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RESEARCH REGARDING THE RESURSELE VEGETALE DIN ZONA TISMANA AREA, GORJ COUNTY

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ABSTRACT

Tismana region - county Gorj represents part of the floristic and faunal treasure of Oltenia, but also of Romania.
Biodiversity is very rich, here there are, in a very good state of conservation, habitats where we meet plant and animal species.
Due to the rarity, naturalness and biodiversity of forest ecosystems, they are and will increasingly become bearers of inestimable scientific, landscape and social values.

INTRODUCTION

The plant resources in the Tismana area provide us with goods and services vital to our existence. For example, food source (vegetables, fruits, cereals), wood, fuel, construction materials, substances used in the pharmaceutical and cosmetic industry, in light industry (textiles, clothing and footwear).

Also, ecosystem services and plant resources ensure the essential conditions of life: air and water purification, climate regulation, natural waste recycling, protection against natural calamities, excess carbon dioxide storage. At the same time, they are a valuable and important source of relaxation - trips and vacations to the mountains, to the sea, hikes in nature, etc., of cultural and spiritual inspiration.

MATERIAL AND METHODS

The commune of Tismana belongs to Gorj county and is part of the Natura 2000 Site – Nordul Gorjului de Vest ROSCI0129, which covers an area of 86,958 hectares in 9 communes of Gorj county (Tismana - Protected Area of National Interest - after 800 ha - 82% from total of the Site) (*Planul de management* Situl Natura 2000 - Nordul Gorjului de Vest ROSCI0129-2014, www.rezervatiagorjului.ro).

Observations were conducted during 2021-2023 in the Tismana Gorj county, area. To determine the structure of the vegetal resources was made observations in the in the field or laboratory. After collecting of biological material was made the material collected was analyzed and determined (Ciocârlan, V. 2009, Costache, I. 2011).

For as little impact on the ecosystem we have preferred to capture images with the camera.

RESULTS AND DISCUSSIONS

The Tismana area is composed of different types of ecosystems: cultivated agricultural land, landscaped pastures, submontane and mountain meadows, deciduous, coniferous and mixed forests, meadows along the rivers and streams that cross the area, the plant resources being made up of the appropriate flora Habitat Class (Doniță, N. et al. 2005) well defined from a territorial point of view, namely:

1. **Artificial lands (localities, constructions, hydrographic dams, mines...)**

Spontaneous herbaceous species: *Caltha palustris*, *Consolida regalis*, *Anemone ranunculoides*, *Clematis vitalba*, *Ranunculus acris*, *Ranunculus ficaria*, *Ranunculus repens*, *Papaver rhoeas*, *Chelidonium majus*, *Stellaria graminea*, *Stellaria media*, *Stellaria holostea*, *Gypsophila muralis*, *Silene vulgaris*, *Amaranthus albus*, *Amaranthus retroflexus*, *Polygonum aviculare* etc.

Spontaneous woody plants: *Morus alba, Salix spp.,Tilia spp., Populus nigra, Ulmus minor, Fraxinus excelsior, Prunus cerasifera, Castanea sativa, Acer negundo, Sambucus nigra, Pyrus pyraster, Malus sylvestris, Carpinus betulus, Juglans regia, Corylus avellana, Picea abies, Pinus nigra,* etc.

2. **Pastures and other arable land:** plant resources refer in particular to herbaceous species (especially alfalfa, clover, corn, oats, barley, beets, sunflowers, soybeans, etc.) cultivated either for fodder (in the area the animal husbandry sector is very well developed: sheep, goats, cattle, horses, pigs and domestic birds, etc.) or grain for baking (a smaller share), potato, vegetable plants, etc.

3. **The banks of mountain rivers**:

The banks of mountain rivers are populated by spontaneous species (herbaceous or woody) that naturally beautify and add value to the area.

Herbaceous species: *Lamium purpureum, Mentha aquatica, Caltha palustris, Consolida regalis, Anemone ranunculoides, Ranunculus acris, Ranunculus ficaria, Ranunculus repens, Matricaria recutita, Matricaria perforata, Arctium lappa, Centaurea cyanus, Carex riparia, Cichorium intybus, Taraxacum officinale, Sonchus arvensis, Potentilla anserina, Potentilla reptans, Alliaria petiolata, Cardaria draba.*

Figure 1. Herbaceous and woody species of the banks of mountain river Tismana

Woody species: *Salix spp., Populus spp., Ulmus minor, Fraxinus excelsior, Acer negundo, Sambucus nigra, Pyrus pyraster, Malus sylvestris, Carpinus betulus, Juglans regia, Corylus avellana, Fagus silvatica, Quercus spp. Robinia pseudoacacia, Clematis vitalba, Crataegus monogyna, Rosa canina, Rubus caesisus etc.*

3. Submontane and mountain meadows : Herbaceous species: *Sonchus arvensis*, *Festuca heterophyla*, *Festuca rubra*, *Festuca pratensis*, *Lolium perenne*, *Poa annua*, *Apera spica-venti*, *Bromus sterilis*, *Hordeum murinum*, *Agrostis capilaris*, *Echinochloa crus-galli*, *Centaurea cyanus*, *Matricaria recutita, Matricaria perforata, Convolvulus arvensis*, *Medicago sativa*, *Medicago lupulina*, *Melilotus albus*, *Trifolium arvense*, *Trifolium pratense*, *Vicia angustifolia*, *Vicia cracca, Papaver rhoeas,* etc. And also woody species like : *Rubus caesius*, *Rosa canina, Prunus spinosa*, etc.

Figure 2. Submontane and mountain meadows in the area Tismana

4. **Forest habitats**

The woody plant resources that we record in the Tismana area are made up of:

The woody-deciduous species in the area: *Fraxinus angustifolia*, *Salix alba*, *Populus spp.*, *Tilia spp.*, *Corylus avellana*, *Carpinus betulus*, *Fagus sylvatica*, *Castanea sativa*, *Quercus spp.*, *Alnus glutinosa*.

Figure 3. Mixed forests in the area Tismana

Coniferous forests:

The woody-coniferous species in the area: *Abies alba*, *Picea abies*, *Larix decidua*, *Pinus nigra*, *Pinus mugo*.

Potential of berries

The geographical and pedoclimatic conditions in the forests of the Tismana area are favorable for the development of fruit bushes whose fruits are used in food or industry, both on the domestic and foreign markets (blackberry, raspberry, blueberry): The annual average of fruit harvests of forest is approx. 3 tons/year (I.C.A.S. 2021).

Medicinal and aromatic plants that can be found in the studied area are chamomile, St. John's wort, mint, linden flower and nettle, but other products can also be used, such as: hay and resins, etc.

Potentially edible mushrooms

Many species of mushrooms from the Class Basidiomycota and Ascomycota, edible that constitute the food of some wild animals in the forests of the area, especially omnivores (boar, bear), but also the source of income obtained from their collection and sale, for the inhabitants of the Tismana area (the harvest is of approximately 0.5-1 ton/year I.C.A.S. 2021).

CONCLUSIONS

The flora, which constitutes the vegetal resource of the area, is very rich divided into various habitats specific to the area: meadows, forests, pastures, agricultural crops (Mănoiu, T., Brînzan, T. 2013).

The forests (consisting mostly of deciduous: gorun, beech, linden, paltin, acacia and conifers: pine, fir, spruce, Douglas fir) in the Tismana area, are populated with species valued for hunting such as: pheasant, mountain grouse, rabbit, wild boar , deer, black goat, provide ideal conditions for the survival of large carnivore species such as bear, lynx, wolf, fox (I.C.A.S. 2021).

Castanea sativa, which represented 2% of the total deciduous forests in the area, is in great suffering due to the invasive fungus *Cryphonectria parasitica* (I.C.A.S. 2021).

An essential characteristic of the forests in the Tismana area is the fact that 91% of the forest area is occupied by natural stands, with a relatively plurien and plurien structure. Currently, such forests are increasingly rare, both in our country and in Europe (I.C.A.S. 2021).

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