



Tanaidacea from Brazil. II. A revision of the subfamily Hemikalliapseudinae (Kalliapseudidae; Tanaidacea; Crustacea) using phylogenetic methods

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Abstract

Based on recently collected material from Brazil the subfamily Hemikalliapseudinae is revised using phylogenetic methods and including ontogenetic observations. Due to the homoplastic nature of many family or subfamily characters, this analysis includes taxa from the family Kalliapseudidae as well as from other Apseudomorphan families (Apseudidella, Apseudidae, Parapseudidae and Sphyrapodidae). *Gigantapseudes* is chosen as an outgroup. According to this analysis the family Kalliapseudidae, the Kalliapseudinae and Hemikalliapseudinae are monophyletic but the subfamily Tanapseudinae is not monophyletic. *Thaicungella* currently residing in the Parapseudidae is transferred to Kalliapseudidae on the basis of this analysis. Male, female and manca I of a new species of the genus *Acutihumerus*, *A. petronius*, are described. The species *Bacescapseudes patagoniensis* is restored but moved to genus *Acutihumerus*. The genus *Longipedis* (Parapseudidae) is removed from *Saltipedis* and restored. Comments on the ontogeny of the pereopodal exopod are included.

Key words: Crustacea, Peracarida, Tanaidacea, Apseudomorpha, Kalliapseudidae, Kalliapseudinae, Hemikalliapseudinae, Tanapseudinae, Phylogeny, *Acutihumerus*, *Longipedis*, *Thaicungella*, Pereopod exopod, Brazilian fauna

Introduction

This is the second in a series of systematic papers on the Tanaidacea from Brazil and here we analyze the monophyly of the subfamily Hemikalliapseudinae Guțu, 1972 using phylogenetic methods.

The phylogeny of the Tanaidacea is very poorly understood (Guțu 1981, Sieg 1986, Larsen 1999, Larsen & Wilson 2002, Bird & Larsen 2009) and for the suborder Apseudomorpha, no phylogenetic analyses have been conducted since Sieg (1984). The subfamily Hemikalliapseudinae is one of three subfamilies within the Kalliapseudidae Lang, 1956a. Not only on the subfamily level is there confusion, but also on the family level of the family Kalliapseudidae (Guțu 2006).

One example is the missing maxillule palp [contrary to Lang's (1956a and 1956b) original diagnoses]. This palp is a diagnostic character but one also found in the Neotanaidomorpha and in the family Apseudellidae Lang, 1968 (which also display a spiniform pereopod 1 coxa) and is thus homoplastic.

Another character poorly defined is the presence of a coxa spine (spiniform process/apophysis) on pereopod 1 which is a diagnostic characteristic of the family Apseudidae Leach, 1814 and is also found (well developed) in some genera of Hemikalliapseudinae (*Acutihumerus* and *Hemikalliapseudes*). While no-one doubts that the Apseudidae is overburdened and its diagnosis has been eroded several times in recent years (Guțu 2002, Blazewicz-Paszkowycz & Larsen 2004, Guțu 2006); no-one has disputed the diagnostic value of the pereopod 1 coxa spine character. Therefore, the presence of a strong coxa spine in members of the Kalliapseudidae causes substantial systematic confusion.