

RESEARCHES ON THE EPIGEOUS ENTOMOFAUNA IN THE "DUMBRAVA SIBIULUI" OAK FOREST (SIBIU COUNTY, ROMANIA)

Cristina MOISE*, Maria TĂNASE*

* "Lucian Blaga" University of Sibiu, Faculty of Faculty of Agricultural Sciences, Food Industry and Environmental Protection, Sibiu, Romania
Corresponding author: Cristina Moise, "Lucian Blaga" University of Sibiu, Faculty of Agricultural Sciences, Food Industry and Environmental Protection, 5-7 Ion Ratiu, 550371 Sibiu, Romania, phone: 0040269234111, fax: 0040269234111, e-mail: cristinamoise1@yahoo.com

Abstract. Epigeous insects in the "Dumbrava Sibiului" oak forest were captured between 2011-2012. From April to September in each year. 12 traps were installed in a circle 243 individuals collected belonged to 28 species and 6 families: *Carabidae* – 14 species (50.0%), 188 individuals (77.37 %), *Staphylinidae* – 7 species (25.0 %), 15 individuals (6.17 %), *Silphidae* – 3 species (10.72 %), 29 individuals (11.93 %), *Elateridae* – 1 species (3.51 %), 1 individual (0.41 %), *Scarabaeidae* – 2 species (7.14 %), 8 individuals (3.29 %), *Forficulidae* – 1 species (3.51 %), 2 individuals (0.82 %). Also, we presented in tables the ecological requirements of the species of *Carabidae* collected, the variation of their relative abundance and the structure of dominance. Composition of species corresponded to communities from drier forms of irregularly flooded the floodplain forests with decreased level of ground water, known from Central Europe.

Keywords: Forest "Dumbrava Sibiului", entomofauna, ecological requirements, abundance, dominance.

INTRODUCTION

The carabids in Romania were studied in two basic directions, one purely faunistic (zoogeographic) and the other one ecologic and coenotic.

The faunistic and zoogeographic direction is represented by a plenty of earlier works. Some of these also include the biological characteristics of species [1, 9, 10, 11, 12, 13, 14-16, 18-20, 22-25, 29]. The second direction of research is oriented of structure of *Carabid* communities in a wide scale of natural and artificial ecosystems. The observations on the taxonomic composition and ecological structure of populations of *Carabidae* in the same forest ecosystems are published in the other papers [36, 38, 39, 40, 41, 42, 24, 48].

Some papers on carabids from mixed forests in Moldova (Romania) were published by Solomon L., Varvara M., (1983) [28] and also Varvara (2004, 2005) [45, 46]; while those in beech forests and in coniferous forests and besides it [43-48] some collaborators published many papers on structure of the carabid communities in the field of potatoes, sugar beet, wheat, maize, sunflower, clover and in apple orchards in Moldova [43, 44, 47].

In the Republic of Moldova, Baban E., (2006) [4] synthesized his results obtained during 24 years (1979-2003), in his ample thesis for the degree of doctor habilitate, "*Carabids (Coleoptera, Carabidae)* in the biogeographical interference zone (Taxonomy, Diversity, Zoogeography, Biology) and their practical importance," [2-8]. Another authors are referring to epigeic fauna from the "Plaiul Fagului" Reserve [2] and other authors published a paper on the epigeic beetle fauna from the "Codrii Tigheciului" Scientific Reserve [5-8]. In 2006, Baban [4] made a representative PhD. thesis with the title: Diversity of coleopterans (Coleoptera; *Carabidae*, *Silphidae*, *Scarabaeidae*, *Cerambycidae*) from the forest ecosystems of the Central Plateau of Moldova. In 2012, she published a paper on the same subject from the "Codrii Tigheciului" Scientific Reserve.

The aim of the present paper is the faunistic and ecologic evaluation of the epigeic insects collected in the "Dumbrava Sibiului" oak forest.

MATERIALS AND METHODS

The insects were collected in the Dumbrava Sibiului oak forest (Fig. 1) situated in the Municipality Sibiu, in Sibiu County, at the contact between the Cindrel Mountains and the sediments of the piemontan plaine and hills in the S of the city Sibiu. „Dumbrava Sibiului” (GPS: 45°44'35''N, 24°05'51''E) has a surface of 978 ha and it is distributed in four forests (Fig.2).

They were installed 12 pitfalls having the capture possibilities of 29.37% from the circle circumference [21, 32].

In order to attract the insects inside the trap, at the aperture of every collector bottle a funnel made of a thin of a sheet of PVC, dark colored.

The traps were set in a circle of 12.5 m diameter. The traps were put in the first decade of April, 2011, 2012 till September and were emptied twenty times. The species dominance is characterized by the following scale: eudominant > 10 %, dominant species 5-10%, subdominant 2 - 5%, recedent 1 -2 % and subrecedent < 1 %.

The insect collected are presented in Tables 1-4 and description form for every species collected (material collected, biology, trophic regimen).

RESULTS

In total, during 2011-2012 there were collected 243 individuals of 28 species of epigeic insects of the "Dumbrava Sibiului" oak forest belonging to two orders (*Coleoptera*, five families *Dermaptera*, one family), (Table 2), among them 28 species. The families of *Carabidae* and *Staphylinidae* were represented by 75% and 203 individuals (83.54%). The other families (*Silphidae*, *Elateridae*, *Scarabaeidae* and

Forficulidae) were represented by 7 species (25 %) and 40 individuals (16.47%).

In the "Dumbrava Sibiului" oak forest, Carabid were represented by 188 individuals (77.37%) belonging to 14 species (50% of species collected). Four species were eudominant (*Pterostichus oblongopunctatus*, *Platynus assimilis*, *Pterostichus niger* and *P. melanarius*) whose number of individuals ranged from 29 (13.89%) (*Pterostichus melanarius*) to, 60 (31.91%) (*Pterostichus oblongopunctatus*). Four species were subdominant (*Carabus violaceus*, *C. ullrichi*, *C. gigas* and *Harpalus latus*) and the remaining six species were recedent (Table 4).

Table 3 the main ecological requirements of the species of Carabidae. Five species (35.71%) are spring breeders and three species (28.57%) are autumn breeders. In the spring 2012, the spring breeding

Pterostichus oblongopunctatus, *Platynus assimilis* were captured in the period from 1 to 6 April.

According to the variation of moisture preferences, *Loricera pilicornis* is an eurytopic mesohygropilous species, particularly typical for intial stages of succession of vegetation cover. *Carabus scheidleri* is mesohygropholius, preferably forests species, but it is able to survive succesfully in open landscape. *Carabus ullrichi*, *Carabus coriaceus*, *Carabus gigas*, *Pterostichus oblongopunctatus* are mesohyrophilous forests species, *Carabus violaceus* and *Pterostichus melanarius* are moderately hydrophilous. *Carabus violaceus* is primarily a forest species, but at higher altitudes it is able to colonize high stands of grasses. *Pterostichus melanarius* is a eurytopic species abundant in floodplain forests, in fields and in to certain degree also in moutain forests. *Platynus assimilis* and *Pterostichus niger* are hygrophilous

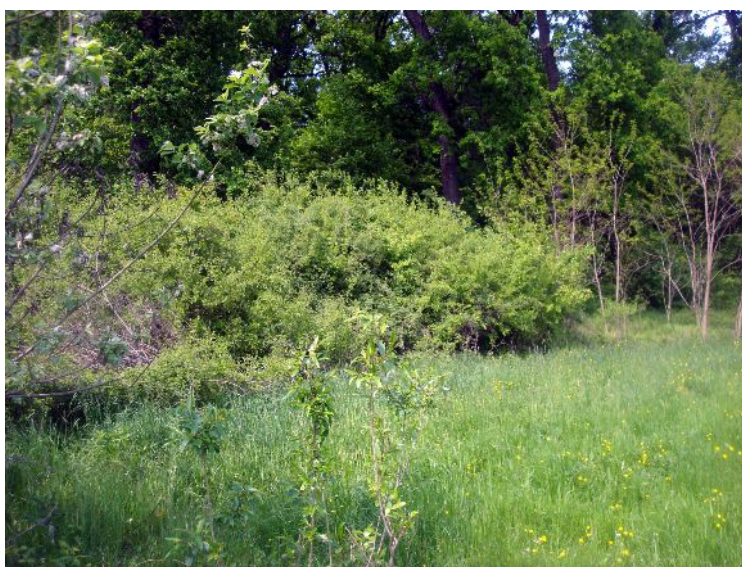


Fig. 1. Interior of the study plot in the oak forest

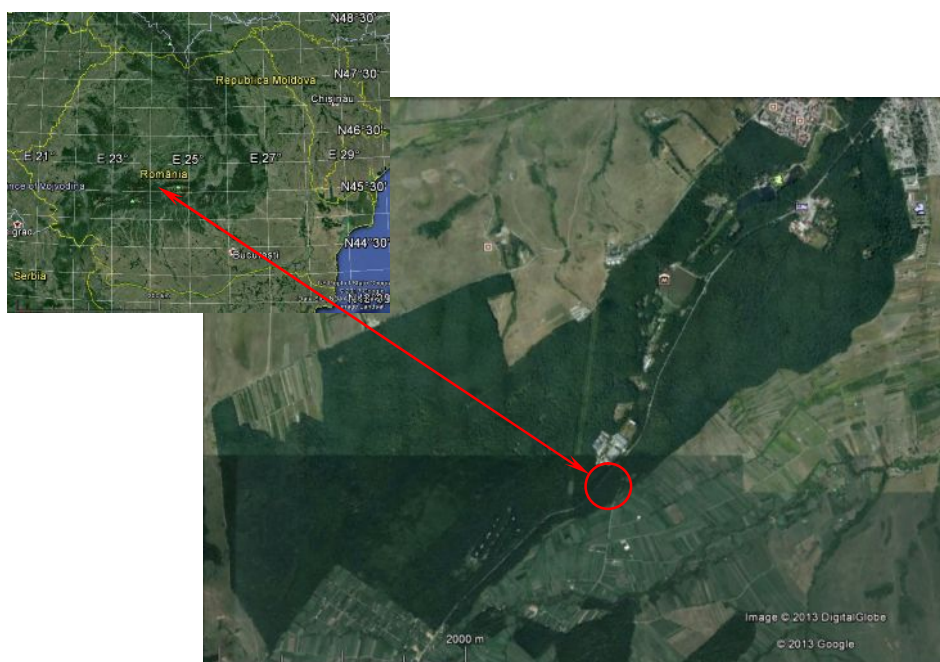


Fig. 2. The satellite map of the "Dumbrava Sibiului" oak forest, the circle mark the study plot (after <http://maps.google.ro>)

species typical for floodplau forests and one. *Harpalus latus* and *Anisodactylus binotatus* are open landscape species. *Harpalus latus* is mesohydrophilous, while *Anisodactylus binotatus* prefers increased humidity and heavy soils.

Most of species are zoofagous 78.57%. *Harpalus latus* and *Anisodactylus binotatus* are pantofagous. Most species are palaeartic in the "Dumbrava Sibiului" oak forest.

Table 1. Species of insects collected from the „Dumbrava Sibiului” oak forest captured during 2011-2012

Taxa	April, decades			May, decades			June, decades			July, decades			August, decades			September, decades			Trophic regime [⊗]
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Order Coleoptera																			
Family Carabidae																			
1. <i>Carabus gigas</i>																4	1		E
2. <i>C. coriaceus</i>				1						1							1		E
3. <i>C. violaceus</i>				1			1							3			1		E
4. <i>C. ullrichi</i>			5														2		E
5. <i>C. monilis scheidleri</i>							2			1									E
6. <i>C. nemoralis</i>							3												E
7. <i>Harpalus latus</i>			4																M;E
8. <i>Pterostichus niger</i>			8	1	4	4	6		1	3									E
9. <i>P. melanarius</i>	4		10	9	1	3				1							5		E
10. <i>P. oblongopunctatus</i>	5		18	7	9	6	12			3							1		E
11. <i>Platynus assimilis</i>	5		9	6	5	4													E
12. <i>Agonum</i> sp.			3																M
13. <i>Anisodactylus binotatus</i>				3															M
14. <i>Loricera pilicornis</i>				2															E
Family Staphylinidae																			
15. <i>Staphylinus erythropterus</i>				2															E
16. <i>S. olens</i>					2														E
17. <i>S. caesareus</i>				2															E
18. <i>Staphylinus</i> sp.			1		1														E
19. <i>Velleius dilatatus</i>			1				1			1									F
20. <i>Velleius</i> sp.			2																F
21. <i>Philonthus</i> sp.										2									M
Family Silphidae																			
22. <i>Oeceoptoma thoracica</i>	3			5	4														N
23. <i>Necrophorus vespillo</i>							4												N
24. <i>N. humator</i>				2										4					N
Family Elateridae																			
25. <i>Sericus brumeus</i>				1												1			F
Family Scarabaeidae																			
26. <i>Oniticellus</i> sp.				1															C
27. <i>Geotrupes stercorarius</i>				2	1	4													C
Order Dermaptera																			
Family Forficulidae																			
28. <i>Forficula</i> sp.				2															M

⊗ F - phytophagous, M - myxophagous, E - entomophagous, C - coprophagous, N - necrophagous.

Table 2. The taxonomic structure of the epigeic insects collected from the Dumbrava Sibiului oak forest during 2011-2012

Families	Species	%	Individuals	%
<i>Carabidae</i>	14	50.0	184	77.37
<i>Staphylinidae</i>	7	25.0	15	6.17
<i>Silphidae</i>	3	10.71	29	11.93
<i>Elateridae</i>	1	3.57	1	0.41
<i>Scarabaeidae</i>	2	7.14	8	3.29
<i>Forficulidae</i>	1	3.57	2	0.82
Total	28	99.99	243	99.99

Table 3. Ecological and zoogeographic characteristics of Carabid collected in the Dumbrava Sibiului oak forest

Species	Reproduction	Hum.	Habit.	Food	Distribution
<i>C. gigas</i>		M	F	Z	
<i>C. coriaceus</i>	A	M.	F	Z	Eur.
<i>C. violaceus</i>	A	M	F, St.	Z	West Pal.
<i>C. ullrichi</i>	S	M	F	Z	Transpal.
<i>C. scheidleri</i>		M	F	Z	
<i>C. nemoralis</i>		M	F	Z	
<i>H. latus</i>	A	M.	F,St.	P	Transpal.
<i>P. niger</i>	plastic	M	E	Z	Transpal.
<i>P. melanarius</i>	Plastic	M	F	Z	West pal.
<i>P. oblongopunctatus</i>	S	M	F	Z	Transpal.
<i>P. assimilis</i>	S	H	F	Z	Transpal.
<i>Agonum</i> sp.					
<i>A. binotatus</i>	S	M	O	P	Westpal.
<i>L. pilicornis</i>	S	M	F	Z	Holarct.

Legend : Reproduction type: A = Autumn, S=Spring, P= Plastic; Humidity preference: M= Mesophilous, X=Xerophilous, H=Hygrophilous; Habitat preference: F= Forest, E= Eurypotic,O=landscape; Z = Zoophagous, P=Pantophagous; E= Europe, W = Westpalaeartic, T=Transpalaeartic; H= Holarctic.

Table 4. The dominance structure of the species of Carabidae in the Dumbrava Sibiului oak forest, Sibiu County

Dominance degree	Species	%	Individuals	%
Eudominant	4	28.57	150	79.79
Dominant	0	0	0	0
Subdominant	4	28.57	21	11.17
Recedent species	6	42.86	17	9.04
Subrecedent species	0	0	0	0
Total	14	100.0	188	100

Order COLEOPTERA

I. Family CARABIDAE

1. *Carabus gigas* CREUTZ

Material collected: 5 individuals, 15.09.2012¹, C₈^{**}; L_c^{*}=33 mm; Rare species, it can live more than 3 years [20].

Biology: It prefers habitats with increased atmospheric humidity and abundant precipitation, more authors stress preference of beech forests, but it occurs in any other types of deciduous forests and penetrates arable land and settlements. Essential precondition is abundance of snails (*Helix*) and presence of old trees. It is highly mobile and often is active by the day, hunting the snails mostly after rains. According to [23] it occurs till 700 m altitude but its vertical occurrence reaches even to higher altitudes [11]. Our individuals are smaller. Concerning the geographical distribution in Romania [24] quoted this species also in Cibin Mountains and Turnu Roșu zone that are not very far away from Dumbrava Sibiului.

Trophic regimen: carnivorous, preferably snails, insects etc.).

2. *Carabus coriaceus*

Material collected: 3 individuals, 17.05.2012, C₃ (L_c=30 mm); 15.08., C₈(L_c=35 mm); 15.09., C₁(L_c=35 mm),

Biology: From lowlands to the altitudes of about 1000 m, in central Europe a stenotopic forest species penetrating in autumn to orchards etc. The South

European subspecies are known to in fields with moisture and shade [23]. It is active in the first part of the night. It could live 2-3 years.

Trophic regimen: carnivorous, entomophagous.

3. *Carabus violaceus*

Material collected: 7 individuals, 17.05.2011, C₁₁, L_c=30 mm; 04.06.2012, C₄, L_c=25 mm; 15.08.2011, C₁₂(3 ex.); 15.09.2011, C₈ and C₅(3ex.). L_c=25-30 mm;

Biology: in forest and orchards lowlands till to the upper border of the dwarf pine zone, optimum at middle elevation, increased demands for humidity, relatively tolerant to deforestation.

Trophic regimen: carnivorous, entomophagous. It has many races. It is frequent also in the agricultural zones on the substratum with moisture and shade.

4. *Carabus ullrichi*

Material collected: 5 individuals, 22.04.2012, C₃, L_c=17 mm.

Biology: a stenotopic species of deciduous forests, from lowlands to hilly lands.

Trophic regimen: carnivorous, entomophagous. In rainy periods active even during the day.

5. *Carabus scheidleri*

Material collected: 3 individuals, 4.06.2012; C₂ and 5.07.2011; C₁₂; L_c=30 mm. One individual had the femurs black.

Biology: from plains mountains, primarily a forest species, but is able to survive in open landscape, but in this case its occurrence depends on structure of dispersed wooden vegetation formations, sometimes active by the day.

Trophic regimen: carnivorous, entomophagous.

¹ All the captures were made during the period 2011-2012, for a space economy we don't repeat the year every time.

^{**} C₁-C₁₂ the trap number were the insect was captured.

^{*}L_c= body length

^{**}R_t=trophic regime

6. *Carabus nemoralis* O. F. Müller, 1794

Material collected: 3 individuals, 28.05.2012, C₂; L_c=30 mm, A typical species of deciduous forests in lowlands and at middle altitudes forming a typical spring aspect of the communities.

Biology: litter, different hiding places (stones, trees etc.).

Trophic regimen: carnivorous

7. *Harpalul latus* L.

Material collected: 4 individuals, 29.04.2012, C₅; L_c=10 mm.

Biology: from lowlands to mountains, an common open landscape species.

Trophic regimen: in spring it feeds with the germinated seeds and also with little animals, larvae and adults.

8. *Pterostichus niger* SCHALL.

Material collected: 32 individuals, 22.04.2012 C₃(3 ex.), C₆(1 ex.), C₁₁(1 ex.), C₁₂(1 ex.), 29.04.2012, C₁(2 ex.), C₇(1 ex.); 17.05.2012, C₃(1 ex.), C₅(2 ex.); C₁₀(1 ex.), C₄(2 ex.); C₅(1 ex.); C₆(1 ex.); 4.06.2012, C₂(1 ex.); C₃(2 ex.); C₄(2 ex.); C₁₁(1 ex.); 19.05.2012, C₅(1 ex.), 05.07.2011, C₉(2 ex.), C₁₁(1 ex.); 13.09.2011, C₈(1 ex.), 15.09.2011, C₅(1 ex.), C₄(2 ex.); C₁₀(10), L_c=20-21 mm.

Biology: From lowlands to mountains, in forests, especially in floodplains, gardens, riverine meadows. but it also occurs in fields (potato, sugar beet), where it has conditions to survive. Especially typical of the floodplain forests, highly moveable and easily changes habitats according the momentary changes in humidity. In the Cluj surroundings [37] it was collected from IV-IX.

Trophic regimen: zoophagous.

9. *Pterostichus melanarius* L.

Material collected : 25 individuals, 6.04.2012, C₇(1 ex.); 22.04.2012, C₆(1 ex.), C₇(2 ex.), C₁₂(1 ex.), 29.04.2012, C₅(1 ex.), C₆(2 ex.), C₇(1 ex.), C₈(1 ex.), C₁₂(1 ex.), 17.05.2012, C₁(1 ex.), C₆(1 ex.), C₇(3 ex.), C₁₀(1 ex.), C₁₁(2 ex.), 28.05.2012, C₁₁(1 ex.), 4.06.2012, C₃(1 ex.), C₇(1 ex.), 5.07.2011, C₁₂(1 ex.), 15.09.2011, C₃(1 ex.). L_c=15-17 mm.

Biology: eurytopic species with certain preference for increased humidity, particularly frequent in floodplain forests and in some types of mountain forests, urban parks, often being also one of dominant species fields in sugar beet, potatoe and maize fields, activity from the IV-IX, very quickly reacts on the momentary changes in humidity, escapes or recolonizes the habitats..

Trophic regimen: zoophagous.

10. *Pterostichus oblongopunctatus* F.

Material collected: 53 individuals, 6.04.2012, C₁(1 ex.), C₆(5 ex.), C₇(1 ex.); 22.04.2012, C₁(1 ex.), C₃(1 ex.), C₇(2 ex.), C₈(3 ex.), C₈(3 ex.), C₁₁(3 ex.), C₁₂(1 ex.); 29.04.2012, C₅(2 ex.), C₆(1 ex.), C₇(3 ex.); C₈(2 ex.); 6.05.2012, C₅(4 ex.), C₇(3 ex.), 17.05., C₃(2 ex.),

C₅(4 ex.), C₇(3 ex.), C₁₁(1 ex.); 28.05.2012, C₅(3 ex.), C₆(1 ex.), C₈(1 ex.), 5.07.2011, C₇(2 ex.), C₁₀(1 ex.); L_c=11-13 mm.

Biology: a stenotopic species inhabiting many types of forests, with a wide altitudinal distribution and preference for moderately increased humidity. It occurs as in the mesohydrophilous forests as in the floodplain forests with different hydrological regime. By [39] found in beech trees forests

Trophic regimen: zoophagous.

11. *Platynus assimilis* PAYK.

Material collected: 36 individuals, 6.04.2012, C₆(2 ex.); 22.04.2011, C₁(1 ex.), C₇(2 ex.); 29.04.2012, C₈(7 ex.); 6.05., C₈(5 ex.); 17.05.2011, C₅(1 ex.), C₆(3 ex.), C₇(1 ex.), 28.05.2012, C₁(1 ex.), C₅(1 ex.), C₈(2 ex.), 4.06.2011, C₇(1 ex.), C₈(9 ex.); L_c=11-14 mm.

Biology: it prefers humid forests and floodplain forests, under litter, floods survives under bark or in summerged soil cavities filled with air. Prefers floodplain forests flooded with stagnant water for a short time.

Trophic regimen: predatory, entomophagous.

12. *Agonum* sp.

Material collected : 3 individuals, 29.04.2012, C₇, L_c=7 mm.

Trophic regimen: all the species are zoophagous .

13. *Anisodactylus binotatus* F.

Material collected : 2 individuals, 17.05.2012, C₇, L_c=9.5 mm;

Biology: open places, open landscape without tree shadowing, hydrophilous, prefers heavy soils.

Trophic regimen: Pantophagous.

14. *Loricera pilicornis*

Material collected : 3 individuals, 6.05.2012, C₈, L_c=8 mm;

Biology: it prefers searly successional stages of vegetation, under litter, moss, stones, near the water bodies.

Trophic regimen: entomophagous.

II. Family Silphidae**1. *Oiceoptoma thoracica***

Material collected: 12 individuals, 6.04.2012, C₇(2 ex.), 17.05., C₁(2 ex.), C₇(1 ex.), C₁₁(2 ex.), 28.05.2012, C₄(4 ex.), C₁₂(1 ex.); L_c=11-16 mm.

Biology: dead bodies, human dejections, mushrooms, ratten, fruits. Shows a preference for forests.

Trophic regimen: necrophagous, occasionally saprophagous.

2. *Nicrophorus vespillo* L.

Material collected: 9 individuals, 4.06.2012, C₁₁(2 ex.), 15.09.2011, C₅(1 ex.), C₉(6 ex.); L_c=14-16 mm.

Biology: dead bodies, an eurytopic species with slight preference for open landscape.

Trophic regimen: necrophagous.

3. *Nicrophorus humator* GOEZE.

Material collected : 8 individuals , 17.05.2012, C₁(2 ex.), C₁₁(2 ex.), 16.10.2012 C₁ (4 ex.), L_c=18-23 mm.

Biology: dead bodies of animals, dry mushrooms, an eurytopic species with slight preference for open landscape

Trophic regimen: necrophagous.

III. Family ELATERIDAE

1. *Sericus brunneus*

Material collected: 1 individual, 17.05.2012, C₅, L_c=9 mm.

Biology: larvae feed with the roots of the plants, the species distributed from lowlands to the mountain zones.

Trophic regimen: phytophagous larvae, the adults lick nectar and eat pollen.

IV. Family SCARABAEIDAE

1. *Onitcelus fulvus*.

Material collected: 1 individual , 17. 05. 2012, C₇; L_c=10.5 mm.

Biology: it prefers oak trees forest and mixed .

Trophic regimen: coprophagous.

2. *Geotrupes stereorarius*

Material collected : 7 individuals , 17.05.2012, C₁ (2 ex.), 28.05.2012, C₈ (1 ex.), 4.06.2012, C₁ (4 ex.); L_c=20 mm.

Biology: it prefers fresh animal excreta. It was collected in litter in beech forest [39], otherwise eurytopic.

Trophic regimen: coprophagous.

Order DERMAPTERA

VI. Family FORFICULIDAE

1. *Forficula auricularia*

Material collected: 2 individuals, 17.05.2012, C₁; L_c=10 mm.

Biology: rare forest with subtrees, litter. **Trophic regimen:** mixophagous.

DISCUSSION

The community composition reflects the position of the sampling site close to the margin of the forests and neighbouring fields, but the forest and eurytopic species predominate over the open landscapes species represented by *Harpalus latus* [48]. Presence of *Silphids* and *Scarabaeids* in the material results from the attractivity of the caught material in the traps for these necrophagous or coprophagous species.

Within an oak tree forest, the conditions of humidity are lower than within a beech tree ecosystem. Comparing our results, as concerns the family of Carabidae, (species, percentages of individuals) with those of [2,3,4] in a forests of pedunculate oak (*Quercus pedunculatus*) sessile oak (*Quercus petraea*) in Republic of Moldova [2] collected 21 species of Carabidae, while we only 14 . Among them six species

were common for these two forests, viz *Platynus assimilis*, *Pterostichus niger*, *P. melanarius* , *Carabus ullrichi*, *Harpalus latus* and *Carabus coriaceus*. Eight species (57.14 % of total species) were captured only in the Dumbrava Sibiului forest, while 15 species (71.42 %) only in the forest studied by [3].

The variation of percentages of the common species dominance in the two sites reflect more adequately the reality of locale conditions. Thus, The "Dumbrava Sibiului" forest has better conditions of humidity for the forest is located in the Sibiu Depression with mountain influences in comparison with the "Plaiul Fagului" Reserve, located closer to Eastern steppe[2].

Pterostichus oblongopunctatus has a percentage of 31.43% in the "Dumbrava Sibiului" while in the "Plaiul Fagului" it was not collected at all. The species *Carabus ullrichi* had a percentage of 10.95%, in the "Plaiul Fagului" and only 2.66 % in the "Dumbrava Sibiului". Percentage differences are due to variation of the humidity in the two forests.

The following species of carabids, *Carabus coriaceus*, *Carabus violaceus*, *Carabus ullrichi*, *Pterostichus niger*, *P. melanarius*, *Harpalus sp.* were collected from crops near the forest, too, but in fewer individuals.

The species composition characterized by a high dominance of *Pterostichus niger*, *Pterostichus melanarius*, *Platynus assimilis*, *Carabus ullrichi* and *Staphylinus erythropterus* is typical of dry types of floodplain forests in Central Europe (*Quercus Fraxineta*, *Ulmi Fraxineta carpineae*) [26, 27, 32-35]. In comparison with carabid communities in many other localities in lowlands and highlands number of species and individuals is extremely low and corresponds to the highly degraded communities [17, 27, 30, 31] and corresponds to the urban parks with preserved seminatural vegetation and fauna, but isolated in the city.

The collecting and analysing of 243 individuals during 2011-2012 in the "Dumbrava Sibiului" oak forest revealed that the epigeic entomofauna poor as in number of individuals as in number of species. The epigeic fauna of insects is composed of 96.42% Ord. *Coleoptera* and 3.57% Ord. *Dermaptera*.

The *Carabids* were represented by 14 species, 184 individuals, *Staphylinids* 7 species, 15 individuals, and *Silphids* by 3 species, 29 individuals, *Elateridae* 1 specie, 1 individual, *Scarabaeidae* 2 species, 8 individuals and *Forficulidae* 1 specie, 2 individuals.

The eudominant species of *Carabidae* were: *Pterostichus oblongopunctatus* *Platynus assimilis*, *Pterostichus niger*, *P. melanarius*. The percentage of individuals of eudominant species ranged from 29 (15.43 % *Pterostichus melanarius*) to 60 (31.43 % *Pterostichus oblongopunctatus*). 6 species were recedent.

Five *Carabid* species are springbreeders, and 4 species autumn breeders. The majority of species were forest species, mesophilic, zoophagous, Palaearctic.

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Received: 6 October 2013

Accepted: 25 November 2013

Published Online: 28 November 2013

Analele Universității din Oradea, Fascicula Biologie

<http://www.bioresearch.ro/revistaen.html>

Print-ISSN: 1224-5119

e-ISSN: 1844-7589