

(P04) Colour evolution in insular ecosystems. Chromatic variation in *Podarcis liolepis*

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Evolution in islands and islets often leads to changes in chromatic characters of animals. In many cases, the result of these changes is an extravagant pattern, the loss of some chromatic character and/or the loss of its function, or the fixation of rare phenotypes. These changes are often explained by historical events as well as by several selective processes. The coloration of *Podarcis* lizards provides many examples of insularity driving changes in coloration. *Podarcis liolepis atrata*, an insular clade that inhabits the Columbretes archipelago, (a group of small volcanic islets facing the Iberian Mediterranean coast) shows some differences respect to the general pattern found in continental *P. liolepis* populations. However, no study has addressed these differences objectively (i.e. using reflectance spectrophotometry techniques). Here, we compare the coloration of *P. liolepis atrata* with those shown by a continental population of *P. liolepis liolepis* (Penyagolosa massif; Iberian System), focusing on male coloration.

Although data from other populations may be necessary for understanding the evolution of *P. liolepis* coloration, our spectral analyses reveal chromatic differences in most lizard body surfaces: the dorsal cryptic coloration, the long-wavelength based belly and throat, and the ultraviolet (UV) patches found on the outer ventral scales (OVS). Overall, *P. liolepis atrata* (mainly dorsal and ventral surfaces) are darker than *P. liolepis liolepis*. This is probably due to a general increase in melanin deposition, a common phenomenon in insular evolution. Also dorsal and ventral coloration are more chromatically pure and short-wavelength biased in *P. liolepis liolepis* than in *P. liolepis atrata*. The colour of throat and belly varies in the same way between populations. Although the UV patches found in OVS are the less variable colour character in this species (probably because they evolve under a strong social selection), we found a highly significant difference in hue, the OVS of male *P. liolepis liolepis* being more short-wavelength biased than those of *P. liolepis atrata*. The available evidence suggests that the hue of UV patches is related to individual quality signalling. Thus, differences in this variable may indicate differences in the intrasexual selection strength.

Coloration, evolution, insularity, lizards.