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New water mites species of the genus *Aturus* Kramer (Acariformes, Aturidae) from the Far East of Russia

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Abstract

Illustrated descriptions of seven water mite species, *Aturus triangularis* **sp. n.**, *Aturus similis* **sp. n.**, *Aturus sikhotealinensis* **sp. n.**, *Aturus primoryensis* **sp. n.**, *Aturus polysetus* **sp. n.**, *Aturus pulcher* **sp. n.**, *Aturus insolitus* **sp. n.**, from running waters of the Far East of Russia are presented. *Aturus multiclavus* Kim & Chung, 1993 and *Aturus multisetus* Kim & Chung, 1993 are reported from Russia for the first time.

Key words: water mites, Hydrachnidia, Aturidae, *Aturus*, new species, Far East of Russia

Introduction

The genus *Aturus* Kramer, 1875 comprises about 130 species (Viets 1987; Kim & Chung 1995). At present, 18 species of this genus are known from Russia (Sokolow 1940; Tuzovskij 1990, 1994, 2009; Semenchenko 2006, 2008, 2009; Semenchenko *et al.* 2010).

Investigations of the water mite fauna of the Russian Far East have yielded seven new species of this genus which are described below, and two species are reported as a new to the fauna of Russia.

Material and methods

The material was sampled with a common hand net with 250 μm mesh size and bottom grabber (0.25 x 0.25 m^2) with V.Y. Levanidov's modification (Tiunova 2003). Some samples were obtained via a hand-pump (similar to the Bou-Rouch method) from subterranean waters. A metal tube was hammered into river sediments to a depth of about 30 cm. Pumped samples were filtered through the hand net and fixed in 70 % ethanol for further examination in the laboratory under a stereo microscope. Entire idiosoma and appendages used for scanning electron microscopy (SEM) were dehydrated in acetone and coated with palladium-gold before being photographed with a Carl Zeiss Evo 40.

Specimens were preserved in modified Koenike's solution and mounted on slides using Hoyer's medium and glycerine-gelatine jelly. The descriptions are based on the type series, deposited in the research collections of the Institute for Biology of Inland Waters, Borok, Russia (IBIW) and the Institute of Biology and Soil Science, Vladivostok, Russia (IBSS).

Idiosomal setae and lyriform organs terminology follows Tuzovskij (1987): *Fch*—frontales chelicerarum, *Fp*—frontales pedipalporum, *Vi*—verticales internae, *Ve*—verticales externae, *Oi*—occipitales internae, *Oe*—occipitales externae, *Hi*—humerales internae, *He*—humerales externae, *Hv*—humerales ventralia, *Sci*—scapulares internae, *Sce*—scapulares externae, *Li*—lumbales internae, *Le*—lumbales externae, *Si*—sacrales internae, *Se*—sacrales externae, *Ci*—caudales internae, *Pi*—praeanales internae, *Pe*—praeanales externae; i_1–i_5—lyriform organs (Figs. 6–7, 12–13).

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