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NEW RECORDS OF *GECKOBIA* SPECIES  
(ACARI, PROSTIGMATA, PTERYGOSOMATIDAE)  
FROM INDIA AND SRI LANKA,  
WITH DESCRIPTION OF *GECKOBIA MYANMARENSIS* N. SP.  
FROM MYANMAR

BY R. HAITLINGER<sup>1</sup>

(Accepted December 2005)

SUMMARY: *Geckobia myanmarensis* n. sp. is described from Myanmar. *G. indica* and *G. glaedoviana* are new for Sri Lanka and *G. nepalii* is the first time reported from India.

RÉSUMÉ : *Geckobia myanmarensis* n. sp. est décrit de Myanmar. *G. indica* et *G. glaedoviana* sont signalés pour le Sri Lanka et *G. nepalii* est signalé pour la première fois de l'Inde.

#### INTRODUCTION

TWENTY SIX *Geckobia* species have been described hitherto from Asia:

*Geckobia bataviensis* Vitzthum, 1926 from Indonesia (Java), New Guinea and Vietnam, *G. hindustanica* Hirst, 1926 from India and Sri Lanka, *G. orientalis* Abdussalam, 1941, *G. kasurensis* Abdussalam, 1941, *G. indica* Hirst, 1917, *G. simplex* Hirst, 1926, *G. diversipilis* Hirst, 1926, *G. glaedoviana* Hirst, 1926, *G. himalayensis* Hiregaudar, Joshee & Soman, 1959 all from India, *G. malayana* Hirst, 1917 from Malaysia, *G. turkestanica* Hirst, 1926, *G. hirsti* Bochkov & Mironov, 2000 both from Turkmenia, *G. anocellatus* Bochkov & Mironov, 2000 from Iraq, *G. uenoi* Kawashima & Kamo, 1960, *G. nipponicus* Kawashima, 1962, *G. japonicum* (Kishida, 1927), all from Japan, *G. boulengeri* Hirst, 1917 from China, *G. philippinensis* Lawrence, 1953, *G. keegani*

Lawrence, 1953, *G. cosymboti* Cuy, 1979, from Philippines, *G. socotrens* Hirst, 1926 from Sokotra (Yemen), *G. nepalii* Hiregaudar, Joshee & Soman, 1959 from Nepal, *G. glebosum* Bertrand *et al.*, 2000, *G. dubium* Bertrand, Paperna & Finkelman, 2000 both from Thailand, *G. morum* Bertrand, Paperna & Finkelman, 2000, *G. squameum* Bertrand, Paperna & Finkelman, 2000 both from Israel and *G. parvulum* Bertrand, Paperna & Finkelman, 2000 from Israel and Syria (HIRST, 1917, 1926, VITZTHUM, 1926, KISHIDA, 1927, ABDUSSALAM, 1941, LAWRENCE, 1953, HIREGAUDAR, JOSHEE & SOMAN, 1959, KAWASHIMA & KAMO, 1960, KAWASHIMA, 1962, CUY, 1979, DOMROW, 1983, HAITLINGER, 1988, BERTRAND, PAPERNA & FINKELMAN, 2000, BOCHKOV & MIRONOV, 2000). In this paper new records for *G. indica*, *G. glaedoviana* and *G. nepalii* are given and *G. myanmarensis* n. sp. from Myanmar is described.

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MATERIAL AND METHODS

The examined specimens of *Geckobia* were obtained from undetermined Gekkonidae, mainly belonging to the widely distributed genus *Hemidactylus*. Total 62 specimens in fields and houses were collected. These mites were mounted in Berlese fluid and studied in detail under a compound microscope. All measurements are given in micrometers ( $\mu\text{m}$ ). The holotype and part of paratypes are deposited at the Museum of Natural History, Wroclaw University, Poland (MNHWU); paratypes are also deposited in the author's collection.

ABBREVIATIONS. *H.* — holotype, *P.* — paratypes, *IL.* — length of idiosoma, *IW.* — width of idiosoma, *L.* — length of scutum, *W.* — width of scutum, *A.* — length of scutalae, *GL.* — length of gnathosoma (measured between basis capituli and tip of hypostomal lip), *GW.* — width of gnathosoma (measured in the widest place of gnathosoma), *PsFd.* — length of palpfemorala, *PsGd.* — length of palpgenuala, *DS.* — length of dorsal setae, *VS.* — length of ventral setae, *sc1.* — length of hypostomalae.

RESULTS

*Geckobia indica* Hirst, 1917

Material: 4 females, 5.02.2001, Polonnaruwa, Sri Lanka, collected from body (not legs) of undetermined *Hemidactylus* sp. obtained on enclosure of garden; leg R. HAITLINGER.

This species was known only from India and was collected on *Hemidactylus gleadovi*, *H. brooki* and *H. frenatus* (HIRST, 1917, 1926, BERTRAND, PAPERNA & FINKELMAN, 2000). New for the fauna of Sri Lanka. Some measurements are given in Table 1.

*Geckobia nepalii* Hiregaudar, Joshee & Soman, 1959

Material: 16 females, 3 DN, 1 L, 14.02.2001, Kovalam, India, from undetermined *Hemidactylus* sp. collected in house; leg. R. HAITLINGER. This species was described from Nepal (HIREGAUDAR, JOSHEE & SOMAN, 1959). Some measurements are given in Table 1. This species is new for the fauna of India.

*Geckobia gleadoviana* Hirst, 1926

Material: 12 females, 3 males, 2 DN, 3 L, 5.02.2001, Polonnaruwa, Sri Lanka; 8 females, 30.01.2001, Mount Lavinia, Sri Lanka; all collected from fingers of forelegs and hindlegs from an undetermined *Hemidactylus* sp. obtained in house and enclosure of garden; leg. R. HAITLINGER.

This species was only known from India (HIRST, 1926). It is the first record from Sri Lanka. Some measurements are given in Table 1.

FEMALES	<i>G.m.</i> n = 8		<i>G.i.</i> n = 4	<i>G.n.</i> n = 16	<i>G.g.</i> n = 20
	H.	P.			
IL	432	355-413	228-318	457-527	387-488
IW	476	381-502	272-413	495-584	374-444
L	108	92-110	78-90	144-170	122-150
W	238	186-220	150-188	222-248	190-210
A	16-20	16-22	14-24	34-50	24-42
GL	82	88-104	48-74	96-120	62-86
GW	94	90-100	80-84	88-114	86-110
PsFd	16	16-20	22-26	40-48	40-50
PsGd	28	30-38	24-30	32-44	36-52
DS	20-54	16-64	14-62	32-70	34-78
VS	20-50	18-64	12-52	26-62	18-68
sc1		42-60	42-48	38-56	42-54

TABLE 1. Metric data of *Geckobia myanmarensis* n. sp. (**G.m.**), *G. indica* (**G.i.**), *G. nepalii* (**G.n.**), *G. gleadoviana* (**G.g.**).

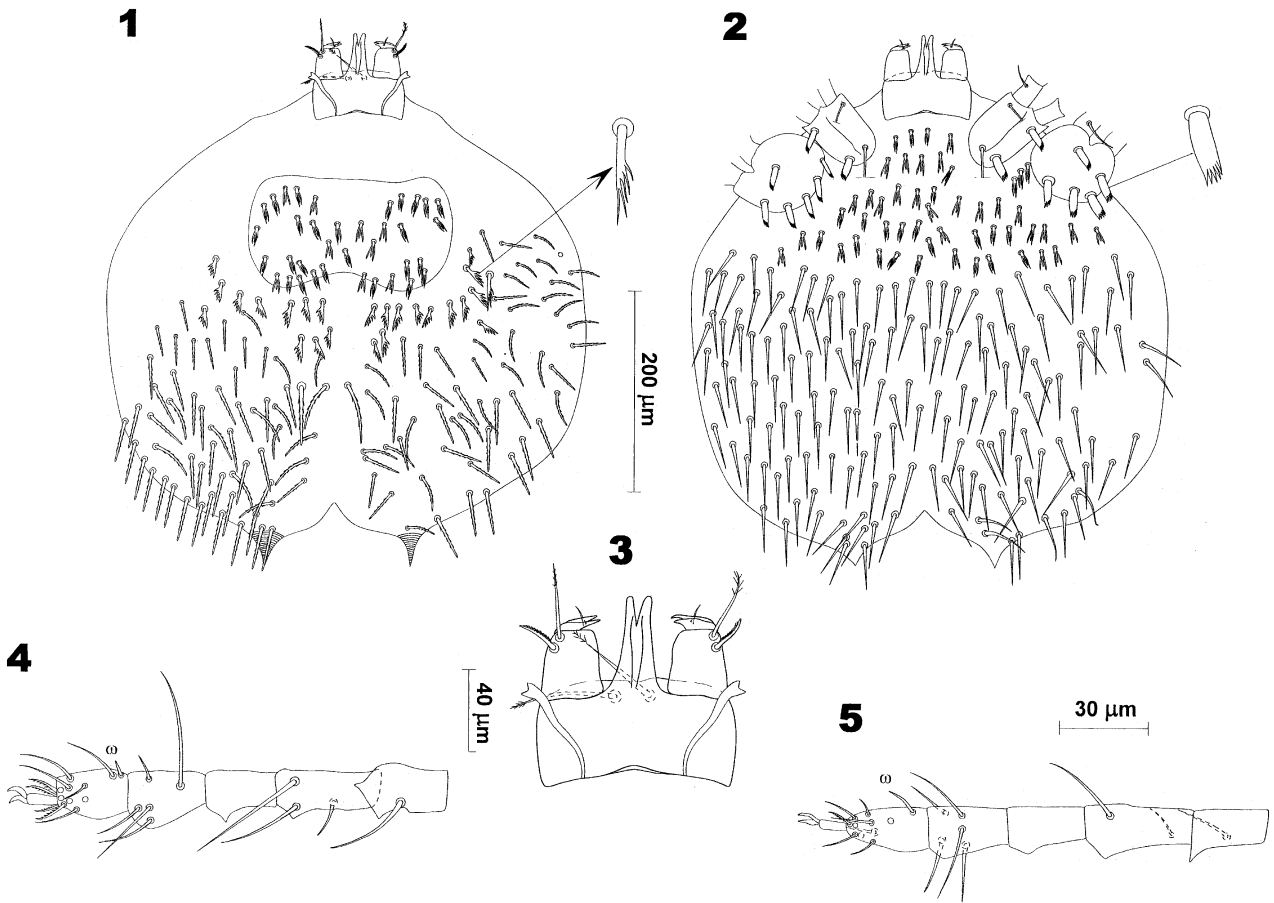
*Geckobia myanmarensis* n. sp.

FIGS. 1-15

Etymology: the name of the species refers to the region encompassing the type locality of this species.

EX undetermined Gekkonidae (not *H. frenatus*). Holotype: Yin Mar Bin, Myanmar (Burma), 29.01.2002; paratypes 8 females, 2 males, same data as holotype. Leg. R. HAITLINGER.

DESCRIPTION: FEMALE (holotype). Idiosoma wider than long; length 432 holotype, (355-413 in paratypes), width 476 (381-502). Propodosomal scutum wide concave in posterior margin. Scutum with ~36 short barbed setae, 16-20 long (16-22), arranged as FIG. 1. Two eyes are present. Dorsal body setae variable in shape and length. Setae surrounding the scutum similar in shape to scutalae. The remaining



FIGS. 1-5. *Geckobia myanmarensis* n. sp. Female. 1. — Dorsal view. 2. — Ventral view. 3. — Gnathosoma, dorsal view. 4. Leg I, tarsus — trochanter, 5. — Leg II, tarsus — trochanter.

dorsal setae are longer and thinner with very small barbs 20-54 (16-64). Genito-anal region as in FIG. 4.

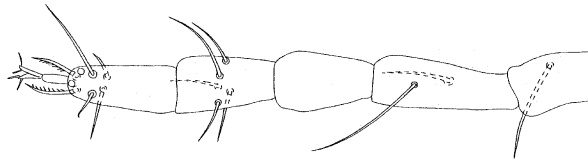
Ventral body setae between coxae I-IV short and barbed and similar to anterior dorsal ones; median setae and posterior setae longer, slender, nude in the middle of idiosoma and slightly barbed distally in setae near posterior margin of idiosoma, 20-50 long in holotype and 18-64 in paratypes (FIG. 2).

Gnathosoma: length excluding movable digits 82 holotype, 88-104 paratypes, width 94 and 90-100, respectively; palpfemur with short barbed seta 16 long in holotype, 16-20 in paratypes; palpgenu with thin nude seta 28 (30-38) long. Palptibia with two nude setae; palptarsus with thin setae as FIG. 5. Ven-

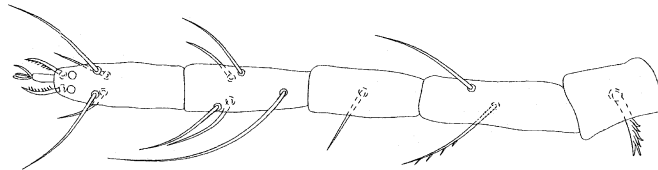
tral hypostomal seta (sc1) (42-60) long. Peritremes extending beyond lateral margin of basis capituli 28 long (FIG. 3).

Legs. Coxa I with two thin nude setae, coxa II with two spur-like setae, coxa III with two spur-like setae and coxa IV with three spur-like setae. In some paratypes coxa IV only with two setae on both coxae or only on one coxa. Chaetotaxy of trochanters-tibiae I-IV: Tr 1-1-1-1, Fe 3-2-2-2, Ge 0-0-0-1, Ti 5-5-5-5 all nude and thin, excluding thin medial seta with setules on Fe IV and thick barbed seta on Tr IV (FIGS. 4-7). Tarsi I with  $1\omega$ , 12 setae, tarsi II  $1\omega$ , 10, tarsi III-IV, 8-8 setae, respectively. Chaetotaxy of trochanters-tibiae I-IV as in group I (Jack, 1964).

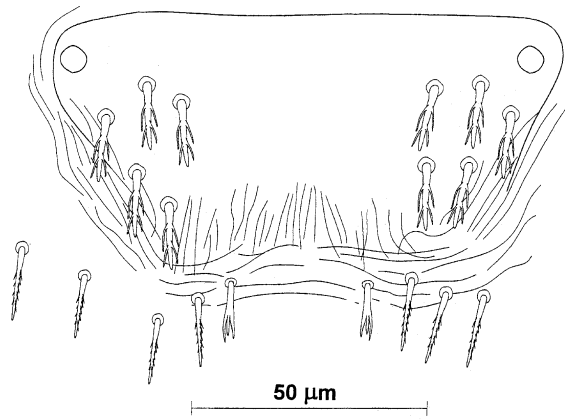
**6**



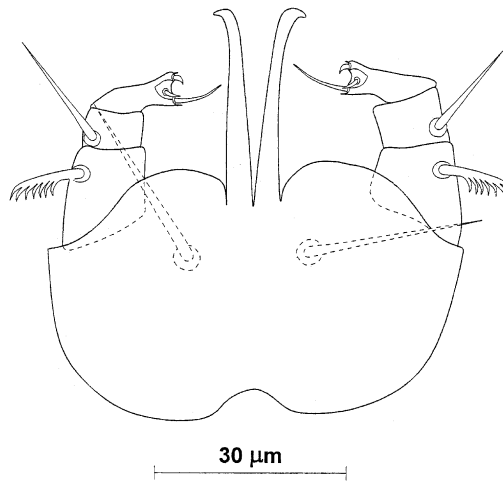
**7**



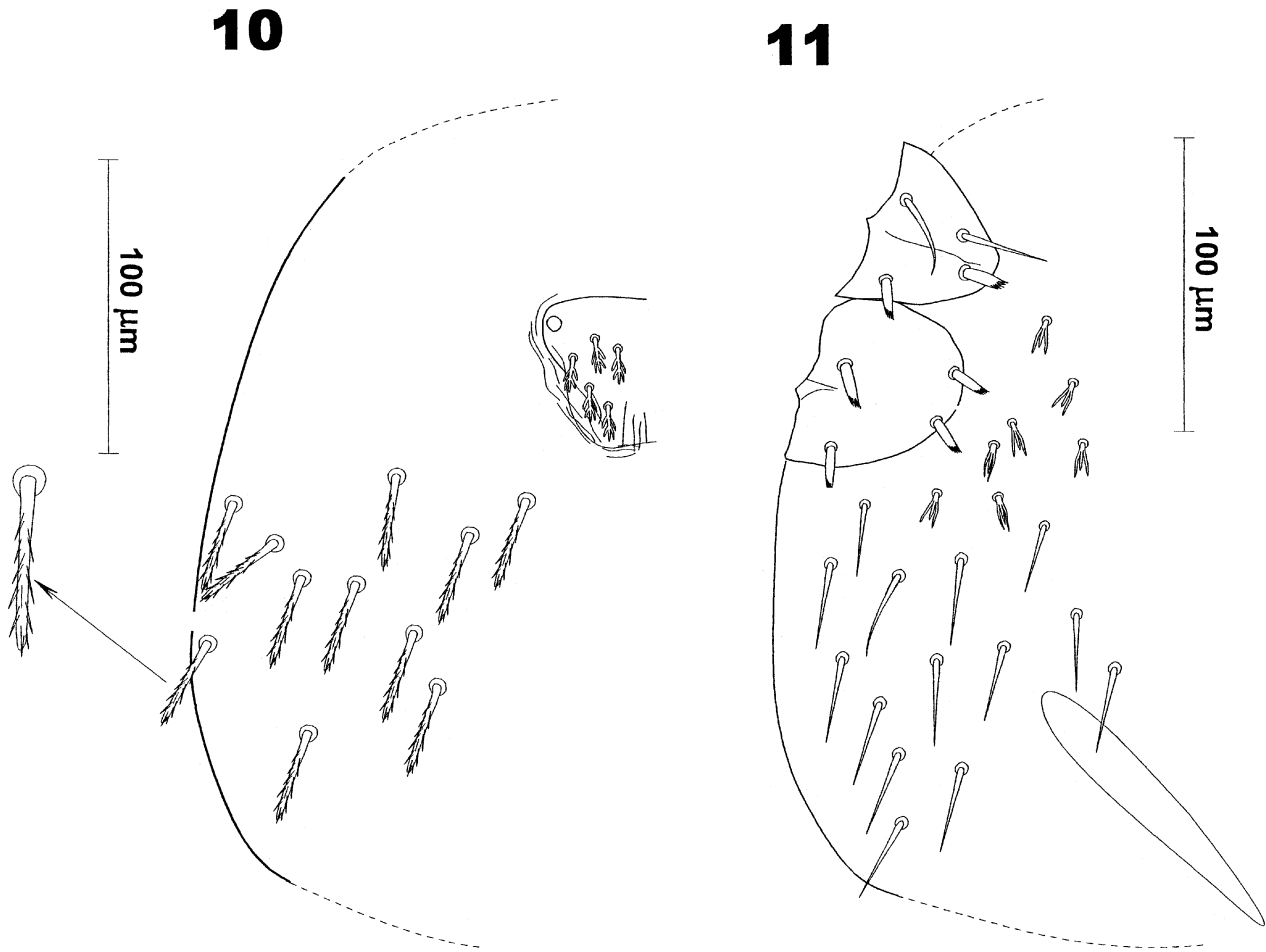
**8**



**9**



FIGS. 6-9. *Geckobia myanmarensis* n. sp. Female. 6. — Leg III, tarsus. — trochanter. 7. — Leg IV, tarsus. — trochanter male. 8. — scutum. 9. — Gnathosoma, ventral.

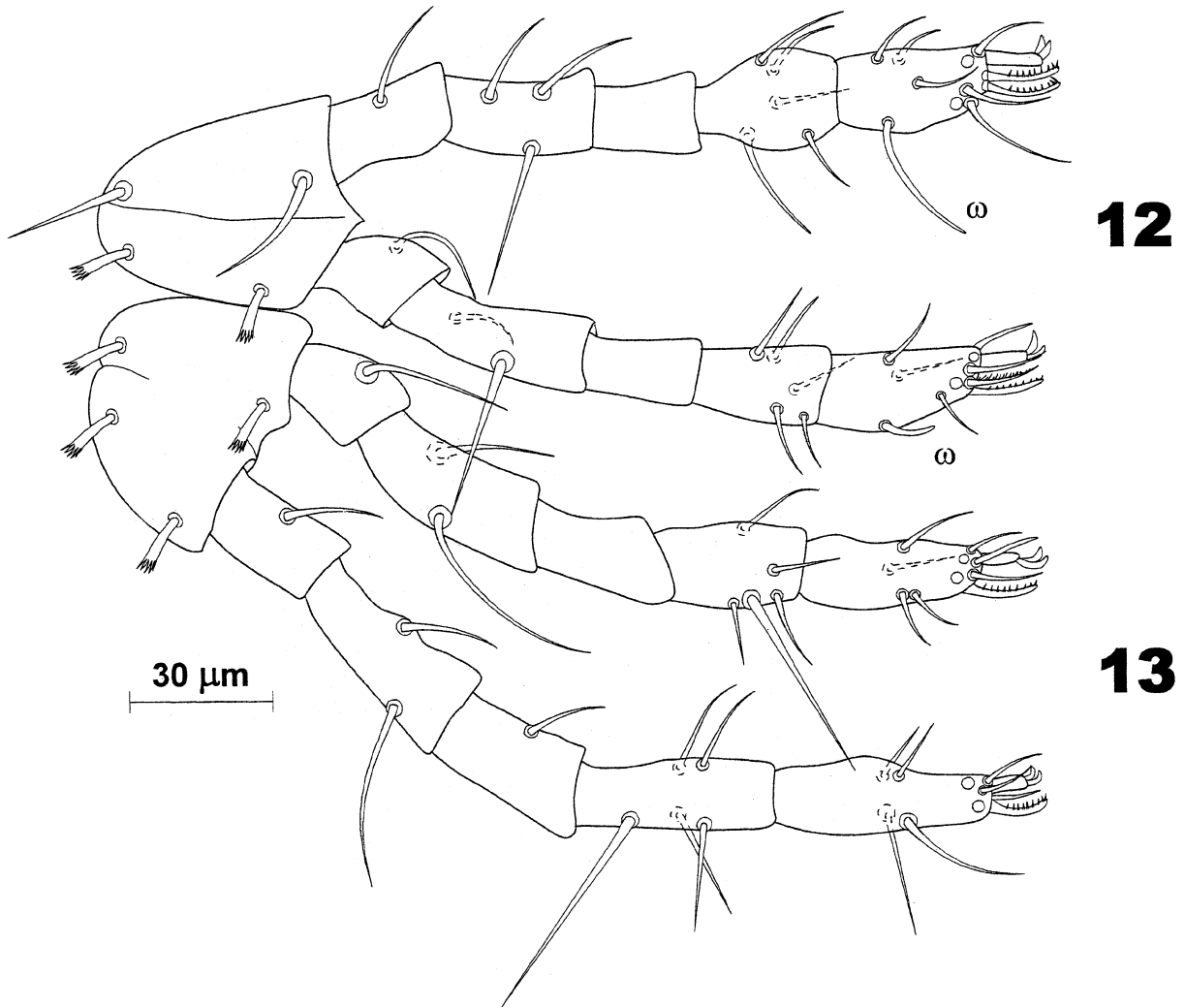


Figs. 10-11. *Geckobia myanmarensis* n. sp. Male. 10. — Dorsal view. — 11. — Ventral view.

#### Differential diagnosis.

*G. myanmarensis* n. sp. belongs to the group of species with short enlarged setae on the scutum. This group (only with such short setae on scutum or also with longer setae) includes also the following species: *G. indica* Hirst, *G. hindustanica* Hirst, *G. bouleengeri* Hirst, *G. malayana* Hirst, *G. diversipilis* Hirst, *G. gleadoviana* Hirst, *G. simplex* Hirst, *G. socotrensis* Hirst, *G. turkestanica* Hirst, *G. philippinensis* Lawrence, *G. himalayensis* Hiregaudar et. al., *G. kasurensis* Abdusalam, *G. gymnodactyli* Womersley and *G. bataviensis*. The new species differs from *G. indica* in longer idiosoma IL (355-432 vs. 228-318), width of idiosoma

IW (381-502 vs. 272-413), L (92-110 vs. 78-90), W (186-238 vs. 150-188), GL (82-104 vs. 48-74), GW (90-100 vs. 80-84) and palpfemorala distinctly shorter than palpgenuala; from *G. hindustanica* in longer IL (355-413 vs. 250), number of setae on scutum (about 36 vs. more than 70) and thin ventral setae (in *G. hindustanica* are scale-like); from *G. himalayensis* in wider idiosoma (381-502 vs. 250-300), lack enlarged ventral setae and distinctly shorter palpfemorala than palpgenuala (in *G. himalayensis* these setae are similar in length); from *G. gleadoviana* in L (92-110 vs. 122-154), length of scutalae (16-22 vs. 24-52), shorter palpfemorala (16-20 vs. 40-52) and minimal length of dorsal idiosomalae (16 vs. 34); from *G. simplex* in



FIGS. 12-13. *Geckobia myanmarensis* n. sp. Male. 12. — Leg I-II, tarsus-coxa. 13. — Leg III-IV, tarsus-coxa.

shape of scutum, only short setae on scutum, longer idiosoma (355-413 vs. 300-370) and short setae near scutum (in *G. simplex* only elongate setae); from *G. boulengeri* in shape of scutum, the number of scutalae (~36 vs. 8); from *G. kasurensis* in shape of scutum and lack of scale-like setae on ventrum; from *G. diversipilis* in shape of scutum, from *G. gymnodactyli* in the number of scutalae (36 vs. 10) and from *G. bataviensis* in shape of scutum, shape of scutalae, PsFd about twice shorter than PsGd vs. PsFd somewhat shorter (or subequal) than PsGd and lack in *G. bataviensis* short setae near posterior border of scutum (VITZTHUM, 1926, DOMROW, 1983, HAITLINGER, 1988).

MALES	<i>G. myanmarensis</i> n = 2	<i>G. glaedoviana</i> n = 3
IL	279-286	159-210
IW	210-254	159-210
L	52-58	54-60
W	108-122	108-124
A	14-16	18-24
GL	46-52	32-34
GW	66-74	58-64
PsFe	16	10-12
PsGe	28-30	28-34
sc1	32-36	24-32
DS	24-36	24-36
VS	14-36	10-32
Penis	100-102	102-110

TABLE 2: Metric data for males of *Geckobia myanmarensis* and *G. glaedoviana*.

DESCRIPTION MALES. Idiosoma longer than wide. Propodosomal shield with concave in posterior part, posterior margin invisible in middle part. Two eyes present and 10 short barbed setae arranged as in FIG. 11, 14-16 long. Dorsal setae thin, slightly barbed, 24-34 long (FIG. 10); ventral setae short and barbed placed in anterior part of idiosoma and thin and longer setae are in middle and posterior part of idiosoma, 14-36 long; penis 100, 102 long (FIG. 11).

Gnathosoma short. Palpfemur with short barbed seta and palpgenu with longer nude seta. Ventral hypostomal seta barbed at 1/4 distal length. Peritremes extending beyond lateral margin of basis capituli, 34 long (FIG. 11).

Legs. Coxa I with two thin nude setae, coxa II with two slightly enlarged barbed setae, coxa III and IV

each with two slightly enlarged barbed setae. Chaetotaxy of trochanters-tibiae I-IV: Tr 1-1-1-1, Fe 3-2-2-2, Ge 0-0-0-1, Ti 5-5-5-5, all nude and thin. Tarsi I with 1  $\omega$ , 10 setae, tarsi II 1  $\omega$ , 9, tarsi III-IV each, with 8 setae (Figs. 12, 13).

Males are similar to *G. glaedoviana* and *G. diversipilis*. It differs from *G. glaedoviana* in IL (279-286 vs. 159-210), IW (210-254 vs. 159-210), A (14-16 vs. 18-24), GL (66-76 vs. 32-34) and lack of lower border of scutum (in its middle part are only cuticular lines); from *G. diversipilis* in lack of lower border of scutum.

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