

RANISSUS SCYTHA (OSHANIN, 1913) (HEMIPTERA, FULGOROMORPHA, DICTYOPHARIDAE) IN THE FAUNA OF THE REPUBLIC OF MOLDOVA

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Abstract. The article contains new data on the cicada *Ranissus scytha* Oshanin, 1913 (Hemiptera, Dictyopharidae) from the Republic of Moldova. The first evidence of this species on the territory of the country can be found in 1966. This cicada species was rediscovered in 2015 in "Flamînda" Reserve (Pelinei, Cahul), and in 2016 in the steppe area (Vrănești, Singerei). No information about the presence of this species on the territory of the Republic of Moldova was included in the site Fauna Europaea

Introduction

Cicadas (order *Hemiptera*) represent an important component of fauna and play a significant role in ecosystems. At present, much more than 30 thousand species are described in the world fauna, from which more than 2000 species are in Europe. According to the Fauna Europaea (FE) 252 species from 13 families: Aphrophoridae, Cercopidae, Cicadidae, Tibicinidae, Cicadellidae, Membracidae, Ulopidae, Caliscelidae, Cixiidae, Delphacidae, Dictyopharidae, Issidae and Tettigometridae are recorded in the Republic of Moldova. The number of species is greater in the countries bordering with the Republic of Moldova: in Ukraine - 609 and in Romania - 430 species [3]. One family - Dictyopharidae belongs to infraorder Fulgoromorpha, which species are more pronouncedly different from other groups of cicadas. Cicadas of this families are medium-sized, well-jumping insects. The head is often extended forward in the form of a cephalic outgrowth. The adults and larvae walk, raising the front part of the body. According to the FE in the Republic of Moldova there are two species of cicadas from this family *Dictyophara europaea* and *Dictyophara multireticulata*, no information about the species *Ranissus scytha* in our country [6].

Materials and methods

The article is based on the materials of our own collections in various points of the Republic of Moldova. During the research were used generally accepted methods in entomology - sampling (mowing with an entomological net over the vegetation) and collected material was determined in laboratory conditions with the help of determinants and with the involvement of an electronic resource. Also, the collection of cicadas of the Laboratory of Entomology and Biocenology of the Institute of Genetics, Physiology and Plant Protection was studied (the collection also contains this type of cicada found and identified by various entomologists in the 60s of the last century). The collected cicada specimens were confirmed by PhD Emeljanov (Russian Academy of Sciences).

Results and discussion

Geographical spread. According to FE the species *Ranissus scytha* (Oshanin, 1913) occurs in Ukraine, Bulgaria, Monaco and South European Russia. Emeljanov made the main contri-

tribution to the study of the subfamily Orgeriinae. In his works the information about phylogeny, evolution, new taxa and new data on distribution of the subfamily Orgeriinae in the Mediterranean are included [1, 2, 4]. Systematic framing. The species *Ranissus scytha* belongs to subphylum Hexapoda, class Insecta, order Hemiptera, infraorder Fulgoroidea, family Dictyopharidae, genus *Ranissus*. Synonymous. The synonyms given during the study for *Ranissus scytha* treated in foreign sources are *Orgerius scytha* Oshanin, 1912 and *Schizorgerius scytha* Oshanin, 1913 [2]. Morphology. The structure of the representatives of family Dictyopharidae is typical for Fulgoroidea, the body is longitudinally elongated, moderately flattened dorsoventrally, more convex below, legs most developed among Fulgoroidea. The front legs are slightly longer than the middle ones, which causes the front part of the body to be raised. Leaping hind legs are strong and proportionally longer than those of other Fulgoroidea. Species of subfamily Orgeriinae are more compact flightless monomorphically short-winged with thicker and more rigid covers. The most variable is the length and shape of the head. *Ranissus* has a short and broad head. Also, in its representatives, the middle keel is partially or completely bifurcated - this is the transition of the larval trait to the imago. Larvae of representatives *Ranissus* genus have been studied very poorly; they are the closest to the imago in appearance and way of life.

Bioecology of the species. *Ranissus scytha* prefers dry meadows, perennial deposits with shrubs, steppe areas, “gyrnets” slopes and herbs. In the southern regions of Ukraine, this species occurs in steppe areas with cereal grasses. Larvae were recorded in the same biotopes just like adult insects. It was found in Republic of Moldova earlier, specifically in Bendery, Dubossary, Chisinau, Kornesti, Hincesti, Rybnita [5]. The species was collected recently in “Flamînda” July-August 2015 (Peliney village, Cahul district) and July 2016 (Vrănești village, Singerei district) in steppe biotopes (fig. 1).



Figure 1. Biotope in the steppe area, near Vrănești village

Generally, the species of Dictyopharidae family are a thermophilic and sun-loving group, associated with undersized and therefore mainly herbaceous vegetation, with open spaces and therefore to large extent is xerophilic. The family is characterized by polyphagia and oviposition on the soil surface.

The species *Ranissus scytha* is a moderately hygrophilous species, therefore belongs to mesophilic group and often have flat life cycle. All available indirect data indicate that this

group of insects has one generation per year with overwintering at the egg stage. Larvae are found in spring and first half of summer. Adults in most cases are met during all summer, gradually decreasing in number by autumn [2].



Figure 2. *Ranissus scytha*, Imago and labelling of the species

The figure above for the species *R. scytha* is the proof of identification and storage of the species in cicadas collection, which is preserved in the Museum of Entomology of the Institute of Zoology (fig. 2).

Conclusions

The faunal researches in 2015 in "Flamînda" Reserve (Pelinei, Cahul) and in 2016 in the steppe area (Vrănești, Singerei) allowed to identify the characteristic fauna of cicadas for these areas, including the species *Ranissus scytha*. This cicada species has one generation per year with overwintering at the egg stage. Larvae are found in spring and first half of summer. Adults in most cases are met during all summer, gradually decreasing in number by autumn.

The list of cicadas collected in the Republic of Moldova in the FE needs revision.

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