

A NEW SPECIES OF THIN-TOED GECKOS *Cyrtopodion sensu lato* (SQUAMATA: SAURIA: GEKKONIDAE) FROM HORMOZGAN PROVINCE, SOUTH IRAN

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A new species of the geckonid genus *Cyrtopodion sensu lato* — *Cyrtopodion* sp. nov. is described from Hormozgan Province, Iran. It is distinguished from other *Cyrtopodion sensu lato* by the combination of the following characters: (1) small body size, maximal SVL 46.0 mm, (2) 10 – 14 longitudinal rows of large strongly keeled trihedral dorsum tubercles, (3) ventral scales in 18 – 23 rows between ventrolateral skin folds, (4) 16 – 18 femoral and precloacal pores, (5) enlarged median subcaudals, (6) head moderately short and high with very big eyes and short rostrum, (7) limbs thin and elongate, (9) 8 – 9 dark broad bands on tail, interspaces between them noticeable bigger than the width of stripes. These bands also visible on the subcaudal surface of tail.

Keywords: a new species; thin-toed gecko; Gekkonidae; *Cyrtopodion*; taxonomy; South Iran.

INTRODUCTION

There are about 40 species in the *Cyrtopodion* group although the systematic of Palearctic thin-toed geckos has not been clearly worked out. Many new species were described in the last 10 – 15 years, mostly from Pakistan and Iran (Krysko et al., 2007; Baig, 1998; Khan, 1980, 1988, 1993, 2001, 2003; Masroor, 2008, 2009; Nazarov and Radjabizadeh, 2007; Nazarov et al., 2009; Nazarov et al., 2011). The latest molecular studies showed that *Cyrtopodion* is a paraphyletic group. *Mediodactylus* was elevated to full generic status including *Carinatogecko* as junior synonym (Červenka et al., 2008, 2010). It is also shown that *Tenuidactylus* — compact monophyletic group consisting of eight species (Nazarov and Poyarkov, in press).

In the present article we describe one more new *Cyrtopodion* species from Southern Iran. This species is closely related to the recently described *Cyrtopodion be-laense* Nazarov et al. 2011. Based on morphological analysis we suppose that both species occupy an intermediate position between *scabrum* group and *agamuroides* – *gas-*

trophole group because they share some common characters of both these groups.

MATERIAL AND METHODS

We studied 6 specimens (4 male and 2 females) collected by the authors in South Iran, Hormozgan Province in May 2010 as the material for the present study. Collections of Zoological Museum of Moscow State University (ZMMU), Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZISP), California Academy of Sciences, San Francisco (CAS), Museum of Vertebrate Zoology (MVZ) of Berkeley University, Field Museum of Florida University (UF), and Department of Biodiversity, Institute of Environmental Science, International Center for Science, High Technology & Environmental Science, Kerman, Iran (ICSTZ) were used for comparative analysis.

For morphological analysis the following characters were used: snout-vent length (SVL, from snout to vent), tail length (TailL, from vent to the tip of the tail), head length (HeadL, from rostrum to occipital sinus), head width (HeadW, maximum width), head height (HeadH, maximum height), snout to eye distance (SnEye, distance between anterior most point of eye and tip of snout), orbital diameter (OrbD, greatest diameter of orbit), ear length (EarL, longest dimension of ear), eye to ear distance (EyeEar, distance from anterior edge of ear opening

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to posterior corner of eye), trunk length (TrunkL, distance from axilla to groin measured from posterior edge of forelimb insertion to anterior edge of hind limb insertion), shoulder length (LS), forearm length (ForeaL, from base of palm to elbow), femur length (FemurL), crus length (Crus L, from base of heel to knee), fourth finger length (LD4A), fourth toe length (LD4P).

The following characters of pholidosis were examined: number of scales across middle of belly (SAB), number of midventral scales along belly (SLB, between mental and vent), number of subdigital lamellae on fourth finger (LF4), number of subdigital lamellae on fourth toe (LT4), number of preanal pores (PP), number of supralabials (SL), number of infralabials (IL), number of longitudinal rows of enlarged tubercles in the middle of dorsum between ventrolateral folds (TubL); number of transversal rows of enlarged tubercles between occiput sinus and middle of sacrum along the middle of dorsum (TubW); number of scales along middle of head, between



Fig. 1. Holotype of *Cyrtopodion hormozganum* sp. nov. from Southern Iran.

occiput sinus and supranasales (SLH), number of scales across head, between top of ears opening (SAH).

Geckos were searched during the night using lanterns. To estimate the population density of lizards, a sampling census on a line transect with fixed width of

TABLE 1. Measurement and Pholidosis of Type Series of *C. hormozganum* sp. nov.

Character	Holotype	Paratypes					
	ICSTZ M6H1290	ZMMU R-13406-1	ZMMU R-13406-2	ZMMU R-13406-3	ZMMU R-13406-4	ZMMU R-13406-5	ZMMU R-13406-6
Sex	male	male	male	male	male	female	female
SVL	40	44	45.6	45.8	41.3	43.2	46.0
TailL, mm	58	24.4*	41.7*	61.8	50*	60	56*
HeadL, mm	11.9	12.7	13.8	13.3	14.3	12.8	13.8
HeadW, mm	7.7	8.1	8.5	8.7	8.6	7.9	8.5
HeadH, mm	4.5	5.1	5.3	5.5	6	5.3	5.5
SnEye	4.3	4.8	5.4	5.3	5.7	4.7	5.2
OrbD	2.6	2.8	3.0	3.1	2.9	2.7	3.2
EarL, mm	0.8	0.8	1.5	1.4	1.2	1.1	1.3
EyeEar	3.3	3.2	3.2	3.4	3.3	3.2	3.4
TrunkL, mm	17.7	18.7	18.3	21.5	21.7	19.7	20.0
LS	7.6	7.8	8.0	8.2	8.7	7.8	8.4
ForeaL, mm	7.8	8.0	7.0	7.4	8.0	7.7	8.1
FemurL, mm	9.6	11.1	11.2	11.7	11.6	10.9	11.4
CrusL, mm	8.6	9.6	9.6	10	9.8	9.0	9.0
LD4A	4.1	4.7	4.0	4.8	4.4	4.8	4.5
LD4P	5.8	6.0	5.3	6.0	5.9	5.8	5.8
V	21	22	22	19	18	22	23
SLB	98	112	111	92	102	108	104
LF4	20	18	21	20	24	22	22
LT4	26	23	25	26	26	27	25
PP + FP	22	22	18	22	16	0	0
SL	10	10	11	11	10	9	11
IL	9	8	9	9	8	9	8
TubL, mm	10	12	12	12	14	12	12
TubW, mm	22	24	22	22	24	22	20
SLH	50	58	47	41	41	40	45
SAH	38	34	30	33	34	36	36

* Regenerated tail.

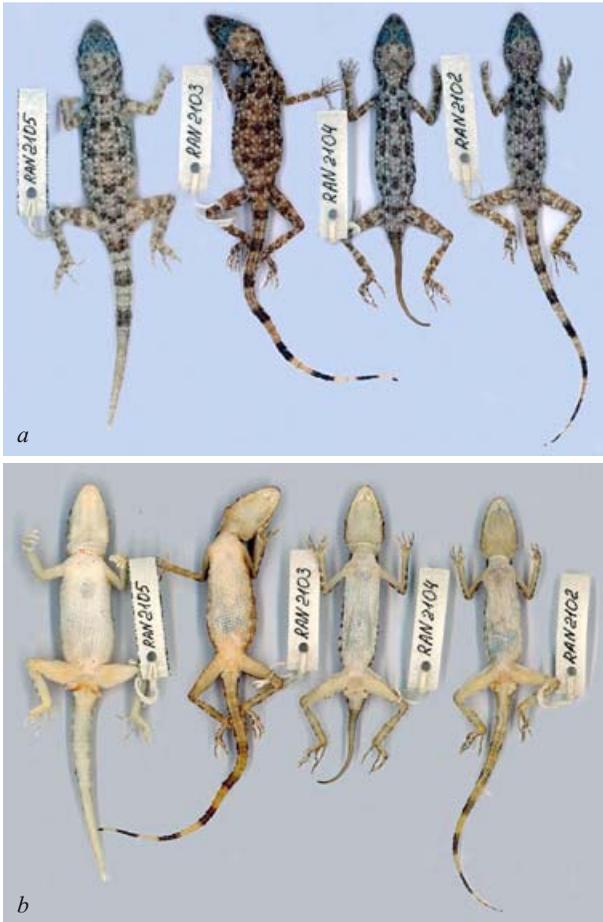


Fig. 2. Type series (holotype and paratypes) of *Cyrtopodion hormozganum* sp. nov. dorsal (a) and ventral (b) view.

strip was conducted. The population density of geckos was estimated on a sample transect.

Cyrtopodion hormozganum sp. nov. (Fig. 1)

Holotype. ICSTZ M6H1290: Iran, Hormozgan Province, 27 km NW from Minab, 27°24' N 56°57' E; altitude 77 m a.s.l., June 22, 2011, coll. Roman A. Nazarov, Dmitry A. Bondarenko, and Khosrow Rajabizadeh.

Paratypes. ZMMU R-13406-1 – R-13406-6 with the same data as holotype.

Measurements of holotype and type series are presented in Table 1 (Fig. 2).

Diagnosis. Small size geckos, SVL 40–46 mm, non-regenerated TailL 58–61.8 mm; large strongly keeled trihedral dorsal tubercles forming 10–14 longitudinal rows at midbody, these parallel rows are divided by only 1–3 small scales (Fig. 3). The number of tubercles



Fig. 3. Enlarged dorsal tubercles of *C. hormozganum* sp. nov.



Fig. 4. Series of preloacal and femoral pores on holotype *Cyrtopodion hormozganum* sp. nov. (scales with pores are marked by black dots).

from occiput to the middle of sacrum is 20–24; tail with pronounced segments, that were formed by semi-rings of large greatly keeled oblong tubercles, subcaudal plates in single median series, which are wider than high, on the tip of non-regenerated tail the subcaudal scales are bifid; 18–23 abdominal scales across middle of belly, 92–112 midventral scales along trunk. Males have 16–22 preloacal and femoral pores in single row, situated within the scales of the same size as the surrounding (Fig. 4). Preanal pores formed a row with obtuse angle. 8–9 infralabial scales, 9–11 supralabial (Fig. 5). The mental plate large, 3 pairs postmentals scales, first pair in broad contact (Fig. 6). Subcaudal surface of tail with 6–8 dark wide bands.

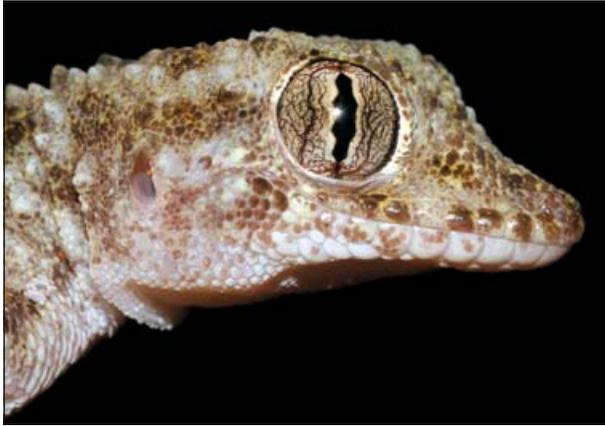


Fig. 5. Snout of *C. hormozganum* sp. nov. with big eye and short rostrum part.



Fig. 6. Mental scalation of *C. hormozganum* sp. nov.

Description of holotype. Adult male, SVL 40 mm, tail L 58 mm. Head relatively long (HeadL/SVL ratio 0.30), wide (HeadW/HeadL ratio 0.65), not markedly depressed (HeadH/HeadL ratio 0.38), distinct from slender neck. Snout not elongate (SnEye/HeadL ratio 0.36), roundish, longer than eye diameter (OrbD/SnEye ratio 0.6); scales on snout rounded and homogeneous. Occipital region covered by small homogeneous scales, with large conical tubercles among them.

The eyes are large (OrbD/HeadL ratio 0.22); pupil vertical with crenellated margins; supraciliaries short, bearing tiny conical spines posteriorly. External ear opening small (EarL/HeadL ratio 0.07) oval, vertical; eye to ear distance approximately equal of eye diameter (EyeEar/OrbD ratio 1.27). Width of rostral scale (1.7 mm) is more than its height (0.9 mm), it is divided in two third by longitudinal groove; two small supranasals, the same size as surrounding scales, are divided by two granular scales; rostral in contact with first supralabial, two supranasals and scales between them; nostrils round, each surrounded by supranasal, rostral, first supralabial, and two enlarged postnasals, about the same size as supranasals;

Mental triangular, height (1.6 mm) and width (1.7 mm) equal; three pairs of enlarged postmentals, first pair in broad contact; supralabials 10, infralabials 9.

Body is slightly flattened and not elongated (Trunk/SVL ratio 0.44) with weakly developed ventrolateral folds. Dorsal surface is covered of regularly rows of large trihedral tubercles, among which small granular scales (10 – 12 times less than tubercles) are situated. Ten rows of trihedral tubercles pass from occipital and temporal region on to back and tail base. Lateral edges of these keeled tubercles are bent.

Ventral scales much larger than dorsal, smooth, subimbricate, with rounded free margins. Scales in precloacal region have almost the same size as surrounding ones. Twenty one scales across middle of belly, 98 scales from mental to vent. The gular region with relatively homogeneous, smooth scales.

22 femoral and precloacal pores located in a one row without diastema, each pore is situated within a scale of size equal with surrounding scales.

Fore and hind limbs moderately long, slender (LS/SVL ratio 0.19; FemurL/SVL ratio 0.24); digits are long and thin; 20 subdigital lamellae on IV finger; 26 subdigital lamellae on IV toe.

Coloration. The dorsal color pattern of the back has a great resemblance to that in *C. belaense* Nazarov et al., 2011, *C. scabrum* (Heyden, 1827), and *C. kachhense* (Stoliczka, 1872).

The ventral body surface is white, distal subcaudal surface of tail with 6 – 8 dark wide bands; there are 5 – 6 transverse dark bands on the dorsum, consisting of separate oblong spots. There are 8 – 9 dark wide bands on tail, interspaces between them noticeable bigger than their width.

Color pattern of dorsal surface of the head in preserved specimens is almost not visible except small dark spots of irregular shape in nuchal area. A less developed dark nuchal band passing from posterior edge of eye above the ear and along nuchal area is indistinct and often disintegrates into separate fragments. This band is well developed in juvenile individuals and becomes less visible when they grow up.

Etymology. This species is named after the locate, Hormozgan Province, where the geckos were collected.



Fig. 7. Type locality of *C. hormozganum* sp. nov. in Hormozgan Province, Southern Iran.

Distribution (Fig. 7). New species is known only from the type locality: Iran, Hormozgan Province, 27 km NW from Minab, 27°24' N 56°57' E; altitude 77 m a.s.l.

Habitat and natural history. *Cyrtopodion hormozganum* was found in a 27 km NW Minab (between Hassan Lange – Faryab) on one of the low rocky mountains between the Zagros mountain system and Makran mountain ridge. It is a desert plateau with isolated low-mountains and ranges which can be considered as a transitional zone from the coastal plains of Garmsir on the Persian Gulf up the East Iranian Mts. (Makran Mts.). Gecko habitats are located in low mountains dissected by dry riverbeds (wadi) and almost devoid of vegetation at an altitude of 77–90 m a.s.l. Sparse vegetation consists of rare ephemeral grasses (genus *Poa*) and xerophytic shrubs (*Salsola*, *Gailonia*, *Hammada*, *Convolvulus*, *Astragalus*), growing in the intermountain sites and along wadi.

Cyrtopodion hormozganum is found in the biotope irregularly on the slopes with a heap of stones and on the vertical surface of rocks. According to night census of reptiles the population density of new species gecko was 5.1 specimens per hectare (ind./ha). Moreover, two species of geckos, *Cyrtopodion* sp. nov. (Nazarov et al., in press) and *Hemidactylus persicus* were recorded. The population density of these species consists of 10.1 and 5.1 ind./ha, respectively. These species may compete with each other. A morning census on the stony slope found *Pristurus rupestris* (population density 44.4 ind./ha).

Comparison. The new species differs from all other geckos inhabiting this region by following characters: high number of preloocal and femoral pores, specific color pattern of the tail with very broad black bands and interspaces between them noticeably bigger than the

width of the bands. These bands on the lower tail surface are also visible, especially on the distal part of the tail (see Fig. 2b).

The new species is very closely related to the recently described *Cyrtopodion belaense* Nazarov, Ananjeva et Papenfuss 2011, but differs from this species by 16–22 preloocal and femoral pores in single row, vs. 9 preloocal pores on *C. belaense*.

Two more species have femoral pores in genus *Cyrtopodion sensu stricto*: *C. montiosalorum* (Annandale, 1913) and *C. kohsulaimanai* (Khan, 1991). From them *C. hormozganum* can be distinguished by the lower number of preloocal-femoral pores 16–22 versus 29 and 35 (in *C. montiosalorum* and *C. kohsulaimanai*, respectively); as well *C. kohsulaimanai* have V27–30 and SLB 120–138 vs. 18–23 and 92–112 in *C. hormozganum*.

The new species have very thin and elongate limbs, index SVL/forelimbs and SVL/hindlimbs for adult *scabrum* = 2.33 and 1.77 ($n = 25$); *kohsulaimanai* = 2.18 and 1.96 ($n = 1$); *montiosalorum* = 2.58 and 1.98 ($n = 1$) and for new species 2.16 and 1.64 ($n = 7$);

C. hormozganum differs from *C. agamuroides* (Nikolsky, 1900), *C. kachhense* (Stoliczka, 1872) and *C. persepolense* Nazarov, Ananjeva et Radjabizadeh, 2009 by single row of enlarged subcaudal plates and larger triangular tubercles; from *C. scabrum* (Heyden, 1827) by smaller body size (maximal SVL known for *scabrum* — 53 mm and TailL — 62 mm vs. SVL — 46 mm and TailL — 61.8 mm for the new species), higher number of pores (16–22 vs. 4–7* for *scabrum*), patterns of the original tail with broad dark bands and interspaces between them noticeable larger than the width of bands. These bands on the subcaudal surface are also visible and contrast especially on the distal part of the tail vs. *scabrum*, which has white subcaudal surface. The head is moderately short and high with very big eyes and short rostral part (Fig. 4); from *C. potoharensis* (Khan, 2001), *C. sistansense* Nazarov et Radjabizadeh, 2007 and *C. watsoni* (Murray, 1892), by smaller body size, large ventral scales (see Table 2), relatively longer limbs and high number of femoral and preloocal pores; from *C. gastrophole* (Werner, 1917), *C. golubevi* Nazarov, Ananjeva et Radjabizadeh, 2009 and *C. kiabbi* Ahmadzadeh, Flecks, Torki et Böhme, 2011 by smaller body size, large triangular tubercles and high number of preloocal-femoral pores (16–22 vs. 4).

All details of comparison of species of thin-toed geckos of this region are shown in Table 2.

DISCUSSION

In recent years there have been several attempts to revise the complicated group of Palearctic thin-toed geckos of genus *Cyrtopodion sensu lato* and in particular those from Pakistan (Khan, 1993, 2001, 2003; Červenka et al., 2008, 2010; Sindaco and Jeremchenko, 2008).

Based on morphological analysis we hypothesize that *C. hormozganum* occupies an intermediate position between the *scabrum* group and *agamuroides* – *gastrophole* group because it has some common characters of both these groups. On the one hand the new species has very large trihedral tubercles on the dorsal surface of the body and color pattern similar to those of the typical members of *scabrum* group (*C. kachhense*, *C. scabrum*, *C. watsoni*, and *C. sistanense*). A large number of preloacal-femoral pores (16 – 22) on the new species make it close to *C. montiosalorum* and *C. kohsulaimanai*. However, such characters as: long, slender limbs, thin and long tail, relatively large eyes, high head with a short

rostrum are more common for the *agamuroides* – *gastrophole* group.

We have a few taxonomical remarks concerning some Palearctic thin-toed geckos.

Cyrtopodion brevipes (Blanford, 1874) — this enigmatic species, is known only from few specimens; the type locality for this species is Baluchistan, Iran (Jaz Murian). The other gecko was described from the same locality (Iran Baluchistan Jaz Murian Depression, Bampur) — *C. sagittifer* (Nikolsky, 1899a). In fact, both of these species are originated from a single region.

We have examined the type series and other additional material of *C. sagittifer*, and find few specimens with transverse enlarged median series of subcaudals scales. The main difference between *C. brevipes* and *C. sagittifer* is presence of enlarged subcaudals in the first species and small homogenous subcaudals in the second. Enlarged subcaudals and large dorsal tubercles on *C. brevipes* have caused erroneous inclusion of this species in the *Cyrtopodion sensu stricto* or in *scabrum*

TABLE 2. Comparison of Morphological Characters of Palearctic Thin-Toed Geckos from Iran and Neighboring Countries

	Maximal SVL/ Maximal TailL, mm	Scales across belly/midventrals	Preanal pores	Number of longi- tudinal rows of dorsal ubercles	Sub-c audal*	Number of sub- caudals per segment	Postmen- tals**	Number of transversal bands on trunk and tail
<i>belaeense</i> Nazarov et al., 2011	40/54	22/98 – 103	9	12	S	2	3C	4 – 5/5 – 7
<i>hormozganum</i> sp. nov.	46/61.8	18 – 23/92 – 112	16 – 22	10 – 14	S	2	3C	5 – 6/8 – 9
<i>kachhense</i> (Stoliczka, 1872)	46/45	28 – 35/100 – 128	4 – 8	12 – 14	D	3	3C	4 – 5/7 – 10
<i>k. ingoldbyi</i> (Khan, 1997)	53/65	32 – 40/149 – 156	4 – 6	14 – 16	D	3	3C	4 – 6/7 – 10
<i>kohsulaimanai</i> (Khan, 1991)	58/80	27 – 30/120 – 138	30 – 40	13 – 14	S	2	2 – 3C	6 – 7/11 – 12
<i>montiosalorum</i> (Annandale, 1913)	47/57	20 – 23/103 – 115	26 – 32	12 – 13	S	2	2C	5 – 6/13 – 14
<i>potohareense</i> (Khan, 2001)	52/64	25 – 35/121 – 145	5 – 12	12 – 15	S	2 (?)	(?)	5 – 8/10 – 12
<i>scabrum</i> (Heyden, 1827)	53/62	16 – 23/85 – 120	4 – 7	12 – 13	S	2	2 – 3C	5 – 8/7 – 10
<i>sistanense</i> Nazarov et. al 2007	57/78	31 – 44/120 – 156	6	14 – 15	S	2	3 – 4C	5 – 8/11 – 12
<i>watsoni</i> (Murray, 1892)	53/63	30 – 40/140 – 170	5 – 9	12 – 13	S	2	2 – 3C	5 – 8/10 – 12
<i>agamuroides</i> (Nikolsky, 1900)	40/50	28 – 30/120	2	10 – 12	M	3	2C	7/13
<i>golubevi</i> Nazarov et al., 2009	52/73	23 – 28/115 – 126	4	10	S	2	2 – 3C	5 – 7/7 – 8
<i>gastrophole</i> (Werner, 1917)	50/55	14 – 18/84 – 94	4	10	S	2	3D	6 – 8/10 – 13
<i>kiabbi</i> Ahmadzadeh et al., 2011 reg.	46.9/46.3	10/12	4	9	S	2	3C	6/?
<i>persepolense</i> Nazarov et al., 2009	51/58	26 – 35/114 – 132	4	10 – 12	D	2+2	3D	6 – 8/10 – 13
<i>brevipes</i> (Blanford, 1874)	44/	20 – 22/(?)	4	10	S	2 (?)	(?)	8/12
<i>dehakraense</i> Mansoor, 2009	36/48	21 – 25/92 – 102	4	10 – 12	D	4	3C	6 – 8/10 – 14
<i>russowii zarudnyi</i> (Nikolsky, 1900)	34/45	25/102	2	10 – 12		2	2D	6 – 8/10 – 12
<i>sagittifer</i> (Nikolsky, 1899)	32/40	19 – 24/83 – 98	4	10 – 12	D	4	1 – 2C	5 – 6/(?)
<i>baigii</i> Mansoor, 2008	46/58	30 – 31/120 – 132	2	10 – 12	D-M	3	3C	6 – 8/9 – 10
<i>kirmanense</i> (Nikolsky, 1900)	51/40	26 – 30/120 – 132	4	8 – 10	D-M	3	3 – 4C	8/10
<i>brachikolon</i> Krysko 2007	51/62	30 – 34/137 – 158	4	10	S	2	2 – 3C	5 – 6/10 – 12

* M, Small homogenous scales; S, single row of transversally enlarged subcaudals plate; D, double row of enlarged subcaudals.

** C, first pair in contact; D, first pair divided.

group. Comparing our morphological data of *C. sagittifer* and picture of type species of *C. brevipes* (in Anderson, 1999), we suppose that *C. sagittifer* is a junior synonym of *C. brevipes*.

Diagnosis of recently described *Cyrtopodion dehakroense* Mansoor, 2009 totally agreed with diagnosis of *C. sagittifer*, how it's were sowed by Červenka and Kratochvíl (2010). We can not find any differences between these species that is why we suppose that *C. dehakroense* also should be considered as a junior synonym of *C. brevipes*. Exact taxonomic status of these forms should be checked by molecular, acoustic and other methods.

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REFERENCES

- Anderson S. C. (1999), *The Lizards of Iran*, Soc. for the Study of Amphibians and Reptiles.
- Ahmadzadeh F., Flecks M., Torki F., and Böhme W. (2011), "A new species of angular-toed gecko, genus *Cyrtopodion* (Squamata: Gekkonidae), from southern Iran," *Zootaxa*, **2924**, 22 – 32.
- Auffenberg K., Krysko K., and Auffenberg W. (2004), "Studies on Pakistan lizards: *Cyrtopodion stoliczkai* (Steindachner, 1867) (Gekkonidae: Gekkoninae)," *Asiatic Herpetol. Res.*, **10**, 151 – 160
- Auffenberg K., Krysko K., and Rehman F. (2010), "Studies on Pakistan Lizards: *Cyrtopodion baturensis* (Khan and Baig 1992) and *Cyrtopodion walli* (Ingoldby 1922) (Sauria: Gekkonidae)," *Zootaxa*, **2636**, 1 – 20.
- Baig K. J. (1998), "A new species of *Temnidactylus* (Sauria: Gekkonidae) from Balochistan, Pakistan," *Hamadryad*, **23**(2), 127 – 132.
- Červenka J., Kratochvíl L., and Frynta D. (2008), "Phylogeny and taxonomy of the Middle Eastern geckos of the genus *Cyrtopodion* and their selected relatives," *Zootaxa*, **1931**, 25 – 36.
- Červenka J. and Kratochvíl L. (2010), "Generic reassignment and validity of the recently described species *Cyrtopodion dehakroense*," *Herpetol. Notes*, **3**, 135 – 137.
- Khan M. S. (1980), "New species of gecko from northern Pakistan," *Pakistan J. Zool.*, **12**(1), 11 – 16.
- Khan M. S. (1988), "A new cyrtodactylid gecko from north-western Punjab," *Pakistan J. Zool.*, **22**(2), 241 – 243.
- Khan M. S. (1993), "A new angular-toed gecko from Pakistan, with remarks on the taxonomy and a key to the species belonging to genus *Cyrtodactylus* (Reptilia: Sauria: Gekkonidae)," *Pakistan J. Zool.*, **25**(1), 67 – 73.
- Khan M. S. (2001), "Taxonomic notes on angulate-toed gekkota of Pakistan, with description of a new species of genus *Cyrtopodion*," *Pakistan J. Zool.*, **33**(1), 13 – 24.
- Khan M. S. (2003), "Questions of generic designation of angular-toed geckos of Pakistan with description of three new genera (Reptilia: Gekkonidae)," *J. Nat. Hist. Wildlife Karachi*, **2**(2), 1 – 9.
- Krysko K. L., Rehman H., and Auffenberg K. (2007), "A new species of *Cyrtopodion* (Gekkonidae: Gekkoninae) from Pakistan," *Herpetologica*, **63**, 100 – 113.
- Masroor R. (2008), "A new species of *Cyrtopodion* (Sauria: Gekkonidae) from the northern areas of Pakistan," *Zootaxa*, **1857**, 33 – 43.
- Masroor R. (2009), "A new arboreal species of *Cyrtopodion* (Squamata: Gekkonidae) from Deh Akro-II Wetlands Complex, Sindh, Pakistan," *Zootaxa*, **2243**, 57 – 67 [erratum in *Zootaxa*, **2307**, 68].
- Nazarov R. and Radjabizadeh M. (2007), "A new species of angular-toed gecko of genus *Cyrtopodion* (Squamata: Sauria: Gekkonidae) from South-East Iran (Sistan-Balochistan province)," *Russ. J. Herpetol.*, **14**(2), 137 – 144.
- Nazarov R., Ananjeva N., and Radjabizadeh M. (2009), "Two new species of angular-toed geckos (Squamata: Sauria: Gekkonidae) from South Iran," *Russ. J. Herpetol.*, **16**(4), 311 – 324.
- Nazarov R. A., Ananjeva N. B., and Papenfuss T. J. (2011), "A new angular-toed geckoes (Squamata: Gekkonidae) from South Pakistan," *Russ. J. Herpetol.*, **18**(2), 130 – 136.
- Nazarov R. and Poyarkov N. (in press), "Revision of taxonomical structure of the genus *Temnidactylus* Szczerbak et Golubev, 1984 (Reptilia, Squamata, Gekkonidae) with descriptions of new species from Central Asia" (in Russian)," *Russ. J. Zool.* (in press).
- Sindaco R. and Jeremčenko V. K. (2008), *The Reptiles of the Western Palearctic*, Edizioni Belvedere Latina.
- Szczerbak N. N. and Golubev M. L. (1986), *Geckos of the USSR Fauna and Adjoining Countries*, Zool. Inst. AN UkrSSR [in Russian]; (1996), *Gecko Fauna of the USSR and Contiguous Regions* [English translation], Soc. Study Amphib. Rept.