

THE COROLOGY, ECOLOGY AND PHYTOSOCIOLOGY OF THE WOODY PLANT COMMUNITIES OF THE LAPUȘNIC VALLEY, PART OF THE NERA GORGES-BEUȘNIȚA NATIONAL PARK

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ABSTRACT

The examined area, process which started in 2011, is situated along the course of Lăpușnic, a tributary of the Nera river and is an integral part of the Nera Gorges-Beușnița National Park. Calcareous substratum and climate influences sub-Mediterranean determine the type of flora and vegetation of Lăpușnic Valley. In the Lăpușnic basin there were identified numerous vulnerable (V), rare (R), and endangered (E) taxa, which are found in the red lists, published in our country. The general aspect of vegetation in the the Lăpușnic basin represents an image of the very different stationary conditions, to which one can add the influence of the anthropo-zoogenous factors. The wooden vegetation is represented by forests, underwoods and riverside coppices, the forests occupy the largest area. In the Lăpușnic basin, important areas are occupied by the beech forests belonging to the Festuco drymeiae-Fagetum Morariu et al. 1968 plant community. At lower altitudes, one can find alder tree groves which belong to the association Stellario nemori-Alnetum glutinosae (Kärstner 1938) Lohm. 1957. The Quercetum petraeae-cerris Sós (1957) 1969 plant community grow on the slopes of the lower limit of the basin Lăpușnic. Subcontinental peri-Pannonic scrub are represented by the following plant communities: Syringo-Fraxinetum orni Borza 1958 em. Resmeriță 1972 (Syn.: Syringeto-Fraxinetum orni coryletosum columnae Borza 1958; Syringo-Carpinetum orientalis humiletosum domogledicum Jakucs 1959; Syringetum-Cotinetetum-Acaerineum tatarici Georgescu 1934), Cotino-Carpinetum orientalis Csürös et al. -1968, Syringo-Carpinetum orientalis Jakucs 1959. They form the so called „sibliacuri,, and are included in the Habitat 40A0 - Subcontinental peri-Pannonic scrub. This plant communities are installed on bedrock, hard to reach land, with slopes moderately to highly pitched, even on steep walls.*

INTRODUCTION

The examined area, process which started in 2011, is situated along the course of Lăpușnic, a tributary of the Nera river and is an integral part of the Nera Gorges-Beușnița National Park. Calcareous substratum and climate influences sub-Mediterranean determine the type of flora and vegetation of Lăpușnic Valley.

In the Lăpușnic basin there were identified numerous vulnerable (V), rare (R), and endangered (E) taxa, which are found in the red lists, published in our country.

The general aspect of vegetation in the the Lăpușnic basin represents an image of the very different stationary conditions, to which one can add the influence of the anthropo-zoogenous factors.

The wooden vegetation is represented by forests, underwoods and riverside coppices, the forests occupy the largest area.

MATERIALS AND METHODS

For the study of the vegetal carpet in Lăpușnic Valley, we have used methods of phyto-sociologic research characteristic to the Central European phyto-sociologic School, which was based on the principles and methods elaborated by J. Braun-Blanquet (1926) and adapted by A. Borza (1934) to the particularities of our country's vegetation.

The woody plant communities have been analyzed and characterized from the chorological, ecological point of views. They were also examined according to their floristic composition and physiognomy, syndynamics and economics.

RESULTS AND DISCUSSION

In the Lăpușnic Valley (fig. 1, 2), important areas are occupied by the beech forests belonging to the *Festuco drymeiae-Fagetum* Morariu et al. 1968 plant community. At lower altitudes, one can find alder tree groves which belong to the association *Stellario nemori-Alnetum glutinosae* (Kärstner 1938) Lohm. 1957. The *Quercetum petraeae-cerris* Sós (1957) 1969 plant community grow on the slopes of the lower limit of the basin Lăpușnic.

Subcontinental peri-Pannonic scrub are represented by the following plant communities: *Syringo-Fraxinetum orni* Borza 1958 em. Resmeriță 1972 (Syn.: *Syringeto-Fraxinetum orni coryletosum colurnae* Borza 1958; *Syrigo-Carpinetum orientalis humiletosum domogledicum* Jakucs 1959; *Syringetum-Cotinetetum-Acaerineum tatarici* Georgescu 1934), *Cotino-Carpinetum orientalis* Csürös et al. -1968, *Syringo-Carpinetum orientalis* Jakucs 1959. They form the so called „șibliacuri,, and are included in the Habitat 40A0* - Subcontinental peri-Pannonic scrub. They are installed on bedrock, hard to reach land, with slopes moderately to highly pitched, even on steep walls.



Fig. 1. Lăpușnic Valley (M. Niculescu, 26.VII.2013)

1. Ass. *Festuco drymeiae-Fagetum* Morariu et al. 1968 (Table no. 1)

The beech forests are well-represented, develops on the slopes with various exhibitions and slopes whose inclination can vary from 100 to 400, varies according to age, which is between 60-130 years old, and status of preservation is less good to very good (fig. 3).

This plant community are found on the slopes with various exhibitions, on slopes with inclinations ranging up to 400, steep, usually at altitudes of approximately 700 m.s.m, skeletal soils, districambosol, middle-type deep-shallow, moderately acidic, oligomezobazice, oligotrophic. These forests have ages between 65 and 130 years and have production between class III-V. In the floristic composition of the ptytocoenoses meet numerous species of the macromicetes.



Fig.2.Lăpușnic Valley (M. Niculescu, 26.VII.2013)

These phytocoenoses have a special composition, being characterised by the dominance of the species by Querco-Fagetea class, *Fagetalia* order and *Symphyto – Fagion* alliance: *Luzula luzuloides*, *Calamagrostis arundinacea*, *Galium odoratum*, *G. schultesii*, *Carex sylvatica*, *Dentaria bulbifera*, *Pteridium aquilinum*, *Carex pillosa*, *Mycelis muralis*, *Poa nemoralis*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *Viola reichenbachiana*, *Rubus hirtus*, *Asarum europaeum*, *Neottia nidus-avis*, *Atropa bella-dona* ș.a. The coordinates of this type of forest are: 44°95'20" Northern latitude and 21°91'12" East longitude.



Fig.3. Ass. *Festuco drymeiae-Fagetum* Morariu et al. 1968
–Lăpușnic Valley- Ogașu Rău (L. Niculescu, 26.VII.2013)

Limitative factors: fall wind, early or late frosts, plant pathology agents and attack of entomofauna species. In the Lăpușnic basin some phytocoenoses suffering from significant attacks by: *Nectria galligena*, *Pseudomonas syringae*, *Cryptococcus fagisuga*, *Xyleborus saxeseni*, *Trypodendron domesticum*, cu specii de *Cerambycidae*, *Hylecoetus dermestoides*, *Taphrorynchus bicolor*, *Xyleborus monographus*. *Lymantria monacha* causes very large attacks in the arboretum, where surveys have been carried out. These arboretum requires urgent and appropriate treatments and hygienic cutting and painting works in the Ogașu Rău. Also in the forests with *Festuca drymeia* are necessary cuts

conservation as well as treatments for progressive regeneration, especially the Valley of Pârâul Vălae. This plant community is part of the 9110 habitat - *Luzulo-Fagetum* beech forests; CLAS. PAL.: 41.11; HdR R4102, R4105-4107, R4110.

Ass. *Festuco drymeae-Fagetum* Morariu et al. 1968

Table no. 1

No. of relevée	1	2	3	4	5	6	7	8	9	10	K
Altitude m.o.s. (x 10 m)	66	66	66	70	70	70	71	71	72	72	
Exposure	SE	SE	SV	S	S	V	SV	SE	V	V	
Inclination (in grades)	15	30	20	10	40	30	15	10	20	10	
Canopy	0,7	0,6	0,7	0,7	0,7	0,6	0,7	0,7	0,8	0,8	
Coverage of herbaceous layer (%)	20	40	20	35	30	40	20	35	30	30	
Sampling surface (m2)	1000	1000	1000	1000	1000	400	400	400	400	400	
Char. ass.											
<i>Fagus sylvatica</i>	4-5	4	4-5	4-5	4	4	4	4	4-5	4-5	V
<i>Festuca drymeia</i>	1	2	+1	1	1	2	1	1	2	+1	V
<i>Symphyto – Fagion</i>											
<i>Dentaria bulbifera</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Isopyrum thalictroides</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Asarum europaeum</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Circea lutetiana</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Athyrium filix-femina</i>	-	+	+	+	-	+	+	+	+	+	IV
<i>Dryopteris filix-mas</i>	-	+	+	-	-	+	+	-	+	+	III
<i>Carex pillosa</i>	+	+	+	-	+	+	+	+	+	+	IV
<i>Actaea spicata</i>	+	+	+	-	+	+	+	-	+	+	IV
Fagetalia et Quercu Fagetea											
<i>Luzula luzuloides</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Anemone nemorosa</i>	+	+	-	-	+	+	-	-	+	+	III
<i>Hedera helix</i>	+1	1	+1	+1	+1	1	+1	+1	+	+	V
<i>Cornus sanguinea</i>	+	+	-	-	-	+	-	-	+	+	III
<i>Viola reichenbachiana</i>	+	+	+	-	+	+	+	-	+	+	IV
<i>Carex sylvatica</i>	+1	1	+1	1	+1	1-2	+1	1	+1	+1	V
<i>Poa nemoralis</i>	1	+1	+	+	+	1	+	+	+	1	V
<i>Galium schultesii</i>	+	+	+	-	+	+	+	-	-	-	III
<i>Calamagrostis arundinacea</i>	+	+	+	-	+	+	+	-	+	+	IV
<i>Galium odoratum</i>	+	+	-	-	+	+	-	-	-	-	II
<i>Melica iniflora</i>	+	+	+	-	+	+	+	-	+	+	IV
<i>Brachypodium sylvaticum</i>	+	+	+	+	+	+	+	-	+	+	V
<i>Lapsana communis</i>	+	+	+	-	+	+	+	-	+	+	IV
<i>Neottia nidus-avis</i>	+	-	-	-	+	-	-	-	+	-	II
<i>Oryzopsis virescens</i>	+	+	+	-	+	+	+	-	-	-	III
<i>Atropa bella-dona</i>	-	+	-	-	+	-	-	-	-	+	II
<i>Cotinetalia</i>											
<i>Fraxinus ornus</i>	+	+	+	-	-	-	+	+	-	+	III
<i>Helleborus odoratus</i>	-	+	+	+	-	+	+	+	-	-	III
<i>Tilia tomentosa</i>	-	-	-	+	-	-	-	+	+	+	II
Variae Syntaxa											
<i>Mycelis muralis</i>	-	+	+	+	-	+	+	+	-	-	III
<i>Glechoma hederacea</i>	-	-	-	+	-	-	-	+	+	+	II
<i>Hieracium murorum</i>	-	+	+	+	-	+	+	+	+	+	IV
<i>Campanula patula</i>	-	-	+	-	-	-	+	-	+	+	II
<i>Campanula persicifolia</i>	-	+	+	-	-	-	-	-	-	-	I
<i>Campanula rapunculoides</i>	-	-	-	-	+	-	-	-	+	-	I
<i>Urtica dioica</i>	+	+	-	-	-	-	-	-	-	-	I
<i>Chelidonium majus</i>	+	+	-	-	-	-	-	-	-	-	I
Diverse specii de briofite	+	+	+	+	+	+	+	+	+	+	V

Place and data of the relevés: 1-10, Lăpușnic Valley, 26.VII.2013



Fig. 4. *Nectria* sp. attack – frequently on Lăpușnic Valley

2. **Ass. *Stellario nemori-Alnetum glutinosae*** (Kärstner 1938) Lohm. 1957 (Syn. *Alnus glutinosa*-*Salix purpurea* Paucă 1941, *Aegopodium-Alnetum praecarpaticum* Kárpáti V., Kárpáti I. et Jurko 1963, *Alnetum glutinosae* Meijer-Drees 1936.) (Table no. 2)

The *Stellario nemori-Alnetum glutinosae* (Kärstner 1938) Lohm. 1957 plant community is part of the habitat 91E0 * Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*; CLAS. PAL.: 44.3, 44.2 și 44.13. In this basin the Habitat 91E0 * is poorly developed, the characteristic plant community meeting more in the form of strips of about 10-15 m wide. However analyzed phytocoenosis are comprised are well sourced, even if you stretch more in the form of strips along the Lăpușnicului.

The herbaceous layer is very developed, reaching a coverage of up to 70%. The degree of antropizare is relatively small. We can mention a few species which present a high constancy: *Stellaria nemorum*, *Glechoma hederacea*, *Brachypodium sylvaticum*, *Lysimachia numularia*, *Aegopodium podagraria*, *Erigeron annuus*, *Poa pratensis*, *Ranunculus repens*, *R. ficaria*, *Geranium phaeum*, *Alliaria petiolata*, *Mentha longifolia*, *Saponaria officinalis*. The coordinates of this type of forest are: 44°95'01" Northern latitude and 21°90'04" East longitude.

Ass. *Stellario nemori-Alnetum glutinosae* (Kärstner 1938) Lohm. 1957

Table No. 2

No. of relevée	1	2	3	4	5	6	7	8	K
Altitude m.o.s. (x 10 m)	40	45	40	45	45	40	40	40	
Canopy	0,6	0,6	0,7	0,7	0,6	0,6	0,6	0,6	
Coverage of herbaceous layer (%)	65	70	40	40	70	70	80	80	
Sampling surface (m2)	400	400	400	400	400	400	400	400	
Char. ass.									
<i>Alnus glutinosa</i>	3-4	4	4	4	3-4	3-4	3-4	3-4	V
<i>Stellaria nemorum</i>	1	1	+	+	1	1	1	1	V
Alno – Ulmion									
<i>Festuca gigantea</i>	+	+	+	+	+	+	+	+	V
<i>Ranunculus repens</i>	1	1	+	+	1	1	1	1	V
<i>Carex remota</i>	+	+	+	-	-	+	-	-	III
<i>Matteuccia struthiopteris</i>	-	-	-	-	+	+	-	-	II
<i>Geranium phaeum</i>	-	+	-	-	-	-	+	-	II
Fagetalia									
<i>Salvia glutinosa</i>	+1	-	1	-	1	+	+	+	IV
<i>Euphorbia amygdaloides</i>	-	+	-	+	-	-	-	-	II

<i>Thelypteris phegopteris</i>	+	+	+	-	-	+	-	-	III
<i>Athyrium filix-femina</i>	+	+	+	+	+	+	+	+	V
<i>Lamium galeobdolon</i>	+	-	+	-	-	+	-	-	II
Quercu – Fagetea									
<i>Geum urbanum</i>	+	+	+	-	+	-	+	+	IV
<i>Ligustrum vulgare</i>	-	-	+	-	-	+	+	-	II
<i>Fragaria vesca</i>	1	+	+	+	+	+	+1	+1	V
<i>Carpinus betulus</i>	-	-	-	-	+	+	-	-	II
<i>Prunus avium</i>	-	+	-	-	-	-	+	-	II
<i>Ranunculus ficaria</i>	+	+	+	+	-	+	+	-	IV
<i>Rubus caesius</i>	+1	+1	+	+	+1	1	1	1	V
<i>Polygonatum latifolium</i>	-	-	-	+	+	-	-	+	II
<i>Brachypodium sylvaticum</i>	+	+	-	+	+	-	+	+	IV
<i>Dryopteris filix-mas</i>	+	+	+	+	+	+	+	+	V
<i>Clematis vitalba</i>	+	+1	+1	+	1	+	1	+1	V
<i>Crataegus monogyna</i>	-	-	-	+	+	-	-	+	II
<i>Rosa canina</i>	+	-	+	-	-	+	-	-	III
<i>Poa nemoralis</i>	+	+	+	-	-	+	-	-	III
Molinio-Arrhenatheretea									
<i>Agrostis stolonifera</i>	1	+	+	+	+1	+	+1	+1	V
<i>Achillea millefolium</i>	-	+	+	-	+	+	-	-	III
<i>Poa pratensis</i>	+1	+1	+	+1	+1	1	1	1	V
<i>Trifolium pratense</i>	+	+	-	+	-	-	-	-	II
Variae Syntaxa									
<i>Alliaria petiolata</i>	+1	+1	+1	+	+1	+	1	1	V
<i>Lamium maculatum</i>	+	+	+	+	-	+	-	+	IV
<i>Sambucus nigra</i>	+	+1	1	+1	+	+	+	+1	V
<i>Salix alba</i>	-	-	-	+	+	+	-	-	II
<i>S. fragilis</i>	+	+	-	-	-	-	+	-	II
<i>Aegopodium podagraria</i>	+1	+	1	+1	1	1	1-2	1-2	V
<i>Mycelis muralis</i>	+	+	+	-	-	-	-	+	III
<i>Geranium robertianum</i>	-	-	-	+	-	+	-	-	II
<i>Urtica dioica</i>	+	+1	+	+	+1	1	+1	1	V
<i>Glechoma hederacea</i>	+1	+	+	1	1	1	1	+	V
<i>Mentha longifolia</i>	+	+1	+	+1	+	+1	1	+1	V
<i>Galium aparine</i>	+	+	+	-	+	-	+	+	IV
<i>Rorippa sylvestris</i>	+	+	+	+	+	+	+	+	V
<i>Prunella vulgaris</i>	+	-	+	+	-	+	+	+	IV
<i>Saponaria officinalis</i>	+	+	+	-	-	-	-	+	III
<i>Erigereon annuus</i>	+	+	+	+	+	+	+	+	V
<i>Tanacetum vulgare</i>	+	-	+	-	+	-	-	+	III
<i>Prunus cerasifera</i>	+	+	-	-	-	-	+	-	II
<i>Lysimachia nummularia</i>	+	-	+	-	+	-	-	+	III
<i>Althaea officinalis</i>	+	-	+	-	-	-	-	-	II

Place and data of the relevés: 1-10, Lăpușnic Valley, 26.VII.2013

3. **Ass. *Salicetum albae*** Issler 1924

(Syn.: *Salicetum albae-fragilis* R. Tx. 1937)

The phytocoenoses of the of *Salix alba* inhabits meadows, residuary permanent wetlands, alluvial soil with flysch-sandy, or clay loam. In the Lăpușnic basin this plant community meets at the lower limit of the basin. About the ecological categories, from the humid point of view, the mesophytes are most common, meso-hygrophytes and hygrophytes.

Characteristic species, *Salix alba* is accompanied by *Salix fragilis*, which in some transitional plant associations is codominant, and subdominant in others.

In the grassy stratum, there are frequently met the following species: *Urtica dioica*, *Saponaria officinalis*, *Geranium robertianum*, *Aegopodium podagraria*, *Agrostis stolonifera*, *Glechoma hederacea*, *Ranunculus repens*, *Equisetum arvense*, *Calystegia sepium*, *Humulus lupulus* *Lysimachia nummularia*, *Lycopus europaea*, *L. exaltatus*, *Lythrum salicaria*

One of the species very well developed is *Urtica dioica*, indicating a high degree of human impact at the lower basin. And the presence of the species *Prunus cerasifera* in the

phytocoenosis can be explained by this high degree of human intervention. This plant community is also part of the habitat 91E0 * - Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*; CLAS. PAL.: 44.3, 44.2 și 44.13.

4. *Ass. Quercetum petraeae-cerris* Sóo (1957) 1969 (Table no. 3)

This plant community is found at the lower limit of the basin, towards the village Lăpușnicu Mare. The phytocoenosis from this plant community are found on the slopes of the southern and south-western exposure, on the brown soils, deep, developed on limestone bedrock. This type of forest examined in Lăpușnic have a productivity of class IV and age is ee 85 years. These forests are in a good conservation status, requiring only the cuts for hygiene and preservation. Limitative factors of which act at their level of those hydric deficit stands high has an important role. The *Quercetum petraeae-cerris* Sóo (1957) 1969 plant community is part of the 91M0 habitat - Pannonian-Balkan turkey oak - sessile oak forests; CLAS. PAL.: 41.76.

Ass. Quercetum petraeae-cerris Sóo (1957) 1969

Table no. 3

No. of relevée	1	2	3	4	5	6	7	8	9	10	K
Altitude m.o.s. (x 10 m)	52	52	52	52	52	52	52	52	52	52	
Exposure	S	SV	SV	SV	S	S	V	SV	SV	V	
Inclination (in grades)	10	10	15	10	15	20	25	20	10	25	
Canopy	0,7	0,7	0,7	0,7	0,7	0,7	0,7	0,6	0,7	0,7	
Coverage of herbaceous layer (%)	40	30	40	35	35	40	40	45	35	30	
Sampling surface (m ²)	400	400	400	400	400	400	400	400	400	400	
Char. ass.											
<i>Quercus petraea</i>	3-4	4	4	4	4	4	4	4	4	4	V
<i>Quercus cerris</i>	1	1-2	1	1	1	1	1	1	1	1-2	V
Quercetea pubescenti-petraeae et Quercetalia petraeae-pubescentis											
<i>Quercus frainetto</i>	1	1	1	+1	+1	1	+	+	1	1	V
<i>Comus mas</i>	+	-	-	+	-	-	-	-	-	-	I
<i>Rosa canina</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Tanacetum corymbosum</i>	-	+	-	+	-	-	+	-	+	-	II
<i>Astragalus glycyphyllos</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Trifolium medium</i>	+	+	-	-	+	+	-	-	+	+	III
<i>Fragaria viridis</i>	+	+	-	-	-	+	-	-	+	+	III
<i>Vincetoxicum hirsutum</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Sedum cepaea</i>	+	-	+	-	+	-	+	-	-	+	II
<i>Campanula persicifolia</i>	+	+	+	-	+	+	+	-	-	-	III
<i>Dianthus armeria</i>	+	+	+	-	+	+	+	-	+	+	IV
<i>Hypericum perforatum</i>	+	+	-	-	+	+	-	-	-	-	II
<i>Coronilla varia</i>	+	-	+	-	+	-	+	-	-	+	II
<i>Arabis turrita</i>	+	+	-	-	-	+	-	-	+	+	III
<i>Viola hirta</i>	+	-	-	-	-	-	-	-	-	+	I
<i>Poa angustifolia</i>	+	-	-	+	-	-	-	-	-	-	I
<i>Lithospermum purpureo-coeruleum</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Festuca heterophylla</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Teucrium chamaedrys</i>	+	+	+	-	+	+	+	-	+	+	IV
<i>Carex montana</i>	+	+	-	-	+	+	-	-	-	-	II
<i>Potentilla micrantha</i>	+	-	+	-	+	-	+	+	-	+	III
<i>Oryzopsis virescens</i>	+	+	-	-	-	+	-	-	+	-	II
<i>Potentilla alba</i>	+	+	-	-	+	+	-	-	-	-	II
<i>Lychnis coronaria</i>	+	-	-	+	-	-	-	-	-	-	I
<i>Fraxinus ornus</i>	-	-	-	+	+	-	-	-	-	-	I
<i>Helleborus odoratus</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Tilia tomentosa</i>	+	+	+	+	+	+	+	-	-	+	IV

<i>Acer tataricum</i>	+	-	+	-	+	-	+	+	-	+	III
Fagetalia et Querco Fagetea											
<i>Fagus sylvatica</i>	+	+1	+1	+	+	+	+	-	-	+1	V
<i>Fagus sylvatica (juv.)</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Acer campestre</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Carpinus betulus</i>	+	+	+	-	-	-	-	+	-	+	III
<i>Cornus sanguinea</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Crataegus monogyna</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Viburnum lantana</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Sorbus torminalis</i>	+	-	-	+	-	-	-	-	-	-	I
<i>Prunus spinosa</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Cerasus avium</i>	+	-	-	-	+	+	+	-	-	-	II
<i>Ligustrum vulgare</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Euonymus europaeus</i>	-	+	+	+	-	-	-	+	+	+	III
<i>Poa nemoralis</i>	+1	1	1	1	1	+1	1	1-2	1	+1	V
<i>Veronica officinalis</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Campanula ranunculoides</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Luzula luzuloides</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Carex pilosa</i>	1	1	+1	+1	+	+	+1	+1	1	+	V
<i>Galium schultesii</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Melica nutans</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Melica uniflora</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Euphorbia amygdaloides</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Veronica chamaedrys</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Brachypodium sylvaticum</i>	+	1	1	1	+1	1	+1	1	-	+	V
<i>Viola sylvestris</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Ranunculus auricomus</i>	+	+	+	-	-	-	+	+	-	+	III
<i>Lathyrus vernus</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Galium verum</i>	+	-	+	+	-	+	-	-	-	-	II
<i>Carex divulsa</i>	+	-	-	-	-	+	-	-	-	-	I
<i>Hedera helix</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Geum urbanum</i>	+	+	+	+	+	+	+	-	-	+	IV
<i>Asperula taurina</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Hieracium sabaudum</i>	+	+	+	+	+	+	+	+	+	+	V
Variae Syntaxa											
<i>Cardaminopsis arenosa</i>	-	+	-	-	+	-	-	-	-	-	I
<i>Lathyrus venetus</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Trifolium medium</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Digitalis grandiflora</i>	+	+	-	-	-	-	-	-	-	-	I
<i>Inula hirta</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Mycelis muralis</i>	-	+	+	+	-	+	-	+	+	+	IV
<i>Glechoma hederacea</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Rubus caesius</i>	-	-	-	+	+	+	-	-	-	-	II
<i>Campanula patula</i>	+	-	-	-	+	-	-	-	+	-	I
<i>Campanula rapunculus</i>	+	+	+	+	+	+	+	+	+	+	V
<i>Lathyrus hallersteinii</i>	+	-	+	+	-	+	-	-	-	-	II
<i>Euphorbia cyparissias</i>	+	-	-	-	+	+	+	-	-	-	II
<i>Betonica officinalis</i>	+	-	-	-	+	-	-	-	+	-	I
<i>Galium aparine</i>	-	-	+	+	+	+	-	-	-	+	III
<i>Viscaria vulgaris</i>	+	+	-	+	-	+	-	-	-	-	II
<i>Scrophularia nodosa</i>	-	-	-	+	-	+	-	-	+	+	II

Place and data of the relevés: 1-10, Lăpușnic Valley, 26.VII.2013, 5.X.2013

Subcontinental peri-Pannonic scrub are represented by the following plant communities: *Syringo-Fraxinetum orni* Borza 1958 em. Resmeriță 1972 (Syn.: *Syringeto-Fraxinetum orni coryletosum colurnae* Borza 1958; *Syrigo-Carpinetum orientalis humiletosum domogledicum* Jakucs 1959; *Syringetum-Cotinetetum-Acaerineum tatarici* Georgescu 1934), *Cotino-Carpinetum orientalis* Csürös et al. -1968, *Syringo-Carpinetum*

orientalis Jakucs 1959. They form the so called „sibliacuri,, and are included in the Habitat 40A0* - Subcontinental peri-Pannonic scrub. This plant community are installed on bedrock, hard to reach land, with slopes moderately to highly pitched, even on steep walls and are in a good conservation status.

CONCLUSIONS

The examined area, process which started in 2011, is situated along the course of Lăpușnic, a tributary of the Nera river and is an integral part of the *Nera Gorges-Beușnița National Park*. Calcareous substratum and climate influences sub-Mediterranean determine the type of flora and vegetation of Lăpușnic Valley. In the Lăpușnic basin there were identified numerous vulnerable (V), rare (R), and endangered (E) taxa, which are found in the red lists, published in our country. The general aspect of vegetation in the the Lăpușnic basin represents an image of the very different stationary conditions, to which one can add the influence of the anthropo-zoogenous factors. The wooden vegetation is represented by forests, underwoods and riverside coppices, the forests occupy the largest area. The beech forests represented by the plant community *Festuco drymeiae-Fagetum* Morariu et al. 1968 are well-represented, develops on the slopes with various exhibitions and slopes whose inclination can vary from 10⁰ to 40⁰, varies according to age, which is between 60-130 years old, and status of preservation is less good to very good. The *Quercetum petraeae-cerris* Sósó (1957) 1969 plant community grow on the slopes of the lower limit of the basin Lăpușnic. Subcontinental peri-Pannonic scrub are represented by the 3 plant communities. They form the so called „sibliacuri,, and are included in the Habitat 40A0* - Subcontinental peri-Pannonic scrub. This plant communities are installed on bedrock, hard to reach land, with slopes moderately to highly pitched, even on steep walls and are in a good conservation status.

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