New record of an extreme phenotype in *Salamandra salamandra gallaica*

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Resumen: Una hembra adulta de *Salamandra salamandra gallaica* con hiperpigmentación roja fue observada en el noroeste de Portugal. Este individuo fue único en una muestra de 675 observaciones realizadas a lo largo de 24 noches. Individuos como el descrito en este trabajo han sido raramente reportados.

Amphibians have a vast diversity of colourations. This entire palette of colours results from the light interplay of chromatophores divided into three skin layers: (i) xanthophores and erythrophores, included in the uppermost layer, containing yellow and red pigments; (ii) iridophores, located in the intermediate layer, containing light-scattering platelets of guanine; and (iii) melanophores, in the bottom layer, containing brown to black melanin pigments (Bagnara *et al.*, 1978; Bagnara & Matsumoto, 2006; Rudh & Qvarnström, 2013).

The fire salamander (*Salamandra salamandra*) is the most common salamander species in Europe, being easily recognized by its characteristic yellow spots on a black background (Velo-Antón & Buckley, 2015). However, brown, grey or red colour patches are also present in different populations of the species (Guiberteau *et al.*, 2012; Velo-Antón & Buckley, 2015; Donaire *et al.*, 2016). In the case of *S. salamandra gallaica*, the presence of red and grey colourations is relatively common (Guiberteau *et al.*, 2012; Velo-Antón & Buckley, 2015).

Here, we report an exceptional case of red hyperpigmentation in an adult female of *S. salamandra gallaica*. The red pigmentation covered not only the dorsal area, but most of the sala-

Figure 1: Adult female of *S. salamandra gallaica* with a marked red colouration distributed all over the body. a) Lateral, b) dorsal, and c) ventral view.
Figura 1: Hembra adulta de *S. salamandra gallaica* con una marcada coloración rojiza distribuida por todo el cuerpo. Vistas a) lateral, b) dorsal y c) ventral.

mander's body, which also had smaller black, yellow and grey areas (see Figure 1). The individual was observed on a trail of Mindelo Ornithological Reserve (Vila do Conde, Portugal; UTM 29T E 522260 / N 4575092; 13 masl) on November 26th, 2020, at 10:38 pm. It took place during a 24-nights survey that included 675 salamander observations. Individuals with a high prevalence of red pigmentation are scarce and only few studies have reported cases where red pigmentation was predominant over the typical yellow and black design (see Guiberteau *et al.*, 2012; Velo-Antón & Buckley, 2015). To the best of our knowledge, this would be the first record of an individual with such an extreme pigmentation observed in Portugal.

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Report of polymelia in *Lissotriton helveticus*

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Resumen: La salud de los anfibios es un tema clave en la investigación herpetológica actual, especialmente considerando que son el grupo de vertebrados más amenazado del planeta debido a las múltiples y sinérgicas amenazas que los acechan. Uno de los indicadores utilizados para evaluar la salud de las especies, es el porcentaje de malformaciones en una misma población. En esta nota se describe la observación de un tritón palmeado (*Lissotriton helveticus*) con polimelia en Cataluña.

Amphibian's health is a common issue in herpetological research. Within this topic, morphological malformations are seen as a worrying and comparatively frequent phenomenon in herpetofauna (Martínez-Silvestre *et al.*, 2014; Bell *et al.*, 2006). Morphological mal-