



<http://dx.doi.org/10.11646/zootaxa.3847.4.2>

<http://zoobank.org/urn:lsid:zoobank.org:pub:46E41A86-A877-4690-80D9-1C91149A4F8E>

## The identity of the treehopper genus *Dysyncritus* Fowler, with descriptions of new related taxa (Hemiptera: Membracidae: Heteronotinae)

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### Abstract

*Dysyncritus* Fowler is revised based on the examination of primary types, and restructured to exclusively accommodate *Dysyncritus intectus* Fowler, 1895. *Allodrilus* Evangelista **gen. nov.** (type species: *Cymbomorpha nitidipennis* Funkhouser, 1922 = *Allodrilus nitidipennis* (Funkhouser, 1922) **comb. nov.**) is erected with seven newly discovered taxa: *A. alboferrugineus* Evangelista **sp. nov.** (Brazil, Colombia, Guyana), *A. colombiensis* Flórez-V **sp. nov.** (Colombia), *A. deitzi* Evangelista **sp. nov.** (Ecuador), *A. granulatus* Evangelista **sp. nov.** (Ecuador), *A. horizontalis* Evangelista **sp. nov.** (Bolivia), *A. intermedius* Evangelista **sp. nov.** (Ecuador), and *A. similis* Evangelista **sp. nov.** (Peru). A key to males is provided, in addition to annotated descriptions and illustrations. Nomenclatural changes are proposed to species formerly included in *Dysyncritus*: *Smiliorachis nubilis* (Goding, 1930) **comb. nov.**, *Smiliorachis discrepans* (Goding, 1930) **comb. nov.**, and *Dysyncritus lineatus* Goding, 1930 (= *Smiliorachis octilinea* Stål, 1869 **syn. nov.**).

**Key words:** Auchenorrhyncha, Heteronotini, taxonomy, nomenclatural notes, new species

### Introduction

Species in the treehopper family Membracidae are renowned for their extraordinarily developed pronota, which often consists of complex-shaped structures thought to have adaptive significance and play multiple roles in treehopper biology (Wood, 1993a). The subfamily Heteronotinae shows an outstanding diversity of such thoracic ornamentations, and currently comprises 103 species classified in nine exclusively Neotropical genera (McKamey, 1998a; Sakakibara, 1998c). The monophyly of the subfamily is supported by the following characters: the dorsally concave vertex, the absence of the crossvein *m-cu*<sub>1</sub> in the forewings, and female's second valvulae serrated distally (Dietrich *et al.*, 2001a; Deitz, 1975a). Whereas some heteronotine genera are unique in their external morphology (i.e., *Heteronotus* Laporte, and *Omolon* Walker), others may appear identical to each other, as exemplified by *Dysyncritus* Fowler, and *Smiliorachis* Fairmaire. Indeed, the lack of a comprehensive study on *Dysyncritus* and *Smiliorachis* made species determination a difficult task, especially with the substantial number of taxa awaiting formal description. Although pronotal shape and coloration show a lesser degree of variation in these groups, their male genitalia are remarkably elaborate in comparison to other heteronotines. Those genitalic structures provide a useful basis for species recognition, as well as characterization of genus-level taxa. The focus of this revision is to reassess the taxonomic identity of *Dysyncritus* and to place morphologically heterogeneous species currently considered congeneric in well defined genera.

### Taxonomic background

Fowler (1895b) erected *Dysyncritus* to accommodate a single species, *Dysyncritus intectus*, described by the author

## *Smiliorachis octilinea* Stål, 1869

*Smiliorachis octilinea* Stål, 1869c: 260; Berg, 1883c: 293 [comparative notes]; Funkhouser, 1927f: 156 [catalogued]; Goding, 1929e [sic]: 225 [key, catalogued]; Funkhouser, 1951a: 82, Pl. III, Fig. 36 [illustrated, catalogued]; Metcalf & Wade, 1965a: 647 [catalogued]; McKamey, 1998a: 169 [catalogued].  
*Dysyncritus lineatus* Goding, 1930b: 12 [original description], 14 [key, comparative notes]; Metcalf & Wade, 1965a: 645 [catalogued]; McKamey, 1998a: 162 [catalogued]. **Syn. nov**  
*Procyrtia lineatus*; Funkhouser, 1951a: 84 [catalogued in Darnini: error].

**Examined material.** *Smiliorachis octilinea* Stål, 1869. Holotype male from BRAZIL: Minas Gerais: Lagoa Santa, '[handwritten] Lagoa \ Santa', '[handwritten] M. Havn', '[handwritten] octilinea \ Stål', '[red label] Typus' (NHRS). *Dysyncritus lineatus* Goding, 1930. Holotype male from BRAZIL: Mato Grosso: Chapada dos Guimarães, 'Chapada', 'Oct', 'Am[erican]. Mus[eum]. [of] Nat[ural]. Hist[ory]. \ Dep[ar]t[ment]. [of] Invert[erbrate]. Zool[ogy]. \ No.', '[handwritten] Ac: 23739', '[handwritten] 541', '[handwritten] Dysyncritus \ lineatus \ type God[in]g', '[red label] HOLOTYPE \ DYSYNCRITUS \ LINEATUS \ GODING', '[handwritten] DEITZ RESEARCH \ 72-81b ♂' (AMNH).

## Acknowledgments

The authors thank all curators for their invaluable assistance with specimen loans, especially of primary types. We are indebted to Victor Nardino (Taxon line, Universidade Federal do Paraná) for photographing several specimens, Lewis Deitz for sharing unpublished data on treehopper literature, Rodrigo Feitosa for identifying tending ants, Keith Bayless and an anonymous referee for critically reviewing an earlier draft of this manuscript. Financial support was provided to O. Evangelista through a Brazilian program for enhancing taxonomy expertise [CAPES, PROTAX 561298/2010-6] and FAPESP [2012/21398-0]; A. M. Sakakibara is currently funded by CNPq [proc. 300.577/2010-9].

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