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Predation on *Scinax x-signatus* (Anura: Hylidae) by the giant water bug *Lethocerus annulipes* (Hemiptera: Belostomatidae) in a Brazilian Restinga habitat

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Abstract. We report in this paper the predation on *Scinax x-signatus* (Anura: Hylidae) by *Lethocerus annulipes* (Hemiptera: Belostomatidae), observed in a semi-permanent pond located at Restinga de Iquiparí, São João da Barra municipality, Rio de Janeiro state, Brazil. This is the first record of predation by *L. annulipes* on *Scinax x-signatus*; nevertheless, we suggest that interactions between Giant Water Bugs and other anuran species could be pretty common when they are found at the same environment.

Keywords. Predation, *Scinax x-signatus*, *Lethocerus annulipes*, Amphibia, Brazilian Restinga habitat.

Predation risk is considered by many authors as a big cost related to reproduction in anuran amphibians, where breeding strategies exposes these animals to potential predators (Pough et al., 1992; Toledo, 2003; Toledo, 2005). Amphibians perform an important role on trophic chains, being preyed by vertebrates (e.g. fishes, amphibians, reptiles, mammals and birds), invertebrates (e.g. insects, spiders and crabs) and carnivorous plants (Duellman and Trueb, 1994).

The Giant Water Bug *Lethocerus annulipes* (Herrich-Schäffer, 1846) is distributed on Central and South America, since Mexico until Uruguay. It occurs in the Brazilian states of Mato Grosso, Minas Gerais, Goiás, São Paulo, Rio de Janeiro, Santa Catarina and Rio Grande do Sul (Ribeiro, 2005). Bugs on this genus are aquatic, carnivorous and widely distributed around the world (China, 1955; Lauck and Menke, 1961), being characterized by medium-large size (since 55 mm to more than 85 mm) and just one claw on the tarsus of the first pair of legs (Ribeiro, 2005). Water bugs are cited by many authors as predators of larval and adult frogs (e.g. Martins et al., 1993; Eterovick and Sazima, 2000; Toledo, 2003; Toledo, 2005), acting on the regulation of anuran communities through predation (Duellman and Trueb, 1994).

The hylid *Scinax x-signatus* (Spix, 1824) is widely distributed on South America, occurring in Arauca, Meta and North Santander, Colombia, and in Venezuela, Guyana, Suriname, and eastern, southern and southeastern Brazil (Rodrigues et al., 2004). It inhabits tropical savannahs, as well as forest edges and open areas, being found calling on the vegetation nearby or above permanent, semi-permanent and temporary waterbodies (Izeckson and Carvalho-e-Silva, 2001; Rodrigues et al., 2004). Although occurring in abundance along its distribution area, we are unaware of any record of predation on *Scinax x-signatus*.

On 19 December 2009, at 23:26 h, we observed an adult female of *Lethocerus annulipes* (66 mm total length) feeding on an adult male of *Scinax x-signatus* (SVL= 35 mm), on the margins of a semi-permanent pond located at Restinga de Iquiparí (21°44'09" S, 41°01'45" W; at sea level), within the municipality of São João da Barra, Rio de Janeiro state, Brazil. The frog found was already dead with the Giant Water Bug biting its left side right behind its head (Figure 1). Predator and prey were collected and are deposited in the collections DZRJ (Professor José Alfredo Pinheiro Dutra, Departamento de Zoologia, Universidade Federal do Rio de Janeiro, Brazil), and MNRJ (Museu Nacional, Rio de Janeiro, Brazil), vouchers: DZRJ 2735 (*L. annulipes*) and MNRJ 63510 (*S. x-signatus*).

Although this is the first record of predation by *L. annulipes* on *S. x-signatus*, we suggest that such interaction could be common when they are found at the

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Figure 1. Predation on *Scinax x-signatus* by *Lethocerus annulipes* observed at Restinga de Iquiparí, São João da Barra municipality, Rio de Janeiro state, Brazil. Photo by C. A. Figueiredo-de-Andrade.

same environment, such as permanent, semi-permanent or temporary ponds. Giant Water Bugs are very abundant on the ponds of Restinga de Iquiparí, and probably act regulating some anuran populations (mainly during breeding seasons, when these animals are found inside waterbodies, where its reproduction takes place). We suppose that syntopic small and medium-sized anuran species could be potential preys of Giant Water Bugs at Restinga de Iquiparí, as other species on the genera *Dendropsophus* (Fitzinger, 1843) and *Scinax* (Wagler, 1830), that are pretty abundant on the study area, and use ponds for reproduction.

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