



***Scapheremaeus rodickae* n. sp. (Acari: Oribatida: Cymbaeremaeidae) associated with temporary rock pools in Georgia, with key to *Scapheremaeus* species in eastern USA and Canada**

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Abstract

A new and apparently endemic oribatid mite—*Scapheremaeus rodickae* n. sp. (Cymbaeremaeidae)—is described based on adult specimens collected from mosses (*Grimmia laevigata*) growing on shallow soils in weathering depressions (rock pools) on granitic outcrops of the Georgia (USA) Piedmont. *Scapheremaeus marginalis* (Banks) is considered a senior subjective synonym of *Scapheremaeus marmoratus* (Berlese). A diagnostic key to the five currently recognized species of *Scapheremaeus* known from the eastern USA and Canada is presented, as are new distribution records. *Scapheremaeus palustris* (Sellnick) is the most common and widely distributed species in this region and is the only *Scapheremaeus* species known to have a trans-Atlantic distribution; European populations have a slightly different prodorsal microsculpture.

Key words: Piedmont, granite outcrops, oribatid mite, soil mite, moss fauna, epilithic fauna, lithotelmata

Resumo

Um novo e aparentemente endêmico ácaro oribatídeo—*Scapheremaeus rodickae* n. sp. (Cymbaeremaeidae)—é descrito e ilustrado a partir de espécimes adultos coletados em musgos (*Grimmia laevigata*) de solos rasos de orifícios e depressões encontrados em rochas graníticas do Platô de Piedmont na Geórgia (USA). *Scapheremaeus marginalis* (Banks) é considerado um sinônimo sênior de *Scapheremaeus marmoratus* (Berlese). Uma chave diagnóstica para as cinco espécies atualmente reconhecidas de *Scapheremaeus* registradas no leste dos Estados Unidos e no Canadá é apresentada, assim como novos registros de distribuição. *Scapheremaeus palustris* (Sellnick) é a espécie mais comum e a mais amplamente distribuída nesta região, sendo a única espécie de *Scapheremaeus* conhecida que tem distribuição trans-Atlântica; as populações Européias possuem a microescultura do prodorso levemente diferente.

Introduction

Oribatid mites comprise a major part of the decomposer community of soil and litter in humid forests, where they reach high density and diversity, but members of the cosmopolitan superfamily Cymbaeremaeoidea (with the single family Cymbaeremaeidae, *sensu* Behan-Pelletier 1989) are rarely found there. Instead, they are associated with thin, xeric soils, arboreal or epilithic mosses and lichens, and similar rigorous, environmentally challenging microhabitats that are subject to frequent, periodic wetting and drying (Norton & Behan-Pelletier 2009). In the context of classification, Cymbaeremaeoidea have been linked to Licneremaeoidea and Ameronothroidea (e.g., Woas 2002; Subías 2004), most of whose members also inhabit abiotically unstable environments. Along with Hermannielloidea, Neoliodoidea, and several other groups