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.

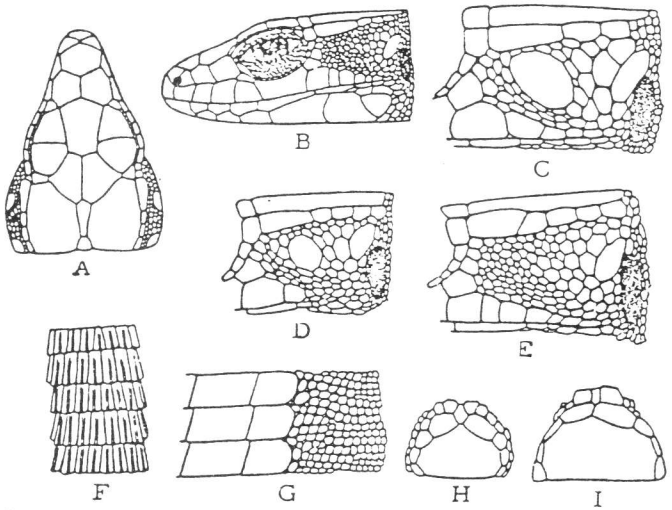

Fig. 12. Major scalation of L.s. brauneri.

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).

Description. The width of the frontonasal scale is greater than, equal to, or slightly more than its length. The rostral scale and the frontonasal are in broad contact in 30 percent of the individuals. The frontonasal-postnasal suture is usually slightly longer than the suture between the anterior and posterior nasal scales. The prefrontal and frontal suture are straight or slightly concave inside the latter. There is a fully or, rarely, partially interrupted row of 5 to 16 granules separating the supraciliary scales and supraoculars. The upper postorbital does not touch the parietal in most cases. The first supratemporal moderately long, roughly truncate posteriorly; 1 to 5 usually well-developed posttemporal scales along the edge of the parietal behind the first supratemporal. The midtemporal scale of various sizes is separated from the first supratemporal by 1-4, and from the small tympanic shield by 1-6 tiny scales. There are 23-32 scales along the midline of the throat to the collar. Body scales are smooth, and prominent; 49-65 scales around midbody. Ventral scales meet the body scales with 2 or 3 scales, the posterior one usually somewhat enlarged. Ventral and pectoral scales arranged in 20-35 transverse rows in males and 22-28 in females. A large anal shield usually preceded by 2 enlarged preanals and often a very small third one between them; rarely, the large preanal shields are not prominent. Femoral pores number 23-32. Ventrally on the thigh between the femoral pores and the outer row of enlarged scales, there are 4 to 7 transverse rows of tiny scales. Dorsal scales of the crus have more or less distinct keels or tubercles, not larger than the body scales. 15 to 22 tiny scales lie in one row around the center of the ankle. Scales on the anterior third of tail are keeled, much sharper on the sides where their posterior ends are usually upturned in the form of acute spines; some scales are bluntly truncated posteriorly or protrude at a distinct backward angle. Snout-vent length is 49-71 mm in males and 49-65 mm in females; the ratio of it to length of unregenerated tail is 0.44-0.64 in the former and 0.45-0.69 in the latter.

The basic color of the dorsum of males and females is apple-green grass-green, bluish-green, sandy, dark-sandy, brownish-gray, or grayish-brown, the greenish tone in general being more characteristic of males than females. The occipital stripe is formed by black or dark-brown blotches and spots which vary greatly in shape and size; these are generally concentrated along the midline and do not cover the entire width of the back. The broad temporal stripes comprise 1 3 longitudinal rows of merging or partly-separated irregular dark blotches with whitish or bluish (at the level of anterior limbs) centers. The upper and lower ends of temporal stripes are usually bounded by a row of bright, fully or partly-rounded dark ocelli. A few specimens have different pattern elements which are very faint or absent. The underside of body, including the head, is yellow, saffron-yellow, greenish yellow or whitish. Lateral ventral scales, especially in males, usually carry large, bright-blue patches so that the body side at the time of breeding often exhibits a continuous blue tone.

Geographical distribution. This subspecies lives in the western part of Bolshoy Kavkaz mountain in the southeast of Krasnodar region, Abkhazia, and north western Georgia. On the northern slopes, the edge of its range passes through the upper course of the Bela River and the lower course of Bolshaya and Malaya Laba Rivers in the Caucasian Reserve Forest area where L. s brauneri is known, especially from around Guzeriplia, Psebaya and the gorge of the Urushtena River. A small isolated population exists in the upper course of the Azgek River (left tributary of Teberdy of the northern Caucasus). The southern edge of its range stretches along the southern slopes of Glavnyi mountain roughly from the gorge in the middle of the Shakha River in the west, then, gradually descending along the western slopes of Gagrinsk mountain and dropping to the sea in the western Abkhazia; flurther east it again rises along the foothills of the right bank of the Riona River where the extreme eastern occurrences are known from the gorge of the Khoba River. It is also known in the mountainous part of northwestern Georgia from the gorge of the Kodori River, gorge of the Ingura River in the Nizhnaya and Verkhnaya Svanetia and the upper reaches of the Tekhuri River in Megrelsk mountain (Fig. 10, 11). In the northern slopes of Bolshoy Kavkaz, it is occasionally sympatric with L. s. darevskii and L. c. alpina, and in the gorge of the Ingura River with L. r. rudis. In the gorge of the Mulkhra River in Verkhnaya Svanetia, a zone of sympatry with L. c. caucasica is known.

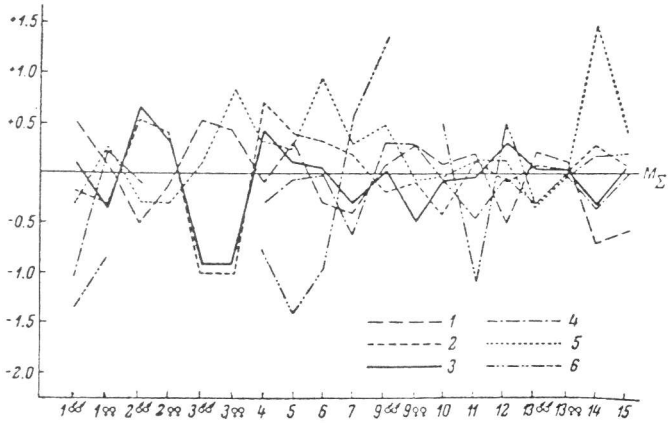

Fig. 13. Summary graph of the variations of L. s. brauneri.

1 - Krasnaya Polyana; 2 - lower reaches of the Bzyba River; 3 - Sukhumi; 4 - Cape of Pitsunda; 5 - gorge of Ingura; 6 - Mulkhra River gorge.

Geographic variation. Samples were taken from 7 populations (Table 3) separated from the west to east by distances of 55, 30, 70, 20, 80, and 60 km, respectively. The last two samples (Ingura River gorge and around the Zhabezhi village in the gorge of the Mulkhra River) were taken

high in the mountains and considerably isolated from the main area of occurrence. As may be seen from fig.18, the shore populations (Gagry, Sukhumi, Pitsunda, and others) are fairly similar in all respects and only Pitsunda lizards differ noticeably in their very small body dimensions. Only the lizards of Ingura gorge differ considerably from the specimens of shore populations in several indices of scalation (characters 5-7 and 14-15); the former are particularly characterized by a greater number of scales around the middle of the ankle. On the whole, according to the characters indicated above, clinal variation with an increase from south to north (i.e., from the coast towards the mountains) occurs in this subspecies. Another variational feature of brauneri is characteristic presence of a suture between the rostral and frontonasal scales. The number of specimens possessing this suture increases initially towards the east reaching a maximum in the region of Sukhumi, noticeably decreasing thereafter in the cape of Pitsunda and even more so in the gorges of the Ingura and Mulkhra Rivers.

Of special importance is the isolated population in the gorge of the Mulkhra River where L.s. brauneri and L.c. caucasica are sympatric. Although both species in the area of sympatry differ distinctly from each other, the former clearly tends towards L. caucasica in several respects, primarily in a decrease in the absolute values of characters 4,5,6, and 11. Finally, the populations from around Krasnaya Polyana, as also the lizards from the lower course of the Bzyba River which approach to L.s. darevskii in several characters (large size of males, relatively long heads, and some color characteristics) should be considered as forms which are transitory between L.s. darevskii and L.s. brauneri, although on the whole they are more similar to the latter.

Comparative notes. The subspecies was described by Méhely (1909) mainly from a series of specimens from Krasnaya Polyana in Krasnodar region the neighborhood of which should be regarded as the typical territory. Later, Lantz and Cyren (1936), included the whole of Abkhazia within the range of L.s. Brauneri based on their study of large samples of freshly collected specimens; they also included several specimens from the Black Sea coast of the Caucasus, formerly regarded by Méhely as L. saxicola f-typica, under this subspecies.

Specimens examined. Abkhazia: ZIL 12712 (1), Khosty River valley; 15605 (6), around Sukhumi; 15922 (9), Tsebelda; 17066 (8), Yasochka close to Sukhumi; 17119 (1), Tkvarcheli; 17464 (3), from the confluence of Kodora and Amtkela rivers; 17913 (17), Gagry; 17914 (20), cape of Pitsunda; 17915 (27), lower course of Bzbyba; 17962 (1), Akhuk-Dara mountain, lake Mzi; ZMMSU 2477 (10), around Pskhu; 2488 (5), Gagry; 2507 (1), Matsesta. Georgia: ZIL 17807 (38), gorge of the Ingura River in the basin

Table 3

Geographic variation of Lacerta saxicola brauneri

Characters	Krasnaya Polyana, N = 30 (19 ♂♂, 11 ♀♀)		Lower course of the Bzyba River a, N = 16 (8 ♂♂, 8 ♀♀)		Around Gagry N = 13 (9 ♂♂, 4 ♀♀)		Around Sukhumi N = 15 (8 ♂♂, 7 ♀♀)	
	Range of variation	$M \pm m$	Range of variation	$M \pm m$	Range of variation	$M \pm m$	Range of variation	$M \pm m$
1 ♂♂	60—71	65.89±0.78	51—67	61.75±1.77	50—66	60.56±1.77	60—70	63.87±1.23
1 ♀♀	54—65	59.18±1.04	49—64	56.62±1.72			53—60	56.29±0.94
2 ♂♂	103—130	116 ±2.35	101—142	126.71±5.3	116—130	123.5 ±0.33	126—136	127.0±4.9
2 ♀♀	97—110	101.8±2.28	100—118	109.0 ±3.08			93—117	108.2±4.1
3 ♂♂	0.47—0.64	0.56±0.01	0.44—0.53	0.48±0.01	0.49—0.53	0.51±0.008	0.44—0.54	0.48±0.02
3 ♀♀	0.53—0.62	0.57±0.01	0.45—0.54	0.5 ±0.01			0.50—0.56	0.51±0.01
4	51—65	57.83±0.51	56—64	60.19±0.48	49—62	56.92±1.13	54—64	59.4±0.75
5	25—32	27.77±0.39	25—32	28.08±0.4	23—28	26.08±0.4	24—31	27.4±0.58
6	15—22	18.47±0.29	17—21	19.59±0.3	16—21	18.92±0.34	16—22	19.03±0.36
7	8—13	10.62±0.16	7—15	11.75±0.48	10—15	11.46±0.34	5—11	10.8±0.50
7a	0	—	12.5	—	0	—	20	—
9 ♂♂	21—25	22.68±0.21	21—24	22.25±0.36	20—22	21.4 ±0.4	21—24	22.62±0.42
9 ♀♀	24—28	25.1 ±0.36	23—26	24.5 ±0.37	23—26	24.62±0.42	22—26	24.0±0.58
10	2—3	2.4 ±0.08	1—3	2.06±0.13	1—3	2.23±0.16	2—3	2.26±0.11
11	2—5	3.25±0.14	2—6	3.20±0.23	2—4	3.17±0.17	2—4	3.0±0.16
11a	23,3	—	25	—	6.1	—	8.6	—
12	1—4	2.78±0.12	2—4	3.0 ±0.12	2—4	3.23±0.16	2—4	3.33±0.15
13 ♂♂	3—4	3.18±0.08	3—4	3.12±0.08	3—4	3.1±0.14	3—4	3.19±0.13
13 ♀♀	2—4	3.09±0.15	3—4	3.06±0.06	3—4	3.06±0.08	3—4	3.07±0.09
14	15—22	17.34±0.23	17—21	19.0 ±0.26	16—20	17.54±0.37	16—19	17.73±0.25
15	4—7	5.1 ±0.10	5—7	5.62±0.15	5—6	5.61±0.14	5—6	5.6±0.13

Characters	Cape of Pitsunda, N = 10 (4 ♂♂, 6 ♀♀)		Ingur Gorge in the basin of the river Nakra, N = 25 (15 ♂♂, 10 ♀♀)		Around village Zhabezhi in Verkhnaya Svanetia, N = 12 (10 ♂♂, 2 ♀♀)		B-a	Subspecies as a whole, N = 121 (73 ♂♂, 48 ♀♀)		
	Range of variation	$M \pm m$	Range of variation	$M \pm m$	Range of variation	$M \pm m$		Range of variation	$M \pm m$	
1 ♂♂	56—60	58.0 ±0.91	57—66	61.13±0.58	49—63	56.50±1.32		49—71	63.07±0.59	5.05
1 ♀♀	56—63	59.67±1.05	57—65	59.70±0.78				49—65	58.40±0.76	5.28
2 ♂♂	104—130	118.00±4.13	96—127	114.22±3.74	97—110	104.00±2.29		96—142	118.94±1.44	12.30
2 ♀♀			83—110	99.29±3.48				83—118	103.95±1.55	11.82
3 ♂♂	0.45—0.54	0.50±0.001	0.46—0.63	0.54±0.02	0.50—0.59	0.55±0.01		0.44—0.64	0.53±0.006	0.054
3 ♀♀			0.55—0.69	0.60±0.01				0.45—0.69	0.55±0.005	0.042
4	55—60	57.3 ±0.47	54—64	59.08±0.54	52—61	55.90±0.76		49—65	58.26±0.24	2.73
5	24—29	27.00±0.47	24—32	27.52±0.39	23—28	24.20±0.51		23—32	27.10±0.18	2.00
6	17—21	18.95±0.40	16—25	20.06±0.36	15—19	17.35±0.32		15—25	18.99±0.15	1.65
7	6—13	10.45±0.64	10—16	11.94±0.26	10—15	12.15±0.43		5—16	11.29±0.14	1.63
7a	13	—	0	—	0	—		—	—	—
9 ♂♂	22—24	23.00±0.40	22—24	23.20±0.17	23—25	24.20±0.29		20—25	22.58±0.14	1.21
9 ♀♀	24—26	25.17±0.30	23—26	24.60±0.33				22—28	24.69±0.17	1.22
10	2—3	2.10±0.09	2—3	2.32±0.09	2—3	2.60±0.16		1—3	2.30±0.04	0.515
11	2—3	2.60±0.15	2—4	3.16±0.14	1—3	2.10±0.13		1—6	3.02±0.07	0.787
11a	0	—	0	—	0	—		—	—	—
12	2—4	3.10±0.17	2—5	3.24±0.13	2—4	3.45±0.18		1—5	3.11±0.05	0.656
13 ♂♂	3—3	3.00±0.00	3—3	3.00±0.00	3—3	3.00±0.00		3—4	3.11±0.034	0.292
13 ♀♀	3—4	3.08±0.11	3—3	3.00±0.00				2—4	3.06±0.041	0.297
14	17—19	17.90±0.23	19—22	20.44±0.21	18—20	18.90±0.23		15—22	18.47±0.14	1.60
15	5—6	5.50±0.16	5—7	5.80±0.12	4—6	5.70±0.21		4—7	5.52±0.05	0.64

of the Nakra River; 17879 (12), gorge of the Mulkhra River above village Zhabezhi; and SMG (3), Lebarde health resort, Gegechkor region. Krasnodar territory Zil 17439 (27), Krasnaya Polyana; 17964 (1), Babuk Aul; ZMMSU. 1943 (19), Chernorechenskaya, Caucasian Reserve Forest; 3153 (1), Guzeripl; and 17973 (7) Kisha River, Caucasian Reserve Forest. Karachai-Cherkess Autonomous region: ZIL 16304 (4), Teberda, upper course of the Azgek River.

Lacerta saxicola bithynica Méhely, 1909
(Fig. 14; photo. 10)

L. depressa var. rudis, Werner, 1902:1086, Table III, Fig. 9 and 10 - muralis var. chalybdea, Boulenger (part), 1904: 337 and 338; 1913:187, Tab. XXII, Fig. 1; 1920:278. - saxicola bithynica Méhely, 1909:537, Table XXI, fig. 7; Lantz and Cyren, 1936:165; Terentiev and Chernov, 1940:98; Bodenheimer, 1944:25. -saxicola chalybdea, Nikolskii, 1915:337.

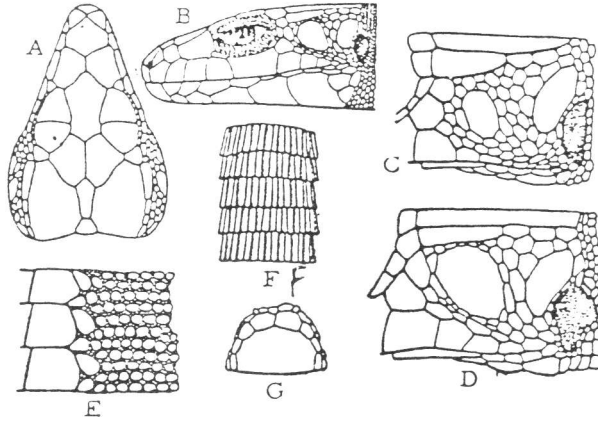

Fig. 14. Major scalation of L. s. bithynica.

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

Holotype. Not desigated. Described by Méhely (1909) from specimens from the Uludag mountains (Bitinsky Olimp) and around Amasa in northwestern and northern parts of Asia Minor.

Description. The width of the frontonasal scale is greater than or equal to its length. Rostral scale is separated from the frontonasal or, rarely, joins with it at one point. The suture between the frontonasal and postnasal