

**A specimen misidentified as *Podarcis muralis*
(LAURENTI, 1768) from Ohio, USA, re-determined as
Darevskia valentini (BOETTGER, 1882)
(Reptilia: Lacertidae)**

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Abstract

A museum specimen misidentified as a common wall lizard, *Podarcis muralis*, from Van Wert County, Ohio, USA was re-determined as a Caucasian rock lizard, *Darevskia valentini*. The specimen displays characteristics of *Darevskia*, the most notable of which are alternating broad and narrow whorls of scales around the tail. Scalation of the specimen is described and compared to sister taxa in detail.

Key Words: Reptilia: Lacertidae: *Darevskia valentini*; USA; Ohio; introduced population.

Zusammenfassung

Ein als *Podarcis muralis* (LAURENTI, 1768) fehlbestimmtes Präparat aus Ohio, USA, neu bestimmt als *Darevskia valentini* (BOETTGER, 1882) (Reptilia: Lacertidae).

Ein als Mauereidechse, *Podarcis muralis*, fehlbestimmtes Museumsexemplar aus Van Wert County, Ohio, USA, wurde als Kaukasische Felseidechse, *Darevskia valentini*, neu bestimmt. Das Präparat zeigt die charakteristischen Merkmale von *Darevskia*, von denen die bemerkenswertesten die alternierend schmalen und breiten Schwanzwirbel sind. Die Beschuppungsmerkmale werden beschrieben und mit verwandten Taxa im Detail verglichen.

Schlagwörter: Reptilia: Lacertidae: *Darevskia valentini*; USA; Ohio; eingeführte Population.

After investigating into the history of introduction of the common wall lizard, *Podarcis muralis* in Cincinnati, Ohio, USA (CONANT & COLLINS 1998, DEICHSEL & GIST 2001), the junior author examined museum material of the common wall lizard, *Podarcis muralis*, from Ohio in the collection of the Natural History Museum and Biodiversity Research Center at the University of Kansas (KUNHM), Lawrence. However, specimen KU 206727, a male, was recognized as not matching the usual *Podarcis muralis* dorsal pattern (see GRUSCHWITZ & BÖHME 1986). The specimen was collected west of Delphos at Kill Brothers Equipment Company, on Ohio Route 697 in Van Wert County, Ohio, in August 1986. For further examination it was sent to the senior author, whose results are presented here.

Snout-vent length (SVL) of the specimen (69.8 mm) lies in the size range of *P. muralis* (max. 75 mm; see GRUSCHWITZ & BÖHME 1986). The alternating narrow and broad whorls of scales around the tail eliminate all species of the genus *Podarcis* (Fig. 1). However, the specimen matches the pattern known from Caucasian rock lizards of the genus *Darevskia* very well (see DAREVSKY 1967). Among the numerous species of this genus only representatives of the *Darevskia rudis/valentini* complex reach the SVL of the specimen from Ohio.

The dorsal pattern (Fig. 2) of the lizard correspond to those of *D. v. valentini*, but are also similar to those observed in *D. valentini lantziyreni* and *D. rudis rudis*, and occasionally in *D. rudis bischoffi*.

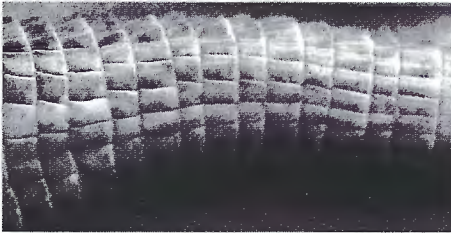


Fig. 1. Ventral aspect of the tail of a male specimen of *Darevskia v. valentini* from Ohio (KU 206727). Note alternating narrow and broad whorls of scales.

Ventralansicht des Schwanzes einer männlichen *Darevskia v. valentini* Ohio (KU 206727). Man beachte die alternierenden schmalen und breiten Schwanzwirtel.



Fig. 2. Dorsal aspect of a male specimen of *Darevskia v. valentini* from Ohio (KU 206727). Scale in cm. – All photos: ANDREAS MENDT, DGHT.

Dorsalansicht von *Darevskia v. valentini* aus Ohio (KU 206727). Maßstab in cm.

right page: Tab. 1. SVL and other scale count values for *Darevskia cf. valentini* from Ohio compared to *D. valentini valentini* from Zangesur, Armenia; *D. valentini lantziyreni* from Erciyes dağ, Turkey (taken from EISELT et al. 1992); *D. rudis rudis* from Trabzon, Turkey; and *D. rudis bischoffi* from Arhavi and Hopa, Turkey (taken from EISELT & DAREVSKY 1991). Males only (minimum, middle and maximum values): n = number (in the Ohio specimen single values from the left and right side were taken); L = length, W = width.

rechte Seite: Kopf-Rumpflänge und verschiedene Pholidosewerte der *Darevskia cf. valentini* aus Ohio, USA, im Vergleich zu *D. valentini valentini* aus Zangesur, Armenien und *D. valentini lantziyreni* vom Erciyes dağ, Türkei (aus EISELT et al. 1992) sowie zu *D. rudis rudis* aus Trabzon, Türkei und *D. rudis bischoffi* von Arhavi und Hopa, Türkei (aus EISELT & DAREVSKY 1991). Es wurden nur die Werte männlicher Tiere verglichen (Minimal-, Mittel- und Maximalwerte): n = Anzahl (bei dem Tier aus Ohio wurden einzelne Werte auf der linken und der rechten Körperseite ermittelt); L = Länge, W = Breite.

	Ohio (KU 206727) (n = 1 [2])	<i>D. v. valentini</i> (n = 8)	<i>D. v. lantzcycyreni</i> (n = 14)	<i>D. r. rudis</i> (n = 13)	<i>D. r. bischoffi</i> (n = 19)
SVL / KRL (mm)	69.8	57-64.6-71	66-71.2-76	60-71.7-81	60-77.5-88
Dorsals	47	44-47.6-51	47-52.0-57	57-61.9-68	40-45.8-57
Dorsals per / pro 10 Ventrals	32	27-28.4-31	27-30.4-33	34-36.5-42	22-26.5-33
Marginals per / pro 10 Ventrals	23	16-20.8-24	12-20.5-27	—	—
Ventrals	26	26-26.6-27	24-25.9-28	22-24.8-26	21-23.6-25
Praeanals	6	5-6.3-7	5-6.3-8	5-6.8-8	5-6.2-8
Central praeanal	1	1.0	1-1.1-2	1-1.1-2	1-1.1-2
L : W / H : B of anal shield (%)	21.6	44-47.5-52	37-51.9-60	27-46.3-55	28-42.2-49
Femoral pores	18/17	16-18.1-20	16-19.9-23	15-19.4-23	18-21.0-24
Subdigital lamellae	26/25	24-24.9-28	25-27.2-29	25-28.2-30	25-27.7-31
Tibials	17/17	15-17.3-18	15-16.4-20	15-17.2-20	11-12.6-14
Tibials : Dorsals (%)	93.9	91-102.4-111	98-112.7-130	131-138.8-167	132-143.1-167
Gular scales	24	25-25.8-28	27-29.5-33	28-32.9-36	25-28.0-32
Gular scales transversal / quer	33	31-32.4-35	39-43.4-50	43-47.0-54	37-43.1-47
Supraciliares	7/3	5-6.4-8	5-6.1-7	—	—
Supraciliary granules	8/11	6-7.3-9	5-9.9-13	10-12.4-16	8-11.6-15
Distinctively interrupted series of granulae / unterbrochene Granulareihen (%)	50	77.3	21.4	0	47
Postorbital reaches the parietal / Post-orbitale erreicht Parietale (%)	100	100	57.1	—	—
length of 1 st Supratemporale : Parietale (%)	40.7/48.2	25-42.5-52	30-40.9-65	38-44.0-53	28-41.9-55
Æ / Ø Massetericum : Parietal (%)	40.7/40.7	46-56.6-64	33-46.0-56	25-36.7-45	33-42.1-51
Temporals between masseteric and 1 st supra- temporal / Temporalia zwischen Massetericum und 1. Supratemporale	1/2	0-0.8-2	1-1.3-3	1-2.5-3	1-1.7-3
Temporals between masseteric and tympanic / Temporalia zwischen Massetericum und Tympanicum	1/2	1-1.9-3	2-2.4-5	2-2.8-4	1-2.0-3
Temporals (longitudinally) / längs	8/8	5-7.4-10	9-10.4-13	—	—

In order to compare the size and various characteristics of the pholidosis, the papers by EISELT & DAREVSKY (1991) and EISELT et al. (1992) were evaluated. Table 1 compares the four taxa mentioned above to the specimen from Ohio. The characters examined are described in the papers cited. We stress that SVLs reported represent very small samples. Considering size as the only criterion, the specimen from Ohio best matches *D. v. valentini*.

The scale counts of the specimen (Tab. 1) correspond to *D. valentini*, and here in particular to the nominate form (dorsals, ventrals, central preanals, femoral pores, sub-digital lamellas, ratio of tibials : dorsals, gular scales, temporals between masseteric and first sub-temporals and tympanic scale). Wherever matches with *D. rudis* occur, these are found between both species as well. The specimen from Ohio displays a conspicuously deviating anale which is very short and very broad. We assume this characteristic is an individual variation. *Darevskia valentini* and in particular *D. rudis* have strongly keeled scales on the tail whorls and tibia (DAREVSKY 1967). These scales are least strongly keeled in *D. v. valentini*, as in the specimen described here.

We conclude that these characteristics indicate that the specimen from Van Wert, Ohio, is a representative of *Darevskia v. valentini* (see DEICHSEL & BISCHOFF 2002). A final judgement regarding the subspecific ranks can be made only after the examination of more specimens. We did not try to have recovered DNA because the specimen had been formaldehyde fixed.

The native range of *D. v. valentini* comprises the mountainous regions of southern Georgia, Armenia and adjacent parts of NE Turkey. In this area the species is found at elevations of 1700 to 3000 meters above sea level. As a typical rock dweller, it avoids the ground as a rule (DAREVSKY 1967, EISELT et al. 1992). Given this background, habitat choice and ecology of the colony of Caucasian rock lizards introduced in Van Wert, Ohio warrant further investigation, if still present there. The place of introduction corresponds to the home range of *D. v. valentini* with respect to its latitude, but has, however, a flat topography with an elevation of only circa 250 meters above sea level. DEICHSEL & GIST (2001) referred to the Van Wert colony erroneously as *Podarcis muralis*, citing CONANT & COLLINS (1998) without checking the KU specimen. COLLINS (in litt.) stated upon request that this erroneous reference in the precursor edition (1991) of the primary one of „*Podarcis muralis*“ in Van Wert.

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