



New flat mite genera (Acari: Trombidiformes: Tenuipalpidae) associated with Australian sedges (Cyperaceae)

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Abstract

Two new genera, *Gahniacarus* **gen. nov.** and *Cyperacarus* **gen. nov.**, and four new species, *G. gersonus* **sp. nov.**, *G. tuberculatus* **sp. nov.**, *C. naomae* **sp. nov.** and *C. foliatus* **sp. nov.**, are described from native Australian sedge species in the genus *Gahnia* (Cyperaceae). Leg chaetotaxy is provided for all stages of each species. The importance of taxonomic characters offered by immature stages and ontogenetic changes in leg chaetotaxy are discussed. A key to the Tenuipalpidae associated with Cyperaceae in Australia is provided.

Key words: *Acaricis*, *Afronychus*, *Dolichotetranychus*, *Gahnia*, leg chaetotaxy, *Lisaepalpus*, ontogeny, *Prolixus*, *Tenuilichus*, *Tenuipalpus*, Tetranychoida

Introduction

Most species of flat mite (Tetranychoida: Tenuipalpidae) have been described from North America (33% of the total known flat mite fauna) and Africa (13%), whereas little is known about flat mites in the rest of the world (Mesa *et al.* 2009). Although the described Australian flat mite fauna currently consists of only 27 species representing a meagre 3% of the known world flat mite fauna (Womersley 1941, 1942, 1943; Smiley & Gerson 1995; Smiley *et al.* 1996; Beard *et al.* 2006; Beard & Gerson 2009; Mesa *et al.* 2009; Seeman & Beard 2011), 16 of the 34 known tenuipalpid genera are found in Australia, ten of which are endemic to the continent. This gives Australia the highest endemicity at the generic level in the world, and suggests the presence of a richly diverse fauna with