

Micrurus ibiboboca (Merrem, 1820) feeding behavior - regurgitant ingestion

Comportamento alimentar de *Micrurus ibiboboca* (Merrem, 1828) – Ingestão de regurgito

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Resumo O registro de *Amphisbaena vermicularis* na dieta de *Micrurus ibiboboca* já é conhecido em trabalhos com conteúdo estomacal, mas não há registro de comportamento alimentar com uma presa já regurgitada, sendo este o primeiro.

Palavras-chave: Elapidae, cobra-coral, regurgito

Abstract The record of *Amphisbaena vermicularis* on the diet of *Micrurus ibiboboca* its already known in works with stomach contents, but there's no record of any feeding behavior with an already regurgitated prey, being these the first one.

Keywords: Elapidae, coral-snake, regurgitant

Snakes from Elapidae family, in Brazil, are divided in two genus: *Micrurus* and *Leptomicrurus*, mostly known as coral snakes. They are medium sized snakes measuring up to for 1,5 m, proteroglyph dentition and normally with colorful rings surrounding their body (BERNARDE, 2014), with terrestrial and semi fossorial habits (SILVA JR et al., 2016). Coral snakes can be found active during daylight periods and at twilight (FRAGA et al., 2013). Currently, 33 species of coral snakes are recorded in Brazil, representing 45% of the venomous snakes of the local

fauna (COSTA; BÉRNILS, 2018; SILVA JR et al., 2016). These animals are active foragers and predators of amphibians, lizards and elongated vertebrates, like snakes and amphisbaenas (MARQUES, 1992; SILVEIRA JR et al., 2016). Records of predation on *Amphisbaena fuliginosa* by *Micrurus ancoralis* (CISNEROS-HEREDIA, 2005), *Amphisbaena ibijara* by *Micrurus ibiboboca* (GOMES et al., 2005), *Amphisbaena vermicularis* by *M. ibiboboca* (LISBOA; FREIRE, 2010; MESQUITA et al., 2013) are already known.

In Brazil, 75 species of Amphisbaenas can be found, known as “two headed snakes” (BERNARDE, 2014; COSTA; BÉRNILS, 2018) due to it ability of translocation forward and backward (NAVEGA-GONÇALVES, 2004) and similarity of head and tail (MATEUS et al., 2011).

Amphisbaenas are limbless, fossorial animals, highly specialized, they can build tunnels compressing the soil underground with the movement of the head (GANS, 1968) and distributed in six families, being Amphisbaenidae most diversified (GANS, 2005). Having a wide geographical distribution, living in many different biomes (VIDAL et al., 2008) measuring up to 40 cm length (SANTOS et al., 2017).

The *Amphisbaena vermicularis* WAGLER,

1824, have a wide distribution in Brazil (Amazonas, Mato Grosso, Pará, Goiás, Maranhão, Minas Gerais, Bahia, Pernambuco, Ceará, Rio Grande do Norte e Piauí) and Bolivia (UÉTZ, 2018).

Micrurus ibiboboca (MERREM, 1820) is an endemic specie from Brazil with a wide distribution in the northeast region, but also recorded for some southeast states, exception of Espírito Santo (SILVA JR et al., 2016). These animals can be found in open, urban and forested areas (FRANÇA et al., 2012; SILVA JR et al., 2016). Studies recorded the presence of four individuals of *A. vermicularis* inside the stomachs of four *M. ibiboboca*, (MESQUITA et al., 2013), it may suggests that's important item.

We know that snakes can feed on dead prey and also capable of regurgitate in situation of stress (CAMPBELL, 1973; CAMPAGNER, 2011; LUNGHI et al., 2015), but that's the first record of a snake feeding on an already regurgitated prey.

On July 03, 2015 (16:30), a female *M. ibiboboca* was found and captured at Universidade Federal Rural de Pernambuco (8°00'51.86"S,

34°57'02.14"O), then conditioned in a restraint box for measure taking and folidoses in the future. At 1:44 h from July 04, 2015, before taking the mofometric measure taking, the animal regurgitated an individual of *A. vermicularis* inside the box (Figure 1A). The whole process took four minutes and 47 seconds. Because of the stress caused by the regurgitating, the researchers preferred to leave the animal to rest for the remaining of the day. At 05:33 h of the same day the snake swallowed the dead prey again, and the animal was maintained for observation, but at the dawn of July 05, the snake once again regurgitated the *A. vermicularis* (Figure 1B). Both ingestion were started by the head which is an already recorded behavior (SILVA JR et al., 2016). The snake measured SVL = 280 mm, Tail length = 15.0 mm and 8 g. The amphisbaena's head was partially digested but it measured SVL = 220.0 mm, Tail length = 20.0 mm and 4,2 g. Both deposited in the herpetological collection of Universidade Federal Rural de Pernambuco (CHP-UFRPE: *A. vermicularis*- 5085; *M. ibiboboca*- 5017)



Figura 1. Regurgitation and ingestion of *Amphisbaena vermicularis* by *Micrurus ibiboboca*. **A-** *Micrurus ibiboboca* and *Amphisbaena vermicularis* after the first regurgitating process. **B-** *Amphisbaena vermicularis* after the second regurgitating process.

Hudson (2007) relates an event where an anaconda (*Eunectes murinus*) regurgitated a prey after being captured an suggests that kind of action make the snake lighter and faster to escape or defend yourself, corroborating with Leyva et al. (2015) affirming the period of the digestion make snakes more

vulnerable leading to them regurgitation. As the handling after feeding may cause stress and then regurgitation (CAMPAGNER, 2011; LUNGHI et al., 2015).

Following that logic, here we suggest the snake in the present work regurgitated to have an easier way to get out of box and the stress caused

after handling could also influenced the regurgitation, that may probably be the factor that led to the another attempt of feeding on the regurgitated prey. There's no record of that kind of behavior. We hope the present work became useful to make comparison in more studies of diet and feeding of *Micrurus ibiboboca* or any species in the future.

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