



# **BOOK** of **ABSTRACTS**

## **4<sup>th</sup> INTERNATIONAL CONFERENCE ON PLANT BIOLOGY (23<sup>rd</sup> SPPS Meeting)**



**6-8 OCTOBER 2022  
BELGRADE**

**Serbian Plant Physiology Society**

**Institute for Biological Research “Siniša Stanković”  
National Institute of Republic of Serbia, University of Belgrade**

**Faculty of Biology, University of Belgrade**

**BOOK OF ABSTRACTS**  
**4<sup>th</sup> International Conference**  
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Belgrade, 2022

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CIP - Каталогizacija u publikaciji - Narodna biblioteka Srbije, Beograd

581 (048)

INTERNATIONAL Conference on Plant Biology (4 ; 2022 ; Belgrade)

Book of Abstracts / 4th International Conference on Plant Biology [and] 23rd SPPS Meeting, 6-8 October 2022, Belgrade ; [organized by] Serbian Plant Physiology Society [and] Institute for Biological Research "Siniša Stanković", University of Belgrade [and ] Faculty of Biology, University of Belgrade ; [editor Milica Milutinović]. - Belgrade : Serbian Plant Physiology Society : University, Institute for Biological Research "Siniša Stanković" : University, Faculty of Biology, 2022 (Zemun : Alta Nova). - 169 str. : ilustr. ; 24 cm

Tiraž 30. - Registar.

ISBN 978-86-912591-6-7 (SPPS)

1. Društvo za fiziologiju biljaka Srbije. Sastanak (23 ; 2022 ; Beograd)

a) Ботаника - Апстракти

COBISS.SR-ID 74996233

**4<sup>th</sup> International Conference on Plant Biology**  
**(23<sup>rd</sup> SPPS Meeting)**  
**6-8 October, Belgrade**

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**Publishers**

Serbian Plant Physiology Society  
Institute for Biological Research "Siniša Stanković" – National Institute of Republic of Serbia,  
University of Belgrade  
Faculty of Biology, University of Belgrade

**Editor**

Milica Milutinović

**Graphic design**

Dejan Matekalo

**Prepress**

Marija G. Gray

**Printed by**

Alta Nova, Zemun

**Print run**

30 pcs

Belgrade, 2022

## Flowering trends in *Iris pumila* in Deliblato Sand: Ten years after

PP4-3

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In 2012 we selected 35 experimental plots in *Iris pumila* L. (dwarf bearded iris) natural population in natural reserve Deliblato Sand, Serbia. Flowering was monitored in 2013, 2014 and 2015 on selected more than 4 000 square meters, and opening of every individual flower on *I. pumila* clones was recorded. Data revealed steady decline in number of flowering individual plants (ramets) through analyzed years. The same spots were revisited in 2021 and 2022 flowering seasons and occurrence of all flowers was recorded by introducing drone digital photography in our long term study. Preliminary analysis on the subsample of monitored spots reveals that detected trend of decline in number of flowering ramets was not reversed after ten years. Detected long term trend has significant implications for studies of evolutionary relationship between vegetative and sexual modes of reproduction in this species, as well as possible conservation management strategies in the face of environmental change. Additional methods that can reveal evolutionary consequences of observed population dynamics on maintenance of within population genetic polymorphism (with special emphasis on flower color polymorphism and variability on DNA level) are discussed. We propose application of field spectography to huge flower color polymorphism observed in analyzed species coupled with pigment HPLC analysis on studied population level, as well as microsatellite genetic analyses of studied population composition as most suitable and efficient lines of further research of those topics in the studied populations.

**Keywords:** flowering phenology, sexual and vegetative reproduction, polymorphism maintenance

*Acknowledgment: This study was supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia contract number 451-03-68/2022-14/200007.*