

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

**13th 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**

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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 α -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 β -pinene or (*Z*)- β -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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