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A new *Crossodactylodes* Cochran, 1938 (Anura: Leptodactylidae: Paratelmatobiinae) from the highlands of the Atlantic Forests of southern Bahia, Brazil

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Abstract

A new *Crossodactylodes* is described from Serra das Lontras, in the highlands of the Atlantic Forests of southern Bahia. The new species can be distinguished from all other *Crossodactylodes* by having Finger I ending in an acute tip, a larger body size, by cranial features, and by molecular data. Like their congeners, the new species live in bromeliads but is widely geographically disjunct, being apparently restricted to the summit of a mountain range in Northeastern Brazil.

Key words: *Crossodactylodes septentrionalis* sp. nov., Serra das Lontras, Atlantic Forests, mountain endemism

Introduction

The genus *Crossodactylodes* Cochran, 1938, family Leptodactylidae (sensu Fouquet *et al.* 2013), is a poorly known bromeliad-dweller genus endemic to the Brazilian Atlantic Forests. *Crossodactylodes pintoii* Cochran, 1938 is the type species and “Macahé [= Serra de Macaé]”, Macaé mountains, in Nova Friburgo, state of Rio de Janeiro, is the type locality (Bokermann 1966).

Given the presence of spines on the inner surface of the first finger, a similar tooth development, and the supposed presence of digital pad glands that appears when the digital tips are dried out, Cochran (1955) suggested *Crossodactylodes* to be closely related to *Crossodactylus* Duméril and Bibron, 1841. However, this last character was probably an artifact resulting from the presence of Y-shaped terminal phalanges (Lynch 1971). Lynch (1971) placed *Crossodactylodes* as part of his Grypiscini tribe of leptodactylids, along with *Cycloramphus* Tschudi, 1838 and *Zachaenus* Cope, 1866, and reported its occurrence from “Guanabara” (a former Brazilian state, presently the Rio de Janeiro municipality) to Espírito Santo, along the Brazilian coast.

The first extensive molecular phylogenetic study on amphibians did not include *Crossodactylodes* (Frost *et al.* 2006), but based on the phylogenetic relationships of its putative relatives, from which samples were available, the genus was allocated in the resurrected family Cycloramphidae. Posterior molecular analyses, still not including *Crossodactylodes*, lead Pyron and Wiens (2011) to create the subfamily Paratelmatobinae to harbor *Paratelmatobius* and *Scythrophrys*. *Crossodactylodes* and *Rupirana* were not included in the analysis and remained as *incertae sedis*. However, they did not present a diagnosis for their new subfamily, rendering Paratelmatobinae a *nomen nudum*. This was later emended by Ohler and Dubois (2012) which diagnosed the Paratelmatobinae. In a recent molecular study, Fouquet *et al.* (2013) included *Crossodactylodes* in the analysis and recovered it closely related to *Paratelmatobius*, *Scythrophrys* and *Rupirana*. Unaware of Ohler and Dubois (2012) previous diagnosis of Paratelmatobinae (sensu Pyron & Wiens 2011), Fouquet *et al.* (2013) proposed the new subfamily Crossodactylodinae (Fouquet *et al.* 2013), now including *Crossodactylodes* and *Rupirana*, rendering it a junior synonym of Paratelmatobinae Ohler & Dubois, 2012 (Dubois 2013).