

NEW CHOROLOGICAL DATA ON SOME RARE PLANT SPECIES FROM ROMANIA

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Abstract: New chorological data for 13 rare vascular plant taxa are reported in the present paper: *Alchemilla gracillima*, *Athamanta turbith* subsp. *hungarica*, *Bromus erectus* subsp. *transsilvanicus*, *Centaurea globurensis*, *Dianthus guttatus*, *Edraianthus graminifolius*, *Festuca tenuifolia*, *Hieracium flagellare*, *Narcissus poeticus* subsp. *radiiflorus*, *Ophrys apifera*, *Plantago atrata* subsp. *sudetica*, *Thymus longicaulis* and *Veronica bachofenii*. The fieldwork period in which we have investigated flora from various regions of the country started in 2013 and finished in 2015.

Key words: Romania, rare, endangered species, chorology, Red Lists

Introduction

Romania is one of the European countries characterized by rich floristic diversity (about 4000 taxa including species and subspecies) [10]. Also, Romania includes an important centre of plant diversity (south-eastern part of the Carpathian Mountains) [19].

Establishing the chorology of taxa (species or subspecies) is the result of a continuous process that results in accumulating chorological data. Recently many data regarding the chorology of rare plant species in Romania have been published [1, 16, 10, 11, 2, 8, 3].

In this paper we present the results of field investigations during the years 2013–2015 in diverse regions of Romania.

Material and Methods

Our results are based on field studies, analysis of herbarium material from „A. Borza” Botanical Garden Herbarium, Cluj-Napoca [CL] and literature data. The identification of taxa has been done using *Flora Europaea* [18], Ciocârlan [5] and Sârbu et al. [17]. The herbarium specimens collected from the field have been lodged in the *GTM Co Herbarium*. The nomenclature of the taxa follows *Flora Europaea* [20] and Sârbu et al. [17].

Results and Discussions

The results regarding the new chorological data are presented in Table 1. Also, the plant community type in which each taxon is present are shown in Table 2.

Alchemilla gracillima Rothm. is a rare species in Romania [5, 17]. It is mentioned from the Piatra Craiului and Bucegi Mountains [14, 17]. The authors have identified two populations

of this species in the Făgăraș Mountains (Table 1).

Athamanta turbith subsp. *hungarica* (Borbás) Tutin is also a rare taxon, for which we have identified a population in the Șureanu Mountains (table 1). The species was previously mentioned from the Bucegi, Făgăraș, Căpățâni, Parâng, Vâlcan, Retezat, Mehedinți, Godeanu, Semenic Mountains and Jiu river Gorge [17].

Bromus erectus subsp. *transsilvanicus* (Steud.) Asch. & Graebn. is a rare taxon that in the Romanian flora was mentioned from Harghita, Brașov, Sibiu and Alba counties [17]. We have found a population of this taxon in Hunedoara county (Table 1).

Centaurea globurensis Nyár. This is a very rare species, with only one known location in Mehedinți county [17]. We have found a second population in Caraș-Severin county (Table 1).

Dianthus guttatus M. Bieb. This is a species with a different status in Red Lists (Table 1) and is mentioned from Dolj, Ialomița, Buzău, Brăila, Constața, Tulcea, Galați, Bacău, Vaslui, Iași and Botoșani counties [13]. We have found a new population in Vrancea county (Table 1).

Edraianthus graminifolius (L.) A. DC. (Fig. 1) is also a species with a different status in Red Lists for which we have found a new location in the Șureanu Mountains (Table 1).

Festuca tenuifolia Sibth. is a rare and endangered species that is mentioned from Maramureș, Bistrița-Năsăud, Brașov and Suceava counties [16, 17]. We have found a population of this species in Hunedoara county (Table 1).

Hieracium flagellare Willd. is a rare species with populations in a few counties (Maramureș, Cluj, Bistrița-Năsăud, Mureș, Vâlcea) [5, 13]. We have identified two further populations, one in Suceava county, the other in Hunedoara county.

Narcissus poeticus L. subsp. *radiiflorus* (Salisb.) Baker. This is an Endangered taxon, considered by some [12] as Rare. We have found a second population in Hunedoara county (Table 1). The species has been noted previously from Hunedoara county, but in another locality (Sălașul de Sus) [13].

Ophrys apifera Huds. (Fig. 2) is a critically endangered and rare species that is mentioned from Sibiu, Hunedoara, Dâmbovița, Prahova and Mehedinți counties [17]. We have found a new population in Caraș-Severin county (Table 1).

Plantago atrata subsp. *sudetica* (Pilger) Holub is a very rare taxon, with only two known localities (Rodnei and Nemira Mountains) [17]. We have found a third population in the Făgăraș Mountains.

Thymus longicaulis C. Presl. We have found a new population of this species in Hunedoara county (Șureanu Mountains). Until now the populations of the species were noted from Cluj, Sibiu, Alba and Bacău counties and from the Iezer-Păpușa and Retezat Mountains [17]. The species is also mentioned from Hunedoara county, but from different localities (Deva, Bejan) [15].

Veronica bachofenii Heuff. For this rare species we have found a new population in the Făgăraș Mountains (Argeș county) (Table 1).

Table 1: New chorological data on some rare taxa

Nr. crt.	Species/Subspecies	Localities	Red lists status
1	<i>Alchemilla gracillima</i> Rothm.	Podul Giurgiu (Făgăraș Mountains) Fruntea Moașei (Făgăraș Mountains)	Rare [5, 17]
2	<i>Athamanta turbith</i> subsp. <i>hungarica</i> (Borbá) Tutin	Valea Strei (Hunedoara county)	Rare [6, 9, 12]
3	<i>Bromus erectus</i> subsp. <i>transsilvanicus</i> (Steud.) Asch. & Graebn.	Crivadia (Hunedoara county)	Rare [12]
4	<i>Centaurea globurensis</i> Nyár.	Poloamele Mici (Caraș-Severin county)	Rare [12]
5	<i>Dianthus guttatus</i> M. Bieb.	Cheile Tișitei (Vrancea county)	Endangered [6] Rare/Vulnerable [12]
6	<i>Edraianthus graminifolius</i> (L.) A. DC.	Muchia Comarnicului (Hunedoara county)	Endangered [6] Rare [12]
7	<i>Festuca tenuifolia</i> Sibth.	Târsa (Hunedoara county)	Rare [4, 12] Rare/Endangered [6] Endangered [7]
8	<i>Hieracium flagellare</i> Willd.	Bistrița aurie (Suceava county) Crivadia (Hunedoara county)	Rare [5]
9	<i>Narcissus poeticus</i> L. subsp. <i>radiiflorus</i> (Salisb.) Baker	Vârful Jiguru Mare (Hunedoara county)	Endangered [4, 6] Rare [12]
10	<i>Ophrys apifera</i> Huds.	Sasca Montană (Caraș-Severin county)	Endangered [4, 6] Rare [12] Critically Endangered [7]
11	<i>Plantago atrata</i> subsp. <i>sudetica</i> (Pilger) Holub	Vârful Mesteacănului (Făgăraș Mountains)	Rare [5]
12	<i>Thymus longicaulis</i> C. Presl	Dealul Poienii (Hunedoara county)	Rare [6, 12]
13	<i>Veronica bachofenii</i> Heuff.	Confluence of Călțun and Argeș rivers (Făgăraș Mountains)	Rare [6, 12]



Fig. 1: *Edraianthus graminifolius* in the field at Muchia Comarnicului (photo M. Bărbos, 2015)



Fig. 2: *Ophrys apifera* in the field at Sasca Montană (photo E. Stoianov, 2014)

Table 2: Plant community type for Rare/Endangered taxa

Species/subspecies	Sintaxa (plant communities type)
<i>Alchemilla gracillima</i> Rothm.	<i>Potentillo chrysocraspedae-Festucetum airoidis</i> Boşcaiu 1971
<i>Athamanta turbith</i> subsp. <i>hungarica</i> (Borbás) Tutin	<i>Asplenietum trichomano-rutae-murarie</i> Kuhn 1937, Tx. 1937
<i>Bromus erectus</i> subsp. <i>transsilvanicus</i> (Steud.) Asch. & Graebn.	<i>Asplenio-Syringetum vulgaris</i> Jakucs et Vida 1959
<i>Centaurea globurensis</i> Nyár.	<i>Danthonio-Brachypodietum pinnati</i> Soó ex Pop et al. 2002
<i>Dianthus guttatus</i> M. Bieb.	<i>Achillea setaceae-Festucetum pseudovinae</i> Soó (1933) 1947 corr. Borhidi 1966
<i>Edraianthus graminifolius</i> (L.) A. DC.	<i>Asplenietum trichomano-rutae-murarie</i> Kuhn 1937, Tx. 1937
<i>Festuca tenuifolia</i> Sibth.	<i>Festuco-Agrostetum capillaris</i> Horv.1951
<i>Hieracium flagellare</i> Willd.	<i>Festuco-Agrostetum capillaris</i> Horv.1951
<i>Narcissus poeticus</i> L. subsp. <i>radiiflorus</i> (Salisb.) Baker	<i>Bruckenthalio-Vaccinietum</i> Coldea, Filipaş et Stoica, 2008
<i>Ophrys apifera</i> Huds.	<i>Trifolio medii-Agrimonetum</i> Th. Müller 1962
<i>Plantago atrata</i> subsp. <i>sudetica</i> (Pilger) Holub	<i>Seslerio bielzii-Caricetum sempervirentis</i> Puscaru et al. 1956
<i>Thymus longicaulis</i> C. Presl	<i>Danthonio-Brachypodietum pinnati</i> Soó ex Pop et al. 2002
<i>Veronica bachofenii</i> Heuff.	<i>Asplenio trichomani-Poëtum nemoralis</i> Boşcaiu 1971

Conclusions

We have discovered new locations for 13 taxa (4 subspecies and 9 species) that are rare in Romania. Acquiring new chorological data represent an important tool for *in situ* conservation of populations of rare taxa.

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NOI DATE COROLOGICE ASUPRA UNOR TAXONI RARI DE PLANTE DIN ROMÂNIA

(Rezumat)

În context european România are o floră bogată (circa 4000 taxoni - specii și subspecii), iar completarea

corologiei unei specii/subspecii rare este un proces dinamic cu descoperirea continuă de noi populații.

Pe baza investigațiilor efectuate în teren, a consultării materialului de ierbar (CL) și a literaturii de specialitate lucrarea prezintă noi date corologice pentru 13 taxoni rari/amenințați (9 specii și 4 subspecii): *Alchemilla gracillima*, *Athamanta turbith* subsp. *hungarica*, *Bromus erectus* ssp. *transsilvanicus*, *Centaurea globurensis*, *Dianthus guttatus*, *Edraianthus graminifolius*, *Festuca tenuifolia*, *Hieracium flagellare*, *Narcissus poeticus* subsp. *radiiflorus*, *Ophrys apifera*, *Plantago atrata* subsp. *sudetica*, *Thymus longicaulis* și *Veronica bachofenii*.

Evidențierea noilor localități în care sunt prezente populațiile taxonilor prezenți în listele roșii reprezintă un instrument concret și util pentru conservarea in situ a acestora.

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