537	<i>Campoletis crassicornis</i> (Thoms.)	○	—	—	—	—	—
538	<i>Campoletis ?latrator</i> (Schrank)	○	●	—	—	—	—
539	<i>Campoletis maculipes</i> (Tschek)	—	+	—	—	+	—
540	<i>Dusona aemula</i> (Först.)	—	●	—	—	—	—
541	<i>Dusona americana</i> (Ashm.)	+	●	+	+	—	—
542	<i>Dusona anceps</i> (Holmgr.)	●	+	—	+	+	—
543	<i>Dusona angustata</i> (Thoms.)	+	—	—	—	—	—
544	<i>Dusona angustifrons</i> (Först.)	+	—	—	—	—	—
545	<i>Dusona aurita</i> (Kriechb.)	+	—	—	—	—	—
546	<i>Dusona bucculenta</i> (Holmgr.)	+	+	—	—	—	—
547	<i>Dusona carnifrons</i> (Holmgr.)	●	—	—	—	—	—
548	<i>Dusona circumspectans</i> (Först.)	+	—	—	—	—	—
549	<i>Dusona confusa</i> (Först.)	—	+	—	—	—	—
550	<i>Dusona cultrator</i> (Grav.)	—	—	+	—	—	—
551	<i>Dusona falcator</i> (Thunb.)	+	—	+	—	—	—
552	<i>Dusona foersteri</i> (Roman)	+	+	—	—	—	—
553	<i>Dusona heterocera</i> (Först.)	+	—	—	—	—	—
554	<i>Dusona infesta</i> (Först.)	+	—	—	—	—	—
555	<i>Dusona inermis</i> (Först.)	+	—	—	—	—	—
556	<i>Dusona insignis</i> (Först.)	+	—	—	—	—	—
557	<i>Dusona libertatis</i> (Teum.)	+	—	—	—	—	—
558	<i>Dusona limnobia</i> (Thoms.)	+	—	—	—	—	—
559	<i>Dusona myrthilla</i> (Desv.)	—	+	—	—	—	—
560	<i>Dusona montana</i> (Roman)	+	—	—	—	—	—
561	<i>Dusona nitidulator</i> (Holmgr.)	○	—	—	—	—	—
562	<i>Dusona obliterated</i> (Holmgr.)	+	—	—	—	—	—
563	<i>Dusona oxyacantha</i> (Boie)	●	—	—	—	—	—
564	<i>Dusona perditior</i> (Först.)	+	—	—	—	—	—
565	<i>Dusona petiolator</i> (Fabr.)	+	—	—	—	—	—
566	<i>Dusona recta</i> (Först.)	+	—	—	—	—	—

1	2	3	4	5	6	7	8
567	<i>Dusona remota</i> (Först.)	+	—	—	—	—	—
568	<i>Dusona rugifer</i> (Först.)	—	+	—	—	—	—
569	<i>Dusona rugulosa</i> (Först.)	—	+	—	—	—	—
570	<i>Dusona sobolicida</i> (Först.)	●	—	—	—	—	—
571	<i>Dusona spiniger</i> (Thoms.)	+	+	+	—	—	—
572	<i>Dusona subaequalis</i> (Först.)	○	—	—	—	—	—
573	<i>Dusona subcincta</i> (Först.)	+	—	—	—	—	—
574	<i>Dusona subimpressa</i> (Först.)	+	+	+	—	—	—
575	<i>Dusona terebrator</i> (Först.)	●	+	+	—	—	—
576	<i>Dusona tenuis</i> (Först.)	+	—	—	—	—	—
577	<i>Dusona victor</i> (Thunb.)	○	—	—	—	—	—
578	<i>Nepiera collector</i> (Thunb.)	●	●	+	+	+	—
579	<i>Meloboris alternans</i> (Grav.)	—	●	—	—	—	—
580	<i>Cymodusa antennuator</i> Holmgr.	—	—	—	—	+	—
581	<i>Cymodusa cruentata</i> (Grav.)	+	—	—	—	—	—
582	<i>Cymodusa leucocera</i> Holmgr.	—	+	+	—	—	—
583	<i>Dolophron pedellum</i> (Holmgr.)	+	—	—	—	—	—
584	<i>Phobocampe cingulata</i> (Grav.)	+	●	+	—	—	—
585	<i>Phobocampe confusa</i> (Thoms.)	○	●	—	—	—	—
586	<i>Phobocampe crassiuscula</i> (Grav.)	+	●	+	—	—	—
587	<i>Phobocampe disparis</i> (Vier.)	○	—	—	—	—	—
588	<i>Phobocampe pulchella</i> Thoms.	+	—	—	—	—	—
589	<i>Tranosema hyperborea</i> (Thoms.)	—	+	—	—	—	—
590	<i>Tranosema nigridens</i> (Thoms.)	+	+	+	—	+	—
591	<i>Tranosema nishiguchii</i> (Momoi)	●	—	—	—	—	—
592	<i>Tranosema rostralis</i> (Brischke)	+	●	+	—	—	—
593	<i>Diadegma annulicrus</i> (Thoms.)	—	—	—	—	+	—
594	<i>Diadegma anura</i> (Thunb.)	+	—	+	—	—	—
595	<i>Diadegma apostata</i> (Grav.)	+	+	+	—	—	—
596	<i>Diadegma appositor</i> Aub.	—	—	—	—	+	—
597	<i>Diadegma armillata</i> (Grav.)	●	●	+	+	+	—
598	<i>Diadegma chrysosticta</i> (Gmel.)	●	—	+	—	+	—
599	<i>Diadegma crassicornis</i> (Grav.)	+	+	—	—	—	—
600	<i>Diadegma ?dimiator</i> Aub.	—	+	—	—	—	—
601	<i>Diadegma ?pescator</i> (Zett.)	—	+	—	—	—	—
602	<i>Diadegma eucerophaga</i> Horstm.	●	●	+	—	+	—
603	<i>Diadegma fenestralis</i> (Holmgr.)	●	●	+	+	—	—
604	<i>Diadegma ?holopyga</i> (Thunb.)	—	●	+	—	—	—
605	<i>Diadegma incompleta</i> Horstm.	+	●	+	—	—	—
606	<i>Diadegma lateralis</i> (Grav.)	○	—	—	—	—	—
607	<i>Diadegma longicauda</i> Horstm.	+	●	—	—	—	—
608	<i>Diadegma ?major</i> (Szépl.)	—	+	—	—	—	—
609	<i>Diadegma meliloti</i> Horstm.	—	●	+	—	—	—
610	<i>Diadegma neomajalis</i> Horstm.	+	+	+	—	—	—
611	<i>Diadegma pusio</i> (Holmgr.)	+	+	+	—	—	—
612	<i>Diadegma tibialis</i> (Grav.)	○	—	—	—	—	—
613	<i>Diadegma truncator</i> (Thoms.)	—	+	—	—	—	—
614	<i>Diadegma trochanterata</i> (Thoms.)	○	—	—	—	—	—
615	<i>Macrus parvulus</i> (Grav.)	+	●	+	—	—	—
616	<i>Hyposoter ebenina</i> (Grav.)	+	●	—	—	—	—

1	2	3	4	5	6	7	8
617	<i>Hyposoter vulgaris</i> (Tschek)	○	—	—	—	—	—
618	<i>Hyposoter didymator</i> (Thunb.)	○	—	—	—	—	—
619	<i>Hyposoter tricoloripes</i> (Vier.)	○	—	—	—	—	—
620	<i>Olesicampe alboplica</i> Thoms.	+	—	—	—	—	—
621	<i>Olesicampe macellator</i> (Thunb.)	+	●	—	—	—	—
622	<i>Olesicampe heterogaster</i> (Thoms.)	○	—	—	—	—	—
623	<i>Lathrostizus lugens</i> (Grav.)	—	—	+	—	+	—
	<i>Cremastinae</i>						
624	<i>Pristomerus orbitalis</i> Holmgr.	+	●	—	—	+	—
625	<i>Pristomerus vulnerator</i> (Panz.)	●	+	—	—	—	—
626	<i>Cremastus crassicornis</i> Thoms.	+	—	—	—	—	—
627	<i>Cremastus geminus</i> Grav.	+	—	—	—	+	—
628	<i>Cremastus infirmus</i> Grav.	○	●	+	—	—	—
629	<i>Temelucha interruptor</i> (Grav.)	+	+	+	+	+	—
630	<i>Temelucha</i> sp.	+	—	+	—	—	—
	<i>Phrudinae</i>						
631	<i>Pygmaeus nitidus</i> (Bridgm.)	—	—	+	—	—	—
	<i>Tersilochinae</i>						
632	<i>Probles gilvipes</i> (Grav.)	+	—	—	—	—	—
633	<i>Probles neoversutus</i> Horstm.	+	—	+	+	+	—
634	<i>Probles versutus</i> (Holmgr.)	—	●	—	—	—	—
635	<i>Probles truncorum</i> (Holmgr.)	—	●	—	—	—	—
636	<i>Spinolochus laevifrons</i> (Holmgr.)	+	—	—	—	—	—
637	<i>Barycnemis anurus</i> Thoms.	●	—	—	—	—	—
638	<i>Barycnemis gracillimus</i> Thoms.	+	—	—	+	—	—
639	<i>Barycnemis harpurus</i> (Schränk)	+	●	—	—	—	—
640	<i>Barycnemis</i> sp.	+	—	—	—	+	—
641	<i>Gonolochus caudatus</i> (Holmgr.)	+	●	+	—	+	—
642	<i>Epistathmus crassicornis</i> Horstm.	+	—	—	—	—	—
643	<i>Tersilochus jocator</i> Holmgr.	+	●	+	—	—	—
644	<i>Tersilochus obscurator</i> Aub.	+	+	+	—	—	—
645	<i>Phradis interstitialis</i> (Thoms.)	+	●	+	—	—	—
646	<i>Phradis minutus</i> (Bridgm.)	+	—	—	—	—	—
647	<i>Phradis rufiventris</i> Horstm.	+	—	—	—	—	—
648	<i>Nonodiaparsis frontellus</i> (Holmgr.)	+	+	+	—	—	—
649	<i>Aneuclis brevicauda</i> (Thoms.)	+	—	—	—	—	—
650	<i>Aneuclis melanarius</i> (Holmgr.)	—	+	+	—	+	—
651	<i>Sathropterus pumilus</i> (Holmgr.)	+	—	—	+	+	—
	<i>Mesochorinae</i>						
652	<i>Cidaphus alarius</i> (Grav.)	+	—	—	—	—	—
653	<i>Astiphromma graniger</i> (Thoms.)	+	+	+	—	—	—
654	<i>Astiphromma marginellum</i> (Holmgr.)	+	●	—	—	—	—
655	<i>Astiphromma strenuum</i> (Holmgr.)	●	—	+	—	—	—
656	<i>Mesochorus anomalus</i> Holmgr.	●	●	+	—	—	—
657	<i>Mesochorus confusus</i> Holmgr.	+	+	+	—	—	—
658	<i>Mesochorus curvulus</i> Thoms.	+	●	+	+	+	—

1	2	3	4	5	6	7	8
659	<i>Mesochorus discitergus</i> (Say)	○	—	—	—	—	—
660	<i>Mesochorus fulgurans</i> Curt.	○	—	—	—	—	—
661	<i>Mesochorus fulvus</i> Thoms.	+	—	—	—	—	—
662	<i>Mesochorus fuscicornis</i> Brischke	○	—	—	—	—	—
663	<i>Mesochorus giberius</i> (Thunb.)	○	—	—	—	—	—
664	<i>Mesochorus longicauda</i> Thoms.	+	●	+	—	—	—
665	<i>Mesochorus nigriceps</i> Thoms.	+	—	—	—	—	—
666	<i>Mesochorus nigripes</i> Ratz.	+	—	—	+	—	—
667	<i>Mesochorus orbitalis</i> Holmgr.	+	—	+	—	—	—
668	<i>Mesochorus pectoralis</i> Ratz.	+	—	—	—	—	—
669	<i>Mesochorus suecicus</i> D. T.	+	—	—	—	—	—
670	<i>Mesochorus sylvorum</i> Curtis	+	●	+	—	—	—
671	<i>Mesochorus temporalis</i> Thoms.	●	—	—	—	—	—
672	<i>Mesochorus testaceus</i> Grav.	○	—	—	—	—	—
673	<i>Mesochorus ?tetricus</i> Holmgr.	+	●	+	—	—	—
674	<i>Mesochorus vittator</i> (Zett.)	●	—	+	—	—	—
675	<i>Mesochorus vitticollis</i> Holmgr.	+	+	+	—	—	—
676	<i>Stictopisthus complanatus</i> (Hal.)	—	●	+	—	+	—
677	<i>Stictopisthus ?formosus</i> (Bridgm.)	+	—	+	—	+	—
<i>Metopiinae</i>							
678	<i>Chorinaeus cristator</i> (Grav.)	+	—	—	—	—	—
679	<i>Trieces rufimitranae</i> Aeschl.	+	+	+	—	—	—
680	<i>Metopius ?dentatus</i> (Fabr.)	●	—	—	—	—	—
681	<i>Triclistus globulipes</i> (Desv.)	+	●	—	—	—	—
682	<i>Triclistus podagricus</i> (Grav.)	+	●	—	—	—	—
683	<i>Colpotrochia cincta</i> (Scop.)	+	●	+	+	—	—
684	<i>Carria paradoxa</i> Schmiedekn.	+	—	—	—	—	—
685	<i>Hypsicera curvator</i> (Fabr.)	+	●	+	—	+	—
686	<i>Hypsicera femoralis</i> (Geoff.)	+	●	+	—	—	—
687	<i>Exochus decoratus</i> Holmgr.	+	—	—	—	—	—
688	<i>Exochus flavomarginatus</i> Holmgr.	+	—	+	—	—	—
689	<i>Exochus gravipes</i> (Grav.)	+	—	—	—	—	—
690	<i>Exochus longicornis</i> Thoms.	+	●	—	—	—	—
691	<i>Exochus ?parvispina</i> Thoms.	+	—	+	—	—	—
692	<i>Exochus tardigrandus</i> Grav.	+	—	—	—	—	—
693	<i>Exochus tibialis</i> Holmgr.	+	●	+	—	—	—
<i>Anomaloninae</i>							
694	<i>Aphanistes armatus</i> (Wesm.)	+	—	—	—	—	—
695	<i>Aphanistes bellicosus</i> (Wesm.)	+	—	—	—	+	—
696	<i>Aphanistes ruficornis</i> (Grav.)	○	—	—	—	—	—
697	<i>Barylypa insidiator</i> (Först.)	○	+	—	—	—	—
698	<i>Trichomma enecator</i> (Rossi)	●	+	+	—	—	—
699	<i>Trichomma fulvidens</i> (Wesm.)	+	●	—	—	—	—
700	<i>Parania geniculata</i> (Holmgr.)	—	+	—	—	—	—
701	<i>Anomalon foliator</i> (Fabr.)	○	+	—	—	—	—
702	<i>Erigorgus melanobatus</i> (Grav.)	+	+	—	—	—	—
703	<i>Erigorgus cerinops</i> (Grav.)	+	—	—	—	—	—
704	<i>Heteropelma amictum</i> (Fabr.)	●	—	—	—	—	—

1	2	3	4	5	6	7	8
705	<i>Heteropelma calcator</i> (Wesm.)	+	—	—	—	—	—
706	<i>Therion circumflexum</i> (L.)	●	+	—	+	—	—
707	<i>Agrypon anxium</i> (Wesm.)	+	—	—	—	—	—
708	<i>Agrypon clandestinum</i> (Grav.)	●	—	—	—	—	—
709	<i>Agrypon delarvatum</i> (Grav.)	+	—	—	—	—	—
710	<i>Agrypon flaveolatum</i> (Grav.)	●	●	—	—	—	—
711	<i>Agrypon flexorium</i> (Thunb.)	●	●	—	—	—	—
712	<i>Habronyx canaliculatus</i> (Ratz.)	—	●	—	—	—	—
<i>Acaenitinae</i>							
713	<i>Coleocentrus excinctator</i> (Poda)	●	—	—	—	—	—
714	<i>Acaenitus dubitator</i> (Panz.)	+	—	—	—	—	—
715	<i>Phaenolobus saltanus</i> (Grav.)	+	—	—	—	—	—
716	<i>Phaenolobus terebrator</i> (Scop.)	+	●	—	—	—	—
<i>Oxytorinae</i>							
717	<i>Oxytorus luridator</i> (Grav.)	+	+	—	—	—	—
718	<i>Cylloceria caligata</i> (Grav.)	+	—	—	—	—	—
719	<i>Cylloceria melancholica</i> (Grav.)	+	—	—	—	—	—
720	<i>Proclitus grandis</i> Först.	○	—	—	—	—	—
721	<i>Catastenus femoralis</i> Först.	+	—	—	—	—	—
722	<i>Eusterinx oligomera</i> Först.	+	+	—	—	—	—
<i>Orthopelmatinae</i>							
723	<i>Orthopelma mediator</i> (Thunb.)	+	●	+	—	—	—
<i>Collyriinae</i>							
724	<i>Collyria coxator</i> (Vill.)	●	●	+	—	—	—
<i>Diplazontinae</i>							
725	<i>Homotropus dimidiatus</i> (Schrank)	+	●	+	—	+	—
726	<i>Homotropus elegans</i> (Grav.)	+	+	+	+	—	—
727	<i>Homotropus fissorius</i> (Grav.)	—	+	—	—	+	—
728	<i>Homotropus haemorrhoidalis</i> Szépl.	—	●	+	+	+	—
729	<i>Homotropus incisus</i> (Thoms.)	—	+	—	—	—	—
730	<i>Homotropus nigritarsus</i> (Grav.)	+	—	+	—	+	—
731	<i>Homotropus pictus</i> (Grav.)	+	+	+	—	+	—
732	<i>Homotropus pallipes</i> (Grav.)	—	●	—	—	—	—
733	<i>Homotropus pulcher</i> (Holmgr.)	—	—	—	+	—	—
734	<i>Homotropus signatus</i> (Holmgr.)	+	+	+	—	+	—
735	<i>Homotropus strigator</i> (Fabr.)	+	●	+	+	+	—
736	<i>Homotropus tarsatorius</i> (Panz.)	●	●	+	+	+	—
737	<i>Enizemum ornatum</i> (Grav.)	●	●	+	+	+	—
738	<i>Syrphoctonus abdominator</i> (Bridgm.)	—	—	+	—	+	—
739	<i>Syrphoctonus biguttatus</i> (Grav.)	+	+	+	—	+	—
740	<i>Syrphoctonus flavolineatus</i> (Grav.)	+	●	+	+	—	—
741	<i>Campocraspedon ?arcanus</i> (Stelf.)	—	+	—	—	—	—
742	<i>Campocraspedon caudatus</i> (Thoms.)	+	—	—	—	—	—
743	<i>Phthorima xanthaspis</i> (Thoms.)	—	—	+	+	+	—
744	<i>Syrphophilus bizonarius</i> (Grav.)	+	+	+	+	—	—

1	2	3	4	5	6	7	8
745	<i>Syrphophilus tricolorius</i> (Thunb.)	●	+	—	—	—	—
746	<i>Thymmophorus graculus</i> (Grav.)	+	●	+	+	—	—
747	<i>Thymmophorus rufiventris</i> (Grav.)	+	—	—	—	—	—
748	<i>Diplazon laetatorius</i> (Fabr.)	●	●	+	+	+	—
749	<i>Diplazon pectoratorius</i> (Thunb.)	+	●	+	+	+	—
750	<i>Diplazon tetragonus</i> (Thunb.)	+	●	+	+	+	—
751	<i>Diplazon tibiatorius</i> (Thunb.)	●	+	+	—	—	—
752	<i>Bioblapsis flavipes</i> (Holmgr.)	—	+	—	—	—	—
753	<i>Promethes sulcator</i> (Grav.)	+	●	+	+	+	—
754	<i>Sussaba cognata</i> (Holmgr.)	+	+	+	—	+	—
755	<i>Sussaba dorsalis</i> (Holmgr.)	+	+	—	—	—	—
756	<i>Sussaba erigator</i> (Fabr.)	+	●	+	+	—	—
757	<i>Sussaba coriacea neopulchella</i> Diller	+	●	+	—	—	—
758	<i>Sussaba pulchella pulchella</i> (Holmgr.)	—	●	+	+	—	—
759	<i>Sussaba punctiventris</i> (Holmgr.)	—	—	—	—	+	—
<i>Opioninae</i>							
760	<i>Ophion brevicornis</i> Morl.	+	—	—	—	—	—
761	<i>Ophion costatus</i> Ratz.	—	—	+	—	—	—
762	<i>Ophion forticornis</i> Morl.	+	—	—	—	—	—
763	<i>Ophion longigena</i> Thoms.	—	+	—	—	—	—
764	<i>Ophion luteus</i> (L.)	●	●	+	—	—	—
765	<i>Ophion minutus</i> Kriechb.	+	+	—	—	—	—
766	<i>Ophion ?mocsaryi</i> Brauns	○	○	—	—	—	—
767	<i>Ophion obscuratus</i> Fabr.	●	—	—	—	—	—
768	<i>Ophion pteridis</i> Kriechb.	+	+	—	—	—	—
769	<i>Ophion ventricosus</i> Grav.	+	+	—	—	—	—
770	<i>Enicospilus combustus</i> (Grav.)	●	○	+	—	—	—
771	<i>Enicospilus ramidulus</i> (L.)	●	+	—	—	—	—
772	<i>Enicospilus repentinus</i> (Holmgr.)	+	+	—	—	—	—
773	<i>Hellwigia elegans</i> Grav.	+	—	—	—	—	—
<i>Ichneumoninae</i>							
774	<i>Trogus lapidator</i> (Fabr.)	●	—	—	—	—	—
775	<i>Callajoppa cirrogastra</i> (Schränk)	○	+	—	—	—	—
776	<i>Callajoppa exaltatoria</i> (Panz.)	●	—	—	—	—	—
777	<i>Lymantrichneumon dispar</i> (Poda)	—	+	—	—	—	—
778	<i>Protichneumon fusorius</i> (L.)	●	—	—	—	—	—
779	<i>Protichneumon pisorius</i> (L.)	●	—	—	—	—	—
780	<i>Amblyjoppa proteus</i> (Christ)	+	—	—	—	—	○
781	<i>Coelichneumon auspex</i> (Müll.)	+	—	—	—	—	—
782	<i>Coelichneumon biguttatus</i> (Kriechb.)	—	+	—	—	—	—
783	<i>Coelichneumon desinatorius</i> (Thunb.)	—	●	—	—	—	—
784	<i>Coelichneumon dissimilis</i> (Grav.)	+	—	—	—	—	—
785	<i>Coelichneumon comitator</i> (L.)	—	+	+	—	—	—
786	<i>Coelichneumon falsificus</i> (Wesm.)	+	—	—	—	—	—
787	<i>Colichneumon ferreus</i> (Grav.)	—	●	—	—	—	—
788	<i>Coelichneumon fuscipes</i> (Gmel.)	—	○	—	—	—	—
789	<i>Coelichneumon haemorrhoidalis</i> (Grav.)	○	—	—	—	—	—
790	<i>Coelichneumon leucocerus</i> (Grav.)	+	—	—	—	—	—

1	2	3	4	5	6	7	8
791	<i>Coelichneumon periscelis</i> (Wesm.)	+	—	—	—	—	—
792	<i>Coelichneumon sugillatorius</i> (L.)	●	+	—	—	—	—
793	<i>Heresiarches eudoxius</i> (Wesm.)	+	—	—	—	—	—
794	<i>Anisobas cingulatorius</i> (Grav.)	+	+	—	—	—	—
795	<i>Hoplismenus albifrons</i> Grav.	—	+	—	—	—	—
796	<i>Hoplismenus bidentatus</i> (Gmel.)	+	●	+	—	—	—
797	<i>Stenichneumon culpator</i> (Schrank)	●	●	+	—	—	—
798	<i>Syspasis lineator</i> (Fabr.)	+	+	—	—	—	—
799	<i>Syspasis rimulosus</i> (Thoms.)	—	—	+	—	—	—
800	<i>Syspasis scutellator</i> (Grav.)	+	+	—	—	—	—
801	<i>Aoplus castaneus</i> (Grav.)	+	●	+	—	—	—
802	<i>Aoplus ochropis</i> (Gmel.)	+	●	+	—	—	—
803	<i>Aoplus pictus</i> (Gmel.)	+	●	—	—	—	—
804	<i>Cratichneumon clarigator</i> (Wesm.)	+	●	—	—	—	—
805	<i>Cratichneumon corruscator</i> (L.)	●	+	—	—	—	—
806	<i>Cratichneumon culex</i> (Müll.)	●	●	+	+	+	—
807	<i>Cratichneumon fabricator</i> (Fabr.)	●	●	+	—	+	—
808	<i>Cratichneumon infidus</i> (Wesm.)	+	—	—	—	—	—
809	<i>Cratichneumon jocularis</i> (Wesm.)	+	—	+	—	—	—
810	<i>Cratichneumon luteiventris</i> (Grav.)	—	●	+	—	+	—
811	<i>Cratichneumon rufifrons</i> (Grav.)	+	●	—	—	+	—
812	<i>Cratichneumon sicarius</i> (Grav.)	—	●	+	—	—	—
813	<i>Cratichneumon versator</i> (Thunb.)	+	●	—	—	—	—
814	<i>Cratichneumon viator</i> (Scop.)	●	+	—	—	—	—
815	<i>Aculichneumon lanius</i> (Grav.)	+	●	+	—	—	—
816	<i>Eupalamus lacteator</i> (Grav.)	+	—	—	—	—	—
817	<i>Eupalamus oscillator</i> (Wesm.)	+	●	—	—	—	—
818	<i>Eupalamus wesmaeli</i> Thoms.	○	—	—	—	—	—
819	<i>Melanichneumon albipictus</i> (Grav.)	○	—	—	—	—	—
820	<i>Melanichneumon designatorius</i> (L.)	+	—	—	—	—	—
821	<i>Vulgichneumon saturatorius</i> (L.)	●	—	—	—	—	—
822	<i>Vulgichneumon bimaculatus</i> (Schrank)	●	●	—	—	—	—
823	<i>Vulgichneumon deceptor</i> (Scop.)	+	—	—	—	—	—
824	<i>Vulgichneumon lepidus</i> (Grav.)	+	●	—	—	—	—
825	<i>Vulgichneumon trifarius</i> (Berth.)	—	+	—	—	—	—
826	<i>Virgichneumon tergenus</i> (Grav.)	—	+	+	—	—	—
827	<i>Barichneumon albilineatus</i> (Grav.)	●	●	+	+	+	—
828	<i>Barichneumon albosignatus</i> (Grav.)	+	—	—	—	—	—
829	<i>Barichneumon anator</i> (Fabr.)	●	—	+	+	—	—
830	<i>Barichneumon bilumulatus</i> (Grav.)	+	—	—	—	—	—
831	<i>Barichneumon callicerus</i> (Grav.)	+	—	—	—	—	—
832	<i>Barichneumon derogator</i> (Wesm.)	+	●	+	—	—	—
833	<i>Barichneumon digrammus</i> (Grav.)	—	+	—	—	—	—
834	<i>Barichneumon dumeticola</i> (Grav.)	+	●	+	—	—	—
835	<i>Barichneumon faunus</i> (Grav.)	—	●	—	—	—	—
836	<i>Barichneumon krapinensis</i> (Schmiedekn.)	+	—	—	—	—	—
837	<i>Barichneumon nubilis</i> (Brischke)	+	—	—	—	—	—
838	<i>Barichneumon peregrinator</i> (L.)	+	+	+	—	—	—
839	<i>Barichneumon ?plagiarius</i> (Wesm.)	—	+	—	—	—	—
840	<i>Barichneumon praeceptor</i> (Thunb.)	+	●	+	—	—	—

1	2	3	4	5	6	7	8
841	<i>Barichneumon protervus</i> (Holmgr.)	+	●	—	—	—	—
842	<i>Baronisobas ridibundus</i> (Grav.)	+	—	—	—	—	—
843	<i>Stenobarichneumon basalis</i> Perk.	+	●	—	—	—	—
844	<i>Stenobarichneumon basiglyptus</i> (Kriechb.)	+	●	+	+	—	—
845	<i>Homotherus locutor</i> (Thunb.)	+	+	+	—	—	—
846	<i>Homotherus varipes</i> (Grav.)	●	+	+	—	—	—
847	<i>Homotherus</i> sp.	+	—	—	—	—	—
848	<i>Chasmias motatorius</i> (Fabr.)	+	●	+	—	—	—
849	<i>Chasmias paludator</i> (Desv.)	—	+	—	—	—	—
850	<i>Ichneumon albicollis</i> Wesm.	○	—	+	—	—	—
851	<i>Ichneumon albiger</i> Wesm.	+	+	+	—	—	—
852	<i>Ichneumon amphibulus</i> Kriechb.	+	—	—	—	—	—
853	<i>Ichneumon balteatus</i> Wesm.	○	—	—	—	—	—
854	<i>Ichneumon bucculentus</i> Wesm.	+	+	—	—	—	—
855	<i>Ichneumon caproni</i> Perk.	+	—	—	—	—	—
856	<i>Ichneumon confusor</i> Grav.	●	●	+	—	—	—
857	<i>Ichneumon deliratorius</i> L.	+	+	—	—	—	—
858	<i>Ichneumon extensorius</i> L.	+	—	—	—	—	—
859	<i>Ichneumon formosus</i> Grav.	+	—	—	—	—	—
860	<i>Ichneumon fulvicornis</i> Grav.	—	○	—	—	—	—
861	<i>Ichneumon gracilentus</i> Wesm.	+	—	—	—	—	—
862	<i>Ichneumon gracilicornis</i> Grav.	+	—	—	—	—	—
863	<i>Ichneumon gratus</i> Wesm.	○	—	—	—	—	—
864	<i>Ichneumon inquinatus</i> Wesm.	+	—	—	—	—	—
865	<i>Ichneumon latrator</i> Fabr.	+	●	—	—	—	—
866	<i>Ichneumon lautatorius</i> Desv.	+	—	—	—	—	—
867	<i>Ichneumon lugens</i> Grav.	+	—	—	—	—	—
868	<i>Ichneumon memorator</i> Wesm.	●	—	—	—	—	—
869	<i>Ichneumon nereis</i> Thoms.	—	—	+	—	—	—
870	<i>Ichneumon quadrialbatus</i> Grav.	○	—	—	—	—	—
871	<i>Ichneumon raptorius</i> Grav.	—	○	—	—	—	—
872	<i>Ichneumon sarcitorius</i> L.	●	●	—	—	—	—
973	<i>Ichneumon spurius</i> Wesm.	+	●	+	—	—	—
874	<i>Ichneumon subquadratus</i> Thoms.	+	+	+	—	—	—
875	<i>Probolus concinnus</i> Wesm.	+	—	—	—	—	—
876	<i>Probolus culpatorius</i> (L.)	—	—	+	—	—	—
877	<i>Probolus</i> sp.	—	+	—	—	—	—
878	<i>Ctenichneumon castigator</i> (Fabr.)	+	●	+	—	—	—
879	<i>Ctenichneumon divisorius</i> (Grav.)	+	—	—	—	—	—
880	<i>Ctenichneumon edictorius</i> (L.)	○	+	—	—	—	—
881	<i>Ctenichneumon funereus</i> (Geoff.)	—	+	—	—	—	—
882	<i>Ctenichneumon panzeri</i> (Wesm.)	●	—	—	—	—	—
883	<i>Spilothyrateles fabricii</i> (Schrank)	—	—	—	—	+	—
884	<i>Eutanyacra glaucatoria</i> (Fabr.)	—	+	—	+	—	—
885	<i>Eutanyacra picta</i> (Schrank)	+	—	—	—	—	—
886	<i>Diphyus raptorius</i> (L.)	+	—	+	—	—	—
887	<i>Triptognathus pulchellus</i> (Christ)	+	●	+	—	—	—
888	<i>Achais oratorius</i> (Fabr.)	●	+	—	—	—	—
889	<i>Amblyteles armatorius</i> (Forst.)	○	○	—	—	—	—
890	<i>Amblyteles quadriguttorius</i> (Thunb.)	○	—	—	—	—	—

1	2	3	4	5	6	7	8
891	<i>Limerodes arctiventris</i> (Boie)	—	●	—	—	—	—
892	<i>Limerodops elongatus</i> (Brischke)	+	—	—	—	—	—
893	<i>Exephanes ischioxanthus</i> (Grav.)	+	+	—	—	—	—
894	<i>Exephanes occupator</i> (Grav.)	—	—	+	—	—	—
895	<i>Acolobus albimanus</i> (Grav.)	+	—	+	—	—	—
896	<i>Acolobus sericeus</i> Wesm.	—	+	—	—	—	—
897	<i>Hepiopelmus melanogaster</i> (Gmel.)	—	—	+	—	—	—
898	<i>Tricholabus strigatorius</i> (Grav.)	+	—	—	—	—	—
899	<i>Eurylabus andrei</i> (Berthom.)	○	—	—	—	—	—
900	<i>Pristiceros laetepictus</i> (Costa)	+	—	—	—	—	—
901	<i>Poecilostictus conthurnatus</i> (Grav.)	+	—	—	—	—	—
902	<i>Pseudoplatylabus uniguttatus</i> (Grav.)	+	—	—	—	—	—
903	<i>Pseudoplatylabus violentus</i> (Grav.)	+	●	—	—	—	—
904	<i>Stenolabus concinnus</i> (Thoms.) Heinr.	+	—	+	—	—	—
905	<i>Platylabus concinnus</i> Thoms.	+	+	—	—	—	—
906	<i>Platylabus iridipennis</i> (Grav.)	—	—	+	—	+	—
907	<i>Platylabus pedatorius</i> (Fabr.)	—	+	—	—	—	—
908	<i>Platylabus punctifrons</i> Thoms.	—	+	—	—	—	—
909	<i>Platylabus rufiventris</i> Wesm.	+	+	+	—	+	—
910	<i>Asthenolabus vitratorius</i> (Grav.)	+	—	—	—	—	—
911	<i>Linyctus exhortator</i> (Thunb.)	+	+	—	—	+	—
912	<i>Apaeticus bellicosus</i> Wesm.	—	+	—	—	—	—
913	<i>Heterischnus nigricollis</i> Wesm.	—	—	+	—	—	—
914	<i>Heterischnus thoracicus</i> (Grav.)	+	●	+	—	—	—
915	<i>Heterischnus truncator</i> (Fabr.)	●	●	+	—	—	—
916	<i>Misetus ocelatus</i> Wesm.	+	+	—	—	—	—
917	<i>Nematomicrus tenellus</i> Wesm.	—	+	—	+	—	—
918	<i>Stenodontus marginellus</i> (Grav.)	—	●	—	—	—	—
919	<i>Eriplatys ardeicollis</i> (Wesm.)	+	●	—	—	—	—
920	<i>Herpestomus aridens</i> (Grav.)	+	●	+	—	—	—
921	<i>Herpestomus brunnicornis</i> (Grav.)	●	+	+	—	—	—
922	<i>Dicaelotus cameroni</i> (Bridgm.)	+	●	+	—	+	—
923	<i>Dicaelotus erythrostromus</i> Wesm.	+	●	—	—	—	—
924	<i>Dicaelotus parvulus</i> (Grav.)	+	—	—	—	—	—
925	<i>Dicaelotus pictus</i> (Schmiedekn.)	+	●	+	+	—	—
926	<i>Dicaelotus pumilus</i> (Grav.)	+	●	+	—	+	—
927	<i>Dicaelotus punctiventris</i> (Thoms.)	+	●	—	+	+	—
928	<i>Dicaelotus ruficoxatus</i> (Grav.)	+	—	—	—	—	—
929	<i>Dicaelotus resplendens</i> Holmgr.	—	●	—	—	—	—
930	<i>Dicaelotus pudibundus</i> Wesm.	+	●	—	+	—	—
931	<i>Epitomus infuscatus</i> (Grav.)	+	●	+	+	—	—
932	<i>Trachyarus corvinus</i> Thoms.	—	●	—	—	—	—
933	<i>Oronotus binotatus</i> (Grav.)	+	—	—	—	—	—
934	<i>Notosemus bohemani</i> (Wesm.)	+	—	—	—	—	—
935	<i>Mevesia arguta</i> (Wesm.)	+	—	—	—	—	—
936	<i>Diadromus collaris</i> (Grav.)	+	●	+	—	+	—
937	<i>Diadromus subilicornis</i> (Grav.)	+	+	+	—	—	—
938	<i>Diadromus tenax</i> Wesm.	—	+	—	—	—	—
939	<i>Diadromus troglodytes</i> (Grav.)	+	+	—	—	—	—
940	<i>Colpognathus celerator</i> (Grav.)	●	—	—	—	—	—

1	2	3	4	5	6	7	8
941	<i>Colpognathus divisus</i> Thoms.	●	—	—	—	—	—
942	<i>Centeterus confector</i> (Grav.)	+	—	—	—	—	—
943	<i>Centeterus opprimator</i> (Grav.)	—	●	+	—	—	—
944	<i>Oiorhinus pallipalpis</i> Wesm.	+	●	+	—	—	—
945	<i>Aethecerus discolor</i> Wesm.	+	●	+	+	+	—
946	<i>Aethecerus dispar</i> Wesm.	+	●	—	—	—	—
947	<i>Aethecerus placidus</i> Wesm.	+	+	—	—	—	—
948	<i>Phaeogenes callopus</i> Wesm.	+	●	+	—	—	—
949	<i>Phaeogenes elongatus</i> Thoms.	—	—	+	—	—	—
950	<i>Phaeogenes flavidens</i> Wesm.	+	●	—	—	—	—
951	<i>Phaeogenes fulvitaris</i> Wesm.	+	●	—	—	—	—
952	<i>Phaeogenes fuscicornis</i> Wesm.	+	—	—	—	—	—
953	<i>Phaeogenes heterogonus</i> Holmgr.	+	—	—	—	—	—
954	<i>Phaeogenes ?impiger</i> Wesm.	+	●	+	—	—	—
955	<i>Phaeogenes ?infimus</i> Wesm.	+	●	—	—	—	—
956	<i>Phaeogenes invisor</i> (Thunb.)	—	+	+	—	—	—
957	<i>Phaeogenes ischiomelinus</i> Wesm.	—	—	+	—	—	—
958	<i>Phaeogenes maculicornis</i> (Steph.)	—	—	+	—	—	—
959	<i>Phaeogenes melanogonos</i> (Gmel.)	+	—	—	—	—	—
960	<i>Phaeogenes modestus</i> Wesm.	+	—	+	—	+	—
961	<i>Phaeogenes mysticus</i> Wesm.	+	—	—	—	—	—
962	<i>Phaeogenes ophthalmicus</i> Wesm.	+	+	—	—	—	—
963	<i>Phaeogenes spiniger</i> (Grav.)	+	—	—	—	—	—
964	<i>Phaeogenes suspicax</i> Wesm.	+	●	—	+	+	—
965	<i>Dicaelotus suspectus</i> Perk.	+	+	—	—	—	—

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ICHNEUMONIDAE (HYMENOPTERA) WARSZAWY I MAZOWSZA

STRESZCZENIE

Łącznie z terenów niezurbanizowanych Mazowsza i Warszawy, w oparciu o dane z piśmiennictwa i własne materiały (około 15 500 okazów), wykazano 965 gatunków *Ichneumonidae*, z czego nowych dla całego Mazowsza 454 gatunki, a nowych dla Polski 25 gatunków. Na terenach niezurbanizowanych Mazowsza badano różne środowiska, gdzie stwierdzono 780 gatunków. Pod wpływem presji urbanizacyjnej zachodzą istotne zmiany w składzie gatunkowym. W transekcie tereny niezurbanizowane Mazowsza—suburbia—centrum miasta zaznaczył się wyraźny spadek liczby gatunków — w suburbiach stwierdzono 553 gatunki, w zieleni miejskiej 381, z czego w parkach 344, w zieleni osiedlowej 106 i w centrum miasta 109. Około 4,5% gatunków okazało się wspólnych dla Mazowsza, suburbiów i pozostałych badanych typów zieleni Warszawy.

W podrodzinie *Diplazontinae* przeważały gatunki o dużych zasięgach występowania (kosmopolitycznym i holarktycznym). Presja urbanizacyjna tylko nieznacznie zmieniła proporcje między poszczególnymi elementami zoogeograficznymi występującymi w badanych typach zieleni.

Obszary zurbanizowane tworzą wyraźną barierę dla większości gatunków kompleksów parazytoidów związanych z określonymi grupami biotycznymi żywicieli — w 6 kompleksach parazytoidów nastąpił wyraźny spadek liczby gatunków w transekcie od Mazowsza do centrum miasta. Znacznie szybciej są eliminowane parazytoidy egzofitofagów niż parazytoidy fitofagów minujących. Zjawiska te należy wiązać ze spadkiem liczby gatunków żywicieli oraz ograniczającym wpływem różnych czynników (np. brak kwiatów i czystej spadzi, brak zimowisk dla samic itp.).

Odm inną sytuację odnotowano w przypadku kompleksu parazytoidów drapieżników mszycożernych. W kompleksie tym w zieleni miejskiej nie nastąpiła eliminacja gatunków, a w związku z tym wzrósł tu wyraźnie ich udział procentowy w porównaniu z terenami

niezurbanizowanymi Mazowsza. Sytuacja taka mogła powstać, gdyż w zieleni Warszawy istnieje duże zagęszczenie żywicieli, a związane z nimi parazytoidy charakteryzują się dużą tolerancją ekologiczną — są eurytopami o dużych zasięgach występowania i żyjącymi w różnych środowiskach (np. szereg gatunków z *Diplazontinae*). Spotyka się je wszędzie tam, gdzie mają odpowiednich żywicieli. Utrzymujące się duże zróżnicowanie gatunkowe parazytoidów owadów pożytecznych — drapieżników mszycyżernych — na terenie miasta jest z punktu widzenia ochrony roślin zjawiskiem negatywnym.

Gatunki liczniej występujące w zieleni miejskiej zwykle nie były liczne na Mazowszu. Wyjątek stanowiły *Gelis albipalpis*, *Charitopes chrysopae*, *Nemeritis lativentris*, i *Leptocampoplex cremastoides*, które wszędzie były stosunkowo liczne.

ICHNEUMONIDAE (HYMENOPTERA) WARSZAWY I MAZOWII

РЕЗЮМЕ

На неурбанизированных территории Мазовии и Варшавы констатировано 965 видов *Ichneumonidae*. На неурбанизированных территории Мазовии 780 видов; в Варшаве из субурбиев 553, из городской зелени 381, в том числе в парках 344, в зелени жилых районов 106 и в центре города 109. Таким образом, происходит четкое снижение количества видов под влиянием урбанизационного пресса. Этот фактор был также причиной редукции числа видов большинства из 7 выделенных комплексов паразитов, связанных с определенными биотическими группами хозяев. Исключение в этом отношении составляют паразиты хищников-афидофагов, количество видов которых не уменьшилось в городской зелени. Не наблюдалось также влияния урбанизационного пресса на соотношение отдельных зоогеографических элементов *Diplazontinae*.