



**IBC**  
**2024**

**XX International  
Botanical  
Congress  
Madrid Spain**



## **Book of Abstracts. Posters**

**July, 21st - 27th, 2024**

[ibcmadrid2024.com](http://ibcmadrid2024.com) • [info@ibcmadrid2024.com](mailto:info@ibcmadrid2024.com)

    **#IBC2024**



**Title of the Work:** : XX International Botanical Congress IBC 2024, Spain. Book of Abstracts. Posters.

**Publisher:** Fase 20 Ediciones

C/ Narváez, 15- 1º Izqda.- 28009 MADRID

[www.fase20.com](http://www.fase20.com)

**ISBN:** 978-84-09-63656-3

© Copyright 2024. All rights reserved.

The content of this publication may not be reproduced or transmitted by any electronic or mechanical means, including photocopying, magnetic recording, or by any information storage and retrieval system, in any form, or by any means, without prior written permission from the copyright holders.

Total or partial reproduction of this material, including images and tables, in any form—whether electronic, mechanical, by photocopy, or any other means—is strictly prohibited without express written authorization from Fase 20 Ediciones.

The editors do not accept any responsibility or legal liability for errors or omissions regarding the accuracy of the information obtained in this work. It is also assumed that the reader possesses the necessary knowledge to interpret the information provided in this text. In any case, the use of this manual cannot replace the professional judgment of the physician, who will be solely responsible for their clinical decisions.

The sale or exchange of this book for profit is strictly prohibited without the express written authorization of the Publisher.

## P.0738 Conserving a critically endangered microendemic tree of the family Zygophyllaceae: *Guaiaacum unijugum*

Victor Garcia Balderas<sup>1</sup>, Kate Good<sup>1</sup>, Daniel Wblesther Perez<sup>2</sup>, Silvia Alvarez Clare<sup>1</sup>

<sup>1</sup> The Morton Arboretum, Lisle, USA. <sup>2</sup> Centro de Investigaciones Biológicas del Noroeste S.C., La Paz, México.

*Guaiaacum unijugum* is a critically endangered, micro-endemic shrub occurring in the south-eastern coast of Baja California Sur, Mexico. Since 1995, only 29 living individuals have been documented, and the last known survey took place in 2007, when a genetic study was conducted across the genus. Before our study, the population's status was unknown, even though threats continue to expand in the region, and there are currently no living *ex situ* collections for this species. The goals of present study were to 1) document the status of the native population of *G. unijugum*, 2) quantify the propagation success under three experimental treatments, and 3) establish living *ex situ* conservation sites that will serve as an insurance policy against extinction. We conducted a plant survey in the area of occurrence to geolocate, measure, assess the reproductive status, and collect germplasm. We documented a total of 53 individuals and successfully collected over 2000 seeds. In order to quantify the propagation success, we tested three treatments: storage for 30 days, exposure to 200 ppm gibberellic acid (GA) as a germination enhancer, and leaching with water to reduce the effects of abscisic acid in germination inhibition. The seeds exposed to GA had the highest germination rate both when stored (73%) and planted fresh (74%). The leaching treatment decreased germination rate, resulting in 47% for stored seeds and 24% for fresh seeds. Results from this study are summarized in a propagation protocol published in English and Spanish, which provides recommendations for the reproduction of this species. We have also shared seeds with three botanic gardens in Mexico, which will result in the first living *ex situ* collections for this rare and threatened shrub. Next steps include working with local communities to promote *in situ* conservation and sustainable management practices.

## P.0739 Evaluation and monitoring of populations of *Swertia perennis* in the Ayllón mountain range, Spain

Sara García-Matesanz<sup>1</sup>, Cristina Benavente-Mena<sup>1</sup>, Joaquín Castelo-Schremmer<sup>2</sup>, Juan P. Martín-Clemente<sup>3</sup>, Carlos Ruiz-López<sup>3</sup>, José M<sup>o</sup> Postigo-Mijarra<sup>1</sup>, Felipe Martínez-García<sup>3</sup>

<sup>1</sup> Complutense University of Madrid, Madrid, Spain. <sup>2</sup> Segovia, Spain. <sup>3</sup> Polytechnic University of Madrid, Madrid, Spain.

*Swertia perennis* L. (Gentianaceae) is a boreoalpine species whose most southerly populations in the Iberian Peninsula are found in the Central and Iberian mountain ranges. It is very scarce in these mountains, with relictual populations in the Ayllón range (province of Segovia, Autonomous Community of Castilla y León) and in the Albarracín range (province of Teruel, Autonomous Community of Aragón). In Spain, this species is protected under different regional protection categories: in Castilla y León, as a taxon of Preferential Attention and in the Foral Community of Navarra as Endangered. The aim of this study is to assess the viability and conservation status of its populations located on the northern slopes of the Ayllón range, the easternmost of the Central System. For this purpose, some of these populations have been monitored by installing permanent monitoring plots, marking individuals and monitoring them throughout the growing season. Variables that provide information on their evolution from a vegetative, phenological and reproductive point of view have been measured, applying chorological and demographic work methodology proposed in the project Atlas of Endangered Vascular Flora of Spain. In order to assess the viability of current populations, seed germination trials have been carried out, the results of which have been compared with previous data to determine the chorological and demographic trend of these populations. In addition, a preliminary study has been carried out to determine the phylogenetic relationships of this population nucleus with the rest of the known and characterised European populations, which are located from the Pyrenees to the north of Europe.