VEGETATION ASPECTS IN THE LAPUS VALLEY

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Summary: Vegetation aspects in the **Lăpuş Valey vegetation.** The Lăpuş Valey belong the Maramureş county. It's situated in North of Transilvania and his territory covers few geomorphological units like: Rodna Mountains, the Maramureş Mountains, the Gutâi Mountains. The longest river wich crossed the county is Lăpuş. The climat is formed under the influence of dominantly western and north-western atmospheric flow and sheltered by the nerby mountains. The Lăpuş Mountins far from having impressing heights, are very fragmentated, with deep valleys and steep slopes, the river Lăpuş forming true quays. Near the Lăpuş Valey the peaks are covered with forest consist in special in beech forests with a few oak trees and small meadows of *Nardus stricta* and *Agrostis stolonifera*. Near the river they are also low forest edificated by *Salix alba* and *Alnus glutinosa*.

The Lapus region is delimited by the Tibles and Gutâi massifs in the North, by the Breaza summit and the Preluca massif in the South, and in the East it is streching towards Năsăud, the separation of the water being the limit, while in the West it opens towards the depression of Baia Mare. This region is crossed by the Lăpus river.

From the geographical point of wiew, the reference area taken into study is at the margin of the Lăpuş river, delimited between the Razoare locality and its confluence with the valley of Cavnic, more precisely the Lapus gorge, also known as "The Straits of Lăpuş" streching over a length of aproximately 30 km.Lăpuş is the most long river from the Maramureş county, gathering the waters from the Igniş and Văratic vulcanic mountains, from the Breaza summit and the Preluca massif. The precipitations wich have medium values vacillating between 950 and 1380 mm keep a very special role in the formation of the Lăpuş system. The debit of the Lăpuş vacillates betwenn 10 m3/s at Remetea Chioarului. In the spring, due to snow thawing, the debit is maximum and also quite high in the winter because of the western influences. Even during summer, after some heavy rain falls, the debit can increase very much. The lowest value of the trickling are recorded during winter2.

The relief. The Lăpuş region is formed of several sectors or distint subunities wich specific nature. In the center lies the large corridor of the Lăpuş river wich curves in front of the Târgu Lăpuş locality towards North, where the river is called Valea Luncii. If up to the Răzoare village the Lăpuş flows into a relatively open meadow, from the confluence with the Hijului Valley (a small tributary of Lăpuş), we can see the straits. From here and as far as Remecioara, tha Lăpuş river flows into a gorge of 30 km between steep shores, wich are rocky here and there, of the Preluca summit and of other hills, starting with an afforested and less higher hill, the Podul Hijului, situated at the boundary of Peteritea village. The gorge of the Lăpuş valley deepens in the Preluca massif with 200m as compared to the level wich is above the gorge, reaching 304m at the entrance in the gorge and 109m at the confluence with Cavnic. It is steep and hardly accesible, with shackled meanders and very abrupt walls, especially in the first 100m from the river bed. The gorge of Lăpuş is a unique touristic objective, "the most wild in the contry" as G. Posea characterized it. It is not crossed by any artery of traffic, not even a path[3].

The Climat. The climat of the Lăpuş county is included between the limits of a moderated/continental climat of hill and plateau type. This climate is generated by the geographical position, by the relief and the general circulation of the air from the Western and Northern directions, there are more humid masses of air.The anual medium temperatures are of 8/10°C in January of –4-2°C, and in June of 18-20°C. The average annual precipitations are of 700-800 mm.

General Characterization of the Vegetation

The Lăpuş river is limited on one side and the other by a vegetation full of variety, imposed by the relief and the ecological factors. At the sources of the river from the heart of the mountains, the vegetation is formed by forests of spruce fir and of spruce fire mingled with fir. Downstream, the river's margins are limited by beech forests and beech-hornbeam groves and in front of the Târgu Lăpuş town, in the meadow exist crops. In the gorge of the Lăpuş, starting with the Răzoare locality, dominant are the beech-hornbeam groves. These expand from the river bed and up to the summits of the mountains wich limit the river bed. They are very well made woods having in the grassy layer a flora as it follows: *Galanthus nivalis, Primula acaulis, Anemone nemorosa, Crocus heuffelianus, Helleborus purpurascens*.

In some places, the river bed is limited by low grounds with excessive humidity upon wich there are willow groves, have in the shrubs layer *Crataegus monogyna, Corylus avellana, Cornus mas, Cornus sanguinea.*

Even though the afforested areas are dominant here and there, we can find mezo-hygrophyles grasslands wich are enlightened by species as *Agrostis stolonifera, Trifolium repens, Lotus corniculatus, Lolium perenne, Caltha laeta*. These species place themselves on plane, humid sections, covered with fertile aluvial soil. The marshry grounds billeted on clayery soil are marked by species as *Phragmites communis, Agropyron repens, Symphytum officinale*.

Numerous species in the meadows of Lăpuş are characteristic for the grassland, having a hygrophyls nature.Some of them are: *Humulus lupulus, Caltha laeta, Lysimachia nummularia, Rorippa sylvestris*. The meadows areas of lapus, the ones before the gorge, but also the ones wich are after the gorge are destined for the crops, mostly cereals and sun-flowers.

The *Carpino –Fagetum silvaticae Association,* Păucă 1941

The forest of mixture between hornbeam and beech are most numerous in the studied region. The accompany the gorge at ils almost entire length, being installed on the slope wich limit the gorges of the Lăpuş and they often

descend to the river bed. The brushes are well formed and stratified. The arborescent layer is dominated by the beech and the hornbeam and from time to time, there also appear samples of *Acer campestris, Quercus robur, Quercus petraea* etc.

The shrubs layer is enlightened at the greatest rate by *Crataegus monogyna, Corylus avellana* and *Cornus mas*. In the herbaceous layer, more abundant are the species wich indicated the mull flora: *Allium ursinum, Viola reichenbachiana, Galanthus nivalis, Crocus heuffelianus*. The grass layer is much more sustantial in the spring, while during summer the unity diminished.

In the phytocenosis analysed, both numerical and as covering, dominant are the phanerophytes (40,90%), followed by the geophytes (31,18%), hemicryptophytes (20,45%) terophytes (4,54%), hellohydatophytes (2,27%). This situation is in full concordance with the ecology and the biology of the beech-hornbeam groves, the arborescent layer creating compact crowings wich allow the vegetation of grassy flora to resist only for a short period of tima, while the rest of year it traverses latently in the shape of bulbs and rhizomes. The Western influences of the climate are also reflected in the composition of the geoelements, the Europeans elements are majority (34,09%), followed by the Euroasian ones (29,54%), 13,63% Central-Europeans (6,81%) sM (4,54%) Cp, (2,27%) Atl-M, (2,27%) DB, (4,54%) Cosm. Even though the other elements make smaller proportions, it is noticed the presence of the sheltered microbiotopes where more thermophylic elements grow as: *Cornus mas, Primula acaulis* sau *Muscari comosum*, but also of the microbiotopes exposed to cold currents, where the conditions are worse and where circumpolars species vegetate: *Cerastium sylvaticum, Oxalis acetosella.* As a result of the associations ecological analysis, the following situation was distinguished: according to the hydric system, the majority of species are mezophyle (33,32%),in what concerns the temperature, the micro-mezotherms (75,55%), are very numerous, and regarding the reaction of the soil acidity, close enough to the majority of amphitolerantes (33,33%), are distinguished the acido-neutrophyles species (26,66%).

The ecomonic value of these phytocenosis is confered in the first place by the dominant species. Even so, the most significant value of these phytocenosis is the ecological one, because they protect the very steep sides of the Lăpuş Valley, and the last but not the least, they shelter species wich are protected as *Narcissus poeticus* şi *Fritillaria meleagris*.

Table 1. *Carpino –Fagetum silvaticae* Association Păucă 1941

Number	1	2	3	4	5	
Altitude (m)	550	550	600	750	700	
Exposition	N-V	N	N-V	V	N-V	
Slope (degree)	20	15	20	10	10	
Hights of the trees (m)	35-40	35-45	30-45	30-45	35-40	
Diam. (cm)	3-40	35-45	30-45	30-50	30-50	
Crowner (%)	0,8	0,9	0,8	0,8	0,9	
The grass layer (%)	15	2	10	35	15	
		200mp			K	
Car as.						
Carpinus betulus	2	2	2	3	2	V
Fagus silvatica	3	3	3	2	2	V
Q-F; Fa; Sym-Fon						
Acer campestre	-	+	+	-	+	III
Quercus petraea	-	+	+	+	2	IV
Quercus robur	-	-	+	+	-	II
Pyrus pyraster	+	-	-	-	-	I
Al-P						
Alnus glutinosa	+	-	-	-	-	I
Q-pb-p						
Malus silvestris	-	+	-	-	-	I
II						
Q-F; Fa; Sym-Fon						
Corylus avellana	+	2	1	+	+	V
Rubus hirtus	+	2	-	+	-	III
Crataegus monogyna	+-1	+	+	-	1	IV
Rosa canina	+	-	-	-	-	I
Cornus sanguinea	-	-	-	-	+	I
Sorbus aucuparia	-	-	+	-	-	I
Q-pb-p						
Cornus mas	+	-	-	-	-	I
Prunus spinosa	-	-	+	-	-	I
Al-P						
Sambucus nigra	+	-	-	-	-	I
Sa-P						
Salix alba	+	-	-	-	-	I

III						
Fa; Sym-Fon						
Dryopteris filix-mas	+	-	+	+	+	IV
Anemone nemorosa	-	-	-	+	1	II
Tussilago farfara	1	+	+	-	-	III
Allium ursinum	-	-	-	1	1	II
Hepatica nobilis	+	-	-	1	-	II
Salvia glutinosa	1	-	1	-	-	II
Viola odorata	-	-	+	-	-	I
Telekia speciosa	+	-	+	-	-	II
Q-F						
Lathyrus vernus	+	-	-	-	-	I
Helleborus purpurascens	-	-	+	+	+	III
Erythronium dens canis	-	-	-	+	+	II
Q-pb-p						
Galanthus nivalis	-	-	-	1	+	II
V-P						
Oxalis acetosella	+	-	-	-	-	I
Che						
Agropyron repens	+	-	-	-	-	I
Equisetum arvense	+	-	-	-	-	I
M-Al						
Filipendula vulgaris	+	-	-	-	-	I
Ins.						
Colchicum autumnale	-	+	+	-	-	II
Leucojum vernum	-	-	+	-	-	I
Viola tricolor	-	+	+	-	-	II
Narcissus poeticus	-	-	-	2	-	I
Lysimachia vulgaris	+	-	-	-	-	I
Cerastium sylvaticum	-	+	+	-	-	II
Cirsium canum	-	-	+	-	-	I
Primula acaulis	-	-	+	+	-	II
Fritillaria meleagris	-	-	-	-	1	I
Muscari comosum	-	-	-	-	+	I

1. 17.07. 2003 -Balta lui Văsălică; 2-3 – Vima Mică; 15. 03 2003; 4-5 La Custură 14. 04 2003.

Salicetum albae Associations, Issler 1924

This is an association billeted especially at the entrance in the gorge, near the Razoare locality, but it can also be found along the gorges where exists a small meadows and the beech-hornbeam groves don't approach the river bed. The wooden species as well as the grassy ones are also pypical hygrophyls.The trees layer is dominted by Salix alba and Salix fragilis. The shrubs layer is formed by the species like Cornus sanguinea, Humulus lupulus, Rubus hirtus. The grassy layer is made up of hygrophyles species which can resist to floods or to ater bogging. Some of the most frequent species are: Urtica dioica, Rumex crispus, Phragmites australis, Tussilago farfara, Echinocystis lobata.

The analysis of the bioforms outlines the primate held by hemycriptophytes as number of specie and as accomplished covering. These are followed by phanerophytes and geophytes.

From the point of view of the geoelements: Eua (49,23%), E (20%), Ec (4,61%), Cosm (12,30%), Cp (6,15%), sM (3,07%), DB (1,53%), Adv (3,07%).

Although the mezophytes are the most numerous (46,14%), there are in high percentage, the mezo-hygrophytes (18,45%) and the hygrophytes (18,54%).The big proportion of the last ones is due to a water excess in the biotope which was maintained for a long period of time. From the point of view of the thermic preferences, the majority is represented by the mezothermes (66,15%). Regarding the chemical reaction of the soil, beside the euriionics and the weak-acid-neutrophyles which are dominant numerically with 32,3% also numerous are the acido-neutrophyles species (29,23%). The analysed willow groves are getting more reduced as surface. As a consequence, their role of ecological buffer for the Lapus valley is becoming more difficult to accomplish and they should be preserved and extended.They would also supply important quantities of medicinal, edible species.

Table 2. *Salicetum albae, Association,* Issler 1924

Number	1	2	3	4	5	6	7
Altitude (m)	350	400	300	300	180	180	180
Exposition	S-V	S-V	S-V	N-V	N-V	N	N-V
Slope (degree)	2-3	2-3	5	5	2-3	5	5
Hights of the trees (m)	10-15	8-10	8-10	5-10	5-10	5-10	8-10
Diam. (cm)	25-35	25-30	25-35	30-35	30-35	20-30	25-35
Crowning (%)	0,7	0,8	0,8	0,7	0,7	0,7	0,8
Grass layer (%)	50	15	5	30	15	3	5

Car as.								K
Salix alba	1	2	2	+	+	1	2	V
Sa-P								
Salix fragilis	2	2	2	2	2	-	3	V
Salix purpurea	-	-	-	-	-	2	+	II
Al-P								
Alnus glutinosa	1	1	1	-	-	-	-	III
Q-F								
Carpinus betulus	+	+	-	-	+	-	-	III
Acer campestris	-	-	-	-	+	-	-	I
Fraxinus excelsior	-	+	-	+	-	-	-	II
II								
Sa-P								
Cornus sanguinea	-	-	-	-	+	-	-	I
Humulus lupulus	-	+	+	-	-	-	-	II
Q-F								
Rubus hirtus	+	1	+	-	-	+	-	III
Corylus avellana	-	+	1	-	-	+	+	III
Q-pb-p								
Cornus mas	-	-	-	-	-	-	+	I
Al-P								
Sambucus nigra	-	-	+	-	-	-	+	II
III								
Sa-P								
Phragmites australis	+	+	-	-	+	+	-	III
Urtica dioica	1	+	+	+	-	-	-	III
Rumex crispus	+	-	-	-	1	-	-	II
Convolvulus arvensis	+	+	+	-	-	+	-	III
Echinocystis lobata	+	-	+	-	-	-	-	II
Eupatorium cannabinum	1	-	-	-	-	-	-	I
Equisetum arvense	+	-	-	-	-	+	-	II
Chrysosplenium alternifolium	-	-	+	+	-	-	-	II
Tussilago farfara	-	-	-	1	1	+	+	III
Q-F								
Aegopodium podagraria	-	-	-	-	-	-	+	I
Ranunculus ficaria	-	-	-	+	-	-	-	I
Cardamine glanduligera	-	-	-	+	-	-	-	I
Allium ursinum	-	-	-	2	-	-	-	I
Erythronium dens canis	-	+	-	+	-	-	-	II
Anemone ranunculoides	-	-	-	+	-	-	-	I
Melampyrum bihariense	-	-	+	-	-	-	-	I
Telekia speciosa	2	1	-	-	-	-	-	II
Dryopteris filix mas	-	-	+	-	-	-	-	I
V-P								
Oxalis acetosella	+	-	-	+	-	-	-	II
M-Arr								
Trifolium repens	-	+	-	-	-	-	-	I
Taraxacum officinale	-	-	+	+	+	-	-	III
Campanula persicifolia	-	+	-	-	-	-	-	I
Ranunculus acris	-	-	-	-	+	-	-	I
Achillea millefolium	-	-	-	+	-	-	-	I
Lolium perenne	-	-	-	+	-	-	-	I
Galium molugo	-	-	-	+	-	-	-	I
Stellaria media	-	+	-	-	-	-	-	I
Vicia cracca	+	-	-	-	-	-	-	I
Erigeron acer	+	-	-	-	-	-	-	I
Chenopodium album	+	-	+	-	-	-	-	II
Îns								
Agropyron repens	2	1	+	+	+	+	+	V
Carex riparia	+	-	-	-	-	-	-	I
Cichorium intybus	+	-	-	-	-	-	-	I
Solidago virgaurea	+	-	-	-	-	-	-	I
Typha latifolia	+	-	-	-	-	-	-	I
Armoracia rusticana	-	-	+	-	-	-	-	I
Symphytum officinale	-	+	+	-	-	-	-	II
Carduus acanthoides	-	-	+	-	+	-	-	II
Juncus effusus	-	-	-	-	-	-	+	I
Inula helenium	-	+	-	-	-	-	+	II
Pulicaria vulgaris	-	-	-	-	-	-	+	I
Conium maculatum	-	-	-	+	-	+	-	II
Carduus crispus	-	-	-	+	-	-	-	I
Plantago lanceolata	-	-	-	-	+	-	-	I
Serratula macrocephala	-	-	-	-	+	-	-	I

1-3 Răzoare, 17.07 2003. 4-5 “La insula” 15.03 2003. 6-7 Peteritea 14.04 2003.

Coryletum avellanae Association, Soó 1927

These phytocenosis place themselves on half-shaded slopes, with brown luvis soils, which are humid and rich in nutritive substances and which can be found in the sub-stage of the beech forests. They are installed like successive stages which followed the deforestation of woods enlightened by beech. They appear as high, compact shrubs, with continuous stratification. They are billeted in the places called:“ Fundul câmpului”, “Balta lui Văsălică”, in Vima Mică and in “Dealul Corbului”.

Beside the dominant species *Corylus avellana* there are also *Acer pseudoplatanus, Acer campestre, Fagus sylvatica, Carpinus betulus*. The shrubs layer is represented by *Rubus hirtus, Sambucus nigra, Cornus mas*. The herbaceous layer is formed of species like *Anemone nemorosa, Hepatica nobilis, Chrysosplenium alternifolium* and others, which are many remainings of the initial beech forests.

The analysis of the bioformes outlines the great number of H (41,30%) which show an arbustif associations with poor crowning, but also with a significant number of nPh (28,25%); G: 19,56%; T: (8,69%); Hh: 2,17%).

From the geoelements:Eua (41,30%), E (28,26%), Cosm (15,21%), Cp (4,34%), Atl-med, sM, Adv (2,17%). The biotope with a good water supply during the year is reflected by the presence of the mezophytes (52,53%) and of the mezo-hygrophytes (25,77%). Regarding the temperature, the majority are the micro-mezothermes (73,92%), and from the point of view of the soil’s chemical reaction, the weak-acid-neutrophyles (32,59%) are predominant, followed at small distance by euriionics.

The economical value of the phytocenosis is confered, in the first place, by the dominant specieswhich are valuable edible species. Next to these medicinal species can be noticed.

Table 3. *Coryletum avellanae* Association, Soó 1927

Nr.	1	2	3	4	5	6	
Altitude	350	450	380	550	450	570	
Exposition	S-V	S-E	V	V	S-V	S-V	
Slope	10	10	15	10	5	5	
Grass layer(%)	40	26	50	10	50	30	
(mp)				100mp			
Car as.							K
Corylus avellana	1	2	2	1	1	1	V
Q-F							
Fagus sylvatica	-	+	-	1	-	-	II
Carpinus betulus	+	-	1	-	-	-	II
Acer campestris	-	-	-	+	-	-	I
Acer pseudoplatanus	-	-	-	+	-	-	I
Sp							
Salix caprea	-	+	+	-	-	-	II
Al							
Alnus glutinosa	-	-	-	-	-	+	I
II							
Q-F							
Rubus hirtus	2	2	2	2	-	1	V
Al-P							
Sambucus nigra	+	+	1	-	-	+	IV
Q-pb-p							
Cornus mas	-	-	-	-	-	+	I
Sp							
Humulus lupulus	-	+	+	-	+	-	III
III							
Ep-an							
Atropa bella donna	+	-	-	-	1	2	III
Telekia speciosa	+	-	-	-	-	+	II
Q-F							
Hedera helix	-	-	+	-	-	-	I
Hepatica nobilis	-	-	1	-	-	-	I
Dryoteris filix mas	1	-	-	-	+	1	III
Anemone nemorosa	+	-	-	-	1	-	II
Allium ursinum	-	-	-	-	2	1	II
Ranunculus ficaria	-	-	-	-	+	-	I
Sp							
Convolvulus arvensis	-	-	-	+	-	-	I
Echinocystis lobata	-	+	-	-	-	-	I
Equisetum arvense	-	+	-	-	-	-	I

Chrysosplenium alternifolium	-	-	-	-	+	-	I
Tussilago farfara	-	-	-	+	-	-	I
G-U							
Urtica dioica	-	2	+	-	-	-	II
Dactylis glomerata	-	-	+	-	-	-	I
Arctium lappa	-	+	-	-	-	-	I
Aegopodium podagraria	2	-	-	-	-	+	II
Îns.							
Euphorbia palustris	+	-	-	-	2	-	II
Agropyron repens	-	1	-	1	-	-	II
Carex riparia	-	+	1	-	-	-	II
Typha latifolia	-	-	+	+	-	-	II
Artemisia vulgaris	-	-	2	-	-	-	I
Campanula persicifolia	-	-	+	-	-	-	I
Juncus effusus	-	-	-	+	-	-	I
Chenopodium album	-	-	-	+	-	-	I
Medicago sativa	-	-	-	+	-	-	I
Trifolium fragiferum	-	-	-	+	-	-	I
Veratrum album	-	-	-	-	1	-	I
Symphytum officinale	-	-	-	-	+	-	I
Primula acaulis	-	-	-	-	+	+	II

1-3 “La Custura” 17.07 2003. 4-6 La Razoare 14.04 200

The Aegopodio-Alnetum glutinosae Association, Kárpáti et Jurko 1961

This association groups riverans lands enlightened by Alnus glutinosa, which can be met along the steep from the hills region unlimited by the steep rocky walls, as: “la bisericuță”, pe “insulă”, “balta lui Văsălică”. It units the mezo-hygrophyls phytocenosis with a reach and mixed floristic composition. The trees layer is enlightened by Alnus glutinosa beside which disseminated samples of Salix fragilis. In the arbustif stratum are outlined Crataegus monogyna, Rubus hirtus, Sambucus nigra. In the grassy layer, the degree of covering is not uniform and it depends on the unification of the crowning, but also on the degree of water supply the soil has. Most of the species are characteristic of the fields, margins of the woods, beside which also vegetate species proceeding from the near forests. The faithful companion of the alder tree woods is Aegopodium podagraria, beside which one can frequently Urtica dioica, Caltha laeta, Tussilago farfara, Anemone nemorosa.

From the analysis of the bioforms it results that from numerical point of view, the H (49,99%), are dominant, although through the accomplished abundance-dominance, the (23,07%) achieve a more consistent coagulation. G: 23,07%, Hh: 3,84%. In the spectre of the geoelements, the greatest importance is registered by the Eua (65,38%), while the Cosm (15,38%), is situatedon the second position and the European onu registeres a percentage of 11,53% and the Central-European one 3,84% at eqality with the circumpolars. The ecological analysis obtains the mixture of the microresorts under the aspect of the humidity of the soil’s chemical reaction. Regarding the humidity factor, in the studied alder-tree groves, the mezophytes (53,84%) are the oneswhich impose themselves, followed by the hygrophytes and the dydrophytes, each with 19,23%. The last ones are situated especially in the part of the meadow that cannot be flooded. Depending on the temperature, those who represent the majority in the association are the mezothermic specias. Regardingthe soil’s chemical reaction, more species of alder-trees are euriionics, weak-acid-neutrophyle and acid-neutrophyle being in equivalent proportions (26,92%) which certifies the association’s character.

The role of the alder-trees groves as of other fields is more mostly an ecological and a protective one for the valleys, they are limiting. As other formations of fiel, their surface is in a continuous reduction, with a powerful and unwanted impact over the environment. Their spreading or-at least the preservation of the existing ones, beside the protective and preserving effect for many species of plants and animals, would give supplies of medicinal resources, of edible one etc in valuable quantities.

Table 4. Aegopodio-Alnetum glutinosae Association, Karpati et Jurko

Nr.	1	2
Altitude	400	380
Exposition	S-V	N-V
Slope	5	5
The hights of the trees (m)	20-25	25-30
Diam. (cm)	25-30	25-35
Crowner (%)	0,7	0,7
Herbaceous layer (%)	15	12
(mp)	200	200
Car as.		
Alnus glutinosa	2	2
Sa-P		
Salix fragilis	+	+
II		
Sa-P		
Rubus hirtus	2	1
Humulus lupulus	-	+
Q-F		
Crataegus monogyna	+	-
Corylus avellana	+	-

Al-P		
Sambucus nigra	1	+
III		
Car as.		
Aegopodium podagraria	+	1
Sa-P		
Urtica dioica	1	+
Chrysosplenium alternifolium	+	-
Tussilago farfara	+	-
Equisetum arvense	-	+
Q-F		
Dryopteris filix-mas	-	+
Anemone nemorosa	+	-
Îns.		
Carex gracilis	+	-
Achillea millefolium	-	+
Rumex acetosella	-	+
Agropyron repens	-	+
Lotus corniculatus	-	+
Taraxacum officinale	-	+
Galium molugo	-	+
Vicia cracca	-	+
Trifolium repens	-	+
Symphytum officinale	-	+
Erythronium dens-canis	+	-
Caltha laeta	1	-

1. 10.09. 2003. La Stanul lui Ipeg; 2. 7.07. 2003 – Balta lui Văsălică

Agrostetum stoloniferae Association, Ujvarosi 1941

The cenoses of tis association are placed on plane humid areas covered by aluvial soilsfrom the places where the Lăpuş river is limited by a narrow meadow and in the middle of the river where exist islands as those from "Răstoacă", Strâmtoare", at theRăzoare, Vima Mică, Sălniţă. It is one of the most spreaded associations, the grasslands being billeted in the meadows of the rivers, in coppices and near basin with permanent water. The ecological conditions give these associations a powerful mezohygrophyls character, reflected in the floristic structure. In these meadows phytocenoses, the hemicriptophytes accomplish the most important procent (over 80%), followed by the geophytes and the terophytes, which register a reduced percentage. We should take into consideration, the reduced number of the terophytes indicating a relatively reduced level of the anthropics influences.

In the spectre of geoelements, the percentage of the Eua elements is the most significant (73,33%) followed by that of the cosmopolitan ones (13,33%), of the Cp (6,66%), of the E ant Ec (each with 3,33%). In the ecological analysis, a majority of mezophytic species (59,88%) is outlined, followed by the mezo-hygrophytes (16,33%), the situation being explained by the soil's increased and permanent humidity. The thermic system favours the dominance in the phytocenose of the micro-mezothermic species and depending on the soil's chemical reaction, the acido-neutrophyle species are dominant (36,66%), followed by the euriionics ones (23,33%) and the weak-acid-neutrophyles ones (16,66%).

The grasslands present an economically importance because of the good and very fooder species: Agrostis stolonifera, Alopecurus pratensis, Trifolium repens, Lolium perenne, Vicia cracca etc. For their preservation it is recommended the use of these grasslands in a sysstem of hay fields. We can also find there medicinal species and toxical ones, which increase the economical value of thse grasslands. Pentru conservarea acestora se recomandă folosirea acestor pajişti în regim de fânețe. Se găsesc de asemenea specii medicinale, melifer şi toxice care sporesc valoarea economică a acestor pajişti.

Table 5. *Agrostetum stoloniferae, Association,* Ujvarosi 1941

Nr.	1	2	3	4
Altitude	350	400	200	180
Exposition	S-V	S-V	S-E	N-V
Slope	2	5	2	2-3
Grass layer(%)	75	70	80	45
(mp)	8	6	6	6
Car as.				
Agrostis stolonifera	4	3	3	3
Poa pratensis	1	+	-	+
Alopecurus pratensis	+	-	+	+
Potentilla reptans	-	+	+	-
Lysimachia nummularia	-	-	+	+
Rorripa sylvestris	-	+	-	+
Daucus carota	-	-	+	+
M-Arr				
Trifolium repens	+	1	1	-
Lotus corniculatus	+	-	+	-

Medicago lupulina	-	1	-	-
Vicia cracca	-	-	+	-
Plantago lanceolata	+	-	-	-
Ranunculus ficaria	-	-	1	-
Rumex acetosella	1	+	-	-
Rumex crispus	-	-	+	-
Galium schultesii	+	-	-	-
Juncus effusus	-	-	+	-
Achillea millefolium	-	+	+	-
Dactylis glomerata	-	+	+	-
Filipendula vulgaris	-	+	-	-
Taraxacum officinale	-	+	-	-
Pl				
Cichorium intybus	-	+	-	-
Ranunculus repens	-	-	1	-
Lolium perenne	-	1	2	-
Plantago major	-	+	-	-
Plantago media	-	+	-	-
Art				
Urtica dioica	-	-	-	+
Tussilago farfara	-	-	-	+
Che				
Chenopodium album	-	-	+	1
Lamium album	-	-	+	-
Îns				
Matricaria chamomilla	-	-	+	-
Lythrum salicaria	-	-	+	-
Asperula odorata	+	-	-	-
Pulmonaria montana	-	+	-	-
Conium maculatum	-	-	-	+
Petasites hybridus	-	-	-	+

1-“La Răstoacă” 14.04.2003. 2-La Răzoare 17.07 2003.

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ASPECTE DIN VEGETAŢIA VĂII LĂPUŞULUI

Valea Lăpuşului este cea mai lungă de pe teritoriul judeţului Maramureş. Cu toate că ea străbate si zone joase, cu lunci domoale, între satul Răzoare si confluenţa cu Valea Hijului (un afluent al Lăpuşului) se găsesc strâmtorile Lăpuşului, un defileu de cca 30 de km, mărginit de pereţi stâncoşi si abrupţi. Vegetaţia Văii Lăpuşului, impusă de condiţiile ecologice este reprezentată in cea mai mare parte de carpino-făgete, dar si de asociaţii arbustive edificate de alun si mur, iar insular, pe lângă vale vegeteaza sălcişuri si zăvoaie edificate de arin negru. Vegetaţia ierboasă insulara, este reprezentată, mai ales de pajişti de iarba câmpului.