

Two *Seira* Lubbock 1869 (Collembola, Arthropleona, Entomobryidae) new to science, with remarkable secondary sexual characters

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Abstract

Two new species of *Seira* Lubbock 1869 are described and illustrated. The males of these species show modifications in the fore legs, probably associated with sexual courtship and/or mating behavior. Despite the similarity of the modifications of the two species, they are not otherwise similar. Thus the similarity is due to convergence rather than homology. These are the first records of sexual dimorphism other than genital openings in Entomobryidae.

Key words: Collembola; *Seira*; Brazilian *Seira*; Canary Island *Seira*; Secondary sexual character; Sexual dimorphism

Introduction

After Christiansen and Bellinger (2000) the genera *Depranocyrtus*, *Pseudosira*, *Lepidocyrtinus* and *Ctenocyrtinus*, became synonymous with *Seira* Lubbock 1869. They diagnosed the genus as being "...readily identified by the presence of large, rounded, brownish scales, 8+8 eyes, crenulate dentes equipped with ventral scales, and a falcate mucro lacking a basal spine". There are 44 species described in Americas, 28% of the total species of the genus (~160). In Brazil the first record of the genus was *S. subannulata* (Denis) and *S. melloi* (Arlé) both as *Lepidocyrtinus* (Arlé, 1939), 14 species are known to occur in Brazil, but 2 are dubious records, *S. subannulata* (Denis) and *S. musarum* Ridley (Christiansen & Bellinger, 2000; Culik & Zeppelini, 2003).

Since Yosii's (1959) introduction of the dorsal macrochaetotaxy many authors have described new species, contributing to the understanding of the diversity in different environments, from forest soil to deserts (e.g. Coates, 1968; Jacquemart, 1974; Mari-Mutt,