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Description of a new species of the *costata*-group (Cladocera, Chydoridae, Aloninae) from Brazil

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Abstract

The aim of this study is to describe a new species of the *costata*-group from Brazil. *Alona margipluma* sp. nov. shares morphological traits with *A. costata* Sars, 1862, *A. natalensis* Sinev, 2008, and *A. cheni* Sinev, 1999, but differs from them in: (i) thin setulae between the marginal setae on the valves, (ii) setae 4–5 on the exopodite of limb III long and different in length, (iii) bottle-shaped sensillum on the basal endite of limb IV. For identification of *Alona margipluma* sp. nov. it is necessary to check carefully the main head pores and postabdomen characters since the former superficially resemble *A. iheringula*, *A. setigera* and *Alona guttata*.

Key words: *Alona costata*-group, head pores, morphology, taxonomy, Neotropics, South America

Introduction

The *costata*-group is a well-defined species complex of the subfamily Aloninae Dybowski & Grochowski, 1894 emend. Frey, 1967 belonging to the Hexalona-branch (Van Damme *et al.* 2010). Its representatives have a number of conservative morphological features, such as transverse lateral head pores, each with a pocket-like cavity, inner distal lobe of limb I with three setae, limb I with one flat plumose seta on endite 1, exopodite of limb III with seven setae, presence of filter comb on limb V, and limb VI. However, structures such as the postabdomen, main head pores and labral keel show important differences among different species (Sinev 1999; Sinev 2001; Sinev 2008; Sinev 2009a; Van Damme & Eggermont 2011; Van Damme *et al.* 2011). The *costata*-group is expected to be transferred to a new genus because it differs from the “true *Alona*” core group, which includes species with morphology similar to *Alona quadrangularis* (O.F. Müller, 1776) (Van Damme & Dumont 2008a; 2008b).

Until now, the Brazilian fauna of the *costata*-group has been represented by two species, *A. iheringula* Sars, 1901 and *A. cf. setigera* Brehm, 1931. *Alona iheringula* was, for a long time, considered a junior synonym of *A. rustica* Scott, 1895 (cf. Smirnov 1971). Sinev (2001) revalidated the species status of *A. iheringi* after its redescription based on Sars’ material. Kotov & Sinev (2004) created a *nomem novum*, *Alona iheringula*. *Alona setigera* was initially described from New Zealand as a variation of *A. guttata* Sars, 1862 and later transferred to the genus *Biapertura* Smirnov, 1971 because it has two main head pores (Smirnov & Timms 1983). Sinev (1999) observed that the morphology of its limbs was related to the *Alona costata*-group, and it was considered as a valid species (Van Damme *et al.* 2010). In Brazil, this species was reported for the first time in São Paulo state (Santos-Wisniewski *et al.* 2001) and new records have been added for other states (Elmoor-Loureiro 2010).