

NEW ROVE BEETLES (COLEOPTERA: STAPHYLINIDAE) FOR THE REPUBLIC OF MOLDOVA (II)

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Abstract. This paper presents 14 species of rove beetles from forest leaf litter new for the fauna of the Republic of Moldova. These species belong to 10 genera and 4 subfamilies – Tachyporinae, Oxytelinae, Staphylininae, and Steninae. For each species there are given the following information: place of collection, distribution, and ecological data.

Keywords: rove beetles, place of collection, distribution and ecology.

Rezumat. Stafilinide (Coleoptera: Staphylinidae) noi pentru fauna Republicii Moldova (II). Această lucrare prezintă 14 specii noi de stafilinide pentru fauna Republicii Moldova. Aceste specii aparțin unui număr de 10 genuri și 4 subfamiliile (Tachyporinae, Oxytelinae, Staphylininae și Steninae). Pentru fiecare specie sunt precizate: locul colectării, răspândirea și ecologia.

Cuvinte cheie: stafilinide, locul colectării, răspândirea și ecologia.

INTRODUCTION

The first data regarding the diversity of the rove beetles of the Republic of Moldova was published in 1912 by E. IATSENKOVSKI (1912), where he mentioned 70 species. Other paper belongs to MARCU (1931), with other 8 new species. Since 1931 till present (2010), there were published numerous papers dedicated to the diversity, biology, and ecology of rove beetles from Staphylinidae family of the Republic of Moldova (MEDVEDEV & SHAPIRO, 1957).

The rove beetles present an ecological significance, especially in the biological control of pests in agriculture, not only in the Republic of Moldova but in other countries, too (ADASHKEVICH, 1969, 1970, 1972a, 1972b; ADASHKEVICH & PEREKREST, 1974, 1977; BONDARENKO, 1986; OSTAPHICHIUK, 1981; TIKHOMIROVA, 1973).

The rove beetles have a diverse and consistent nutritional spectrum (BONDARENKO, 1986; MEDVEDEV & SHAPIRO, 1974). These coleopterans can be used as biological indicators in monitoring a particular environment or ecosystems, and also in biological control of pests in various crops.

MATERIAL AND METHODS

We have used the undetermined coleopterological materials from the museum of the Institute of Zoology of the Academy of Sciences of Moldova. Also, in this paper, there are given the entomological materials collected from different zones of our republic since 2008 till 2009.

The studied materials were collected from different biotopes such as: forests and forest strips (forest leaf litter and similar kinds of decaying plants substance); roadsides; around freshwater margins and storage pools; wetlands and flood plains; steppe; grass crops and industrial crops, orchards, plantations of vine-vine, pasture, dumps, animal droppings etc.

RESULTS AND DISCUSSIONS

In this paper, we have studied the distribution and ecology of 14 species of rove beetles, which are new for the fauna of the Republic of Moldova. These species belong to the following subfamilies: Oxytelinae (24 specimens, which belong to 3 species), Staphylininae (7 specimens, which belong to 1 species), Steninae (3 specimens, which belong to 1 species), and Tachyporinae (28 specimens, which belong to 9 species).

Table 1. The taxonomic classification of the species of rove beetles new for the Republic of Moldova.
Tabel 1. Clasificarea taxonomică a speciilor de stafilinide noi pentru Republica Moldova.

No.	Subfamilies	Number of specimens	Number of species	Number of genera
1.	Tachyporinae	24	3	3
2.	Oxytelinae	7	1	1
3.	Steninae	3	1	1
4.	Staphylininae	28	9	5
	Total	62	14	10

The maximum taxonomic number of genera, species and specimens belong to the subfamily Staphylininae – with 5 genera, 9 species, and 28 specimens; and the minimum respectively belong to the Steninae subfamily with 1 genus, 1 species, and 3 specimens (Table 1).

Below, there are given the entomological examined materials, ecology, and distribution of these new 14 species of rove beetles for the Republic of Moldova.

I. Subfamily TACHYPORINAE MACLEAY 1825

1. *Parabolitobius formosus* (GRAVENHORST 1806)

(= *Bolitobius formosus* GRAVENHORST 1806)

Examined material: Parcova (Edineț District), April 29, 1960 – 1 specimen, litter (leg. V. Ostaphichiuk).

Distribution: Europe (BURAKOWSKI et al., 1980).

Ecology: this is a saprotrophic species which prefers fresh mushrooms and decomposed, stick in the process of decay and dried remains of different plants (BURAKOWSKI et al., 1980).

2. *Ischnosoma splendidum* (GRAVENHORST 1806)

Examined material: Ciorești (Nisporeni District), June 13, 1968 – 1 specimen, decomposed in the tobacco plants (leg. V. Ostaphichiuk).

Distribution: Russia, Caucasus, Ural, Siberia, North Africa, Europe, Crimea, Turkey, Uzbekistan, Japan, West Indies, Canada, USA (SHAVRIN, 2006).

Ecology: this species prefers piles of dried plants (COIFFAIT, 1972).

3. *Tachinus lignorum* (LINNAEUS 1758)

Examined material: Tigheci (Cantemir District), October 18, 2008 – 3 specimens, litter; Ustia (Criuleni District), October 16, 2009 – 8 specimens, cattle manure; Lupa Recea (Orhei District), October 28, 2009 – 1 specimens, litter; Grădinița (Căușeni District), October 08, 2009 – 10 specimens, horse manure (leg. I. Mihailov).

Distribution: Algeria, Europe, Russia (SHAVRIN, 2006).

Ecology: this species prefers animal droppings, and it also can be observed on field plants (BURAKOWSKI et al., 1980).

II. Subfamily OXYTELINAE FLEMING 1821

4. *Anotylus intricatus* (ERICHSON 1840)

Examined material: Grădinița (Căușeni District), October 8, 2009 – 7 specimens, horse manure (leg. I. Mihailov).

Distribution: Russia, Caucasus, Morocco, Algeria, Tunisia, Europe, Turkey, Syria, Iran, Afghanistan (SHAVRIN, 2006).

Ecology: It prefers animal droppings, litter, and sandy-clay soils.

III. Subfamily STENINAE MACLEAY 1825

5. *Stenus flavipalpis* THOMSON 1860

Examined material: Ciorești (Nisporeni District), June 13, 1968 – 3 specimens, cattle manure (leg. V. Ostaphichiuk).

Distribution: Russia, Europe (SHAVRIN, 2006).

Ecology: this species can be met in moist and light (sandy) soil, on the banks of rivers, ponds, lakes - the piles of aquatic plants, rarely it can be found in the forest litter and animal droppings (BURAKOWSKI et al., 1979).

IV. Subfamilia STAPHYLININAE LATREILLE 1802

6. *Erichsonius cinerascens* (GRAVENHORST 1802)

Examined material: Ciorești (Nisporeni District), June 7, 1960 – 5 specimens, litter (leg. V. Ostaphichiuk).

Distribution: Russia, Siberia, Morocco, Europe, Crimea, Caucasus (SHAVRIN, 2006).

Ecology: It inhabits the banks of river reservoir, especially under piles of aquatic plants (BURAKOWSKI et al., 1980).

7. *Hesperus rufipennis* GRAVENHORST 1806

Examined material: Bahmut (Călărași District), August 30, 1960 – 1 specimen, litter (leg. V. Ostaphichiuk).

Distribution: Europe (SHAVRIN, 2006).

Ecology: it is met in the woods, under the bark of trees, stumps in the process of decomposition, the weak and diseased trees; sometimes it is observed on trumpet mushrooms (BURAKOWSKI et al., 1980).

8. *Philonthus cognatus* STEPHENS 1832

Examined material: Lozova (Strășeni District), May 10, 1979 – 1 specimen, May 21, 1979 – 3 specimens, litter; Ivancea (Orhei District), July 04, 1975 – 1 specimen, litter; Hârbovăț (Anenii Noi District), July 04, 1981 – 2 specimens, the decomposed plant; Buțeni (Hâncești District), July 13, 1981 – 3 specimens, the decomposed plant (leg. V. Ostaphichiuk); Stăuceni (Chișinău city), May 19, 2008 – 1 specimen, litter (leg. I. Mihailov).

Distribution: Russia, Siberia, Tunisia, Algeria, Europe, Turkey, Iran, Kazakhstan, Tajikistan, China, India, Pakistan, Nepal, Canada, USA (SHAVRIN, 2006).

Ecology: It prefers hidden places and can be found easily in litter, dried plants, animal droppings etc. (COIFFAIT, 1972).

9. *Philonthus diversiceps* BERNHAUER 1901

Examined material: Ghidighici (Chișinău city), June 13, 2008 – 2 specimens, pond bank; Moara Domnească (Glodeni District), August 20, 2009 – 1 specimen, slurry of aurochs (leg. I. Mihailov).

Distribution: Russia, Turkey, Cyprus, Armenia, Europe, Kazakhstan, Turkmenistan (PETRENKO, 1978; SHAVRIN, 2006).

Ecology: It prefers the banks of rivers, ponds, lakes, and animal droppings (COIFFAIT, 1972).

10. *Philonthus laevicollis* (LACORDAIRE 1835)

Examined material: Brânzeni (Edineț District), September 13, 2008 – 1 specimen, Barber trap type (leg. I. Mihailov).

Distribution: Russia, Europe (SAVRIN, 2006).

Ecology: it prefers dry soils and stones. During the summer, it gathers the piles of seaweed on the banks of the rivers and the shores of the lakes (BURAKOWSKI et al., 1980).

11. *Quedius lateralis* GRAVENHORST 1802

Examined material: Cioești (Nisporeni District), June 6, 1968 – 2 specimens, split wood; Durlești (Chișinău city), June 15, 1968 – 1 specimen, litter; Lozova (Strășeni District), June 20, 1972 – 1 specimen, litter (leg. V. Ostaphichiuk).

Distribution: this species has a Palearctic distribution (BURAKOWSKI et al., 1980).

Ecology: it can be seen on mushrooms, wood split, and litter (BURAKOWSKI et al., 1980).

12. *Quedius invreae* GRIDELLI 1924

Examined material: Brânzeni (Edineț District), October 24, 2008 – 1 specimens, Barber trap type (leg. I. Mihailov).

Distribution: Europe (SHAVRIN, 2006).

Ecology: this species inhabits in hidden places, under rocks, animal excrements, litter, rotten wood (BURAKOWSKI, et al., 1980).

13. *Quedius tenellus* (GRAVENHORST 1806)

Examined material: Speia (Anenii Noi District), August 18, 1979 – 1 specimen, litter (leg. V. Ostaphichiuk).

Distribution: Russia, Siberia, Europe, Mongolia (SHAVRIN, 2006).

Ecology: environmental aspects are little known. It is assumed that it lives in wood and old trees weakened physiologically (BURAKOWSKI et al., 1980).

14. *Xantholinus dvoraki* COIFFAIT 1956

Examined material: Dondușeni, May 29, 1984 – 1 specimen, litter (leg. V. Ostaphichiuk).

Distribution: Russia, Austria, Czech Republic, Slovakia, Hungary, Romania, Turkey, Kazakhstan, Kyrgyzstan (GUSAROV, 2002). Russian entomologist SHAVRIN (2006) in addition to the countries mentioned indicates the spread of species in the Caucasus, Western Siberia, Ukraine. RAITCHEV (1986) mentioned this species as being common for Bulgaria, too.

Ecology: this species prefers to hide in soil cracks and under rocks (COIFFAIT, 1972).

CONCLUSIONS

According to the reported analysis, the geographical distribution can be attributed to the following groups:

Holarctic – *Ischnosoma splendidum* GRAV., *Philonthus cognatus* STEPH.

Transpalearctic – *Philonthus diversiceps* BERNH.

Palearctic – *Anotylus intricatus* ERIC., *Quedius lateralis* GRAV.

Eurosiberian – *Erichsonius cinerascens* GRAV., *Quedius tenellus* GRAV., *Xantholinus dvoraki* COIFF.

European – *Parabolitobius formosus* GRAV., *Tachinus lignorum* LINN., *Stenus flavipalpis* THOMS., *Hesperus rufipennis* GRAV., *Philonthus laevicollis* LAC., *Quedius invreae* GRID.

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