

The *Arabidopsis arenosa* species complex is closely related to the model species *Arabidopsis thaliana*. Distribution range of the diploid lineage covers most parts of Central and South-eastern Europe with a remarkable diversity of ecological niches from sea level to alpine peaks. There is still little known about genetic relationships among the diploid populations of *A. arenosa*. The evolutionary history of the diploid cytotype across its entire range was explored by using 14 nuclear microsatellite loci. Five lineages occupying biogeographically distinct regions were identified in *Arabidopsis arenosa* complex. These lineages were labelled as Western Carpathians, Eastern Carpathians, Pannonian Lowland, Dinaric Alps and Baltic Shore (according to geographical regions where these lineages occur).