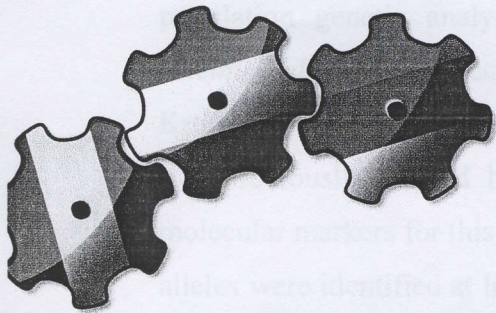


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GENETIC DIVERSITY OF AMBROSIA ARTEMISIIFOLIA (L.) IN SERBIA

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Ambrosia artemisifolia is one of about 40 species of the genus *Ambrosia* (fam. *Asteraceae*). In Europe five species were recorded, but *A. artemisifolia* is the most frequent and the most invasive species of this genus in Europe and also in Serbia. This species is an annual monoecious weed, that have a huge impact on human health since its pollen is a strong allergen. *Ambrosia* has been studied using morphological, ecological, physiological and genetic approaches. With the aim of better understanding this aggressive weed in Serbia, in present study, genetic diversity was analysed using microsatellites, which present one of the most popular molecular markers in population genetic analyses. Samples of 138 individuals from 5 wild populations of *A. artemisiifolia* were collected in Serbia on 5 localities: Laćarak, Novi Sad, Djala, Šabac and Kruševac. A set of three microsatellite loci: *Amb12*, *Amb16* and *Amb30* was amplified. All three loci previously showed high level of polymorphism and they were presumed to be useful molecular markers for this study. At locus *Amb12* the lowest number of alleles (4) was detected, 9 alleles were identified at locus *Amb16* and 12 alleles at locus *Amb30*. Hardy-Weinberg exact test for all population and all loci detected significant heterozygote deficiency. Average observed heterozygosity was $H_o=0.327$, and average expected heterozygosity value was $H_e=0.466$. No linkage disequilibrium was detected between loci in any population. Pairwise F_{ST} values showed that populations from Šabac and Kruševac are genetically the most identical and that populations from Djala and Laćarak have the highest genetic divergence.

Keywords: *ambrosia*, genetic diversity, microsatellite