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A new species of spectacularly coloured flat lizard *Platysaurus* (Squamata: Cordylidae: Platysaurinae) from southern Africa

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Abstract

We describe a new species of flat lizard (*Platysaurus attenboroughi* sp. nov.) from the Richtersveld of the Northern Cape Province of South Africa and the Fish River Canyon region of southern Namibia. This species was formerly confused with *P. capensis* from the Kamiesberg region of Namaqualand, South Africa. Genetic analysis based on one mtDNA and two nDNA loci found *Platysaurus attenboroughi* sp. nov. to be genetically divergent from *P. capensis* and these species can also be differentiated by a number of scalation characters, coloration and their allopatric distributions. To stabilize the taxonomy the type locality of *Platysaurus capensis* A. Smith 1844 is restricted to the Kamiesberg region, Namaqualand, Northern Cape Province, South Africa.

Key words: southern Africa, lizard, new species, reptile, *Platysaurus attenboroughi* sp. nov., *Platysaurus capensis*

Introduction

Flat lizards (*Platysaurus*) belong to the Cordylidae, the only lizard family endemic to Africa (Stanley *et al.*, 2011), and currently comprise 26 taxa, including 15 subspecies (Mouton *et al.*, 2014). The last major taxonomic revision of the genus was by Broadley (1978; see also FitzSimons, 1943; Loveridge, 1944), although several new taxa have since been described (e.g. Jacobsen & Newbery, 1989; Jacobsen, 1994; Branch & Whiting, 1997) followed by a molecular phylogeny and biogeographic analysis of 14 taxa (Scott *et al.*, 2004). More recently, the generic relationships of the Cordyliformes were reassessed by Stanley *et al.* (2011) and *Platysaurus* was placed in its own subfamily (Platysaurinae). Resolving species boundaries has been constrained by the conservative nature of *Platysaurus* morphology (Broadley, 1978; Jacobsen, 1994), and this is currently being addressed in a comprehensive molecular systematics study of the genus (Keogh *et al.* in prep).

Flat lizards are found on rocky outcrops of granite, gneiss and sandstone (Broadley, 1978). The majority of species are found in rocky habitats in mesic savannah extending from southern Tanzania in the north to eastern South Africa and Swaziland in the south (Broadley, 1978; Spawls *et al.*, 2002). The *P. broadleyi-capensis* clade, however, is found in Succulent and Nama Karoo habitats in the Northern Cape Province of South Africa and southern Namibia, separated to the east by > 500 km from its nearest congener (*Platysaurus minor* in the Waterberg, Limpopo Province, South Africa) (Broadley, 1978; Branch & Whiting, 1997; Whiting, 2014). They are among the most dorso-ventrally flattened lizards, enabling them to squeeze into tight crevices where they seek refuge. Interestingly, the majority of species are allopatric (Broadley, 1978). In the few instances of sympatry, species pairs are either large- and small-bodied, and/or use different microhabitat (Broadley, 1978). *Platysaurus* are also strikingly sexually dimorphic: males are brightly coloured while females are drab and typically are smaller in both head and body size (Broadley, 1978; Jacobsen, 1989; Branch & Whiting, 1997). Juveniles and females of all