

(12.78917°S, 71.39111°W; WGS 84; 460 m elev.) of the Madre de Dios Region in southeastern Peru. The individuals were found in the Manu Learning Centre, a research station and lodge located in the buffer zone of the Manu National Park, owned and operated by The Crees Foundation. The pair was located on concrete ground by the station facilities, with the *Leptodeira annulata* slowly ingesting the *Leptodactylus rhodonotus* head-first (Fig. 1). The entire process took ca. 66 min until the frog was completely consumed, after which the snake moved to a shaded space under one of the buildings where it remained for at least 8 h.

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LEPTODEIRA ANNULATA (Banded Cat-eyed Snake). DIET. *Leptodeira annulata* is a snake of the family Dipsadidae that is widely distributed in Neotropical wetlands between Mexico and Argentina (Peters and Orejas-Miranda 1986. Catalogue of the Neotropical Squamata: Part I, Snakes. Revised Edition. Smithsonian Institution Press, Washington, D.C. 347 pp.). This snake has arboreal habits but can be found on the ground and in bodies of water (Ávila and Morais 2007. Herpetol. Rev. 38:278–280) and is typically batracophagous (Campos et al. 2011. Herpetol. Rev. 42:412; Sales et al. 2013. Herpetol. Rev. 44:524; Santos-Silva et al. 2014. Herpetol. Notes 7:123–126). Here, we describe the attempted predation of an *Osteocephalus taurinus* by a *Leptodeira annulata*.

On 18 May 2016, at 2000 h, in the Municipality of Cantá (2.8640°N, 60.5574°W; WGS 84) in Roraima, Brazil, AMR observed an *L. annulata* trying to prey on an adult male *O. taurinus*. At first the snake bit the head of the frog, then constricted, but failed to kill the prey. The snake remained for ca. 3 h attempting to swallow the anuran, but eventually released the frog. *Osteocephalus taurinus* is an abundant treefrog in central and northern Brazil. It is arboreal and nocturnal, and is found in primary and secondary forests, usually on trunks and branches (Lima et al. 2006. Guia de Sapos da Reserva Adolpho Ducke, Amazônia Central. Áttema, Manaus, Brazil. 168 pp.). Given that



FIG. 1. Attempted predation of *Osteocephalus taurinus* by *Leptodeira annulata* in Roraima, Brazil.

O. taurinus is not known to be toxic, we believe that the size of the prey prevented consumption by the snake.

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LEPTODRYMUS PULCHERRIMUS (Striped Lowland Snake). DEFENSIVE BEHAVIOR. *Leptodrymus pulcherrimus* is the only member of its genus. It ranges from southern Guatemala to northwestern Costa Rica (Solórzano 2004. Snakes of Costa Rica: Distribution, Taxonomy and Natural History. INBio, Santo Domingo de Heredia, Costa Rica. 792 pp.). *Leptodrymus pulcherrimus* it is a fast-moving, diurnal, mainly ground-dwelling snake, with defensive behaviors that include biting and retreating (Solórzano 2004, *op. cit.*). Here, we report another defensive response: fleeing through the branches.

On 19 April 2018, at 0920 h, José Juárez found an adult *L. pulcherrimus* at 1.5 m above ground in El Rancho, El Progreso, Guatemala (14.90986°N, 90.02145°W; WGS 84; 330 m elev.). While taking footage of the snake, it made short fleeing attempts through the branches, punctuated by rapid bouts of wriggling its anterior body and tail. First the snake moved rapidly through the branches without facing completely away from the observer, then stopped to rapidly wriggle the first third of its body for ca. 2 sec, and then proceeded to wiggle the middle portion of its body. Afterwards, it remained still for several seconds facing towards the observer, then started moving its tail as if luring, and finally wriggling the anterior part of its body again. Video of the behavior was deposited in the Reference Collection of Universidad del Valle de Guatemala (UVGF-0011) and uploaded online (<https://m.youtube.com/watch?feature=youtu.be&v=G1bUwHUel2g>).

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LOXOCEMUS BICOLOR (Mexican Burrowing Python). ATTEMPTED PREDATION. *Loxocemus bicolor* is the lone member of the monotypic family Loxocemidae and is found along the Pacific Coast of Central America in southwestern and southeastern Mexico, Guatemala, Honduras, El Salvador, Nicaragua, and northwestern Costa Rica (Chaves et al. 2014. The IUCN Red List of Threatened Species 2014; 5 June 2019). *Loxocemus bicolor* is primarily fossorial, but is also known to occur terrestrially, under logs, and in leaf litter (Alvarez del Toro 1982. Los Reptiles de Chiapas. Colección. Instituto de Historia Natural, Tuxtla Gutiérrez, Chiapas, México, 248 pp.). Several studies have documented the diet of *L. bicolor* (Mora-Benavides 1987. J. Herpetol. 21:334–335), however, there have been no reports on predation of *L. bicolor*.

At 1155 h on 29 May 2019, we observed an adult *Tigrisoma mexicanum* (Bare-throated Tiger-heron) attempting to prey upon an *L. bicolor* in Hacienda Solimar, Guanacaste, Costa Rica (10.25919°N, 85.15603°W; WGS 84). The habitat can be described as a heterogeneous mix of wetland and agricultural land, with



FIG. 1. *Tigrisoma mexicanum* attempting to prey upon a *Loxocemus bicolor* in Guanacaste, Costa Rica.

scattered trees. We initially observed the snake slowly crossing a dirt road bordered by agricultural canals, following a recent rain. The *T. mexicanum* flew in from the agricultural field on one side of the dirt road, captured the snake by the head, and flew to another tree across the road, while the snake constantly wrapped around the bird's beak (Fig. 1). The *T. mexicanum* did not make any attempts to kill the snake but only jerked its head to unravel the snake from its beak. After ca. 10 min, the *T. mexicanum* dropped the *L. bicolor* in the wetlands as it tried to get a better grip on the snake. There was another *T. mexicanum* on the same branch ca. 1 m away that quietly observed the process.

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LYCODON RUFOZONATUS WALLI (Sakishima Odd-tooth Snake). **DIET.** *Lycodon rufozonatus walli* is an endemic subspecies to the Yaeyama Islands and Miyako Islands, Ryukyu



FIG. 1. *Lycodon rufozonatus walli* eating *Mauremys mutica kami* on Miyako Island, Ryukyu Archipelago, Japan.

Archipelago, Japan, and is known as a generalist predator of fishes, frogs, lizards, snakes, birds, and small mammals (Mori and Moriguchi 1988. Snake 20:98–113). On Miyako Island, at 2117 h on 5 September 2018, I recovered a male *L. r. walli* (52.8 cm SVL, 15.4 cm tail length), which was eating a juvenile *Mauremys mutica kami* (Yaeyama Brown Pond Turtle; Fig. 1). This is the first report of predation on turtles by *L. r. walli* in the wild and adds to our knowledge of this snake's diet.

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MASTICOPHIS FLAGELLUM (Coachwhip). **ARBOREAL ESCAPE BEHAVIOR.** Collectively, over the last decade, we have encountered over 500 *Masticophis flagellum*. Many of these snakes were roadkills, some were captured, and others escaped by going into bushes or down holes. Separately and together we have seen only 10 arboreal escape behaviors, a few of which are worth reporting here:

1) Horned Lizard Ranch, Mohave County, Arizona, USA. BB and EN spotted a *M. flagellum* resting in the sun on a dirt road near a Foothill Palo Verde Tree (*Cercidium microhyllum*). EN grabbed for the snake which twisted up and around in an egg-beater shaped movement, defensively biting EN in the process. The snake headed into the leaf litter and lower branches of the Palo Verde and then quickly, within 2 sec, climbed to the top of the tree (ca. 4 m) and into a Mistletoe (*Phoradendron californicum*) mass, and visually disappeared within that mass, though its tail hung out about 10 cm.

2) Parker Wash, Pinal County, Arizona, USA. EN and RR saw a *M. flagellum* quickly climb 5 m up a tree and disappear into a Mistletoe mass.

3) Cattle Tank Road, just S of Park Link Drive, Pinal County, Arizona, USA. A *M. flagellum*, found by RR and Kate Jackson at the base of two Palo Verde trees, quickly climbed 2.5 m up into the one tree and into a Mistletoe mass.

4) Estancia Road, just N of Davis Rd, Pinal County, Arizona, USA. RR saw an *M. flagellum* climb up into the lower branches of a Mesquite Tree (*Prosopis* sp.).

Although *M. flagellum* have been reported to sometimes climb into trees and bushes to escape (Ernst and Ernst 2003. Snakes of the United States and Canada. Smithsonian Books, Washington D.C. 668 pp.), BHB had never in 50 years seen such arboreal escape behavior in the California desert. Arboreal escape behavior by *M. flagellum* may be more common in eastern USA where there are more trees (K. Dodd, pers. comm.). Brattstrom et al. (2015. Herpetol. Rev. 46:101) reported a *M. flagellum* crawling up and between the spines and grooves of a Saguaro (*Carnegie gigantea*). With a more diverse habitat, there is a greater opportunity for different modes of escape behavior.

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MASTICOPHIS TAENIATUS (Striped Whipsnake). **DIET.** *Masticophis taeniatus* is a colubrid generalist with a broad distribution in western North America. A diurnal, active forager, *M. taeniatus* has a diet that primarily consists of lizards, but can also include mammals, snakes, birds, and insects (Parker and Brown 1980.