COMPLEXUL MUZEAL DE ŞTIINŢELE NATURII „ION BORCEA” BACĂU

STUDII ŞI COMUNICĂRI 2012 - 2015	Vol. 25: 70 – 73

ROVE BEETLES (COLEOPTERA, STAPHYLINIDAE, OMALIINAE) FAUNA ANNOTATIONS FROM DIFFERENT PLACES OF COLLECTION OF REPUBLIC OF MOLDOVA (A)

IRINA MIHAILOV*

ABSTRACT

In general list of rove beetles, the omaliinae that are registered in Republic of Moldova, currently include 8 species: *Acidota cruentata, Antobium atrocephalum, Anthophagus caraboides, Acrolocha pliginskii, Hypopycna rufula, Omalium caesum, Omalium ferrugineum, Omalium rivulare.* Faunistic researchs, presented in this paper, include the data collected from different places of the country in different period of time, table 1 (1961, 1968, 2009, 2010, 2011). On the base of faunal records in stages of the study, gives us the opportunity to observe the capacity expansion of representatives from subfam. Omaliinae in micro natural habitats. Thus, special monitoring researches spread in the country and informatization in the fauna, biological, agricultural areas, etc. are undertaken annually, in purpose to complement and enrich the specific database group of staphylinids.

Keywords: omaliinae, fauna, places of collection, Republic of Moldova.

Introduction

The researches and knowledging of certain groups of insects, gradually start from one point of study with applicative interest in the scientific direction.

In the presented study the Omaliinae rove beetles from Republic of Moldova, that are classified within the informational domain from 1912 [11], are staphylinids group and its important existance in nature and biological, ecological and behavioural characteristics.

By documenting and reporting the references dedicated to this insects group, shows the necessity to continue tracking, registration and researching in respective direction.

Thus, the data will be presented concerning faunistic collections of species of *Omaliinae* registered on the territory of our country, from different places of our republic.

Material and methods

The base of the sample collection are the classical methods: Barber soil traps, light traps, manual collection.

Used materials are: storage containers, jars-traps, light traps, spade, rake, pellicle, etc.

Results and discussion

Representatives of *Omaliinae* subfamily have dimension of body 1,5-6 mm, with curved-oblong form, brown-light colored, yellow-brown and yellow-reddish.

The antennas (formats of 10-11 articule) are setiform type, filiform, pectinates, pedunculate and bludgeon. The antennas positioning is lateral, in front to eyes.

In comparison with representatives from other subfamilies, elytra are developed, covering entirely the abdomen, except the penultimate and last segment.

Morphological body particularities of *Omaliiinae* are similar with *Silfidae* and *Nitidulidae* insects.

It is distinguished from other staphylinids through the cephalic capsule width, undershot type and with simple eyes.The species that inhabit hidden places have eyes or they are missing.

Protorax is flattened dorso-ventral and is wider than long and has the appearance transverse segment.

The abdomen is short and wide, and basal segments are more narrower.The microsculpture is represented by the hull body (crests), accentuated lines, patchies punctuation and prominent dimples.

The body of species of the genus *Omalium* is elongated and flat, no hull top and tapering towards the front.The area of protorax is dotted with uneven microsculpture [10]. Adults are not moving fast.

Populate the steppe and forest steppe zones, plants in flower, animal waste, etc.

Typical representatives of this subfamily is *Antophagus caraboides* and other species of the genera *Acidota, Anthobium, Hypopycna, Omalium* [1, 2, 4-6, 8, 9].

In Republic of Moldova known species of this subfamily are: *Acidota cruentata*, *Antobium atrocephalum*, *Anthophagus caraboides*, *Acrolocha pliginskii*, *Hypopycna rufula*, *Omalium caesum*, *Omalium ferrugineum*, *Omalium rivulare*.

Study of fauna and collection of rove beetles *Omaliinae* had an expanded character in terms of territory and biotope.

The points of detection and regular collection of rove beetles *Omaliinae* were within the areas of zones: *North*: forests and unmaintained apple

* Institute of Zoology of Academy of Science of Moldova, Chisinau, Academy Street, 1

orchards from Zabriceni and Brinzeni village (Edinet district) – 2010, 2011; plantation of grape-vine from Călugăr village (Falesti district) – 2011; *Center*: forest of Micauti village (Straseni district) – 2009; of Cioresti village (Nisporeni destrict) – 1968; of Bahmut village (Calarasi district) – 1961; *South*: meadow from Grădiniţa (Causeni district) – 2009.
Characteristic points (tab. 1) emphasizes: previous citations; examined / collected material; geographical distribution and bioecology.

Relating to the results in table, faunal collections of rove beetles *Omaliinae* in the specified periods are: 8 species, 6 genera, 123 specimens.

Tabel 1 - Rove beetles of *Omaliinae* colected from various places of the Republic of Moldova

GENERA/SPECIES		
***Acidota* Stephens, 1829**		
***Acidota cruentata* Mannerheim, 1830**		
Material	**colected**	Brinzeni village, Edinet district, 01.11.2010 – 1 ♂ forest, Barber soil traps (leg. I. Mihailov).
Geographical spread		Holarctic element.
Bioecology		Saprobiont, predator species.
***Anthobium* Leach, 1819**		
***Anthobium atrocephalum* (Gyllenhal, 1827)**		
Material	**examined**	Cioreşti village, Nisporeni district, 05.05.1968 – 1 ♀ forest, on mushrooms (leg. V. Ostaficiuc).
	colected	Zabriceni village, 01.06.2010 – 1 ♂, 10.10.2010 – 1 ♀ forest, Barber soil traps; Brinzeni village (Edinet district), 21.10.2010 – 1 ♀ forest, Barber soil traps, 01.11.2010 – 3 (1 ♂, 2 ♀♀) unmaintained apple orchard, Barber soil traps (leg. I. Mihailov).
Geographical spread		Holarctic element.
Bioecology		Saprobiont, predator species.
***Anthophagus* Gravenhorst, 1802**		
***Anthophagus caraboides* (Linnaeus, 1758)**		
Previous citations		1972 [7].
Material	**examined**	Bahmut village, Calarasi district, 09.09.1961 – 2 ♂♂ forest, litter (leg. S. Plugaru).
Geographical spread		Euro-Siberian element.
Bioecology		Saprobiont, necrobiont, predator species.
***Acrolocha* Thomson, 1858**		
***Acrolocha pliginskii* Bernhauer, 1912**		
Material	**colected**	Gradinita village, Causeni district, 08.10.2009 – 94 (56 ♂♂, 38 ♀♀) horse manure; Calugar village, Falesti district, 03.04.2011 – 3 (2 ♂♂,1 ♀) on the grape-vine rope; Brinzeni village, Edinet district, 24.05.2011 – 4 ♀♀ forest, Barber soil traps (leg. I. Mihailov).
Geographical spread		Euro-Caucasian element.
Bioecology		Fly to trap with white light source. Coprobiont, predator species.
***Hypopycna* Mulsant & Rey, 1880**		
***Hypopycna rufula* (Erichson, 1840)**		
Material	**colected**	Zabriceni village, Edinet district, 01.06.2010 – 1 ♂ forest, Barber soil traps (leg. I. Mihailov).
Geographical spread		Western-Palearctic element.
Bioecology		Coprobiont, predator species.
***Omalium* Gravenhorst, 1802**		
***Omalium caesum* Gravenhorst, 1806**		
Material	**colected**	Micauti village, Straseni district, 03.06.2009 – 5 ♂♂ forest, litter (leg. I. Mihailov).
Geographical spread		Palearctic element.
Bioecology		Mycobiont species, saprophages.
***Omalium ferrugineum* Kraatz, 1857**		
Material	**colected**	Zabriceni village, 01.06.2010 – 2 ♂♂ forest, Barber soil traps; Brinzeni village

		(Edinet district), 07.06.2011 - 2 ♂♂ forest, white light trap (leg. I. Mihailov).
Geographical spread		Palearctic element.
Bioecology		Fly to trap with white light source. Coprobiont species, saprophages.
***Omalium rivulare* (Paykull, 1789)**		
Previous citations		1931 [3].
Material	**colected**	Zăbriceni village, Edinet village, 01.06.2010 – 1 ♂ forest, Barber soil traps; Calugar village, Falesti district, 03.04.2011 - 1 ♀ on the grape-vine rope (leg. I. Mihailov).
Geographical spread		Holarctic element.
Bioecology		Mycobiont species, saprophages.

The abundance of collected and determined material, expresses the values emphasized only on one species: *Acrolocha pliginskii*.

Numerical of this one, is different during research: 94 specimens in 2009 (Grădinita village, Căuseni district), 3 in 2011 (Călugăr village, Fălesti district), 4 specimens in 2011 (Brînzeni village, Edinet district). Colected material for other species of omaliinae is lower.

Across from the geographical spread, analyzed in specialized literature, is observed dominance of element: Palearctic – specific to the species (*Omalium caesum*, *O. ferrugineum*, *O. rivulare*), followed by Holarctic element to rove beetles *Omaliinae* (*Acidota cruentata*, *Anthobium atrocephalum*).

From the scientific literature and field observations, the rove beetles of *Omaliinae* subfamily can be classified in the group of polybiont species (with multiple bioecology status).

Conclusions

1) Entomological material collected from target or spontaneous places, expresses entomological evidence of the existence of the species in particular ecosystem, biotope and / or micro habitat.
In this context, for each of rove beetles species can draw up entomological recordings and annual track registers - "cadastres" which will be as the scientific material for researchers.
2) As a result of faunal material collected from different regions of the investigated country, 8 species were identified: *Acidota cruentata*, *Antobium atrocephalum*, *Anthophagus caraboides*, *Acrolocha pliginskii*, *Hypopycna rufula*, *Omalium caesum*, *Omalium ferrugineum*, *Omalium rivulare*, from 6 genera, 123 specimens.
3) From registered rove beetles *Omaliinae*, species with large numerical abundance of 101 specimens is *Acrolocha pliginskii*. Collected specimens are kept in entomological mattresses and collection.

Rezumat

În lista stafilinică generală, omaliinele înregistrate în Republica Moldova, la momentul actual enumără 8 specii: *Acidota cruentata, Antobium atrocephalum, Anthophagus caraboides, Acrolocha pliginskii, Hypopycna rufula, Omalium caesum, Omalium ferrugineum, Omalium rivulare*. Cercetările faunistice, prezentate în lucrare, includ evidenţierea colectărilor din diverse puncte ale ţării şi perioade diferite, tabelul 1 (1961, 1968, 2009, 2010, 2011). Datorită înregistrărilor evidenţelor faunistice în etapele de studiu, ne oferă posibilitatea de a observa capacitatea extinderii reprezentanţilor din subfam. Omaliinae în micro habitatele naturale. Astfel, cercetări speciale de monitorizare, răspândire în ţară şi informatizare în domeniile faunistice, biologice, agricole, etc. se întreprind anual, cu scopul de a completa şi îmbogăţi baza de date specifică grupului de stafilinide.

References

1. MAKRANCZY, G., 2009 – Two interesting Thinobius species collected at the river Vişeu in Maramureş (Romania) (Coleoptera: Staphylinidae: Oxytelinae). *Travaux* du Muséum National d'Histoire Naturelle „Grigore Antipa", vol. 52, p. 249-261.

2. SHAVRIN, A.V., 2000 – New and little-know species of Omaliinae from the Baikal-Transbaikal area (Coleoptera, Staphylinidae). *Zoosistematica Rossica*, vol. 9, nr.1, p. 189-193.

3. MARCU, O., 1931 – Beitrage zur Kenntnis der Coleopteren fauna Bessarabiens. *Bulletin de la section scientifique de l'Academie Roumanie*, vol. 14, p. 5-9.

4.VANIN, S. A., 2002 – Classificado comentada de Coleoptera. *Marco sistematica del Proyecto Pribes*. p. 193-206.

5. ZANETTI, A., 1987 – *Fauna d`Italia. Coleoptera, Staphylinidae, Omaliinae*. Bologna: Calderini. 472 p.

6. ADASHKEVICH, B. P., 1972 – *Khishchnye zhuki (Coleoptera, Staphylinidae, Carabidae).* V: Poleznaya entomofauna ovoshchnykh poley Moldavii. Kishinev: Shtiintsa. s. 30-38.

7. GONTARENKO, A. V., 2007 – *Novye i maloizvestnye dlya fauny Ukrainy zhuki-stafilinidy podsemeystv Proteininae i Omaliinae (Coleoptera, Staphylinidae).* V: Izvestiya Khar'*kovskogo* Ântomologicheskogo obshchestva. Odessa, tom XIV, vyp.1-2, s. 19-24.

8. GORESLAVETS, I. N., 2010 – *Materialy po faune i âkologii stafilinid (Coleoptera, Staphylinidae) Zhigulevskogo Biosfernogo Zapovednika*. V: Okhrana rastitel'nogo i zhivotnogo mira. s. 98-121.

9. КИРШЕНБЛАТ, Я. Д., 1965 – *Stafilinidy ili* коротконадкрылые *zhuki*. V: Opredelitel' nasekomykh Evropeyskoy chasti SSSR. Moskva-Leningrad: Nauka, chast' 2, s. 111-156.

10. TIKHOMIROVA, A. L., MARAKUSHINA, L. P., PRONOVA, G. Ya., 1973 – *Sezonnost‘ popadaniya napochvennykh zhukov v κanavki v dvukh tipakh lesa v Yuzhnom Zaural‘e.* V: Âκologiya pochvennykh bespozvonochnykh. Moskva: Nauκa, s. 174-180.

11. YATSENTKOVSKIY, E., 1912 – *Materialy poântomologicheskoy faune Bessarabii. Zhestkokrylye. VII. Staphylinidae.* V: Trudy *Bessarabii* obshchestva estestvoispytaniy i lyubiteley estestvoznaniy, tom II, vyp.2, s. 149-164.