

Genetic variation of agamospermous populations of *Hieracium echioides* s. l. in the Danube basin

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Six agamospermous populations of *Hieracium echioides* s.l. from Southern Slovakia and Northern Hungaria were analysed. The plants studied differed from *H. echioides* s.str. in having a lower density of hairs on the stem and leaves, less rigid hairs, narrower and more pointed leaves, and smaller flowering heads. The plants are taller and at the same time more slender than *H. echioides*. They start flowering earlier, and the flowering period is shorter in comparison with *H. echioides* s.str. From the morphological point of view the populations are supposed to be a result of introgressive hybridization of *H. echioides* s.str. with *H. piloselloides* or *H. auriculoides* which is distributed in this region. Morphologically, the plants match *H. echioides* subsp. *echioides* var. *tauscheri* NAEGELI & PETER well (ZAHN 1921–23).

Allozyme analysis, cytology, and analysis of mode of reproduction were used to evaluate variation within and among populations. All populations were tetraploid ($2n = 36$) and agamospermous. Allozyme analysis revealed four genotypes: three populations were represented by genotype I, two populations by genotype II, and one population by genotypes III and IV. Within-population diversity was found only in one population (population from the Pilis Mountains) where genotypes III and IV were represented equally (genotypic evenness = 0.96). All the remaining populations were genetically completely uniform.

The absence of within-population diversity reflects the agamospermous mode of reproduction. The occurrence of sexual plants of *H. echioides* s.str. with these plants was only recorded from the Pilis Mountains.

The geographic distribution pattern (one genotype at several isolated localities) can reflect occurrence of the taxa together in the past. Changes of

environment and loss of suitable localities, mainly sandy habitats, could cause the reduction and fragmentation of their habitats. The study of herbarium specimens, mainly in BP, confirmed this hypothesis.

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References

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