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RESEARCHES ABOUT THE LEAF BEETLES (CHRYSOMELIDAE, COLEOPTERA) OF TULCA AREA (BIHOR COUNTY, ROMANIA)

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Abstract
In this work are presented data about the fauna of leaf beetles (Chrysomelidae, Coleoptera) from Tulca area, Bihor county during the period 2009 – 2021. There were recorded 69 species belonging to 8 subfamilies, 35 genera, and 10 chromatic varieties. The identified species are relatively common in the Romanian fauna, representing 12.02 % of the total species from Romania. Some species, through the attacked host plants, can be harmful to agriculture and forestry: Crioceris duodecimpunctata L., Leptinotarsa decemlineata Say, Chrysomela populi L., Chrysomela vigintipunctata Scop., Plagiodera versicolora Laich., Gonioctena fornicata Bruggm., Phratora vitellinae L., Diabrotica virgifera Le Conte, the species belonging to Phyllotretta genus, Crepidodera aurata Marsh., Crepidodera aurea Geoffr. The multitude of the number of species on a relatively small territory in terms of surface shows the great variety of plant species with which they feed but also the fact that the area is unpollued, being an argument for protecting nature in the future of this area.

Keywords: Chrysomelidae, Coleoptera, leaf beetles, Tulca area.

1. INTRODUCTION

Tulca area is located in the south-western part of Bihor county, belonging to the historical province of Crișana, in the north-western part of Romania, in the Miersigului Plain, part of the Crișurilor Plain. The average altitude is 60 m, the climate is temperate-continental moderate. The vegetation belongs to the oak stage (Berindei and Pop, 1972). Tulca village includes Tulca and Căuașd villages. Data about the fauna of leaf beetles from Tulca area were published by Ilie (2017).
The leaf beetles (Chrysomelidae family) comprise over 40,000 species worldwide, being outnumbered only by the family Curculionidae.
The paper adds data to those previously known in the area, thus contributing to the completion of information on species diversity and distribution at the national level.

2. MATERIALS AND METHODS

The collection of chrysomelid species was done both manually and with the help of entomological net. For the identification of the species were used different sources (Kaszab, 1962; Warchalowski, 2003). The classification and the nomenclature are based on the monograph of Warchalowski (2003).

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3. RESULTS AND DISCUSSIONS

During the period 2009-2021 in Tulca area there were recorded the following species:

Chrysomelidae Family

Subfamily Criocerinae Latreille, 1807

Lilioceris lilii Scopoli, 1763 (Tulca)

Lilioceris merdigera Linnaeus, 1758 (Căuașd forest)

Crioceris duodecimpunctata Linnaeus, 1758 (Tulca)

Lema cyanella Linnaeus, 1758 (Căuașd, Tulca)

Oulema melanopus Linnaeus, 1758 (Tulca, Căuașd)

Subfamily Clytrinae Kirby, 1837

Labidostomis longimana Linnaeus, 1761 (Căuașd)

Lachnaia sexpunctata Scopoli, 1763 (Căuașd)

Clytra laeviuscula Ratzeburg, 1837 (Tulca, Căuașd)

Smaragdina salicina Scopoli, 1763 (Căuașd)

Smaragdina xanthaspis Germar, 1824 (Căuașd forest)

Subfamily Cryptocephalinae Gyllenhal, 1813

Pachybrachis sinuatus Mulsant et Rey, 1857 (Căuașd)

Pachybrachis hieroglyphicus Laicharting, 1781 (Căuașd) and ab. ictericus Weise, 1882

Cryptocephalus apicalis Gebler, 1830 (Căuașd)

Cryptocephalus sericeus Linnaeus, 1758 (Tulca, Căuașd)

Cryptocephalus hypochaeridis Linnaeus, 1758 (Tulca, Căuașd)

Cryptocephalus octacosmus Bedel, 1891 (Căuașd, Tulca)

Subfamily Chrysomelinae Latreille, 1802

Leptinotarsa decemlineata Say, 1824 (Tulca, Căuașd)

Chrysolina haemoptera Linnaeus, 1758 (Căuașd forest)

Chrysolina sturmi Westhoff, 1882 (Tulca, Căuașd)

Chrysolina limbata Fabricius, 1775 (Tulca, Căuașd)

Chrysolina polita Linnaeus, 1758 (Tulca, Căuașd)

Chrysolina fastuosa Scopoli, 1763 (Tulca, Căuașd) and ab galeopsidis Schrank, 1798, ab jodasi Bechyne, 1950, ab callichloris Bechyne, 1950

Chrysolina varians Schaller, 1783 (Tulca)

Chrysolina herbacea Duftschmid, 1825 (Tulca) and ab solistima Bechyne, 1950, ab durabilis Bechyne, 1950

Chrysolina gypsophilae Kuster, 1845 (Căuașd)

Chrysolina sanguinolenta Linnaeus, 1758 (Tulca, Căuașd)

Chrysomela populi Linnaeus, 1758 (Tulca, Căuașd)

Chrysomela vigintipunctata Scopoli, 1763 (Căuașd)

Colaphus sophiae Schaller, 1783 (Căuașd)

Plagiodera versicolora Laicharting, 1781 (Căuașd)

Phaedon cochleariae Fabricius, 1792 (Tulca, Căuașd)

Gonioctena fornicata Brugemann, 1873 (Tulca, Căuașd)

Phratora vitellinae Linnaeus, 1758 (Căuașd)

Subfamily Galerucinae Latreille, 1802

Diabrotica virgifera Le Conte, 1802 (Tulca, Căuașd)

Pyrrhalta viburni Paykull, 1799 (Căuașd)

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Galeruca rufa Germar, 1824 (Tulca, Căuașd)
Galeruca pomonae Scopoli, 1763 (Tulca, Căuașd)
Galeruca tanaceti Linnaeus, 1758 (Tulca, Căuașd)
Galerucella lineola Fabricius, 1784 (Căuașd forest)
Galerucella calmariensis Linnaeus, 1758 (Tulca) and ab lythri Gyllenhall, 1813
Subfamily Alticinae Kutchera, 1859
Phyllotreta nemorum Linnaeus, 1758 (Tulca, Căuașd)
Phyllotreta atra Fabricius, 1775 (Tulca, Căuașd)
Phyllotreta armoraciae Koch, 1803 (Tulca, Căuașd)
Phyllotreta nigripes Fabricius, 1775 (Tulca, Căuașd)
Aphtona euphorbiae Schrank, 1781 (Tulca, Căuașd)
Longitarsus lycopi Foudras, 1860 (Căuașd forest)
Longitarsus melanocephalus De Geer, 1775 (Tulca, Căuașd, Căuașd forest)
Longitarsus nigrofasciatus Goeze, 1777 (Căuașd)
Longitarsus jacobaeae Waterhouse, 1858 (Căuașd)
Longitarsus pratensis Panzer, 1794 (Tulca, Căuașd)
Longitarsus luridus Scopoli, 1763 (Tulca)
Longitarsus minusculus Foudras, 1860 (Tulca, Căuașd)
Sphaeroderma testaceum Fabricius, 1775 (Tulca, Căuașd)
Epitrix atropae Foudras, 1860 (Tulca, Căuașd) and ab quadrimaculata Weise, 1886
Altica oleracea Linnaeus, 1758 (Tulca, Căuașd) and ab lugubris Weise, 1886, ab nobilis Weise, 1886
Neocrepidodera ferruginea Scopoli, 1763 (Tulca, Căuașd)
Neocrepidodera transsylvanica Fuss, 1864 (Tulca, Căuașd)
Chaetocnema tibialis Illiger, 1807 (Tulca, Căuașd)
Chetocnema concinna Marsham, 1802 (Tulca, Căuașd)
Crepidodera aurata Marsham, 1802 (Tulca, Căuașd)
Crepidodera aurea Geoffroy, 1805 (Tulca, Căuașd)
Podagrica malvae Illiger, 1807 (Tulca, Căuașd)
Psylliodes chrysocephalus Linnaeus, 1758 (Tulca, Căuașd)
Psylliodes attenuata Koch, 1803 (Tulca, Căuașd)
Subfamily Hispinae Gyllenhal, 1813
Hispa atra Linnaeus, 1758 (Căuașd)
Subfamily Cassidinae Gyllenhal, 1813
Hypocassida subferruginea Schrank, 1776 (Tulca, Căuașd)
Cassida sanguinolenta Muller, 1776 (Căuașd)
Cassida vibex Linnaeus, 1767 (Tulca, Căuașd)
Cassida viridis Linnaeus, 1758 (Tulca, Căuașd)
There were identified 69 species belonging to 8 subfamilies, 35 genera and 10 chromatic varieties. This number of species represents 12, 02% of the total species from Romania (574). The identified species are relatively common in Romanian fauna.
The most represented subfamily is Alticinae – 24 species (34.78%), folowed by Chrysomelinae – 17 species (24.63%), Galerucinae – 7 species (10.14%), Cryptocephalinae – 6 species (8.69%), Clytrinae – 5 species (7.24%), Criocerinae – 5 species (7.24%), Cassidinae – 4 species (7.24%) and

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Hispinae – 1 species (1.44%). These percentages are fully consistent with the number of species that these subfamilies have nationally and globally.

4. CONCLUSIONS

During 2009-2021, in Tulca area there were identified 69 species of Chrysomelidae, representing 12.02 % of the total species from Romania. The species are relatively common in Romanian fauna and some species are harmful to agriculture and forestry.

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Annex 1

Family Chrysomelidae in the Tulca area (photos by Ilie A.L.)

Chrysolina sturmi Westf.

Leptinotarsa decemlineata Say

Chrysolina herbacea Duft.

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Cassida vibex L.

Clytra laeviuscula Ratz,

Chrysolina polita L.

Galeruca pomonae Scop.

Chrysomela vigintipunctata Scop.

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