

Taxonomic Resolution to the Problem of Polyphyly in the New Caledonian Scincid Lizard Genus *Lioscincus* (Squamata: Scincidae)

ROSS A. SADLIER^{1*}, AARON M. BAUER², GLENN M. SHEA^{3,1} AND SARAH A. SMITH¹

¹ Australian Museum Research Institute, Australian Museum, 1 William Street, Sydney NSW 2010, Australia

² Department of Biology, Villanova University,
800 Lancaster Avenue, Villanova, Pennsylvania 19085, United States of America

³ Faculty of Veterinary Science B01, University of Sydney NSW 2006, Australia

ABSTRACT. Recent genetic studies have identified the New Caledonian scincid genus *Lioscincus* to be polyphyletic, comprising four distinct evolutionary lineages which we recognize at the generic level. The revised concept of *Lioscincus s.s.* now includes only the type species *Lioscincus steindachneri* Bocage, 1873 and the recently described *Lioscincus vivae* Sadlier, Bauer, Whitaker & Smith, 2004. The three remaining lineages identified are: *Leiolopisma tillieri* Ineich & Sadlier, 1991 and *Lioscincus maruia* Sadlier, Whitaker & Bauer, 1998 for which the genus *Phymasaurus* gen. nov. is proposed; *Lygosoma (Mococa) nigrofasciolatus* Peters, 1869 and *Leiolopisma greeri* Böhme, 1979 for which the genus *Epibator* gen. nov. is proposed; and *Lygosoma (Leiolopisma) novaecaledoniae* Parker, 1926 for which the genus *Caesoris* gen. nov. is proposed. Each of these genera is diagnosed by a suite of morphological apomorphies which in combination is unique within the *Eugongylus* group of skinks of which each is a member. The revised taxonomy presented here, which recognises an additional three new genera, brings the number of endemic skink genera present in New Caledonia to 17, representing approximately 40% of the generic diversity within the Australian/Pacific region *Eugongylus* group of skinks as currently recognised. Although we are reluctant to erect new genera to accommodate one or two species, the data at hand suggest this as the most accurate reflection of the available genetic and morphological data.

KEYWORDS. Taxonomy; scincid; new genera; *Lioscincus*; New Caledonia.

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The discovery and description of the New Caledonian scincid lizard fauna covers a period of just over 150 years. The first century of investigation in the period 1869–1970 saw contributions by five workers (Bavay, 1869; Peters, 1869, 1879; Günther, 1872; Bocage, 1873; Brocchi, 1876) describing 17 species in the nineteenth century, and six

workers (Andersson, 1908; Werner, 1909; Roux, 1913; Parker, 1926; Mertens, 1928; Loveridge, 1941) describing nine species or subspecies in the early twentieth century. Twenty of these 26 taxa remain valid today. The most significant contributions were the *Catalogue des reptiles de la Nouvelle-Calédonie et description d'espèces nouvelles* of

* author for correspondence