



## Water mites of the genus *Brachypoda* Lebert, 1879 (Acari: Hydrachnidia: Aturidae) from South Korea and the Russian Far East

VLADIMIR PEŠIĆ<sup>1</sup> & KSENIA SEMENCHENKO<sup>2</sup>

<sup>1</sup>Department of Biology, Faculty of Sciences, University of Montenegro, 81000 Podgorica, Montenegro.

E-mail: vladopesic@gmail.com

<sup>2</sup>Institute of Biology and Soil Science, Far Eastern Branch of Russian Academy of Sciences, Vladivostok, 690022 Russia.

E-mail: semenchenko@biosoil.ru

### Abstract

In this study, four water mites of the genus *Brachypoda* (Acari: Hydrachnidia: Aturidae) are reported from South Korea and the Far East of Russia. *Brachypoda* (*Ocybrachypoda*) *milicae* sp. n. (South Korea), *B.* (*Ocybrachypoda*) *sokolowi* sp. n. (Russia) and *B.* (*Eubrachypoda*) *rossica* sp. n. (Russia) are described as new for science. The latter species is the second representative of the subgenus *Eubrachypoda* Tuzovskij, 2004, previously known only from Lake Biwa in Japan. A new record of *Brachypoda rubidata* Kim & Chung, 1996, a species so far known only from a pond in Bosung (South Korea), is given.

**Key words:** Acari, water mites, running waters, *Brachypoda*, taxonomy, South Korea, Far East of Russia

### Introduction

Water mites of the genus *Brachypoda* are known from the Holarctic, Oriental and Neotropical regions (Cook 1974, Esen *et al.* 2013). The genus currently includes five subgenera (Cook 1974, Tuzovskij 2004): *Brachypoda* s. str., *Hemibrachypoda* K.Viets, 1937, *Ocybrachypoda* Cook, 1974, *Parabrachypoda* K.Viets, 1929 and *Eubrachypoda* Tuzovskij, 2004. At present, two species of the genus *Brachypoda*, i.e. *B.* (*Brachypoda*) *rapida* Kim & Chung, 1996 and *B.* (*Brachypoda*) *rubidata* Kim & Chung, 1996, are known from South Korea (Kim & Chung 1996), while two species, i.e. *B.* (*Brachypoda*) *versicolor* (Müller, 1776) and *B.* (*Hemibrachypoda*) *orientalis* Pešić & Esen, 2013, are known from Russia (Sokolow 1940, Tuzovskij 1978, Esen *et al.* 2013).

During a recent survey of the water mite fauna of South Korea (Pešić *et al.* 2013), two species of the genus *Brachypoda* were collected, one of which, from the subgenus *Ocybrachypoda*, is new to science. Two species new to science, from the subgenera *Ocybrachypoda* and *Eubrachypoda*, respectively, were found in the same river in the Far East of Russia. Descriptions of these species are given in this paper.

### Material and methods

During field work, water mites were collected by hand netting, sorted on the spot from the living material, conserved in Koenike-fluid and dissected as described elsewhere (e.g. Gerecke *et al.* 2007). The holotype and paratype of the new species from South Korea are deposited in the National Institute of Biological Resources, Korea (NIBR); other paratype in the Montenegro Natural of History Museum. Material from the Russian Far East is deposited in the research collections of the Institute of Biology and Soil Science, Vladivostok, Russia (IBSS).

In the section ‘Material examined’ collecting site abbreviations derive from the geographical database Pešić. All measurements are given in micrometers. The following abbreviations are used: a.s.l. = above sea level; Ac-1–3 = acetabulum 1–3; Cx-IV = fourth coxae; H = height; L = length; NP = National Park; I-L-6 = first leg, sixth segment (tarsus); L = length; P-1 = palp, first segment; vL = ventral length; W = width.

## Subgenus *Brachypoda* Lebert, 1879

### *Brachypoda rubidata* Kim & Chung, 1996

(Figs. 9A–B)

**New records.** SOUTH KOREA: CR10 Ne myeon Mt, Naeyeansan NP, 0.6 km from Naeyeansan Info Center (near Silsung temple), pool near stream, 1.7 km to Jiksopolpol falls, 35°64'65.978" N, 126°58'62.285" E, 10.x.2012, Pešić & Choi, one male, fixed in Koenike-fluid.

**Remarks.** *Brachypoda rubidata* was described in the both sexes from a pond in Bosung (Kim and Chung 1996). It is similar to *B. rapida* Kim & Chung, 1996 (South Korea), but can be easily distinguished from the latter in the both sexes by the presence of two red posterolateral patches (Figs. 9A–B), dorsal and ventral shield stouter, posteriorly not narrowed as in *B. rapida*, and by the differently shaped genital field (see Kim and Chung 1996).

**Habitat.** Kim and Chung (1996) stated that they found this species in a lake. We found this species in a pool near stream (Fig. 9D) with typical lenitobiontic species of the genera *Thoracophoracarus* and *Neumania*.

**Distribution.** South Korea (Kim and Chung 1996; our study).

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