

A NEW SPECIES OF *STETHORUS* WEISE (COLEOPTERA-COCCINELLIDAE), FEEDING ON ARECANUT PALM MITES IN KERALA, SOUTHERN INDIA

BY

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Owing to extensive use of organic insecticides, plant-mites, which generally show resistance to such insecticides, have come into prominence during the last one decade or so. Species of the coccinellid beetles belonging to the genus *Stethorus* WEISE, feed almost exclusively on such mites, and have, in turn, received greater attention than ever before, at the hands of economic entomologists in different parts of the world. Taxonomy of these beetles is, therefore, of practical interest to these entomologists. In 1948 (1) I had given an account of 21 old-world species of the genus and had later, in 1950 (2), described from Calcutta another species, *Stethorus indira* KAPUR, which was found feeding upon mites on Arum (*Colocasia antiquorum* SCHOTT) (3).

More recently several specimens of *Stethorus* collected by Sir G. B. PILLAI from arecanut palm leaves infested with the mite *Raoiella indica* HIRST, in Kerala, were received for identification through Dr. K.P.V. MENON, Director, Central Coccoanut Research Institute, Ochira, Kerala. These beetles appear to belong to a new species and are being named and described below. My thanks are due to both Dr. MENON and Sir PILLAI for affording me the opportunity to study the material.

Stethorus keralicus sp. n.

Body shortly oval and fairly strongly convex. Black, excepting the testaceous antennae and mouth-parts, the pale piceous epipleurae, trochanters and greater part of femora, and the testaceous apices of the latter and the entire tibiae and tarsi. Dorsal surface with greyish,

(1) KAPUR, A. P. — 1948. *Bull. ent. Res.*, London, **39**, 297-320.

(2) KAPUR, A. P. — 1950. *Proc. R. ent. Soc. Lond.* (B) **19** (9-10), 148-149.

(3) This species was further collected from Deoghar, Bihar, in December, 1953 from mite-infested leaves of *Zizyphus mauritiana* LAM. (*Rhamnaceae*).

moderately long and sub-erect pubescence. Head with small, fairly impressed, and sparse punctures; pronotum with relatively larger, fairly impressed and less sparse punctures which are of nearly uniform size, both in the middle and at the sides; scutellum triangular, small, with a few very minute punctures; elytral punctures about as large and close as those on pronotum, but more impressed except towards the apex where these are less impressed; the surface between punctures on the head, pronotum and the elytra smooth, more so on the latter; apical angle of elytron subrounded. Underside with greyish, generally short (except at the prosternum where it is slightly longer), sub-depressed and sparse pubescence, and with generally sparse, less impressed and small punctation except at the metasternum where the punctures are coarse and at the middle of the first abdominal sternite where these are coarse, close, impressed and navel-like; femoral lines semicircular, extending to about two-thirds of the length of the first abdominal sternite; the last, or the sixth, visible abdominal sternite subrounded along the apical margin, both in the male and the female (Fig. 1, A). The male genitalia with the siphon (Fig. 1, B) moderately curved at the basal two-thirds and much narrowed in the apical one-third of its length; the basal piece (Fig. 1, C, *bp.*) relatively well-developed, nearly as broad as long; the median lobe (*ml*) about three to four times longer than wide and gradually narrowed distally to a pointed apex; paramera (*p*) a little more than half the length of the median lobe and uniformly narrow except a little distance towards the apex where two to three, moderately long and slender, setae are generally to be seen; in some examples these are easily torn away during preparation of the material for study; the trabes, absent. The female subgenital plates (ix sternite), subtriangular (Fig. 1, D), weakly chitinised at the base but relatively strongly chitinised along the external margin and towards the apex where these are provided with a number of short setae; the spermatheca (Fig. 1, E) globular, with a short and narrow base.

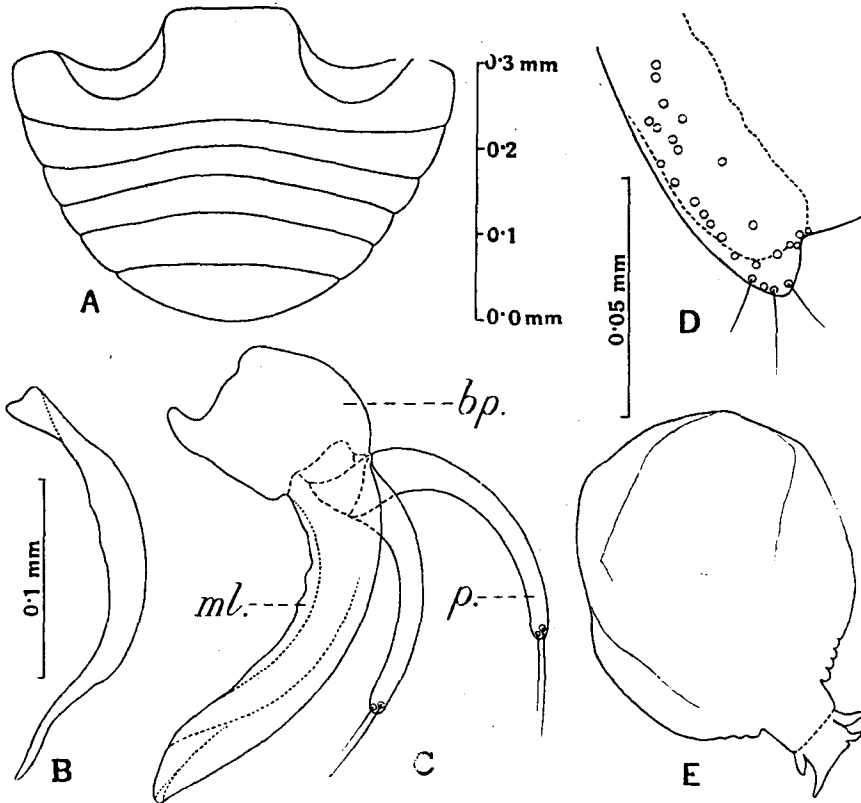
Length 0.85-0.90 mm.; width 0.62-0.67 mm.

HOLOTYPE — A male from India : Ochira, Quilon district, Kerala State (Southern India), predacious on arecanut palm mites (*Raoiella indica* HIRST), July, 1958 (G.B. PILLAI coll.); in the Zoological Survey of India, Calcutta, (Z. S. I); Registered No. 13088/H4; mounted on a card on a pin and with the abdomen and genitalia dissected and mounted in Canada balsam on a slide of the same registered number.

ALLOTYPE — A female, with the same data as the Holotype, in the Z. S. I., Registered No. 13089/H4; mounted on a card and with the abdomen and genitalia dissected and mounted on a slide of the same registered number. Other **PARATYPES** — Both males and

females, with the same data as the Holotype, about eight in number, some dissected, others mounted on cards, also in Z. S. I.

REMARKS — Although almost all the species of *Stethorus* are small, *S. keralicus* is about the smallest species of the genus known to me. It is perhaps more allied to *Stethorus pauperculus* WEISE which



Stethorus keralicus, sp. n.

A : abdominal sternites (δ); B : the siphon; C : the male genitalia except siphon, *bp* — basal plate, *ml* — median lobe, *p* — paramere; D : the female genital plate (ix sternite); E : the spermatheca.

(0.3 mm. scale for fig. A; 0.1 mm. scale for figs. B and C; 0.05 mm. scale for figs. D and E.)

occurs in various parts of India, is about 1.0-1.2 mm. long and 0.8-0.9 mm. wide and is similar in coloration, etc. It can, however, be distinguished from the latter by its uniform punctation on the pronotum (the punctures being coarse and navel-like at the sides in *S. pauperculus*). The two species are further distinguished by the structure

of the genitalia, especially in the male, in respect of the shape of siphon (which is stouter, longer and sigmoid in *S. pauperculus*), the basal plate and the median lobe (the last two are broad and ovoid respectively, in *S. pauperculus*). In the female the genital plates are relatively more chitinised in *S. keralicus* than in *S. pauperculus*.

RÉSUMÉ

L'auteur décrit ici un nouveau Coccinellide du genre *Stethorus* WEISE : *S. keralicus* sp. n.

Les espèces de ce genre sont bien connues par leur action prédatrice particulièrement efficace vis-à-vis des Acariens phytophages. *S. keralicus* ne fait pas exception à cette règle, il est spécialement inféodé à l'Acarien *Raoiella indica* HIRST qui attaque les feuilles de l'Aréquier (Palmier) en Inde dans la région de Quilon (Kerala).

(*Zoological Survey of India, Calcutta*)