

## GENETIC ANALYSIS OF *HIERACIUM PILOSELLA* L. NATURAL POPULATIONS IN TRENINO REGION

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In Trentino, numerous medicinal and aromatic species are naturally growing. The collecting of these species was widespread up to about 50 years ago, but since 30 years ago the Provincial Law for the protection of the wild flora (n. 17/73) allows their collection only to authorized professionals. According to recent studies, however, several wild plants species, some of whose medicinal and aromatic plants, are endangered in Trentino.

Knowledge of how genetic variation is partitioned among populations may have important implications not only in evolutionary biology and ecology, but also in conservation biology. Hence, reliable estimates of population differentiation are crucial to understanding the connectivity among population and represent an important tools in the development of conservation strategy.

*Hieracium pilosella* L. (mouse-ear hawkweed) is a perennial, herbaceous weed belonging to the *Asteraceae* family. The herb is mildly astringent, cholagogue, diaphoretic, strongly diuretic, expectorant and tonic. *H pilosella* L. has a complex reproductive strategy: presence of both sexual and facultatively apomictic types, polyploidy differentiation and frequent hybridization.

A direct study of representative DNA would be most suitable for elucidating the genetic variability of this species and establishing the genetic associations. Microsatellite markers are considered the most appropriate for genetic diversity studies and to investigate population genetic structure. In this work SSRs were developed in *Hieracium pilosella* using an enrichment procedure. Primer pairs were designed on 34 different microsatellite regions detected. Sixteen developed SSRs were applied for genotyping plants collected in 10 different location in the Trentino region (Italy), fifteen of them were polymorphic among the genotypes studied. SSR analysis results showed a high and interesting polymorphism within and among populations.