STUDY ON THE DIVERSITY OF THE SPONTANEOUS FLOWER IN THE PĂDUREA CRAIULUI MOUNTAINS

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Abstract

The present paper is based on the studies carried out both in the field in the Pădurea Craiului Mountains and on the studies carried out by the researchers, regarding the spontaneous flora. The mountain meadows of the Pădurea Craiului Mountains are highlighted by a high floristic diversity, over 1500 species of plants being identified so far. The inversions of vegetation, the floral diversity, the existence of caves, largely accessible to man, create unique mountain landscapes in the country and even in the world.

Due to the floristic variety, the Pădurea Craiului Mountains have a special interest regarding the use of spontaneous flora in the treatment of certain conditions. This is why a detailed study of the different species of plants is required.

Key words: massive, spontaneous flora, climate, forest

INTRODUCTION

The area under study is geographically framed by Valea Crișului Repede (Vad-Borod Depression), in its northern part until Valea Crișului Negru (Beiușului depression), in the south and are bordered by the western hills (Tășadului Hills), in the west and Iada and Meziad valleys (Vlădeasa Massif), in its eastern part. The highest peak in the massif is Hodrâncușa with 1027 m, located in the eastern part, after which, to the west, it drops to 400 m, near Vârciorog. From a geomorphological point of view, they are made of mesozoic limestone (83%). Crystalline shale predominates, subhercinic and laramic magmatites, some conglomerates and Permian sandstone. It is a karst relief that alternates with the uncharacteristic ones. The exocarst belongs to deep dolines of 5-60 m, then pits and karst depressions. The Craiului Forest occupies about 15.2% of the surface of Bihor county, being located in the central-eastern part of the county, with an area of about 1152 square kilometers.

The annual average temperatures are around 6 - 8 degrees C in the higher central part, after which they increase to the periphery, reaching 8 - 9 degrees C. Precipitation increases from 700 mm / year in the western part to 1000 mm / year in their eastern part (Brejea, 2017).

Fig. 1. The Pădurea Craiului Mountains (Pop A., 2018)

MATERIAL AND METHOD

The study was conducted in the northwestern part of the Piatra Craiului massif, but it also contains general data about these mountains. Most of the Pădurea Craiului Mountains are covered by deciduous forests. Within the deciduous forests, spruce patches appear, interrupted by broad meadows on the karst plateaus. The exception is the spruce forest on the karst plateau at Scalvul Pleș (above the Luncasprie Valley). Beech (fagus silvatica) it predominates in the deciduous forests, followed by gorun (quercus sessiflora), wild chestnut (castanea sativa), birch (betula avellanca), banana (acer pseudoplantatus) and cherry (cerasus avium). Among the shrubs we find the hazelnut (corylus avellanca), the horn (cornu mas), the pigeon with barbs (prunus spinosa). The tufts of sandstone are

covered by large-leaved ferns, in the marshy areas the burns (arctium lappa) develop, and in the fields we find daisies (chrysanthemum leucamtemum), chicory, bells, raspberries and blackberries. The mushrooms are not missing: yolks, ears, beetles and pitons. On the slopes of the hills we find plants such as snowdrops (Galanthus), violins (scilla bifolia) and hawks (crocus), plants known as spring heralds. Beech forests are decorated with ivory (allium ursinum), a plant used for salads. The leaves of leprosy contain allyl sulphide, which imprints the taste and smell characteristic of all species of the genus Allium, carotenoids, vitamins A and C, vitamins of complex B, levulose, complex ethereal oil, mineral salts, calcium, iron, phosphorus, sodium, magnesium , copper and protein.

As a peculiarity of the karst plateaus of The Pădurea Craiului mountains, as a result of the thermal inversions, there are areas where the floor of the conifers disappears completely being replaced by beech forests (fagus silvatica) that are directly adjacent to the mountain meadows. The boundary between deciduous and softwood forests lies between altitudes of 600 -1300 m, depending on the relief, substrate and microclimate that sometimes lead to vegetation inversions (Brejea R; 2017).

The spontaneous flora of the Pădurea Craiului Mountains presents a great variety of trees, plants and flowers, interesting associations of plants such as the wild stingray (Iris sybirica - glacier relic) and Martaloaga (Calluna vulgaris), flowers belonging to the mountain floor. In addition to these there are also the juniper (Pirus mugo), the blueberry (Vaccinium myrtillus) and the blueberry (Vaccinium vitis-idaca). The floor of the conifers is around the altitude of 1000 m, with the dominant element being the spruce (Picea excelsa), the fir (Abies alba), less frequently the mountain hawthorn (Acer pseudoplatanus), the scorus (Sorbus aucuparia) and the very rare thistle (Taxus baccata). The beech floor (Fagus silvatica) runs between 600 - 1,000 m altitude, it holds 52.76% of the total wood mass being the dominant element. We also meet the gorun (Quercus campestris), the ash (Fraxinus excelsior), the peanut (Corylus avellana). On the cold valleys we find the Carpathian bat (Syringa josikaca) glacier, endemic species, and mountain bulb (Trollius europaeus), protected plant. The oak floor extends from the plain area to an altitude of about 500 m. Here pure or mixed forests of peduncular oak (Quercur robur), gnita (Q. Farineta) together with the Tartar maple (Acer tataricum), lime (Tilia parvifolia) occur.) to At the foot of the mountains we can also find dogwood (Ligustrum vulgaris) and woody wood (Eronymus verrucosa). There is also no glitch (Rosa canina) or hawthorn, goat's pike in the popular name (Crataegus monogyna). After the closure of the bauxite exploitations in this area, the villages became depopulated, the population aged, and the agricultural lands cultivated with potato, wheat, rye, were filled with shrubs and berries. Areas with hay,

agricultural crops and colorful meadows we meet in the localities: Tomnatic, Zece Hotare, Ponoare, Damiș și Călățea.

Fig. 2. Chicera - Tomnatic 2019

However, the same area has not escaped the illegal deforestation. According to the data provided by the National Directorate of the Romsilva Forests, on the territory of the Pădurea Craiului Mountains, there are 4 forest sites: the Aleşd Forest District, the Beiuș Forest District, the Dobrești Forest District and the Remeți Forest District. They manage a total area of 51378 ha, divided according to the table below, where both the surfaces of these oak trees are presented as well as the composition of the wood material that is part of respective area rounded to them.

Table 1

The surface of the forests within the Forest District of the Pădurea Craiului Mountains

Crt. No	Forest District	Aleșd	Beiuș	Dobrești	Remeți
1	**Surface**	**16307 ha**	14182 ha	9437 ha	11452 ha
2	Fagus sylvatica	54,5%	66%	54%	36,53%
3	**Variousus hard sp.**	16,6%	18%	9%	1,62%
4	Quercus petraea	11,3%	5%	9%	-
5	Quercus cerris	6,8%	2%	5%	-
6	Picea abies	3,7%	5%	5%	47,83%
7	Pinus sylvestris	2,9%	-	-	-
8	Pseudotsuga menziesii	2,5%	-	-	0,54%
9	**Various soft sp.**	1,2%	2%	2%	0,09%
10	Larix sp.	0,5%	-	-	-
11	Abies sp.	-	-	-	13,39%
12	Quercus robur	-	2%	1%	-

Within the spontaneous flora as curiosities we mention:

- Painted tulip -Fritillaria meleagris, a plant of the family Liliaceae related to tulip. We find it in the Crișului Repede parade, we find dark, white and black-purple specimens. It has no pleasant smell.

Fig. 3. Painted tulip - Vadu Crișului 2019

-Thorn (Ruscus aculeatus) is a dioecious plant, the male and female flowers being produced on separate plants (of the same species). The flowers are small, white, and from the female ones, in October, the fruits form like red, glossy balls, which last until March.

Fig. 4. Thorn - Tomnatic 2018

RESULTS AND DISCUSSION

Analyzing the data in Table 1. we conclude that of the total forests, beech is the most widespread species, occupying 52.76% of the total, followed by spruce with a percentage of 15.38% and gorun with a percentage of 6.325%. The remaining 25.53% being represented by the other existing species, but not representing, each taking a considerable percentage. After forests as a stretch follow the meadows and meadows as occupied surface The beauty of the places is given between the contrast between the secular forests, placed on the obvious karsts and the rich and colorful spontaneous flora.

CONCLUSIONS

The Pădurea Craiului mountains occupy the subalpine floor, the species participating in the vegetation composition are mostly species with mountain spread. The deciduous forests alternate with those of conifers, with brightly colored meadows and meadows. The spontaneous flora of the Pădurea Craiului Mountains represents a natural wealth, untapped at its true value. While in the depressed area of Beiușului whole communities live, from harvesting, processing and marketing of plants of spontaneous flora, in Craiului Forest, medicinal plants, although present in all spontaneous flora, are processed only for personal consumption, in the largest part of the inhabitants of this area.

As a conclusion we can say that, due to the rich diversity of spontaneous flora in the Pădurea Craiului Mountains, it is necessary to take measures to protect the rare species, which can be achieved through an ecological education of both locals and tourists.

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