



Redescription of C. Willmann's Holarctic species of the genus *Trhypochthonius* (Acari: Oribatida: Trhypochthoniidae)

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Abstract

Trhypochthonius nigricans and *T. cladonicolus* are redescribed on the basis of type specimens originating from C. Willmann's collection and comparative material from Poland, Canada and the USA. The taxonomic importance of some morphological characters is analysed. Shape of the sensillus does not seem to be a good diagnostic character in the genus *Trhypochthonius*. *Trhypochthonius sphagnicolus* is recognized as a junior synonym of *T. nigricans* and *T. cladonicolus* is noted for the first time from the North America.

Key words: Acarology, taxonomy, morphology, Oribatida, *Trhypochthonius*, variability, synonym, distribution

Introduction

The cosmopolitan genus *Trhypochthonius* Berlese, 1904 comprises about 20 described species of medium sized (400–750 µm) oribatid mites with flattened bodies of light to dark-brown colouration. All species have a well developed bothridium with sensillus widened apically. There are 15 pairs of notogastral setae (f_1 are lost). The coxisternal region is well developed, with a stable setation: 3-1-3-3. The number of genital setae is variable and ranges from 6 to 18 pairs. Aggenital setae are absent. One pair of anal setae and three pairs of adanal setae are present, and the tarsi have three claws.

Trhypochthonius species are found mainly in wet habitats, such as in mossy bogs; they are found less often in soil mosses and forests. In Europe the occurrence of five species of *Trhypochthonius* has been confirmed: *T. tectorum* (Berlese, 1896), *T. cladonicolus* (Willmann, 1919), *T. nigricans* Willmann, 1928, *T. sphagnicolus* Weigmann, 1997 and *T. semovitusi* Szywilewska, 2004. In the Nearctic Region only two of these species have been previously reported (*T. tectorum* and *T. nigricans*). *Trhypochthonius cladonicolus* is reported here for the first time from North America although Palmer & Norton (1991) recorded an undetermined species related to *T. cladonicolus* from New York State, USA.

In this paper *T. nigricans* and *T. cladonicolus* are redescribed on the basis of type specimens originating from C. Willmann's collection and comparative material from Poland, Canada and the USA. We recognize *Trhypochthonius sphagnicolus* as a junior synonym of *T. nigricans*.

The specific epithets of *Trhypochthonius sphagnicola* and *T. cladoncola* should be changed to *sphagnicolus* and *cladonicolus* to reflect the masculine gender of *Trhypochthonius*.