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New species of oribatid mites (Acari: Oribatida) of the genera *Belbodamaeus* (Damaeidae), *Malaconothrus* (Malaconothridae) and *Nothrus* (Nothridae) from India

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Abstract: Three new oribatid mite species, *Belbodamaeus indicus* sp. n. (Damaeidae), *Malaconothrus macrofoveolatus* sp. n. (Malaconothridae) and *Nothrus phylliformis* sp. n. (Nothridae), are described from Indian soils. *Belbodamaeus indicus* sp. n. is clearly distinguishable from all species of *Belbodamaeus* by the absence of discidia, very long sensilli and morphology of parastigmatic tubercles *Sa*. *Malaconothrus macrofoveolatus* sp. n. is very similar morphologically to *Malaconothrus yinae* Yamamoto, Aoki, Wang & Hu, 1993 from China, however it differs from the latter by the morphology of notogastral and genital setae, size of body foveolae, epimeral formula, and number of genital setae. *Nothrus phylliformis* sp. n. is very similar morphologically to *Nothrus mystax* Mahunka, 1986 from Tanzania, however it differs from the latter by the smaller body size, length of interlamellar setae and the position of notogastral setae d_1. An identification key to known species of *Belbodamaeus* is presented.

Key words: oribatid mites; *Belbodamaeus*; *Malaconothrus*; *Nothrus*; new species; key; India

Introduction

The fauna of oribatid mites (Acari: Oribatida) of India is studied insufficiently (but see Pearce 1906; Baker 1945; Bhaduri & Raychaudhuri 1968; Mahunka 1985; Sanyal 2000; Bayartogtokh & Chatterjee 2010). In the course of taxonomic identification of oribatid mite material from India we found three new species, belonging to the genera *Belbodamaeus* Bulanova-Zachvatkina, 1967 (Damaeidae), *Malaconothrus* Berlese, 1904 (Malaconothridae) and *Nothrus* Koch, 1835 (Nothridae). The main purpose of this paper is to describe and illustrate these species under the names *Belbodamaeus indicus* sp. n., *Malaconothrus macrofoveolatus* sp. n. and *Nothrus phylliformis* sp. n.

Belbodamaeus is a small genus that was proposed by Bulanova-Zachvatkina (1967) with *Belbodamaeus tuberculatus* Bulanova-Zachvatkina, 1967 as type species. Currently, this genus comprises three species (also see Subias 2004 for different classification), which are distributed in the Palearctic region. Hence, *Belbodamaeus* is recorded for the first time from India and the Oriental region. An identification key to known species of the genus is presented by us below. The main generic characters of *Belbodamaeus* are summarized by Bulanova-Zachvatkina (1967) and Weigmann (2006).

Malaconothrus is a large genus that was proposed by Berlese (1904) with *Nothrus monodactylus* Michael, 1888 (see Michael 1888) as type species. Currently, this genus (also see Subias 2004 for classification of subgenera) comprises more than 60 species, which have a cosmopolitan distribution. Ten species of *Malaconothrus* (*M. asiaticus* Aoki, 1967; *M. assamensis* Chakrabarti & Talukdar, 1979; *M. crassisetosus* Subías & Sarkar, 1982; *M. dipankari* Saha & Sanyal, 1996; *M. geminus* Hammer, 1972; *M. pauciareolatus* Subías & Sarkar, 1982; *M. peruensis* Hammer, 1961; *M. pseudolamellatus* Willmann, 1931; *M. ramensis* Hammer, 1966; *M. rostropilosus* Saha & Sanyal, 1996) were recorded in India (Chakrabarti & Talukdar 1979; Subías & Sarkar 1982; Sanyal & Bhaduri 1986; Saha & Sanyal 1996; Sengupta *et al.* 1997; Sanyal 2000). An identification key to Extra-Holarctic species has been presented earlier (Balogh & Balogh 2002). The main generic characters of *Malaconothrus* are summarized by Balogh & Balogh (1992) and Weigmann (2006).

Nothrus is a large genus that was proposed by Koch (1835) with *Nothrus palustris* Koch, 1839 (see Koch 1839) as type species. Currently, this genus comprises more than 80 species, which have a cosmopoli-

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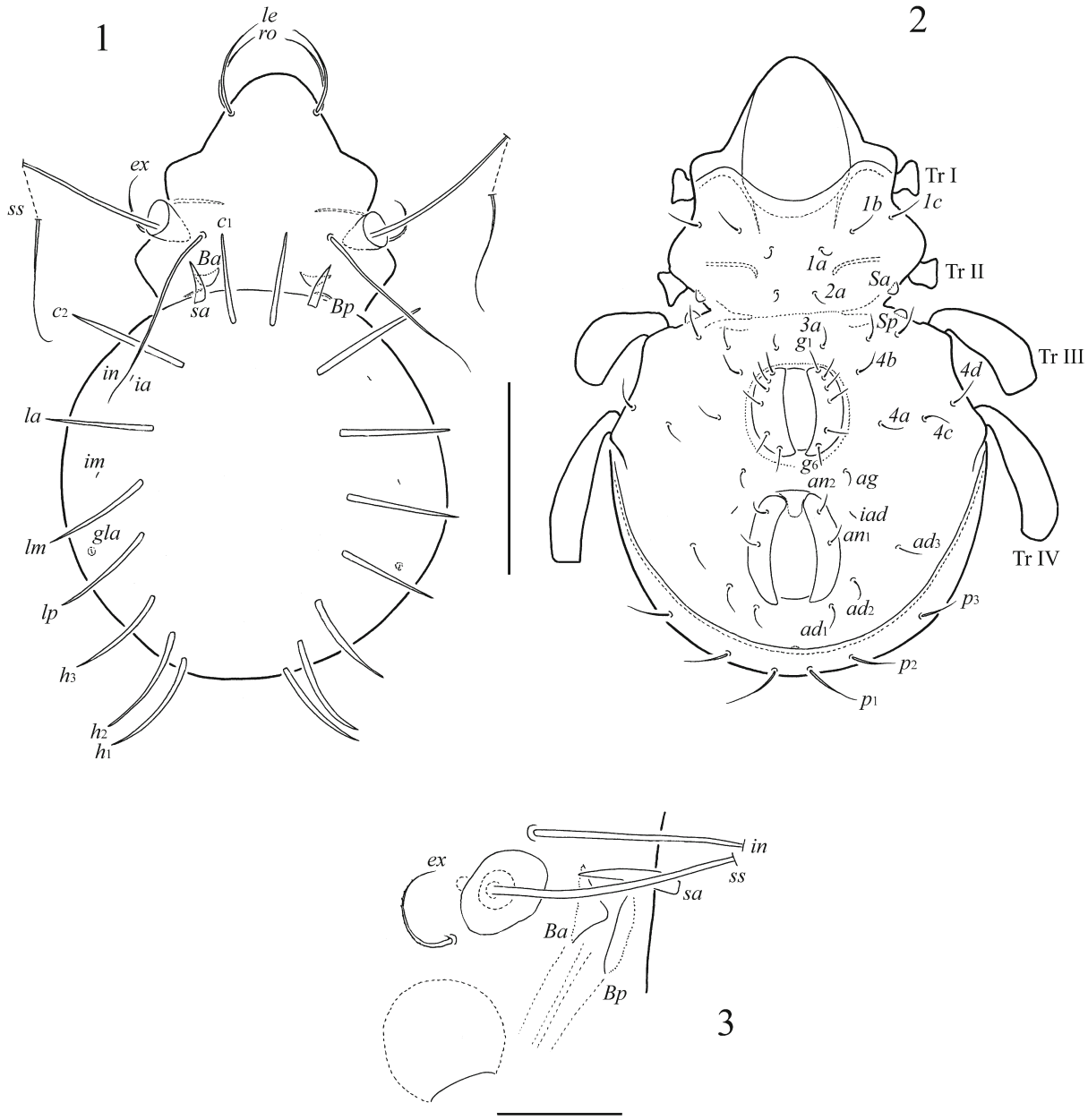


Figs 1–3. *Belbodamaeus indicus* sp. n., adult: 1 – Dorsal view (legs not illustrated); 2 – Ventral view (gnathosoma and legs, except trochanters, not illustrated); 3 – Dorso-lateral view of sejugal region (leg II not illustrated). Scales 200 μm (Figs 1, 2), 50 μm (Fig. 3).

tan distribution. Five species of *Nothrus* (*N. biciliatus* Koch, 1941; *N. brevirostris* (Ewing, 1910), *N. gracilis* Hammer, 1961, *N. oblongus* Hammer, 1961; *N. palustris* Koch, 1839) were recorded in India (Ewing 1910; Sanyal & Bhaduri 1986; Sengupta et al. 1997; Sanyal & Sengupta 2005; Sanyal 2009, 2010). The identification keys to Extra-Holarctic species has been presented earlier (Balogh & Balogh 2002; Ermilov & Hugo-Coetzee 2012). The main generic characters of *Nothrus* are summarized by Fujikawa (1999) and Colloff (2011).

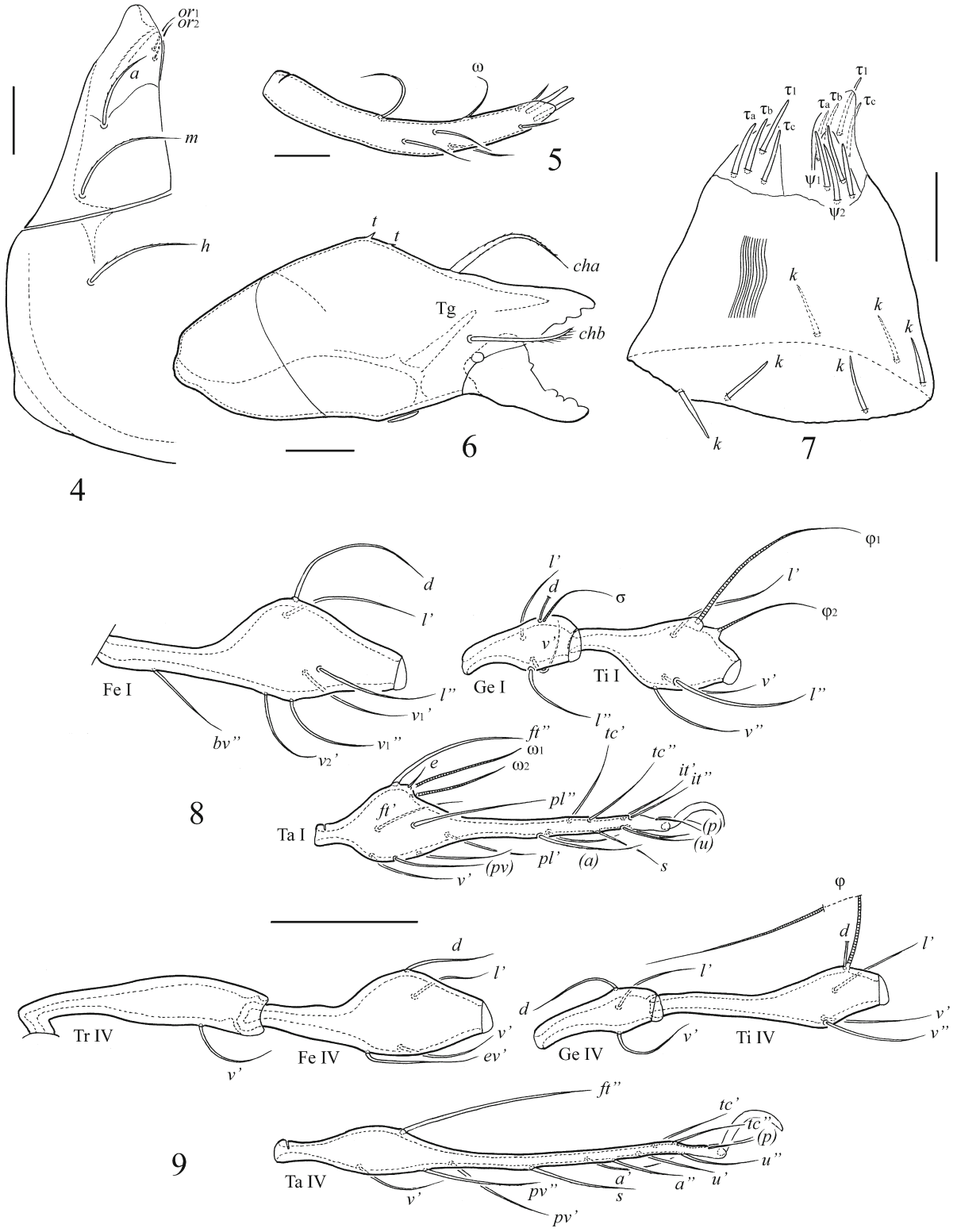
Material and methods

Specimens were mounted in lactic acid on temporary cavity slides for measurement and illustration. All measurements are presented in micrometers. Body length was measured in lateral view, from the tip of the rostrum to the posterior edge of the ventral plate, to avoid discrepancies caused by different degrees of notogastral distortion. Notogastral width refers to the maximum width in dorsal aspect. Lengths of body setae were measured in lateral aspect. Formulae for leg setation are given in parentheses according to the sequence trochanter–femur–genu–tibia–tarsus (famulus included). Formulae for leg solenidia are given in square brackets according to the sequence genu–tibia–tarsus.

The general terminology used in the descriptions follows that summarized by Hammen & Strenzke (1953), Grandjean (1960), Knülle (1957) and Norton & Behan-Pelletier (2009).

Belbodamaeus indicus sp. n. (Figs 1–9)

Diagnosis. Body size 614–647 × 365–398. Propodolateral apophysis absent. One pair of prodorsal tubercles (*Ba*) present. Rostral and lamellar setae setiform,



Figs 4–9. *Belbodamaeus indicus* sp. n., adult: 4 – Subcapitulum, right half; 5 – Palptarsus; 6 – Chelicera; 7 – Ovipositor (invaginated); 8 – Leg I without trochanter (disjointed), right, antiaxial view; 9 – Leg IV (disjointed), right, paraxial view. Scales 20 μm (Figs 4, 6, 7), 10 μm (Fig. 5), 100 μm (Figs 8, 9).

smooth. Interlamellar setae and sensilli long, with flagellate tip, smooth. Spinae adnatae thorn-like, pointed. Dorsal notogastral setae thorn-like, posterior setae setiform. Parastigmatic tubercles triangular, blunt-ended. Discidia absent.

Description. Measurements. Body length 614 (holotype), 614–647 (mean 630; five paratypes); notogaster width 365 (holotype), 365–398 (mean 378; five paratypes).

Table 1. Measurements of leg segments (means, in micrometers) and ratio of *Belbodamaeus indicus* sp. n.

Legs	Trochanter	Femur	Genu	Tibia	Tarsus	All	Leg : body mean length
I	33	199	91	124	248	695	≈ 1.10
II	33	182	74	115	207	611	≈ 0.97
III	124	166	66	132	249	737	≈ 1.17
IV	166	190	107	182	315	960	≈ 1.53

Table 2. Leg setae and solenidia of *Belbodamaeus indicus* sp. n.

Leg	Trochanter	Femur	Genu	Tibia	Tarsus
I	*v'*	*d, (l), bv", (v$_1$), v$_2$"*	*(l), v', $\underline{d\sigma}$*	*(l), (v),ϕ_1, ϕ_2*	*(ft), (tc), (it), (p), (u), (a), s, (pv), (pl), v', e, ω_1, ω_2*
II	*v'*	*d, (l), bv", (v)*	*(l), v', $\underline{d\sigma}$*	*(l), (v), $\underline{d\phi}$*	*(ft), (tc), (it), (p), (u), (a), s, (pv), (v), ω_1, ω_2*
III	*l', v'*	*d, l', ev', v'*	*l', v', $\underline{d\sigma}$*	*l', (v), $\underline{d\phi}$*	*(ft), (tc),(it), (p), (u), (a), s, (pv), v'*
IV	*v'*	*d, l', ev', v'*	*d, l', v'*	*l', (v), $\underline{d\phi}$*	*ft", (tc), (p), (u), (a), s, (pv), v'*

Explanations: Roman letters refer to normal setae (*e* – famulus), Greek letters refer to solenidia, $\underline{d\phi}$ and $\underline{d\sigma}$ – seta and solenidion coupled. One apostrophe (*'*) marks setae on anterior and double apostrophe (*"*) setae on posterior side of the given leg segment. Parentheses refer to a pair of setae.

Integument. Body color light brownish to brown. Surface of body with filamentous cerotegument. Setae of prodorsum, notogaster, and legs without cerotegument.

Prodorsum (Figs 1, 3). Rostrum rounded. Propodolateral apophysis absent. One pair of prodorsal tubercles (*Ba*) present, triangular, blunt-ended; *Bp* poorly developed, represented by elongate ridge. Rostral (*ro*) and lamellar (*le*) setae of medium size (both 90–106), setiform, smooth. Interlamellar setae (*in*, 135–151) and sensilli (*ss*, 299–323) long, with flagellate tip, smooth. Exobothridial setae (*ex*, 49–57) setiform, thin, slightly barbed.

Notogaster (Figs 1–3). Oval. Exuvial scalps absent. Anterior margin with straight or weakly curved one pair of spinae adnatae (*sa*, 41–49). Dorsal notogastral setae inserted in two subparallel rows, long (98–131), thorn-like, smooth. Posterior setae (p_1, 61–69; p_2, p_3, 49–53) setiform, smooth. All lyrifissures (*ia*, *im*, *ip*, *ih*, *ips*) and opisthonotal gland openings (*gla*) are located typically for Damaeidae.

Gnathosoma (Figs 4–6). Subcapitulum longer than wide (143–155 × 98–106). Subcapitular setae *h*, *m* (both 45–57), *a* (32–41) setiform, barbed. Adoral setae (or_1, or_1,12–16) thin, indistinctly barbed. Palps (131–143) with setation 0–2–1–3–8(+ω). Chelicerae (131–143) with two setiform setae; *cha* (45–53) barbed, *chb* (28–32) ciliate unilaterally in distal part. Two small teeth located posteriorly to *cha*. TrägÍrdh's organ (Tg) narrow, conical.

Epimeral and lateral podosomal regions (Fig. 2). Only two pairs of parastigmatic tubercles well-developed, *Sp* little larger than *Sa*, both triangular, blunt-ended. Epimeral and ventrosejugal tubercles absent. Epimeral setal formula (from 1 to 4): 3–1–3–4. Epimeral setae (36–45) setiform, smooth or with one barb. Discidia absent.

Anogenital region (Figs 2, 7). Six pairs of genital (g_1–g_6), one pair of aggenital (*ag*), two pairs of anal (an_1, an_2), three pairs of adanal (ad_1–ad_3) setae similar in length (28–32), setiform, smooth. Adanal lyrifissures (*iad*) located in inverse apoanal position. Ovipositor (67–73 × 53–61) with three short lobes (18–20) and wide cylindrical distal part (49–53). Lobe (ψ, τ) and coronal (*k*) setae thorn-like, smooth, similar in length (12–16).

Legs (Figs 8, 9). Morphology of leg segments, setae and solenidia typical for *Belbodamaeus* (for example, Bayartogtokh 2004). Leg II approximately equal in length to body; legs I, III, IV longer than body length (Table 1). Formulae of leg setation and solenidia: I (1–7–4–4–19) [1–2–2], II (1–6–4–5–17) [1–1–2], III (2–4–3–4–16) [1–1–0], IV (1–4–3–4–13) [0–1–0]; homology of setae and solenidia indicated in Table 2. Famulus (*e*) setiform, straight. Seta *d* on tibiae and genua often broken. Solenidia simple.

Material examined. Holotype (female) and five paratypes (females): India, 28°19′32″ N, 95°57′31″ E, Arunachal Pradesh, Hunli vicinity, 1300 m a.s.l., soil, coll. L. Dembický & O. Šauša on 01.06.2012.

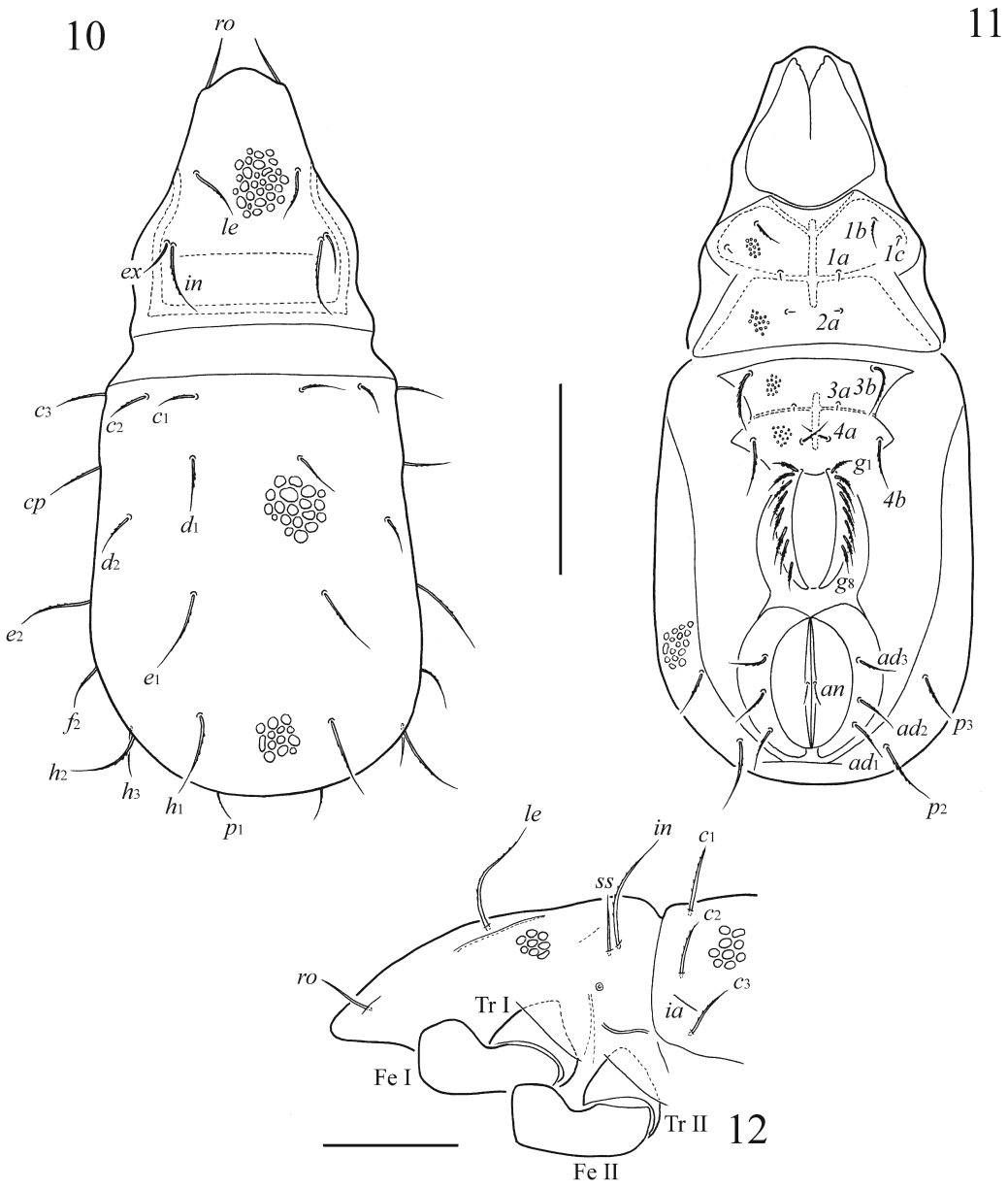
Type deposition. The holotype (alcohol) is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia; three paratypes (alcohol) are deposited in the collection of the Siberian Zoological Museum, Novosibirsk, Russia; two paratypes are in the personal collection of the first author.

Etymology. The specific name "*indicus*" refers to the country origin, India.

Remarks. All known species of the genus *Belbodamaeus* can be distinguished by the key which is presented below.

Key to known species of *Belbodamaeus*

1 Sensilli longer than prodorsum; discidia absent; parastigmatic tubercles *Sa* triangular, blunt-ended; body size: 614–647 × 365–398 . . . . . ***Belbodamaeus indicus*** sp. n. Distribution: India

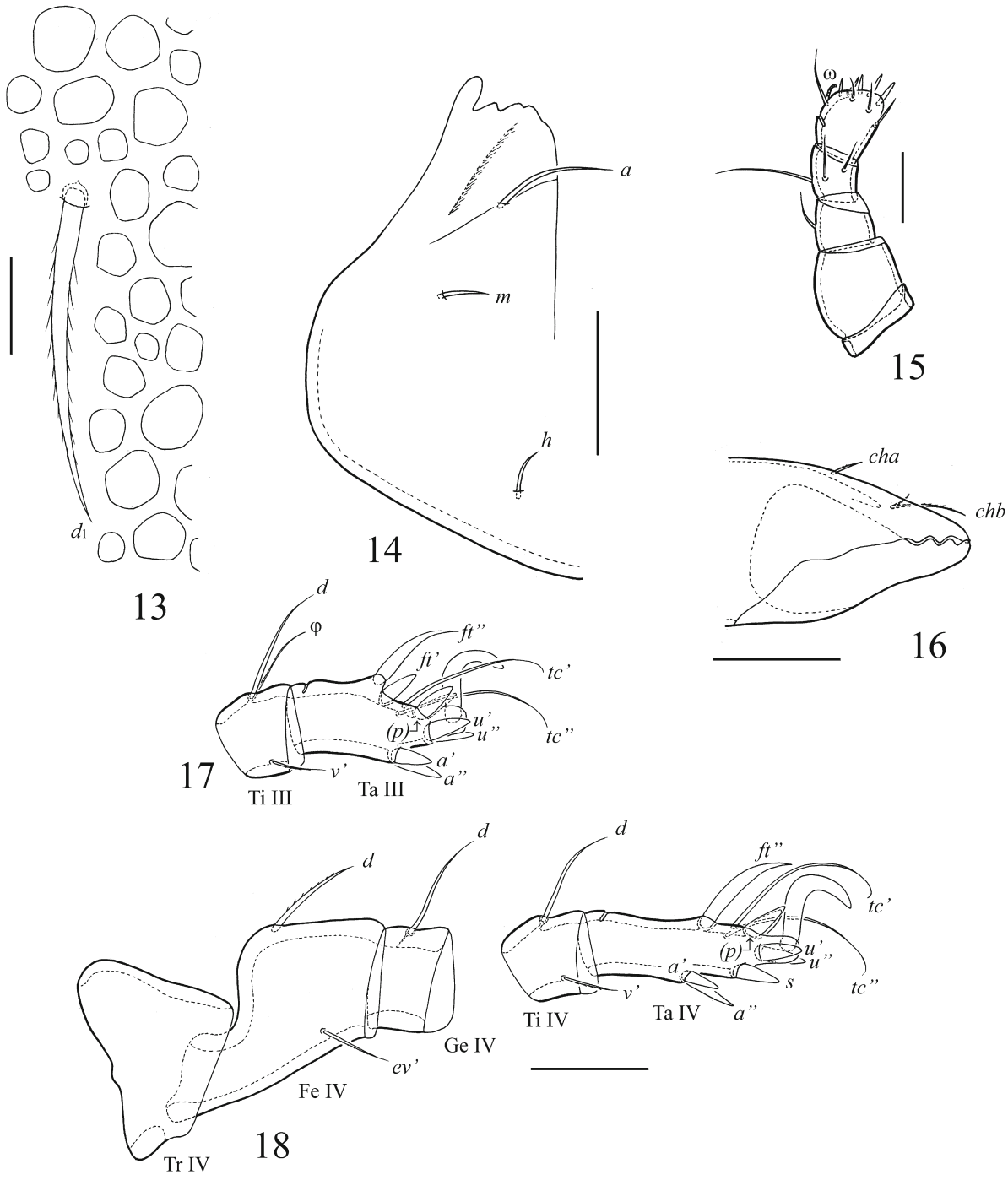


Figs 10–12. *Malaconothrus macrofoveolatus* sp. n., adult: 10 – Dorsal view (legs not illustrated); 11 – Ventral view (subcapitular setae and legs not illustrated); 12 – Lateral view of prodorsum and anterior part of notogaster (only trochanters and femora of leg I, II illustrated). Scales 100 μm (Figs 10, 11), 50 μm (Fig. 3).

– Sensilli shorter than prodorsum; discidia present; parastigmatic tubercles *Sa* thorn-like, pointed 2
2 Notogastral setae c_1 twice length of c_2; spinae adnatae weakly dilated distally; parastigmatic tubercles *Sp* thorn-like, pointed; body size: 340 × 200 .... ***Belbodamaeus marginatus*** Kulijev, 1967 (see Kulijev 1967). Distribution: Caucasus
– Notogastral setae c_1 equal in length to c_2; spinae adnatae pointed distally; parastigmatic tubercles *Sp* triangular, blunt-ended 3
3 Sensilli with flagellate tip, smooth; propodolateral apophysis present; prodorsal tubercles *Ba* and *Da* absent; body size: 360–408 × 252–264..... .. ***Belbodamaeus rarituberculatus*** Bayartogtokh, 2004 (see Bayartogtokh 2004). Distribution: Mongolia
– Sensilli setiform, barbed; propodolateral apophysis absent; prodorsal tubercles *Ba* and *Da* present; body size: 560 × 380..... .. ***Belbodamaeus tuberculatus*** Bulanova-Zachvatkina, 1967 (see Bulanova-Zachvatkina 1967). Distribution: Palearctic region

***Malaconothrus macrofoveolatus* sp. n.** (Figs 10–18)

Diagnosis. Body size 344 × 151–155. Body surface densely foveolate. Rostral and exobothridial setae straight, smooth. Lamellar and interlamellar setae setiform, barbed. Notogastral ridges absent. Notogastral setae of medium size, setiform, barbed. Epimeral setal formula: 3–1–2–2; setae *3b*, *4b* longer than others.



Figs 13–18. *Malaconothrus macrofoveolatus* sp. n., adult: 13 – Notogastral seta d_1 and part of body surface; 14 – Subcapitulum, right half; 15 – Palp; 16 – Anterior part of chelicerae; 17 – Tibia and tarsus of leg III, left, antiaxial view; 18 – Leg IV (disjointed), left, antiaxial view. Scales 10 μm (Figs 13, 15), 20 μm (Figs 14, 16–18).

Eight pairs of genital setae present, all barbed. Anal and adanal setae barbed.

Description. Measurements. Body length 344 (holotype), 344 (paratype); notogaster width 155 (holotype), 151 (paratype).

Integument (Figs 10–13). Body color light brownish. Surface of prodorsum and notogaster with densely large foveolae (diameter up to 12). Surface of epimeral region with small foveolae (diameter up to 6).

Prodorsum (Figs 10, 12). Rostrum rounded. Rostral and exobothridial setae (both 24–28) thin, straight, smooth. Lamellar and interlamellar setae (both 45–49) setiform, barbed.

Notogaster (Figs 10–13). Anterior margin straight. Posterior margin rounded. Notogastral ridges absent. Dorsal notogastral setae setiform, barbed;e_1, e_2, f_2, h_1, h_2, p_2 (49–53) longer than c_1–c_3, cp, d_1, d_2, p_3 (28–36)

Table 3. Leg setae and solenidia of *Malaconothrus macrofoveolatus* sp. n.

Leg	Trochanter	Femur	Genu	Tibia	Tarsus
I	*v'*	*d, l', bv", v"*	*dσ, (l)*	*dϕ, l', (v)*	*(ft), (tc), (p), (u), (a), e,* ω_1, ω_2, ω_3
II	*v'*	*d, l', bv", v"*	*dσ, l'*	*dϕ, l', (v)*	*(ft), (tc), (p), (u), (a),* ω
III	*l', v'*	*d, ev'*	*d*	*dϕ, v'*	*(ft), (tc), (p), (u), (a)*
IV	*v'*	*d, ev'*	*d*	*d, v'*	*ft", (tc), (p), (u), (a), s*

See Table 2 for explanations.

and h_3, p_1 (16–20). Lyrifissures are located typically for Malaconothridae.

Gnathosoma (Figs 14–16). Subcapitulum little longer than wide (73 × 69). Subcapitular setae setiform, smooth; *h*, *m* (both 12) shorter than *a* (16–20). Adoral setae not evident. Palps (36) with setation 0–0–1–3–9(+ω). Chelicerae (73) with two setiform, slightly barbed setae; *cha* short (4), straight, *chb* (12) with setiform branch in basal part. Trägårdh's organ not evident.

Epimeral and lateral podosomal regions (Fig. 11). Epimeral setal formula (from 1 to 4): 3–1–2–2. Epimeral setae *1a*, *1c*, *2a*, *3a* short (4) setiform, smooth; *1b*, *4a* longer (16), setiform, slightly barbed; *3b*, *4b* (24–28) setiform, barbed.

Anogenital region (Fig. 11). Eight pairs of genital setae (g_1–g_8, 16) setiform, densely barbed. One pair of anal (*an*, 12) and three pairs of adanal (ad_1–ad_3, 24) setae setiform, barbed. Adanal lyrifissures not evident.

Legs (Figs 17, 18). Morphology of leg segments, setae and solenidia typical for *Malaconothrus* (for example, Knülle 1957). Formulae of leg setation and solenidia: I (1–4–3–4–11) [1–1–3], II (1–4–2–4–10) [1–1–1], III (2–2–1–2–10) [0–1–0], IV (0–2–1–2–10) [0–0–0]; homology of setae and solenidia indicated in Table 3. Famulus poorly visible, short, conical. Solenidia simple.

Material examined. Holotype (female) and paratype (female): India, 28°19′32″ N, 95°57′31″ E, Arunachal Pradesh, Hunli vicinity, 1300 m a.s.l., soil, coll. L. Dembický & O. Šauša on 01.06.2012.

Type deposition. The holotype (alcohol) is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia; paratype is in the personal collection of the first author.

Etymology. The specific name "*macrofoveolatus*" refers to the body surface (large foveolae on prodorsum and notogaster).

Remarks. In having the combination of foveolate body surface, length of body setae and the absence of notogastral ridges, *Malaconothrus macrofoveolatus* sp. n. is very similar to *Malaconothrus yinae* Yamamoto, Aoki, Wang & Hu, 1993 from China (see Yamamoto et al. 1993), however it clearly differs from the latter by the barbed notogastral and genital setae (versus smooth in *M. yinae*), larger size of foveolae on prodorsum and notogaster (versus smaller in *M. yinae*), epimeral formula – 3–1–2–2 (versus 3–1–3–3 in *M. yinae*) and the presence of eight pairs of genital setae (versus five pairs in *M. yinae*).

***Nothrus phylliformis* sp. n.** (Figs 19–27)

Diagnosis. Body size 680–697 × 365. Dorsal side and anogenital region of body alveolate. Prodorsal, notogastral (except long and setiform h_2), epimeral and anogenital setae covered with phylliform cerotegument. Sensilli long, rod-like, barbed. Distance between notogastral setae c_1–c_2 shorter than between c_2–c_3. Subcapitular setae *h* covered with phylliform cerotegument, m_1, m_2, *a* setiform; adoral setae or_1 simple, or_2 dilated distally, truncate. Epimeral setal formula 5–4–5–5. Adanal setae ad_1 longer ad_2, ad_3. Leg tarsi with three claws.

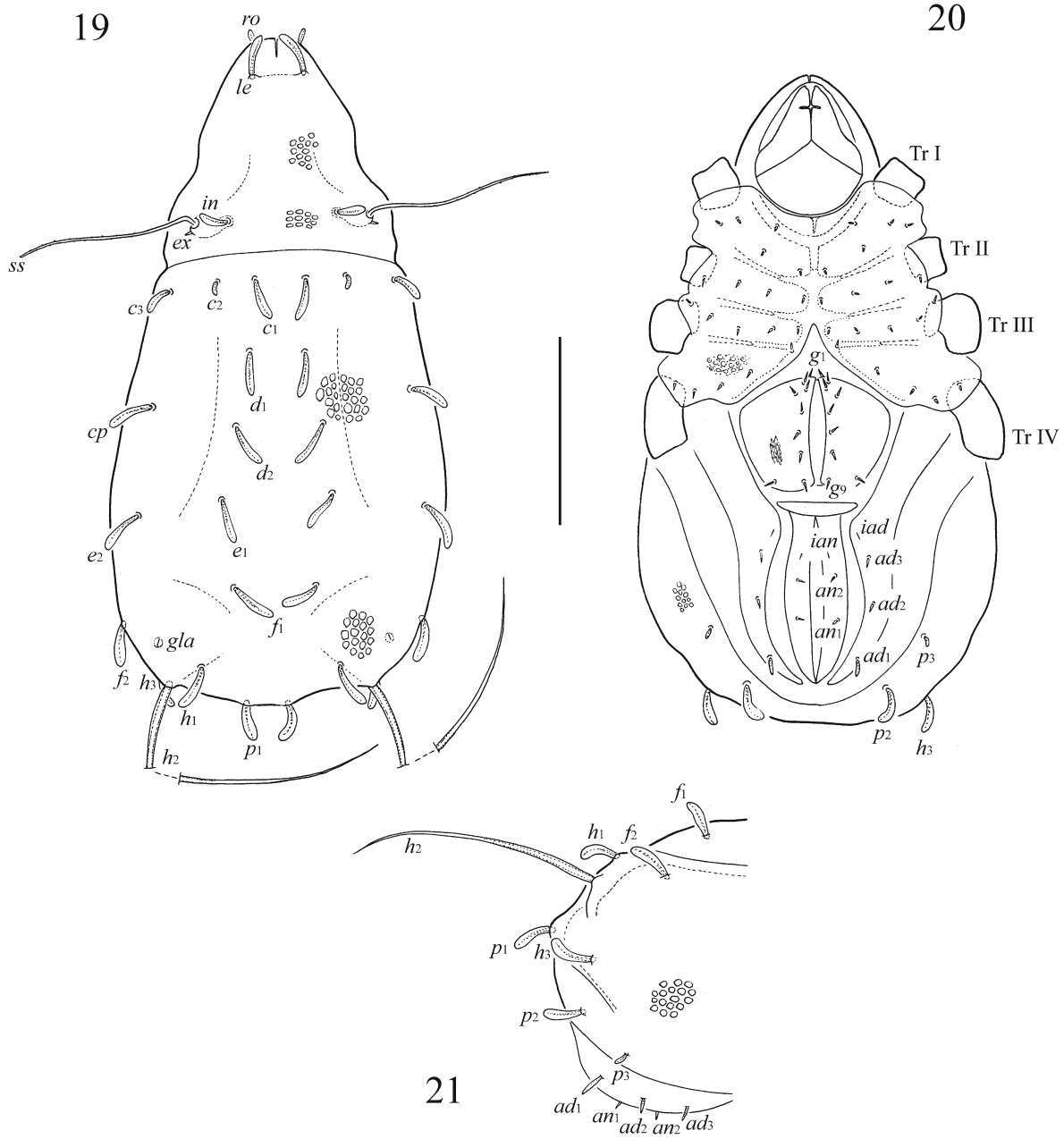
Description. Measurements. Body length 697 (holotype), 680 (paratype); notogaster width 365 (holotype), 365 (paratype).

Integument. Body color yellow-brownish. Dorsal side and anogenital region of body alveolate (diameter of alveoli up to 8 on prodorsum and 16 on notogaster), epimeres with dense microfoveolate and some alveoli.

Prodorsum (Figs 19, 22). Rostrum broadly rounded, with medial indentation in dorsal view. Rostral (20), lamellar (45), interlamellar (45) and exobothridial (8) setae covered with broad, phylliform cerotegument, set on small tubercles. Sensilli longest setae on prodorsum (196), rod-like, barbed.

Notogaster (Figs 19–21, 23). Weakly convex in dorso-central and dorso-lateral part and with circummarginal furrow between them (visible only in dorsolateral and dorso-caudal views). Sixteen pairs of notogastral setae set on small tubercles. Setae h_2 (295–323) setiform, covered with thin layer of cerotegument in basal part. Other setae considerable shorter, covered with broad, phylliform cerotegument, slightly serrated: c_2 and p_3 (16) shorter than other (49–53). Distance between setae c_1–c_2 shorter than between c_2–c_3. Lyrifissures not evident. Large opisthonotal gland openings present postero-lateriad f_2.

Gnathosoma (Figs 24–26). Subcapitulum little shorter than wide in dissected specimen (139 × 143). Subcapitular setae *h* (20) covered with phylliform cerotegument; m_1 (18), m_2 (6), *a* (28) setiform, slightly barbed. Two pairs of smooth adoral setae (24) present: or_1 simple, slightly thickened; or_2 dilated distally, truncate. Palps (73) with setation 0–1–1–3–9(+ω). Chelicerae (139) with two setiform, barbed setae; *cha* (57)



Figs 19–21. *Nothrus phylliformis* sp. n., adult: 19 – Dorsal view (legs not illustrated); 20 – Ventral view (subcapitular setae and legs except trochanters not illustrated); 21 – Lateral view of posterior part of notogaster. Scale 200 μm.

longer, than *chb* (28). Trägårdh's organ narrow, conical.

Epimeral region (Fig. 20). Epimeral setal formula 5–4–5–5. Setae short (12), covered with phylliform cerotegument.

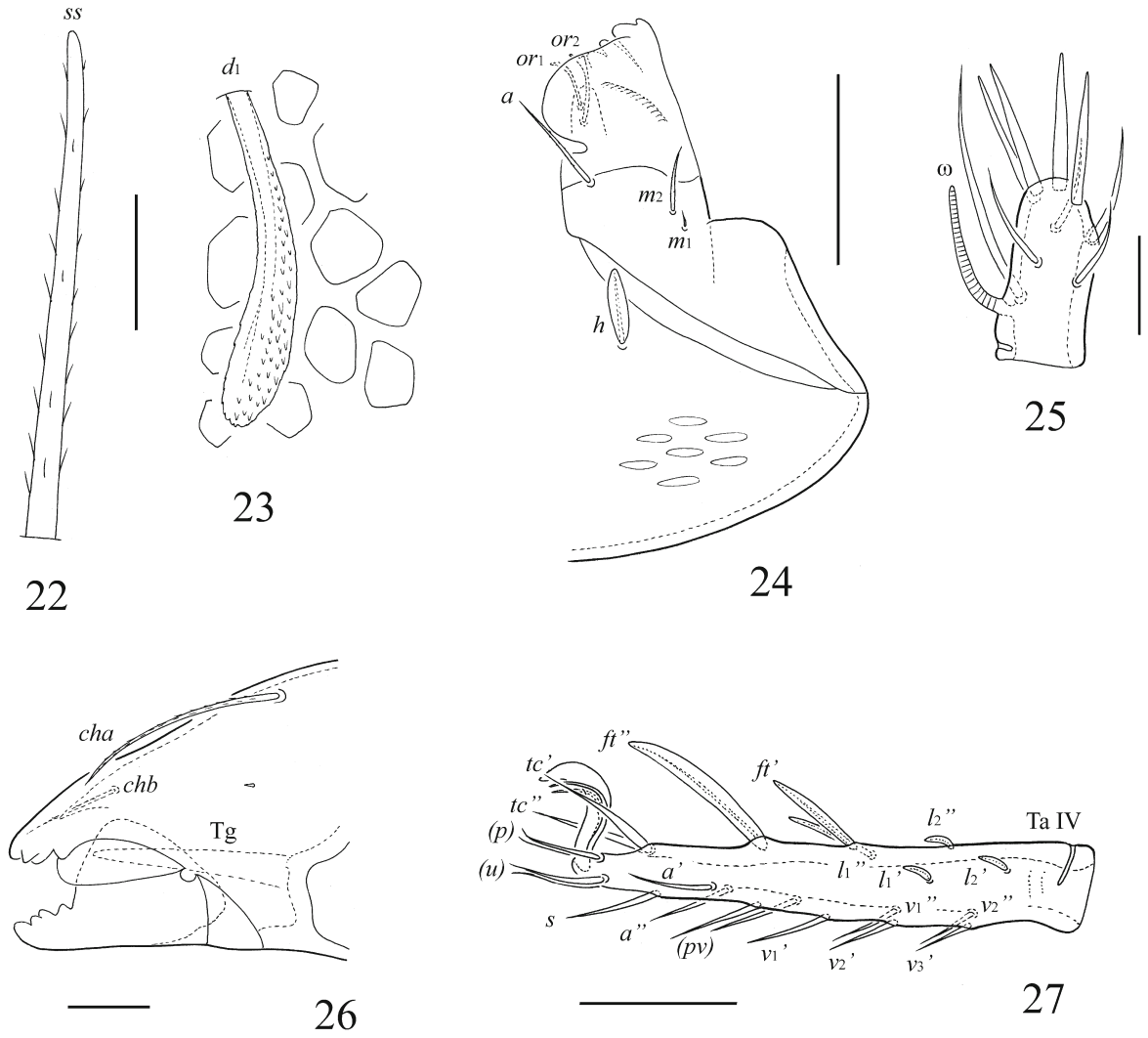
Anogenital region (Figs 20, 21). Nine pairs of genital (16), two pairs of anal (8) and three pairs of adanal (ad_1, 24, ad_2, ad_3, 16) setae covered with phylliform cerotegument. Lyrifissures *ian* and *iad* clearly visible, others (*ih*, *ips* and *ip*) not evident.

Legs (Fig. 27). Tarsi with three smooth claws; median claw stronger than lateral claws. Morphology of leg segments, setae and solenidia typical for *Nothrus* (for example, Olszanowski 1996). Formulae of leg setation and solenidia: I (1–9–5–6–27) [1–2–3], II (1–8–5–5–25) [1–1–1], III (4–5–5–5–22) [1–1–0], IV (2–6–5–5–22) [1–1–0]; homology of setae and solenidia indicated in Table 4. Famulus short, setiform, pointed. Solenidia simple.

Material examined. Holotype (female) and paratype (female): India, 27°00′48″ N, 92°39′08″ E, Assam, Bhalukpong, 150 m a.s.l., soil, coll. L. Dembický & O. Šauša on 01–08.05.2012.

Type deposition. The holotype (alcohol) is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia; paratype is in the collection of the Siberian Zoological Museum, Novosibirsk, Russia.

Etymology. The specific name "*phylliformis*" refers to the phylliform body setae.



Figs 22–27. *Nothrus phylliformis* sp. n., adult: 22 – Medio-distal part of sensillus; 23 – Notogastral seta d_1 and notogastral alveoli; 24 – Subcapitulum, left half; 25 – Palptarsus; 26 – Anterior part of chelicerae; 27 – Tarsus of leg IV, right, antiaxial view. Scales 20 μm (Figs 22, 23, 26), 50 μm (24, 27), 10 μm (Fig. 25).

Table 4. Leg setae and solenidia of *Nothrus phylliformis* sp. n.

Leg	Trochanter	Femur	Genu	Tibia	Tarsus
I	*v'*	*d, (l1), (l2), bv", v1", v2", v3"*	*dσ, (l), (v)*	*dϕ1, (l1), l2", (v), ϕ2*	*(ft), pl', (l1), (l2), (l3), (tc), (p), (u), (a), s, (pv), (v1), (v2), (v3), e, ω1, ω2, ω3*
II	*v'*	*d, (l1), (l2), bv", v1", v2"*	*dσ, (l), (v)*	*dϕ, (l), (v)*	*(ft), (l1), (l2), (l3), (tc), (p), (u), (a), s, (pv), (v1), (v2), (v3), ω1*
III	*l'1, l'2, l'3, v'*	*d, (l), bv", v"*	*dσ, (l), (v)*	*dϕ, (l), (v)*	*(ft), (l1), (l2), (tc), (p), (u), (a), s, (pv), (v1), (v2), v3'*
IV	*l', v'*	*d, (l1), l2", bv", v"*	*dσ, (l), (v)*	*dϕ, (l), (v)*	*(ft), (l1), (l2), (tc), (p), (u), (a), s, (pv), (v1), (v2), v3'*

See Table 2 for explanations.

Remarks. *Nothrus phylliformis* sp. n. can be included in the *Nothrus* species group with one pair of long (not shorter than half of notogaster) notogastral caudal setae (Ermilov & Hugo-Coetzee 2012). This species is most similar morphologically (long h_2, tridactylous legs, phylliform prodorsal and notogastral setae, c_2 inserted nearly to c_1 than c_3) to *Nothrus mystax* Mahunka, 1986 from Tanzania (see Mahunka 1986), however it differs from the latter by the smaller body size (680–697 × 365 versus 1090 × 574 in *N. mystax*), length of interlamellar setae (not longer than lamellar and dorsal notogastral setae c_1, d_1, d_2, e_1, f_1 versus clearly longer in *N. mystax*) and the position of notogastral setae d_1 (not reaching insertions of d_2 versus reaching in *N. mystax*).

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