

**DOES GEOGRAPHY RULE OVER BIOLOGY? LESSONS FROM THE
DIVERSIFICATION OF GREEN LIZARDS**

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The balance between speciation and extinction (i.e. diversification), together with dispersal, dictate biodiversity patterns, which vary enormously among regions and taxa. This implies that diversification depends both on 'intrinsic' organismal traits and 'extrinsic' factors associated to specific regions. Areas such as the Mediterranean Basin which underwent intense paleogeographic changes are known to have favored isolation and promoted diversification. Non-exclusively, the acquisition of key phenotypic traits (e.g. morphological innovations or shifts in climatic tolerances to exploit new niches) could drive diversification. The contribution of intrinsic traits and extrinsic factors to diversification, however, remains elusive. Here we test the contribution of paleogeography and phenotypic evolution in the diversification of green lizards (*Timon* and *Lacerta*). We reconstructed a complete dated phylogeny including all known lineages within species. Further, we characterized each lineage using 1) ecologically relevant morphological traits from museum specimens and 2) climatic niche characteristics (thermal and hydric conditions across each lineage's distribution). Diversification analyses revealed that green lizards diversified steadily, without major rate shifts, and suggested that (paleo)geography played a significant role in this process. Body and relative head size, as well as climatic niche characteristics, exhibited significant phylogenetic signal pointing to higher dissimilarity among close relatives than expected under random processes. In contrast, thermal niche characteristics were more similar among close relatives than expected by chance. However, trait-dependent diversification analyses did not lend support to any influence of these variables on diversification rates. Our results suggest that the geographic history of the Mediterranean Basin governed the diversification of green lizards.