A new skink (Scincidae: Saproscincus) from rocky rainforest habitat on Cape Melville, north-east Australia

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Abstract

Saproscincus skinks are restricted to wet forest habitats of eastern Australia. Eleven species have previously been described, with most having small distributions in disjunct areas of subtropical and tropical rainforest. The localized distributions and specific habitat requirements of Saproscincus have made them a key group for understanding the biogeographic history of Australia’s rainforests. Here I describe a new species of Saproscincus from the Melville Range on Cape Melville, north-east Australia. The Melville Range is composed of boulder-fields and areas of rainforest in the uplands, and is highly isolated from other areas of elevated rainforest. All individuals of the new species were found on a moist ridgeline, active on boulders under a rainforest canopy or on boulder-field immediately adjacent to rainforest. Saproscincus saltus sp. nov. is highly distinct in morphology and colour pattern. Of particular interest are its long limbs and digits compared to congeners, which in conjunction with the observed ecology, suggest a long history of association with rock. The discovery of S. saltus sp. nov. extends the distribution of the genus over 100 km north from the nearest congeners in the Wet Tropics region. This species brings the number of vertebrates known to be endemic to the Melville Range to six, which is remarkable for such a small area.

Key words: Saproscincus basiliscus, Saproscincus lewisi, Cape York, boulder-field, rainforest, lithorefugia, Queensland

Introduction

The genus Saproscincus Wells & Wellington 1984 consists of 11 species distributed in the coastal ranges and lowlands of eastern Australia. Most of the species have localized distributions in rainforests of coastal Queensland and northern New South Wales, and the genus has been a key group in biogeographic analyses of the history of Australia’s rainforests (e.g., Moritz et al. 2005; Moussalli et al. 2005). Most Saproscincus (8 species) were described in the 1980s and 1990s during a period of intense interest in the rainforest fauna of eastern Australia that began in the 1970s (e.g., Broadbent & Clark 1976). Since the descriptions of S. oriarus Sadlier 1998, S. hannahae Couper & Keim 1998 and S. lewisi Couper & Keim 1998, only one species has been added, S. eungellensis Sadlier et al. 2005.

Within Saproscincus there is a ‘northern’ clade (Greer & Kluge 1980; Greer 1989; Couper & Keim 1998) consisting of S. basiliscus (Ingram & Rawlinson 1981), S. lewisi, S. czechurai (Ingram & Rawlinson 1981), S. tetradactylus (Greer & Kluge 1980) and S. hannahae. Genetics support the monophyly of this clade (Moussalli et al. 2005; Sadlier et al. 2005) and the group is defined by a number of unique morphological traits (Greer 1989; Couper & Keim 1998). The clade is distributed in rainforests of mid-east and north-east Queensland, with the most northerly species being S. lewisi in the northern Wet Tropics region. The largest areas of rainforest north of the Wet Tropics (particularly in regards to elevated rainforest) are in the McIlwraith Range and in the Iron Range area. McIlwraith Range has several endemic rainforest vertebrates, Orraya occultus (Couper et al. 1993), Cophixalus crepitans Zweifel 1985, Cophixalus peninsularis Zweifel 1985 and Cyrtodactylus pronarus Shea et al. 2011, while the only vertebrate endemics known for the Iron Range region are two frogs, Cophixalus kulakula Hoskin & Aland 2011 and Cophixalus pakayakulangun Hoskin & Aland 2011, that are highly localized in boulder-pile habitats. Interestingly, no Saproscincus have been found in these areas.