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## Taxonomic adjustments in the systematics of the southern African lacertid lizards (Sauria: Lacertidae)

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### Abstract

Molecular phylogenetic analyses of southern African lacertid lizards (Eremiadini) using mitochondrial and nuclear markers revealed two examples of generic assignments incompatible with monophyletic clades. *Australolacerta* Arnold 1989, a genus endemic to South Africa and to which two isolated species have been referred, is paraphyletic at the generic level. In addition, the species *Ichnotropis squamulosa* Peters 1854 was found to be embedded within the genus *Meroles*. To resolve the paraphyly in *Australolacerta* we erect a new genus, *Vhembelacerta* Edwards, Branch, Herrel, Vanhooydonck, Measey, & Tolley, **gen. nov.**, to accommodate *Lacerta rupicola* FitzSimons 1933. To maintain a monophyletic *Ichnotropis* Peters 1854, *Ichnotropis squamulosa* Peters 1854 is transferred to *Meroles* Gray 1838, now named *Meroles squamulosus* **comb. nov.** Where necessary the genera affected by these actions are re-characterized.

**Key words:** Lacertidae, Eremiadini, *Ichnotropis squamulosa*, *Australolacerta*, paraphyly, mitochondrial and nuclear DNA

### Introduction

Lacertids are a diverse group of lizards, ubiquitous throughout much of the Old World and occur in a wide variety of habitats; e.g. high mountain tundra, heath lands, Mediterranean scrub, tropical forest, semi-desert and desert (FitzSimons 1943; Arnold 1989; Branch 1998). However, they have an unusual distribution, with only a limited penetration into south-east Asia, and are absent from Australia and Oceania. Lacertids are also absent from Madagascar but occur throughout mainland Africa, with high regional endemism at both genus and species level (Branch 1998; Spawls *et al.* 2002). Although diverse lacertid faunas occur in southern Africa (at least 8 genera and 37 species; Branch 1998; Conradie *et al.* 2012) and eastern Africa (10 genera, 19 species; Spawls *et al.* 2002; Greenbaum *et al.* 2011), only three species (*Nucras ornata* (Gray 1864), *Ichnotropis capensis* (Smith 1838) and *I. squamulosa* Peters 1854) occur in both regions and then only marginally, with the southern African species just entering the southern parts of East Africa.

Early classification of lacertids, as with that of most organisms, relied almost exclusively on morphological characteristics, occasionally supplemented with other types of biological data. Phylogenetic hypotheses of lacertid