



A Middle American Ameiva, *Holcosus festivus* (Teiidae), as Prey of the Banded Calico Snake, *Oxyrhopus petolarius* (Dipsadidae)

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Snakes are important predators in many terrestrial, aquatic, and marine communities, and have evolved several ways to detect, capture, and ingest prey (Alencar et al. 2013; Vitt and Caldwell 2014). Species in the genus *Oxyrhopus* compose a monophyletic Neotropical group of terrestrial snakes that feed on a wide variety of vertebrates, although lizards and small mammals are the main components of their diets (Duellman 1978; Alencar et al. 2012; Gaiarsa et al. 2013).

The Banded Calico Snake, *Oxyrhopus petolarius* (Linnaeus 1758), generally is terrestrial and nocturnal, but occasional records document arboreal and diurnal activity. It is widely distributed throughout Central and tropical South America (Lee 1996, 2000; Lynch 2009; McCrainie 2011). In Colombia, this snake occurs in almost all lowland ecoregions from Amazonian rainforests to the dry tropical forests of the upper Cauca River, in the Caribbean lowlands, and the upper



Fig. 1. (A) A juvenile female Banded Calico Snake (*Oxyrhopus petolarius*; MHN-UCa 0268) collected in the village of Berlín, Municipality of Samaná, Department of Caldas, Colombia; note the distended midsection. (B) A juvenile female Middle American Ameiva (*Holcosus festivus*; MHN-UCa 0267) extracted from the stomach of the snake.

Magdalena Basin (Lynch 2009). This is a relatively common snake in secondary dry tropical forests as well as in humid lowland forests, but exhibits considerably less forest fidelity than do its Colombian congeners (Lynch 2009). It is a generalist predator, with a diet that includes small mammals, lizards, and birds (Gaiarsa et al. 2013; Nogueira et al. 2013; Caldeira et al. 2014), but occasionally other prey, such as amphibians, other snakes, bird eggs, and bats (Rodríguez-França and Amorim 2012; Gaiarsa et al. 2013). These snakes overpower prey using a presumably weak venom introduced by rear fangs (Lee 1996, 2000), although the venom appears to be highly toxic to anoles (*Anolis* spp.; Boos 2001). Herein we report an incidence of predation by *O. petolarius* on the Middle American Ameiva, *Holcosus festivus* (Lichtenstein 1856) in a premontane humid forest in the middle Magdalena River Valley of Colombia.

Holcosus festivus is distributed from Mexico to Colombia at elevations of 100–1,000 m asl (Köhler 2003). It is an active predator of invertebrates and small vertebrates that usually forages along open forest edges (Vitt and Colli 1994; Vitt and Carvalho 1995; Vitt and Zani 1996). Although these lizards are terrestrial, they can climb trunks of trees and low vegetation to bask or reach prey (Vitt and Zani 1996; Köhler 2003). Peak foraging activity is late morning (1030–1230 h) and then decreases through the day (Hillman 1969; Vitt and Zani 1996). Lattanzio (2014) noted that escape responses varied with time of day, and that the flight initiation distance (FID) decreased throughout the day, suggesting that lizards might be more vulnerable to predators at night.

At 2128 h on 7 September 2015, we found a juvenile female *O. petolarius* (SVL 222 mm, TL 66 mm; MHN-UCa 0268; Fig. 1A) perched 102 cm above the ground and 30 m from a stream in the village of Berlín, Municipality of Samaná, Department of Caldas, Colombia (5.608767°N, -74.955331°W; WGS84; elevation 650 m asl). The distended midsection of the snake indicated that it had recently swallowed a prey item. Dissection revealed a juvenile female *Holcosus festivus* (SVL 45.6 mm, TL 96 mm; MHN-UCa 0267; Fig. 1B) that had been ingested headfirst.

Digestion of the lizard's head was modest, suggesting that it had been caught recently, presumably when inactive. The ratio of prey total length (TL) to predator SVL (0.63) was intermediate; the prey qualifies as type III (*sensu* Cundall and Greene 2000), which is fusiform, roughly spherical in cross-section, and relatively heavy. This kind of prey invokes a high handling cost and requires an increased gape (Cundall and Greene 2000). Also interesting is the elevated perch of the snake, which might support the hypothesis of Martins (1993), who suggested that some Neotropical snakes, even those that are usually terrestrial, sleep on elevated perches to avoid predation by terrestrial invertebrates. On the ground in the same area, we found a juvenile male Red-tailed Coralsnake, *Micrurus mipartitus* (Duméril, Bibron, and Duméril, 1854; Elapidae) that was being eaten by ants.

Although this is not the first record of *H. festivus* as prey of *O. petolarius* (see Guyer and Donnelly 2004), it is important because it shows that these species sustain a trophic relationship in different tropical environments, the evidence suggests that the snake encountered the lizard when it was inactive, and the elevated perch assumed by the snake after feeding is supportive of an anti-predator strategy.

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