EVOLUTIONARY VARIATION IN MORPHOLOGY-PERFORMANCE ASSOCIATIONS IN *Podarcis* WALL LIZARDS

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Form and function have always intrigued biologists, as they constitute a key element of the evolutionary history of organisms. Under the ecomorphological paradigm, differences in morphological traits result in differences in performance which in turn translate into variation in fitness in a given environment. Understanding how such evolutionary associations emerge at the microevolutionary level (i.e. across individuals of a species) and then scale up to shape macroevolutionary patterns (i.e. across species) has long been a challenge in evolutionary biology. In the Mediterranean Basin, wall lizards (*Podarcis spp.*) are an intriguing model system for investigating the evolutionary meaning of phenotypic traits and their relationship with performance, due to their elevated variability and their occurrence in a diversity of both natural and anthropized habitats. We examined locomotion and bite force, and several morphological traits relevant for functional performance for several species of wall lizards. We then obtained F-matrix statistics that describe the association between form and function within (intraspecific) and across species (interspecific). We also used pairwise Mantel tests to investigate the functional divergence among species and to study whether these were in accordance with clade-level phenotype-performance relationships. Mantel tests on intraspecific F-matrices suggested some degree of functional divergence among species. Our results also showed that intra- and interspecific F-matrices provide different information, where phenotype-performance relationships often do not coincide across analytical levels. Overall, our results suggest that phenotype-performance relationships may vary substantially across species and evolutionary scales.