



## The genus *Cultroribula* (Acari: Oribatida: Astegistidae) in Mongolia, with new findings from Altai Mountains and remarks on known species of the world

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### Abstract

The oribatid mite genus *Cultroribula* Berlese, 1908 is represented in Mongolia with six species. Most species of *Cultroribula* found in Mongolia are inhabitants of litter of various types of forests, soils of steppes and the high mountain alpine zone, but are also commonly found in lichens growing on trees or bare rock and terricolous bryophytes. In this work, two species, *Cultroribula altaica* **sp. nov.** and *Cultroribula rarisetosa* **sp. nov.**, are described as new to science based on adults collected from litter of cool temperate forests and lichens growing on bare rock, respectively, in western Mongolia. In addition, two known species, *Cultroribula berolina* Weigmann, 2006 and *Cultroribula vtorovi* Krivolutsky, 1971 are redescribed. *Cultroribula berolina* is recorded for the first time for the fauna of Asia. Species descriptions are accompanied with detailed illustrations. Data on geographical distribution and habitat ecology are given for all known species in the world. Issues concerning the taxonomic status of some genera of Astegistidae and species of *Cultroribula* are discussed. The subgenus *Furcoppia* (*Mexicoppia*) is considered as a junior synonym of *Cultroribula*. The new combination, *Cultroribula hauseri* (Mahunka, 1983) for *Furcoppia* (*Mexicoppia*) *hauseri* Mahunka, 1983 is proposed. Furthermore, a key is provided for the identification of adults of the known species of *Cultroribula* in Mongolia.

**Key words:** new species, redescription, habitat ecology, distribution, identification key

### Introduction

The oribatid mite family Astegistidae was erected by Balogh (1961) to encompass three genera, namely *Astegistes* Hull, 1916, *Cultroribula* Berlese, 1908 and *Furcoribula* Balogh, 1943. Later, several more genera were erected within the Astegistidae (see Subías 2004). Only two of the above-mentioned genera were found in Mongolia with four species. One of these species belongs to *Astegistes*, whereas the three other species belong to *Cultroribula* (Bayartogtokh 2007).

The present work deals with the genus *Cultroribula*, which is the largest in the family, showing extensive taxonomic diversity, with its representatives occurring in all continents of the world, except Antarctica. Most *Cultroribula* species are native to the Holarctic region. Recently, Subías (2004) transferred some species of *Cultroribula* to *Furcoppia* (*Mexicoppia*). In addition to the three Holarctic species, newly combined with *Furcoppia* (*Mexicoppia*), Subías (2004) listed 24 species in *Cultroribula*. Furthermore, several fossil species have been revealed from Baltic amber and Jurassic deposits (Krivolutsky *et al.* 1990).

In a recent review of Central European oribatids, Weigmann (2006) accepted the genus *Cultroribula* in its broad sense, a view which is followed in the present work.

The genus *Cultroribula* is unique among the Astegistidae in the combination of following characters: lamella fused together; lamellar cusp long, separate from each other or close adjacent; tutorium well developed, with free distal cusp; anterior margin of notogaster well developed separating it from prodorsum; humeral process well developed, sometimes sharply projected distally; 10 or 11 pairs of notogastral setae short or medium long; chelicerae chelate-dentate; palpal eupathidium *acm* and solenidion separate; genital and anal apertures interspaced far from each other; genital plates with four to six pairs of setae; pedotectum I without deep incision; legs monodactylous or tridactylous, seta *d* absent from tibiae and genua. Immatures are not yet known.