



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

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Chemosystematic significance of triterpenes from dichloromethane extracts of 28 *Hieracium* L. species from the Balkan Peninsula

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The genus *Hieracium* L. s. str. (Cichorieae, Asteraceae) is one of the most taxonomically complex genera of flowering plants. Chemosystematic significance of triterpenes especially for Asteraceae genera is scarcely assessed. The subject of this research are 28 *Hieracium* species from Balkan Peninsula (mostly collected at Mt Durmitor, Montenegro): 12 principal belonging to sections *Pannosa*, *Naegelianae*, *Drepanoidea* and *Villosa*, and 16 hybridogenous originated from the species from those four sections and *Glauciformia*, *Hieracium*, *Prenantheoidea* and/or *Italica*. Previously, in dried dichloromethane extracts of flowering aerial plant parts, α -amyrin and α -amyrin acetate, as well as β -amyrin, β -amyrin acetate and/or lupeol acetate were identified and quantified using GC-FID-MS. The aim was to evaluate chemosystematic significance of these five triterpenes using multivariate statistical methods (principal components analysis-PCA and non-metric multidimensional scaling-nMDS). Statistical analysis supported the current taxonomical classification of the investigated species, despite overlapping of certain groups. In PCA, all five triterpenes significantly contributed to the differences between the species. Moreover, lupeol acetate could be a significant chemosystematic marker for the most of principal species belonging to the section *Pannosa*, as well as for some hybridogenous species between *H. gymnocephalum* Gris. ex Pant. and the members from the other sections.

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