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A new species of insular skink (Genus *Sphenomorphus* Fitzinger 1843) from the Langkawi Archipelago, Kedah, West Malaysia with the first report of the herpetofauna of Pulau Singa Besar and an updated checklist of the herpetofauna of Pulau Langkawi

L. LEE GRISMER

Department of Biology, La Sierra University, 4500 Riverwalk Parkway, Riverside, California, 92515-8247 USA
Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor Darul Ehsan, Malaysia

Abstract

A new species of small, insular, forest floor skink, *Sphenomorphus langkawiensis* **sp. nov.** is described from the islands of Langkawi and Singa Besar in the Langkawi Arichipelago, Kedah, West Malaysia. This species is differentiated from all other 35 Sundaland and Malay Peninsula species of *Sphenomorphus* on the basis of a unique suite of morphological and color pattern characteristics. The discovery of the first endemic reptile in the Langkawi Archipelago and the addition of nine new records of species to Pulau Langkawi underscores the unrealized biodiversity of the herpetofauna of this archipelago. Twelve species (one frog, nine lizards, and two snakes) are reported for the first time from Pulau Singa Besar, a small satellite island off the southern coast of Pulau Langkawi.

Key words: Pulau Langkawi, Pulau Singa Besar, Malaysia, Scincidae, *Sphenomorphus langkawiensis*

Introduction

The Langkawi Archipelago encompasses 104 islands lying 35 km off the northwest coast of the state of Kedah, West Malaysia, and is the largest conglomerate of islands associated with peninsular Malaysia. Its islands range in size from 0.01–328 km^2 and for the most part, are covered entirely by primary forest. The largest of these islands, Pulau Langkawi (328 km^2), is also the most environmentally diverse. Its interior is mountainous and covered with mixed dipterocarp forest and its highest peak, Gunung Raya, reaches 881 m above sea level. Its second highest peak, Gunung Machinchang, reaches 701 m and is one of the oldest geological formations in Southeast Asia (Jones 1981; Stauffer *et al.* 1981). Broad, flat, low-lying expanses fringe the interior mountains providing suitable relief for agriculture areas as well as lowland dipterocarp forest, coastal vegetation, and mangrove communities. Surrounding Pulau Langkawi are at least 103 much smaller statllite islands. One of these islands, Singa Besar, lying only 3.5 km off the southern coast, is 11.3 km^2 in size, reaches 242 m in elevation and is nearly entirely covered in pristine lowland dipterocarp forest.

Thus far, Pulau Langkawi is the only island in the archipelago that has been surveyed for amphibians and reptiles (Ibrahim *et al.* 2006; Grismer *et al.* 2006a; Zimmerer 2004). The latest herpetological inventory (Grismer *et al.* 2006a) reports a total of one caecilian, 23 species of frogs, six turtles, 21 lizards, and 37 snakes. Among them was an unidentified species of a small, forest floor, scincid lizard of the genus *Sphenomorphus* Fitzinger 1843. An additional specimen of this same unidentified species was collected in 2002 from Pulau Singa Besar and recently discovered in the herpetological collection of the Department of Wildlife and

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