

***Gekko ulikovskii* Darevsky & Orlov, 1994: a junior synonym of *Gekko badenii* Szczerbak & Nekrasova, 1994**

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In Vietnam, a total of seven species of *Gekko* are currently recognized: *G. badenii*, *G. chinensis*, *G. gekko*, *G. grossmanni*, *G. palmatus*, *G. scientiaventura*, and *G. ulikovskii* (Rösler et al. 2004; Nguyen et al. 2009). Both *Gekko badenii* and *G. ulikovskii* were simultaneously described in 1994 based on the type series collected from Ba Den Mountain in Tay Ninh Province and “Gilai-Con Tum Province” (now Kon Tum Province) near the border with Laos and Cambodia, respectively (Darevsky & Orlov 1994; Szczerbak & Nekrasova 1994). The diagnostic characters of *G. badenii* and *G. ulikovskii* obtained from the original descriptions are presented in Table 1.

In the key to the species of *Gekko* from Vietnam, Rösler et al. (2004) distinguished these two species by the number of interorbital scales (30–37 in *badenii* versus 40–46 in *ulikovskii*). Based on the original descriptions, *G.*

badenii further differs from *G. ulikovskii* by the following characters: smaller SVL (51.5–76.5 mm in *G. badenii* vs. 87–108 mm in *G. ulikovskii*), smaller ratio of SVL/TaL (0.82 in *G. badenii* vs. 0.94–1.24 in *G. ulikovskii*), and larger number of precloacal pores (14–18 in *G. badenii* vs. 10–15 in *G. ulikovskii*). During recent field work in southern Vietnam, a series of *G. badenii* was collected in October 2004 by Nguyen Huu Dat from the type locality on Ba Den Mountain, Tay Ninh Province, and was subsequently deposited in the Institute of Ecology and Biological Resources, Hanoi, Vietnam (IEBR 1555, 1562–1564, 1566). Our own examination of this new collection compared with two paratypes of *G. ulikovskii* deposited in the collection of the Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany (ZFMK 55110–55111) revealed that there are no distinct differences in morphology between these two species. All



Fig. 1. *Gekko badenii* (IEBR 1562) from Ba Den Mountain, Tay Ninh Province, Vietnam (alive animal)



Fig. 2. *Gekko badenii* (IEBR 1562) from Tay Ninh Province (a) and *Gekko ulikovskii* (Paratype: ZFMK 55110) from Kon Tum Province (b) (preserved specimens).

diagnostic characters obtained from the original descriptions and examined specimens resemble each other or rather overlap: SVL (51.5–106.0 in *G. badenii* and 87.0–108.0 in *G. ulikovskii*), ratio of SVL/TaL (0.81–1.28 in *G. badenii* and 0.94–1.24 in *G. ulikovskii*), interorbital scales (30–39 in *G. badenii* and 35–46 in *G. ulikovskii*), precloacal pores (12–18 in *G. badenii* and 10–15 in *G. ulikovskii*), dorsum dark grey with 6–8 light bands in both species, for further comparison see Table 1. It is noted that our scalation counts for two paratypes of *G. ulikovskii* (ZFMK 55110–55111) are a bit different from the original description: interorbitals (number of scales between middle orbitals, not including granular scales on upper eyelids) 35–38 versus 40–41 in the original description; scales around midbody (number of scales around body at the position between axilla and groin): 114–118 versus 131–136 in the original description. Moreover, the character “scales around midbody” was erroneously noted as “dorsals around midbody–DoM” for 11 paratypes [Table 1, p. 74] by Darevsky & Orlov (1994). Although these authors did not mention their method to count the number of dorsals around midbody, we supposed that this is the number of scales between lateral folds at midbody. Our examination of ZFMK 55110–55111 showed that the

scales between lateral folds at midbody only range from 84–91 (131–136 scales in the original description). Therefore, this morphological character should be corrected as “scales around midbody” as it was mentioned for the holotype (132 scales around midbody).

In terms of priority, the formal description of *Gekko badenii* was published in *Vestnik Zoologii* on 15 April 1994, whereas the description of *G. ulikovskii* was published in the journal *Salamandra* on 15 May 1994. Therefore, based on the evidence mentioned above and according to the International Commission on Zoological Nomenclature (ICZN, 1999: Articles 23.1 and 23.3) *Gekko ulikovskii* Darevsky & Orlov, 1994 must be regarded as a junior synonym of *Gekko badenii* Szczerbak & Nekrasova, 1994.

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Fig. 3. Map showing the type localities of *Gekko badenii* (Tay Ninh Province) and *Gekko ulikovskii* (Kon Tum Province) in Vietnam.

Table 1. Comparison of morphological characters of *G. badenii* Szczerbak & Nekrasova and *G. ulikovskii* Darevsky & Orlov based on the original descriptions and specimens examined (“–”: character unobtainable from literature).

	Original description		Specimens examined	
	<i>G. badenii</i>	<i>G. ulikovskii</i>	<i>G. badenii</i>	<i>G. ulikovskii</i>
Sex (M = male, F = female)	n = 3 (2 M, 1 F)	n = 11 (10 M, 1 F)	n = 5 (3 M, 2 F, additional material)	n = 2 (2 M, paratypes)
SVL (mean ± SD)	51.5–76.5 (62.3 ± 0.7)	87–108 (101.1 ± 5.7)	87–106 (93.3 ± 7.6)	102.1–102.7 (102.4 ± 0.4)
Tail length (TaL) (mean ± SD)	72.0–93.5 (82.7 ± 1.07)	80–112 (94.1 ± 11.1, n = 9)	82.8–107.8 (96.9 ± 12.3, n = 4)	95.8–99.6 (97.7 ± 2.7)
SVL/TaL	0.82	0.94–1.24	0.81–1.28	1.03–1.06
Snout length > orbit diameter	–	yes	yes	yes
Nostril in contact with rostral, supranasal, two postnasals, and first supralabial	yes	yes	yes	yes
Suture on upper part of rostral	present	present	present	present
Supralabials	12–15	11–14	12–14	11–14
Infralabials	13–14	9–13	11–12	12
Internasals	1–3	0–1	1	0–1
Interorbitals	30–37	40–46	36–39	35–38
Gular scales	4–8	–	6–12	7–12
Number of gular scales in contact with infralabials	–	5	4–5	4–6
Scales around midbody	–	123–136	114–119	114–118
Number of dorsal tubercles	12	–	8–13	11–12
Ventral scales between axilla and groin	–	51	52–56	52–54
Ventral scales between latero-ventral folds	29–35	–	31–34	32–34
Subdigital lamellae under fourth toe	18–20	15–20	16–19	18
Precloacal pores	14–18	10–15	12–14	12
Enlarged subcaudals	–	56–83	60–68	59–63
Ground color of dorsum (in preservative)	brownish grey	dark grey	dark grey	dark grey
Light dorsal bands	4–8	8	6–8	7–8

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