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Behaviour and Ecology

Analysis of colour morphs variation in *Podarcis muralis* by using RGB scale

Daniele Pellitteri-Rosa, Roberto Sacchi, Aurora Di Paoli, Michele Ghitti, Adriana Bellati, Mauro Fasola, Paolo Galeotti

University of Pavia, Via Ferrata 1, 27100 Pavia, Italy e-mails: masterfauna@unipv.it; roberto.sacchi@unipv.it; adriana.bellati@unipv.it

Abstract: Colour polymorphism is a common phenomenon in reptiles, especially among the Squamates and in particular among Saurians, where colour is frequently involved in various sociosexual contexts. To speak correctly of chromatic polymorphism, colour morphs must be clearly distinguished between them with no gradual colour shifting from a morph into another. The common wall lizard (Podarcis muralis) is a small European Saurian showing a huge variability in the colour of the throat and ventral scales. Both sexes show three main colour morphs (white, red and yellow) and three intermediate colour morphs between the main ones (red/white, red/yellow and pale yellow). The purpose of this study was to determine whether the intensity of morphs coloration is discrete or continuous and whether it differs between sexes and sites of capture. The colour measurement was made using digital photography and expressed in the RGB scale. We found differences in the coloration of the three main morphs between the sampling sites: individuals belonging to the same morph show slight nuances from one site to another but don't prevent discrimination of morphs by an observer. There is no difference in the coloration of the three main morphs between the two sexes. The colour morphs show discrete colorations, highly discriminable basing on their RGB values, so throat coloration of P. muralis may be considered as a clear example of colour polymorphism.



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