



Scincopus fasciatus, distribution and new records in Tunisia

Mohsen Kalboussi

Institut Supérieur Agronomique de Chott Mariem, B.P 47, 4042 Chott Mariem, Tunisia

*Corresponding email: mkalboussi@gmail.com

Received: 23 December 2020 / Revised: 24 January 2021 / Accepted: 25 January 2021 / Published online: 4 February 2021.

How to cite: Kalboussi, M. (2021). *Scincopus fasciatus*, distribution and new records in Tunisia, *Scientific Reports in Life Sciences* 2(1), 52-57, <http://dx.doi.org/10.22034/srls.2021.522484.1010>

Abstract

Scincopus fasciatus (Peters, 1864) is a nocturnal skink species rarely recorded from its large global distribution area. In Tunisia, it was reported for the first time at the end of the 19th century. After different field surveys in southern Tunisia, I found the species active many times in Bou Hedma national park. Additional new records concern road-killed animals. In this paper, a review was made on the species distribution in Tunisia, and its habitats are described.

Keywords: Activity, Banded skink, habitat, new records, Scincidae

Introduction

Scincopus fasciatus (Peters 1864; Fig. 1) is a poorly known nocturnal skink species with a range extending over an area from Mauritania to Sudan (Schleich *et al.* 1996; Trape *et al.* 2012). The species has been reported from different countries: Mauritania (Vicent-Castelló *et al.* 2018), Morocco (Bons and Geniez 1996), Algeria (Mouane *et al.* 2014), Tunisia (Lanza and Corsi, 1981; Nourira *et al.* 1999), Libya (Sindaco 1995), Niger (Gonçalves *et al.* 2013), Nigeria (Papenfuss, 1969) and Soudan (Lanza and Corsi 1981). The banded skink is a poorly known species, currently catalogued as “data deficient” in the IUCN Red List (Geniez *et al.* 2010).

S. fasciatus is one of the eight skink species living in Tunisia (Kalboussi 2006). Its records in the country during the last century were extremely scarce. It was reported from El Arad plain (south of Gabes; Mayet



1903; Olivier 1896), Tozeur (Schleich *et al.* 1996), Hazoua oasis (Lanza and Corsi 1981) and Souk Djedid (south of Sidi Bouzid; Nourira *et al.* 1999).

This paper's main objective was to update the geographical distribution of *Scincopus fasciatus* in Tunisia after field surveys over almost 20 years and provide unpublished information about its natural habitats and ecology.



Figure 1. Adult *Scincopus fasciatus* from Bou Hedma national park

Methods

Nocturnal field surveys were conducted, seeking for the species between 2000 and 2017, mainly in spring and summer seasons (May-August), totalling about 30 nights and 180 hours. Animals were tracked in their natural habitats (edges of cultivated fields, steppes, oases, Sahara desert, etc.). During these trips, the biotopes in which there is evidence of the presence of the species (active animals, carcasses, traces...) were visited and accurately described. The landscape, nature of the soil, plant cover, microhabitat, and time of activity were noted (when fresh specific traces were found during night trips or if active animals were encountered). Different reptile species living in the same area as *Scincopus* were recorded (both diurnal and nocturnal species), when caught or identified with certainty on the field. On 2017, an adult specimen was kept one night to photograph it and then released in the same place where it was found.

Results and discussion

During field surveys, some remains of killed animals along routes were found, in Regueb and Mezzouna localities. A mummified specimen from Regim Maatoug region was also obtained. Specific traces were



recorded, without any encounter with a living animal, mainly in the regions of Douz, Jemna and Bchelli, in the southern part of Kebili. Living animals were only found in Bou Hedma national park which is also part of the biosphere reserves network (Fig. 2). In Tunisia, the range of the species seems to be large though the density of its populations is very low. *S. fasciatus* inhabits regions with Mediterranean bioclimates, ranging from super arid with temperate winters to superior Saharan with fresh winters (between latitudes 33° and 35° N).

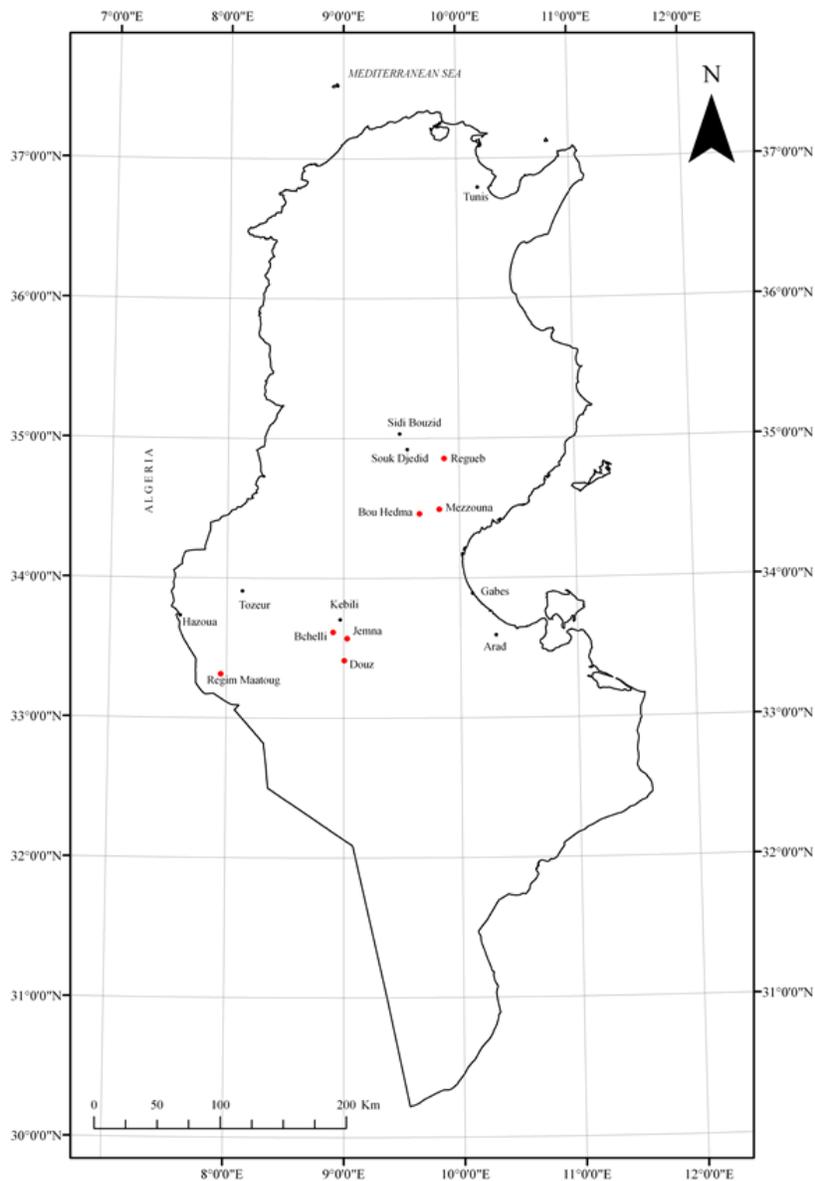


Figure 2. Map of Tunisia showing the localities where *Scincopus fasciatus* was found (red circles indicate new localities). Note that El Arad is not a locality, but a plain, and the point is just indicative.



Living animals were found in Bou Hedma national park (May and September 2010, and May 2017). Only on May 2017, three living adults were encountered in one night, but on the other dates, only one individual was found. All of them were active around midnight.

Scincopus fasciatus is rare and strictly nocturnal species, but lives in large and extended areas. Its scarcity is partly due to the destruction of its natural habitat and its nocturnal habits. In fact, *Opuntia* hedges are destroyed during dry years to afford the livestock, or lost because of drought. The destruction of jujube tufts, by ploughing, reduces even more the natural vegetation ensuring the species persistence in some of its natural habitats. Other investigators failed to find the species in these areas (Blanc and Sane, 1980; Joger, 2003; Moldrzyk, 2003).

The habitats consisted of sandy areas covered with low discontinuous shrubs and scattered annual herbaceous plants (*Cenchrus ciliaris*). Shrubs consisted mainly in *Rhantheruim suaveolens*, *Haloxylon scoparium* and *H. schmittianum*. Only once, an animal tried to flee under a *Rhantheruim suaveolens* shrub when I tried to handle it.

In Regueb and Mezzouna, dead specimens on sandy soils covered with *Retama raetam* shrubs, but also in the margins of cultivated cereal fields and near *Opuntia* hedges. They were killed while crossing routes. In these areas, the habitat consists mainly in flat lands on which fences were made for water harvesting and cultivation. The natural vegetation consists mainly in *Ziziphus lotus* shrubs or *Opuntia* hedges around cultivated areas. In these areas, animals live in the *Opuntia ficus indica* hedges or in the tufts of *Ziziphus* where there are many rodent burrows in which the banded skink shelters, by day.

In the surroundings of the Sahara desert (Bchelli, Jemna, Douz and Regim Maatoug), its habitat consists of fences made of dead palm trees used to stop the advancement of movable sand. It also lives on flat sandy areas covered with Chenopodiaceae where its specific tracks were found.

Fresh specific tracks of *S. fasciatus* were found on the sand of the Sahara desert around 9 pm. While active, animals move on very long distances (more than 200 m), and seem to return to their same refuges (information gathered by pursuing fresh tracks). While moving on the sand, animals leave specific marks on the sand, consisting mainly of long trails between the legs traces, because their tails are continuously trailed on the ground, but, sometimes their bellies also.

The species seems to shelter in rodent burrows. It was never found under deposits. Each year, many animals are killed by vehicles, while crossing roads. In Douz region, each animal is intentionally killed when encountered, because local people present an unjustified fear from the species. They think that its bites are more dangerous than envenomation by *Cerastes* vipers. This belief is only reported in this region, and is not recorded in other places where the species is known to live, though it is shared with other communities, as in Niger (Chirio 2009). Such fears from lizards are relatively common in many places in Tunisia, and concern mainly Gekkonids (*Tarentola* spp. and *Hemidactylus turcicus*), because it is believed that they to cause skin diseases. In the neighbouring Algeria, Doumergue (1901) relates another case of fear from *Chalcides chalcides*.

Observations of living animals showed that they were not fast while moving and, if threatened, they look for a tuft of vegetation to hide. While handled gently, an animal stays immobile without trying to escape, but if grasped, it tries to bite.



All the found animals, dead or alive, were adults, but frequent tracks of young specimens were observed in July. This fact seems to indicate that newborn emerge during June-July each year.

Tropicolotes tripolitanus, *Tarentola fascicularis*, *Hemidactylus turcicus*, *Stenodactylus* sp., *Chalcides boulengeri*, *Cerastes cerastes*, *Lytorhynchus diadema* and *Spalerosophis diadema* are among nocturnal reptiles living in sympatry with *Scincopus fasciatus*. Diurnal species include *Chalcides ocellatus*, *Acanthodactylus boskianus*, *Chamaeleo chamaeleon*, *Testudo graeca*, *Varanus griseus*, *Naja haje* and *Psammophis schokari*.

Conclusion

Future prospections will focus on additional appropriate habitats of *S. fasciatus* in the areas where the species lives, at specific times, to complete basic information on its ecology and biology.

Acknowledgements

I thank all those who accompanied me on the field or facilitated my various missions, mainly Mr L. Hamdi and A. Ben Ali curators of Bou Hedma national park. I also thank Dr H. Achour for contributing to improve a previous version of the manuscript, as well as Miss H. Belghith.

References

- Bauer A.M., DeBoer J.C., Taylor D.J. 2017. Atlas of the Reptiles of Libya. Proceedings of the California Academy of Sciences, 64(8): 155–318.
- Blanc C.P., Sname M.H. 1980. Les reptiles et les batraciens de la région de Bou Hedma. Bulletin de la Société les Sciences Naturelles de Tunisie, 15: 3–10.
- Bons J., Geniez P. 1996. Amphibiens et reptiles du Maroc Sahara occidental compris. Atlas Biogéographique. Barcelona, Spain: Asociación Herpetológica Española.
- Chirio L. 2009. Inventaire des reptiles de la région de la Réserve de Biosphère Transfrontalière du W (Niger/Bénin/Burkina Faso: Afrique de l'Ouest). Bulletin de la Société Herpétologique de France, 132: 13–41.
- Doumergue F. 1901. Essai sur la faune erpétologique de l'Oranie, avec des tableaux analytiques pour déterminer tous les Reptiles et Batraciens du Maroc, de l'Algérie et de la Tunisie. Oran, Algeria: Imprimerie Typographique Fouque.
- Geniez P., Crochet P-A., Mateo Miras J.A., Joger U., Pleguezuelos J., Slimani T., El Mouden E.H., Baha El Din S.M. 2010. *Scincopus fasciatus*. The IUCN Red List of Threatened Species 2010: e.T178691A7596726. <https://dx.doi.org/10.2305/IUCN.UK.2010-4.RLTS.T178691A7596726.en>. Downloaded on 17 November 2020
- Gonçalves D.V., Álvares F., Brito J.C. 2013. Data on the distribution of herpetofauna of southern Niger with comments on Termit & Tin Toumma National Nature Reserve. Boletín de la Asociación Herpetológica Española, 24(1): 74.
- Joger U. 2003. Reptiles and amphibians of southern Tunisia. Kaupia 12: 71–88.
- Kalboussi M. 2006. Biosystématique, biogéographie et écologie des Scincidae (Reptilia) de la Tunisie. Ph.D. Dissertation, Faculté des Sciences de Tunis, Department of Biological Sciences.



- Lanza B., Corsi M. 1981. Notes on *Scincopus fasciatus* (Peters) with a description of a new subspecies (Reptilia Scincidae). *Monitore zoologico italiano*, 14(3): 17–29.
- Mayet V. 1903. *Catalogue raisonné des Reptiles et Batraciens de la Tunisie*. Exploration Scientifique de la Tunisie, Zoologie: Reptiles et Batraciens. Paris, France: Imprimerie Nationale.
- Moldrzyk U. 2003. Preliminary faunal list of the Bou Hedma national park, southern Tunisia. *Kaupia*, 12: 29–41.
- Mouane A., Si Bachir A., Ghennoum I., Harrouchi A. 2014. Premières données sur la diversité de l'Herpétofaune de l'Erg oriental (Région du Souf - Algérie). *Bulletin de la Société Herpétologique de France*, 148: 491–502.
- Nouira S., Blanc Ch.P., Ktari M.H. 1999. Biodiversité de l'herpétofaune tunisienne. III. Les Sincidae (Reptilia, Sauria). *Bulletin de la Société les Sciences Naturelles de Tunisie*, 27: 121–130.
- Olivier M.E. 1896. Matériaux pour la faune de Tunisie. *Catalogue des Reptiles*. Notes sur les Mammifères–Oiseaux. *Revue scientifique du Bourbonnais et du Centre de la France*, 15 août: 117–133.
- Papenfuss T.J. 1969. Preliminary analysis of the reptiles of arid central West Africa. *Wasmann Journal of Biology*, 27(3): 249–325.
- Schleich H.H., Kästle W., Kabisch K. 1996. *Amphibians and Reptiles of North Africa*. Koeltz Scientific Publishers, Koenigstein, Germany, 627 p.
- Sindaco R. 1995. Addition to the herpetofauna of Libya: *Scincopus fasciatus fasciatus* (Peters, 1864) (Reptilia: Scincidae). *Bollettino del Museo Regionale di Scienze Naturali di Torino*, 13(1): 117–122.
- Trape J.-F., Trape S., Chirio L. 2012. *Lézards, crocodiles et tortues d'Afrique occidentale et du Sahara*. Marseille, France: IRD Éditions.
- Vicent-Castelló P., Herrero-González D., Rodríguez-Lozano J.J., García-Antón P., Sánchez-Vialas A. 2018. On the presence of *Scincopus fasciatus* (Squamata, Scincidae) in Mauritania. *Boletín de la Asociación Herpetológica Española*, 29(1): 56–58.