



## Revision of the genus *Rutacarus* (Acari, Parasitengona, Hydrachnidia) with the description of a new species from Central America

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### Abstract

A review of the morphology and distribution of the genus *Rutacarus* Lundblad, 1937 is provided with the description of a new species, *R. annae* n. sp. from Coiba, an island off the Pacific coast of Panama. A key to all described species, five already known, one new, is included.

**Key words:** Hydrachnidia, *Rutacarus*, Anisitsiellidae, interstitial water mites

### Introduction

There are five species of *Rutacarus* Lundblad, 1937 (Hydrachnidia, Anisitsiellidae) described from South America and Australia. The first species, *R. pyriformis* Lundblad, 1937 was found in a creek in the state of Santa Catarina, in southern Brazil. Several decades later, David R. Cook (1980) found *R. ferradasae* in three localities in northern Argentina, at latitude similar to the previous species. The habitat for this species has been described as ‘bottom deposits’, a term that may designate an interstitial environment. The geographical range of the genus was widened with the finding of *R. angelieri* Orghidan and Gruia, 1983 in a creek in northern Venezuela, in the ‘hyporhéique’ environment, a denomination for interstitial areas close to the stream bottom. Lastly, two additional species have been described from Australia, *R. sasonus* Cook, 1986 and *R. stygius* Harvey, 1990 from Tasmania, Victoria, New South Wales and Queensland. Both come from river habitats, with *R. sasonus* from a Karaman-Chappuis sample. Herewith we describe the species *R. annae* n. sp. from a small stream on the island of Coiba (Panama), provide a key for all species and review the external morphology of the genus.

### Material and methods

Water mites were sampled by the Karaman-Chappuis method. The morphological description follows the terminology of Cook (1974). Despite repeated efforts to standardize terminology and homology of glandularia and sclerites of water mites (Lundblad 1927; Wiles 1997; Smith *et al.* 2001; Davids *et al.* 2007), there is no general agreement among specialists. Hence, I employ Cook’s unspecific designation. The holotype and the paratype are deposited in the Hydrachnidia collection of the Museo Nacional de Ciencias Naturales, Madrid. In the description of the new species, measurements are given in  $\mu\text{m}$ , first for the holotype followed by the paratype in brackets. The key has been produced with the help of the software DELTA (available at: (<http://delta-intkey.com/>)). Coiba Island is the largest of all the Central America Pacific islands. The climate is tropical moist monsoon with mean temperature 25.9°, 3500 mm per year precipitation and a mean relative humid-