



Three new species of *Seira* Lubbock (Collembola, Entomobryidae) from Mataraca, Paraíba State, Brazil

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Abstract

Three new species of *Seira* Lubbock from Mataraca, Paraíba State, Brazil are described and illustrated, *S. mataraquensis* **sp. nov.**, *S. arenicola* **sp. nov.** and *S. pseudoannulata* **sp. nov.** Evolutionary and taxonomic aspects of the dorsal chaetotaxy are discussed. The large number of *Seira* species recorded in Paraíba and the sympatric distribution of eight species in coastal sand dunes suggest that the Brazilian northeastern region is a hotspot of diversity for the genus.

Key words: chaetotaxy, coastal diversity, systematics, microarthropods

Introduction

The Entomobryidae is the most diverse family of Collembola with more than 1620 species (21.6% of all known Collembola (Bellinger *et al.* 1996–2007). The genus *Seira* Lubbock is the fourth more species rich genus in the Entomobryidae, with 175 described species (Table 1) (Bellinger *et al.* 1996–2007; Mari Mutt & Bellinger 1990, 1996; Mari Mutt *et al.* 1998–2007).

Seira is a predominantly tropical genus, with more than 70% of the species described from Africa, Latin America and India (Mari Mutt *et al.* 1998–2007, Christiansen & Bellinger 2000). There are 45 species found in the Americas, with only six of them from North America (Christiansen & Bellinger 1998). In Brazil, *Seira* is the second most diverse genus of Collembola with 17 species. Only *Sphaeridia* Linnaniemi (Sminthuridae) is more diverse with 20 recorded species (Culik & Zeppelini 2003; Bellini & Zeppelini 2005; Zeppelini & Bellini 2006).

Specimens of *Seira* are usually found in high temperature sites (Christiansen & Bellinger 2000). They are epiedaphic and usually found among leaf litter or on soil or under rocks.

The morphology of *Seira* superficially resembles that of *Lepidocyrtus* and *Entomobrya*. *Seira* differs from the other entomobryids in having yellowish or brownish rounded scales covering almost all the dorsum and the first segments of the legs, antennae and furca, eight lenses on each eye spot (except for *S. americana* Jacquemart, which has seven) and with a typical entomobryid crenulate dens ending in a falcate mucro (Christiansen & Bellinger 2000).

The most relevant study of *Seira* in the New World is the revision of the genus by Christiansen & Bellinger (2000). In this work the genera *Drepanocyrtus* Handschin, *Pseudosira* Schott, *Lepidocyrtinus* Börner and *Ctenocyrtinus* Arlé were synonymised with *Seira* and the species of the Americas were revised. *Seira* belongs in the subfamily Seirinae *sensu* Deharveng (2004) together with *Epimetrura* Schött, 1925 (Bellinger *et al.* 1996–2007).