

PREDATION OF THE CHOCOAN ROBBER FROG, *STRABOMANTIS ANOMALUS* (CRAUGASTORIDAE), BY THE CAT-EYED SNAKE, *LEPTODEIRA ORNATA* (DIPSADIDAE)

DEPREDACIÓN DE LA RANA LADRONA DEL CHOCÓ, *STRABOMANTIS ANOMALUS* (CRAUGASTORIDAE), POR LA SERPIENTE OJIGATA, *LEPTODEIRA ORNATA* (DIPSADIDAE) EN EL CHOCÓ COLOMBIANO

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Received: 2025-05-22. Accepted: 2025-12-20. Published: 2026-03-10.

Editor: Teddy Angarita Sierra, Colombia.

Resumen.— *Strabomantis anomalus* es una rana asociada a quebradas, que se distribuye en la costa Pacífica de Colombia y Ecuador. El conocimiento actual de la historia natural de esta especie es escaso, y no se sabe nada sobre sus depredadores. *Leptodeira ornata* es una especie de serpiente ampliamente distribuida, que se extiende desde las regiones del Pacífico y los Andes de Colombia hasta Ecuador. Su dieta se compone principalmente de anfibios y sus huevos. De esta forma, aquí reportamos el primer evento de depredación sobre *Strabomantis anomalus* por una *Leptodeira ornata*.

Palabras clave.— Chocó biogeográfico, historia natural, primer registro, Terrarana.

Abstract.— *Strabomantis anomalus* is a stream-associated frog, distributed along the Pacific coast of Colombia and Ecuador. The current knowledge of the natural history of this species is scarce, and nothing is known about this species' predators. *Leptodeira ornata* is a widely distributed snake species, ranging from the Pacific and Andean regions of Colombia to Ecuador. Its diet consists mainly of amphibians and their eggs. Here we report the first predation event upon *Strabomantis anomalus* by a *Leptodeira ornata*.

Keywords.— Biogeographic Chocó, first record, natural history, Terrarana.

Strabomantis Peters, 1863 (Craugastoridae) is a Neotropical genus of terrestrial-breeding frogs composed of 16 species. Its distribution ranges from Costa Rica in the north to Peru in the south, extending into northern Venezuela and western Brazil (Frost, 2025). The species in this genus exhibit terrestrial and cryptic habits, being typically found within leaf litter in primary or lightly disturbed forests or associated with the edges of water bodies such as rivers and streams (Castro-Herrera & Vargas-Salinas, 2008; Guevara-Molina & Velasco, 2017; Lynch & Duellman, 1997; Lynch & Myers, 1983; Napoli et al., 2010). The Chocoan Robber frog *Strabomantis anomalus* (Boulenger, 1898) is distributed from northwestern Colombia to northwestern Ecuador, occurring in lowland tropical rainforests below 1100

m a.s.l. (Lynch & Duellman, 1997). This is a nocturnal species associated with the margins of clear-water streams, typically found resting on rocky or sandy banks, or partially submerged in shallow pools (Lynch & Duellman, 1997; Lynch & Myers, 1983).

The Cat-eyed Snake, *Leptodeira ornata* (Bocourt, 1884), is a nocturnal semi-arboreal snake, distributed from eastern Panama to the northwestern Ecuador. In Colombia, it occurs along the Pacific and Caribbean regions, throughout the three Cordilleras, and in both inter-Andean valleys, at elevations below 1830 m a.s.l. (Costa et al., 2022). This snake can be found foraging along the forest floor and in low vegetation such as small bushes. Like other species of the genus, it feeds on a wide variety of prey,

with amphibians being one of the main components of its diet. Reported prey includes frogs of the genus *Hyalinobatrachium* —Centrolenidae—, *Agalychnis*, *Boana*, *Duellmanohyla*, *Scinax* —Hylidae— and *Rhinella* —Bufonidae— and salamanders of the genus *Bolitoglossa* —Plethodontidae— (Abarca-Alvarado et al., 2021; Ali & Ali, 2022; Jiménez-Bolaño et al., 2024; Nuñez-Escalante & Garro-Acuña, 2020; Savage, 2002).

Herein, we present the first predator reported for *Strabomantis anomalus* and the fourth known predator for the genus *Strabomantis*. Likewise, this represents the first predation event by a species of the genus *Leptodeira* upon a species of the genus *Strabomantis*.

During a survey for amphibians and reptiles at the Jardín Botánico del Pacífico (JBP), corregimiento of Mecana, municipality of Bahía Solano, Chocó, Colombia (6.2743056° N, 77.373166° W; WGS 84; 7 m a.s.l.), on November 7, 2021 at 22:00 h, we encountered along a stream called “La Resaquita” an adult female of *L. ornata* (EAFIT-R 0192, Snout-Vent Length = 245mm; Total Length = 313 mm) feeding upon an adult male of *S. anomalus* (EAFIT-Am 0136, Snout-Vent Length = 69.50mm). The snake was observed on a sandy stream shore with sparse leaf litter and covered by some branches of small bushes, with the body of the frog being half ingested, headfirst (Fig. 1). During the encounter the snake remained calm with our presence and after about five minutes the frog was almost completely ingested, with only its feet visible. With the frog still in the process of being swallowed,



Figure 1. Evento de depredación de una Culebra Ojigata adulta (*Leptodeira ornata*; EAFIT-R 0192) sobre un macho adulto de Rana Ladrona del Chocó (*Strabomantis anomalus*; EAFIT-Am 0136). Foto: Santiago Giraldo.

Figure 1. Predation event of an adult Cat-eyed Snake (*Leptodeira ornata*; EAFIT-R 0192) upon an adult male Chocóan Robber Frog (*Strabomantis anomalus*; EAFIT-Am 0136). Photo: Santiago Giraldo.

the snake was captured and placed into a cloth bag and taken to the campsite where it was photographed (at this point the frog was fully ingested). The snake was subsequently euthanized with 5% lidocaine and dissected to remove the stomach content, approximately two hours after the capture. Both the frog and the snake were fixed in 10% formalin and later preserved in 70% ethanol (Pisani, 1973; McDiarmid, 1994; Angulo et al., 2006). The specimens were deposited in the Reptile (EAFIT-R) and Amphibian (EAFIT-Am) collections of the EAFIT University Biological Collections in Medellín, Colombia.

Both specimens were examined in detail to corroborate their identities, using the characters provided by Costa et al. (2022) for the species of the genus *Leptodeira*, and Lynch & Duellman (1997) for *Strabomantis*. The main characters used to differentiate the *Strabomantis* specimen from other sympatric frogs and congeners were the following (considering that the head and part of the dorsum were partially digested): first finger longer than second; fingers lacking discs; inner tarsal fold present; toes extensively webbed, with the webbing reaching the base of the disc in Toe V and lateral edge of Toe III; fifth toe shorter than third; discs on toes present, but small (Lynch & Duellman, 1997).

The genus *Strabomantis* is a poorly studied group of anurans, with little to nothing known about the ecological and biological aspects of numerous species within the genus. This is likely due to their cryptic habits, their association with well-preserved forests, and their rarity, with several species not having been observed in years (Castro-Herrera & Vargas-Salinas, 2008; Guevara-Molina & Velasco, 2017; Lynch, 1986; Lynch & Duellman, 1997; Lynch & Myers, 1983; Napoli et al., 2010; Ospina-Sarria et al., 2015; Velandia-Perilla et al., 2011). Thus, this new report helps to increase the knowledge about the natural history of such a little-known group of amphibians. To the best of our knowledge, this record represents the first known predator of *S. anomalus* and the fourth documented predator for a species within the genus *Strabomantis*. Previous reports include predation by *Chironius grandisquamis* upon *S. bufoniformis*, as well as two species of the genus *Dendrophidion* and *Erythrolamprus* (referred as *Liophis*) upon *S. biporcatus* (Dixon et al., 1993; Savage & Myers, 2002).

Finally, this predation event may occur frequently in nature, given that species of the genus *Leptodeira* typically forage on the ground (Jiménez-Bolaño et al., 2024), and that both *S. anomalus* and *L. ornata* are relatively common in the study area, with several individuals of each species observed during the same night along a single stream (authors, pers. obs.), suggesting that the Chocoan Robber Frog may represent a regular prey item in the diet of the Cat-eyed snake.

Acknowledgements.— We are deeply grateful to J. F. Díaz-Nieto, J. Correa Álvarez, L. Puerta (Chacha), L. Salinas, the Semillero Biodiversidad and the Department of Biological Sciences of the EAFIT University. We are in debt to the Jardín Botánico del Pacífico Nature Reserve staff and the Mecana community for their help and logistical support during the field trips. We also thank S. Giraldo for providing us with the use of his photograph of the predation event, and J. D. Garcés for his help with some theoretical issues about *Strabomantis*. Permits for the collection of specimens of wild species of biological diversity for non-commercial scientific research purposes were issued to the EAFIT University by the National Authority of Environmental Licenses (ANLA), Resolution 1566 of 2014. The specimens were stored in the Amphibian (EAFIT-Am) and Reptile (EAFIT-R) collections of EAFIT University Biological, Medellín, Colombia, under the Unique National Registry of Biological Collections (RNC) 277.

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