



A new genus and species of branchipodid fairy shrimp (Crustacea: Branchiopoda: Anostraca) from Australia

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ABSTRACT

A new anostracan genus with two new species in the family Branchipodidae is described from the Murray Darling basin, Australia. This is the first record of the family from Australia. Males of *Australobranchipus* typically have long and elaborate frontal appendages comparable to those in the branchipodid genera *Branchipus* and *Pumilibranchipus*. Females have a compact brood pouch like other branchipodid genera. Two new species in this genus are described (*A. parooensis* and *A. gilgaiphila*). Along with recent additions in *Branchinella* and *Parartemia*, and confirmation of the presence of *Streptocephalus*, these new findings change the concept of low diversity among higher anostracan taxa in Australia. *Australobranchipus* is also remarkable for having the shortest known life cycle of any Australian anostracans. In the type locality, which typically holds water for only two to six weeks in occasional years, and when cultured, it matures within a week and dies within two weeks, allowing these species to avoid competition with other anostracans.

Key words: Taxonomy, *Australobranchipus*, *Australobranchipus parooensis*, *Australobranchipus gilgaiphila*, biogeography, life cycle

INTRODUCTION

To date, four families of anostracans are known to occur in Australia: Artemiidae, Thamnocephalidae, Parartemiidae and Streptocephalidae (Timms 2004). Of these, only the Parartemiidae were previously considered endemic to Australia. However, according to a recent revision of the Thamnocephalidae (Rogers 2006), the genus *Branchinella* (subgenus *Branchinella*) is also endemic. (The subgenus *Branchinellites* occurs in Eurasia and Africa). In comparison with other continents like Africa and North America, this is not an impressive number, although the list is growing with recent discoveries. The Australian anostracan fauna is mainly characterized by a considerable species radiation in the endemic groups: *Branchinella* (31 described species) (Timms 2004, 2005; Rogers 2006) and *Parartemia* (8 described and more than 7 undescribed species) (P. Hudson pers.comm.; Timms 2004). Only recently was the presence of streptocephalids in Australia confirmed (Herbert & Timms 2000; Timms 2004).

On several occasions, a new anostracan genus and two species were collected from the Paroo region in northwestern New South Wales and also in southwestern Queensland. This genus belongs to the family of the Branchipodidae, a typical Old World family showing great morphological diversity (Brendonck 1995a) in Eurasia and Africa.

In this paper we describe the new genus and two species of Branchipodidae, and discuss their affinities with other members of the family. Some observations on the biology and ecology of the new species are also presented.