

NEW SPECIES AND RECORDS OF *PHYTOSEIUS* MITES (ACARINA :
MESOSTIGMATA) FROM SOUTH INDIA

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ABSTRACT

Four species of *Phytoseius* Ribaga from South India are treated in this paper. This includes a new species as well as a new record from India.

INTRODUCTION

The present paper is based on the material of the genus *Phytoseius* Ribaga from South India. Altogether, four species are treated here which includes a species that is new to science and another one the occurrence of which was not earlier known from India.

Setal nomenclature as that of Chant *et al.* (1974) is followed. All the material treated here were collected by the author himself. The measurements given in the text are in microns.

Types are being deposited in the National Collection of the Zoological Survey of India.

1. *Phytoseius* (*Phytoseius*) *kapuri* Gupta (Fig. 1A)

Phytoseius (*Phytoseius*) *kapuri* Gupta, 1969, *Israel J. Agric. Res.*, 19 : 115-117

Female : Dorsal shield 260 long, 160 wide. Measurements of setae $j_1 - 28$, $j_4 - j_6 - 4$ each,

$J_2 - 8$, $J_5 - 4$; $j_3 - 68$, $z_2 - 16$, $z_3 - 48$, $s_3 - 9$, $s_4 - 96$, $s_6 (= L_6 \text{ of Garman, 1948}) - 80$, $Z_5 - 75$; $z_4 - 4$, $Z_4 - 76$; $r_3 - 40$, $R_1 - 12$. Ventrianal shield 92 long, 60 wide with 3 pairs of preanal setae. Leg IV with macrosetae on : genu - 29, tibia - 29, basitarsus - 25. Spermatheca as illustrated.

Material : 2 ♀ ♀, PONDICHERRY : on 4.xii. 1975 ; 3 ♀ ♀, KERALA : Trivandrum, on an unknown host, 14.xii.1975 ; 2 ♀ ♀, TAMIL NADU : Coimbatore, on brinjal, 19.xii.1975.

Distribution : India : West Bengal, Kerala (New record), Tamil Nadu (New record), Pondicherry (New record)

2. *Phytoseius* (*Dubininellus*) *roseus* Gupta (Fig. 1B)

Phytoseius (*Dubininellus*) *roseus*, Gupta, 1969, *Israel J. agric. Res.*, 19 : 119-120.

Female : Dorsal shield 270 long, 132 wide. Measurements of setae : $j_1 - 28$, $j_4 - j_6$, $J_2 -$

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$J_5 - 4 - 6$ each, $j_3 - 38$, $z_2 - 8$, $z_3 - 33$, $s_3 - 8$, $s_4 - 101$, $s_6 - 64$, $Z_5 - 60$; $z_4 - 6$; $Z_4 - 76$; $r_3 - 40$. Genital shield - 68 wide. Ventrianal shield 72 long, 49 wide with 3 pairs of preanal setae. Spermatheca as in figure. Leg IV with macrosetae on: genu - nil, tibia - 40, basitarsus - 21.

Material: 1 ♀, TAMIL NADU: Madras Agri. Horticultural Garden, on papaw, 1.xii. 1975.

Distribution: India: West Bengal, Tamil Nadu (New record).

3. *Phytoseius (Dubininellus) rachelae* Swirski and Shechter (Fig. 1C)

Phytoseius (Dubininellus) rachelae Swirski & Shechter, 1961, *Israel J. agric. Res.*, 11: 108-109.

Female: Body elongated, narrow. Peritreme extends anteriorly up to j_1 and posteriorly upto coxa IV. Dorsal shield 268 long, 128 wide, well sclerotized with 14 pairs of setae; $j_1 = j_3$; s_4 being longest, $s_6 > Z_5 > Z_4$; measurements of setae: $j_1 - 28$, $j_4 - j_6$, $J_2 - J_5 - 4 - 5$ each; $j_3 - 28$, $z_2 - 8$, $z_3 - 20$, $s_3 - 14$, $s_4 - 100$, $s_6 - 80$, $Z_5 - 76$, $z_4 - 5$, $Z_4 - 64$; $r_3 - 40$. Sternal shield with 3 pairs of sternal setae, 4th pair lie on interscutal membrane. Genital shield wider than greatest width of ventrianal shield. Ventrianal shield 64 long, 44 wide with 3 pairs of preanal setae; 3 pairs of setae present around ventrianal shield, $JV_4 - 50$ long; one pair of metapodal plates present. Chelicera with 2 teeth on fixed digit and none on movable digit. Spermatheca with elongated 'Y' shaped cervix. Leg IV with macrosetae on: genu - 12, tibia - 48, basitarsus - 20, all with spatulate tip.

Material: 6 ♀ ♀, KERALA: Trivandrum, on *Hibiscus* sp., 14.xii.1975;

Distribution: India: Kerala. Hong Kong.

Remarks: This species is recorded here for the first time from India.

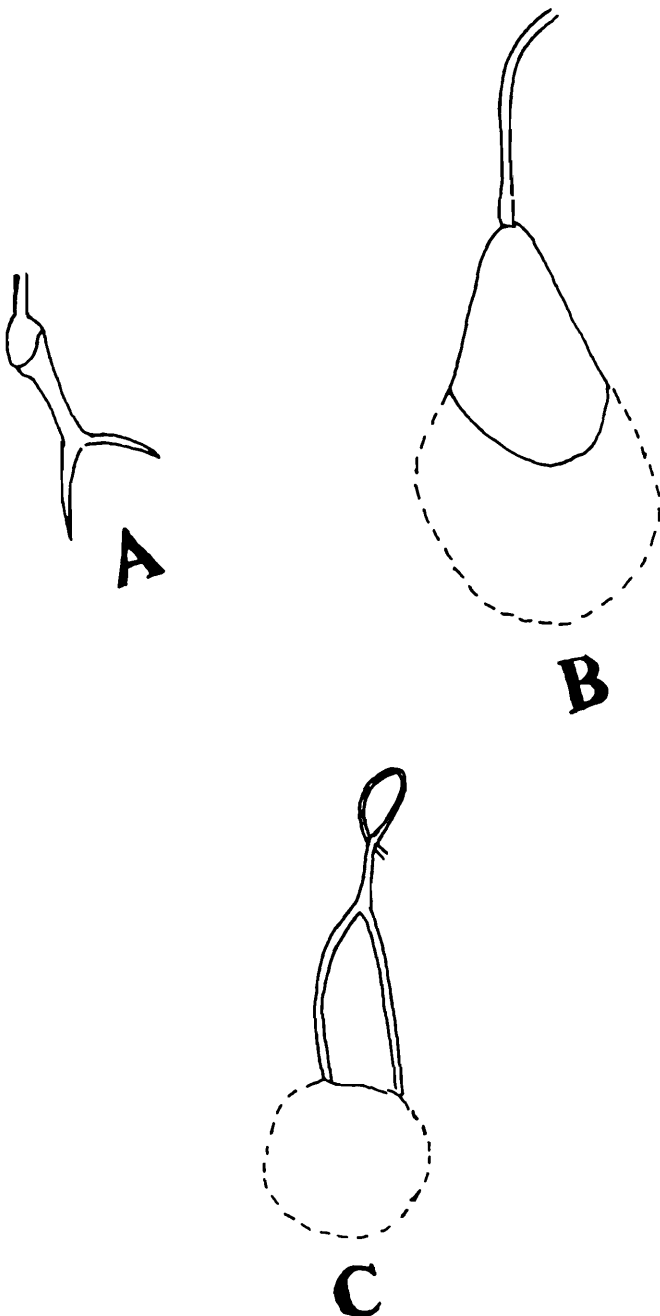


Fig. 1. A—*Phytoseius (Phytoseius) kapuri* (♀) spermatheca, B—*Phytoseius (Dubininellus) roseus* (♀) spermatheca, C—*Phytoseius (Dubininellus) rachelae* (♀) spermatheca.

4. *Phytoseius (Dubininellus) bandipurensis* sp. nov. (Fig. 2A-D)

Female : Body narrow. Peritreme extends anteriorly upto j_1 and posteriorly slightly curves around coxae IV. Dorsal shield heavily sculptured with 14 pairs of setae; j_1 very close to each other; $j_1, j_3, z_3, s_4, s_6, Z_5, Z_4$ and r_3 thick and serrate; all other setae small; $j_1 < j_3 = z_3, z_2 = s_3, s_4 > Z_5 > Z_4, r_3$ thicker and longer than z_3 ; measurements of setae: $j_1 - 24, j_3 - 28, z_2, s_3 - 8$ each, $z_3 - 28, s_4 - 88, s_6 - 56, Z_5 - 64, Z_4 - 72, r_3 - 36$. Sternal shield not clearly discernible. Genital shield wider than greatest width of ventrianal shield with a pair of genital setae. Ventrianal shield shorter, lateral margin deeply concave with 3 pairs of preanal setae; 3 pairs of setae

present around ventrianal shield, $JV_4 - 40$ long; single pair of metapodal plates present. Spermatheca with long duct and 'Y' shaped cervix. Fixed digit of chelicera with 2 teeth, movable digit with one tooth. Macroseta present on leg IV: genu—18, tibia—40, basitarsus—16 and distitarsus—20 long, all macrosetae with spatulate tip.

Male : Unknown.

Material : *Holotype* : Reg. No. 3056/17 INDIA : Karnataka, Bandipur Sanctuary, on an unknown host, 30.xii.1975.

Remarks : This species differs from *Phytoseius (Dubininellus) woodburyi* De Leon 1965) in having ventrianal shield much shorter, in

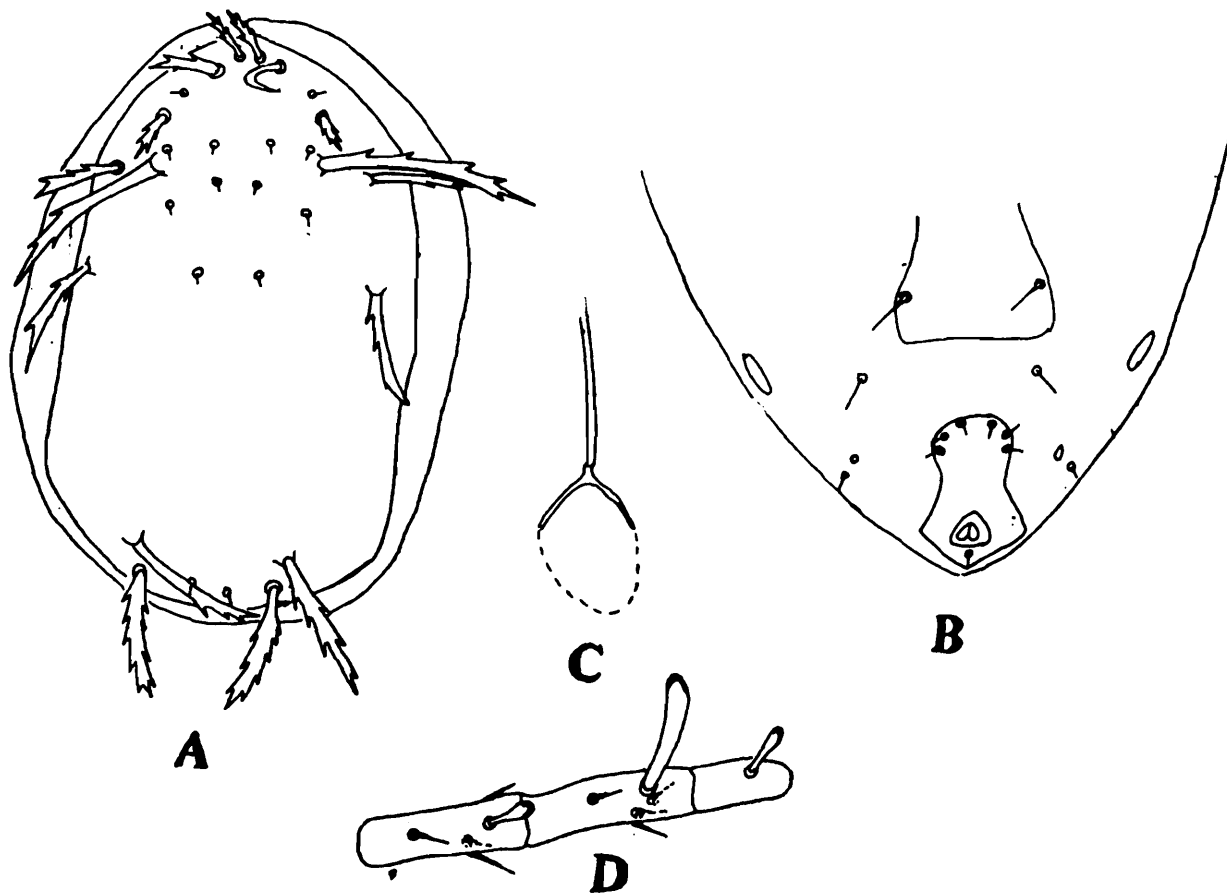


Fig. 2. (A-D) *Phytoseius (Dubininellus) bandipurensis* sp. nov. (♀), A—dorsal shield, B—posterior ventral surface, C—spermatheca, D—leg IV.

having shorter s_4 and the macrosetae on genu IV and basitarsus IV almost equal (macroseta on basitarsus longer than that of genu in *woodburyi*). Further, it differs from *P. (D.) macropilis* Banks (1909) in presence of 3 pairs of preanal setae on ventrianal shield, and in having shorter s_4 and macroseta on basitarsus IV shorter.

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