



A new species of *Coleodactylus* Parker, 1926 (Squamata: Sphaerodactylidae) from the Atlantic Forest of northeast Brazil

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Abstract

A new species, *Coleodactylus elizae* **sp. nov.**, is described for the Atlantic Forest of Northeastern Brazil. It is distinguished from other *Coleodactylus* species by the following character combinations: one nearly completely divided or two rostral scales, dorsal scales smooth and four scales forming the unguis sheath. The color pattern consists of white spots distributed over a pinkish background. *Coleodactylus elizae* **sp. nov.** is a forest species inhabiting bromeliads.

Key words: lizard, bromeliad fauna, rainforest, Brazil

Introduction

The genus *Coleodactylus* Parker (Squamata: Sphaerodactylidae) is distributed in South America east of the Andes range. Up to now, it was composed of five species of small leaf-litter diurnal geckos: *C. amazonicus* (Andersson), distributed in Central and Eastern Amazonia, including Southern Venezuela, Southern Guyana, Suriname, and French Guyana; *C. brachystoma* (Amaral) in the Cerrado in the Brazilian states of Goiás, Mato Grosso, Mato Grosso do Sul and Piauí; *C. meridionalis* (Boulenger), in the Atlantic Forest, from the coastal Brazilian states to more mesic open formations from Ceará to Bahia; *C. natalensis* Freire restricted to the forest in the dune fields of Natal and Parnamirim, in Rio Grande do Norte State, and *C. septentrionalis* Vanzolini, which occurs in the northern state of Roraima (Vanzolini 1957, 1980; Ávila-Pires 1995; Freire 1999; Vitt *et al.* 2005; Geurgas *et al.* 2008; Geurgas & Rodrigues 2010).

Until recently the characteristic considered most informative in recognizing genera of Sphaerodactylidae, due to its conservative nature, was digital scutellation, particularly of the unguis sheath. Kluge (1995) conducted a cladistic analysis using 25 internal and external morphological synapomorphies. However, he explored the unguis sheath arrangement, based on the homonymy and heteronymy of individual digital scales, as the element of greatest weight to sustain the hypothesis regarding the historical evolution of the group. The most parsimonious hypothesis of his study established the following relationship (*Gonatodes* (*Lepidoblepharis* (*Sphaerodactylus* (*Coleodactylus*, *Pseudogonatodes*))))), corroborating the monophyly of each genus described in other studies (Parker 1926; Vanzolini 1968; Huey & Dixon 1970; Hoogmoed 1985).

More recently, molecular genetic studies have been carried out to help interpret relationships based on morphological aspects. The phylogenetic study of *Coleodactylus* conducted by Geurgas *et al.* (2008) based on mitochondrial 16S and two nuclear genes, identified the monophyly of the genus, albeit weakly supported, as well as two main clades. The first composed of populations attributed to *C. amazonicus* and the second of *C. meridionalis*, *C. brachystoma*, *C. natalensis* and *C. septentrionalis*. The last was named as the *C. meridionalis* group.

However, in a phylogenetic study by Gamble *et al.* (2011), using fragments of five nuclear genes from New World geckos, established that *Coleodactylus* was polyphyletic with regard to other genera. *Coleodactylus amazonicus* was reported as the sister taxon to the remaining Sphaerodactylini, a clade consisting of *Gonatodes*, *Lepi-*