

# LOHMANNIID MITES FROM KERALA, INDIA IV. A NEW SPECIES OF *ANNECTACARUS* GRANDJEAN, 1950

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ABSTRACT : Several new and interesting species of oribatid mites were obtained from the Silent Valley evergreen forest area of Western Ghats of Kerala of which one new species, *Annectacarus aokii* sp. nov. is described in the present paper.

RÉSUMÉ : Plusieurs espèces d'oribates, nouvelles et intéressantes, ont été rencontrées dans l'aire de la forêt sempervirente de Silent Valley, au Kerala occidental, dont une espèce nouvelle pour la Science, *Annectacarus aokii* sp. nov., décrite dans le présent article.

## *Annectacarus aokii* sp. nov. (Figs. 1-8)

*Colour* : Yellowish brown to brown.

*Measurements* : Length : 359  $\mu$ m (range : 349-391)  
Width : 193  $\mu$ m (range : 184-211)

*Dorsal region*

*Prodorsum* (Fig. 1)

Prodorsum broader than long and richly ornamented with reticulations and punctations. Rostrum bent downwards without any distal incisions. Rostral seta *ro* inserted far below the rostral tip, bent mediad, barbed and 44  $\mu$ m long. Seta *le* resembles *ro* in nature, flexed outwards and measures 70  $\mu$ m. Seta *in* placed far below, closely adjacent to bothridium, barbed and much shorter than *le*, measuring 46  $\mu$ m in length. Both exostigmatic hairs almost equal, barbed, *exa* 66  $\mu$ m while *exp* 65  $\mu$ m long. Bothridium (*bo*) opens laterally. Sensillus (*ss*) pectinate with 16-20 long branches anteriorly and 5-7 small barbs posteriorly.

*Notogaster* (Fig. 1)

Anterior border of the notogaster straight while the posterior border rounded. Characteristic heterotrichy could be observed on the notogaster, 18 pairs of notogastral setae present arranged as in figure 1. Setae *c*<sub>1</sub>, *d*<sub>1</sub> and *e*<sub>1</sub> small and smooth, the remaining setae long, tapering and barbed except at their proximal region. Four notogastral bands, of which the second and third discontinuous medially. Notogastral fissures *ia*, *im* and *ip* as figured. Notogastral ornamentation resembles that of the prodorsal one.

*Ventral region* (Fig. 2)

The ventral plate including the infracapitulum and epimeral region ornamented with dense punctations arranged in a characteristic reticulated pattern.

*Gnathosoma* (Fig. 3)

Labiogenal articulation stenarthric. Rutellum (Fig. 4) stout, broad with 3-4 notches. Adoral setae leaf-like and smooth. Gnathosomal neotrichy pre-

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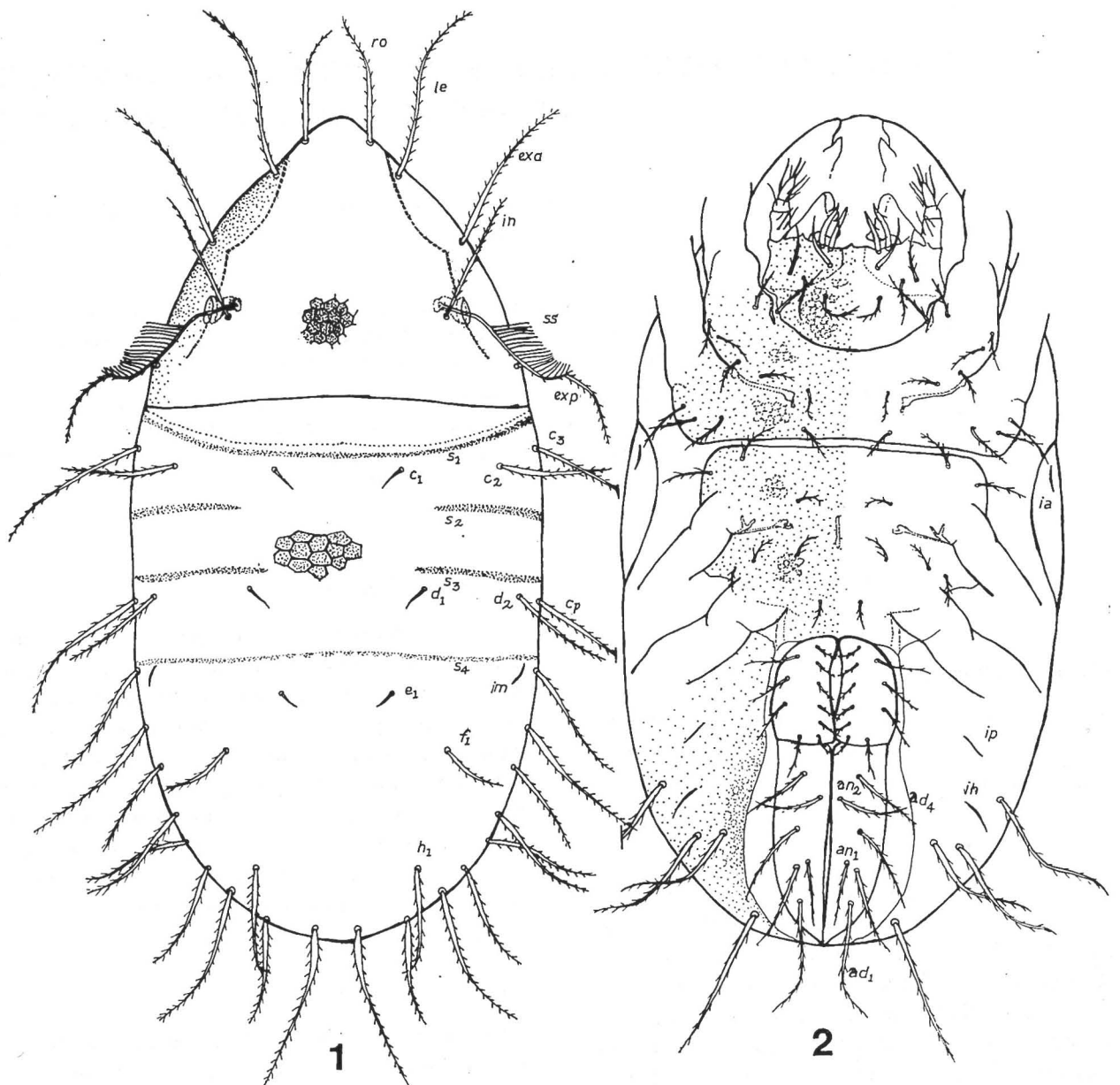


FIG. 1-2 : *Annectacarus aokii* sp. nov.  
1. — Dorsal view. 2. — Ventral view.

3. — Gnathosoma. 4. — Rutellum. 5. — Chelicera. 6. — Pedipalp. 7. — Leg I. 8 — Tarsal claw enlarged.

sent; infracapitulum with 6 pairs of setae, of which *a* smooth while *m*<sub>1</sub>, *m*<sub>2</sub>, *m*<sub>3</sub>, *m*<sub>4</sub> and *h* barbed. Genae and mentum highly ornamented. Chelicerae (Fig. 5) broad, with well developed digits. Digitus fixus bears 4 teeth, digitus mobilis 3 teeth. Seta *cha* long and smooth and *chb* short and smooth. Body of chelicerae broad, short and porose. Pedipalp (Fig. 6) with a chaetotaxy of 0-2-0-1-9, the femorogenu suture indistinct. Palpal tarsus bears 2 distal eupathidia and a thick and blunt solenidion.

#### Epimeral region

Sejugal apodemata well developed and continuous medially. Coxisternal setal formula 7-4-3-4, all the setae barbed and possess size variation.

#### Genital region

Genital plates elongated, each plate bearing 10 barbed setae arranged in 2 rows, an antiaxial row of 6 small and a paraxial row of 4 large setae. Genital plates smooth.

#### Anoadanal region

Anoadanal plates fused, well elongated and rectangular with a pointed posteriormost apex. Both anal and adanal setae smooth, the 2 pairs of anal setae smaller than the 4 pairs of adanal setae. Anoadanal plates smooth; the ventral plate lying just exterior to the anoadanal plate bears aggregations of fine punctations and foveolae. Fissure *ih* vertical and *iad* long and placed obliquely.

#### Legs (Fig. 7)

All legs monodactylous with a stout empodial claw. Chaetotaxy of leg-1 0-5-6-5-18. Trochanter 1 very small and devoid of any setae. Femur-1 stout with an antero-ventral keel and dorsal notch carrying 5 setae, all barbed in various degrees. A small tubercle-like structure present on the femur just below the basal notch. Genu 1 short and broad, carrying 4 setae, 2 solenidia,  $\sigma'$  and  $\sigma''$ ; seta *d* very thin and closely associated with  $\sigma'$ ; *l'* plumose. Tibia 1 with a long whip-like solenidion  $\varphi$ , one smooth, thin seta *l'* and 3 barbed setae. Tarsus 1 bears 18 setae including a famulus  $\varepsilon$  and 2 solenidia,

$\omega_1$  and  $\omega_2$ , the former stout and blunt, while the latter thin and long; setae *s* and *m* eupathidic; claw (Fig. 8) bears basal spine. All leg segments ornamented with reticulated punctations.

#### Material examined :

Holotype ♀; paratypes 4 ♂♂, 3 ♀♀; collected from the soil and litter samples of Anavai of Silent Valley National Park, Kerala, South India, on 12.I.1991.

#### Remarks :

The genus *Annectacarus* was established by GRANDJEAN (1950) with *Annectacarus mucronatus* as type species. Nine species of *Annectacarus* are hitherto known (BALOGH and BALOGH, 1987) of which the present species conforms superficially with *A. insculptus* and *A. sejugatus*, described by WALLWORK (1962), in general shape of the body and nature of notogastral and prodorsal setae, but can easily be distinguished by the following characters :

- a) Smooth rostral tip,
- b) Long interlamellar (*in*) setae,
- c) More barbs on the sensillus (*ss*),
- d) Epimeral setal formula of 7-4-3-4,
- e) Nature and arrangement of genital setae,
- f) Number and nature of notogastral bands.

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