

Geographic patterns of morphological and genetic variability of *Podarcis vaucheri* in Morocco

A. KALIONTZOPOULOU^{1,2}; C. PINHO¹; J.C. BRITO¹; M.A. CARRETERO¹; D.J. HARRIS¹ & G.A. LLORENTE²

¹ CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, Campus Agrário de Vairão, 4485-661 Vairão, Portugal; antigoni@mail.icav.up.pt

² Departament de Biologia Animal (Vertebrats), Facultat de Biologia, Universitat de Barcelona. Avda. Diagonal, 645, 08028 Barcelona, Spain

The wall lizards of the genus *Podarcis* are characterised by a very high intraspecific morphological variability. *Podarcis vaucheri* is a member of the Iberian/Maghrebian clade of the genus; it was recently re-elevated to the species level and is distributed in Morocco and Southern Spain. Moroccan populations present very high levels of intra- and interpopulation genetic variability and it has been suggested that genetic patterns in this species result from isolation during the Pleistocene Ice Ages. In this study, we analyse potential sources of morphological diversification of the group, trying to evaluate the relative contribution of genetic and environmental factors. In order to do this, we examined 9 populations throughout the range of the species in Morocco and quantified 13 linear biometric and 9 pholidotic variables. We explored patterns of variation in morphological characters both in a geographic context and in relation to genetic variability of populations and environmental characteristics of the sampling sites. Both morphological and genetic traits presented local patterns of variation, associated to geographic units. On the other hand, the variability of some characters showed patterns of geographic variation along a latitudinal gradient. Results are discussed in the light of the evolutionary history of this phylogenetically complex group.

