

Discoglossus galganoi tadpoles: egg and carcass cannibalism

César Ayres

AHE-Galicia. Cl. Barcelona, 86. 6º C. 36211 Vigo. Pontevedra. España. C.e.: cesar@herpetologica.org

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RESUMEN: En este trabajo se describen dos episodios de canibalismo de *Discoglossus galganoi* en la zona de especial conservación de Gándaras de Budiño (Pontevedra).

During our winter monitoring of amphibian breeding success in the Special Conservation Area (SCA) of Gandaras de Budiño and Ribeiras do Louro (NG36) we detected two episodes of cannibalism by *Discoglossus galganoi* tadpoles.

The first one was detected on April 1st, 2016. Two dead adults were found on a shallow pond created due to the water runoff through the wall of an old clay pit. One of them was on a hole on the bottom of the pond (see Figure 1), being consumed by tadpoles.

The second episode was detected on May 5th 2016. A late clutch was being consumed actively by tadpoles of at least three previous clutches (see Figure 2).

Oophagy on conspecifics spawns have been described on many species as *Bufo viridis*, *Isthmohyla pseudopuma*, *Dendrobates ventrimaculatus* and *Phrynohyas resinifictrix* (references in Escoriza, 2014).

Cannibalistic oophagy has been described on *D. galganoi* (Niecieza *et al.*, 2006) and also on *Discoglossus pictus* (Licata *et al.*, 2015). Cannibalism seems to represent an ideal diet because of its composition, which can also benefit reducing competition on ephemeral ponds with low availability of resources and high density of conspecifics (Jefferson *et al.*, 2014). It has been suggested that it could be an adaptation to xeric habitats (Degani, 2016). But this behaviour has some risks, if the adults died from an emerging disease or pathogen, which could also affect the tadpoles (Pfenning *et al.*, 1998).

In our case, where the pond is small (less than 0.50 m²) and there is no vegetation, the presence of dead conspecifics or new clutches represents an emergent resource that is readily consumed by tadpoles, allowing them to reach the metamorphic



Figure 1: Carcass of an adult *D. galganoi* on a hole on the bottom of the pond being consumed by tadpoles.

Figura 1: Cadáver de un adulto en el fondo de la charca, siendo consumido por los renacuajos.



Figure 2: Late clutch being consumed actively by tadpoles.

Figura 2: Puesta tardía siendo consumida activamente por los renacuajos.

stage. This small pond was not the primary breeding area for the species, but as mining activity is still active on the SCA,

the landscape has changed in the last year, forcing *D. galganoi* to select suboptimal breeding habitats.

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Human-mediated syntopy between *Cerastes cerastes* and *Daboia mauritanica* in the lower Drâa Valley, Morocco

Fernando Martínez-Freiría¹, Victoria Flores Stols² & Luis García-Cardenete³

¹ CIBIO/InBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos da Universidade do Porto. Instituto de Ciências Agrárias de Vairão. R. Padre Armando Quintas. 4485-661 Vairão. Portugal. C.e.: fmartinez-freiria@cibio.up.pt

² Plaza de España, 1. 13343 Villamanrique. Ciudad Real. Spain.

³ Cl. Carrera de San Agustín, 24. 2º A. 18300 Loja. Granada. Spain.

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Key words: North Africa, sympatry, Viperidae, water cisterns.

RESUMEN: Marruecos cuenta con siete especies de víboras, con distribuciones alopátricas, para las que nunca se ha citado coexistencia. No obstante, se ha identificado una zona de potencial simpatria entre cinco de estas especies en la región suroeste del país. En esta nota presentamos un caso de sintopía entre una especie sahariana, *Cerastes cerastes*, y otra mediterránea, *Daboia mauritanica*, que quedaron atrapadas en la cámara de decantación de un aljibe. La observación ocurrió en el bajo Drâa, suroeste de Marruecos; se trata de una zona de transición ambiental, donde las dos especies deben encontrarse en simpatria y probablemente también con una tercera especie de origen afro-tropical, *Echis pyramidum leucogaster*.

Palaearctic vipers (Serpentes, Viperinae) exhibit allopatric distributions at regional scale (see Sindaco *et al.*, 2013). This pattern frequently occurs at local scale too (e.g. Brito & Crespo, 2002; Martínez-Freiría *et al.*, 2006, 2008), being mediated by distinct climatic requirements and interspecific competition (Luiselli, 2006). Some species, however, overlap their

distributions at local scale (e.g., Saint-Girons *et al.*, 1975; Monney, 1996) and even occur in syntopy (e.g. Martínez-Freiría *et al.*, 2006; Mebert *et al.*, 2015). Syntopy can be favoured by human mediated landscape transformation; with pathways, for instance, allowing specimens movement to particular thermoregulation spots (see Mebert *et al.*, 2015).