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Oued Noun (Morocco). Southwest limit for the genus *Discoglossus*

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Resumen: La distribución conocida de *Discoglossus scovazzi* alcanza por el sur la cuenca del río Souss. Se presenta una observación extralimital de dos ejemplares adultos atrapados en aljibes, en la cuenca del río Noun, región de Guelmim-Smara. Esta localidad se encuentra 180 km más al sur del área conocida de la especie, en una zona de transición climática entre las etapas árida y sahariana de Emberger. Por tanto, sugiere la posibilidad de que este sapillo habite áreas adecuadas entre los valles del Souss y el Noun, como puede ser el Antiatlas occidental, entre Sidi Ifni y Tafraoute, o la cuenca del río Massa.

The genus *Discoglossus* is unique to the Mediterranean region, with two species in North Africa (Beukema *et al.*, 2013). *Discoglossus pictus* would occupy the eastern portion of the range (eastern Morocco, Algeria and Tunisia), while *D. scovazzi* occupies the western portion of that range, thus being considered a Moroccan endemism. The boundary between both species is found in the oued Moulouya basin (Vences *et al.*, 2014).

The distribution of *D. scovazzi* has been well known for a long time (Bons & Geniez, 1996), and the subsequent studies that have dealt with its chorology have provided few new locations (Barnestein *et al.*, 2012, Beukema *et al.*, 2013, Mediani *et al.*, 2015), without significantly expanding its extension, considered to be around 190.600 km^2 (Reques *et al.*, 2013).

D. scovazzi inhabits mostly humid and subhumid ombroclimates, where it is relatively easy to detect in suitable places, such as edges of humid forests, grasslands or waterlogged gutters. Thus, it is a frequent species in a large part of the Tangier Peninsula, Western Rif, Djebel Tazzeka (Mediani *et al.*, 2015), Atlan-

tic plain between Assilah and Casablanca, in already semi-arid areas. It is common in the High Atlas, where it occupies high altitude wetlands or valley bottoms. It even inhabits arid areas of temperate winters, such as the plain of Marrakech or the valley of the Souss (Bons & Geniez, 1996, Beukema *et al.*, 2013). This valley is considered the southern known limit of *Discoglossus*, with the exception of a doubtful old observation in the Saharan zone (oued Draa, Tafnidilt, Bons & Geniez, 1996) by F. Cuzin (P. Geniez, personal communication) which has not been considered afterwards (Beukema *et al.*, 2013, Vences *et al.*, 2014).

A new southernmost locality for *D. scovazzi* is presented in this note, in the transition from the arid to the saharan stages according to the bioclimates of Emberger (Mokhtari *et al.*, 2013). The area has an average annual temperature of 18.9º C and an average annual rainfall of 119 mm (http://fr.climate-data.org/location/4101/, accessed on 17 December 2018). On December 6th 2018, two adult specimens were observed (Figure 1), in the vicinity of Targa Wassay, trapped in different matfiyas (water cisterns to collect rainwater and store it). They were found in the 10 x 10 km UTM grid 29R LN71, about 180 km to the SSW in a straight line from the nearest previously known location (Beukema *et al.*, 2013) (Figure 2). Both specimens were observed in the southern margin of oued Noun, at a distance of 3 km (airline) between them. The surrounding habitat was formed by riparian vegetation on the margins of the nearby oued Noun, as well as macaronesian scrub on a substrate that alternates rocky and sedimentary material.

One of the specimens was discovered dry, under plastic waste next to an adult *Pelophylax saharicus*, while the other was trapped

Figure 1: Adult female of *Discoglossus scovazzi* found in a water cistern in Targa Wassay, oued Noun, Morocco.
Figura 1: Hembra adulta de *Discoglossus scovazzi* hallada en un aljibe en Targa Wassay, oued Noun, Marruecos.

in water, together with an adult *Barbarophryne brongersmai* and *Sclerophrys mauritanica*. It has been shown that matfiyas, or water cisterns, constitute a threat for amphibians and reptiles in the southwest of Morocco (García-Cardenete *et al.*, 2014, Pleguezuelos *et al.*, 2017). In this case, the trap effect of these structures has allowed to locate *D. scovazzi* in an area where it was not known. Also, it is the first time that the authors have observed this species affected by this threat in about 6000 checkpoints of matfiyas (L. García-Cardenete, unpublished data), of which just over 1% have been made in the valley of the Souss, within its known distribution area.

It is the first observation of this species in the Guelmim-Smara region. The area of the discovery has been and is still intensely visited by herpetologists (oued Noun, Assaka, Fort Bou Jeriff), so that a great knowledge of its herpetological community is possessed, with 21 species cited in the grid L28 assigned to Bons & Geniez (1996), plus eight species observed

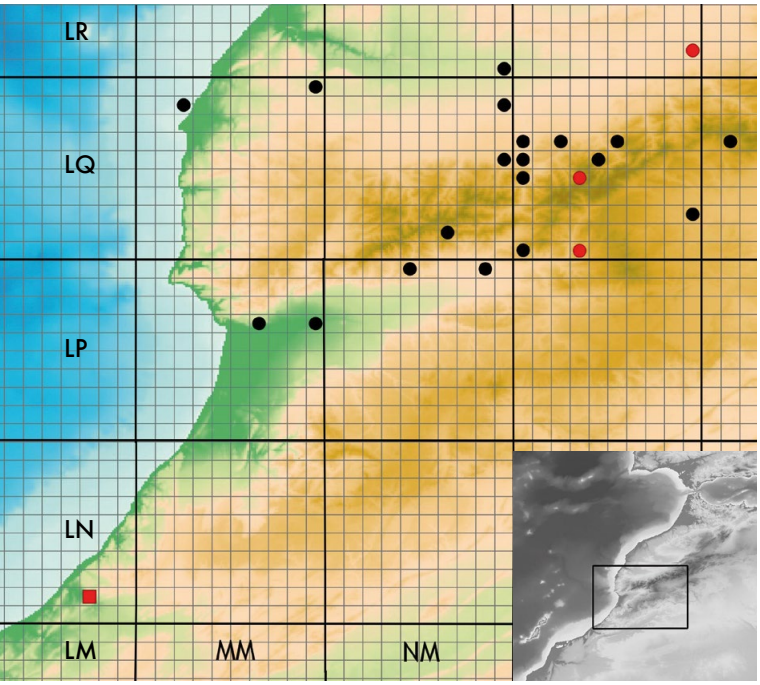

Figure 2: Southwestern range of *Discoglossus scovazzi* (Morocco), in an UTM grid mesh of 10x10 km. Black circles show known locations. Red circles indicate new localities; the red square represents the oued Noun record.
Figura 2: Distribución suroccidental de *Discoglossus scovazzi* (Marruecos), en malla de cuadrículas UTM de 10x10 km. Los círculos negros muestran localidades conocidas. Los círculos rojos indican nuevas localidades, correspondiendo el cuadrado rojo a la localidad de oued Noun.

by the authors of this note (*D. scovazzi*, *Bufotes boulengeri*, *Acanthodactylus boskianus*, *Mesalina olivieri*, *Chalcides polylepis*, *Eumeces algeriensis*, *Macroprotodon brevis* and *Boaedon fuliginosus*).

The non-detection of *D. scovazzi* in oued Noun makes it necessary to confirm its presence in suitable areas for this tiny toad between this locality and oued Souss during future surveys. The sampling should be directed especially to small riverbeds and humid areas of the western Antiatlas: mountains of Ifni and Tafraoute, as well as in the oued Massa basin, where it is possible that this anuran may have gone unnoticed until now.

The relict presence of a Mediterranean element such as *D. scovazzi* within the arid-Saharan environment shows the value of wetlands (in this case, a permanent watercourse) as a refuge for biodiversity, which should be taken into account when regulating human activities and planning an adequate network of protected areas that avoid or curb the current trend of biodiversity loss in the Sahara (Brito *et al.*, 2014, 2016).

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Sobre la presencia de *Lissotriton helveticus* en los Montes de León (Galicia y Zamora, NW Iberia)

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El tritón palmeado, *Lissotriton helveticus* (Razoumowsky, 1789), es un urodelo de distribución eminentemente eurosiberiana que habita en gran parte de Europa occidental. Está presente de manera continua en Gran Bretaña, siendo más escaso en las zonas bajas del suroeste de la isla. En Alemania habita su mitad occidental, volviéndose más raro en su extremo norte, así como en los Países Bajos, donde ocupa solo la mitad sur. Por el contrario, está presente en toda Bélgica y Francia, con la excepción de los departamentos alpinos y la Riviera francesa en el sureste del país (Barbadillo, 2002; García-París & Recuero, 2008).

En la península ibérica, habita principalmente la región eurosiberiana, penetrando en las zonas costeras con clima mediterráneo situadas más al norte. Está presente en el extremo noreste de Cataluña, ocupando gran parte de la provincia de Girona, siendo más escaso y localizado en el Pirineo catalán y aragonés. Es abundante en Navarra y el País Vasco y también está presente en el norte del Sistema Central, en la Sierra de la Demanda y Moncayo. Desciende por el río Ebro hasta su desembocadura, siendo éste su límite sur en la costa mediterránea. Está presente en Cantabria, Asturias y Burgos, limitándose a las zonas del norte de Palencia y León. En Galicia,