

First record of *Hemidactylus mindiae* BAHA EL DIN, 2005 from Jordan

Hemidactylus turcicus turcicus (LINNAEUS, 1758) has been traditionally believed to be the only Jordanian taxon of the genus *Hemidactylus* OKEN, 1817. It has been considered as a very common reptile species distributed widely in all main eozones of Jordan (e.g. DISI 1996; DISI & AMR 1998; DISI et al. 1999, 2001, 2004). However, the situation seems to be more complex. Using mitochondrial DNA sequences, CARRANZA & ARNOLD (2006) found 4.4 % genetic divergence between their specimens from Dair al Khaf (32°19'N, 36°53'E; northern Jordan) and Wadi al Burbeytah (30°59'N, 35°42'E; central part of western Jordan) and all other investigated samples of *H. t. turcicus* which covered an essential part of the range of this form. This finding indicates, that the taxonomic status of the Jordanian form of *H. turcicus* is not clear enough.

CARRANZA & ARNOLD (2006) used the name *Hemidactylus turcicus lavadeserticus* MORAVEC & BÖHME, 1997 for the specimen of *Hemidactylus* originating from Dair al Khaf. However, determination of this individual was not based on an appropriate examination of the relevant material. *Hemidactylus t. lavadeserticus* was described from southern Syria from the area of the black lava desert east of Jabal Duruz (ca. 30 km northwest of the Jordanian border) and its occurrence in the basalt desert of Jordan and Saudi Arabia has been expected (MORAVEC & BÖHME 1997). The three specimens of *Hemidactylus* collected at Dair al Khaf (margin of basalt area of northern Jordan), which are deposited in the collection of the National Museum in Prague (NMP6V 72130/1–3) and include also the specimen sequenced by CARRANZA & ARNOLD (2006) resemble *H. t. lavadeserticus* in colouration. A similar colour form can be found also among the three specimens (NMP6V 72131, 72740/1–2) obtained from the nearby locality of Jawa (32°20'N, 37°02'E). Nevertheless, all these individuals differ clearly from the type specimens of *lavadeserticus* (NMP6V 34831/1, 35540/1–4; ZFMK

64409) in the following morphological features (measurements in mm): larger body size (max. male SVL = 49.5 versus 48.0, max. female SVL = 50.5 versus 48.5); less depressed head (head depth: 44.4–54.8 % of head length measured from snout to posterior edge of ear opening, n = 6 versus 35.8–44.6 %, n = 6); larger and more prominent dorsal tubercles; lower number of lamellae under 1st toe (6–7, n = 6 versus 7–8, n = 6) and 4th toe (10–11, n = 6 versus 10–12, n = 6); higher number of preanal pores (7–8, n = 2 versus 6, n = 3); higher number of tail segments bearing 6 tubercles ((3)6–8, n = 5 versus 2–5, n = 6); anterior postmentals being in contact with 1st lower labials (n = 6, there is a punctual contact with the 2nd lower labial on the left side in NMP6V 72740/1). Thus, the occurrence of *H. t. lavadeserticus* in Jordan remains to be proved.

Recently, BAHA EL DIN (2005) described a new gecko *Hemidactylus mindiae* BAHA EL DIN, 2005 from the mountain range of southern Sinai. A thorough examination of the material of *Hemidactylus* available from the area of southern Jordan revealed occurrence of this species (Fig. 1) also within the Jordanian borders. In all, five voucher specimens of *H. mindiae* from two localities are deposited in the collection of the National Museum Prague: NMP6V 71323/1–2, 1 female, 1 subadult, Jordan, Jabal Ghazali, 29°31'N, 35°25'E, 16–26 June 2000, Leg. D. MODRÝ; NMP6V 72739/1–3, 1 female, 1 male, 1 subadult, Jordan, Nughra-Raddet Salem, Wadi Ramm, 29°35'N, 35°26'E, 22 June 2005, Leg. A. BAKER and D. MODRÝ). This series has the following morphological characteristics (measurements in mm): max. male SVL = 50.0, max. female SVL = 56.5; head depth = 40.5–46.7 % of head length, n = 5; lamellae under 1st toe = 6–7, n = 5; lamellae under 4th toe = 10, n = 5; number of preanal pores = 4, n = 1; number of tail segments bearing 6 tubercles = 4–7, n = 5; anterior postmentals being in contact with 1st lower labials (1 specimen) and 2nd lower labials (4 specimens).

Our records extend the known range of *H. mindiae* from its type locality in the southern Sinai for ca. 200 km linear distance to the northeast and suggest a more extensive distribution of the species in the



Fig. 1: *Hemidactylus mindiae* BAHA EL DIN, 2005 from Wadi Ramm, southern Jordan.

area of the Gulf of Aqabah and the southern part of Wadi Araba and northern Arabia. This should be substantiated by re-examining materials from these regions.

Wadi Ramm area consists of precipitous sandstone and granite mountains, which are isolated from each other by flat corridors covered with mobile sand-dunes. The altitude varies from 800–1750 m. Wadi Ramm massifs are formed by several types of sandstone, which was deposited by braid-



Fig. 2: Habitat of *Hemidactylus mindiae* BAHA EL DIN, 2005 in Wadi Ramm, southern Jordan.

ed rivers running from south to north during the lower Cambrian and lower Ordovician. Sedimentation continued during the Ordovician and Silurian periods. The area was subjected to the present day phase of lift up (ABED 2002). Ramm area is a mosaic of diverse habitats, ranging from sand dunes, open sand, rocky slopes and cliffs, mud flats, open gravel, caves, etc. (ABU BAKER et al. 2004).

The specimens of *H. mindiae* were collected along the walls of canyons in Khazali Mountain and Al Nughra (Fig. 2). Both canyons are narrow and extend over 500–1500 m deep into the rocky slopes reaching a maximum width of 4–1 m, respectively, with relatively high humidity and cool temperature during day time. The altitude is about 1150 m a.s.l. The ground flora consists of few solitary wild fig trees, *Ficus pseudo-sycomorus*, and bushes of the Venus Maidenhair fern, *Adiantum capillus-veneris*. Within the same habitat, *Lacerta* cf. *kulzeri* was also collected. A total of 34 species of reptiles representing nine families were collected from different habitats in Wadi Ramm and its vicinity (ABU BAKER et al. 2004). In their paper these authors considered all the collected *Hemidactylus* from rocky areas as *H. turcicus*.

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