# THE LEAF – BEETLES ( COLEOPTERA, CHRYSOMELIDAE ) FROM COCIUBA-MARE (BIHOR COUNTY, ROMANIA)

**Ilie Lorena Cosma *, Marinescu Mariana ****

*Gymnasium School no 1 Batăr, Bihor county
** University of Oradea. Didactic Staff Training Department (DSTS ), Str. Universităţii No 1., e-mail: marinescum54@yahoo.com

***Abstract***

*The authors presents the fauna of leaf-beetles identified in Cociuba-Mare area and some ecological aspects of those beetles in area, during 2009-2011.There were identified 44 species, belonging to 7 subfamilies and 27 genera. Some of those species (17) are harmful to agriculture and forestry. In nutritional tems, we observe that oligophagous species (29) are predominates and the zoogeographical analysis proves a great variety of the species: eurosiberian, palearctic, european, euroasian, holarctic, european and Asia minor.*

**Key words:** Chrysomelidae, ecological aspects, Cociuba Mare area.

## INTRODUCTION

Belonging to the historical province Crişana, Cociuba Mare area is located in the south part of Bihor county, in the Holod Depression. The climate is temperate – continental moderate, the average altitude is 100m.

The vegetation belongs to the oak stage, having a predominant central - origin (Berindei I., Pop G., 1972).

## MATERIAL AND METHOD

The researches were performed during 2009-2011, in the period april-october.

The insects were collected using the entomological net. The identification of the species was performed using different references (Mohr K.H., 1966; Kaszab Z., 1962; Warchalowsky A., 2003 )

## RESULTS AND DISSCUSIONS

In Cociuba Mare area, during 2009-2011 were identified 44 species, belonging to 7 subfamilies and 27 genera.

Subfamily Criocerinae Latreille, 1807
Lilioceris lilii Scopoli, 1763
Oulema melanopus Linnaeus, 1758

Crioceris duodecimpunctata Linnaeus, 1758

Subfamily Clytrinae Kirby, 1837
Clytra laeviuscula Ratzeburg, 1837
Labidostomis longimana Linnaeus, 1761
Lachnaia sexpunctata Scopoli, 1763
Smaragdina xanthaspis Germar, 1824
Smaragdina affinis Illiger, 1794

Subfamily Cryptocephalinae Gyllenhal, 1813
Cryptocephalus hypochoeridis Linnaeus, 1758
Cryptocephalus aureolus Suffrian, 1847
Cryptocephalus octacosmus Bedel, 1891

Subfamily Chrysomelinae Latreille, 1802
Chrysolina herbacea Duftschmid, 1825
Chrysolina polita Linnaeus, 1758
Chrysolina sanguinolenta Linnaeus, 1758
Chrysolina fastuosa Scopoli, 1763
Gastrophysa polygoni Linnaeus, 1758
Plagiodera versicolora Laicharting, 1781
Chrysomela populi Linnaeus, 1758
Gonioctena fornicata Bruggemann, 1873
Leptinotarsa decemlineata Say, 1824

Subfamily Galerucinae Latreille, 1802
Diabrotica virgifera virgifera Le Conte, 1858
Galeruca rufa Germar, 1824
Galeruca tanaceti Linnaeus, 1758

Subfamily Alticinae Kutchera, 1859
Phyllotreta atra Fabricius, 1775
Phyllotreta vittula Redtenbacker, 1849
Phyllotreta armoraciae Koch, 1803
Phyllotreta nigripes Fabricius, 1775
Phyllotreta nemorum Linnaeus, 1758
Longitarsus melanocephalus De Geer, 1775
Longitarsus jacobaeae Waterhouse, 1858
Longitarsus lycopi Foudras, 1860
Altica oleracea Linnaeus, 1758
Aphtona euphorbiae Schrank, 1781
Asiorestia ferruginea Scopoli, 1763

Crepidodera aurata Marsham, 1802
Podagrica malvae Illiger, 1807
Chaetocnema tibialis Illiger, 1807
Psylliodes affinis Paykull, 1799
Psylliodes chrysocephala Linnaeus, 1758

Subfamily Cassidinae Gyllenhal, 1813
Hypocassida subferruginea Schrank, 1776
Cassida viridis Linnaeus, 1758
Cassida vibex Linnaeus, 1767

In biodiversity tems, we observe that the dominant subfamilies are Alticinae with 9 genera and 16 species ( 36,36%) and Chysomelinae with 6 genera and 10 species (22,72% ).
Those families are followed by Clytrinae (4 genera, 5 species – 11,36%), Cryptocephalinae (1 genera, 4 species – 9,09% ), Criocerinae (3 genera, 3 species – 6,81%), Galerucinae (2 genera, 3 species – 6,81 %) and Cassidinae (2 genera, 3 species – 6,81%).

The list includes harmful species to forestry and agriculture: Lilioceris lilii Scop., Oulema melanopus L., Crioceris duodecimpunctata L., Clytra laeviuscula Ratz., Plgiodera versicolora Laich, Chrysomela populi L., Chrysomela vigintipunctata Scop., Gonioctena fornicata Bruggm., Leptinotarsa decemlineata Say, Diabrotica virgifera Le Conte, Phyllotreta atra Fabr., Phyllotreta nemorum L., Phyllotreta armoraciae Koch, Phyllotreta nigripes Fabr., Phyllotreta vittula Redtb., Crepidodera aurata Marsh, Podagrica malvae Ill.

In ecological preferences tems, the subfamilies of leaf-beetles identified could be so characterized:

- Criocerinae subfamily was recorded on the cultivated plaines or with spontaneous plants proving the preference for intense light (heliophilous).
- Chysomelinae subfamily presents species who lives in the humid and sometimes shady places. Majority of the species are hygrophilous.
- Clytrinae and Cryptocephalinae subfamilies presents generally heliophilous species, identified on the places with meridional exposition.
- The species of Galerucinae subfamily are mesophilous – mesohygrophilous, identified under the rocks or on the lawns or agricultural cultures.

- Alticinae subfamily includes xerophilous, heliophilous species.
- Cassidinae subfamily presents generally hygrophilous species. The single exception is Hypocassida subferruginea Schr. who lives on during lawns. There is an xerophilous species.
- In nutritional tems, predominates oligophagous species – 29 (65,90%) followed by polyphagous species – 11 (25%) and the monophagous species – 4 (9,09%) are less represented.

In zoogeographical tems we note a great variety of the species: eurosiberian – 14 (31,81%), Palearctic – 10 (22,72%), european – 7 (15,98 %), Europe and Asia minor – 6 (13,63%), euroasian – 4 (9,09%) and holarctic – 3 (6,81%).

**CONCLUSIONS**

During 2009 – 2011, in Cociuba Mare area were identified 44 species belonging to 7 subfamilies and 27 genera.

From the total, 17 species are harmful to forestry and agriculture, predominates oligophagous, eurosiberian and paleactic species.

In ecological preferences tems we observe a great variety of the species: heliophilous, hygrophilous, mesophilous-mesohygrophilous, xerophilous.

## REFERENCES


1. Berindei I., Pop G., 1972, Judeţul Bihor. Editura Academiei R.S.R., Bucureşti, pp. 35-43.
2. Kaszab Z., 1962, Fauna Hungariae. Chrysomelidae, Akademiai Kiado, Budapest, pp. 1-416.
3. Mohr K., 1966. Chrysomelidae. In: Freude H., Harde K.W., Lohse G.A. Die Kafer Mitteleuropas. Goecke & Evers, Krefeld, pp. 95-299.
4. Warchalowski A., 2003, Chrysomelidae. The leaf-beetles of Europe and the Mediterranean area. Natura Optima dux Foundation, Warszawa, 600 pp.