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Spoiling friendship: First report on predation of anuran by *Aparasphenodon brunoi* Miranda-Ribeiro, 1920 (Anura: Hylidae)

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Anurans are the most diverse group of amphibians (Frost, 2017) and are important food items in the diet of several vertebrates and invertebrates (Toledo, 2005; Pombal, 2007). Likewise, they play a large role as predators due to the variety of food items they consume. Arthropods are the most common food component in the diet of anurans (Wells, 2007, Forti et al., 2011, Pazinato et al., 2011, Sugai et al., 2012, Camera et al., 2014). However, some species, such as *Xenohyla truncata* (Izecksohn, 1959), includes fruits in their diets, as well as arthropods (Silva and Brito-Pereira, 2006). Anurans are also known to prey on small vertebrates (Duellman and Trueb, 1986), including other anurans (Mendes et al*.,* 2012; Sales-de-Aquino et al., 2012; Baracho et al., 2013; Measey et al., 2015).

Aparasphenodon Miranda-Ribeiro, 1920 is a Neotropical genus of the family Hylidae that currently comprises five species: *A. arapapa* Pimenta, Napoli and Haddad, 2009*, A. bokermanni* Pombal, 1993*, A. brunoi* Miranda-Ribeiro, 1920*, A. pomba* Assis et al., 2013 and *A. venezolanus* (Mertens, 1950). The genus is distributed predominantly through the coastal region of southeastern Brazil, except for *A. venezolanus*, the only Amazonian species (Assis et al., 2013). *Aparasphenodon* species are characterized by head longer than wide, as well as by the hyper ossified skull (Pombal, 1993).

Aparasphenodon brunoi is relatively common in restinga areas, being one of the largest anurans of known to use bromeliads as shelter (e.g., Teixeira et al., 2002; Mesquita et al., 2004). Studies on the diet of *A. brunoi* suggest that this species is a generalist that preys mainly on arthropods including Araneae, Orthoptera, Hemiptera, Diptera and Coleoptera (e.g., Teixeira et al., 2002; Mesquita et al., 2004).

On 03 July 2016, we collected a female of *Aparasphenodon brunoi* (SVL 81.7 mm) inside of a bromeliad in the *Parque Nacional da Restinga de Jurubatiba*, municipality of Carapebus, state of Rio de Janeiro, southeastern Brazil (22.2708°S, 41.6469°W). The specimen presented an enlarged belly due the presence of one large stomach content, one adult of *Scinax* sp (Fig. 1). The prey item was identified to genus level based on its body size and truncate disc on fingers, characteristics still preserved and clearly observed. Both specimens were deposited in the herpetological collection of the *Departamento de Vertebrados, Museu Nacional, Universidade Federal do Rio de Janeiro* (*Aparasphenodon brunoi*: MNRJ 91622; *Scinax* sp.: stomach content of MNRJ 91622).

We could not identify the species of *Scinax* ingested by *Aparasphenodon brunoi*, due to its advanced stage of decomposition. However, in the study area we have recorded three bromelicolous species of anurans with similar in size (Van Sluys et al. 2004) to the individual ingested (20.3 mm SVL): *Scinax alter* (B. Lutz, 1973) (22.5-31.0 mm SVL), *S. cuspidatus* (A. Lutz, 1925) (21.4-25.0 mm SVL) and *S. tymbamirim* (Nunes et al., 2012) (20.6 mm – 31.2 mm SVL) – combined measurements of males and females, according Nunes et al. (2012). These three species are syntopic with *A. brunoi*, occurring in bromeliads in *Parque Nacional da Restinga de Jurubatiba*. Hence, it is likely that the frog ingested by *A. brunoi* belongs to one of these three species.

This is the first report of a vertebrate in the diet of *Aparasphenodon brunoi*. Anurophagy by anurans could

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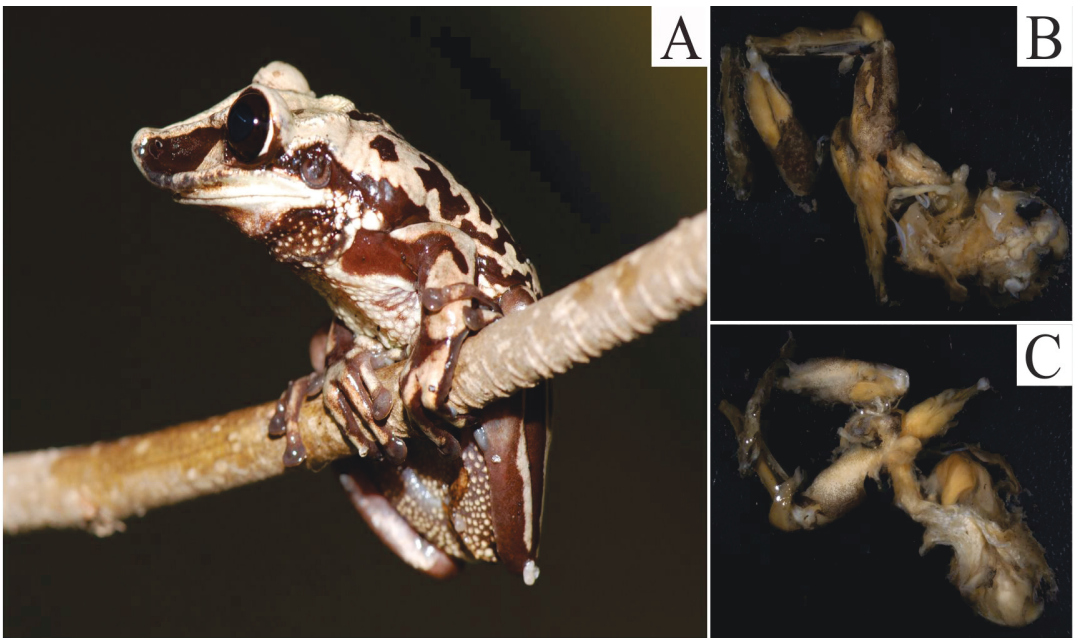

Figure 1. (A) Adult individual of *Aparasphenodon brunoi* captured in Parque Nacional da Restinga de Jurubatiba, Rio de Janeiro, Brasil; (B) Individual of *Scinax* sp. retrieved from the stomach of *A. brunoi* (dorsal view); (C) Individual of *Scinax* sp. retrieved from the stomach of *A. brunoi* (ventral view). Photo: M. Woitovicz-Cardoso (A) and L. F. F. Carmo (B, C).

be interpreted as opportunistic predation, favoured by three factors: body size, local anuran diversity and habitat (Toledo et al., 2007; Measey et al., 2015). The partitioning of habitat (i.e. bromeliads) by these species suggests that this event of anurophagy by *A. brunoi* is a case of opportunistic predation.

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