



Maximum Size and a New Dietary Record for the Broad-banded Trope, *Tropidophis feicki* (Squamata: Tropidophiidae), in Cuba

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The Broad-banded Trope (*Tropidophis feicki*) is one of 17 endemic Cuban species of *Tropidophis* (Henderson and Powell 2009; Díaz and Cádiz 2020; Rodríguez-Cabrera et al. 2021; Uetz et al. 2022). This species occurs in karstic areas associated with forests in western and central Cuba (Schwartz and Henderson 1991; Rodríguez-Cabrera et al. 2020a). Based on a wild-caught male kept in captivity for nearly a year, Rodríguez-González (2020) recently reported the largest individual ever recorded (463 mm SVL, 50 mm tail length [TL]). Data on the diet of *T. feicki* is scarce (see Rodríguez-Cabrera et al. 2020b for a review). Herein I report a new maximum size record and a new dietary record for the species.

At 1930 h on 9 March 2022, during a herpetological expedition to El Moncada, Viñales Municipality, Pinar del

Río Province, Cuba (22.32942°N, 83.50937°W; 300 m asl), I encountered a female *T. feicki* in the Incógnita Gallery of Santo Tomás Great Cavern in complete darkness 220 m from the nearest entrance. The female was on the cave wall 1.8 m above the ground and measured 604 mm SVL, 64 mm TL (668 mm total length), 20.5 mm head length, and 13.2 mm head width (Fig. 1). Upon closer examination I noticed that the female had a stomach bulge and forced regurgitation by abdominal palpation (Luiselli and Amori 2016; Rodríguez-Cabrera et al. 2020b) revealed a partially digested adult Cuban Giant Frog (*Eleutherodactylus zeus*) (~62.2 mm SVL) (Fig. 2). A male *T. feicki* was coiled on the floor 2.4 m from the female; it measured 411 mm SVL, 51 mm TL (462 mm total length), 13.6 mm head length, 8.6 mm head width,



Fig. 1. A large female Broad-banded Trope (*Tropidophis feicki*) encountered in the Incógnita Gallery, Santo Tomás Great Cavern, El Moncada, Viñales Municipality, Pinar del Río Province, Cuba. This individual represents the maximum size record for the species. The snake with a reference scales (caliper 200 mm) (left) and the author holding it (right). Photographs © L. Yusnaviel García-Padrón (left) and Hilario Carmenate Rodríguez (right).



Fig. 2. Cuban Giant Frog (*Eleutherodactylus zeus*) regurgitated by a large female Broad-banded Trope (*Tropidophis feicki*) (top) and the partially digested prey (bottom). Photographs © L. Yusnaviel García-Padrón.



Fig. 3. Broad-banded Tropes (*Tropidophis feicki*) found in the Incógnita Gallery, Santo Tomás Great Cavern, El Moncada, Viñales Municipality, Pinar del Río Province, Cuba. A female after regurgitating a Cuban Giant Frog (*Eleutherodactylus zeus*) (left) and an inactive male where initially encountered (right). Photograph © L. Yusnaviel García-Padrón.

and 1.98 mm spur length (Fig. 3). During a second visit to the cave seven days later (at 1100 h on 16 March 2022), I found the male in the same place, but the female had moved to within 80 m of the nearest entrance (Fig. 4).

The female *T. feicki* exceeded by 141 mm the previous maximum size record for the species (463 mm SVL; Rodríguez-González 2020) and by 156 mm the previous maximum size record for females (448 mm SVL; Hedges 2002). Domínguez Díaz and Moreno (2003) mentioned SVLs up to 505 mm for the species, but provided no further references. Rodríguez-Cabrera et al. (2021) listed the sizes of the largest species of *Tropidophis*, and *T. feicki* closely followed the smallest of the giant tropes (Grand Cayman Trope, *T. caymanensis*, female 438 mm SVL, male 470 mm SVL). With the maximum size record presented here, *T. feicki* is now the second largest species of *Tropidophis* after the Cuban Giant Trope (*T. melanurus*).

As for most Cuban *Tropidophis*, the diet of *T. feicki* is virtually unknown (Henderson and Powell 2009; Rodríguez-Cabrera et al. 2020b). This species has been recorded as a predator of the Cuban Flat-headed Frog (*Eleutherodactylus planirostris*) and the Cuban White-fanned Anole (*Anolis homolechis*) (Rodríguez-Cabrera et al. 2020b). This report is the first record of *T. feicki* feeding in caves, specifically on large frogs such as adult *E. zeus*, suggesting that this species

might regularly forage in caves as *E. zeus* is a well-known cave-dwelling species (Henderson and Powell 2009; Alonso Bosch et al. 2015; García-Padrón et al. 2021). In addition, Schwartz (1958) suggested that arachnids (*Phrynus* sp. and large tarantulas) prey on *E. zeus*, but no confirmed predator had been recorded for this frog until now.



Fig. 4. Incógnita Gallery, Santo Tomás Great Cavern, 80 m from the nearest entrance. Photograph © L. Yusnaviel García-Padrón.

The use of caves by *T. feicki* is largely unknown. The occurrence of this species in these karstic formations has been rarely documented and reports are limited to anecdotal records (e.g., Schwartz 1957; Schwartz and Henderson 1991; García-Padrón et al. 2020). García-Padrón et al. (2020) reported a Broad-banded Trope 20 m within a cave, but the two snakes recorded herein represent by far the deepest known penetration by the species into a cave. The location of the female seven days after the first observation equates to an average movement of 20 m/day. Also, despite not seeing any sign of reproductive activity, the initial close proximity of the male and female suggests that these snakes might breed in caves.

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