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## A new genus of Phaneropterinae (Orthoptera: Ensifera: Tettigoniidae) from Central Africa

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### Abstract

The new genus *Pseudoplangia* is described for *Plangia laminifera* Karsch, 1896. Its general aspect is similar to that of the genus *Plangia* Stål, 1873, but it differs remarkably in the vertex width, in the shape of eyes, that are oval and elongate, in the length of mid femora, that are shorter than pronotum length, in the shape of fore and mid legs that are very much laterally compressed, and in the presence of broad-based spines on the hind tibiae.

**Key words:** *Pseudoplangia* n. gen., *Plangia*, description, affinities, distribution

### Introduction

Stål (1873) described the genus *Plangia* as follows: “*Processu verticis apice articulo primo antennarum haud vel vix latiore; oculis minus angustis; pronoto dorso plano antrorsum angustato, marginibus lateralibus obtusis convexis*” (= Fastigium verticis not or just wider than the first antennal segment; less narrow eyes; disc of the pronotum flat, posteriorly narrowed, with convex and obtuse lateral margins). In his key this short description was coupled with that of the genus *Eurycorypha* Stål, 1873: “*Processu verticis et frontis latissimo, articulo primo antennarum latiore; pronoto dorso plano, marginibus lateralibus parallelis vel subparallelis, distinctissimis, angulatis; oculis angustis*” (= Fastigium verticis and frons very wide, wider than the first antennal segment; disc of the pronotum flat, with parallel or subparallel very distinct and angular lateral margins; eyes narrow). He also established as type species of the genus *Plangia* the species *Phylloptera graminea* Serville, 1838.

According to Ragge (1980) the genus *Plangia* Stål, 1873 is characterized by fastigium of vertex usually sloping steeply to frons, at least as broad as, and often broader than, first antennal segment, with or without median sulcus, eyes oval, pronotum without lateral carinae, but sometimes showing fairly clear angle between disc and lateral lobes, surface punctate or at least partly so, shiny, fore coxae armed, femora with ventral spines, fore and mid tibiae without dorsal spurs except at apex, hind tibiae with three apical spurs on each side, male tenth abdominal tergite unmodified or somewhat enlarged, male sub-genital plate with styli, ovipositor well developed, with fine teeth.

Ragge (1980) ascribed to the genus *Plangia* 8 taxa: *P. compressa* (Walker, 1869), *P. graminea* (Serville, 1838), *P. graminea deminuta* Griffini, 1908, *P. karschi* Chopard, 1954, *P. laminifera* Karsch, 1896, *P. nebulosa* Karsch, 1890, *P. unimaculata* Chopard, 1955 and *P. villiersi* Chopard, 1954. *Plangia venata* Griffini, 1893 from Madagascar was synonymized by Carl (1914) with *P. albolineata* (Brunner von Wattenwyl, 1878) from Madagascar, not listed by Ragge (1980), who overlooked also *P. guttatipennis* Karsch, 1889 from Madagascar, *P. ovalifolia* Bolívar, 1912 from Seychelles, and *P. segonoides* (Butler, 1878). In addition *P. natalensis* Walker, 1869 from South Africa was synonymized with *P. graminea* by Kirby (1906). On the whole, 12 taxa are currently listed within the genus *Plangia* by Eades et al. (2013).

However, among the species above listed *Plangia laminifera* does not match characteristics of the genus; for this reason a new genus is erected and below described.

Fastigium of vertex is broader than the first antennal segment, with median sulcus, eyes oval and elongate, head without fronto-genal carinae. Pronotum without lateral carinae, surface punctate, shiny, legs densely covered by hairs. Fore and mid tibiae and femora are laterally compressed, mid femora very short, less than pronotum length. Fore and mid femora reddish, fore and mid tibiae dark, hind femora yellowish-brown, hind tibiae yellowish with dark apical part (Figs. 1, 2, 12, 13). Legs are comparatively short, fore and mid are laterally compressed (Figs 6, 7). Distribution of spines on legs are as follows: 3 on the inner ventral border of fore femora, 3 on each side of ventral border of fore tibiae, 4 spines on the inner ventral border of mid femora, 4 on each side of ventral borders of mid tibiae, 6 spines on the outer ventral border of hind femora, 11 on the inner and outer dorsal borders, 10 on the inner and outer ventral borders of hind tibiae. Upper spines are broad-based and long (Figs 12, 13). Many hairs are scattered over the legs. Tegmina are rather large and long (see measurements) and show a sinuous radius and simplified veins; radius is sinuous, second radius divaricate, media nearer to fore than to hind border, with three veinlets developed towards the hind border (Figs 1, 11). Speculum is wide and triangular, small veinlets branch off its left border (Fig. 4); the stridulatory file is gently curved, with ca. 100 small teeth (Fig. 8). Abdomen is yellowish with a reddish stripe on the upper part, cerci are short, covered by small hairs and in-curved, with pointed apex, reddish with black apex (Fig. 5). Sub-genital plate is long, with two carinae, provided by two apical small appendices, similar to styli, which are absent (Fig. 5).

**Redescription of the female.** Same characters of the male, with the following differences. 6–8 spines on the outer ventral border of hind femora, 10–12 and 12–13 spines on the inner and outer dorsal borders of hind tibiae, 5–6 and 9–11 spines on the inner and outer ventral borders of hind tibiae. Ovipositor clearly up-curved, cerci pointed (Fig. 9). Sub-genital plate triangular, with a concavity on the middle and two reliefs on the hind border (Fig. 10).

Measurements (mm). Male. Total length: 21.0; length of pronotum: 6.2; height of pronotum: 6.1; length of hind femora: 13.4; length of tegmina: 30.7. Females. Total length: 21.9–27.4; length of pronotum: 6.0–6.4; height of pronotum: 6.0–6.3; length of hind femora: 12.5–13.4; length of tegmina: 31.1–33.4; length of ovipositor: 5.0–5.9.

**Distribution.** Karsch (1896) described this species from Cameroon (Lolodorf); later, Griffini (1908) recorded it from the Democratic Republic of Congo (Popocabacca), and Leroy (1985) from the Central African Republic.

**Discussion.** When Ragge (1980) published his revision on African Phaneropterinae with open tympana, he divided the key into two main groups, one with dorsal spines of the hind tibiae unusually broad-based and another with unmodified dorsal spines. The first group includes only the genus group *Terpnistriae* Brunner von Wattenwyl, 1878, with characters much different from those of the genus group *Amblycoryphae* Brunner von Wattenwyl, 1878, to which both *Plangia* and *Pseudoplangia* n. gen. belong. The broad-based spines of hind tibiae are a quite unique character in the latter group of Phaneropterinae; their presence in *Pseudoplangia laminifera* was overlooked. Other Phaneropterinae with closed tympana show broad-based spines on hind tibiae (e.g. the S–E Asian genus *Ancylecha* Serville, 1838, belonging to the tribe *Holochlorini* Brunner van Wattenwyl, 1878). *Pseudoplangia* n. gen. seems to be the sole African representative of *Amblycoryphae* equipped with broad-based spines on hind tibiae.

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