



New records of water mites (Acari: Hydrachnidia) from Malaysia, with descriptions of three new species

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Abstract

New records of water mites (Acari: Hydrachnidia) from Malaysia are presented. Three species new to science, *Torrenticola haliki*, *Monatractides cameronensis* and *Atractides cameronensis* are described; first records are given for *Monatractides parviventrus* (K. Viets, 1935) and *M. roseus* (Lundblad, 1941).

Key words: Acari, new species, new records, taxonomy

Introduction

The first study on the water mites from Malaysia was published by K. Viets (1927, 1929), followed later by Halík (1930) and Wiles (1986). Wiles (1991) gave the first complete list of known Malaysian water mites increasing the number to 30 species. Later, papers with records of water mites from Malaysia were published by Wiles (1997), Smit (2008) and Pesic & Smit (2009c). In total, 44 species are recently known from Malaysia.

The present study is based on material collected in 2009 from seven localities in Malaysia (Fig. 1). Eleven species are identified, of which three species are new to science. Descriptions of these species are given in this paper.

Material and methods

Water mites were collected by hand netting, sorted on the spot from the living material, preserved in Koenike fluid and dissected as described elsewhere (e.g. Gerecke *et al.* 2007). Holotype, paratypes and all non-type material are deposited in the Zoological Museum in Amsterdam (ZMAN). All material has been collected by the junior author and this is not repeated in the text.

The composition of the material is given as males/females/nymphs (in parentheses: males/females/nymphs mounted in Hoyer's fluid). All measurements are given in μm . For a detailed description and discussion of the characteristics of the genus *Atractides* and a detailed methodological introduction, see Gerecke (2003); for the *Torrenticolidae*, see Wiles (1997). The following abbreviations are used: Ac-1 = first acetabulum, alt. = altitude, Cx-1 = first coxae, Cxgl-4 = coxoglandularia of fourth coxa (= E4 in Wiles 1997), D = dorsale, Dc-1-4 = dorsocentralia 1-4, Dgl-1-7 = dorsoglandularia 1-7, dL = dorsal length, H = height, HB = central height, L = length, %L = relative length, I-Leg-6 = Leg 1, sixth segment (tarsus), IL = lateral length, mL = medial length, NP = National Park, P-1 = palp, first segment, postoc = postocular sclerite, prefr = prefrontal sclerite, S-1 = large proximal ventral seta at I-Leg-5, S-2 = large distal ventral seta at I-Leg-5, Vgl = ventroglandularia, vL = ventral length, W = width.