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## TORYMIDAE AND EURYTOMIDAE (HYMENOPTERA: CHALCIDOIDEA) FROM BUCUREȘTI CITY AND THE SURROUNDING AREA

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**Abstract.** We present 55 species of Torymidae and Eurytomidae (Hymenoptera: Chalcidoidea) mentioned from București city (Bucharest, Romania) and its surroundings. 34 species were recorded anteriorly to this research, we made some considerations especially on the 23 species collected by net with the opportunity of participation to the project “Study of the fauna of București and its surroundings” initiated by the scientific personal of the “Grigore Antipa” National Museum of Natural History of București.

**Résumé.** Nous présentons 55 espèces de Torymidae et d'Eurytomidae (Hymenoptera: Chalcidoidea) mentionnées de la ville de București (Bucarest, Roumanie) et ses environs. 34 espèces ont été enregistrées avant ces recherches, nous avons fait quelques considérations surtout sur les 23 espèces recueillies à l'aide d'un filet, ayant l'occasion de participer au projet „Étude de la faune de București et ses environs“ lancé par le collectif scientifique du Muséum National d'Histoire Naturelle „Grigore Antipa“ de București.

**Key words:** Hymenoptera (Chalcidoidea: Torymidae, Eurytomidae), urban and peri-urban fauna, București, Romania.

### INTRODUCTION

Torymidae and Eurytomidae families (Hymenoptera: Chalcidoidea) includes very small hymenopteran species, they have few millimeters, 2-3 mm usually, and because of that they are not a common capture in the field for generalist entomologists or naturalists. Almost all species are endophyte, feeding as larvae inside the plants, most of them being parasitoids on other insects but some genera are complete phytophagous, like *Tetramesa*, *Bruchophagus* or *Systole*, also some parasitoid genera includes phytophagous species, like *Eurytoma* or *Torymus*. Until now, 101 species of torymids are known from Romania (Popescu, 2006 a) from more than 1000 species known at planetary level and 108 species of eurytomids (Popescu, 2006 b) from more than 1500 species known in the entire world.

First data on some torymids and eurytomids from București and its surroundings are from M. Jaquet, who collected five species of *Torymus* (*T. angelicae*, *T. auratus*, *T. cyaneus*, *T. erucarum*, *T. nobilis*), one of *Eurytoma* (*E. pistaciae*) and one of *Sycophila* (*S. biguttata*) from Comana forest and Buftea in 1898. The species were identified by J. Kieffer and published in “Buletinul Societății de Științe din București” - Romania, 9 (1), in one of Jaquet's papers, in his series “Faune de la Roumanie” (Jaquet, 1900).

Manolache (1939) published a short note in “Progresul Horticol” on *Systole coriandri* from Băneasa, as a pest of *Coriandrum sativum*. Ene (1953) published a paper on the raptors and parasitoids of the pest *Tortrix viridana* L. from Snagov, where he mentioned *Eurytoma appendigaster* as a parasitoid of this small butterfly. Ionescu & Roman (1959) mentioned a gall on *Festuca heterophylla* Lam. from Săbăreni forest, collected by M. Andreescu. This gall was considered to belong to

*Tetramesa brevicollis* (Walker) (mentioned as *Isosoma hieronymi* Schltld.) but they didn't obtain the mature stages of the insects for identifying. Andriescu (1971) mentioned *Eurytoma robusta* Mayr and *Eurytoma tibialis* Boheman from Pipera, both species collected by Șt. Negru, in a paper on Chalcidoidea (Hymenoptera) from the collections of "Grigore Antipa" National Museum of Natural History of București. Ceianu & Ghizdavu (1990) mentioned *Eurytoma arctica* Thomson from *Pissodes notatus* F. (Coleoptera: Curculionidae) from Otopeni, in a paper on biotic factors that control the mortality of this noxious beetle.

The one who made the most extensive research on torymids and eurytomids of București and the surrounding area was Constanța Tudor. She was a professor at the Faculty of Biology of the University of București and within period 1956-1988 she published a series of 14 papers that included 28 species from this area. Most of the species were obtained by rearing from cynipid galls (Hymenoptera: Cynipidae) especially from oaks, but also some species were collected using the entomological net.

This paper presents the results of the study made as a result of collaboration at the project "Study of the fauna of București and its surroundings" (Pârvu, 2008) with the scientific staff of "Grigore Antipa" National Museum of Natural History of București, especially with Dr. C. Pârvu and D. Ruști.

#### MATERIAL AND METHODS

The collecting sites were urban - Vitan area, Dâmbovița river bank (București), Văcărești everglade (București), Tineretului Park (București) and peri-urban - Comana forest (Giurgiu). All specimens were collected by sweeping using an entomological net and after that they were kept in alcohol until they were mounted on cards and on slides (the appendages) for identification. The pictures were made using a Canon digital camera attached to an Euromex stereomicroscope and by scanning electron microscopy (SEM). The genera and species are listed alphabetically. They are considered under their present valid names.

#### RESULTS AND DISCUSSIONS

Prior to this study, 19 species of torymids and 15 species of eurytomids from București and the surrounding area were mentioned:

##### Family Torymidae

-*Glyphomerus stigma* (Fabricius, 1793)

-Pasărea, Botanical Garden (București), Andronache (Constanache-Tudor, 1958), Cernica, Băneasa, Pustnicu (Tudor, 1966 b), Băneasa, Cernica, Pasărea, Pustnicu, Botanical Garden (București) (Tudor, 1970), Botanical Garden (București), Băneasa, Cernica, Pasărea, Pustnicu, Andronache (Tudor, 1988).

-*Megastigmus aculeatus* (Swederus, 1795)

-București (Tudor, 1970).

-*Megastigmus dorsalis* (Fabricius, 1798)

-Băneasa forest (Constanache-Tudor, 1956), Căciulați, Cernica, Andronache, Mogoșoaia (Tudor, 1966 b), Băneasa, Cernica, Mogoșoaia, Andronache, Săbăreni, Căciulați (Tudor, 1970), Băneasa, Cernica, București, Cernica, Andronache, Mogoșoaia, Săbăreni, Căciulați (Tudor, 1988).

-*Megastigmus stigmatizans* (Fabricius, 1798)

- Mogoșoaia, Băneasa (Tudor, 1970), Băneasa, Mogoșoaia (Tudor, 1988).
- Monodontomerus aeneus* (Fonscolombe, 1832)
  - București (Tudor, 1970).
- Monodontomerus aereus* Walker, 1834
  - Snagov (Ene, 1953), Băneasa (Tudor, 1970).
- Torymoides kiesewetteri* (Mayr, 1874)
  - Căciulați (Tudor, 1969), Căciulați (Tudor, 1970).
- Torymus affinis* (Fonscolombe, 1832)
  - Periș, Căciulați (Tudor, 1961), Mogoșoaia, Cernica, (Tudor, 1966 b), Mogoșoaia, Cernica, Periș, Căciulați (Tudor, 1970), Cernica, Mogoșoaia, Periș (Tudor, 1988).
- Torymus angelicae* (Walker, 1836)
  - Comana (Jaquet, 1900), Cernica (Tudor, 1961), Băneasa, Cernica, Puieni, Mogoșoaia (Tudor, 1966 b), Băneasa, Cernica, Pasărea, Pustnicu, Mogoșoaia, Puieni (Tudor, 1970), Băneasa, Cernica, Pasărea, Pustnicu, Mogoșoaia, Puieni (Tudor, 1988).
- Torymus arundinis* (Walker, 1833)
  - Măriuța (Tudor, 1968 a), Măriuța (Tudor, 1970).
- Torymus auratus* (Müller, 1764)
  - Buftea (Jaquet, 1900), Ștefănești, Pasărea, Pustnicu, Greaca, Băneasa, Mogoșoaia, Cernica (Tudor, 1966 b), Băneasa, Mogoșoaia (Tudor, 1969), Cernica, Băneasa, Mogoșoaia, Comana, Pasărea, Pustnicu, Andronache, Ștefănești, Greaca, Puieni, Săbăreni (Tudor, 1970), Băneasa, Cernica, Mogoșoaia, Pasărea, Pustnicu, Comana, Ștefănești, Săbăreni, Greaca (Tudor, 1988).
- Torymus bedeguaris* (Linnaeus, 1758)
  - Botanical Garden (București), Andronache (Constandache-Tudor, 1958), Andronache, Botanical Garden (București) (Tudor, 1970), Băneasa (Tudor, 1971), Botanical Garden (București), Andronache, Comana (Tudor, 1988).
- Torymus calcaratus* Nees, 1834
  - Săbăreni (Tudor, 1970), Săbăreni (Tudor, 1988).
- Torymus chloromerus* (Walker, 1833)
  - Cernica (Constandache-Tudor, 1958), Puieni, Săbăreni (Tudor, 1969), Cernica, Comana (Tudor, 1970), Cernica, Comana, Săbăreni, Puieni (Tudor, 1988).
- Torymus cingulatus* Nees, 1834
  - Mogoșoaia (Tudor, 1961), Mogoșoaia (Tudor, 1970).
- Torymus cyaneus* Walker, 1847
  - Comana (Jaquet, 1900), Cernica, Băneasa, Mogoșoaia, Pustnicu, Ștefănești (Tudor, 1966 b), Băneasa, Cernica, Mogoșoaia, Pustnicu, Comana, Ștefănești (Tudor, 1970), Băneasa, Cernica, Pustnicu, Mogoșoaia, Comana, Ștefănești (Tudor, 1988).
- Torymus erucarum* (Schrank, 1781)
  - Comana (Jaquet, 1900).
- Torymus nobilis* Boheman, 1834
  - Comana (Jaquet, 1900).
- Torymus ventralis* (Fonscolombe, 1832)
  - Căciulați (Tudor, 1962), Herăstrău Park (București), Căciulați (Tudor, 1970).

## Family Eurytomidae

- Eurytoma appendigaster* (Swederus, 1795)
  - Snagov (Ene, 1953).
- Eurytoma arctica* Thomson, 1875
  - Otopeni (Ceianu & Ghizdavu, 1990).
- Eurytoma brunniventris* Ratzeburg, 1852
  - Cernica, Băneasa, Andronache, Mogoșoaia, Pasărea, Pustnicu, Brănești, Botanical Garden (București), Snagov, Greaca, Căciulați (Tudor, 1970), Cernica, Snagov, Băneasa, Andronache, Botanical Garden (București), Mogoșoaia, Comana, Pasărea, Pustnicu, Greaca (Tudor, 1988).
- Eurytoma dentata* Mayr, 1878
  - Budești (Tudor, 1970).
- Eurytoma mayri* Ashmead, 1887
  - Săbăreni (Tudor, 1967 a), Săbăreni (Tudor, 1970), Săbăreni (Tudor, 1988).
- Eurytoma pistaciae* Rondani, 1977
  - Buftea (Jaquet, 1900), Băneasa, Pustnicu, Cernica, Ștefănești (Tudor, 1970), Băneasa, Cernica, Pustnicu, Ștefănești (Tudor 1988).
- Eurytoma robusta* Mayr, 1878
  - Cernica (Constandache-Tudor, 1958), Cernica, București (Tudor, 1970), Cernica (Tudor, 1988), Pipera (Andriescu, 1971; collected by Șt. Negru).
- Eurytoma rosae* Nees, 1834
  - Băneasa forest, Cernica forest, Epurești forest (Constandache-Tudor, 1956).
- Eurytoma tibialis* Boheman, 1836
  - Pipera (Andriescu, 1971; collected by Șt. Negru).
- Sycophila biguttata* (Swederus, 1795)
  - Comana (Jaquet, 1900), Cernica forest (Constandache-Tudor, 1956), Pasărea, Băneasa, Cernica (Constandache-Tudor, 1958), Băneasa forest, Cernica forest, Pustnicu forest, Căciulați, Ștefănești (Tudor, 1966 a), Băneasa, Cernica, Pasărea, Mogoșoaia, Pustnicu, Căciulați, Ștefănești, Săbăreni (Tudor, 1970), Cernica, Băneasa, Pasărea, Mogoșoaia, Pustnicu, Ștefănești, Căciulați, Săbăreni (Tudor, 1988).
- Sycophila flavicollis* (Walker, 1834)
  - Căciulați (Tudor, 1970).
- Sycophila submutica* (Thomson, 1875)
  - Băneasa forest (Constandache-Tudor, 1956), Țigănești (Tudor, 1970), Băneasa (Tudor, 1988).
- Sycophila variegata* (Curtis, 1831)
  - Cernica (Constandache-Tudor, 1958), Cernica forest (Tudor, 1966 a), Băneasa, Cernica, Săbăreni (Tudor, 1970), Cernica, Băneasa, Săbăreni (Tudor, 1988).
- Systole coriandri* Gussakovsky, 1933
  - Băneasa (Manolache, 1939).
- Tetramesa fulvicollis* (Walker, 1832)
  - Țigănești (Tudor, 1968 b), Țigănești (Tudor, 1970).

I collected 23 species of torymids and eurytomids, all listed in the table 1.

Table 1

Torymidae and Eurytomidae collected from București city and the surrounding area.

| Nr. crt. | SPECIES  | EXAMINED MATERIAL  |
|----------|--|--|
| 1.       | <i>Eridontomerus biroi</i> Ruschka, 1923         | 1 ♂, 1.08.1999, Vitan area, Dâmbovița river bank (București).  |
| 2.       | <i>Eridontomerus laticornis</i> (Förster, 1859)  | 1 ♀, 1 ♂, 25.08.2008, 1 ♀, 29.08.2008, Văcărești everglade (București).  |
| 3.       | <i>Exopristus trigonomerus</i> (Masi, 1916)      | 1 ♂, 12.09.2008, Comana (Giurgiu).   |
| 4.       | <i>Idiomacromerus mayri</i> (Wachtl, 1883)       | 1 ♀, 1.08.1999, Vitan area, Dâmbovița river bank (București); 2 ♀♀, 25.08.2008, 1 ♀, 29.08.2008, 2 ♀♀, 1.09.2008, Văcărești everglade (București). |
| 5.       | <i>Idiomacromerus pannonicus</i> (Ruschka, 1923) | 1 ♂, 1.08.1999, Vitan area, Dâmbovița river bank (București); 1 ♂, 25.08.2008, Văcărești everglade (București).                                    |
| 6.       | <i>Idiomacromerus perplexus</i> (Gahan, 1914)    | 1 ♀, 25.08.2008, Văcărești everglade (București).  |
| 7.       | <i>Idiomacromerus terebrator</i> (Masi, 1916)    | 1 ♀, 13.08.2003; 1 ♀, 25.08.2008, 2 ♀♀, 1.09.2008, Văcărești everglade (București).  |
| 8.       | <i>Microdontomerus annulatus</i> (Spinola, 1808) | 1 ♀, 16.05.1999, Tineretului Park (București); 5 ♀♀, 29.08.2008, 7 ♀♀, 1.09.2008, Văcărești everglade (București).                                 |
| 9.       | <i>Podagrion pachymerum</i> (Walker, 1833)       | 1 ♀, 1 ♂, 4.05.2005, Comana (Giurgiu).   |
| 10.      | <i>Pseudotorymus arvernicus</i> (Walker, 1833)   | 1 ♀, 1.08.1999, Vitan area, Dâmbovița river bank (București).  |
| 11.      | <i>Torymoides kiesenwetteri</i> (Mayr, 1874)     | 40 ♀♀, 3 ♂♂, 13.08.2003, 5 ♀♀, 25.08.2008, 1 ♀, 1.09.2008, Văcărești everglade (București); 1 ♂, 3.09.2008, Tineretului Park (București).          |
| 12.      | <i>Torymus cupratus</i> Boheman, 1834            | 3 ♀♀, 1 ♂, 16.05.1999, Tineretului Park (București); 3 ♂♂, 21.04.2006, Văcărești everglade (București).  |
| 13.      | <i>Bruchophagus astragali</i> Fedoseeva, 1954    | 2 ♀♀, 13.08.2003, Văcărești everglade (București).   |
| 14.      | <i>Bruchophagus platypterus</i> (Walker, 1834)   | 1 ♀, 13.08.2003, Văcărești everglade (București); 1 ♀, 1.08.1999, Vitan area, Dâmbovița river bank (București).                                    |
| 15.      | <i>Eurytoma palustris</i> Erdős, 1957            | 3 ♀♀, 2 ♂♂, 29.05.2004, Văcărești everglade (București).   |
| 16.      | <i>Eurytoma tibialis</i> Boheman, 1836           | 27 ♀♀, 2 ♂♂, 13.08.2003, Văcărești everglade (București).  |
| 17.      | <i>Sycophila mellea</i> (Curtis, 1831)           | 1 ♀, 25.08.2008, 4 ♀♀, 1 ♂, 29.08.2008, 1 ♂, 1.09.2008, Văcărești everglade (București).   |
| 18.      | <i>Systole tuonela</i> Claridge, 1959            | 1 ♀, 25.08.2008, Văcărești everglade (București).  |
| 19.      | <i>Tetramesa cereipes</i> (Erdős, 1955)          | 1 ♀, 6.05.2002, Văcărești everglade (București).   |
| 20.      | <i>Tetramesa gracilipennis</i> Szélnyi, 1968     | 1 ♀, 6.05.2002, Văcărești everglade (București).   |
| 21.      | <i>Tetramesa linearis</i> (Walker, 1832)         | 2 ♀♀, 16.05.1999, Tineretului Park (București); 7 ♀♀, 2.05.2008, Văcărești everglade (București); 3 ♀♀, 1 ♂, 26.04.2008, Comana (Giurgiu).         |
| 22.      | <i>Tetramesa variae</i> Erdős, 1963              | 1 ♀, 21.04.2006, Văcărești everglade (București); 2 ♀♀, 6.05.2002, Văcărești everglade (București).  |
| 23.      | <i>Tetramesa viktorina</i> Szélnyi, 1968         | 3 ♀♀, 26.04.2008, Comana (Giurgiu).  |

## Superfamily Chalcidoidea

## Family Torymidae Walker, 1833

## Subfamily Toryminae Thomson, 1876

- 1). *Eridontomerus biroi* Ruschka, 1923  
Material examined: 1 ♀, 1.08.1999, Vitan area, Dâmbovița river bank (București).  
Biology: this species was obtained from *Tetramesa linearis* (Walker) (Hymenoptera: Eurytomidae) from stems of *Elytrigia* sp. and from stems of *Calamagrostis* sp., *Elymus junceus* Fisch. and *Elymus angustatum* Bieb. (Poaceae) (Zerova & Seryogina, 1999).  
Geographical distribution: Palaearctic (the Western and South-eastern part of Europe, Kazakhstan) (Grissell, 1995; Noyes, 2003; Zerova & Seryogina, 1999).  
This species was found in the South-eastern part of Romania, at Căldărușanca (Ialomița) (Popescu, 2003, 2004).
- 2). *Eridontomerus laticornis* (Förster, 1859)  
(syn. *Cryptopristus laticornis* Förster)  
Material examined: 1 ♀, 1 ♂, 25.08.2008, 1 ♀, 29.08.2008, Văcărești everglade (București).  
Biology: this species was obtained from *Tetramesa* sp. in *Agropyron* (*Elytrigia*) sp. (Poaceae), from *Tetramesa brevicornis* Walker in *Festuca sulcata* (Hack) Beck. and from *Tetramesa linearis* (Walker) in *Agropyron* sp. (Grissell, 1995; Zerova & Seryogina, 1999).  
Geographical distribution: Palaearctic (Germany, Hungary, Ukraine, Moldavia) (Grissell, 1995; Noyes, 2003; Zerova & Seryogina, 1999).  
This species was found in the South-western part of Romania, at Topleț and Orșova-Valea Mraconiei (Tudor, 1967 b) and in the North-eastern part (Popescu, Andriescu & Fusu, 2002) and in the South-eastern part of the country (Popescu, 2002).
- 3). *Exopristus trigonomerus* (Masi, 1916)  
(syn. *Cryptopristus trigonomerus* Masi)  
Material examined: 1 ♀, 12.09.2008, Comana (Giurgiu).  
Biology: this species was obtained from flowers of *Cirsium vulgare* (Savi). (Asteraceae) that were infested with tephritids (Tephritidae) and weevil larvae (Curculionidae), and from gall formers on *Papaver* sp. (Papaveraceae), *Verbascum* sp. (Scrophulariaceae) and *Centaurea* sp. (Asteraceae) (Grissell, 1995). Also, it was obtained from *Gymnetron bipunctulatum* Rossi in seeds of *Scrophularia* sp. (Zerova & Seryogina, 1999). More recently, a single dead male was found in a cocoon of *Bracon* sp. (Hymenoptera: Braconidae) in a seed of *Ephedra fragilis* in Spain (Askew & Blasco-Zumeta, 2000).  
Geographical distribution: Palaearctic (Grissell, 1995; Noyes, 2003; Zerova & Seryogina, 1999).  
This species was found in the South and North-eastern part of Romania (Tudor, 1970; Popescu, 2004).
- 4). *Idiomacromerus mayri* (Wachtl, 1883)  
(syn. *Callimome scorzonerae* Giraud; *Liodontomerus mayri* (Wachtl); *Lochites mayri* Wachtl)  
Material examined: 1 ♀, 1.08.1999, Vitan area, Dâmbovița river bank (București); 2 ♀♀, 25.08.2008, 1 ♀, 29.08.2008, 2 ♀♀, 1.09.2008, Văcărești everglade (București).



Biology: this species was obtained from galls of *Aulacidea scorzonerae* Giraud (Hymenoptera: Cynipidae) on *Tragopogon orientalis* L. (Asteraceae) (Grissell, 1995).

Geographical distribution: Palaearctic (Europe: France, Austria, Hungary, Romania) (Andriescu, 1996; Grissell, 1995; Noyes, 2003; Zerova & Seryogina, 1999).

In Romania, this species was found in the central part, at Tușnad (Erdős, 1960), in the South-eastern part, at C. A. Rosetti, in the Danube Delta Reservation (Andriescu, 1996) and on the Maritime Dune Natural Reserve from Agigea, Constanța (Popescu, 2002) and in the North-eastern part (Popescu, Andriescu & Fusu, 2002).

5). *Idiomacromerus pannonicus* (Ruschka, 1923)

(syn. *Liodontomerus pannonicus* (Ruschka), *Lochites pannonicus* Ruschka)

Material examined: 1 ♂, 1.08.1999, Vitan area, Dâmbovița river bank (București); 1 ♂, 25.08.2008, Văcărești everglade (București).

Biology: this species was obtained from *Bruchophagus roddi* Gussakovsky (Hymenoptera: Eurytomidae) in seeds of *Medicago sativa* L. (Fabaceae) (Grissell, 1995).

Geographical distribution: Palaearctic (Italy, Austria, Hungary, Romania) (Grissell, 1995; Noyes, 2003; Zerova & Seryogina, 1999).

In Romania, this species was found in the middle part, in Transylvania (Erdős, 1960), in the South-eastern part (Andriescu, 1996; Popescu, 2004) and in the North-eastern part (Popescu, Andriescu & Fusu, 2002).

6). *Idiomacromerus perplexus* (Gahan, 1914)

(syn. *Liodontomerus perplexus* Gahan)

Material examined: 1 ♀, 25.08.2008, Văcărești everglade (București).

Biology: this species was obtained from *Bruchophagus platypterus* Walker in seeds of *Trifolium* sp. (Fabaceae) and from *B. roddi* Gussakovsky in seeds of *Medicago sativa*. Also, it was obtained from *Eurytoma onobrychidis* Nikolskaya (Hymenoptera: Eurytomidae) in seeds of *Onobrychis viciaefolia* (Fabaceae) (Grissell, 1995). Perju (1965) obtained this species from seed heads of *Trifolium fragiferum* L.

Geographical distribution: Holarctic and Neotropical (Uruguay) (Grissell, 1995; Noyes, 2003).

This species was found in the entire Romania (Popescu, 2004).

7). *Idiomacromerus terebrator* (Masi, 1916)

(syn. *Idiomacromerus longfellowi* Girault, *Liodontomerus longfellowi* (Girault), *Liodontomerus secundus* Gahan, *Liodontomerus terebrator* (Masi), *Lochites terebrator* Masi)

Material examined: 1 ♀, 13.08.2003, 1 ♀, 25.08.2008, 2 ♀♀, 1.09.2008, Văcărești everglade (București).

Biology: this species was obtained from *Bruchophagus gibbus* Boh. in seed heads of *Trifolium alpestre* L. (Grissell, 1995).

Geographical distribution: Holarctic and Australian (New Zealand) (Grissell, 1995; Noyes, 2003; Zerova & Seryogina, 1999).

This species was found in the Southern (Tudor, 1988), South-eastern (Popescu, 2002) and North-eastern (Popescu, Andriescu & Fusu, 2002) part of Romania, as *I. terebrator*, and in the central, North-eastern and Southern part as *I. longfellowi* (Perju, 1961, 1965).

- 8). *Microdontomerus annulatus* (Spinola, 1808)  
 (syn. *Antistrophoplex cothurnatus* (Masi), *Diplolepis annulata* Spinola, *Microdontomerus annulata* (Spinola), *M. annulatus* (Spinola), *M. cothurnatus* (Masi), *Paraholaspis cothurnata* Masi, *Plastotorymus cothurnatus* (Masi), *Torymus annulatus* (Spinola))  
 Material examined: 1 ♀, 16.05.1999, Tineretului Park (București); 5 ♀♀, 29.08.2008, 7 ♀♀, 1.09.2008, Văcărești everglade (București).  
 Biology: this species was obtained from *Olethreutes sororiana* (Lepidoptera: Tortricidae) in stems of *Phlomis fruticosa* (Lamiaceae) (Grissell, 1995) and together with *Aylax* sp. (Cynipidae) and *Phanacis* sp. (Cynipidae) from *Centaurea* sp. (Asteraceae) (Zerova & Seryogina, 1999). Also, it was obtained from *Centaurea adpressa* Ledeb., *C. taurica* N. Ilj., *C. solstitialis* L., *Jurinea arachnoidea* Bunge and *Cousinia refracta* Boiss. (Zerova & Seryogina, 1999).  
 Geographical distribution: Palaearctic (Grissell, 1995; Noyes, 2003).  
 In Romania, this genus and species was mentioned in the South-eastern part, at Agigea (Andriescu, unpublished data) and from the North-eastern part, from “David’s valley” Hayfields Natural Reserve (Iași) (Popescu, Andriescu & Fusu, 2002).
- 9). *Podagrion pachymerum* (Walker, 1833)  
 (syn. *Priomerus pachymerus* Walker, *Palmon religiosus* Westwood)  
 Material examined: 1 ♀, 1 ♂, 4.05.2005, Comana (Giurgiu).  
 Biology: this species was obtained from oothecae of *Mantis religiosa* L. (Mantidae) (Grissell, 1995).  
 Geographical distribution: Palaearctic and Oriental (India) (Grissell, 1995; Noyes, 2003).  
 In Romania, this species was found in the central (Erdős, 1960), South-eastern (Andriescu, 1996; Tudor, 1962) and in the North-eastern part of the country (Popescu, Andriescu & Fusu, 2002).
- 10). *Pseudotorymus arvernicus* (Walker, 1833)  
 (syn. *Torymus dubius* Nees, *Holaspis apionis* Mayr)  
 Material examined: 1 ♀, 1.08.1999, Vitan area, Dâmbovița river bank (București).  
 Biology: this species was obtained from seed heads of *Trifolium pratense* containing *Apion apricans* Hbst. (Coleoptera: Curculionidae) and from *Apion cracca* L. (Grissell, 1995; Zerova & Seryogina, 1999). Also, it was obtained from *Bruchidius virescens* Boh. and *B. unicolor* Ol. (Curculionidae) from *Onobrychis sativum* Led. and from *Medicago sativa* and *Astragalus cicer* L. (Fabaceae) (Zerova & Seryogina, 1999).  
 Geographical distribution: Palaearctic (Grissell, 1995; Noyes, 2003).  
 This species was found in entire Romania (Popescu, 2004).
- 11). *Torymoides kiesenwetteri* (Mayr, 1874)  
 (syn. *Holaspis kiesenwetteri* Mayr, *Dimeromicrus longicauda* Masi)  
 Material examined: 40 ♀♀, 3 ♂♂, 13.08.2003, 5 ♀♀, 25.08.2008, 1 ♀, 1.09.2008, Văcărești everglade (București); 1 ♂, 3.09.2008, Tineretului Park (București).  
 Biology: in Italy, it was obtained from *Myopites inulaedysentericae* (Diptera: Tephritidae) on *Pulicaria dysenterica* (Asteraceae), *M. longirostis* on *Inula crithmoides* (Asteraceae) and *M. stylatus* on *Inula viscosa* (Grissell, 1995). Kapoor and Agarwal (1983, in Grissell, 1995) and Agarwal and Kapoor (1989, in Grissell, 1995) reported it from India in the pupae of *Chaetostoma completum* (Tephritidae) (Grissell, 1995). Narendran (1994, in Grissell, 1995)



reported it from *Acanthophilus helianthi* (Tephritidae) and *Procecidochares utilis* (Tephritidae) on *Eupatorium adenophorum* (Asteraceae) and from galls on *Eupatorium glandulosum* (Grissell, 1995).

Geographical distribution: Palaearctic and Oriental (India) (Grissell, 1995; Noyes, 2003).

This species was found in entire Romania except the central part, Transilvania (Popescu, 2004).

12). *Torymus cupratus* Boheman, 1834

Material examined: 3 ♀♀, 1 ♂, 16.05.1999, Tineretului Park (București); 3 ♂♂, 21.04.2006, Văcărești everglade (București).

Biology: unknown (Graham & Gijswijt, 1998).

Geographical distribution: Palaearctic (Grissell, 1995; Noyes, 2003).

This species was mentioned from the South-eastern and North-eastern part of Romania (Popescu, 2004).

Family Eurytomidae Walker, 1832

Subfamily Eurytominae Walker, 1832

13). *Bruchophagus astragali* Fedoseeva, 1954

Material examined: 2 ♀♀, 13.08.2003, Văcărești everglade (București).

Biology: this species was obtained from seeds of *Astragalus* (*A. albicaulis*, *A. caucasicus*, *A. asper*, *A. onobrychis*, *A. glycyphyllos*, *A. cicer*, *A. davuricus*) (Fabaceae) and *Hamodendron holodendron* (Zerova, 1995).

Geographical distribution: Palaearctic: (Zerova, 1995; Noyes, 2003).

In Romania, this species was found in the central part (Perju, 1960) and in the North-eastern part (Popescu, 2004) of the country. *Bruchophagus astragali* is reported in the Southern part of Romania for the first time.

14). *Bruchophagus platypterus* (Walker, 1834)

(syn. *Bruchophagus kolobovae* Fedoseeva, *B. platyptera* (Walker), *Eurytoma kolobovae* (Fedoseeva), *E. platyptera* (Walker), *Systole platyptera* Walker)

Material examined: 1 ♀, 1.08.1999, Vitan area, Dâmbovița river bank (București); 1 ♀, 13.08.2003, Văcărești everglade (București).

Biology: this species was obtained from seeds of *Lotus corniculatus* L. (Fabaceae) (Zerova, 1995).

Geographical distribution: Holarctic (North America (USA, Canada), United Kingdom, Ireland, Germany, Sweden, ex-Yugoslavia (Serbia), Bulgaria, Georgia, Russia, Ukraine, Kazakstan), South America (Argentina, Chile, Brazil, Uruguay) (Zerova, 1995; Noyes, 2003).

In Romania, this species was found in the central (Perju, 1960), South-eastern (Andriescu, 1993, 1996), North-western (Perju, 1960), North-eastern (Popescu, 2004) and in the Southern part of the country (Popescu, 2006 d).

15). *Eurytoma palustris* Erdős, 1957

(syn. *Ahtola paludicola* Zerova, *Eurytoma paludicola* (Zerova), *E. (Hydateurytoma) palustris* Erdős)

Material examined: 3 ♀♀, 2 ♂♂, 29.05.2004, Văcărești everglade (București).

Biology: this species was obtained from galls of *Eurina ducalis* Costa (Diptera: Chloropidae) on *Schoenoplectus mucronatus* (Cyperaceae) (Zerova, 1995). Erdős (1957) mentioned this species from galls of *Lipara lucens* Meyg. on *Phragmites australis* (Poaceae) but Zerova (1995) considered questionably this fact.

Geographical distribution: Palaearctic (Europe: Hungary, European part of ex-USSR, Ukraine) (Zerova, 1995; Noyes, 2003).

In Romania, *Eurytoma palustris* was mentioned from Piatra Craiului National Park (Popescu, 2006 d) in the southern part of the country.

16). *Eurytoma tibialis* Boheman, 1836

(syn. *E. claripennis* Thomson, *E. dilatata* Thomson, *E. curta* Mayr)

Material examined: 27 ♀♀, 2 ♂♂, 13.08.2003, Văcărești everglade (București).

Biology: the larvae of this species was recorded as endoparasitoid of many species of Tephritidae (Diptera), especially species of *Orellita*, *Chaetorellia*, *Terellia*, *Urophora* in flower heads of *Cirsium*, *Centaurea*, *Carduus* and *Jurinea* (Asteraceae) (Zerova, 1995).

Geographical distribution: Palaearctic (Zerova, 1995; Noyes, 2003).

This species was found in the South-eastern and North-eastern part of Romania (Andriescu, 1971, 1982, 1993; Popescu, 2004).

17). *Sycophila mellea* (Curtis, 1831)

(syn. *Eudecatoma rimsky-korsakovi* Erd.)

Material examined: 1 ♀, 25.08.2008, 4 ♀♀, 1 ♂, 29.08.2008, 1 ♂, 1.09.2008, Văcărești everglade (București).

Biology: this species was obtained from several species of *Tetramesa* (Hymenoptera: Chalcidoidea) from stems of Poaceae (Zerova, 1995). Erdös (1960) mentioned this species from *Phitophaga destructor* Say. (Diptera).

Geographical distribution: Holarctic (Zerova, 1995; Noyes, 2003).

*Sycophila mellea* was mentioned in the South-eastern part at Agigea (Andriescu, 1982) and Vadu (Popescu, 2004) and in the North-eastern part of Romania (Popescu, 2001, 2004).

18). *Systole tuonela* Claridge, 1959

Material examined: 1 ♀, 25.08.2008, Văcărești everglade (București).

Biology: the larvae of this species are feeding inside the seeds of the wild carrot (*Daucus carota* L.) and *Pimpinella saxifraga* (Apiaceae) (Zerova, 1995).

Geographical distribution: Palaearctic (United Kingdom, Ukraine, Far East of Russia) (Zerova, 1995; Noyes, 2003).

This species was found in the central (Perju, 1985) and the North-eastern (Popescu, 2004) part of Romania, being for the first time mentioned in the South part of the country.

Subfamily Harmolitinae Ferrière, 1950

19). *Tetramesa cereipes* (Erdös, 1955)

Material examined: 1 ♀, 6.05.2002, Văcărești everglade (București).

Biology: this species was obtained from stems of *Agropyron ruthenicum* Gris., *A. repens* (L.) Beauv., and *A. intermedia* (Poaceae) (Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988; Erdös, 1960).

Geographical distribution: Palaearctic (Zerova, 1976; Zerova & Dyakonchuk & Ermolenko, 1988; Noyes, 2003).

*Tetramesa cereipes* was found in the North-eastern part of Romania (Popescu, 2001, 2004) and now is for the first time mentioned in the Southern part of the country.

20). *Tetramesa gracilipennis* Szelenyi, 1968

Material examined: 1 ♀, 6.05.2002, Văcărești everglade (București).

Biology: the larvae are feeding in the inferior part of the stems of *Festuca vaginata* Waldst. et Kit. (Poaceae) (Szelényi, 1968), *F. sulcata* Hack. and *F. rupicola* Heuffel. (Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988). Geographical distribution: Palaearctic (Hungary, Bulgaria, European part of ex-USSR) being a very rare species (Szelényi, 1968; Stojanova, 1997; Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988; Noyes, 2003).

This species was mentioned in Romania from Piatra Craiului National Park (Popescu, 2006 c, d) in the Southern part of the country.

21). *Tetramesa linearis* (Walker, 1832)

(syn. *Cinips nigra* Fonscolombe, *Harmolita atlantica* Phillips & Emery, *H. attenuata* (Walker), *H. dimidiata* (Hedicke), *H. linearis* (Walker), *Isosoma agropyri* Schlechtendal, *I. attenuatum* Walker, *I. canaliculata* Walker, *I. canaliculatum* Walker, *I. dimidiatum* Hedicke, *I. hordei* Hedicke, *I. lineare* Walker, *Tetramesa atlanticum* (Phillips & Emery))

Material examined: 2 ♀♀, 16.05.1999, Tineretului Park (București); 7 ♀♀, 2.05.2008, Văcărești everglade (București); 3 ♀♀, 1 ♂, 26.04.2008, Comana (Giurgiu).

Biology: this species was obtained from stems of a few species of couch grass: *Agropyron intermedium* (Host.) Beauv., *A. repens* (L.) Beauv., *A. trichophorum* Richt. (Poaceae) (Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988). Geographical distribution: Holarctic (North America (USA), United Kingdom, Ireland, France, Germany, Sweden, Czech Republic, Slovakia, Bulgaria, Hungary, ex-USSR (European part, Siberia), Kazakhstan) (Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988; Noyes, 2003).

In Romania, this species was found in the central part (Erdős, 1947, 1960), the north-eastern (Popescu, 2001) and the southern (Popescu, 2006 d) part of the country.

22). *Tetramesa variaie* Erdős, 1963

Material examined: 1 ♀, 21.04.2006, 2 ♀♀, 6.05.2002, Văcărești everglade (București).

Biology: this species was obtained from *Calamagrostis varia* (Schrader) Host (Poaceae) (Erdős, 1963; Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988)

Geographical distribution: Palaearctic (Hungary, ex-USSR) (Erdős, 1963; Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988; Noyes, 2003).

*This species is for the first time mentioned in Romania.*

23). *Tetramesa viktorina* Szelényi, 1968

(syn. *Tetramesa victorina* Szelényi)

Material examined: 3 ♀♀, 26.04.2008, Comana (Giurgiu).

Biology: the larvae are feeding inside the stems of *Poa trivialis* L. (Poaceae) on the upper part of the stem. The galls are slightly visible (Szelényi, 1968; Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988).

Geographical distribution: Palaearctic (Hungary, European part of the ex-USSR), being a very rare species. (Szelényi, 1968; Zerova, 1976; Zerova, Dyakonchuk & Ermolenko, 1988; Noyes, 2003).

*Tetramesa viktorina* was mentioned in Romania from Piatra Craiului National Park (Popescu, 2006 c, d) in the Southern part of the country.

If we mix the 34 species mentioned anteriorly to this study with the 23 species found in this research the result is 55 species recorded from the area of research. The anterior 34 species were mainly obtained by rearing from cynipid galls

(Hymenoptera: Cynipidae). All the 23 species mentioned with the opportunity of this new research was collected by net.

If we take a look on the biology of these 23 species, eight of them are linked with the plants from Poaceae, plants that are a primary host for the phytophagous species or host for the insects that are living inside of them being hosts for parasitoid species. All five species of *Tetramesa* lived as larvae inside the stems of various Poaceae. *Tetramesa viktorina* look to be a rare species that are feeding inside the stems of *Poa trivialis*, a big species of *Poa*, 30-100 cm height, a species that live in the swamp sites placed in the forests or grass lands. *T. viktorina* was found in the Comana forest, close to the lake, she was mentioned from Romania just from Piatra Craiului National Park from a mountain damp area. *T. variae* are feeding inside the stems of *Calamagrostis varia* and she was found on vegetation from Văcărești everglade, inside the city of București, this being the first mention of this species in Romania. *T. gracilipennis* is another rare species that was also found on vegetation from Văcărești everglade. This species was described from stems of *Festuca vaginata*, a not so common species, but it was also mentioned from stems of *F. rupicola* (*F. sulcata*). *T. gracilipennis* was mentioned in Romania just from Piatra Craiului National Park. *T. linearis* is a common species and, together with *T. cereipes*, have several species of *Agropyron* as host, *T. cereipes* being for the first time mentioned in the Southern part of Romania. Three parasitoid species, *Eridontomerus biroi*, *E. laticornis* and *Sycophila mellea*, are feeding as larvae on the *Tetramesa* species inside the stems of Poaceae, including *Agropyron* spp. So, eight species are linked with stems of Poaceae, especially with species of *Agropyron*, six of them being recorded from Văcărești everglade, inside the București city.

Six species are feeding inside the seeds of Fabaceae, two of them being phytophagous and four parasitoids. *Bruchophagus astragali* is feeding as larvae inside the seeds of several species of *Astragalus* and *B. platypterus* inside the seeds of *Lotus corniculatus*. *Bruchophagus astragali* is for the first time mentioned in the Southern part of Romania. *Idiomacromerus pannonicus*, *I. perplexus* and *I. terebrator* are all parasitoids on species of *Bruchophagus*, inside the seeds of various Fabaceae, especially species of *Trifolium* and *Medicago*. *Pseudotorymus arvernicus* is also a parasitoid species on *Apion* spp, and *Bruchidius* spp. in seeds of *Trifolium*, *Medicago* and *Astragalus*. Văcărești everglade and the Vitan area on the Dâmbovița river bank, within the city of București, were the collecting sites of these species.

Five species, *Exopristus trigonomerus*, *Idiomacromerus mayri*, *Microdontomerus annulatus*, *Torymoides kiesenwetteri* and *Eurytoma tibialis* are associated with different species of Asteraceae, where they usually feed on various species of Cynipidae or Tephritidae. These species were found usually in the Tineretului Park and the Văcărești everglade, inside the city of București, *Exopristus trigonomerus* was found at Comana forest, outside București, at approximate 30 kilometers far from the city, this species being not so common.

*Podagrion pachymerum* lived as larvae inside the oothecae of *Mantis religiosa* and it was captured just from Comana forest. *Eurytoma palustris* has as host species of Chloropidae on plants of Cyperaceae and it was recorded from the Văcărești everglade. *Systole tuonela* is a phytophagous species feeding as larvae inside the seeds of Apiaceae, being for the first time mentioned in the South part of the country, at the Văcărești everglade. *Torymus cupratus* have an unknown biology and it was found in the Tineretului Park and in the Văcărești everglade.

In conclusion, it's important to make research in this urban and peri-urban zone, especially in these days of continues aggression of the humanity on the wild environment. These sites like parks inside the city or the green sites like forests and grass lands close to the urban area can be refugees for the flora and fauna, erased by crops and the human settlements.

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#### TORYMIDAE ȘI EURYTOMIDAE (HYMENOPTERA: CHALCIDOIDEA) DIN BUCUREȘTI ȘI ZONELE LIMITROFE

#### REZUMAT

Din zona orașului București (România) și zonele limitrofe prezentăm 55 de specii de Torymidae și Eurytomidae (Hymenoptera: Chalcidoidea). 34 specii au fost menționate anterior prezentelor cercetări, noi prezentăm câteva considerații în special asupra celor 23 de specii colectate cu ajutorul fileului entomologic cu ocazia participării la proiectul "Studierea faunei Bucureștiului și a zonelor limitrofe" inițiat de personalul științific al Muzeului de Istorie Naturală "Grigore Antipa" din București.

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Fig. 1 – *Microdontomerus annulatus* (Spinola): head, posterior view (orig.).

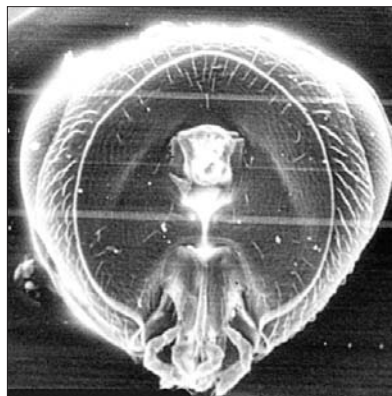


Fig. 2 – *Podagrion pachymerum* (Walker): head, posterior view (orig.).



Fig. 3 – *Sycophila mellea* (Curtis): head, posterior view (orig.).



Fig. 4 – *Torymoides kiesewetteri* (Mayr): head, posterior view (orig.).

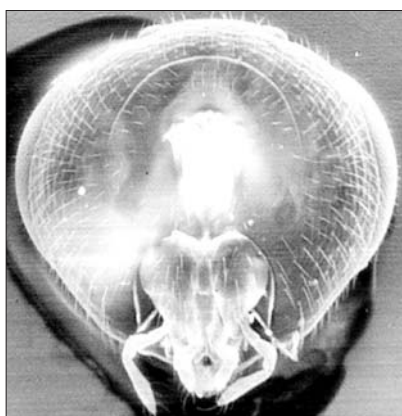


Fig. 5 – *Exopristus trigonomerus* (Masi): head, posterior view (orig.).



Fig. 6 – *Idiomacromerus terebrator* (Masi): head, posterior view (orig.).



Fig. 7 – *Microdontomerus annulatus* (Spinola): mesosoma and propodeum, dorsal view (orig.).

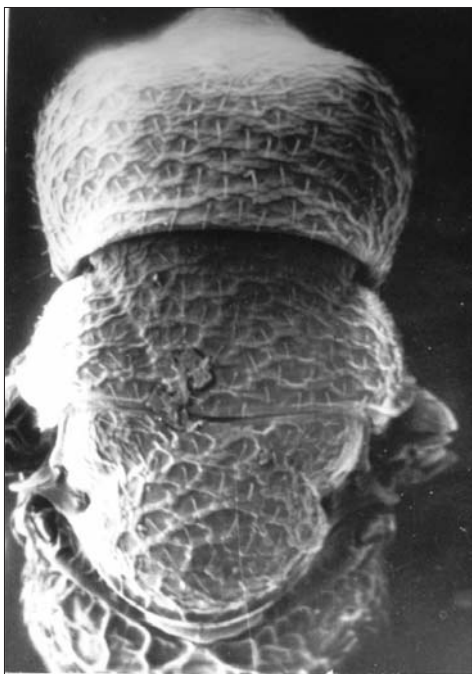


Fig. 9 – *Sycophila mellea* (Curtis): mesosoma and pronotum, dorsal view (orig.).

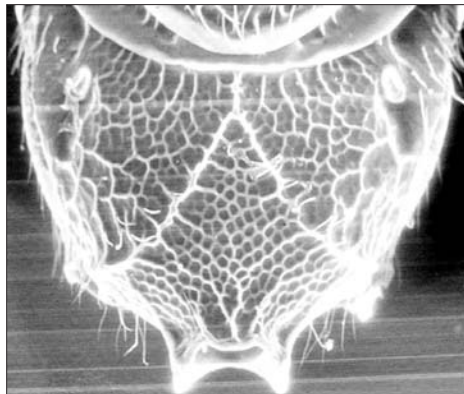


Fig. 8 – *Podagrion pachymerum* (Walker): propodeum, dorsal view (orig.).

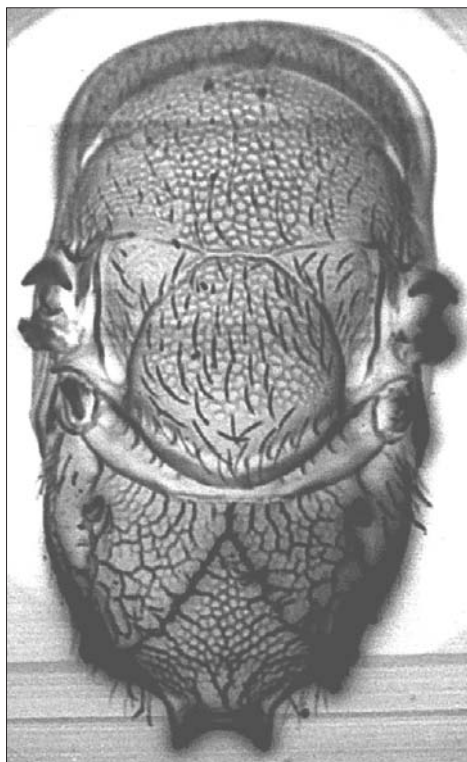


Fig. 10 – *Podagrion pachymerum* (Walker): mesosoma and propodeum, dorsal view (orig.).



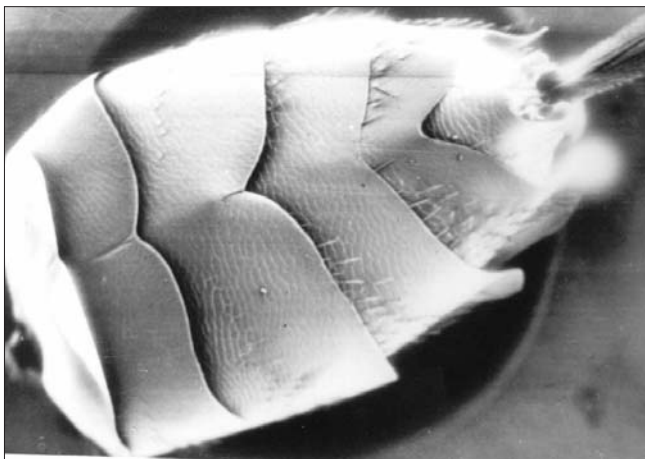


Fig. 11 – *Microdontomerus annulatus* (Spinola): metasoma, dorsal view (orig.).

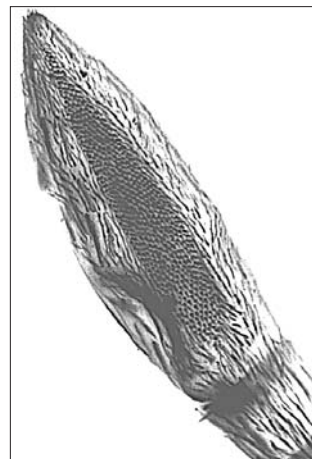


Fig. 12 – *Podagrion pachymerum* (Walker): antennal club (orig.).

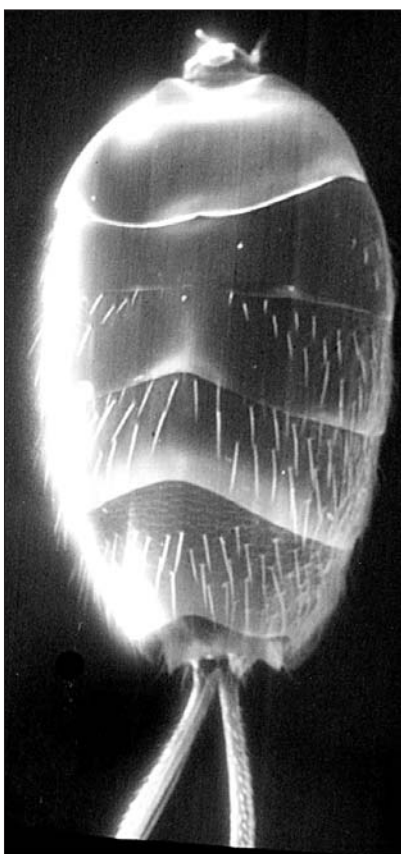


Fig. 13 – *Exopristus trigonomerus* (Masi): metasoma, dorsal view (orig.).



Fig. 14 – *Exopristus trigonomerus* (Masi): propodeum, posterior view (orig.).

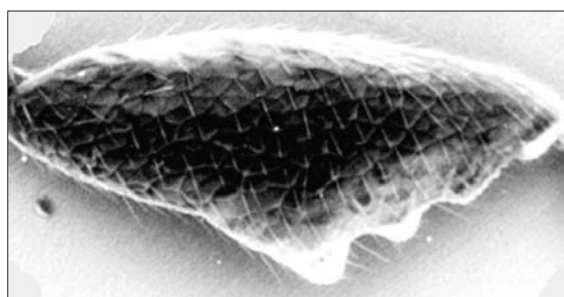


Fig. 15 – *Exopristus trigonomerus* (Masi): left hind femur, exterior view (orig.).



Fig. 16 – Comana Forest (Giurgiu) (orig.).



Fig. 17 – Văcărești everglade (București) (orig.).





Fig. 18 – *Tetramesa variaie* Erdős (orig.).



Fig. 19 – *Eurytoma tibialis* Boheman (orig.).

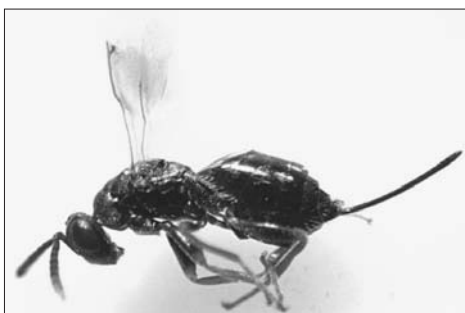


Fig. 20 – *Torymus cupratus* Boheman (orig.).

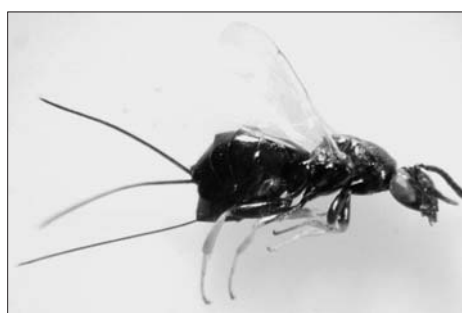


Fig. 21 – *Torymoides kiesewetteri* (Mayr) (orig.).



Fig. 22 – *Bruchophagus platypterus* (Walker) (orig.).



Fig. 23 – *Podagrion pachymerum* (Walker) (orig.).