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A NEW SPECIES OF *OPPIA* (ACARI : ORIBATEI : OPPIIDAE) FROM DARJEELING, INDIA

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ABSTRACT

A new species of the genus *Oppia* Koch (Acari : Oribatei : Oppiidae), viz., *O. cryptomeriae* is described from forest soils in the district of Darjeeling, West Bengal, India.

The genus *Oppia* was established by Koch (1836) with *Oppia nitens* Koch, 1836 as the type-species. It is well represented in India and has been reported previously by Prasad (1965) from Bhagalpur, Bihar, Bhaduri and Raychaudhuri (1967) from Calcutta, West Bengal, Singh and Mukharji (1971) from Varanasi, U. P., Hafeez-Kardar (1976) from Aligarh, U. P., Chakrabarti, Bhaduri and Raychaudhuri (1977) from West Bengal, Mishra, Bhaduri and Raychaudhuri (1980) from Orissa and by Bhattacharya (1980) from Santiniketan, West Bengal. All measurements are in microns.

Oppia cryptomeriae sp. nov.

(Figs. 1-2)

Female : Colour deep brown ; length of the body : 715-745 ; width of the body : 395-440.

Prodorsum longer than broad, dorsomedially with irregular scattered foveolations, tectopodium I and posterolateral margin granular, posterior region with many small light spots ; the tip of rostrum cut deeply into three parts ; rostral setae glabrous, slightly elbowed at the middle, with pointed tips, 65-70 long, 3 times as long as their mutual distance, inserted dorsally on a thin transverse ridge, a little beyond the tip of rostrum ; lamellar setae smooth, slightly curved, 28-30 long, as long as their mutual distance, located on a strongly developed arch-like ridge on the middle field of prodorsum ; interlamellar setae smooth, extremely long, 130-140 in length, more than 3 times as long as their mutual distance, situated anterior to the posterior light spots of prodorsum ; exobothridial setae 1 pair, smooth, moderately long, 40-50 in length, about $1\frac{1}{2}$ times longer than the lamellar setae, inserted anterolaterally to the bothridium ; bothridium cup-shaped, directed anterolaterad ; sensillus with a narrow stalk and club-shaped head beset with two distal

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threads, the posterior one being 5 times as long as the anterior one, 140-155 long, directed postero-laterad.

Notogaster oval, a little longer than broad, anterior margin rounded, with scattered irregular foveoles and light spots ; notogastral setae 10 pairs, glabrous, curved, with pointed tips, 50-110 long, setae *ta* antero-lateral, *te*

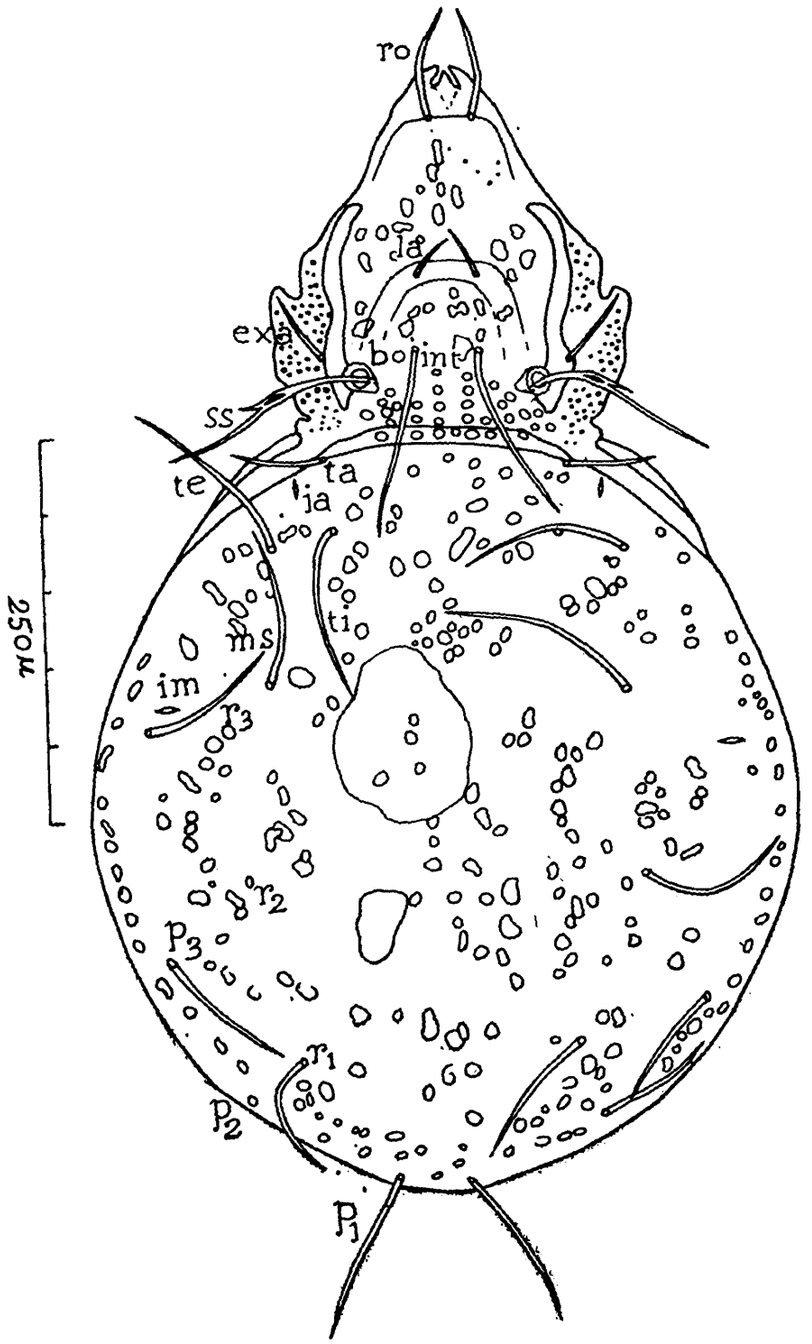

Fig. 1. *Oppia cryptomeriae* sp. nov. (Dorsal view), *ro*=rostral seta, *la*=lamellar seta, *int*=interlamellar seta, *exa*=anterior exobothridial seta, *ss*=sensillus, *bo*=bothridium, *ta*, *te*, *ti*, *ms*, r_1, r_2, r_3, p_1, p_2, p_3=notogastral setae, *ia*, *im*=dorsal fissures.

and *ti* antero-dorsal, *ms*, r_2 mid-dorsal, r_3 medio-lateral, r_1 postero-dorsal, and p_1, p_2, p_3 postero-marginal ; humeral setae *ta* well-developed being smallest, setae *te* longest among the notogastral setae ; distance *ti*—*ti* $<r_1—r_1<ms—ms<r_2—r_2$; distance *ta*—*ta* $<te—te<r_3—r_3$; setae *ms* situated a little closer to *ti* than to r_2 ; the fissure *ia* a longitudinal slit, located immediately behind *ta* ; lyrifissure *im* aligned transversely in front of setae r_3.

Ventral plate with a few scattered irregular foveoles and light spots ; each anal plate about $3\frac{1}{2}$ times as long as wide, with

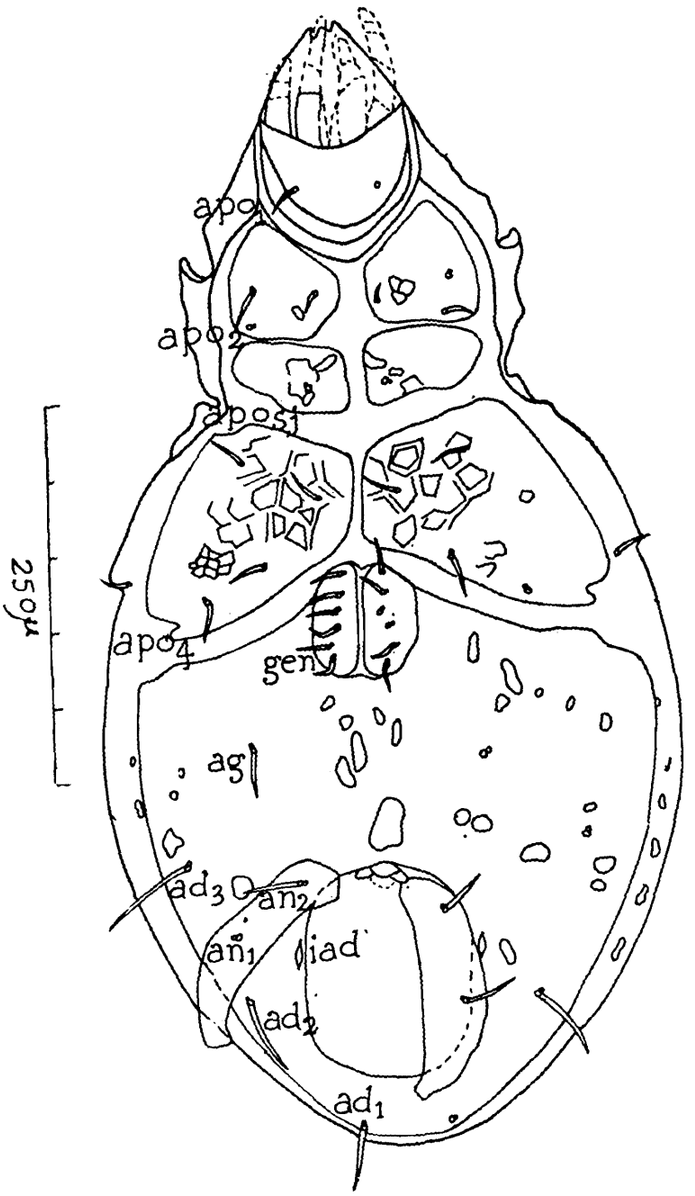

Fig. 2. *Oppia cryptomeriae* sp. nov. (Ventral view), an_1, an_2=anal setae, ad_1, ad_2, ad_3=adanal setae, *iad*=adanal fissure, *gen*=genital plate, *ag*=aggenital seta, apo_1, apo_2, apo_{sj}, apo_4=apodemata.

2 smooth, homotrichous setae, 29-30 long, an_1 inserted at about the middle and an_2 anteriorly on anal plate, their mutual distance about 1½ times as long as their individual length ; adanal setae 3 pairs, smooth, 40-65 long, ad_1 postero-marginal, ad_2 mid-lateral and ad_3 antero-marginal to anal aperture ; setae $ad_3 > ad_2 > ad_1$, distance $ad_1—ad_1 < ad_2—ad_2 < ad_3—ad_3$; *iad* a distinct slit, aligned closely parallel to the lateral border of anal aperture medially ; each genital plate about 2 times as long as broad, with 6 small, homotrichous setae, 14-15 long, arranged equidistantly in a linear fashion on the middle of the genital plate ; aggenital setae 1 pair, smooth, simple, 25-30 long, situated close to the genital than to the anal aperture, their mutual distance twice the maximum width of the genital plates.

Epimeral region reticulated ; sternal ridges completely developed in epimeres I, II, III and IV ; apo_1, apo_2, apo_{3j}, apo_4 distinct, apo_3 absent ; epimera I and II completely separated, III and IV fused ; epimeral setae simple, smooth, 10-20 long ; setal formula of epimerata 3-1-2-3.

All legs monodactylous, claws slightly curved.

Holotype : Adult ♀, INDIA : W. Bengal : Darjeeling, Darjeeling forest Div., Tonglu forest range, Palmajua forest bunglow area (from rotten leaves of *Cryptomeria japonica*), 2300 m., 16.viii.1977 (*B. K. Mondal* Coll.) ; paratypes : 2 adult ♀ ♀, same data as for holotype ; paratype : adult ♀, INDIA : W. Bengal : Darjeeling, Darjeeling forest Div., Ghum-Simana forest range, Sukiapokhri forest block (from decomposed leaves of *Cryptomeria japonica*), 2100 m., 21.ix.1978 (*B. K. Mondal* Coll.) ; deposited in the laboratory of the Department of Zoology, Presidency College, Calcutta.

This new species approaches close to *Oppia arcualis* Berlese, 1913, in body shape, in the nature of rostrum, in the arrangement of prodorsal ridges, location of lamellar, interlamellar, exobothridial and notogastral setae, in the structure of the sensilla, position of anal, adanal, aggenital setae, situation of *iad* and general configuration of the epimeral region, besides a few other characters. It can easily be separated from Berlese's (1913) species in having long interlamellar setae, posterior distal 'thread' of sensillus 5-times as long as the anterior one, long, smooth, curved notogastral setae, genital setae arranged equidistantly and medially on genital plates and in the absence of 4 large light spots between the interlamellar setae.

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