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## A new species of *Yola* Gozis, 1886 from the Western Cape of South Africa (Coleoptera: Dytiscidae: Bidessini)

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### Abstract

*Yola matsikammae* sp. nov. is described from the Matsikammaberg, an inselberg on the northern edge of the fynbos biome of the Western Cape, South Africa. A key is provided to separate the new species from other southern African members of the *Yola bicarinata* group. *Y. matsikammae* sp. nov. bears a superficial resemblance to *Sharphydrus* species, particularly *Sharphydrus brincki* Bilton, 2013 with which it was found to co-occur. Comparative notes to separate these taxa are also included.

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

### Introduction

*Yola* Gozis, 1886 is one of the largest genera of Bidessini, with 46 described species (Nilsson 2014), 38 of which are known from the Afrotropical region. Of these, 15 have been reported from southern Africa to date, 5 being endemic to the region (Stals 2007). Although the detailed biology of most *Yola* species is unknown, the genus is found in both running and standing water habitats (Biström 1983); most of the endemic southern African species apparently being associated with running waters. Here I describe a distinctive new species of *Yola* from permanent stream pools on the Matsikammaberg, an inselberg situated south of Vanrhynsdorp, at the northern edge of the fynbos biome of the South African Cape. I provide a key to distinguish the new species from other southern African members of the *Yola bicarinata* species group (sensu Biström 1983), alongside comparative notes to separate *Y. matsikammae* sp. nov. from the superficially similar *Sharphydrus brincki* Bilton, 2013.

### Material and methods

Specimens were studied using Leica MZ8 and M205C stereomicroscopes, with a Fluopac FP1 fluorescent illuminator. Digital photographs were taken with a Canon EOS 500D camera fitted to a Leica Z6 Apo macroscope, equipped 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 fitted with the same Canon camera. Image stacks were produced by hand, and combined using Zerene Stacker software ([www.zerene.com](http://www.zerene.com)).

Exact label data for specimens are cited in quotation marks. A double slash (//) indicates separate label lines.

### Abbreviations

CDTB Collection D.T. Bilton, Plymouth, UK

DMSA Ditsong National Museum of Natural History, Pretoria, South Africa

Superficially, in both shape and dorsal colouration, the new taxon resembles species of *Sharphydrus* Omer-Cooper, 1958, especially *S. brincki*, with which it was microsympatric (i.e. co-occurred in the same microhabitat). It can readily be distinguished from *S. brincki* by the presence of three elytral keels rather than just the discal one. The discal keel of *Y. matsikammae* sp. nov. is also much stronger, the dorsal surface shinier, and the dorsal and ventral punctures larger than in *S. brincki*. In addition, the median lobe of the aedeagus lacks the tripartite apical structure characteristic of known *Sharphydrus* species (see Bilton 2013). As discussed by Biström (1988) and Bilton (2013), the distinction between *Yola* and *Sharphydrus* is not well-defined. Bilton (2013) suggested that the tripartite structure of the median lobe of the aedeagus represented a unique synapomorphy of this group, although the inter-relationships between *Sharphydrus* and *Yola*, including the new species, require further exploration.

**Distribution.** To date known from the type locality (Fig. 2), a permanent stream surrounded by Bokkeveld Sandstone Fynbos (sensu Mucina & Rutherford 2006) on the Matsikammaberg in the northern part of the Western Cape province of South Africa. The Matsikammaberg is a striking inselberg, reaching just over 1,000 m in altitude, with 700 m high sandstone cliffs towering over the dry Knersvlakte plains of Namaqualand. The mountain forms a mesic island in an otherwise semi-arid landscape, annual rainfall reaching 550 mm in the east contrasting with as little as 50 mm per year on the plains below. The Matsikammaberg is consequently home to a diverse flora, 10% of which is regionally, and 4% locally endemic (Helme 2004).

**Etymology.** Named after the Matsikammaberg, on which the type locality is situated. Matsikamma is a Khoi-San word which translates as “full of pools”, in apparent reference to the abundance of seasonal rock pools on the mountain plateau. The specific epithet is a noun in the genitive case.

**Ecology.** Specimens of *Y. matsikammae* sp. nov. were taken from the margins of deep (ca. 40–50 cm), clear pools in a permanent stream section, over sand and gravel. Here they co-occurred with a range of water beetles, including *Hydaticus dregei* Aubé, 1838, *Sharphydrus brincki*, *Canthyporus consuetus* Omer-Cooper, 1965, *C. lateralis* (Boheman, 1848), *C. nebulosus* Omer-Cooper, 1965, *Hydropeplus montanus* Omer-Cooper, 1965, *H. trimaculatus* (Laporte, 1835) and *Laccophilus* sp. Other beetles taken in the same stream reach, but in other microhabitats, were *Delevea bertrandi* Reichart, 1976, *Aulonogyrus capensis* (Thunberg, 1781), *A. formosus* (Modeer, 1776), *A. marginatus* (Aubé, 1838), *Dineutus punctatus* Aubé, 1838, *Copelatus capensis* Sharp, 1882, *Anacaena glabriventris* Komarek, 2004, *A. reducta* Komarek, 2004, *Crenitis zimmermanni* Knisch, 1924, *Helochaeres* sp., *Mesoceration umbrosum* Perkins, 2008, *Mesoceration* sp. nov. 1, *Mesoceration* sp. nov. 2, *Prosthetops wolfbergensis* Bilton, 2013, *Pneuminion endroedyi* Perkins, 2004, *Pneuminion velamen* Perkins, 1997, *Discozantaena genuvela* Perkins & Balfour-Browne, 1994, *Elpidelmis capensis* (Grouvelle, 1890) and *Strina* sp.

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