

First record of predation on *Cyclodontina maranguapensis* (Baker, 1913) (Mollusca: Odontostomidae) by the cloudy snail-eating *Sibon nebulatus* (Linnaeus, 1758) (Squamata: Dipsadidae) in Northeast Brazil
Primeiro registro de predação em *Cyclodontina maranguapensis* (Baker, 1913) (Mollusca: Odontostomidae) pela comedora-de-caracol *Sibon nebulatus* (Linnaeus, 1758) (Squamata: Dipsadidae) no Nordeste do Brasil

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Abstract: *Sibon nebulatus* (Linnaeus, 1758) is a neotropical arboreal and nocturnal snake species found in a variety of habitats. It is classified as a 'goo-eater' species, preying primarily on mollusks. In this study, we document the first record of *S. nebulatus* preying on the pulmonated snail *Cyclodontina maranguapensis* (Baker, 1913). The observation occurred during field work in the municipality of Aratuba, located in the Baturité Massif region, state of Ceará, Brazil.

Keywords: Diet. Dipsadidae. Mollusks. Prey.

Resumo: *Sibon nebulatus* (Linnaeus, 1758) é uma espécie de serpente neotropical arbórea e noturna, encontrada em uma variedade de habitats. É classificada como uma espécie 'comedora-de-lesmas', alimentando-se principalmente de moluscos. Neste estudo, documentamos o primeiro registro de *S. nebulatus* predando o caracol pulmonado *Cyclodontina maranguapensis* (Baker, 1913). A observação ocorreu durante trabalhos de campo no município de Aratuba, localizado na região do Maciço de Baturité, estado do Ceará, Brasil.

Palavras-chave: Dieta. Dipsadidae. Moluscos. Presa.

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Sibon nebulatus (Linnaeus, 1758) is a nocturnal and mostly arboreal snake, of moderate size, with a maximum known snout-vent length of approximately 779 mm and 1,013 total length (Frazier et al., 2006). Within the genus, this species is one of the least studied and has the widest distribution, in southern Mexico, Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Isla Margarita, French Guiana, Ecuador, and Trinidad and Tobago (Hidalgo, 1981; Campbell, 1998; Gorzula & Señaris, 1998; Jansen & Koehler, 2002; Claessen, 2003; Köhler, 2008; Ugueto & Rivas, 2010; McCranie, 2011; Lewis et al., 2013; Arias & Bolaños, 2014; Sunyer, 2014; Acuña-Vargas, 2016; Wallach et al., 2014; Badillo-Saldaña et al., 2018; Fuentes Magallón et al., 2023; Uetz & Hosek, 2023). In Brazil, known from eastern Amazonia and marginal upland areas of the Caatinga, mostly at low elevations (Nogueira et al., 2019). It is part of the Dipsadini tribe, whose main characteristics are specialization in diet and morphological changes related to arboreal habits (Peters, 1960). However, the group has already been registered in different habitats, presenting fossorial, terrestrial, arboreal, cryptozoic, and aquatic species (Cadle & Greene, 1993).

Although it's known that *Sibon nebulatus* is one of the 'goo-eaters' dipsadids (and therefore preying mainly on mollusks), there are gaps in the knowledge about its trophic ecology. However, other representatives of this genus already have their diets reported in the literature, such as *Sibon carri* (Shreve, 1951) feeding on earthworms in captivity (Lewis et al., 2013), *Sibon longifrenis* (Stejneger, 1909) feeding on the eggs of the treefrog *Cochranella albomaculata* (Montgomery et al., 2007) and *Sibon argus* (Cope, 1875) feeding on the eggs of the hylid *Agalychnis callidryas* (Ray et al., 2011). When reviewing the literature, only one observation was found about the *S. nebulatus* diet, where it consumed a Veronicellidae slug in Colombia (Rojas-Morales et al., 2021) and Ryan and Lips (2004) suggested that it may feed on eggs of the treefrog *Agalychnis callidryas*.

Here, we report the first predation record of *Cyclodontina maranguapensis* (Baker, 1913), by

S. nebulatus. This mollusk belongs to the Odontostomidae family and is endemic to the highland swamps of Ceará, has an arboreal habitat, and is quite unusual to be found (Rios, 1994). The record took place during a fieldwork on March 15, 2022, at 8 pm, at Sítio Covico (04° 24' 02.02" S; 39° 00' 58.4" W), in the municipality of Aratuba, located in the Maciço de Baturité, state of Ceará, Brazil. The individual of *C. maranguapensis* is 15.29 mm long and 6.62 mm wide, while that of *S. nebulatus* is an adult male with a snout-vent length of 432.93 mm, tail length 140.14 mm and was under the ground with the snail *C. maranguapensis* in its mouth moments before capture (Figure 1). Swallowing was completed after the capture and later both specimens were deposited in scientific collections: the snake in the *Coleção Herpetológica* (CHUFC-4533) and the gastropod in the *Coleção Malacológica Professor Henry Ramos Matthews* (CMPHRM 6944B) both affiliated with the *Universidade Federal do Ceará*.

This is the first reported occurrence of predation on *C. maranguapensis* by *S. nebulatus*, and adds one more food item to the diet of this widely distributed snake with little information about its biology. Our data contribute to a more comprehensive understanding of the feeding habits of *S. nebulatus*.



Figure 1. Predation of *Cyclodontina maranguapensis* by *Sibon nebulatus* in Northeast Brazil. Photo: R. W. Ávila (2022).

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AUTHORS' CONTRIBUTION

T. F. Quirino contributed to investigation, visualization, writing and review (original draft); I. M. Neumam contributed to investigation, visualization and writing (original draft); A. R. Sousa contributed to investigation and methodology; and S. D. O. Paula contributed to investigation and conceptualization.

