



## A new cryptic species of *Ameerega* (Anura: Dendrobatidae) from Brazilian Cerrado

WILIAN VAZ-SILVA<sup>1,2</sup> & NATAN MEDEIROS MACIEL<sup>2,3,4</sup>

<sup>1</sup>Departamento de Ciências Biológicas, Centro Universitário de Goiás – Uni-Anhanguera, Rua Professor Lázaro Costa, 456, 74415-450, Goiânia, GO, Brazil

<sup>2</sup>Laboratório de Genética e Biodiversidade, Departamento de Biologia Geral, Instituto de Ciências Biológicas, Universidade Federal de Goiás, Campus Samambaia, 74001-970, Cx. Postal 131, Goiânia, GO, Brazil

<sup>3</sup>Laboratório de Comportamento Animal, Herpetologia e Conservação da Natureza, Departamento de Ecologia, Instituto de Ciências Biológicas, Universidade Federal de Goiás, Campus Samambaia, 74001-970, Cx. Postal 131, Goiânia, GO, Brazil

<sup>4</sup>Corresponding author. E-mail: nmaciel@gmail.com

### Abstract

A new cryptic species of poison frog is described from Central Brazil and included in the *Ameerega picta* group. *Ameerega berohoka* **sp. nov.** occurs in cerrado sensu stricto and gallery forest phytophysionomies in the Cerrado biome in areas drained by the Araguaia River basin, State of Goiás, Brazil. The new species differs from the other species in the *A. picta* group by adult morphology, such as dorsal coloration, hand length, nostril shape, and features of advertisement call. Uncorrected p-distances of a fragment of the 16S mitochondrial rRNA gene revealed high divergence among other *Ameerega* species. The new species seems to be genetically most similar to *Ameerega flavopicta* (ca. 5.3%).

**Key words:** *Ameerega berohoka* **sp. nov.**, *Ameerega picta* group, poison frog, advertisement call, DNA barcoding

### Introduction

The systematics of poison frogs, Family Dendrobatidae, has passed through many changes in the last years (e.g. Frost *et al.* 2006; Grant *et al.* 2006). Nowadays, the family is composed of 174 species comprising 12 genera (Frost 2011). The genus *Ameerega* Bauer, 1986 currently contains 31 valid species (Frost 2011). Several of them are suggested to actually represent complexes of cryptic species, mainly because of the conserved morphological attributes of the adults (e.g. Lötters *et al.* 2007). Cryptic species in the *Ameerega picta* group have been proposed in integrative taxonomic approaches combining several of the following characters: adult coloration, advertisement call features, tadpole morphology and DNA barcoding (e.g. Haddad & Martins 1994; Lötters *et al.* 1997, 2005, 2009; Twomey & Brown 2008). For the purpose of DNA barcoding, these studies employed the mitochondrial 16S rRNA gene, which has been proposed to fulfill the requirements for a universal DNA barcoding marker in amphibians (Vences *et al.* 2005).

In this paper we describe a new species of the *Ameerega picta* group from the Brazilian Cerrado on the basis of adult morphological features, advertisement call and its 16S barcoding.

### Material and methods

Specimens examined for description and comparisons are deposited at Museu Adão Cardoso Universidade de Campinas (ZUEC), Museu Nacional, Rio de Janeiro (MNRJ), Coleção Zoológica da Universidade Federal de Goiás (ZUFG), Coleção Herpetológica do Centro de Estudos e Pesquisas Biológicas da Pontifícia Universidade Católica de Goiás (CEPB-PUCGO) and Coleção Herpetológica da Universidade de Brasília (CHUNB). Adult measurements were made using digital calipers (to nearest 0.1 mm) following Haddad & Martins (1994), including the