



A new insular species of *Cyrtodactylus* (Squamata: Gekkonidae) from the Langkawi Archipelago, Kedah, Peninsular Malaysia

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Abstract

A new species of the gekkonid lizard, *Cyrtodactylus macrotuberculatus* **sp. nov.**, is described from Pulau Langkawi of the Langkawi Archipelago located off the northwest coast of Peninsular Malaysia in the state of Kedah. This species had been previously recognized as *C. pulchellus* but is differentiated here from that species and all other Sunda Shelf *Cyrtodactylus* on the basis of its strong tuberculation and other scale and color pattern characteristics. This represents the second endemic species known from the Langkawi Archipelago.

Key words: Malaysia, Langkawi, Archipelago, Kedah, *Cyrtodactylus*, *macrotuberculatus*, new species

Introduction

The lizard genus *Cyrtodactylus* is the largest group of gekkonids to date (Kluge 2001) and the rate at which new species are being discovered and described shows no signs of leveling off (i.e., Bauer 2002, 2003; Bauer *et al.* 2002, 2003; Grismer 2005, Grismer & Leong 2005; Grismer *et al.*, 2008; Hayden *et al.* 2008; Hoang *et al.* 2007; Heidrich *et al.* 2007; Kraus 2007; Linkem *et al.* 2008; Ngo & Bauer 2008; Ngyuen *et al.* 2006; Orlov *et al.* 2007; Pauwels *et al.* 2004; Rösler & Glaw 2008; Rösler *et al.* 2007; Youmans & Grismer 2006; Zeigler *et al.* 2002). *Cyrtodactylus* are terrestrial to scansorial forest-dwelling lizards noted for their slender, inflected digits, and long limbs. They collectively range from tropical South Asia, Indochina, the Philippines, and the Indo-Australian Archipelago to as far east as the Solomon Islands (Bauer & Henle 1994). There are at least 24 species of *Cyrtodactylus* currently recognized from the Sunda Shelf region of Southeast Asia, and these species collectively range from the Isthmus of Kra, Thailand (*sensu* Hughes *et al.* 2003) southward to Borneo, Sumatra, Java, and their satellite islands (Manthey & Grossmann 1997; Grismer 2005; Rösler & Glaw 2008; Youmans & Grismer 2006). Of these, 13 species occur in Peninsular Malaysia (Grismer 2008c) and two, *C. pulchellus* Gray and *C. quadrivirgatus* Taylor, are known from the Langkawi Archipelago off the northwest coast of Peninsular Malaysia (Fig. 1).

Island archipelagos associated with Peninsular Malaysia support a suite of endemic species and serve to warehouse a significant portion of this nation's herpetofaunal diversity and endemism (Grismer & Pan 2008). Nowhere is the potential for diversity and endemism greater than in the Langkawi Archipelago, which encompasses 104 islands lying 35 km off the coast of Peninsular Malaysia in the state of Kedah, and represents the largest conglomerate of islands associated with Peninsular Malaysia. Its islands range in size from 0.01–328