ATTEMPTED PREDATION OF *PHYSALAEMUS ERIKAE* (ANURA, LEPTODACTYLIDAE) BY *XENOPHOLIS SCALARIS* (WUCHERER, 1861; COLUBRIDAE) IN SOUTHERN BAHIA, BRAZIL

INTENTO DE DEPREDACIÓN DE *PHYSALAEMUS ERIKAE* (ANURA, LEPTODACTYLIDAE) POR *XENOPHOLIS SCALARIS* (WUCHERER, 1861; COLUBRIDAE) EN EL SUR DE BAHIA, BRASIL

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Resumen.– Las interacciones entre depredadores y presas son componentes importantes para la estructuración de las comunidades terrestres. Los anuros se consideran el principal alimento de las serpientes. *Xenopholis scalaris* tiene una amplia distribución geográfica, ocupando la selva amazónica y la selva atlántica, viviendo en bosques primarios y secundarios en ambientes húmedos. Los anuros son uno de los principales alimentos que componen su dieta. Otros estudios han reportado intentos infructuosos de depredación de esta especie en ranas de la familia Leptodactylidae. La rana *Physalaemus erikae* es una especie endémica de la región sur del estado de Bahía, Brasil oriental, ocupando hábitats en el borde del bosque atlántico, claros y plantaciones de cacao (cabrucas). El caso del intento fallido de depredación de la especie involucrada en el evento aquí reportado puede deberse al tamaño del cuerpo de la presa y a la capacidad de ésta de presentar una alta resistencia durante la captura del depredador.

Palabras clave .– Anfibios, serpientes, depredación, selva atlántica.

Abstract.– Interactions between predator and prey are important components for the structuring of terrestrial communities. Anurans are considered the main food item for snakes. *Xenopholis scalaris* has a wide geographic distribution, occupying the Amazon Forest and Atlantic Forest, inhabiting primary and secondary forests in humid environments. Anurans are one of the main food items that make up its diet. Other studies have reported unsuccessful predation attempts of this species on frogs of the family Leptodactylidae. The frog *Physalaemus erikae* is an endemic species from the southern region of Bahia state, eastern Brazil, occupying habitats on the edge of the Atlantic Forest, clearings, and cocoa plantations (Cabrucas). The case of the unsuccessful attempt at predation on the species involved in the event described here may be due to the size of the prey and the prey's ability to strongly resist the predator's capture.

Keywords.– Amphibians, snakes, predation, atlantic rainforest.

Snakes and anurans are important in the trophic levels they occupy and are important components of terrestrials communities (Costa & Trevelin, 2020). Snakes are carnivorous animals that feed on a variety of prey, however, studies suggest that frogs are among the main food items of Atlantic Forest snakes (Ringler et al., 2010; Solé et al., 2010; Lenger et al., 2014;

Figura 1. Un individuo de *Xenopholis scalaris* que intenta cazar a un individuo de *Physalaemus erikae* en un bosque en el municipio de Ilhéus, estado de Bahía, Brasil.
Figure 1. An individual of *Xenopholis scalaris* trying to prey on an individual of *Physalaemus erikae* in a forest in the municipality of Ilhéus, state of Bahia, Brazil.

Paulo et al., 2018; Teles et al., 2018; Pasukonis & Loretto 2020; Costa & Trevelin, 2020). On the other hand, although frogs seem to be an easy prey to catch, they have a variety of defensive mechanisms (for example, swelling of the body, tanathosis, spine agression) and also chemical defense (secretion emission) (Wells, 2007; Paulo et al., 2018).

Consisting of three species, *Xenopholis scalaris* (Wucherer, 1861), *X. undulatus* (Jensen, 1900) and *X. werdingorum* (Jansen et al., 2009), the genus Xenopholis includes small snakes with cryptic habits (Powell et al., 2016). *Xenopholis scalaris* (Wucherer, 1861) has a wide distribution in the Amazon Forest, in Bolivia, Peru, Ecuador, Colombia and Brazil, in the states of Amazonas, Pará, Mato Grosso, Rondônia, with occurrences in the Atlantic Forest in the southern region of the state of Bahia, and in the states of Pernambuco, Alagoas, Rio de Janeiro and São Paulo. It inhabits primary and secondary forests in humid environments (Ringler et al., 2010, Vieira et al., 2012, Powell et al., 2016, França et al., 2019, Gomes et al., 2020) and shows an opisthoglyph dentition. This species is found mainly in the leaf litter on the ground (Ringler et al., 2010; Mendes et al., 2013) where it forages mainly during the night (Ringler et al., 2010). Anurans are the main food item of *X. scalaris* and predation events have been reported for anurans of the family Leptodactylidae (Vieira et al., 2012; Costa & Trevelin, 2020). Additionally, our observation is the first record of an attempted predation of a snake on the frog *Physalaemus erikae*.

Physalaemus erikae (Cruz & Pimenta, 2004) is an endemic species in the Southern region of Bahia, occupying habitats such as the edges of fragments of Atlantic Forest, clearings and cocoa plantations (cabrucas; Dias & Solé, 2012). This species has terrestrial habits with peak activity at night and is characterized by a moderate size and a robust body (Cruz & Pimenta, 2004; Dias & Solé, 2012).

On July 20, 2020, at 6:53 pm, at Fazenda Provisão located at Km 27 of the Ilhéus-Uruçuca Highway, in the municipality of Ilhéus, state of Bahia, Brazil, an individual of *X. scalaris* was registered in an area of cabruca (agroforest of cocoa) in an attempt to prey upon a *P. erikae* individual. The snake was already with the amphibian captured by the lateral region of the body. The amphibian was immobile and with its venter turned upwards (Fig. 1). However, after a few minutes (approximately 5 min), the amphibian managed to get loose, possibly influenced by our presence, which caused the snake to give up its capture.

Neither the amphibian nor the snake was collected, but the photographic record is evident and can contribute to a better understanding of *X. scalaris* capture strategies, as well as *P. erikae* defense strategies, as well as the food items that make up the diet of *X. scalaris*.

Teles et al. (2018) and Costa & Trevelin (2020) also reported unsuccessful predation attempts by *Xenopholis undulatus* on anuran species of the family Leptodactylidae. On the other hand, Ringler et al. (2010), reported a case of death of an individual of *X. scalaris* that preyed upon an individual of the venomous frog, *Allobates femoralis* (Dendrobatidae), that had a radio transmitter attached to its inguinal region.

Unsuccessful predation events between snakes and anurans can be related to the relative sizes of predator and prey, secretions on the skin of the frogs, and physical resistance by the prey (Costa & Trevelin, 2020). The unsuccessful predation reported herein of *X. scalaris* on *P. erikae* may be due to a combination of a large prey size in relation to the snake size and the ability of the frog to resist the predation attempt, resulting in it being difficult to ingest. In addition to being a rare field observation, this observation is an evidence of a failed predation attempt.

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