

NUTRITIONAL CHARACTERISTICS OF THE DONACIINAE AND CHRYSOMELINAE (COLEOPTERA, CHRYSOMELIDAE) SUBFAMILIES FROM BIHOR COUNTY

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Abstract

A big variety of leaf beetles species were identified in Bihor county. The majority of species are herbaceous, the forest species being less represented. This paper presents the nutritional characteristics of Donaciinae and Chrysomelinae subfamilies from Bihor county identified during 2010-2014.

Were identified 2 species belonging to the Donaciinae subfamily and 44 species belonging to the Chrysomelinae subfamily. The nutritive spectrum includes 36 oligophagous species (78,26%), 8 polyphagous species (17,39%) and 2 monophagous species (4,34%). The host-plants of the subfamilies analysed belongs to the class Dicotyledonatae and three species to the class Monocotyledonatae.

Key words: Donaciinae, Chrysomelinae, Bihor county, nutritional, characteristics.

INTRODUCTION

The nutritional spectrum of the Chrysomelidae family is approximately exclusively phytophagous. Nutritional characteristics of Donaciinae and Chrysomelinae subfamilies identified at Bihor county level are comprised in the present work. The host-plants of the leaf-beetles from Romania belongs to the class Dicotyledonatae and a few belongs to the class Monocotyledonatae.

MATERIAL AND METHOD

The researches were made during the period 2010-2014 in the different location of Bihor county, from April to October. The collection was realised with the entomological net, being completed with manual collection and direct observations in various habitats (forests, meadows, pastures, isolated trees). The identification of species was realised with a binocular magnifier and the works of the authors mentioned in the references (Freude H. et al, 1966; Kaszab Z., 1962; Warchalowski A., 2003).

RESULTS AND DISCUSSIONS

There were identified a total of 44 Chrysomelinae subfamily species and 2 Donaciinae subfamily species. The species of Chrysomelinae subfamily belongs to

14 genera: Leptinotarsa, Chrysolina, Chrysomela, Gastrophysa, Phaedon, Timarcha, Plagiodera, Colaphus, Phratora, Linnaeidea, Oreina, Goniocтена, Entomoscelis, Sclerophaedon (Ilie L.C.,2010,2012,2013).

The Chrysolina genus is represented by 20 species (45,05%), Chrysomela genus by 5 species (11,36%), Gastrophysa, Phaedon, Timarcha, Goniocтена genus with 2 species (4,54%), Oreina genus with 3 species (6,81%) and Leptinotarsa Plagiodera, Colaphus, Phratora, Linnaeidea, Entomoscelis and Schrophaedon genus with 1 species (2,27%) – table 1

Table 1

Distribution of the Chrysolimelinae subfamily species in Bihor county (original)

Genus	No of species	No of Forest species	% of The total	No of Grossland species	% of the Total
Chrysolima	20	-	-	20	45,45
Chrysomela	5	5	11,36	-	-
Oreina	4	-	-	4	9,09
Gastrophysa	2	-	-	2	4,54
Phaedon	2	-	-	2	4,54
Timarcha	2	-	-	2	4,54
Goniocтена	2	1	2,27	1	2,27
Leptinotarsa	1	-	-	1	2,27
Plagiodera	1	1	2,27	-	-
Colaphus	1	-	-	1	2,27
Phratora	1	1	2,27	-	-
Linnaeidea	1	1	2,27	-	-
Entomoscelis	1	-	-	1	2,27
Sclerophaedon	1	-	-	1	2,27
Total	44	9		35	

Table 1 indicates that the forest species are less represented and the majority of species are herbaceous.

Depending on the nutritive spectrum the species fall into the monophagous, oligophagous and polyphagous categories.

From the total of the species, 36 species (78,26%) are oligophagous, 8 species(17,39%) are polyphagous and 2 species (4,34%) are monophagous – fig.1.

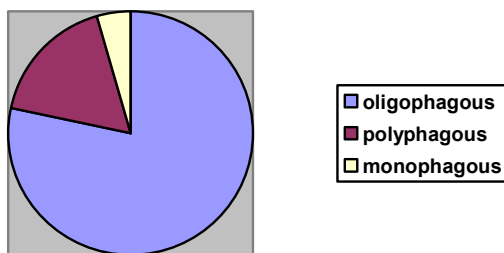


Fig.1. The nutritive spectrum of the Chrysolimelinae subfamily species from Bihor county (original)

The nutritive spectrum includes 2 polyphagous species (100%).

Only the existence of the oligophagous and polyphagous species proves the existence of some species till at high altitudes (1200-1700 m). The Donaciinae subfamily includes two genera with 2 species (table 2).

Table 2
Distribution of the Donaciinae subfamily species in Bihor county (original)

Genus	No of species	No of Forest species	% of The total	No of Grassland species	% of the Total
Donacia	1	-	-	1	50
Plateumaris	1	-	-	1	50

Table 2 indicates that all the species of the Donaciinae subfamily are grassland. Approximately all the host plants of the subfamilies analyzed belongs to the Phylum Spermatophyta, three species (3%) belongs to class Monocotyledonatae.

CONCLUSIONS

During the period 2010-2014 in Bihor county were identified 46 species belongs to Donaciinae and Chrysomelinae subfamilies. Those species belongs to 16 genera: Donacia, Plateumaris, Leptinotarsa, Chrysolina, Chrysomela, Gastrophysa, Phaedon, Timarcha, Plagiodes, Colaphus, Phratora, Linnaea, Oreina, Goniocenta, Entomoscelis, Sclerophaedon.

The majority of the species are grassland species – 37 (80,43%) and 9 are forest species (19,56%). From the nutritive spectrum, 36 species of the Chrysomelinae subfamily (78,26%) are oligophagous, 8 species (17,39%) are polyphagous and 2 species (4,34%) are monophagous.

All the species of Donaciinae subfamily are polyphagous (2).

Totally, 36 species (78,26%) are oligophagous, 8 species (17,39%) are polyphagous and 2 species (4,34%) are monophagous.

The majority of the host-plants of the subfamilies analysed belongs to the class Dicotyledonatae and three species to the class Monocotyledonatae. Some species were identified till at high altitudes (1700m).

REFERENCES

1. Freude H., K.W. Harde, G.A.Lohse, 1966, Die Kafer Mitteleuropas, Goecke & Evers, Krefeld, 9
2. Ilie L.C., 2010, The leaf-beetles (Coleoptera, Chrysomelidae) from Husasău de Tinca area (Bihor county, Romania), Drobeta, Seria Științele Naturii, vol.20, pp. 95-97, Drobeta-Turmu-Severin.

3. Ilie L.C., 2010, The leaf-beetles (Coleoptera, Chrysomelidae) from Salonta area (Bihar county, Romania), Drobeta, Seria Științele Naturii, vol.22, pp. 50-52, Drobeta-Turnu-Severin.
4. Ilie L.C., 2013, New contributions at the knowlwdge of the leaf-beetles (Coleoptera, Chrsomelidae) form the Bihar county, Drobeta, Seria Științele Naturii, vol 23, pp.180-182, Drobeta Turnu-Severin.
5. Kaszab Z., 1962, Crysomelidae, Fauna Hungariae, Akademiai Kiado, Budapest.
6. Warchalowski A., 2003, Chrysomelidae. The leaf-beetles of Europa and the Mediterranean area, Warszawa.