SYSTEMATIC REVIEW OF SPECIES AND SUBSPECIES

SAXICOLA GROUP

Lacerta saxicola saxicola Eversmann, 1934
(Fig. 9; photo. 3).

L. saxicola Eversmann, 1934;349, table 30, fig. 1. - muralis fusca var. saxicola Bedriaga, 1886: 195 (179). - muralis f. typica Boulenger, 1887:29. - muralis var. saxicola Boulenger, 1913:190; 1920: 282. - saxicola f. typica. Méhely, 1909:495; Nikolskii, 1910:492. - saxicola saxicola Nikolskii, 1913:67; Lantz and Cyren, 1936:164; Terentiev and Chernov, 1960:136; and Shcherbak, 1962a:1383, fig. 9.

Holotype Not designated. Judging from the description of Eversmann (1834), the specimen first described was collected from Kislovodsk (source Narzan).

Description Frontonasal width is greater than or rarely equal to its length. The rostral is usually separated from the frontonasal. The suture between the frontonasal and posterior nasal is not shorter than between the anterior and posterior nasals. The sutures between prefrontal and frontal are often covex in the frontal. Between the supraciliaries and supraoculars, there is a complete, or very rarely interrupted, row of 9 to 23 granules. The upper postorbital touches the parietal in a majority of specimens. The first supratemporal is of moderate length, truncate posteriorly; 2 to 5 prominent and subequal posttemporals lie behind the supratemporal. The midtemporal is moderate, small, or indistinct; and is separated from the first supratemporal by 2-4 small scales and from the small tympanic scale by 2 to 5 small scales. Along the midline of the throat, there are 18-32 scales. Body scales are smooth, and slightly bulged; 41-69 scales are around the midbody. Ventral scales meet the body scales with 2-4 scales in males and 2 or 3 in females, the posterior most one usually being much enlarged. Ventral and pectoral scales lie in 22-27 and 24-27 transverse rows, respectively. The anal scale is large; one, rarely two, greatly enlarged preanal scales are more or less symmetrically arranged in front of the former, or the preanal scales are

small and equal in size. Femoral pores number 13-21. Ventrally on the abdomen, 4-7 transverse rows of tiny scales lie between the rows of pores and the outer row of enlarged scales. The dorsal scales on the crus are smooth with blunt keels and are not larger than the dorsal scales. Around the middle of the crus 11-23 tiny scales lie in a row.

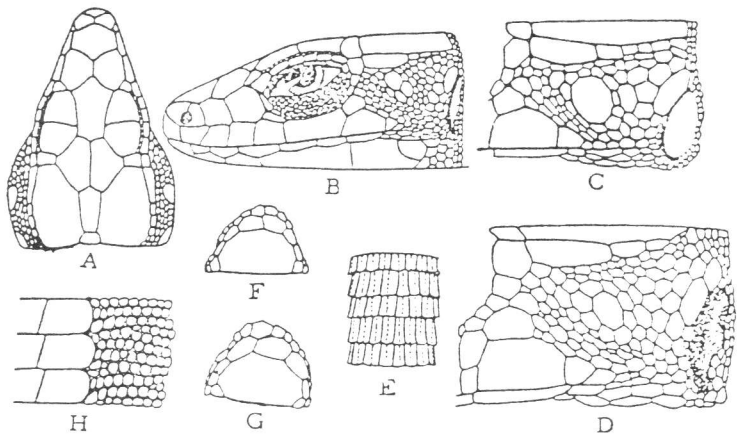

Fig. 9. Major scalation of L. s. saxicola.

A - Head, dorsal view; B - head, lateral view; C, D - temporal region; E - dorsal surface of the base of the tail; F - contact zone between dorsal and ventral scales; G and H - anal region (D, H - Gorge of Chegem River; others - Kislovodsk).

Scales on the anterior third of tail have moderate keels; these are very sharp on the sides; the posterior edge of scales end bluntly or protrude slightly backward at a low angle. Snout-vent length is 52-70 mm in males and 47-65 mm in females; the ratio of body length to the length of the unregenerated tail is 0.41-0.68 in males and 0.51-0.66 in females.

The main ground color of the dorsum of males is grassy green, ivy green, bluish green, or dirty-green; in females, it is dark-sandy or sandy with no green tint. The occipital stripe is formed by a row, sometimes doubled, of moderately-sized black or dark-brown blotches along the mid-dorsal line. These blotches are bounded laterally by broad parietal stripes of the main ground color. Temporal stripes are formed, at least in part, by broken and fused black or brown ocelli with light or bluish centers; a more or less prominent row of small, light spots often merging into a continuous ciliary line which usually passes along the broken upper edge of the temporal stripes. Some specimens, particularly females, have faint occipital and temporal stripes extending into the nape in males. The venter dark-orange, chrome-orange, saffron-yellow, yellowish-orange, yolk-yellow, ochreous or, rarely, porcelain pink in spring; this coloration

extends well on to the underside of thigh, anal area, and the base of the tail. Females have yellowish, ash-gray, rusty, or whitish venters. In the breeding season, the extreme ventral scales of males as well as most of the ocelli in the temporal stripes become bluish or bright blue. The dorsal surface of the head shows some dark spots.

Georgraphical distribution. The main range of this subspecies includes the northern slopes of the Skalistyi mountain within the Karachai-Cherkess Autonomous Region, south of Stavropol region, and Kabardino-Balkaria, from the valley of the upper course of the Kuban River and its tributaries in the east. The northern most reliable records are from around Kislovodsk. The southern edge of the range extends through the north eastern arm of the Elbrus in the Kuban gorge, across the Skalistyi mountain (known from Marinsky pass), along its watershed into the upper reaches of the Kuma, Podkumka, Alkanovka, Borezova, Kich-Malka, Zolka rivers and evidently, the Khasaut and Gundelen. Along the Baksan gorge, it extends up to Tyrny-Auz and along the Chegem up the Chegem ravine (fig. 10,2). In the west, the range of this subspecies abuts the range of L.s. darevskii and on the slopes of Elbrus that of L. caucasica alpina. In the Chegem ravine, it is locally sympatric with L. caucasica caucasica.

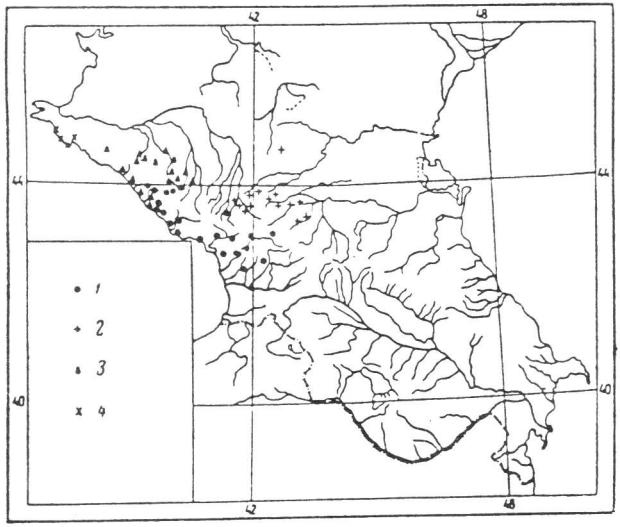

Fig. 10. Distribution in the Caucasus.

1 - L.s. brauneri; 2 - L.s. saxicola; 3 - L.s. darevskii; 4 - L.s. szczerbaki.

Geographic variation. Samples were taken from 5 populations along an east-west transect at distances of 30, 70, 100 and 120 [?] km (Table 2).

Table 2

Geographic variation of Lacerta saxicola saxicola

Characters	Chegem River, gorge N = 10 (6 ♂♂, 4 ♀♀)		Baksan River gorge, N = 15 (9 ♂♂, 6 ♀♀)		Berezova River gorge, N = 10 (4 ♂♂, 6 ♀♀)	
	Range of variation	$M \pm m$	Range of variation	$M \pm m$	Range of variation	$M \pm m$
1 ♂♂	52—62	57.00±1.33	53—62	57.11±1.08	59—68	62.75±1.88
1 ♀♀	51—59	55.50±1.65	53—61	57.67±1.37	53—62	58.67±1.37
2 ♂♂	90—110	98.0 ±3.87	87—110	98.25±3.19	110—121	115.5±5.50
2 ♀♀	96—110	104.67±4.65	88—103	94.5 ±3.16	—	—
3 ♂♂	0.51—0.65	0.58±0.02	0.48—0.68	0.58±0.02	0.56—0.56	0.56±0.00
3 ♀♀	0.51—0.61	0.54±0.03	0.56—0.66	0.60±0.02	—	—
4	47—52	48.7 ±0.44	51—58	54.2 ±0.41	52—56	54.80±0.49
5	19—24	21.9 ±0.54	22—25	23.47±0.27	22—26	24.40±0.49
6	13—20	17.1 ±0.50	15—20	18.37±0.37	15—18	16.75±0.26
7	3—15	9.4 ±0.91	5—13	10.47±0.53	9—13	11.00±0.33
7a	0	—	0	—	0	—
9 ♂♂	22—24	23.0 ±0.36	22—24	23.44±0.29	22—24	22.75±0.47
9 ♀♀	25—26	25.50±0.28	25—26	25.5 ±0.22	25—27	25.67±0.33
10	1—3	1.9 ±0.23	1—3	1.86±0.21	2—3	2.10±0.10
11	3—5	3.85±0.20	3—5	4.13±0.19	2—4	3.08±0.14
11a	—	—	26.6	—	40	—
12	2—4	3.3 ±0.17	2—4	3.30±0.13	2—4	3.15±0.15
13 ♂♂	2—3	2.91±0.11	3	3.0 ±0.00	2—3	2.5±0.26
13 ♀♀	2—3	2.75±0.23	3	3.0 ±0.00	3—3	3.00±0.00
14	17—21	17.9 ±0.36	17—19	18.00±0.24	16—20	17.9±0.378
15	5—5	5.00±0.00	5—6	5.60±0.13	4—5	4.7±0.15

Contd.

Characters	Kislovodsk (after Shcherbak 1962)		Around Karachev, N = 10 (5 ♂♂, 5 ♀♀)		Subspecies as a whole, N = 45 (24 ♂♂, 21 ♀♀)		
	Range of variation	$M \pm m$	Range of variation	$M \pm m$	Range of variation	$M \pm m$	0
1 ♂♂	max 68.0	—	59—70	64.60±2.03	52—70	59.58±1.0	4.91
1 ♀♀	max 62.5	—	47—62	56.2 ±2.47	47—62	57.19±0.906	4.15
2 ♂♂	max 132	—	89—127	106.33±11.1	87—132	101.80±2.76	13.5
2 ♀♀	max 114.2	—			88—127	98.56±2.67	8.46
3 ♂♂	0.49—0.82	—	0.46—0.66	0.57±0.05	0.46—0.82	0.58±0.013	0.066
3 ♀♀					0.46—0.82	0.57±0.018	0.070
4	51—61	56.3±0.4	54—69	58.70±1.35	47—69	54.8 ±0.44	3.799
5	23—32	28.4±0.4	23—30	27.0 ±0.68	19—32	25.8 ±0.40	3.567
6	15—20	17.7±0.3	17—21	19.2 ±3.1	13—21	17.82±0.18	1.63
7	11—23	12.6±0.5	11—13	12.35±0.23	3—15	10.86±0.32	2.16
7a	0	—	0	—	—	—	—
9 ♂♂	—	—	23—25	23.6 ±0.40	22—25	23.25±0.19	0.95
9 ♀♀	—	—	25—27	25.8 ±0.37	25—27	25.62±0.15	0.71
10	—	—	1—3	2.00±0.14	1—3	1.90±0.09	0.65
11	3—5	4.4±0.1	2—5	3.3 ±0.28	3—5	3.96±0.12	0.81
11a							
12	3—5	3.5±0.4	3—5	3.6 ±0.20	2—5	3.4 ±0.05	0.57
13 ♂♂	—	—	3—4	3.2 ±0.13	2—4	2.94±0.07	0.39
13 ♀♀	—	—	3—3	3.00±0.00	2—3	2.95±0.04	0.22
14	—	—	17—23	19.9 ±0.52	16—23	18.20±0.20	1.46
15	—	—	5—7	6.2 ±1.99	4—7	5.42±1.00	0.71

The data of N.N. Shcherbak (1962a) were used for comparative purposes; these data include Shcherbak's analysis of several specimens from the neighborhood of Kislovodsk. As may be seen in fig. 11, extreme values of several scalation characteristics occur in the sample of lizards from the neighborhood of Karachai and in the lizard samples from the Chegem and Baksan Rivers, thereby suggesting a distinct variational cline increasing from west to east. Of special interest is the extreme western sample from around Karachai, strongly tending towards the neighboring subspecies L.s. darevskii and occupying an intermediate position between them in several characteristics. Moreover, specimens from the gorge of the Chegem River, sympatric with L.c. caucasica, experience a positive influence of the latter as reflected in a reduction of the number of scales around the mid-body and along the midline of the throat; on the whole, however, both these forms can clearly be differentiated from each other morphologically in their zone of sympatry.

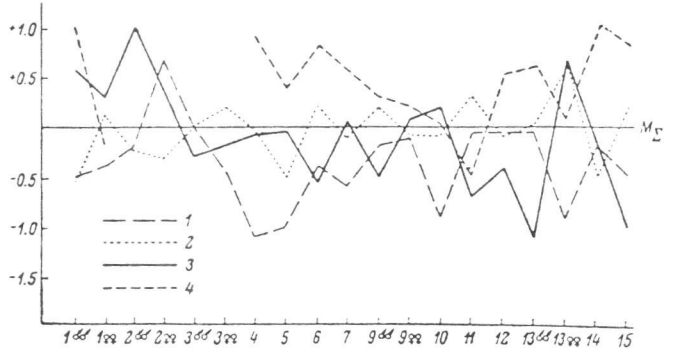

Fig. 11. Summary graph of the variation in L.s. saxicola.

1 - Gorge of Chegem River; 2 - gorge of Baksan River; 3 - gorge of Berzov River at Kislovodsk; 4 - around Karachai.

Comparative notes. Méhely (1909) under his Lacerta saxicola f. typica included a wide range of lizards from Crimea, northern and northwestern Caucasus to northwestern coast of Turkey. Later, Nesterov (1911a and 1912), Boulenger (1913), and Nikolskii (1915) extended the boundaries of this subspecies even further by including in it a part of their specimens from Dagestan, Black Sea coast of the Caucasus, Borzhomi gorge, northwestern Azerbaijan, Talysh, Armenia, Kura valley, and north-eastern Turkey. Lantz and Cyren (1936) retained the name of the subspecies saxicola only for the lizards of the Crimea, Kuban basin, and around Kislovodsk; they also suggested that the Crimean and Kislovodsk specimens in fact belonged to different forms of the subspecies. Recently (1962a), N.N. Shcherbak confirmed the correctness of this suggestion and established, in particular, that the nominal form is encountered only to the east of Kuban basin.

Specimens examined. Karachai-Cherkess Autonomous Region: ZIL 16912 (10), around Karachai; 17080 (2), around Karachai: 17961 (3), Marinskii ravine; 17974 (2), Teberda, Gonachkhir River; and ZMMSU, 3176 (7), Nizhnya Teberda.

Stavropol region: ZIL 17437 (14), gorge of the Berezova River, Kislovodsk; 17652 (20), Kislovodsk.

Kabardino-Balkariya: ZIL 17880 (14), gorge of the Chegem River; 17789 (20), gorge of the Baksan River between Zhankhoteko and Tyrny-Auz.

Lacerta saxicola bruneri Méhely, 1909
(Fig 12; photo .4)

L. saxicola var. bruneri Méhely, 1909:509; Nikolskii, 1913:69. - saxicola brauneri, Nikolskii, 1915:367; Lantz and Cyren, 1936:164; Terentiev and Chernov, 1949:188; Mertens and Wermuth, 1960:137.

Holotype - Not designated. Described by Méhely (1909) based on some specimens from around Adler, Krasnaya Polyana, Gagr, and Pseashkho pass.

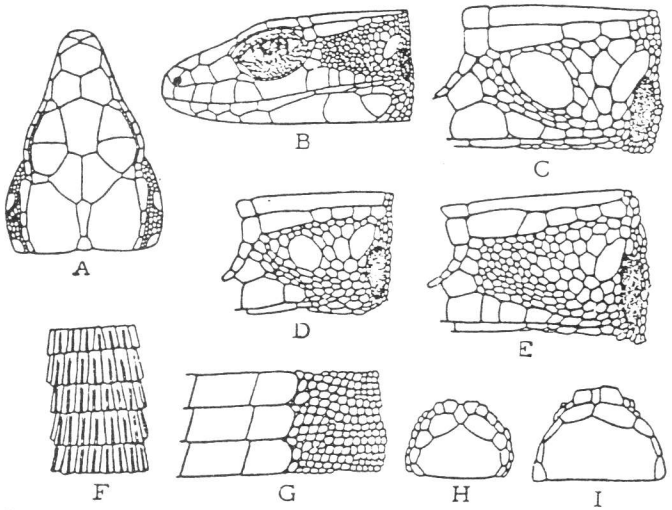

Fig. 12. Major scalation of L.s. brauneri.

A - Head, dorsal view; B - head, lateral view; C, D, E - temporal region; F - dorsal surface of the anterior one-third of tail; G - contact zone between dorsal and ventral scales of females; H and I - anal region (C - Gorge of Inguri; D - Sukhumi; others - Krasnaya Polyana).