

**MATERIAL ON THE RED BOOK OF FLORA OF SERBIA III –  
VASCULAR PLANTS I (REGIONALLY EXTINCT AND  
CRITICALLY ENDANGERED TAXA).  
CHOROLOGICAL NOTES**

GORDANA TOMOVIĆ<sup>1</sup>, MARJAN NIKETIĆ<sup>2,3\*</sup>, DMITAR LAKUŠIĆ<sup>1</sup>, BOJAN ZLATKOVIĆ<sup>4</sup>, SNEŽANA VUKOJIČIĆ<sup>1</sup>, GORAN ANAČKOV<sup>5</sup>, STEFAN BOGOSAVLJEVIĆ<sup>6</sup>, UROŠ BUZUROVIĆ<sup>7</sup>, ŠEMIJA DURAKI<sup>8</sup>, VLADAN DJORDJEVIĆ<sup>1</sup>, SANJA ĐUROVIĆ<sup>9</sup>, EVA KABAS<sup>1</sup>, NEVENA KUZMANOVIĆ<sup>1</sup>, MAJA LAZAREVIĆ<sup>1</sup>, PREDRAG LAZAREVIĆ<sup>1</sup>, ŽARKO MLADENOVIĆ<sup>10</sup>, JELICA OBRADOVIĆ NOVAKOVIĆ<sup>1</sup>, RANKO PERIĆ<sup>11</sup>, IVANA STEVANOSKI<sup>1</sup>

<sup>1</sup> Institute of Botany and Botanical Garden, Faculty of Biology, University of Belgrade, Takovska 43, 11000 Belgrade, Serbia, e-mail: gtomovic@bio.bg.ac.rs; vdjordjevic@bio.bg.ac.rs; ekabas@bio.bg.ac.rs; nkuzmanovic@bio.bg.ac.rs; dlakusic@bio.bg.ac.rs; predrag.lazarevic@bio.bg.ac.rs; jelica@bio.bg.ac.rs; ijankovic@bio.bg.ac.rs; sneza@bio.bg.ac.rs

<sup>2</sup> Natural History Museum, Njegoševa 51, 11000 Belgrade, Serbia, e-mail: mniketic@nhmbeo.rs

<sup>3</sup> Serbian Academy of Sciences and Arts, 11000 Belgrade, Serbia

<sup>4</sup> Department of Biology and Ecology, Faculty of Natural Sciences and Mathematics, University of Niš, Višegradska 33, 18000 Niš, Serbia, e-mail: bojanzlat@pmf.ni.ac.rs

<sup>5</sup> Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Trg Dositeja Obradovića 3, 21102 Novi Sad, Serbia, e-mail: goran.anackov@dbe.uns.ac.rs

<sup>6</sup> Health Institution Lilly Drogerie, Trg Oslobođenja 14, 19350 Knjaževac, Serbia, e-mail: stefan.bogosavljevic@gmail.com

<sup>7</sup> Institute of Soil Science, Teodora Dražera 7, 11000 Belgrade, Serbia, e-mail: soilsbuzurovic@gmail.com

<sup>8</sup> 8<sup>th</sup> Belgrade High School, 71 Grčića Milenka, 11000 Belgrade, Serbia, e-mail: semijaduraki@gmail.com

<sup>9</sup> Faculty of Agriculture, University of Niš, Kosančićeva 4, 37000 Kruševac, Serbia, e-mail: djurovic.sanja@ni.ac.rs

<sup>10</sup> Faculty of Pharmacy, University of Belgrade, Vojvode Stepe 450, 11221 Belgrade, Serbia, e-mail: zarko.mladenovic@pharmacy.bg.ac.rs

<sup>11</sup> Institute for Nature Conservation of Vojvodina province, Radnička 20a, 21101 Novi Sad, Serbia, e-mail: ranko.peric@pzzp.rs

The paper presents new and unpublished distribution data of 45 species and subspecies that will be included in the publication “*The Red Book of Flora of Serbia III – Vascular plants I (Regionally Extinct and Critically Endangered taxa)*”. Of this number, 25 taxa have been previously processed in the “*The Red Data Book of Flora of Serbia I – Extinct and Critically Endangered taxa*” (Stevanović ed. 1999) and new chorological records not previously published in this publication are presented here. These data include either old herbarium specimens that were not available at the time of the publication of the Red Book, or newly discovered localities in the last 25 years. In some cases, already known localities are presented, but with new data on the status of populations. In addition, for 20 species and subspecies which will be included for the first time in a publication “*The Red Book of Flora of Serbia III – Vascular plants I (Regionally Extinct and Critically Endangered taxa)*” new distribution records are also presented.

**Key words:** vascular flora, Serbia, extinct taxa, critically endangered taxa, distribution

## INTRODUCTION

More than 25 years have passed since the printing of the first edition of „*The Red Data Book of Flora of Serbia I – Extinct and Critically Endangered taxa*“ (Stevanović 1999), a pioneering work on the conservation biology of vascular plants in Serbia. In this volume, 171 plant taxa (species and subspecies levels) were presented, of which 50 taxa were considered extinct (EX-Srb, EX-Srb DD), while 121 species and subspecies were critically endangered in Serbia (CR-Srb, CR-Srb DD). In that publication, the IUCN criteria and categories were applied for the first time in Serbia, and a special application was made for the assessment of the threatened status of plant taxa in our country.

A kind of addition and correction to „*The Red Data Book of Flora of Serbia I*“ is represented by Tomović *et al.* (2009). In this paper, 25 species and subspecies were re-evaluated, of which six plant species were rediscovered for the flora of Serbia and they were assigned the status of critically endangered (CR) taxa. New field data were presented for 21 plants that were included in the category of critically endangered taxa in „*The Red Data Book of Flora of Serbia I*“. Additionally, population size on the studied localities and new threatened status were presented for each taxon. For 16 plant species, previously determined as critically endangered (CR) in Serbia, the threat status was changed to endangered (EN).

In a period of 25 years, major changes have taken place at the world level; new versions of the IUCN criteria (IUCN 2012) and categories (IUCN 2012a) were published. In addition, the digitization of specimens from herbarium collections around the world and their placement on the electronic services for the examination of (predominantly type) plant material have become available in the last couple of decades. As a result, scanned plant material can be examined very quickly and in depth, primarily in terms of nomenclatural, taxonomic, floristic and chorological research. The same applies to the services used for literature review, such as the latest journals and old and rare books with important protologues or floristic data. Therefore, after many years of efforts of a number of botanists, extensive literature and/or herbarium databases related to the world flora, as well as flora of Serbia, have been formed and to a considerable extent filled.

At the level of Serbia, several important publications were accomplished: Flora of Serbia 2 (Stevanović ed. 2012), Flora of Serbia 3 (Stevanović & Niketić eds. 2022), as well as the An Annotated Check-list of Vascular Flora of Serbia (Niketić & Tomović 2018). It is important to emphasize that a large number of nomenclature and taxonomic papers were published for the flora of Serbia, in which revisions of a large number of plant groups were carried out, and a significant number of taxa (species, subspecies and hybrids) new to science were described. Some of them will be included in “*The Red Book of vascular Flora of Serbia III – Vascular plants*” I such as: *Centaurea ozrenii* Niketić, Tomović & Buzurović (Buzurović *et al.* 2024), *C. zlatiborensis* Zlatković, Novaković & Janačković (Novaković *et al.* 2018), *Hieracium bertisceum* Niketić (Niketić 2005), *H. durmitoricum* (Rohlena & Zahn) Niketić (Niketić *et al.* 2003), *Edraianthus canescens* D. Lakušić, Niketić & Stevan. (Lakušić *et al.* 2013), *E. stankovicii* (Lakušić) D. Lakušić & Surina (Lakušić *et al.* 2016), *Pedicularis ernesti-mayeri* Stevan., Niketić & D. Lakušić (Stevanović *et al.* 2001), *Androsace komovensis* Schönsw. & Schneew. (Schönschwetter & Schneeweiss 2009) and *Stipa stevanoviciorum* Kabaš & D. Lakušić (Kabaš *et al.* 2025).

In the end, a huge number of floristic and chorological records to the flora of Serbia were published in previous years, which contributed to a better knowledge of the distribution of vascular plants in our country. That was the starting point and motivation for creating an extensive database on the distribution of species and subspecies in Serbia. Distribution data from the database, in addition to information on the populations size and threatened factors for plant taxa, made it possible to carry out new assessments of the threat status of a large number of species of the vascular flora of Serbia, which resulted with “*Preliminary Red List of the Flora of Serbia*” (Tomović & Lakušić 2022).

“*The Red Book of Flora of Serbia III – Vascular plants I (Regionally Extinct and Critically Endangered taxa)*” (a kind of “second edition” of the first one) is in preparation, so the indispensable basis for publishing it, is the presentation of the new or previously unpublished distribution data for plant species and subspecies included in this book.

## MATERIAL AND METHODS

The presentation of new or unpublished data on the distribution of regionally extinct and critically endangered species and subspecies is based on an intensive verification of herbarium material deposited in national and international collections, targeted field research, as well as consulting the latest taxonomic, floristic and chorological literature from Serbia, the Balkan Peninsula and Europe.

Collected material of plant species is deposited in the Herbarium of the Institute of Botany and Botanical Garden “Jevremovac”, University of Belgrade (BEOU) (which includes General herbarium, BEOU-Pančić – Herbarium collection of Josif Pančić *Herbarium Pancicanum* and BEOU-KEGB – Herbarium collection of Department of Plant Ecology and Geography), the Herbarium of the Natural History Museum in Belgrade (BEO), the Herbarium of the Natural History Museum in Rijeka (NHMR), the Herbarium of Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad (BUNS), the Herbarium of the Faculty of Pharmacy, University of Belgrade (HFF), the Herbarium of the Institute for Nature Conservation of the Vojvodina province (PZZP), the Herbarium of the University of Zagreb – *Herbarium Croaticum* (ZA) (acronyms according to Thiers 2026) and the Herbarium of the Faculty of Sciences and Mathematics, Department of Biology and Ecology, University of Niš (HMN).

Data on the distribution of taxa in Serbia are grouped by region. The division of the territory of Serbia into geographical regions was done according to Marković (1970), with slight compression of smaller regions into larger ones. Individual data are listed from broadest to narrowest geographic definition: region, broader locality, locality, narrower locality. The coordinates of the MGRS (UTM) square (10 × 10 km) as well as the status of (sub)populations are given for each locality.

In the Appendix 1 – database of distribution of regionally extinct or critically endangered taxa, there are several symbols about presence in Serbia:

- present (h – herbarium; l – literature; t – field observation)
- extinct (sub)population (+)

The criterion for determining the status of “(sub)population extinct from a known site” was assigned in cases where specific (sub)populations were not registered at known sites during targeted field research, as well as in cases where the species were not targeted, but their habitats are extremely threatened, and the findings have not been confirmed in the last 50 years. Conversely, in cases where the findings were not confirmed in the last 50 years, targeted field research was not organized, when the habitats were not under strong anthropogenic influence or greater influence of climate change, the findings were treated as currently present the known site.

Distribution data were georeferenced using GPS devices in the field or by the OziExplorer 3.95 4s programme. The coordinates are given in the World Geodetic System 84 format (WGS84). For all findings, spatial information is also provided in the MGRS (UTM) 10 × 10 km square (Lampinen 2001).

In the text, taxa names are listed in alphabetical order, and basic chorological data are provided only for new and unpublished records for Serbia. For each species, the following basic chorological data are provided: region, locality, sublocality, UTM cell 10 × 10 km (all squares are in MGRS 34T), latitude and longitude (in WGS84 – only for records with an accuracy of less than 100 m in radius from the point specified by geographic coordinates), altitude (in m a.s.l.), habitat, geological context, collector (coll.), identifier (det.), collection date, collector number (number in regular style before the Herbarium code), herbaria (acronyms according to THIERS 2025), and voucher number (number in regular style before the Herbarium code). The abbreviation “*s.n.*” was used when herbarium specimens were not assigned herbarium numbers, and the abbreviation “*s.d.*” was used when there were no data on the time of collection on the herbarium labels. In cases of incorrect identification, the original identification is added in parentheses after the collection time, prefixed with “sub”.

Extensive data are provided in Electronic Appendix 1, including basis of record, taxon remarks, population status at the locality, identification verification status, coordinate uncertainty for the purposes of IUCN assessment, coordinate accuracy (as a radius in metres from a point specified by geographic coordinates for all records), higher classification (kingdom, phylum, class, subclass, order), higher geography (continent, country, state or province) and several metadata identifiers.

Notes and comments for the same taxa are based on data from the developing *Database on the distribution of potentially endangered species and habitats of Serbia* (available upon request), which currently contains

1,800 records based on published sources, herbarium data, or field observations for the 45 taxa presented in this paper.

## RESULTS AND DISCUSSION

### New and unpublished chorological records

In this part of the paper, we present new and/or unpublished chorological data for species and subspecies that were included in “*The Red Data Book of Flora of Serbia I*” in the categories EX-Srb, EX-Srb DD, CR-Srb and CR-Srb DD (Stevanović 1999 ed.). Such taxa are marked with asterisk (\*). This includes old records (herbarium specimens or field observations) collected before 1999, which were omitted in the mentioned publication, as well as new herbarium or field data collected after the year of publication of this monograph.

In addition, we provide new and/or unpublished chorological records for species and subspecies that will be included in the new edition “*The Red Book of Flora of Serbia III – Vascular plants I*”.

#### \**Achillea ochroleuca* Ehrh.

*A. pectinata* Willd.

Asteraceae (Compositae)

NE SERBIA, **Gradište**, Gradištanska Sands, MGRS 34T EQ45, coll. & det. Pančić, J. *s.d.* (sub *A. pectinata*) (BEOU010660); **Kladovo**, Kladovska Sands, Kostol, MGRS 34T FQ33, 47 m a.s.l., coll. Stevanoski, I., Stevanoski, N. 4-Oct-2020, det. Stevanoski, I. (BEOU-KEGB 69256); Fetislam [Novigrad], MGRS 34T FQ24, on ramparts and neglected sandy places, Zlatković, B., Bogosavljević, S. 13-May-2012 (*field obs.*).

#### *Achillea pseudopectinata* Janka (Fig. 1)

*A. depressa* Janka

Asteraceae (Compositae)

C SERBIA, **Merošina**, MGRS 34T EN59, coll. & det. Randelović, N. 1991 (HMN 11419); Biljeg, coll. & det. Pančić, J. 4-Aug-1885 (sub *A. depressa*) (BEOU010632); Biljeg church, coll. & det. Pančić, J. May-1886 (sub *A. depressa*) (BEOU010634, BEOU010635); coll. & det. Pančić, J. 1880 (sub *A. depressa*) (BEOU010629, BEOU010630); Bilješka Čuka, coll. & det. Niketić, M. 05-Jun-1997 (BEO 101942); Lepaja, Čukarice, coll. & det. Niketić, M. 21-Jul-1997 (BEO 101941); Kovanlučka Čuka

peak, coll. & det. Randelović, N. 29-Jun-1996 (HMN 11355); Kusa Topola, coll. & det. Niketić, M. 29-May-1998 (BEO 101943); Oblačina, coll. & det. Pančić, J. 1885 (sub *A. depressa*) (BEOU010633).



Fig. 1. – *Achillea pseudopectinata* Janka on Bilješka Čuka hill near Oblačina (photo B. Zlatković).

Pančić (1884) was the first botanist who mentioned this plant for the flora of Serbia (sub *A. depressa*) for the locality Tri Čuke above Oblačina church in the Prokuplje area. Later, Gajić (1975) mentioned the same area in the *Flora of SR Serbia*.

**\**Aconitum anthora* L. subsp. *anthora***

Ranunculaceae

SW SERBIA, **Mt Bič**, Golet – Goli Vrh peak, 43.5706052° N, 19.4808425° E, MGRS 34T CP72, coll. & det. Niketić, M. 25-May-2022 (BEO 101945); Goli Vrh peak, 43.5740091° N, 19.474579° E, MGRS 34T CP72, coll. & det. Niketić, M. 25-May-2022 (BEO 101946).

In the “*Red Data Book of the Flora of Serbia*”, *A. anthora* was treated as a taxon supposed to be extinct (EX-Srb DD) (Niketić 1999). However, this species was rediscovered for the flora of Serbia in Sutjetska river gorge near Priboj (western Serbia) and its threatened status was re-estimated as critically endangered (CR B2abii,iii,v) (Tomović *et al.* 2009). In the years 2017 and 2021 this rare plant was also found in three new localities in Mt Medvednik (northwestern Serbia) (Tomović *et al.* 2022).

**\**Aconitum toxicum* Rchb. subsp. *toxicum***

Ranunculaceae

NE SERBIA, **Mt Kučajske Planine**, Lisac peak, MGRS 34T EP68, Zlatković, B. 1993 (*field obs.*); Gornja Klisura, MGRS 34T EP78,

Lazarević, P. 2006 (*s.n.* BEOU); **Mt Mali Krš**, Gavran peak, MGRS 34T EQ80, coll. & det. Pančić, J. *s.d.* (sub *A. paniculatum*) (BEOU-002209).

In the “*Red Data Book of the Flora of Serbia*”, *A. toxicum* subsp. *toxicum* was considered as extinct plant from Serbia (EX-Srb), since Pančić's finding from 1863 in Mt Beljanica was not confirmed by later investigations of the flora of this area (Niketić 1999a). Based on these two new findings, the status of this species is re-assessed as critically endangered (CR) in Serbia.

**\**Alkanna pulmonaria*** Griseb.

Boraginaceae

S SERBIA, **Mt Rujan**, Mali Orljak, between peak and pass, MGRS 34T EM67, grove and stony steppes, limestone, coll. & det. Niketić, M., Tomović, G. 15-Aug-2010 (BEO 101947, BEOU-KEGB 31368).

**\**Alnus alnobetula*** (Ehrh.) K. Koch subsp. *alnobetula*

*A. viridis* (Chaix) DC. subsp. *viridis*

Betulaceae

E SERBIA, **Stara Planina Mts.**, Crni Vrh village, Topli Do, 43.409641° N, 22.662995° E, MGRS 34T FP30, 1686 m a.s.l., Randelović, V. 21-Aug-2021 (sub *A. viridis*) (*field obs.*); Golema Reka river, 43.409669° N, 22.662995° E, MGRS 34T FP30, 1658 m a.s.l., coll. & det. Đurović, S., Buzurović, U., Đorđević, V. 15-Jul-2022 (sub *A. viridis*) (BEOU-KEGB BBD\_7203).

**\**Asparagus pseudoscaber*** Grecescu

Liliaceae (Asparagaceae)

BANAT, **Beograd**, Krnjača, Reva pond, 44.838522° N, 20.53256° E, MGRS 34T DQ66, 72 m a.s.l., coll. & det. Đurović, S. 8-Apr-2020 (BEOU-KEGB 69058).

***Astragalus contortuplicatus*** L. (Fig. 2)

Fabaceae (Leguminosae)

BAČKA, **Žabalj**, MGRS 34T DR22, coll. & det. Obradović, M. Oct-1970 (BUNS 1269).

ŠUMADIJA, **Dunav**, Ritopek, MGRS 34T DQ75, coll. & det. Pančić, J. *s.d.* (BEOU005399).

Andrae (1853) was the first botanist who found this plant in the region of southern Banat (today part of Vojvodina province). Later, Pančić (1865, 1874) also published that this plant was present in the flora of proper Serbia, in the surrounding of Belgrade (along the banks of the Danube river).



Fig. 2. – *Astragalus contortuplicatus* L. from Čoka, Sanad village (photo R. Perić).

In a large number of literature references from the last century, it was stated that *A. contortuplicatus* was present in the middle and upper reaches of the Tisa river and the lower reaches of the Danube river in Serbia. However, all these reports for other localities have not been confirmed in the field for more than 50 years, and it is therefore justified to assume that the species is extinct from the most historical localities. It is possible that *A. contortuplicatus* is present in suitable microhabitats in ponds in the floodplain of the middle and upper reaches of the Tisa river in Serbia. The only preserved population in the vicinity of Čoka, Sanad village (Banat region) is present in only three micro-localities in the Tisa floodplain.

\**Astragalus exscapus* L. subsp. *exscapus*

Fabaceae (Leguminosae)

BAČKA, **Bačka Topola**, Bajša, Duboka Dolina valley, 45.7731° N, 19.510525° E, MGRS 34T CR86, coll. & det. Sabadoš, R., Perić, R. 28-Jul-2007 (*s.n.* PZZP).

*Barbarea longirostris* Velen.

Brassicaceae (Cruciferae)

KOSOVO, **Šar Planina Mts.**, Jažinačko Jezero lake, MGRS 34T DM96, coll. & det. Rudski, I. 16-Jul-1930 (*s.n.* BEOU); coll. & det. Stevanović, V., Lakušić, D., Niketić, M. 29-Sep-1991 (BEOU-KEGB 2442/91); coll. & det. Stevanović, V. 17-Jul-1977 (BEOU-KEGB 3209).

METOHJA, **Šar Planina Mts.**, MGRS 34T DM96, coll. & det. Soška, Th. 21-Jun-1924 (*s.n.* BEOU); Kobilica, MGRS 34T DM96, coll. & det. Rudski, I. 05-Jul-1930 (*s.n.* BEOU).

The oldest information about the presence of this high-mountain plant in Serbia comes from Bornmüller (1937) who found it on Šar Planina Mts. (Kobilica peak). The species was reported as also present near Jažinačko Jezero lake at the same mountain massif (Nikolić 1977). The herbarium specimens presented in this paper confirm the presence of this critically endangered plant on these two localities in Šar Planina Mts.

*Biscutella laevigata* L. subsp. *laevigata* (Fig. 3)

Brassicaceae (Cruciferae)

E SERBIA, **Mt Rtanj**, northern slopes, MGRS 34T EP74, coll. & det. Lakušić, D., Tomović, G., Živković, T. 25-May-2002 (BEOU-KEGB 16094); Jotić, B. 25-May-2025 (*field obs.*).

The oldest information about the presence of this high-mountain plant in Serbia comes from Josif Pančić, who found it on Mt Rtanj in eastern Serbia (Pančić 1874). The species was reported as also present on Mt Suva Planina (Jovanović-Dunjić 1972), but it is considered extinct from this locality, since it has not been re-found in the last 50 years. Only quite recently, *B. laevigata* subsp. *laevigata* was reported for Đerdap gorge (Tomović *et al.* 2025). The herbarium specimens presented in this paper confirm the presence of this critically endangered plant on Mt Rtanj.



Fig. 3. – *Biscutella laevigata* L. subsp. *laevigata* on Mt Rtanj, infructescence (photo M. Niketić); inset: didymous silicle (photo B. Jotić).

\**Carex limosa* L.

Cyperaceae

SE SERBIA, **Vlasina plateau**, Okruglica, Savina Mahala, 42.6715803° N, 22.3440072° E, MGRS 34T FN12, peat bog, ass. *Caricetum limosae*, 1233 m a.s.l., coll. & det. Vukojičić, S., Kuzmanović, N. 30-May-2025 (BEOU-KEGB 64282).

***Centaurea derventana*** Pančić (Fig. 4)

Asteraceae (Compositae)

NW SERBIA, **Trešnjica canyon**, MGRS 34T CP88, rock crevices, limestone, coll. & det. Jovanović, S., Lakušić, D. 27-May-1992 (BEOU-KEGB 131/92);

W SERBIA, **Grlac canyon**, MGRS 34T CP67, rock crevices, limestone, coll. & det. Jovanović, S., Niketić, M., Tomović, G. 3-Jul-1998 (BEOU-KEGB 12591); **Mt Zvijezda**, Galine, Brusnički stream, MGRS 34T CP66, Zlatković, B., Ostojić, D. 22-6-2002 (*field obs.*).

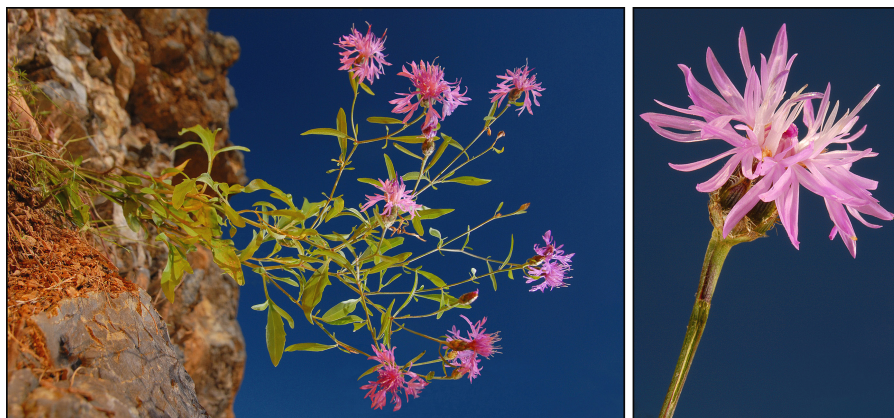


Fig. 4. – *Centaurea derventana* Pančić in Derventa canyon; inset: flowering head (photo M. Niketić).

This regional (Illyrian) endemic species was described from Derventa canyon in Mt Tara in western Serbia (Visiani & Pančić 1865). Later, it was also found by Josif Pančić near Gornje Košlje village, Ljubovija municipality in northwestern Serbia (Pančić 1867), as well as in Mt Mokra Gora in western Serbia (Pančić 1874).

**\**Ceratocephala orthoceras*** DC.

Ranunculaceae

BAČKA, **Sombor**, MGRS 34T CR57, coll. & det. Anonymus, *s.d.* (*s.n.* BUNS).

***Cirsium greimleri*** Bureš (Fig. 5)

*C. pauciflorum* Spreng., *C. waldsteinii* Rouy

Asteraceae (Compositae)

W SERBIA, **Mt Golija**, Pašina Česma, MGRS 34T DN39, coll. & det. Pančić, J. *s.d.* (sub *C. pauciflorum*) (BEOU011168);

C SERBIA, **Mt Kopaonik**, MGRS 34T DN89, Gobelja peak, Oštri Krš, coll. Stanić, S. 15-Jun-1988 (sub *C. waldsteinii*) (BEOU 25977); Hajdučki

stream, coll. Stanić, S. 15-Jul-1988 (sub *C. waldsteinii*) (BEOU 25974); Jankova Bara, 43.2717429° N, 20.7951379° E, tall herb vegetation, 1514 m a.s.l., coll. & det. Kabaš, E., Lazarević, P. 14-Jul-2022 (BEOU-KEGB BBD\_KabaE\_92); Ledenica, 43.295569° N, 20.851147° E, tall herb vegetation, 1839 m a.s.l., coll. & det. Lakušić, D., Novaković, J. 15-Jul-2023 (BEOU-KEGB BBD\_NovaJ\_105); Metode, 43.3038784° N, 20.841704° E, 1502 m a.s.l., coll. & det. Kabaš, E., Lazarević, P. 17-Jul-2022 (BEOU-KEGB BBD\_9672); 1500 m a.s.l., *Fagetum sub-alpinum picetosum excelsae*, coll. & det. Lakušić, D., Niketić, M., 12-Aug-1986 (sub *C. pauciflorum*) (BEOU 25975; (sub *C. waldsteinii*) (BEOU 25976); Samokovka river, Lakušić, D. 4-Jul-1998 (*field obs.*).

The distribution of this Alpine-Balkan subendemic species includes Mt Golija and Mt Javor in western Serbia (Pančić 1867, 1874 sub *C.*



Fig. 5 – *Cirsium greimleri* Bureš on Mt Kopaonik, Ledenica – habitus *in situ* (left) and nodding capitula (right) (photo D. Lakušić).

*waldsteinii*) as well Mt Kopaonik (Lisičje Stene) in central Serbia (Stevanović *et al.* 1991 sub *C. waldsteinii*). In this paper, we present seven new localities from Mt Kopaonik.

***Cirsium heterotrichum*** Pančić (Fig. 6)

Asteraceae (Compositae)

E SERBIA, **Stara Planina Mts.**, MGRS 34T FN49, coll. & det. Randelović, V. 1-Aug-1998 (HMN 429); Ponor, 43.246791° N, 22.813455° E, MGRS 34T FN48, Niketić, M. 19-Sep-2020 (BEO 101948); Govedar-

nik, 43.3333532° N, 22.7962464° E, Niketić, M. 15-Sep-2013 (*field obs.*); 43.3315256° N, 22.7992291° E, 17-Sep-2020, MGRS 34T FN49 (BEO 101949); Krvave Bare, 43.334534° N, 22.797235 E°, MGRS 34T FN49, Lazarević, P. 24-Jul-2013 (*field obs.*).



Fig. 6. – *Cirsium heterotrichum* Pančić on Stara Planina Mts. (photo M. Niketić); inset: flowering head (photo P. Lazarević).

Pančić (1883) described this species as a new for science from Bulgaria (Rila Mts. and Mt Vitoša) and Serbia (Stara Planina Mts. – Ponor and Tri Čuke

peaks). Several new localities from Stara Planina Mts. in Serbia are known in the literature (Mišić *et al.* 1978), and here we present two new sites from the same mountain. Presence of this plant in Vlasina plateau in southeastern Serbia and Šar Planina Mts. in Kosovo and Metohija province are doubtful, while record from Mt Giljeva in southwestern Serbia is erroneous.

***Clinopodium pulegium*** (Rochel) Bräuchler (Fig. 7)

*Micromeria pulegium* (Rochel) Benth.

Lamiaceae (Labiatae)

E SERBIA, **Svrljiški Timok gorge**, Podvis, 43.538972° N, 22.171722° E, MGRS 34T EP92, screes, limestone, coll. & det. Zlatković, B. 7-Jul-2012 (sub *Micromeria pulegium*) (HMN 6912); between Miljkovac and Podvis, rocky grounds next to and above the railway, limestone, coll. & det. Jančić, R., Stojanović, D., Slavkovska, V. 21-Jul-2009 (sub *Micromeria pulegium*) (HFF 3203); Rgošte village, Bolvan, 43.545131° N, 22.198529° E, MGRS 34T EP92, rocky grounds, limestone, 268 m a.s.l., Bogosavljević, S. 23-Aug-2017 (*field obs.*).



Fig. 7. – *Clinopodium pulegium* (Rochel) Bräuchler in Svrljiški Timok gorge (photo S. Bogosavljević).

This Carpathian-Balkan subendemic species was first incorrectly mentioned in the *Flora of the SR Serbia* for Mt Tara in western Serbia (Diklić 1986). Only recently it was found in Svrljiški Timok gorge, in several localities (Bogosavljević *et al.* 2007). Here we present two unpublished records from the same gorge.

**\**Crambe tataria*** Sebeók

Brassicaceae (Cruciferae)

SREM, **Mt Fruška Gora**, between Čortanovci and Venac, near the road, MGRS 34T DR10, neglected areas and between fields, coll. Diklić, N., Mladenović, S. 11-Jul-1983, det. Diklić, N. (sub *Brassica elongata* Ehrh.) (BEO 42323); Krčedin, tourist settlement, 45.162514° N, 20.103341° E, MGRS 34T DR20, meadow, 118 m a.s.l., Anačkov, G. 8-Jul-2021 (*field obs.*).

In the “*Red Data Book of Flora of Serbia*” (Stevanović & Butorac 1999), *C. tataria* was included in the group of critically endangered plants, since it grew only in one locality in Mt Fruška Gora in Srem region (near village Krčedin). Meanwhile, during review of the herbarium collection of the Natural History Museum in Belgrade (BEO) we found a specimen collected between village Čortanovci and Venac peak in Mt Fruška Gora. Also, G. Anačkov noted the species in a tourist settlement near village Krčedin in 2020. After checking all three localities, it was determined that the species does not grow there anymore, so it is considered extinct from Serbia.

**\**Crocus olivieri*** J. Gay

Iridaceae

S SERBIA, **Mt Rujan**, Veliki Orljak peak, above Slavujevac village, MGRS 34T EM67, coll. & det. Stanković, M. 23-Mar-2014 (*s.n.* HMN).

***Cyperus pannonicus*** Jacq.

Cyperaceae

C SERBIA, **Prokuplje**, Oblačina, 43.3462833° N, 21.7540167° E, MGRS 34T EN69, 195 m a.s.l., coll. & det. Lakušić, D., Lakušić, B., Zlatković, B. 15-Sep-2007 (BEOU-KEGB 24994).

Rumy (1846) was the first botanist who found this plant in the region of Srem – Sremski Karlovci (today part of Vojvodina province). Later, Pančić (1856) also published that *C. pannonicus* was present in the flora of proper Serbia, in the surrounding of Kragujevac (village Vitanovac).

In a large number of literature references from the last century, it was stated that *C. pannonicus* was present in many halophytic habitats in Banat, Bačka, Srem, Central and South Serbia regions (Tomović *et al.* 2007, Dítě *et al.* 2013). However, most of these reports for other localities have not been confirmed in the field for more than 50 years, and it is therefore

justified to assume that the species is extinct from the most historical localities.

**\**Cypripedium calceolus* L.**

Orchidaceae

E SERBIA, **Mt Suva Planina**, [Kosmovačka] Točila, MGRS 34T EN97, Niketić, M. 22-Jun-1990 (*video record*).

**\**Dianthus sabuletorum* subsp. *kladovanus* (Degen) Holub**

Caryophyllaceae

NE SERBIA, **Negotin**, Radujevac village, MGRS 34T FQ30, coll. & det. Pančić, J. Jun-1853 (sub *D. sabuletorum*) (BEOU001757).

***Gentiana dinarica* Beck (Fig. 8)**

Gentianaceae

W SERBIA, **Mt Zvijezda**, Veliki Kraj, Vidača, *in saxosis calcareis*, coll. & det. Košanin, N. Jun-1912 (sub *G. dinarica* f. *serbica*) (*s.n.* BEOU); MGRS 34T CP67, Veliki Kraj, Vranica, Milanović, Đ. *s.d.* (*field obs.*).



Fig. 8 – *Gentiana dinarica* Beck on Mt Zvijezda, Drlje (photo Ž. Mladenović).

Čolić (1953 sub *G. kochiana*) was the first botanist to announce the discovery of *G. dinarica* in Mt Tara in western Serbia. This species has also been recorded on Mt Zvijezda (Drlje) (Mladenović *et al.* 2025). In *The Flora of SR Serbia*, this species was wrongly mentioned for Kosovo and Metohija province – Prokletije Mts. (Mt Lumbardska Planina and Mt Greben) (Jovanović-Dunjić 1973) and Mt Koritnik (Nikolić *et al.* 1986).

***Geranium nodosum* L.** (Fig. 9)

Geraniaceae

W SERBIA, **Derventa canyon**, MGRS 34T CP66, coll. & det. Pančić, J. May-1880 (BEOU003845); **Drina canyon**, MGRS 34T CP76, coll. & det. Jurišić, Ž. 19-Jun-1912 (BEO 9416).

*Geranium nodosum* was firstly mentioned by Pančić (1874) for Grlac gorge near Derventa in Podrinje area (western Serbia). However, until now, there were no known herbarium specimens that would confirm the presence of this South European mountain species in Serbia.



Fig. 9. – *Geranium nodosum* L. from Derventa canyon (BEOU003845).

\**Groenlandia densa* (L.) Fourr.

Potamogetonaceae

S SERBIA, **Mt Rujan**, Slavujevaca, Lismider, MGRS 34T EM68, puddles, in clear mesotrophic water, silicate, coll. & det. Zlatković, B., Stanković, M. 21-May-2005 (HMN 13496).

\**Gypsophila fastigiata* L. subsp. *fastigiata*

Caryophyllaceae

BANAT, **Deliblatska Sands**, Deliblato, MGRS 34T EQ06, coll. & det. Pevalek, I. Jul-1921 (sub *G. fastigiata* var. *arenaria*) (ZA 15688).

*Hedysarum hedysaroides* (L.) Schinz & Thell. subsp. *hedysaroides* (Fig. 10)

*H. silicii* Lakušić

Fabaceae (Leguminosae)

METOHIIJA, **Prokletije Mts.**, Hajla, MGRS 34T DN33, 2250 m a.s.l., Panjković, B. 11-Jul-1996 (sub *H. silicii*) (*s.n.* PZZP); 42.75417° N, 20.14916 22° E, high-mountain pastures, ass. *Dryadetum octopetalae*, limestone, 2200 m a.s.l., coll. & det. Lakušić, D., Kuzmanović, N., Stevanoski, I. 16-Jul-2025 (sub *H. silicii*) (BEOU-KEGB 72382);



Fig. 10. – *Hedysarum hedysaroides* (L.) Schinz & Thell. subsp. *hedysaroides* on Prokletije Mts., Hajla peak, Brahim Breg – habitus (left) and inflorescence (right) (photo D. Lakušić).

42.754415 N, 20.149038° E, high-mountain pastures, ass. *Dryadetum octopetalae*, limestone, 2219 m a.s.l., coll. & det. Lakušić, D., Kuzmanović, N., Stevanoski, I. 16-Jul-2025 (sub *H. silicii*) (*field obs.*); 42.753744° N, 20.1491° E, high-mountain pastures, ass. *Dryadetum octopetalae*, limestone, 2246 m a.s.l., Lakušić, D., Kuzmanović, N., Stevanoski, I. 16-Jul-2025 (sub *H. silicii*) (*field obs.*); Brahim breg, 42.756666° N, 20.148361° E, ass. *Pinetum mugo*, limestone, 2130 m a.s.l., coll. & det. Markišić, H., Prašević, M., Surina, B. 12-Jul-2008 (sub *H. silicii*) (NHMR 1106); Brahim breg, 42.755644° N, 20.148962° E, ass. *Pinetum mugo*, limestone, 2158 m a.s.l., coll. & det. Lakušić, D., Kuzmanović, N., Stevanoski, I. 16-Jul-2025 (sub *H. silicii*) (*field obs.*); 42.755409° N, 20.149046° E, ass. *Pinetum mugo*, limestone, 2173 m a.s.l., Lakušić, D., Kuzmanović, N., Stevanoski, I. 16-Jul-2025 (*field obs.*).

Lakušić R. & Markišić (1982) recorded the presence of this species in Prokletije Mts. (Hajla peak), on both the Montenegrin and Serbian sides of the mountain range. After them, this species was collected again by B. Panjković in 1996. In this paper, we present most recent records of this Eurasian high-mountain species after more than 30 years.

***Hieracium andrasovszkyi*** subsp. ***kobilicanum*** O. Behr, E. Behr & Zahn (Fig. 11).

Asteraceae (Compositae)

METOHIIJA, Šar Planina Mts., Kobilica peak, MGRS 34T DM86, Carevo Gumno, stone blocks in the high-mountain pastures, marbled limestone, 2000-2200 m a.s.l., coll. & Niketić, M., Duraki, Š. 7-Aug-2008, det. Niketić, M. (BEO 101837); pass between Treskavac peak and Ljubinske Uši, 2100-2300 m a.s.l., coll. & Niketić, M., Duraki, Š. 20-Aug-2006, det. Niketić, M. (BEO 101835); MGRS 34T DM96, Surduk, rocky grounds, marbled limestone, 2350 m a.s.l., coll. & Niketić, M., Duraki, Š. 18-Jul-2006, det. Niketić, M. (BEO 101836); Treskavac pass, 2000-2200 m a.s.l., coll. & Niketić, M., Duraki, Š. 19-Aug-2006, det. Niketić, M. (BEO 101834).

This local endemic subspecies was described by Karl Herman Zahn from Kobilica peak in Šar Planina Mts. (Behr *et al.* 1937). However, no specimens have been presented to support this finding, so our herbarium and field data are the first confirmation of the presence of this subspecies in the Serbian part of Šar Planina Mts.

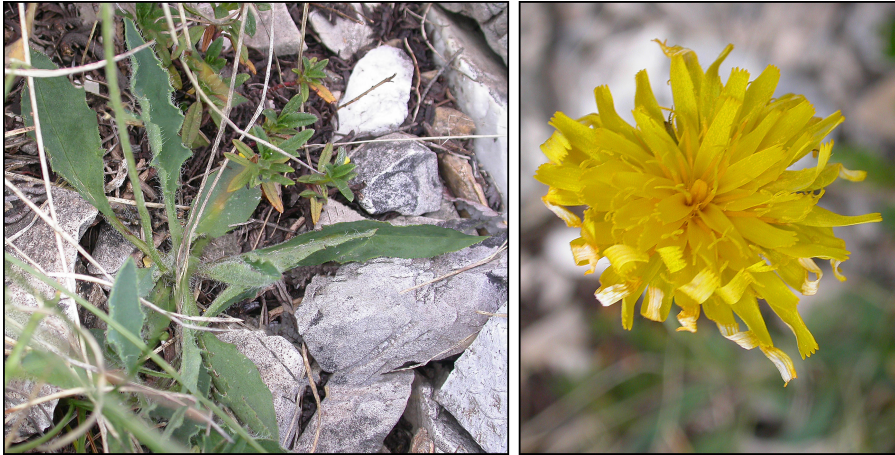


Fig. 11. – *Hieracium andrasovszkyi* subsp. *kobilicanum* O. Behr, E. Behr & Zahn on Šar Planina Mts., Kobilica – basal rosette with the lower part of the scape emerge (left); flowering capitulum, apical view (right) (photo M. Niketić).

***Hieracium pseudotranssilvanicum* (Zahn) Zahn (Fig. 12)**

Asteraceae (Compositae)

E SERBIA, **Stara Planina Mts.**, Arbinje, near Dojkinačka river, MGRS 34T FN49, foot of rock blocks in a beech forest, silicate, 1250-1500 m a.s.l., coll. & det. Niketić, M. 17-Sep-2025 (BEO 101950).

This Carpathian-Balkan subendemic species was found in Stara Planina Mts. in 1993, but this founding was published only recently (Niketić *et al.* 2022). Here we present one more locality of the species from the same mountain.

***Hieracium virosium* subsp. *foliosum* (Willd.) Zahn (Fig. 13)**

Asteraceae (Compositae)

SREM, **Mt Fruška Gora**, Slankamen, MGRS 34T DR30, Koševac, ass. *Chrysopogonetum*, loess, 200-225 m a.s.l., coll. & det. Niketić, M. 21-Sep-2015 (BEO 101954); 27-Apr-2016 (BEO 101951); 05-Avg-2016 (BEO 101952); Perić, R. *s.d. (field obs.)*; Slankamenački Vinogradi, Perić, R. 17-Sep-2014 (*s.n.* PZZP); Sremski Karlovci, MGRS 34T DR10, coll. & det. Niketić, M. 22-May-1993 (BEO 101680).

This Pannonian-Balkan subendemic subspecies was first recorded in Vojvodina province (Mt Fruška Gora, near Slankamen village) at the beginning of the 19<sup>th</sup> century (Waldstein & Kitaibel 1804). It was also found near Sremski Karlovci in Srem region, as well as near Kladovo in northeastern Serbia (Zahn 1922). However, no specimens have been

presented to support this finding, and a field inspection proved that *H. virosum* subsp. *foliosum* no longer grows in these two locations. Our herbarium and field records are the first confirmation of the presence of this subspecies in Serbia.

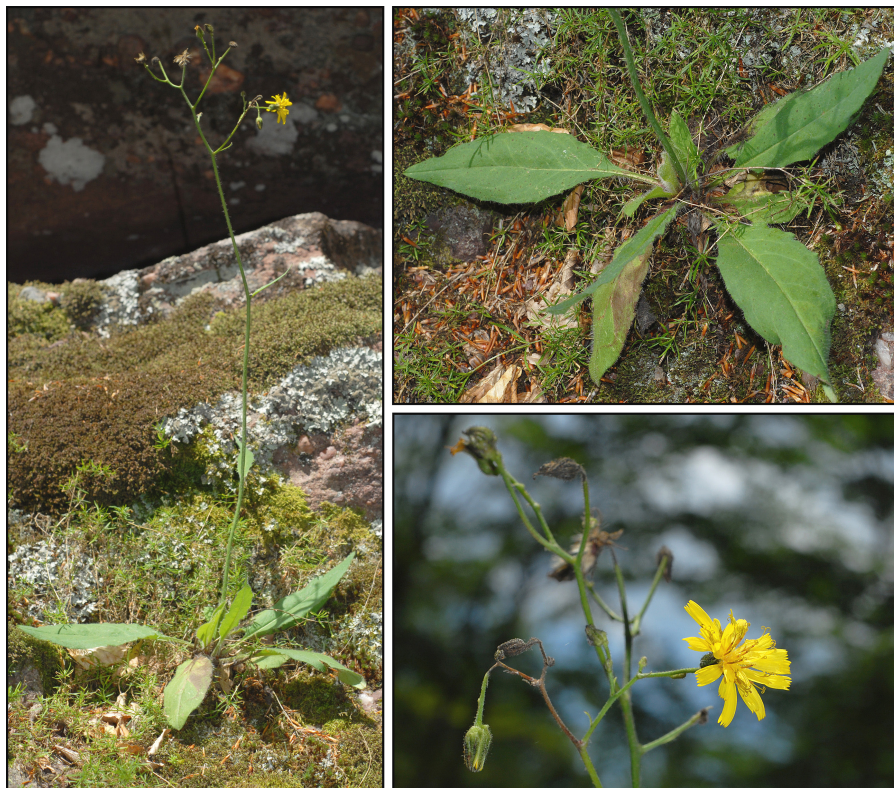


Fig. 12. – *Hieracium pseudotranssilvanicum* (Zahn) Zahn on Stara Planina Mts., Arbinje – habitus *in situ* (left), basal leaf rosette (upper right) and inflorescence (lower right) (photo M. Niketić).

**\**Hypocoum pseudograndiflorum*** Petrović  
Papaveraceae

E SERBIA, **Doljevac**, between villages Malošište and Orljane, MGRS 34T EM68, Niketić, M. 6-Apr-2014 (BEO 101955).

**\**Jacobaea pancicii*** (Degen) Vladimirov & Raab-Straube  
Asteraceae (Compositae)

E SERBIA, **Stara Planina Mts.**, Belčin Dol, near stream, MGRS 34T FN49, coll. & det. Niketić, M. 25-Aug-2013 (BEO 101956); Krvave Bare, 43.334534° N, 22.797235 E°, Lazarević, P. 13-Aug-2025 (*field obs.*);

Srebrna Glava 43.1916130° N, 22.99907 E°, MGRS 34T FN68, coll. & det. Niketić, M. 13-Aug-2025 (BEO 101957).



Fig. 13. – *Hieracium virosum* subsp. *foliosum* (Willd.) Zahn from Slankamen, Koševac – habitus *in situ* (left) and infructescence (right) (photo M. Niketić).

**\**Kalmia procumbens*** (L.) Gift, Kron & P. F. Stevens

*Loiseleuria procumbens* (L.) Desv.

Ericaceae

METOHUJA, **Šar Planina Mts.**, MGRS 34T EM06, Piribreg peak, next to the repeater tower, 42.168858° N, 21.043327° E, alpine heaths, silicate, 2335 m a.s.l., Lazarević, P. 4-Jun-2024 (sub *Loiseleuria procumbens*) (*field obs.*); 42.168630° N, 21.043186° E, alpine heaths, silicate, 2335 m a.s.l., coll. & det. Lazarević, P. 4-Jun-2024 (sub *Loiseleuria procumbens*) (*s.n.* BEOU); Rafša, 42.161869° N, 21.033253° E, Lazarević, M., Lazarević, P. 9-Aug-2025 (*field obs.*).

***Knautia orientalis*** L.

Caprifoliaceae (Dipsacaceae)

S SERBIA, **Mt Rujan**, Svinjište village, Zlatković, B. *s.d.* (*field obs.*).

This (east)mediterranean-submediterranean plant is distributed in Kosovo and Metohija province (surrounding of Klina) (Krasniqi *et al.* 1990) and in Svrljiške Planine Mts. in eastern Serbia as well as in Mt Rujan in southern Serbia (Niketić *et al.* 2021, Simić & Zlatković 2022). Here we present one new record from Mt Rujan.

***Minuartia hirsuta*** L. subsp. ***falcata*** (Griseb.) Mattf

Caryophyllaceae

ŠUMADIJA, **Mt Rudnik**, Kasamovac, MGRS 34T DP59, coll. & det. Niketić, M. 29-Jul-1994 (BEO 101958).

Pančić (1856) was firstly mentioned this plant for Šumadija region – Mt Rudnik, Ostrovica peak. All later literature sources mention only this locality, so our finding of the species at the Kasamovac is the second known locality of this critically endangered mountain species in Serbia.

**\**Nepeta rtanjensis*** Diklić & Milojević

Lamiaceae (Labiatae)

E SERBIA, **Mt Rtanj**, MGRS 34T EP74, Gola Planina, between Vodeni Kamen and Mirčin Del, rocky grounds, limestone, 804 m a.s.l., Tomović, G. 26-Jul-2021 (BEO 101961); Šarbanovac, Mirčin Del, rocky grounds, limestone, 779 m a.s.l., coll. & det. Niketić, M., Tomović, G. 26-Jul-2021 (BEO 101959); Tumba, Niketić, M. 10-Jul-2009 (BEO 101960).

**\**Prangos trifida*** (Mill.) Herrnst. & Heyn

*Cachrys alpina* M. Bieb.

Apiaceae (Umbelliferae)

E SERBIA, **Sićevačka Klisura gorge**, Sićevo village, resting resort, MGRS 34T EN89, rocky grounds, coll. & det. Randelović, N., Randelović, V. 17-Jul-1988 (sub *Cachrys alpina*) (HMN 9736).

***Pulsatilla grandis*** Wender (Fig. 14)

*P. vulgaris* subsp. *grandis* (Wender.) Zämelis

Ranunculaceae

SREM, **Mt Fruška Gora**, MGRS 34T CR90, between Beočin and Crveni Čot peak, coll. & det. Boža, P. 27-Mar-1975 (*s.n.* BUNS); Beočin, Erdelj, coll. & det. Niketić, M. 19-Mar-2016 (BEO 101929); 28-Mar-2016 (BEO 101924); 08-May-2016 (BEO 101927); Crveni Čot peak, coll. & det. Obradović, M. 20-Apr-1963 (*s.n.* BUNS); below Crveni Čot peak, coll. & det. Boža, P. 18-Apr-1976 (*s.n.* BUNS); Čerević, Mandinac–Kaluderica, coll. & det. Niketić, M. 14-Apr-2025 (BEO



Fig. 14. – *Pulsatilla grandis* Wender from Slankamen, Koševac (photo M. Niketić).

101918); 20-Apr-2025 (BEO 101917); 03-May-2025 (BEO 101912); 04-May-2025 (BEO 101914); Čerević, Lipska strana, coll. & det. Niketić, M. 21-Apr-2025 (BEO 101920); Osovlje village, coll. & det. Obradović, M. May-1963 (*s.n.* BUNS); MGRS 34T DQ09, Vrdnik

village, Kanov Breg hill, 250 m a.s.l., Niketić, M. 30-Apr-2020 (BEO 101932); Vrdnik village, Murgin točak, coll. & det. Niketić, M. 18-Apr-2022 (BEO 101931); MGRS 34T DQ19, Irig, Staro Hopovo, coll. & det. Niketić, M. 19-Apr-2022 (BEO 101936); MGRS 34T DR00, Stari Ledinci, Čukale, 294 m a.s.l., Niketić, M. 30-Apr-2020, 300–370 m a.s.l. (BEO 101930); MGRS 34T DR10, Bukovac, Bukovačke Širine, coll. & det. Obradović, M. 20-Mar-1959 (*s.n.* BUNS); Sremski Karlovci, Krstuševine, 157 m a.s.l., coll. & det. Niketić, M. 27-Apr-2016 (BEO 101933); MGRS 34T DR30, Krčedin, Koševac, coll. & det. Anonymus, M. 30-Apr-2010 (*s.n.* BUNS); 200-270 m a.s.l. coll. & det. Niketić, M. 18-Mar-2016 (BEO 101923); 27-Apr-2016 (BEO 101926); 08-May-2020 (BEO 101934, 101935); 18-Mar-2016 (*field obs.*); 221 m a.s.l., 13-Apr-2014 (*field obs.*).

The species is present only in Srem region – on the slopes of Mt Fruška Gora and on the Srem loess plateau. In the literature, it is mentioned for several localities, from which it mostly disappeared in the last 50 years or some data were related to *P. montana* (Hoppe) Rechb. During the last ten years, *P. grandis* has been established with certainty only for eight localities, but it is most likely present in some other sites on the northern slopes of Mt Fruška Gora. Due to the high conservation status of the species, its vulnerability to illegal picking, and the proximity of the populations to densely populated areas near the city of Novi Sad, precise coordinates for these localities are withheld to prevent potential habitat disturbance.

A large number of literature references to the presence of *P. grandis* in Bačka, Banat, Šumadija, Pomoravlje, western, central, northeastern and eastern Serbia, as well as in Kosovo and Metohija province refer either to *P. montana* or on *P. halleri* (All.) Willd. The only information for the Subotičko-Horgoška Sands actually refers to *P. pratensis* (L.) Mill.

### ***Ranunculus aconitifolius* L. (Fig. 15)**

Ranunculaceae

W SERBIA, **Drina canyon**, Perućac, Drundebo, MGRS 34T CP76, coll. & det. Pančić, J. May-1880 (BEOU002348).

Pančić (1856) first reported this plant from Central Serbia, specifically from Mt Kopaonik and its foothills. It was also recorded on Mt Željin by Lazarević & Zlatković (2018); nevertheless, these authors concluded that Pančić's record from Mt Kopaonik in fact refers to the more frequently occurring *R. platanifolius* L. Pančić also recorded *R. aconitifolius* in 1880 in the Drina canyon (Drundebo locality) in western Serbia (herbarium specimen deposited in BEOU). However, owing to intermediate morpho-

logical characteristics, Pančić's specimens warrant further examination and may be assignable to other taxa within the *R. aconitifolius* aggregate.



Fig. 15. – *Ranunculus aconitifolius* L. from Mt Željina in central Serbia (photo P. Lazarević).

\**Rhaponticoides alpina* (L.) M. V. Agab. & Greuter  
Asteraceae (Compositae)

W SERBIA, **Mt Tara**, Mokra Gora, Suvi Potok Stream, towards spot height 687, marly limestone screes, in the zone of *Ostrya carpinifolia*, MGRS 34T CP74, Niketić, M. 20-Jul-2024 (BEO 101902).

\**Romulea bulbocodium* (L.) Sebast. & Mauri  
Iridaceae

METOHIIJA, **Prokletije Mts.**, Dečani, MGRS 34T DN31, chestnut forest, coll. & det. Janković, M. 8-May-1960 (*s.n.* BEOU).

\**Stachys milanii* Petrović  
Lamiaceae (Labiatae)

E SERBIA, **Aleksinac**, between villages Kraljevo and Bobovište, MGRS 34T EP52, *in agris*, coll. & det. Ilić, Đ. *s.d.* (*s.n.* BEOU).

***Stipa stevanoviciorum*** subsp. ***pseudodasyphylla*** Kabaš & D. Lakušić

Poaceae

E SERBIA, **Svrljiške Planine Mts.**, Crni Vrh, near the peak, 43.344422° N, 22.277617° E, MGRS 34T FN09, 1231m a.s.l., exposure SW, slope 25°, mountain steppe on carbonate, coll. & det. Kabaš, E., Lazarević, P., Vukojičić, S. 25-Jun-2024 (BEOU-KEGB 72930).

Kabaš *et al.* (2025) described this subspecies as new for science only recently from Svrljiške Planine Mts. This is a new micro locality for the local endemic subspecies in the same mountain massif.

**\**Swertia punctata*** Baumg.

Gentianaceae

E SERBIA, **Stara Planina Mts.**, MGRS 34T FN49, Belčin Dol, near stream, coll. & det. Niketić, M. 25-Aug-2013 (BEO 101962); Govedarnik, Niketić, M. 15-Sep-2013 (*field obs.*); Niketić, M. 17-Sep-2020 (BEO 101963); MGRS 34T FP30, Golema Reka river, 1644 m a.s.l., Đurović, S., Buzurović, U., Đorđević, V. 15-Jul-2022 (*field obs.*); Tupanar peak, Niketić, M. 27-Aug-2023 (BEO 101964); Tupanar peak, Golema Lekija, 1757 m a.s.l., Randelović, V. 21-Aug-2021 (*field obs.*).

**\**Utricularia minor*** L. (Fig. 16)

Lentibulariaceae

SW SERBIA, **Pešter plateau**, Bračak, Karamejdani, MGRS 34T DN27, 43.0939238° N, 20.1321504° E, peat-bogs, 1160 m a.s.l., coll. & det. Niketić, M. 9-Jun-2019 (BEO 101965); Karajukića Bunari, Zlatković, B. 26-Jul-2017 (*field obs.*); Trojan, MGRS 34T DN37, 43.103556° N, 20.151723° E, coll. & det. Lazarević, P. 13-Jul-2011 (*s.n.* BEOU); 43.106183° N, 20.153327° E, coll. & det. Kabaš, E., Lazarević, P. 27-Aug-2020 (BEOU-KEGB 76629); 43.103556° N, 20.151723° E, Kabaš, E., Lazarević, P. 27-Aug-2020 (*field obs.*).

The exact distribution and population status of *U. minor* in Serbia are still insufficiently known. Namely, although Blaženčić & Blaženčić (1991) believe that there were no suitable conditions in the Vlasina Lake itself that enable the survival of this species, in “*The Red Book of the Flora of Serbia I*” this species is still listed for three sites in this area (Blaženčić & Blaženčić 1999). According to Randelović & Zlatković (2010), *U. minor* is classified in a group of taxa whose findings have not been confirmed in the last 90 years for the Vlasina plateau. The species was firstly recorded on the Pešter plateau (between Peštersko Polje and Begov Lug) in 2006 (Tomović *et al.* 2009).

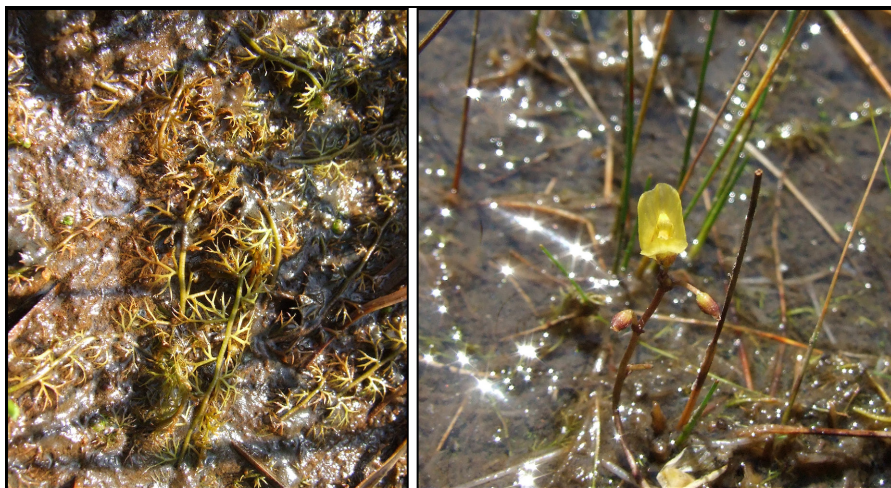


Fig. 16. – *Utricularia minor* L. from Pešter plateau – submerged shoots with traps on a muddy substrate (left) and inflorescence (right) (photo P. Lazarević).

### Acknowledgements

This work represents the result of the seventh phase of a multi-year project that was implemented by the Faculty of Biology of the University of Belgrade for the needs of the Institute for Nature Protection of Serbia. The project, whose official name was “*Acquisition of data and other services for the purpose of creating red lists of individual groups of organisms of flora, fauna and fungi in the Republic of Serbia*”, lasted continuously from 2015 to 2024. Research of Uroš Buzurović was supported by the Ministry of Science, Technological Development and Innovation of the Republic of Serbia (Grant No. 451-03-136/2025-03/200011). We also would like to thank Branko Jotić for providing the photos.

### REFERENCES

- Andrae, C. J. (1853): Beiträge zur Kenntnis der Flora des südlichen Banates, der banater Militärgrenze und Siebenbürgens. – *Botanische Zeitung* 11(24): 435–443.
- Behr, O, Behr, E., Zahn, K. H. (1937): Beiträge zur Kenntnis der Hieracien von Südserbien. – *Glasnik Skopskog naučnog društva* 18. Odeljenje prirodnih nauka 7: 51–67.
- Blaženčić, J., Blaženčić, Ž. (1991): Makrofite Vlasinskog jezera. – *Glasnik Prirodnjackog Muzeja B* 46: 71–85.

- Blaženčić, J., Blaženčić, Ž. (1999): *Utricularia minor* L. In: Stevanović, V. (ed.): Crvena knjiga flore Srbije 1. Iščezli i krajnje ugroženi taksoni, 233–234, 474. – Ministarstvo za životnu sredinu Republike Srbije, Biološki fakultet Univerziteta u Beogradu, Zavod za zaštitu prirode Republike Srbije, Beograd. [in Serbian with English Summary]
- Bogosavljević, S., Zlatković, B., Randelović, V. (2007): Flora klisure Svrljiškog Timoka. In: Randelović, V. (ed.), 9. Simpozijum o flori jugoistočne Srbije i susjednih područja. – Zbornik radova, Niš, 41–54. [in Serbian]
- Bornmüller, J. (1937): Zur Flora Mazedoniens. – **Feddes Repertorium specierum novarum regni vegetabilis** 42(1–10): 126–142. [in German]
- Buzurović, U., Tomović, G., Jakovljević, K., Vuksanović, S., Lazarević, M., Dragičević, S., Niketić, M. (2024): *Centaurea ozrenii* (Asteraceae) – a new local endemic and extremely rare species from Mt Ozren in Serbia. – **Botanica Serbica** 48(2): 263–271.
- Čolić, D. (1953): Staništa pančičeve omorike na desnoj strani Drine. – **Zaštita prirode, Beograd** 4-5: 425-659.
- Diklić, N. (1986): *Micromeria pulegium* (Roch.) Benth. In: Sarić, M., Diklić, N. (eds.), Flora SR Srbije 10: 186. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Dítě, D., Melečková, Z., Perić, R., Eliáš Jun., P. (2013): The confirmed occurrence and current phytosociological status of *Cyperus pannonicus* in Vojvodina (northern Serbia). – **Bulletin of the Natural History Museum in Belgrade** 6: 43–54.
- Gajić, M. (1975): Asteraceae Dumortier. In: Josifović, M. (ed.): Flora SR Srbije 7: 1–465. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- IUCN (2012): Guidelines for Application of IUCN Red List Criteria at Regional and National Levels: Version 4.0. Second Edition. – Gland, Switzerland and Cambridge, UK: IUCN. iv + 32 pp.
- IUCN (2012a): IUCN Red List Categories and Criteria. Version 3.1. Second Edition. – Gland, Switzerland and Cambridge, UK: IUCN. ii + 41 pp.
- Jovanović-Dunjić, R. (1972): *Biscutella* L. In: Josifović, M. (ed.): Flora Srbije 3: 362–364. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Jovanović-Dunjić, R. (1973): Rod *Gentiana* L. In: Josifović, M. (ed.): Flora SR Srbije 5: 412-425. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Kabaš, E., Novaković, J., Lazarević, P., Vukojičić, S., Stanković, V., Lakušić, D. (2025): Morphological Diversification of the “*Dasyphyllous*” *Stipa* Species (Poaceae) from the Balkan Peninsula, with a Description of a New Species, *S. stevanoviciorum*. – **Plants** 2025(14): 1035.
- Krasniqi, F., Hundozi, B., Pajazitaj, Q. (1990): A short contribution to the flora of Kosovo. – **Razprave IV. razreda SAZU** 31(6): 97–104.
- Lakušić, D., Niketić, M., Rakić, T., Stevanović, V. (2013): *Edraianthus canescens* (Campanulaceae), a new species from the Central Balkan peninsula. – **Phytotaxa** 118(1): 22–28.
- Lakušić, D., Stefanović, S., Siljak-Yakovlev, S., Rakić, T., Kuzmanović, N., Surina, B. (2016): *Edraianthus stankovicii* (Campanulaceae), an overlooked

taxon from the Balkan Peninsula – Evidence from morphometric, molecular and genome size studies. – *Phytotaxa* **269**(2): 69–89.

- Lakušić, R., Markišić, H. (1982): Nova vrsta genusa *Hedysarum* L. na Prokletijama (Jugoslavija). – *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* **21**: 65–72. [in Serbian]
- Lampinen, R. (2001). Universal Transverse Mercator (UTM) and Military Grid Reference System (MGRS). – Downloadable from <http://www.fnnh.helsinki.fi/english/botany/afe/map/utm.htm>
- Lazarević, P., Zlatković, B. (2018): *Ranunculus aconitifolius* L. (Ranunculaceae), a taxon new for the flora of Serbia. – *Botanica Serbica* **42**(1): 147–151.
- Marković, J. (1970): Geografske oblasti Socijalističke federativne republike Jugoslavije. – Zavod za izdavanje udžbenika i nastavna sredstva Srbije, Beograd. [in Serbian]
- Mišić, V., Jovanović-Dunjić, R., Popović, M., Borisavljević, Lj., Antić, M., Dinić, A., Danon, J., Blaženčić, Ž. (1978): Biljne zajednice i staništa Stare planine. – Srpska akademija nauka i umetnosti, Posebna izdanja 511, Odeljenje prirodno-matematičkih nauka 49: 389 pp. [in Serbian]
- Mladenović, Ž., Kuzmanović, N., Lakušić, D., Stojanović, D. (2025): Comparative Leaf Anatomy of Balkan Representatives of *Gentiana* L. Sect. *Ciminalis* (Adans.) Dum. (Gentianaceae): Implications for Species Delimitation. – *Plants* **14**(19): 2977.
- Niketić, M. (1999) *Aconitum anthora* L. In: Stevanović V (ed.) Crvena knjiga flore Srbije 1. Iščezli i krajnje ugroženi taksoni, pp. 99–100. – Ministarstvo za životnu sredinu Republike Srbije, Biološki fakultet Univerziteta u Beogradu, Zavod za zaštitu prirode Republike Srbije. [in Serbian with English Summary]
- Niketić, M. (1999a) *Aconitum toxicum* Reichenb. subsp. *toxicum* In: Stevanović V (ed.) Crvena knjiga flore Srbije 1. Iščezli i krajnje ugroženi taksoni, pp. 59–60. – Ministarstvo za životnu sredinu Republike Srbije, Biološki fakultet Univerziteta u Beogradu, Zavod za zaštitu prirode Republike Srbije. [in Serbian with English Summary]
- Niketić, M. (2005): *Hieracium bertisceum* (Compositae), a new species from the State Union of Serbia and Montenegro. – *Willdenowia* **35**(2): 265–269.
- Niketić, M., Bareka, P., Kamari, G. (2003): Karyosystematic study of selected *Hieracium* taxa (Compositae) from Mt Durmitor (Montenegro). – *Botanika Chronika* **16**: 23–45.
- 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., Anačkov, G., Djordjević, V., Đurović, S., Duraki, Š., Kabaš, E., Lakušić, D., Petkovski, G., Petrović, S., Ranimirović, M., Slavkowska, V., Ušjak, Lj., Zbiljić, M., Zlatković, B., Stevanović, V. (2022): Material on the Annotated Checklist of Vascular Flora of Serbia. Nomenclatural, taxonomic and floristic notes IV. – *Bulletin of the Natural History Museum in Belgrade* **15**: 27–96.

- Niketić, M., Tomović, G., Bokić, B., Buzurović, U., Duraki, Š., Djordjević, V., Djurović, S., Krivošej, Z., Lazarević, P., Perić, R., Prodanović, D., Radak, B., Rat, M., Ranimirović, M., Stevanović, V. (2021): Material on the Annotated Checklist of Vascular Flora of Serbia. Nomenclatural, taxonomic and floristic notes III. – **Bulletin of the Natural History Museum in Belgrade** 14: 77–132.
- Nikolić, V. (1977): Brassicaceae. In: Josifović, M. (ed.): Flora SR Srbije 9: 74–86. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Nikolić, V., Sigunov, A., Diklić, N. (1986): Dopuna flori SR Srbije novim podacima o rasprostranjenju biljnih vrsta. In: Sarić, M. R., Diklić, N. (eds.): Flora SR Srbije 10: 259–336. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Novaković, J., Zlatković, B., Lazarević, M., Garcia-Jacas, N., Susanna de la Serna, A., Marin, P., Lakušić, D., Janačković, P. (2018): *Centaurea zlatiborensis* (Compositae, Cardueae-Centaureinae), a new endemic species from Zlatibor mountain range, Serbia. – **Nordic Journal of Botany** 35: e01893.
- 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: 477–598. [in German]
- Pančić, J. (1865): Flora u okolini beogradske po analitičnom metodu. – Kraljevsko-srpska državna štamparija, Beograd. [in Serbian]
- Pančić, J. (1867): Botanische Ergebnisse einer i. J. 1866 unternommenen Reise in Serbien. – **Oesterreichische Botanische Zeitschrift** 17(6): 166-209. [in German]
- Pančić, J. (1874): Flora kneževine Srbije. – Državna štamparija, Beograd. [in Serbian]
- Pančić, J. (1883): Građa za floru Kneževine Bugarske. – Državna štamparija, Beograd. [in Serbian]
- Pančić, J. (1884): Dodatak flori kneževine Srbije. – Kralj. -srp. državna štamparija, Beograd. [in Serbian]
- Ranđelović, V., Zlatković, B. (2010): Flora i vegetacija Vlasinske visoravni. – Odsek za biologiju i ekologiju, Prirodno-matematički fakultet, Univerzitet u Nišu, Niš. [in Serbian]
- Rumy, K. (1846): Über das Klima Sirmiens. In: Zipser, C. A. (ed.): Die Versammlungen ungarischer Ärzte und Naturforscher: mit besonderer Beziehung auf die am 4. August 1842 zu Neusohl abgehaltene dritte. – Versammlung. Neusohl [Banská Bystrica], 48–55.
- Schönswetter, P., Schneeweiss, G. M. (2009): *Androsace komovensis* sp. nov., a long mistaken local endemic from the southern Balkan Peninsula with biogeographic links to the Eastern Alps. – **Taxon** 58(2): 544–549.
- Sigunov, A. (1986): *Alchemilla* L. - In: Sarić, M. R., Diklić, N. (ed.), Flora SR Srbije 10: 88–104, Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Simić, M. & Zlatković, B. (2022): Flora around Slavujevac on Rujan mountain (SE Serbia). – **Biologica Nyssana** 13(2): 89–107.
- Stevanović, V. (ed.) (2012): Flora Srbije 2. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]

- Stevanović, V. (ed.) (1999): Crvena knjiga flore Srbije 1. Iščezli i krajnje ugroženi taksoni. – Ministarstvo za životnu sredinu Republike Srbije, Biološki fakultet Univerziteta u Beogradu, Zavod za zaštitu prirode Republike Srbije. [in Serbian with English Summary]
- Stevanović, V., Butorac, B. (1999): *Crambe tataria* Sebeók. In: Stevanović, V. (ed.), Crvena knjiga flore Srbije 1. Iščezli i krajnje ugroženi taksoni, 164–166, 451–452. – Ministarstvo za životnu sredinu Republike Srbije, Biološki fakultet Univerziteta u Beogradu, Zavod za zaštitu prirode Republike Srbije, Beograd. [in Serbian with English Summary]
- Stevanović, V., Niketić, M. (eds.) (2022): Flora Srbije 3. – Srpska akademija nauka i umetnosti, Beograd. [in Serbian]
- Stevanović, V., Niketić, M., Lakušić, D. (1991): Chorological additions to the flora of eastern Yugoslavia. – **Flora Mediterranea** 1: 121–142.
- Stevanović, V., Niketić, M., Lakušić, D. (2001): *Pedicularis ernesti-mayeri* (P. subsect. Comosae, Scrophulariaceae), a new species from Mt. Prokletije (Yugoslavia). – **Razprave IV. razreda SAZU** 42(2): 209–228.
- Thiers, B. (2026): [continuously updated]. Index Herbariorum: A global directory of public herbaria and associated staff. New York Botanical Garden's Virtual Herbarium. <http://sweetgum.nybg.org/ih>
- Tomović, G., Sabovljević, M. M., Niketić, M., Boycheva, P., Lazarević, P., Kabaš, E., Vidaković, D., Krizmanić, J., Kutnar, L., Kermavnar, J., Veljković, M., Djordjević, V., Assyov, B., Bozok, F., Strgulc Krajšek, S., Lobnik Cimerman, Ž., Ștefănuț, S., Bîrsan, C.-C., Hajrudinović-Bogunić, A., Begić, A. (2022): New records and noteworthy data of plants, algae and fungi in SE Europe and adjacent regions, 8. – **Botanica Serbica** 46(1): 133–141.
- Tomović, G., Sabovljević, M. S., Mašić, E., Nadarević, V., Savić, D., Lakušić, D., Vukojičić, S., Stoykov, D., Kunev, G., Szeląg, Z., Dudaš, M., Širka, P., Niketić, M., Ștefănuț, S., Djordjević, V., Jenačković Gocić, D., Nikolić, D. (2025): New records and noteworthy data of plants, algae and fungi in SE Europe and adjacent regions, 20. – **Comprehensive Plant Biology** 49(1): 117–130.
- Tomović, G., Vukojičić, S., Niketić, M., Lakušić, D. (2007): New chorological data on some threatened and rare plants in Serbia. – **Archives of Biological Sciences** 59(1): 63–73.
- Tomović, G., Zlatković, B., Niketić, M., Perić, R., Lazarević, P., Duraki, Š., Stanković, M., Lakušić, D., Anačkov, G., Knežević, J., Szabados, K., Krivošej, Z., Prodanović, D., Vukojičić, S., Stojanović, V., Lazarević, M., Stevanović, V. (2009): Threat status revision of some taxa from “The Red Data Book of Flora of Serbia 1”. – **Botanica Serbica** 33(1): 33–43.
- Visiani, R. de & Pančić, J. (1865) Plantae serbicae rariorae aut novae – Decas II. – **Memorie dell’Imperial Regio Istituto Veneto di Scienze, Lettere ed Arti** 12: 461–478.
- Waldstein, F., Kitaibel, P. (1804): Descriptiones et icones plantarum rariorum Hungariae II. – *Matthiae Andreae Schmidt*, 141–185 (t. 132–170), Viennae.

Zahn, K. (1922): Compositae – *Hieracium* 1. In: Engler, A. (ed.) Das Pflanzenreich Regni vegetabilis conspectus 4(280): 76–79. Wilhelm Engelmann, Leipzig. 289–1146. [in German]

## SUPPORTING INFORMATION

### Online Appendices:

Appendix 1. – Distributional data for the listed species and subspecies in Serbia (.xls format).

## МАТЕРИЈАЛ ЗА ЦРВЕНУ КЊИГУ ФЛОРЕ СРБИЈЕ III – ВАСКУЛАРНЕ БИЉКЕ I (РЕГИОНАЛНО ИШЧЕЗЛИ И КРИТИЧНО УГРОЖЕНИ ТАКСОНИ). ХОРОЛОШКИ ПРИЛОЗИ

ГОРДАНА ТОМОВИЋ, МАРЈАН НИКЕТИЋ, ДМИТАР ЛАКУШИЋ, БОЈАН  
ЗЛАТКОВИЋ, СНЕЖАНА ВУКОЛИЧИЋ, ГОРАН АНАЧКОВ, СТЕФАН  
БОГОСАВЉЕВИЋ, УРОШ БУЗУРОВИЋ, ШЕМИЈА ДУРАКИ, ВЛАДАН  
ЂОРЂЕВИЋ, САЊА ЂУРОВИЋ, ЕВА КАБАШ, НЕВЕНА КУЗМАНОВИЋ, МАЈА  
ЛАЗАРЕВИЋ, ПРЕДРАГ ЛАЗАРЕВИЋ, ЖАРКО МЛАДЕНОВИЋ, ЈЕЛИЦА  
ОБРАДОВИЋ НОВАКОВИЋ, РАНКО ПЕРИЋ, ИВАНА СТЕВАНОВИЋ

## РЕЗИМЕ

У раду су представљени нови и необјављени подаци о распрострањењу 45 врста и подврста које ће бити укључене у публикацију „Црвена књига флоре Србије III – Васкуларне биљке I (регионално ишчезли и критично угрожени таксони)“. Од овог броја, 25 таксона је већ претходно обрађено у „Црвеној књизи флоре Србије I – ишчезли и крајње угрожени таксони“ (Stevanović 1999), а овде су представљени и нови хоролошки подаци који раније нису објављени у овој публикацији. Ови подаци укључују или старе хербарске примерке који нису били доступни у време објављивања „Црвене књиге“, или новооткривене локалитете у последњих 25 година. У неким случајевима, представљени су већ познати локалитети, али са новим подацима о стању популација. Поред тога, за 20 врста и подврста које ће први пут бити укључене у публикацију „Црвена књига флоре Србије III – Васкуларне биљке I (регионално ишчезли и критично угрожени таксони)“ представљени су нови подаци о распрострањењу.