New records of the water mite family Arrenuridae from the Afrotropical region, with the description of 11 new species and two new subspecies (Acari: Hydrachnidia)

HARRY SMIT
Netherlands Centre for Biodiversity Naturalis, P.O. Box 9517, 2300 RA Leiden, The Netherlands. E-mail: harry.smit@ncbnaturalis.nl

Abstract

Ten new species and two new subspecies of the water mite genus Arrenurus are described from the Afrotropical region, i.e. Arrenurus abyssinicus n. sp., A. altomontanus n. sp., A. baleensis n. sp., A. bechuanicus n. sp., A. botswanicus n. sp., A. coronopetiolatus n. sp., A. flavus n. sp., A. monocavus n. sp., A. okavango n. sp. and A. serratopetiolatus n. sp., A. chutteri longipes n. subsp., A. concavus longifissus n. subsp. One new species of the genus Thoracophoracarus is described, T. flaviatilis n. sp. The following taxa are proposed to the rank of a full species: A. chutteri K.O. Viets, A. damasi Lundblad and A. grandis Walter & Bader. Arrenurus odonophilus Müchberg is transferred to the subgenus Brevicaudaturus Smit, while A. discretus Cook is synonymized with the latter species. Arrenurus vanopus Cook is synonymized with A. capensis Thor, and the female of A. petri Cook must be assigned to A. capensis. The presumed female of A. petri is described therefore again. The male of A. latifoliatus K. Viets is redescribed and the female of this species is described for the first time.

Key words: New species, Afrotropical region, Hydrachnidia, Arrenurus, Thoracophoracarus

Introduction

Within the water mite family Arrenuridae, the water mite genus Arrenurus is the largest water mite genus, with some 950 species known to date (K.O. Viets, 1987; www.watermite.org viewed on August 1, 2011). The genus occurs on all continents except Antarctica. From the Afrotropical region (Africa south of the Sahara) 97 Arrenurus species are known (K. Viets 1953; K.O. Viets 1970, 1972a, 1973a, b, 1980, 1981; K.O. Viets & Böttger 1974; Green et al 1974; Bader 1976; Cook 1979; Tuzovskij 2007). The taxonomy of the genus Arrenurus from the Afrotropical region is hampered by past practice of describing new species based on females only, and occasionally even on deutonymphs only. Especially within the subgenus Micruracarus, females are difficult to separate. Descriptions of new Arrenurus species should be based on males.

To date, ten subgenera are known worldwide (their distribution in brackets), i.e. Arrenurus (worldwide), Truncaturus Thor, 1901 (worldwide), Dadayella Koenike, 1907 (Neotropical), Megaluracarus K. Viets, 1911 (worldwide), Micruracarus K. Viets, 1911 (worldwide), Rhinophoracarus K. Viets, 1916 (Oriental and Afrotropical), Arrhenuropsis K. Viets, 1954 (Neotropical), Arrhenuropsides K. Viets, 1954 (Neotropical), Brevicaudaturus Smit, 1997 (Oriental, Australasian, Neotropical) and Dividuracarus Smit, 1997 (Australia). The subgenera are based on morphological criteria, and tend to grade into each other, especially Megaluracarus, Micruracarus and Truncaturus. Dadayella is close to Truncaturus, but Cramer & Cook (1992) retained the subgenus. With such a large genus a subdivision, even an artificial one, is the most convenient.

The genus Thoracophoracarus K. Viets is much less species-rich, and only 11 species are known from the Afrotropical and Neotropical region (Gerecke 2009).

In the present paper new records are given from Botswana, Cameroon, Comoros, Ethiopia, Gambia, Ghana, Namibia and South Africa.