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Easternmost record of *Salamandra algira splendens* in Morocco

Axel Hernandez¹ & Daniel Escoriza²

¹ Department of Environmental Sciences, Faculty of Sciences and Technics. University Pasquale Paoli of Corsica. 20250 Corte. France. C.e: hernandez.axel.1989@gmail.com

² Institut Català de la Salut. Gran Via de les Corts Catalanes, 587-589. 08004 Barcelona. Spain.

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RESUMEN: Se describe el descubrimiento de la población más oriental conocida de *Salamandra algira splendens* en el Parc National d'Al-Hoceima. En esta región, *S. algira* ocupa un hábitat de matorral y bosque mediterráneo a baja altitud (220 msnm) y, al igual que en el caso de otras poblaciones, podría favorecer el uso de cuevas.

The North African Fire Salamander *Salamandra algira* Bedriaga, 1883 is the only species of the genus *Salamandra* present in North Africa (Schleich *et al.*, 1996). Its range encompasses from northern Morocco to north-eastern Algeria (Escoriza *et al.*, 2006). In this broad area of distribution four subspecies are currently recognized: *S. algira tingitana* in the Tingitana Peninsula (north-western Morocco), *S. algira splendens* in the Middle Atlas and Rif mountains (northern Morocco),

S. algira spelaea in the Beni Snassen mountains (north-eastern Morocco), and *S. algira algira*, restricted to north-eastern Algeria (Ben Hassine *et al.*, 2016). Recent publications provided accounts on the species' distribution, showing local adaptive divergence throughout its range (Escoriza & Comas, 2007; Beukema *et al.*, 2010). However this species is morphologically very conservative and its origin remains the most important criterion to determine the taxonomic status of the individuals (Ben Hassine *et al.*, 2016).

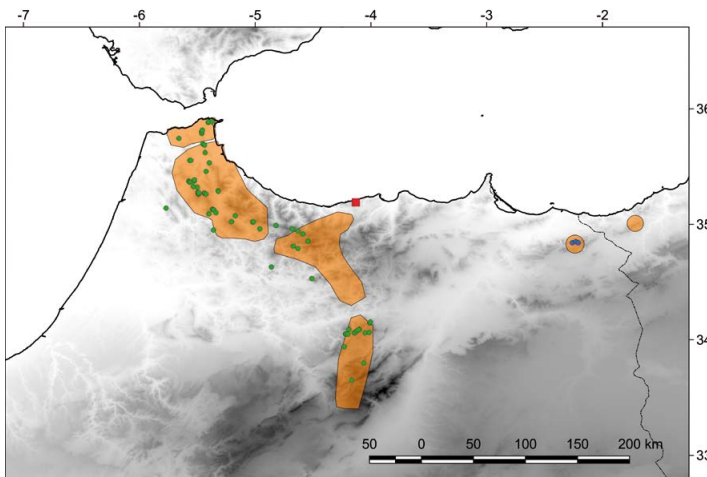


Figure 1: Distribution of *S. algira* in Morocco, according to Beukema *et al.* (2010, 2013) and Escoriza (2016) (*S. algira splendens* / *S. algira tingitana*, green circles; *S. algira spelaea*, blue circles) and IUCN (2014) (orange polygons). The new location is shown as a red square.

Figura 1: Distribución de *S. algira* en Marruecos, según Beukema *et al.* (2010, 2013) y Escoriza (2016) (*S. algira splendens* / *S. algira tingitana*, círculos verdes; *S. algira spelaea*, círculos azules) y IUCN (2014) (polígonos naranjas). La nueva localidad se muestra como un cuadrado rojo.

In the Rif Mountains, the distributional limits of *S. algira splendens* have been previously described to occur at Imassinen, Jebel Aâlou and Jebel Rhelem (Beukema *et al.*, 2013). Here we provided a new record for *S. algira splendens* in the Bokkoyas massif, Central Rif (Figure 1). On April 2017 in Bouchanchet (35°11'21.43"N, 4°7'50.37"O; elevation: 220 masl), we found an adult female (Figure 2). The habitat consisted in a mesic mixed forest composed by pines and evergreen oaks and a dense scrub (Figure 2) on a substrate formed by carbonate sedimentary rocks. The species possibly has a limited occurrence, restricted to patches of forested habitats within the Parc National d'Al-Hoceima. Locals also indicated its presence in caves in the same area, although this fact remains to be confirmed (Hernandez, 2017).

This new record is situated at approximately 60 km from the closest known locality, Jebel Rhelem (Beukema *et al.*, 2013; Figure 1), thus being the easternmost locality for the subspecies *S. algira splendens*. Another subspecies *S. algira spelaeae* appears more to the east, in the Beni Snassen

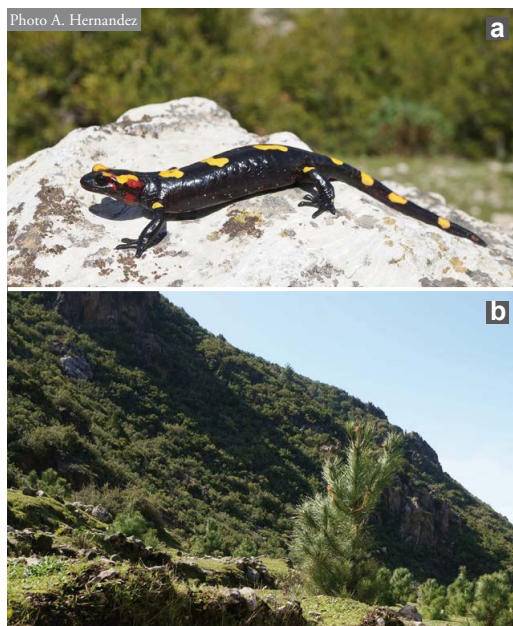


Figure 2: a) Adult female of *S. algira splendens* found in the Parc National d'Al-Hoceima. b) Its habitat.

Figure 2: a) Hembra adulta de *S. algira splendens* encontrada en el Parc National d'Al-Hoceima. b) Su hábitat.

massif (213 km to the east), being an important distributional gap caused by the Moulouya arid basin (Escoriza & Ben Hassine, 2015).

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