

SPECIES OF PLANTS OF THE OLTEȚ RIVER BASIN

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Abstract

The Olteț River Basin is an area with varied flora, due to natural factors represented by geomorphological formations, differences in altitude, latitude and climatic conditions. From the altitude of 1548 m in the upper part, at the beginning of the basin, to the 88 m in its lower part at Fălcoiu, where the river flows into the greater Olt river, there are altitudes of 905 m in the Olteț Gorges at Polovragi and of 411 m in the hills of the Getic Plateau which is crossed by the Olteț. In this article are presented the floral elements identified in the territory researched over many years, starting with the year 2007 and several data about the condition of populations. Observations of the number of individuals/the abundance and factors which can endanger the existence of some species have shown that there are changes taking place within the floral inventory.

Key words: flora, genera, species, vegetation, the Olteț River Basin.

INTRODUCTION

Spontaneous plant species of the Olteț River Basin, regardless of what plant formations they are found in, are a component which needs and is worth the attention of researchers in this field.

The floral research conducted shows that there are common species which have a great number of individuals with a high frequency, but also cases of genera with few species which have a small number of individuals.

The floral composition of the vegetation in some points in the Basin has shown annual variations in many respects, especially as regards the entry or absence of entry into vegetation of some species.

Out of the great number of species found in the territory researched, this article presents 25 plant species from 21 genera, mentioned as spontaneous or rare in the literature.

MATERIALS AND METHODS

For observation of the species there were made field trips, in itinerary and stationary in some places, in the past years. Some plants have been harvested, pressed and placed on paper sheets in herbarium.

Those quoted as rare or vulnerable, as well as those existing in a small number of individuals, have been photographed. Determination was

made using the special determiner devices. During the field trips all important aspects about each plant were written down in the field notebook.

Discussions were held with the local people to identify the place by the name given by these people, the popular name of the plant and the degree to which some of the plants were being used.

RESULTS AND DISCUSSIONS

The plant species identified in the territory researched have established the localization by the name of the locality, the popular name of the place and its coordinates by Google Earth. Aspects about the number of individuals are also presented, as well as the degree of damage by natural or anthropogenic factors. Some of the descriptions are accompanied by photos of the plants, which were taken on the field.

Angelica L.

Angelica arhangolica L. – Polovragi, upstream of the Olteț Gorges, 45°12'57.20" N, 23° 46' 23.41" E, alt. about 649 m, a very small number of individuals, some of which were damaged by the upstream flood, 21 VII 2014 (Figure 1).



Figure 1. *Angelica arhangelica*, the Olteț Gorges (photo: M. Burdușel, July, 2014)

Azolla Lam.

Azolla filiculoides Lam. (*A. caroliniana* Willd. non auct.) – Fălcoiu, stagnant waters from former irrigation channels, 44013'52.90"N, 24022'54. 86"E, alt. about 86 m, a small number of individuals, the channels are being clogged, 27 VIII 2009. This species is quoted by Gh. Popescu (1996) in the Corabia- Orlea-Potelu area, localities at a great distance from Fălcoiu (Figure 2).



Figure 2. *Azolla filiculoides*, Fălcoiu (photo: M. Burdușel, August 2009)

Cerastium L.

Cerastium dubium (Bastard) Guepin (*Cerastium anomalum* Waldst. & Kit) – Tetoiu, in cultis abandonatis 44043'46.03"N, 23055'26.10"E, alt. about 244m, a very small number of individuals, 3 IV 2008, leg. Maria Burdușel, det. G. Negrean and Maria Burdușel.

Cynoglossum L.

Cynoglossum hungaricum Simonk. – Tetoiu in meadow „La Periețeanu., 440 43' 40.14" N, 230 55' 13. 18" E, alt. about 221 m, small number of individuals, of which few are reaching maturity

as the plants are destroyed by the animals grazing in the area, 13 VI 2012 (Figure 3).



Figure 3. *Cynoglossum hungaricum*, Tetoiu (photo: M. Burdușel, June 2012)

Cyperus L.

Cyperus serotinus Rottb. (*Juncellus serotinus* (Rottb.) C. B. Clarke; *Duvaljouvea serotina* (Rottb.) Palla) – Fălcoiu, a dike flooded area of the Olteț River, 44013'55. 94"N, 24022'49.82"E, alt. about 86 m, a very small number of individuals, 14 VIII 2014.

Corydalis Vent.

Coridalis solida (L.) Clairv. subsp. *Slivenensis* (Velen.) Hayek – Călui in Cerăt Forest, 44026'06.70"N, 24004'30.77" E, alt. about 160 m, a very small number of individuals relative to the individuals from the solida subsp., 2 IV 2009.

Doronicum L.

Doronicum hungaricum (Sadl.) Rchb. – Călui in Cerăt Forest, 44026'06.70"N, 24004'30.77" E, alt. about 160 m, a small number of individuals, 28 IV 2010.



Figure 4. *Doronicum hungaricum*, Călui (photo: M. Burdușel, April 2010)

***Echinops* L.**

Echinops exaltatus Schrad. (*E. commutatus* Jur.) – Tetoiu, in Chirca, the edge of the oaktree forest, 44043'41.13" N, 23055'37.31" E, alt. about 257 m, very small number of individuals, 23 VII 2011.

***Erythronium* L.**

Erythronium dens-canis L. subsp. *niveum* Baumg. - Zătreni, in Făget - Beechtree Forest, 44047'31.38"N, 23051'07.12" E, a small number of individuals, picked up as ornamental plants, 10 III 2015.

***Equisetum* L.**

Equisetum ramosissimum Desf. - Tetoiu in Lunca Oltețului – riverside, at the water well, 44043'29.32"N, 23054'37.17" E, alt. about 211m, small number of individuals, 11 VI 2010.

***Fritillaria* L.**

Fritillaria orientalis Adams (*F. montana* Hoppe; *F. tenella* M. Bieb.) – the Olteț Gorges, at the bridge, 45012'20.98" N, 23046'41.63" E, a very small number of individuals, 14 IV 2010.

***Galium* L.**

Galium kitaibelianum Schult- Polovragi upstream of the Olteț Gorges, 45012'57.20" N, 230 46' 23.41" E, alt. about 649 m, a very small number of individuals at the edge between the pasture land and forest, 18 VII 2013.

***Kickxia* Dumort.**

Kickxia elatine (L.) Dumort. subsp. *elatine* – Tetoiu, in cultis abandonatis, at Periețeanu, 44043'46.03" N, 23055' 26.10" E, alt. about 244 m, a small number of individuals, 22 VII 2012.

Kickxia elatine (L.) Dumort. subsp. *crinita* - Tetoiu, in cultis abandonatis, at Periețeanu, 44043'46.03" N, 23055' 26.10" E, alt. about 244 m, a very small number of individuals, 22 VII 2012.

***Lathyrus* L.**

Lathyrus sphaericus Retz. – Irimești in the meadow, 44038' 49.58" N, 23055' 26.77" E, alt. about 191 m, a small number of individuals

on the reduced areas of unpopulated pastures, 21 VI 2015.

***Leontopodium* (Pers.) R.Br.**

Leontopodium alpinum Cass. – Polovragi in the Olteț Gorges, 45011'48.83" N, 23047'00.85" E, alt. cca 680 m, a very small number of individuals on the rocky formations beside the grotto; there is grazing land in the area, 24 VII 2011.

***Melittis* L.**

Melittis melissophyllum L. subsp. *melissophyllum* – Tetoiu in the Chirca Forest, 44043'41.13" N, 23055' 37.31" E, alt. about 257 m, a small number of individuals; the forest is being exploited, 18.VI.2014 (Figure 5).



Figure 5. *Melittis melissophyllum*, Tetoiu (photo: M. Burdușel, June 2014)

***Ornithogalum* L.**

Ornithogalum boucheanum Ascherson, E+M, Fălcoiu in the acacia tree forest of Dobrosloveni, 44012'10.77" N, 24020'59. 72" E, alt. about 107 m, a small number of individuals, 2 IV 2017.

Ornithogalum pyramidale L. – Tetoiu in the grasslands, near the Drumul Satului (Village Road), 44043'44.25" N, 230 55'34.08" E, alt. about 259 m, a small number of individuals, 3 VI 2010.

Ornithogalum umbellatum L. – Polovragi, a glade in the beechtree forest, 45011'55.84"N, 2 047'09.84" E, alt. cca 705 m, a small number of individuals, 12 V 2009.

***Ranunculus* L.**

Ranunculus constantinopolitanus (DC) D,Urv. – Căluu in the Cerăț Forest, 44026'06.70" N, 24 04'30.77" E, alt. cca 160 m, a small number of individuals, 16 IV 2009; Fălcoiu in the Razem

Forest, 44013'10.60"N, 24 22'35.80"E, alt about 88 m, a great number of individuals in some places in the forest, 2 IV 2016 (Figure 6).



Figure 6. Forest image with *R. constantinopolitanus*, Fălcoiu. (photo: M. Burdușel, April 2016)

***Saxifraga* L.**

Saxifraga tridactylites L. – Polovragi in the Olteț Gorges, at the Grotto, 45011'48.83" N, 23047'00. 85" E, alt. about 680 m, a very small number of individuals exposed to grazing, 28 IV 2007 (Figure 7).



Figure 7. *Saxifraga tridactylites*, the Olteț Gorges (photo: M. Burdușel, April 2007)

***Sedum* L.**

Sedum sexangulare L. – Fălcoiu, the dike area of the Olteț River at the confluence with the Olt River, 44013'54.75" N, 240 22'50.88" E, alt. about 86 m, a great number of individuals, 6 VII 2010 (Figure 8).



Figure 8. *Sedum sexangulare*, Fălcoiu (photo: M. Burdușel, July 2010)

***Veronica* L.**

Veronica orchidea Crantz (*V. spicata* L. subsp. *orchidea* (Crantz) Hayek) – Tetoiu pasture Dealul Viilor (Vineyard Hill), 440 43'53.23" N, 230 55'55.17" E, alt. about 303 m, a very small number of individuals, destroyed by grazing, 6 V 2008 (Figure 9).



Figure 9. *Veronica orchidea* ((photo: M. Burdușel, May 2008)

Veronica triphyllos L. – Fălcoiu on the outer side of the dike, 44013'52.90" N, 240 22'54.86"E, alt. about 86 m, a great number of individuals, exposed to grazing, 27 III 2011.

In order to evaluate the abundance of some of the species, we have agreed that a number smaller than 10 individuals of a population should be considered a very small number and between 10 and 50 individuals should be considered a small number. The species with over 50 individuals in a population are *Ranunculus constantinopolitanus*, in the Razem Forest, Fălcoiu and *Sedum sexangulare*, which have been quoted as having a great number of individuals.

CONCLUSIONS

The aspects presented here offer information about the spontaneous plant species in the Olteț River Basin, with respect to their diversity, abundance and degree of endangerment. Depending on these data measures can be established to limit the decrease in the number of individuals from some species. In this article we can find partial results from the vast research. Introduction of the photos is meant to facilitate determination of the species and the access to knowing them by the beginner students of this field.

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