Critical update on Carinthia's flora: review of the Red List of endangered ferns and flowering plants of Carinthia

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The book *Red List of Endangered Ferns and Flowering Plants of Carinthia* [1], published by the Publishing House of the Natural Science Association for Carinthia, presents the second edition of this comprehensive assessment of Carinthia's flora, twenty-eight years after its first publication in 1995. It is authored by Wilfried R. Franz, Tobias Köstl, Christian Keusch and Oliver Stöhr. The new edition draws on the authors' extensive experience in floristics, phytosociology, and nature conservation, providing a well-rounded and authoritative update on the status of ferns and flowering plants in the region.

The statistical analysis reveals a concerning trend: over the 28 years since the first edition, there has been a 35.5% increase in the number of endangered taxa. Currently, 1,015 taxa are considered endangered in Carinthia, representing 44.15% of species classified under a risk or early warning category. This significant increase highlights the ongoing challenges in conserving Carinthia's diverse plant life.

The species portraits chapter offers detailed profiles of selected plant species, such as the Illyrian gladiolus (*Gladiolus illyricus*), the Carinthian wulfenia (*Wulfenia carinthiaca*), the three-leaved waldsteinia (*Waldsteinia ternata subsp. trifolia*), the Styrian feather grass (*Stipa styriaca*), or *Doronicum cataractarum*, an endemic species of Koralm Mountain. These species are emblematic of Carinthia's unique flora and underscore the importance of regional conservation efforts.

The main section of the publication is devoted to a comprehensive table listing the classified taxa and their conservation status, categorized regionally for the Central and Southern European Alps, the Klagenfurt Basin, and Carinthia as a whole.

The publication identifies several key factors contributing to the increased risk of species endangerment in Carinthia's natural and cultural landscapes. These include increasingly intensive and industrial agriculture, the use of pesticides, the development and sealing of valuable natural areas, climate change, and the loss of near-natural and natural habitats, as well as the steady shift from extensive to intensive agricultural production.

While the publication provides a sobering overview of the escalating threats to Carinthia's plant species, it also serves as a crucial resource for conservation efforts. By combining detailed species profiles, innovative methodologies, and visually engaging elements—such as high-quality photographs,—the book is an invaluable tool for conservation professionals, educators, and nature enthusiasts alike.

Overall, the *Red List of Endangered Ferns and Flowering Plants of Carinthia* is more than a documentation of decline; it is an urgent call to action for preserving the botanical richness of the region, providing both a foundation for future research and a guide for implementing effective conservation strategies.

ORIGINAL TITLE:

[1] W. R. Franz, T. Köstl, C. Keusch, and O. Stöhr, Rote Liste der gefährdeten Farn- und Blütenpflanzen Kärntens. Klagenfurt am Wörthersee, Austria: Naturwissenschaftlicher Verein für Kärnten, 2023. ISBN 978-3-85328-098-0

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