

Biology, Ecology and Diversity

Two new species of *Trichomyia* Haliday 1839 (Diptera, Psychodidae, Trichomyiinae) from the Pantanal of Mato Grosso, Brazil

Q1 Maíra Xavier Araújo ^{a,*}, Freddy Bravo ^b, Claudio José Barros de Carvalho ^a

^a Universidade Federal do Paraná, Departamento de Zoologia, Laboratório de Biodiversidade e Biogeografia de Diptera, Curitiba, PR, Brazil

^b Universidade Estadual de Feira de Santana, Programa de Pós-graduação em Zoologia, Departamento de Ciências Biológicas, Feira de Santana, BA, Brazil

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ABSTRACT

Two new species in the Trichomyiinae (Psychodidae), *Trichomyia pantanensis* sp. nov. and *Trichomyia lamasi* sp. nov., are described and illustrated. New records are given for the two additional species *Trichomyia spinicauda* Araújo & Bravo, 2016 and *Trichomyia hispida* Araújo & Bravo, 2016. These four species comprise the first records of the genus in the Pantanal region.

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Introduction

Trichomyia Haliday in Curtis, 1839 is the only extant genus in the Trichomyiinae. This subfamily comprises 191 species distributed throughout the world except Antarctica (Duckhouse, 1973a,b; Duckhouse and Lewis, 2007; Curler and Moulton, 2010; Omelkova and Ježek, 2012; Kvifte, 2012; Araújo and Bravo, 2016). Many species of Neotropical *Trichomyia* were recently described and now 122 species are recognized to this region. In Brazil, 82 species have been recorded, from the Amazon, Cerrado (semi-arid savanna) and Atlantic Rain Forest (Araújo and Bravo, 2016).

The Pantanal is a seasonally flooded savanna plain of approximately 140,000 km² with vegetation similar to that of the Cerrado (Diegues, 1994). A large part of the Pantanal is in the state of Mato Grosso and is an important ecosystem with a rich biodiversity (Almeida, 2004). While many *Trichomyia* species are known in Brazil, members of the genus were not previously found in the Pantanal. Here, we present the first records of *Trichomyia* in the Pantanal of Mato Grosso, with the description of two new species and range extensions of an additional two species.

Material and methods

All specimens used in this study are deposited either in the Coleção Entomológica do Museu de Zoologia da Universidade

Estadual de Feira de Santana, MZFS, Bahia, Brazil or the Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil (MZSP). The specimens from Pantanal were collected during the Project SIS-BIOTA – Diptera, with CDC light trap. The specimens were treated with 10% KOH, dehydrated and mounted in Canada balsam. The general morphological terminology follows Cumming and Wood (2009); the antenna terminology of *Trichomyia* follows Ibáñez-Bernal (2004); wing terminology and the terminology for the male terminalia follows Wagner and Ibáñez-Bernal (2009) and Araújo and Bravo (2016).

Taxonomy

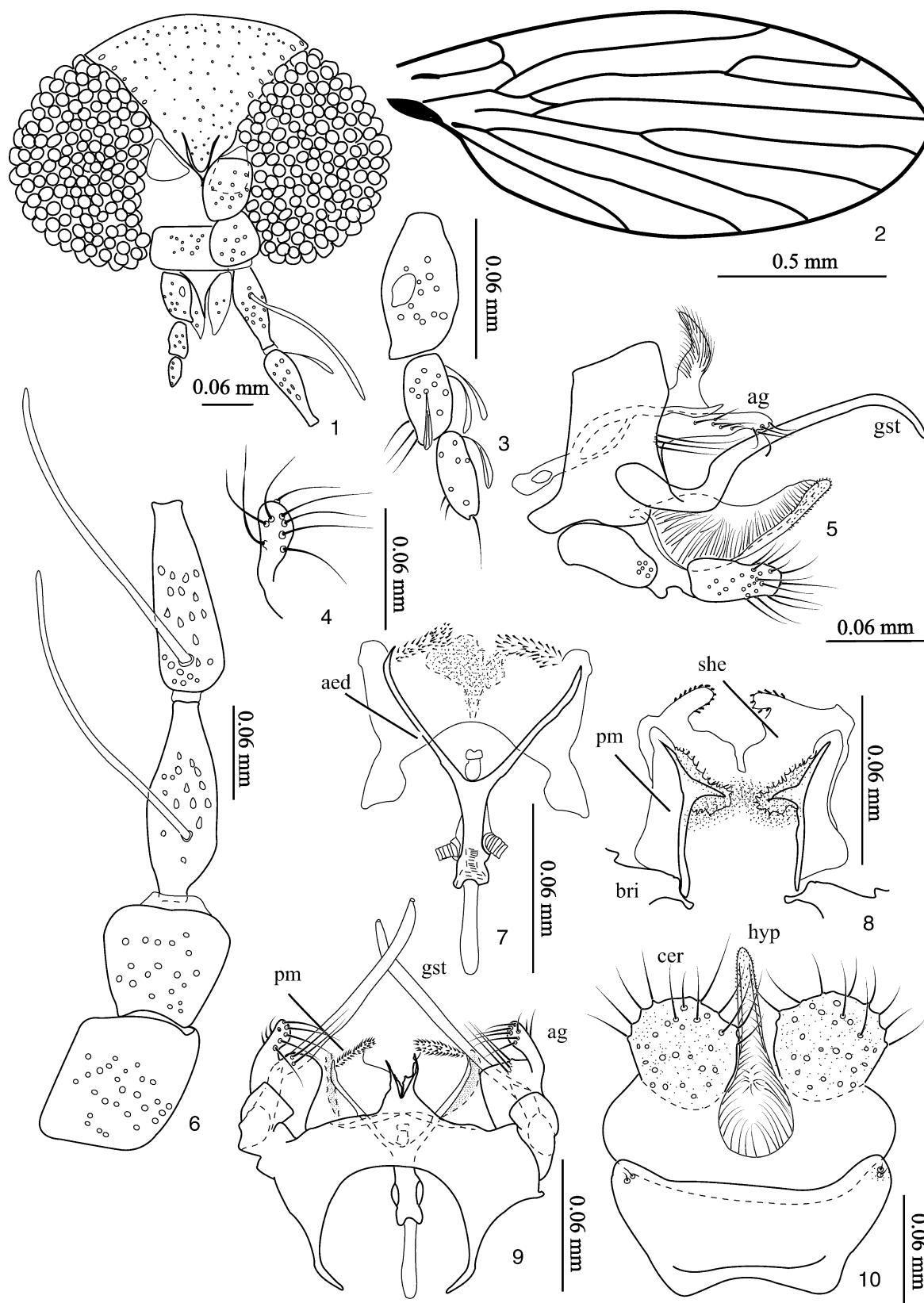
Trichomyia lamasi sp. nov.

Diagnosis. Apex of gonocoxites rounded and with bristles. One pair of parameres fused basally and involved by a membranous parameral sheath. Hypoproct pyriform with setulae.

Description. Male. Head ellipsoidal (Fig. 1). Antenna incomplete in the studied specimens; scape the same length as subspherical pedicel; flagellomeres pyriform and eccentric (Fig. 6); ascoids 1.75 times flagellomere length. Palpus formula 1.0:0.5:0.7; 1st segment with sensilla in depressed pit on inner side (Fig. 3). Wing. R₄₊₅ complete at base; r-m present and m-cu absent (Fig. 2).

Male terminalia: Hypandrium fused with gonocoxites, with medial posterior expansion, bifurcate (Fig. 9), each pair of arm of gonocoxite with rounded apex and elongated bristles along the internal margin (Figs. 4, 5, 9). Gonostylus elongated and straight in dorsal view. One pair of parameres present, with apical setae,

* Corresponding author.
E-mail: mairaxaraudo@gmail.com (M.X. Araújo).



Figs. 1–10. *Trichomyia lamasi* sp. nov. 1. Head; 2. Left wing; 3. Palpus; 4. Arm of gonocoxite; 5. Male terminalia, lateral; 6. Scape, pedicel and basal flagellomeres; 7. Aedeagus and parameres, dorsal; 8. Parameres, ventral view; 9. Male terminalia, dorsal; 10. Cerci, epandrium and hypoproct (abbreviations: aed = aedeagus, ag = arm of gonocoxite, bri = gonocoxal bridge, cer = cercus, gst = gonostylus, hyp = hypoproct, pm = paramere, she = parameral sheath).

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