

## Fist record of ophiophagy in the false coral snake *Oxyrhopus trigeminus* Duméril, Bibron & Duméril, 1854

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Recibida: 11 Noviembre 2019

Revisada: 11 Diciembre 2019

Aceptada: 09 Enero 2020

Editor Asociado: J. Goldberg

doi: 10.31017/CdH.2020.(2019-045)

### ABSTRACT

The false coral *Oxyrhopus trigeminus* is a very common snake in Northeastern Brazil. The diet of *O. trigeminus* includes mainly lizards, although the consumption of small mammals and birds has been recorded in other studies. Ophiophagy had previously not been reported for the false coral snake. This event occurred during a wildlife rescue operation. Upon capture and translocation of an adult individual of this species, the snake regurgitated an individual of the vine snake *Oxybelis aeneus*.

Key Words: Diet; Feeding behavior; Predation; Brazilian semiarid.

*Oxyrhopus trigeminus* Duméril, Bibron & Duméril, 1854 (false coral snake) is a terrestrial and nocturnal small-sized snake that belongs to the family Dip-sadidae. The species is widely distributed in South America, being recorded in Bolivia, Peru, and Brazil (Uetz *et al.*, 2019). In Northeastern Brazil, the false coral snake occurs commonly in the Caatinga domains (Guedes *et al.*, 2014). It presents a diet composed of lizards (Coelho *et al.*, 2019), mammals (Vitt and Vangilder, 1983), and birds (Alencar *et al.*, 2012), with no snakes recorded as part of its diet until now. This study documents the first case of ophiophagy for *O. trigeminus*.

The event was observed in Pindaí municipality (-14.441011; -42.653648, WGS 84; 730 m a.s.l.), Bahia State, Northeastern Brazil. On 14 June 2019 at 15:11 h, an adult individual of *O. trigeminus* was found in a burrow during a wildlife rescue operation (Fig. 1A). Upon translocation, the snake regurgitated a specimen of *Oxybelis aeneus* (Wagler, 1824) (brown vine snake) which was swallowed by the head (Fig. 1C). Upon regurgitation, the snake ran away without complications.

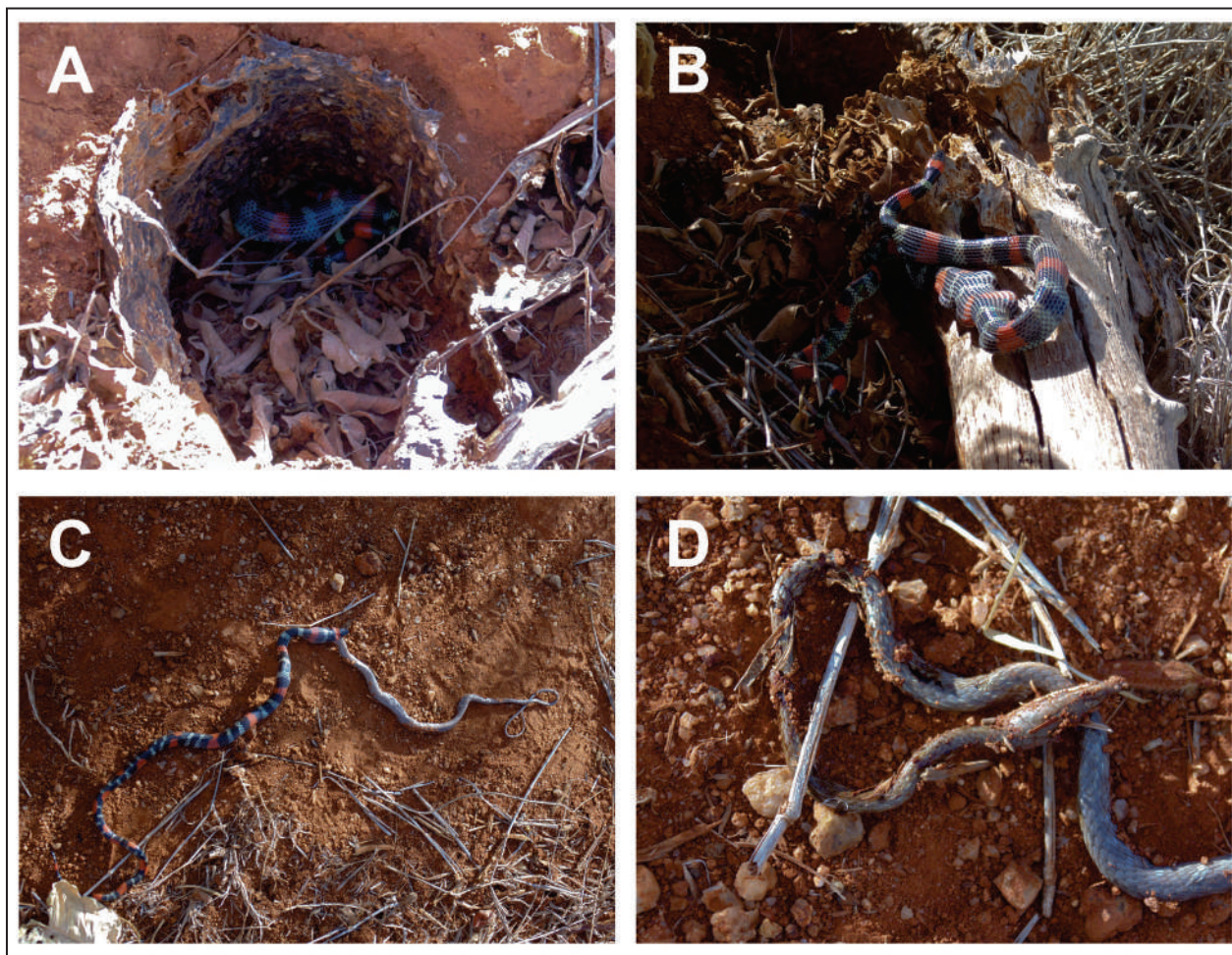
After eating, a snake gets heavier, slower and consequently became easy prey for potential predators (Garland and Arnold, 1983). In order to avoid predation and be safe during the food digestion, the snakes usually look for microenvironments for hiding, such as the burrow where the false coral was found. Probably, when the snake was captured and

felt threatened, the regurgitation became a viable option to reduce the weight and increase the agility to escape.

The ophiophagy is known for several other species, including some dipsadids (Pinto and Lema, 2002; Coelho-Lima *et al.*, 2019). Even small-sized individuals can feed off longer or equal-sized snakes by forcing their prey's spine to bend in waves (Fig. 1B), and consequently shortening their body axis to fit in their digestive tracts (Jackson *et al.*, 2004). However, this behavior is poorly recorded for the genus *Oxyrhopus* (see Solórzano, 2004 for a record of a dipsadid snake that composed a diet item of *Oxyrhopus petolarius*).

*Oxybelis aeneus* is a diurnal and mid-sized snake, widely distributed from the United States to Argentina (Uetz *et al.*, 2019). This snake was recorded as a food item of *Philodryas nattereri* Steindachner, 1870, another terrestrial and generalist snake commonly found in the Brazilian Caatinga (Mesquita *et al.*, 2009). Despite *O. aeneus* has mainly arboreal habits (Mesquita *et al.*, 2012), this species, eventually, can use the ground, which may facilitate the predation.

In a study conducted by Coelho *et al.* (2019), the diet of *O. trigeminus* was 96 % composed of lizards in the Caatinga domain, however, when comparing their results with studies in the Atlantic Forest and Cerrado domains at Brazil, the most important dietary items varied according to the geographical



**Figure 1.** Predation of *Oxybelis aeneus* by *Oxyrhopus trigeminus* in Pindaí municipality, State of Bahia, Brazilian Northeast. A) *Oxyrhopus trigeminus* found in a burrow. B) Lateral and dorsal view of the predator with the digestive tract with food content. C) *Oxyrhopus trigeminus* regurgitating a specimen of *Oxybelis aeneus*. D) Regurgitated prey.

localization. The diversity of food items (lizards, mammals, and birds) commonly consumed by *O. trigeminus*, the variation in their most important dietary items according to geographical location (Coelho *et al.*, 2019), and this first reported record of ophiophagy reinforce the generalist diet pattern of the false coral snake.

### Acknowledgements

We thank the Eólicas Pindaí company for allowing the use of the data presented on this note, to Jackson Ministro for helping in the edition of the figures, to Dr. Daniel Passos for the valuable contribution in our work, and to the anonymous reviewer for the important suggestions in our manuscript.

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