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Phylogeography on the Balkan Peninsula – two examples from *Veronica* (Plantaginaceae)

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The Balkan Peninsula is one of the hotspots of biodiversity in Europe with more than 6500 species of native seed plants; presumingly because of its role as a refugial area during the Pleistocene ice ages. Despite being a source for the recolonization of Europe, the Balkan Peninsula was a place for continuous diversification and formation of new species futher enhancing its richness in endemic species.

Up to now, our knowledge of the phylogeographic history of plant species of the Balkan Peninsula is predominantly based on the study of trees. However, most of its species richness is due to herbaceous perennials such as the genus *Veronica*.

Information on the morphology of the genus *Veronica* combined with its available phylogenetic framework makes the genus an excellent model taxon for our study. We focus on species from two different subgenera: subgenus *Pseudolysimachium (V barrelieri, V orchidea* and *V spicata)* – occurring on grasslands – and subgenus *Chamaedrys (V chamaedrys* agg.) – mainly inhabiting forests. Using genome size estimation, AFLP fingerprints and cpDNA markers we address the following main questions:

1) Do molecular and genomesize data confirm the currrent taxonomy?
2) Which geographical patterns do the genetic entities exhibit on the Balkan Peninsula?

The analysis for the subgenus *Chamaedrys* reveals that the diploid species form distinct genetic entities whereas the tetraploid *V cham. subsp. chamaedrys* is polymorphic, phenetically as well as genetically, and has probably originated more than once via autopolyploidization. The three species analyzed from the subgenus *Pseudolysimachium* show a partly congruent genetic pattern compared to phenology but appear to hybridize over large areas.

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