



Department of Biology and Ecology,
Faculty of Sciences and Mathematics
University of Niš
Institute for Nature Conservation of Serbia

ABSTRACTS APSTRAKTI

**14th Symposium
on the Flora of Southeastern Serbia
and Neighboring Regions**

Kladovo 26 to 29 June 2022

**14. Simpozijum
o flori jugoistočne Srbije
i susednih regiona**

Kladovo 26. do 29. jun 2022.

Niš-Belgrade, 2022

Department of Biology and Ecology,
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**14th Symposium on the Flora of
Southeastern Serbia
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Kladovo, 26th to 29th June, 2022

Abstracts

14th Symposium on the Flora of Southeastern Serbia and Neighboring Regions,
Kladovo, 26th to 29th June 2022

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PROGRAMME

Sunday, June 26th, 2022

12.00-15.00 Registration

15.00-16.00 Opening Ceremony

16.00-16.30 Plenary Session

16.30-17.00 Coffee break

17.00-18.30 Session 1 and Session 2

Hall 1

Phytogeography, Floristics and Phytoecology

Hall 2

Taxonomy and Systematics

Monday, June 27th, 2022

9.00-10.30 Session 3 and Session 4

Hall 1

Phytogeography, Floristics and Phytoecology

Hall 2

Taxonomy and Systematics

10.30-11.00 Coffee break

11.00-13.00 Session 5 and Session 6

Hall 1

Ecology and Environmental Protection

Hall 2

Agriculture, Forestry and Landscape Architecture,
Genetics, Selection and Biotechnology, Zoology

Poster Session 1

15.00-16.30

Taxonomy and Systematics,
Phytogeography, Floristics and Phytoecology,
Nature Protection

Poster Session 2

17.00-18.30

Agriculture, Forestry and Landscape Architecture,
Genetics, Selection and Biotechnology, Zoology,
Ecology and Environmental Protection

Panel discussion

19.00-20.00

Tuesday, June 28th, 2022

9.00-11.00 Session 7 and Session 8

Hall 1

Phytochemistry and Phytotherapy

Hall 2

Nature Protection

Poster Session 3a

11.30-13.00

Phytochemistry and Phytotherapy

13.00-13.30 Pause

Poster Session 3b

13.30-15.00

Phytochemistry and Phytotherapy

15.00-16.00 Lunch break
16.00 Excursion (Danube boat ride)
21.00 Conference dinner

Wednesday, June 29th, 2022

08.00-09.00 Breakfast
09.00-09.30 Closing ceremony
10.00 Check out

The role of polyphenols, sugars, and cell-wall associated polymers in desiccation tolerance of *Ramonda serbica*

Vidović, M.¹, Tosti, T.², Nikolić, N.³, Pantelić, A.¹, Veljović Jovanović, S.³

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Resurrection plant *Ramonda serbica* Panc. survives long desiccation periods and fully recovers metabolic functions already one day upon watering. This study aimed to investigate the role of soluble sugars and polyphenols, as well as cell wall-associated polysaccharides and lignin in desiccation tolerance in *R. serbica*, an endemic species from the Balkan peninsula. We combined differential transcriptomics and proteomics, the analysis of soluble polyphenolics and sugars, as well as FTIR analysis of the cell wall polymers. Pectin, cellulose, hemicellulose, and xyloglucans were identified as polysaccharide components of the *R. serbica* cell wall and they decreased upon desiccation. Desiccation provoked cell wall remodelling related to the possible production of H₂O₂/HO via germin-like proteins and pectin demethylesterification. In addition, desiccation induced carbon recycling from starch to soluble sugar osmolytes, whose content significantly increased in desiccated leaves. These data support the importance of specific sugars and the plasticity of the cell wall as one of the major contributors to desiccation tolerance of resurrection species, contributing to further crop drought tolerance improvement.

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