

A review of the Lacertini of Iraq in Iraqi collections (Squamata: Sauria: Lacertidae)

Übersicht der Lacertini des Iraks in irakischen Sammlungen (Squamata: Sauria: Lacertidae)

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KURZFASSUNG

Die vorliegende Publikation beschäftigt sich mit der von Professor A. D. NIAZI, Direktor des Naturhistorischen Museums der Universität von Bagdad, 1976 gemachten Veröffentlichung über irakische Lacertini, unter Einbeziehung weiterer Belege aus irakischen Sammlungen.

Irakisches Material (22 Individuen) von fünf Eidechsenformen dieser Gruppe wurde in irakischen Sammlungen gefunden: *Lacerta* cf. *strigata* EICHWALD, 1831, die von vielen Autoren von der Liste irakischer Eidechsen genommen worden war, *L. media media* LANTZ & CYRÉN, 1920 und *Timon kurdistanicus* (SUCHOW, 1936) sowie zwei Unterarten von *Apathya cappadocica* (WERNER, 1902). Ein Bestimmungsschlüssel und eine Fundortkarte werden vorgelegt.

ABSTRACT

The present study is a review of the 1976 publication by professor A. D. NIAZI, director of the Natural History Museum of the University of Baghdad, on the Lacertini of Iraq, including additional materials from Iraqi collections.

Twenty-two individuals of five taxa of this group originating from the territory under study were identified in Iraqi collections: *Lacerta* cf. *strigata* EICHWALD, 1831 which had been removed from the list of Iraqi lacertids by many authors, *L. media media* LANTZ & CYRÉN, 1920, *Timon kurdistanicus* (SUCHOW, 1936) and two subspecies of *Apathya cappadocica* (WERNER, 1902). A key for identification and a map of the records are also presented.

KEY WORDS

Reptilia: Squamata: Sauria: Lacertidae: Lacertini, *Lacerta* cf. *strigata*, *Lacerta media media*, *Timon kurdistanicus*, *Apathya cappadocica muhtari*, *Apathya cappadocica urmiana*, Zakhow District, Kurdistan, Iraq, museum specimens

INTRODUCTION

Early studies of the Lacertini of Iraq reported the presence of *Lacerta princeps* BLANFORD, 1874, and *Lacerta strigata* EICHWALD, 1831, referred to as a variety of *L. viridis* (LAURENTI, 1768) (e.g., BOULENGER 1920; MAHDI & GEORG 1969; NIAZI 1976). Lacertid systematics, Iraqi taxa included, was subject to refinement for decades. In this process, *Lacerta cappadocica* WERNER, 1902, was uniquely transferred to the genus *Latastia* BEDRIAGA, 1884 (BOULENGER 1921), and later to *Apathya* MÉHELY, 1907 (e.g., KHALAF 1959; ANDERSON 1974; ARNOLD et al. 2007), and *L. princeps* was placed into the genus *Timon* TSCHUDI, 1836 by MAYER & BISCHOFF (1996). The chronology of the knowledge of Iraqi Lacertini is shown in Table 1.

Following J. SCHMIDTLER (in litt.), LEVITON et al. (1992) concluded that the presence of *L. strigata* in Iraq was reported in error due to confusion with *Lacerta media* LANTZ & CYRÉN, 1920 or even *T. princeps*. SCHMIDTLER (1975, 1986a, 1986b, 1986c, 2002) studied the Anatolian *L. trilineata*, *L. viridis*, *L. media*, *L. strigata*, *L. agilis* and *L. pamphylica* in terms of systematics, distribution and ecological congruency with vegetation ecozones and restricted *L. trilineata* to the Supramediterranean-prepontic zone in western Turkey. Recently, the Palaearctic and Oriental lacertids of the tribe Lacertini were revised by ARNOLD et al. (2007). In this study, the authors follow their terminology and present information about morphology and record localities of Iraqi Lacertini. In

all probability, *Iranolacerta zagrosica* (RASTEGAR-POUYANI & NILSON, 1998) is supposed to occur in the Kurdistan Province of

Iraq (RASTEGAR-POUYANI et al. 2008), although specimens of this taxon were not found in Iraqi collections.

MATERIALS AND METHODS

Our study is based on specimens in the collections of (i) the Iraq Museum of Natural History in Baghdad (IMNHB), accumulated by Professor A. D. NIAZI and his staff (field group) from the Museum of Natural History of the Baghdad University, the first author (S.R.A) having been member of this group, (ii) the Erbil (Arbil) Museum of Natural History (Arbil, Hewler) of the University of Salahaddin, and (iii) the collection of the Biology Department of the University of Sulaymaniyah. The authors examined 23

specimens from various Iraqi localities, including two lizards recently collected from north of Arbil. Since the specimens were preserved in formalin, most of the color had gone; moreover, some specimens were dried out but most morphological features of taxonomic relevance were clearly visible, except coloration. The numbers of femoral pores and symmetrical head shields are given for each side. Longitudinal series of dorsal scales were counted at midbody. SVL – Snout-Vent Length, TL – Tail Length.

RESULTS AND DISCUSSION

Timon kurdistanicus (SUCHOW, 1936)

Material: Two female specimens (Figs. 1, 5) in the collection of the Sulaymaniyah University, collected from mountain regions north of Sulaymaniyah City, eastern Kurdistan, Iraq, by a student of the Sulaymaniyah University in 1997, without number or further data; a female specimen, collected by A. D. NIAZI in 1978 from the road between Khapoor (Khabur) River and Kanimase, Zakhaw District, western Kurdistan, Iraq (IMNHB No. 98).

Pholidosis: Ten longitudinal rows of ventral plates, the outermost smooth

(keeled in IMNHB 98) as are the dorsals of the three posteriormost transversal rows. 37-38 longitudinal rows of keeled dorsal scales, neck scales keeled. 14-16 femoral pores and 22-23 temporals; 3-4 pairs of enlarged chin shields. Lower edge of subocular half the length of the shield.

Size: SVL of the unnumbered females is 135 and 137 mm, TL 280 mm each. SVL of specimen No. 98 is 116 mm, tail broken.

Color: In the unnumbered formalin specimens, the body is dark gray with scattered white spots on the sides and hind limbs, ventrals dark (Fig. 1).

Table 1: Available information in synoptic publications on the presence of Lacertini taxa in Iraq.

Tab. 1: Übersichtsarbeiten mit Angaben zum Vorkommen von Echsen aus der Gruppe der Lacertini im Irak.

Taxon name	BOULENGER (1920/21)	KHALAF (1959)	MAHDI & GEORG (1969)	NIAZI (1976)	WELCH (1983)	LEVITON et al. (1992)	ANDERSON (1999)
<i>Timon princeps</i>			+	+			
<i>Timon kurdistanicus</i>						+	+
<i>Lacerta media</i>					+	+	+
<i>Lacerta strigata</i>				+	+		?
<i>Lacerta viridis</i>			+				
<i>Apathya cappadocica</i>	+		+				
<i>Apathya cappadocica muhtari</i>						+	+
<i>Apathya cappadocica urmiana</i>		+				+	+
<i>Apathya cappadocica wolteri</i>							+

Lacerta media media
LANTZ & CYRÉN, 1920

Material: Three specimens collected by A. D. NIAZI, on 7 June, 1961, two males from Shaklawa north of Arbil (IMNHB nos. 110, 111), one from Zaweta, Duhok Province (IMNHB No. 60); a female and a male specimen from Hage Omaran, north of the Province of Arbil (without number, collected by S. IBRAHIM in April 2011) were present in the Arbil Museum of Natural History. A male (Figs. 2, 5; INHMB 170a) and a female (INHMB 170b) specimen from Gelki Islam near the Khapoor River (same locality as for *L. strigata*), collected by A. D. NIAZI on 27 June 1973. Upon revision of the collection of the Natural History Museum of the University of Baghdad, the authors found one more male *Lacerta* (INHMB No. 112), collected by Iyad NADER in 1968 from Sakreen-Sarsang, Duhok Province, labeled *L. viridis*. In that it shows 60 longitudinal series of keeled dorsal scales, 8 longitudinal series of ventral plates, 20 femoral pores, and more than 20 temporal shields it probably represents also *L. media*. The same is supposed to apply to four specimens of Iraqi *Lacerta* deposited at the British Museum (Natural History) by A. D. NIAZI under the name *L. viridis*.

Pholidosis: Ventral plates in 6-8 longitudinal series. Dorsal scales oval, concave, keeled; in eastern and northern populations arranged in 50-52, in western populations (Khapoor) in 55-60 longitudinal series. Smooth granules on the nape and anterior dorsum. Number of femoral pores 11-18, the row of the pores not reaching the knee. More than 21 temporals. Four pairs of enlarged chin shields. Number of granules between supraciliars and supraoculars 2-7.

Size: SVL of the longest specimen (male from Zaweta) 134 mm, tail broken. SVL of the longest specimen from the Province of Arbil 105 mm, TL 194 mm. SVL of the longest specimen from Khapoor 160 mm.

Color in formalin: Dorsum and maxillary shields uniformly dark blue. Ventral plates dark gray or blue, edged with white.

Remark: Distribution of this species extends westward to Jordan and Israel (DISI et al. 2001; DISI 2011).

Lacerta cf. *strigata* EICHWALD, 1831

Material: Three specimens collected by A. D. NIAZI 1973 from Gelki Islam near the Khapoor River and the road to Kanimase, Zakhaw District, western Kurdistan, IMNHB Nos. 99a (male), 99b (female), 99c (juvenile, not sexed) (Figs. 3, 5).

Pholidosis: Eight longitudinal series of ventral plates. Fifth submaxillary shield well developed, 18-22 femoral pores, the row of pores reaching the knee. Temporal shields 17-19, mostly 19. Dorsal scales strongly keeled, subimbricate, rhombic, in 46-52 longitudinal rows (thereby exceeding the range of 35-47 as given by DAREWSKIJ 1984). Keeled granules on the nape. One to three granules between superciliaries and supraoculars. Length of lower edge of subocular shield half the length of its upper edge. Occipital wider than interparietal.

Size: SVL of largest male 111 mm (TL 250 mm), of largest female 112 mm (TL 270 mm).

Color in formalin: Dorsal side uniformly dark brown, venter yellow, except submaxillary shields and centers of the ventral plates.

Remark: The presence of *L. strigata* at the Khapoor River was mentioned by NIAZI (1976). However, according to LEVITON et al. (1992) who quoted J. SCHMIDTLER (pers. comm. 30 April 1991 to K. ADLER), reports of *L. strigata* occurring in Iraq should be considered as errors due to confusion with *L. media* or *L. princeps* [or *L. kurdistanicus*]. The same reservation was already made by DAREWSKIJ (1984). There is, however, another report of *Lacerta* cf. *strigata* from near Rawanduz, north Iraq, by HAAS & WERNER (1969) which is doubted as well and interpreted as a juvenile *T. kurdistanicus* by DAREWSKIJ (1984).

Studying NIAZI's collection from the Khapoor River, the authors of this paper are convinced that the lizards IMNHB nos. 99a, 99b and 99c represent morphologically typical *L. strigata* when compared with descriptions by BOULENGER (1920), ANDERSON (1974, 1999) and DAREWSKIJ (1984). SCHMIDTLER (1986b) considered *L. strigata* a fully allopatric (relative to *L. trilineata*) and probably polytypic taxon. In Iraq, *L. c. f. strigata* seems to occur only in the partic-



Fig. 1: *Timon kurdistanicus* (SUCHOW, 1936). Female collected from north of Sulaymaniyah, northeast Iraq, by a student of the Biology Department of the Sulaymaniyah University in 1997. Collection of the biology department of the Sulaymaniyah University, without number.

Abb. 1: *Timon kurdistanicus* (SUCHOW, 1936) Weibchen aus dem Gebiet nördlich von Sulaymaniyah, Nordostirak. Sammlung des Institutes für Biologie der Universität von Sulaymaniyah, ohne Nummer. 1997 von einem Studenten des Institutes für Biologie der Universität von Sulaymaniyah aufgesammelt.



Fig. 2: *Lacerta media media* LANTZ & CYRÉN, 1920 (IMNHB No. 170a). Male from Gelki Islam near the Khapoor River and the road to Kanimase, Zakhaw District, western Kurdistan, Iraq. Collected by A. D. NIAZI in 1973.

Abb. 2: *Lacerta media media* LANTZ & CYRÉN, 1920 (IMNHB Nr. 170a). Männchen von Gelki Islam nahe dem Khapoor Fluß und der Straße nach Kanimase, Bezirk Zakhaw, westliches Kurdistan, Irak. Gesammelt von A. D. NIAZI im Jahr 1973.



Fig. 3: Chin shields of *Lacerta cf. strigata* EICHWALD, 1831 (IMNHB No. 99b). Female from Gelki Islam near the Khapoor River and the road to Kanimase, Zakhow District, western Kurdistan, Iraq, collected by A. D. NIAZI in 1973.

Abb. 3: Kinnschilde von *Lacerta cf. strigata* EICHWALD, 1831 (IMNHB Nr. 99b). Weibchen von Gelki Islam nahe dem Khapoor Fluß und der Straße nach Kanimase, Bezirk Zakhow, westliches Kurdistan, Irak, gesammelt von A. D. NIAZI im Jahr 1973.

ular area where it was collected; these lizards may have been introduced from the mountains of eastern Turkey by floodings of the Khapoor River or represent an unrecognized similar taxon.

Apathya cappadocica muhtari
(EISELT, 1979)

Material: Two specimens from Rawanduz, north of Arbil (IMNHB No. 168-2, 12 Aug. 1973), three from Sarsang (IMNHB No. 168-3, 28 Nov. 1973), and one male from Gali Zanta (IMNHB No. 560, 24 Apr. 1990, collected by S. R. AFRASIAB), all from the Duhok Province (Fig. 5).

This lizard has a wide distribution in Iraq; understanding of its exact range area requires intensified collecting.

Pholidosis: Occipital larger than interparietal, no femoral pores, 6 longitudinal rows of rectangular/trapezoid ventral plates, no scale bordering the preanal shield posteriorly, transparent shields on lower eyelid.

Color: Two continuous light dorsal stripes from parietal across tail.

Apathya cappadocica urmiana
(LANTZ & SUCHOW, 1934)

Material: A specimen from Aqrah, west of Arbil, collected in 1987 (IMNHB No. 168) and one from Peramagroon, Sulaymaniyah Province (IMNHB No. 567), collected on 10 April 1992 by Saman R. AFRASIAB; a young male (IMNHB No. 780) (Figs. 4, 5), recently collected at Shanedur cave, north of the Province of Arbil on 29 October 2011 by Saman R. AFRASIAB.

Pholidosis: Occipital smaller than interparietal, 14 femoral pores, 8 longitudinal rows of nearly squarish ventral plates, 3 rows of small scales bordering the preanal shield posteriorly.

Color: Dorsum of the Peramagroon specimen was green with two longitudinal stripes, whereas the Shanedur specimen was bluish with two dorsal stripes and two red blotches on the sides of the neck.

It seems that *A. c. urmiana* is present at altitudes of more than 1000 m a.s.l., and *A. c. muhtari* below 1000 m a.s.l.



Fig. 4: *Apathya cappadocica urmiana* (LANTZ & SUCHOW, 1934) from Shanedur cave, north of the Province of Arbil (IMNHB No. 780). Young male, collected on 29 October 2011 by Saman R. AFRASIAB.

Abb. 4: *Apathya cappadocica urmiana* (LANTZ & SUCHOW, 1934) von der Shanedur Höhle im Norden der Provinz Arbil (IMNHB Nr. 780). Junges Männchen, gesammelt am 29. Oktober 2011 von Saman R. AFRASIAB.

KEY TO IRAQI LACERTINI

- | | | |
|----|--|------------------------------------|
| 1 | Lower eyelid with 5-7 transparent shields, subdigital lamellae keeled | 2 |
| 1' | Lower eyelid without transparent shields, subdigital lamellae smooth or tuberculate | 3 |
| 2 | Ventral plates usually in 6 longitudinal series,
preanal shield usually entire | <i>Apathya cappadocica muhtari</i> |
| 2' | Ventral plates in 8 longitudinal series,
preanal shield divided | <i>Apathya cappadocica urmiana</i> |
| 3 | Ventral plates in 6 or 8 longitudinal series,
more than 40 longitudinal series of keeled dorsal scales | 4 |
| 3' | Ventral plates in 10 longitudinal series, dorsal scales strongly keeled,
sub-imbricate, arranged in up to 37 longitudinal series | <i>Timon kurdistanicus</i> |
| 4 | 18-21 femoral pores, row of the pores reaches knee, less than
20 temporal scales, 5 pairs of enlarged chin shields,
granules of the nape keeled | <i>Lacerta strigata</i> |
| 4' | 12-16 femoral pores, row of the pores does not reach the knee,
more than 20 temporal scales, 4 pairs of enlarged
chin shields, granules of the nape smooth | <i>Lacerta media media</i> |

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Fig. 5: Map of North Iraq, showing record localities of the specimens mentioned in the text.

Abb. 5: Karte des Iraks mit den Fundorten der im Text genannten Exemplare.

△ - *Timon kurdistanicus*, ◇ - *Lacerta media media*,
 ☆ - *Lacerta strigata*, ⊗ - *Apathya cappadocica urmiana*, ○ - *Apathya cappadocica muhtari*.

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