

One New Species and a New Subspecies of Oribatid Mites (Acari, Oribatei) from West Bengal, India

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ABSTRACT: This paper describes one new species, *Cosmochthonius bengalensis* and a new subspecies, *Malacoangelia remigera indica* from West Bengal.

During a survey of soil oribatid mites in the districts of Nadia and 24-Parganas, West Bengal, two interesting species belonging to the genera *Cosmochthonius* and *Malacoangelia* were collected. The one under the genus *Cosmochthonius* is described as new to science and the other under *Malacoangelia* as a new subspecies. In this connection it may be stated that PROSAD (1965) reported the genus *Cosmochthonius* from India while, the monotypic genus *Malacoangelia* is reported for the first time from this subcontinent.

The specimens were collected by D. K. CHAKRABARTI and deposited in the Entomology Laboratory of the Calcutta University.

Cosmochthonius bengalensis sp. nov.

(Figs. 1-2)

Female: Colour yellowish brown. Length of the body: 290μ (range: 288μ - 290μ), width: 168μ (range: 166μ - 168μ). Microsculpture of integument with reticulation of polygonal alveoli, reticulation complete, not broken; rostral hairs bilaterally feathered with 6-7 barbs on either side, smaller than their mutual distance; lamellar hairs bilaterally feathered with 7-8 barbs on either side, about twice as long as their mutual distance; interlamellar hairs biramous, rami profusely branched, shorter than their mutual distance; exobothridial hair uniramous, bilaterally feathered; bothridium cup-shaped, directed posterolateral; sensillus narrow at base, increasingly thickened along

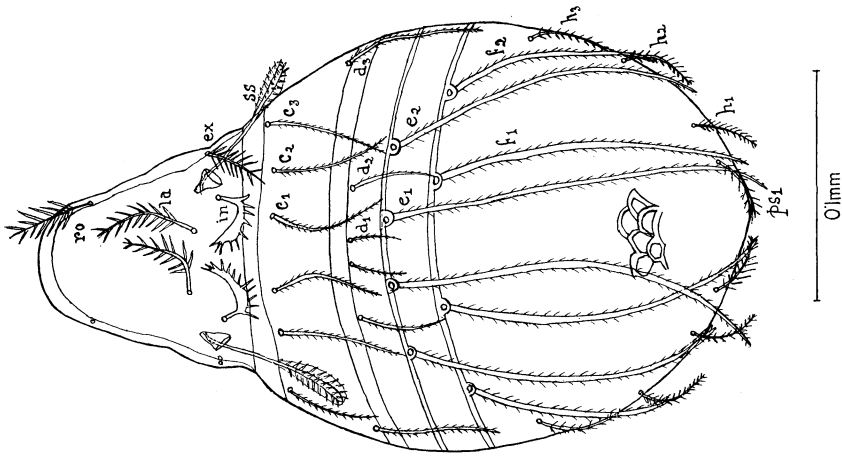


Fig. 1. *Cosmochthonius bengalensis* sp. nov., dorsum; ro-rostral hair, la-lamellar hair, in-interlamellar hair, ex-exobothridial hair, ss-sensillus, c₁, c₂, c₃, d₁, d₂, d₃, e₁, e₂, f₁, f₂, h₁, h₂, h₃, and ps₁-notogastral hairs.

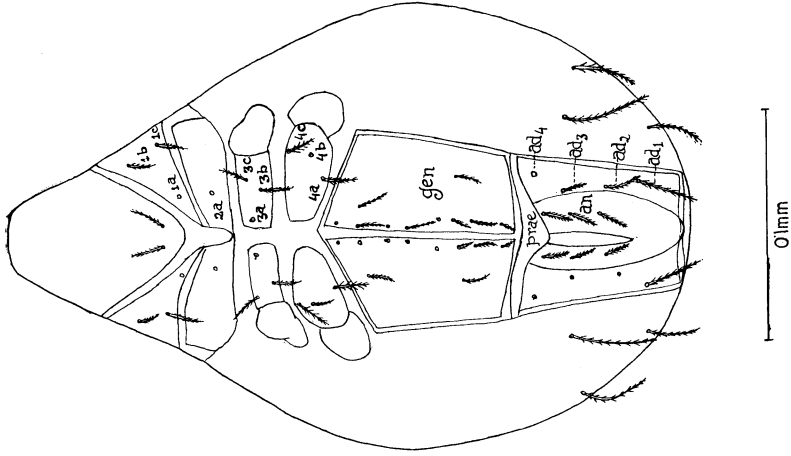


Fig. 2. *Cosmochthonius bengalensis* sp. nov., venter; 1a, 1b, 1c, 2a, 3a, 3b, 3c, 4a, 4b, 4c-epimeral hairs, genital plate, an-anal plate, prae-preanal plate, ad₁, ad₂, ad₃, ad₄-adanal hairs.

its length posteriorly, densely setose at distal end.

All the notogastral hairs finely barbed on both sides, hairs on segment III equidistant, e_1 and e_2 158μ and 152μ long respectively, d_1 and d_2 26μ and 36μ long respectively, situated on the median part of segment II, d_3 49μ long, distance between d_1-d_2 nearly half that of d_2-d_3 ; c_1 , c_2 , c_3 , on segment I more or less of equal length, finely feathered bilaterally, distance between c_1-c_2 equal to the distance between c_2-c_3 ; 4 pairs of plumose hairs situated at the posterolateral margin of notogaster become progressively shorter posteriorly.

Ventrally, epimeres partly obscured by legs, all epimeres separate, epimeral setae bilaterally feathered, epimeral setal formula 3-1-3-3; genital plates large, roughly rectangular in outline; of the 10 pairs of genital hairs 8 pairs arranged medially while the rest 2 pairs arranged towards the middle and peripheral part of each plate, genital hairs on average 19μ long, finely feathered bilaterally; anterior margin of preanal plate more or less straight, posterior margin convex; 3 pairs of anal hairs thickly feathered bilaterally, 16μ long, inserted towards the inner margin of anal plate; 4 pairs of adanal hairs densely feathered bilaterally, their main axes gradually thicker and longer posteriorly.

Tarsi I-IV bidactyle, claws sickle-shaped, equally thick and curved.

Holotype: adult ♀, INDIA: Bethuadahari forest, Krishnagar (West Bengal), 6. XII. 1970, from rotten leaves of *Shorea robusta* near a pond; paratypes: one adult ♀, same data as holotype, and one adult ♀, Chakraberia Road, Calcutta, 22. VII. 1972, from humus under decaying trunk of *Musa sapientum*.

Remarks: The new species comes close to *C. emmae* BERLESE, 1910, in the presence of bidactyle tarsi I-IV, but can easily be distinguished from the latter in the absence of peculiar leaf-shaped notogastral hairs. It also resembles the Ghanian species of *C. lanatus* redescribed and figured by WALLWORK (1960) in a number of characters, but the presence of bidactyle tarsi I-IV, uniramous, bilaterally feathered, rostral, lamellar and exobothridial hairs and the form of hairs on the posterolateral margin of notogaster, the complete, polygonal reticulated microsculpture of the integument separate the Indian species from the Ghanian one.

***Malacoangelia remigera indica* subsp. nov.**

(Fig. 3)

Female: Colour dark brown. Length of the body: 353μ (range: 340μ - 353μ); width: 198μ (range: 177μ - 214μ).

The present material collected from the districts of Nadia and 24-Parganas, West Bengal agrees with *M. remigera* BERLESE, 1913, redescribed by GRANDJEAN (1935) in almost all the characters except in the typically club-shaped rostral hairs. Further the present species differs from the additional description and figure of *M. remigera* collected at Ghana by WALLWORK (1960) in having 8 barbs in the inner margin of the sensillus (4-6 barbs in Ghanaian species) and the tip of the sensillus without bifurcation (bifid in Ghanaian one).

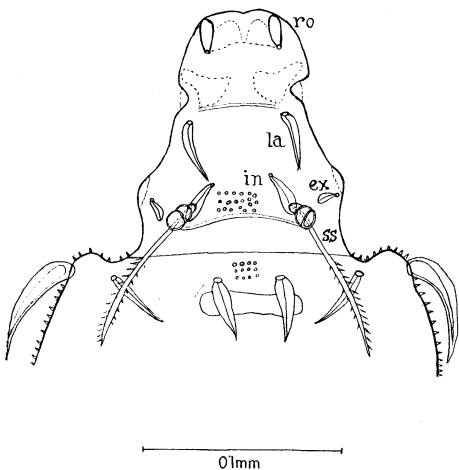


Fig. 3. *Malacoangelia remigera indica* subsp. nov., prodorsum; ro-rostral hair, la-lamellar hair, in-interlamellar hair, ex-exobothridial hair, ss-sensillus.

In view of the differences mentioned above, it is considered as a new subspecies of *M. remigera* BERLESE, 1913.

Holotype: adult ♀, INDIA: Guari Bazar, Krishnagar (West Bengal), 13. X. 1971, from rotten leaves of *Bambusa* sp., paratypes: 3 adult ♀♀, same data as holotype, 3 adult ♀♀, Malopara, Krishnagar, 10. X. 1971, from compost heaps near a pond and 4 adult ♀♀, Nimta, Belgharia (West Bengal), 29. V. 1971, from rotten leaves of *Bambusa* sp.

Acknowledgements: The authors are grateful to Dr. D.N. GANGULY, Professor and Head of the Department of Zoology, Calcutta University for laboratory facilities and to Dr. S.K. BHATTACHARYA, Zoological Survey of India, for valuable suggestions.

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