

## The *Hieracium* subg. *Pilosella* in the Šumava Mountains (SW part of the Czech Republic)

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The *Pilosellae* population occurring in the Šumava Mts. was analysed during the last three years. It consists of the following four basic species: *H. pilosella* ( $2n=36$ ), *H. lactucella* ( $2n=18$ ), *H. aurantiacum* ( $2n=36, 45$ ), and *H. caespitosum* ( $2n=36$ ). Three intermediate species are common in the study area, viz. *H. glomeratum* ( $2n=36, 45$ ), *H. floribundum* ( $2n=36$ ), and *H. scandinavicum* (*H. glomeratum* – *H. floribundum*,  $2n=36$ ). Within the region, the following set of recent hybrids was found: *H. aurantiacum* > *H. pilosella* (morphotype as well as chromosome number fully corresponding to *H. rubrum*,  $2n=54$ ); *H. aurantiacum* – *H. pilosella* (*H. stoloniflorum*,  $2n=36$ ); *H. scandinavicum* – *H. aurantiacum* ( $2n=36$ ); *H. caespitosum* – *H. aurantiacum* (morphotype corresponding to *H. fuscoatrum*,  $2n=36$ ); *H. floribundum* – *H. aurantiacum* ( $2n=36$ ); *H. lactucella* – *H. pilosella* (*H. schultesii*,  $2n=27, 36$ ); *H. floribundum* > *H. pilosella* (morphologically similar to *H. iseranum*, but  $2n=54$ ); *H. floribundum* < *H. pilosella* (*H. piloselliflorum*,  $2n=36$ ); *H. glomeratum* < *H. pilosella* (*H. macranthelum*,  $2n=38$ ; morphotype similar to *H. schultesii*).

The basic chloroplast haplotypes are the same as in the Sudeten region: Haplotype group 1, and its modification typical of tetraploid *H. aurantiacum*; haplotype group 2 and its modification typical of *H. cymosum*. The distribution of haplotypes among most of the basic and hybridogenous types is very complex. Several species, both basic and hybridogenous, share more than one of them. This fact reflects several phenomena:

(i) rather complex pattern within the basic species, as for *H. lactucella* (the occurrence of haplotypes 1, 2 and *aurantiacum* sub-type); (ii) recurrent origin of hybridogenous types, with both parents serving reciprocally as mother plants: *H. stoloniflorum*, *H. schultesii*; (iii) common function of apomicts as mother plants; (iv) indication of uncertainty of determination of some rare types, e.g. of that morphologically corresponding to *H. macrostolonum* (*H. caespitosum* < *H. pilosella*). Its *aurantiacum*-haplotype indicates another explanation, viz. yellow type of hybrid between *H. aurantiacum* and *H. pilosella*; (v) possible introgression between several species.

The above-mentioned traits suggest common recent hybridisation. Most hybrids were found at recently disturbed sites. As a whole, the pattern of the *Pilosellae* population within the Šumava Mts. is different from that in the western part of the Sudeten Mts. (the Krkonoše Mts.). Most probably, random events in the past led to differences in qualitative and quantitative composition of populations.

Common occurrence of *H. scandinavicum*, its hybrids with *H. aurantiacum*, and hybridisation between *H. floribundum* and *H. aurantiacum* seem to be typical of the Šumava region, while *H. iserantum*, *H. piloselliflorum*, and *H. blyttianum* (*H. aurantiacum* – *H. lactucella*) are typical for the Krkonoše Mts. *H. rubrum* occurs in the Krkonoše as an old stabilized hybrid with its own distribution area and ecology; in the Šumava region, it is a recent hybrid with low number of localities and specimens. The same particular haplotypes-cytotypes combination of the same species in both mountain regions suggests that they are either old entities or that they have originated in the same way.

#### **Acknowledgements:**

We would like to express our thanks to Grant Agency of the Academy of Sciences of the Czech Republic (grant No. IAA6005203).