

## **Auchenorrhyncha of Kyrgyzstan**

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Kyrgyzstan is a mountain country; about 60% of its territory has greatly folded relief with elevations varying between 500 and 7000 m above sea level. Over 90% of the territory is elevated above 1500 m and nearly 40% (glaciers, permanent snowfields, rocks, screes, etc.) is unsuitable for life. About 7% of the territory is occupied by cultural landscape: fields and settlements, roads and industrial enterprises (Shukurov et al., 2002). Kyrgyzstan is characterized by an extraordinary diversity of natural conditions. Natural communities are represented variously: walnut and fruit forests, juniper and fir-wood, deciduous forests (3.5%), shrubs, high-montane, mid-montane and low-montane meadows, steppes and deserts, wetlands.

Biogeographical peculiarities of the country call forth the complex structure of the local entomofauna. At present, about 10 thousand insect species are known from Kyrgyzstan (Genetic Fund Cadastre, 1996). This is some more than half of the real number of species. Inventory is one of actual modern problems in the study of the biodiversity; it includes data on distribution of insects including Auchenorrhyncha across the whole territory of the country.

The leafhoppers (Auchenorrhyncha) are an important component of biogeocenoses, they are numerous both in species and individuals, and their impact in the nature is diverse.

Oshanin (1879) pioneered the scientific study of leafhoppers in Kyrgyzstan. Horváth (1904) has published a checklist of Hemiptera from Heptapotamia, which included species from Kyrgyzstan. Then appears Kuznetsov's work (1929) based on examination of Prof. D.N. Kashkarov's collection. There are many publications containing faunistic lists of leafhoppers (by G.K. Dubowski, K.A. Abdurakhimov, M.T. Turgunov, N. Karimov).

Essential contribution to study of Auchenorrhyncha in Central Tien Shan was made by A.F. Emeljanov; he has described many new taxa from this region. Mityaev (1975), when studied leafhoppers of Kazakhstan, reported some species from Alexander and Talas Mt. Ranges. G.A. Anufriev in 1990-2000 has carried out faunistic study of Auchenorrhyncha in Kyrgyzstan, he described some new species and published data on finds and distribution of

species rare or registered in Kyrgyzstan for the first time. Many works (by D.I. Prutenskij, K.E. Romanenko, V.F. Palij, L.V. Peck, K.I. Ibraimova and others) contain data on leafhoppers as pests of field-protecting forest plantations, orchards and agricultural plants. Exploration of the leafhopper fauna in aspect of its qualitative and quantitative composition is continued by me.

At present, the checklist of Auchenorrhyncha of Kyrgyzstan numbers 436 species from 172 genera of 10 families. Ten 10 families belonging to 4 superfamilies are represented: Fulgoroidea – 6 families (112 species), Cercopoidea – 1 family (9 species), Cicadoidea – 1 family (6 species), Cicadelloidea – 2 families (309 species).

Among the Fulgoroidea, Delphacidae are dominant in species number: 58 species from 37 genera. Issidae are represented by 17 species from 8 genera. There are 17 species from 7 genera in the family Dictyopharidae and 12 species from 5 genera, in Cixiidae. The family Tettigometridae is represented by 1 genus with 7 species and Tropiduchidae, by 1 genus with 1 species.

In the superfamily Cicadelloidea, the absolute majority of species belongs to Cicadellidae – 307 species from 105 genera. Membracidae are represented by 2 species from 2 genera.

The superfamily Cercopoidea includes the family Aphrophoridae with 9 species from 5 genera.

The superfamily Cicadoidea is represented by the family Cicadidae with 6 species from 2 genera.

The number of species recorded from particular regions of Kyrgyzstan is as follows: Issyk-Kul region – 239, Inner Tien Shan – 169, Western Tien Shan – 161, Northern Kyrgyzstan – 158. The list for Alai Valley comprises 55 species. Spreading in Kyrgyzstan without concrete region is indicated in literary sources for 39 species.

In the biogeographical regionalization by Emeljanov (1974), Kyrgyzstan is placed in Sethian Region of Tethyan Subkingdom. The leafhopper fauna of Kyrgyzstan is characterized by species with distribution ranges associated with the arid zone of Palaearctic (Tethya). Among them there are most diverse species with wide-Tethyan, Scythian and Tien Shan ranges. Species of Hyadean fauna are slightly prevailing (230 species, or 52.8%). These species have ranges characteristic for the humid part of Palaearctic (Hyadea). In total, 56 species (12.8%) from 4 families are endemic: Cicadellidae – 37 species, Delphacidae – 11, Dictyopharidae – 2, Issidae – 6.

Meadow species predominate among faunistic complexes, and most species are hortobionts. Maximum number of species occurs in July and August.

# THIRD EUROPEAN HEMIPTERA CONGRESS

## ABSTRACTS



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ABSTRACTS



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