

Genus	Vol. 7(3): 341-346	Wrocław, 30 X 1996
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Pseudovannius lestoni gen. n. sp. n. from Ghana
(Heteroptera: Miridae)

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ABSTRACT. *Pseudovannius lestoni* gen. and sp. nov. is described and illustrated on the basis of specimens from Ghana. Notes on the taxonomic position of the genus are provided.

Key words: entomology, taxonomy, *Heteroptera*, *Miridae*, new genus, new species, Ghana.

INTRODUCTION

Since the fundamental work of FIEBER (1861), the pretarsal structures have been treated as basic characters in classification of *Miridae*. According to the most recent papers (SCHUH 1995; SCHUH and SLATER 1995) *Miridae* are divided into eight subfamilies and the structure of claws, presence or absence and structures of parempodia, pulvilli and pseudopulvilli are among the most important characters. The occurrence of subapical tooth on the claws is known in almost all *Isometopinae*, all *Psallopinae* and many representatives of *Cylapinae*. The subapically toothed claws usually co-occur with the setiform parempodia. So far only one genus is known - *Palaucoris* CARVALHO, 1956 which has a subapical tooth and, very characteristic, spatulate parempodia.

During the examination of the material from Africa I found two specimens which had two teeth on the claw and small spatulate parempodia, characteristics not known so far in any other representatives of *Miridae* (see discussion below). They represent a new genus, the description of which is given below.

Pseudovannius n. gen.

ETYMOLOGY

Named for its superficial resemblance to the genus *Vannius* DISTANT.

Gender: masculine.

DIAGNOSIS

It differs from all known genera of *Miridae* in the occurrence of the unique pretarsal structure: claws with two teeth and very small, spatulate parempodia (figs 3, 4)

DESCRIPTION

Body elongatedly oval, smooth, mat, covered with dense setae, in general appearance (fig. 1) similar to the genus *Vannius* DISTANT.

Head very short, in top view shorter than wide, elongated dorsoventrally (fig. 2), contiguous with pronotal collar. Rostrum relatively short, reaching from meso- to metacoxae. Eyes large, granulated, occupying more than one-half of the lateral side of head. Antennal fossa contiguous with eye margin, antennae long inserted approximately in the middle of inner margin of eyes, first segment very short and distinctly thickened, second segment thin and very long, third thinner than the second (fourth segment damaged).

Pronotum flat, much shorter than broad with collar enlarged in middle, anterior margin slightly raised (fig. 2), posterior margin bisinuate; mesoscutum well exposed, raised, depressed in the angles and in the mid part on the border with pronotum. Scutellum weakly swollen, sloping posteriorly.

Hemelytra well developed, embolium narrow, costal fracture distinct, cuneus relatively large, almost twice as long as wide at base. Membranae with two cells.

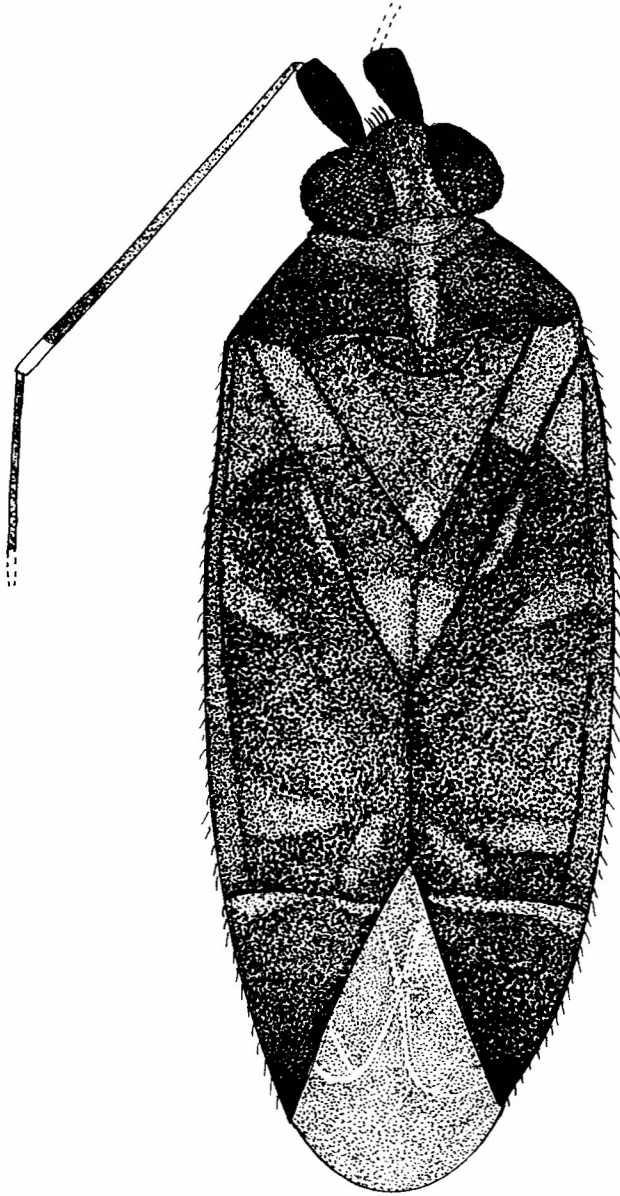
Legs covered with short setae. Procoxae enlarged, tarsi two-segmented. Claws with a subapical tooth and with the second tooth in middle (fig. 3,4). There are also small teeth on the basal portion of claw (fig. 4) but according to CARVALHO (1984) the presence of such a structure is variable and it is probably a species-level character. Parempodia rising from distal surface of the unguitactor plate are spatulate, small and very thin (figs 3,4).

Type species of genus: *Pseudovannius lestoni* n. sp.

DISCUSSION

As I have mentioned above only the genus *Palaucoris* CARV. has a similar combination of the pretarsal characters but it has one subapical tooth, sometimes small teeth on the basal part of claw, and large parempodia. The systematic position of this genus is not clear. Because of this unusual set of characters CARVALHO (1956) established a separate subfamily *Palaucorinae*. SCHUH (1976) placed this genus within the subfamily *Bryocorinae* (*Eccritotarsini*) and erected a subtribe *Palaucorina* as a sister group of *Eccricotarsina*. The unique pretarsal structure was treated as an

autapomorphic character of *Palaucorina*. Despite the similar combination of pretarsal structure, vertical head and short rostrum, the new genus differs distinctly from *Palaucoris* in its impunctate body, the characters of antennae, broad, short pronotum



1. *Pseudovannius lestoni* - holotype, dorsal habitus

with bisinuate posterior margin, exposed mesoscutum, distinct cuneus, the characters of tarsi as well as the structure of claws. *Pseudovannius* has two teeth on the claws, small teeth near the base of claws and much smaller parempodia (figs 3,4). GHOURI (1975), basing on figures included in CARVALHO's (1956) paper, noted that *Palaucoris* had two teeth on the claws. In his figure 28, CARVALHO (1956) presented two pictures of tarsi of *Palaucoris unguidentatus* CARV.: in one of them the claws have one tooth and in the other two teeth. In fact there is one tooth, or rather multiply cleft claws (SCHUH and SLATER 1995), according to photographs 47, 49 (SCHUH, 1976), 59D (SCHUH and SLATER 1995) as well as figures 7, 6 (CARVALHO, 1984).

In spite of this unique pretarsal structure the new genus has a general appearance of the tribe *Cylapini* (*Cylapinae*): short, vertical head, long and slender antennae and two-segmented tarsi. Moreover, *Cylapinae* are assumed to be associated with fungi (WHEELER and WHEELER 1994) and the label with LESTON's note "Pyretrum knockdown" distinctly shows that the new genus also occurs on them. *Pseudovannius* seems to be closely related to *Vannius* DISTANT. The general appearance, the same structure of head which is almost opisthognathous, the structures of antennae with a very characteristic short and thin first segment, short pronotum with bisinuate posterior margin, exposed mesoscutum, the characters of legs strongly suggest a common phylogenetic lineage. On the other hand, their pretarsal structures show some characters unknown so far in *Cylapinae* (GORCZYCA in preparation).

Pseudovannius lestoni n. sp.

ETYMOLOGY

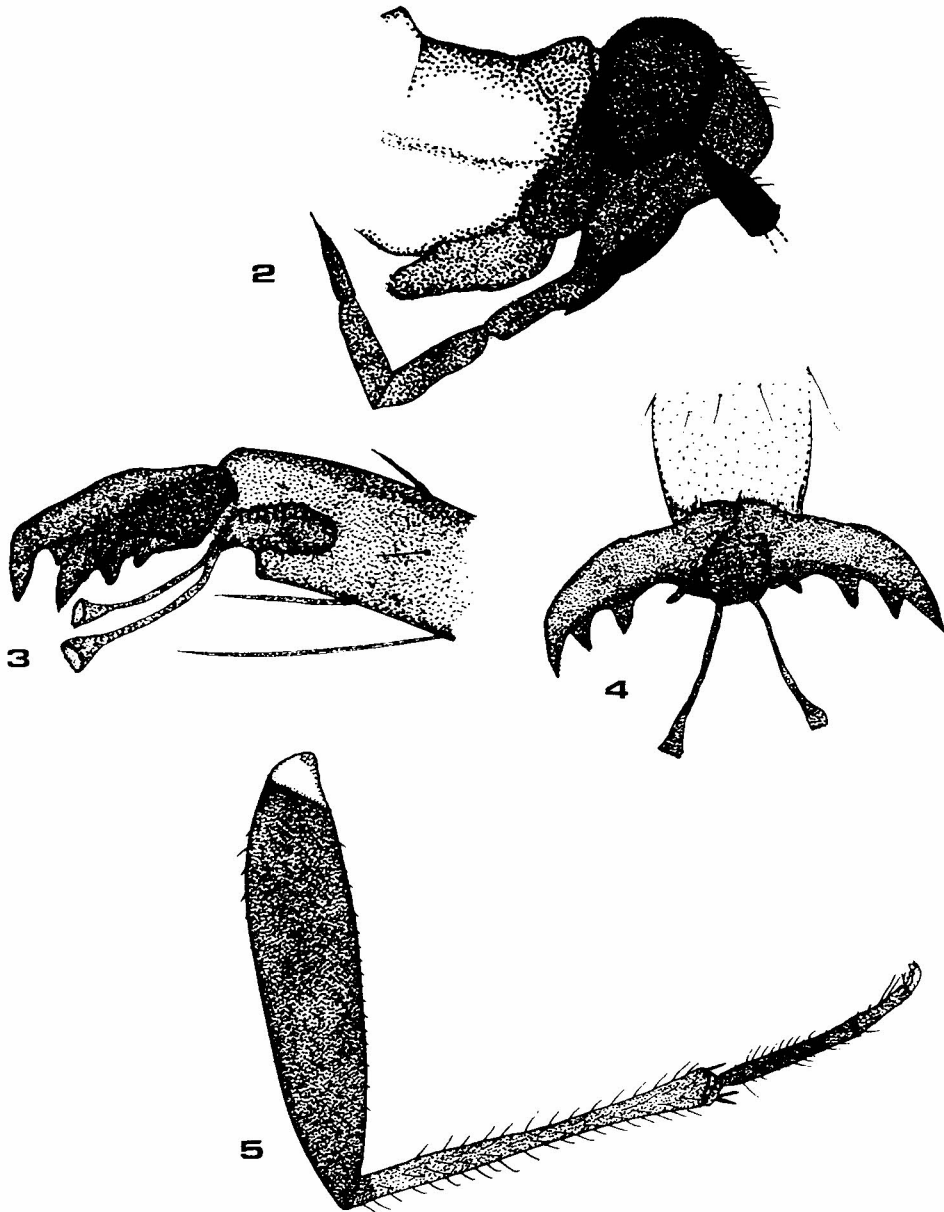
Named in honour of the collector D. LESTON.

DESCRIPTION

Female. Body length: 4.4 mm. general colour brown with few paler patches. Head reddish to dark, vertex with two pale spots contiguous with eyes, frons covered with erect setae. Width of head: 0.68 mm, width of eye: 0.22 mm, eyes red, length of head: 0.32 mm, in top view, height: 0.8 mm. Rostrum reddish, its segments of nearly equal length (only the first segment slightly longer than the others); first antennal segment black, length: 0.28 mm, second pale brown, darkened and weakly thickened gradually towards the apex (fig. 1), apex white, length of segment: 1.6 mm, third segment pale at base and next dark brown, broken at the apex.

Pronotum dark brown only anterior and mid part somewhat lighter. Length of anterior margin: 0.7 mm, posterior margin: 1.2 mm, lateral margin: 0.45 mm. Mesoscutum and scutellum brown, only apex of scutellum pale. Width of scutellum 0.8 mm, length: 0.6 mm (excluding mesoscutum).

Hemelytra brown with few lighter patches, clavus and embolium brown, cuneus reddish black, pale at base, red and gradually darkened towards apex, apex almost



2-5. *P. lestoni*: 2 - head and pronotum in side view, 3, 4 - pretarsal structures, 5 - fore leg

black, width: 0.4 mm., length: 0.7 mm. Membrane greyish dark, with slightly lighter venation.

Underside of body red yellow to reddish brown, ostioral peritremes very small, well visible, pale, procoxae enlarged, reddish. Legs reddish to brown, femora dark reddish to dark brown, tibiae and tarsi lighter, covered with dense setae. Protibiae thickened distally, with a few spicules at base (fig. 5). Metatibiae with short setae and only a few spiculi. Tarsi covered with dense setae, distally bearing a few very long setae (fig. 3), two-segmented but with a visible line, resembling a pseudo-joint, dividing the second segment in two parts (fig. 5). Claws with almost equal teeth on the ventral surface and with much smaller tooth at the base (fig. 4). I was unable to compare the differences in pretarsal structures on meso- and metatarsi because in both specimens the tarsi are damaged.

Male unknown.

TYPE MATERIAL

Holotype female: Ghana: "Pyrethrum knockdown, K. 8\4"; "Kade, Ghana, 22 VIII. 69, D. LESTON"; "D. LESTON coll. B.M. 1976-509"; paratype one female: "Pyrethrum knockdown, K. 7\3"; "Kade, Ghana, 22 VIII. 69, D. LESTON"; "D. LESTON coll. B.M. 1976-509.". Holotype and paratype preserved at the Natural History Museum, London.

Acknowledgements: I would like to thank Mrs Janet MARGARISON-KNIGHT (Natural History Museum, London) for the loan of specimens.

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