3. Reptiles from the River Tajan (Transcaspia).

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[Received February 5, 1918: Read February 19, 1918.]

(Plate I.)

The small collection of reptiles which I am about to describe was made from April to September 1914 by Mr. N. V. Meriakri, who presented it to the Zoological Museum of the Moscow University. Prof. G. A. Kojevnikof was kind enough to entrust me with its study.

This material, although consisting of only 35 specimens, contains 16 species, one of which appears to be new. It thus affords interesting information on the herpetological fauna of the region of the river Tajan, situated at the meeting of the Persian, Afghan, and Transcaspian frontiers.

1. Gymnodactylus microlepis, sp. n. (Pl. I. fig. 1.)

3 ♂. Length of head and body (from snout to vent) 61, 60, and 40 mm.

Head oviform, rather depressed. Snout much longer than the diameter of the eye. Forehead slightly concave. Ear-opening small, elliptical. Proportion: $\frac{\text{length of head}}{\text{length of head and body}} = 0{\cdot}27$ to 0·30; average 0·28.

Body moderate, depressed. A well-marked lateral fold.

Limbs rather long. Proportion: $\frac{\text{length of fore limb}}{\text{length of head and body}} = 0{\cdot}42$ to 0·43; average 0·43. Proportion: $\frac{\text{length of hind limb}}{\text{length of head and body}}$ = 0·61 to 0·64; average 0·63.

Tail cyclotetragonal and slightly depressed at the base, becoming cylindrical towards the end. Proportion: $\frac{\text{length of tail}}{\text{length of head and body}}$ = 1·33 (1 spec.).

Rostral broader than deep, with median cleft above. Nostril pierced between the rostral, the first supralabial, and 3 feebly swollen nasals. 10 or 11 supralabials. Scales of snout, forehead, and supraocular region polygonal, slightly convex, small in the postnasal depression, enlarged in front of the eye. One enlarged superciliary. Parietal and occipital regions covered with small, roundish, feebly convex scales, intermixed with larger, more convex, or slightly conical ones. On the temple a few large, moderately conical, but not keeled tubercles; the other temporal scales small, granular; in front of the ear-opening 2 or 3 small tubercles.

Mental large, sub-triangular. 7 to 9 infralabials. 3 pairs of chin-shields, the first *not* forming a suture behind the apex

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of the mental. Gular scales extremely small, roundish, scarcely imbricate.

Neck with very small, juxtaposed, granular scales and longitudinal rows of large, slightly conical, but not keeled scales, changing gradually along the back into 12 or 14 longitudinal rows of moderate, elongated, trihedral tubercles; between the median rows a row of small tubercles. The other scales of the back larger than those of the neck, flat, feebly imbricate; across the middle of the body 62 to 65 dorsal scales (in a transverse line passing between the tubercles).

Ventral scales small, cycloid, smooth, 35 to 38 in a transverse row in the middle of the belly, 136 to 144 in the median line from the mental to the vent.

Suprahumeral scales rather small, imbricate, more or less rounded, smooth, or indistinctly keeled. Forearm covered with scales like the dorsals, and with a few moderately keeled tubercles. Infrahumeral scales granular, juxtaposed. Infraradial scales like the ventrals.

Suprafemoral scales imbricated, pointed, smooth, or indistinctly keeled on the inner side of the thigh; the other parts of the thigh and leg covered with scales like the dorsals, intermixed with large, moderately prominent trihedral tubercles. Infrafemoral scales large, roundish, imbricate. Male with a continuous series of 34 to 39 femoral and præanal pores. Infratibial scales similar to the ventrals, but a little larger.

Tail covered above with transverse rows of very large, moderately keeled spinose scales, decreasing in size towards the end of the tail; between these rows of large scales about two rows of small, imbricate, more or less distinctly keeled ones. On the lower side of the tail, except at its base, a single row of enlarged transverse plates.

Coloration grey above, with more or less distinct darker transverse bands, which are disposed as follows:—one on the occipital region, one on the neck, 4 to 7 on the back, about 12 on each limb, 12 on the tail. Lower parts white.

Comparative Notes.

The presence of a series of numerous femoral and præanal pores show *G. microlepis* to belong to the group of *G. caspius* Eichw. It is especially closely allied to *G. fedtschenkoi* Str. and *G. longipes* Nik., agreeing with the former in proportions and with the latter in most characters of scaling. I am greatly indebted to Mr. W. A. Lindholm, who was so kind as to examine the types and other material of *G. longipes*, which are preserved in the Museum of the Petrograd Academy of Science *. Owing to his notes, which complete the description given by Nikolski †, I am able to state that these two species are quite distinct.

* Nos. 8809 (3 ♂), 8810 (1 ♂, 2 ♀), 8811 (1 ♀), from Neh in Eastern Persia, 18. v. 1896, leg. N. A. Zarudny (types); Nos. 9191 (1 ♀), 9193 (1 ♂, 4 ♀), 9194 (1 ♂) from the country Zirkuh in Eastern Persia, 21. iv. to 6. v. 1898, leg. N. A. Zarudny.

† Ann. Mus. Zool. Acad. St. Petersb. 1897, p. 313.

Mr. Lindholm measured specimens of *G. longipes* and obtained the following data:—

	♂	♀
$\frac{\text{Length of fore limb}}{\text{Length of head and body}}$	0·48 to 0·51; average 0·50	0·49 to 0·51; average 0·50
$\frac{\text{Length of hind limb}}{\text{Length of head and body}}$	0·69 to 0·73; average 0·71	0·65 to 0·70; average 0·68

The comparison with the corresponding data of *G. microlepis* shows the difference in the length of limbs*. Besides *G. longipes* has 12 to 15 supralabials, and the first pair of chin-shields almost always forming a suture behind the mental; on one specimen only out of 14 these plates are separated by two small scales. As to the size of the tubercles of the head, neck, and back, the scaling of the throat and belly, the number of femoral and præanal pores, the two species seem to agree.

There is a very interesting gradation in the characters of scaling between the three species *G. microlepis*, *G. fedtschenkoi*, and *G. caspius*. *G. microlepis* has the smallest and the most numerous scales, its tubercles are relatively feebly developed; *G. fedtschenkoi* forms the link between the foregoing and *G. caspius*, which has the largest and the least numerous scales, and very strongly developed tubercles. The following table contains the most important distinctive characters of these three species:—

	G. microlepis.	*G. fedtschenkoi* †.	*G. caspius* ‡.
Tubercles of the temple ...	moderately conical.	conical.	trihedral.
Before the ear-opening	2 or 3 small tubercles.	2 or 3 small tubercles.	1 large tubercle.
On the neck	slightly conical scales.	moderately prominent trihedral tubercles.	very prominent large trihedral tubercles.
Tubercles of the back	moderate, prominent, not spinose.	large, prominent, not spinose.	very large, very prominent, often spinose.
Gular scales	extremely small.	very small.	small.
Number of scales in a line between the apex of the mental or the suture of the chin-shields and the anal cleft	136 to 144.	123 to 131.	100 to 114.
Number of ventral scales across the middle of the belly	35 to 38.	30 to 33§.	24 to 29.
Suprafemorals on the inner side of the thigh	small, smooth, or indistinctly keeled.	moderate, distinctly keeled.	large, strongly keeled.
Number of femoral and præanal pores	34 to 39.	26§.	27 to 29‖.

* Nikolski attributes as a distinctive character to *G. longipes* the greater diameter of the eye, which he supposes to be longer than the distance from eye to nostril; with this statement Mr. Lindholm does not agree.

† Material: 2 ♂ from Samarkand.

‡ Material: 2 ♀ from Shemakha (Caucasus); 5 spec. (2 ♂, 1 ♀, 2 juv.) from Sangatshaly near Baku (Caucasus): 3 spec. (1 ♂, 2 ♀) from Askhabad (Transcaspia), 1 ♂ from Anaú (Transcaspia), and the ♀ described here from the river Tajan.

§ 24 to 34 ventral scales and 30 to 37 pores, according to Nikolski, Fauna of Russia, Reptiles I., Petrograd 1915, p. 78.

‖ The maximum is 30, according to Nikolski, *loc. cit.* p. 74.

2. Gymnodactylus caspius Eichw. (Pl. I. fig. 3.)

1 ♀. Length of head and body 65 mm. 9/10 supralabials, 7/8 infralabials. 14 longitudinal rows of dorsal tubercles. 65 dorsal scales in a transverse row across the middle of the body. 101 scales in a line between the suture of the chin-shields and the vent. 28 ventral scales across the middle of the belly.

3. Agama sanguinolenta Pall.

4 specimens, agreeing in every respect with others from Transcaspia (Askhabad, Anaú, Bairam-Ali). Length of head and body 83 mm. (♂), 81 mm. (♂), 78 mm. (♀), and 36 mm. (juv.). 14 to 17 supralabials, 15 to 17 infralabials. 43 to 47 gular scales and 73 to 76 ventral scales in a line from mental to vent. 58 to 64 dorsal and ventral scales round the middle of the body. The young differs from the adults in having no spinose scales.

4. Eremias velox velox Pall.

2 specimens, entirely agreeing with other material from Transcaspia (Askhabad, Bairam-Ali). Length of head and body 65 mm. (♂) and 34 mm. (juv.). 6 to 9 superciliaries. The large supraocular shields completely or almost completely separated by a row of granules from the frontal and the postfrontal. Infranasal not reaching the rostral. 6 anterior and 3 posterior supralabials, 6 to 8 infralabials. 5 or 6 chin-shields in the young, the first 3 or 4 forming a suture. 22 or 23 gular scales in a line between the suture of the chin-shields and the collar. 10 plates in the collar. 50 to 53 dorsal scales across the middle of the body. 30 transverse rows of ventral plates, the longest of which consists of 13 to 15 plates. 20/21 femoral pores. Supracaudal scales strongly keeled.

5. Eremias intermedia Str.

3 typical specimens. Length of head and body 55 mm. (♀), 37 and 38·5 mm. (juv.). In the ♀ a granule between the præfrontals. 6 to 8 superciliaries. The large supraocular shields entirely separated by a row of granules from the frontal and the postfrontal*. 6+1+2 to 4 supralabials. 7 or 8 infralabials. 26 or 27 gular scales in a line between the suture of chin-shields and the collar. 11 or 12 plates in the collar. 47 to 50 dorsal scales across the middle of the body. 29 or 30 transverse rows of ventral plates, the longest of them consisting of 16 to 18 plates. 13 or 14 femoral pores on each side.

* I shall show in a more detailed publication that the subspecies *transcaspica* Nik., which, according to the author, may be distinguished by this character, is identical with the typical *E. intermedia*.

6. EREMIAS (MESALINA) GUTTULATA Licht.

1 ♀. Length of head and body 49 mm. 5 superciliaries. Row of superciliary granules beginning behind the 7th superciliary only. Occipital as large as the interparietal. 4 anterior and 3 posterior supralabials. 7 infralabials. 22 gular scales in a line between the suture of the chin-shields and the collar. Collar free, consisting of 9 plates. 40 dorsal scales across the middle of the body. 28 transverse rows of ventral plates. 10 femoral pores on each side.

7. EUMECES SCHNEIDERI Daud.

1 spec. Length of head and body 109 mm. (♂) and 63 mm. (hgr.). 6+1+3 supralabials in the ♂, 5+1+2 only in the half-grown specimen, the middle one being fused with the following by forming a very large subocular. 8 infralabials. 4/5 or 5/6 nuchal plates. 25 or 26 dorsal and ventral scales round the middle of the body. 68 scales in a line between the suture of the chin-shields and the anal plates.

8. EUMECES SCUTATUS Theob.

3 spec. Length of head and body 122 mm. (♂), 124 and 116 mm. (both ♀). The head-shields offer many anomalies. In one ♀ the right supranasal is divided; the other ♀ has both præfrontals divided into two unequal parts, and two loreals on the left side. In the ♂ the parietals form a long suture behind the interparietal. 4 to 6 superciliaries. 4 or 5+1+3 supralabials, the last being very small. 7 infralabials. 3/4 or 4/4 nuchal plates. 21 dorsal and ventral scales round the middle of the body. 78 to 80 scales in a line between the suture of the chin-shields and the anal plates.

9. MABUIA SEPTEMTÆNIATA Reuss.

2 spec. Length of head and body 82 mm. (♂) and 90 mm. (♀). Supranasals meeting in a point (♂) or separated (♀). Præfrontals separated from each other, the internasal forming a short suture with the frontal. 4 anterior and 2 posterior supralabials. 8 infralabials. 34 or 35 dorsal and ventral scales round the middle of the body. 70 or 71 scales in a line between the suture of the chin-shields and the vent.

10. VIPERA LEBETINA L.

1 spec.* Length of head and body 520 mm. Tail incomplete. 10 supralabials, 13/14 infralabials. 25 longitudinal rows of dorsal scales. 121 ventral plates.

* It was impossible to ascertain the sex of the snakes, the viscera having been removed.

11. Boiga trigonatum Schneid.

2 specimens :—

Length of head and body	510	480 mm.
Length of tail	115	108 „
Number of supralabials	8/9, the 3rd, 4th, and 5th entering the orbit.	
Number of infralabials	11/12	
Temporal shields	$2+3$	$\frac{2+1+3}{1+3+3}$
Number of rows of dorsal scales	21	
Number of ventral plates	222	221
Number of pairs of infracaudals	86	84

12. Taphrometopon lineolatum Brandt.

1 specimen. Length of head and body 790 mm. Length of tail 375 mm. 8 supralabials, the 4th and 5th entering the orbit. 11 infralabials. $2+1/2+3$ temporal shields. 12 rows of dorsal scales. 181 ventral plates. 121 pairs of infracaudals.

13. Zamenis rhodorhachis Jan.

2 specimens :—

Length of head and body	715	630 mm.
Length of tail	265	230 „
Number of supralabials	9, the 5th and 6th entering the orbit.	
Number of infralabials	10	
Temporal shields	$2+5$ to 8 irregular ones.	
Number of rows of dorsal scales	19	
Number of ventral plates	227	226
Number of pairs of infracaudals	121	117

These specimens have no red stripe along the back.

14. Zamenis diadema Schleg.

4 specimens :—

Length of head and body	870	830	825	770 mm.
Length of tail	215	190	215	(140) „
Number of supralabials	11/12	12/13	10/11	12/13
Number of infralabials	11/13	12	13/14	12
Number of rows of dorsal scales	27	29	27	27
Number of ventral plates	225	244	217	234
Number of pairs of infracaudals	76	83	83	—

Behind the præfrontals a row of 3 accessory shields; in one specimen the median one is fused with the right internasal. 3 $\left(\frac{1}{1+1}\right)$ exceptionally 4 $\left(\frac{1}{1+1+1}\right)$ frenals. 2 præoculars. Supralabials more or less separated from the loreals and entirely separated from the orbit by a row of small shields, the first of which may reach the postnasal; there are 2 or 3 shields between the supralabials and the loreals, 3 to 5 between the former and the orbit, and, following them, 2 or 3 postoculars. Temple covered with small irregular shields.

15. NATRIX TESSELLATA Laur.

3 specimens:—

Length of head and body	580	530	470 mm.
Length of tail	155	155	125 „
Number of supralabials		8	
Number of infralabials		10/11	
Number of præoculars	4	2/3	2
Number of postoculars	4	4	3
Temporal shields		1+2+2 or 3	
Number of rows of dorsal scales		19	
Number of ventral plates	176	170	176
Number of pairs of infracaudals	70	73	69

In the specimen having 2 præoculars and 3 postoculars the 4th and 5th supralabials enter the orbit.

16. ERYX MILIARIS Pall.

1 specimen. Length of head and body 355 mm. Length of tail 30 mm. Internasals separated by the point of the rostral. 4 scales between the postnasals. Round the eye a circle of 13 small shields, the lowest of them much enlarged and reaching the 6th supralabial, the two anterior ones a little enlarged (præoculars), the others (supraoculars and postoculars) about equal in size. Between the supraoculars 5 scales across the head. Between the postnasals and the præoculars 8 $\left(\frac{1}{1}+\frac{1}{1}+\frac{1}{1}\right)$ small loreal shields. 13 supralabials, the 3rd one being the highest. 20 infralabials, the first 3 or 4 enlarged, the others very small, with larger shields below them.

EXPLANATION OF PLATE I.

Fig. 1. *Gymnodactylus microlepis*, sp. n., ♂, River Tajan.
Fig. 2. *G. fedtschenkoi* Str., ♂, Samarkand.
Fig. 3. *G. caspius* Eichw., ♀, River Tajan.