

New Localities for *Leptotyphlops macrorhynchus* (JAN, 1862) (Reptilia: Leptotyphlopidae) in Turkey

İsmail Hakkı UĞURTAŞ^{1,*}, Murat SEVİNÇ¹, Mehmet ÖZ², Rağsen S. KAYA¹

¹Uludağ University, Faculty of Arts and Science, Department of Biology, Bursa - TURKEY

²Akdeniz University, Faculty of Arts and Science, Department of Biology, Antalya - TURKEY

Received: 08.08.2005

Abstract: Four new localities of *Leptotyphlops macrorhynchus* (JAN, 1862) were recorded in Turkey. Two of the localities were found within the previously known distribution area on the east side of the Fırat River, and the other 2 were found on the west side. As a result, the distribution range of *Leptotyphlops macrorhynchus* has been extended. Information about the morphological features of the captured specimens is given.

Key Words: *Leptotyphlops macrorhynchus*, morphology, distribution range, Turkey

Türkiye'deki *Leptotyphlops macrorhynchus* (JAN, 1862) (Reptilia: Leptotyphlopidae) İçin Yeni Lokaliteler

Özet: Bu çalışmada *Leptotyphlops macrorhynchus*'a (JAN, 1862) ait Türkiye'den 4 yeni lokalite tespit edilmiştir. Bu yeni lokalitelerden ikisi türün eski yayılış sahası olan Fırat Nehri'nin doğusunda, diğer ikisi ise Fırat Nehri'nin batısında bulunmaktadır. Böylece *Leptotyphlops macrorhynchus*'un dağılışı genişletilmiştir. Ayrıca yakalanan örnekler hakkında morfolojik bilgiler verilmiştir.

Anahtar Sözcükler: *Leptotyphlops macrorhynchus*, morfoloji, dağılış sahası, Türkiye

Introduction

The distribution area of *Leptotyphlops macrorhynchus* covers the Sahara and Sahel regions of northern Africa, the Sinai and Arabian Peninsulas, the Near East, Mesopotamia, southern Iran, and Pakistan (Baran and Atatür, 1998; Sindaco et al., 2000). The existence of the species in Turkey was reported for the first time by Clark and Clark (1973); they collected 10 *Leptotyphlops macrorhynchus* specimens from Birecik, Şanlıurfa, and Kızıltepe (Mardin). More recently, Baran (1978, 1982) and Mulder (1995) found new localities for *Leptotyphlops macrorhynchus*. All of these localities are on the east side of the Fırat River.

The presence of *Leptotyphlops macrorhynchus* on the west side of the Fırat River was recorded for the first time by Baran et al. (2004).

In this study, new localities from the east and west sides of the Fırat River were added to the currently known distribution range of *Leptotyphlops macrorhynchus*.

Materials and Methods

A total of 11 specimens were collected 25 km east of Gaziantep at an altitude of 758 m, in Atmalı-Adıyaman at an altitude of 730 m, 50 km east of Şanlıurfa at an altitude of 695 m, and in Hasankeyf-Suçeken-Batman at an altitude of 511 m (Figure).

The specimens were anesthetized with ether, fixed in 10% formalin, and later deposited in 70% ethanol.

While taking the morphological measurements, digital calipers sensitive to 0.01 mm (Mitutoyo 500-181 U)

*E-mail: hakk@uludag.edu.tr

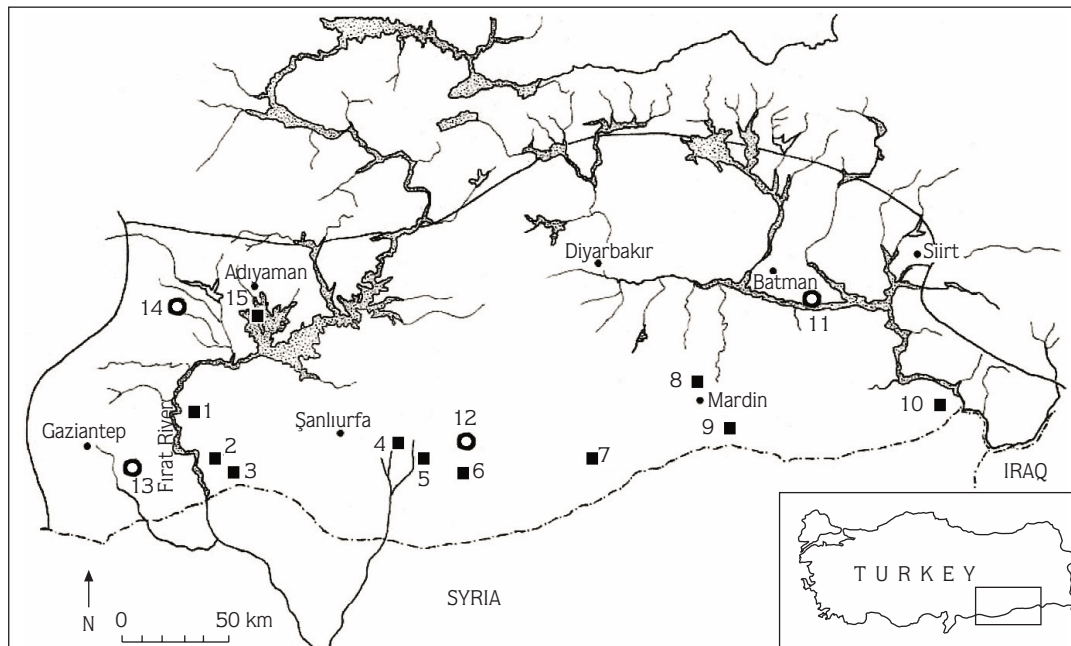


Figure. The localities of *Leptotyphlops macrorhynchus* from Turkey. (■) Old localities, (●) New localities. 1. Karaotlak Plateau - Halfeti (BEV 8183, Montpellier), 2. 5 km E Birecik (Clark and Clark, 1973), 3. Arat Mountain-Birecik (Baran, 1982), 4. 30 km E Şanlıurfa (Clark and Clark, 1973), 5. Karahisar Pass - Tek Tek Mountain (Baran, 1978), 6. Tek tek Mountain (MVZ 128743 Berkeley-USA), 7. Hamzababa-Ceylanpınar DÜÇ (Baran, 1982), 8. Mardin (Baran, 1978), 9. 30 km W Kızıltepe (Clark and Clark, 1973), 10. Cizre (Baran, 1982), 11. Hasankeyf-Suçeken, 12. 50 km E Şanlıurfa, 13. 25 km E Gaziantep, 14. Atmalı-Adıyaman, 15. Bağpınar - Adıyaman (Baran et al, 2004).

were used. Data were analyzed using SPSS 11.0 for Windows. The Mann-Whitney U test was utilized to compare the SVL/TL (SVL: Snout-vent length, TL: Tail length) values between the populations on the east and west sides of the Fırat River. The level for statistical significance was set at $\alpha = 0.05$.

The geographic position of each sampling station was located by GPS (Magellan).

The specimens, which were given collection numbers at ZDEU (Zoology Department, Ege University), are now

kept at the Zoology Museum, Faculty of Arts and Science, Uludağ University (Table 1).

Results and Discussion

While *Leptotyphlops macrorhynchus* is very common on the east side of the Fırat River (Clark and Clark, 1973; Baran 1978, 1982; Mulder, 1995), the presence of *Leptotyphlops macrorhynchus* on the west side was only recently recorded for the first time by Baran et al. (2004). In this study, we added new localities to the

Table 1. Specimens used in this study.

Material	Number of Specimens	Locality	Collecting Date	Coordinates
ZDEU 258/2005, 1-3	3 (♂ + ♀)	25 km E Gaziantep	11.05.2004	37° 00' 40" N, 37° 37' 43" E
ZDEU 259/2005, 1-3	3 (♂ + ♀)	Atmalı-Adıyaman	15.05.2004	37° 42' 21" N, 38° 00' 44" E
ZDEU 260/2005, 1-2	2 (♂ + ♀)	50 km E Şanlıurfa	12.05.2004	37° 13' 43" N, 39° 15' 56" E
ZDEU 261/2005, 1-3	3 (♂ + ♀)	Hasankeyf Suçeken-Batman	13.05.2004	37° 44' 18" N, 41° 17' 48" E

distribution range of the species on the west side of the Fırat River.

The specimens examined in this study were evaluated without sexual differentiation. In all of the specimens examined, the dorsum was yellowish pinkish-brown and the venter was yellowish. This is largely a subterranean species that prefers loose soil in Mediterranean, semi-desert, and arid areas. Specimens were found under stones among ant and termite colonies. Usually a few of them were seen together.

Morphometric measurements are provided in Table 2. Among the specimens on the west side of the Fırat River, the SVL varied between 140.91 and 208.00 mm (median: 182.80), the TL varied between 15.17 and 21.06 mm (median: 17.84), and SVL/TL ranged between 9.12 and 12.24 mm (median: 10.28). Among the specimens on the east side of the Fırat River, SVL varied between 154.38 and 220.45 mm (median: 186.21), TL varied between 14.43 and 20.33 mm (median: 17.63), and SVL/TL ranged between 9.86 and 11.91 mm (median: 10.54). According to pholidosis and morphometric measurements, no significant difference was found between the populations on the east and west sides of the Fırat River ($P > 0.05$).

While conducting this study, additional herpetofaunal elements were found and are listed according to locality: Gaziantep biotope, *Trapelus lessonae* (Olivier, 1805) and *Eirenis collaris* (Menetries, 1832); Şanlıurfa biotope, *Eirenis collaris* (Menetries, 1832), *Typhlops vermicularis* Merrem, 1820, *Mabuya vittata* (Olivier, 1804), and *Ophisops elegans* Menetries, 1832; Adıyaman biotope, *Bufo viridis* (Laurenti, 1768), *Eirenis collaris* (Menetries, 1832), *Typhlops vermicularis* Merrem, 1820, *Eirenis rothi* Jan, 1863, *Mabuya vittata* (Olivier, 1804), *Eumeces schneideri* (Daudin, 1802), and *Ophisops elegans* Menetries, 1832; Hasankeyf-Suçeken biotope, *Eumeces schneideri* (Daudin,1802), *Typhlops vermicularis* Merrem, 1820, *Cyrtopodion heterocercus* (Blanford, 1874), *Mabuya aurata* (Linnaeus, 1758), and *Blanus strauchi* (Bedriaga, 1884). To conclude, the distribution range of *Leptotyphlops macrorhynchus* has been extended.

Acknowledgments

This study was supported by Uludağ University (The Scientific Research Project) Project no: 2001/60. We are indebted to Uludağ University for its financial support.

Table 2. Some morphometric values (in mm) and derived ratios of the investigated specimens from Gaziantep, Adıyaman, Şanlıurfa and Batman.

Localities	N	SVL	TL	SVL/TL	Number of scales at midbody	Supraocular plates present (+) absent (-)	Ocular plate reaches mouth edge (+) or not (-)	Nasal plates were separated (+) or not (-)
25 km E Gaziantep	3	208	16.98	12.24	14	+	+	+
		186.8	19.91	9.38	14	+	+	+
		204	17.43	11.7	14	+	+	+
Atmalı-Adıyaman	3	164.9	16.51	9.98	14	+	+	+
		140.91	15.17	9.28	14	+	+	+
		192.2	21.06	9.12	14	+	+	+
50 km E Şanlıurfa	2	154.38	14.43	10.69	14	+	+	+
		167.33	16.96	9.86	14	+	+	+
Hasankeyf-Suçeken-Batman	3	220.45	18.5	11.91	14	+	+	+
		186.6	17.95	10.3	14	+	+	+
		202.31	20.33	9.95	14	+	+	+

Abbreviations: N: Number of specimens, SVL: Snout-vent length, TL: Tail length.

References

- Baran, İ. 1978. Some rare species of snakes from Turkey. Ann. Naturhist. Mus. Wien. 81: 261-265.
- Baran, İ. 1982. Zur taxonomie der schlangen in Südost und Ost Anatolien. Spixiana. 5: 51-59.
- Baran, İ. and Atatür, M.K. 1998. Turkish Herpetofauna Amphibians and Reptiles, Republic of Turkey Ministry of Environment. Ankara.
- Baran, İ., Kumlutaş, Y., Ilgaz, Ç., Türkozan, O. and Avcı, A. 2004. New locality records extended the distribution of some ophidians in Southeastern Anatolia. Russ. J. Herpetol. 11: 6-9.
- Clark, R.J. and Clark, E.D. 1973. Report on a collection of Amphibians and Reptiles from Turkey. Calif. Acad. Sci. San Francisco. 104: 1-62.
- Mulder, J. 1995. Herpetological observations in Turkey (1987-1995). Deinsea, 2: 51-66.
- Sindaco, R., Venchi, A., Carpaneto, G.M. and Bologno, M. 2000. The Reptiles of Anatolia: A Checklist and Zoogeographical Analysis. Biogeographia 21: 441-554.