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Separation of *Anthalona* gen.n. from *Alona* Baird, 1843 (Branchiopoda: Cladocera: Anomopoda): morphology and evolution of scraping stenothermic alonines

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Abstract

We move the freshwater cladocerans *Alona verrucosa* Sars, 1901 and related species from the lump genus *Alona* Baird, 1843 (Anomopoda: Chydoridae: Aloninae) to *Anthalona* **gen. n.** We revise the group and describe five new taxa from tropics and subtropics: *Anthalona simplex* **n. sp.**, DR Congo, *A. harti* **n. sp.**, Africa (with two subspecies), *A. acuta* **n. sp.**, Brazil and *A. obtusa* **n. sp.**, Borneo. *Anthalona* is a genus of relatively small-sized, stenothermic Aloninae with specializations for scraping. Within the subfamily, the new genus is closest to *Karualona* and *Coronatella*. We discuss possible homoplasy of limb characters between latter and *Anthalona*. The genus can be considered an important case study in an evolutionary trend towards oligomerization of limb structures at low taxonomical levels and within an extant crustacean lineage. Composition of the genus reflects a complex history. Species with unusual morphologies (*A. brandorffi, A. simplex* **n. sp.**) appear basal in our phylogeny and may be relicts, in comparison to a pantropical *A. verrucosa* complex of similar forms. Several species may coexist in a single water body such as *A. acuta* **n. sp.** and *A. verrucosa* in the Neotropics, suggesting niche separation.

Key words: *Anthalona* **gen. n.**, Aloninae systematics, limb morphology, taxonomy, Anomopoda