P1.
Is ecophysiology in accordance with current distribution for the four species assigned to *Algyroides*?

Carneiro, Diana[1]; García-Muñoz, Enrique[1,2,3]; Žagar, Anamarija[1]; Pafilis, Panayotis[4]; Carretero, Miguel A.[1]

[1]CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, Universidade do Porto, Vairão, Portugal
[2]ECOBISA, Departamento de Biología Animal, Biología Vegetal y Ecología, Universidad de Jaén, Jaén, Spain
[3]CESAM, Centro de Estudos de Ambiente o do Mar, Universidade de Aveiro, Aveiro, Portugal
[4]Department of Zoology and Marine Biology, School of Biology, National and Kapodistrian University of Athens, Athens, Greece

The ecology of the lacertids genus *Algyroides* is still poorly known. Nevertheless, all four species recognized, *A. nigropunctatus*, *A. moreoticus*, *A. fitzingeri* and *A. marchi*, display some degree of restriction in distribution and habitat use when compared to other Mediterranean genera. As for other ectotherms with low dispersal abilities, in absence of other forces, such spatial restrictions are expected to be linked to ecophysiological constraints. Here, we test such prediction by focusing on two crucial features of reptilian life, thermal preferences and water loss. We performed two consecutive experiments in order to determine preferred body temperatures (Tp) and water loss rates (WI). Tp of 5-10 adult males by species was hourly monitored in a photothermal gradient for a ten-hour period. Subsequently, WI was estimated by placing the same specimens in sealed chambers with silica gel and weighing them hourly during a 12-hour period. Both Tp and WI differed in mean and time profiles across species, which were arranged into two groups regarding their ecophysiology. Namely, under standard conditions, *A. nigropunctatus* and *A. fitzingeri* selected for lower temperatures but lost less water than *A. moreoticus* and *A. marchi*, although the existence a trade-off between Tp and WI was unclear. While significant size variation between all species exists (A. fitzingeri and *A. marchi* being dwarfed), neither SVL nor body mass accounted for the differences in ecophysiology recorded. It is, hence, concluded that intrinsic (size/shape-free) differences in thermal and hydric physiology (high Tp and WI) may be responsible for the decrease of the ranges and habitats available suffered by *A. moreoticus* and, mainly, by *A. marchi*. Such process is likely to be linked to the spread of Mediterranean climate during the Pliocene.

engamu@gmail.com