



Defensive Behavior in a Villavicencio Coralsnake, *Micrurus medemi* Roze 1967 (Squamata: Elapidae), in Colombia

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Aposematic signals, which serve as warnings or deterrents against predators (Brodie et al. 1991), can be visual, chemical, acoustic, or even involve interactions between color patterns and corporal movements (Rowe and Halpin 2013; Dalziell and Welbergen 2016). Snakes employ various anti-predatory mechanisms that seek to avoid detection and injury or even signal death to a predator (Green 1988). However, knowledge of anti-predator mechanisms in many snake species is scarce (Lopes de Assis et al. 2020).

Coralsnakes of the genus *Micrurus* are venomous snakes that signal their toxicity through aposematic coloration patterns and behaviors that include mock-striking displays (DuVal et al. 2006; Serafin and Duarte 2008; Rodrigues França et al. 2016). Coralsnakes also employ a form of self mimicry during which a snake hides its head under its body while elevating its tail to mimic the head (Green 1973, 1979;

Jackson 1979), with both head and tail displaying similar colors to deceive predators (Jowers et al. 2019). This behavior, called the “protean effect” by Gelbach (1972), is evident in both American and Asian coralsnakes (R.M. Brown et al. 2013) and is copied by non-venomous snakes that mimic the coloration and behavior of coralsnakes, suggesting that this tactic is effective at evading predation (Moore et al. 2020). Self-mimicry has been reported in *Micrurus diastema* (T.W. Brown et al. 2020), *Micrurus frontalis*, *Micrurus lemniscatus*, *Erythrolamprus aesculapii*, *Simophis rhinostoma* (Sazima and Abe 1991), and *Xenodon dorbignyi* (Tozzetti et al. 2009).

At 1400 h on 18 June 2021, we encountered a Villavicencio Coralsnake (*Micrurus medemi*) in the farming settlement of Chirajara Baja, Guayabetal Municipality, Cundinamarca, Colombia. When we disturbed the snake, it coiled its body, hid its head in vegetation, and coiled and

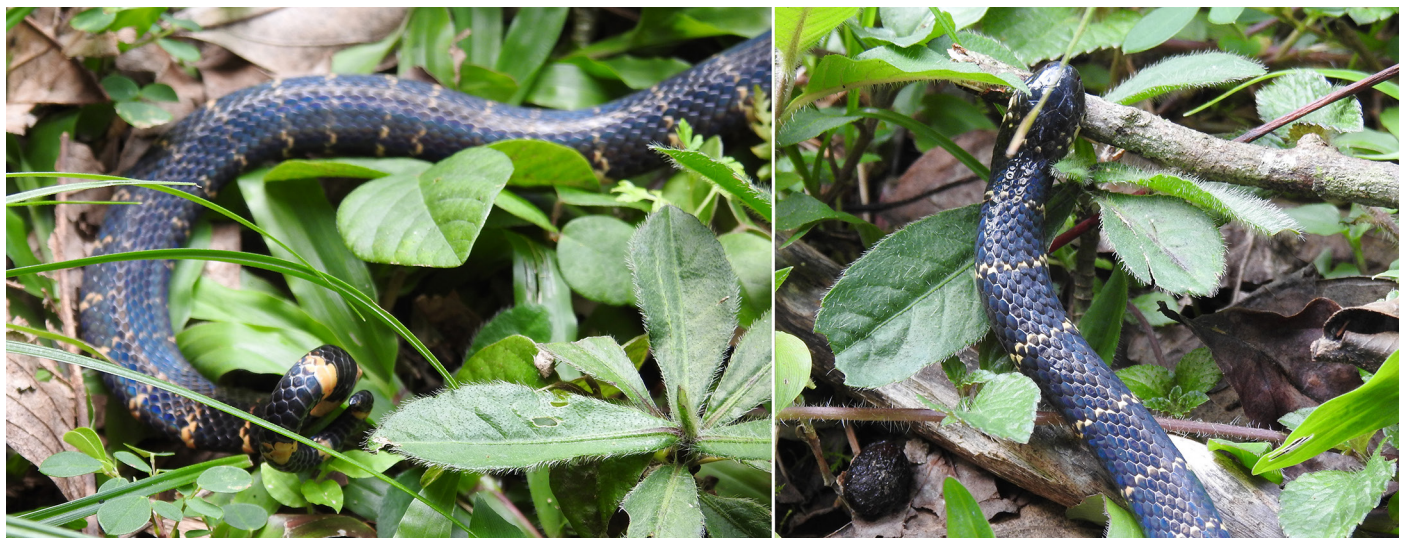


Fig. 1. A Villavicencio Coralsnake (*Micrurus medemi*) in the village of Chirajara Baja, Municipality of Guayabetal, Cundinamarca, Colombia, curling its tail (left) and holding its head and body immobile while exposing the tail (right). Photographs by Didier Mancera-García.

waved its tail while otherwise remaining motionless (Fig. 1). After about 2 min, when the snake no longer felt threatened, it stopped waving its tail and proceeded to move away from us. However, when we once again approached the snake, it repeated the self-mimicking behavior. After taking photographs, we relocated the snake to a wooded area, away from humans. The identity of the snake was corroborated from photographs by Dr. Santiago Ayerbe.

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