

NEW DATA OF THE SCELIONID FAUNA (HYMENOPTERA, SCELIONIDAE) FROM THE NORTH OF THE REPUBLIC OF MOLDOVA

GÎRNEȚ MARIANA

Abstract. *The material of Scelionidae collected from the North of the Republic of Moldova is formed of 23 species belonging to 11 genera. The most known and studied is the biology of species from genera Telenomus Hal. and Trissolcus Ashm. and Gryon Hal. as parasites of Eurygaster eggs and other 30 species of Pentatomidae.*

Key words: *Scelionidae, diversity species, egg parasite.*

Rezumat. Noi date despre fauna scelionidelor (Hymenoptera, Scelionidae) din nordul Republicii Moldova. *Analiza spectrului faunistic evidențiază că cele 23 de specii de scelionide identificate aparțin 11 genuri. Speciile genurilor Trissolcus Ashm., Telenomus Hal. și Gryon Hal. sunt cunoscute ca parazite ale ouălor de Eurygaster, precum și ale altor 30 de specii de Pentatomidae.*

Cuvinte cheie: *Scelionidae, diversitatea specifică, parasite oofage.*

INTRODUCTION

Starting with the XX century the study direction of the researches leded to the oophagous insects – scelionid parasites of the hemipteran eggs. The first attempt of biological fight against these bugs using scelionid parasites was accomplished in Russia in 1903 by Vassiliev, which imported from Central Asia the species *Trissolcus vassilievi* Mayr and acclimatized it in Ukraine. In different countries the oophagous scelionids of *Eurygaster* genus were studied, imported, grown in laboratories and left free in crops to diminish the damages produced by bugs. The results were very good; the biological treatment with oophagous species was efficient, non-polluting and much cheaper than the chemical one. More important than the growing and free out of the parasites is their protection in nature by creation of favorable development conditions, as well as by avoiding the destruction of the population using irrationally the chemical methods, therefore by using the integrate fight method against the pests (TEODORESCU, NĂDEJDE, 1983).

Among numerous hymenopterans families the family Scelionidae includes exclusively parasitoid species. Taking into account the fact that the representatives of Scelionidae family are oophagous parasites, we can realize the importance of these insects in the maintaining of some phytophagous insect population at certain level, especially of the species harmful for the agricultural crops and forests (POPOVICI, 2007).

MATERIAL AND METHOD

The material that constitutes the study object of this paper was collected in 2007 in the Northern part of the Republic of Moldova, districts of Bălți (Alexândreni, Cubolta, Chiliceni villages), Edineț (Zăbriceni, Viișoara, Brânzeni, Brăniști villages) in various types of biotopes. The collecting was accomplished by sweeping the herbaceous vegetation with entomologic sweep net and the small insects were collected by the entomologic aspirator.

To find the scelionid hosts, their eggs were collected by the visual control of the plants on the inferior part of the leaves, especially in the preferred places of egg laying. The collected eggs were introduced in Florinski tubes until the parasite eclosion.

REZULTS AND DISCUSSIONS

After the analysis of faunistic spectrum it was established that the 23 identified scelionid species belong to 11 genera: *Trissolcus*, *Telenomus*, *Gryon*, *Platitelenomus*, *Eumicrosoma*, *Apegus*, *Scelio*, *Sparasion*, *Duta*, *Psilanteris* and *Idris*. The species are: *Trissolcus choaspens* (NIXON, 1939), *T. grandis* (THOMSON, 1860), *T. manteroi* (KIEFFER, 1909), *T. rufiventris* (MAYR, 1908), *Telenomus chloropus* (THOMSON, 1860), *T. ocellatus* (KOZLOV et KONONOVA, 1979), *T. aserus* (KOZLOV et KONONOVA, 1978), *T. corticatus*, *Platytelenomus antennalis* (KOZLOV et KONONOVA, 1973), *Eumicrosoma beneficum* (GAHAN, 1913), *Gryon exculptus* FORST., *G. fasciatus* PRIESNER, *G. misellus* HAL., *Apegus leptocerus* KIEFFER, *A. minor* KIEFFER, *Scelio inermis* YETT, *S. rugosulus* LATR., *Sparasion frontalis* LATR., *Duta longimarginatus* SZABO, *Psilanteris bicolor* KIEFFER, *Idris striativentris* KIEFFER, *I. coxalis* KIEFFER and *I. piceiventris* KIEFFER.

In Scelionidae family the most known and studied is the biology of species from genera *Telenomus* and *Trissolcus*, that contribute in nature to the number regulation of the vermin species of agricultural crops, as well as of forests. The scelionid species, with known hosts are listed in table 1. These 8 species were collected in the Northern part of Moldova.

Table 1. The species of *Scelionidae* and their hosts.

Scelionid species	Host species	Source
<i>Trissolcus choaspens</i>	<i>Aelia acuminata</i> L.	NIXON, 1939; КОЗЛОВ, 1968, ЛЕ, 1977, 1978
<i>T. grandis</i>	<i>Eurygaster integriceps</i> PUT., <i>Eu. austriaca</i> SCHRANK, <i>Eu. maura</i> L., <i>Dolycoris baccarum</i> L., <i>Carpocoris pudicus</i> PODA., <i>Palomena prasina</i> L., <i>Aelia acuminata</i> L., <i>Ae. cognata</i> FIEB., <i>Ae. germari</i> KUESTER.	KIEFFER, 1926; NIXON, 1939; МЕЙЕР, 1940; ТАЛИЦКИЙ, 1940.
<i>T. rufiventris</i>	<i>Eurygaster integriceps</i> PUT., <i>Eu. maura</i> L., <i>Eu. austriaca</i> SCHRANK, <i>Dolycoris baccarum</i> L., <i>Carpocoris fuscispinus</i> BOH., <i>Graphosoma liniatum</i> L., <i>Palomena prasina</i> L., <i>P. viridissima</i> PODA., <i>Aelia furcula</i> FIEB., <i>Ae. rostrata</i> BOH., <i>Piezodorus rubrofasciatus</i> FABR., <i>Eysarcoris ventralis</i> WESTW.	MAYR, 1908; ВАСИЛЬЕВ 1913; KIEFFER, 1926; РУБЦОВ, 1944; MASNER, 1958; КОЗЛОВ, 1968, 1971; КОЗЛОВ, ЛЕ, 1977, 1978.
<i>Telenomus chloropus</i>	<i>Eurygaster integriceps</i> PUT., <i>Eu. maura</i> L., <i>Eu. austriaca</i> SCHRANK, <i>Dolycoris baccarum</i> L., <i>Carpocoris fuscispinus</i> BOH., <i>Graphosoma liniatum</i> L., <i>Palomena prasina</i> L., <i>P. viridissima</i> PODA., <i>Aelia furcula</i> FIEB., <i>Ae. rostrata</i> BOH., <i>Piezodorus rubrofasciatus</i> FABR., <i>Eysarcoris ventralis</i> WESTW.	MAYR, 1879; СОКОЛОВ 1904; ASHMEAD, 1904; ВАСИЛЬЕВ 1913; KIEFFER, 1926; ДОБРОВОЛЬСКИЙ, 1913; MANNINGER, 1934; NIXON, 1939; КУЛАКОВ, 1940, 1949a; РУБЦОВ, 1944; МЕЙЕР, 1940, 1949a; ЩЕПЕТИЛЬНИКОВА, 1958; ВИКТОРОВ, 1960, 1962, 1964a, 1967, 1979; КОЗЛОВ, 1967a, 1971, 1978.
<i>Platytelenomus antennalis</i>	<i>Kleidocerys resedae</i> PANZ.	КОЗЛОВ, КОНОНОВА 1983
<i>Eumicrosoma beneficum</i>	<i>Blissus leucopterus</i> SAY.	КОЗЛОВ, КОНОНОВА 1983
<i>Gryon exculptus</i>	<i>Coreus marginatus</i> L.	КОНОНОВА 1992
<i>Idris striativentris</i>	fam. <i>Lycosidae</i>	КОНОНОВА, КОЗЛОВ 2001

The species from genera *Trissolcus* ASHM., *Telenomus* HAL., și *Gryon* HAL. are known as parasites of *Eurygaster* eggs, as well as of other 30 species of *Pentatomidae* (TEODORESCU, NĂDEJDE, 1983).

As limiting factors of these vermin species there are also known several species of fungi, bacteria, nematodes, predatory arthropods, arachnids, orthopterans, heteropterans, coleopterans, hymenopterans, dipterans, various bird species, as well as some parasites such as hymenopterans (*Scelionidae*, *Encyrtidae*, *Torymidae*). Among entomophags, the most important are the *Scelionidae* which destroy the vermin species eggs and the *Phasiinae* that parasitize on adult individuals, followed by fungi that decrease the bedbug number in their wintering places.

BIBLIOGRAPHY

- КОЗЛОВ М. А., КОНОНОВА С. В. 1990. *Сцелионины фауны СССР. (Hymenoptera, Scelionidae, Scelioninae)*. Ленинград. Наука: 344 с.
- POPOVICI OVIDIU ALIN. 2007. *Biodiversitatea Familiilor Platigastride și Scelionide (Hymenoptera, Platygasteridae, Scelionidae) din estul României*. Teza de doctorat, Iași: 452 pp.
- TEODORESCU I., NĂDEJDE M. 1983. *Cercetări faunistice asupra scelionidelor (Hymenoptera, Scelionidae) parazite în ouă de Eurygaster*. St. Cerc. Seria Biol. Anim. **35**(1). București: 23-27.
- ТАЛИЦКИЙ В. И., КУСЛИЦКИЙ В. С. 1990. *Паразитические перепончатокрылые (Hymenoptera) Молдавии*. Кишинев: 304 с.
- ТАЛИЦКИЙ В. И. 1940. *Размножение и применение теленомуса для борьбы с клопом-черепашкою*. Киев: 72 с.
- ВИКТОРОВ Г. А. 1962. *Причины низкой численности вредной черепашки (Eurygaster integriceps Put.) в некоторых районах Закавказья*. Зоол. Журн. **41**(1): 70-71.

Gîrneț Mariana

Institute of Zoology, Academy of Sciences of Moldova,
Chisinau, Republic of Moldova
e-mail: gmariana_83@yahoo.com