



A new species of *Seira* Lubbock (Collembola: Entomobryidae) from Brazil with sexually dimorphic legs

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Abstract

A new species of *Seira* Lubbock, *S. bicolorcornuta* **sp. nov.**, from Alto do Moura, Pernambuco State, Brazil, is described and illustrated. The males of this species have conspicuous modifications on the first pair of legs. This condition and other morphological features indicate a clear relationship between *S. bicolorcornuta* **sp. nov.** and *S. raptora* Zeppelini & Bellini. The distribution and chaetotaxic patterns of both species are discussed.

Key words: Brazilian collembolan diversity, chaetotaxy patterns, Pernambuco State, systematics

Introduction

Seira Lubbock is one of the most diverse genera of Entomobryidae, with 178 described species (Bellinger *et al.* 1996–2008; Mari Mutt & Bellinger 1990, 1996; Mari Mutt *et al.* 1998–2008; Bellini & Zeppelini 2008). *Seira* has a worldwide distribution but the majority of the species have been recorded from tropical areas, most frequently on sites experiencing high temperatures (Mari Mutt *et al.* 1998–2007; Christiansen & Bellinger 2000). There are 48 described species of *Seira* for the Americas, with 20 of them occurring in Brazil (Mari Mutt 1986; Culik & Zeppelini 2003; Bellini & Zeppelini 2005; Zeppelini & Bellini 2004; Bellini & Zeppelini 2008). It is the most diverse genus, together with *Sphaeridia*, so far known from the country (Culik & Zeppelini 2003; Bellini & Zeppelini 2008).

The superficial morphology of *Seira* specimens is not very different from other entomobryids (Christiansen & Bellinger 1998). *Seira* can be distinguished from other genera for the presence of a falcate mucro, seven or eight lenses on each eye spot and yellowish or brownish rounded scales covering the dorsum of the head, body and at least the first segments of antennae, legs and furca (Christiansen & Bellinger 2000; Barra 2004).

Seira is an important genus of Entomobryidae since it is the only group in which sexual dimorphism occurs other than in the size of individuals and the morphology of the genital plate (Zeppelini & Bellini 2006). The condition was first recognized in *S. raptora* Zeppelini and Bellini and *S. mantis* Zeppelini and Bellini but has not been observed in other species. In these species, sexual dimorphism consists of strong, spine-like setae on the femora and tibiotarsi of the first pair of legs in males (Fig. 1). In males of *S. raptora* the shape of anterior femora are strongly enlarged and the tibiotarsi are slightly curved (Fig. 1A). However, the two species are not closely related because the body chaetotaxy, the shape of the antennae and even the structure of the male legs distinctly differ (Fig. 1) (see Zeppelini & Bellini 2006). Both species therefore achieved sexual dimorphism of the leg by convergence.