FIRST RECORD OF PREDATION OF *MICRURUS MIPARTITUS* (SERPENTES: ELAPIDAE) ON *OSCAECILIA POLYZONA* (GYMNOPHIONA: CAECILIIDAE) IN COLOMBIA

PRIMER REGISTRO DE DEPREDACIÓN DE *MICRURUS MIPARTITUS* (SERPENTES: ELAPIDAE) EN *OSCAECILIA POLYZONA* (GYMNOPHIONA: CAECILIIDAE) EN COLOMBIA

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Resumen.— Las cecilias y las serpientes de coral son animales evasivos que rara vez se encuentran durante el trabajo de campo de un herpetólogo. Es bien sabido que estas serpientes se alimentan de otros vertebrados vermiformes como las lagartijas amphisbaenidas, cecilias y otras serpientes que pueden o no, ser de su misma especie. Por el contrario, las cecilias presentan un mayor vacío de información sobre su dieta y demás aspectos de historia natural ya que sus hábitos fosoriales impiden acceder a esta información. Reportamos el primer registro de *Micrurus mipartitus* depredando a *Oscaecilia polyzona*, uno de los caeciliidos menos conocidos del país, esto en base a una fotografía tomada en Cimitarra, Santander, Colombia. Esta foto nos permite incluir a *O. polyzona* dentro de la dieta de *M. mipartitus*.

Palabras clave.— Cecilias, Comportamiento, Dieta, Elápidos, Historia Natural, Serpientes de Coral.

Abstract.— Caecilians and coral snakes are evasive animals that are rarely encountered by herpetologists during their fieldwork. Coral snakes are well known to prey on other vermiform vertebrates such as amphisbaenid lizards, caecilians and other snakes which may or may not be conspecific to them. On the contrary, the information void regarding caecilian diet composition is even greater because their fossorial habits keep their natural history a secret. We here provide the first register of *Micrurus mipartitus* feeding on *Oscaecilia polyzona*, one of the least known caeciliids in the country, based on a photograph taken in Cimitarra municipality, Santander department, Colombia. This photograph allows us to claim *O. polyzona* as a new prey item in the diet of *M. mipartitus*.

Keywords.— Behavior, Caecilians, Coral snakes, Diet, Elapids, Natural history.

Oscaecilia polyzona (Fischer, 1880) is among Colombia's least known caeciliids. This species inhabits the Magdalena Valley lowlands with records in Antioquia, Caldas, Cesar, Córdoba, Cundinamarca, Tolima, and Santander departments, ranging from 150-810 m.a.s.l. (Lynch, 2000). This species can be diagnosed from the other sympatric Gymnophiona of the Magdalena Valley chiefly because its eyes are concealed under bone (Taylor, 1968), and by its range of 192-217 primary grooves, 12-42 secondary grooves, length/width 43-69 times and its mainly pink/purple coloration in life (Lynch, 2000; Lynch & Acosta, 2004). Although Lynch and Acosta (2004) considered it to be abundant in La Dorada municipality, Caldas department, the species has not been so regularly encountered elsewhere and the newest records are casual and isolated. This is most likely linked to the secretive fossorial life of most caecilians, which makes finding these animals a very challenging endeavor. Not surprisingly most natural history aspects (i.e., reproduction, diet, behavior and habitat preferences) remain largely unknown for most caecilian species.

Micrurus mipartitus (Duméril, Bibron & Duméril, 1854) is a widely distributed venomous snake found in Brazil (Rondônia), Colombia, Costa Rica (southeast), Ecuador, Panama and Venezuela (west) (Uetz et al., 2021). In Colombia, it inhabits

Figura 1. *Micrurus mipartitus* depredando a *Oscaecilia polyzona* en la localidad de Campo Opon, vereda La Verde, municipio de Cimitarra, departamento de Santander, Colombia. Nótese que la coral se comió a la cecilia desde la cabeza. Fotografía de Julio César Martínez Ortega.

Figure 1. *Micrurus mipartitus* preying on *Oscaecilia polyzona* in Campo Opon locality, vereda La Verde, Cimitarra municipality, Santander department, Colombia. Notice the coral snake ate the caecilian head-first. Photograph by Julio Cesar Martinez Ortega.

the Magdalena and Cauca Valley lowlands, but also the Pacific and Caribbean plains, and the Orinoquía region, ranging from 0-2700 m.a.s.l. (Rios-Soto et al., 2018). This species has a particular coloration pattern that consists of a main black body with 45-84 complete white or yellow bands and with a bright red-orange parietal ring on the head and 2-5 red/orange bands on the tail; Its body is very slender and its total length ranges from 500-1406 mm (Vera et al., 2019); Ventral scales 254-284 in males and 279-326 in females, and subcaudal scales (usually divided) 26-35 in males and 23-31 in females (Campbell & Lamar 2004; Rodríguez-Guerra, 2019). Individuals with yellow bands occur in western Colombia and those with white ones in eastern Colombia (Ayerbe et al., 1990; Rios-Soto et al., 2018). Captive individuals of *M. mipartitus* are known to prey on *Caecilia occidentalis*, *Pholidobolus vertebralis*, *Atractus* gr. *iridescens*, *A. lehmanni*, *Dendrophidion vivittatus*, *Erythrolamprus epinephelus* and *Sibon nebulatus* (Vera-Pérez et al., 2019), whilst *A. manizalesensis* (Rodríguez-García & Díaz-Ayala, 2015) and *Bachia bicolor* (Vera-Pérez et al., 2019) are known to be preyed upon *in situ*.

This coral snake is known to prey on caecilians, as do most other *Micrurus* (Greene, 1973; 1984; Roze, 1996: 57; Marques & Sazima, 1997), but the identity of their prey is usually not confirmed, which is unfortunate. The use of the term 'caecilian' generates ambiguity, given that *Caecilia guntheri* Dunn, 1942, *C. pulchraserrana* Acosta-Galvis, Torres & Pulido-Santacruz, 2019, *C. subnigricans* Dunn, 1942, *C. thompsoni* Boulenger, 1902, *Microcaecilia nicefori* (Barbour, 1924), *M. pricei* (Dunn, 1944), *O. polyzona* and *Typhlonectes natans* (Fischer, 1880), are all found in the Magdalena Valley of Colombia. Moreover, not all species simply live underground, some are fully aquatic (e.g., *T. natans*), some live under leaf litter (e.g., *C. thompsoni*, *C. subnigricans* and *M. nicefori*) and some live within organic matter in soft, moist soils (*C. pulchraserrana* and *O. polyzona*).

In February 2020, amidst the dry season, Engineer Julio Cesar Martinez Ortega observed - unbeknownst to him - a coral snake feeding on a caecilian in Campo Opon (Fig. 1), vereda La Verde, Cimitarra municipality, Santander department, Colombia, (6.384361° N, 73.882753° W, 170 m a.s.l.; Fig. 2), during the evening hours (14:00-16:00 hrs). The engineer contacted us seeking an identification for the animals that he had photographed because he was (understandably) uncertain of what he had witnessed during his routine fieldwork (Fig. 1). The photograph clearly depicts a *M. mipartitus* coral snake feeding on a caecilian. The identity of the Amphibian would prove more challenging to establish, given that the total count of primary grooves was impossible to determine because the animal had already been eaten head-first and the first fifth of the total length was now inside the coral snake.

Figura 2. Mapa de Colombia mostrando la localidad del registro fotográfico (punto rojo) de *Micrurus mipartitus* alimentándose de *Oscaecilia polyzona* en la localidad de Campo Opon, vereda La Verde, municipio de Cimitarra, departamento de Santander, Colombia.

Figure 2. Map of Colombia showing the locality of the photographic register (red dot) of *Micrurus mipartitus* feeding on *Oscaecilia polyzona* in Campo Opon locality, vereda La Verde, Cimitarra municipality, Santander department, Colombia.

Aided by a HD television screen, we noted that the attacked caeciliid was *O. polyzona*, due to counts of secondary grooves (n = 20) and bright purple body coloration (as can be seen in Lynch & Acosta 2004: 588, Fig. 4 in there). This record constitutes the first predation case on *O. polyzona* by *M. mipartitus* and is one of the very few existing records on this genus of caecilians apart from that of Villacampa & Whitworth (2016) for *O. bassleri* and more recently that of Escalante & Amador (2020) for *O. osae*. Although there is still much left unknown about the biology and natural history of *O. polyzona*, registering the predators of the species enriches the current knowledge about its ecology, and allows us to affirm that both genera of the family Caeciliidae (i.e., *Caecilia* and *Oscaecilia*) suffer attacks primarily from snakes with fossorial habits. These predator-prey dynamics can be facilitated due to the fossorial lifestyle that brings both animals to the same environment.

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