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The millipede order Chordeumatida (Diplopoda) in Kazakhstan, with descriptions of three new species

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Abstract

The order Chordeumatida is represented in Kazakhstan by five species in three genera and three families. All species are recorded in the Altai and Dzhungarskii Alatau Mountains. Three species are described here as new to science: *Altajosoma arshaty* **sp. nov.**, *Altajosoma bukhtarma* **sp. nov.** and *Tarbagataya zaisanica* **sp. nov.** The family Diplomaragnidae and the genus *Altajosoma* Gulička, 1972 are formally new to the fauna of Kazakhstan. Diagnosis of the genus *Tarbagataya* has been supplemented. All currently known Chordeumatida from Kazakhstan are keyed, including the new species. The distributions of all Kazakhstan chordeumatidan species are mapped.

Key words: Diplopods, chordeumatidans, new species, taxonomy, key, Altai, Kazakhstan, Central Asia

Introduction

The millipede order Chordeumatida has hitherto been known to be represented in Kazakhstan by two species from two genera and two families: *Tianella ornata* Golovatch, 1979 (Cleidogonidae) (Golovatch 1979) and *Tarbagataya splendida* Golovatch & Wytwer, 2003 (Kirkayakidae Özdikmen, 2008, syn. Altajellidae Mikhaljova & Golovatch, 2001 (Golovatch & Wytwer 2003). Because *Altajella* Gulička, 1972 is a homonym which has been changed to *Kirkayakus* Özdikmen, 2008, the family name Altajellidae has also been changed to Kirkayakidae (Özdikmen 2008). Also, the first species can be found in the lists of diplopods from Central Asia (Read & Golovatch 1994) and the former Soviet Union, including Kazakhstan (Lokšina and Golovatch 1979). In addition, an unidentified species of *Tianella* (represented by a female or juveniles) was recorded from the valley of the Bolshaya Alma-Atinka River, East Kazakhstan (Golovatch 1979). Up to now, our knowledge about Kazakhstan Chordeumatida was limited to this information.

The diplopod material treated herein appears to contain two new species belonging to the family Diplomaragnidae Attems, 1907 and the genus *Altajosoma* Gulička, 1972, new to the fauna of Kazakhstan. In addition, among the material a new species of *Tarbagataya* has been found. The present paper provides descriptions of the new species and a key to the families, genera and species of Chordeumatida occurring in Kazakhstan, and the distributions of all Kazakhstan chordeumatidan species are mapped (Map).

Material and methods

Material treated here has been deposited in the collections of the Institute of Biology and Soil Science, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, Russia (IBSS), Pavlodar State University, Pavlodar, Kazakhstan (PU), and Zoological Museum, State University of Moscow, Russia (ZMUM), as indicated in the text.