

## Defensive behavior in *Proceratophrys renalis* (Miranda-Ribeiro, 1920) (Anura, Odontophrynidae)

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The genus *Proceratophrys* Miranda-Ribeiro, 1920 comprises 31 species occurring in Brazil, Argentina and Paraguay (Dias et al., 2013). *Proceratophrys renalis* was recently revalidated (Prado and Pombal, 2008) and occurs in the Atlantic Forest from Paraíba to south of Bahia State, in a portion of central Brazil, close to transitions between Cerrado and Caatinga biomes, including Jequitinhonha river basin in Minas Gerais state (Prado and Pombal, 2008).

On November 9, 2010, males of *Proceratophrys renalis* were calling inside a forest fragment at Mata do Açude Cafundó (07°10'48"S, 35°05'39"W), municipality of Cruz do Espírito Santo, State of Paraíba, Brazil. After capturing, at 9 pm, we observed a male of *P. renalis*, displaying a defensive behavior called stiff legged (Sazima, 1978) (Fig. 1A). Even after the capture, we put the individual back on the ground, and it still remained with the rigid body (Fig. 1B), limbs hindquarters stretched and body having a slightly flattened dorsal ventral feature of this behavior. The individual was collected and deposited in Coleção Herpetológica da Universidade Federal da Paraíba (CHUFPB 00007) (collection permits 15363-1 issued by Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis IBAMA/SISBIO).

Similar defensive behavior has been shown for other species of the same genus, *P. moehringi* (Weygoldt, 1986), *P. appendiculata* (Sazima, 1978), *P. boiei*

(Toledo and Zina, 2004; Costa, Silva-Soares and Bernstein, 2009), and *P. melanopogon* (Moura et al., 2010). These species live on the forest floor and are difficult to distinguish from the leaves due to their cryptic coloration. Certainly, other *Proceratophrys* species might display this behavior, due to their cryptic habits.



**Figure 1.** *Proceratophrys renalis*, (adult male, CHUFPB 00007) (A) after captured displaying the stiff-legged defensive posture, and (B) stiff-legged after to have been put in the forest floor.

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## References

- Costa, P.N., Silva-Soares, T., Bernstein, L.B. (2009): Defensive behaviour of *Proceratophrys boiei* (Wied-Neuwied, 1824) (Amphibia, Anura, Cycloramphidae). *Herpetology Notes* **2**: 227-229.
- Dias, P.H.S., Carvalho-e-Silva, A.M.P.T., Carvalho-e-Silva, S.P. (2013): Larval chondrocranium morphology of five species of *Proceratophrys* Miranda-Ribeiro (Amphibia; Anura; Odontophrynidae). *Zootaxa* **3683**(4): 427-438.
- Moura, M.R., Santana, D.J., Mângia, S., Feio, R.N. (2010): *Proceratophrys melanopogon*. Defensive behavior. *Herpetological Review* **41**: 479.
- Prado, G.M., Pombal Jr., J.P. (2008): Espécies de *Proceratophrys* Miranda-Ribeiro, 1920 com apêndices palpebrais (Anura; Cycloramphidae). *Arquivos de Zoologia* **39**(1): 1-85.
- Sazima, I. (1978): Convergent defensive behavior of two leaf-litter frogs of Southeastern Brazil. *Biotropica* **10**: 158.
- Toledo, L.F.; Zina, J. (2004): *Proceratophrys boiei* (smooth horned toad) Defensive behavior. *Herpetological Review* **35**: 375.
- Weygoldt, P. (1986): Beobachtungen zur ökologie und Biologie Von Froschen an einem neotropischen Bergbach. *Zoolisch Jahrbücher Systematics* **113**(3): 429-454.