FOREST COMMUNITIES WITH EUROPEAN LARCH (*LARIX DECIDUA* MILL.) AT VIDOLM, ALBA COUNTY

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Abstract: The present paper presents a description of one of Romania's five natural distribution centers of larch. The study area is situated in the northern part of the Trascau Mountains, in Colțu Roşu-Bedeleu reserve. 23 phytosociological mappings have been analyzed, concluding with the identification of two vegetal associations: *Asperulo capitatae-Seslerietum rigidae* (Zolyomi 1939) Coldea 1991, *Seslerio rigidae-Fagetum* Soo *et* Vida 1963 and an alliance: *Symphyto-Fagion* Vida 1959. Although *Larix decidua* Mill. appears in the phytosociological tables with a high abundance/dominance (AD) scores in the canopy level, the species from the herbaceous layer do not correspond to these of high altitude forest formations, being in fact characteristic to the nemoral Beech forests (Cl. *Querco-Fagetea*). Under the mixed Beech-Larch canopy, the larch regeneration is missing completely. Considering the great importance of the herbaceous layer in forest fitosociological classifications, the relic character of larch populations is emphasized.

Keywords: larch, calcareous forests, relict populations

1. Introduction

The larch forest communities from the Trascău Mountains are a valuable resource of information, especially in the study of the postglacial evolution of vegetation from this specific region of the Carpathian Mountains. They detain an extraordinary scientific importance, as they have witnessed periods of time dominated by a climate a lot different from the present one.

Unfortunately, the larch communities from the Apuseni Mountains, as those from other mountains, have been subdued, along time, to intensive antropic pressures generated by the acute need for timber. The larch, from an economical point of view, is an important generator of high quality wood. Numerous sources cite massive timber extractions from the larch forests of the Apuseni Mountains.

However, there have been conservation measures taken, for example the foundation of the seed reserve "Coltu Roşu-Bedeleu" by the forestry administration, for the purpose of collecting seeds, particularly from populations adapted to the local conditions, and promoting them to the region. Then again, no matter how intensively the forest management and gene conservation measures are applied, in the case of these woody plant communities, the authentic flora from underneath can be considered as lost.

The scientific importance, as much as their ecological role, make them a natural resource which needs to be preserved.

2. Material and Methods

The phytosociological analysis followed the principles of the Central-European geobotanical school (Zurich-Montpellier). The methodology used in the study of vegetation was the classical one, using the relevé technique. The floristic composition of the coenotaxa is presented by coenotic category, which includes species characteristic to associations, suballiances, alliances, orders and

classes of vegetation. The field records include the species list and for each species, the abundance-dominance score (degree of cover), estimated visually according to the Braun-Blanquet scale. This scale provides values from 1 to 5, the species with coverage between 0.01-1% from the total surface being marked with a plus sign ("+"). Each sample had an area of 400 m^2.

The synthetic table (in which "+" was replaced by 0.5) was used to perform a Correspondence Analysis (CA) with the usage of the PAST 1.72 (Statistics package). The data sources used for constructing the synthetic table and employed in the numerical analysis are presented in Table 1 for *Asperulo capitatae-Seslerietum rigidae*, Table 2 for *Seslerio rigidae-Fagetum* and Table 3 for *Symphyto-Fagion.*

For nomenclature and delimitation of coenotaxonomical units, we followed Sanda [6].

The present study includes all phytosociological data collected and aims to produce a thorough phytosociological survey and classification of these forest communities.

3. Results and Discussions:

1. Larch distribution in Romania

In Romania, the larch can be found in five distinct natural spreading centers: Ceahlău, Zăganu-Teleajen, Bucegi, Lotru and Trascău. It normally thrives at altitudes beyond 1000-1200 m, with the species extending to altitudes as low as the beech subzone, if we refer to the last 2 regions (670m in the Lotru Mountains and 600m in the Trascău Mountains). It is a mixed forest species, which can appear in the following compositions: disseminated, in groups or closely mixed with other species (*Picea, Pinus, Fagus*). Rarely, it can form pure stands, thoroughly connected, normally not overrating a consistency of 70%.

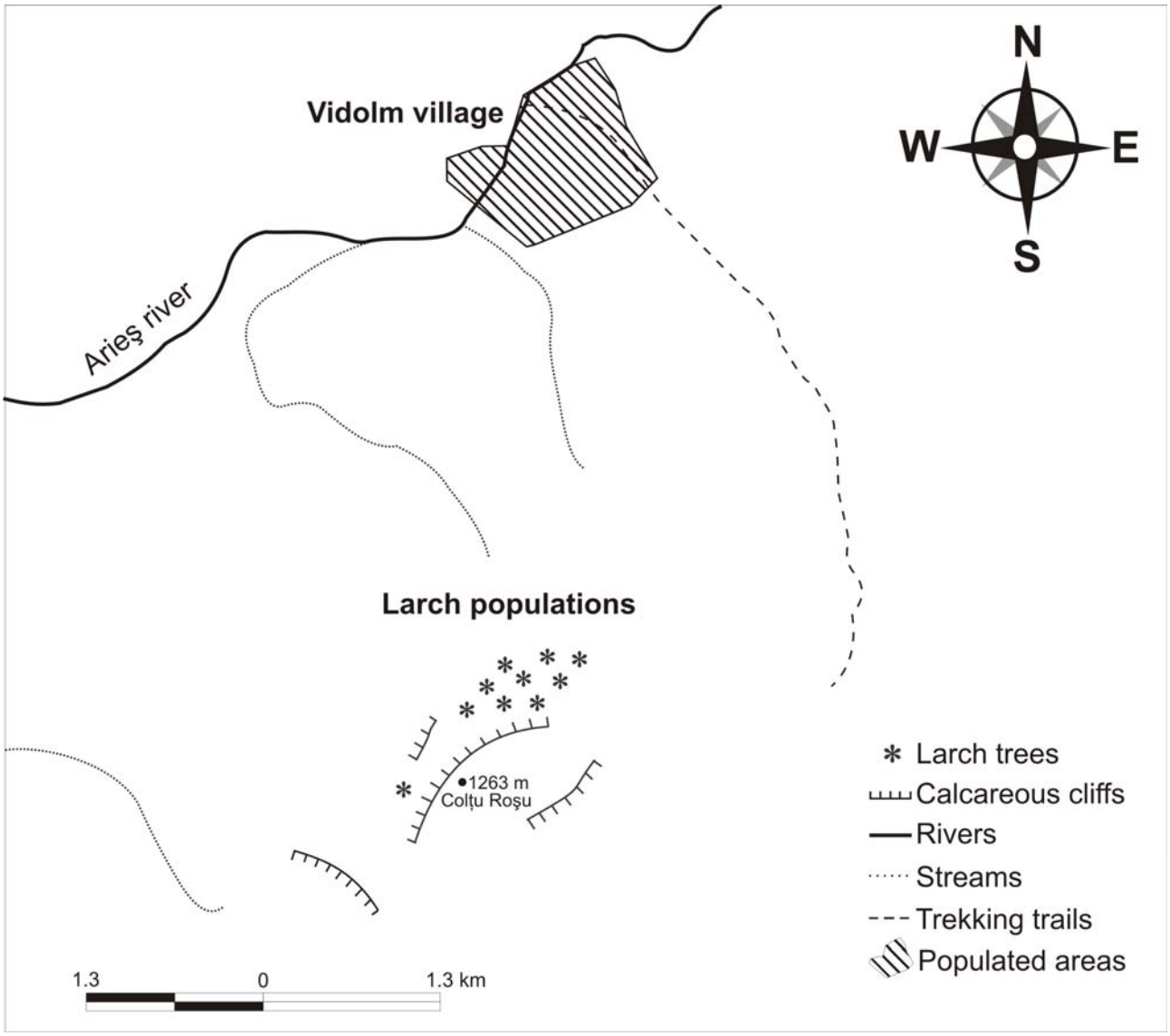

Fig. 1. *Geographic location of the studied area*

In Trascău Mountains, disjunct populations of larch have been mentioned in the literature as being present in the following locations: Arieş basin (Urdaş Mountain, Brădet location near the Rîmeţ village [5], Colţii Trascăului, Scărița Belioara, Poşegii Gorges), Geoagiu basin (Rîmeţ Gorges [5]). It appears in the form of a dim micro-population, reduced sometimes to just a few specimens, completely isolated populations or rarely under the form of larger population groups, as been observed by Dumitru-Tataranu [1]. Recently we identified one more population of just a few individuals in the basin of the Cioara valley, Arieş Basin.

2. Larch communities at Vidolm - Colţu Roşu-Bedeleu rezerve

The Forest Reserve "Colţu Roşu-Bedeleu" is located on the north face of the Urdaş Mountain, at about 2 km south of Vidolm village. Fig. 1 shows the current position of larch populations, which actually detain the most numerous individuals from Trascău Mountains. The area is characterized by a steep and extremely abrupt terrain, with an average down-grade of over 30-35%. The soils are represented by rendzinas and in a lesser proportion by acid brown forest soils. The dominant exposure is North-Western (75%) and Eastern (25%) (Rubţov, 1965). The medium height

of the larch individuals sets its value between 16-30 cm, while the medium diameter ranges between 14-50 cm.

The following main tree compositions are present in the studied area:

a) On the lower and middle part of the north-facing side of the massif, the beech is the dominant species, while the larch comes up with a lesser value creating a second canopy, due to its increased preferences for light.
b) On the upper part of the slope, characterized by dry skeletal calcareous soils, the larch grows as the dominant species.

A number of 23 releveés have been placed in different parts of the studied perimeter, searching for points characterized by high proportion of larch in the upper synusia. The systematization of the species in the tables was done according to the coenotaxonomical criteria, which lead to classify the evaluated phytocoenoses in 3 cenotaxonomical units. The first corresponds to the dry Moor Grass meadows on open calcareous slopes from the low altitudinal mountains. Their species composition, is shown in Table 1, corresponding to that of *Asperulo capitatae-Seslerietum rigidae* (Zolyomi 1939) Coldea 1991. Transitional areas between the adjacent ecosystems of beech-larch closed forests and dry *Sesleria* carpets are presented in Table 2. These boundary lines which appears as gradual blendings have been included in *Seslerio rigidae-Fagetum* Soo *et* Vida 1963 association. Closed canopy forests can be described as limestone Beech woods. Often there is a more or less deep layer brown soil or other material which is relatively poor in carbonates. These combinations of species are included in the *Symphyto-Fagion* Vida 1959 as shown in Table 3.

None of these relevees have considerable presence of species pertaining to the *Vaccinio-Piceetea* class, therefore the phytocoenosis could not be categorized in the same association as the one described in literature from the other Carpathian massifs (*Saxifrago cuneifoliae-Laricetum* (Beldie 1967) Coldea 1991).

The releveé groups are ordered quite distinctively within the space determined by the first CA components (Fig. 2).

A few observations have also been performed in the Scarita –Belioara reserve (placed at about 10 km North from the Vidolm village) in August 2008, at the lower limit of the coniferous forests, with an altitude close to 1200 m. The larch grows in mixture with species such as beech, spruce and Scots pine. Some of the most common species we have encountered are: *Sesleria rigida, Vaccinium vitis-idaea, Luzula sylvatica, Juniperus communis, Picea abies, Betula pendula, Calamagrostis arundinacea, Hieracium transsilvanicum, Sorbus aucuparia, Campanula rotundifolia, Cirsium erisithales, Campanula persicifolia, Pimpinella major, Acer pseudoplatanus, Aconitum moldavicum, Mercurialis perennis, Chrysanthemum corymbosum, Achillea distans, Salix cinerea, Laserpitium latifolium, Corylus avellana, Leontodon hispidus, Scabiosa columbaria, Doronicum columnae, Asarum europaeum, Ranunculus oreophilus, Gentiana asclepiadea, Veronica urticifolia, Carex humilis, Valeriana tripteris, Melampyrum bihariense, Rubus saxatilis, Goodyera repens*. Here, the structure of the arborescent layer is visibly correlated with the soil humidity. The mixtures between larch and pine are extremely rare and only situated in very dry areas.

Analyzing the releveés taken from the Vidolm area and taking into consideration the observations from the other researched sites, it was impossible to determine a distinct cenotaxonomical unit to include the larch as a constant species. The larch individuals taken into study did not exhibit visible preferences for neither of the vegetation classes present in the analyzed surfaces (*Querco-Fagetea, Elyno-Seslerietea, Erico-Pinetea*).

The vegetation study made by E. Ghisa (1957) [2] at the Vidolm forest, allowed the identification of the association also present in the other spreading centers across the Carpathian Mountains (Bucegi, Ceahlau, Ciucas): *Saxifrago cuneifoliae-Laricetum* (Beldie 1967) Coldea 1991. We also mention that during our research, the species *Saxigrafa cuneifolia* was found rarely, only in humid places at the base of shady stony blocks, situated under massifs of *Fagus sylvatica* mixed

with *Acer pseudoplatanus*. The larch's importance in such a biocoenosis is insignificant, with the species manifesting low growth and rotten trunks due to excessive soil humidity.

The difficulties that appear when trying a cenotaxonomic classification of the larch biocenosis from the Trascău Mountains is explained by the relict character of the populations, as outposts from their center of distribution. Species pertaining to the *Vaccinio-Piceetea* class, in which the larch should also appear, are missing completely. The populations can no longer find their specific coenotic background, that in which they primarily appeared, although they might seem in a climax state. It should be considered that the larch was spread across our country in all of the colder interglaciar periods as well as in the glacial periods. Taking into account that in the last glacial period the boreal, subarctic, pine forests dominated the lower vegetations level, implies that in these levels the larch must have had a remarkable role, one that which the pollen analysis cannot reconstruct. The natural spreading explanation of the larch, takes us to the conclusion that the present larch forests from the lower regions, especially those from Poland, are actually relict remnants from the Pleistocene period. The presence of these formations is the result of long line of adaptations to very different climate changes, compared to the larch forests found at a higher altitude (Vlase I.Ilarion, 1966).

When it comes to small groups or isolated individuals mixed with the beech, there is an obvious exclusion tendency. The regeneration of the species under the thick canopy of the beech stands is practically impossible, due to its known affinity for light.

Recent observations (October 2008) enabled the identification of yet another isolated fragment of a natural larch population, in the basin of the Cioara valley (Simuleşti village). The species from the herbaceous layer are entirely specific to the beech forests, while the larch individuals which are in a codominance social position are already sapless.

The small groups present on the calcareous rocks of the upper part on the Vidolm, Scărița Belioara, Colții Trascăului and Rimeț Gorges are basically sheltered from competition with the beech forests, these unfortunately being the only actual refuge sites for the species. These relict types of populations will remain standing as long as their habitat stays favorable. Regeneration is present in just a few isolated points of the calcareous rocks, indicating a directional dynamic process, with a regressive succession in the favor of recent beech forests.

The main biogeographic hypotheses that we propose to explain their origin are: 1) they survived the glacial period in situ i.e. 1) classical glacial relics 2) remnant populations along the (re-)immigration routes of a species after the end of the last glacial period 3) long-distance dispersal after the glacial period.

Table 1

Phytocoenosis of the association Asperulo capitatae-Seslerietum rigidae (Zolyomi 1939) Coldea 1991

Relevee code	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	
Altitude (m)	950	1050	1050	1050	1050	1100	
Aspect	N	N-E	N	N	N	N-V	
Slope (degrees)	30	20	25	35	30	25	
Tree cover %	60	40	0	25	30	15	
Herbaceous cover %	85	55	16	60	40	80	K
Larix decidua	4	3	1	2	2	1	V
Char. ass.							
Sesleria rigida	2	1	4	3	2	4	V
Asperula capitata	.	.	+	+	.	+	III
Elyno-Seslerietea s.l.							

Campanula rotundifolia	+	.	.	+	.	+	III
Thymus comosus	.	.	+	+	+	.	III
Ranunculus oreophilus	+	1	.	.	.	+	III
Dianthus spiculifolius	.	.	+	.	+	+	III
Rhamnus saxatilis subsp. tinctorius	.	.	1	+	.	+	III
Sorbus dacica	.	.	+	+	.	.	II
Saxifraga paniculata	.	.	.	+	.	+	II
Seslerion-rigidae							
Helictotrichon decorum	.	+	.	.	.	.	I
Seseli gracile	.	.	+	.	.	.	I
Seslerio rigidae-Pinion							
Helianthemum nummularium	+	1	+	.	+	+	V
Teucrium camaedrys	.	+	.	.	+	+	III
Quercetalia-pubescentis							
Fraxinus ornus	.	+	.	.	+	+	III
Campanula persicifolia	.	.	+	.	.	+	II
Variae syntaxa							
Galium album	1	1	.	.	+	+	IV
Epipactis atrorubens	+	+	.	.	+	.	III
Calamagrostis arundinacea	2	2	.	.	+	.	III
Thesium linophyllon	.	.	+	+	.	+	III
Spiraea chamaedryfolia	2	.	+	+	.	.	III
Lilium martagon	+	+	.	.	.	.	II
Dianthus carthusianorum	+	+	.	.	.	.	II
Polygonatum odoratum	+	+	.	.	.	.	II
Corylus avellana	2	.	.	.	.	.	I

Species encountered in a single releveé: *Tanacetum corymbosum* 1:+, *Melica picta* 1:+, *Valeriana tripteris* 1: +, *Luzula luzuloides* 1:+, *Doronicum columnae* 1:+, *Lembotropis nigricans* 1:+, *Asplenium ruta-muraria* 1:+, *Lathyrus vernus* 1:+, *Cruciata glabra* 2:+, *Allium senescens* 2:+, *Phyteuma orbiculare* 2:+, *Briza media* 2:+, *Potentilla erecta* 2:+, *Primula veris* 2:+, *Rosa pimpinellifolia* 2:+, *Vicia cracca* 2:+, *Melampyrum bihariense* 3:+, *Rubus saxatilis* 3:+, *Sempervivum montanum* 3:+.

Table 2

Phytocoenosis of the association Seslerio rigidae-Fagetum Soo et Vida 1963

Relevee code	SF-1	SF-2	SF-3	SF-4	SF-5	SF-6	
Altitude (m)	850	950	850	850	910	1050	
Aspect	N	N-V	N-V	N-V	N	N-E	
Slope (degrees)	30	30	25	30	20	35	
Tree cover %	50	60	50	90	60	80	
Herbaceous cover %	15	30	30	30	15	85	K
Larix decidua	2	3	2	3	3	3	V
Char. ass.							
Sesleria rigida	1	2	2	1	1	2	V
Fagus sylvatica	2	3	3	4	2	3	V

Vaccinio-Piceetea s.l.							
Betula pendula	+	+	1	.	.	.	III
Orthilia secunda	+	1	.	.	.	.	III
Querco-Fagetea s.l.							
Gymnocarpium dryopteris	+	+	+	.	+	.	IV
Acer pseudoplatanus	+	.	+	.	.	+	III
Melampyrum bihariense	+	+	.	.	+	.	III
Epipactis atrorubens	+	+	.	.	+	.	III
Mercurialis perennis	+	.	.	.	+	+	III
Corylus avellana	.	.	+	.	.	1	II
Lonycera xylosteum	.	.	.	+	.	.	I
Elyno-Seslerietea s.l.							
Doronicum columnae	+	+	.	+	+	.	IV
Sorbus dacica	+	.	+	+	.	.	I
Seslerio rigidae-Pinion							
Cotoneaster integerrimus	+	.	.	+	+	.	III
Juniperus communis	1	1	.	.	.	.	II
Variae syntaxa							
Galium album	.	+	+	.	.	+	III
Peucedanum oreoselinum	.	.	+	.	+	.	II
Anthericum ramosum	+	.	+	.	.	.	II
Asplenium ruta-muraria	.	+	.	.	+	.	II
Clematis alpina subsp. *alpina*	.	.	+	2	.	.	II

Species encountered in a single releveé: *Goodyera repens* 1:+, *Asarum europaeum* 1:+, *Veronica urticifolia* 1:+, *Gentiana asclepiadea* 1:+, *Coronilla varia* 1:+, *Picea abies* 2:+, *Hieracium rotundatum* 2:+, *Asplenium trichomanes-ramosum* 2:+, *Valeriana tripteris* 3:+, *Melica ciliata* 3:+, *Thymus comosus* 3:+, *Anthyllis vulneraria ssp alpestris* 3:+, *Teucrium camaedrys* 3:+, *Scabiosa lucida* 3:+, *Lembotropis nigricans* 3:+, *Aquilegia vulgaris* 3:+, *Digitalis grandiflora* 3:+, *Sorbus aucuparia* 4:+, *Rosa pendulina* 4:2, *Rubus saxatilis* 4:+, *Asplenium trichomanes* 5:+, *Calamagrostis arundinacea* 5:+, *Poa nemoralis* 6:2, *Luzula luzuloides* 6:1, *Sedum telephium subsp. maximum* 6:1, *Hepatica nobilis* 6:1, *Campanula persicifolia* 6:+, *Spiraea chamaedryfolia* 6:1, *Polypodium vulgare* 6:+, *Galium verum* 6:1, *Primula veris* 6:+.

Table 3

Phytocoenosis of the suballiance Symphyto-Fagion Vida 1959

Relevee code	F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-10	F-11	

Altitude (m)	950	1000	900	900	850	1050	1000	850	850	950	1010	
Aspect	N	N	N	N	N	N	N	N-V	N	N-E	N-E	
Slope (degrees)	25	30	25	20	25	20	30	25	25	30	35	
Tree cover %	70	70	60	75	70	65	80	80	80	50	70	
Herbaceous cover %	85	60	20	15	40	85	40	90	40	80	90	K
Fagus sylvatica	3	4	3	3	3	3	4	4	4	2	1	V
Larix decidua	4	2	3	3	3	3	3	2	1	3	4	V
Vaccinio-Piceetea s.l.												
Sorbus aucuparia	+	+	+	.	1	+	.	.	.	.	1	III
Querco-Fagetea												
Acer pseudoplatanus	2	.	.	1	.	+	+	3	2	.	.	III
Mycelis muralis	.	1	+	+	.	.	+	2	.	.	.	III
Lonycera xylosteum	+	.	.	.	.	.	.	+	+	.	.	II
Poa nemoralis	.	.	.	1	+	.	.	.	.	.	.	II
Melitis mellisophyllum	.	.	.	+	.	.	.	.	+	.	.	I
Tilia cordata	.	.	.	.	+	.	.	.	.	.	1	I
Corylus avellana	.	.	2	.	.	.	.	.	.	1	1	I
Fagetalia-sylvaticae												
Mercurialis perennis	3	+	+	+	1	2	1	.	1	.	.	IV
Hepatica nobilis	+	.	+	.	.	+	1	1	.	.	.	III
Luzula luzuloides	+	1	+	.	.	+	.	1	.	.	.	III
Hieracium rotundatum	.	+	+	+	.	.	.	.	.	.	.	II
Daphne mezereum	.	+	+	.	.	.	.	.	.	.	.	I
Asarum europaeum	.	.	+	+	.	.	.	.	2	.	1	I
Symphytum tuberosum	+	.	.	.	.	.	+	.	.	.	.	I
Geranium robertianum	.	.	.	+	+	.	.	.	.	.	.	I
Dryopteris filix-mas	.	.	.	.	.	+	.	.	.	1	.	I
Cirsium erisithales	.	.	+	.	.	+	.	.	.	.	.	I
Senecio nemorensis subsp. nemorensis	3	.	.	.	.	.	.	.	.	+	.	I
Oxalis acetosella	.	.	.	.	.	.	.	.	1	+	.	I
Symphyto-Fagion												
Actaea spicata	+	+	1	.	.	.	+	.	+	.	.	III
Rosa pendulina	.	.	1	.	.	+	.	.	.	1	1	II
Saxifraga cuneifolia	.	+	.	+	+	+	.	.	.	.	.	II

Veronica urticifolia	.	.	+	+	.	.	.	.	.	.	.	I
Aconitum moldavicum	.	+	.	.	.	.	.	.	+	.	.	I
Cardamine glanduligera	.	.	+	.	.	.	.	.	+	.	.	I
Gentiana asclepiadea	+	.	+	.	.	.	.	.	.	.	.	I
Acerion												
Hesperis sylvestris	+	.	.	.	2	.	1	.	.	.	.	II
Valeriana tripteris	.	+	+	.	.	.	.	.	.	.	.	I
Elyno-Seslerietea s.l.												
Doronicum columnae	+	2	+	+	1	3	+	1	+	.	1	V
Campanula rotundifolia	.	+	.	.	.	.	.	.	.	+	.	I
Laserpitum latifolium	.	.	.	+	.	+	.	.	.	.	.	II
Rubus saxatilis	.	.	+	.	.	+	.	.	.	.	.	I
Variae syntaxa												
Clematis alpina subsp. alpina	+	+	+	+	.	1	+	3	.	1	.	IV
Calamagrostis arundinacea	.	+	.	.	.	+	.	+	.	2	.	II
Spiraea chamaedryfolia	1	2	.	.	.	.	2	.	.	.	3	II
Primula veris	.	+	+	.	.	.	.	.	.	.	1	II
Cystopteris fragilis	.	.	.	+	+	.	.	.	.	+	.	II
Arabis hirsuta	.	.	+	.	.	.	+	.	.	.	.	I
Polypodium vulgare	.	.	+	.	+	.	.	.	.	.	.	I
Hypericum maculatum	.	.	.	+	.	.	.	.	.	+	.	I
Lathyrus vernus	.	+	+	.	.	.	.	.	.	.	.	I
Urtica dioica	.	.	.	.	+	.	.	.	.	1	.	I

Species encountered in a single releveé: *Luzula sylvatica* 1:+, *Ribes alpinum* 1:+, *Lilium martagon* 1:+, *Tanacetum corymbosum* 2:+, *Viola reichenbachiana* 2:+, *Neottia nidus-avis* 3:+, *Cardaminopsis arenosa* 3:+, *Leucanthemum vulgare* 3:+, *Campanula rapunculoides* 4:+, *Epipactis atrorubens* 4:+, *Moehringia muscosa* 4:+, *Sorbus dacica* 4:+, *Asplenium trichomanes* 4:+, *Asplenium trichomanes-ramosum* 4:+, *Leontodon hispidus* 4:+, *Sedum telephium subsp. maximum* 5:+, *Silene latifolia subsp. alba* 5:+, *Melampyrum bihariense* 6:+, *Galium album* 6:+, *Veronica montana* 9:+, *Lunaria rediviva* 10:+, *Cirsium pannonicum* 10: +, *Asplenium ruta-muraria* 10:+.

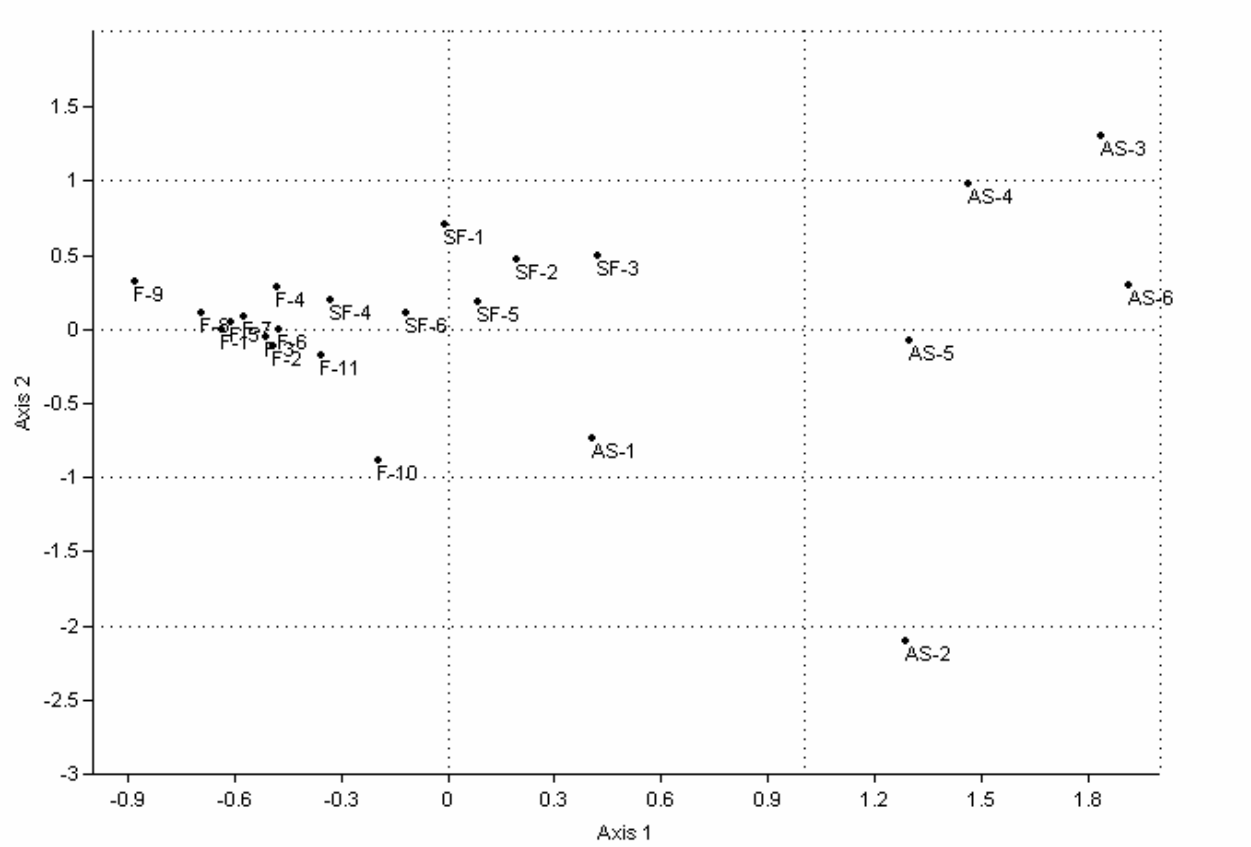

Fig. 2. *Ordination of the forest communities studied, in the space determined by the first two CA components.* ***AS****- phytocoenosis of Asperulo capitatae-Seslerietum rigidae,* ***SF****- phytocoenosis of Seslerio rigidae-Fagetum,* ***F****- phytocoenosis of Symphyto-Fagion. The prevailed releveés from the stony areas and those from the forested areas separate along the first axis (Axis 1), allowing a light gradient based interpretation. (Performed by PAST Version 1.72 [8])*

4. Conclusion

The larch communities present at Vidolm locality, as well as those from other locations around the Trascău Mountains, represent relic fragments of a once largely extent populations. The continuous regression of them is due to the continuous climate changes, as well as to the pressure exerted by the beech forests, which flourished and extended mostly in the subatlantic period (2600–0 BP). The lack of the characteristic floral elements of the authentic larch forests (those from high altitudes) in all of the 23 relveés researched in the present study, confirms these affirmations. The analysis led to the classification of the biocenoses into the following cenotaxonomical units: two associations: *Asperulo capitatae-Seslerietum rigida* (Zolyomi 1939) Coldea 1991 typical for the calcareous meadows, *Seslerio rigidae-Fagetum* Soo *et* Vida 1963 in the ecotone areas and an alliance which brings together, in a larger sense, the Beech Dacian forests: *Symphyto-Fagion* Vida 1959.

The fragmentation of the larch population can be reduced by applying responsible forest silvicultural measures, more specifically by applying intensive treatments based on natural regeneration, this being meant to promote the larch species in the competition against the beech. Being a highly pretentious species when it comes to the light factor, the creation of large open areas for the seeds is also recommended as well as the permanent assistance of the regeneration process, with a low impact on the herbaceous layer.

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COMUNITĂŢILE FORESTIERE CU LARICE (*LARIX DECIDUA* MILL.) DE LA VIDOLM (JUDEŢUL ALBA)

(Rezumat)

Studiul prezintă o descriere fitosociologică a comunităţilor naturale de larice situate în Munţii Trascău, localitatea Vidolm. Populaţiile existente aici formează unul din cele 5 nculee de răspândire naturală a laricelui în România. S-au efectuat 23 de relevee după metoda Braun-Blanquet, iar din analiza acestora s-a reuşit identificarea a două asociaţii vegetale: *Asperulo capitatae-Seslerietum rigidae* (Zolyomi 1939) Coldea 1991, *Seslerio rigidae-Fagetum* Soo et Vida 1963 şi o alianţă *Symphyto-Fagion* Vida 1959. Deşi specia *Larix decidua* Mill. apare in tabele cu un indice ridicat de abundenţă-dominanţă (AD) şi cu frecvenţe mari în sinuzia superioară (stratul arborescent), speciile din pătura ierbacee nu corespund acestor formatiuni forestiere care de obicei apar la altitudini ridicate (peste 1200m). Fondul floristic este caracteristic in marea lui majoritate pădurilor nemorale de fag (încadrate în clasa *Querco-Fagetea*). Sub adăpostul coronamentelor care realizează acoperiri de până la 90%, regenerarea laricelui lipseste în totalitate. Ipoteza sustinută de noi este aceea că laricetele din acest perimetru aflat la o altitudine relativ coborâtă se află într-un stadiu dinamic regresiv, populaţiile îndreptându-se către extincţie. Puternica fragmentare a nucleelor cu larice poate fi redusă prin măsuri de management forestier responsabil. Datorită exigenţei ridicate a speciei pentru lumină, este necesară aplicarea unor tratemente intensive cu deschideri de ochiuri largi, atent monitorizate, în care laricele să se regenereze natural.