



A checklist of the water mites (Acari: Hydrachnidia) of India, with new records and description of one new species

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Abstract

Using published records and original data from recent research, a checklist was compiled of the water mite (Acari: Hydrachnidia) fauna of India. It includes 275 species in 70 genera and 25 families of water mites. The new records of 23 water mite species are reported; one species *Wuria indica* is described as new for science; a first description of the male is given for *Wuria sumatrensis* K. Viets, 1935. The present state of knowledge of the Indian water mite fauna is discussed.

Key words: Acari, water mites, Checklist, new species, India

Introduction

Research on water mites from India started at the beginning of the 20th century with publications of K. Viets (1926a, b), followed later on by publications of Walter (1928) and Lundblad (1934). Cook (1967) published his comprehensive work on the water mites from India in which he summarized the water mite fauna of India until that time. He reported 173 species of water mites, describing many new species and genera. Cook's work as he stated gave "an adequate beginning to our knowledge of the water mite fauna of Maharashtra, Mysore (Karnataka), Madras (Chennai, Tamil Nadu) and Kerala". Lundblad studied the water mites from Calcutta (Kolkata, West Bengal) and Bombay (Mumbai, Maharashtra), resulting in his comprehensive paper published in 1968. Later on papers with records of water mites from India were published by Nayar (1969a, b), while Prasad (1974) in his *A catalogue of mites of India* reported 197 water mites from India. Tomar & Raychaudhury (1981, 1983b) studied mostly the water mites of the genus *Arrenurus*. During the 20th century and in the beginning of 21th century more authors published mostly ecological or faunistical studies on water mites (e.g., Kumar & Dobrigyal 1992), usually as part of a study of parasitism on invertebrate (insects and mollusks) fauna. Examples of these are Bishth (1979), Malahotra *et al.* (1983), Rajendran & Prasad (1992), John & Inasu (2005).

In the first decade of 21th century the number of publications dealing with the systematics of water mites from India increased. Panesar studied water mites in the Indian Himalayas (Panesar 2004, Panesar & Gerecke 1994) and Smit & Pešić (2008) studied water mites of the genus *Arrenurus*. Recently, Pešić *et al.* studied water mites mostly from the Indian Himalayas (Pešić & Panesar 2008, 2009, Pešić & Gerecke 2008, Pešić *et al.* 2007a, b, 2008) although other regions of India were studied as well but to a much lesser extent (e.g., Pešić & Ranga Reddy 2009, Pešić *et al.* 2008, 2009).

The aim of this paper is to compile data on the Indian water mites and their current geographic distribution in India, which helps to understand the major gaps in our knowledge on the water mites of India.

Material and methods

The present checklist was compiled using published records and original data, mostly from recent field work of the authors. During field work, water mites were collected by hand netting, sorted on the spot from the living material, conserved in Koenike's fluid and dissected as described elsewhere (e.g. Gerecke *et al.* 2007). The holotype and paratypes of the new species are deposited in the Museum of Natural History Basel (NHMB) and all non-type material in the collections of the first and second authors. Synonyms of former