

PRELIMINARY STUDY OF SPECIFIC AND INTRASPECIFIC BIODIVERSITY IN *RUBUS* L. (ROSACEAE)

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The genus *Rubus* L. (*Rosaceae*) is one of the most diverse in the plant kingdom, comprising a highly heterozygous series of some 500 species with a ploidy range from diploid to dodecaploid.

Few plant genera are as confused as to nomenclature and identity. It is a critical genus because of its complex reproductive biology (Abbate *et al.*, 2002) and the high rates of interspecific hybridization. It is characterized by great interspecific and intraspecific variability, consequently the classification of species based on morphological characters can be very difficult.

The objectives of the present study were to quantify the similarity among some *Rubus* populations located within the Nature Reserve "Bosco Siro Negri", in the southern part of the Lombardy Ticino Valley Park (Pavia), and to determine their relationships.

A biosystematic study, based on biometric and molecular analysis, was carried out on samples belonging to *Rubus ulmifolius* Schott., *Rubus caesius* L. and to some hybrid populations with morphological characters intermediate between the two species. Genetic variation was investigated by RAPDs markers in order to estimate relatedness between species and construct groups between and within species.

Biometric and molecular data obtained were subjected to multivariate analysis using the program SYN-TAX 2000 (Podani, 2001).

Preliminary results allowed us to define more exactly the morphological variability of the two species examined and to evaluate genetic distances among these species and hybrid populations.

The main qualitative morphological characters differentiating *R. ulmifolius* from *R. caesius* are stem, prickles and stipules shape, number of segments and color of leaf underside. The shape of the stem, prickles and stipules of hybrid samples is typical of the species *R. caesius*, while the number of segments and the color of leaf underside are discriminatory characters of *R. ulmifolius*.

RAPDs preliminary results genetically differentiate the two *Rubus* species examined and confirm higher genetic similarity between the hybrid populations and *R. caesius*.

Abbate G., Bonacquisti S., Scassellati E., 2002. Morphological study of three taxa of the genus *Rubus* L. sect. *Rubus* (*Rosaceae*) in Western Central Italy. *Plant Biosystems* 136: 321-330.

Podani J., 2001. Syn-tax 2000. Computer program for data analysis in ecology and systematic. Scientia Publishing, Budapest.

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