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The advertisement call of *Proceratophrys renalis* (Miranda-Ribeiro, 1920) (Amphibia: Anura: Cycloramphidae)

DIEGO JOSÉ SANTANA[1], RICARDO RODRIGUES, RALPH LACERDA DE ALBUQUERQUE, DANIEL ORSI LARANJEIRAS, ARIELSON DOS SANTOS PROTÁZIO, FREDERICO GUSTAVO RODRIGUES FRANÇA & DANIEL OLIVEIRA MESQUITA

Programa de Pós-Graduação em Ciências Biológicas (Zoologia), Universidade Federal da Paraíba, Departamento de Sistemática e Ecologia, Cidade Universitária, 58059-900, João Pessoa, Paraíba, Brazil

[1]*Corresponding author. E-mail: santana_herpeto@yahoo.com.br*

Proceratophrys renalis (Fig. 1A) was recently revalidated (Prado & Pombal 2008). This frog species comprises a population previously recognized as *P. boiei*. It occurs in Atlantic forest from Paraíba to south of Bahia State, and in the interior of Brazil, close to transitions between Cerrado and Caatinga biomes, including Jequitinhonha river basin in Minas Gerais State (Prado & Pombal 2008).

Anuran advertisement calls are species-specific, and bioacoustic analyses constitute an important character for species delimitation (Duellman & Trueb 1986).

On November 9, 2010, a few males of *Proceratophrys renalis* were recorded in Mata do Açude Cafundó, at a swamp area inside Forest (07º10'48"S, 35º05'39"W) located in the municipality of Cruz do Espírito Santo, Paraíba State, Northeastern Brazil. Calls of two males (totaling 12 calls) were recorded at around 21:00 h, air temperature of 25°C, using a Sony ICD-B120® digital recorder with an internal microphone and sampling frequency of 44.000 Hz and 16bit resolution. Calls were analyzed and spectrograms build with Raven Pro 1.3 for Windows (Cornell Lab of Ornithology) using the following parameters: FF T 512 (1024 for power spectrum), overlap 50, and DF T 512. Terminology of calls follows Duelmann & Trueb (1986). Voucher specimens are deposited in the Herpetological collection of Universidade Federal da Paraíba (CHUFPB), João Pessoa, state of Paraíba, Brazil, as CHUFPB 00006 and 00007.

The males whose calls we recorded started to call sporadically as soon as the rain fall inside forest. They had cryptic behavior, calling amid the leaf litter. They were found close to the edge, among other species also calling, such as *Dendropsophus branneri* (Cochran) and several individuals of *Leptodactylus natalensis* Lutz.

The advertisement call of *Proceratophrys renalis* (Fig. 1B, 1C and 1D) consists of a multipulsed note with a duration of 151–461 ms ($\bar{x}$ = 390 ± 90 ms, n = 12 calls from two males), emitted sporadically with 13–30 pulses ($\bar{x}$ = 24.82 ± 5.02, n = 11) and the pulse rate ranges from 61.50–86.09 pulses/s ($\bar{x}$ = 61.12 ± 20.54 pulses/s, n = 11). The dominant frequency is between 689.1–1033.6 Hz ($\bar{x}$ = 760.86 ± 115.15 Hz).

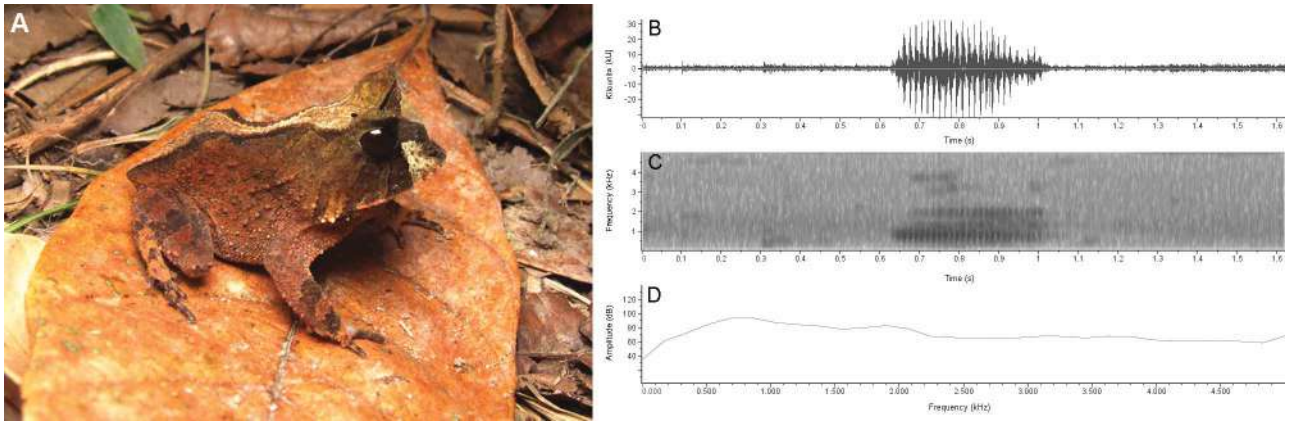

FIGURE 1. A) *Proceratophrys renalis* photographed in Cruz do Espírito Santo municipality (Photo by D.J. Santana); B) *Proceratophrys renalis* advertisement call: B) oscillogram, C) audiospectrogram and D) power spectrum of a single call (air temperature = 25ºC).

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For a comparison among described advertisement calls of *Proceratophrys* species, we used Mângia *et al*. (2010), who summarized data of the described calls of genus, and Cruz & Napoli (2010), who described the call of *P. sanctaritae* and another population of *P. melanopogon*. *P. renalis*, belongs to the *P. boiei* complex, which have no rostral appendages (Prado & Pombal 2008). Considering call characteristics, it is noted that the revalidation of *P. renalis*, separated from *P. boiei* (Prado & Pombal 2008), can be confirmed, being the call of *P. renalis* (151–461 ms) shorter than *P. boiei* (700–800 ms). *Proceratophrys renalis* has fewer pulses (13–30) than *P. boiei* (30–35) and a greater pulse rate (*P. renalis* emitted 61.50–86.09/s; *P. boiei* emitted 45/s) (Heyer *et al*. 1990; present work).

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