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## Revision of the Afrotropical *Pimentelia* Laboissière, 1939 (Coleoptera, Chrysomelidae, Galerucinae)

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### Abstract

We redescribe two of the valid species of the Afrotropical galerucine genus *Pimentelia* Laboissière, 1939. This group forms a distinct monophyletic group, characterized by several external and genitalic characters. It is closer related to *Galerudolphia* Hincks, 1949 and *Neobarombiella* Bolz & Wagner, 1912. The revision is based on the examination of 30 specimens from continental Africa, and contains two valid species: the type of the genus, *Pimentelia kuanduensis* Laboissière, 1939, and *Pimentelia maculata* (Jacoby, 1885) comb. nov. (= *Sermyloides unifasciata* Jacoby, 1900 syn. nov.). A further species originally described, *Pimentelia ochracea* Laboissière, 1939 is unknown to us, type material could not be found. Another species, *Pimentelia hertigi* (Laboissière, 1931), has to be transferred to another group since external characters show that it is not closely related to *Pimentelia* and does not belong to this genus. *Pimentelia* is described in detail, redescrptions are provided for the two known species, including figures of external and genitalic characters, and distribution maps. A key is provided to facilitate species identification.

**Key words:** *Pimentelia*, *Sermyloides*, Africa, Afrotropical Region, taxonomy, revision, new genus, new species, lecto-type, synonymy, key

### Introduction

Traditionally, species of Galerucinae with elongate basal metatarsi and no significant pronotal depressions were placed in the supra-generic group “Monoleptites”, which was introduced by Chapuis (1875). This group can be also found in the catalogue to chrysomelid beetles (Wilcox 1973). Most of the descriptions of such species originated between 1890 and 1950. They were, with few exceptions, based on coloration patterns and few external characters. Thus the taxonomic status, classification and generic delimitation of most of the genera in this group were for a long time unsatisfactory.

The taxonomy and phylogeny of the Afrotropical taxa has been studied by our working group for more than 15 years. Of the species-rich groups like *Monolepta* Chevrolat, 1836 (Wagner 2000a, 2000b, 2001a, 2001b, 2002, 2003, 2005, 2007a, 2007c, with a few awaiting revisions), *Afrocrania* Hincks, 1949 (Middelhaue & Wagner 2000, Wagner 2007b), *Candezea* Chapuis, 1879 (Wagner & Kurtscheid 2005), *Afrocandezea* Wagner & Scherz, 2002 (Scherz & Wagner 2007), *Barombiella* Laboissière, 1931 (Wagner & Freund 2003), *Bonesioides* Laboissière, 1925 (Freund & Wagner 2003), *Galerudolphia* Hincks, 1949 (Bolz & Wagner 2005), and recently *Neobarombiella* Bolz & Wagner, 2012 (Bolz & Wagner 2012) revisions have already been published. Some additional monotypic genera, or such with few species, about 220 species, covering 70 % of the afrotropical taxa traditionally placed in the “Monoleptites”, are now revised. Our studies revealed that the use of external characters for allocation to monophyletic groups or identification alone were not particularly useful. However, a combination of characteristic genital structures, particularly the shape and endophallic armature of the median lobe, could effectively be used for the identification of both species and genera. As opposed to this, the coloration patterns often used for the differentiation of species by preceding authors could be shown as highly variable and thus unreliable, leading to the description of many synonyms, particularly in abundant and widely distributed species.

Furthermore, many of the species described in *Monolepta*, *Candezea* and *Barombiella* have been transferred to

width 0.60 in *P. kuanduensis*; 0.47–0.56 in *P. maculata*; maximal width of both elytra to length of elytron 0.63–0.79 in *P. maculata*, 0.56–0.61 in *P. kuanduensis*; length of second to third antennomere 0.56–0.62 in *P. kuanduensis*; 0.64–0.82 in *P. maculata*).

Total length. 5.85–9.25 mm (mean: 7.56 mm).

Head. Head reddish brown, yellowish brown or brown, rarely black, maxillary palpi brown or black. Antenna dark brown or black, only first or three to four antennomeres brown or yellowish-brown. Third antennomere in female specimens longer than second, fourth and following antennomeres conical and shorter than antennomeres of male specimens. Length of second to third antennomere 0.68–0.82 (mean: 0.77) in males, 0.64–0.75 (mean: 0.70) in females; length of third to fourth antennomere in male specimens 0.45–0.56 (mean: 0.52), in female specimens 0.52–0.63 (mean: 0.57; Fig. 14). Eyes big and rounded (Figs 12a–e), width of eyes to eye distance 0.36–0.45 (mean: 0.41).

Thorax. Pronotum trapezoidal, yellow, brownish-yellow, reddish-yellow or reddish-brown, sometimes with dark brown heart- or berry-shaped spot or entirely black (1 specimen), lightly punctuated. Pronotal width 2.15–3.50 mm (mean: 2.77 mm), pronotal length 1.10–1.90 mm (mean: 1.45 mm), pronotal length to width 0.47–0.56 (mean: 0.52). Elytra yellow or brownish-yellow, in 70% of specimens with black sutural and elytral margins and black transverse bands around shoulder and middle of the elytra, which can rarely (2 specimen) be reduced to black spots. Elytra with deep punctuation and iridescent sheen, elytral length 4.60–7.50 mm (mean: 5.71 mm), elytral width 3.00–5.20 mm (mean: 3.97 mm), maximal width of both elytra to length of elytron 0.63–0.79 (mean: 0.69; Fig. 12). Meso- and metathorax brownish-yellow or brown, legs yellowish-brown or brown, tarsomeres dark brown or black, length of basi-metatarsus to metatibia 0.31–0.41 (mean: 0.34).

Abdomen. Brownish yellow.

Male genitalia. Median lobe long and slender, in ventral view with v-shaped incision and strongly sclerotised structures beside incision, in lateral view sclerotised at apex without significant ridges. Paralell-sided and straight, orifice ovate. Median lobe with very delicate small pair of spiculae (Fig. 13).

**Distribution.** Recorded from South Africa and Zimbabwe (Fig. 11).

## Key to species

- 1 Antennomeres conically but not apically broad and widened, apically twice as wide as basally. Total length 5.9–9.3, maximum width of both elytra to length of elytron 0.63–0.79; antennomere two about two-thirds as long as antennomere three but not of the same length (length of second to third antennomere 0.64–0.82). Pronotal length to width 0.47–0.56, elytron uniformly coloured yellow or brownish-yellow or with black sutural and elytral margins and black transverse bands around shoulder and middle of the elytra, which can be reduced to black spots (Fig. 12 a–e). Elytra with deep punctuation and iridescent sheen. Median lobe apically not strongly sclerotised but in ventral view with a pair of sclerotised ridges beside incision and in lateral view apex not rounded (Fig. 13). Zimbabwe and South Africa (Fig. 11). . . . . *Pimentelia maculata* (Jacoby, 1895)
- Antennomeres conical and apically strongly broad, apically at least or more than twice as wide as basally, second antennomere on average more than half as long as antennomere three (length of second to third antennomere 0.56–0.62; Fig. 9). Total length 7.9–10.9; elytron more slender, maximum width of both elytra to length of elytron 0.56–0.62. Pronotum yellow, brown or brownish-black, trapezoidal and elongated, pronotal length to width 0.60 (Fig. 7). Elytron yellowish-brown or brown, with an oily sheen and deep punctuation. Only recorded from Angola but a wider distribution is possible. . . . . *Pimentelia kuanduensis* Laboissière, 1931

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