

**O21.****Fluctuating asymmetry in urban vs. rural populations of *Podarcis muralis***

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Fluctuating asymmetry (FA) regards to minor, random deviations from perfect bilateral symmetry being often used as a measure of developmental stability. Stress, both environmental and genomic has been demonstrated to increase the level of FA in morphological traits. It is suggested that since organisms need energy to compensate for stress, the amount of energy available for growth and maintenance of developmental precision is reduced. Compared to other indicators of stress, FA is easy and inexpensive. Here we tested whether urban populations of *P. muralis*, which are expected to be under higher environmental stress due to exposure to contaminants, show increased levels of FA compared to rural populations. We examined the degree of FA in three morphological traits (number of femoral pores, subdigital lamellae and supraciliary granules) in 10 populations of *Podarcis muralis* - five urban and five rural ones. Trait size dependence, directional asymmetry, antisymmetry and measurement error were quantified for all three traits in both sexes and in all populations. Since all traits fulfilled the FA criteria we proceeded to FA analyses. The degree of FA varied between populations, and also between traits, but not between sexes. Populations inhabiting urban areas showed higher degree of FA when compared to rural ones. Increased FA in urban areas can be a result of nutritional stress of pregnant females and/or embryos, chemical pollution and inadequate incubation temperatures.

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