A new larval trombidiid, *Calctrombidium nikolettae* n. gen., n. sp. (Acari, Prostigmata, Trombidiidae, Trombidiinae) from India

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Abstract

A new larval trombidiid, Calctrombidium nikolettae *n. gen., n. sp. (Acari, Prostigmata, Trombidiidae, Trombidiinae) from India.— Calctrombidium nikolettae* n. gen., n. sp. is described from Calcutta in India. Larvae were obtained from plants. The new genus has the following main features: anterior dorsal scutum sensillae placed between setae AL and PL; PL setae placed posterior and lateral to bases of sensilla. Posterior dorsal scutum absent. Bf 5, 4, 4, Tr 1, 1, 1, Cx 2, 2, 1, all barbed. Posterior claw III reduced to a hooked conical spur.

Key words: Acari, Trombidiidae, *Calctrombidium nikolettae* n. gen., n. sp., India.

Resumen

Una nueva forma larval de trombidio, Calctrombidium nikolettae *gen. n., sp. n. (Ácari, Prostigmata, Trombidiidae, Trombidiinae) de la India.*— Se describe una nueva forma larval de trombidio *Calctrombidium nikolettae* gen. n., sp. n. procedente de Calcuta, India. Las larvas se obtuvieron de plantas. El nuevo género se caracteriza por: sensilios del *scutum* anterior dorsal situados entre las sedas AL y PL; Sedas PL situadas posterior y lateral a la base de los sensilios. *Scutum* dorsal posterior ausente. Bf 5, 4, 4, Tr 1, 1, 1, Cx 2, 2, 1, todas barbuladas. Uña posterior III reducida a un espolón cónico ganchudo.

Palabras clave: Ácari, Trombídiidae, *Calctrombidium nikolettae* gen. n., sp. n., India.

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Introduction

The subfamily Trombidiinae Leach consists of 12 genera; some of them were described based only on postlarval instars; five genera were described based on larvae. Now, in this subfamily the following genera based on larvae or adults with known larval instars have been reported: *Trombidium* Fabricius, *Paratrombium* Bruyant, *Dinothrombium* Southcott, *Clinotrombium* Southcott and *Pollicotrombium* Southcott. According to SOUTHCOTT (1986), 7 genera based on larvae (or larvae and adults) belonged to this subfamily; later ZHANG & XIN (1992) synonymized the genus *Nippotrombium* Southcott with the genus *Allothrombium* Berlese and the genus *Acritotrombium* Southcott was transferred to the subfamily Allothrombiinae Thor.

In this paper, a new genus *Calctrombidium* for new species *C. nikolettae* is described from India. To date only two species were known in India, both belonging to the family Trombidiidae: *Dinothrombium gigas* (Trouessart) based on adults and *Allothrombium muscaparasiticae* Vishnupriya & Mohanasundaram based on larvae (THOR & WILLMANN, 1947; VISHNAUPRIYA & MOHANASUNDARAM, 1988).

Material and methods

Two specimens of *Calctrombidium nikolettae* n. gen., n. sp., were obtained from plants in Calcutta, India. They were mounted in Berlese fluid. The terminology is based on ROBAUX (1974) and SOUTHCOTT (1986). All measurements are given in micrometers (μm). The holotype will be deposited in the Museum of Natural History, Wroclaw University (MNHWU).

Results

Fam. Trombidiidae Leach, 1815
Subfam. Trombidiinae Leach, 1815

Calctrombidium n. gen.

Diagnosis
Anterior dorsal scutum sensillae placed between setae AL and PL; PL setae placed posterior and lateral to bases of sensilla. Posterior dorsal scutum absent, but two setae are present in place where scutellum usually is. Basifemur 5, 4, 4, Trochanteralae 1, 1, 1, Coxalae 2, 2, 1, all barbed. Seta 1a (on coxa I) and seta 2a (on coxa II) both placed at anterior margin of these coxae. Posterior claw III reduced to a hooked conical spur. Palptarsus with only short setae, without long and barbed setae. Hypostomalae distally branched.

Type species
Calctrombidium nikolettae n. sp.

Etymology
Generic name is derived from the first part of the name: Calcutta, the place of type species collection, and "–tromb–" as a root word of the superfamily.

Remarks
Calctrombidium n. gen. is similar to genera *Trombidium*, *Dinothrombium* and *Clinotrombium*. It differs from *Dinothrombium* by PL placed beyond bases of scutal sensilla, proximal coxala II placed near anterior margin of coxa; from *Clinotrombium* by PL situated at posterior angle of scutum, proximal coxalae I placed at anterior margin of coxae and coxalae II placed near anterior margin of coxae; from *Trombidium* by barbed coxala 1a and proximal coxala II placed near anterior margin of coxa.

Calctrombidium nikolettae n. sp. (figs. 1–8)

Examined material
Holotype larva, Calcutta, India, 30 II 2001, from herbaceous plants on large recreation ground near centre of Calcutta; paratype, the same data as in holotype; leg. R. Haitlinger; MNHWU.

Description
Larva
Idiosoma elongate. Dorsal surface of idiosoma with 20 very slightly barbed setae, arranged 4, 6, 4, 4, 2. Setae without platelets (fig. 1). Two pairs of eyes, both on platelet; the anterior eye larger than the posterior eye. Dorsal scutum with very weakly barbed AL and PL and distinctly barbed AM. Setae AL about half the length of setae PL. AM = AL. Sensillae distally with setules (fig. 3). Scutellum absent but two setae present in its place.

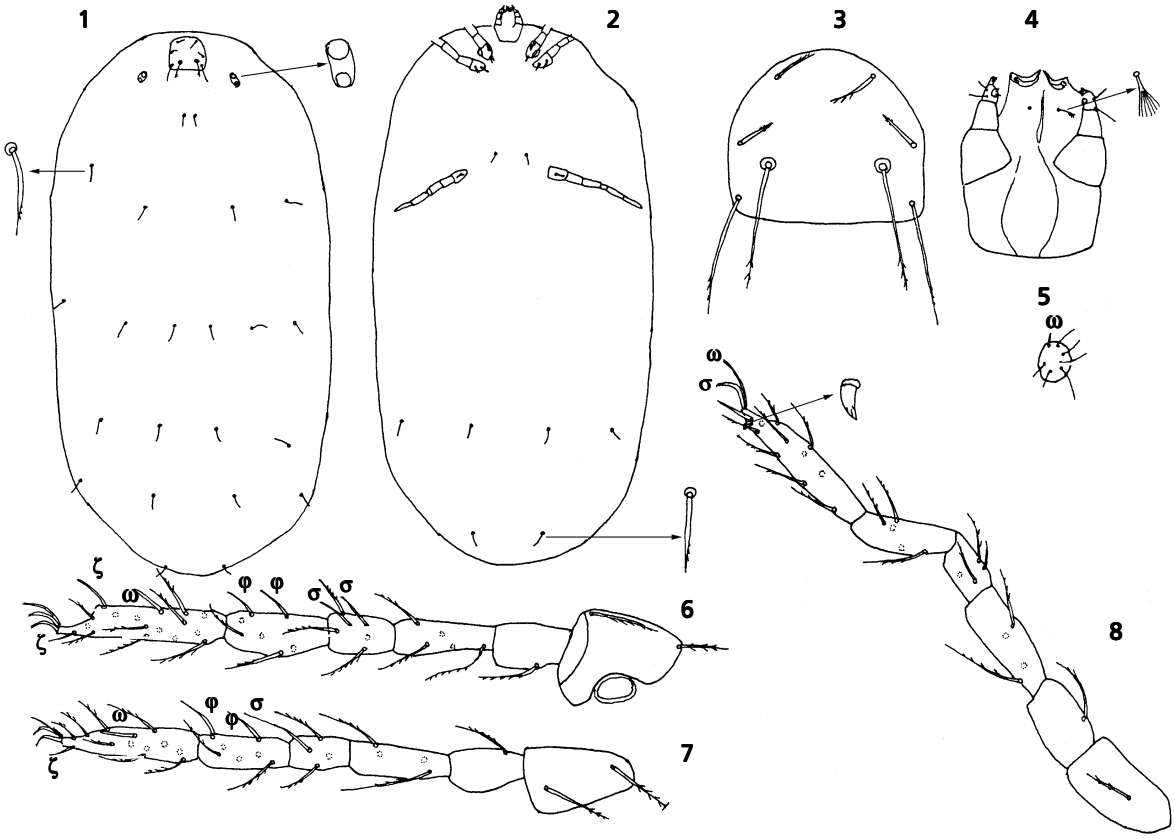
Ventral surface of idiosoma with two intercoxal setae 3a, present between coxae III. Beyond coxae III six setae; two posterior setae weakly barbed (fig. 2).

Gnathosoma with palpfemur and palpgenu without setae, palptarsus with seven short and nude setae (with solenidion). Hypostomalae distally branched (figs. 4, 5).

Leg lengths (with coxae, without claws)
I 300 holotype, 310 paratype; II 274, 284; III 288, 296. Ip = 862, 890.

Legs setal formula
Leg I. Ta–1ω, 2ζ, 14B; Ti–2φ, 5B; Ge–2δ, 4B; Fe–5B; Tr–1B. Coxa with two barbed setae; seta 1a placed at anterior margin of coxa and seta 1b placed in angle at posterior and lateral margins of coxa (fig. 6).

Leg II. Ta–1ω, 1ζ, 11B; Ti–2φ, 5B; Ge–1δ, 3B; Fe–4B; Tr–1B. Coxa with two barbed setae; seta 2a near anterior margin of coxa and seta 2b near posterior margin of coxa. Solenidion δ relatively long (36 μm) (fig. 7).



Figs. 1–8. *Calctrombidium nikolettae* n. sp.: 1. Idiosoma, dorsal view, eyes and dorsal seta detailed; 2. Idiosoma, ventral view and ventral seta detailed; 3. Scutum; 4. Gnathosoma and hypostoma detailed; 5. Palptarsus; 6. Leg I, tarsus–coxa; 7. Leg II, tarsus–coxa; 8. Leg III, tarsus–coxa: ω. Solenidion on tarsi I, II; φ. Solenidion on tibiae I, II; σ. Solenidion on genu I–III; ζ. Eupathidium.

Figs. 1–8. Calctrombidium nikolettae *sp. n.: 1. Idiosoma, vista dorsal, ojos y sedas dorsales en detalle; 2. Idiosoma, vista ventral y sedas ventrales en detalle; 3.* Scutum*; 4. Detalle del gnatosoma y del hipostoma; 5. Palpotarso; 6. Pata I, tarso–coxa; 7. Pata II, tarso–coxa; 8. Pata III, tarso–coxa: ω. Solenidio de los tarsos I, II; φ. Solenidio de las tibias I, II; σ. Solenidio del* genu *I–III; ζ. Eupatidio.*

Leg III. Ta–11B; Ti–5B; Ge–1δ, 3B; Fe–4B; Tr–1B. Coxa with one barbed seta 3b placed in median part of coxa. Anterior claw strong, recurved; empodium long, slender; posterior claw strong, curved (fig. 8).

Measurements

IL (length of idiosoma) 1,695 holotype, 1,511 paratype, IW (width of idiosoma) 707, 774, L 80, 78, W 96, 94, AW 80, 80, PW 80, 84, AA 44, ?, SB 54, 58, ASB 62, 60, PSB 18, 18, ISD 50, 42, AP 22, 28, AL 28, 30, PL 58, 54, AM 28, 28, MA 36, 40, S 60, 64, DS 42–52, 44–54, GL 84, 86, SA 16, 16, SP 20, 20, Ocular sclerite 26, –, Tal 82, 80, Til 44, 48, Gel 34, 30, Fel 50, 60, Trl 36, 36, Cxl 54, 56, Tall 66, 70, Till 42, 44, Gell 26, 26, Fell 50, 48, Trll 36, 40, Cxll 54, 56, Talll 70, 70, Tilll 48, 50, Gelll 26, 28, Felll 54, 56, Trlll 38, 44, Cxlll 52, 48.

Remarks

This species has common features with *Trombidium telletxeae* Goldarazena et al. provisionally included with the genus *Trombidium*. *T. telletxeae* also has seta 2a situated at anterior margin of coxa, but differs by the presence of scutellum, nude setae 1a and normal claws on tarsus III (GOLDARAZENA et al., 2000).

Etymology

The name of the species has been derived from the name Nikoletta.

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