

Chorological Data on the Distribution of Some Species in the Bulgarian Flora and the Neighbouring Countries

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Abstract:

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During inconspicuous enrichment of the Herbarium in our institute (SOM), revision on the specimens is needed. New records are reported, chorological data are concluded and map on the distribution of some species of: *Ulmus*, *Celtis*, *Isatis*, *Smyrniium*, *Oenante*, *Nepeta*, *Dittrichia* is given.

Key words: revision, chorology, distribution, maps.

Introduction

The aim of this report is to add the chorological information about the taxa collected during 1995-2002. There are no revising notes on most of herbaria specimens, although the volumes of Flora of NRB (I-X) have been printed. The contradictory data on the distribution of the collected plants (literature-herbaria) are reviewed for most of them. Most of the species were revised, after detailed investigation. The localities and regions of distribution cited below were new for some of the species.

Materials and methods

The collected plants were compared with the herbarium specimens in SOM, SO, SOA.

The distribution has been mapped on the base of herbarium studies and literature data, especially with the last most recent ones (Dimitrov, 2002).

The cited specimens are kept in the herbarium of the Institute (SOM). They are in the order accepted in Flora of Bulgaria (vol. III.) and the new localities are cited based on of phytogeographical

regions of the country (vol. III. and UTM-grid, Kozuharov et al., 1983), except these one from Greece and Turkey.

Results and discussion

Ulmus minor Mill. ssp. *canescens* (Melville) Browicz et Zielinski GF-92; SV (I. Pashaliev) SOM 151536; (JCH) Greece; SOM 156581.

Slavjanka: Goleshovo, 29.VII.1991 - sub *U. montana* With.

Greece: Sevasti, distr. Katerini, 25.IV.2001.

In Flora PRB (Georgiev et Palamarev, 1966) this taxon is not mentioned. For the first time it was recorded by Browicz et Zielinski (1977) for the regions of Struma valley and Eastern Rhodopes Mts., both on the base of herbaria specimens, collected before and their own specimens. From the above-cited localities - the first one is a new region for our country, and the second one - is also new but for Greece.

Celtis glabrata Stev. MH-09; SV (M. Anchev) SOM 133942; MJ-24; SV (Kochev) SOM 150532; MJ-36; SV (I. Apostolova)

SOM 152507; LJ-52; SV (Tzonev) SO 10030.

North Eastern Bulgaria: sub *C. caucasica* Willd.: Madara distr. Sumen, rocky places, fruits, 19.VIII.1975; sub *C. australis* L.: Ivanovo, distr. Russe, on the rocks, fruit 1.X.1978; sub *C. caucasica* Willd.; 23.V.1982.

Danube plain: sub *C. caucasica* Willd., Muselievo, Butovo, distr. Pleven.

Browicz et Zielinski (1977) recorded the distribution of the species in Bulgaria - Black Sea coast, North Eastern Bulgaria, Thracian plain, Toundzha hilly region. The next collected specimens are determined again "*caucasica*" by the authors, maybe because they used *Flora PRB* (VIII). The region of the Danube plain is the new one. The cited distribution of *Celtis caucasica* Willd. (Kozhuharov (ed.), (1992) is not correct.

Celtis australis L.

Our new records from this species confirm the regions of the distribution. The aim is to conclude the chorological information collected until now, because during the determination of our specimen, contradictory data both from the literature and herbaria collections was found.

According to Georgiev et Palamarev (1966) the species is distributed in: North Eastern Bulgaria, Struma valley, Eastern Rhodopes Mts. and Thracian plain. On the distribution map (Dimitrov, 2002) the regions of Central Rhodopes Mts., Tundzha hilly region and Strandza are not mentioned. The herbaria specimens were found there.

Isatis tinctoria L. SC (JCH); FN-55; SOM 156914.

Znepole region: In herbosis saxosis via ferrae Kalotina, distr. Sofia., fruit 4.VII.1997.

The region is not recorded by Assenov (1970), as well as the herbaria specimens were also not found in this area. According to Kozhuharov (ed.), (1992) the distribution of the plant is in North Eastern Bulgaria, Danube plain and Struma valley. That is why the above-cited region is new for the species.

Smyrniium rotundifolium Mill. LG-96; Sc (JCH) SOM 156913.

Thracian plain: in fruticetes distr. Dimitrovgrad, near the road to Haskovo, flowers, 16.V.1996.

According to Assenov (1982) and Velchev (1984) the plant is distributed in the regions of Struma valley, Eastern Rhodopes Mts. and Tundzha hilly region only and it is included as a "rare" species in the Bulgarian Red data book

(Velchev, 1984). The locality where the plant is found is new, but is near to the above-cited regions and adds it to the chorological data.

Oenanthe pimpinelloides L. MG-43; SC (JCH) SOM 156916.

Thracian plain: near Svilengrad, seeds, 15.VII.1997.

This "rare" species of Bulgarian flora is distributed in the South Eastern part of the country - the regions of South Black Sea coast and Strandzha (Assenov, 1982; Velchev, 1984). The map of the distribution of this taxon in the Bulgarian Red data book opens of the question, but the last one (Dimitrov, 2002) includes more detailed information.

Nepeta parviflora Bieb. PJ-33; SC (JCH) SOM 156918, 156919; LJ-52; SV (R.Tzonev) SOM 156920.

Black Sea coast: Shabla. Flowers; stems. 20.V.1999.

Danube plain: Cherna mogila, near Dragomirovo, distr. Pleven. 22.VI.1999.

These localities are not new in the distribution of *Nepeta parviflora*. This is the reason why all specimens in the herbaria need to be researched in detail. Both species, *Nepeta parviflora* Bieb. (= *N. euxina* Vel.) and *N. ucrainica* L. are reported by many authors (Pojarkova, 1954; Turner, 1972, Velchev, 1984; Assenov, 1989; Dimitrov, 2002) to be distributed in Bulgaria.

According to Velchev (1984) they are "rare" species. The data on the distribution bot in the literature and the herbaria specimens are very closed and similar: Black Sea coasts (Balchik) and Strandzha, respectively Black sea coast (Kavarna, Balchik, Kaliakra, distr. Varna; Kameno, distr. Burgas). and Danube plain (Gorna Mitropolia, distr. Pleven).

Boissier (1879), to the end of the description of *Nepeta ucrainica* L., equated, *N. parviflora* M.B. as a synonym, and cited it as been distributed "in Tauria, Caucasus, Capadocia, Transylvania, Rossia australis, Sibiria, Altai".

Turner (1972) pointed out as a first character the indumentum of the stem: "sub glabrous or glabrescent" (*N. ucrainica*) and "pubescent to lanate" (*N. parviflora*).

There are not a lot of specimens in the Bulgarian herbaria, especially from Bulgarian localities, but they all are with lanate stems.

The calyx teet are triangular, sharp, sometimes subequal, equal or longer the calyx tube. The corolla is small, blue, pubescent, missing in more of the flowers.

Turner (1972) also pointed that both species are unisexual. Plants with long stamens (staminodes) and short stigma (male) are sterile. In one inflorescence both empty calyces and such with normal flowers and seeds could be seen; also with long stigma and staminodes, (female). The author's opinion is that some of the morphological differences between *N. parviflora* and *N. ucrainica* are connected with the sex of the plants, as it is in *Origanum*, *Thymus* and other species of Lamiaceae. The specimen of *N. hispanica* Boiss. & Reuter are very close to *N. parviflora*, but it is necessary to observe many plants in the populations.

Sub *N. parviflora* N J-11, SV (Velchev) SOM 154388, Black Sea coast: Balniskha tuzla, in calcareis, 29.VII.1993. RJ-11; SV (Velchev) SOM 154389, Bozuret, distr. Kavarna, herbosus calcareis, flowers. 30.VI.1993; LJ-63; (Kozeva, Stojanov) SO 95552, 95553. Cherna mogila, between Ovcha Mogila and Dragomirovo, 1989; rev. Stojanov, 13.II.1999. sub. *N. ucrainica* L. RJ-11; SV (M. Filipova, D. Stojanov) SO 97333, 100384. Black Sea coast, Chirakman. 17.VI.1992.

Sub *N. euxina* Vel.- NJ-11; SV (Bezdek, Stribrny) SO 61497. Balchik, V.1897. rev. Sub *N. ucrainica* D. Jordanov; rev. Sub *N. parviflora*, 5.VI.1966. B. Kitanov.

Ucraina: SV (Cleopov) SOM 9603. Herbaria Inst. Bot. A.S.S.S. Ucrainicae: Ucraina austro-orientalis. Distr. Stalino, ad fl. Kalmius. 6.VI.1928. Romania: SV (Borza) SO 61483 Dobrogea, distr. Constantza, in stepaceis aridis ad Murfatlar, solo calcareo. Alt. cca. 500 m s. m. 4.VII.1922.

Sub *N. ucrainica* L. RJ-12; SV (B. Davidov, B. Achtarov) SO 61331. Kaliakra, ad Pontum 20. V.1901; RJ-11; SV (B. Davidov, B. Achtarov) SO 61334, 61337. Kaliakra ad Pontum, 17.V.1904; SV (Davidov) SO 61336. In collis herbis Dobrodze, circa urb. Kaliakra, ad Pontum. 16.VII.1904. NH-32; SV (D. Jordanov) SO 61498, 61499, 61500. Inter D. Eserovo-Kameno, distr. Burgas. 13.VII.1933.

Turkey: SV (B. Davidov) SOM 61332. In collibus siccis circa Adrianopolem: ad urb. Baba-Eski. 24.V.1913.

Herbarium USSR: - SV (S.E. Kutcherovskaja) SOM 61331. Semipalatinsk. Lake Kara-Sor, in pratis, iter ad distr. Pawlodar et Karalinsk. 19.V.1914.

Transcaucasia: SV (Schelvjakov) SO 61495. Nachitchevan, prope Aznavurt, in calcareis m. Karakush, 22.V.1933.

Transilvania:

1. Herbarium Dorfler. SV (Wolff) SO 61494, Torda.VI.1893.

2. SV (Mus. Bot. Cluj) SO 61493. In graminosis apricis collinis "Tekinto" - La Fankate, prope opp. Cluj, 500-600 m. 24.V.1909.

3. **Transilvania Septentrionalis** SV (Unknown) SO 61492. In graminosis ad Claudipolium.

Between the species in the list, only the this one from Ucraina (SOM 9603) seem to be "glabrescent". By the microscope - small, short hairs ("pubescent") on the stem, branches, leaves, calyx, flower, were seen; it is collected in a meadows.

This one from Turkey, collected by Bulgarian botanist (SOM 61332) was the same as all the specimens from Bulgaria and Transilvania. In Flora of Turkey (1982) the distribution of the plant named *parviflora*, is not pointed out.

The herbarium specimen from Strandza was not found.

Although "the types" of *N. ucrainica* L. and *N. parviflora* M.B. have not been seen by the author, but on the basis of research materials, a conclusion is made that in Bulgaria *N. parviflora* (?= *N. ucrainica*) exists.

Dittrichia graveolens (L). Greuter GH-21 SC (JCH) SOM 156917.

West Sredna gora mt: along the road - Vakarel - Ihtiman. 5.VIII.2001.

The species is recorded in East Rhodopes Mts., (Cherneva, 1995), as well as Tundzha hilly region and Thracian region (Dimitrov, 2002). The author supposes, that during the next years the areas of its distribution will enlarge.

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Резюме

Хорологични данни върху разпространението на видове от българската флора и съседните страни

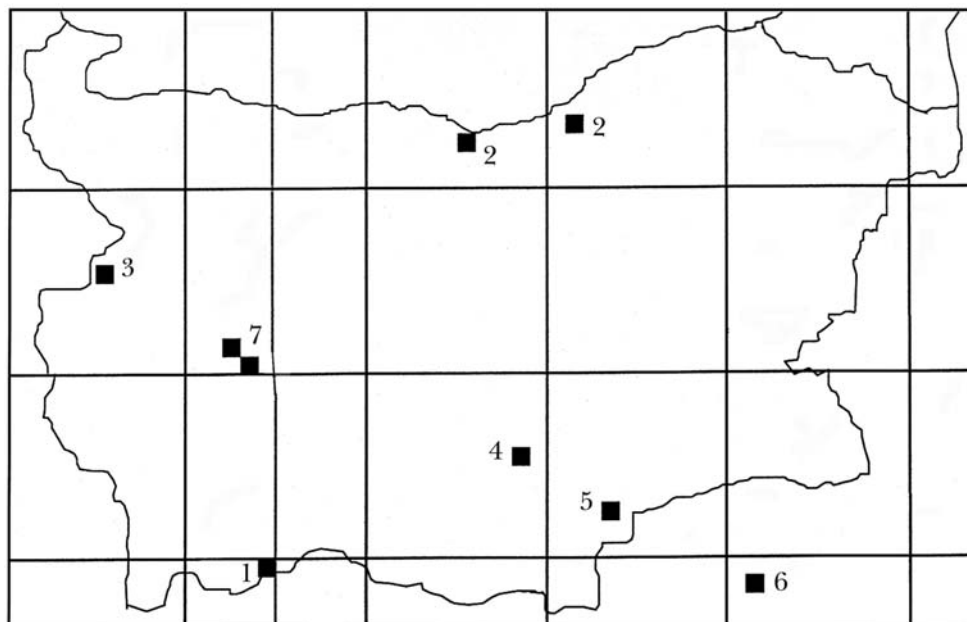
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По време на попълване на хербарната колекция на Института по ботаника (SOM) през 1995-2002 г., се наложи и ревизиране на по-рано събраните хербарни образци. Представят се нови локалитети и райони за: *Dittrichia graveolens* (L.) Greuter, *Isatis tinctoria* L., Hartwig, *Oenanthe pimpinelloides* L., *Smyrnum rotundifolium* Mill., *Ulmus minor* Mill. ssp. *canescens* (Melville) Browicz et Zielinski.

Уточнява се разпространението на: *Celtis glabrata* Stev. и *Celtis australis* L.,.

Критична ревизия е направена за *Nepeta ucranica* L., *Nepeta parviflora* Bieb.

Като резултат: *Nepeta parviflora* Bieb. (= *N. euxina* Vel.) е разпространена в България в районите на **Черноморско крайбрежие** и **Дунавска равнина**, както и в Европейската част на съседна **Турция**.



Map 1. Map showing the new localities of the distribution of:

1. *Ulmus minor* Mill. subsp. *canescens* (Melville) Browicz et Zielinski;
2. *Celtis glabrata* Stev.;
3. *Isatis tinctoria* L.;
4. *Smyrnum rotundifolium* Mill.;
5. *Oenanthe pimpinelloides* L.;
6. *Nepeta parviflora* Bieb.;
7. *Dittrichia graveolens* (L.) Greuter