

## Article



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## Revision of the plant bug genus *Cylapocoris* Carvalho (Hemiptera: Heteroptera: Miridae: Cylapinae), with descriptions of seven new species from Costa Rica, Brazil, Ecuador, and Venezuela

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## **Abstract**

The plant bug genus *Cylapocoris* Carvalho, 1954 is revised. Seven new species: *Cylapocoris costaricaensis* **sp. nov.**, *C. cucullatus* **sp. nov.**, *C. fulvus* **sp. nov.**, *C. laevigatus* **sp. nov.**, *C. marmoreus* **sp. nov.**, *C. plectipennis* **sp. nov.**, and *C. simplex* **sp. nov.** are described from Costa Rica, Brazil, Ecuador, and Venezuela. The genus *Adcylapocoris* Carvalho, 1989 is synonymized with *Cylapocoris*. Five species: *C. castaneus* (Carvalho, 1989), *C. funebris* (Distant, 1883), *C. pilosus* Carvalho, 1954, *C. sulinus* Carvalho & Gomes 1971, and *C. tiquiensis* Carvalho, 1954 are redescribed. Illustrations of the male genitalia, color photographs of dorsal and lateral views of the adult of most species, scanning electron micrographs of selected structures of *C. simplex*, and keys to species of the genus *Cylapocoris* are provided.

Key words: Hemiptera, Heteroptera, Miridae, systematics, Cylapinae, Cylapocoris, new species, key, distribution

## Introduction

The state of knowledge of the tribes of Cylapinae is highly uneven. While most of the representatives of the tribes Bothriomirini, Vaniini, and Rhinomirini have recently been the subject of extensive studies (Gorczyca & Chérot 1998; Cassis et al. 2003; Cassis & Monteith 2006; Wolski 2010, 2012; Wolski & Gorczyca 2011, 2012), the tribes Cylapini and Fulviini are still neglected and our knowledge on these groups is mostly restricted to the original, old generic and specific descriptions, with only a few genera receiving modern treatments (e.g. Carvalho & Costa 1994; Gorczyca 1998, 2000, 2002, 2006a; Chérot & Gorczyca 2000; Moulds & Cassis 2006; Wolski & Henry 2012, 2013).

Our knowledge of the diversity and distribution of the subfamily Cylapinae is also unsatisfactory. The only comprehensive treatments of the subfamily are those of Gorczyca (2000) and Yasunaga (2000) and Yasunaga & Miyamoto (2006), who reviewed the Afrotropical and Japanese representatives of this group. There are no comparable studies for the Australian, Neotropical, and Oriental regions.

The New World Cylapinae fauna currently comprising 136 species in 25 genera (Schuh 1995, 2002–2013; Gorczyca 2006b; Henry et al. 2011), the majority of which belong to the largest genera *Fulvius* Stål and *Peritropis* Uhler, remains the most poorly studied. Recent revisionary studies of *Fulvius* and *Peritropis* in the New World (Carvalho & Costa 1994; Wolski & Henry 2012) have drastically increased the number of known species and many undescribed taxa are still awaiting discovery in collections. This paper, providing descriptions seven new species of *Cylapocoris* Carvalho, is the next, small step towards understanding the true diversity of the cylapines in the New World.

Cylapocoris was described by Carvalho (1954) to accommodate two species *C. tiquiensis* Carvalho and *C. pilosus* Carvalho. Subsequently, Carvalho & Gomes (1971) provided diagnosis of the genus along with description of the new species (*C. sulinus* Carvalho & Gomes) and key to three known taxa. Later two additional species were described by Carvalho (1982, 1989a). The same author (Carvalho 1976) included *Carnus funebris* Distant (Distant 1883) in *Cylapocoris* and described the genus *Adcylapocoris* Carvalho (Carvalho 1989b) to accommodate the single species *Adcylapocoris castaneus*. In the present paper *A. castaneus* is included in the *Cylapocoris* (see