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ZAVOD ZA ZAŠTITU PRIRODE REPUBLIKE SRBIJE

# CRVENA KNJIGA FLORE SRBIJE

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IŠČEZLI I KRAJNJE UGROŽENI TAKSONI

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BEOGRAD  
1999

*Asparagus pseudoscaber* Grec."*Asparagus scaber*" sensu Pančić; auct.

lažnohrapavičasta špargla

LILIACEAE - fam. ljiljana

## IUCN kategorija ugroženosti u Srbiji

Krajnje ugrožen takson (CR-Srb B2c)

## IUCN kategorija ugroženosti u Jugoslaviji

Krajnje ugrožen takson (CR-Yu B2c)

## Status u međunarodnoj zaštiti

Takson nije uvršten u evropsku (ECE 1991) i u svetsku crvenu listu flore (WALTER, GILLET 1998).



## Opis taksona

Uspravna, zeljasta, razgranata biljka visine do 200 cm. Stabljika i grane uzdužno prugasto hrapavi od mekih bradavičastih zubaca, vrlo retko potpuno glatki. Filokladije duge 5-15 mm, široke 0,2-0,5 mm, u čupercima od po 10-25, uglavnom glatke, do samo neznatno hrapave. Cvetne drške 10-26 mm, znatno duže od filokladija. Pršljeni sa 1-2(4) cveta, uglavnom u gornjem delu, izmešani sa filokladijama. Plod je krupna (7-11 mm) crvena bobica sa 1-4 crna semena naboranog omotača.

## Osobnosti reprodukcije

Cveta V-VI. Oprašivanje entomofilija (sitne himenoptere) i autogamija. Rasejavanje ornitohorno. Razmnožava se semenima i vegetativno širenjem i grananjem rizoma iz kojeg izbijaju vegetativni i generativni izdanci.

## Životna forma

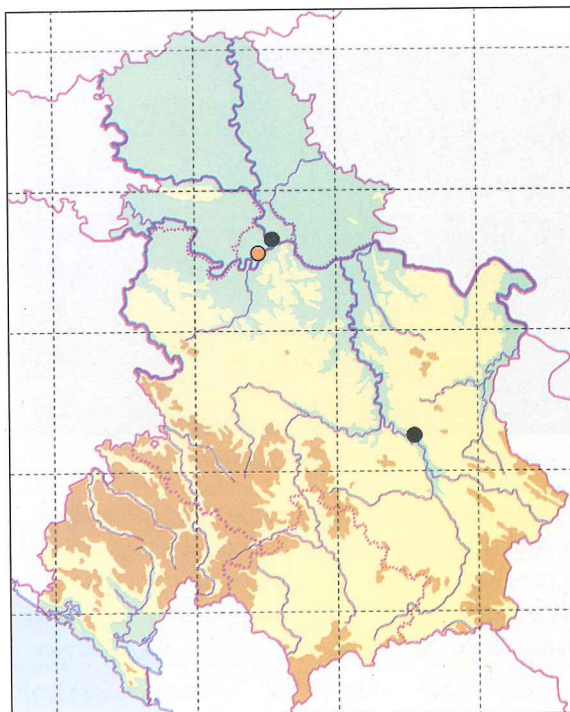
*G rhiz scap*

## Stanište

Plavne šume tipa *Salici-Populetum*, a naročito jasenove i jasenovo-lužnjakove šume iz sveze *Alno-Quercion roboris*, vlažne livade i polja u dolinama reka.

## Opšte rasprostranjenje

Rumunija, zapadna Ukrajina, severoistočna Srbija.



## Rasprostranjenje u Srbiji

**Sr DQ56/ex Zemun: Bežanija** (Soška, Th. May-1930, BEOU!), **DQ45/cr2 Novi Beograd**, leva obala Save, preko puta Makiša i Ostružnice (Bartula, M. 1998, BEOU!); **Š DQ45/cr2 Beograd, Makiš** (Soška, Th. Jun-1924; May-1930, BEOU!; Bartula, M. 1998, BEOU!; Jovanović, S., Lakušić, D. Sep-1998, BEOU; sub *A. scaber*, Pančić, J. Oct-1880; Jul-1867, BEOU!; PANČIĆ 1874: 674; Đurđić, A. 5-May-1913, BEOU) Veliko okno, "in agris" (sub *A. scaber*, Jurišić, J. 27-Sep-1923, BEOU!); **I EP52/ex Aleksinac** (sub *A. officinalis*, Pančić, J. BEOU!).

## Florni element

pontsko-južnosibirski / zapadnopontski

**Taksonomski i fitogeografski značaj u flori Srbije**  
Pripada sekciji *Neoasparagus* i seriji *Foliolati*. Sekcija obuhvata oko 25 taksona rasprostranjenih u

umerenim i subborealnim oblastima Evroazije sa centrom u srednjoj Aziji. U najbližem je srodstvu sa vrstama *A. officinalis* i *A. maritimus*. Endemična je vrsta evropskog potkontinenta sa ograničenim (zapadnopontskim) rasprostranjenjem. Nalazišta u Srbiji predstavljaju krajnje južne i zapadne tačke u arealu ove vrste. *A. pseudoscaber* je za područje Srbije u literaturi dugo bio pogrešno tretiran kao *A. scaber*. Naime, u Pančićevo vreme vrsta još uvek nije bila poznata u nauci (PANČIĆ 1875, 1892). VUKIĆEVIĆ (1975) samo preuzima Pančićeve podatke, bez provere herbarskog materijala i pomenutih nalazišta. Međutim, revizijom herbarskog materijala iz zbirke BEO i BEOU utvrđeno je da svi pomenuti herbarski primerci, identifikovani ranije kao *A. scaber*, pripadaju vrsti *A. pseudoscaber*.



Habitus (Beograd: Makiš)

photo D. Lakušić

#### Brojnost populacije i tendencije njene promene

Na Makišu kod Beograda nađeno je svega nekoliko razvijenih, reproduktivno sposobnih primeraka. Nešto brojniji delovi populacije zabeleženi su uz desnu obalu Save, između Makiša i Ostružnice.

Znatno brojnije grupacije, sa složenijom uzrasnom strukturom, nalaze se uz levu obalu Save kod Novog Beograda.

#### Delovanje negativnih faktora

Irigaciono-meliorativni radovi u plavnoj zoni donjeg toka reke Save, kod Beograda, koji su redukovali prirodna staništa ove vrste: izgradnja nasipa neposredno uz samu rečnu obalu, isušivanje staništa, seča drveća i pretvaranje staništa plavnih-galejskih šuma tipa *Salici-Populetum* s. l. i *Quercetum roboris* s. l. u poljoprivredne površine, neplanski razvoj turizma u priobalju Save kod Beograda, urbanizacija, izgradnja saobraćajne i komunalne infrastrukture (vodozahvat kod Makiša) i sl.

#### Preduzete mere zaštite

Vrsta nije zakonom zaštićena u Srbiji.

#### Neophodne mere zaštite

Zaštita preostalih vlažnih staništa sa najbogatijim subpopulacijama vrste i njihovo praćenje. *Ex situ* vegetativna i generativna propagacija vrste na povoljnim mestima u okolini Beograda, npr. na Adi Ciganliji ili u uslovima Botaničke bašte u Beogradu kao i njena kasnija reintrodukcija na prirodna staništa sa kojih je iščezla.

#### Stvarne ili potencijalne vrednosti taksona

Stvarne vrednosti vrste *A. pseudoscaber* do sada nisu istraživane niti korišćene. Međutim, mladi izdanci srodne vrste *A. officinalis* koriste se kao delikatesno povrće, koje je i bogato vitaminima, a rizom i koren kao jako diuretično sredstvo (asparagin, saponini). Pored toga, mogao bi biti uveden u hortikulturu kao dekorativna vrsta.

#### Literatura

ILJIN (1935); PANČIĆ (1874, 1875, 1892); VALDES (1980); VUKIĆEVIĆ (1975).

Slobodan Jovanović

## *Blackstonia acuminata* (Koch & Ziz) Domin

*Blackstonia serotina* (Koch ex Reichenb.) G. Beck

*Blackstonia perfoliata* (L.) Hudson subsp. *serotina* (Koch ex Reichenb.) Vollmann

*Blackstonia perfoliata* (L.) Hudson subsp. *acuminata* (Koch & Ziz) Dostál

kasna jezernica, kasna salančica

GENTIANACEAE - fam. lincura

#### IUCN kategorija ugroženosti u Srbiji

Krajnje ugrožen takson (CR-Srb E)

#### IUCN kategorija ugroženosti u Jugoslaviji

Takson za koji se pretpostavlja da je ugrožen (EN-Yu DD). Daleko reda na vlažnim i zaslanjenim livadama crnogorskog primorja od *B. perfoliata*. Stanje populacije nije praćeno.

#### Status u međunarodnoj zaštiti

Takson nije uvršten u evropsku (ECE 1991) i u svetsku crvenu listu flore (WALTER, GILLET 1998). U Rumuniji je agregat *B. perfoliata* uključen u kategoriju taksona sa nedovoljno podataka (BOŞCAIU *et al.* 1994: 54). Regionalno je ugrožen u Italiji u kategorijama CR-VU (CONTI *et al.* 1997: 32).

50/93). The habitats near Bačka Topola are within boundaries of Nature Park "Panonija".

#### Proposed conservation measures

Prevent steppe ploughing. Mowing should be done after fructification. Bearing in mind that the taxon is critically endangered, its protection in all localities may be performed through habitat protection.

### *Artemisia austriaca* Jacq.

COMPOSITAE (ASTERACEAE)

(271-272)

#### IUCN threatened status in Serbia

Critically endangered (CR-Srb B<sub>2c</sub>)

#### IUCN threatened status in Yugoslavia

Critically endangered (CR-Yu B<sub>2c</sub>)

#### International threatened status

The taxon is not included either in European (ECE 1991) or in the global IUCN Red List of Threatened Plants (WALTER & GILLET 1998).

#### Distribution in Serbia

**Ba** DR64/cr1 Zrenjanin, Banatski Dvor; DS30/ex Novi Kneževac, DS31/cr1, DS30/ex? Đala; EQ19/dd Vršac; **Sr** DQ09/ex, DQ39/ex, DQ49/ex, CQ78/ex Mt Fruška Gora.

#### Habitat

Warm and dry sites, salty, sandy and loess steppes, moderately salty pastures and hay meadows, railroad embankments.

#### Taxonomic and phytogeographical notes

It belongs to the sect. *Artemisia* and ser. *Abrotani*. It is allied to medicinal and spicy absinthe. Western limits of the species distribution are in the Pannonian Plain.

#### Population trends

The only subpopulations in Serbia (Banat) consists of about 300 specimens. The plant has already disappeared from Novi Kneževac and Krčedin

#### References

BOŽA (1976); BUTORAC (1981); CONTI *et al.* (1997); IGIĆ (1988); IGIĆ *et al.* (1997, 1998); IGIĆ, BUTORAC (1998); KOVÁCS (1929); OBRADOVIĆ (1981, 1986a, 1988); OBRADOVIĆ *et al.* (1980, 1990); OBRADOVIĆ, PANJKOVIĆ (1980); PRODÁN (1916); SOÓ (1973); STEARN (1980).

Ružica Igić and Petar Marin

whereas in the vicinity of Kuzmin and Jazak it has not been found though some habitats are suitable to the species ecological demands. Thus, the taxon seems to be in imminent danger of extinction.

#### Negative human impacts on population

Susceptibility to herbicides, converting of natural habitats into agricultural lands, burning of grasslands. The single habitat occurring in Yugoslavia is threatened to be destroyed given that it is located along the railroad embankment. As the railroad is out of service, there are neither gravel nor rails and in the near future it will be levelled and converted into agricultural lands. Possible collecting for medicinal purposes since it is confused with other medicinal wormwoods such as *A. pontica*, *A. absinthium*, *A. annua*.

#### Conservation measures taken

The species is not protected by law in Serbia.

#### Proposed conservation measures

Urgent protection of the single habitat, in northern Banat, is needed. Besides, this species should be further searched for in the suitable habitats.

#### References

BUDAK (1986); GODRA (1872); KNEŽEVIĆ (1994); OBRADOVIĆ, BOŽA (1981); OBRADOVIĆ, BUDAK (1979); SOÓ (1970).

Pal Boža

### *Asparagus pseudoscaber* Grec.

"*Asparagus scaber*" sensu Pančić; auct.

LILIACEAE

(273-274)

#### IUCN threatened status in Serbia

Critically endangered (CR-Srb B<sub>2c</sub>)

#### IUCN threatened status in Yugoslavia

Critically endangered (CR-Yu B<sub>2c</sub>)

#### International threatened status

The taxon is not included either in European (ECE 1991) or in the global IUCN Red List of Threatened Plants (WALTER & GILLET 1998).

#### Distribution in Serbia

**Sr** DQ56/ex Zemun, DQ45/cr2 Ostružnica; **Š** DQ45/cr2 Beograd, Makiš; **E** EP52/ex Aleksinac.

#### Habitat

Flooded forests, wet meadows and abandoned fields beside the rivers.

#### Taxonomic and phytogeographical notes

It belongs to the sect. *Neoasparagus* and ser. *Foliolati*. The section includes c. 25 taxa distributed

in temperate and subboreal region of Eurasia with distribution center in C. Asia. It is closely related to *A. officinalis* and *A. maritimus*. The localities in Serbia represent the southern- and westernmost margins of the species range. Until recently the specimens collected in Serbia were erroneously determined as *A. scaber*.

#### Population trends

In Makiš locality only several mature individuals have been found, whereas somewhat larger subpopulation was recorded along the right bank of the Sava river near Belgrade.

#### Negative human impacts on population

Irrigation-melioration works in the flood zone of the lower course of the Sava river near Belgrade;

forest felling and converting of these forest habitats into agricultural lands; unplanned tourism development, urbanization; building of traffic and urban infrastructure.

#### Conservation measures taken

The species was not protected by law in Serbia.

#### Proposed conservation measures

The protection of the remaining wetland habitats. Species vegetative and generative *ex situ* propagation and its subsequent reintroduction to natural habitats from which it has either disappeared or is critically endangered.

#### References

ILJIN (1935); PANČIĆ (1874, 1875, 1892); VALDES (1980); VUKIĆEVIĆ (1975).

Slobodan Jovanović

## *Blackstonia acuminata* (Koch & Ziz) Domin

*Blackstonia serotina* (Reichenb.) G. Beck

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*Blackstonia perfoliata* subsp. *acuminata* (Koch & Ziz) Dostál

GENTIANACEAE

(274-276)

#### IUCN threatened status in Serbia

Critically endangered taxon (CR-Srb E)

#### IUCN threatened status in Yugoslavia

Taxon supposed to be endangered (EN-Yu DD).

In wet and salty meadows of the Montenegrin coast it is less frequent than *B. perfoliata*. Population state has not been monitored.

#### International threatened status

The taxon is not included either in European (ECE 1991) or in the global IUCN Red List of Threatened Plants (WALTER & GILLET 1998). In Rumania the aggregate *B. perfoliata* is included under indeterminate (I) category (BOȘCAIU *et al.* 1994: 54). As regionally threatened in Italy, it has CR-VU status (CONTI *et al.* 1997: 32).

#### Distribution in Serbia

**Bč** CR57/ex?, CR56/ex? Sombor; **CR54/cr1** Apatin, Bogojevo; **CS90/cr1**, **CS91/cr1**, **DS11/cr1**, **DS10/cr1** Subotičko-Horgoška Sands; **DR25/cr1** Bečej; **DR01/ex?**, **DR00/ex**, **DR11/ex** Novi Sad; **Sr** **DR11/cr1** Petrovaradin; **DR00/ex**, **DR10/cr1** Fruška Gora; **DQ33/ex** Indija - Nova Pazova; **W** **CP79/dd** Podrinje, Ljubovija.

It has been also recorded from the bordering area between Yugoslavia and Hungary in Subotičko-Horgoška Sands, Királyhalom (DEGEN 1904: 218; LENGYEL 1915: 68).

#### Habitat

Wet sandy and slightly salty meadows.

#### Taxonomic and phytogeographical notes

According to contemporary taxonomic views *B. acuminata* (*B. serotina*) belongs to *B. perfoliata* aggregate which includes several taxa ranked as species and subspecies mainly distributed in W. Mediterranean reaching the Colchidan part of the Black Sea coast in the east and up to the Pannonian Plain in the north. The taxon *B. acuminata* has a disjunct distribution. In Bačka and Srem regions of Vojvodina, it reaches easternmost limits of distribution. In Vojvodina it is a relict plant from humid postglacial (Atlantic) period.

#### Population trends

Subpopulations are poor tending to decline. In the remaining localities they contain not more than 100 mature individuals.

#### Negative human impacts on population

Bringing of the habitat into cultivation: grazing pressure, settlement expansion such as that of Novi Sad.

#### Conservation measures taken

The taxon has been protected by law as the natural rarity in Serbia (gazetted under the *N*<sup>o</sup> 66/91, 83/92, 50/93). Out of the remaining habitats only those encompassed by Petrovaradinska Marsh and Selevenjska Pustza, which are special nature reserves, are protected.

#### Proposed conservation measures

Habitat protection.