

A genus level revision of the Thamnocephalidae (Crustacea: Branchiopoda: Anostraca)

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Abstract

The family Thamnocephalidae, especially the genus *Branchinella*, has become a mélange of genera and species with unclear affinities. A genus level revision of the family, using modern taxonomic standards, is presented. Two distinct subfamilies are recognized, consisting of six genera (including one new genus): *Thamnocephalus* and *Carinophallus* gen. nov. in the Thamnocephalinae, and; *Dendrocephalus*, *Phallocryptus*, *Gurneya*, and *Branchinella* in the Branchinellinae. Three genera are each composed of two subgenera: *Thamnocephalus* (*Thamnocephalus* and *Simpliccephalus*), *Dendrocephalus* (*Dendrocephalus* and *Dendrocephalinus* subgen. nov.), and *Branchinella* (*Branchinella* and *Branchinellites* stat. nov.). A key to the genera is presented coupled with a checklist of all described species in the family, and *Branchinella hardingi* is redescribed from presumed paratype material.

Key words: *Branchinella*, *Branchinellites*, *Carinophallus*, *Dendrocephalinus*, *Dendrocephalus*, *Gurneya*, *Phallocryptus*, *Thamnocephalus*, fairy shrimp, new genus, new subgenus

Introduction

As previously noted (Linder 1941; Hamer 1994; Brtek 1996; Brendonck 1997; Brendonck & Belk 1997; Rogers 2003), the genus *Branchinella* Sayce, 1903 has long been a dumping ground for thamnocephalid anostracans that did not readily fit into the genera *Thamnocephalus* Packard 1879, *Dendrocephalus* Daday 1908, and *Phallocryptus* Birabén 1951. The resulting confusion has necessitated a close reassessment of the family.

In 1879 Packard established the genus *Thamnocephalus*, and later in 1883 he erected the subfamily Thamnocephalinae within the Branchipodidae to accommodate his new genus and species. Simon (1886) elevated this subfamily to family level. Daday (1910 a, b) recognized similarities among the genera *Thamnocephalus*, *Dendrocephalus*, *Branchinella*, *Branchinellites* Daday, 1910, and *Eubranchinella* Brauer 1877, and placed