



Systematic revision of the genus *Maudheimia* Dalenius, 1958 (Acari: Oribatida)

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Abstract

The genus *Maudheimia* Dalenius, 1958 occurs on the Antarctic continent and contains four known species (*M. wilsoni* Dalenius, 1958; *M. petronia* Wallwork, 1962; *M. marshalli* Coetzee, 1997 and *M. tanngardenensis* Coetzee, 1997). *Maudheimia marshalli* has 15 pairs of notogastral setae in the adults for which Subías (2004) proposed the genus *Multimaudheimia*. The other three species have 10 pairs of notogastral setae in the adult stage. The value of “number of notogastral setae” as a single generic character has previously been shown as insufficient to distinguish a genus. The authors conclude that the genus *Multimaudheimia* Subías, 2004 is a synonym of *Maudheimia*. The relationship of *Maudheimia* is confirmed as a member of Ceratozetoidea in the family Maudheimiidae.

Key words: *Maudheimia*, Maudheimiidae, systematics

Introduction

The genus *Maudheimia* Dalenius, 1958 was instituted to accommodate a species of oribatid mites discovered in western Queen Maud Land, Antarctica (Dalenius & Wilson 1958). The genus is endemic to continental Antarctica and occurs in isolated populations on the ice-free peaks of rock projecting above the surface of the ice (nunataks) around the perimeter of the Antarctic continent between 71°S and 73°S.

The genus name refers to the base of the *Norwegian-British-Swedish Expedition to the Antarctic*, Maudheim. The type species *Maudheimia wilsoni* Dalenius, 1958 originates from the Ahlmann ridge in western Queen Maud Land. A second species from the eastern side of Antarctica, North Victoria Land, was described by Wallwork (1962) namely *M. petronia*.

The genus was judged by Dalenius (Dalenius & Wilson 1958) to be closely related to *Schelorbitates* Berlese and the family Schelorbitatidae. Wallwork (1962) did not make any reference to the relationship of the genus and presumably agreed with its placement in Schelorbitatidae. Balogh and Balogh (1984), in their review of “Oribatuloidea”, proposed the monotypic family Maudheimiidae.

In a review of the genus *Maudheimia* Coetzee (1997) added two more species: *M. marshalli* Coetzee, 1997 and *M. tanngardenensis* Coetzee, 1997. *Maudheimia marshalli* originates from mountain ranges (Mühlig-Hoffmanfjella, Gjelsvikfjella and H.U. Sverdrupfjella) in Queen Maud Land separated from the distribution range of *M. wilsoni* (Ahlmann ridge) by the Jutulstraumen Glacier. *Maudheimia tanngardenensis* occurs in the Sør-Rondane Mountain Range in eastern Queen Maud Land. *Maudheimia marshalli* has 15 pairs of notogastral setae, in contrast to 10 pairs in the other three species. Descriptions of all the immature stages of *M. wilsoni* were given (Coetzee 1997). In a discussion of the relationship of the genus it was shown that *Maudheimia* shares certain key character states with Ceratozetoidea and that the genus belongs to Ceratozetoidea rather than Oripodoidea. The family Maudheimiidae was retained.

Subías (2004) proposed the genus *Multimaudheimia* based on the presence of 15 pairs of notogastral setae in adult *M. marshalli* – a character, according to Subías (2004), usually used in the taxonomy of oribatids to separate genera and subgenera. The family Maudheimiidae Balogh and Balogh, 1984 is listed in the superfamily Oripodoidea by Subías (2004, 2011).

In this paper the genus *Multimaudheimia* Subías, 2004 and the family relationship of the genus *Maudheimia* are revisited. Character states of *Maudheimia* are reviewed and a characterization of the family Maudheimiidae is given.

Material

Specimens used to re-evaluate character states of *Maudheimia* derive from the previous study by Coetzee (1997). See there for details.