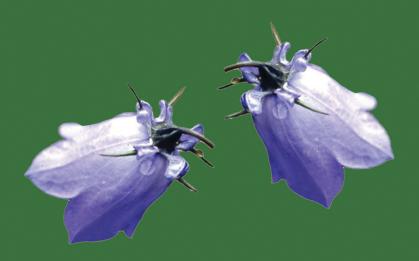
Department of Biology and Ecology,
Faculty of Sciences and Mathematics, University of Niš
Institute for Nature Conservation of Serbia

## 13<sup>th</sup> Symposium on the Flora of Southeastern Serbia and Neighboring Regions

Stara planina Mt. 20 to 23 June 2019



13. Simpozijum o flori jugoistočne Srbije i susednih regiona Stara planina 20. do 23. jun 2019.

# ABSTRACTS APSTRAKTI

Niš-Belgrade, 2019

Department of Biology and Ecology,
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**Abstracts** 

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# Chemical composition of headspace fractions from fruits and roots of selected *Heracleum* taxa collected in Southeastern Europe and its chemosystematic significance

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Headspace fractions of fruits and/or roots of Heracleum sphondylium, H. sibiricum, H. montanum, H. ternatum, H. pyrenaicum subsp. pollinianum, H. pyrenaicum subsp. orsinii and H. verticillatum, belonging to group H. sphondylium, and H. orphanidis, all from sect. Heracleum, as well as H. austriacum subsp. siifolium from sect. Wendia (from Serbia, Montenegro, North Macedonia or Slovenia) were isolated using automatic headspace sampler and analyzed by GC-FID and GC-MS. Chemosystematic significance of identified constituents was evaluated using multivariate statistics: PCA, nMDS and UPGMA. GC analysis of headspace fractions from 17 fruit samples of all investigated taxa showed that octyl acetate or  $\alpha$ -pinene (sect. Heracleum), or n-octanol (H. austriacum) were the most abundant. The analysis of the fractions from 13 root samples of investigated taxa belonging to sect. Heracleum revealed prevalence of  $\beta$ -pinene or (Z)- $\beta$ -ocimene (group H. sphondylium), or n-nonane (H. orphanidis). Statistical analysis of fruit fractions revealed separation of H. austriacum and H. orphanidis from investigated members of group H. sphondylium. Morphologically related H. sphondylium and H. montanum were grouped together and H. verticillatum was well separated from other representatives of group H. sphondylium. Complete separation of H. sibiricum, H. ternatum and H. pyrenaicum samples was noticed in root fractions statistical analysis.

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