

Intraspecific ecomorphological variation in *Podarcis bocagei* wall lizards

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Abstract: Morphological variation in relation to habitat is known to occur in several lizard groups. Comparative studies have linked morphology and habitat use, showing that locomotion is the principal mediator of this evolutionary relationship. We investigated intraspecific ecomorphological variation in *Podarcis bocagei* by examining three habitat types, representing a variety between saxicolous and ground-dwelling habits. Our results indicate variation in absolute and relative limb length, but patterns are only partially concordant to biomechanical predictions. While the femur and hind foot are longer in ground-dwelling lizards, confirming previous observations, the tibia and hind limb are relatively shorter, contradicting expectations. Additionally, head shape varies substantially between habitats, in line with a hypothesis of mechanical restrictions related to microhabitat and refuge use. Finally, we detect male-specific variation between habitats in total body size and head size, providing evidence for interactions between natural and sexual selection. Interestingly, the results obtained about head size and shape partially coincide with the interspecific ecomorphological variation across the whole genus *Podarcis*. Although performance and behaviour studies are necessary to definitely confirm the functional and evolutionary significance of the observed patterns, our study indicates that ecomorphological adaptations can arise in a very short evolutionary time in this group of lizards.