

Collection of additional material from the different regions of Turkey is necessary to establish more accurately this form's position in the L. saxicola group

Specimens examined. Anatoliya: GMNH 2481-2485, 2487 (7), around Adapazar; BMNH 1964382 (1), Alidag, above Bolu, vilayet Bolu.

Lacerta saxicola valentini Boettger, 1892
(Table I, A, Fig. 39; Photo. 18).

L. muralis var. valentini, Boettger, 1892:145; Mertens, 1922:173.
-- saxicola valentini, Méhely, 1909:543, Table 21, Fig. 6; Nikolskii, 1913:77; Nikolskii, 1915:375; Darevsky, 1965b: 481, Fig. 1, 2. -- saxicola armeniaca (non Méhely), Chernov (part.), 1939:113. -- saxicola terentjevi Darevsky 1957:42, fig. 9.

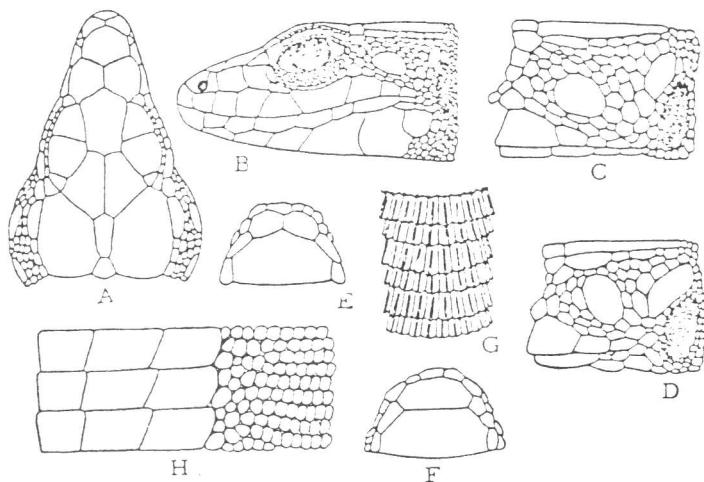


Fig. 39. Major scalation of L. s. valentini.

A - Head, dorsal view; B - head, lateral view; C, D - temporal region; E, F - anal region; G - dorsal anterior third of tail; H - contact zone between dorsal and ventral scales of males. (D, E - Gukasyan; rest - Lchashen).

Holotype. Senckenbergische Natur-Museum (Germany), 12064, village Bazarchai (Bazarkent), northeastern Armenia, collected by Radde and Valentin 1890.

Description. The frontonasal is considerably wider than long. The rostral is set off from the frontonasal or, extremely rarely (2 percent of the specimens) touches it along a narrow suture. The suture between the frontonasal and postnasal, generally, is not shorter than that between the anterior and posterior nasals. The suture between the frontal and prefrontals is straight. The supraciliaries are set off from the supraoculars by a broken or, rarely, entire row of 2 - 18 granules; in rare cases; these granules are completely absent. The upper postorbital touches the parietal along a broad suture. The first supratemporal is moderately long with a truncate posterior; the 1 - 4 weakly developed posttemporals located posterior of it are subequal. The midtemporal is large. The tympanic is moderate; between it and midtemporal, 1 - 4 prominently enlarged scales lie in a very narrow place. Along the midline of the throat up to the collar, there are 21 - 29 scales. The body scales are smooth, slightly bulging, sometimes slightly enlarged at the sides where some tiny granules may be present at random between the scales. Around the midbody, 41 - 53 scale rows are present. Laterally 2 - 3 body scales in males and 2 or, rarely, 3 in females meet with each ventral scale. The ventral and pectoral scales are arranged in 23 - 27 transverse rows in the former and 26 - 30 rows in the latter. The anal scale is large; anterior of it one large or, rarely, 2 very slightly enlarged preanal scales are present symmetrically. The femoral pores number 14 - 22. On the underside of the thigh between the pores and outer row of large scales, there are 3 - 6 longitudinal rows of tiny scales. The dorsal scales of the crus are smooth or very faintly keeled and do not exceed the size of the body scales. Around the middle of the ankle there is a 1[♀] - 23 scale row. The scales on the anterior third of the tail are moderate, keeled dorsally and intensely, keeled laterally; the posterior edge of some scales is truncate or slightly bulges backward at an obtuse angle.

The snout-vent length is 56 - 70 mm in males and 5[♀] - 77 mm in females; the ratio of the body length to its unregenerated tail is 0.4[♀] - 0.60 in the former and 0.51 - 0.69 in the latter.

The main background of the dorsum is olive-yellow, yellowish-green, greenish-yellow, bright-green, greenish-brown or olive-yellow. The distinct occipital stripe consists of large, irregular and closely spaced black or dirty-brown blotches. Some of these blotches cover up to 30 - 40 body scales. In some cases, these blotches, reduced in size, form a continuous reticulate pattern. Narrow parietal stripes of the same color as the background are bordered by the central occipital stripe and extend onto the dorsal third of the tail. Distinct, broad, black and blackish-brown temporal stripes bear 1 - 3 longitudinal rows of rounded, bright (bluish in pectoral zone) spots forming the centers of fused, dark ocelli. Poorly

developed maxillary bands, bright, sometimes with small dark spots, surround the temporal stripes at the edge of the abdomen. The upperside of the head has black, irregular blotches and spots. During the breeding season, the venter of the male and female, including the throat and the head, is bright yellowish-orange. At this time, the extreme lateral rows of ventral scales and the adjacent body regions in males acquire a bright or light blue coloration.

Geographical distribution. At present, the distribution of this subspecies is divided into isolated sections of various sizes confined exclusively to the mountainous-steppes zone of the Dzhavakhet uplands in northeastern Turkey, southern Georgia and north-western Armenia, on the one hand, and several ranges in the central and northeastern sections of Armenia, on the other. The northern edge of the range from west to east crosses the Dzhavakhet Plateau roughly at the level of the town of Akhalkalaki in Georgia and, having covered the southern spur of the Samsar range, descends along the western foothills of the Dzhavakhet range to the south and reaches the neighborhood of the village of Verin-Gukasyan in Armenia. The western edge of the range in Turkey has not been conclusively established but, judging from the recent finds, this lizard is fairly widely distributed in the Yalnyzcham (Arsiyan) range in the northeastern corner of Asia Minor (Darevsky, 1965c). In the Shirak and Aparan plains in northern Armenia, *L.s. valentini* is absent but appears again in the Aragats massif where its range encircles the mountainous-steppe zone of the Argats mountain. Small isolated populations are also present in the Tsakhkuniantskii and Pambakskii mountains. In central and northeastern Armenia, the range of this subspecies encompasses the slopes of the Gegam and Vardenis ranges towards Sevan, descending at places, e.g., around the village of Lchashen, to the shores of the lake. Farther to the east, the range extends along the northeastern slopes of the Zangezur range into the right bank valley of the Vorotan River where the eastern edge of the distribution has not been positively determined (fig.29,2).

Geographical variation. Samples were analyzed from 6 populations separated from west to east by distances of 140,70,40,25 and 35 km (Table 16). All of them, with the exception of the third and the fourth, and possibly also the first and the second, are at present isolated from each other and form isolated ranges of different sizes. As may be seen from fig.40, the samples resemble each other very closely with respect to most features of pholidosis, the minimal values of several characters being generally recorded from the extreme western and the maximal ones from the extreme eastern parts of the range. Though the individual characters, e.g., the number of granules between the supraciliary and supraocular shields, provide a fairly distinct picture of the variational gradient from

west to east, on the whole, the variations which are characteristic of subspecies possessing a continuous range are absent in L. s. valentini, evidently as a result of the isolation of the individual sections of its range. A characteristic pattern of a circular cline was discovered in the variations of several characters in the ring-like distribution around the Aragats hill in Armenia. As may be seen from fig. 40, the maximum values of most of the characters are noticed here on the northeastern slope and around Aparan, whereas the minimal values are recorded in the dimetrically opposite southwestern slope around the village Karmrashen. As additional investigations of populations from the north-western slope in Artik region showed, the very same meristic characters have intermediate values here and, thus, on the whole the increasing cline moves in a clock-wise direction from west to northeast. It may also be pointed out that the lizards of samples investigated differ comparatively little from each other in their body dimensions which may be explained by their habitats being at nearly equivalent elevations in the mountainous steppe zone.

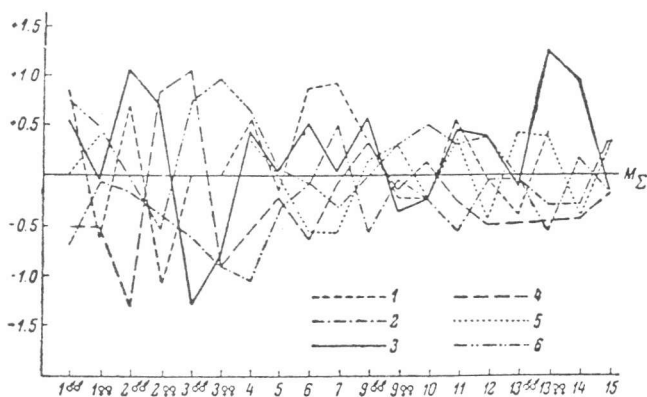


Fig. 40. Summary graph of variation of L. s. valentini.

1 - Arsian range; 2 - Gukasian; 3 - Aparan; 4 - Karmrashen;
5 - Pambak range; 6 - Lchashen.

Comparative notes. Boettger (1892) described his L. muralis var. valentini from 2 specimens from eastern Armenia, the type for description being the specimen collected in 1890 during an expedition by Radde and Valentin from the village of Nyuvadi located at an elevation of about 500 m in the Araks gorge. Even, M ehely (1909) regarded this form as a subspecies of L. s. valentini (it figures under this name even in the much later works of Nikolskii 1913, 1915), whereas Boulenger (1913, 1920) identified it as the subspecies L. s. armeniaca of M ehely.

Lantz and Cyren (1936) studied the 2 well-known specimens of L. s. valentini but left open the question of this subspecies' position and did not include it in the list of Caucasian forms.

Table 16

Geographical variation of *Lacerta saxicola valentini*

Characters	Arihan (northeastern Turkey) N = 7 (4 ♂♂, 3 ♀♀)		Around Gukasyan (northwestern Armenia) N = 21 (13 ♂♂, 8 ♀♀)		Karmahsen village (western slope of Aragats hill), N = 14 (7 ♂♂, 7 ♀♀)		Around Aparan (northeastern slope of Aragats hill), N = 16 (7 ♂♂, 9 ♀♀)	
	Range of variation	M ± m	Range of variation	M ± m	Range of variation	M ± m	Range of variation	M ± m
1 ♂	65-69	67.00 ± 0.91	59-66	61.69 ± 0.68	63-69	66.57 ± 0.78	60-66	62.29 ± 1.00
1 ♀♀	61-71	65.33 ± 2.94	62-73	68.25 ± 1.32	60-74	68.29 ± 1.79	58-76	65.67 ± 1.96
2 ♂♂	120-136	128.33 ± 4.64	117-130	120.0 ± 1.74	135-138	136.33 ± 0.88	100-112	107.0 ± 2.5
2 ♀♀	101-115	108.0 ± 7.00	—	—	94-140	122.00 ± 4.48	101-135	122.33 ± 10.7
3 ♂♂	0.51-0.57	0.53 ± 0.01	0.51-0.52	0.51 ± 0.001	0.49-0.50	0.49 ± 0.003	0.54-0.60	0.56 ± 0.01
3 ♀♀	0.56-0.60	0.58 ± 0.02	—	—	0.51-0.64	0.55 ± 0.04	0.52-0.58	0.54 ± 0.01
4	45-49	47.57 ± 0.52	41-46	43.29 ± 0.40	45-52	48.07 ± 0.56	41-49	45.06 ± 0.49
5	25-29	26.67 ± 0.48	22-27	24.19 ± 0.35	23-28	25.14 ± 0.46	21-27	24.5 ± 0.46
6	18-20	18.50 ± 0.28	15-21	17.31 ± 0.26	16-22	18.08 ± 0.40	14-19	16.59 ± 0.07
7a	8-13	10.28 ± 0.58	6-12	8.93 ± 0.33	2-11	8.11 ± 0.70	2-12	7.56 ± 0.71
7	0	—	33	—	35-7	—	43-7	—
9 ♂♂	20-26	26.00 ± 0.00	23-27	25.00 ± 0.34	25-27	26.29 ± 0.36	24-27	26.00 ± 0.44
9 ♀♀	28-28	28.00 ± 0.00	26-30	28.12 ± 0.48	27-29	27.72 ± 0.29	27-29	28.00 ± 0.23
10	1-1	1.00 ± 0.00	1-1	1.00 ± 0.00	1-1	1.00 ± 0.00	1-2	1.06 ± 0.06
11	1-3	2.57 ± 0.24	1-3	1.88 ± 0.09	2-3	2.5 ± 0.13	1-4	2.09 ± 0.22
12	2-3	2.42 ± 0.19	1-4	2.48 ± 0.12	2-4	2.68 ± 0.14	1-3	2.18 ± 0.17
13 ♂♂	2-3	2.37 ± 0.25	2-3	2.54 ± 0.13	2-3	2.5 ± 0.19	2-3	2.57 ± 0.19
13 ♀♀	2-3	2.50 ± 0.31	2-3	2.19 ± 0.13	2-3	2.86 ± 0.14	2-3	2.05 ± 0.07
14	—	—	18-22	19.81 ± 0.25	19-23	21.36 ± 0.33	18-22	19.63 ± 0.26
15	—	—	4-6	4.63 ± 0.12	3-5	4.43 ± 0.17	4-5	4.37 ± 0.12

Characters	Pambak range (northern Armenia), (exampt), N = 7 (5 ♂♂, 2 ♀♀)		Northwestern slopes of Gegam range at Lechashen village N = 23 (9 ♂♂, 14 ♀♀)		Subspecies as a whole N = 28 (15 ♂♂, 13 ♀♀)	
	Range of variation	M ± m	Range of variation	M ± m	Range of variation	M ± m
1 ♂♂	56-70	64.2 ± 2.98	63-70	67.22 ± 0.83	56-70	64.40 ± 0.51
1 ♀♀	67-74	70.5 ± 3.36	66-77	70.78 ± 0.96	58-77	68.44 ± 0.76
2 ♂♂	—	—	115-143	121.17 ± 4.36	100-143	121.68 ± 1.64
2 ♀♀	—	—	102-123	112.56 ± 1.93	94-140	116.81 ± 1.15
3 ♂♂	—	—	0.48-0.59	0.55 ± 0.01	0.48-0.60	0.53 ± 0.004
3 ♀♀	—	—	0.56-0.69	0.62 ± 0.01	0.51-0.69	0.58 ± 0.007
4	45-50	47.0 ± 0.72	44-53	48.04 ± 0.45	41-53	46.25 ± 0.29
5	23-27	24.86 ± 0.55	22-28	24.96 ± 0.33	21-29	24.83 ± 0.22
6	15-19	16.71 ± 0.41	15-20	17.3 ± 0.23	14-22	17.44 ± 0.13
7	0-10	6.21 ± 0.97	1-12	6.74 ± 0.56	0-13	7.87 ± 0.28
7a	90	—	60.8	—	—	—
9 ♂♂	25-27	25.8 ± 0.38	24-26	25.67 ± 0.23	23-27	25.67 ± 0.16
9 ♀♀	28-29	28.5 ± 0.5	27-30	28.57 ± 0.25	26-30	28.18 ± 0.17
10	1-1	1.00 ± 0.00	1-2	1.13 ± 0.07	1-2	1.04 ± 0.021
11	2-3	2.50 ± 0.19	1-3	2.39 ± 0.12	1-4	2.25 ± 0.072
12	1-3	2.21 ± 0.26	2-4	2.71 ± 0.12	1-4	2.49 ± 0.067
13 ♂♂	2-3	2.7 ± 0.21	2-3	2.61 ± 0.16	2-3	2.56 ± 0.074
13 ♀♀	2-3	2.5 ± 0.5	2-3	2.71 ± 0.10	2-3	2.30 ± 0.073
14	18-21	19.57 ± 0.43	19-23	20.48 ± 0.24	18-23	20.21 ± 0.13
15	4-6	4.71 ± 0.28	4-5	4.39 ± 0.10	3-6	4.46 ± 0.065
						3.75
						4.98
						11.01
						7.56
						0.033
						0.046
						2.79
						2.08
						1.30
						2.66
						—
						1.08
						1.13
						0.20
						0.68
						0.633
						0.50
						0.48
						1.25
						0.583

Contd.

Recently, Darevsky (1965b) demonstrated that L.s. terentijevi described by him in 1957 from hilly Armenia was none other than L.s. valentini; the Araks gorge and the village of Bazarchai at an elevation of about 2000 m above the sea level in eastern Armenia which was covered by Radde and Valentin (Radde 1890) in their expeditions should be regarded as the type locality. This form differs greatly from the other of the subspecies of L. saxicola in their morphological characteristics. This phenomenon was also pointed out by R. Mertens (1922) who suggested that it be regarded as an independent species. Since L.s. valentini reveals a good similarity with L.s. lantzicyreni of Asia Minor, the question of its taxonomic rank should be resolved together with a study of the latter for which purpose additional material from northeastern Turkey is required.

Specimens examined. Armenia: ZIL 14197 (4), Kazanchi, Gukasyan region; 14393 (1), Chakalovka, Sevan region; 14911 (5), Agbaba mountain Gukasyan region; 16072 (5), Agmagan mountain, Nor-Bayazet region; 16786 (3), Lchashen, Sevan region; 16549 (10), around Aparani; 16677 (14), Karmrachen, Talin region; 16392 (6), eastern slope of Aragats mountain; 17777 (3), Miskhan range at village Takyalu; 17806 (7), Pambak range at village Akhundov; 17826 (10), Lchashen, Sevan region; 17829 (20), around Gukasyan; 17938 (11), around Karvansar, Martunin region; ZIA (7), northwestern slopes of Aragats mountain at Artik town; (11), upper courses of Mantash gorge, Artik region; (2) southern slopes of Aragats mountain in the upper courses of Amberda River; SMF 12064 (1), Bazarchai, Sisian region 12065 (1), Bazarchai, Sisian region. Georgia: GMG (4), around Bogdanovki. Turkey (northeastern):NMW, 18383 (6), western slopes of Yalnyzcham range; 18384 (2), eastern slopes of Yalnyzcham range.

RUDIS GROUP

Lacerta rudis rudis Bedriaga 1886
(Fig. 41; Photo. 14)

Podarcis depressa Camerano (part.), 1878:539.-- Lacerta depressa var. rudis, Bedriaga, 1886:275 (259). -- muralis var. depressa f. modesta, Boettger (part.), 1892:140.-- muralis var. depressa, Boulenger, 1904:337 Table 22, Fig.c; 1913:196, Table 22, Fig. 7, 7a, 8.-- muralis var. rudis, Mehely, 1909:529, Table 20, Fig. 7; Nikolskii, 1915:373; Lantz and Cyren, 1936:165; Terentiev and Chernov, 1949:187.

Holotype. Not designated. Described by Bedriaga (1886) from Batumi samples.