

**O16.****How plastic is antipredator behaviour in lacertids?  
Comparing two populations of *Podarcis carbonelli* with  
different levels of human disturbance**

Carretero, Miguel A.<sup>1</sup>; Argaña, Elena<sup>2</sup>; Duarte, Ricardo<sup>3</sup>

<sup>1</sup>CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, Universidade do Porto, Vairão, Portugal

<sup>2</sup>Centro de Investigação em Ciências Geo-Espaciais (CICGE). Faculdade de Ciências da Universidade do Porto, Porto, Portugal

<sup>3</sup>CESAM & Departamento de Biologia, Universidade de Aveiro, Aveiro, Portugal

Antipredator strategies in lacertids vary across and within species. Previous investigations have documented divergent strategies in both escape and recovery behaviour between syntopic species, between conspecific populations inhabiting different habitats and between colour morphs and size classes within the same population. Here, we evaluate the degree of plasticity in the different components of the antipredatory behaviour by comparing two conspecific populations under divergent disturbance regimes but otherwise environmentally similar. We examined the lizard responses under direct attack from a predator (simulated by the researcher) in two populations of *Podarcis carbonelli* from geographically close (1200 m) sites from Doñana National Park (SW Spain). In both cases, lizards mainly occupied wooden passes on sandy soil allowing park visitors to reach fauna observatories but, while one (El Acebuche) was heavily frequented (40,000-50,000 visitors/year) the other (Ribeteñilos) was not (<500). Field experiments were carried out in both sites during days with suitable conditions within a period with optimal temperatures but out of the reproductive period (November 2010) to exclude factors other than site, sex and size class. We recorded variables describing lizard traits (sex, size class), environment (microhabitat, refuge) and behavioural responses for 128 observations (63 for El Acebuche and 65 for Ribeteñilos) throughout random walking routes. Lizards from the most disturbed population (El Acebuche) were observed closer to their refuges than those from the less disturbed one (Ribeteñilos), regardless their sex, size class and habitat features. While the first were also observed on hotter substrates and males in general escaped into hotter refuges, thermal environment was insufficient to explain the behavioural differences found. By contrast with previous studies comparing species or colour morphs, no variation between sites for either escape distance, recovery time or recovery distance was recovered despite the good samples sizes. Results reinforce previous claims that individual lizards may respond to different levels of disturbance in a directional way. However, they also indicate that some components of the antipredator behaviour are more plastic than others. This should be confirmed by further experimental work.

**carretero@cibio.up.pt**