



Phenotypic variation of *Leptodactylus cupreus* Caramaschi, São-Pedro and Feio, 2008 (Anura, Leptodactylidae)

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Abstract

This study describes for the first time the female of *Leptodactylus cupreus* and provides new information concerning its geographical distribution, male's morphology and bioacoustics. *Leptodactylus cupreus*, a poorly known species from the Brazilian Atlantic Forest, was originally allocated in the *L. mystaceus* complex of the *L. fuscus* species group. Based on morphological observations, we infer that *L. cupreus* should be in fact related to *L. mystacinus*, a species that, although assigned to the *L. fuscus* species group, is not assigned to the *L. mystaceus* complex. Therefore, we comment the phylogenetic relationships concerning *L. cupreus*, *L. mystaceus* and *L. mystacinus*.

Key words: *Leptodactylus cupreus*, Geographic distribution, Morphological variation, Advertisement call, Female description

Resumo

Este estudo descreve pela primeira vez a fêmea de *Leptodactylus cupreus* e fornece novas informações sobre sua distribuição geográfica, morfologia e bioacústica dos machos. *Leptodactylus cupreus*, uma espécie pouco conhecida da Floresta Atlântica brasileira, foi originalmente alocada dentro do complexo *L. mystaceus* do grupo de espécies de *L. fuscus*. Baseados em observações morfológicas, propomos que *L. cupreus* deve ser mais relacionado a *L. mystacinus*, uma espécie que, apesar de pertencer ao grupo de espécies de *L. fuscus*, não está alocada dentro do complexo *L. mystaceus*. Portanto, comentamos o relacionamento filogenético das espécies *L. cupreus*, *L. mystaceus* e *L. mystacinus*.

Introduction

The genus *Leptodactylus* is divided into five species groups. Within the *Leptodactylus fuscus* group, the *L. mystaceus* complex comprises six species: *L. mystaceus*, *L. spixi*, *L. notoaktites*, *L. elenae*, *L. didymus* and *L. cupreus* (Heyer 1996; De Sá *et al.* 2005; Caramaschi *et al.* 2008), distributed in the Amazon basin, Atlantic Forest, Cerrados, Chacos and Caatingas of South America (Frost 2011).

Caramaschi *et al.* (2008) considered *L. cupreus* as a member of *L. fuscus* group and related to the *L. mystaceus* complex. The species was diagnosed and distinguished from the other species within the *L. fuscus* group by the following combination of traits: general color of dorsum copper without spots; presence of a large black stripe extending from the tip of snout to the shoulder passing through the eye and tympanum; outer metacarpal tubercle divided and smaller than the inner metacarpal tubercle. In addition, the advertisement call presents a combination of traits (not pulsed, call rate of 12 calls per second and dominant frequency between 2,800 and 3,058 Hz) that is also diagnostic (Caramaschi *et al.* 2008).