

SOME ORIBATID MITES (ACARINA :
CRYPTOSTIGMATA) FROM MEGHALAYA
WITH DESCRIPTION OF THREE NEW SPECIES

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INTRODUCTION

The oribatid mite fauna of the eastern Himalaya was little known through the report of only a few oribatid species from Darjeeling, West Bengal. The present paper is based on a small collection from Shillong, Meghalaya. Altogether 7 species belonging to 7 genera under 6 families are reported, of which 3 are new to science while the rest are new to the state. The genera *Mesotritia* and *Euphthiracarus* are reported here for the first time from India. All measurements are in microns. The types are deposited in the National Collection of the Zoological Survey of India, Calcutta.

***Mesotritia indica* sp. n.**

(Figs. 1-3)

Colour light brown ; length of the body 552, width 425 ; length of the aspis 310, width 195.

Dorsum of the aspis finely granulated, a single lateral carina on each side of aspis, rostral setae (34) inserted well behind the lamellar setae, fine, smooth, a little shorter than lamellar setae ; lamellar setae (40) fine, smooth ; inter-lamellar setae (34) fine, smooth ; sensillus short about the same length as the lamellar setae, slightly thickened with blunt head ; a pronounced scale below bothridium.

Notogaster minutely granulated with fine lines of striation ; fourteen pairs of fine, short setae on notogaster, length of notogastral setae ranges between 34-40.

Genital plate completely separated from the aggenital plate by a distinct suture, six pairs of minute genital setae ;

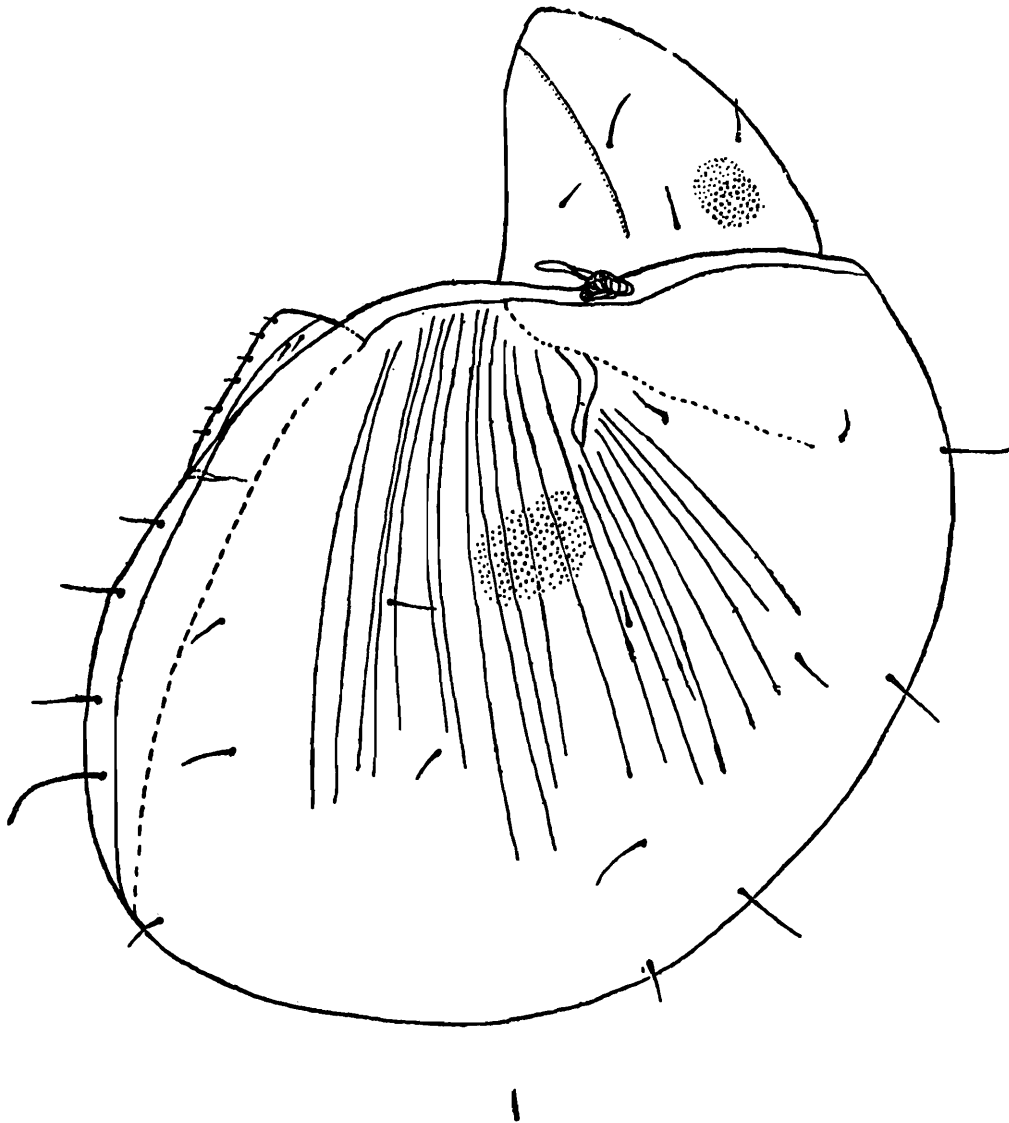


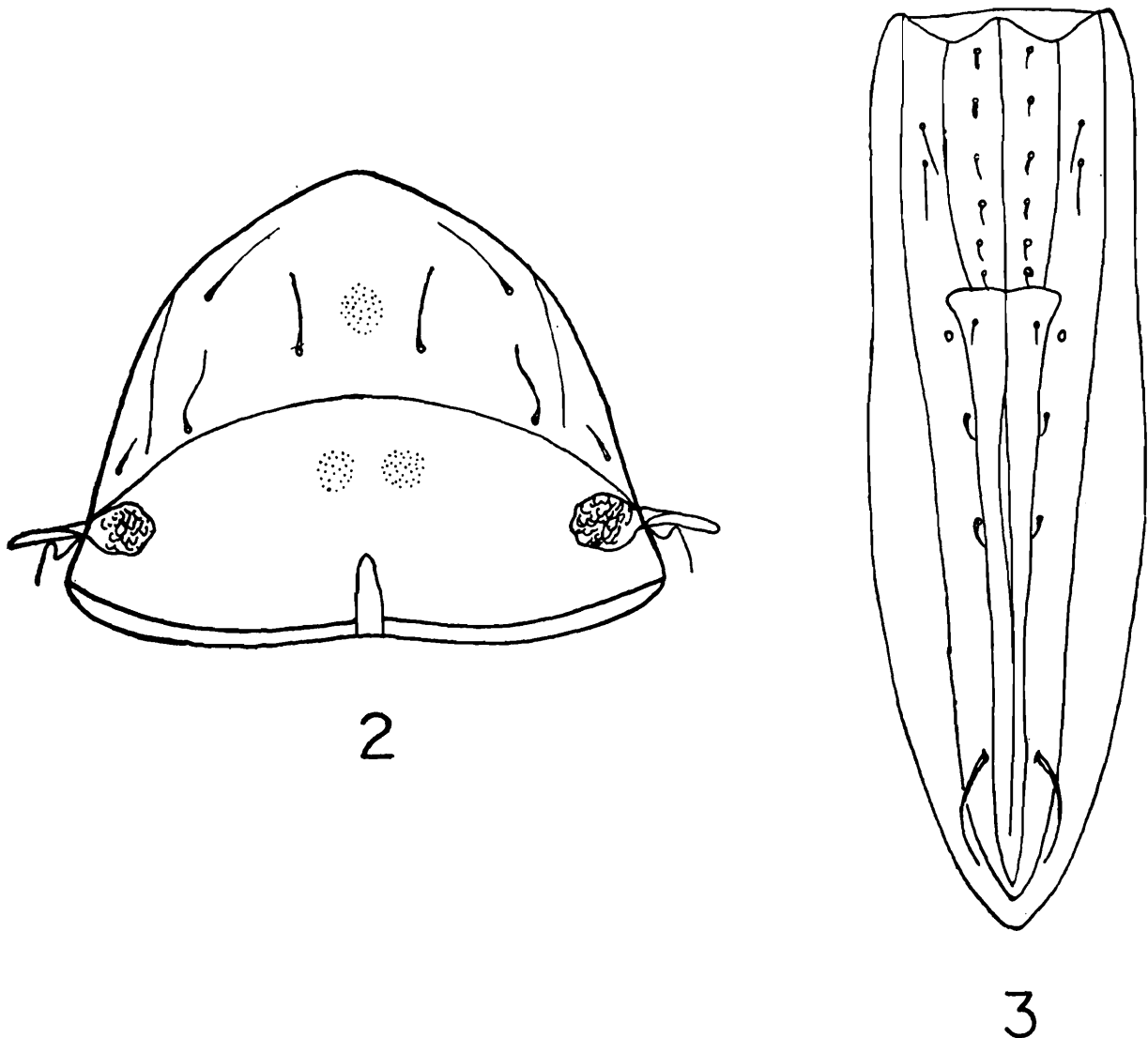
Fig. 1. *Mesotritia indica* sp. n. : Lateral

two pairs of fine aggenital setae occupy the middle portion of the aggenital plate, about half the length of ad_3 ; oblique fissure between aggenital and adanal plates absent, anal plate with single pair of minute setae, adanal plate with 3 pairs of setae, ad_1 and ad_2 minute, ad_3 much longer than the remainders ; a pair of distinct adanal fissure (iad) situated near the anal setae.

All the tarsi triheterodactyl.

Holotype : Adult ♀, India : Meghalaya ; Shillong : Laitkor protected forest, altitude 1929 m, from pine forest litter and soil, 15.vii.1981, coll. V. T. Darlong.

Remarks : The new species is closely related to *Mesotritia* (*Mesotritia*) *testacea* Forsslund, 1963 and *Mesotritia maerkeli*



Figs. 2 & 3. 2. *Mesotritia indica* sp. n. : Aspis, 3. *Mesotritia indica* sp. n. : Genito-anal region

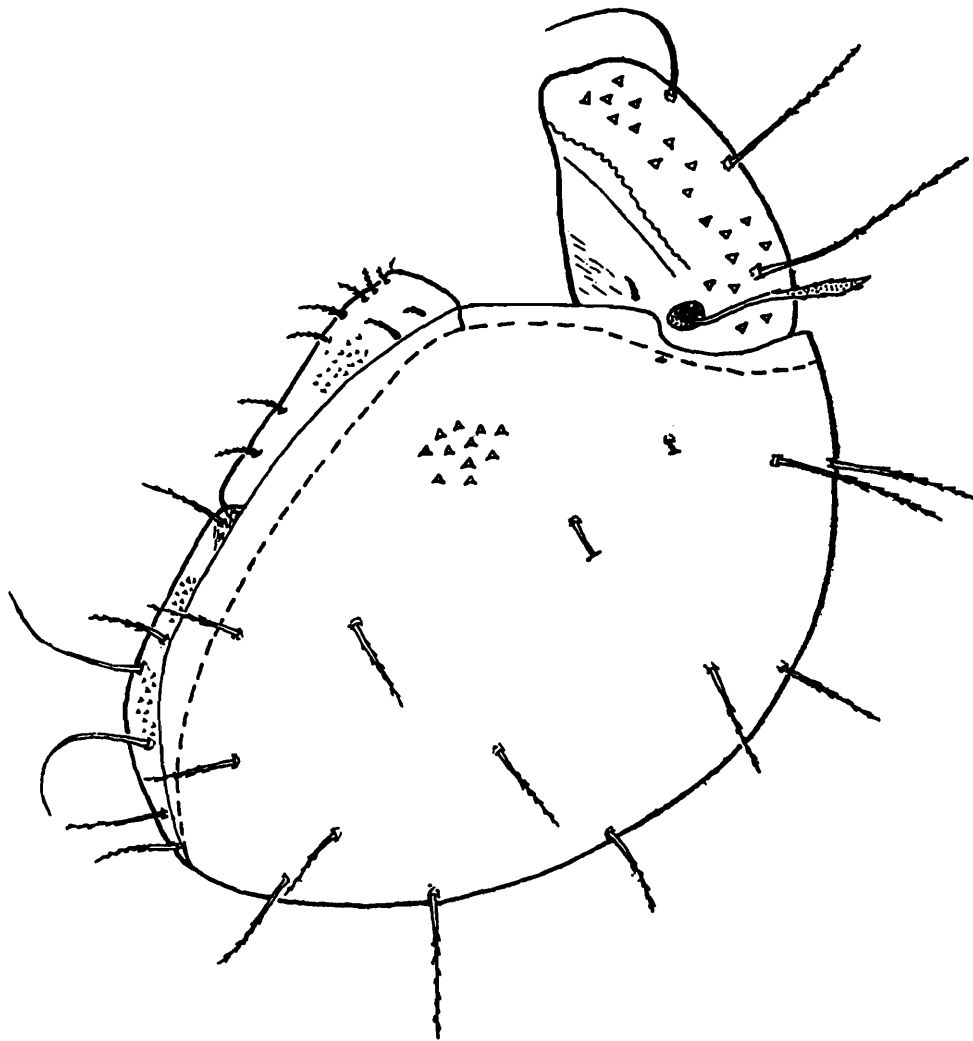
Sheals, 1965 in the character of body size and prodorsal and notogastral setae, but it is easily distinguishable from the *testacea* and *maerkeli* by the finely granulated body with fine striations, small rostral setae, shape of sensilla and position of aggenital setae. The genus *Mesotritia* is reported here for the first time from India.

***Euphthiracarus meghalayensis* sp. n.**

(Figs. 4-6)

Colour light brown ; length of the body 586, width 460 ; length of aspis 264.

Aspis with two lateral carinae on each side, the upper one slightly irregular and strong, the lower one weak; surface of aspis between the upper carinae sculptured with papillae, the remaining portion of aspis smooth; rostral setae long (126-138), smooth, directed outward and bent downward; lamellar setae long (103-115), finely barbed,



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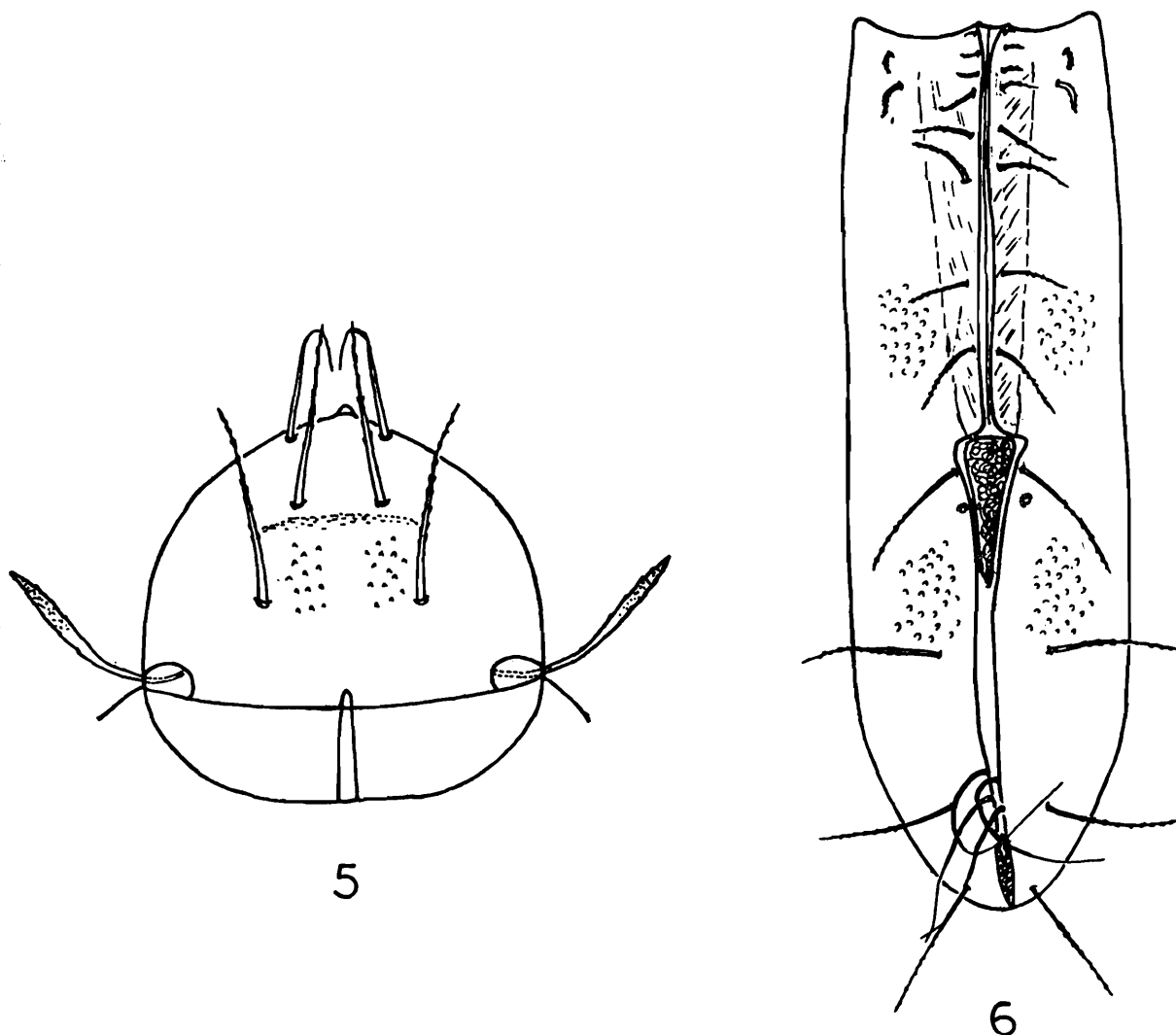
Fig. 4. *Euphthiracarus meghalayensis* sp. n. : Lateral

interlamellar setae long (138-155), stout, finely barbed; sensillus (92-115) with apical portion weakly thickened and minutely serrated; very pronounced scale below the bothridium; exobothridial seta short and fine.

The whole surface of notogaster distinctly sculptured with papillae; fourteen pairs of notogastral setae, long (69-115), erect, minutely barbed.

Genito-aggenital region with distinct papillae; 8 pairs

of genital setae on each side, minutely barbed, unequal in length; ano-adanal region sculptured with minute papillae,



Figs. 5 & 6. 5. *Euphthiracarus meghalayensis* sp. n. : Aspis, 6. *Euphthiracarus meghalayensis* sp. n. : Genito-anal region.

papillae not so large and clear as on notogaster, adanal setae ad_1 - ad_3 and anal seta an_3 strong, weakly barbed, an_1 and an_2 glabrous, long and whip like, the tip of an_1 strongly curved backward.

All the tarsi triheterodactyl.

Holotype : Adult ♀, India : Meghalaya : Shillong : Laitkor protected forest, altitude 1929 m, from pine forest litter and soil, 15.vii.1981, coll. V. T. Darlong. *Paratypes* : 2 ♀ ♀, data same as above.

Remarks : The new species differs from all other species of *Euphthiracarus* by the presence of distinct papillae on the

body surface, smooth *ro*, number of genital setae and size of aggenital setae. The genus *Euphthiracarus* is reported here for the first time from India.

***Rhysotritia ardua* (Koch) var. *otaheitensis* Hammer**

Rhysotritia ardua (Koch) var. *otaheitensis* Hammer, 1972. *Biol. Skr. Dan. Vid. Selsk.*, 19(3) : 12.

Material examined : 1 ♀, India : Meghalaya : Shillong : Laitkor protected forest, altitude 1929 m, from pine forest litter and soil, 15.vii.1981, coll. *V. T. Darlong*.

Distribution : India : West Bengal, Meghalaya (new record) ; Tahiti.

Remarks : The material from Meghalaya agrees with the drawings and descriptions of *Rhysotritia ardua* (Koch) var. *otaheitensis* except in the length of the body which is slightly larger in the present specimen.

***Eremobelba shillongensis* sp. n.**

(Figs. 7-8)

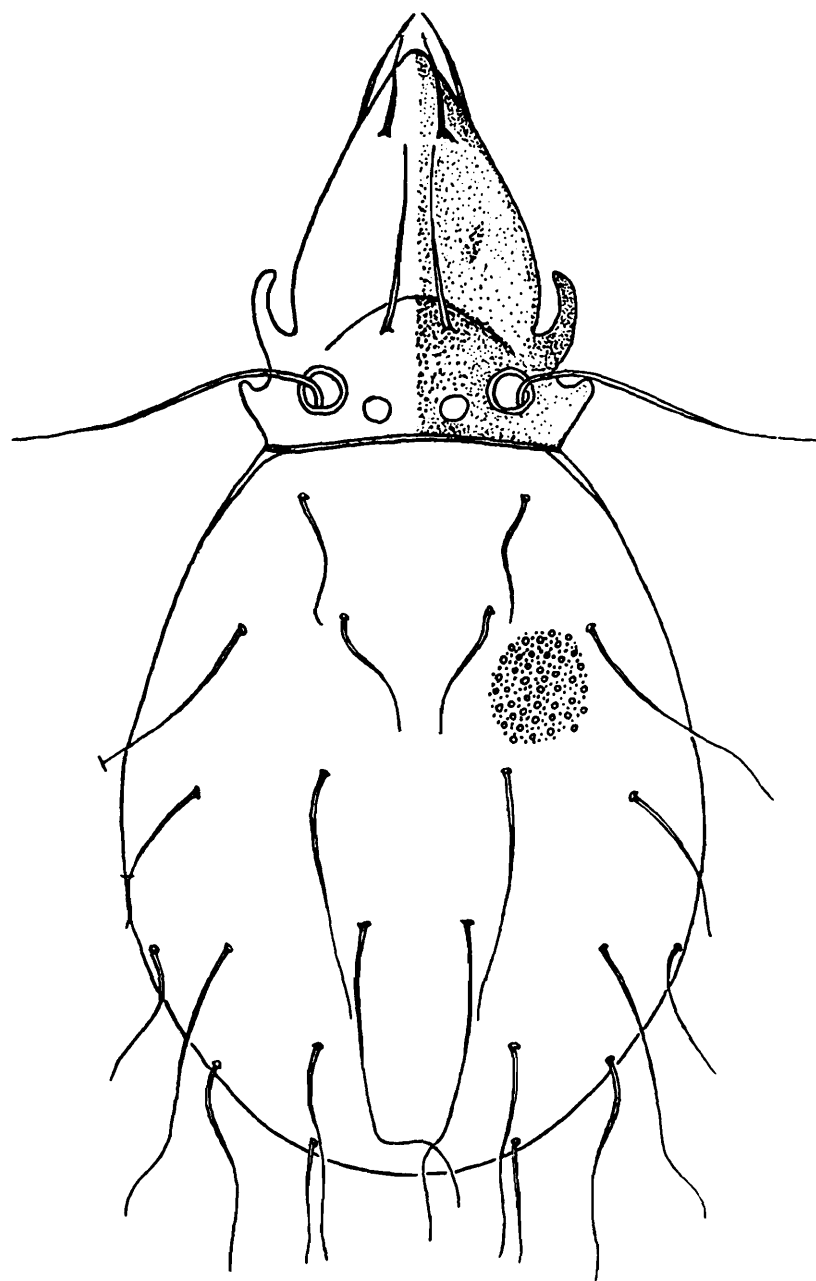
Colour light brown ; length of the body 563, width 333.

The surface of prodorsum unevenly granulated, the granules at the posterior region of prodorsum, near bothridium, dense and form an arched elevation, middle portion of prodorsum with fine punctations ; rostral setae (57) slightly longer than lamellar setae, smooth, fine, directed outward and curved inward, tips nearly meeting each other ; lamellar setae (34) smooth, fine, straight ; interlamellar setae long (103), smooth, fine, straight, extended beyond the middle of prodorsum ; sensillus long (161), flagellate, smooth ; a pair of circles in between bothridia.

Notogaster with cerotegument, broad, posteriorly rounded, anterior margin straight, foveolated, small granules on the notogaster throughout, eleven pairs of notogastral setae, long (max. 142), flagellate, smooth.

Ventral region finely granulated ; infracapitulum with

two pairs of small smooth hairs ; epimeral setal formula 3-1-3-3, setae 1C, 3C and 4C with six branches, others



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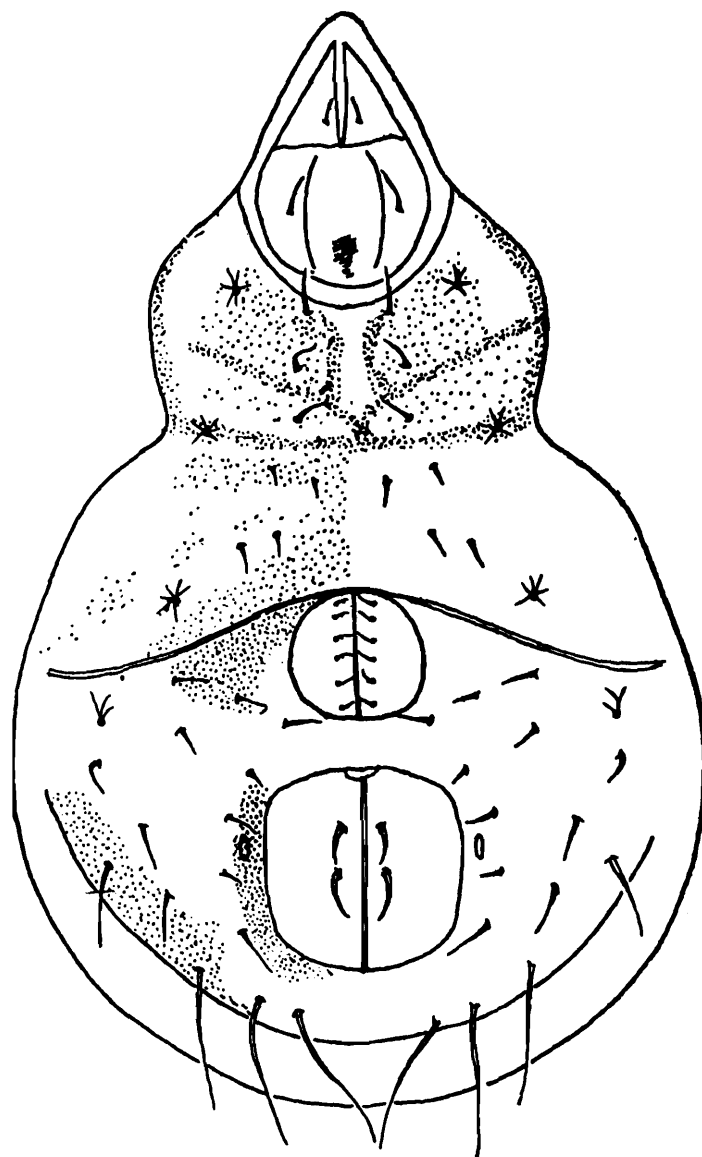
Fig. 7. *Eremobelba himalayensis* sp. n. : Dorsal

smooth ; 16 pairs of setae on the ventral plate, one pair of setae with three branches, others smooth, three posterior pairs of setae long and flagelliform ; genital setae 6 pairs, minute, smooth ; anal setae 2 pairs, smooth.

Legs monodactyl.

Holotype : Adult ♀, India : Meghalaya ; Sillong : Laitkor protected forest, altitude 1929 m, from pine forest

litter and soil, 15.vii.1981, coll. V. T. Darlong. Paratype :
1 ♀, data same as above.



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Fig. 8. *Eremobelba himalayensis* sp. n. : Ventral

Remarks: The new species is related to *Eremobelba japonica* Aoki, 1959, *E. nagaroorica* Haq, 1978 and *E. himalayensis* Mondal & Kundu, 1984. However, it is distinguishable from *E. japonica* by granulations of the body and long interlamellar setae and from *E. nagaroorica* and *E. himalayensis* by the presence of smooth interlamellar setae and sensillus, absence of notogastral elevatinn, smooth setae on infracapitulum, number of branched setae on epimeral and ventral plates.

Dolicheremaeus coronarius Chakrabarti, Bhaduri and Kundu

Dolicheremaeus coronarius Chakrabarti, Bhaduri and Kundu, 1981, *Mitt. Zool. Mus. Berlin*, 57(1) : 15.

Material examined : 3 ♀ ♀ , India : Meghalaya : Shillong : Laitkor protected forest, altitude 1959 m, from pine forest litter and soil, 15.vii.1981, coll. V. T. Darlong.

Distribution : India : West Bengal, Meghalaya (new record).

Remarks : The present species shows distinct resemblance with *D. coronarius* Chakrabarti, Bhaduri and Kundu from Darjeeling Himalaya, West Bengal, India except in having weakly developed *co. pm.* and *co. nm.* The species is represented here for the second time from Indian sub-continent.

Suctobelba quadricarina Hammer

Suctobelba quadricarina Hammer, 1958. *Biol. Skr. Dan. Vid. Selsk.*, 10(1) : 43.

Material examined : 1 ♀ , India : Meghalaya : Shillong : Laitkor protected forest, altitude 1929 m., from pine forest litter and soil, 15.vii.1981, coll. V. T. Darlong.

Distribution : India : West Bengal, Meghalaya (new record) ; Argentina.

Remarks : The present species is well in accord with the original description and figures of *S. quadricarina* from Argentina. The species is recorded here for the second time from India.

Galumna crenata Deb and Raychaudhuri

Galumna crenata Deb and Raychaudhuri, 1975. *Annot. Zool. Japan*, 48(3) : 167.

Material examined : 4 ♀ ♀ , India : Meghalaya : Shillong : Laitkor protected forest, altitude 1929 m, from pine forest litter and soil, 15.vii.1981, coll. V. T. Darlong.

Distribution : India : West Bengal, Meghalaya (new record).

Remarks : The present species is well in accord with the original description and figures of *G. crenata* Deb and Raychaudhuri from West Bengal, India. The species is reported here for the second time from Indian sub-continent.

SUMMARY

Seven oribatid mite species belonging to seven genera under six families from Meghalaya, India are treated in this paper. Of these, 3 species viz., *Mesotritia indica* sp. n., *Euphthiracarus meghalayensis* sp. n. and *Eremobelba shillongensis* sp. n. are new to science. The first two genera mentioned above are reported here for the first time from India. Four other species are new record for the state.

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