

# A record of predation on a poisonous toad *Rhinella granulosa* (Anura, Bufonidae) by Guira Cuckoo *Guira guira* (Cuculidae, Crotophaginae) in the state of Ceará, Brazil

Paulo Cesar Mattos Dourado de Mesquita

Rua Plínio Monteiro, 123, Engenheiro Luciano Cavalcante, CEP 60811-285, Fortaleza, CE, Brasil. E-mail: paulocmdm@gmail.com

Recebido 31/03/2009. Aceito em 01/07/2009.

---

**RESUMO:** Registro de predação de um anuro venenoso *Rhinella granulosa* (Anura: Bufonidae) por *Guira guira* (Cuculidae, Crotophaginae) no Estado do Ceará, Brasil. Informações precisas sobre predação de vertebrados por Anu-branco *Guira guira* são escassas e raramente as espécies predadas são identificadas ao nível de espécie. Eu registro um evento de predação de *G. guira* sobre *Rhinella granulosa*, um anfíbio venenoso.

**PALVRAS-CHAVE:** *Guira guira*, dieta, alimentação, comportamento.

**KEY-WORDS:** *Guira guira*, predation, diet, feeding, behavior.

---

The Guira Cuckoo *Guira guira* (Gmelin, 1788), is a species of the subfamily Crotophaginae and it is widely distributed through South America, inhabiting Brazil, Bolivia, Paraguay, Uruguay and Argentina (Sick, 1997). They are common in areas affected by human activities, like deforested areas, urban areas and crop fields. The diet of *G. guira* is essentially carnivore, composed mainly by arthropods (Schubart, *et al.* 1965), especially those of the order Orthoptera (Martins and Donatelli, 2001); however some studies of stomach contents indicate the eventual consumption of small vertebrates (Schubart, *et al.* 1965).

Predation of anurans by birds is considered merely occasional (Toledo, *et al.* 2007) and registers of predation of anurans by *G. guira* are rare and in general are not precise in relation to the identification of prey species. Apparently the only register that identified the preyed anuran was made by Kokubum and Zacca (2003), who identified the small frog (Family Leiuperidae) *Physalaemus* cf. *fuscumaculatus* as a prey of *G. guira*. Toads (Family Bufonidae) are preyed by only few species of birds because of the high toxicity of its poison (Frost, 2009). Nevertheless this poison seems to be inefficient against some bird species as *Theristicus caudatus* (Carvalho, 1941) and *Corvus macrorhynchos* (Krishna and Vijayalaxmi, 2004). Macedo (1994) reports, but do not identify,

that rarely some small toads can be included in the diet of *G. guira*.

Here I report an event of capture and handling of a toad by *Guira guira* in the city of Fortaleza, State of Ceará, Brazil.

On 27 March 2009, at 15 h 10 min in an urban area of the city of Fortaleza (03°46'41.9"S, 38°29'52.7"W), State of Ceará, Brazil, while I was observing the social behavior of a small group of three individuals of *Guira guira* I saw one of the birds capturing a Granulated Bufo, *Rhinella granulosa*, and afterwards flying to a nearby coconut tree (*Cocos nucifera*), the toad was first loosely caught by its back legs but the bird started to handle it with its beak until the toad was held firmly by its dorsal skin (Figure 1), a refined handling technique not usual in *Guira guira* (see Martins and Donatelli, 2001). When the predator was to start to consume the toad another specimen of *G. guira* appeared and tried to pile the prey. The two birds then flew away and I could not see them anymore. This is the first record of *Guira guira* and Family Cuculidae preying on *Rhinella granulosa*. This report explicit the lack of information on natural history and ecology of birds even in the case of very common and well known species like *Guira guira* and agrees with Christianini (2005) that this kind of occasional information are important to increase the knowledge available about Neotropical species.



FIGURE 1: *Guira guira* holding a *Rhinella granulosa* by its dorsal skin.

## REFERENCES

- Carvalho, A. L. (1941).** Observações sobre casos de batracofagia entre as aves. *Mem. Inst. Oswaldo Cruz*, 35:575-576.
- Christianini, A. V. (2005).** A feeding record of the Short-tailed Hawk *Buteo brachyurus* in its southern range. *Rev. Bras. Ornit.*, 13(2):192-192.
- Frost, D. R. (2009).** Amphibian Species of the World: an online reference. Version 5.3 (12 February, 2009). Electronic Database accessible at <http://research.amnh.org/herpetology/amphibia/>. American Museum of Natural History, New York, USA. (acessado em 28/03/2009).
- Kokubum, M. N. C. and Zacca, W. (2003).** *Physalaemus* cf. *fuscomaculatus* (NCN). Predation. *Herpetol. Rev.*, 34:232-233.
- Krishna, S. and Vijayalaxmi, K. K. (2004).** *Bufo parietalis* (Forest Toad). Predation. *Herpetol. Rev.*, 35:156-157.
- Macedo, R. H. (1994).** Inequities in parental effort and costs of communal breeding in the Guira Cuckoo. *Orn. Neotrop.*, 5:79-90.
- Martins, F. C. and Donatelli, R. J. (2001)** Estratégia alimentar de *Guira guira* (Cuculidae, Crotophaginae) na região centro-oeste de Estado de São Paulo. *Anarajuba*, 9(2):89-94.
- Schubart, O.; Aguirre, A. C. and Sick, H. (1965).** Contribuição para o conhecimento da alimentação das aves brasileiras. *Arg. Zool.*, 12:95-249.
- Sick, H. (1997).** Ornitologia Brasileira. Rio de Janeiro. Editora Nova Fronteira.
- Toledo, L. F.; Ribeiro, R. S; Haddad, C. F. B. (2007)** Anurans as prey: an exploratory analysis and size relationships between predators and their prey. *Jour. Zool.*, 271: 170-177.