

## RARE PLANTS IN THE “RÂPA ROȘIE” NATURAL RESERVE

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**ABSTRACT:** The Complex Râpa Roșie, a real "cathedral natural" spoon in the course of millions of years bullying Grindstones are a red, houses the bullying lace of forms of a particular vegetation, plants common European continent, but also with rare species, on the verge of extinction.

**Key words:** the reserve complex; the exotic plant; the red list of IUCN;

Nature protection issues have far outstripped the interest of naturalists or passionate lovers of nature and have entered the conscience of the great public and the care of the officials [1].

**The Râpa Roșie Natural Reserve** located in Alba County (fig. 1, 2), on the right bank of Secaș river, has access to the road from Sebeș to Daia Româna, after the barrier and the military unit, from where the Sebeș meadow and the bridge crosses the Secașul Mare river.

Râpa Roșie is made up of sandstones and

including the large valley of Sebeș river, revealing the multicolored rocks of the Râpa Roșie, which were then intensely molded by rain, wind, frost. A tributary stream of Secaș is guilty of ravishing and landslide, the slope being very steep and easily unbalanced. As a result, due to the lack of vegetation, the water washed the surface materials, resulting in sculptural shapes, a true basorelief with towers, columns, counterforts [2], including “Gaura Hoților” grotes, which resembles the area with an pipeorgan (fig. 3).

Vertically, you can see two floors:



Fig. 1. Geographical position of Râpa Roșie in Alba County (left); satellite view of the reserve (right)

red clays, indicating a strongly oxidized environment, interrupted by horizontal conglomerate layers fixed in limestone cement. All these sedimentary rocks were deposited on the seabed, which in this region formed a bay at the foot of the Carpathians.

After the retreat, the valleys deepened,

- in the top, ditches due to the slopes;
- at the bottom, soil pyramids.

The factors that contributed to the formation of the Râpa Roșie were: internal factors - sedimentary deposits and external factors - water, wind, creatures, the Secașul Mare river [3].



Fig. 2. Natural Reserve “Râpa Roşie”

Declared natural reserve in 1950, when it was given 10 hectares and referred to in Law 5 of 2000, is classified in IUCN category IV. Currently protects 43 hectares; has a length of 800 m, a minimum altitude of 300 m, a maximum of 425 m, framed in the continental biogeographic region (Fig. 3) [4].

Subpanonic steppe meadows with insularity spread across the Transylvanian landscape and lush forests with ravines are naturalistic values of European interest. Endemic taxa are: *Cephalaria radiata* (Fig. 8), *Cephalaria uralensis*, *Onosma pseudoarenaria*.



Fig. 3. Sandstones and conglomerates of Râpa Roşie, affected by torrents (source: Internet)

It is a complex reservation: geological, geomorphological, landscape and botanical with rare plants: *Onosma viride*, *Onosma pseudoarenaria* (Fig. 4), *Agropyron cristatum*, *Ephedra distachya* (Fig. 5), *Genista spathulata*, *Cypripedium calceolus* (Fig. 6), *Adenophora lilifolia*, *Salvia transsilvanica* (Fig. 7), *Salvia nutans* (Fig. 8), are nesting in a small steppe area at the foot of the slope.

Among the arboreal plants, there are species of *Tilia platyphyllos*, *Tilia cordata*, *Ulmus foliacea*, *Carpinus betulus*, maple *Acer platanoides*, *Acer tataricum*, *Quercus robur*, *Quercus petraea*; interesting is the presence of *Quercus pubescens* (Fig. 9), a rare species of silvostepa in Transylvania, but also *Robinia pseudoacacia*, is an invasive allohtonic species, introduced for the stabilization of soils.



Fig. 4. *Onosma viride* (L), *Onosma pseudoarenaria* (R) (source Internet)



Fig. 5. *Agropyron cristatum* (L), *Ephedra distachya* (R) (source Internet)



Fig. 6. *Genista spathulata* (L), *Cypripedium calceolus* (R) (source Internet)



Fig. 7. *Adenophora lilifolia* (L), *Salvia transsilvanica* (R)  
(source Internet)



Fig. 8. *Salvia nutans* (L), *Cephalaria radiata* (R)  
(source Internet)



Fig. 9. *Quercus pubescens*  
(source Internet)

Among the shrubs, meet: *Crataegus monogyna*, *Sambucus nigra*, *Sambucus racemosa*, *Cornus sanguinea*, *Viburnum lantana*, *Viburnum opulus*, *Euonymus europaeus*, *Rosa canina*, *Prunus spinosa*.

Important for conservation are the bushes of *Prunus tenella*, synonym *Amygdalus nana*. Carnation of the endemic *Dianthus serotinus* varietas *demissorum* (Fig. 10) is known from the landslides in the east. On hilly slopes from the west, under steepness, there is a: *Centaurea atropurpurea* (Fig. 10), a tertiary relict species present on the red list, (*Carex humilis* ), *Brachypodium pinnatum*, *Goniolimon tataricum*, synonym *Static tartarica* or *Limonium tataricum*) and various species of warm steppes, with a wider spread to the south.

In the forest below the ravine was signaled the presence of *Asplenium adiantum-nigrum*, with an almost global spread, from Africa to Oceania, Eurasia and America, *Corydalis bulbosa* of a modest waist, that impresses with elegance *Ranunculus ficaria* with the European range to the western steppes of Asia, as well as the presence of the shrub *Cotoneaster integerrimus*, a species of rosacea with Eurasian spread. In the "Management Plan Considerations for Red River, Natural Reserve, Environment & Progress No.13 / 2009" written by Andreea Ioana Pop, is included a table with vascular plant species, which includes 136 species [5].

Smoking is prohibited in the area of Râpa Roşie reserve.



Fig. 10. *Dianthus serotinus* (L), *Centaurea atropurpurea* (R)  
(source Internet)



Fig. 11. *Carex humilis* (source Internet)

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