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ORIBATID MITES FROM COCONUT PALM

2. A NEW SPECIES OF NOTOGALUMNA (ACARI: ORIBATEI) FROM KERALA, INDIA

BY N. RAMANI and M.A. HAQ*

ABSTRACT: The systematic description is given of a new oribatid species viz. Notogalumna nortoni inhabiting the foliage of coconut palm cultivated in Kerala, South India. The present species is widely distributed on 20 species of economically important plants such as vegetables, fibre crops, oil seeds, fruit crops, weeds etc. The population density of this species was found very high on Cocos nucifera and Pandanus sp. The genus Notogalumna is recorded for the first time from Indian subcontinent after its erection and the present species forms the second representative of the genus.

Notogalumna nortoni
(Fig. 1-4)

Colour : Dark brown to black.

Prodorsum (Fig. 1) : Prodorsum flat and broad with conical rostrum; seta ro (Fig. 1a) barbed, measures 57 µm, inserted far below the rostral tip and closely appressed to the latter; lamellar and sublamellar carinae visible dorsally; seta le (Fig. 1b) measures 87 µm and barbed; seta in (Fig. 1c) thick basally, barbed and measures 103 µm; sensil-lus (ss) (Fig. 1d) setaceous, glabrous with finely pointed tip; the integument of the prodorsum punctated.

Notogaster (Fig. 1) : The hexagonal notogaster anteriorly merges with the prodorsum owing to the absence of dorsosejugal suture; posterior border straight; directing interiorad on either side, three to four pairs of dark foveolae like structures present more or less at the level of the bothridia; pteromorphe (Fig. 1e) well developed with strong venation, a median chitinous ridge and a notch just above the middle; area porosae three pairs, very conspicuous and of varying shape and size, A0 more or less print-shoe shaped, A1 + A2 very large, thick and inverted ‘L’ shaped, A3 somewhat kidney shaped and lies at the extreme posterior corner; ten pairs of setae present, ta inserted on the pteromorph below the internal ridge, te and ti on either side of A1 horizontally, ms medially arranged, fissure ia obliquely arranged on the pteromorph, almost medially and im placed laterally more or less at the level of seta r3; the general surface of the notogaster bears round foveolae and punctuation.

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FIG. 1-2: Notogalumna nortoni sp. nov.
Fig. 3-4: Notogalumna nortoni sp. nov.

Lateral Region (Fig. 2): Lamellar carina (L) runs above the level of bothridium covering the insertion of le, curves down to pedotectum I and reaches beyond it; sublamellar carina (s) originates below the level of bothridium, curves parallel to L and terminates near pedotectum I; circumpedal carina (cir) well developed, arising just below pedotectum I and runs beyond acetabulum IV posteriorly; discidium (dis) well discernible but custodium not detected.

Ventral Region (Fig. 3): Apodemata II, III and the sejugal one well developed, several less sclerotized, light, irregular areas of different size and shape present on the epimeres, setal formula of the epimeral area 1-0-2-1, all setae smooth and show variation in size.

Genital and anal regions: Genital plates with six pairs of long and smooth setae, g₁ and g₂ placed nearer anteriorly, g₃ at the anterolateral corner, g₄ almost at the middle, g₅ and g₆ posteriorly placed; seta ag smooth and inserted posterior to the genital plates; anal plates placed more posteriorly and each plate carries two setae, only their insertions visible, the arrangement as in the figure 3; adanal setae three pairs represented by their points of insertion, ad₁ and ad₂ posterior to the anal plates and ad₃ placed far lateral; a well developed area porosa Apa located between ad₁ and ad₂.

The entire region of the ventral plate provided with punctation.

Gnathosoma (Fig. 3a): Infracapitulum smooth; setae h and m equal in size and glabrous, a smaller than the others and smooth; chelicerae (Fig. 3b) stout with four to five pairs of well sclerotized teeth, seta cha longer and with short barbs while seta chb shorter with long barbs, cheliceral surface porose; pedipalps (Fig. 3c) follow a chaetotaxy of 0-2-1-3-10, palpal femur porose, on tarsus four eupathidic setae present, of which acm fused with the solenidion (ω).

Legs: The ambulacrum of all legs homotridactylous; chaetotaxy of leg I (Fig. 4) 0-4-4-6-22; femur I porose and provided with a ridge, all setae barbed, d and v longer than l' and l'; genu I narrow with a setaceous and tapering solenidion; tibia I distally broad and carries a very long solenidion φ₁ φ₂ less than half of φ₁ l' long and weakly barbed, v' and v" with stout barbs; tarsus I progressively narrows distally, three equally thick solenidia (w₁, w₂ and w₃) and a famulus (t) present on tarsus I, setae(p) and s smooth, (υ) and (σ) with few barbs.

Materials examined: Holotype ♂; paratypes 9 ♀ and 10 ♀♀ collected from the foliage of coconut palm, Calicut University Campus, India on 12.6.84.

Remarks: The present discovery of N. nortoni from India forms an interesting addition to the genus Notoga lumna after erection of the species, N. praetiosa by Sellnick (1959) from Polynesia. Possession of the following characters separate N. nortoni from the type species:

1. Presence of area porosa postanales (Apa)
2. Characteristic shape of area porosae A₁, A₂ and A₃
3. Presence of only two pairs of anal setae
4. Position of seta ad₃ and
5. Possession of an epimeral setal formula of 1-0-2-1.

Reference
