



## Two new species of the genus *Arrenurus* from Pohnpei, Federal States of Micronesia (Acari: Hydrachnidia: Arrenuridae)

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### Abstract

Two new species of the genus *Arrenurus*, *A. cornuatus* and *A. kostkai* are described from high elevation, head water streams on the island of Pohnpei, Micronesia.

**Key words:** New species, head water streams, Pacific Islands, Micronesia, Pohnpei

### Introduction

Few specimens of water mites have been collected from Pacific Island streams, especially higher elevation, head water streams. Uchida (1935, 1939) and Cook & Bright (1983) published 11 species of water mites from the Palau Islands, while Cook (1957) reported two *Arrenurus* species from the main island of Yap in the Caroline Island chain. Viets (1939) reported the occurrence of unnamed *Arrenurus* larvae from Hawaii, but Smit (2004) failed to find the adults. Smith & Cook (2004) described a new *Piona* species from Hawaii, but very likely this is an introduced species.

During an inventory of high elevation, head water streams on the island of Pohnpei, Federal States of Micronesia, two *Arrenurus* species new to science were collected. These were the only water mites collected, and they are described in this paper. The genus *Arrenurus* is the most speciose genus of all water mites. To date, more than 800 species are known. The genus has a cosmopolitan distribution and occurs on every continent except Antarctica. Many *Arrenurus* species have a larval parasitic stage on odonates (Smith *et al.* 2009), which can explain their extended distribution, even to remote islands in the Pacific like Hawaii and Pohnpei. On these remote islands, *Arrenurus* species are the only water mite species found (apart from introduced species).

### Material and methods

The following abbreviations have been used: PI-PV = palp segment 1–5; I-leg-4–6 = fourth–sixth segments of first leg; D3 dorsoglandularia 3; a.s.l. = above sea level, ZMAN = Zoological Museum of the University of Amsterdam, BPBM = Bishop Museum, Honolulu. Measurements of paratypes are given in brackets. All measurements are in  $\mu\text{m}$ , measurements of palp and leg segments are of the dorsal margins. All material was collected by Richard MacKenzie and Caitlin L. Kryss, with the USDA Forest Service's Institute of Pacific Islands Forestry.