

SHORT COMMUNICATION

## *Chironius fuscus* (Serpentes: Colubridae): Predation over anurans in explosive reproduction

### *Chironius fuscus* (Serpentes: Colubridae): predação sobre anuros em reprodução explosiva

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#### Abstract

Anurans compose an important part of the diet of several species of Neotropical snakes. Here we report a predator-prey interaction involving *Chironius fuscus* and *Oloolygon argyreornata*. A young individual of *C. fuscus* preyed three specimens of *O. argyreornata*, in soil, while occurred explosive reproduction of frogs. This contribution reinforces ecological data that *C. fuscus* forages mainly on the ground. We believe that this interaction can occur with relative frequency and that eventually arboreal frogs can compose important sample in *C. fuscus*' diet, which is based on terrestrial amphibians.

**Keywords:** anurophagy, Colubrinae, diet, feeding habits.

#### Resumo

Os anuros compõem uma parcela importante da dieta de diversas espécies de serpentes neotropicais. Neste trabalho, relatamos uma interação de predador-presa envolvendo *Chironius fuscus* e *Oloolygon argyreornata*. Um indivíduo jovem de *C. fuscus* apressou três espécimes de *O. argyreornata*, no solo, enquanto ocorria reprodução explosiva dos anuros. Essa contribuição reforça os dados ecológicos de que *C. fuscus* forrageia, principalmente, no chão. Acreditamos que essa interação possa ocorrer com relativa frequência e que, eventualmente, os anuros arborícolas possam compor importante amostra na dieta de *C. fuscus*, a qual é baseada em anfíbios terrestres.

**Palavras-chave:** anurofagia, Colubrinae, dieta, hábitos alimentares.

*Chironius fuscus* (LINNAEUS, 1758) presents a disjunct geographical distribution, occurring in Brazil, Bolivia, Colombia, Equator, French Guyana, Guyana, Surinam and Venezuela. In the Atlantic Forest of Brazil, it is distributed from Pernambuco to Santa Catarina, being relatively common in some places (Hoogmoed, 1982; Dixon *et al.*, 1993; Pontes *et al.*, 2009; Souza-Filho *et al.*, 2012).

Its activity is predominantly diurnal, although nocturnal foraging has been recorded (Hartmann, 2005). Although foraging events in aquatic and arboreal environments have already been reported (Marques *et al.*, 2001; Pontes *et al.*, 2009), *C. fuscus* is a typical ground forager species (Rodrigues, 2007). When compared to its congeners, *C. fuscus* presents a relatively small and slender body, feeding mainly on terrestrial amphibians of the family Leptodactylidae, even though there are also records of predation in Hylidae (Dixon *et al.*, 1993; Morato, 2005; Rodrigues, 2007).

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**Figure 1.** Specimens of *Ololygon argyreornata*, observed during the explosive reproduction event.

On 12 February 2016, at 08h15, 29°C, we recorded an explosive reproduction behavior in *Ololygon argyreornata* (MIRANDA-RIBEIRO, 1926) (Figure 1) at a flooded clearing in the Dacnis Project Lowland Atlantic Forest (23° 27.945'S - 45° 8.485'O), Ubatuba, São Paulo, Brazil. We observed a number close to 200 specimens dispersed in the leaf litter and adjacent vegetation up to 170 cm above the ground. In this occasion, we located a specimen of *C. fuscus* (total length = 360mm), preying upon a specimen of *O. argyreornata* (Figure 2), with the ingestion starting from the anterior portion of the body, without constriction. Afterwards, it proceeded to ingest other two individuals with the same manner and fleeing from the observers. Considering that, during the event, the prey availability was high and the individuals were agglomerated, the snake dislocation between the predatory acts was relatively short, and the three anurans were captured and ingested within less than five minutes. The predation events occurred on the edge of the flooded area and all preyed specimens of *O. argyreornatus* were 30 cm above the ground, over the herbaceous vegetation.

The predatory activity reported herein reinforces the ecological data for ground foraging (Rodrigues, 2007), since even though there were available preys over the water and in higher vegetation strata, the three predated individuals were on the margin of the flooded area, next to the ground.

The multiple sequential predations of *C. fuscus* over individuals of *O. argyreornata* are tentatively assigned as an opportunist action, which lead us to highlight the importance of a careful evaluation of foraging substrate based on stomach content. The presence of arboreal anurans in the digestive tract of *C. fuscus* could indicate a significant arboreal foraging, which is herein reported as a false hypothesis based on empirical observations.

Although *C. fuscus* also preys on hylid frogs, this is the first time that a prey-predator interaction is recorded be-



**Figure 2.** A specimen of *Chironius fuscus* capturing (A) and swallowing (B) an individual of *Ololygon argyreornata*.

tween *C. fuscus* and *O. argyreornata*. The explosive reproduction pattern of *O. argyreornata*, with a massive number of individuals conglomerated during daylight, seems to propitiate optimal foraging conditions to *C. fuscus*. Therefore, we believe that this interaction could be common, and arboreal amphibians could constitute an important element in the diet of ground foraging species, especially during explosive breeding events.

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