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A new data on the distribution of the Hatay Lizard, *Phoenicolacerta laevis* (Gray, 1838) (Squamata: Lacertidae) from the western Anatolia

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Abstract. A new locality record for the Hatay Lizard *Phoenicolacerta laevis* from Özdere (Menderes, İzmir) is presented based on our fieldwork in coastal Aegean Sea Region in July 2013. Our record is north westernmost locality and represents a considerable range extension for both species and genus, around 165 km air distances to the northwest from nearest known locality (Marmaris, Muğla).

Key words: *Phoenicolacerta laevis*, Lacertidae, distribution, new locality, Turkey.

The Hatay Lizard was described by Gray (1838) from Lebanon as *Lacerta laevis*. It was diagnosed *Lacerta judaica* by Camerano (1877) and Boettger (1880). The first record of the species from Cilician Taurus Mountains, Anatolia was given by Werner (1899) and accepted again as *Lacerta laevis*. Boulenger (1920) had believed Werner's record to be based on an aberrant form of *Anatololacerta danfordi* which endemic lacertid species of southern Mediterranean of Turkey, but Wenzmer (1918, 1922), Bird (1936), Bodenheimer (1944) and Mertens (1952) confirmed presence of *Lacerta laevis* in eastern Mediterranean coast of Anatolia. Müller & Wettstein (1932) described the *L. l. kulzeri* from Lebanon. Budak (1976) examined in detail the Anatolian populations of *Lacerta laevis* and determined the distribution of species from Hatay to Mersin province. Bischoff & Schmidtler (1999) was found the north easternmost population of *Lacerta laevis* in Andırın, Kahramanmaraş province. On the other hand, Schmidtler & Bischoff (1999) described the *Lacerta cyanisparsa* from north western Syria and Gaziantep province, Turkey. According to the other studies by Bischoff & Franzen (1993), Budak & Göçmen (1995), Bischoff & Schmidtler (1999) and Tosunoğlu et al. (1999, 2001) based on morphological, serological and ecological investigations have shown that, the races of *L. laevis* must be separate from each other and consequently raised to species level. Then, in the light of recent molecular studies, the taxonomy of the *Lacerta laevis, L. kulzeri, L. cyanisparsa* and *L. troodica* have been reorganized in the genus "*Phoenicolacerta*" has been established with the detailed and comprehensive mitochondrial genome, morphological and other non-molecular investigations by Arnold et al. (2007).

The first south western Turkey records of *Phoenicolacerta laevis* were given from Side, Manavgat, Antalya province by Troidl & Troidl (2008). Some specimens were found from İçmeler and Marmaris, Muğla province by Bruekers (2010), as a last record from Beldibi and Tekirova (Kemer), Antalya province given by Troidl & Troidl (2011).

At present, *Phoenicolacerta laevis* has wide and discontinuous distribution range has known along the east-west direction in Anatolia approximately 750 km air distance from Andırın, Kahramanmaraş province to İçmeler/Marmaris, Muğla province with a vertical distribution from sea level up to 1250 m a.s.l. (Budak 1976, Başoğlu & Baran 1977, Schmidtler 1988 and 1993, Bischoff & Franzen 1993, Bischoff & Schmidtler 1999, Uğurtaş et al. 2000, Budak & Göçmen 2008, Franzen et al. 2008, Troidl & Troidl 2008 and 2011, Bruekers 2010, www.turkherptil.org 2013).

In July 2013, during a photographical-herpetological trip to W Anatolia especially the Aegean Sea coast, we encountered a Hatay Lizard "*Phoenicolacerta laevis*" population in Özdere, İzmir province which is far from the nearest locality (Marmaris, Muğla) approximately 165 km air distance. The new locality and previously known localities from the literature are shown in Figure 1.

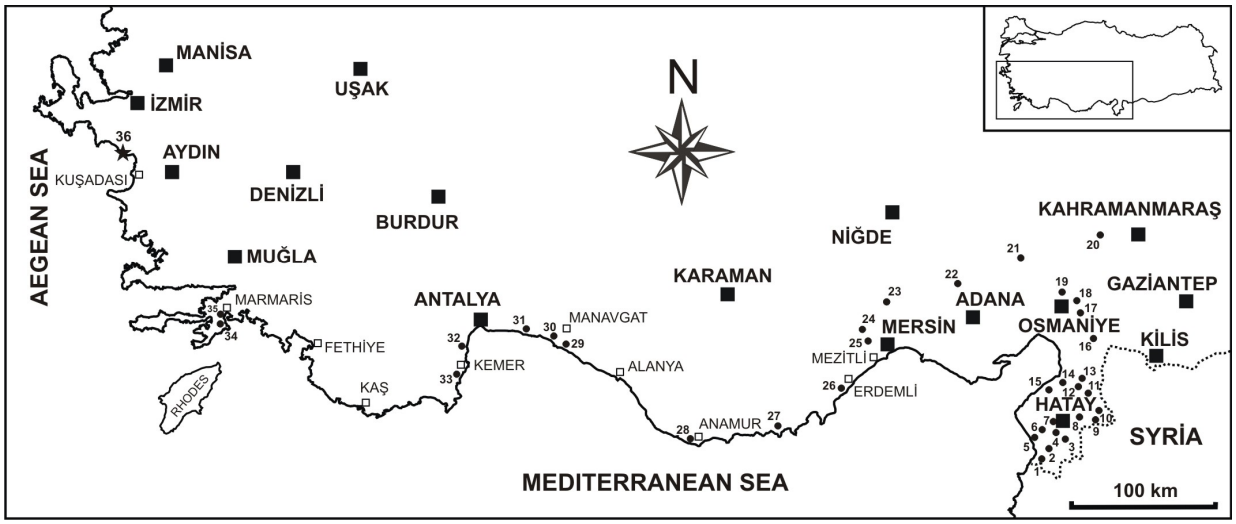

Figure 1. Map of the new locality of *Phoenicolacerta laevis* (solid asterisk) and previously known localities from literature (solid circles) in Turkey. [the localities are listed on the next page]

Figure 1. [Locality list]: **1.** 4 km NW Yayladağı (Bischoff & Franzen, 1993); **2.** 15 km S Harbiye (Bischoff & Franzen, 1993); **3.** Kozkalesi, S Antakya (Uğurtaş et al., 2000); **4.** Harbiye "Daphne" (Budak, 1976); **5.** Çevlik, Samandağ (Bischoff & Franzen, 1993); **6.** Teknepınar (Batıayaz), W Antakya (Bischoff & Franzen, 1993); **7.** Antakya (Uğurtaş et al., 2000); **8.** Demirköprü, E Antakya (Uğurtaş et al., 2000); **9.** Yenişehir Lake, 5 km S Reyhanlı, (Bischoff & Franzen, 1993); **10.** Reyhanlı (Uğurtaş et al., 2000); **11.** Muratpaşa, E Kırıkhan (Uğurtaş et al., 2000); **12.** Kırıkhan (Uğurtaş et al., 2000); **13.** Güzelce, N Kırıkhan (Uğurtaş et al., 2000); **14.** 5 km NE Belen (Bischoff & Franzen, 1993); **15.** NW Soğukoluk (Bischoff & Franzen, 1993); **16.** Akbez, Hassa (Budak, 1976); **17.** Yarpuz, E Osmaniye (Bischoff & Franzen, 1993); **18.** Kırıklı, W Hasanbeyli (Schmidtler, 1993); **19.** Karatepe, N Osmaniye (Bischoff & Franzen, 1993); **20.** Andırın, W Kahramanmaraş (Bischoff & Schmidtler, 1999); **21.** Kozan dam, N Kozan (Schmidtler, 1988); **22.** 5 km N Karaisalı (Schmidtler, 1993); **23.** Sebil Village, Çamlıyayla (Budak, 1976); **24.** Fındıkpınar plateau (Budak, 1976); **25.** Akarca Village, N Mezitli (Budak, 1976); **26.** Limonlu, SE Erdemli (Schmidtler, 1993); **27.** Koçaşlı, SE Gülnar (www.turkherptil.org, 2013); **28.** Anamur (www.turkherptil.org, 2013); **29.** Titreyengöl, Side (Troidl & Troidl, 2008); **30.** Kumköy, Side (Franzen et al., 2008); **31.** Boğazkent, SE Serik (www.turkherptil.org, 2013); **32.** Beldibi, SW Antalya (Troidl & Troidl, 2011); **33.** Tekirova, S Kemer (Troidl & Troidl, 2011); **34-35.** İçmeler and Marmaris, Muğla (Bruekers, 2010); **36.** Özdere, S Menderes, İzmir (new locality).

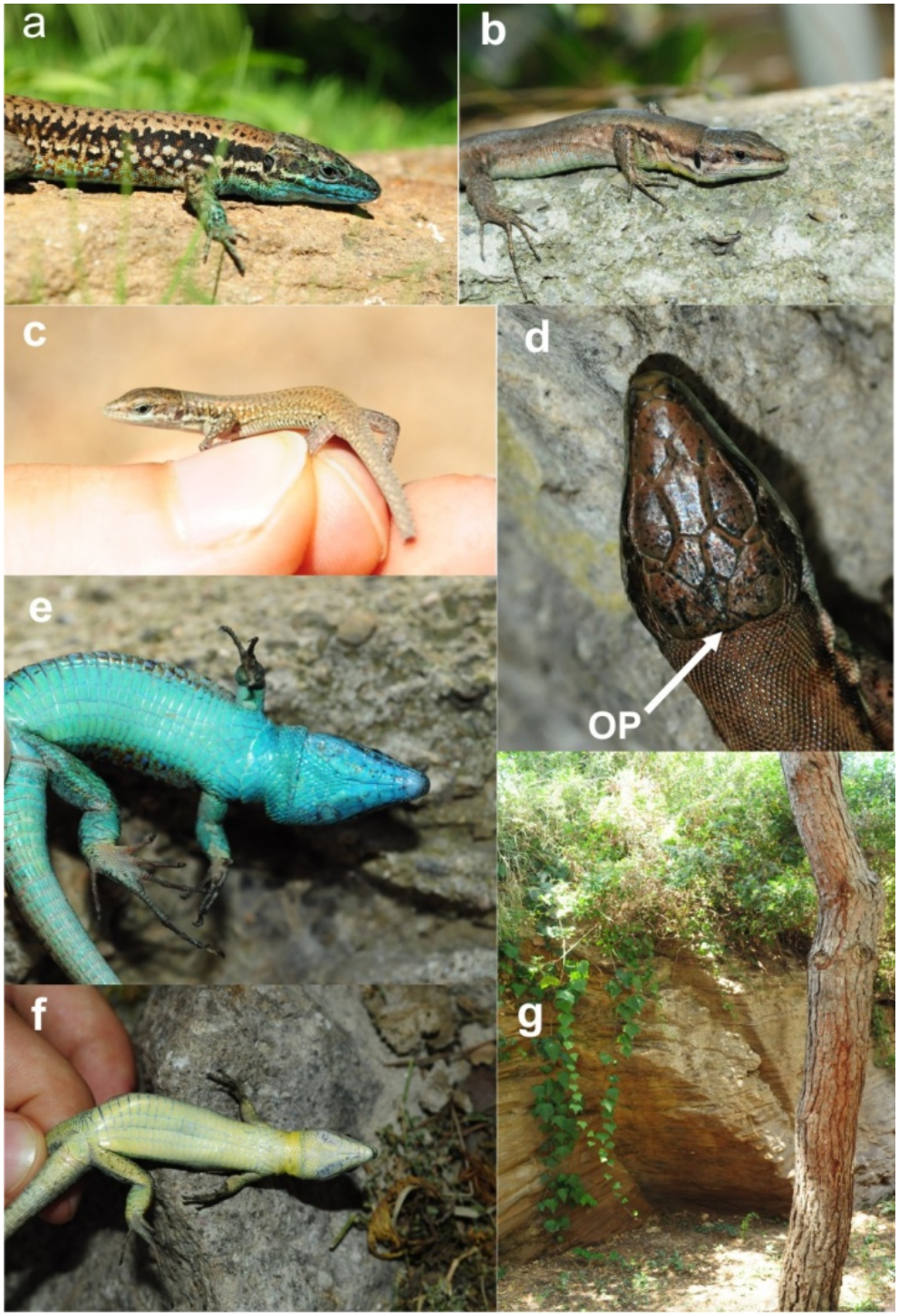

Figure 2. (a) Lateral view of released male; **(b)** Dorsolateral view of female (ZMHRU 2013/171:1♀); **(c)** General view of juvenile (ZMHRU 2013/171:2juv.); **(d)** Aspect of the occipital plate [OP] on female (ZMHRU 2013/171:1♀); **(e)** Ventral coloration of released male; **(f)** Ventral coloration of female (ZMHRU 2013/171:1♀); **(g)** Habitat of *P. laevis* in Özdere.

We observed only 15 individuals during whole excursion [7 adults (2 ♂♂, 5 ♀♀) and 8 juveniles]. Therefore, we photographed all specimens individually then released except only 3 (1♀ and 2 juveniles) specimens (autotomized specimens) were collected to avoid from the negative effect of over-collecting for their conservation. Specimens are deposited in the Zoology Museum of Harran University (ZMHRU), Şanlıurfa, Turkey. Materials: *Phoenicolacerta laevis* (N=3), ZMHRU 2013/171:1-3 (1♀, 2 juv.), Özdere/İzmir, 15.07.2013, Leg. M. Karış. Some Özdere specimens are shown in Figure 2. Also some metric measurements [Rostrum to end of Cloaca length (RCL), Rostrum to Gular fold length (RGL), Head width (HW), Gular to end of Cloaca length (GCL), Cloaca length (CL), Distance of Foreleg and Hindlimb length (DFHL), Pileus length (PL), Pileus width (PW), Foreleg length (FL), Hindlimb length (HL), 4th toe length of hindlimb (4.TLH)] of collected specimens are given in Table 1.

Table 1. Some metric measurements (in mm) of the autotomized *Phoenicolacerta laevis* Özdere/İzmir specimens. Abbreviations of characters were given in text.

	2013/171:1♀	2013/171:2juv.	2013/171:3juv.
RCL	64.11	33.39	32.74
RGL	21.01	12.15	11.70
HW	8.58	5.87	5.29
GCL	43.10	21.24	21.04
CL	6.86	3.38	2.74
DFHL	32.51	15.29	14.98
PL	14.15	8.77	8.52
PW	6.74	4.54	4.08
FL	20.24	10.85	10.64
HL	32.31	19.52	18.67
4.TLH	11.38	6.77	6.58

Morphological comparison of live specimens from Özdere (Menderes, İzmir) and known locality specimens showed that, the new population do not differ much from previously known populations except for the size of occipital plate. According to Budak (1976) all the 102 specimens of *Phoenicolacerta laevis* have a large occipitale plate and this plate has equal or higher values from length of the interparietale plate without exception. However, Özdere specimens have a narrow occipitale plate than known locality specimens and these plate smaller values from length of the interparietale plate (Fig. 2-d). Adult male specimen has complete blue ventral coloration from mental plate to end of the tail (Fig. 2-e). The blue coloration also is observed on supralabials and it has some blue and red spots in ventrolateral region (Fig. 2-a). Adult female specimens have yellowish ventral coloration; it's more distinctive on gular region (Fig. 2-f). Both sexes have black dots on sublabial plates (Figs 2-e,f).

The new population was found in a rocky area with plenty vegetation and air temperature was 36 °C. They were also observed near the houses and hotels in Özdere. The habitat view is shown in (Fig. 2-g). Sympatric herptiles; *Stellagama stellio, Ophisops elegans, Testudo graeca, Mauremys rivulata* and *Pelophylax bedriagae* were observed. We carried out some field trips to close areas but we couldn't observe any *P. laevis*, that make us think the population can be anthropogenic. Our suggestion, Özdere population needs more comprehensive and comparative study with other known Anatolian populations. As a result of this survey, the new record of *Phoenicolacerta laevis* extends the known distribution range for both species and genus around 165 km air distance to the northwest.

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