

On the morphology of
Teratoscincus microlepis
NIKOLSKY, 1900, from Iran

The genus *Teratoscincus* STRAUCH, 1863, is widely distributed in Iran, Afghanistan, Pakistan, Russia, Mongolia, China, United Arab Emirates, Qatar, Oman, Uzbekistan, Kazakhstan, Tajikistan and Turkmenistan (ANDERSON 1999; MACEY et al. 1999, 2005). Based on the latest checklist of Iranian lizards (ŠMÍD et al. 2014), three out of six nominal species of *Teratoscincus* are reported from Iran including *T. bedriagai* NIKOLSKY, 1900, *T. keyserlingii* STRAUCH, 1863 and *T. microlepis* NIKOLSKY, 1900.

The Baluch Plate-tailed Gecko or Small-scaled Wonder Gecko, *T. microlepis*, is among the lesser known lizards of Iran. It is a nocturnal, insectivorous, and oviparous lizard with restricted distribution in southeast Iran, southwest Pakistan and adjacent Afghanistan (ANDERSON 1999). This species has been described from Duz-Abad, east of Kerman, by NIKOLSKY. After that, various records of *T. microlepis* were reported from the southeast Iranian Provinces of Kerman, and Sistan and Baluchistan (ŠCERBAK & GOLUBEV 1996; ANDERSON 1999; ŠMÍD et al. 2014). It is inferred from genetic data that *T. microlepis* is a basal *Teratoscincus* form, separated from the other species of the genus as a result of the uplift of the Hindu Kush Massif about 20 million years ago (MACEY et al. 1999, 2005). Since Iranian *T. microlepis* were never subject to morphological studies, corresponding data from specimens of two distinct populations from the East Iranian Province of Sistan and Baluchistan are presented in the present note.

During field work investigating the herpetofauna of eastern Iran from 2015–2016, ten specimens of *T. microlepis* were collected from near Mir Ja'far Khan village (30.988721° N, 61.758877° E), 35 km east of Zabul (Figs. 1, 2) and three from near Bampur (26.7944167° N, 60.2879444° E). The specimens were fixed with 96 % ethanol, and deposited in the Shahrekord University Herpetological Collection (Hamzeh Collection HAC 53-61 & 63) and Sabzevar University Herpetological Collection (E. Ra-

stegar-Pouyani Collection ERP 3965, 3966, 3967). Identification of the specimens followed ŠCERBAK & GOLUBEV (1996) and ANDERSON (1999). Meristic characters were counted using a magnifying lens and included the following counts: Scales across the top of the head counted along a straight line between the pupils (SH), scales along the midline of the upper head between nasal and enlarged dorsal scales (SA), supralabial scales on the right side (SLSR), supralabial scales on the left side (SLSL), infralabial scales on the right side (InLSR), infralabial scales on the left side (InLSL), scales along a line around the middle of the body (SMB), lateral fringe scales on the 4th toe of the right hind limb (LRS4th), numbers of enlarged supracaudal plates (LSCP), scales along a line between mental scale and anterior edge of vent (GVA), scales in contact with the mental scale (SCM) and dark transversal bands across the tail (DTBT). Morphometric measurements (to the nearest 0.01 mm) were taken using digital calipers and included head and body length from the tip of the snout to the posterior edge of the vent (SVL), length of the complete tail from the posterior edge of the vent to the tip of the tail (LCD), head length from the anterior edge of the nostril to the anterior edge of the ear opening (HL), snout length from the the anterior edge of the nostril to the anterior edge of the orbit (SL), transversal (horizontal) eye diameter (TED), maximum (vertical) diameter of the ear opening (MDEO), head width just behind the eyes (HWBE) and head height just behind the eyes (HHBE). To consider allometric variation, ratios were calculated according to ŠCERBAK & GOLUBEV (1996) such as [SVL/LCD], [(HHBE/HWBE)×100 = HHW] and [(MDEO/TED)×100 = EED].

Morphometric and meristic data of the specimens is presented in Table 1. Even though the studied specimens agree well with the description of the type specimen (NIKOLSKY 1900) in color pattern there are considerable morphometric differences between the specimens from Mir Ja'far Khan village and those from near Bampur. The former differ from the latter by higher numbers of SA, SMB, LSCP and GVA (Table 1). The largest collected specimen came from Mir Ja'far Khan village with SVL = 90.86 mm LCD =



Fig.1: *Teratoscincus microlepis* NIKOLSKY, 1900 (HAC 63) in its natural habitat in the environs of the Village of Mir Ja'far Khan, 35 km east of Zabul, Province of Sistan and Baluchistan, Iran.



Fig. 2: Habitat of *Teratoscincus microlepis* NIKOLSKY, 1900, near the Village of Mir Ja'far Khan, 35 km east of Zabul, Province of Sistan and Baluchistan, Iran.

Table 1: Morphological counts, measurements and ratios of 13 specimens of *Teratoscincus microlepis* NIKOLSKY, 1900, recently collected from two areas in the East Iranian Province of Sistan and Baluchistan, in comparison with data from ŠCERBAK & GOLUBEV (1996). * - Data in mm.

Character	ŠCERBAK & GOLUBEV (1996)	Mir Ja'far Khan (N = 10)	Bampour (N = 3)
Scales across head along a line between pupils (SH)	48-58	57-72	45-63
Scales along head from nasal to enlarged dorsals (SA)	135-154	124-199	116-147
Supralabial scales on the right side (SLSR)	10-12	10-12	11-12
Supralabial scales on the left side (SLAL)	10-12	10-12	11-12
Infralabial scales on the right side (InLSR)	9-11	10-12	10-12
Infralabial scales on the left side (InLSL)	9-11	10-12	8-10
Scales around the middle of the body (SMB)	85-110	119-150	85-86
Lateral fringe scales on 4th toe of hind limb (LRS4th)	22-26	22-28	20-23
Number of Large supracaudal plates (LSCP)	9-11	8-17	8-10
Body length from snout to vent (SVL)*	53.2-73	39.28-90.83	58.67-60.98
Length of complete tail from vent to tip of tail (LCD)*	34	29.25-54.27	34.14-39.77
Head length from front nostril edge to front ear edge (HL)*	—	10.15-21.57	14.87-16.10
Snout length from the front nostril edge to front orbit edge (SL)*	—	3.53-6.78	5.38-6.68
Transverse eye diameter (TED)*	—	2.90-6.24	5.58-6.32
Maximum (vertical) diameter of ear opening (MDEO)*	—	1.32-3.36	2.11-2.84
Head width behind the eyes (HWBE)*	—	10.15-21.57	13.86-14.81
Head height behind the eyes (HHBE)*	—	3.53-6.78	8.94-11.18
Body length/complete tail length (SVL/LCD)	1.56-1.95	1.53-2.95	1.53-1.71
[(Head height / head width)×100] (HHW)	63-66	58.7-77.37	64.14-78.01
[(Height of ear opening / horizontal eye diameter)×100] (EED)	53-89	27.96-64.12	37.81-46.12
Scales between mental shield and vent (GVA)	150-188	176-251	184
Scales in contact with mental shield (SCM)	11-13	13-17	13
Dark transversal bands on tail (DTBT)	5-6	5-9	5-6

54.27 mm, HWBE = 20.72 mm, HHBE = 14.47 mm, HL = 21.20 mm, SL = 6.70 mm, MDEO = 2.71 mm and TED = 5.97 mm.

The present results revealed considerable variation between different populations of *T. microlepis* in Iran. It sounds like the study of further samples from Iran and adjacent countries would throw more light on the geographic variation of *T. microlepis*.

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REFERENCES: ANDERSON, S. C. (1999): The lizards of Iran. Ithaca (Society for the Study of Amphibians and Reptiles – SSAR), pp. vii, 442. MACEY, J. R. & FONG, J. J. & KUEHL, J. V. & SHAFIEI, S. & ANANJEVA, N. & PAPANFUSS, T. J. & BOORE, J. L. (2005): The complete mitochondrial genome of a gecko and the phylogenetic position of the Middle Eastern *Teratoscincus keyserlingii*.- Molecular Phylogenetics and Evolution, San Diego; 36 (1): 188-193. MACEY, J. R. & WANG, Y. & ANANJEVA, N. B. & LARSON, A. & PAPANFUSS, T. J. (1999): Vicariant patterns of fragmentation among gekkonid lizards of the Genus *Teratoscincus* produced by the Indian collision:

A molecular phylogenetic perspective and an area cladogram for Central Asia.- Molecular Phylogenetics and Evolution, San Diego; 12 (3): 320-332. NIKOLSKY, A. M. (1900): Deux nouvelles espèces de *Teratoscincus* de la Perse orientale.- Annuaire du Musée Zoologique de l'Académie Impériale des Sciences de St. Pétersbourg, Sankt-Peterburg; 4 [1899]: 145-147. [text in Latin, title in Russian]. ŠMÍD, J. & MORAVEC, J. & KODYM, P. & KRATOCHVÍL, L. & HOSSEINIAN YOUSEFKHANI, S. S. & RASTEGAR-POUYANI, E. & FRYNTA, D. (2014): Annotated checklist and distribution of the lizards of Iran.- Zootaxa, Auckland; 3855 (1): 1-97. ŠCERBAK, N. N. & GOLUBEV M. L. (1996): Gecko fauna of the USSR and contiguous regions.- Contributions to Herpetology. Volume 13. Ithaca (Society for the Study of Amphibians and Reptiles), pp. 245.

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