



Predation on a Blindsnake Genus *Typhlops* (Squamata: Typhlopidae) by the Spanish Flag Anole, *Anolis allogus* (Squamata: Dactyloidae) in Cuba

Tomás M. Rodríguez-Cabrera¹ and Ansel Fong G.²

¹Jardín Botánico de Cienfuegos, Pepito Tey, Cienfuegos, CP 59290, Cuba (tomasmichel.rodriguez@gmail.com)

²Centro Oriental de Ecosistemas y Biodiversidad (BIOECO), Museo de Historia Natural “Tomás Romay,” Santiago de Cuba, CP 90100, Cuba (ansel@bioeco.cu)

Photographs by the senior author.

The Blindsnake family Typhlopidae (Squamata: Scolecophidia) comprises well over 40 currently recognized native West Indian species in as many as four genera (Hedges et al. 2014; but see also Pyron and Wallach 2014 and Nagy et al. 2015), plus the introduced invasive and parthenogenetic Braminy Blindsnake (*Indotyphlops braminus*; e.g., Wallach 2009; Hedges et al. 2014; Pyron and Wallach 2014; Domínguez 2015). In Cuba, 12 native species of Blindsnakes are currently recognized, four in the genus *Typhlops* and eight in the genus *Cubatyphlops*, in addition to *I. braminus* (Domínguez et al. 2013; Díaz and Cádiz 2014; Hedges et al. 2014; Pyron and Wallach 2014; Domínguez 2015). However, both in Cuba and throughout the region, additional species remain to be described (Hedges et al. 2014).

Probably attributable primarily to their secretive habits, the natural history of Blindsnakes is poorly known (e.g., Vitt and Caldwell 2009). In the West Indies, predators have been reported for only five species (see review in Henderson and Powell 2009; Table 1), representing only about 11% of all West Indian Blindsnakes. Moreover, these reports are limited to eight predators, most of them snakes in the family Dipsadidae (Henderson and Powell 2009; Table 1). The only known instance of a lizard preying on a Blindsnake was a male Puerto Rican Crested Anole (*Anolis cristatellus*) eating a Puerto Rican Coastal Blindsnake (*Antillotyphlops hypomethes*; referred therein to the genus *Typhlops*; Colón 2009). Herein we report the second instance of a West Indian anole preying on a Blindsnake, in this case from eastern Cuba.

At 0838 h on 9 June 2015, we observed an adult male Spanish Flag Anole (*Anolis allogus* Barbour and Ramsden 1919; 59 mm SVL, 3.8 g) eating a Blindsnake (*Typhlops* sp.; 155 mm SVL) midway up the ascending path to El Yunque (20°20'41.9"N, -74°34'01.5"W, WGS 84; 394 m asl),

Baracoa, Guantánamo Province, Cuba. The lizard was resting on a bush trunk (8.5 mm diameter, 110 cm above the ground) in an almost vertical position with 57 mm (37% of SVL) of



Fig. 1. Male Spanish Flag Anole (*Anolis allogus*) consuming a Blindsnake (*Typhlops* sp.) along the ascending path to El Yunque, Baracoa, Guantánamo Province.

Table 1. Predators reported for Blindsnakes (Typhlopidae) in the West Indies. Note that Pyron and Wallach (2014) did not recognize *Antillotyphlops* and *Cubatypshlops*, which they considered junior synonyms of *Typhlops* (see, however, Nagy et al. 2015). Consequently, snakes from Cuba (except for the report in this paper), Jamaica, and Puerto Rico, listed below as “*Typhlops* sp.,” might be in the genera *Cubatypshlops* or *Antillotyphlops*.

Predator	Prey	Island	Source
Amphibia: Anura			
Leptodactylidae			
<i>Leptodactylus fallax</i>	<i>Antillotyphlops dominicanus</i>	Dominica	Brooks (1982)
Reptilia: Squamata			
Dactyloidae			
<i>Anolis cristatellus</i>	<i>Antillotyphlops hypomethes</i>	Puerto Rico	Colón (2009)
<i>Anolis allogus</i>	<i>Typhlops</i> sp.	Cuba	This paper
Dipsadidae			
<i>Arrhyton taeniatum</i>	<i>Typhlops</i> sp.	Cuba	Schwartz and Henderson (1991)
<i>Borikenophis portoricensis</i>	<i>Antillotyphlops platycephalus</i>	Puerto Rico	Henderson and Sajdak (1996)
	<i>Typhlops</i> sp.	Puerto Rico	Schwartz and Henderson (1991)
<i>Ialtris agyrtes</i>	<i>Typhlops pusillus</i>	Hispaniola	Schwartz and Rossman (1976)
<i>Magliophis stabli</i>	<i>Typhlops</i> sp. (adults and eggs)	Puerto Rico	Rivero (1998)
<i>Schwartzophis funereum</i>	<i>Typhlops</i> sp. (eggs)	Jamaica	Schwartz and Henderson (1991)
Aves: Ciconiiformes			
Ardeidae			
<i>Egretta thula</i>	<i>Antillotyphlops monensis</i>	Isla Mona	Hernández-Prieto (1987)

the Blindsnake's anterior body hanging from its mouth (Fig. 1). The snake was gently removed. Only about 25 mm of the snake's anterior body remained intact, the rest was substantially damaged (Fig. 2B) apparently due to mastication. Both the snake and lizard are deposited in the herpetological collection of BIOECO, Santiago de Cuba (Field number: AFG-3205).

Anolis allogus (Fig. 3) is a Cuban endemic trunk-ground ecomorph widely distributed throughout the archipelago and locally common. It is most frequently associated with shaded forests (Henderson and Powell 2009; Rodríguez Schettino et al. 2013). It feeds mostly on arthropods, including insects (cockroaches, beetles, flies, hemipterans, ants, termites, lepidopteran larvae, orthopterans, barklice), crustaceans, millipedes, and spiders (see review in Henderson and Powell 2009), but it also consumes smaller vertebrates, including other anoles such as grass-bush ecomorphs (Socarrás et al. 1988).

Blindsnakes are burrowers and rarely venture onto the surface, but some have been observed in arboreal situations

presumably searching for prey (e.g., Henderson and Powell 2009; Vitt and Caldwell 2009). The instance of predation reported herein suggests that the Blindsnake was on the surface by day, during the diurnal activity period of *Anolis allogus*. The predominant vegetation at the observation site (i.e., rainforest on limestone) produces a heavily shaded environment (Fig. 4), which probably facilitated the snake's daytime movement on the surface with minimal risk of dehydration. The snake apparently was captured while trying to escape because it was being ingested tail-first, contrary to Colón's (2009) observation of headfirst ingestion by *Anolis cristatellus*.

The specific identity of the blindsnake could not be determined due to the damaged condition of its body (Fig. 2B). The visible characteristics allowed us to place it in the *T. lumbricalis* species group (*sensu* Domínguez and Díaz 2011), and some characters coincide with the recently described *T. leptolepis* (see Domínguez et al. 2013), but we were unable to definitively assign the specimen to that species.

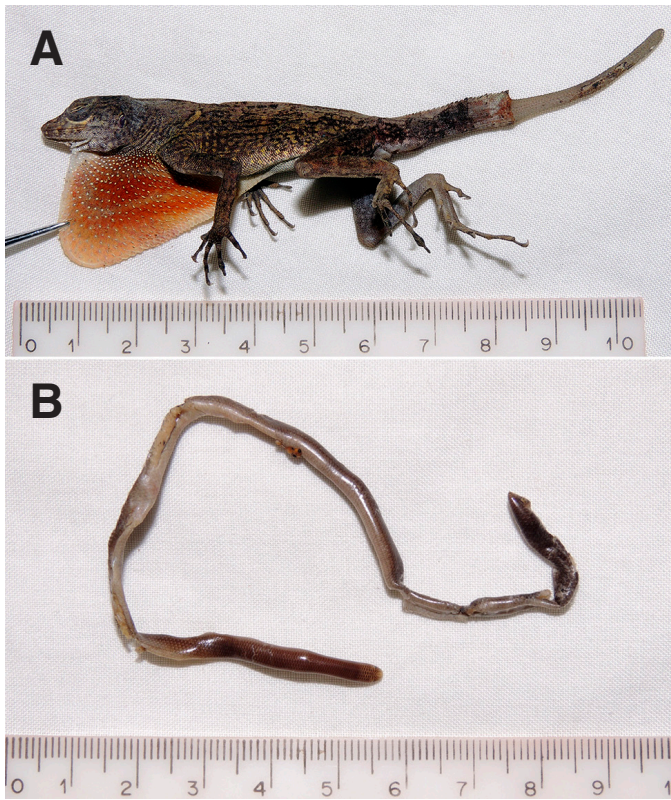


Fig. 2. Specimens of the anole predator (*Anolis allogus*; A) and the Blindsnake prey (*Typhlops* sp.; B) collected along the ascending path to El Yunque, Baracoa, Guantánamo Province.



Fig. 3. Male Spanish Flag Anole (*Anolis allogus*) from El Yunque, Baracoa, Guantánamo Province.



Fig. 4. Habitat where we observed the male Spanish Flag Anole (*Anolis allogus*) preying on a Blindsnake (*Typhlops* sp.) along the ascending path to El Yunque, Baracoa, Guantánamo Province.

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