

**MATERIAL ON THE ANNOTATED CHECKLIST
OF VASCULAR FLORA OF SERBIA.
NOMENCLATURAL, TAXONOMIC AND FLORISTIC NOTES III**

MARJAN NIKETIĆ^{1,2*}, GORDANA TOMOVIĆ³, BOJANA BOKIĆ⁴,
UROŠ BUZUROVIĆ¹, ŠEMIJA DURAKI⁵, VLADAN DJORDJEVIĆ³,
SANJA DJUROVIĆ⁶, ZORAN KRIVOŠEJ⁷, PREDRAG LAZAREVIĆ³,
RANKO PERIĆ⁸, DANIJELA PRODANOVIĆ⁹, BORIS RADAK⁴,
MILICA RAT⁴, MILANA RANIMIROVIĆ³, VLADIMIR STEVANOVIĆ²

¹ Natural History Museum, Njegoševa 51, 11000 Belgrade, Serbia,
e-mail: mniketic@nhmbeo.rs

² Serbian Academy of Sciences and Arts, Belgrade, Serbia,
e-mail: vstev@bio.bg.ac.rs

³ University of Belgrade, Faculty of Biology, Institute of Botany and Botanical
Garden, Serbia, e-mail: gtomovic@bio.bg.ac.rs; vdjordjevic@bio.bg.ac.rs

⁴ University of Novi Sad, Department of Biology and Ecology, Faculty of Sciences,
Serbia, e-mail: milica.rat@dbe.uns.ac.rs

⁵ Eight Belgrade Grammar School, Grčića Milenka 71, 11000 Belgrade, Serbia

⁶ University of Niš, Faculty of Agriculture, Kosančićeva 4, 37 000 Kruševac,
Serbia, e-mail: djurovic.sanja@ni.ac.rs

⁷ University of Priština, Department of Biology, Faculty of Natural Sciences, Lole
Ribara 29, 38220 Kosovska Mitrovica, Serbia, e-mail: zoran.krivosej@gmail.com

⁸ Institute for Nature Conservation of Vojvodina province, Novi Sad, Serbia,
e-mail: ranko.peric@pzzp.rs

⁹ University of Priština, Kosovska Mitrovica, Faculty of Agriculture, Kopaonička
bb, 38219 Lešak, Serbia, e-mail: danijela.prodanovic@pr.ac.rs

The paper proposes eight new nomenclatural combinations and indicates two new synonyms. There are 11 taxa (species and subspecies) of the vascular flora that are new for the flora of Serbia (of which nine are autochthonous and two allochthonous plants). Two autochthonous species were confirmed for the flora of Serbia. Six plant taxa are a novelty for proper Serbia, Vojvodina, or Kosovo and Metohija. There are eight taxa whose presence in Serbia or in its territorial units has been refuted.

Key words: vascular flora, checklist, nomenclature, taxonomy, Serbia

INTRODUCTION

This paper represents a third continuation of the inventory of the flora of Serbia (Niketić *et al.* 2018a, 2020) with nomenclatural, taxonomic and floristic notes related to taxa from the Liliopsida and Magnoliopsida groups, as well as some novelties that have not been published in *An annotated checklist of vascular flora of Serbia I* (Niketić & Tomović 2018) because in the meantime some significant findings for the flora of Serbia or certain administrative units have emerged.

MATERIAL AND METHODS

The same methods and principles for nomenclature and chorological revision were applied as in Niketić *et al.* (2018a).

RESULTS AND DISCUSSION

Nomenclatural notes**MAGNOLIOPSIDA**

ASTERACEAE (COMPOSITAE)

Centaurea borysthena Gruner, Bull. Soc. Imp. Naturalistes Moscou 41(2): 426 (1868).

≡ *Acosta borysthena* (Gruner) Soják, Čas. Nár. Mus., Odd. Přír. 140(3–4): 133 (1972) ≡ *C. arenaria* subsp. *borysthena* (Gruner) Dostál, Bot. J. Linn. Soc. 71(3): 197 (1976).

IND. LOC.: [Ukraine] “Inter frutices, locis arenosis ad Borysthenem fluvium frequens”. LECTOTYPE (invalidly designated in Shiyan *et al.* 2010: 820 [Art. 7.11] as holotype): “Gubern. Catherinoslaw: in campis elatis ad Borysthenem prope urbem, Alexandrousk, 13 IX 1865, L. Gruner” (s.n. LE); isolectotype: BM! 001043218.

= *Centaurea tauscheri* A. Kern., Oesterr. Bot. Z. 22: 119 (1872), **syn. nov.**
 ≡ *C. arenaria* subsp. *tauscheri* (A. Kern.) Soó, Acta Geobot. Hung. 3: 64 (1940) ≡ *Acosta tauscheri* (A. Kern.) Holub, Folia Geobot. Phytotax. 7: 314 (1972) ≡ *C. arenaria* var. *tauscheri* (A. Kern.) Gajić, Fl. Srbije 7: 254 (1975).

IND. LOC.: [Hungary, Budapest] “Auf wüsten Sandhügeln. Auf der Kecskem. Landhöhe bei Sari und Also Dabas. Auf der Csepelinsel bei Tököl und Csepele. — Diluv. Sand.”. LECTOTYPE (first-step: designated by Ochsmann 2000: 80): “Insula Csepel e clivibus arenosis prope Tököl et Csepele. Floret Julio-Augusto, biennis. Tauscher, J., 08.08.

1870” (WU-Kerner); (second-step: **here designated**): “E flora: Hungarica / *Centaurea* Linnni / *arenaria* MB. *Tauscheri* / Insula Csepele clivibus arenosis prope / Tököl et Csepe: le / Floret: Julio – Augusto [biennis] / Legit. 8, Augusto 870 Dr J. Tauscher” (WU 034292! [photo!] image available at <https://iiif.jacq.org/viewer/?manifest=https://services.jacq.org/jacq-services/rest/iiif/manifest/8403>; isolectotypes: WU 034289!, WU 034290!, WU 034292!

= *Centaurea* ×*hungarica* Gugler, Ann. Mus. Nat. Hungar. 6: 231 (1907), **syn. nov.**

= *Centaurea* ×*pseudorhenana* Gugler, Ann. Mus. Nat. Hungar. 6: 231 (1907), **syn. nov.** ≡ *Acosta pseudorhenana* (Gugler) Holub, Folia Geobot. Phytotax. 7: 314 (1972).

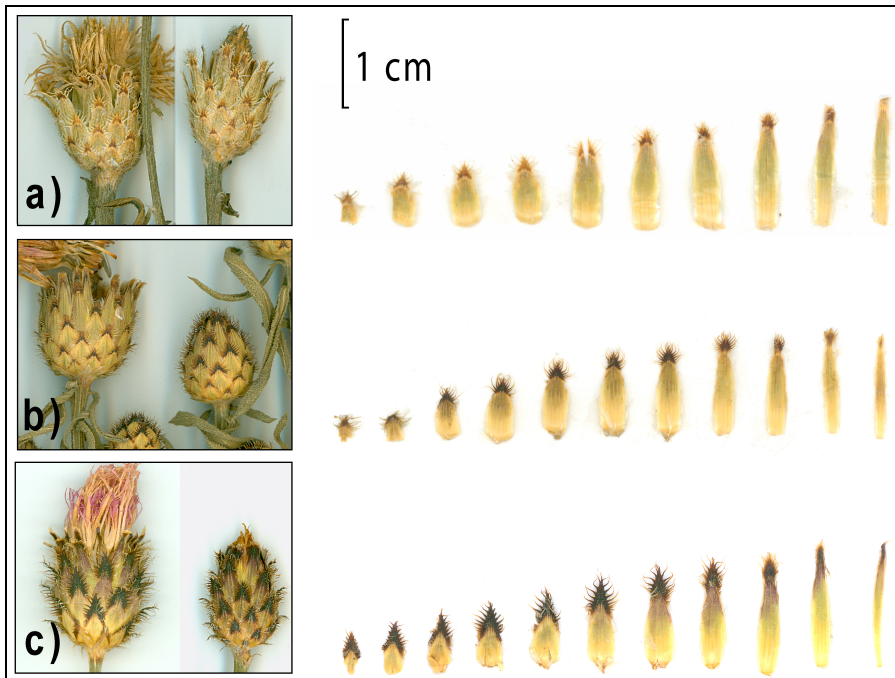


Fig. 1. – Capitula and phyllaries of: a) *Centaurea arenaria* M. Bieb. (Banat, Deliblato Sand), b) *C. borysthena* Gruner (Banat, Deliblato Sand) and c) *C. stoebe* subsp. *stoebe* L. (E Serbia, Mt Svrlijske Planine).

In the protologues for *Centaurea borysthena* Gruner and *C. tauscheri* A. Kern., the authors clearly mention their hybrid origin, which arose from the ancient crossing of *C. arenaria* M. Bieb. and *C. stoebe* L. which is also confirmed by Hayek (1901) for *C. tauscheri*. No significant morphological differences were observed between them in the descriptions and in the type

materials. Intermedial morphological position of *C. borysthenica* is visible in Fig. 1.

Hieracium brachytrichophyes* (O. Behr, E. Behr & Zahn) Niketić, **comb. et stat. nov.*

≡ *Hieracium djimilense* subsp. *brachytrichophyes* O. Behr, E. Behr & Zahn, Glasnik Skopskog Naučnog Društva 20, Sect. Sci. Nat. 7: 34 (1939) [basionym].

IND. LOC.: “Korab: Hänge an der Waldgrenze an der Dlaboka [“Luboka”] Reka, ca. 1600–1700 m”. LECTOTYPE (**here designated**): “Macedonia, in montibus Korabensibus, ad declives praeter Dlaboka [“Luboka”] reka prope finem si[I]varum, ca. 1600 m.”, 23-Jul-1937, *E. Behr* (987 S 13-19905 [photo!] image available at <https://plants.jstor.org/stable/viewer/10.5555/al.ap.specimen.s12-19905>); isolectotype: M.

The same combination has been published in Niketić *et al.* (2020), but the basionym was not clearly indicated (erroneously “*sparsum*” instead “*djimilense*”) making it invalid (Art. 41.5.).

M. Niketić, M. Ranimirović, S. Duraki

Hieracium schuettianum* (Zahn) Niketić, **comb. & stat. nov.*

≡ *Hieracium sparsum* subsp. *schuettianum* Zahn, Repert. Spec. Nov. Regni Veg. 30: 237 (1932) [basionym].

This variable taxon from *Hieracium* sect. *Cernua* R. Uechtr. was originally included in *H. sparsum* Friv. but it is morphologically more similar to *H. vierhapperi* (Zahn) Szelağ or *H. dacicum* R. Uechtr. in semiamplexicaul leaves at base and some other characters. It was described from Montenegrin part of Prokletije Mts. Almost 60 years later Gottschlich (1991) found this taxon again in the Metohian part of the Šar Planina Mts, describing a new variety, *H. sparsum* [subsp. *schuettianum*] var. *glandulosquamosum* Gottschlich. All the data on the presence of *H. brachytrichophyes* (O. Behr, E. Behr & Zahn) Niketić on Šar Planina Mts (Duraki & Niketić 2018) actually correspond to *H. schuettianum* (Zahn) Niketić (see on page 120). It was also found in Mt Durmitor, Mt Komovi and Mt Maganik in Montenegro (BEO, leg. M. Niketić).

M. Niketić

FABACEAE (LEGUMINOSAE)

Chamaecytisus albus* subsp. *pallidus* (Schrad.) Niketić, **comb. in stat. nov.*

≡ *Cytisus leucanthus* var. *pallidus* Schrad. in DC., Prodr. 2: 155 (1825) [basionym] ≡ *Cytisus austriacus* var. *pallidus* (Schrad.) Neilr., Aufz.

- Ungarn Slavon. Gefässpfl.: 330 (1865) ≡ *Cytisus pallidus* (Schrad.) A. Kern., Abhang. Pflanzengest. Klim. u. Bod.: 6 (1869), comb. illeg. [non Poir., Encycl. Suppl. 2. 442 (1812)] ≡ *Cytisus supinus* subsp. *pallidus* (Schrad.) Briq., Etud. Cytis. Alp. Marit.: 174 (1894) ≡ *Cytisus albus* var. *pallidus* (Schrad.) Rehder, J. Arnold Arbor. 3: 36 (1922) ≡ *Cytisus albus* subsp. *pallidus* (Schrad.) Gams, Ill. Fl. Mitt.-Eur. 4(3): 1175 (1924) ≡ *Cytisus albus* f. *pallidus* (Schrad.) Beck, Fl. Bosne: 208 (1927) ≡ *Chamaecytisus albus* f. *pallidus* (Schrad.) Klásk., Preslia 30: 214 (1958) ≡ *Chamaecytisus albus* subsp. *pallidus* (Schrad.) Á. Löve et D. Löve, Opera Bot. 5: 222. 1961, comb. inval.
- = *Cytisus banaticus* Griseb. & Schenk, Arch. Naturgesch. 18(1): 292 (1852) ≡ *Cytisus pallidus* var. *banaticus* (Griseb. & Schenk) Asch. & Graebn., Syn. Mitteleur. Fl. 6(2): 330 (1907) ≡ *Chamaecytisus banaticus* (Griseb. & Schenk) Rothm., Feddes Repert. Spec. Nov. Regni Veg. 53: 144 (1944).
- IND. LOC.: “Banat (Wieryb., Heuff.), Siebenbürgen: auf den Hügeln von Hammersdorf bei Hernamannstadt 1500”, in Gesellschaft von *C. leucanthus*”. SYNTYPES (designated by Pifkó 2005: 23): BP 583169, BP 622875, BP 622884.
- = *Cytisus pallidus* var. *subnudus* Velen., Sitzungsber. Königl. Böhm. Ges. Wiss., Math.-Naturwiss. Cl. 28: 3 (1904) ≡ *Cytisus supinus* [subsp. *pallidus*] var. *subnudus* (Velen.) Stoj. & Stef., Fl. Bulg. 2: 623 (1925) ≡ *Chamaecytisus banaticus* var. *subnudus* (Velen.) Kuzmanov, Fl. Republ. Bulgariya 6: 109 (1976).
- IND. LOC.: “In m. Sredna Gora [Bulgaria] (Str.), in Serbia ad Piro (Adam)”. LECTOTYPE (**here designated** [selected as syntypus in PRC by Patrik Mráz]): “*Cytisus ~~supinus~~ L. var. / subnudus m. / Sredna Gora...Stříbrný / 1892 ... Legit. dr. J. Velenovský.*” (PRC 454966! [photo!] image available at <https://www.gbif.org/tools/zoom/simple.html?src=//api.gbif.org/v1/image/unsafe/http%3A%2F%2Fwww.jacq.org%2Fimage.php%3Ffilename%3D459107%26method%3DEuropeana>).
- = *Cytisus virens* Velen., Fl. Bulg.: 128 (1891) ≡ *Cytisus capitatus* var. *virens* (Velen.) Stoj et Stef., Papilion. Bulg.: 18. 1922 ≡ *Cytisus supinus* [subsp. *capitatus*] var. *virens* (Velen.) Stoj et Stef., Fl. Bulg. 2: 623 (1925) ≡ *Cytisus leucanthus* [subsp. *pallidus*] var. *virens* (Velen.) Hayek, Feddes Repert., Beih. 30: 903 (1926) ≡ *Chamaecytisus banaticus* var. *virens* (Velen.) Kuzmanov, Fl. Republ. Bulgariya 6: 109 (1976).

IND. LOC.: “In fissuris rupium m. Balkan Arabakonak (Vel) et m. Vitoša supra Bojana (Vel), ad Krapec (Šk)”. LECTOTYPE (**here designated** [selected from five syntypi in PRC]): “*Cytisus virens* Velen. /

Ad Krapec leg. Škorpiil. / 1890 VI. ... Legit. dr. J. Velenovský.” (PRC 451956! [photo!] image available at <https://plants.jstor.org/stable/viewer/10.5555/al.ap.specimen.prc451956>).

The same combination was previously published by Löve & Löve (1961) but without reference to the basionym (ICN Art. 36.1, 41.5) (Pifkó 2015). This taxon is characterized by higher growth and pale yellow flowers (vs. white with yellow patterns in the type subspecies). It is very widespread on the Balkan Peninsula, especially in Serbia, where it occurs for the most part, except in the far east, where it is replaced by a type subspecies. It is treated in the *Flora of SR Serbia* as *Ch. banaticus* (Griseb. & Schenk) Rothm. (Diklić 1972a). It is often mistaken for other taxa in herbarium and literature.

M. Niketić

***Chamaecytisus eriocarpus* subsp. *absinthioides* (Janka) Niketić, comb. in stat. nov.**

≡ *Cytisus absinthioides* Janka, Oesterr. Bot. Z. 22: 175 (1872) [basionym]
 ≡ *Cytisus eriocarpus* var. *absinthioides* (Janka) Stoj. & Stef., Papilion. Bulg.: 18 (1922) ≡ *Cytisus supinus* [subsp. *eriocarpus*] var. *absinthioides* (Janka) Stoj. & Stef., Fl. Bulg. 2: 624 (1925) ≡ *Cytisus eriocarpus* f. *absinthioides* (Janka) Hayek, Feddes Repert., Beih. 30: 900 (1926) ≡ *Cytisus supinus* subsp. *absinthioides* (Janka) Stoj. & Stef., Fl. Bulg., ed. 2, 2: 582 (1933) ≡ *Chamaecytisus absinthioides* (Janka) Kuzmanov, Taxon 21: 336 (1972).

IND. LOC.: [NE Greece] “in declivitate boreali m. Kara-Dagh leucas 1,2 ab oppido Seres Macedoniae orientalis ... versus pag. Karakioi”, [SW Bulgaria] “ad ped. m. Perim-Dagh oppido Nevrekop ... prope pag. Kornitza”. LECTOTYPE (designated by Pifkó & Barina 2016: 172): WU-Kerner 0033170. Isolectotypes: BEOU (s. n.), BP 296809, GOET 005095, W Collectio Reichenbach fi l. 44808, WU-Halácsy.

The species *Chamaecytisus eriocarpus* (Boiss.) Rothm. is distributed in mountainous areas of Anatolia and E Balkans (Cristofolini 1991). According to Pifkó & Barina (2016) it represents a complex of six species. To avoid a narrow species concept, *Ch. absinthioides* (Janka) Kuzmanov is treated as a subspecies here. It differs from the type Anatolian subspecies by more elongated branches and narrower cuspidate leaflets. It is distributed in E and SE Serbia in silicate massives, also in Šar Planina Mts in Kosovo and Metohija. According to Kuzmanov (1976), the Bulgarian *Cytisus rhodopeus* J. Wagner ex Degen also belongs here.

M. Niketić

Chamaecytisus eriocarpus* subsp. *pygmaeus* (Willd.) Niketić, **comb. nov.*
 ≡ *Cytisus pygmaeus* Willd., Sp. Pl., ed. 4, 3(2): 1127 (1802) [basionym] ≡
Cytisus supinus [subsp. *austriacus*] var. *pygmaeus* (Willd.) Briq., Etud.
 Cytis. Alp. Marit.: 176 (1894) ≡ *Cytisus austriacus* var. *pygmaeus*
 (Willd.) Stoj. et Stef., Papilion. Bulg.: 18 (1922) ≡ *Chamaecytisus*
pygmaeus (Willd.) Rothm., Feddes Repert. 53: 144 (1944) ≡ *Chamae-*
cytisus austriacus subsp. *pygmaeus* (Willd.) Ponert, Feddes Repert. 83:
 619 (1973).

IND. LOC.: [Anatolia] “Galatia”. LECTOTYPE (designated by Pifkó & Barina 2016: 172): B-W13632-010, 13632-000, isotype: HAL 0100154.

This taxon was traditionally considered to belong to the *Chamaecytisus austriacus* complex, but according to Pifkó & Barina (2016) this is a member of *Ch. eriocarpus* aggregate. It resembles Anatolian dwarf *Ch. tmoleus* (Boiss.) Rothm. and *Ch. smyrnaeus* (Boiss.) Rothm., which are distinguished by elongated leaflets and semipatent calyx hairs. Although described from Anatolia, this is the only taxon from the aggregate that also occurs on the Balkan Peninsula. It was recorded for Stara Planina Mts in E Serbia, on silicate substrate (Diklić 1972a). There it grows in sympatry with the *Ch. eriocarpus* subsp. *absinthioides*, and inhabits only the highest ridges. The relationship with calcicole *Ch. calcareus* (Velen.) Kuzmanov (≡ *Cytisus pygmaeus* var. *calcareus* Velen.) from Bulgaria is still unclear.

Chamaecytisus heuffelii* subsp. *jankae* (Velen.) Niketić, **comb. & stat. nov.*
 ≡ *Cytisus jankae* Velen., Sitzungsber. Königl. Böhm. Ges. Wiss., Math.-
 Naturwiss. Cl. 1889: 31 (1890) [basionym] ≡ *Cytisus tmoleus* var. *jankae*
 (Velen.) Stoj. et Stef., Papilion. Bulg.: 18 (1922) ≡ *Cytisus supinus*
 [subsp. *tmoleus*] var. *jankae* (Velen.) Stoj. et Stef., Fl. Bulg. 2: 625
 (1925) ≡ *Chamaecytisus jankae* (Velen.) Rothm., Feddes Repert. 53: 144
 (1944).

IND. LOC.: [Bulgaria] “collis Golem Jug prope Razgrad”. LECTOTYPE
(here designated): “Flora bulgarica / *Cytisus Jankae* Vel. / In colle
 Големъ югъ prope Razgrad. / 1885.VII. Legit dr J. Velenovský.” (PRC
 451243! [photo!] image available at https://plants.jstor.org/stable/10.5555/al.ap.specimen.prc451243?searchUri=filter%3Dname%26so%3Dps_group_by_genus_species%2Basc%26Query%3DCytisus%2Bjankae).

Chamaecytisus heuffelii (Wierzb.) Rothm., described from SW Romania, is recorded for Pannonian and Wallachian Plain and C, S and E parts of the Balkan Peninsula (Euro+Med 2011a). *Chamaecytisus jankae* (Velen.) Rothm. was described from NE Bulgaria, and is known from Bulgaria, Serbia and North Macedonia (Euro+Med 2011a) with doubtful records from Albania (Barina *et al.* 2018) and Greece (Dimopoulos *et al.* 2013).

Both taxa belong to intricate *Ch. austriacus* group and *Ch. heuffelii* is morphologically more similar to *Ch. austriacus* (L.) Link. Type specimens of both taxa are more or less clearly distinguished: *Ch. jankae* is smaller very densely silvery-sericeous plant with pale yellow corolla and densely hairy standard. Also, the populations of eastern Serbia are clearly different from those in the north. However, there is often an overlap of the mentioned morphological characters in sympatric populations, for example on ultramaphites in Central Serbia or in North Macedonia. Whether this is a consequence of hybridization or environmentally caused modifications of a single taxon, future research will show. It is therefore proposed that both taxa be treated in the subspecific rank.

M. Niketić

***Chamaecytisus supinus* subsp. *lasiosemius* (Boiss.) Niketić, comb. & stat. nov.**

≡ *Cytisus lasiosemius* Boiss. in Tchich., *Asie Min.*, Bot. 1: 12 (1860) [basionym] ≡ *Cytisus supinus* var. *lasiosemius* (Boiss.) Hayek, *Feddes Repert.*, Beih. 30: 900 (1926) ≡ *Chamaecytisus lasiosemius* (Boiss.) Pifkó in Barina, *Distrib. Atlas Vasc. Pl. Albania*: 466 (2017).

IND. LOC.: [Anatolia] “Ponto: inter Samsun et Tekekoi, regione montosa silvatica, alt. c. 400^m. T.”. LECTOTYPE (**here designated**): “*Cytisus lasiosemius* sp. nov. / Asia minor, OEst. 1858, *M. de Tchiha-tchef* (P! P02952886 [photo!] image available at <https://www.gbif.org/tools/zoom/simple.html?src=//api.gbif.org/v1/image/unsafe/http%3A%2F%2Fmediaphoto.mnhn.fr%2Fmedia%2F1441328413199pOo7FjCM MZRLaPw0>); isolectotype: K000829777!).

This taxon, described from Anatolia, has been treated very differently in various sources, from complete rejection (Davis 1970, Greuter *et al.* 1989, sub *Chamaecytisus supinus* (L.) Link), illegitimate inclusion in *Ch. frivaldszkyanus* (Degen) Kuzmanov ex Greuter, Burdet & G. Long (POWO 2021, GBIF 2021), transfer to *Chamaecytisus* (Barina (2017, Pifkó 2018), reduction to varietal rank (Hayek 1926), to recognition of the original name *Cytisus lasiosemius* (Cristofolini 1991, Euro+Med 2011a). In any case it belongs to *Ch. hirsutus* (L.) Link – *Ch. supinus* complex. Some authors treated the last species conspecific with *Cytisus hirsutus* L. (Cristofolini 1991, Euro+Med 2011a) but in habitats in Serbia they are clearly different: *Ch. supinus* inhabits forests and forest margins (vs. open habitats and scrubs) and has taller and more slender habitus, relative longer and thinner hairs on stem and branches and capitate inflorescences. It is widespread in W, C, E and SE Europe and Anatolia.

According to original diagnosis (Tchichatscheff 1860) and Pifkó (2018) *C(h). lasiosemius* differs from *C(h). supinus* by a lower and more branched stem, ± acute leaflets and densely villous vexillum. Since there are a number of different opinions about the status of the taxon *lasiosemius*, we think that the rank of the subspecies (in a new combination) would be the most appropriate for it. It is known from N Albania, Bulgaria and Turkey (Cristofolini 1991, Barina 2017). According to Barina (2017) and Pifkó (2018) closely related *Ch. frivaldszkyanus* from Bulgaria and S Albania additionally has appressed and semipatent hairs which are very dense on young branches. POWO (2021) and GBIF (2021) synonymized *Ch. lasiosemius* with *Ch. frivaldszkyanus* but in any case it is not legitimate because at the specific level *Ch. lasiosemius* has priority.

M. Niketić

***Cytisus procumbens* subsp. *petrovicii* (Adamović) Niketić, stat. nov.**

≡ *Cytisus petrovicii* Adamović, Allg. Bot. Z. Syst. 2: 95 (1896) [basionym]
 ≡ *C. procumbens* var. *petrovicii* (Adamović) Stoj. & Stef., Fl. Bulg. 2: 621 (1925) ≡ *C. procumbens* f. *petrovicii* (Adamović) Hayek, Feddes Repert., Beih. 30: 896 (1926) ≡ *Corothis procumbens* var. *petrovicii* (Adamović) Kuzmanov, Fl. Republ. Bŭlgariya 6: 69 (1976).

IND. LOC.: [Serbia] “montis Basara prope Pirot”. LECTOTYPE (**here designated**): “N124 / sp. n. / *Genista (procumbens)* WK / *C. Petrovicii* Adamović! / Original! / Basara / 1891/ L. Adam.” (PRC 45518! [photo!] image available at https://plants.jstor.org/stable/10.5555/al.ap.specimen.prc455418?searchUri=filter%3Dname%26so%3Dps_group_by_genus_species%26Query%3DCytisus%2Bpetrovicii).

Taxon is known from E Serbia, North Macedonia (Micevski 2001) and Bulgaria (Kuzmanov 1976). It has rather denser indumentum and up to 4 times longer pedicels from calyx (vs. 2 times) in relation to the type subspecies. In Serbia population from E Serbia are geographically separated from the type subspecies in C and W Serbia and Kosovo and Metohija. According to Micevski (2001) this is a good species.

M. Niketić

URTICACEAE

***Urtica sondenii* (Simmons) Avrorin ex Geltman, Novosti Sist. Vyssh. Rast. 25: 76 (1988) [Avrorin, Fl. Murmansk. Obl. 3: 136 (1956), comb. inval.]**
 ≡ *U. dioica* var. *sondenii* Simmons, Fl. Veg. Kiruna 1: 78 (1910) [basionym] ≡ *U. gracilis* subsp. *sondenii* (Simm.) Á. Löve & D. Löve, Bot. Not. 128(4): 506 (1976).

- ≡ *U. dioica* var. *subinermis* R. Uechtr., Verh. Bot. Vereins Prov. Brandenburg 5: 146 (1863), **syn. nov.** ≡ *U. dioica* subsp. *subinermis* (R. Uechtr.) Weigend, Hoppea 66: 114 (2005) ≡ *U. subinermis* (R. Uechtr.) Hand & Buttler, Kochia 2: 46 (2007) [Thomé, Fl. Deutschl. ed. 2, 2: 46 (1904), nom. inval. (pro syn.)].
- = *U. dioica* var. *mitissima* Hausskn., Mitth. Thüring. Bot. Vereins 16: 134 1901.
- = *U. dioica* var. *glabra* Hartm., Handb. Skand. Fl. ed. 2 (1832).
- “*U. galeopsifolia*” auct. [non Wierzb. ex Opiz, Naturalientausch n. 9: 107 (1825)] (cf. Geltman, D. V., Novosti Sist. Vyssh. Rast. 25: 77 (1988)).
- “*U. dioica* subsp. *galeopsifolia*” auct. [non (Wierzb. ex Opiz) Chrtek, Čas. Nár. Muz. Praze, Rada Přír. 150(3–4): 212 (1982)] (cf. Wisskirchen, R., Haeupler, H., Standardliste Farn- Blütenpfl. Deutschl.: 532 (1998)).

This subboreal diploid Eurasiatic nettle belongs to intricate *Urtica dioica* L. complex. On this occasion, it has been united with the *U. subinermis* (R. Uechtr.) Hand & Buttler (“*U. galeopsifolia*” auct.), bearing in mind that in recent studies, no significant morphological or genetic differences between them have been found (Rejlová *et al.* 2021, Fig. 2, suppl. Fig. 4). According to Geltman (1992) and Ball & Geltman (1993) *U. subinermis* [“*U. galeopsifolia*”] differs from *U. sondenii* by densely pubescent leaves at least beneath. However, this feature was not mentioned in the protologue of *U. dioica* var. *subinermis* R. Uechtr., but his description stated that the plant is “mostly completely without burn hairs” (Uechtriz 1863) (hence the variety epithet). Moreover, *U. subinermis* and *U. sondenii* “have opportunities for hybridisation” and “there were no ecological barriers, because the ecological niches of both species are similar” (Geltman 1992). They are also both diploids and “only one specimen was determined as tetraploid” (Geltman 1992, Ball & Geltman 1993, Rejlová *et al.* 2019, 2021).

Although recent cytological and molecular analyzes (Rejlová *et al.* 2019, 2021) failed to resolve relationships within *U. dioica* complex, *U. sondenii* form a coherent group in the ASTRAL tree (except inclusion of four tetraploid samples of *U. dioica*). It is well-established morphologically and characterised with slender stems, almost glabrous to sparse hairy stems and leaves with sparse stinging trichomes and with elongated leaves, cuneate to slightly cordate et base. It also differs from *U. dioica* karyologically (diploids vs. tetraploids), phenologically (later flowering) and ecologically (damp elder woodlands) (Geltman 1992, Ball & Geltman 1993, Rejlová *et al.* 2021). Therefore, its taxonomic treatment as a species (Geltman 1992, Ball & Geltman 1993, Buttler 2007, GBIF 2021) rather than as a subspecies (Weigend 2006, Uotila 2011, Große-Veldmann 2016, Rejlová *et al.* 2019, Rejlová *et al.* 2021, POWO 2021) should be chosen.

Since the decision on the status of the taxon is not easy to make, future research could shed light on that. If it would be established that it is a subspecies, then the epithet *sondenii* would have priority again.

A similar pattern of variation, as in *U. dioica* group, was also observed in the American *U. gracilis* Aiton. According to Henning *et al.* (2014) it is genetically well separated from *U. dioica* s.l.

Floristic notes

New and confirmed taxa for the flora of Serbia

LILIOPSIDA

LILIACEAE (ASPARAGACEAE)

Yucca filamentosa L., Sp. Pl. 1: 319 (1753).

North American evergreen shrub, common as an ornamental plant, was noted by now only in gardens and urban parks in settlements of Serbia (Popović & Marković 2012, Kevrešan & Stevanov 2017, Obradov *et al.* 2020). During field work, populations, each of them with more than 20 adult individuals, are recorded on several locations, in natural habitats in



Fig. 2. – *Yucca filamentosa* L. in Subotica Sandland (photo B. Radak).

Serbia. Some populations are near to the settlements, while other are distant. Populations at Subotica Sandland (Fig. 2) are dense, consisted of numerous individuals, while populations from Deliblato Sand are larger and occupy a wider area on open steppe habitat, with scattered individuals

along the roads and forest edges. In NE Serbia, populations are recorded at several locations along the transversal which connects rural settlements established on sand: Požeženo-Vinci-Usije.

Open sandy habitats are appropriate type for adaptation of the species, its potential naturalization and further spread, due to great similarities with original habitat type in native distribution area within Southeast North America. However, populations have been observed also in natural sandy habitats, far from the settlements, indicating that this species is not a casual alien, but rather an invasive alien with high expansion rate in Serbia. This primarily refers to the area of Deliblato and Požeženo sands.

First records:

Bačka, Subotica Sandland, MGRS 34T CS90, coll. M. Vukotić, 15-jul-2016, det. B. Radak 2016 (BUNS 25126); M. Rat and B. Radak, 29-oct-2020 (field observ.) (Fig. 2).

Banat, Deliblato Sand, Mramorak, MGRS 34T EQ70, M. Rat, B. Panjković, R. Perić (field observ.).

NE Serbia, Požeženo-Vinci, MGRS 34T EQ45, B. Radak, B. Bokić, 29-jun-2021 (field observ.).

NE Serbia, Vinci-Usije, MGRS 34T EQ44, B. Radak, B. Bokić, 29-jun-2021. (field observ.).

A new allochthonous invasive species for the flora of Serbia.

B. Radak, B. Bokić, M. Rat

LILIACEAE (XANTHORRHOACEAE)

Asphodelus albus subsp. *delphinensis* (Gren. & Godr.) Z. Díaz & Valdés, Boissiera 52: 95 (1996).

≡ *Asphodelus delphinensis* Gren. & Godr. in Mém. Soc. Émul. Doubs ser. 2, 6(2): 13 (1855) [basionym].

In the catalogue of Serbian monocots (Anačkov *et al.* 2018) the only representative of the genus *Asphodelus* L. in Serbia is *A. ramosus* L. instead earlier records for *A. albus* L. s.l. (Pančić 1884, Diklić 1975). Because in the current lists (Euro+Med 2011b, POWO 2021) this taxon is limited to Western Europe, the only choice for the authors of *An annotated Checklist of Vascular Flora of Serbia* (Anačkov *et al.* 2018) was to choose Mediterranean *A. ramosus*. After the additional analysis of literature sources and herbal material, it was concluded that *A. albus* still occurs in Serbia, where it is represented by the subspecies *A. albus* subsp. *delphinensis* (Gren. & Godr.) Z. Díaz & Valdés. According to Díaz Lifante (2013) this taxon is distributed in S Europe from the Pyrenees and the Alps to the Balkan Peninsula, while the type subspecies is limited to the region



Fig. 3. – *Asphodelus albus* subsp. *delphinensis* (Gren. & Godr.) Z. Díaz & Valdés (E Serbia, Mt Ruj, Greben–Vetren) (photo M. Niketić).

of Western Europe (Iberian Peninsula, W and C France). It has been established that the type subspecies in Serbia is being replaced by *A. albus* subsp. *delphinensis*, which has longer (8.5–12 mm) ellipsoid or ovoid-ellipsoid capsules, with truncate apex and capsules are also yellowish-green or green and matte (vs. 6.6–10 mm, ovoid or oblongo-ovoid, with trilobed apex, dark green and shiny). Compared to the Mediterranean *A. ramosus*, this taxon has a simple to slightly branched scapes, with dark bracts and larger capsules. On the Balkan Peninsula it is also recorded for the flora of Greece (mountainous regions of Pind and North Central) (Dimopoulos *et al.* 2013). Its presence is very possible in other Balkan countries, for which the presence of *A. albus* s.l. is recorded.

Although there is a lot of data about the presence of *A. albus* s.l. for Serbia, starting with Pančić (1884) for the vicinity of Vranje, they do not specify the affiliation to a certain subspecies. Therefore, in the formal sense, under the name *A. albus* subsp. *delphinensis*, the following example from Mt Ruj in E Serbia (Fig. 3) can be mentioned for the first time.

First record:

E Serbia, Mt Ruj Planina, between Greben and Vetren peaks, limestone, rocky ground, screes and tall-herb vegetation, 1400–1440 m, MGRS 34T FN24, coll. & det. M. Niketić, 19-Jun-2015 (BEO 100133).

A new subspecies for the flora of Serbia.

M. Niketić, V. Stevanović

MAGNOLIOPSIDA

ASTERACEAE (COMPOSITAE)

Centaurea arenaria M. Bieb. ex Willd., Sp. Pl., ed. 4, 3(3): 2278 (1803).

≡ *Centaurea paniculata* subsp. *arenaria* (M. Bieb.) Arènes, Mém. Mus. Natl. Hist. Nat., Ser. B, Bot. 1: 184 (1951) ≡ *Acosta arenaria* (M. Bieb. ex Willd.) Soják, Čas. Nár. Mus., Odd. Přír. 140(3–4): 133 (1972).

= *Centaurea jankeana* Simonk., Termesz. Fuzetek 1: 168 (1877) ≡ *C. arenaria* f. *jankeana* (Simonk.) J. Wagner, Math. Term. Közlem. 30(6): 115 (1910).

Earlier note that all published records for *Centaurea arenaria* M. Bieb. ex Willd. for Serbia refer to *C. borysthena* Gruner (Greuter, W. 2006+, Niketić 2007, POWO 2021) is not correct. Actually, in Deliblato Sand in Banat, the both species can be found (Fig. 1) and also in the sand dunes of northeastern Serbia. First published record for the flora of Serbia (Heuffel 1858) refers to Banat sands in Vojvodina. Also, the earlier claim of Dostál (1976) that the type subspecies of *C. arenaria* is limited to the area of SE

Russia (lower Volga valley) has not been confirmed, because no significant difference between eastern and western populations has been observed in herbarium materials.

Moreover, Simkovic (1877) described *C. jankeana* Simonk. from Deliblato Sand (Greibenac) which was traditionally treated as a synonym of *C. arenaria* (Hayek 1901, Wagner 1910, Gajić 1975, Ochsmann 2000). In contrast, the current lists treat it as a good species (Greuter, W. 2006+, CWG 2021, POWO 2021). Since the diagnostic characters represent only a variation of the involucre appendix, this taxon should be kept within the *C. arenaria*.



New record:

Banat, Deliblato, MGRS 34T EQ06, coll. & det. T. Soška, 13-Jul-1943 (sub *C. stoebe* subsp. *micranthos*), rev. M. Niketić, 19-Jan-2021 (BEO 26407) [at the same sheet also *C. borysthenica*].

Reconfirmed species for the flora of Serbia.

M. Niketić

Erigeron bonariensis L., Sp. Pl. 2: 863 (1753).

Species of this genus are among the most common representatives of invasive flora, present in diverse types of habitats throughout Europe, originating from the North American continent. In addition to being frequent in ruderal habits, they have been also adapted to the conditions of different natural habitats. On the Subotica Sandland (Fig. 21), in communities on open sands near the settlement, this species was recorded for the first time during the research of alien flora in the territory that is protected as Land-

Fig. 4. – *Erigeron bonariensis* L. (Subotica Sandland, BUNS 25128).

scape of outstanding features The Subotica Sandland. Species is already recorded in the region (Milović 2004, Wirth & Csiky 2020), with status of invasive alien species. Considering that related species of the genus are morphologically similar, further research is needed to determine the potential presence in other locations.

First record:

Bačka, Subotica Sandland, MGRS 34T CS90, coll. M. Vukotić, 15-07-2016, det. B. Radak (BUNS 25128) (Fig. 4).

A new allochthonous species for the flora of Serbia.

B. Radak, M. Rat

Gaillardia pulchella Foug., Hist. Acad. Roy. Sci. Mém. Math. Phys. (Paris, 4to) 1786: 5 (1788).

A North American short-lived perennial or annual flowering plant, common ornamental in gardens, was observed in several locations on the very edge of the Subotica (north part of the settlement) and Subotica Sandland, protected area (Fig. 15). Populations of this alien species were recorded in several remote locations. Given that the species is an annual or perennial plant, it is necessary to continue research to determine the naturalization rate, and its invasive potential. In some regions of Europe, this species is already rated as invasive alien (Molnár *et al.* 2019).

First record:

Bačka, Subotica Sandland, MGRS 34T CS90, coll. M. Vukotić, 15-Jul-2016, det. B. Radak (BUNS 25127).

A new allochthonous species for the flora of Serbia.

B. Radak, M. Rat

BORAGINACEAE

Alkanna stribrnyi Velen., Fl. Bulg.: 647 (1891) subsp. *stribrnyi*.

This Balkan endemic plant with deep orange flowers was described from Bulgaria near Stanimaka (Velenovský 1891), and was also reported from NE Greece (Thrace) (Rechinger 1965, Valdés 2011, Dimopoulos *et al.* 2013) and North Macedonia (Vandas 1909, Matevski 2010). It is most similar to *A. methanaea* Hausskn. from the Peloponnese and southern mainland Greece, from which it differs by the corolla tube about as long as the calyx (in *A. methanaea* corolla tube is at least 1.5 times as long as the calyx). In addition, in *A. methanaea* rosette leaves are usually present at the time of flowering, while in *A. stribrnyi* no basal leaves are formed (Fernandes 1972).

Within the species, two subspecies are recognized: *A. s.* subsp. *stribrnyi* and *A. s.* subsp. *intermedia* Kožuharov. Based on the description of both subspecies, as well as their distribution (Kožuharov 1989), we concluded

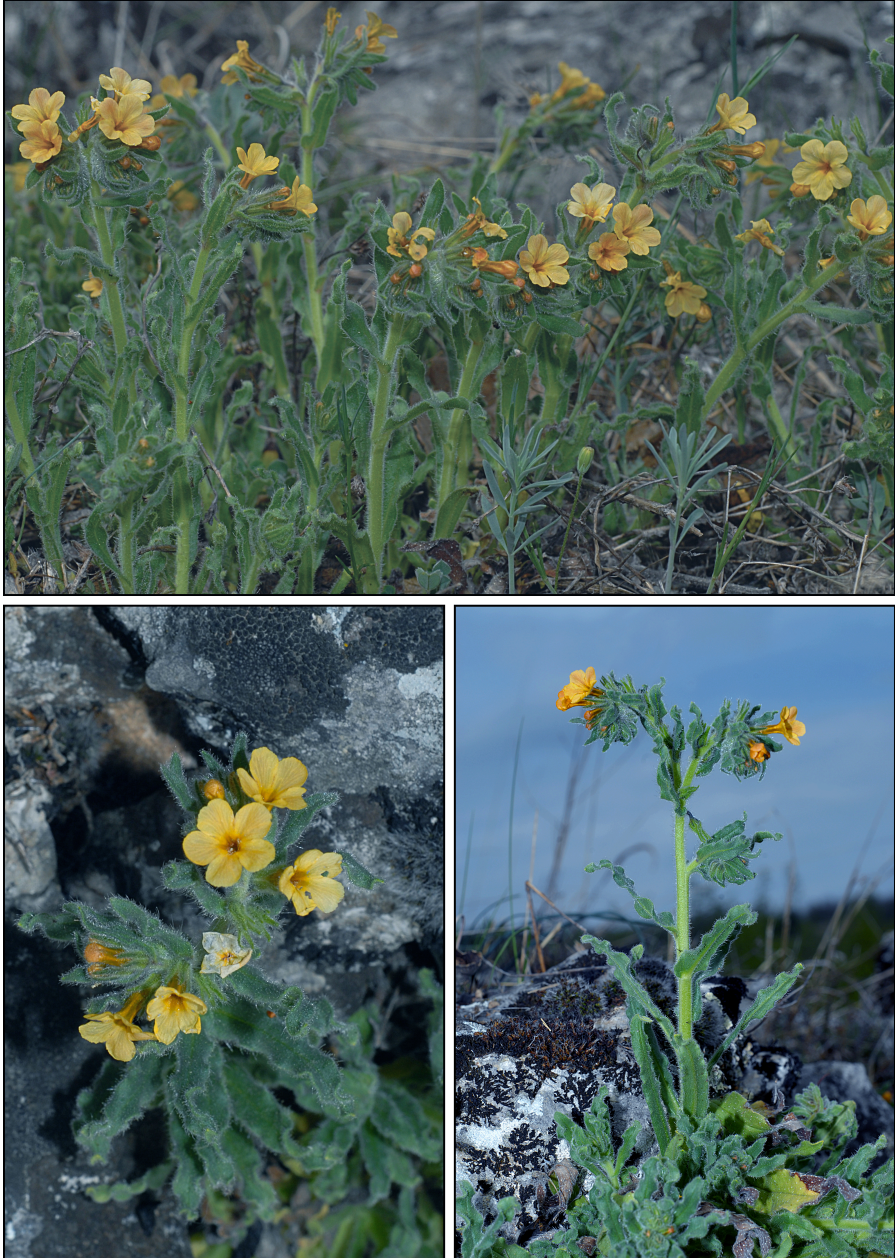


Fig. 5. – *Alkanna stribrnyi* Velen. (E Serbia, Mt Svrljiške Planine, Klenje) (photo M. Niketić).

that in Serbia grows the type subspecies. It has bluish-gray or colourful corolla when dry and elliptic-lanceolate leaves subobtuse to acute at the apex. Calyx 8–9 mm long in flower, 9–11 mm in fruit. Nutlets uniformly scrobiculate-tuberculate (Kožuharov 1989).



Fig. 6. – *Alkanna stribrnyi* Velen. (E Serbia, Mt Svrliške Planine, Klenje, BEO 100056).

The newly discovered locality of *A. stribrnyi* (Fig. 5) in the foothill of Mt Svrliške Planine represents the most continental distributional finding

of the species (Fig. 21). In the region of Mt Svrljiške Planine in E Serbia *A. stribrnyi* was found in dry grasslands on limestone. Population size was estimated to c. 200 reproductive individuals that are restricted within the area between Ljubatovica and Klenje villages (Mala Rudina peak). It was previously preliminary announced for the same area by Niketić (2000).

First records:

E Serbia, Mt Svrljiške Planine, between Ljubatovica and Klenje villages, limestone, 350-600 m, MGRS 34T FN18, coll. & det. M. Niketić, 18-Apr-2009 (BEO 100056) (Fig. 6).

E Serbia, Mt Svrljiške Planine, Mala Rudina peak, near village Klenje, limestone, 350-530 m, MGRS 34T FN18, coll. M. Niketić & G. Tomović, det. M. Niketić, 02-Maj-2009 (BEO 100057).

A new species for the flora of Serbia.

M. Niketić, G. Tomović

BRASSICACEAE (CRUCIFERAE)

Noccaea dacica subsp. *montenegrina* F. K. Mey., Feddes Repert. 84: 464 (1973).

≡ *Thlaspi dacicum* subsp. *montenegrinum* (F. K. Mey.) Greuter & Burdet, Willdenowia 13(1): 95 (1983).

– “*Thlaspi cuneifolium*” auct. balc. [non Griseb. ex Pant., Oesterr. Bot. Z. 23: 268 (1873)].

Distribution of this Balkan endemic plant is restricted only to Montenegro and Serbia (here presented). It is described from Mt Kom (locality Bijeje Carine) (Meyer 1973), but in Montenegro it is also present in Pivske Planine Mts, Mt Durmitor and Prokletije Mts (Caković & Stešević 2020).

This species was not presented in the *Flora of SR Serbia* (Diklić 1972b), but all the distribution records related to the name “*Thlaspi cuneifolium* Griseb. ex Pant.” (synonym of *Noccaea praecox* (Wulfen) F. K. Mey.) actually refer to *N. dacica* subsp. *montenegrina* F. K. Mey. Although the findings of this subspecies in Prokletije Mts (Kurvala peak) was previously preliminary announced by Niketić (2000), this is the first official confirmation of its presence in Serbia (Fig. 15).

First records:

Metohija, Mts Prokletije, Pločica peak, schists, 2100-2200 m, MGRS 34T DN21, coll. P. Černjavski, I. Rudski, V. Lindtner, 16-Jun-1933,

det. P. Černjavski (sub *Thlaspi cuneifolium*), rev. M. Niketić, 03-Dec-2021 (BEO 7739).



Fig. 7. – *Noccaea dacica* subsp. *montenegrina* F. K. Mey. (Metohija, Mts Prokletije, Kurvala peak, BEO 7732).

Metohija, Mts Prokletije, Pločica peak, limestone, 1800-2200 m, MGRS 34T DN21, coll. P. Černjavski, I. Rudski, V. Lindtner, 16-Jun-1933, det. P. Černjavski (sub *Thlaspi cuneifolium*), rev. M. Niketić, 03-Dec-2021 (BEO 7731).

Metohija, Mts Prokletije, Pločica peak, 1800-2200 m, MGRS 34T DN21, coll. V. Lindtner, 16-Jun-1933, det. M. Niketić (BEO 42505).

Metohija, Mts Prokletije, Derviš Kom peak, ridge from Ibarda to Pločica, limestone, 2000-2400 m, MGRS 34T DN20, DN21, coll. P. Černjavski, I. Rudski, V. Lindtner, 17-Jun-1933, det. P. Černjavski (sub *Thlaspi cuneifolium*), rev. M. Niketić, 03-Dec-2021 (BEO 7729).

Metohija, Mts Prokletije, Kurvala peak, below the top, rocks and rocky grounds, 2100-2300 m, MGRS 34T DN31, coll. P. Černjavski, I. Rudski, V. Lindtner, 16-Jun-1933, det. P. Černjavski (sub *Thlaspi cuneifolium*), rev. M. Niketić, 03-Dec-2021 (BEO 7732) (Fig. 7).

A new species for the flora of Serbia.

M. Niketić, G. Tomović

CAPRIFOLIACEAE (DIPSACACEAE)

Knautia orientalis L., Sp. Pl.: 101 (1753).

This (east)mediterranean-submediterranean therophyte is distributed in Albania, Bulgaria, Greece, North Macedonia, Turkey (Asiatic Turkey and Turkey-in-Europe) and Transcaucasia (Azerbaijan, Armenia, and Georgia) (Domina 2017, POWO 2021). It was omitted from former Yugoslavia because the misinterpretation that in North Macedonia it is replaced by *K. degenii* Borbás ex Formánek (Micevski 1980) which was also accepted by Greuter *et al.* (1986), and later by Domina (2017) (see more details in page 121).

Probably first data on the native presence of this taxon in Serbia originates from Krasniqui *et al.* (1990) (sub *K. degenii*), who found it in the surrounding of Klina in Kosovo and Metohija province. This record requires verification. Our finding of the species *K. orientalis* on Mt Rujan (locality Mali Orljak) in S Serbia is not so surprising considering that the nearest recorded localities in North Macedonia (Veles, Rajko Žinzifov BEO 23394) are only c. 60 km to the south. Still, the newly recorded locality in the foothill of Mt Svrljiške Planine in E Serbia is quite distant and represents the northernmost species findings in the Balkan peninsula. In this case possible migration route had included the Struma valley in Bulgaria (where it was recorded) and the Nišava valley in Serbia (where the newly discovered population is located). The second locality was preliminary announced in a phylogenetic paper (Rešetnik *et al.* 2014) only with geographic coordinates.

In the foothill of Mt Svrljiške Planine (vicinity of the village Vrandol) (Fig. 15) the species inhabits limestone rocky grounds at elevation 550 m (Fig. 8), while in Mt Rujan (Mali Orljak peak) we found it on dolomitic limestone at 600 m, also on rocky grounds. The population on Mt Svrljiške Planine consists of c. 50 individuals, while in Mt Rujan it is estimated to c. 200 plants.

First records:

E Serbia, Mt Svrljiške Planine, Vrandol, Kosmatac, limestone, 550 m, 22.254452° E, 43.281775° N, MGRS 34T FN09, coll. & det. M. Niketić, 12-Jun-2008 (BEO 100100).

S Serbia, Mt Rujan, Mali Orljak peak, dolomitic limestone, 600 m, 21.7626931° E, 42.2610976° N, MGRS 34T EM67, coll. M. Niketić, G. Tomović, S. Đurović, U. Buzurović, 16-Jun-2013, det. M. Niketić (BEO 100108).

Confirmed and for the first time located species for the flora of Serbia.



Fig. 8. – *Knautia orientalis* L. (E Serbia, Mt Svrliške Planine, Vrandol village, Kosmatac) (photo M. Niketić).

M. Niketić, G. Tomović, S. Đurović, U. Buzurović

FABACEAE (LEGUMINOSAE)

Chamaecytisus supinus subsp. *lasiosemius* (Boiss.) Niketić

A taxonomic and chorological review of the subspecies is given on pages 83–84. It was found in older herbarium material as an addition to the flora of Serbia. Specimens were collected on serpentine massifs in Kosovo region (Fig. 15). These populations are phytogeographically connected to populations on serpentinites in N Albania (Barina 2017).



Fig. 9. – *Chamaecytisus supinus* subsp. *lasiosemius* (Boiss.) Niketić (Kosovo, Mt Koznik, Miruša, BEO 50859).

First records:

Metohija, Koznik, Miruša river gorge, serpentinite, 370-500 m, MGRS 34T DN60, coll. & det. N. Diklić, 28-May-1971 (sub *Cytisus hirsutus*), rev. M. Niketić, 03-Dec-2021 (50859 BEO) (Fig 9).

Kosovo, Mt Žegovac, Crni Kamen peak, Bela Voda, 800-1000 m, oak forest, MGRS 34T EM29, EN20, coll. & det. V. Nikolić, 03-Jun-1961 (sub *Cytisus hirsutus*), rev. M. Niketić, 03-Dec-2021 (50874, 50875 BEO).

A new subspecies for the flora of Serbia.

M. Niketić

LAMIACEAE (LABIATAE)

Stachys beckeana Dörf. & Hayek, Denkschr. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 94: 186 (1918).

= *S. recta* subsp. *hayekii* (K. Malý) Bjelčić, Posebna Izd. Zemaljsk. Muz. Bosne Hercegovine 3: 18 (1974) ≡ *S. hayekii* K. Malý, Glasn. Zemaljsk. Muz. Bosni Hercegovini 40: 160 (1920) [basionym].

– “*S. recta* subsp. *sarajevensis*” (K. Malý) Hayek, Denkschr. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 99: 134 (1924) ≡ *S. labiosa* var. *sarajevensis* K. Malý, Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien: 246 (1904) [basionym] ≡ *S. sarajevensis* (K. Malý) K. Malý, Glasn. Zemaljsk. Muz. Bosni Hercegovini 40: 160 (1920).

This endemic SE Dinaric species is described from the Albanian part of Prokletije Mts and it is also known from the Montenegrin part of the massive near the border with Serbia. Hence, its finding in the Metohian part of Prokletije is quite expected. It was also recorded for Bosnia and Hercegovina (Lenherr & Baltisberger 1984, Kukić *et al.* 2006) and recently for North Macedonia (Niketić & Nikolov 2021). The record for Bulgaria (Rhodope Mts) (Baltisberger 2006) is erroneous and probably corresponds to the *S. leucoglossa* Griseb. that we found at the same locality. There are eight collected specimens from Serbia and most of them were collected on Prokletije Mts in Metohija. A single specimen was collected in W Serbia (Mt Mučanj) (Fig. 15). *Stachys beckeana* was previously preliminary listed as Balkan endemic for Metohija and W Serbia (Tomović *et al.* 2014) but without specifying the locality.

First records:

W Serbia, Mt Mučanj, ridge and top, rocky grounds, 1150-1500 m, MGRS 34T DP22, coll. V. Nikolić, 02-Aug-1991, det. N. Diklić (sub *Stachys recta*), rev. M. Niketić, 14-Feb-2004 (*s.n.* BEO).



Fig. 10. – *Stachys beckeana* Dörf. & Hayek (Metohija, Mts Prokletije, Nedžinatsko lake, BEO 100103).

W Serbia, Nova Varoš, Akmačići, obve Uvac river gorge, rocky grounds, limestone, 1000 m, MGRS 34T DP00, DP10, coll. V. Nikolić, N. Diklić, 10-Jul-1977, det. N. Diklić (sub *Stachys recta*), rev. M. Niketić, 14-Feb-2004 (*s.n.* BEO).

Metohija, Mts Prokletije, Sušica river gorge, limestone, 1400-1700 m, MGRS 34T DN31, coll. & det. M. Niketić, 02-Sep-1997 (BEO 100102).

Metohija, Mts Prokletije, Nedžinatsko lake, limestone, 1700-1850 m, MGRS 34T DN22, coll. & det. M. Niketić, 22-Aug-1997 (BEO 100103) (Fig 10).

Metohija, Mts Prokletije, Maja Rosulija (Žljeb), Stubica, 1500 m, MGRS 34T DN33, coll. I. Rudski, 24-Jun-1932, det. M. Niketić (*s.n.* BEO).

Metohija, Mts Prokletije, Rugovska gorge near Peć, rocks, 800-1400 m, MGRS 34T DN32, coll. V. Nikolić, N. Diklić, M. Bogdanović, 14-Jul-1973, det. N. Diklić (sub *Stachys recta* subsp. *doerfleri*), rev. M. Niketić, 14-Feb-2004 (*s.n.* BEO).

Metohija, Mts Mokra Gora, Veprinja, pastures, 1100-1300 m, MGRS 34T DN55, coll. I. Rudski, 08-Jul-1932, det. M. Niketić (*s.n.* BEO).

Metohija, Mts Šar-planina, near village Brod, Duška river gorge, limestone, 1400-1850 m, MGRS 34T DM74, coll. & det. M. Niketić, 19-Jul-1988 (BEO 100104).

Confirmed and for the first time located species for the flora of Serbia.

M. Niketić, M. Ranimirović

Teucrium scorodonia subsp. *euganeum* (Vis.) Arcang., Comp. Fl. Ital.: 558 (1882).

= *Teucrium siculum* (Raf.) Guss., Fl. Sicul. Syn. 2: 837 (1845).

This perennial species belongs to the sub-Atlantic floristic element and is indigenously widespread in the part of Europe that faces the Atlantic, as well as in the western part of the Central Europe. Indigenous populations extend farthest east to southern Poland, the Czech Republic and Slovakia, while in the southern parts the eastern border consists of areas in western Hungary, northeastern Croatia, Italy and NW Peloponnese.

The newly discovered population on the territory of NW Serbia near Krupanj (Fig. 21) belongs to Apenninian subspecies *T. s.* subsp. *euganeum* (Vis.) Arcang. which is also distributed in Sicilia, with one isolated locality in NW Peloponnese (Dimopoulos *et al.* 2013). It differs from the type subspecies by lower growth, smaller leaves with not more than 15(–20) obtuse teeth, simple racemes, larger calyces, longer hairs and abundant glandular hairs. This new enclave is more than 270 km away from the nearest population in the west (the type subspecies in Croatia) (Nikolić 2021). Accordingly, in by far the largest part of the Balkan Peninsula, this species is present only in that place. Such isolated marginal populations are

generally very interesting from the phytogeographical, ecological and population genetic aspects and it was also recorded for *Gagea spathacea* (Hayne) Salisb. in NW Serbia (Tomović & Niketić 2005). It should be borne in mind that the discovery of *T. scorodonia* L. in the investigated area of NW Serbia (Gornje Podrinje area) could be assumed, because in this area the average rainfall is from 800 to 1000 mm, with a maximum for Serbia of 1324 mm in Loznica, which obviously shows that for a given altitude climate much more humid and similar to the climate in the Western Balkans and Apennine Peninsula. Therefore, plant species, mostly subatlantic distributions, and indicators of humid climate specific to this area (e.g. *Calluna vulgaris* (L.) Hull, *Hypericum androsaemum* L., etc.) are especially rare (Stojanović & Stevanović 2008). However, the finding of the Apennine subspecies *T. s.* subsp. *euganeum* is certainly surprising and calls into question the autochthonous status of the population.



Fig. 11. – *Teucrium scorodonia* subsp. *euganeum* (Vis.) Arcang. (NW Serbia, Krupanj, Dvorska): a group of plants in the habitat (photo M. Niketić).

The largest part of the population (ca. 90%) is concentrated in the valley of the Štavice stream where the species was found on the southern slopes of Miškovac hill, along four side streams, on an area of 7.5 hectares, in the altitude range from 318 to 403 m. This part of population is located within the planned construction line for the industrial waste landfill. Only a small part of the population is outside the intended landfill zone: Rakovica and Popadića streams (Figs 11–12). The geological base of the species' habitat consists of sandstones, while the soil is humid and acidic. The plant

grows on the ground floor of the sessile oak forest (*Quercetum petraeae*) on steeper, thinner and brighter parts of the forest, with a slope of 10° to 45°, but rarely on bare ground (between Rakovica and Popadića streams).



Fig. 12. – *Teucrium scorodonia* subsp. *euganeum* (Vis.) Arcang. (NW Serbia, Krupanj, Dvorska) – habitus, inflorescence and flowers (photo M. Niketić).

Although detailed field research has been carried out on appropriate habitats, within a radius of 10 km, no new populations have been found.

The estimated population size is between 2000 and 2500 individuals. Based on the IUCN criteria for assessing the degree of endangerment of species, it enters the category of critically endangered plants in the territory of Serbia that are threatened with extinction: CR B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv); E. The basic criteria of this assessment were the area of occupancy (7.5 ha), the extent of occurrence (7.5 ha), the number of subpopulations (1) and the probability of extinction (greater than 50% in 10 years). In Central Europe, this species is also listed as vulnerable in the peripheral zone of the eastern part of the range (VU) in Hungary, the Czech Republic and Slovakia and is listed in the Red Data Book of Czechoslovakia.

First records:

NW Serbia, Krupanj, between Dvorska and Brezovice villages, Štavice valley, oak and beech forests, 250–450 m, 19.4111866° E, 44.4543212° N, MGRS 34T CQ72, coll. & det. M. Niketić, 10-Jul-2020 (BEO 100105).

NW Serbia, Krupanj, Štavice valley, 250–400 m, 19.4060754° E, 44.4556931° N, MGRS 34T CQ72, coll. & det. M. Niketić, 29-Jun-2021 (BEO 100080).

NW Serbia, Krupanj, Dvorska village, right bank of the stream Rakovica stream, the slopes of Mt Stolac, *Quercus petraea* forest, silicate, 300–350 m, 19.4009111° E, 44.4587395° N, MGRS 34T CQ72, coll. & det. M. Niketić, 30-Jun-2021 (BEO 100110).

NW Serbia, Krupanj, Dvorska village, between Popadića and Rakovica streams, Mt Stolac, level 280, oak forest, silicate, 280 m, 19.4060258° E, 44.4669968° N, MGRS 34T CQ72, coll. & det. M. Niketić, 01-Jul-2021 (BEO 100111).

NW Serbia, Krupanj, Štavice valley, right bank, the slopes of Mt Stolac in the northwest near the village of Markovići, oak forest, 250–350 m, 19.4006981° E, 44.458359° N, MGRS 34T CQ72, coll. & det. M. Niketić, 30-Jun-2021 (BEO 100113).

NW Serbia, Krupanj, Dvorska village, left bank of the stream Rakovica between Savići and Markovići, oak forest, silicate, S exp., 200–300 m, 19.3981435° E, 44.465629° N, MGRS 34T CQ72, coll. & det. M. Niketić, 01-Jul-2021 (BEO 100112).

A new species for the flora of Serbia.

M. Niketić

POLYGONACEAE

Rumex tuberosus L., Sp. Pl., ed. 2: 481 (1762) subsp. ***tuberosus***.

Rumex tuberosus (Fig. 13) is distributed from NW Africa, W Alps, the Apennine and the Balkan Peninsulas, Asia Minor, the Caucasus, east to N Iran and Kazakhstan; isolated parts are the steppe areas in Russia and the Middle East (POWO 2012). In the Balkans, it is recorded in Bulgaria, Montenegro, Croatia, Greece, North Macedonia and Turkey-in-Europe (Micevski 1995, Uotila 2017, Nikolić 2021). It inhabits grassy and rocky places and meadows on different geological substrate.



Fig. 13. – *Rumex tuberosus* L. subsp. *tuberosus* (NE Serbia, Mt Vrška Čuka, Prlitska river gorge) – cultivated plant, rosette leaves and root (photo M. Niketić).

The first data for Serbia comes from Rechinger (1943) and it is well documented by revised Pančič's material from Mt Rtanj in E Serbia (513 BEOU). This point (Fig. 21) was also represented on the map in *Atlas Florae Europaeae* (Jalas & Suominen 1979) but this species was not included in *Flora of SR Serbia* (Slavnić 1972).

At the beginning of this year, we also found this mediterranean-submediterranean-SW Asian species in NE Serbia on Mt Vrška Čuka (gorge of Prlitski stream) (Fig. 21) and this finding is not so surprising considering that since it is far from Mt Rtanj ca. 35 km and the nearest recorded localities are also in W Stara Planina Mts in Bulgaria (Assyov *et al.* 2012). In Mt Vrška Čuka it is found on rocky grounds within ass. *Carpinetum orientalis*, on limestone and at elevation from 190 to 220 m. Population is very small and estimated to consists of c. 50 individuals.

First records:

NE Serbia, Mt Vrška Čuka, gorge of Prlitski stream, left bank, Stara Bremza, rocky grounds within ass. *Carpinetum orientalis*, limestone, N exp., 190 m, MGRS 34T FP05, coll. M. Niketić, G. Tomović, 02-Mar-2021, det. M. Niketić (BEO 100135).

NE Serbia, Mt Vrška Čuka, gorge of Prlitski stream, right bank, Vlaški Do, rocky grounds within ass. *Carpinetum orientalis*, limestone, S exp., 220 m, MGRS 34T FP05, coll. & det. M. Niketić, 02-Mar-2021 (BEO 100136).

Confirmed species for the flora of Serbia.

M. Niketić, G. Tomović

URTICACEAE

Urtica sondenii (Simmons) Avrorin ex Geltman, Novosti Sist. Vyssh. Rast. 25: 76 (1988).

The main taxonomic and morphological features of the plant are given on pages 85–87. It is distributed from W and C Europe and Scandinavia to central Siberia and grows in alluvial habitats and wetland vegetation mainly near rivers and streams; it usually forms dense but spatially limited populations on river banks, usually in *Alnus glutinosa* (L.) Gaertn. woodlands (Geltman 1992, Ball & Geltman 1993, Rejlová *et al.* 2021). In the neighbouring countries, it is recorded in Croatia, Hungary, Romania and Bulgaria (Uotila 2011), where the populations are confined to large lowland river floodplains, such as likely Sava river in Croatia (Urfus *et al.* 2021).

In the region of SW Serbia, three subpopulations near Loznica (Fig. 15) and Krupanj are confined either to the alluvial forest of *Alnus glutinosa* and *Salicetum cinereae* community of Drina and Jadar river valleys (Fig. 14), or in the meadows and forests of *Quercus cerris* L. and *Q. petraea* (Matt.) Liebl. of the Štavice stream valley, left tributary of the Jadar river. The whole population of this plant in Serbia is estimated to tens of thousands of individuals.

First records:

NW Serbia, Loznica, Lipički Šor village, Starača, flood forest with *Alnus glutinosa* and *Salicetum cinereae*, alluvium, 100 m, MGRS 34T CQ63, coll. & det. M. Niketić, 06-Jul-2020 (BEO 100137).

NW Serbia, Loznica, Jadar river valley, between Zobišta and Veliko Polje, vegetation along the river bank and around the fields, alluvium, 130 m, MGRS 34T CQ73, coll. & det. M. Niketić, 08-Jul-2020 (BEO 100138).

NW Serbia, Krupanj, Brezovice village, between Logor peak and Stevići, meadows and forest of *Quercus cerris* and *Q. petraea*, schist

and sandstone, 400-440 m, MGRS 34T CQ72, coll. & det. M. Niketić, 09-Jul-2020 (BEO 100139).

A new species for the flora of Serbia.



Fig. 14. – *Urtica sondenii* (Simmons) Avrorin ex Geltman (NW Serbia, Loznica, Jadar river valley) – habitat of the species, inflorescence, leaves and trichomes (photo M. Niketić).

M. Niketić

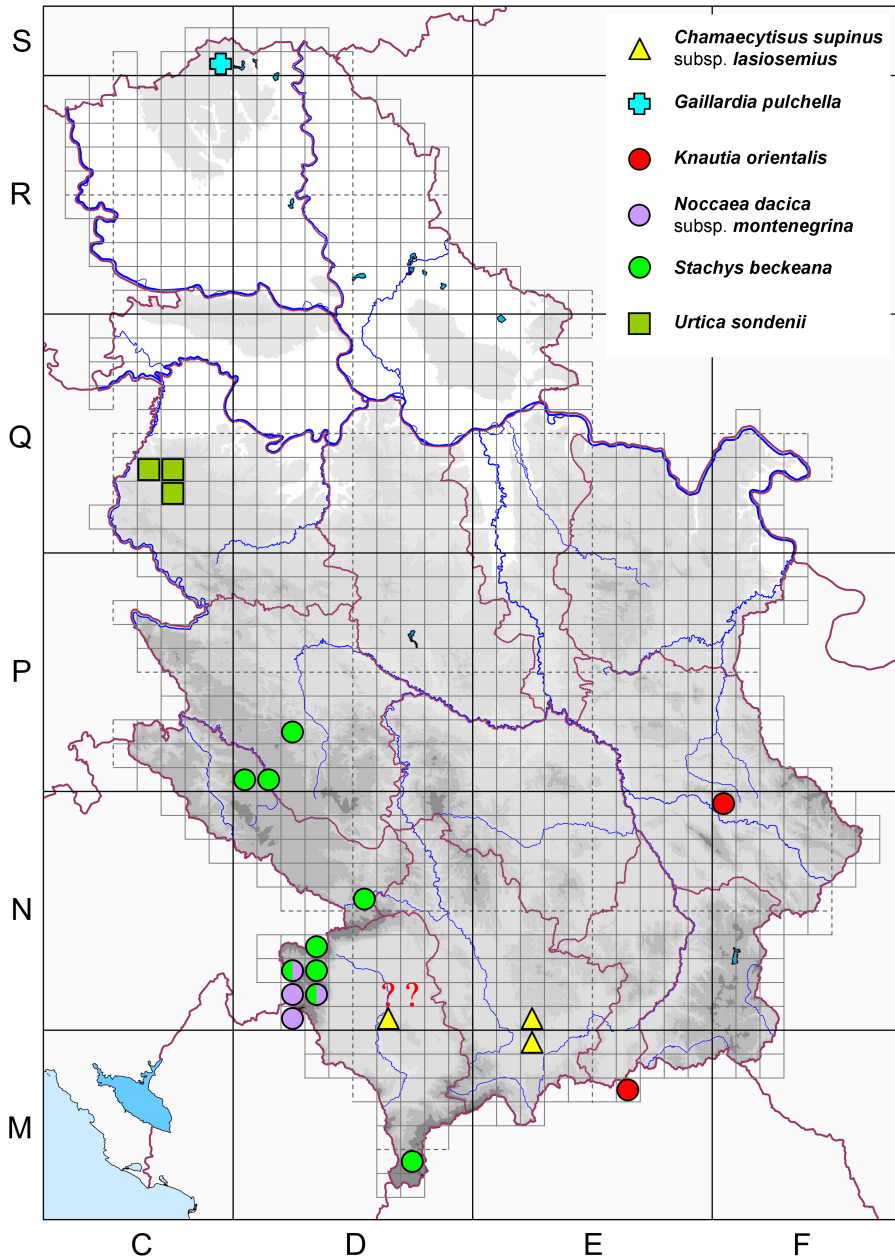


Fig. 15. – Distribution of some new taxa for the vascular flora of Serbia. Doubtful records (question marks).

New and confirmed taxa for the flora of administrative units**PINOPSIDA**

PINACEAE

Pinus nigra J. F. Arnold, Reise Mariazell Steyerm.: 8 (1785) subsp. *nigra*.

This species of dry and thermophilic habitats, native for the Republic of Serbia (Jovanović 1970, Jovanović 1992) was reported for the Vojvodina province, area of Subotica Sandland as cultivated (Gajić 1986). In other parts of Vojvodina province the species has been known as cultivated, used for afforestation in sandy area (Gajić 1983). First occurrence of the spontaneous seedlings in natural habitats was recorded in the Bačka, Municipality of Subotica, in Subotica Sandland (Fig. 16). Seedlings have been observed in



Fig. 16. – Group of offsprings in culture of *Pinus nigra* J. F. Arnold in Subotica Sandland (photo B. Radak).

the plantation, where with previously planted trees build a dense assembly, in the immediate territory of plants, protected by law (*Dianthus serotinus* Waldst. et Kit. and *Salix rosmarinifolia* L.). Considering that spontaneous individuals are common, species is treated as invasive alien plant in Vojvodina province, and in natural, protected areas endangers native species. This species is cultivated in large scale in Deliblato Sand as well, and further investigations about its invasiveness are necessary.

First record for Vojvodina province:

Bačka, Subotica, Subotica Sand, Landscape of outstanding features “Subotica Sandland” MGRS 34T CS90, M. Rat, B. Radak (field observ.)

A new allothonous species for the flora of Vojvodina province.

M. Rat, B. Radak

Pinus sylvestris L., Sp. Pl.: 1000 (1753).

This mountainous, light-demanding species, inhabiting bare-soil habitats occur most often above elevation of 1000 m is native for the Republic of Serbia (Jovanović 1970, 1992), while it has also been recorded as invasive species in forest plantations in SE Serbia (Niketić *et al.* 2018b). Gajić (1983, 1986) states that this species is also used for afforestation of sands in Vojvodina province, but to a lesser extent in relation to *Pinus nigra*. First records of spontaneous distribution in Vojvodina province are from The Subotica Sandland, in the forest plantations of *Pinus nigra* and *Pinus sylvestris*. For Bačka region it is invasive alien species, which threatens the presence and spread of autochthonous species, many of which are protected by law, such are *Dianthus serotinus* Waldst. et Kit. and *Salix rosmarinifolia* L. at the referred location.

First record for Vojvodina province:

Bačka, Subotica, Subotica Sandland. MGRS 34T CS90, M. Rat, B. Radak (field observ.)

A new allochthonous invasive species for the flora of Vojvodina province.

M. Rat, B. Radak

LILIOPSIDA

ORCHIDACEAE

Ophrys scolopax subsp. *cornuta* (Steven) E. G. Camus in E. G. Camus, P. Bergon & A. A. Camus, Monogr. Orchid.: 270 (1908).

This taxon is distributed on the Balkan Peninsula, in Asia Minor, the Crimea, north to southern Hungary, south to the Peloponnese, the Aegean Islands and Anatolia, east to the Caucasus and the Caspian Sea (Iran), and west to the Gargano in Italy (Delforge 2006, Pedersen & Faurholdt 2007). According to the recently published *An annotated Checklist of Species of Vascular Flora of Serbia*, its status in Kosovo and Metohija is marked “±”, which means that its presence is unconfirmed (only literature data available), while its occurrence in central Serbia and Vojvodina is confirmed (Djordjević *et al.* 2018). The only published data on the distribution of this taxon in Kosovo and Metohija refer to the natural monument “Krečnjački sprud Kamilja” (Marinčić 2005). However, no herbarium material was found in the Herbarium of the Institute of Botany and Botanical Garden “Jevremovac”, University of Belgrade (BEOU) and in the Herbarium of the Natural History Museum in Belgrade (BEO), confirming this finding.

New records for Kosovo and Metohija province:

Kosovo, Priština, Gračanica, MGRS 34T EN11, coll. D. Cvejić, Z. Krivošej, 13-May-2012, det. Z. Krivošej (sub. *Ophrys apifera* Huds.), rev. V. Djordjević, Feb-2020 (BEOU 39350).

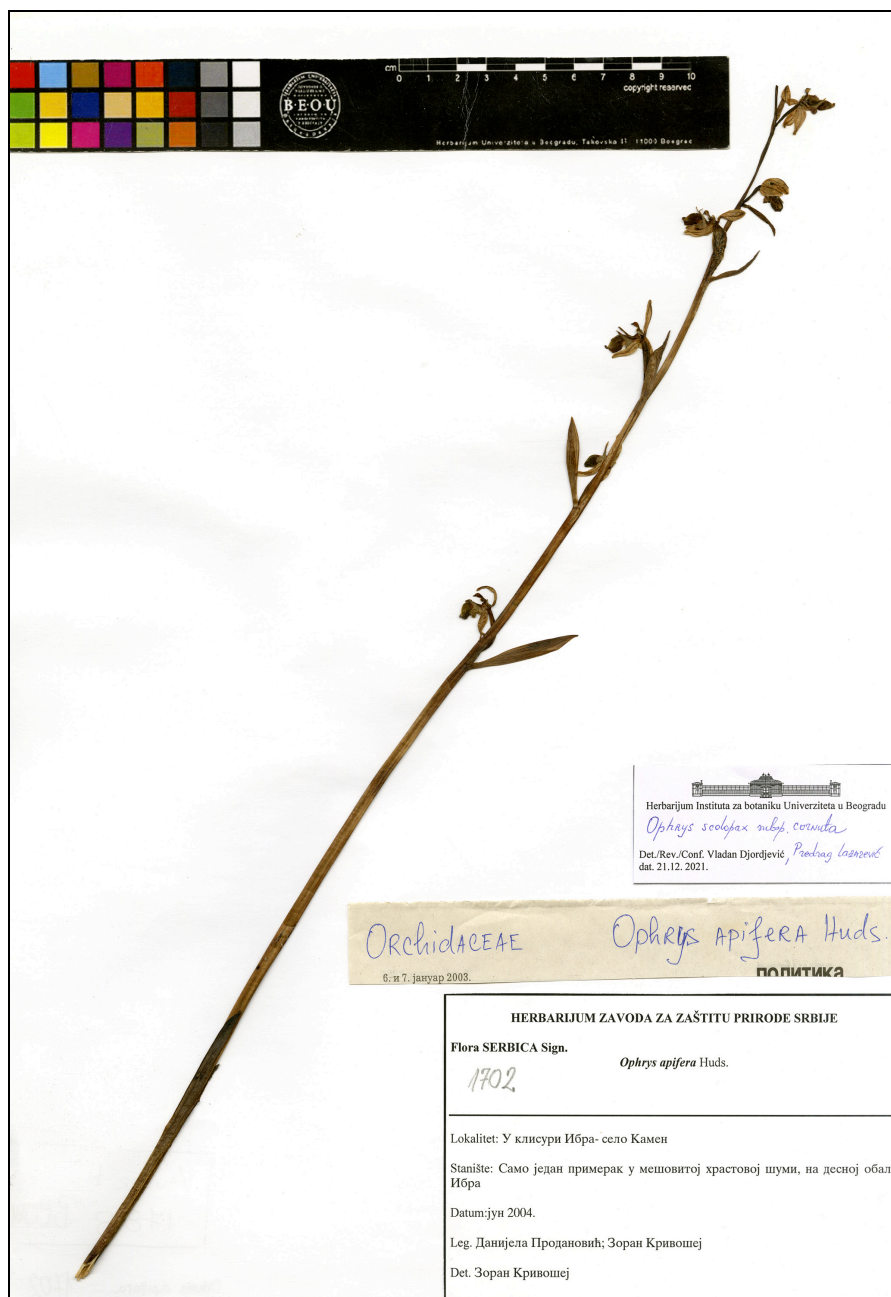


Fig. 17. – *Ophrys scolopax* subsp. *cornuta* (Steven) E. G. Camus (Kosovo, Ibar river gorge, Kamen, BEOU 17818).

Kosovo, Ibar river gorge, Kamen, MGRS 34T DN78, mixed oak forest, coll. D. Prodanović, Z. Krivošej, Jun-2004, det. Z. Krivošej (sub.

Ophrys apifera Huds.), rev. V. Djordjević, P. Lazarević, 21-Dec-2021 (BEOU 17818) (Fig. 17).

Confirmed subspecies for the flora of Kosovo and Metohija province.

V. Djordjević, D. Prodanović, P. Lazarević, Z. Krivošej

MAGNOLIOPSIDA

ASTERACEAE (COMPOSITAE)

Cirsium creticum (Lam.) d'Urv., Mém. Soc. Linn. Paris 1: 363 (1822) subsp. *creticum*.

- “*Cirsium polyanthemum*” sensu Ž. Adamović, Glasn. Prir. Mus. Beogradu, Ser. B, Biol. Nauke 7(3): 154 (1955) [non (L.) Spreng., Syst. Veg., ed. 16, 3: 371 (1826). 5(1): 259 (1826)].
- “*Cirsium siculum*” sensu Pančić, Fl. Serbiae: 431 (1874). [non Spreng., Neue Entdeck. Pflanzenk. 3: 36 (1822)] (cf. Hayek, Repert. Spec. Nov. Regni Veg. Beih. 30(2): 725 (1931); Gajić, Fl. Rep. Soc. Serb. 7: 207; Greuter 2006 +).

First data about presence of this sub-Mediterranean species in Serbia were published by Pančić for vicinity of Raška and Mt Kopaonik (Pančić 1867, 1870). Majority of published records suggests that *C. creticum* is relatively common species in Serbia in ruderal vegetation of wetland and humid grassland habitats in E, SE and S regions of the country (Pančić 1874, Adamović 1911, Gajić 1953, Gajić 1975, Nikolić & Diklić 1983, Nikolić *et al.* 1986, Bogosavljević *et al.* 2008, Petrović *et al.* 2008, Randelović *et al.* 2008). Outside this area species appears to be less common, with sporadic records from Kosovo and Metohija (Rechinger 1935, Adamović 1955, Gajić 1975, Prodanović *et al.* 2008), central Serbia (Pančić 1867, 1870, 1874) and SW Serbia (Butorac *et al.* 1996, Belij 2006). Before our record in the vicinity of Banatska Palanka, this species has never been recorded in Vojvodina province. Its population comprises a few hundred individuals scattered on extensively grazed humid pasture. Dominant type of vegetation is ruderal vegetation of humid sandy meadows with remnants of community *Junco inflexi-Menthetum longifoliae* Lohmeyer ex Oberdorfer 1957.

First records for Vojvodina province:

Banat, Banatska Palanka, bara Krivaja, 66 m, ≈ 44,841622° N, 21,320697° E, MGRS 34T EQ26, R. Perić 08-May-2008 (field observ.).

Banat, Banatska Palanka, bara Krivaja, MGRS 34T EQ26, coll. & det. R. Perić, 09-Sep-2010 (*s.n.* PZZP).

Banat, Banatska Palanka, bara Krivaja, 65 m, $\approx 44.840814^{\circ}$ N, 21.322186° E, MGRS 34T EQ26, coll. & det. R. Perić, 02-Aug-2017 (s.n. PZZP) (Fig. 18).

A new species for the flora of Vojvodina province.

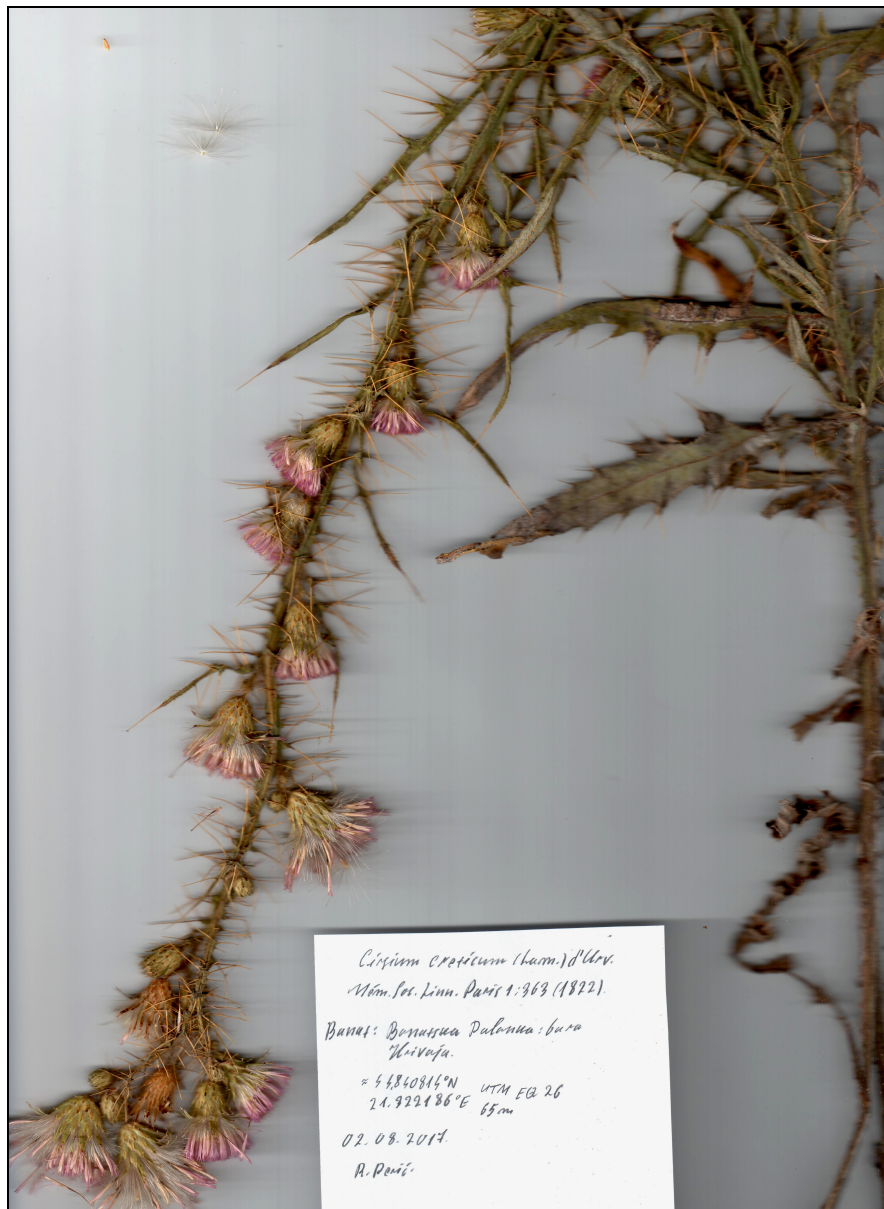


Fig. 18. – *Cirsium creticum* (Lam.) d'Urv. (Banat, Banatska Palanka, s.n. PZZP).

Hieracium oxyodon Fr., Uppsala Univ. Årsskr. 1862: 90 (1862) subsp. *oxyodon*.

The only data of the presence of this central-europaeen mountain plant in Serbia originates from Niketić (1999) who found it in Metohija region



Fig. 19. – *Hieracium oxyodon* Fr. subsp. *oxyodon* (W Serbia, Mt Mučanj, BEO 100114).

(Prokletije Mts, Marijaš peak). Due to the fact that the size of the only population in Serbia was estimated to few hundred individuals, *Hieracium*

oxyodon Fr. subsp. *oxyodon* was estimated as critically endangered (CR) and included in the Red Data Book of Flora of Serbia (Niketić 1999).

Several years later we found this endangered plant in two other localities in Kosovo and Metohija province in Šar Planina Mts: Kobilica peak (in 2006) and Crni Vrh peak (in 2008). In both localities, population size was estimated to several hundred individuals.

In the year 2010 we discovered *H. oxyodon* subsp. *oxyodon* in W Serbia in Mt Mučanj and this findings represents the first and only locality in Serbia proper (Fig. 21). This plant grows in rocky cliffs in the north and east part of the mountain on limestone and at elevation between 900 and 1400 m. Population consists of few hundred individuals.

First record for Serbia proper:

W Serbia, Mt Mučanj, rocky cliffs to the north and east, 900–1400 m, MGRS 34T DP22, coll. M. Niketić, G. Tomović, 22-Aug-2010, det. M. Niketić (BEO 100114) (Fig. 19).

Additional records for Kosovo and Metohija province:

Metohija, Mts Šar-planina, Kobilica peak, Treskavac pass, 1900–2450 m, MGRS 34T DM96, coll. M. Niketić, Š. Duraki, 19-Aug-2006, det. M. Niketić (BEO 100116).

Metohija, Mts Šar-planina, Crni Vrh peak, limestone, 1900–2500 m, MGRS 34T DM96, coll. M. Niketić, Š. Duraki, 31-Jul-2008, det. M. Niketić (BEO 100117).

A new species for the flora of Serbia proper.

M. Niketić, G. Tomović, Š. Duraki

EUPHORBIACEAE

Euphorbia montenegrina (Bald.) K. Malý ex Rohlena, Glasn. Zemaljsk. Muz. Bosni Hercegovini 20: 556 (1908).

≡ *Euphorbia verrucosa* var. *montenegrina* Bald., Mem. Reale Accad. Sci. Ist. Bologna ser. 5, 9: 39 (1900) [basionym].

First data on the presence of this Balkan endemic plant in Serbia originates from Rechinger (1935), who found it in Prokletije Mts (Kurvala peak) in Kosovo and Metohija province. Quite recently Lazarević *et al.* (2013) announced its presence in Serbia proper (Pešter plateau and Mt Kamena Gora). However, recent revision of the herbarium specimens from these two localities showed that they actually belong to *Euphorbia illirica* Lam. Therefore, our newly discovered population of *E. montenegrina* from the same locality (Pešter plateau) represents the only known data confirming its presence in Serbia proper (Fig. 21).



Fig. 20. – *Euphorbia montenegrina* (Bald.) K. Malý ex Rohlena (SW Serbia, Pešter plateau, Duga Dolina, BEO 100060).

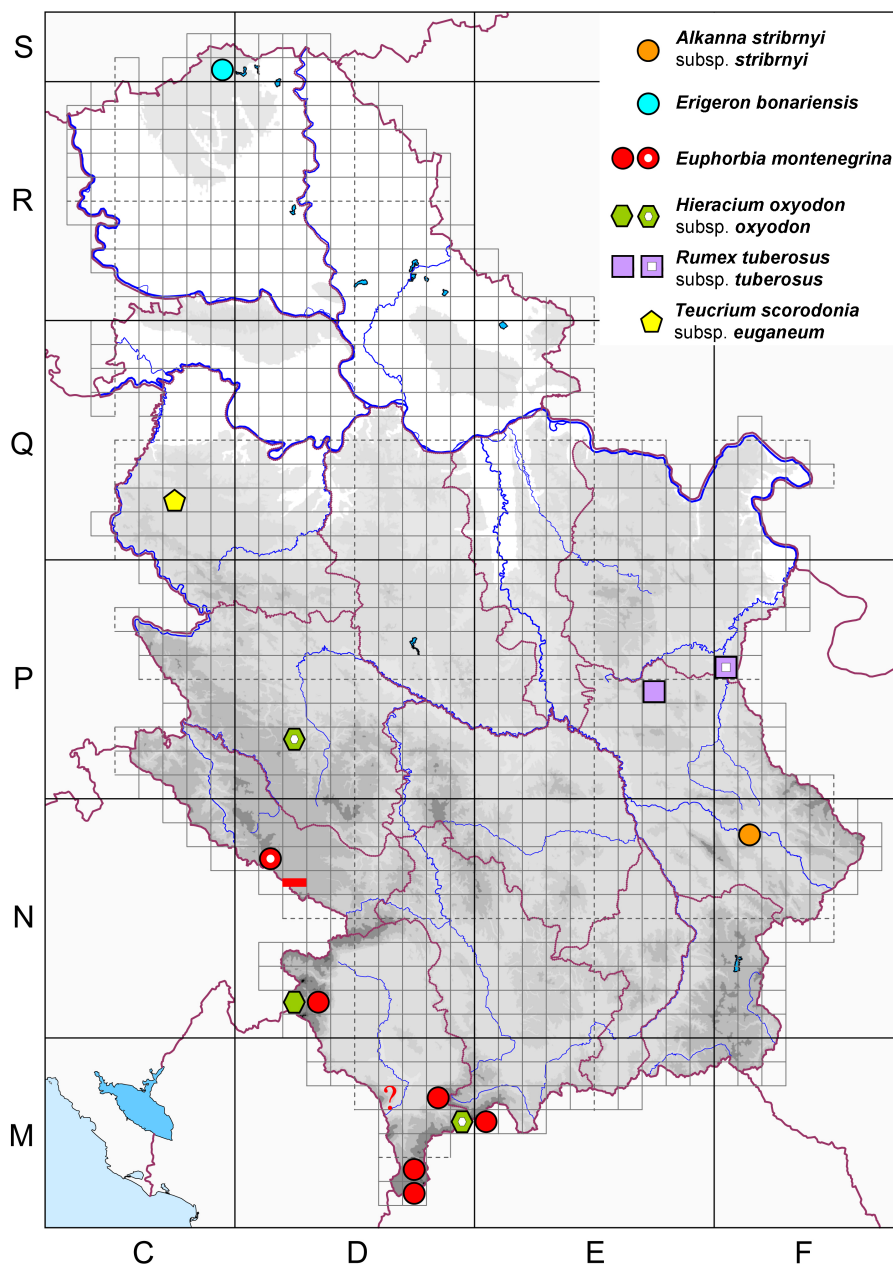


Fig. 21. – Distribution of some new or confirmed taxa for the vascular flora of Serbia (full symbol) or administrative units (full symbol – literature records; small white symbol within symbol – new records). Doubtful record (question marks); erroneous record (dash).

Typical habitats of this plant in Serbia (Kosovo and Metohija province) are rocky grounds and rocks on limestone within the vegetation order *Amphoricarpetalia* as well as Bosnian pine (*Pinion heldreichii*) and Macedonian pine (*Pinion peucis*) forests. In Pešter plateau (Duga Dolina locality), *E. montenegrina* grows on limestone rocky ground at the elevation from 1150 to 1250 m within open grassland habitats in the beech forest zone. Population is very small and estimated to consists of c. 50 individuals.

First records:

SW Serbia, Pešter plateau, Duga Dolina, below Gluhara, limestone, 1150–1250 m, MGRS 34T DN17, coll. & det. M. Niketić, 26-Jul-2017 (BEO 100060) (Fig. 20).

A new species for the flora of Serbia proper.

M. Niketić, G. Tomović, S. Đurović, M. Ranimirović

Erroneously reported taxa for the flora of Serbia

LILIOPSIDA

LILIACEAE (XANTHORRHOEACEAE)

Asphodelus ramosus L., Sp. Pl. 310 (1753) subsp. *ramosus*.

ABSENT FROM SERBIA.

The alleged presence of the species in Serbia (Anačkov *et al.* 2018) actually refers to *Asphodelus albus* subsp. *delphinensis* (Gren. & Godr.) Z. Díaz & Valdés (see explanation on page 90).

M. Niketić

MAGNOLIOPSIDA

APIACEAE (UMBELLIFERAE)

Ostericum palustre (Besser) Besser, Enum. Pl. 94 (1822).

≡ *Imperatoria palustris* Besser, Prim. Fl. Galiciae Austriac. 1: 214 (1809) [basionym]≡ *Angelica palustris* (Besser) Hoffm., Gen. Pl. Umbell. 162 (1814).

ABSENT FROM SERBIA.

The first record for this Eurasian plant in Serbia comes from Pančić (1856) for the foothill of Mt Rudnik (Brusnica) in C Serbia (Šumadija). Petrović (1882) gave another specific record for the foothill of Mt Suva Planina (Mokra) in E Serbia, which is also mentioned in Pančić (1884), Nikolić (1973) and other sources. Revision of Pančić's and Petrović's original material showed that all specimens identified as *Ostericum*

palustre (Besser) Besser actually correspond to *Rhizomatophora aegopodioides* (Boiss.) Pimenov (\equiv *Peucedanum aegopodioides* (Boiss.) Vandas) and some samples belong to *Angelica sylvestris* L. subsp. *sylvestris*.

Petrović (1885) described two species from E Serbia (vicinity of Niš), *P. serbicum* Petrović (also from Mt Suva Planina) and *P. rivulare* Petrović which are currently also treated conspecific with *R. aegopodioides* (Nikolić 1973). Since neither Pančić (1874, 1884) nor Petrović (1883, 1885) mention *R. aegopodioides* at all, which is quite widespread in Serbia, it gives us the right that their data for *O. palustre* actually refer to *R. aegopodioides*.

Apparently, the question is whether *O. palustre* occurs on the Balkan Peninsula, because other data for regional floras (Montenegro, North Macedonia, Bulgaria, Croatia) are singular, imprecise, unconfirmed or doubtful (Rohlena 1942, Cannon 1968, Matevski 2005, Nikolić 2021) and they need to be checked.

M. Niketić

ASTERACEAE (COMPOSITAE)

Centaurea affinis Friv., Flora 19(2): 435 (1836) subsp. ***affinis***

ABSENT FROM SERBIA.

All published records for *Centaurea affinis* Friv. actually correspond to *Centaurea stoebe* subsp. *serbica* (Prodan) Ochsmann (= *C. tartarea* Velen.). The first valid record for *C. stoebe* subsp. *serbica* comes from Adamović (1892) under the name *C. tartarea* for the area of Mt Basara near Pirot in E Serbia. This is also a *locus classicus* for the *C. affinis* subsp. *serbica* Prodan which was later described (Prodan 1930) (currently the basionym of *C. stoebe* subsp. *serbica*). Unaware of this record, Hayek (1931) synonymized *C. tartarea* with *C. affinis* and thus, for the first time, he misrepresented *C. affinis* for Serbia. It was later mentioned under the last name for several localities in C, E and SE Serbia, starting with Pavlović (1955) for Mt Kopaonik and continued by Gajić (1975) for Mt Kopaonik and Vlasina plateau. Recently, Ochsmann (2000) separated *C. tartarea* from *C. affinis* Friv. and included it in *C. stoebe* L. According to him it is distributed in Bulgaria, Serbia, North Macedonia, Greece and Romania.

M. Niketić

Hieracium brachytrichophyes (O. Behr, E. Behr & Zahn) Niketić.

ABSENT FROM SERBIA.

All the data on the presence of this species on Šar Planina Mts (Duraki & Niketić 2018) actually correspond to *H. schuettianum* (Zahn) Niketić (see on page 80).

CAPRIFOLIACEAE (DIPSACACEAE)

Knautia degenii Borbás ex Formánek, Verh. Naturf. Vereins Brünn 33: 29 (1895).

ABSENT FROM SERBIA AND NORTH MACEDONIA.

According to Davis (1972) Ehrendorfer (1976), Dimopoulos *et al.* (2013) and Petrova (2012) the distribution of this annual is limited to N and NW Anatolia, European part of Turkey, SE Bulgaria and NE Greece. However Micevski (1980) also reported it for the flora of North Macedonia in a large number of localities, denying the previously published presence of *Knautia orientalis* L. Following his concept, Krasniqui *et al.* (1990) published the presence of this species as a new for the flora of Serbia and Kosovo and Metohija province (Klina). This concept was accepted by Greuter *et al.* (1986) and Domina (2017). Similarly, Niketić (2010) preliminarily announced it's presence in Serbia proper (Bela Palanka).

Our investigation of this taxon in classical locality of *K. degenii* Borbás ex Formánek (Turkey, vicinity of Istanbul) and in NE Greece as well as the inspection of herbarium material from North Macedonia (BEO, SKO) undoubtedly showed that this species does not exist in the flora of North Macedonia and Serbia and has to be replaced with *K. orientalis* (see on page 97). Herbarium material of Krasniqui *et al.* (1990) was not checked, but the authors of this publication themselves pointed out that “this does not exclude the possibility of revising the existing knowledge on their distribution”.

M. Niketić

EUPHORBIACEAE

Euphorbia fragifera Jan ex Link, Enum. Hort. Berol. Alt. 2: 16 (1822).

ABSENT FROM SERBIA.

This strictly oromediterranean plant is well documented for the flora of NW Italy, SE Slovenia, Croatia (Dalmatia), ?Montenegro, Albania and Greece (Rohlena 1942, Jogan 2001, Dimopoulos *et al.* 2013, Barina 2017, Nikolić 2021, POWO 2021) while data for Bulgaria and Romania are doubtful POWO (2021). Few literature data for the flora of Serbia (Janković & Nikolić 1972, Gajić 1988) probably refer to *Euphorbia epithymoides* L., while the revision of the herbarium revealed that the specimens of *E. serpentini* Novák were incorrectly identified.

Specimen examined:

Euphorbia serpentini – Mt Tara, Zborište, MGRS 34T CP75, coll. & det. Ž. J. Jurišić, 21-Jun-1912 (BEO 3010, sub *E. angulata*), rev. D. Geltman, 08-sep-2009 (sub *E. fragifera*), rev. M. Niketić, 01-Jun-2020.

M. Niketić, G. Tomović, S. Đurović, M. Ranimirović

***Euphorbia verrucosa* L., Sp. Pl. 1: 459 (1753).**

ABSENT FROM SERBIA.

According to Caković *et al.* (2021) this orophyte is distributed in W and C Europe and in Western part of the Balkan Peninsula (Slovenia, Croatia and Bosnia and Herzegovina). Numerous data for Greek flora (Dimopoulos *et al.* 2013) according to these authors correspond to *Euphorbia montenegrina* (Bald.) K. Malý ex Rohlena. The first record for *E. verrucosa* in Serbia originated from Pančić (1867) for the ultramafic Zlatibor Plateau in W Serbia. Inspection of Pančić's original material (BEOU) has shown that all specimens identified under this name correspond to *E. serpentini* Novák, described much later from the same locality. Single specimen from BEO (37285) also corresponds to similar *E. montenegrina*.

Specimen examined:

Euphorbia serpentini – Zlatibor plateau, coll. & det. J. Pančić (BEOU 782, sub *E. verrucosa*), rev. M. Niketić, 05-Sep-2019.

Euphorbia montenegrina – Mts Šar Planina, Ošljak peak, Popovo Prase, MGRS 34T CP75, meadows, coll. V. Nikolić, N. Diklić, S. Mladenović, 24-Jul-1978 (BEO 37285, sub *E. verrucosa*), rev. M. Niketić, 05-May-2019.

M. Niketić, G. Tomović, S. Đurović, M. Ranimirović

LAMIACEAE (LABIATAE)

***Stachys subcrenata* Vis., Flora 12(1): 15 (1829).**

≡ *S. recta* subsp. *subcrenata* (Vis.) Briq., Lab. Alp. Mar.: 257 (1893).

= *S. fragilis* Vis., Flora 12(1): 14 (1829).

ABSENT FROM SERBIA.

This strictly oromediterranean plant was described from Dalmatia near Dubrovnik. Although it was recorded for the wider area from the Apennine Peninsula to Iran, in our opinion, its presence is only confirmed for the sea hinterland around the Adriatic and perhaps the Ionian Seas (NW Italy, Slovenia, Croatia, Bosnia and Hercegovina, Montenegro, Albania, ?Greece). Although it is currently recognized as a subspecies (GBIF 2021, POWO 2021), we treat it as a good species in accordance with Lenherr (1983).

Record for Serbian flora (Diklić 1974) actually correspond to *S. recta* L. subsp. *recta* and *S. recta* subsp. *nitens* (Janka) Beldie. Its presence on the territory of North Macedonia has also been questioned recently (Nikolov 2021), although there are numerous literature data for this area.

M. Niketić, M. Ranimirović

Erroneously reported taxa for the flora of administrative units**MAGNOLIOPSIDA**

RANUNCULACEAE

Pulsatilla grandis Wender., Schrift. Marb. 2: 257 (1830).

≡ *P. vulgaris* subsp. *grandis* (Wender.) Zāmelis, Acta Hort. Bot. Univ. Latv. 1: 104 (1926).

ABSENT FROM SERBIA PROPER AND KOSOVO AND METOHİJA.

Pulsatilla grandis Wender. is a relict Pontic species distributed in C and E Europe with the southern border of the species range in the Pannonian Plain (Serbia, Croatia, Slovenia). In Serbia, it is represented in Vojvodina (Srem) on the slopes of Mt Fruška Gora and on the Srem Loess Plateau.

In addition, there are many records for several localities throughout Serbia. Although it is also mentioned for the flora of Deliblato Sand and Mt Vršačke Planine in Banat (Vojvodina) (Gajić 1992), these data actually refer to *P. montana* (Hoppe) Rchb. *Pulsatilla grandis* is also incorrectly mentioned for limestone mountains in eastern Serbia (Jovanović-Dunjić 1955) and Mt Grmija in Kosovo and Metohija province (Krivošej 2013), and these data actually refer either to *P. halleri* (All.) Willd. or *P. montana*.

M. Niketić

REFERENCES

- Adamović, L. (1892): O vegetaciji jugo-istočne Srbije. – Štamparija Ž. Radovanića, Beograd.
- Adamović, L. (1911): Flora jugoistočne Srbije/Flora Serbiae austro-orientalis. – **Rad Jugoslavenske akademije znanosti i umjetnosti** 185: 194–242. [in Serbian]
- Adamović, R. Ž. (1955): Spisak vrsta Orthoptera prikupljenih na Kosovu. Srbija. – **Glasnik Prirodnjačkog muzeja srpske zemlje, serija B** 7(3): 149–162. [in Serbian]
- Anačkov, G., Niketić, M., Tomović, G. (2018): Liliopsida: Liliaceae s.l. (Amaryllidaceae–Xanthorrhoeaceae). In: Niketić, M., Tomović, G. (2018): An annotated Checklist of Vascular Flora of Serbia 1. Lycopodiopsida, Polypodiopsida, Gnetopsida, Pinopsida and Liliopsida [Catalogue of taxa]: 91–102. – Serbian Academy of Sciences and Arts, Belgrade.
- Assyov, B., Petrova, A., Dimitrov, D., Vassilev, R. (2012): Conspectus of the Bulgarian vascular flora. – Bulgarian Biodiversity Foundation, Sofia.
- Ball, P. W., Geltman, D. V. (1993): *Urtica* L. In: Tutin, T. G., Burges, N. A., Chater, A. O., Edmondson, J. R., Heywood, V. H., Moore, D. M., Valentine, D. H., Walters, S. M., Webb, D. A. (eds): *Flora Europaea* 1: 79–80. – University Press, Cambridge.
- Baltisberger, M. (2006): Cytological investigations on Bulgarian phanerogams. – **Willdenowia** 36(1): 205–216.

- Barina, Z. (2017) (*ed.*): Distribution atlas of vascular plants in Albania. – Hungarian Natural History Museum, Budapest.
- Barina, Z., Somogyi, G., Pifkó, D., Rakaj, M. (2018): Checklist of vascular plants of Albania. – *Phytotaxa, Monograph* **378**(1): 1–339.
- Belij, S. (2006): Geomorfološko-hidrološki spomenik prirode „Slapovi Sopotnice“ – novi objekt geo-nasleđa Srbije. – *Zaštita prirode* **56**(2): 5–19. [in Serbian]
- Bogosavljević, S., Zlatković, B., Randelović, V. (2008): Flora klisure Svrlijskog Timoka. In: Randelović, V. (*ed.*): Zbornik radova, 9. Simpozijum o flori jugoistočne Srbije i susednih područja sa međunarodnim učešćem, Niš, 01-03. septembar 2007: 41–54. – Odsek za biologiju sa ekologijom Prirodno-matematičkog fakulteta Univerziteta u Nišu, Biološko društvo „Dr Sava Petrović“, Niš. [in Serbian]
- Butorac, B., Krizmanić, I., Panić, I., Savić, D., Zlatković, B. (1996): Predlog za stavljanje pod zaštitu tresave Sjeničko-pešterske visoravni. In: Anonymous (*ed.*): Zbornik sažetaka, 5. Kongres ekologija Jugoslavije, Beograd, 22-27. septembar 1996: 137. – Društvo ekologija Srbije, u saradnji sa Društvom ekologija Crne Gore, Beograd. [in Serbian]
- Buttler, K. P. (2007): Beiträge zur Fortschreibung der Florenliste Deutschlands (Pteridophyta, Spermatophyta). – *Kochia* **2**: 43–49.
- Caković, D., Stešević, D. (2020): Katalog vaskularne flore Crne Gore **3**. – Crnogorska akademija nauka i umjetnosti, Katalozi 12, Odjeljenje prirodnih nauka 11, Podgorica. [in Montenegrin]
- Caković, D., Cresti, L., Stešević, D., Schönswetter, P., Frajman, B. (2021): High genetic and morphological diversification of the *Euphorbia verrucosa* alliance (Euphorbiaceae) in the Balkan and Iberian peninsulas. – *Taxon* **70**(2): 286–307.
- Cannon, J. F. M. (1968): *Angelica* L. In: Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M., Webb, D. A. (*eds*): Flora Europaea **2**: 357–358. – University Press, Cambridge.
- Cristofolini, G. (1991): Taxonomic Revision of *Cytisus* Desf. Sect. *Tubocytisus* DC. (Fabaceae). – *Webbia* **45**(2): 187–219.
- CWG (2021): Global Compositae Database. – Compositae Working Group [<https://www.compositae.org>] (accessed: October 1st 2021).
- Davis P. H. (*ed.*) (1970): Flora of Turkey and the East Aegean Islands **3**. – Edinburgh University Press, Edinburgh.
- Davis P. H. (*ed.*) (1972): Flora of Turkey and the East Aegean Islands **4**. – Edinburgh University Press, Edinburgh.
- Delforge, P. (2006): Orchids of Europe, North Africa and the Middle East. – A. & C. Black., London.
- Díaz Lifante, Z. (2013): *Asphodelus*. In: Castroviejo, S., Rico, E., Crespo, M. B., Quintanar, A., Herrero, A., Aedo, C. (*eds*): Flora Iberica **20**: Liliaceae – Agavaceae: 276–308. – Real Jardín Botánico, CSIC, Madrid.
- Diklić, N. (1972a): *Chamaecytisus* Link. In: Josifović, M. (*ed.*): Flora SR Srbije **4**: 497–515. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Diklić, N. (1972b): *Thlaspi* L. In: Josifović, M. (*ed.*): Flora SR Srbije **3**: 347–355. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]

- Diklić, N. (1974): *Stachys* L. In: Josifović, M. (ed.): Flora SR Srbije 6: 408–432. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Diklić, N. (1975): Liliaceae A. L. Juss. In: Josifović, M. (ed.): Flora SR Srbije 7: 492–568. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Dimopoulos, P., Raus, T., Bergmeier, E., Constantinidis, T., Iatrou, G., Kokkini, S., Strid, A., Tzanoudakis, D. (2013): Vascular Plants of Greece. An annotated checklist. – Botanic Garden and Botanical Museum Berlin-Dahlem, Berlin, Hellenic Botanical Society, Athens.
- Djordjević, V., Niketić, M., Tomović, G. (2018): Liliopsida: Orchidaceae. In: Niketić, M., Tomović, G. (2018): An annotated Checklist of Vascular Flora of Serbia 1. Lycopodiopsida, Polypodiopsida, Gnetopsida, Pinopsida and Liliopsida [Catalogue of taxa]: 102–110. – Serbian Academy of Sciences and Arts, Belgrade.
- Domina, G. (2017): Dipsacaceae. In: Greuter, W. & Raab-Straube, E. (eds): Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. [<http://ww2.bgbm.org/EuroPlusMed/PTaxonDetail.asp?NameId=14103&PTRefFk=7000000>](retrieved September 1st 2021)
- Dostál, J. (1976): *Centaurea* L. In: Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M., Webb, D. A. (eds): Flora Europaea 4: 254–301. – University Press, Cambridge.
- Duraki, Š., Niketić, M. (2018): *Hieracium djimilense* subsp. *brachytrichophyes* O. Behr & al. In: Raab-Straube, E., Raus, T. (eds): Euro+Med-Check Notulae, 9: 201. – **Willdenowia** 48(2): 195–220.
- Ehrendorfer, F. (1976): *Knautia* L. In: Tutin, T., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M., Webb, D. A. (eds): Flora Europaea 4: 60–67. – Cambridge University Press, Cambridge.
- Euro+Med (2011a): *Cytisus* L. [<http://ww2.bgbm.org/EuroPlusMed/PTaxonDetail.asp?NameCache=Cytisus&PTRefFk=8500000/>] (accessed: October 1st 2021)
- Euro+Med (2011b): *Asphodelus* L. [<http://ww2.bgbm.org/EuroPlusMed/PTaxonDetail.asp?NameCache=Asphodelus&PTRefFk=8000000/>] (accessed: October 1st 2021)
- Fernandes, R. (1972): *Alkanna* Tausch. In: Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M., Webb, D. A. (eds): Flora Europaea 3: 95–97. – University Press, Cambridge.
- Gajić, R. M. (1953): Prilog poznavanju flore Majdanpečke domene. – **Glasnik Prirodnjačkog muzeja srpske zemlje, serija B** 5-6: 113–141. [in Serbian]
- Gajić, M. (1975): Fam. Asteraceae Dumortier. In: Josifović, M. (ed.): Flora SR Srbije 7: 1–465. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Gajić, M. (1983): Flora Deliblatske peščare. – Prirodno-matemtički fakultet OOUR Institut za biologiju Novi Sad, Šumsko-industrijski kombinat „Pančevo“ OOUR Specijalni prirodni rezervat „Deliblatski pesak“ Pančevo, Beograd. [in Serbian]
- Gajić, M. (1986): Flora i vegetacija Subotičke peščare. – Šumarski fakultet Beograd, Šumarsko gazdinstvo Subotica, Subotica. [in Serbian]

- Gajić (1988): Flora Nacionalnog parka Tara. – Šumarski fakultet Univerziteta u Beogradu, Šumska sekcija Bajina Bašta, Beograd, Bajina Bašta. [in Serbian]
- Gajić, M. (1992): Ranunculaceae A. L. Juss. In: Sarić, M. R. (*ed.*): Flora Srbije 1: 274–410. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- GBIF (2021): GBIF Home Page (via GBIF API). [<https://www.gbif.org>] (accessed: October 1st 2021).
- Geltman, D. V. (1992): *Urtica galeopsifoia* Wierzb. ex Opiz (Urticaceae) in Wicken Fen (E. England). – *Watsonia* 19: 127–129.
- Gottschlich, G. (1991): Über Einige Bemerkenswerte Hieracien Süd-Jugoslawiens. – *Societe pour l'echange des Plantes Vasculaires de l'Europe et du Bassin Mediterranéen - Bulletin* 23: 85–86.
- Greuter, W. (2006+): Compositae (pro parte majore). In: Greuter, W. & Raab-Strube, E. (*eds*): Compositae. Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. [<http://ww2.bgbm.org/EuroPlusMed/PTaxonDetail.asp?NameId=14103&PTRefFk=7000000>] (retrieved September 1st 2021)
- Greuter, W., Burdet, H. M., Long, G. (*eds*) (1986): Med-Checklist 3. – Conservatoire et Jardin botaniques de la Ville de Genève, Med-Checklist Trust of OPTIMA, Genève.
- Greuter, W., Burdet, H. M., Long, G. (*eds*) (1989): Med-Checklist 4. – Conservatoire et Jardin botaniques de la Ville de Genève, Med-Checklist Trust of OPTIMA, Genève.
- Große-Veldmann, B. (2016): Systematics, Taxonomy, and Evolution of *Urtica* L. (Urticaceae). – Mathematisch-Naturwissenschaftlichen Fakultät, Rheinischen Friedrich-Wilhelms-Universität Bonn, Bonn. (PhD Thesis)
- Hayek, A. (1901): Die *Centaurea*-Arten Österreich-Ungarns. – *Österreichische Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Klasse* 70. – K.K. Hof- und Staatsdruckerei, Vienna.
- Hayek, A. (1926): Prodrum florae peninsulae balcanicae 1(5–6). – *Repertorium specierum novarum regni vegetabilis, Beihefte* 30(1): 673–960.
- Hayek, A. (1931): Prodrum florae peninsulae balcanicae 2(6). – *Repertorium specierum novarum regni vegetabilis, Beihefte* 30(2): 769–960.
- Henning, T., Quandt, D., Grosse-Veldmann, B., Monro, A., Weigend, M. (2014): Weeding the Nettles II: A delimitation of “*Urtica dioica* L.” (Urticaceae) based on morphological and molecular data, including a rehabilitation of *Urtica gracilis* Ait. – *Phytotaxa* 162(2): 61–83.
- Heuffel, J. (1858): Enumeratio plantarum in Banatu Temesiense sponte crescentu et frequentius culturarum. – *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien* 8: 39–240.
- Jalas, J., Suominen, J. (1979): Atlas Florae Europaeae. Distribution of vascular plants in Europe 4. Polygonaceae. – The Committee for Mapping the Flora of Europe, Societas Biologica Fennica, Helsinki.
- Janković, M. M., Nikolić, V. (1972): Euphorbiaceae J. St.-Hill. In: Josifović, M. (*ed.*): Flora Srbije 3: 537–570. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]

- Jogan, N. (2001): Materials for the Atlas of Flora of Slovenia. – Center za kartografijo favne i flore, Miklavž na Dravskom polju. [in Slovenian]
- Jovanović, B. (1970): *Pinus* L. In: Josifović, M. (ed.): Flora SR Srbije 1: 145–154. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Jovanović, B. (1992): *Pinus* L. In: Sarić, M. R. (ed.): Flora Srbije 1: 194–208. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Jovanović-Dunjić, R. (1955): Tipovi pašnjaka i livada Suve Planine. – **Srpska akademija nauka, Institut za ekologiju i biogeografiju, Zbornik radova** 6(2): 1–104. [in Serbian]
- Kevrešan, D., Stevanov, M. (2017): Urban green spaces: Dendroflora in designed city parks on the example of Zrenjanin (Serbia). – **Topola** 199–200: 21–34.
- Kožuharov, S. (1989): *Alkana* Tausch. In: Jordanov, D. (ed.): Flora Reipublicae Popularis Bulgaricae 9: 137–145. – Academia scientarum bulgarica, Sofia. [in Bulgarian]
- Krasniqui, F., Hundozi, B., Pajazitaj, Q. (1990): A short contribution to the flora of Kosovo. – **Razprave IV. Razreda SAZU** 31(6): 97–104.
- Krivošej, Z. Đ. (2013): Flora planine Grmija kod Prištine. Magistarska teza. – Univerzitet u Prištini sa privremenim sedištem u Kosovskoj Mitrovici, Kosovska Mitrovica. [in Serbian]
- Kukić, J. Petrović, S, Niketić, M. (2006): Antioxidant Activity of Four Endemic *Stachys* Taxa. – **Biological and Pharmaceutical Bulletin** 29(4): 725–729.
- Kuzmanov, B. (1976): *Chamaecytisus* Link. In: Jordanov, D. (ed.): Flora Reipublicae Popularis Bulgaricae 6: 74–119. – Academia scientarum bulgarica, Sofia. [in Bulgarian]
- Lazarević, P., Krivošej, Z., Tomović, G., Stevanović, V. (2013): *Euphorbia montenegrina* (Bald.) Rohlena. In: Vladimirov, V., Dane, F., Stevanović, V., Tan. K. (eds): New floristic records in the Balkans, 22: 281–282. – **Phytologia Balcanica** 19(2): 279–283.
- Lenherr, A. (1983): Biosystematische und Chemotaxonomische Untersuchungen in der Artengruppe *Stachys recta* L. – Eidgenössische Technischen Hochschule, Zürich, Zürich. (PhD Thesis)
- Lenherr, A., Baltisberger, M. (1984): *Stachys beckeana* (Labiatae) in Albanien und Jugoslawien. – **Plant Systematics and Evolution** 145: 97–104.
- Löve, Á., Löve, D. (1961): Chromosome Numbers of Central and Northwest European Plant Species. – **“Opera Botanica” a Societate Botanica Lundensi** 5, Almqvist and Wiksell, Stockholm.
- Marinčić (2005): Spomenik prirode „Krečnjački sprud Kamilja“. – Zavod za zaštitu prirode Srbije, Beograd. (elaborate) [in Serbian]
- Matevski, V. (2005): Flora na Republika Makedonija 1(6). – Makedonska akademija na naukite i umetnostite, Skopje. [in Macedonian]
- Matevski, V. (2010): Flora na Republika Makedonija 2(1). – Makedonska akademija na naukite i umetnostite, Skopje. [in Macedonian]

- Meyer, F. K. (1973): *Conspectus der "Thlaspi" - Arten Europas, Afrikas und Vorderasias*. – *Feddes repertorium specierum novarum regni vegetabilis* **84(5–6)**: 449–469.
- Micevski, K. (1980): *Knautia degeni* Borb. i *Knautia magnifica* Boiss. et Orph. vo florata na Makedonija. – *Fragmenta Balcanica* **10**: 155–165. [in Macedonian with English abstract and German summary]
- Micevski, K. (1995): Flora na Republika Makedonija **1(3)**. – Makedonska akademija na naukite i umetnostite, Skopje. [in Macedonian]
- Micevski, K. (2001): Flora na Republika Makedonija **1(5)**. – Makedonska akademija na naukite i umetnostite, Skopje. [in Macedonian]
- Milović, M. (2004): Naturalised species from the genus *Conyza* Less. (Asteraceae) in Croatia. – *Acta Botanica Croatica* **63(2)**: 147–170.
- Molnár, Cs., Csathó, A. I., Molnár, A. P., Pifkó, D. (2019): Amendments to the alien flora of the Republic of Moldova. – *Studia Botanica Hungarica* **50(1)**: 225–240.
- Niketić, M. (1999): *Hieracium oxyodon* Fries subsp. *oxyodon*. In: Stevanović, V. (ed.): *The Red Data Book of Flora of Serbia* **1**. Extinct and critically endangered taxa: 344–345, 511–512. – Ministry of Environment of the Republic of Serbia, Faculty of Biology, University of Belgrade, Institution for protection of nature of the Republic of Serbia, Belgrade. [in Serbian with English Summary]
- Niketić, M. (2000): Novi taksoni za floru cvetnica Srbije i susednih područja. In: 6. Simpozijum o flori jugoistočne Srbije i susednih područja sa međunarodnim učesćem: 32–33. – Sokobanja (Abstract). [in Serbian]
- Niketić, M. (2007): *Centaurea arenaria* Willd. In: Greuter, W., Raab-Straube, E. (eds): *Euro+Med Notulae*, **3**: 140. – *Willdenowia* **37(1)**: 139–189.
- Niketić, M. (2010): Novi taksoni za floru cvetnica Srbije i susednih područja. 2. In: X Simpozijum o flori jugoistočne Srbije i susednih regiona, Apstrakti: 32–33. – Niš (Abstract). [in Serbian]
- Niketić, M., Nikolov, Z. (2021): *Stachys beckeana*. In: Matevski, V. (ed.): *Flora na Republika Makedonija* **2(2)**: 291–292. – Makedonska akademija na naukite i umetnostite, Skopje. [in Macedonian]
- Niketić, M., Tomović, G. (2018): An annotated Checklist of Vascular Flora of Serbia 1. Lycopodiopsida, Polypodiopsida, Gnetopsida, Pinopsida and Liliopsida. – Serbian Academy of Sciences and Arts, Belgrade.
- Niketić, M., Tomović, G., Perić, R., Zlatković, B., Anačkov, G., Djordjević, V., Jogan, N., Radak, B., Duraki, Š., Stanković, M., Kuzmanović, N., Lakušić, D., Stevanović, V. (2018a): Material on the annotated checklist of vascular flora of Serbia. Nomenclatural, taxonomic and floristic notes I. – *Bulletin of the Natural History Museum* **11**: 101–180.
- Niketić, M., Tomović, G., Boža, P., Krivošej, Z., Lazarević, P., Perić, R., Zlatković, B. (2018b): Spisak taksona / List of taxa. In: Niketić, M., Tomović, G. (2018): An annotated Checklist of Vascular Flora of Serbia 1. Lycopodiopsida, Polypodiopsida, Gnetopsida, Pinopsida and Liliopsida [Catalogue of taxa]: 141–174. – Serbian Academy of Sciences and Arts, Belgrade.

- Niketić, M., Tomović, G., Anačkov, G., Bartula, M., Djordjević, S., Djordjević, V., Djordjević-Milošević, S., Duraki, Š., Gavrilović, M., Janačković, P., Kabaš, E., Kuzmanović, N., Lakušić, D., Lazarević, P., Perić, R., Randjelović, V., Savić, D., Stanković, M., Stevanoski, I., Stojanović, V., Vasić, O., Vukojičić, S., Zlatković, B., Stevanović, V. (2020): Material on the Annotated Checklist of Vascular Flora of Serbia. Nomenclatural, taxonomic and floristic notes II. – **Bulletin of the Natural History Museum in Belgrade** 13: 87–169.
- Nikolić, T. (2021): Flora Croatica Database. – Faculty of Science, University of Zagreb, Zagreb. [<http://hirc.botanic.hr/fcd/>] (accessed: October 1st 2021).
- Nikolić, V. (1973): Apiaceae Lindley. In: Josifović, M. (ed.): Flora SR Srbije 5: 183–349. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Nikolić, V., Diklić, N. (1983): Novi podaci o nalazištu biljnih vrsta u SR Srbiji (X). – **Glasnik Prirodnjačkog muzeja u Beogradu, serija B** 38: 11–17. [in Serbian]
- Nikolić, V., Sigunov, A., Diklić, N. (1986): Dopuna flori SR Srbije novim podacima o rasprostranjenju biljnih vrsta. In: Sarić, M. R. (ed.): Flora SR Srbije 10, Dodatak (2): 257–336. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Nikolov, Z. (2021): *Stachys* L. – *S. recta* L., *S. atherocalyx* C. Koch. In: Matevski, V. (ed.): Flora na Republika Makedonija 2(2): 288–293. – Makedonska akademija na naukite i umetnostite, Skopje. [in Macedonian]
- Obradov, D., Radak, B., Bokić, B., Anačkov, G. (2020): Floristic diversity of the central part of the South Bačka loess terrace (Vojvodina, Serbia). – **Biologia Serbica** 42(2): 5–25.
- Ochsmann, J. (2000): Morphological und molekularsystemtische Untersuchungen an der *Centaurea stoebe* L. – Gruppe (Asteraceae-Cardueae) in Europa. – **Dissertationes Botanicae** 324, J. Cramer Verlag, Berlin.
- Pančić, J. (1856): Verzeichniss der in Serbien wildwachsenden Phanerogamen, nebst den Diagnosen einiger neuer Arten. – **Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien** 6: 475–598.
- Pančić, J. (1867): Botanische Ergebnisse einer i. J. 1866 unternommenen Reise in Serbien. – **Österreichische botanische Zeitschrift** 17: 166-173, 201–209.
- Pančić, J. (1870): Botanische Reise in Serbien im Jahre 1869. – **Österreichische botanische Zeitschrift** 20: 173–182, 205–208.
- Pančić, J. (1874): Flora kneževine Srbije. – Državna štamparija, Beograd. [in Serbian]
- Pančić, J. (1884): Dodatak flori kneževine Srbije. – Kralj.-srp. državna štamparija, Beograd. [in Serbian]
- Pavlović, Z. (1955): O pašnjačkoj i livadskoj vegetaciji centralnog dela Kopaonika. – **Glasnik Prirodnjačkog muzeja srpske zemlje, Serija B** 7(1): 47–76. [in Serbian]
- Pedersen, H. Æ., Faurholdt, N. (2007): *Ophrys*: the bee orchids of Europe. – Kew Publishing, Royal Botanic Gardens, Kew.
- Petrova, A. (2012): Lugačkovi – Dipsacaceae Juss. In: Peev, D. R., Kožuharov, S. I., Ančev, M. E. (eds): Flora Reipublicae Bulgariae 11: 25–82. – Editio Academica „Professor Marin Drinov“, Sofia. [in Bulgarian]
- Petrović, S. (1882): Flora okoline Niša. – Kraljevsko-srpska državna štamparija, Beograd. [in Serbian]

- Petrović, S. (1885): Dodatak flori okoline Niša. – Kraljevsko-srpska državna štamparija, Beograd. [in Serbian]
- Petrović, B., Randelović, V., Zlatković, B. (2008): Flora i vegetacija Krupačkog Blata kod Pirota u istočnoj Srbiji. In: Randelović, V. (ed.): Zbornik radova, 9. Simpozijum o flori jugoistočne Srbije i susednih područja sa međunarodnim učešćem, Niš, 01-03. septembar 2007: 63–72. – Odsek za biologiju sa ekologijom Prirodno-matematičkog fakulteta Univerziteta u Nišu, Biološko društvo „Dr Sava Petrović“, Niš. [in Serbian]
- Pifkó, D. (2005): Taxonomic revision and typification of *Cytisus* (Leguminosae) in the Herbarium Carpato-Pannonicum in Budapest (BP). – **Annales Historico-Naturales Musei Nationalis Hungarici** 97: 21–32.
- Pifkó, D. (2015): Index of scientific names of *Chamaecytisus* (Leguminosae) taxa. – **Studia Botanica Hungarica** 46(2): 175–203.
- Pifkó, D. (2018): Morphological studies on *Chamaecytisus lasiosemius* (Boiss.) Pifkó and other Balkan *Chamaecytisus* species. – **Botanica Serbica** 42(supplement 1) (7BBC Book of abstracts): 49 (abstract).
- Pifkó, D., Barina, Z. (2016): Two new *Chamaecytisus* species (Leguminosae-Papilionoideae) from Albania, with an overview on the *Ch. ratisbonensis* and *Ch. eriocarpus* species groups. – **Studia Botanica Hungarica** 47(1): 163–178.
- Popović, M., Marković, M. (2012): Analiza asortimana perena u cvetnjacima beogradskih parkova sa posebnim osvrtom na invazivne taksone. – **Bulletin of the Faculty of Forestry** 106: 169–182. [in Serbian, with English summary]
- POWO (2020): Plants of the world online. – The Royal Botanic Gardens, Kew. [http://www.plantsoftheworldonline.org/] (accessed: October 1st 2021)
- Prodan (1930): Centaureeae României (Centaureae Romaniaae). – **Bul. Acad. Stud. Agron. Cluj, Monographie**. – Institutul de arte grafice “Ardealul”, Cluj.
- Prodanović, D., Jovanović, S., Krivošej, Z. (2008): Ecological and phytogeographical characteristics of ruderal flora in Kosovska Mitrovica and its surroundings. – **Natura Montenegrina** 7(3): 307–327.
- Randelović, V., Matejić, J., Zlatković, B. (2008): Flora i vegetacija Batušinačkih bara kod Niša. In: Randelović, V. (ed.): Zbornik radova, 9. Simpozijum o flori jugoistočne Srbije i susednih područja sa međunarodnim učešćem, Niš, 01-03. septembar 2007: 19–40. – Odsek za biologiju sa ekologijom Prirodno-matematičkog fakulteta Univerziteta u Nišu, Biološko društvo „Dr Sava Petrović“, Niš. [in Serbian]
- Rechinger, K. H. (1935): Ergebnisse einer botanischen Reise in den Bertiscus (Nordalbanische Alpen). – **Repertorium specierum novarum regni vegetabilis** 38: 137–152, 319–389.
- Rechinger, K. H. (1943): Die *Rumex*-Arten der Balkanhalbinsel. – **Mitteilungen des Thüringischen Botanischen Vereins** 51: 93–217.
- Rechinger, K. H. (1965): Zur Kenntnis der europäischen Arten der Gattung *Alkanna*. – **Annalen des Naturhistorischen Museums in Wien** 68: 191–220.
- Rejlová, L., Chrtek, J., Trávníček, P., Lučanová, M., Vít, P., Urfus, T. (2019): Polyploid evolution: The ultimate way to grasp the nettle. – **PLoS ONE** 14(7): e0218389 (1–24).

- Rejlová, L., Böhmová, A., Chumová, Z., Hořčicová, Š., Josefiová, J., Schmidt, P.-A., Trávníček, P., Urfus, T., Vít, P., Chrtek, J. (2021): Disparity between morphology and genetics in *Urtica dioica* (Urticaceae). – **Botanical Journal of the Linnean Society** 195(4): 606–621.
- Rešetnik, I., Frajman, B., Bogdanović, S., Ehrendorfer, F., Schönswetter, P. (2014): Disentangling relationships among the diploid members of the intricate genus *Knautia* (Caprifoliaceae, Dipsacoideae). – **Molecular Phylogenetics and Evolution** 74: 97–110.
- Rohlena, J. (1942): Conspectus Florae Montenegrinae. – **Preslia** 20–21: 1–506.
- Shiyan, N. M., Mosyakin, S. L., Fedoronchuk, M. M., Kholodny, M. G. (2010): Typification of taxa of Asteraceae in the flora of Ukraine: Genera *Centaurea* L. – **Ukrayins'kyi Botanicnyi Zhurnal, Kiev** 67(6): 818–831.
- Simkovic, L. (1877): Descriptions plantarum novarum. – **Természetráji füzetek** 1: 168–170.
- Slavnić, N. (1972): *Chamaecytisus* Link. In: Josifović, M. (ed.): Flora SR Srbije 3: 54–90. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Stojanović, V., Stevanović, V. (2008): Prikaz flore planine Gučevo u severozapadnoj Srbiji. – **Zaštita prirode** 59(1–2): 93–108. [in Serbian]
- Tchichatscheff, P. (1860): Asie Mineure, description physique, statistique et archéologique de cette contrée 3 (Botanique). – Gide, Paris.
- Tomović, G., Niketić, M. (2005): *Gagea spathacea* (Hayne) Salisb. (Liliaceae) – new species for the flora of Serbia. – **Archives of Biological Sciences, Beograd**, 57(4): 291–294.
- Tomović, G., Niketić, M., Lakušić, D., Randelović, V., Stevanović, V. (2014): Balkan endemic plants in Central Serbia and Kosovo regions: distribution patterns, ecological characteristics and centres of diversity. – **Botanical Journal of the Linnean Society** 176(2): 173–202.
- Uechtritz, R. (1863): Nachträge zur Flora von Schlesien (II.) – **Verhandlungen des Botanischen Vereins der Provinz Brandenburg und die angrenzenden Länder** 5: 118–157.
- Urfus, T., Kopecký, M., Urfusová, R., Chrtek, J. (2021): Whole genome duplication increases ecological niche breadth of the perennial herb *Urtica dioica*. – **Preslia** 93: 305–319.
- Uotila, P. (2011): Urticaceae. In: Greuter, W. & Raab-Straube, E. (eds): Compositae. Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. [http://ww2.bgbm.org/EuroPlusMed/PTaxon_Detail.asp?NameId=8000163&PTRefFk=7300000] (retrieved September 1st 2021)
- Uotila, P. (2017): Polygonaceae. In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity (retrieved November 1st 2021).
- Valdés, B. (2011): Boraginaceae. In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. [<http://ww2.bgbm.org/EuroPlusMed/>] (retrieved November 1st 2021).

- Vandas, C. (1909): Reliquiae Formánekianae. Enumeratio critica plantarum vascularium, quam itineribus in Haemo peninsula et Asia Minore (Bithynia) factis collegit Dr. Ed. Formánek. – Jos. Jelínek, Brunae [Brno].
- Velenovský, J. (1891): Flora Bulgarica. Descriptio et enumeratio systematica plantarum vascularium in principatu Bulgariae sponte nascentium. – Fr. Rivnáč, Pragmae [Prague].
- Wagner, J. (1910): A magyarországi Centaureák ismertetése (Centaureae Hungariae). – **Mathematikai és Természettudományi közlemények** 30(6): 269–451.
- Weigend, M. (2006): Die Erben Pokornys – Ein Beitrag zur Abgrenzung der Sippen *Urtica galeopsifolia* und *Urtica pubescens* in Mittel- und Osteuropa. – **Hoppea** 66: 101–118.
- Wirth, T., Csiky, J. (2020): Contributions to the Hungarian alien flora: *Erigeron bonariensis* L. and *E. sumatrensis* Retz. (Asteraceae) in Hungary. – **Botanikai Közlemények** 107(1): 33–43.

**МАТЕРИЈАЛ ЗА КРИТИЧКУ ЛИСТУ ВРСТА
ВАСКУЛАРНЕ ФЛОРЕ СРБИЈЕ.
НОМЕНКЛАТУРНИ, ТАКСОНОМСКИ
И ФЛОРИСТИЧКИ ПРИЛОЗИ III**

РЕЗИМЕ

МАРЈАН НИКЕТИЋ, ГОРДАНА ТОМОВИЋ, БОЈАНА БОКИЋ,
УРОШ БУЗУРОВИЋ, ШЕМИЈА ДУРАКИ, ВЛАДАН ЂОРЂЕВИЋ,
САЊА ЂУРОВИЋ, ЗОРАН КРИВОШЕЈ, ПРЕДРАГ ЛАЗАРЕВИЋ,
РАНКО ПЕРИЋ, ДАНИЈЕЛА ПРОДАНОВИЋ, БОРИС РАДАК,
МИЛИЦА РАТ, МИЛАНА РАНИМИРОВИЋ, ВЛАДИМИР СТЕВАНОВИЋ

У раду је предложено осам нових номенклатурних комбинација и назначена су два нова синонима. Поред тога, представљено је 11 таксона (врста и подврста) васкуларне флоре који су нови за флору Србије (од тога девет аутохтоних и две алохтоне биљке). Потврђено је и присуство две васкуларне биљке за флору Србије. Шест биљних таксона представљају новину за ужу Србију, Војводину или Косово и Метохију. Такође је присуство неких таксона у Србији или у њеним територијалним јединицама оповргнуто.