A new transfer in the genus *Pachomius* Peckham & Peckham (Araneae: Salticidae: Aelurillini)

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**Abstract.** *Pachomius lehmanni* (Strand, 1908), **comb. nov.** is transferred to the genus *Pachomius* Peckham & Peckham, 1896 (Salticidae: Salticinae: Aelurillini: Freyina), based on a new examination of the sexual characters of the male. This taxon is placed in the *nigrus* species group by the presence of both a spike-like lateral subterminal apophysis (LSA) and a well-developed proximal retrolateral lobe (pRL) of the male pedipalp. A map with the known distribution of the *nigrus* species group of *Pachomius* is presented.

**Keywords.** Colombia, jumping spiders, *Pachomius lehmanni*, *Phiale*, taxonomy

**Introduction**

*Phiale lehmanni* was originally described without any illustrations by Strand in 1908, based on a male collected in Popayan, department of Cauca (western Colombia), by the German Consul Friedrich Carl Lehmann, a plant collector who was traveling between 1850-1903 through southern Colombia to northern Ecuador (Cribb, 2010a, 2010b). This species was probably placed in *Phiale* C. L. Koch, 1846 (Salticidae: Salticinae: Aelurillini: Freyina) because its coloration was similar to other species placed in that genus. Subsequently, this species received no treatment in the partial revisions of *Phiale* (Galiano 1978, 1979, 1981a, 1981b), *Pachomius* (Galiano, 1994, 1995), and all freyines (Edwards, 2015). Edwards (2015) categorized this species as *incertae sedis* inside the genus *Phiale*.

As part of a project on the jumping spiders (Salticidae) from Colombia, the author received several pictures of the male holotype of this species, enough to find that this taxon was erroneously placed in the genus *Phiale*. In this paper, *Phiale lehmanni* Strand, 1908 is transferred to the genus *Pachomius* and included in the *nigrus* species group, based on the presence of both a spike-like lateral subterminal apophysis and a well-developed proximal retrolateral lobe of the male pedipalp (Edwards, 2015). The malp pedipalp of this species is illustrated for the first time.

**Materials and methods**

The male holotype that was photographed is deposited in the Arachnological Collection of the Senckenberg Forschungsinstitut und Naturmuseum (SMF, Peter Jäger), Frankfurt, Germany. Photographs were taken with a Canon EOS camera. Drawings were made by hand from photographs taken of the pedipalp of the holotype male.
Taxonomy

Salticidae Blackwall, 1841
Salticinae Blackwall, 1841
Aelurillini Simon, 1901
Freyina Edwards, 2015

Pachomius Peckham & Peckham, 1896

_Pachomius_ Peckham & Peckham, 1896: 80; type species _Attus dybowskii_ Taczanowski, 1871.

Diagnosis. Males of _Pachomius_ are similar to those of _Phiale_ in the general structure of the pedipalp, but they can be diagnosed by the presence of a distinctive femoral organ on distal prolateral femur of the pedipalp, with a lateral subterminal apophysis (LSA) varying from mostly membranous and lobe-like to sclerotized and spike-like, near (more or less prolateral to) the embolus, usually containing spicules. Female _Pachomius_ have a rather simple epigynum with copulatory openings that are slit-like and situated in shallow atria, while in _Phiale_ they are circular and placed in deeper depressions (Galiano, 1994; Edwards, 2015).

**Pachomius lehmanni (Strand, 1908), comb. nov.**

_Figures 1-4_

_Phiale lehmanni_ Strand, 1908: 7 (description without illustrations of the male holotype from Popayan, Cauca, Colombia, [coordinates and altitude based on locality: 2.44°N, 76.61°W, 1750 m asl], collected by Friedrich Carl Lehmann, deposited in SMF 2377-141, photographs examined); Mello-Leitão, 1941: 299; Flórez & Sánchez, 1995: 363; World Spider Catalog, 2018.

Diagnosis. Placement in the _nigrus_ species group of _Pachomius_ is indicated by the presence of both a sclerotized (spike-like) lateral subterminal apophysis (LSA) and a well-developed proximal retrolateral lobe (pRL) of the male pedipalp. In this group, _P. lehmanni_ can be distinguished from _P. nigrus_ (Caporiacco, 1947) by its more slenderer LSA and embolus, narrower tegulum with a more slender pRL, and RTA with a wider base (Figures 1-2; see Figures 6-9 in Ruiz _et al._, 2007).

Comments. The holotype male that was examined is well preserved and has a brown carapace with lateral and longitudinal stripes of white hairs, and eyes on black marks. The abdomen has an anterior and lateral white stripe, two transverse light-brown lines, and two lateral and posterior white spots (Figure 3).

Distribution. The _nigrus_ species group of _Pachomius_ is comprised of two species from northern South America (Figure 4). _P. lehmanni_ is endemic to Colombia (Cauca), known from an elevation of approximately 1750 m above sea level. _P. nigrus_ is known from Guyana (Potaro-Siparuni) and French Guiana (Saint-Élie) from an elevation between 150-270 m above sea level.
Figures 1-3. *Pachomius lehmanni* (Strand, 1908), male holotype (SMF 2377-141). 1, Left pedipalp, ventral view, detail of the bulb. 2, Same, retrolateral view. 3, Dorsal view. Abbreviations: Cy = cymbium; e = embolus; pRL = proximal retrolateral lobe of the tegular basal division; RTA = retrolateral tibial apophysis; Spe = spermophore.

Figure 4. Known distribution of the *nigrus* species group of *Pachomius* (Salticidae: Salticinae: Aelurillini: Freyina) in northern South America. Map by Mapswire.com (https://mapswire.com) used and modified under a Creative Commons Attribution 4.0 International (CC BY 4.0) License.
Acknowledgments

I thank Peter Jäger (SMF) for providing facilities to examine the type specimen of the species and especially Ricardo Pinto-da-Rocha (Universidade de São Paulo) for taking photographs of this specimen.

References


