



Congress of The **European** Society for **Evolutionary** Biology

19 to 24 August 2013
Lisbon . Portugal



ABSTRACT BOOK

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D21SY27PS0228

**GENETIC DIVERSITY AND POPULATION STRUCTURE OF THE COMMON
FROG (*RANA TEMPORARIA*) IN THE TRENTINO REGION (SOUTH-
EASTERN ALPS)**

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Amphibians are facing a dramatic decline worldwide, due to their high susceptibility to perturbations and global change. A decrease in genetic diversity can lead to loss of adaptability, and it is often associated with reduction in fitness. Amphibians seem to be particularly prone to such genetic processes, and a growing body of research shows that many amphibian populations are experiencing a reduction in genetic variation. In this study we investigated the levels of genetic diversity and population differentiation of the common frog (*Rana temporaria*) in the alpine region of Trentino. *Rana temporaria* is a widespread amphibian species in Europe and is not currently considered threatened; nevertheless, in some part of its range it has recently experienced localized declines. We analyzed polymorphism in a set of 12 SSR loci, in about 25 populations spread over the entire area of interest. Levels of genetic diversity were comparable to those found in other European populations, but a relatively high degree of heterogeneity among sites was recorded. We detected an irregular population structure, though a first general subdivision may be recognized between the populations belonging to the orographic right and left side of the Adige river. Some populations of the central part of the area showed lower levels of genetic variability, together with relatively strong differentiation. This subarea is characterized by a wide and anthropized valley run through by the Adige river: the suitable habitat for *Rana temporaria* is limited to isolated patches within an inhospitable landscape matrix. In addition, this area largely overlaps with the distribution of *Rana dalmatina* in the Trentino region. We discussed the effects of population density and potential competition (in terms of pond occupancy) on the recorded patterns of genetic diversity and population structure, highlighting the genetic peculiarity (and therefore conservation value) of some isolated populations.