



A Cat-eyed Snake, *Leptodeira* sp. (Squamata: Dipsadidae), Scavenging a Road-killed Frog in Northern Costa Rica

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Recent observations have challenged the idea that necrophagy in snakes is a rare event (Barreto de Oliveira et al. 2023; DeVault and Krochmal 2002; Gamez-Duarte et al. 2024). Observations of snakes feeding on dead animals likely are underestimated by the rarity of witnessing such events (Barreto de Oliveira et al. 2023). Additionally, snake diets often are based on inspection of stomach contents of preserved specimens, which does not provide information on how the prey was subdued and consumed (Shine 1986).

The taxonomy of snakes in the genus *Leptodeira* has been debated recently (Barrio-Amorós 2019; Torres-Carvajal et al. 2020; Costa et al. 2022), with the last authors proposing that *Leptodeira* comprises 15 species, of which four or five occur in Costa Rica (they considered individuals of the *L. annulata-septentrionalis* complex from southern Costa Rica a putative undescribed species and named it *Leptodeira* sp. aff. *ornata*). Snakes in the northern part of the country (where the present observation occurred) have not been tested in any phylogenetic analysis (Costa et al. 2022); we therefore refer to the individual in our observation as *Leptodeira* sp.

Species in the genus *Leptodeira* usually are considered generalist predators (Borges et al. 2014), feeding on a wide variety of frogs (e.g., Dueñas and Báez E. 2023; Matías-Vázquez et al. 2023; Nahuat-Cervera et al. 2021), lizards (e.g., Hudson et al. 2019; Nieto-Toscano and Martínez-Coronel 2021), snakes (Cantor and Pizzatto 2008), fish (Abarca 2014; Rojas Carranza and Anderson 2023), and birds (Almendáriz 1987); and observations of necrophagy have been reported. The taxonomically nebulous species of *Leptoderia* (*L.* sp. aff. *ornata*) from the southern Pacific Versant of Costa Rica is known to scavenge dead frogs (Solorzano 2004, 2022), as are *L. rhombifera* in Costa Rica (reported as *L. annulata* by Mora-Benavides 1999), *L. septentrionalis* and *L. splendida* in Mexico (Gamez-Duarte et al. 2024), and *L. ashmeadii* in Brazil (Barreto de Oliveira et al. 2023). Herein, we report the first observation of necrophagy

by an individual of the taxonomically ambiguous *Leptodeira* sp. from northern Costa Rica.

At 2130 h on 10 May 2024, in La Fortuna de San Carlos, Calle Real el Castillo (10.476388, -84.737777; elev. 543 m asl), we observed a *Leptodeira* sp. scavenging a road-killed frog of the genus *Smilisca*. We filmed the snake while it was swallowing the frog (Fig. 1; <https://youtube.com/shorts/MM76Wo4eS6s>). Because a car was approaching, we moved the snake to the side of the road, where it continued to ingest



Figure 1. A. Cat-eyed Snake (*Leptodeira* sp.) scavenging a road-killed frog (*Smilisca* sp.). Image extracted from a video (<https://youtube.com/shorts/MM76Wo4eS6s>).

the frog. The snake subsequently was left undisturbed, and we did not continue the observation to verify if the snake successfully ate the frog.

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