

Notable herpetological records from Central and Southern Jordan

by Ratib M. Al-Oran

Abstract: Notable herpetofaunal data from the Al Mudawwarah region of South Jordan are listed. They include the second record of the “*kennedyi*” form of *Lytorhynchus diadema*.

Kurzfassung: Es werden bemerkenswerte herpetologische Nachweise aus der Al Mudawwarah-Region in Süd-Jordanien mitgeteilt, u.a. der zweite Nachweis der Form „*kennedyi*“ von *Lytorhynchus diadema*.

Key words: Herpetofauna, reptiles, Jordan, Middle East.

Introduction

Although the herpetofauna of Jordan has been the focus of considerable attention and many faunistic papers have been published recently (AL-ORAN et al. 1998, AMR et al. 1994, ARNOLD 1980, DISI 1991, DISI & AMR 1998, MODRÝ et al. 1999, SINDACO et al. 1995, WERNER 1998, WITTENBERG 1992), our knowledge of the occurrence and distribution patterns in the territory of the Hashemite Kingdom of Jordan is still far from complete for many species. In this report, I summarise and discuss some remarkable herpetofaunal records obtained during field research in Central and Southern Jordan in the last three years.

Collection locations: Al Mudawwarah: 29°19'N, 36°02'E; Batn al Ghul: 31°16'N, 35°42'E; Disah: 29°34'N, 35°35'E; Ma'an: 30°12'N, 35°44'E; Qasr al Hallabat: 32°04'N, 36°22'E; Azraq: 31°53'N, 36°49'E; Mahattat Hattiyah: 29°43'N, 35°54'E; Ash Shidiyah: 29°56'N, 35°56'E.

Species accounts and comments

Gekkonidae

Stenodactylus doriae (Blanford, 1874)

DISI & AMR (1998) summarised the distribution of *S. doriae* in Jordan. Numerous specimens collected in Al Mudawwarah during recent research extend the known range in Jordan. Generally, *S. doriae* is a typical psammophilous species inhabiting soft sand dunes in the Arabian Peninsula. Its occurrence in Al Mudawwarah correlates with the presence of other herpetofaunal elements with similar ecological requirements. Specimens from this locality are larger than those collected in other Jordanian localities; the largest ♀ from Al Mudawwarah reached 81 mm (SVL), which is close to the maximum (83) given by ARNOLD (1980) for this species.

***Stenodactylus cf. sthenodactylus* (Lichtenstein, 1823)**

According to a review of the genus *Stenodactylus* (ARNOLD 1980) and published records from the Jordanian territory (DISI 1991, DISI & AMR 1998), the distribution of *Stenodactylus sthenodactylus* in Jordan is limited to Wadi al Arabah, where it is common in habitats with hardened substrates. A subadult specimen of *Stenodactylus* sp. was collected at Batn al Ghul in June 1999. The animal superficially resembles specimens of *S. sthenodactylus* from Wadi al Arabah. The use of available identification keys (ARNOLD 1980, LEVITON et al. 1992) also leads to *S. sthenodactylus*. However, the specimen differs in the more protruberant nostrils and the relatively slender habitus. Further specimens, preferably adults, are required to confirm whether this record represents an extension of the distribution range of *S. sthenodactylus* or refers to another species.

Lacertidae***Acanthodactylus ophiodurus* Arnold, 1980**

A. ophiodurus occurs sympatrically with *A. boskianus* in large parts of Arabia and, because of the superficial similarity of both species, *A. ophiodurus* has been overlooked for a long time. Recent research revealed that this species is the most common lacertilian species in Batn al Ghul, where it inhabits more or less sandy bottoms of small wadis with relatively dense vegetation (AL-ORAN & MODRY, unpubl.). Despite intensive searches, it was not collected in relatively close habitats in the vicinity of Al Mudawwarah.

DISI & AMR (1998) listed localities of *A. ophiodurus* in Jordan. However, some northern localities given by these authors (Ma'an, Azraq, Qasr Hallabat) seem to be doubtful and may refer to juveniles and subadults of *A. boskianus*. Repeated herpetological exploration of the localities given by these authors (e.g. areas close to Azraq) revealed only the presence of the latter species.

***Acanthodactylus schmidti* Haas, 1957**

A. schmidti is a typically psammophilous species inhabiting sandy regions of the Arabian peninsula west to the Wadi Ramm region in Jordan. Although previously collected from Al Hazim, Ramm and Disah, it has not yet been reported from the Al Mudawwarah and Batn al Ghul regions. While it is common in the wind-blown sand of Al Mudawwarah, it seems to be relatively scarce in Batn al Ghul, which lies on the extreme margin of sandy habitats.

***Acanthodactylus tilburyi* Arnold, 1986**

The presence of *A. tilburyi* was recently reported from Al Mudawwarah by MODRÝ et al. (1999). Extensive field research in similar habitats in the Batn al Ghul region did not reveal the presence of this species. In these localities it is probably replaced by *A. ophiodurus* which is of similar size and probably has similar ecological requirements.

***Acanthodactylus* sp.**

A subadult female of *Acanthodactylus* sp. was collected in the sands of Wadi Batn al Ghul in June 1999. Preliminary comparison with other Jordanian *Acanthodactylus* species revealed evident differences both in pholidosis and colouration. More material is needed for a final assessment of the taxonomic status of this specimen.



Fig. 1. *Lytorhynchus diadema* collected on the road to Al Jafr with the so-called “*kennedyi*” colour pattern.

The coexistence of three *Acanthodactylus* species in Batn al Ghul represents an interesting model of ecological niche partitioning and requires further research. A similar situation is reported from Wadi Ramm, where *Acanthodactylus schmidti*, *A. boskianus* and *A. ophedurus* occur syntopically, divided only by differences in ecological requirements.

Agamidae

Phrynocephalus arabicus Anderson, 1894

The Arabian Toad-headed Agama was first reported in Jordan in the Disah region in 1992 (WITTENBERG 1993). Later, AMR et al. (1994) and DISI & AMR (1998) gave further data on its distribution and listed a second locality.

The species was found to be common in the Al Mudawwarah region in sandy dunes where it coexists with *Acanthodactylus tilburyi* and *A. schmidti*. In contrast to both species of *Acanthodactylus*, *P. arabicus* prefers hardened soil on the bottom of depressions between sand dunes. Adult males of this agamid were observed sitting and displaying on the top of small stones. The typical display behaviour consisted of curling the contrastingly coloured black-and-white tail tightly up over its back and then uncurling it backwards.



Fig. 2. Habitat at Batn al Ghul with sandy dune habitats that extend to this region from Saudi Arabia.

***Trapelus pallidus haasi* (Werner, 1971)**

T. pallidus haasi is a typical species of the hammada type of habitats of central Jordan. An adult ♀ was observed and photographed near Ash Shidiyah, south of Ma'an. Some kilometres southwards, near Mahattat Hattiyah, the type of habitat dramatically changes from the stony hammada of the Ma'an region to more or less sandy desert in Batn al Ghul. This finding represents the southernmost record of this species in Jordan and probably lies on the southern margin of its Jordanian distribution range, limited by the ecological requirements of *T. pallidus*.

Colubridae

***Lytorhynchus diadema* forma "*kennedyi*" Schmidt, 1939**

A remarkable specimen of *L. diadema* was collected during a night search on the road to Al Jafr (approx. 30°34'N, 35°50'E) in June 1997. The specimen (an adult female) was 440 mm long (SVL 387 mm). The ground colour was bright orange to reddish, with dark transverse spots on body and tail. There were 41 dorsal spots on the body and 14 on the tail. So far, the form *kennedyi* has only been reported in Jordanian territory from Azraq (DISI 1985).

The systematic status of *L. kennedyi*, described by SCHMIDT (1939) from Syria, has repeatedly been discussed (GASPERETTI 1988, LEVITON & ANDERSON 1970, LEVITON et al. 1992) and opinions about the status of this form have varied greatly. Recently, MORAVEC (1998) reviewed the systematics of *L. diadema* and found *kennedyi* to be a relatively rare colour form of *L. diadema* without any systematic value. However, all discussions of the status of this form are based on rather limited museum material. The use of modern advanced immunological or molecular methods and the comparison of more material is finally needed to resolve this problem.

Discussion

The Batn al Ghul region lies on the extreme margin of the sandy dune habitats that extend to this region from Saudi Arabia. In Jordan, this area is sometimes called Qa Jabbu. Steep slopes between Mahattat Batn al Ghul and Mahattat Hattiyah represent a barrier between the relatively lowland and more or less sandy region around Al Mudawwarah (700–750 m a.s.l.) and the rocky hammada of upland plateau (950–1000 m a.s.l.) continuing to the Ma'an region. All reptiles recorded in Batn al Ghul evidently belong to psammophilous elements of Arabian origin (also *Cerastes gasperettii*, *Scincus scincus meccensis*, in addition to the species reported here). Because of the extremely narrow zone of steep slopes north of Batn al Ghul, there is no visible transitional zone between both types of ecosystem, and the herpetofaunal elements of wind-blown sands and rocky hammada have no opportunity to establish the transitional type of herpetofaunal community.

The desert and semidesert regions of the Al Jafr region and areas south of Ma'an have attracted only limited zoological attention to date. Further field herpetological research in this area should reveal more interesting finds and provide valuable contributions to our knowledge of the zoogeography of the western margin of Arabia.

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