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Two new water beetles from the Hantamsberg, an inselberg in the Northern Cape of South Africa (Coleoptera, Hydraenidae)

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Abstract

Mesoceration hantam **sp. nov.** and *Parhydraena faeni* **sp. nov.**, are described from the Hantamsberg plateau, an inselberg in the Northern Cape of South Africa. The new species are so far known only from temporary waters on the Hantamsberg summit, where they were both abundant. Sampling in these mountains also revealed an interesting accompanying water beetle fauna, including the northernmost known record of *Hydropeplus montanus* Omer-Cooper, a species characteristic of mountain fynbos further south in the region.

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

Introduction

The Cape of South Africa supports a diverse water beetle fauna, including many species and genera endemic to the region (e.g. Omer-Cooper, 1966; Perkins & Balfour-Browne, 1994). The Cape highlands are particularly important for this aquatic biodiversity, with a large number of the species known from the Western Cape uplands being endemic, sometimes apparently to single mountain systems (e.g. Perkins, 2005, 2008, 2009; Bilton, 2013a-c, 2014; Bilton & Gentili, 2014).

To date, work on water beetles in the Cape has been largely concentrated in the southwest, in the fynbos-dominated systems of the Cape Floristic Region. To the north and east of this area, in the winter-rainfall zone of the Succulent Karoo, or Extra Cape region (see Snijman, 2013), there are also a number of mountain areas with high plant endemicity, and enough rainfall to support habitats suitable for aquatic insects (e.g. Van der Merwe *et al*., 2008a; Clark *et al*., 2011). With few exceptions, however (Challet & Turner, 2006; Bilton, 2013a & c), the water beetle fauna of these areas remains uninvestigated. The southwestern edge of the Karoo plateau of the Great Escarpment is one of the botanically richest areas of the region (Clark *et al*., 2011), forming part of the most diverse geophyte area on earth (Van Wyke & Smith, 2001). In this region the Hantamsberg, north of Calvinia in the Northern Cape, forms a striking inselberg towering 500 m above the surrounding plains and therefore climatically and ecologically distinct from its surroundings (see Figs 2 & 3). The summit plateau of the Hantamsberg supports a number of temporary streams and wetlands (Fig. 3), which were investigated for water beetles in September 2010. This resulted in the discovery of two new species of Hydraenidae, so far only known only from these mountains. These are described below, together with a discussion of the water beetle fauna of the Hantamsberg and its biogeographical affinities.

Material and methods

Beetles were collected from available waterbodies in the Hantamsberg using a D-framed pond net (Fig. 3c), as well as being puddled by hand from pool margins.

Specimens were studied using a Leica MZ8 stereomicroscope, with a Fluopac FP1 fluorescent illuminator.

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known from the Eastern Cape/western Great Escarpment and Western Cape/western Great Escarpment respectively, largely in semi-arid regions in both the winter and summer rainfall zones (Perkins, 2008). In contrast the dytiscid *Canthyporus hottentottus* (Gemminger & Harold) is mostly known from winter-rainfall areas, inhabiting waterbodies in fynbos, and not having been previously reported from this area (Biström & Nilsson, 2006). Similarly *Hydropeplus montanus* Omer-Cooper, another diving beetle found in a temporary stream pool on the Hantamsberg, is characteristic of sites in mountain fynbos, this record representing the first from the Northern Cape Province. As with the vegetation (Van der Merwe, 2008a,b) it would appear that the water beetle fauna of the Hantamsberg contains a mixture of species characteristic of both Fynbos and Succulent Karoo biomes, as well as some endemics—not surprising given its location and altitude.

The species described and recorded here add to our understanding of the biodiversity importance of the Hantamsberg, one of a number of isolated massifs on the edge of the Western Great Escarpment of South Africa. *Mesoceration hantam* **sp. nov.** and *Parhydraena faeni* **sp. nov.** can be added to the other insect endemics of the massif, including the butterflies *Chrysortis beaufortia stepheni* (Dickson) and *Lepidochrysops jamesi claaseni* Dickson (Mecenero *et al*., 2013). It seems likely that other parts of the Great Escarpment, such as the Roggeveldberg and Great Winterberg, currently poorly-known entomologically, would repay further study.

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