

SOME FLORA FEATURES OF THE SOUTHERN PORTION OF THE TISZA RIVER REGION

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Abstract

The paper presents a taxonomic and phytogeographic survey of four rare species and two new infraspecies taxonoms in the flora of the southern portion of the Tisza River region.

Viola pumila CHAIX in WILLD. is a Euro-Asian plant rare in the studied region.

Chenopodium capitatum (L.) ASCH. is probably of North American origin, an adventive ephemerophyte recorded in the southern portion of the Tisza River region only in the vicinity of Kanjiža.

Astragalus asper WULF. in JACQ. is a Pontic-Pannonian species which, in the region studied, grows on the Subotica sand-lands and its taxonom *f. Karpatii* Soó near Kelebija.

Alkanna tinctoria (L.) TAUSCH. is a sub-Mediterranean plant recorded in the southern portion of the Tisza River region near Ridjica, Subotica, Madaraša and on the Subotica sand-lands, while its taxonom var. *parviflora* BORB. f. *Lehmanni* (TINEO in GUSS.) PODP. is found on the Titel Plato.

Introduction

Recent studies of the flora of the southern portion of the Tisza River region indicate that this region is interesting for a number of rare plants. In this paper a more detailed description will be given of the Euro — Asian species *Viola pumila* CHAIX. in WILLD.; of an adventive ephemerophyte, probably of North American origin, *Chenopodium capitatum* (L.) ASCH.; of two plants with a more narrow area of distribution *Astragalus asper* WULF. in JACQ. which belongs to the Pontic-Pannonian flora element and *Alkanna tinctoria* (L.) TAUSCH. from the group of sub-Mediterranean species. Two of their infraspecies taxonoms are also recorded since they are new to the southern portion of the Tisza River region, to Vojvodina i Srbija.

Taxonomic and Phytogeographical Data

F. Violaceae

Viola pumila CHAIX in WILLD. belongs belongs to the Euro-asian flora element. It is rare in the Balkans and is not found in the southern region of the peninsula. In the north it has been found to grow all the way up to the Baltic (Soó 1968). Among the flora of the Balkan Peninsula it is cited for Srbija and Bulgaria (HAYEK 1927).

the flora of Srbija records it only for the eastern region—near Brestovačka banja (JOSIFOVIĆ 1972). In the Bačka region, it has been found to grow near Futog (PRODAN 1916), while for the Tisza River region it was cited near Stari Bečej, from where it has since disappeared (KOVÁCS 1929). In recent years we have discovered it in the southern portion of the Tisza River region near Djala, on marshy meadows.

F. Chenopodiaceae

Chenopodium capitatum (L.) ASCH. belongs to the southern Euro-Asian group of plants, but also grows both in Siberia and in North America, from where it probably originated. It is rarely cultivated as a decorative or vegetable species. It is adventive and ephemerophyte in character (Soó 1970). It was introduced to Europe (TUTIN *et al.* 1964), but also appears subspontaneously (HAYEK 1927, JOSIFOVIĆ 1972). For the Bačka region it is cited as cultivated (PRODAN 1916), and for Srbija as cultivated and appearing subspontaneously, here and there (JOSIFOVIĆ 1972). The first determined site of this species in Vojvodina, on which it grows subspontaneously, is in the southern portion of the Tisza River region, near Kanjiža, on rural locations, beside railroad tracks.

F. Fabaceae

Astragalus asper WULF. in JACQ. is a species which belongs to the Pontic-Pannonian flora element and is widespread all the way up to Austria (Soó 1966). In Europe it grows in the eastern and central regions, and in the south, up to North Bulgaria (TUTIN *et al.* 1968). In the south-eastern portion of Central Europe it is present in the Pannonian and Erdian depressions (JÁVORKA 1925). According to the recorded flora of Srbija it grows only in Vojvodina on the meadows and woodlands of the Fruška gora hills and on the Deliblato sand-lands (JOSIFOVIĆ 1972). In the Bačka region, it has been recorded near Kovilj (ZORKÓCZY 1896) and on the Subotica sand-lands (ŠTURC 1973). In the region of Kelebija, the form *Karpatii* has been discovered as new to the flora of Vojvodina and Srbija (JOSIFOVIĆ 1972, 1977).

F. Boraginaceae

Alkanna tinctoria (L.) TAUSCH. belongs to the group of sub-Mediterranean plants (Soó 1968). It is widespread in the sandy regions of Southern Europe, and in the north all the way up to South-Eastern Czechoslovakia (TUTIN *et al.* 1972). In the Pannonian region it has been found to grow with certainty only between the Danube and Tisza rivers (JÁVORKA 1925). In Srbija it is cited as growing only near Stara Pazova (JOSIFOVIĆ 1974, 1977). In the Bačka region it has been recorded near Ridjica, Subotica and Madaraša (PRODAN 1916) and on the Subotica sand-lands (ŠTURC 1973). In recent years, we have found a type form also on the Deliblato sand-lands, and an infraspecies taxonom var. *parviflora* BORB. f. LEHMANNI (TINEO in GUSS) PODP. on the Titel Hills. This data is new to the flora of the southern portion of the Tisza River region, to Vojvodina and Srbija.

Discussion

On the basis of chorographic data on the distribution of the four above-described species, it can be perceived that these are rare and significant plants to the flora of the southern portion of the Tisza River region. *Viola pumila* CHAIX in WILLD. is of wider distribution and belongs to the Euro-Asian flora element (Soó 1968). In the flora of Srbija it has been cited only for Brestovačka banja (JOSIFOVIĆ 1972, 1977). Formerly

in Vojvodina it was recorded on two sites, both in the Bačka region, near Futog (PRODÁN 1896) and near Stari Bečej (KOVÁCS 1929), from where it has since withdrawn. We have found it on the marshy meadows near Djala in the northern portion of the Banat region, a fact which represents new data for the region. *Chenopodium capitatum* (L.) ASCH. is cited as a cultivated species for Srbija, but one which also grows spontaneously, here and there (JOSIFOVIĆ 1972). It belongs to the adventive species and is of ephemerophyte character, and probably originated from North America (SOÓ 1970). Its discovery on rural locations near railroad tracks in the vicinity of Kanjiža is the first determined location of this plant, as a spontaneous one, in the southern portion of the Tisza River region and in Vojvodina. From the phytogeographical standpoint, two autochthonous species for the flora of the southern portion of the Tisza River region are of special interest. The first one is *Astragalus asper* WULF. in JACQ. which belongs to the Pontic-Pannonian flora element. It is present in the south-eastern region of Central Europe, in the Pannonian and Erdian depressions (JÁVORKA 1925), and in the south, it extends to North Bulgaria (TUTIN *et al.* 1968). For the flora of Srbija, it is cited only on two locations, both of them in Vojvodina, on the Fruška gora Hills and the Deliblato sand-lands (JOSIFOVIĆ 1972). In the Bačka region, it has been recorded near Kovilj (ZORKÓCZY 1896) and on the Subotica sand-lands (ŠTURC 1973), which represents its only location in the southern portion of the Tisza River region. Near Kelebija, a new infraspecies taxonom f. *Karpatii*. has been determined within this species, a fact which has not been known to the flora of Srbija. The second one is *Alkanna tinctoria* (L.) TAUSCH. which is a sub-Mediterranean species. In the north it spreads to Hungary, Rumania (SOÓ 1968) and to Czechoslovakia (TUTIN *et al.*). For the flora of Srbija, it has been recorded only near Stara Pazova, in the Srem region (JOSIFOVIĆ 1974). In past literature it has also been cited for the southern portion of the Tisza River region, near Ridjica, Subotica, Madaraša (PRODÁN 1916) and on the Subotica sand-lands (ŠTURC 1973). We have also found it on the same locations and on the Deliblato sands, and on the Titel Plato, we have found a new taxonom for the flora of Vojvodina var. *parviflora* BORB. f. *Lehmanni* (TINEO in GUSS.) PODP. The presence of these two rare species among the flora of the southern portion of the Tisza River region, reveals the influence of both Pontic-Pannonian and southern sub-Mediterranean flora on the region studied. These plants had come to inhabit the flora of the Pannonian Plain and the southern portion of the Tisza River region, during warmer geological ages.

Conclusion

During a study of the flora of the southern portion of the Tisza River region four rare plant species and two new infraspecies taxonomas have been recorded.

Viola pumila CHAIX in WILLD. is a plant of more extensive distribution, a Euro-Asian species, but rare in the region studied. Today it is present in the vicinity of Djala, in the Tisza River valley, on marshy meadows.

Chenopodium capitatum (L.) ASCH. is an adventive ephemerophyte and probably of North American origin. In natural vegetation it grows in the vicinity of Kanjiža, near railroad tracks, as a spontaneous species. This record is the only location in the southern portion of the Tisza River region.

Astragalus asper WULF. in JACQ. is a Pontic-Pannonian plant. It is a rare plant inhabitant of Vojvodina. In the southern portion of the Tisza region it has been recorded only on the Subotica sand-lands. The discovery of the *Karpatii* form near Kelebija

represents new data for the flora of Vojvodina and the southern portion of the Tisza River region.

Alkanna tinctoria (L.) TAUSCH. is a sub-Mediterranean plant. It is present in the southern portion of the Tisza River region in the vicinity of Ridjica, Subotica, Mada-raša and on the Subotica sand-lands. New data for the flora of Vojvodina and the southern portion of the Tisza River region is the discovery of an infraspecies taxonom var. *parviflora* BORB. f. LEHMANNI (TINEO in GUSS.) PODP. on the Titel Plato.

From the phytogeographical standpoint, the plants *Astragalus asper* WULF. in JACQ., which belongs to the Pontic-Pannonian flora element, and *Alkanna tinctoria* (L.) TAUSCH., which is a sub-Mediterranean species, are important as remains of the flora which differentiated itself in the Pannonian depression in warmer geological ages.

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A déli Tisza szakasz néhány florisztikai jellemzője

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Kivonat

Ebben a dolgozatban elemeztük a déli Tisza-szakasz flórájának négy fajtát és két új fajalatti taxont. — *Viola pumila* CHAIX in WILLD. a Tisza déli szakaszának ritka növénye. Óbecse környékéről eltűnt. Újabbban az Észak-Bánátban Gyala környékén találtuk nedves réteken. — *Chenopodium capitatum* (L.) ASCH. A kutatott területen csak ruderalis társulásokban volt megtalálható Kanizsa környékén, mint subszponán növény. — *Astragalus asper* WULF. in JACQ. A Tisza mentén Szabadka homokvidékén fordul elő. A f. *Kárpátii* Soó, mint a vajdasági flóra új taxonja Kelebiánál lelhető fel. — *Alkanna tinctoria* (L.) TAUSCH elterjedése Észak-Bácskában: Regőce, Szabadka, valamint a szabadkai homokvidék. A var. *parviflora* BORB. f. *lehmanni* (TINEO in GUSS.) PODP. a titeli fennsíkon való előfordulása új adat a Vajdaság flórájára.

Неке флористичке одлике јужног Потисја

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U radu su prikazane četiri retke biljne vrste južnog Potisja i dva nova infraspecijska taksona

Izvod

Viola pumila CHAIX in WILLD. jeretka vrsta u Potisju iz okoline Starog Bečaja se povukla a. u novije vreme je nadjena na vlažnim livadama kod Djale u severoistočnom Banatu.

Chenopodium capitatum (L.) ASCH. je u ispitivanom području zabeležen kao subspontana biljka samo u ruderalnoj vegetaciji kod Kanjiže.

Astragalus asper WULF. in JACQ. raste u Potisju na Subotičkom pesku a njegova forma *Karpatii* Soó kod Kelebije kao nov takson u flori Vojvodine.

Alkanna tinctoria (L.) TAUSCH. rasprostranjena je u severnoj Bačkoj kod Ridjice Subotice i na Subotičkom pesku a takson var. *parviflora* Borb. f. *Lehmanni* (TINEO in Guss.) PODP. na Titelskoj visoravni je nov za floru Vojvodine.

НЕКОТОРЫЕ ФЛОРИСТИЧЕСКИЕ ОСОБЕННОСТИ ЮЖНОГО ПОТИСЬЯ

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Резюме

В статье излагается таксономический и фитогеографический обзор четырех очень редких видов растений из флоры южного Потисья: *Viola pumila* CHAIX — евразийский вид, редко встречаемый в районе исследования. *Chenopodium capitatum* (L.) ASCH адвентивный эфемероид происхождением из северной Америки. У нас встречается исключительно только в Южном Потисье (возле Канижи).

Astragalus asper JACQ. — понтийско-паннонский вид, в районе исследования растет на Суботинском песке, причем f. *KARPATI* в окрестности Келебии. *Alkanna tinctoria* (L.) TAUSCH. субмедитеральный вид обнаружен нами в Южном Потисье, в районе Риджице, Суботице, Мадараша, а также на Суботическом песке, еь var. *parviflora* BORB. f. *Lehmanni* (TINEO in Guss.) PODP. на Тительском плоскогорьи.