

40th Anniversary Conference

Gesellschaft für

Ökologie

Book of Abstracts

August 30th to September 03rd, 2010



**ECOLOGICAL SOCIETY OF GERMANY, AUSTRIA AND
SWITZERLAND**

40th Anniversary Conference

**“The Future of Biodiversity:
Genes, Species, Ecosystems”**

Justus-Liebig-University Giessen

30th August – 03rd September 2010

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Volkmar Wolters, Janine Groh, Franziska Peter, Rainer Waldhardt

The Italian populations of *Viola pumila* Chaix – Their ecological and genetic characterization for an integrated conservation strategy

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Viola pumila Chaix is an Eurasian species linked to large alluvial grasslands. Ecology and conservation problems of its Central European populations have been studied by Hölzel (2003), Eckstein & al. (2004, 2006, 2009) and Danihelka et al. (2009). In Italy, it grows only in 4 Po valley sites, in grasslands and fresh meadows regularly mown, along ditches and cultivated fields. These populations are peripheral with respect to the European distribution of the species. They contain a very low number of individuals in each site (max. 46) and are very distant and strictly isolated from the nearest populations of Central Europe. According to IUCN (2001), this species is critically endangered in Italy (Buldrini & Dallai, in press). Since the best conservation strategy for endangered species implies a detailed knowledge of habitat requirements as well as of its genetic diversity, an ecological characterization of the 4 sites is in progress, by Ellenberg's Indexes modified by Pignatti & al. (2005). Moreover, the genetic diversity of the Italian populations of the species will be evaluated through ISSR markers: semi-arbitrary anchored primers designed from tandem repeat motifs of microsatellites will be used to estimate the level and the distribution of genetic diversity and to provide suggestions for effective conservation programs. A comparison between Italian populations and Central European ones will be performed in the next stage of the research.

