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ON A COLLECTION OF ORIBATEI (ACARI : CRYPTOSTIGMATA) FROM SILENT VALLEY, KERALA (INDIA) WITH DESCRIPTIONS OF SIX NEW SPECIES

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INTRODUCTION

During the course of investigation of faunal wealth of Silent valley, Kerala, India, by a survey party of Zoological Survey of India, soil dwelling oribatid mites were collected on which the present psaper is based. Altogether 19 species belonging to 15 genera under 14 families are treated of which 6 species are new to science and 4 genera *(Camisia, Gibbicepheus, Oppiella, Lauritzenia)* and 7 species are recorded 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.

Family MESOPLOPHORIDAE

1. ***Mesoplophora*** sp.

Material examined : 1 ♀, India : Kerala, Silent valley; 10 kms north west of camp 2 at Valliyaparathodu, 24.i.1980. ex soil and litter, coll. S.K. Bhattacharyya.

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

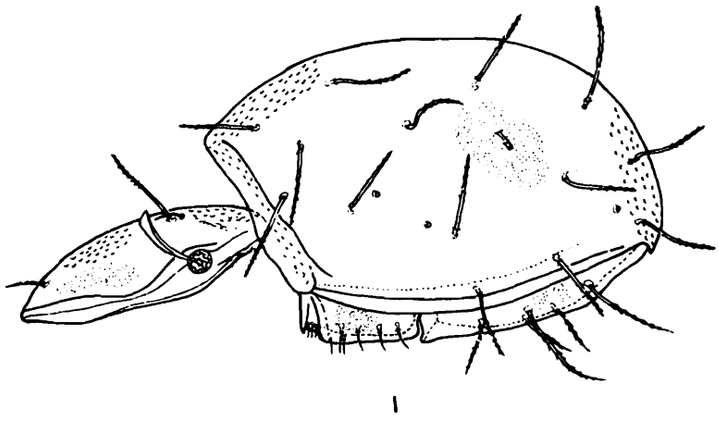
Remarks : The specific identification was not possible as the specimen is damaged. So far, this genus was recorded from West Bengal and now it is being reported for the first time from Kerala.

Family PHTHIRACARIDAE

2. ***Hoplophthiracarus indicus*** n. sp.
(Figs. 1-3)

Colour of the body light yellowish; length of the notogaster 404, height 309; length of aspis 247.

Aspis flat and narrow; distinct lateral carina arising from above bothridium and running almost parallel with lateral margin of aspis on the distal half, lateral carina touches the tip of aspis; rostral setae (29.2) slightly longer than lamellar setae, situated a little distance away from the tip of the aspis, directed outward and curved downward, smooth, thin, pointed; lamellar setae (20.9) 1/3 as long as interlamellar setae, fine, smooth, pointed; interlamellar setae long (66.8), thick, minutely barbed on its distal half, directed dorsoanteriad; sensillus (62.7) slender, weakly winding near base, head elongate and hyaline shaped; exobothridial setae very minute; fine foveolation on the dorsal surface of aspis, rest portion of aspis punctated.



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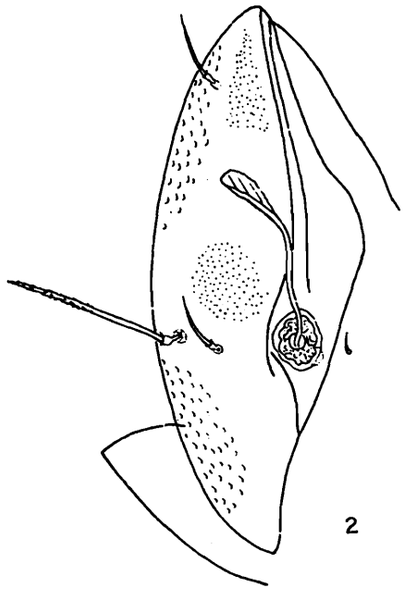

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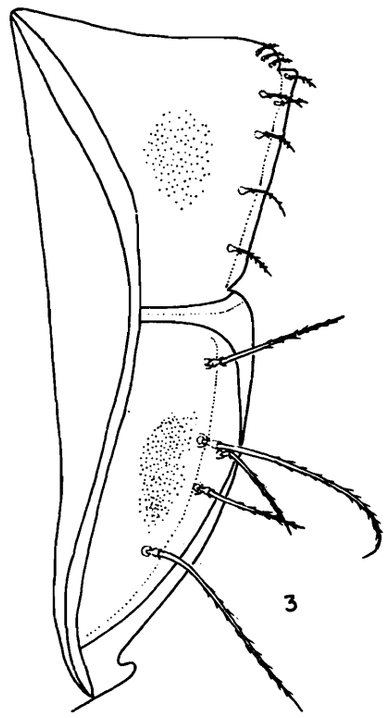

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Figs. 1. *Hoplophthiracarus indicus* n.sp. : Lateral view; 2. *Hoplophthiracarus indicus* n.sp. : Aspis; 3. *Hoplophthiracarus indicus* n.sp. : Genito-anal region.

Notogaster weakly convex, fifteen pairs of notogastral setae, moderately long (62.7 - 66.8), thick, barbed on their distal half, slightly bending towards anterior direction, c_3 slightly longer than c_2, c_1 and c_3 with nearly equal distance from the anterior margin of notogaster, h1 the longest setae, mutual distance between $h_3 - ps_4$ longer than the distance between $ps_3 - ps_4$, notogastral surface densely punctated.

Genital as well as anal plate lightly punctated, nine pairs of genital setae, four pairs placed somewhat distant from the inner margin of genital plate, two pairs close to the margin, munute, three pairs on the anterior appendage of genital plates; five pairs of setae on ano-adanal plates, all setae weakly barbed; an_1 and an_2 subequal in length and in thickness to ad_3, ad_1 and ad_2 very long, thick, ad_2 longer than the longest notogastral setae h_1, finely barbed.

All tarsi with one strong claw.

Holotype : ♀, India : Kerala, Silent valley, 13 kms away from Valliyaparathodu, 28.i.1980, ex soil and litter, coll. S.K. Bhattacharyya *Paratype* : 1 ♀, data same as for holotype.

Remarks : The new species bears close similarity with *Hoplophthiracarus kugohi* Aoki, 1959, in the general configuration of the body and in a number of characters. It can, however, be distinguished from Aoki's species by the absence of longitudinal striations between *in* and *la* and dense punctation of the body.

Family EUPHTHIRACARIDAE

3. *Rhysotritia ardua* (Koch)

1841. *Hoplophora ardua* Koch, *Deutschlands Crustaceen, Myriapoden and Arachniden*, **32** : 15.

1959. *Rhysotritia ardua* (Koch) : Markel and Meyer,, *Zool. Anz.*, **163** : 329.

1980. *Rhysotritia ardua* : Mishra, Bhaduri and Raychaudhuri, *Sci. & Cult.*, **46** : 225; Singh and Mukherjee, 1971, *Oriental Ins.* **5**(4) : 489.

Material examined.: 2 ♀♀, India : Kerala, Silent valley, Valliyaparathodu, 23.i.1980, ex soil and litter, coll. S.K. Bhattacharyya; 2 ♀♀, India, Kerala, Silent valley, 10 kms North west of Valliyaparathodu, 24.i.1980, ex soil and litter, coll. S. K. Bhattacharyya; 4 ♀♀, India : Kerala, Silent valley, 13 kms away from valliyaparathodu, 28.i.1980, ex soil and litter, coll. S.K. Bhattacharyya.

Distribution : India : Kerala (new record), Orissa, Uttar Pradesh.

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

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

1981. *Rhysotritia ardua* (Koch) var. *otaheitensis* : Sanyal, *Progress in Soil Biology and Ecology in India* (ed. G.K. Veeresh), *UAS Tech. Series No.* **37** : 109; Sanyal, 1982, *J.Soil Biol. Ecol.*, **2**(1) : 10.

Material examined : 1 ♀, India : Kerala, Silent valley, 10 kms. away from Valliyaparathodu on Palghat Road, 25.i.1980, ex soil and litter, coll. S.K. Bhattacharyya; 1 ♀, India : Kerala, Silent valley, 13 kms away from valliyaparathodu, 28.i.1980, ex soil and litter, coll. S.K. Bhattacharyya.

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

Family CAMISIIDAE

5. ***Camisia*** sp.

Material examined : 1 Protonymph, India : Kerala, Silent valley, 10 kms north west of camp 2 at Valliyaparathodu, 24.i.1980, ex soil and litter, coll. S.K. Bhattacharyya.

Distribution : India : Kerala (new record).

Family HERMANNIIDAE

Genus ***Phyllhermannia***

Key to the Indian Species of the genus ***Phyllhermannia***

1. Body foveolated with punctation; chitinized ridge above the interlamellar setae ..... *foveolatus* n. sp.

   Body punctated; chitinized ridge below or in between the interlamellar setae 2

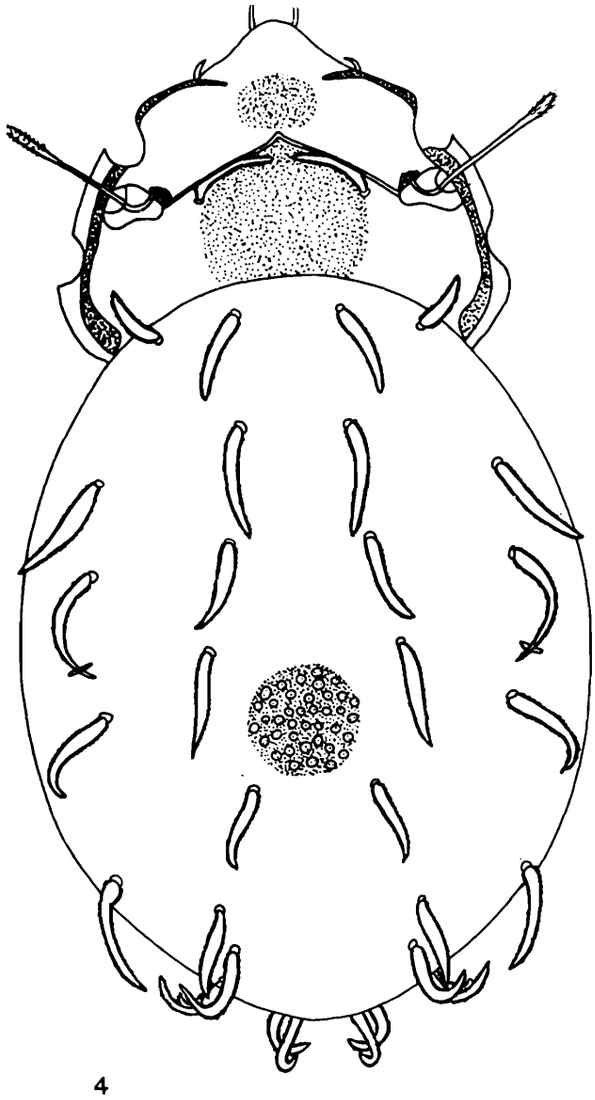
2. Chitinized ridge below the interlamellar setae, notogastral setae 16 pairs; genital setae 9 pairs ..... *punctatus* n.sp.

   Chitinized ridge in between the interlamellar setae; notogastral setae 15 pairs; genital setae 18 pairs ..... *berlesei* Mondal

6. ***Phyllhermannia foveolatus*** n.sp.
(Figs. 4-5)

Colour blackish brown; length of the body 840, width of the body 470.

The whole surface of prodorsum punctated, specially posterior part more densely punctated, prodorsum broader than long, one round shaped hump above the first leg; rostrum conical, rostral setae smooth, thin, pointed, slightly shorter than their mutual distance (29); lamellar setae (20.5) situated on the lateral side of the prodorsum, very thin, smooth, pointed; interlamellar setae situated below the chitinized arch between the pseudostigmata, sword like, pointed, margins rough, long(71), half as long as to their mutual distance; a strong ridge on either sides lateral to the pseudostigmata; pseudostigmatic organ (120) rod shaped, stem compressed, tip with fine bristles, less than half as long as to their mutual distance.



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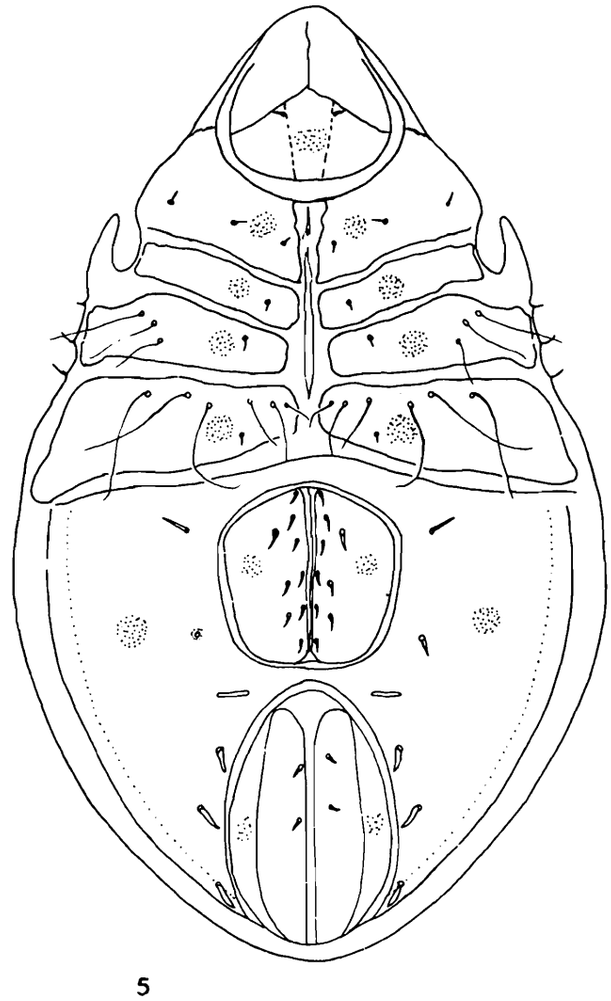

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Figs. 4. *Phyllhermannia foveolatus* n. sp. : Dorsal view; 5. *Phyllhermannia foveolatus* n. sp. : Ventral view.

Notogaster oval, foveolated and punctated; notogastral setae sixteen pairs, long (45.8 - 91.7), narrowly leaf shaped, curved, tips pointed, margins rough, d_2, e_2 and f_2 curved inward, ps_1 and ps_2 curved inward like hook, h_1, h_2 and ps_2 curved outward, setal pores luminous.

The whole ventral surface densely punctated; hypostome rounded; hypostomal setae situated in the middle of the infracapitulum, minute, smooth; apodemata distinct, chitinized, median ridge prominent; epimeral setal formula 3-1-4-7, setae *3a*, *3b*, *3c*, *4a*, *4b*, and *4c* very long (max. 95), fine, smooth, other setae minute, smooth; genital plate smaller than anal plate, nine pairs of genital setae, six on the inner margin and other three on the middle of the genital plate, minute, smooth; aggential setae two pairs, one near anterior part and the other near posterior part of genital field, munute, stiff, smooth; adanal fissures distinct, situated obliquely in front of anal field; adanal setae three pairs, short, thick, smooth; anal setae two pairs, minute, smooth, placed on the inner margin of anal plate.

Legs monodactylous, foveolated and punctated; few setae long, leaf lick, others string like.

Holotype : ♀, India : Kerala, Silent valley, near Valliyaparathodu camp, 22.i.1980, ex. soil and litter, coll. S.K. Bhattacharyya. *Paratypes* : 2 ♀♀, data same as for holotype.

Remarks : The new species is well in accord with the description and diagrams of *Phyllhermannia gladiata* Aoki, 1965 by the general body shape, presence of hump on the prodorsum, number and shape of notogastral setae. But it differs from *P. gladiata* by the absence of a ridge on the base of the prodorsum and the ridge on the anterior part of notogaster and by the presence of thin arch on the middle of prodorsum, apically compressed barbed pseudostigmatic organs, inwardly curved posterior notogastral setae and notogastral foveolation. The species also shows some resemblance to the Indian species *P. berlesei* Mondal, 1984 in general body shape and shape of the notogastral setae. But it can easily be separated from Mondal's species in the absence of ridges on the prodorsum and notogaster, in the presence of barbed sensilla, 16 pairs of notogastral setae and 9 pairs of genital setae.

7. ***Phyllhermannia punctatus*** n.sp.
(Figs. 6-7)

Colour of the body blackish brown; length of the body 840, width of the body 483.

Prodorsum punctated, area between interlamellar setae and anterior border of hysterosoma more densely punctated; the margin of prodorsum above the first leg round shaped like a hump; rostral setae smooth, thin, pointed, slightly shorter than their mutual distance (33.4); lamellar setae (10.4) situated just above the hump, smooth, thin, pointed, about four times smaller as to their mutual distance (87.7); interlamellar

setae sword like, apex pointed, margins rough, about half the length of their mutual distance (133.7); a thin arch between the interlamellar setae; pseudostigmatic organ long (127.0), rod like, stem compressed at the tip with fine bristles, less than half of their mutual distance; one semilunar shsaped chitinized ridge on the posterior part of prodorsum.

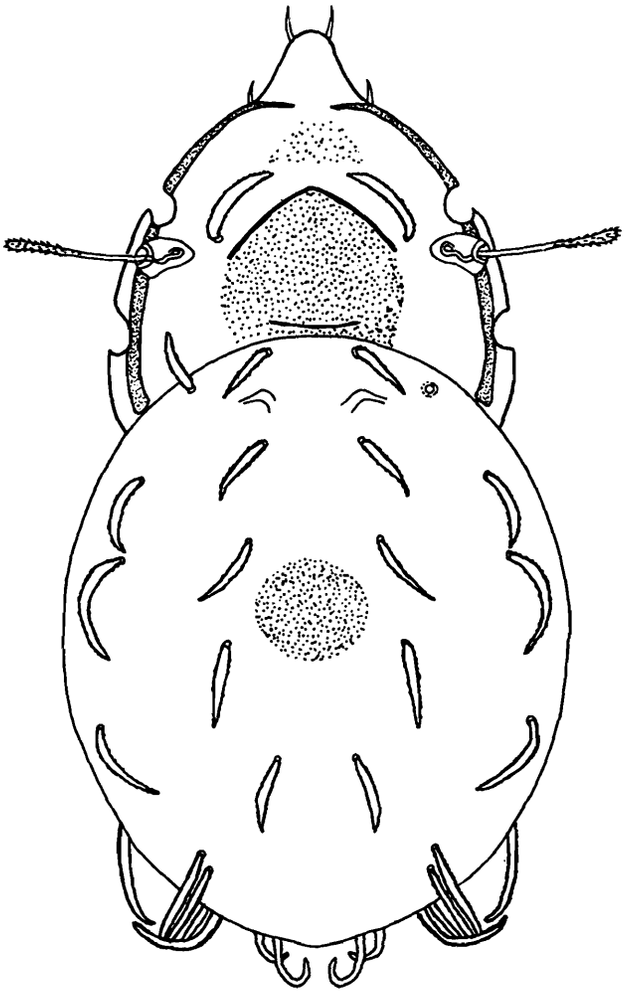
Notogaster oval shaped, punctated, a pair of chitinized ridge on the anterior part of notogaster, notogastral setae sixteen pairs, long (41-90), sword like, pointed tips, d_2, e_2 and f_2 curved, tips of ps_1 and ps_2 curved inward like hook, h_1, h_2 and ps_3 outwardly curved; setal pores prominent.

The whole ventral surface densely punctated, hypostome rounded; a chitinized ridge on the infracapitulum; hypostomal setae minute, smooth, situated on the middle of the infracapitulum; apodemata distinct, chitinized; median ridge prominent; epimeral setal formula 3-1-4-7, setae *3a*, *3b*, *3c*, *4a*, *4b* and *4c* long (Max. 91), fine, smooth; other setae minute, smooth; genital plate smaller than anal plate (188); genital setae nine pairs, six minute setae on the inner line, three others on the middle, comparatively long, smooth, pointed; aggenital setae two pairs, one near the distal part of the genital field, other near middle of the posterior part of epimeral plate IV, minute, smooth, pointed; adanal fissures distinct, situated obliquely in front of anal field; adanal setae three pairs, short, thick, smooth, pointed; two pairs anal setae, minute, smooth, situated on the inner line and middle of anal plate.

Legs monodactylous, densely punctated; long and minute setae of notogastral type.

Holotype : ♀, India : Kerala, Silent valley, 13 kms away from Valliyaparathodu, 28.i.1980, ex. soil and litter, coll. S.K. Bhattacharyya. *Paratypes* : 1 ♀, Kerala, Silent valley, near Valliyaparathodu camp, 22.i.1980, ex. soil and litter, coll. S.K. Bhattacharyya; 2 ♀♀, Kerala, Silent valley, 10 kms north west of camp 2 at Valliyaparathodu, 24.i.1980, ex. soil and litter, coll. S.K. Bhattacharyya.

Remarks : The species shows resemblance to *Phyllhermannia gladiata* Aoki, 1965 by general body shape, presence of hump on the prodorsum, ridge on the base of the prodorsum, number and shape of notogastral setae and small semilunar shaped ridge on the anterior part of notogaster. But it differs from *P gladiata* by the presence of thin arch on the middle of prodorsum, apically compressed barbed pseudostigmatic organ, inwardly curved posterior notogastral setae and notogastral punctation. The species also resembles *P. foveolatus* n.sp. in a mumber of characters but clearly differs from that in the presence of interlamellar setae above the chitinized arch, absence of semilunar shaped ridge on prodorsum and absence of foveolation on the body. Further, the new species are similar to the Indian species *P. berlesei* Mondal, 1984 in general body shape, body punctation and shape of notogastral setae. It can, however, be separatd from *berlesei* by the characters like shape of the ridges on prodorsum and notogaster, barbed sensillus, 16 pairs of notogastral setae and 9 pairs of genital setae.



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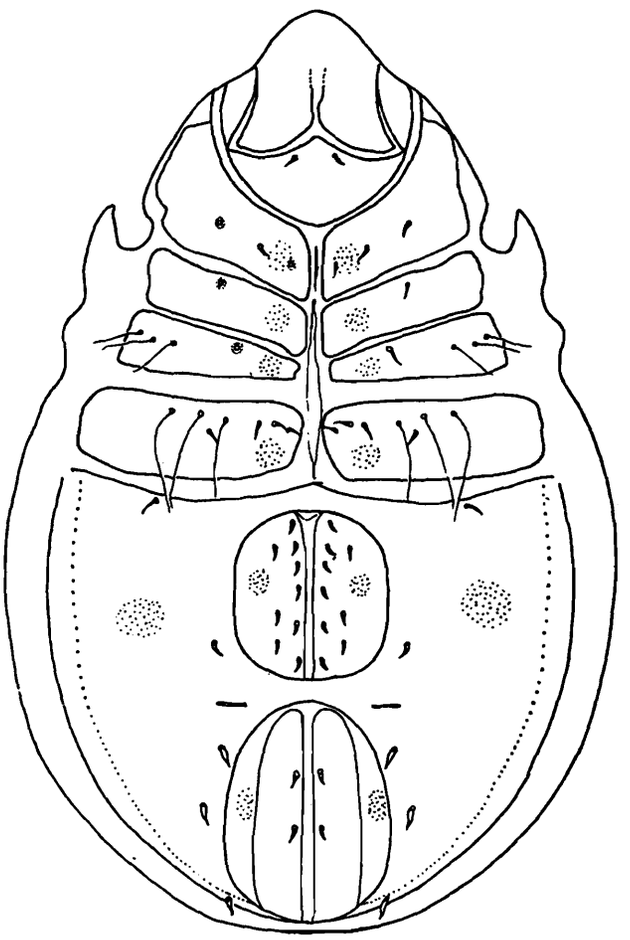

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Figs. 6. *Phyllhermannia punctatus* n. sp. : Dorsal view; 7. *Phyllhermannia punctatus* n. sp. : Ventral view.

Family CARABODIDAE

8. ***Gibbicepheus sisiri*** n.sp.
(Figs. 8-9)

Colour light brown; length of the body 564, width of the body 326.

The whole body surface finely punctated; prodorsum broad, flat; lamellae broad, width greater than rostral setae, distal part with two elongated light protions; rostral setae small (12.5); lameilar setae a little smaller than rostral setae, situated on the antero-lateral portion of lamella, fine, smooth, directed anteriorly; interlamellar setae long (62.7), directed outwardly, fine, smooth; bothridium cone shaped; sensillus erect to inclinate, filiform, aciculate.

Notogaster almost flat, broad; two fine longitudinal crest on the middle of hysterosoma; two more thick ridges situated latero-medially on the hysterosoma; one marginal ridge encircling the whole hysterosoma; fourteen pairs of notogastral setae, small (max. 34), fine, smooth, four pairs on the median crest, one pair near dorsosejugal suture, three pairs on latero-medial ridge, two pairs on marginal ridge, four pairs in postero-marginal position.

Hypostome round; one pair of setae in the middle of infracapitulum, fine, smooth; epimeral plates distinct, dark coloured; epimeres touching the lateral margin of the body; epimeral setal formula 3-1-3-3, setae fine, smooth; four pairs of genital setae, minute, fine, smooth; anal setae two pairs, minute, pointed; three pairs of adanal setae, fine, smooth, posterior two pairs of adanal setae in postanal position; adanal fissures distinct, situated obliquely away from the base of ad_3.

All legs monodactylous.

Holotype : ♀, India : Kerala, Silent valley, 10 kms north west of camp 2 at Valliyaparathodu, 24.i.1980, ex soil and litter, coll. S.K. Bhattacharyya.

Remarks : The new species can easily be differentiated from all other species under the genus by the combination of minute, fine, smooth setae, fine longitudinal crest on the middle of notogaster, thick median ridge on the hysterosoma and dense punctation of the body.

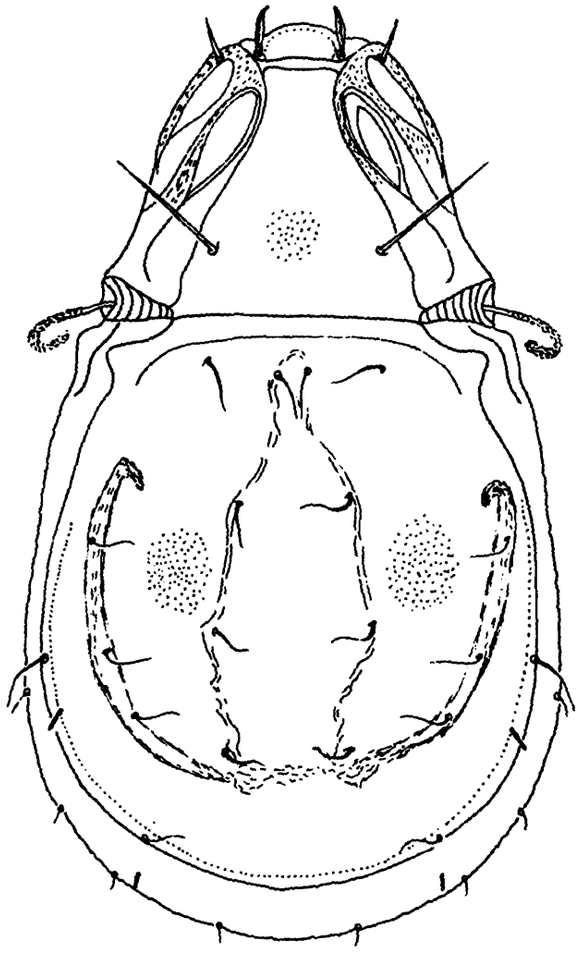
Family TECTOCEPHEIDAE

9. ***Tectocepheus velatus*** (Michael)

1880. *Tegeocranus velatus* Michel, *Journ. Roy. Micr. Soc.*, **3** : 190.

1895. *Tectocepheus velatus*, Berlese, Acari, Myriapoda et Scorpiones hucusque in Italia reperta, **77**.

1906. *Tectocepheus velatus*, Pearce, *Journ. Roy. Micr. Soc.*, 270; Chakrabarti *et al.*, 1979. *Acarology News letter*, 8 : 4; Mishra *et al.*, 1980, *Sci. & Cult.*, **46** : 226.



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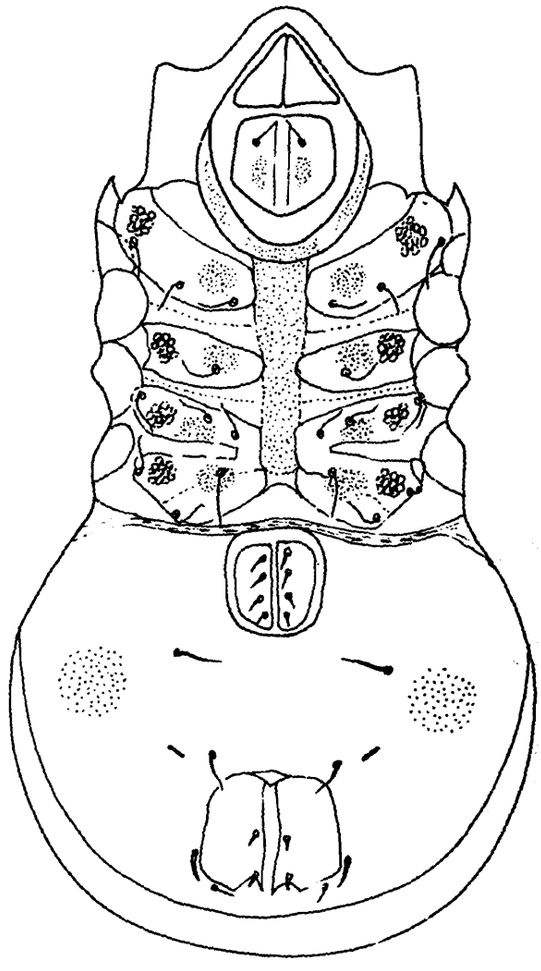

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Figs. 8. *Gibbicepheus sisiri* n. sp. : Dorsal view; 9. *Gibbicepheus sisiri* n. sp. : Ventral view.

Material examined : 2 *fem.fem.*, India : Kerala, Silent valley, Valliyaparathodu, 18.i.1980, ex soil and litter, coll. S.K. Bhattacharyya; 1 *fem.*, Silent valley, 13 kms away from Valliyaparathodu, 28.i.1980, ex soil and litter, coll. S.K. Bhattacharyya.

Distribution : India : Kerala (new record), Orissa, Sikkim, West Bengal.

Family OTOCEPHEIDAE

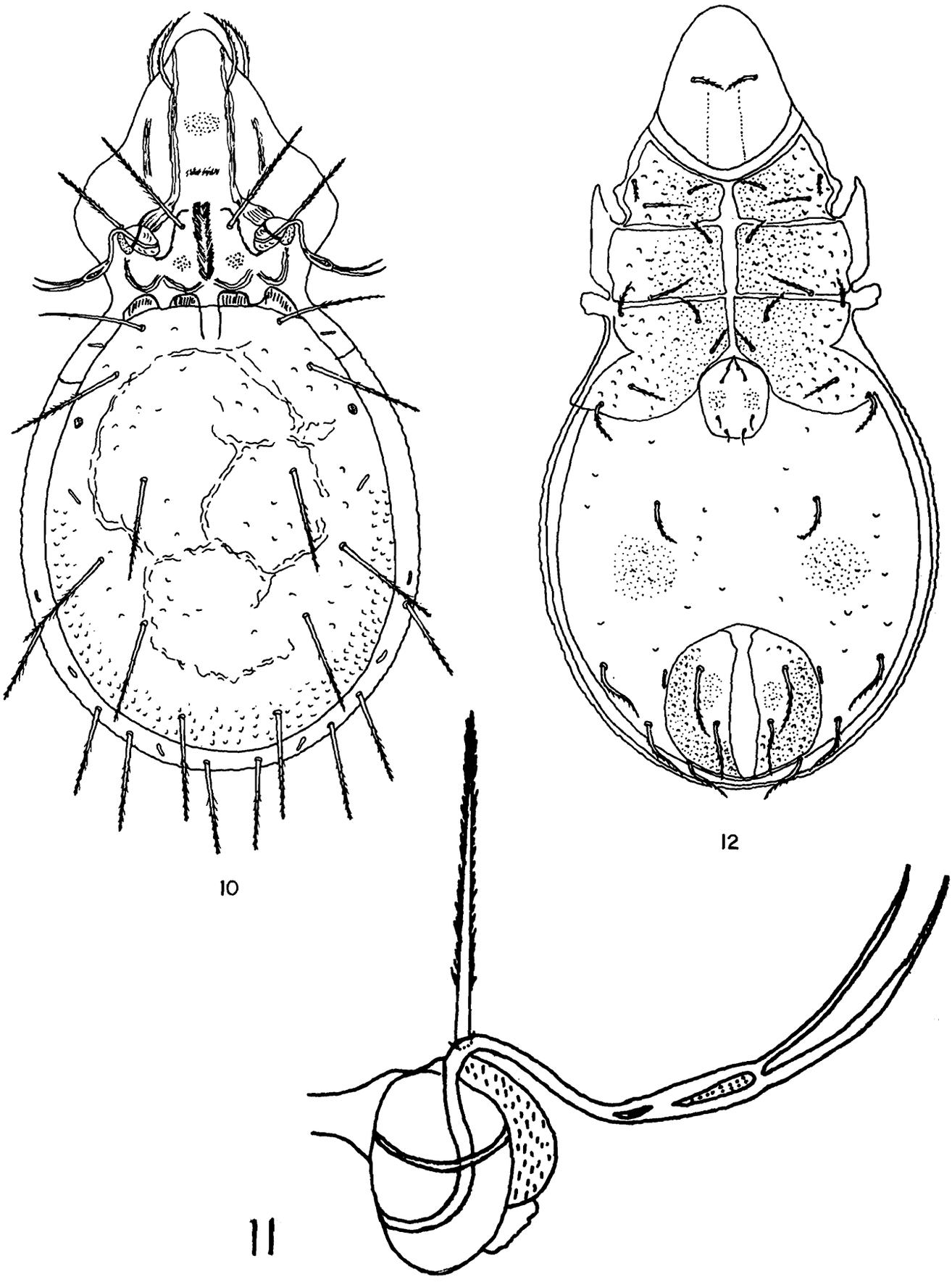
10. ***Dolicheremaeus renukae*** n.sp.
(Figs. 10-12)

Colour dark brown; length of the body 809, width of the body 457.

Prodorsum longer than broad, densely punctated, lateral margins of prodorsum without angular tooth; lamellae mostly parallel, roughly sculptured, a weakly chitinised ridge on the outer side of lamellae; rostral setae (76.1) arise from postero-lateral margin of rostrum, curved, conspicuously barbed on the outer side, tips fine extending slightly beyond the anterior margin of rostrum; lamellar setae (81) similar to that of rostral setae; interlamellar setae long (124), situated close to bothridium, stiff, errect, minutely barbed, slightly longer than twice their mutual distance; dorsal pseudostigmatic plates well developed covering the pseudostigmata, ventral pseudostigmatic plates round; sensillus (171) with fusiform head and long pointed bifurcate apex, smooth, stem strongly elbowed near the base; exopseudostigmatic setae placed antero-lateral to ventral pseudostigmatic plate on each side, long (90.4), stiff, erect, minutely barbed, extend beyond the postero-lateral margin of prodorsum; median prodorsal and lateral condyles large, well chitinized, inner postero-median part of prodorsum with two longitudinal rows of scale like sculptures.

Notogaster longer than broad, dorsally punctate, irregular foveolation on the posterior part; indistinct double lined interrupted longitudinal ridges on the median portion of notogaster, lateral notogastral condyles (*Co.nl*) triangular, projected anteriad, median notogastral condyles (*Co.nm*) well developed, almost rectangular; ten pairs of notogastral setae, long, stiff, erect, minutely barbed; setae *ta*, *te*, *ti*, *ms*, r_1 and r_2 longer (123.7) than other notogastral setae (100.2); distance *te–ti* > *ta–te* and *te–ms* < *ms–*r_1; mutual distance *ta–ta* < *te–te* and *ti–ti* < *ms–ms*; five pairs of notogastral fissures, *ia* located in between *ta* and *te*, *im* in between *te* and *ti* and posterior to *gla* being separated from this for a good distance, *ih*, *ips* and *ip* situated anterior to r_3, p_3 and p_1 respectively.

Hypostome anteriorly rounded, hypostomal setae situated somewhat in the middle of the infracapitulum, relatively long and minutely barbed; the whole ventral surface punctated and foveolated; epimeral setae finely barbed, arranged in the formula 3-1-3-3, antiaxial row of setae longer than para axial row; genital plate smaller than anal plate, four pairs of genital setae, equal in length, five times smaller than the anal setae, smooth; aggenital setae barbed; anal setae two pairs, anterior pairs longer than posterior pairs (158), minutely barbed; adanal fissures distinct, situated parallaly on either side of the anal plate; adanal setae three pairs, minutely barbed.



Figs. 10. *Dolicheremaeus renukae* n.sp. : Dorsal view; 11. *Dolicheremaeus renukae* n.sp. : Sensillus; 12. *Dolicheremaeus renukae* n.sp. : Ventral view.

Legs monodactylous.

Holotype : ♀, India : Kerala, Silent valley, 13 kms away from Valliyaparathodu, 28.i.1980, ex soil and litter, coll. S.K. Bhattacharyya, *Paratype* : 1 ♀, data same as for holotype.

Remarks : The new species shows some resemblance to *D. coronarius* Chakraborti *et al.*, 1981 in the presence of longitudinal ridges on the notogaster but all other major characters are dissmililar in two species. Further *renukae* is well in accord with *D. cuspidata* Wallwork, 1962 in the form of lamellae and rostral, lamellar, notogastral and ventral setae. But the shape of sensilla, long exopseudostigmatic setae and longitudinal ridges on the notogaster distinctly recognise *D. renukae* as a new species.

11. ***Dolicheremaeus keralaensis*** n.sp.
(Figs. 13-15)

Colour dark brown; length of the body 945, width of the body 438.

Prodorsum longer than broad, punctated, lateral margins of prodorsum without angular tooth; lamellae parallal, thin, touching the rostrum; rostral setae (92) originated from postero-lateral margin of rostrum, directed outward and strongly curved inward, unilaterally feathered on the outer side, tips very fine; lamellae almsost parallel, a weakly chitinized ridge on the outer side of lamellae; lamellar setae (125.4) similar to that of rostral setae, tips meeting each other; interlamellar setae twice the length of their mutual distance (66.8), straight, smooth, tips fine, situated close to bothridium; dorsal pseudostigmatic plates cover most of pseudostigmata, well doveloped, almost rounded ventral pseudostigmatic plates; sensillus (142) spindle shaped, smooth, mid-portion slightly expanded, stem strongly elbowed near the base; exopseudostigmatic setae clearly visible, minute (21), situated antero-lateral to ventral pseudostigmatic plate on each side; prodorsal condyles broadly rounded, chitinized, two longitudinal rows of scaly structures on the inner postero-median part of prodorsum.

Notogastral surface covered with dense punctation, distinct foveolation and indistinct broken ridges; lateral notogastral condyles (*Co.nl.*) well developed and somewhat rounded, median notogastral condyles (*Co. nm)* relatively small and rounded; notogastral setae ten pairs, *ta*, *te*, *ti*, *ms* and p_3 weakly barbed, p_1, p_2, r_1 and r_2 long (146), flagelliform, sometimes tips curved, others setiform (83.6); distance *te–ti* > *ta–te* and *te–ms* < *ms–*r_1; mutual distance *ta–ta* < *te–te* and *ti–ti* < *ms–ms*; notogastral fissures *ia* and *im* aligned obliquely, the latter placed immediately above *gla*, *ih* and *ips* located anterior to r_3, *ip* between p_2 and p_3.

Hypostome anteriorly rounded, hypostomal setae situated in the middle of the infracapitulum, smooth; the whole ventral surface finely punctated and foveolated; epimeral setae smooth, tips fine,arranged in the formula 3-1-3-3, antiaxial row of setae smaller than paraaxial row; genital plate smaller than anal plate, four pairs of genital

setae, equal in length, smooth; aggenital setae smooth; anal setae two pairs, smooth; adanal fissures distinct, situated obliquely on either side of the anal plate, adanal setae three pairs, smooth, tips fine.

Legs monodactylous.

Holotype : ♀, India : Kerala, Silent valley, 13 kms away from Valliyaparathodu, 28.i.1980, ex soil and litter, coll. S.K. Bhattacharyya, *Paratypes* : 2 ♀♀, data same as for holotype.

Remarks : *D. keralaensis* is closely related to *D. capreolata* Wallwork, 1962 in general body shape and size, finely barbed rostral and lamellar setae, flagelliform tips of r_1 and p_2 and shape of the epimeral setae. But it differs from *D. capreolata* by the presence of smooth and long interlamellar setae, barbed *ta*, *te*, *ti*, *ms*, r_3 and p_3, broken ridge on the notogaster, smooth adanal setae and in the shape of the sensillus.

12. *Dolicheremaeus aurita* Aoki

1965. *Dolicheremaeus aurita* Aoki, *Nature and Life in Southeast Asia*, **4** : 175.

Material examined : 3 ♀♀, India : Kerala, Silent valley, Valliyaparathodu camp, 23.i.1980, ex. soil and litter, coll. S.K. Bhattacharyya; 1 ♀ Silent valley, 10 kms north west of valliyaparathodu camp, 24.i.1980, ex soil, coll. S.K. Bhattachsaryya; 6 ♀♀, Silent valley, 13 kms away from Valliyaparathodu, 28.i.1980, ex soil and litter, coll. S.K. Bhattacharyya.

Distribution : India : Kerala (new record).

Family OPPIIDAE

13. *Oppia arcualis* (Berlese)

1913. *Dameosoma arcuale* Berlese, *Redia*, **9** : 89.
1967. *Oppia arcualis*, Balogh and Mahunka, *Acta zool. Hung.*, Budapest, **23** : 45.
1968. *Oppia arcualis*, Hammer, *Biol. Skr. Dan. Vid. Selsk.*, **26**(2) : 5.

Material examined : 1 ♀, India : Kerala, Silent valley, 10 kms north west of Valliyaparathodu camp, 24.i.1980, ex soil, coll. S.K. Bhattacharyya.

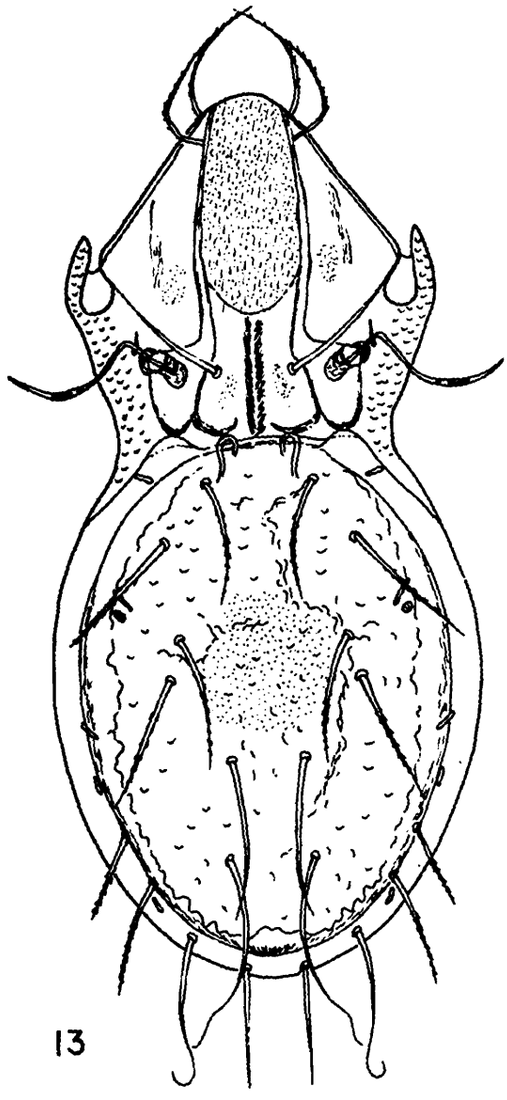
Distribution : India : Kerala (new record).

14. *Oppiella nova* (Oudemans)

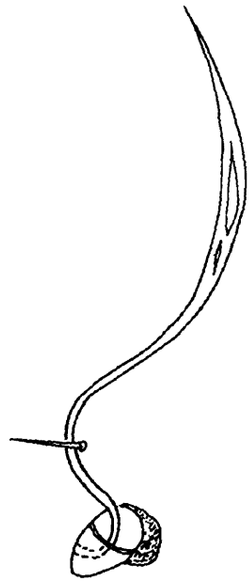
1902. *Eremaeus novus* Oudemans, *Ent. Ber.*, **1** : 36.
1937. *Oppiella nova*, Jacot, *Journ. N.Y. Ent. Soc.*, **45** : 356.

Material examined : 2 ♀♀, India Kerala, Silent valley, 10 kms away from Valliyaparathodu on Palghat Road, 25.i.1980, ex leaf litter, coll. S.K. Bhattacharyya.

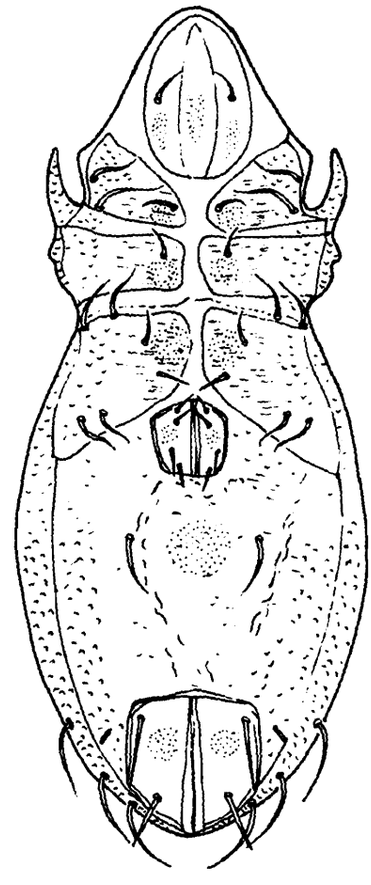
Distribution : India : Kerala (new record).



13



14



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Figs. 13. *Dolicheremaeus keralaensis* n.sp. : Dorsal view; 14. *Dolicheremaeus keralaensis* n.sp. : Sensillus; 15. *Dolicheremaeus keralaensis* n.sp. : Ventral view.

Family CHAUNOPROCTIDAE

15. ***Caloppia minor*** Balogh

1958. *Caloppia minor* Balogh, *Rev. Zool. Bot. Afr.*, **58**(1-2) : 11.

Material examined : 1 ♀, India : Kerala, Silent valley, around Valliyaparathodu camp, 29.i.1980, ex leaf litter and soil, coll. S.K. Bhattacharyya.

Distribution : India : Kerala (new record).

Family ORIBATULIDAE

16. ***Scheloribates elegans*** Hammer

1958. *Scheloribates elegans* Hammer, *Biol. Skr. Dan. Vid. Selsk.*, **10**(1) : 77.

Material examined : 7 ♀♀, India : Kerala, Silent valley, 10 kms north west of Valliyaparathodu camp, 24.i.1980, ex soil, coll. S.K. Bhattacharyya.

Distribution : India : Kerala (new record).

Family HAPLOZETIDAE

17. ***Lauritzenia longipluma*** Hammer

1958. *Lauritzenia longipluma* Hammer, *Biol. Skr. Dan. Vid. Selsk.*, **10**(1) : 83.

Material examined : 2 ♀♀, India : Kerala, Silent valley, 10 kms northwest of Valliyaparathodu camp, 24.i.1980, ex soil, coll. S.K. Bhattacharyya; 1 ♀, Silent valley, 13 kms away from valliyaparathodu, 28.i.1980, ex litter and soil, coll. S.K. Bhattacharyya.

Distribution : India : Kerala (new record).

Family MOCHLOZETIDAE

18. ***Unguizetes clavatus*** Aoki

1967. *Unguizetes clavatus* Aoki, *Nat. Life Southeast Asia*, **5** : 195.

1977. *Unguizetes clavatus* , Chakrabarti, Bhaduri and Raychaudhuri, *Sci. & Cult.*, **43**(4) : 180.

Material examined : 1 ♀, India : Kerala, Silent valley, 8 kms southeast of Valliyaparathodu camp, 23.i.1980, ex soil and decaying leaves, coll. S.K. Bhattacharyya; 1 ♀, Silent valley, 3 kms south of Valliyaparathodu camp, 28.i.1980, ex grass and soil, coll. S.K. Bhattacharyya; 2 ♀♀, Silent valley, around Valliyaparathodu camp, 29.i.1980, ex decomposed wood, coll. S.K. Bhattacharyya.

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

Family GALUMNIDAE

19. ***Galumna flabellifera orientalis*** Aoki

1965. *Galumna flabellifera orientalis* Aoki, *Nat. Life Southeast Asia*, **4** : 187.

1975. *Galumna flabellifera orientalis* , Deb and Raychaudhuri, *Annot. Zool. Japan*,

48 (3) : 170; Haq and Prabhoo, 1976, Entomon, 1 (2) : 136; Haq and Adolph, 1980, *Indian J. Acar.*, **5** : 57.

Material examined : 3 ♀♀, India : Kerala, Silent valley, around Valliyaparathodu camp, 29.i.1980, ex decomposed wood, coll. S.K. Bhattacharyya.

Distribution : India Kerala, West Bengal.

SUMMARY

Nineteen oribatid species belonging to fifteen genera from Silent valley, Kerala, India are treated in this paper. It includes the adequate descriptions of six new species *viz.*, *Hoplophthiracarus indicus*, *Phyllhermannia foveolatus*, *P punctatus*, *Gibbicepheus sisiri*, *Dolicheremaeus renukae* and *D. Keralaensis*. *Camisia sp.*, *D. aurita*, *Oppia arcualis*, *Oppiella nova*, *Caloppia minor*, *Scheleribates elegans* and *Lauritzenia longipluma* are recorded for the first time from India.

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