

***Natrix natrix* (Squamata: Colubridae) presence in Sidi Boughaba Ramsar Reserve (North-western Morocco)**

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Abstract

Two new records of *Natrix natrix* are described for Morocco, which will widen the knowledge of this highly localized species. The record on the Atlantic coast is of special interest as it confirms the presence of the African grass snake in lagoons and deltaic ecosystems in Morocco.

Resum

Dues noves cites de *Natrix natrix* són descrites pel Marroc, el que amplia el coneixement d'aquesta espècie molt localitzada. La localitat de la costa Atlàntica resulta d'especial rellevància donat que confirma la presència de la serp de collaret africana en llacunes i ecosistemes deltaics al Marroc.

Key words: *Natrix natrix*, Atlantic coast, new record, international reserves network, herptile diversity

Paraules clau: *Natrix natrix*, costa Atlàntica, nova cita, red de reserves internacional, diversitat d'hèrptils

Natrix natrix is a natricine which is widely distributed in the mediterranean and temperate regions of Eurasia. In the Mediterranean basin it reaches the southern limit in Syria and Maghreb (Reptile database 2011). In Maghreb this species has been recorded in Tunisia, Algeria and Morocco, and there is a significant gap between the most eastern Morocco and Algerian localities (Schleich et al 1996), similar to that found in other mesophilous herptile species such as *Pleurodeles walt* (Carranza & Arnold 2004) or *Emys orbicularis* (Schleich et al 1996). In northern Morocco, according to Mertens (1947), the Iberian form *N. natrix astreptophora* appears, but Sochurek (1979) proposed that the north-african populations of *Natrix natrix* are better classified as new subspecies, *Natrix natrix algerus*, based on dorsal and head color pattern.

In Morocco is known to be in the Rif and Middle Atlas mountains (Bons & Geniez 1996; Martínez-Medina 2001) (Fig.1), where it can be considered a rare species

(Mateo et al 2003). Most of these records are located in mountain areas, between 600 and 2000 masl (Bons & Geniez 1996), in the subhumid and humid forest belt of evergreen and deciduous oaks, although there is an isolated record on the Atlantic coast (Loukos delta, Mateo et al 2003). This is explained as *Natrix natrix*, a species of probable European origin, depends on more humid climatic conditions than the African water snake *Natrix maura* (Bons 1967; Schleich et al. 1996).

In November 2008, a juvenile specimen was found in the western Rif mountains in a fountain at 35.32°N, 5.53°W 1175m a.s.l., along with *Discoglossus scovazzi* and *Pelophylax saharicus*. In september 2010 an adult specimen was found on the shore of Lake Sidi Boughaba (34.25°N 6.66°W, 45m a.s.l.), along with *Pelophylax saharicus* and *Mauremys leprosa*. This latter area is particularly relevant because it is a second record of the species on the Atlantic coast of Morocco, being separated about 120 Km from the Loukos delta and indicates that this species is also present in lagoons and deltaic environments in Morocco, a fact which was not reflected in Bons & Geniez (1996), who considered the African grass snake an exclusive species of mountain areas with high rainfall values.

Natrix natrix shows a fragmented distribution in Morocco and is much less common than *N. maura*. This observation demonstrates the presence of the African grass snake in the Biological Reserve of Sidi Boughaba, considered of international importance by the IUCN (<http://bioval.jrc.ec.europa.eu>). In this reserve *Pelobates varaldii* has also been recorded, which is considered as an endangered species (IUCN Red Data List 2011) and *Pleurodeles walt*, possibly rare in Morocco (Mateo et al. 2003). The presence of these three herptile species in the Biological Reserve of Sidi Boughaba indicate that this area also has a strong interest from a herpetological point of view and therefore should taken into account the preservation of the herpetological diversity in management measures of the Reserve.

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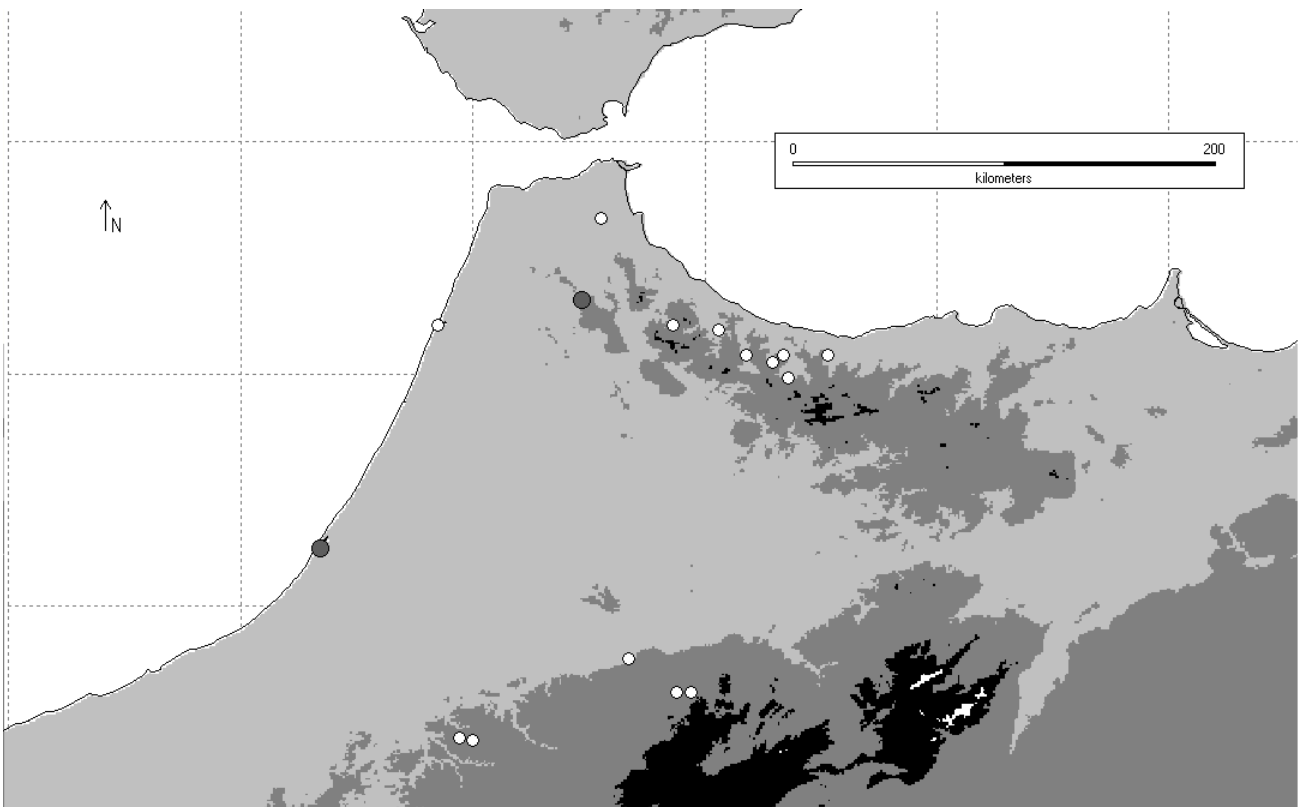


Figure 1: Distribution of *Natrix natrix* in north-western Morocco.
White dots localities described by Bons & Geniez 1996, Mateo et al. 2003.
Grey dots localities described in this article.