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New locality records of eremial snake species in southeastern Turkey (Ophidia: Colubridae, Elapidae, Typhlopidae, Leptotyphlopidae)

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Abstract. We present several considerable range extensions for eremial snake species in the arid regions of southeastern Turkey. *Leptotyphlops macrorhynchus* is first recorded from westernmost localities near Kilis (Küplüce village), Hassa (Aktepe village), and Reyhanlı (Kilis and Hatay provinces). *Spalerosophis diadema* and *Walterinnesia morgani* are recorded from localities near Kilis (Polateli and Çörten villages, respectively). *Letheobia episcopus*, formerly known only from the type locality in the Euphrates valley, is first recorded from a karstic area near Şanlıurfa.

Key words. Reptilia, *Leptotyphlops macrorhynchus*, *Letheobia episcopus*, *Spalerosophis diadema*, *Walterinnesia morgani*, Turkey, distribution.

Herpetological research in the eremial belt of southeastern Turkey, i.e. the arid low karstic plateaus and alluvial plains along the Syrian border, has been neglected for a long time. Recent increased scientific activities have led to a number of new faunistic records (e.g. *Ommatotriton vittatus*: FRANZEN 2001; *Eublepharis angramainyu*: GÖÇMEN et al. 2002; *Walterinnesia morgani*: UĞURTAŞ et al. 2001) and even the description of new species (*Letheobia episcopus*: FRANZEN & WALLACH 2002; *Acanthodactylus harranensis*: BARAN et al. 2006a). We surveyed the region repeatedly while conducting field work on the status of *Stenodactylus* populations in the Gaziantep-Kilis area, and here present some remarkable new snake records. These records represent considerable range extensions for rare species known from very few localities in Turkey (Fig 1). Institutional abbreviations are: ZDEU – Zoological Department of the Ege University, Bornova-İzmir; ZSM – Zoologische Staatssammlung München.

Leptotyphlops macrorhynchus (JAN, 1860)

Material: ZDEU 2007/48, 24 specimens, near Küplüce village (ca. 12 km [air distance] E Kilis, Kilis province), 36°44'49"N, 37°15'04"E, 610 m elevation, 24.04.2007; ZDEU 2007/163, 1 specimen, near Aktepe village (ca. 11 km [air distance] S Hassa, Hatay province), 36°41'55"N, 36°29'43"E, 270 m elevation,

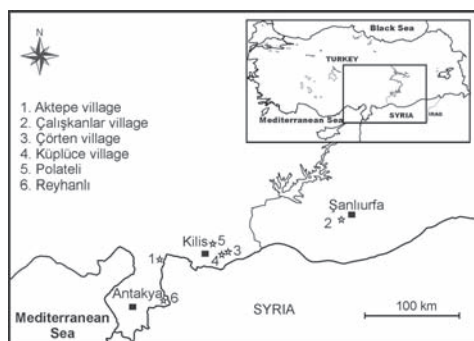


Fig. 1. Map of southeastern Turkey and position of the new snake localities.

29.05.2007; ZDEU 2007/167, 2 specimens, near Reyhanlı (Hatay province), 36°14'21"N, 36°33'05"E, 320 m elevation, 29.05.2007; all collected by B. GÖÇMEN, M.Z. YILDIZ, D. YALÇINKAYA and B. AKMAN.

All *Leptotyphlops* specimens were collected during daytime under stones on dry, stony slopes, whose cover included both heavily degraded vegetation and dense stands of grasses and herbs. The soil substrate was comprised of volcanic basalt at Küplüce and Aktepe, but was karstic at Reyhanlı. The sympatric herpetofauna comprised the following species: Küplüce village: *Bufo variabilis*, *Hyla savignyi*, *Testudo graeca*, *Laudakia stellio*, *Trapelus lessonae*, *Cyrtopodion heterocercus*, *Stenodactylus grandiceps*, *Apathya cappadocica*, *Ophisops elegans*, *Eumeces schneiderii*, *Trachylepis aurata*, *T. vittata*, *Eirenis rothi*, *Natrix tessellata*, *Platyceps najadum*, *P. collaris*, *Telescopus nigriceps*, *Macrovipera lebetina* (see also GÖÇMEN et al. 2007); Aktepe village: *Bufo variabilis*, *Hyla savignyi*, *Pelophylax ridibundus* complex, *Eumeces schneiderii*, *Laudakia stellio*, *Apathya cappadocica*, *Ophisops elegans*; Reyhanlı: *Bufo variabilis*, *Pelophylax ridibundus* complex, *Testudo graeca*, *Eumeces schneiderii*, *Typhlops vermicularis*, *Dolichophis jugularis*, *Platyceps najadum*.

Mensural and meristic data of the newly collected *Leptotyphlops* individuals are shown in Table 1. BROADLEY & WALLACH (2007) stated that northeast African *L. macrorhynchus* typically have unpigmented bodies. In contrast, we detected 5-7 pigmented dorsal scales rows in all of the newly collected specimen as well as in other Turkish material. The distribution of *L. macrorhynchus* in Turkey was recently summarized by UĞURTAŞ et al. (2006), who gave the westernmost localities as being 25 km E of Gaziantep and near Atmalı (Adıyaman). However, SCHMIDTLER (1998) had already published a record from 10 km NE Gölbaşı (Adıyaman). The new localities extend the known range in Turkey nearly 200 km to the southwest (distance of Adıyaman and Reyhanlı localities).

Letheobia episcopus (FRANZEN & WALLACH, 2002)

Material: ZSM 203/2006, adult, approximately 1 km S of Çalışkanlar köyü (on road from Şanlıurfa to Kebirli, ca. 9 km [air distance] SW Şanlıurfa, Şanlıurfa province), 37°06'14"N, 38°42'38"E, 640 m elevation, 16.05.2006, M. FRANZEN leg.

The specimen was found in the late afternoon under a stone directly adjoining a small field on a flat, roughly north-facing slope of a karstic hill. The area is dominated by small patches of sparse grasses and large areas of almost bare ground, rocks and boulders. Other sympatric reptiles were *Apathya cappadocica*, *Eumeces schneiderii*, and *Leptotyphlops macrorhynchus*.

Tab. 1. Mensural (in mm) and meristic data of *Leptotyphlops macrorhynchus* from Küplüce, Aktepe, and Reyhanlı (n = 27). Characters according to BROADLEY & WALLACH (2007), except for head length (= tip of snout to end of mouth).

Character	Mean	SD	Range
Head length	1.19	0.10	1.02-1.40
Head width	1.69	0.16	1.47-2.04
Rostral length	1.00	0.09	0.78-1.13
Rostral width	0.74	0.10	0.57-0.94
Midbody diameter	1.70	0.25	1.22-2.35
Tail diameter	1.40	0.19	1.12-1.92
Total length	188.81	16.91	158.00-220.00
Snout-vent length	170.93	16.30	141.00-201.00
Tail length	17.89	1.72	13.00-21.00
Transverse scale rows	370	10.5	355-390
Longitudinal scale rows (midbody)	14	0.00	14-14
Longitudinal scale rows (middle of tail)	10	0.00	10-10
Subcaudals	39.85	2.66	35-45
Number of dark dorsal scale rows	6.26	0.76	5-7
Head length/head width	0.71	0.07	0.57-0.82
Rostral length/rostral width	1.37	0.21	1.06-1.77
Total length/midbody diameter	112.35	12.26	85.53-147.54
Total length/tail diameter	136.31	12.60	113.02-164.29
Total length/tail length	10.62	1.18	9.29-13.54
Tail length/tail diameter	12.98	1.87	9.77-16.07

Description: Total length 337 mm (snout-vent length 333 mm, tail length 3,8 mm); subcaudals 11; three oculars and four postoculars on left side; on right side oculars partly fused with postoculars, a total of five enlarged scales behind the preocular; tiny, faint eyespots are visible on each side beneath the anterodorsal parts of the preoculars; 595 transverse scales rows; 20 longitudinal scale rows at midbody (at level of transverse scale row 300). The high number of transverse scales rows considerably exceeds that of the type series (range 544-581). On the other hand, fragmentation of oculars and postoculars is lower than in the seven type specimens. In addition, the newly collected specimen exceeds the total length of the hitherto largest individual (holotype) by 19 mm (FRANZEN & WALLACH 2002).

The new locality record extends the known range of the species some 80 km to the east. *Letheobia episcopus* was hitherto known only from the type locality and a second nearby site which are both in the Euphrates valley near Halfeti (FRANZEN 2000, FRANZEN & WALLACH 2002). Due to the recent flooding of the Euphrates valley by the Birecik dam, considerable loss of potential habitats were presumed to have occurred there (FRANZEN & WALLACH 2002), although both *Letheobia* localities in the Euphrates valley appeared unaffected during our visit in May 2006. However, the new Şanlıurfa locality indicates a much wider distribution of the species within the semi-desert belt of southeastern Turkey and possibly northern Syria.

Spalerosophis diadema cliffordi (SCHLEGEL, 1837)

Material: ZDEU 226/2007, female, near Polateli village (ca. 14 km [air distance] N of Kilis, Kilis province), 36°50'44"N, 37°06'45"E, 800 m elevation, 04.11.2007, B. GÖÇMEN, M.Z. YILDIZ, D. YALÇINKAYA & B. AKMAN leg.

Description: Total length 575 mm (snout-vent length 475 mm, tail length 100 mm); 5 prefrontals; 4/4 loreals; 2/2 preoculars; 4/4

suboculars; 3/3 postoculars; 8/9 circumoculars (without supraoculars); 11/11 upper labials; temporals small and numerous; 30-30-20 dorsals; 206 ventrals; cloacal plate undivided; 72 subcaudals. Iris golden to light brown in life; 43 dark blotches on trunk, 23 blotches on tail. The pholidosis agrees well with the previously reported specimens from Turkey (FRANZEN 1999, BARAN et al. 2004).

The individual was collected at night around 23.00 h (air temperature 19°C) on a dry, stony and partly eroded slope, with a sparse cover of grasses. Sympatric amphibians and reptiles included *Bufo variabilis*, *Laudakia stellio*, *Stenodactylus grandiceps*, *Eumeces schneiderii*, *Trachylepis aurata*, *T. vittata* and *Telescopus nigriceps* (see also GÖÇMEN et al. 2007). *Spalerosophis diadema* has been reported from only four localities in Turkey: Samsat (Adıyaman prov.: FRANZEN 1999), Bağpınar (Adıyaman prov.: BARAN et al. 2004), Birecik (Şanlıurfa prov.: FRANZEN 1999), and Ceylanpınar (Şanlıurfa prov.: EISELT 1970). The new locality record extends the known range of the species within Turkey some 80 km to the west, as measured from the Birecik area.

Walterinnesia morgani (MOCQUARD, 1905)

Material: ZDEU 222/2007, female, near Çörten village (ca. 18 km [air distance] E of Kilis, at Kilis and Gaziantep province boundaries), 36°46'30"N, 37°18'34"E, 740 m elevation, 03.11.2007, B. GÖÇMEN, M.Z. YILDIZ, D. YALÇINKAYA & B. AKMAN leg.

Description (see also Fig. 2): Total length 571 mm (snout-vent length 504 mm, tail length 67 mm); mental shield small, triangular; rostral canthus well developed; loreal absent; 7/7 upper labials anterior of subocular 3 and posterior of subocular 3; upper labials 3+4 in contact with eye; 8/8 lower labials; 1/1 preoculars; 2/2 postoculars; 2+3 temporals; 21-21-17 dorsal scales; 194 ventrals; cloacal plate divided; 42 subcaudals, subcaudals 1-4 undivided.

The snake was collected when active at midnight (air temperature 18°C). The habitat



Fig. 2. *Walterinnesia morgani* (ZDEU 222/2007) from near Çörtten village (Kilis/Gaziantep prov.).

comprised a heavily eroded stony slope with a sparse cover of small bushes. Sympatric amphibians and reptiles included *Bufo variabilis*, *Stenodactylus grandiceps*, *Apathya cappadocica*, *Eumeces schneiderii*, and *Trachylepis aurata*. When the individual was caught, it vomited an adult semi-digested *Bufo variabilis*. ZINNER (1971) and DISI et al. (1988) stressed the importance of this bufonid as prey for *Walterinnesia* in Israel and Jordan and even supposed that *Walterinnesia* populations increase due to the expansion of agricultural settlements in desert areas which lead to an increase of *Bufo* populations.

Turkish desert cobras were previously referred to *Walterinnesia aegyptia* (e.g. UĞURTAŞ et al. 2001, BARAN et al. 2006b), but most recently NILSON & RASTEGAR-POUYANI (2007) re-established *W. morgani* for the eastern populations, including eastern Saudi Arabia, Kuwait, Iraq, Iran, and Turkey. The diagnostic characters of our new specimen from Kilis perfectly match the characteristics given for females of *W. morgani* by NILSON & RASTEGAR-POUYANI (2007): 21 anterior dorsals (21-23 according to NILSON & RASTEGAR-POUYANI 2007), 42 subcaudals, the first four entire (39-44, 0-8 entire according to NILSON & RASTEGAR-POUYANI 2007), 194 ventrals (186-200 according to NILSON & RASTEGAR-POUYANI 2007). The only known previous

records of this snake from Turkey include one locality west of Şanlıurfa (UĞURTAŞ et al. 2001) and one site near Viranşehir (BARAN et al. 2006b). The new record near Kilis extends the known range of the species some 130 km to west, as measured from Şanlıurfa.

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