



A new species of *Podocinum* Berlese (Acari: Podocinidae) and a key to species of the genus from China

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Abstract

Mites were collected from leaf litter and the fur of a wild rodent (*Niviventer fulvescens*) in Guizhou Province of China, and described as *Podocinum guizhouense* **sp. nov.** (Podocinidae). This is the first report of Podocinidae from a wild rodent host, but this ecological association may be accidental. A key to the females of *Podocinum* from China is provided.

Key words: Podocinidae, *Podocinum*, new species, China

Introduction

The free-living mites of the family Podocinidae inhabit humus, litter, rodent nests, ant nests, and grain field debris throughout the tropics and the mild temperate zones (Krantz & Walter, 2009). Most of them occur in the tropics, and are probably predacious. The family Podocinidae Berlese, 1913 was reviewed by Evans & Hyatt (1958), and two genera, *Podocinum* Berlese, 1882 and *Podocinella* Evans & Hyatt, 1958, were recognised. New species have been added to the family since then. However, the higher classification of the family is controversial in the literature. The classification by Westerboer (1963) and Karg (1986) included some genera that are usually placed in the families Ascidae and Phytoseiidae. The genus *Derrickia* Womersley, 1956 was described from immature stages only and has been placed in the Podocinidae, but Halliday (1990) considered that it probably belongs to the suborder Trigynaspida (Krantz & Walter, 2009). In the present study we follow the narrow and strict family concept of Evans & Hyatt (1958) and Halliday (1990) in which the family includes only two genera, *Podocinum* and *Podocinella*. Podocinids can be easily recognised by the highly developed ornamentation on the dorsal shield and the extreme length of leg I. The two genera are distinguished by the long whip-like setae on tarsus I – *Podocinum* has two such setae and *Podocinella* only one.

The genus *Podocinum*, the larger of the two podocinid genera, was erected by Berlese (1882) with *Laelaps sagax* as type, a species described from Italy. *Podocinum* has a total of 28 species worldwide (Ho *et al.*, 2009) and ten of them have been recorded from China (Wen, 1965; Liang, 1993; Ma & Wang, 1998; Ho *et al.* 2009; Bei *et al.*, 2010). The ten known species from China are (in alphabetical order): *P. anhuense* Wen, 1965; *P. aokii* Isikawa, 1970; *P. changchunense* Liang, 1993; *P. hainanense* Liang, 1993; *P. jianfenglingense* Liang, 1993; *P. pacificum* Berlese, 1895; *P. pintungense* Ho *et al.* 2009; *P. sagax* (Berlese, 1882); *P. stellatum* Ma & Wang, 1998; *P. tianmuense* Liang, 1993.

In this study, a new species of Podocinidae is described from China, which increases the Chinese fauna of the genus *Podocinum* to 11 species. One of the specimens was collected from the fur of *Niviventer fulvescens*, which may be a newly recorded wild rodent host (or habitat) for the family Podocinidae.