

ORIGINAL PAPERS

A PHYTOCENOLOGICAL STUDY ON THE ANTHROPIC VEGETATION IN THE BERZUNȚI MOUNTAINS AREA, BACĂU COUNTY

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Key words: anthropical vegetation, Berzunți Mountains

INTRODUCTION

The Berzunți Mountains are situated in the central area of Bacău County, over the communes: Berzunți, Poduri, Dofteana and Bârsănești, to which vicinities of Dărmănești and Târgu-Ocna towns are added. The researched territory is in the Trotuș hydrographic basin, from north to south between 46° 28' 04" (on Moinești saddle) and 46° 16' 10" northern latitude (on Cireșoaia saddle) and from west to east between 26° 27' 59" on Ormeniș stream and 26° 38' 41" eastern longitude in the area of Brătești village[3, 7, 12-13]; it occupies a 140 km² area of which approximately 50% is covered with forest vegetation, 20% with lawns of which 15% pastures and 5% hayfields, the rest being occupied with agricultural fields, urban areas, access roads.

MATERIAL AND METHODS

The research concerning the studied area, from the point of view of vegetation, follows the method of the Zürich-Montpellier phytocenological school, proposed by J. Braun-Blanquet and J. Pavillard. To that aim we used the method of surveys „on the itinerary”, covering the whole region, according to the steps described in the studies of authors CRISTEA V., GAFTA D., PEDROTTI FR., 2004, *Fitosociologie*[6] și ȘTEFAN N., 2005, *Fitocenologie și Vegetația României*[17]. We realized the nomenclature, classification and description of vegetal associations following especially the study of CHIFU T., MÂNZU C., ZAMFIRESCU OANA, 2006, *Flora și vegetația Moldovei (România)*, vol. II[4], adding the phytosociological studies by SANDA V., POPESCU A., BARABAȘ N., 1997, *Cenotaxonomia și caracterizarea grupărilor vegetale din România*[15] and SANDA V., POPESCU A., DANIELA ILEANA STANCU, 2001, *Structura cenotică și caracterizarea ecologică a fitocenozelor din România*[16].

The nomenclature of species is made accordingly the following studies: CIOCĂRLAN V., 2000, *Flora ilustrată a României. Pteridophyta et Spermatophyta*. Ediția a II-a revizuită și adăugită,

Editura Ceres, București [5] and SANDA., BIȚĂ-NICOLAE CLAUDIA, BARABAȘ N., 2003, *Flora cormofitelor spontane și cultivate din România*, Editura „Ion Borcea”, Bacău[14]. The types of bioforms and floristic elements were taken from CHIFU T., MÂNZU C., ZAMFIRESCU OANA, 2006, *Flora și vegetația Moldovei (România)*, vol. I, Editura Universității “Alexandru Ioan Cuza” Iași[4].

RESULTS AND DISCUSSIONS

The conspect of vegetal associations. The associations studied by us were classified as follows:

Class MOLINIO-ARRHENATHERETEA R.Tx.

Order **Potentillo-Polygonetalia** R. Tx. 1947

Alliance **Potentillion anserinae** R. Tx. 1947

- As. *Junco inflexi-Menthetum longifoliae* Lohmeyer 1953

- As. *Potentilletum anserinae* Felföldy 1942

Order **Plantaginetalia majoris** R. Tx. et Preising in R. Tx. 1950

Alliance **Lolio-Plantaginion** R. Tx. 1947

- As. *Lolio-Plantaginetum* (Linkola 1921) Beger 1930 em. Sissingh 1969

- As. *Poëtum annuae* Gams 1927

Class GALIO-URTICETEA Passarge ex Kopecky 1969

Order **Lamio albi-Chenopodietalia boni-henrici** Kopecky 1969

Alliance **Galio-Alliarion** (Oberd. 1957) Lohmeyer et. Oberd. in Oberd. et al. 1957

- As. *Sambucetum ebuli* Felföldy 1942

Class STELLARIETEA MEDIAE R. Tx. et al. Ex von Rochow 1951

Order **Chenopodietalia albi** R. Tx. (1937) 1950

Alliance **Panico-Setarion** Sissingh in Westhoff et al. 1946

- As. *Echinochloo-Setarietum viridis* Sissingh et al. 1940

Order **Eragrostietalia** J. Tx. ex Poli 1966

Alliance **Amarantho-Chenopodion albi** Morariu 1943

- As. *Amarantho-Chenopodietum albi*
Morariu 1943

Class BIDENTETEA TRIPARTITI R. Tx.et al. Ex
von Rochow 1951

Order **Bidentetalia tripartiti** Br. – Bl. et R. Tx.ex
Klika et Hadač 1944

Alliance **Bidenton tripartiti** Nordhagen
1940 em. R. Tx. in Poli et J. Tx. 1960

- As. *Xanthietum riparii* Morariu 1943

The description of vegetal associations

- As. *Junco inflexi-Menthetum longifoliae*
Lohmeyer 1953

Wetland weed group with pewter and mint.

The phytocenoses of this association can be met in highly wet places, in ditches or pits in which water is temporarily collected. They have an insular spread, in dense bunches. The species characteristic to this association are *Mentha longifolia* and *Juncus inflexus*. The species *Ranunculus repens*, *Rorippa sylvestris*, *Rumex crispus*, *Prunella vulgaris*, *Taraxacum officinale*, etc. can often be met.

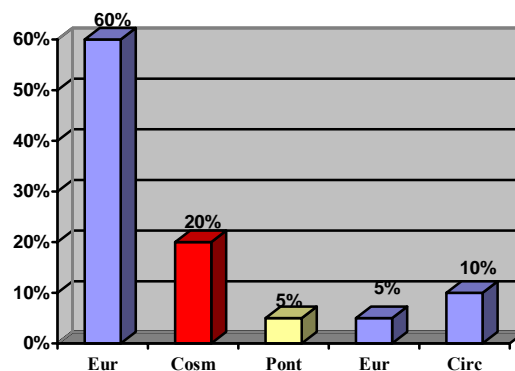
The analysis of floristic elements establishes as dominant the eurasian species (Eua)-60%, after which the cosmopolitan ones follow (Cosm)-20%, then the circumpolar – 10%, the pontic (Pont)-5% and the european (Eur)-5%.

The analysis of bioforms shows the dominance of Hemicryptophytes (H)-75%, then Geophytes (G)-15%, Camephyte (Ch)-5%, Terophyte (Th)-5%.

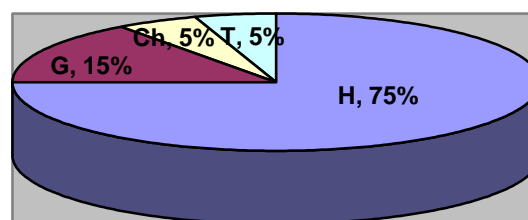
Number of survey	1	2	3	4
Altitude (m)	360	360	370	370
Vegetation cover (%)	80	90	80	90
Area (m ²)	25	50	25	50
Number of species	12	11	8	12
Association characteristic				
<i>Juncus inflexus</i>	3	3	3	3
<i>Mentha longifolia</i>	1	2	2	1
Potentilla anserinae et Potentillo-Polygonetalia				
<i>Potentilla anserina</i>	+	-	+	-
<i>Ranunculus repens</i>	+	-	+	+
<i>Rorippa sylvestris</i>	-	+	+	-
<i>Rorippa austriaca</i>	+	-	+	+
<i>Rumex crispus</i>	+	-	+	+
Arrhenatheretalia				
<i>Achillea millefolium</i>	+	-	-	+
<i>Bellis perennis</i>	+	+	-	-
<i>Prunella vulgaris</i>	-	+	-	+
<i>Taraxacum officinale</i>	-	+	+	-
Artemisieta				
<i>Convolvulus arvensis</i>	+	-	-	-
<i>Tussilago farfara</i>	+	-	-	+
Variae syntaxa				
<i>Agrostis stolonifera</i>	1	+	-	-
<i>Agrimonia eupatoria</i>	-	-	-	+
<i>Carex hirta</i>	-	-	-	+
<i>Ononis arvensis</i>	-	+	-	-
<i>Polygonum hydropiper</i>	-	+	-	+

<i>Symphytum officinale</i>	-	+	-	+
<i>Verbena officinalis</i>	+	+	-	-
Place and date of survey realization: 1, 2 -Brătești- Bârsănești (15.07.2007); 3, 4 – Berzunți (24.07.2008)				

Floristic element spectrum of *Junco inflexi-Menthetum longifoliae* association Lohmeyer 1953



Bioform spectrum of *Junco inflexi-Menthetum longifoliae* association Lohmeyer 1953



- As. *Potentilletum anserinae* Felföldy 1942
Silverweed group

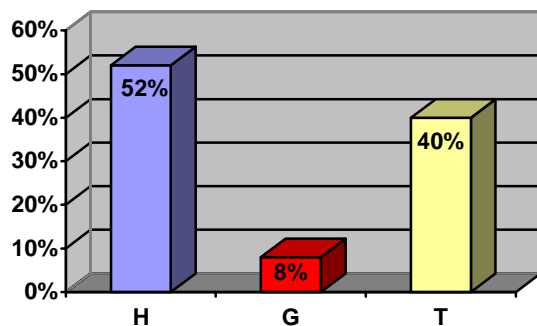
We identified the phytocenoses of these associations in sandy places and moderately wet along the village roads, on ditch margins and along the streams. This mesohygrophile association forms small short bunches. The characteristic species are *Lolium perenne* and *Potentilla anserina*. Among the more frequent species we mention: *Plantago major*, *Potentilla reptans*, *Ranunculus repens*, *Rorippa sylvestris*, *Elymus repens* etc[1-2,9].

The analysis of bioforms shows as dominant among the association the Hemicryptophytes (H) 52%, followed by annual and biannual Terophytes (T) 40% and Geophytes (G) 8%.

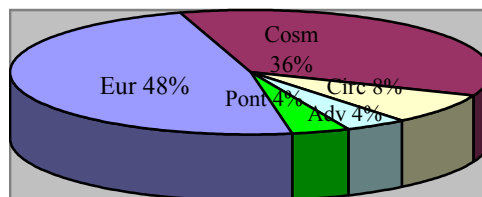
The analysis of floristic elements establishes as dominant the eurasian species (Eua) 48% and cosmopolitan (Cosm) 36%, these indicating a large spreading of the association, followed by the circumpolar ones (Circ) 8%, adventive (Adv) 4% and pontic (Pont) 4%.

Number of survey	1	2	3	4	5	6	K
Altitude (m)	370	360	455	460	300	270	
Vegetation cover (%)	80	90	80	90	80	85	
Area (m²)	25	50	25	50	25	25	
Number of species	12	9	11	8	10	7	
Association characteristic							
<i>Potentilla anserina</i>	4	5	4	4	5	4	V
<i>Lolium perenne</i>	+	+	+	+	+	+	V
Potentillon anserinae et Potentillo-Polygonetalia							
<i>Elymus repens</i>	-	+	-	+	-	+	III
<i>Inula britanica</i>	-	-	+	-	-	-	I
<i>Juncus inflexus</i>	-	-	-	+	-	-	I
<i>Potentilla reptans</i>	+	-	+	-	-	1	III
<i>Ranunculus repens</i>	-	-	-	-	+	-	I
<i>Rorippa sylvestris</i>	+	+	-	-	+	-	III
<i>Rumex crispus</i>	-	-	+	-	-	+	II
<i>Matricaria discoidea</i>	+	+	-	+	-	-	III
<i>Mentha longifolia</i>	-	-	-	-	+	-	I
<i>Plantago major</i>	+	-	+	-	+	-	III
<i>Rorippa austriaca</i>	-	+	-	+	+	-	III
Stellarietea mediae							
<i>Capsella bursa-pastoris</i>	+	-	-	-	-	-	I
<i>Chenopodium album</i>	-	-	+	-	-	-	I
<i>Echinochloa crus-galli</i>	-	-	-	-	+	-	I
<i>Hibiscus trionum</i>	+	-	-	-	-	-	I
<i>Polygonum aviculare</i>	+	-	+	-	-	-	I
<i>Stellaria media</i>	+	-	-	-	+	-	II
Variae syntaxa							
<i>Agrimonia eupatoria</i>	-	+	-	-	-	-	I
<i>Malva pusilla</i>	+	+	-	-	-	+	III
<i>Polygonum hydropiper</i>	-	+	+	-	-	-	II
<i>Prunella vulgaris</i>	+	-	+	+	+	-	IV
<i>Tussilago farfara</i>	-	-	+	-	-	-	I
<i>Verbena officinalis</i>	-	+	-	+	-	+	III
Place and date of survey realization: 1. Berzunți (15.07.2007); 2. Brătești-Bărsănești (5.08.2007); 3. Buda-Berzunți (15.07.2007); 4. Cucuieți- Dofteana (1.09.2008); 5,6. Larga-Dofteana (1.09.2008)							

Floristic bioform spectrum of *Lolio-Potentilletum anserinae* association
Felföldy 1942



Floristic element spectrum of *Lolio-Potentilletum anserinae* association
Felföldy 1942



- As. *Poëtum annuae* Gams 1927

Poa annua lawns

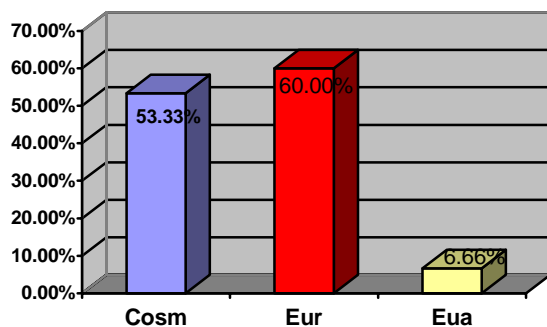
We identified the phytocenoses of this association in unkept lawns, wet places, slightly trodden along the roads, paths, near fences, sometimes it appears on fertilized but uncultivated fields. The relevant species is *Poa annua*. Among the highly consistent species we mention: *Capsella bursa-pastoris*, *Lolium perenne*, *Polygonum aviculare*, *Plantago major*, etc[8].

The analysis of bioforms indicates the predominance of Hemicryptophytes (H) with 66,66 %, followed by Terophytes (T) 26,66% and Geophytes (G) 6,66%.

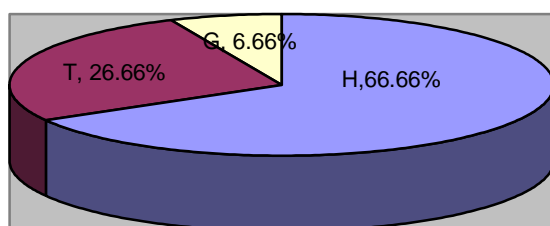
The analysis of floristic elements underlines the predominance of eurasian species (Eua) with 60%, followed by the cosmopolitan (Cosm) 53,33% and the european (Eur) 6,66%.

Number of survey	1	2	3	4	5	K
Altitude (m)	455	455	455	300	300	
Vegetation cover (%)	90	80	90	85	80	
Area (m ²)	50	25	50	25	50	
Number of species	9	7	5	5	5	
Association characteristic						
<i>Poa annua</i>	5	4	4	3	5	V
Lolio- Plantaginion						
<i>Lolium perenne</i>	+	-	+	-	+	III
<i>Polygonum aviculare</i>	+	+	-	1	-	III
Plantaginetalia majoris						
<i>Dipsacus laciniatus</i>	+	-	+	-	+	III
<i>Plantago major</i>	-	1	+	-	+	III
Arrhenatherion et Arrhenatheretalia						
<i>Achillea millefolium</i>	-	-	-	-	+	I
<i>Bellis perennis</i>	+	-	-	-	-	I
<i>Prunella vulgaris</i>	-	-	-	1	-	I
<i>Taraxacum officinale</i>	-	+	+	-	-	II
Molinio - Arrhenatheretea						
<i>Lotus corniculatus</i>	+	-	-	-	-	I
<i>Ranunculus repens</i>	-	-	-	+	-	I
<i>Trifolium repens</i>	+	+	-	-	-	II
Variae syntaxa						
<i>Capsella bursa-pastoris</i>	-	+	-	-	-	I
<i>Cichorium intybus</i>	+	+	-	-	-	II
<i>Tussilago farfara</i>	+	-	-	+	-	II
Place and date of survey realization: 1,2, 3 Buda- Berzunți (17.07.2009); 4,5 Larga –Dofteana (19.07.2009)						

Floristic bioform spectrum of *Poëtum annuae* association Gams 1927



Floristic element spectrum of *Poëtum annua* association Gams 1927



- As. *Lolio-Plantaginetum* (Linkola 1921) Beger 1930 em. Sissingh 1969

Perennial ryegrass and common plantain lawns

This association has phytocenoses insularly formed on fields trodden through grazing, on the road and ditch margins. The dominant species are *Lolium perenne* and *Plantago major* besides species as: *Poa annua*, *Polygonum aviculare*, *Elymus repens*, *Trifolium repens* etc. which are generally fodder plants.

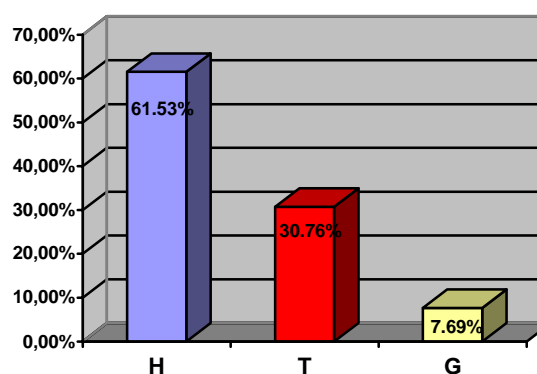
The analysis of bioforms establishes the dominance of Hemicryptophytes (H) with 61,53%, followed by Terophytes (T)-30,76 %, then Geophytes (G) with 7,69%.

The analysis of floristic elements shows that the highest weight belongs to eurasian species (Eua) with 53,84%, then follow cosmopolitan species (Cosm) with 20%, then circumpolar (Circ) with 10 % and adventive (Adv) with 7,69%.

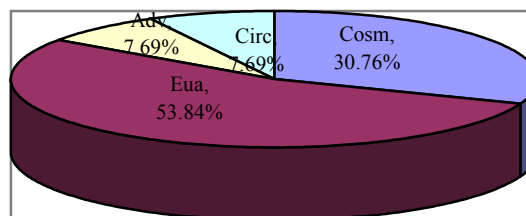
Number of survey	1	2	3
Altitude (m)	260	400	400
Vegetation cover (%)	90	90	80
Area (m ²)	25	25	25
Number of species	7	6	7
Association characteristic			
<i>Plantago major</i>	5	5	4
<i>Lolium perenne</i>	1	+	1
Lolio- Plantaginon			
<i>Amaranthus crispus</i>	-	+	-
<i>Poa annua</i>	+	-	+
Plantaginetalia majoris			
<i>Elymus repens</i>	-	-	+

<i>Cichorium inthybus</i>	+	-	-
<i>Malva pusilla</i>	-	-	+
<i>Potentilla anserina</i>	+	+	-
<i>Ranunculus repens</i>	+	-	-
<i>Trifolium repens</i>	-	+	-
Variae syntaxa			
<i>Berteroa incana</i>	-	+	-
<i>Lotus corniculatus</i>	-	-	+
<i>Prunella vulgaris</i>	+	-	-
Place and date of survey realization: 1.Poieni- Târgu Ocna (30.06. 2009); 2, 3. Valea Șoșii- Poduri (3.08.2008)			

Floristic bioform spectrum of *Lolio-Plantaginetum* association (Linkola 1921) Beger 1930 em.Sissingh 1969



Floristic element spectrum of *Lolio-Plantaginetum* association (Linkola 1921) Berger 1930 em.Sissingh 1969



- As. *Sambucetum ebuli* Felföldy 1942
Danewort shrubs

This is a nitrophile weed group which can be met on road margins, near buildings, on sheepfolds, on manure platforms, in places rich in organic substances. These phytocenoses are dominated by *Sambucus ebulus*, with a cover degree of 90-100. Besides this species *Arctium lappa*, *Ballota nigra*, *Urtica dioica*, *Rumex obtusifolius*, *Artemisia vulgaris* etc. also appear.

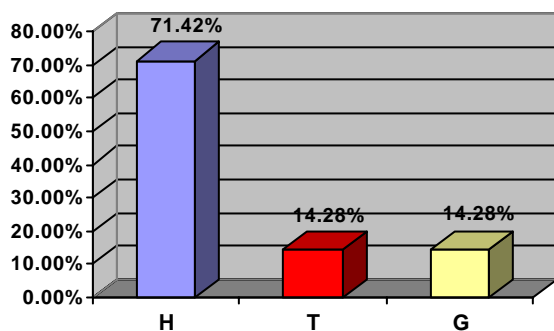
The analysis of bioforms indicates the predominance of Hemicryptophytes (H) with 71,42%, followed by Terophytes (T) and Geophytes (G) with 14,28%.

The analysis of floristic elements proves the dominance of eurasian species (Eua) with 47,61%, then follow the cosmopolitan (Cosm) with 28,57%, the circumpolar (Circ) with 14,30 % and the european (Eur) with 9,52%.

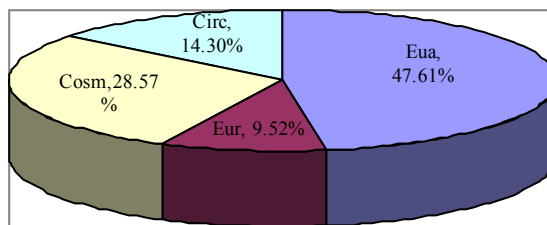
Number of survey	1	2	3	4	5	K
Altitude (m)	370	360	460	400	400	
Vegetation cover (%)	90	100	100	90	100	
Area (m ²)	50	50	50	50	50	
Number of species	8	7	7	8	6	
Association characteristic						
<i>Sambucus ebulus</i>	5	5	5	5	5	V
<i>Arctium lappa</i>						
<i>Arctium lappa</i>	+	-	+	-	-	II
<i>Rumex obtusifolius</i>	-	+	-	-	-	I
Galio-Urticetea						
<i>Calystegia sepium</i>	-	-	+	-	+	II
<i>Urtica dioica</i>	+	-	-	-	-	I
Artemisietea vulgaris						
<i>Artemisia vulgaris</i>	+	-	-	+	-	II
<i>Elymus repens</i>	-	+	-	-	+	II
<i>Convolvulus arvensis</i>	-	+	-	+	-	II
<i>Inula britannica</i>	-	-	-	-	+	I
<i>Marrubium vulgare</i>	+	-	-	+	-	II
<i>Tussilago farfara</i>	-	-	+	+	-	II
Molinio-Arrhenatheretea						
<i>Agrostis stolonifera</i>	-	+	-	-	-	I
<i>Bellis perennis</i>	-	-	-	-	+	I
<i>Lotus corniculatus</i>	-	-	-	+	-	I
<i>Prunella vulgaris</i>	-	-	-	-	+	I
<i>Potentilla anserina</i>	+	-	-	-	-	I
<i>Ranunculus repens</i>	-	-	-	+	-	I
<i>Taraxacum officinale</i>	-	-	+	-	-	I
Variae syntaxa						
<i>Chenopodium album</i>	+	+	-	+	-	III
<i>Lolium perenne</i>	+	+	+	-	-	III
<i>Saponaria officinalis</i>	-	-	+	-	-	I

Place and date of survey realization: 1. Berzunți (15.07.2007); 2. Brătești- Bărsănești (5.08.2007); 3. Cucuieți – Dofteana (19.07.2009); 4, 5 Valea Șoșii-Poduri (3.08.2008)

Floristic bioform spectrum of
Sambucetum ebuli association Felföldy
1942



Floristic element spectrum of
Sambucetum ebuli Felföldy 1942



- As. *Echinochloa-Setarietum viridis* Sissingh et al. 1940

Grass and green bristlegrass culture weed groups

This association is characteristic to cultures of weeding cereals, straw cereals and grapevine. The phytocenoses have a great density (40-80 plants/m²), being dominated by *Setaria viridis* and *Echinochloa crus-galii*; besides *Capsella bursa-pastoris*, *Convolvulus arvensis*, *Polygonum aviculare* etc. can be frequently met.

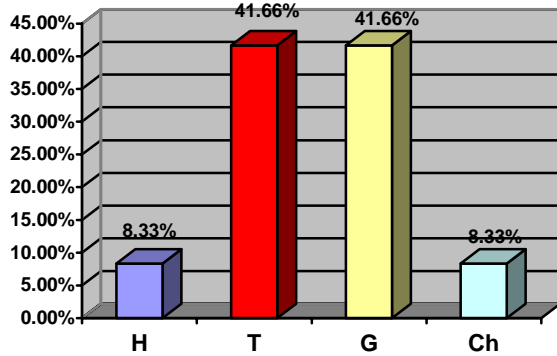
The analysis of bioforms shows the predominance of Terophytes (T) and Geophytes (G) having 41,66 each, followed by Camephytes (Ch) with 8,33%.

The analysis of floristic elements proves the dominance of cosmopolitan species (Cosm) with 41,66%, followed by the eurasian (Eua) with 33,33%, the adventive (Adv) with 16,66% and the circumpolar (Circ) with 8,33%.

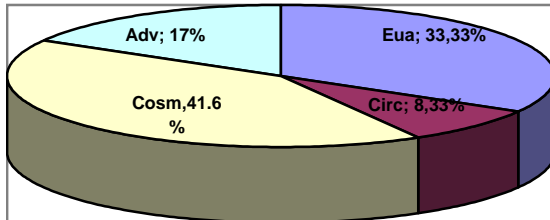
Number of survey	1	2	3	4	5	K
Altitude (m)	370	370	370	370	370	
Vegetation cover (%)	90	85	90	85	80	
Area (m ²)	25	25	25	25	25	
Number of species	6	6	7	5	3	
Association characteristic						
<i>Setaria viridis</i>	3	2	3	2	4	V
<i>Echinochloa crus-galii</i>	2	3	2	3	2	V
Chenopodietalia albi						
<i>Veronica persica</i>	-	-	+	+	+	III
Stellarietea mediae						
<i>Capsella bursa-pastoris</i>	+	+	-	+	-	III
<i>Cirsium arvense</i>	-	-	+	-	-	I
<i>Convolvulus arvensis</i>	-	+	+	-	-	II
<i>Datura stramonium</i>	+	-	-	+	+	III
<i>Sonchus arvensis</i>	-	-	+	-	-	I
Artemisietea						
<i>Artemisia absinthium</i>	-	+	-	-	-	I
<i>Equisetum arvense</i>	-	-	+	-	-	I
Molinio-Arrhenatheretea						
<i>Elymus repens</i>	+	+	-	-	+	III
<i>Taraxacum officinale</i>	+	-	-	-	-	I

Place and date of survey realization: 1,2. Vâlcele- Tg. Ocna (5.08.2008); 3,4, 5. Berzunți (1.07.2007)

Floristic bioform spectrum of
Echinochloo-Setarietum viridis
association Sissingh et al. 1940



Floristic element spectrum of *Echinochloo-Setarietum viridis* association Sissingh et al. 1940



- As. *Amarantho-Chenopodietum albi*
Morariu 1943

Red-root amaranth and fat-hen weed group

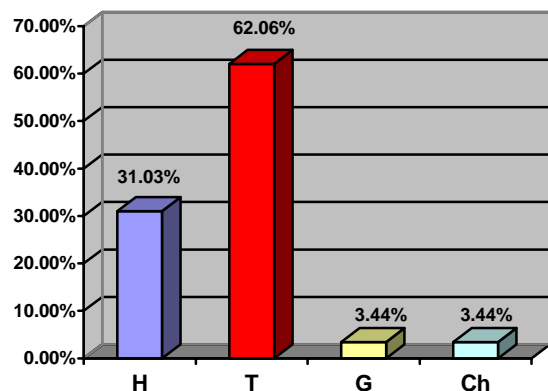
This is a type of segetal weed group largely spread. It appears especially in weeding cereal cultivations, on manure platforms. *Amaranthus retroflexus* and *Chenopodium album* have a larger density. Besides *Amaranthus albus*, *Echinochloa crus-galii*, *Setaria pumilla*, *Stellaria media*, *Solanum nigrum* etc. frequently appear.

The analysis of bioforms proves the predominance of Terophytes (T) with 62,06%, followed by Hemicryptophytes (H) with 31,03%, Geophytes (G) and Camephytes (Ch) having 3,44% each.

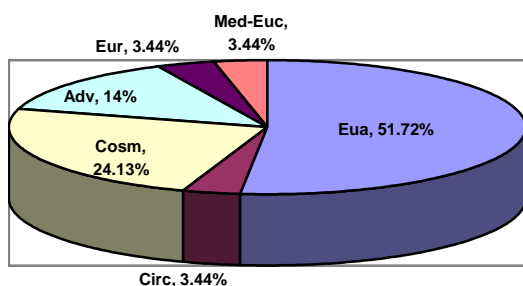
The analysis of floristic elements proves the dominance of eurasian species (Eua) with 51,72%, followed by the cosmopolitan (Cosm) with 24,13%, the adventive (Adv) with 13,49%, the circumpolar (Circ), the european (Eur) and the mediterranean (Med) having 3,44% each.

Number of survey	1	2	3	4
Altitude (m)	360	360	300	300
Vegetation cover (%)	80	85	85	80
Area (m ²)	25	25	25	25
Number of species	13	13	8	14
Association characteristic				
<i>Amaranthus retroflexus</i>	2	1	2	3
<i>Chenopodium album</i>	4	5	4	2
Amarantho-Chenopodion albi				
<i>Amaranthus albus</i>	-	-	+	-
<i>Consolida regalis</i>	-	-	-	-
<i>Hibiscus trionum</i>	+	-	-	-
Panico-Setarion				
<i>Echinochloa crus-galii</i>	+	+	+	-
<i>Setaria pumilla</i>	-	-	-	+
Polygono-Chenopodion polyspermi				
<i>Polygonum aviculare</i>	-	+	-	+
Stellarietea mediae				
<i>Capsella bursa pastoris</i>	-	+	-	+
<i>Cardaria draba</i>	+	-	+	-
<i>Senecio vernalis</i>	-	+	-	-
<i>Stellaria media</i>	+	+	-	+
<i>Veronica persica</i>	+	-	-	-
Artemisietea				
<i>Arctium lappa</i>	-	+	+	-
<i>Artemisia absinthium</i>	-	-	-	+
<i>Ballota nigra</i>	-	-	-	+
<i>Cirsium vulgare</i>	+	-	-	-
<i>Conium maculatum</i>	-	-	+	+
<i>Datura stramonium</i>	-	-	+	+
<i>Marrubium vulgare</i>	+	-	-	+
Galio-Urticetea				
<i>Chelidonium majus</i>	-	-	-	+
<i>Sambucus ebulus</i>	+	+	-	-
<i>Silene alba</i>	-	-	-	+
<i>Urtica dioica</i>	+	+	-	-
Molinio-Arrhenatheretea				
<i>Elymus repens</i>	+	+	-	-
<i>Cichorium inthybus</i>	-	+	-	-
<i>Dactylis glomerata</i>	-	+	-	-
Variae syntaxa				
<i>Calystegia sepium</i>	+	-	-	-
<i>Vicia tetrasperma</i>	-	-	-	+
Place and date of survey realization: 1,2. Vâlcele- Tg. Ocna (5.08.2008); 3,4. Brătești-Bărsănești (6.08.2009)				

Floristic bioform spectrum of
Amarantho-Chenopodietum albi
association Morariu 1943



Spectrul elementelor floristice ale
asociației *Amarantho-Chenopodietum*
albi Morariu 1943



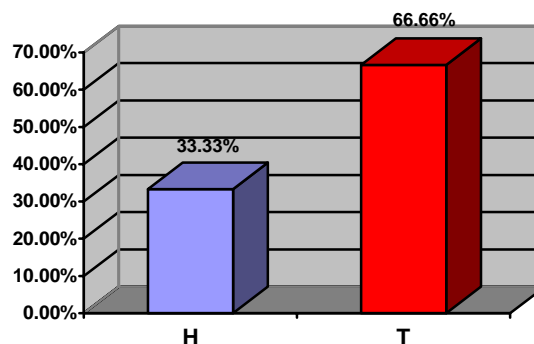
- As *Xanthietum riparii* Morariu 1943

Vegetal association whose floristic elements are in a large majority cosmopolitan and adventive. It is constituted by fast-growing weeds, with a long life span, with a great fruit and seed productivity. It is not a desired association, it harms cultivated and uncultivated fields and it degrades sheep wool. Among the species with a greater frequency we can mention: *Xanthium riparium*, *Polygonum hydropiper*, *Chenopodium album*, *Agrostis stolonifera* etc.

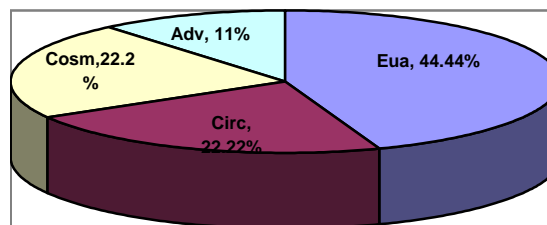
The analysis of bioforms indicates the predominance of Terophytes (T) with 66,66%, followed by Hemicryptophytes (H) with 33,33%.

The analysis of floristic elements proves the dominance of eurasian species (Eua) with 44,44%, followed by the cosmopolitan species (Cosm) and the circumpolar (Circ) having 22,22% each and the adventive (Adv).

Floristic bioform spectrum of
Xanthietum riparii association Morariu
1943



Floristic element spectrum of *Xanthietum riparii*
association Morariu 1943



CONCLUSIONS

The ruderal and segetal vegetal associations the in Berzunți Mountains area, Bacău County, have a floristic composition influenced by the anthropic factor.

The 8 cenotaxa identified, grouped in the classes MOLINIO-ARRHENATHERETEA, GALIO-URTICETEA, STELLARIETEA MEDIAE, BIDETETEA TRIPARTITI, 6 orders and 6 alliances prove the fact that this weed groups can be classified in the types of vegetation in Moldova area.

ABSTRACT

The study concerning the anthropic vegetation realized in the Berzunți Mountains area, Bacău County, during 2007-2009, underlined the presence of 8 vegetal ruderal and segetal associations grouped in the following classes: MOLINIO-ARRHENATHERETEA, GALIO-URTICETEA, STELLARIETEA MEDIAE, BIDETETEA TRIPARTITI, 6 orders and 6 alliances.

Number of survey	1	2	3
Altitude (m)	370	300	460
Vegetation cover (%)	90	90	90
Area (m ²)	30	25	25
Number of species	6	5	4
Association characteristic			
<i>Xanthium albinum</i> <i>ssp riparium</i>	5	5	4
Bidentetalia et Bidentetea tripartiti			
<i>Bidens tripartita</i>	+	-	-
<i>Polygonum hydropiper</i>	+	-	1
Chenopodion rubri			
<i>Chenopodium album</i>	+	+	-
<i>Atriplex tatarica</i>	+	-	-
Variae syntaxa			
<i>Agrostis stolonifera</i>	+	+	+
<i>Matricaria perforata</i>	-	+	-
<i>Mentha longifolia</i>	-	+	
<i>Potentilla anserina</i>	-	-	+
Place and date of survey realization: 1. Vâlcele-Tg. Ocna (5.08.2008); 2. Larga-Dofteana (19.07.2009); 3. Cucuieți-Dofteana (19.07.2009)			

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