

## RESEARCH ON THE PRESERVATION STATUS OF THE 6430 HABITAT (HYDROPHILOUS TALL HERB FRINGE COMMUNITIES OF PLAINS AND OF THE MONTANE TO ALPINE LEVEL) IN THE NATURA 2000 ROSCI0047 NEMIRA PEAK SITE

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*Key words: hydrophilous tall herb fringe habitat, Nemira Peak*

### INTRODUCTION

Following the Natura 2000 Standard Data Form, the site ROSCI 0047 Nemira Peak is characterized by the following geographical coordinates: N 46° 13' 17", E 26° 20' 22".

The entire area of the site is of 3591 hectares.

The highest point within this region is reaches 1646 m, and the lowest point of the site is 699 m. The Nemira Peak Site (fig.1) lies at an average altitude of 1260 m.

#### **The spread within the protected area**

The habitat 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels is a part of the Natura 2000 Standard Form for

the Nemira Peak site, with a total surface of approximately 35 hectares. The habitat was identified nearby the springs and in the proximity of the Nemira ponds.

**Key species:** *Glechoma hederacea*, *Epilobium hirsutum*, *Senecio fluviatilis*, *Filipendula ulmaria*, *Petasites hybridus*, *Cirsium oleraceum*, *Chaerophyllum hirsutum*, *Aegopodium podagraria*, *Alliaria petiolata*, *Geranium robertianum*, *Silene dioica*, *Lamium album*, *Crepis paludosa*, *Lysimachia punctata*, *Aconitum lycoctonum*, *Aconitum napellus*, *Geranium sylvaticum*, *Trollius europaeus*, *Adenostyles alliariae*, *Cicerbita alpina* s.a.[1,2,3,6,7,8,9].

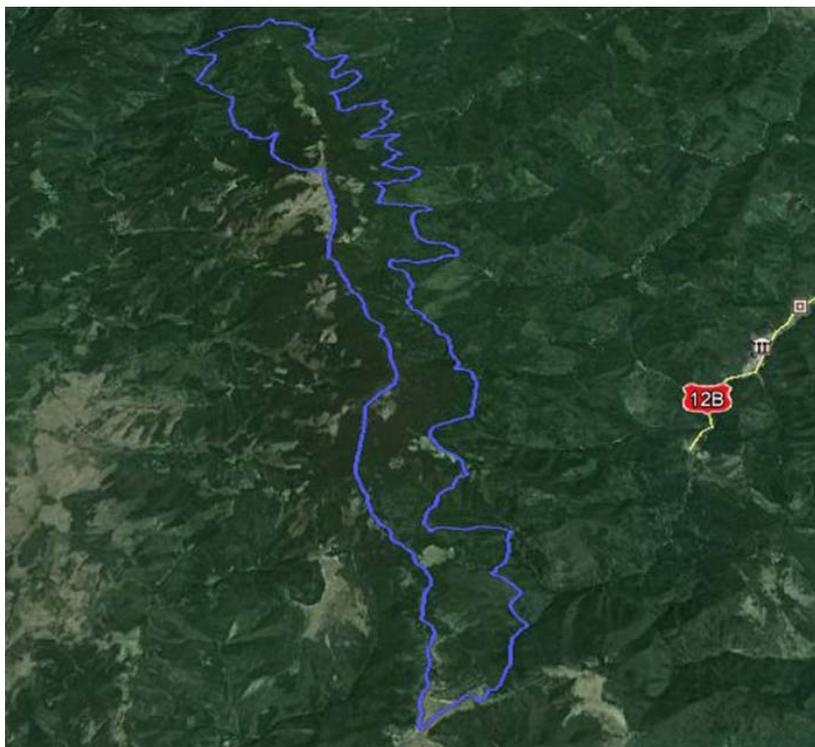


Fig. 1. Limits of the Natura 2000 ROSCI 0047 site Nemira Peak (source: Natura 2000 Viewer)

**Communities of plants** : *Petasitetum kablikiani* Szafer et al. 1926 (syn.: *Petasitetum glabrati* Morariu 1943); *Telekio - Petasitetum hybridi* (Morariu 1967) Resmeriță et Rațiu 1974 (syn.: *Petasitetum hybridi* auct. rom., *Aegopodio-Petasitetum hybridi* auct. rom., *Telekio -Petasitetum albae* Beldie 1967, *Petasitetum albae* Dihoru 1975, *Petasiteto - Telekietum speciosae* Morariu 1967); *Telekio - Filipenduletum* Coldea 1996.

## MATERIAL AND METHODS

The instruments used in our research were: the GPS, the compasses, the Olympus photo camera, the field determinator, the work sheets, and the field maps containing the site limits.

The on site identification and the assessment of the preservation status were done for the habitat 6430, in the site ROSCI 0047 – the Nemira Peak. There were observed numerous transects, in order to

identify the species of interest, researching the characteristic habitats of these species. There were focussed (by means of a GPS) the populations belonging to this species important to the community, the areas and habitats suited for this plant. The measurements and GPS recordings in field respected a data structure that permitted the automatic stocking in the GIS database. There were investigated several sample areas (botanical surveys) within the areas in which these species were identified that provided the estimate on the population size and the preservation status of habitat 6430.

## RESULTS AND DISCUSSIONS

There were identified two vegetal communities: *Petasitetum hybridi* Dostal 1933 and *Telekio-Petasitetum albae* Beldie 1967 on large surfaces.

### Locating the habitat of interest within the protected area

Observation point	Habitat	Geographical coordinates	Toponym	Main observations/observation point0
1	6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	46°18'10.49"N 26°16'44.09"E	Bărzăuța	The vegetal community is <i>Telekio-Petasitetum albae</i> , characterized by a preservation status U1-U2. The vegetal community <i>Petasitetum hybridi</i> Dostal 1933 lies on relatively small areas. Furthermore, the areas of moist abandoned meadows, and the wide communities with <i>Helianthus tuberosus</i> and <i>Impatiens glandulifera</i> were not taken into consideration.
2	6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	46°17'25.30"N 26°17'8.54"E	Chilișca	<i>Petasites</i> vegetation with a U1 preservation status
3	6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	46°15'33.21"N 26°20'8.53"E	Nemira ponds	Upstream the Nemira ponds, along the springs there are narrow regions with a vegetation ashore, that is specific to the 6430, with a U1 preservation status.

#### Observation point no. 1

Toponym : Bărzăuța brook.



Fig.2 Habitat 6430 with *Telekia speciosa* and *Petasites*



Fig.3 Habitat 6430 with *Filipendula ulmaria* and *Petasites*

The dominant species are *Petasites kablikianus* and *Telekia speciosa*. There were other identified species, e.g.: *Filipendula ulmaria*, *Petasites hybridus*, *Lamium album*, *Scirpus sylvaticus*, *Cirsium oleraceum*, *Cirsium rivulare*, *Carduus personata*, *Geranium palustre*, *Eupatorium cannabinum*, *Epilobium hirsutum*, *Stellaria nemorum* etc.(fig.2, 3)[1, 2, 3, 6, 8, 9]

The threats were represented by: the construction of the hydropower station on Bărzăuța has negative effects, because it triggers the fragmentation or dissolution of the habitat in time. This is caused by the lack of the hydric spring level up to the drying up the old course during the drought. The habitat was affected during the micro hydropower station build, as well.

**Observation point no. 2**

**Toponym:** Chilișca brook.



Fig.4 Chilisca area



Fig.5 Habitat 6430 with *Petasites kablikianus*

The habitat lies on both strands of the Chilișca brook, exactly on the site boundary. It appears as vegetation strips, characteristic for that habitat. The dominant species are *Petasites kablikianus* and *Petasites album*. Other identified species were: *Filipendula ulmaria*, *Petasites hybridus*, *Lamium album*, *Scirpus sylvaticus*, *Cirsium oleraceum*, *Cirsium rivulare*, *Carduus personata*, *Telekia speciosa*, *Geranium palustre*, *Eupatorium cannabinum*, *Epilobium hirsutum*, *Stellaria nemorum* etc. [1, 2, 6, 9](fig. 4, 5)

No threats were identified within this observation point.

**Observation point no 3:**



Fig.6 Habitat 6430 with *Telekia speciosa*



Fig.7 Habitat 6430 with *Petasites album*

**Toponym:** the Nemira ponds

The habitat is shaped as land strands along some becks, upstream the Nemira ponds. The habitat is rather small (aproximately 70-100 m in length).

The identified species were: *Petasites kablikianus*, *Petasites album*, *Filipendula ulmaria*, *Petasites hybridus*, *Lamium album*, *Scirpus sylvaticus*, *Telekia speciosa* etc.

No threats were identified within this observation point, (fig. 6, 7)[2, 3, 4, 8, 9].

The intensity of the future threats to the habitat: Environment – The current pressures will be included in this category, with a joint impact on the species (if the impact was assessed as high or medium).

Forestry: B 02.03 – removal of the offsprings; F04 the harvesting of terrestrial plants, mainly; G01 – outdoor sports and leisure activities; G01.02 - hiking, horseback riding and engine free vehicles; G01.03 – engine vehicles; G02.08 – camping lots; H: Polluare; H04 – air pollution, pollutants that are airborne; H04.03 Other types of air pollution; H05 – Soil

pollution and solid waste (evacuations excepted); H05.01 – litter and solid waste; H06.01 – Noise and phonic pollution; H06.01.01 – phonic pollution caused by an irregular source; I02: Problematic invasive species; J – Alterations in the natural system; J01- fire and firefighting; M: Global changes; M01.02: droughts and scarce precipitations.

#### Management regulations

Regarding the fact that the 6430 habitat is mainly bordered by forest vegetation, it can be maintained stable with favourable tendencies by means of complying to the regulations and activities in the forest arrangements and standards.

The curator of the protected area can monitor the enforcement of these regulations – regenerating the natural vegetation, cuttings that allow the regeneration. One should be careful that the wood extracted from the forest should not be stored in the regions in which this habitat does not exist.

Furthermore, there are some regions in which the forest roads border water streams, where this type of habitat lies on both strands. The construction work to repair those roads may impend on the habitat and cause a further degradation.

#### CONCLUSIONS

The 6430 habitat was identified within the Natura 2000 ROSCI 0047 Nemira Peak in the water streams area.

The vegetal communities that were identified: *Petasitetum hybridi* Dostal 1933 and *Telekio - Petasitetum albae* Beldie 1967 on large surfaces.

The habitat displays an U1 preservation status (unfavourable to inadequate) with degradation tendencies due to the construction of a microhydropower station, to the regulation of water streams at some points, to the expanding of the forest roads that border the waterstreams, to the regions in which wood is temporarily stored and that overlap on this type of habitat.

All the rules and regulations in the forest arrangements and standards should be fully complied on this type of habitat. Furthermore, we recommend the monitoring of these actions, in order to prevent the damage on these habitats by ignorance of cause.

#### ABSTRACT

Hydrophilous tall herb fringe communities are characterized by tall species, extremely diverse in floristics and structure.

This type of habitat lies along water streams on the outskirts of the habitat, on both water banks. The areas represented by abandoned moist meadows and the wide communities of *Helianthus tuberosus* and *Impatiens glandulifera* were not taken into account.

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