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İSMAİL HAKKI UĞURTAŞ

HİKMET SAMİ YILDIRIMHAN

MEHMET ÖZ

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Two New Localities for *Lacerta sicula hieroglyphica* Berthold, 1842 (Reptilia, Lacertidae)

İsmail Hakkı UĞURTAŞ, Hikmet Sami YILDIRIMHAN

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

Mehmet ÖZ

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

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Abstract: In this study, we describe 13 *Lacerta sicula hieroglyphica* collected from the centre of Bursa and Çakırca, a village about 10 km west of Iznik. The specimens, including their habitat characteristics and distribution, are described. This subspecies is known to live on islands in the Marmara Sea and in Istanbul. This is the first report of *L. s. hieroglyphica* from Bursa and Çakırca village and therefore its distributional range is being extended to the south of the Marmara Sea.

Key Words: *Lacerta sicula hieroglyphica*, distribution, morphology

İki Yeni Lokaliteden *Lacerta sicula hieroglyphica* Berthold, 1842 (Reptilia, Lacertidae)

Özet: Bu çalışmada Bursa şehiriçi ve Iznik'in 10 km. batısındaki Çakırca köyü'nden toplanan 13 *Lacerta sicula hieroglyphica* örnekleri tanımlandı. Örneklerin kısa tanımı, biyotop özellikleri ve dağılışı değerlendirildi. Bu alttürün İstanbul ve Marmara denizi etrafındaki adalarda yaşadığı bilinmektedir. Bu çalışma, Bursa ili ve Çakırca köyünün, alttürün dağılışı alanı olduğunu bildiren ilk rapordur. Çalışmada, alttürün dağılışı alanının Marmara Denizi'nden güneye doğru genişlediği ortaya konulmuştur.

Anahtar Sözcükler: *Lacerta sicula hieroglyphica*, dağılışı, morfoloji

Introduction

Lacerta sicula is distributed in the region of Istanbul and some islands of the Marmara Sea (Sivri island, Yassı island etc.) in Turkey, and in Corsica, Sardinia, Sicily Peninsula of Apennine, Istria, the west part of the Balkans and some islands in the Adriatic Sea (1-3). This species has also been introduced in south-east Spain and Philadelphia, USA (3). Mertens described 38 subspecies of *Lacerta sicula* (1) and this number was increased later by Arnold (2) to include additional geographic races. The subspecies *Lacerta sicula hieroglyphica*, which was described by Berthold (4), lives only in Turkey, its terra typica is Istanbul. Interestingly, Basoglu and Baran (3) pointed out that the presence of *Lacerta sicula* in Istanbul and the Marmara region is quite amazing because it may have been brought to Turkey accidentally by people or trade ships.

The aim of this study was to investigate the pholidosis, morphometry, colour pattern, and biotopes of specimens collected from the centre of Bursa and Çakırca village.

Materials and Methods

The collected specimens are kept at Uludağ University, Faculty of Science and Arts, Department of Biology. Specimens are maintained in 70 % ethanol after examining the colour and pattern characteristics.

The relevant collecting localities are shown in Figure 1.

Material list

1- ZDEU 227/1996, (1 ♂, 2 ♀♀, 2 juvenile) Centre of Bursa 22.11.1996, Leg. İ. UĞURTAŞ H. S. YILDIRIMHAN.

2- ZDEU 228/1996, (3 ♂♂, 5 ♀♀), Çakırca village - Iznik 10.05.1996, Leg. İ. UĞURTAŞ H. S. YILDIRIMHAN.

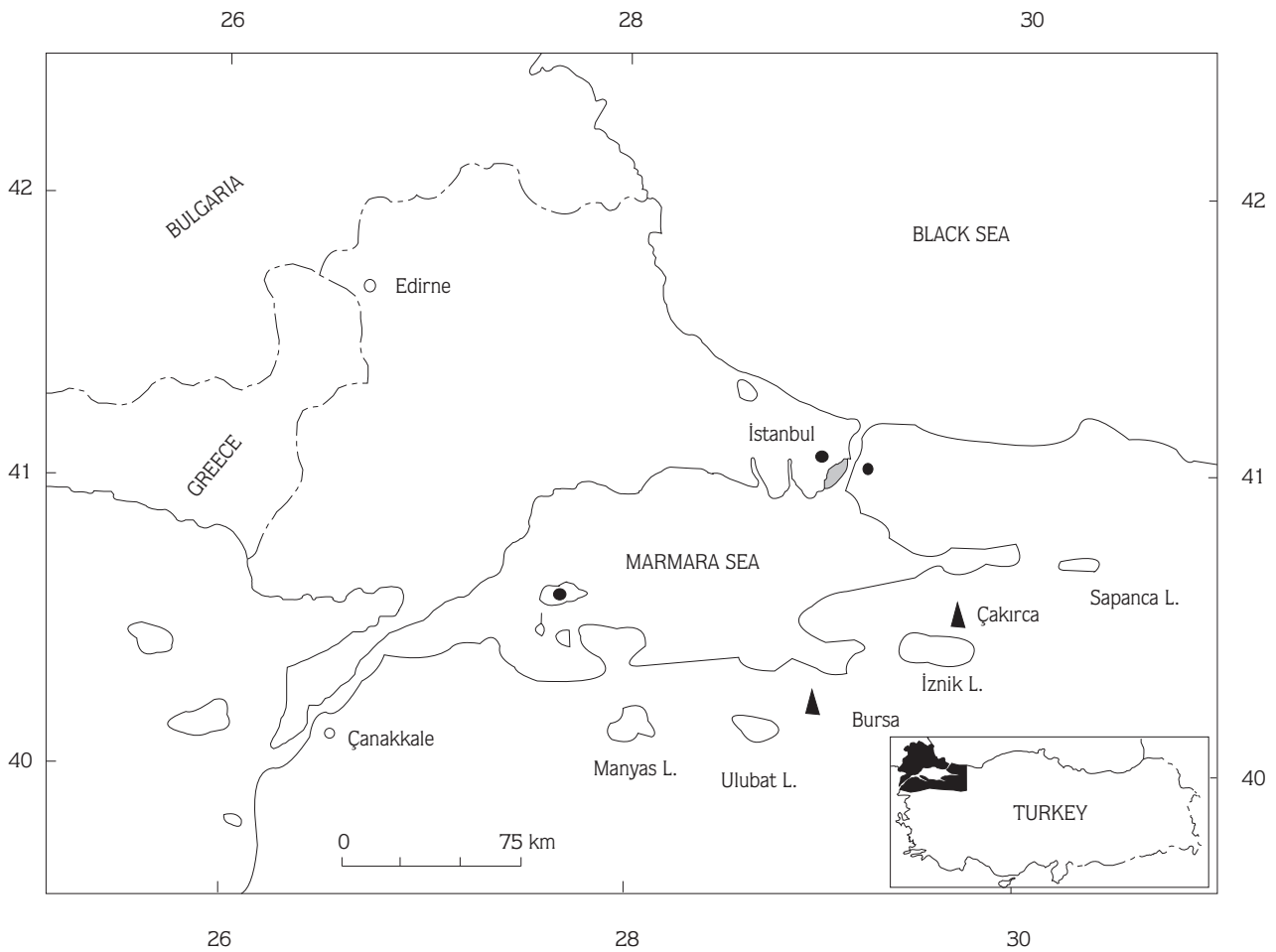


Figure 1. New localities of *Lacerta sicula hieroglyphica*
 ▲ : New localities of samples collected
 ● : Old localities of samples collected

Results and Discussion

a) **Pholidosis:** Rostral plate does not touch the nostril. Postnasal plate is single on each side in 12 specimens (92.30 %), double on each side in 1 specimen (7.69%). Frenale is single on both sides in all species. Supralabial plates in front of the eye and on both sides of the head are in 5 pairs in 2 specimens (5.38 %) and 4 pairs in 11 specimens (84.62 %). There are 6 supraciliaria at both sides in 11 specimens (84.62 %), 6 in one side and 5 on the other side in 2 specimens (15.38 %). A large and clear masseteric plate in the temporal area occurs in all specimens. Small temporal plates exist around the masseteric plate. Massetericum is divided into two parts only on one side of the head in 2 specimens (15.38 %), two parts on both sides in 1 specimen (7.69 %) but as one part in others.

Tympanal is extremely large and has two parts in 1 specimen (7.69 %). While there is a small plate between the interparietal and occipital in 1 specimen (7.69 %), these two plates touch in the other specimens. Parietal plate has two parts on one side in 1 specimen (7.69 %), two parts on both sides in 1 specimen (7.69 %) and in one piece on both sides in other specimens (92.30 %). Inframaxillaria are as six pairs in 11 specimens (84.62 %), first three plate pairs are in touch but the other three pairs are not. There are five pairs of inframaxillaria in 1 specimen (7.69 %), first three plate pairs are touching. There is a small plate between the first and second plate pairs in 1 specimen (7.69 %). The last plate pair has three parts on one side in 1 specimen (7.69 %), 3 parts in both sides in two specimens (15.38 %), last plate pair has two parts in both sides in 3 specimens (23.07 %).

Inframaxillaria plates are six in one side and seven in the other side in 1 specimen (7.69 %).

Anale is single and at its front, preanalia form a line. Free edges of collaria are straight and ranges from between 8 and 13 . Scales on dorsum are circular and smooth. There are 6 rows of ventral scales in all specimens. The number of scales around the body ranges from 63-79, median gularia between 19 to 34, femoralia between 20 to 27, and the number of lamella under the 4th finger between 27 and 35. The descriptive statistics of pholidosis characteristics are given in Table 1 and some body measurements of the specimens in Table 2.

b) Colour and pattern: The colours and patterns of dorsal sides of the specimens show a large variation. Green is dominant in dorsal sides of 5 specimens but becomes pale on the sides of the body. The dorsal sides

are greyish green in another 7 specimens, green in 1 specimen and lateral sides are dark brownish. In 8 specimens, there are patterns like webs on the body. In the others there are light-coloured round spots among the dark-coloured patterns. These light-coloured spots exist on the tail and extremities (Figure 2). Spots can be in the form of webs or show different shapes. The ventral sides

Table 1. Descriptive statistical values in 13 *Lacerta sicula hieroglyphica* specimens
R: Range, M: Mean, SD: Standard deviation, SE: Standard error of the mean, NSMB: Number of scales around the middle of the body.

Characters	R	M	SD	SE
Median gularia	19-34	29.07	3.92	1.08
NSMB	63-79	70.07	4.71	1.30
Ventral plate	24-29	27.00	1.63	0.45
Femoral pores	20-27	24.36	2.02	0.56
Lamella under 4 th toe	27-35	31.36	2.21	0.61

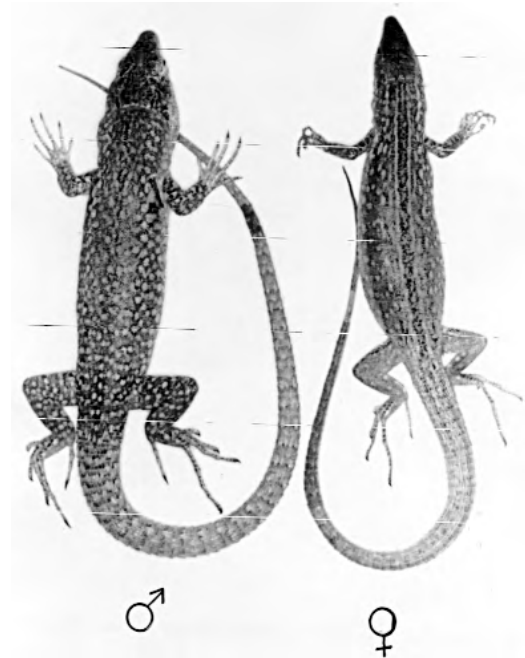


Figure 2. *Lacerta sicula hieroglyphica* from Bursa

Table 2. Body measurements (mm), 1- head length, 2- head width, 3- Body length, 4- head + body length, 5- tail length, 6- total length

Collection no	1	2	3	4	5	6
ZDEU 227/1996-1 ♂	20.00	14.85	61.05	81.05	167.40	248.45
2 ♀	15.75	8.95	55.00	70.75	140.35	211.10
3 ♀	16.00	10.25	56.45	72.45	140.60	213.05
4 juv.	10.00	6.45	29.00	39.00	79.05	118.05
5 juv.	10.25	6.50	33.30	43.55	-	-
ZDEU 228/1996- 1 ♂	20.10	12.45	55.70	75.80	147.60	223.40
2 ♂	16.90	10.80	47.45	64.35	151.70	216.05
3 ♂	18.50	12.25	56.85	75.35	-	-
4 ♀	15.95	9.60	57.40	73.30	136.55	209.85
5 ♀	15.00	8.70	56.95	71.95	132.40	204.35
6 ♀	15.00	8.90	49.60	64.60	132.90	197.50
7 ♀	13.70	8.95	46.20	59.90	-	-
8 ♀	15.75	10.00	51.60	67.35	120.10	197.45

and extremities are spotless and dirty yellow in all specimens. There are blackish spots on the head in 4 specimens. The colour of head is the same as the ventral sides in other specimens.

c) Ecological observations: The specimens were found mostly around midday. The specimens from Çakırca village were collected on stone walls where olive and various fruit trees grow. The specimens from Bursa were collected from the basements of abandoned houses and buildings in empty fields around the Bursa Organized Industrial and Trade Region. However, both biotopes are

similar in terms of the occurrence of amphibian and reptile species, e.g., *Natrix tessellata*, *Rana ridibunda*, and *Bufo viridis* are common to both areas.

d) Conclusion: According to the data obtained, the specimens of *Lacerta sicula hieroglyphica* were in agreement with Basoglu-Baran (3) in terms of pholidosis, morphometry, and colour and pattern characteristics. We conclude that the distribution range of *Lacerta sicula hieroglyphica*, which had been known to occur only around Istanbul, has been extended south of the Marmara Sea.

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