

RESEARCH REGARDING THE ENTOMOFAUNA FROM A MEADOW IN CIUPERCENI (GORJ) AREA

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ABSTRACT

This paper presents the results of the research on a meadow entomofauna, in the Ciuperceni, Golj area. From our research we found that the most numerous species belong to the order Coleoptera (11 species), followed by Heteroptera (9 species), Homoptera (2 species), Lepidoptera (2 species), Neuroptera and Diptera each with one species. Of the total species identified (26 species), it was found that 19 species are harmful, five species are beneficial and two species are indifferent.

INTRODUCTION

Meadows are rich, diverse ecosystems, bustling with a wide range of wildlife. Grasslands host lots of species at various levels of the food chain, also known as "trophic levels."

Wild flowering plants and their wild insect visitors are of great importance for pollination (Garibaldi et al. 2011, 2014). Varied effects of landscape patterns on plant and pollinator diversity are reported in the literature. Some studies show that species richness in plant-pollinator networks declines with loss of meadow habitat and reduced meadow connectivity (e.g., Aizen and Feinsinger 1994; Aguilar et al. 2006; Sabatino et al. 2010; Burkle et al. 2013).

MATERIAL AND METHODS

The natural setting

The commune of Ciuperceni - one of the numerous gorge settlements from the interference of the Getic Subcarpathians with the Getic Plateau, is located at a distance of 25 km from the municipality of Tg-Jiu, the residence of Gorj and in the vicinity of the large Motru-Jilț coal basin.

The territory of Ciuperceni commune has a varied relief. It is outlined by the Getic Subcarpathians, the Getic Plateau and the Tismana, Călnic, Tg-Jiu depression and is made up of meadows and terraces. The Ciuperceni Depression Groove is the western limit of the Târgu Jiu-Câmpu lui Neag.

The climate

Due to the position of the region where the Ciuperceni commune is located, it is influenced by the Mediterranean climatic systems, more than the

temperate continental systems that affect the neighboring regions.

The climate regime is generally characterized by cool summers, with abundant precipitation, and cold winters, with frequent blizzards and stable snow cover over a long period. Average annual precipitation is unevenly distributed, registering substantial increases with altitude. The winds, strongly influenced by the landforms, blow with greater frequency from the North in the depressed area. It is generally warmer in the N-W region than in the rest of the country.

The study was conducted in 2021 during the months of April to September in a meadow from the Ciuperceni (Gorj) area.

To determine the structure of the entomofauna were made collection of material using various means and methods: directly by hand from plants or soil, frame metric, soil surveys and soil surface collected, visual inspection, collection with sticky traps for flying insects, light traps, analyzing samples with binocular magnifier glass directly in the field or laboratory.

After collecting of biological material was made the material collected was analyzed and determined with the binocular magnifier glass using the Identification Manual (Panin 1951, Chatened du Gaetan 1990, Chinery 1998, Godeanu 2002,).

Collecting the biological material has been made monthly, after that the entomological material was analyzed, identified and taxonomic classified. For as little impact on the ecosystem we have preferred to capture images with the camera than to capture live specimens were subsequently removed from their natural environment.

RESULTS AND DISCUSSIONS

The studies were carried out during April to September 2021 in a meadow from the Ciuperceni (Gorj) area.

In 2021, during our observations we have identified 26 species belonging to the *Insecta* class..

The collected insects were systematically classified in 6 orders:, Heteroptera 9 species, Coleoptera 11 species, Homoptera 2 species, Lepidoptera 2 species, and Neuroptera and Diptera each with one species belonging to 12 families.

HETEROPTERA Latr., Family. Pentatomidae: *Eurydema oleraceum* L., *Euryderma ornatum* L., *Dolycoris baccarum* L., *Eurygaster maura* L., *Aelia rostrata* Boh.

COLEOPTERA Linné, Family Coccinellidae: *Coccinella 7-punctata*, *Coccinella 14-punctata* L., *Subcoccinella 24-punctata* L., *Thea 22 punctata* L., Family Elateridae: *Agriotes lineatus* L., *Agriotes ustulatus* Schall.; Family Curculionidae: *Sitona lineatus* L., *Sitona ssp.* Germ., *Phytonomus ssp.* Schonh, *Apion punctigerum* Payk.; Family Cleridae: *Trichodes alvearius* Fabr.

HOMOPTERA L., Family Aphididae: *Acyrtosiphon spp.*, *Macrosiphum spp.*

NEUROPTERA L., Family: Chrysopidae: *Chrysopa perla* L.

LEPIDOPTERA Linné. Family Lycaenidae: *Polyommatus icarus* Rott.; Family Nymphalidae: *Vanessa cardui* L

Diptera L., Family Tipulidae: *Typula oleracea* L.

Table 1

Entomofauna identified

Nr.	Species	Order	Family
1.	<i>Lygus pratensis</i> L.	Heteroptera	Miridae
2.	<i>Lygus rugulipennis</i> Papp.	Heteroptera	Miridae
3.	<i>Brachycarenum tigrinus</i> Schill.	Heteroptera	Rhopalidae
4.	<i>Sticlopeurus punctatonervosus</i> Gz.	Heteroptera	Rhopalidae
5.	<i>Eurydema oleraceum</i> L.	Heteroptera	Pentatomidae
6.	<i>Euryderma ornatum</i> L.	Heteroptera	Pentatomidae
7.	<i>Dolycoris baccarum</i> L.	Heteroptera	Pentatomidae
8.	<i>Eurygaster maura</i> L.	Heteroptera	Pentatomidae
9.	<i>Aelia rostrata</i> Boh.	Heteroptera	Pentatomidae
10.	<i>Acyrtosiphon</i> spp.L.	Homoptera	Aphididae
11.	<i>Macrosiphum</i> spp. L.	Homoptera	Aphididae
12.	<i>Coccinella 7-punctata</i> L.	Coleoptera	Coccinellidae
13.	<i>Coccinella 14-punctata</i> L.	Coleoptera	Coccinellidae
14.	<i>Subcoccinella 24-punctata</i> L.	Coleoptera	Coccinellidae
15.	<i>Thea 22 punctata</i> L.	Coleoptera	Coccinellidae
16.	<i>Agriotes lineatus</i> L.	Coleoptera	Elateridae
17.	<i>Agriotes ustulatus</i> L.	Coleoptera	Elateridae
18.	<i>Sitona lineatus</i> L.	Coleoptera	Curculionidae
19.	<i>Sitona</i> ssp. Germ.	Coleoptera	Curculionidae
20.	<i>Phytonomus</i> ssp. Schonh.	Coleoptera	Curculionidae
21.	<i>Apion punctigerum</i> Payk.	Coleoptera	Curculionidae
22.	<i>Trichodes alvearius</i> Fabr.	Coleoptera	Cleridae
23.	<i>Chrysopa perla</i> L.	Neuroptera	Chrysopidae
24.	<i>Polyommatus icarus</i> Rott.	Lepidoptera	Lycaenidae
25.	<i>Vanessa cardui</i> L.	Lepidoptera	Nymphalidae
26.	<i>Tipula oleracea</i> L.	Diptera	Tipulidae

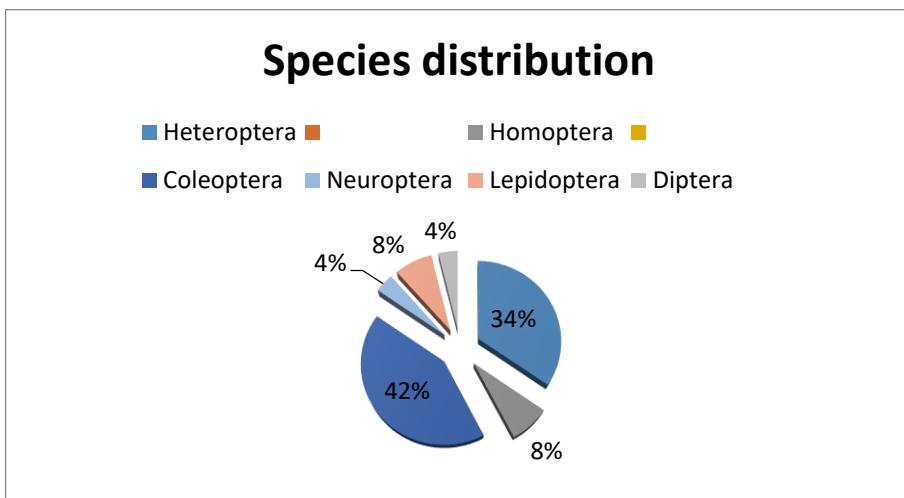


Figure 1. Systematic distribution of the identified entomofauna

CONCLUSIONS

The pedoclimatic conditions of the subcarpathian area of Oltenia are among the most favorable for the development and reproduction of insects.

From the analysis of recorded data, it results that the most species belong to the order Coleoptera (11 species), followed by Heteroptera (9 species), Homoptera and Lepidoptera (2 species).

According to our data, of the total species identified (26 species), it was found that 19 species are harmful, five species are beneficial and two species are indifferent. Regarding the beneficial species three of them belong to Coleoptera order, a single one belong to Neuroptera order.

The most representative families has been Pentatomidae, Coccinellidae and Curculionidae.

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