Zootaxa 3972 (4): 495–520
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3972.4.3
http://zoobank.org/urn:lsid:zoobank.org:pub:CC1ED425-B897-4107-B39B-BA64D88A7980

New species and new records of *Mesoceration* Janssens, 1967 from South Africa (Coleoptera, Hydraenidae)

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Abstract

Mesoceration Janssens, 1967 is the most speciose genus of Prosthetopinae, most of the 44 described species being restricted to South Africa, and almost all occupying the benthic zone of streams and rivers. Here seven species are described as new: *Mesoceration caniplenum* **sp. nov.**, *M. foggoi* **sp. nov.**, *M. helmei* **sp. nov.**, *M. hirsutum* **sp. nov.**, *M. rugulosum* **sp. nov.**, *M. sewefonteinense* **sp. nov.** and *M. sinclairi* **sp. nov.**, bringing the number of known species to 51. All seven new species have been discovered during recent, targeted sampling of South African Hydraenidae. New collection records resulting from this fieldwork are also provided for 27 previously described species, together with ecological notes.

Key words: Coleoptera, Hydraenidae, South Africa, *Mesoceration*, new species, new records, ecology

Introduction

With 44 species described to date (Perkins 2008; Bilton 2014a), *Mesoceration* Janssens, 1967 is the most diverse genus of Prosthetopinae, a largely southern Afrotemperate lineage of Hydraenidae (Perkins & Balfour-Browne 1994). Known *Mesoceration* species are restricted to South Africa and Lesotho, with a concentration of taxa in the fold mountains of the Western Cape (Perkins & Balfour-Browne 1994; Perkins 2008), a known hotspot of freshwater biodiversity (de Moor & Day 2013). The vast majority of collection records are from running waters; *Mesoceration* species being characteristic of riffle areas, where a number of species can co-occur on the underside of stones, together with Elmidae and Dryopidae.

Here I describe seven new species of this genus, as well as providing new collection records for 27 others, some of which represent significant extensions of their known geographical ranges. The opportunity is also taken to provide ecological notes on selected *Mesoceration* species and their habitats.

Materials and methods

Specimens were studied using Leica MZ8 or M205C stereomicroscopes, with a Fluopac FP1 fluorescent illuminator. Habitus photographs were taken with a Canon EOS 500D camera fitted to a Leica Z6 Apo macroscope, fitted with a 2x objective lens. Specimens were illuminated using a Leica LED5000 HDI dome illuminator to avoid shadow.

Genitalia were mounted on glass slides in Kisser's glycerol gelatine (see Riedel 2005) and imaged using an Olympus CX31 microscope with the same camera. All image stacks were produced by hand, and combined using Zerene Stacker software (www.zerenesystems.com). Unless otherwise stated, hind wings were not examined.

Exact label data are cited for specimens. // indicates new line in label text.

Accepted by P. Perkins: 13 May 2015; published: 15 Jun. 2015