

Studies on the snout-beetle fauna (Coleoptera: Curculionoi- dea) from Poșaga de Sus- Belioara Valley area, Apuseni Mountains, Romania

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Rezumat

**Cercetări privind fauna de curculionide (Coleoptera: Curcu-
lionioida) din zona Poșaga de Sus - Valea Belioara, Munții
Apuseni, Romania**

Materialul biologic a fost colectat în perioada iunie - septem-
brie 1997 din șase tipuri de ecosisteme, în cadrul zonei Valea Be-
lioara, localitatea Poșaga de Sus, zonă în care nu s-au mai efectuat
până acum cercetări privind curculionidele. Am colectat un număr
de 1305 indivizi, aparținând la 94 specii, din 48 genuri, 20 subfa-
milii și patru familii de Curculionoidea. Cele mai bine reprezentate
ca număr de specii au fost subfamiliile: Apionidae (22 specii),
Otiiorhynchinae (15 specii), Brachyderinae (10 specii) și Hyperinae
(10 specii), iar ca număr de indivizi subfamilia Rhynchaeninae cu
specia *Rhynchaenus (Euthron) fagi* (L.). Specia dominantă în zonă
este *Rhynchaenus (Euthron) fagi* (L.) iar codominante: *Nedyus
quadrimaculatus* (L.), *Phyllobius (Parnemoicus) chloropus* (L.) și
Deporaus (Deporaus) betulae (L.). Am semnalat în zona Poșaga
- Valea Belioara două specii rare: *Otiiorhynchus (Otiiorhynchus) per-
dix* (OLIV.), și *Polydrusus (Eustolus) confluens* STEPHENS.

Keywords: Curculionoidea, faunistics, Belioara Valley area.

Introduction

This paper is a continuation of our studies made on the snout-beetle
fauna (Coleoptera: Curculionoidea) from the Arieș River basin, studies that
have been started in 1991 and published beginning with 1993 (TEODOR 1993;
TEODOR & CRIȘAN 1996; TEODOR CRIȘAN & SEFFER 2000).

Before our studies, we had only few data about snout-beetles of this
area, and these referred to only 23 species. These early data were published in
publications on Coleoptera in general (PETRI 1912, 1925/1926) or about snout-
beetles (MARCU 1957; ENDRÓDI 1960, 1969, 1970) from different regions of
Transylvania or in articles referring to Coleoptera from some places situated
in the Arieș River area (CSÍKI 1916; TEODOREANU 1986).

Later, snout-beetle fauna from the area mentioned above began to be studied even by others (KOCs & PODLUSSANY 1999) but since this paper, the snout-beetle fauna from Poșaga de Sus- Belioara Valley has never been studied.

The Poșaga Valley is one of the most important valleys from the left side of the middle course of the Arieș River. The locality Poșaga de Sus is situated along the Belioara Valley, which is a tributary of the Poșaga Valley. A road situated along the Belioara Valley ends at the cliffs of the Scărița - Belioara Nature Reserve. This was the place where we conducted our research (fig. 1).

Material & methods

Between June - September 1997, in Poșaga de Sus - Belioara Valley



Fig. 1. Localisation of the studied area

area we took samples both in the valley and on some accessible slopes of the Scărița - Belioara Mountains, in six different ecosystems (fig. 1):

I. A forest of *Fagus sylvatica*, extended from the valley to the boundary of the Nature Reserve Scărița- Belioara. In this forest we sampled slopes with a general South - Eastern aspect.

II. A valley bottom, along the Belioara Valley, a large area with abundant herbaceous vegetation and some trees and bushes.

III. A grazed meadow with some trees of *Robinia pseudoaccacia*, situated on the left side of the Belioara Valley, on a slope with Western aspect.

IV. Steep rocks, on the left side of the Belioara River, having Eastern orientation, with xerophilous biotopes, covered by rare herbaceous vegetation and mostly *Juniperus* bushes.

V. A meadow situated on the right side of the Belioara River, an area with abundant herbaceous vegetation, bushes of *Coryllus avellana* and some trees of *Fraxinus excelsior* and *Acer sp.*

VI. A mezophilous meadow with bushes and herbaceous vegetation on the right side of the Belioara Valley, on a slope with Eastern aspect, which goes to the base of the rocks that surround a large plane area, called "Șesul Craiului".

The capture of snout-beetles was made by sweeping the vegetation with an entomological net (10 sweeps/ sample). Some individuals were captured using Barber traps and others directly from the host-plants.

Identification of the collected individuals was made in the laboratory according to their morphology and to the morphology of the male genitalia. We used different bibliographical sources: FREUDE, HARDE & LOHSE 1981, 1983; ENDRÓDI 1961; DIECHMANN 1974, 1977, 1980, 1983, 1988; LOHSE & LUCHT 1993; ALONSO-ZARAZAGA 1989; COLONELLI 1994; PODLUSSÁNY 1996.

Results and discussions

In all of the sampled ecosystems we captured 1305 individuals belonging to 94 species from 48 genera, 20 subfamilies and 4 families of Curculionoidea (tab.1).

The highest number of species was signaled in the valley bottom (46 species) and in the mezophilous meadow (37 species), followed by the grazed meadow with 29 species and the meadow with 22 species, (fig. 2).

In the *Fagus sylvatica* forest were signaled only 7 species, but in this ecosystem was registered the highest number of individuals that belong to the species *Rynchaenus (Euthron) fagi* (L.). The lowest number of species, only 5, was on the rocks, (fig. 2.).

Table 1

Curculionoidea species from Poșaga de Sus – Belioara Valley, collected in the period June- September 1997.

Abbreviations: D%= dominance; Ind. nr.= number of individuals; Tot. nr.= total number of individuals; *= the note corresponds to that from Material and method.

Families, subfamilies, species	Date	Ind.nr.	Studied ecosystems*	Tot.	D%
ANTHRIBIDAE					
Anthribinae					
<i>Anthribus albinus</i> (Linné, 1758)	25.VII	1	VI. mesophilous meadow	1	0,07
ATTELABIDAE					
Rhynchitinae					
<i>Pselaphorhynchites nanus</i> (Paykul, 1792)	16.VI	2	III. grazed meadow	2	0,15
<i>Rhynchites aetiops</i> Bach, 1854	25.VII	2	II. valley bottom	2	0,15
<i>Byctiscus populi</i> (Linné, 1758)	25.VII	1	VI. mezophilous meadow	1	0,07

Families, subfamilies, species	Date	Ind.nr.	Studied ecosystems*	Tot.	D%
<i>Deporaus (Deporaus) betulae</i> (Linné, 1758)	16.VI	2	II. valley bottom	48	3,68
	16.VI	5	III. grazed meadow		
	16.VI	14	VI. mesophilous meadow		
	18.VI	1	II. valley bottom		
	18.VI	7	III. grazed meadow		
	18.VI	1	V. meadow		
	18.VI	16	VI. mesophilous meadow		
	25.VII	1	II. valley bottom		
	25.VII	1	VI. mesophilous meadow		
Apoderinae					
<i>Apoderus coryli</i> (Linné, 1758)	25.VII	1	VI. mesophilous meadow	1	0,07
APIONIDAE					
Nanophyinae					
<i>Nanophyes marmoratus</i> (Goeze, 1777)	18.VI	1	V. meadow	1	0,07
Apioninae					
<i>Omphalapion dispar</i> (Germar, 1817)	16.VI	1	III. grazed meadow	1	0,07
<i>Omphalapion laevigatum</i> (Paykull, 1792)	16.VI	3	II. valley bottom	4	0,30
	16.VI	1	III. grazed meadow		
<i>Acanephodus (Acanephodus)</i> <i>onopordi</i> (Kirby, 1808)	16.VI	1	III. grazed meadow	3	0,23
	16.VI	1	VI. mesophilous meadow		
	25.VII	1	II. valley bottom		
<i>Acanephodus (Clementielus)</i> <i>orientale</i> (Gerstäcker, 1854)	16.VI	1	II. valley bottom	1	0,07
<i>Pseudoprotapion astragali</i> (Paykull, 1800)	18.VI	1	II. valley bottom	1	
<i>Protapion apricans</i> (Herbst, 1797)	16.VI	2	III. grazed meadow	6	0,46
	16.VI	1	VI. mesophilous meadow		
	18.VI	1	V. meadow		
	25.VII	1	VI. mesophilous meadow		
	28.VIII	1	III. grazed meadow		
<i>Protapion assimile</i> (Kirby, 1808)	16.VI	3	II. valley bottom	11	0,84
	16.VI	1	III. grazed meadow		
	16.VI	1	VI. mesophilous meadow		
	18.VI	1	V. meadow		
	18.VI	3	VI. mesophilous meadow		
	25.VII	2	V. meadow		

Families, subfamilies, species	Date	Ind.nr.	Studied ecosystems*	Tot.	D%
<i>Protapion fulvipes</i> (Fourcroy, 1785)	16.VI	1	II. valley bottom	6	0,46
	18.VI	3	V. meadow		
	28.VIII	2	II. valley bottom		
<i>Protapion trifolii</i> (Linné, 1768)	16.VI	1	VI. mesophilous meadow	1	0,07
<i>Protapion varipes</i> (Germar, 1817)	16.VI	4	II. valley bottom	4	0,30
<i>Aizobius sedi</i> (Germar, 1818)	25.VII	2	VI. mesophilous meadow	2	0,15
<i>Perapion curtirostre</i> (Germar, 1817)	16.VI	1	III. grazed meadow	1	0,07
<i>Perapion marchicum</i> (Herbst, 1797)	16.VI	1	III. grazed meadow	2	0,15
	25.VII	1	V. meadow		
<i>Perapion oblongum</i> (Gyllenhal, 1839)	16.VI	1	III. grazed meadow	1	0,07
<i>Catapion pubescens</i> (Kirby, 1811)	25.VII	2	VI. mesophilous meadow	2	0,15
<i>Stenopterapion intermedium</i> (Eppelsheim, 1879)	16.VI	1	III. grazed meadow	1	0,07
<i>Ischnopterapion (Ischnopterapion) loti</i> (Kirby, 1808)	18.VII	1	V. meadow	1	0,07
<i>Holotrichapion (Holotrichapion) ononis</i> (Kirby, 1808)	16.VI	2	III. grazed meadow	2	0,15
<i>Oxystoma pseudocerdo</i> (Dieckmann, 1971)	16.VI	1	III. grazed meadow	2	0,15
	25.VII	1	VI. mesophilous meadow		
<i>Eutrichapion (Eutrichapion) ervi</i> (Kirby, 1808)	18.VI	1	V. meadow	3	0,23
	18.VI	2	VI. mesophilous meadow		
<i>Eutrichapion (Eutrichapion) viciae</i> (Paykull, 1800)	16.VI	1	III. grazed meadow	2	0,15
	18.VI	1	II. valley bottom		
<i>Eutrichapion (Phalacrolobus) melancholicum</i> (Wenker, 1864)	18.VI	1	III. grazed meadow	1	0,07
CURCULIONIDAE					
Otiiorhynchinae					
<i>Otiiorhynchus (Dodecastichus) pulverulentus</i> Germar, 1824	28.VIII	1	V. meadow	1	0,07
<i>Otiiorhynchus (Otiiorhynchus) perdix</i> (Olivier, 1807)	16.VI	1	II. valley bottom	1	0,07
<i>Otiiorhynchus (Otiiorhynchus) winkleri</i> Solari, 1937	5.VII	1	VI. mesophilous meadow	1	0,07
<i>Otiiorhynchus (Otiiorhynchus) raucus</i> (Fabricius, 1776)	9.VII	2	IV. steep rocks	3	0,23
	28.VIII	1	II. valley bottom		
<i>Otiiorhynchus (Otiiorhynchus) scaber</i> (Linné, 1758)	28.VIII	1	II. valley bottom	1	0,07

Families, subfamilies, species	Date	Ind.nr.	Studied ecosystems*	Tot.	D%
<i>Otiiorhynchus (Dorymerus) cymophanus</i> Boheman, 1821	16.VI	4	II. valley bottom	4	0,30
<i>Otiiorhynchus (Dorymerus) opulentus</i> Germar, 1834	16.VI	7	II. valley bottom	20	1,53
	16.VI	4	III. grazed meadow		
	18.VI	1	II. valley bottom		
	9.VII	2	II. valley bottom		
	25.VII	1	VI. mesophilous meadow		
<i>Otiiorhynchus (Dorymerus) schauami</i> Stierlin, 1861	28.VIII	5	II. valley bottom	1	0,07
	9.VII	1	II. valley bottom		
<i>Otiiorhynchus (Tournieria) coarctatus</i> Stierlin, 1861	16.VI	1	III. grazed meadow	1	0,07
<i>Otiiorhynchus (Tournieria) ovatus</i> (Linné, 1758) ²	25.VII	2	II. valley bottom	4	0,30
	28.VIII	2	II. valley bottom		
<i>Trachyphloeus aristatus</i> (Gyllenhal, 1827)	9.VII	1	V. meadow	1	0,07
<i>Phyllobius (Parnemoicus) chloropus</i> (Linné, 1758)	16.VI	7	II. valley bottom	49	3,75
	16.VI	12	III. grazed meadow		
	16.VI	14	VI. mesophilous meadow		
	18.VI	2	II. valley bottom		
	18.VI	2	III. grazed meadow		
	18.VI	1	IV. steep rocks		
	18.VI	6	V. meadow		
	18.VI	5	VI. mesoph. meadow		
<i>Phyllobius (Haplophyllobius) pilicornis</i> Desbrochers des Loges, 1873	18.VI	1	V. meadow	1	0,07
<i>Phyllobius (Nemoicus) oblongus</i> (Linné, 1758)	16.VI	6	II. valley bottom	20	1,53
	16.VI	7	III. grazed meadow		
	18.VI	4	II. valley bottom		
	18.VI	2	V. meadow		
<i>Phyllobius (Dieletus) argentatus</i> (Linné, 1758)	9.VII	1	V. meadow	39	2,99
	16.VI	24	I. <i>Fagus sylvatica</i> forest		
	16.VI	2	II. valley bottom		
	16.VI	1	III. grazed meadow		
	16.VI	3	VI. mesophilous meadow		
	18.VI	2	I. <i>Fagus sylvatica</i> forest		
	18.VI	2	II. valley bottom		
	18.VI	4	VI. mesophilous meadow		
	25.VII	1	VI. mesophilous meadow		
<i>Phyllobius (Phyllobius) pyri</i> (Linné, 1758)	16.VI	1	III. grazed meadow	3	0,23
	16.VI	2	V. meadow		
Brachyderinae					
<i>Polydrusus (Tylodrusus) pterrygomalis</i> Boheman, 1840	16.VI	4	I. <i>Fagus sylvatica</i> forest	5	0,38
	16.VI	1	II. valley bottom		
<i>Polydrusus (Eustolus) confluens</i> Stephens, 1831	16.VI	4	VI. mesophilous meadow	7	0,53
	5.VII	2	VI. mesophilous meadow		
	25.VII	1	II. valley bottom		
<i>Polydrusus (Neodrusus) thalassinus</i> Gyllenhal, 1834	16.VI	1	VI. mesophilous meadow	2	0,15
	25.VII	1	II. valley bottom		
<i>Polydrusus (Polydrusus) picus</i> (Fabricius, 1792)	16.VI	1	VI. mesophilous meadow	3	0,23
	25.VII	1	V. meadow		
	25.VII	1	VI. mesophilous meadow		

Families, subfamilies, species	Date	Ind.nr.	Studied ecosystems*	Tot.	D%
<i>Polydrusus (Polydrusus) sparsus</i> Gyllenhal, 1834	16.VI	3	I. <i>Fagus sylvatica</i> forest	3	0,23
<i>Liophloeus (Liophloeodes) liptoviensis</i> J. Weise, 1894	16.VI	2	II. valley bottom	2	0,15
<i>Eusomus ovulum</i> Germar, 1824	16.VI	1	VI. mesophilous meadow	2	0,15
	25.VII	1	II. valley bottom		
<i>Sciaphilus asperatus</i> (Bonsdorff, 1785)	16.VI	1	VI. mesophilous meadow	4	0,30
	28.VIII	3	II. valley bottom		
<i>Strophosoma melanogrammum</i> (Forster, 1771)	16.VI	1	III. grazed meadow	3	0,23
	16.VI	1	VI. mesophilous meadow		
	25.VII	1	VI. mesophilous meadow		
<i>Barynotus obscurus</i> (Fabricius, 1775)	28.VIII	1	II. valley bottom	1	0,07
Sitoninae					
<i>Sitona (Sitona) cylindricollis</i> (Fähræus, 1840)	16.VI	3	III. grazed meadow	7	0,53
	16.VI	1	VI. mesophilous meadow		
	18.VI	2	V. meadow		
	25.VII	1	V. meadow		
<i>Sitona (Sitona) humeralis</i> Stephens, 1831	16.VI	8	VI. mesophilous meadow	12	0,92
	18.VI	1	II. valley bottom		
	25.VII	2	II. valley bottom		
	28.VII	1	IV. steep rocks		
<i>Sitona (Sitona) lineatus</i> (Linné, 1758)	16.VI	11	VI. mesophilous meadow	11	0,84
<i>Sitona (Sitona) sulcifrons</i> (Thunberg, 1798)	16.VI	7	II. valley bottom	13	0,99
	16.VI	1	III. grazed meadow		
	16.VI	4	VI. mesophilous meadow		
	25.VII	1	VI. mesophilous meadow		
<i>Sitona (Sitona) striatellus</i> Gyllenhal, 1831	16.VI	1	III. grazed meadow	2	0,15
	18.VI	1	IV. steep rocks		
Cleoninae					
<i>Larinus (Larinodontus) jaceae</i> (Fabricius, 1775)	16.VI	5	III. grazed meadow	18	1,38
	16.VI	4	VI. mesophilous meadow		
	18.VI	1	II. valley bottom		
	18.VI	4	III. grazed meadow		
	18.VI	1	V. meadow		
	18.VI	1	VI. mesophilous meadow		
	25.VII	1	III. grazed meadow		
	25.VII	1	VI. mesophilous meadow		
<i>Larinus (Larinodontus) planus</i> (Fabricius, 1792.)	16.VI	1	II. valley bottom	8	0,61
	16.VI	1	III. grazed meadow		
	16.VI	1	VI. mesophilous meadow		
	25.VII	2	II. valley bottom		
	25.VII	3	VI. mesophilous meadow		
<i>Larinus (Larinomesius) obtusus</i> Gyllenhal, 1836	16.VI	1	VI. mesophilous meadow	2	0,15
	18.VI	1	VI. mesophilous meadow		
Hyperinae					
<i>Hypera meles</i> (Fabricius, 1792)	16.VI	1	VI. mesophilous meadow	1	0,07
<i>Hypera nigrirostris</i> (Fabricius, 1775)	25.VII	1	VI. mesophilous meadow	1	0,07
<i>Hypera ononidis</i> (Chevrolat, 1863)	16.VI	1	VI. mesophilous meadow	1	0,07
<i>Hypera rumicis</i> (Linné, 1758)	16.VI	1	VI. mesophilous meadow	1	0,07

Families, subfamilies, species	Date	Ind.nr.	Studied ecosystems*	Tot.	D%
<i>Hypera striata</i> (Boheman, 1842)	18.VI	1	V. meadow	1	0,07
<i>Hypera suspiciosa</i> (Herbst, 1795)	16.VI	2	III. grazed meadow	3	0,23
	25.VII	1	VI. mesophilous meadow	1	0,07
<i>Domus elegans</i> (Boheman, 1842)	25.VII	1	II. valley bottom	1	0,07
<i>Domus oxalidis</i> (Herbst, 1795)	9.VII	1	II. valley bottom		
<i>Domus velutinus</i> (Boheman, 1842)	16.VI	1	II. valley bottom	1	0,07
<i>Alophus triguttatus</i> (Fabricius, 1775)	9.VII	2	II. valley bottom	5	0,38
	25.VII	1	II. valley bottom		
	28.VIII	2	V. meadow		
Molytinae					
<i>Plinthus sturmi</i>	9.VII	1	II. valley bottom	2	0,15
	28.VIII	1	II. valley bottom		
Cryptorhynchinae					
<i>Echinodera hypocrita</i> (Boheman, 1837)	28.VIII	1	II. valley bottom	1	0,07
Ceurorhynchinae					
<i>Rhynchus (Rhynchus) inconspicuum</i> (Herbst, 1795)	16.VI	1	VI. mesophilous meadow	1	0,07
<i>Ceurorhynchus atomus</i> Boheman, 1845	16.VI	1	II. valley bottom	1	0,07
<i>Ceurorhynchus chlorophanus</i> Rouget, 1857	16.VI	2	I. <i>Fagus sylvatica</i> forest	2	0,15
<i>Ceurorhynchus cochleariae</i> (Gyllenhal, 1813)	16.VI	4	II. valley bottom	5	0,38
	18.VII	1	II. valley bottom		
<i>Ceurorhynchus pallidactylus</i> (Marsham, 1802)	16.VI	1	I. <i>Fagus sylvatica</i> forest	1	0,07
<i>Nedys quadrimaculatus</i> (Linné, 1758)	16.VI	25	I. <i>Fagus sylvatica</i> forest	80	6,13
	16.VI	11	II. valley bottom		
	16.VI	40	III. grazed meadow		
	18.VI	1	II. valley bottom		
	25.VII	3	VI. mesophilous meadow		
<i>Glucianus incisus</i> (Schultze, 1899)	16.VI	3	VI. mesophilous meadow	3	0,23
<i>Zacladus granii</i> (Paykull, 1800)	25.VII	1	II. valley bottom	1	0,07
Curculioninae					
<i>Curculio (Curculio) nucum</i> (Linné, 1758)	25.VII	1	VI. mesophilous meadow	1	0,07
Tychiinae					
<i>Tychius schneideri</i> (Herbst, 1795)	18.VI	1	VI. mesophilous meadow	1	0,07
Notarinae					
<i>Grypus equiseti</i> (Fabricius, 1775)	9.VII	1	V. meadow	1	0,07
Anoplinae					
<i>Anoplus roboris</i> Suffrian, 1840	16.VI	1	III. grazed meadow	1	0,07
Rhynchaeninae					

Families, subfamilies, species	Date	Ind.nr.	Studied ecosystems*	Tot.	D%
<i>Rynchaenus (Euthron) fagi</i> (Linné, 1758)	16.VI	556	I. <i>Fagus sylvatica</i> forest	786	60,23
	16.VI	15	II. valley bottom		
	16.VI	47	III. grazed meadow		
	16.VI	25	VI. mesophilous meadow		
	18.VI	23	I. <i>Fagus sylvatica</i> forest		
	18.VI	4	II. valley bottom		
	18.VI	1	III. grazed meadow		
	18.VI	1	IV. steep rocks		
	18.VI	2	V. meadow		
	18.VI	7	VI. mesophilous meadow		
	5.VII	11	VI. mesophilous meadow		
	25.VII	20	II. valley bottom		
	25.VII	6	VI. mesophilous meadow		
	28.VIII	22	I. <i>Fagus sylvatica</i> forest		
	28.VIII	7	II. valley bottom		
2.IX	36	I. <i>Fagus sylvatica</i> forest			
2.IX	2	II. valley bottom			
<i>Rynchaenus (Tachyerges) stigma</i> (Germar, 1821)	18.VII	1	II. valley bottom	2	0,15
	25.VII	1	II. valley bottom		
Gymnetrinae					
<i>Miarus (Miarus) ajugae</i> (Herbst, 1795)	16.VI	2	II. valley bottom	5	0,38
	16.VI	2	VI. mesophilous meadow		
	5.VII	1	VI. mesophilous meadow		
<i>Miarus (Miarus) monticola</i> Petri, 1912	16.VI	3	III. grazed meadow	8	0,61
	16.VI	2	VI. mesophilous meadow		
	25.VII	2	II. valley bottom		
	25.VII	1	VI. mesophilous meadow		
<i>Miarus (Miaromimus) longirostris</i> (Gyllenhal, 1838)	16.VI	1	II. valley bottom	1	0,07
Gymnetrinae					
<i>Gymnetron (Rhinusa) tetrum</i> (Fabricius, 1792)	25.VII	1	II. valley bottom	1	0,07
Cioninae					
<i>Cionus hortulamus</i> (Fourcroy, 1785)	25.VII	9	II. valley bottom	16	1,23
	25.VII	5	IV. steep rocks		
	28.VIII	2	IV. steep rocks		

Concerning the number of species, the most represented subfamilies were: Apionidae (22 species), Otiorthynchinae (15 species), Brachyderinae (10 species) and Hyperinae (10 species). Regarding the number of individuals, the most dominant subfamily was Rynchaeninae where this high abundance was signaled for the species *Rynchaenus (Euthron) fagi* (L.), (tab. 1, fig. 3).

The dominant species is *Rynchaenus (Euthron) fagi* (L.) (60, 23%), the codominant species have a lower dominance: *Nedyus quadrimaculatus* (L.) (6,13%), *Phyllobius (Parnemoicus) chloropus* (L.) (3, 75%) and *Deporaus (Deporaus) betulae* (L.) (3,68%).

Rynchaenus (Euthron) fagi (L.) is a common species in the sampled area, being typical especially for the *Fagus sylvatica* forest (ecosystem I), where it was found on the leaves of the trees, and where it had the highest abundance (91, 26%). *Rynchaenus (Euthron) fagi* (L.) was abundant also in the valley bottom (ecosystem II)(29,75%), the grazed meadows (ecosystem

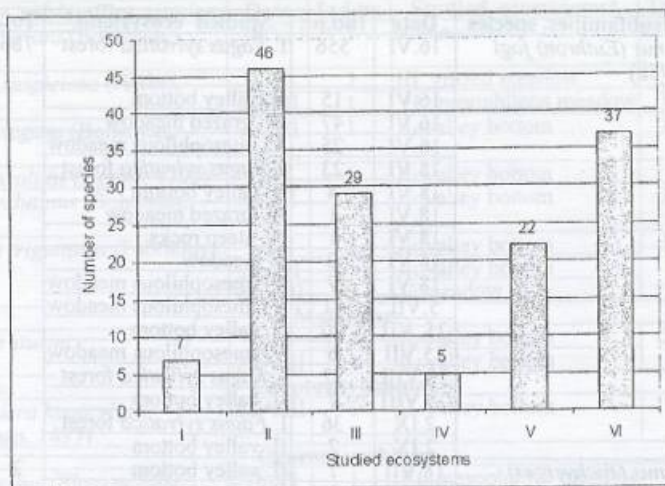


Fig. 2. Numerical spread of Curculionoidea species in Poșaga de Sus- Belioara Valley area.

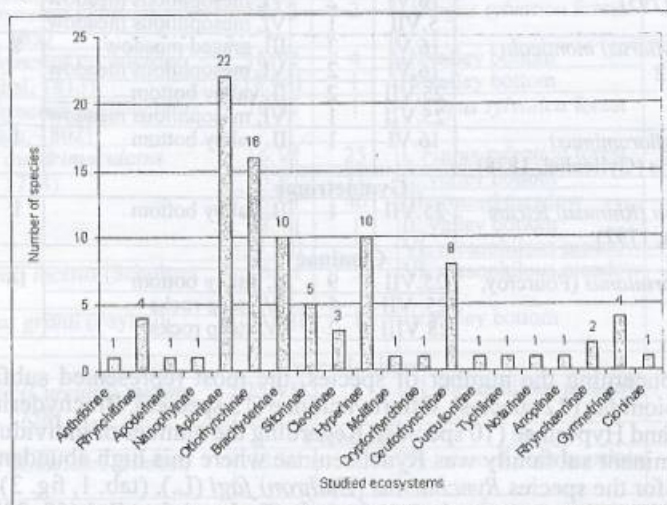


Fig. 3. Range of Poșaga de Sus- Belioara Valley Curculionoidea subfamilies according to the number of species.

III) (33,56%) and the mezophilous meadow (ecosystem VI) (29, 69%). In the rocks (ecosystem IV) and in the meadow (ecosystem V) on the right side of the Belioara River, this species had a smaller representation. We mention that *Rynchaenus (Euthron) fagi* (L.) was the only taxon that was present in all six sampled ecosystems in Poșaga- Belioara Valley.

Following *Rynchaenus (Euthron) fagi* (L.), in ecosystem I a high rela-

tive abundance had the species: *Phyllobius (Dieletus) argentatus* (L.) (3,73%) and *Nedys quadrimaculatus* (L.) (3,58%).

In ecosystem II, a high abundance had the following species: *Otiorhynchus (Dorymerus) opulans* (GERM.) (9, 49%), *Nedys quadrimaculatus* (L.) (7,59%), *Phyllobius (Nemoicus) oblongus* (L.) (6,33%), *P. (Parnemoicus) chloropus* (L.) (5, 69%) and *Cionus hortulans* (FOURCROY) (5,69%).

In ecosystem III, the relative abundance was as follows: *Nedys quadrimaculatus* (L.) (27,97%), *Phyllobius (Parnemoicus) chloropus* (L.) (9, 79%) and *Deporaus (Deporaus) betulae* (L.) (8, 39%).

In ecosystem IV, the highest relative abundance had *Cionus hortulans* (FOURCROY) (58, 33%).

In ecosystem V, species *Phyllobius (Parnemoicus) chloropus* (L.) (20%) had the highest abundance.

In ecosystem VI, *Deporaus (Deporaus) betulae* (L.) (18,18%) and *Phyllobius (Parnemoicus) chloropus* (L.) (11, 51%) had the highest abundance.

In the sampled ecosystems, we signaled two species which are very rare in our region: *Otiorhynchus (Otiorhynchus) perdis* (OLIV.), mostly signaled at higher altitudes of the Alps and the Carpathian Mountains, and *Polydrusus (Eustolus) confluens* (STEPHENS) which in Europe was signaled especially on hills (ENDRÓDI 1961; DIECKMANN 1980).

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