Zootaxa 3750 (1): 026–036
www.mapress.com/zootaxa/

Article

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

http://dx.doi.org/10.11646/zootaxa.3750.1.2
http://zoobank.org/urn:lsid:zoobank.org:pub:3093B45D-78A2-4780-B965-448AB8A177DC

A taxonomic revision of South African *Sharphydrus*, with the description of two new species (Coleoptera: Dytiscidae: Bidessini)

DAVID T. BILTON
Marine Biology and Ecology Research Centre, Plymouth University, Drake Circus, Plymouth PL4 8AA, UK.
E-mail: d.bilton@plymouth.ac.uk

Abstract

Sharphydrus Omer-Cooper, 1958 is one of two endemic bidessine genera currently recognised from South Africa. Here *Sharphydrus brincki* **sp. nov.** and *Sharphydrus kamiesbergensis* **sp. nov.** are described from the Cederberg and Gydopas areas of the Western Cape, and the high Kamiesberg of the Northern Cape respectively, doubling the known species of this genus. It is shown that *S. brincki* **sp. nov.** has been included under *S. capensis* (Omer-Cooper, 1955) in the past, but that these are quite distinct taxa, differing in the extent of their elytral keels and male genitalia. *Sharphydrus* species are inhabitants of pools in seasonally fluctuating rivers, the new species described here occurring in areas which are somewhat transitional between fynbos and karoo biomes. An updated key is presented to *Sharphydrus* species, together with data on the distribution and ecology of known species, and a discussion of the status of the genus within the Bidessini.

Key words: Coleoptera, Dytiscidae, Bidessini, *Sharphydrus*, new species, South Africa

Introduction

Two genera of bidessine diving beetles (Dytiscidae: Hydroporinae: Bidessini) are currently considered to be endemic to the Cape region of South Africa, occurring mostly in the winter rainfall zone: the monotypic *Tyndallhydrus* Sharp, 1882 and *Sharphydrus* Omer-Cooper, 1958, which includes two described species at present. *Sharphydrus capensis* (Omer-Cooper, 1955) is restricted to the southwest of the Western Cape province, whilst *Sharphydrus coriaceus* (Régimbart, 1895) is more widespread across the Eastern, Western and Northern Cape provinces (Omer-Cooper 1966; Stals & de Moor 2007; D. T. Bilton *pers. obs.*; G. Challet *pers. comm.*). The two species occur in pools on seasonally fluctuating rivers, and have been distinguished in the past by the presence (*capensis*) or absence (*coriaceus*) of longitudinal discal keels on the elytra. Here I show that there are actually at least three keeled *Sharphydrus* species in the Cape, describing two new strongly keeled species from the Gydopas area and Cederberg mountains of the Western Cape and the high Kamiesberg of Namaqualand, respectively, which are morphologically closest to *S. capensis*, but can be readily distinguished on the basis of their stronger elytral keels, colour pattern and male genitalia. One of these species had been confounded with *S. capensis* in the past (Omer-Cooper 1966), but is actually very distinct. I also take the opportunity to provide an up-to-date key to known *Sharphydrus* species, review their distribution and ecology, and discuss the status of the genus within the Bidessini.

Materials and methods

Specimens were studied using a Leica MZ8 stereomicroscope, with a Fluopac FP1 fluorescent illuminator. Digital 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 two Fluopac FP1 illuminators and a fibre-optic swan-neck system to avoid shadow, light being diffused using a tracing-paper collar placed around the specimen. Genitalia were mounted on glass slides in Kisser's glycerol gelatine (see Riedel 2005) and imaged using the same Leica

 Accepted by H. Fery: 8 Nov. 2013; published: 17 Dec. 2013

Acknowledgements

I am grateful to Rebecca Bilton for her assistance in the field and to Robert Angus, Hans Fery and two anonymous referees for their comments on the manuscript. Michael Samways (Stellenbosch University), Danelle Kleinans (Cape Nature) and Marietjie Smith kindly assisted with sampling permits. Christine Taylor (NHM) loaned *Sharphydrus* material, including the type of *S. capensis*, and Christoffer Fagerstrom (ZMLU) loaned a *Sharphydrus* collected on the Lund University Expedition. Paolo Mazzoldi is thanked for the gift of a pair of *S. capensis*, which greatly accelerated my understanding of this taxon, and Gil Challet for communicating details of the Oorlogskloof River locality for *S. coriaceus*. Shaun Lewin is thanked for producing the basemap used in Figure 4.

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