

Another record of
Lytorhynchus diadema
(DUMÉRIL, BIBRON & DUMÉRIL, 1854)
from Moroccan Atlantic Sahara

It was towards the end of 19th century and early 20th century that first information on the reptile fauna of the Moroccan Atlantic Sahara or ‘Moroccan Southern Provinces’ (then the Spanish colony ‘Spanish Sahara’) was collected (e.g., QUIROGA 1886; GÜNTHER 1903; ZULUETA 1909; BOETTGER 1921; LOVERIDGE 1947; MONTEIL 1951). During this period, the region of Oued Dahab (then ‘Rio de Oro’), in particular, benefited most from the visit of herpetologists, which helped to shed light on the reptilian community of this region. However, following Spain’s withdrawal from the region and the subsequent war between Morocco and the separatists (Polisario), most of the interior remained relatively unexplored for over two decades (from the mid-1970s to the 1990s). GENIEZ et al. (2004) synthesized the current knowledge about “The amphibians and reptiles of the Western Sahara (former Spanish Sahara) and adjacent regions”, based on previous publications, unpublished and published data from more recent expeditions to some of the safest parts of the territory (e.g., GENIEZ et al. 1992; GENIEZ & GENIEZ 1993; HASI et al. 1997; MATEO et al. 1998; GENIEZ et al. 2000, 2004; PLEGUEZUELOS et al. 2004).

Since the beginning of the 21st century, more and more expeditions to the region, including inland and southernmost parts adjacent to Mauritania, made new discoveries (e.g., ESCORIZA et al. 2011; QNINBA et al. 2013; MEDIANI et al. 2013). In this paper, the authors present and discuss the southern distribution limit of *Lytorhynchus diadema* (DUMÉRIL, BIBRON & DUMÉRIL, 1854) in Morocco.

In Morocco, this snake is widely distributed over a large part of the Saharan area and also in a small part of the arid oriental area (BONS & GENIEZ 1996; GENIEZ et al. 2004) with Bou Craa (VALVERDE 1957) as the southernmost known record locality for the species (Fig. 1). In Mauritania, the species is known to occur in the northernmost coastal region bordering Morocco (VILLIERS 1950). Between the parallels of

Bou Craa (26°19’ N) and northernmost coastal Mauritania (21°18’ N), there is a large gap (over 300,000 km²) in the known species’ distribution where observations have never been collected (BONS & GENIEZ 1996; SCHLEICH et al. 1996; GENIEZ et al. 2004; TRAPE & MANÉ 2006).

During the authors’ field-work in the region, the snake was recorded in three localities new to the species.

One is the market gardening farm “MSD 1 Gleb Jedian” (23.6667 N, 15.7333 W), about 20 km west of the city of Dakhla, about 10 km from the Atlantic Ocean and 420 km south of Bou Craa, the hitherto southernmost record of the species in Morocco. The climate is relatively humid in an otherwise very dry region. The area is subject to mild temperatures with low rainfall that does not exceed 35 mm in the autumn. The site is under oceanic influence which offsets the harshness of the Saharan climate of the region. The observations at MSD 1 correspond to three adult individuals (Figs. 2A and 2B) and were made on June 5, 2005, November 10, 2008 and May 1, 2009. The habitat is mostly a reg with sand dunes and clumps of vegetation at some places, located in a depression that accumulates the rare rainwater. All three individuals were observed on pieces of abandoned plastic, which makes us think that the species may benefit from the artificial microclimate in greenhouses of these farms located in the north of the Oued-Dahab-Lagouira region. These gardening farms are considered a refuge for other species of reptiles, e.g., *Spalerosophis diadema* (SCHLEGEL, 1837) (MEDIANI et al. 2013) and *Chamaeleo chamaeleon* (LINNAEUS, 1758) (TRAPE et al. 2012), as well as for other taxonomic groups, including dragonflies (authors’ pers. obs.), birds (CHEVALIER & BERGIER 2011), and mammals (CHEVALIER et al. 2012).

A further locality is located near the town of Aousserd on National Road N3 (23.1014 N, 14.9300 W), about 110 km southwest of the previous site and about 210 km from the border with Mauritania, the nearest southern sites where the species is known to occur (GENIEZ et al. 2004). The observation corresponds to an active adult observed during a cool night on April 7, 2013 (Figs. 2C and 2D).

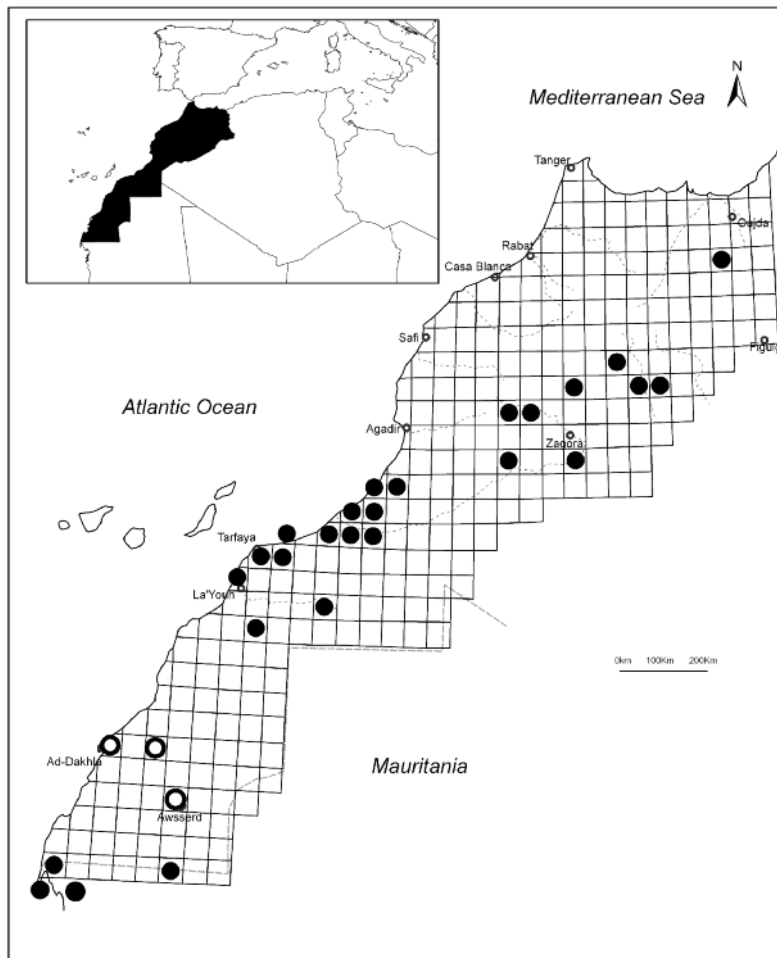


Fig. 1: Range of *Lytorhynchus diadema* (DUMÉRIL, BIBRON & DUMÉRIL, 1854) in Morocco and adjacent areas in Mauritania. Solid circles correspond to localities according to BONS & GENIEZ (1996) and GENIEZ et al. (2004), empty circles to new records reported here.

The third record locality (GPS coordinates unknown, David OUDJANI pers. com.) is situated near Bir Anzaran, at about 104 km from the Atlantic Ocean and 124 km from the first site. This site is the northernmost observation of the species in the region of Oued Dahab-Lagouira. The habitat of the second and third sites is constituted by a reg with interspersed savanna-like areas with *Acacia* trees, reminiscent of those of the Sahel, surrounded by a vast tree-less zone. The habitats are well preserved, discounting

small-scale pasture activities that involve camel and goat rising. The soil is loose in general, but stony regs are present in some places.

In Morocco, the distribution of this colubrid snake in arid and Saharan areas is very sparse and is better known in the region of Tarfaya and Zagora than in the region south La'youne (Fig. 1 in BONS & GENIEZ 1996). The new observations suggest that the species has a much wider distribution than previously known and that a



Fig. 2: *Lytorhynchus diadema* (DUMÉRIL, BIBRON & DUMÉRIL, 1854) photographed at the region of Oued Dahab-Lagouira (Southern Sahara, Morocco). A and B - from 20 km west of the city of Dakhla, C and D - from near the town of Aousserd.

continuous population may occur between Dakhla and Mauritania (GENIEZ et al. 2004). *Lytorhynchus diadema* was considered a rare species in the south of the Sahara (BONS & GENIEZ 1996), but these observations suggest that the species may be relatively abundant in the southern Moroccan Sahara.

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