

Revision of the Neotropical genus *Marbenia* Malloch (Diptera: Periscelididae)

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Abstract

The Neotropical genus *Marbenia* Malloch is revised and now includes 3 species: *Marbenia cinerea*, sp. nov., *Marbenia pallida*, sp. nov. and *Marbenia peculiaris* Malloch, 1931. The genus is herein recorded from the amazonian region of South America (Bolivia, Brazil and Ecuador), and characters of male and female terminalia are illustrated for the first time.

Key words: Periscelidinae, systematics; Neotropical Region, Amazonian Region

Introduction

Periscelididae is a small family of Diptera characterized by the convex and setose face, frons with 1–2 fronto-orbital setae, pedicel cap-like with a dorsal cleft, arista bipectinate, and postocellar setae divergent or absent. Mathis & Rung (2011) provided a global catalog for the family, where a complete diagnosis is found.

The concept of Periscelididae, as adopted here, follows McAlpine (1978, 1983) and comprises ten extant genera and one extinct genus (*Procyamops*, known from Baltic amber). Three of the extant genera are cosmopolitan (*Cyamops* Melander, *Periscelis* Loew, and *Stenomicra* Coquillett). *Stenocyamops* Papp is known from a species from Thailand and a few species from Fiji, and the remaining genera are mostly restricted to the Neotropics (*Diopsosoma* Malloch, *Marbenia* Malloch, *Neoscutops* Malloch, *Parascutops* Mathis & Papp, *Planinasus* Cresson, and *Scutops* Coquillett) (Mathis & Rung 2011). Two subfamilies (Periscelidinae and Stenomicrinae) have been recognized for the Periscelididae (Grimaldi & Mathis 1993; Baptista & Mathis 1994; Mathis & Papp 1998), although the monophyly of only Periscelidinae is well corroborated (Mathis & Rung, 2011).

Marbenia Malloch, 1931 is a rare Neotropical genus that was only known previously by its type species, *M. peculiaris* Malloch, 1931, which was collected in Panama. Malloch (1931) based his description of *Marbenia* on wing venation and shape of face: Costal vein extended only to the apex of vein R_{4+5} , vein A_1+CuA_2 faint, and face with transversal depressions.

The genus is placed in the subfamily Periscelidinae together with *Periscelis* Loew, *Neoscutops* Malloch, *Parascutops* Mathis & Papp, *Scutops* Coquillett and *Diopsosoma* Malloch (Mathis & Rung 2011). These genera form a monophyletic group that shares the following putative synapomorphies: mouth opening large; costal vein short, extended only to vein R_{4+5} ; only one fronto-orbital seta, reclinate; a silvery white stripe on the occiput, adjacent to the posterior margin of the compound eye (absent in some species); vein CuA_2 reduced or absent; cell dm with a fold throughout its length; spiracle 7 within tergite 7 in female postabdomen; postpronotal seta well developed (Grimaldi & Mathis 1993, Baptista & Mathis 1994, Mathis & Papp 1998).

In this paper, we redescribe *M. peculiaris*, including characters of the male, and provide additional distributional data for the species. We also describe two new species, *Marbenia cinerea* sp. nov. and *Marbenia pallida* sp. nov., based on specimens collected in South America.

References

- Ale-Rocha, R. & Freitas, G. (2011) Revision of the Neotropical genus *Neoscutops* Malloch (Diptera: Periscelididae). *Zootaxa*, 3016, 1–28.
- Baptista, A.R.P. & Mathis, W.N. (1994) A revision of New World *Cyamops* Melander (Diptera: Periscelididae). *Smithsonian Contributions to Zoology*, 563, 1–25.
<http://dx.doi.org/10.5479/si.00810282.563>
- Cumming, J.F. & Wood, D.M. (2009) Adult Morphology and terminology. In: Brown, B.V., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E., Zumbado, M.A. (Coordinators), *Manual of Central America Diptera. Vol. 1. Monograph 27*. Research Press, Ottawa, Ontario, Canada, pp. 9–64.
- Grimaldi, D.A. & Mathis, W.N. (1993) Fossil Periscelididae (Diptera). *Proceedings of the Entomological Society of Washington*, 95, 383–403.
- Malloch, J.R. (1931) Notes on some acalyprate flies in the United States National Museum. *Proceedings of the United States National Museum*, 78 (15), 1–32.
<http://dx.doi.org/10.5479/si.00963801.78-2858.1>
- Mathis, W.N. & Papp, L. (1998) Family Periscelididae. In: Papp, L. & Darvas, B. (Eds.), *Manual of Palaearctic Diptera. Vol. 3. Higher Brachycera*. Science Herald, Budapest, pp. 285–294.
- Mathis, W.N. & Rung, A. (2011) World catalog and conspectus on the family Periscelididae (Diptera: Schizophora). *Myia*, 12, 341–377.
- McAlpine, D.K. (1978) Description and biology of a new genus of flies related to *Anthoclusia* and representing a new family (Diptera, Schizophora, Neurochaetidae). *Annals of the Natal Museum*, 23 (2), 273–295.
- McAlpine, D.K. (1983) A new subfamily of Aulacigastridae (Diptera: Schizophora), with a discussion of Aulacigastridae classification. *Australian Journal of Zoology*, 31, 55–78.
<http://dx.doi.org/10.1071/zo9820055>
- Prado, A.P. (1975) Family Periscelididae. In: Papavero (Ed.), *Catalogue of Diptera of Americas South of the United States. Vol. 67*. Depto. Zoologia, Secretaria de Agricultura, São Paulo, pp. 1–3.