

Catalogue of American Amphibians and Reptiles.

Torres, J., R. Powell, and O. H. Garrido. 2017.
Tropidophis hendersoni.

***Tropidophis hendersoni* Hedges and
Garrido
Cuban Khaki Trope**

Tropidophis haetianus: Schwartz and Marsh
1960:73 (part). See **Remarks**.

Tropidophis haetianus haetianus: Schwartz
1975:310 (part). See **Remarks**.

Tropidophis hendersoni Hedges and Garrido
2002:158. Type locality, “Guarda la Vaca
[= Guardalavaca], Holguín Province,
Cuba, 21°07'35"N, 77°49'55"W, probably
at sea level.” Holotype, Museum of
Comparative Zoology (MCZ) 47896, an
adult female, collected by “Clench and
Alayo” on 14 August 1945 (examined by
OHG). See also **Comments**.

CONTENT. No subspecies are recognized.

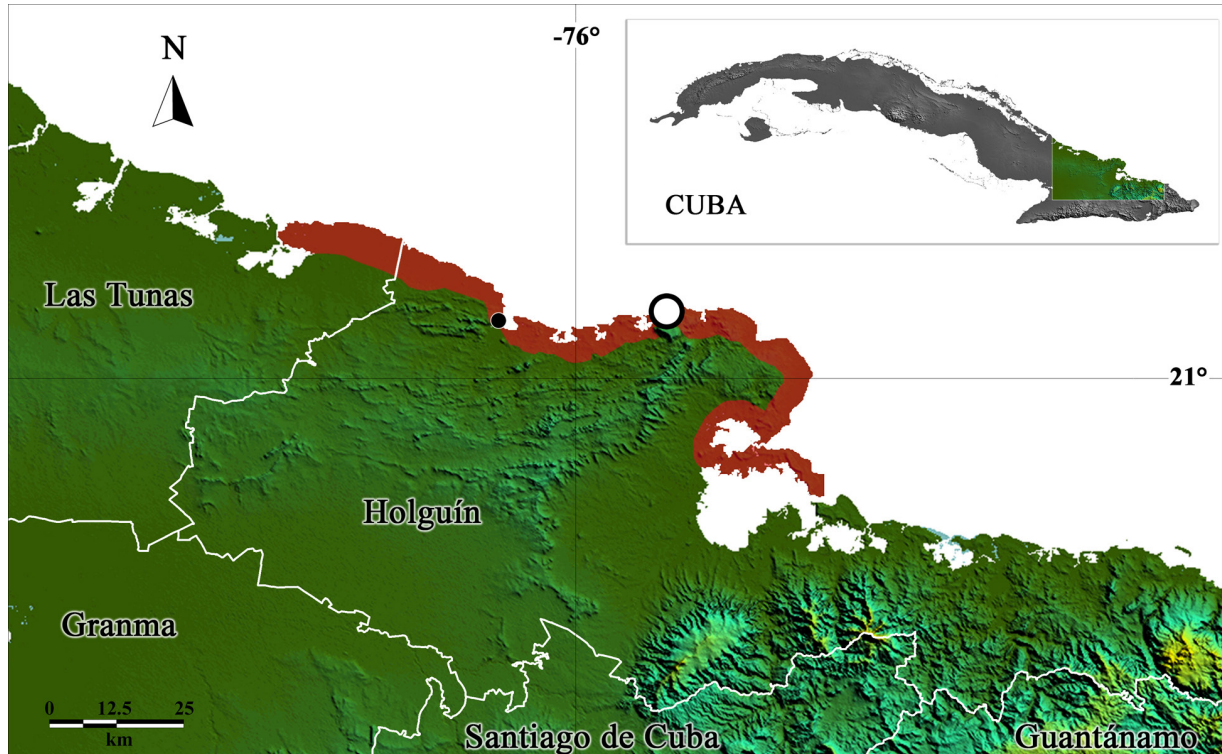
DESCRIPTION. *Tropidophis hendersoni* is a relatively small tropidophiid; the largest individual is an adult male with a snout-vent length (SVL) of 332 mm and the largest female has a SVL of 327 mm (Díaz et al. 2014). The following characters are based on the original description of a single adult female by Hedges and Garrido (2002) and data from six additional adults (three males

and three females) provided by Díaz et al. (2014). The body is robust and the head is slightly wider than the neck. Parietal scales in contact, partially separated, or separated by one scale; 9–11 supralabials (4–5 in contact with the eye), 10–11 infralabials, 1 preocular, and 3 postoculars. Dorsal scales are smooth (weakly keeled in the middorsal region above the vent) and in 23–27 rows anteriorly, 25–27 rows at midbody, and 19–20 rows posteriorly. Middorsal scales are not enlarged except a few scales at the posterior end of the body and on the tail. Ventrals number 190–204, subcaudals 30–34. Adult males have well-developed pelvic spurs that retract into small grooves and slightly longer tails than females (42.5–43.2 mm in males vs. 34.7–37.7 mm in females).

Dorsal color in life (Díaz et al. 2014) is tan to grayish-tan and the venter is paler, cream-colored to slightly orange. Head markings include brown postocular stripes extending over but not beyond the posterior supralabials, conspicuous subocular dark bars, additional less obvious dark bars on supralabials and infralabials, a roughly triangular or diamond-shaped figure on the posterior dorsal surface of the head, and a barely evident brown band across the snout and nares. The dorsal pattern consists of 48–57 pairs of often partially fused and not always paired large spots along either side of the dorsal midline, smaller, irregularly aligned, and less contrasting spots on the flanks, resulting in 8–10 ‘rows’ of spots around



FIGURE 1. Adult male *Tropidophis hendersoni* (left and center) and adult female (right). Photographs by Raimundo López-Silvero Martínez.



MAP. The distribution (in red) of *Tropidophis hendersoni*; the circle marks the type locality (Hedges and Garrido 2002) and the dot marks the other known locality (Díaz et al. 2014). The distribution is an estimate based on the extent of apparently suitable habitat.

midbody. The tip of the tail has a yellowish cast in some individuals. The venter is immaculate or with sparse and widely spaced spots on the borders of some ventral scales.

DIAGNOSIS. *Tropidophis hendersoni* is easily distinguished from its sympatric congeners, *Tropidophis melanurus* and *Tropidophis wrighti* (Rodríguez Schettino et al. 2013). *Tropidophis melanurus* is larger (SVL in males to 770 mm, females to 957 mm; Hedges 2002) and has a predominantly striped pattern with no more than four rows of spots (if spots are present; Hedges and Garrido 2002). *Tropidophis wrighti* has a gracile habitus and a very different pattern that consists of black spots in only four rows.

In general appearance, *Tropidophis hendersoni* is similar to *Tropidophis haetianus* from Hispaniola and three Jamaican species (*Tropidophis jamaicensis*, *Tropidophis stejnegeri*, and *Tropidophis stullae*) that were considered subspecies of

Tropidophis haetianus (Stull 1928; Schwartz and Henderson 1988) until Hedges (2002) elevated them to species and assigned them to the *Tropidophis jamaicensis* species group. *Tropidophis hendersoni* differs from all of those taxa in coloration, pattern, scalation, and size. For example, the Jamaican taxa have fewer ventrals and more anterior scale rows, and *Tropidophis haetianus haetianus* is larger than *Tropidophis hendersoni* and has a lateral head stripe, which is absent in *Tropidophis hendersoni* (Díaz et al. 2014; Hedges and Garrido 2002).

Hedges (2002) also assigned *Tropidophis celiae*, from northwestern Cuba, to a different (*Tropidophis melanurus*) species group, but it is superficially similar in appearance to *Tropidophis hendersoni*. The head is wider in the latter (1.45 head/neck width ratio vs. 1.31 in *Tropidophis celiae*), the pale nuchal band (formed from fused occipital spots) is obvious in *Tropidophis celiae* but less evident in *Tropidophis hendersoni*. The latter also



FIGURE 2. The holotype of *Tropidophis hendersoni* (MCZ 47896), an adult female collected by “Clench and Alayo” on 14 August 1945 at Guardalavaca, Holguín Province, Cuba. Photograph by S. Blair Hedges (from Hedges 2017).

has a salmon-colored venter, whereas that of *Tropidophis celiae* is cream, and the contrast between the dorsal spots and background color is less obvious in *Tropidophis hendersoni* (Díaz et al. 2014; Hedges 2002; Hedges and Garrido 2002; Hedges et al. 1999; Torres et al. 2013, Torres López et al. 2016).

PHYLOGENETIC RELATIONSHIPS.

Hedges and Garrido (2002) tentatively placed this species in the *Tropidophis maculatus* species group, but Hedges (2002) placed it in the *Tropidophis pardalis* species group.

PUBLISHED DESCRIPTIONS. Detailed descriptions were provided by Hedges and Garrido (2002). Additional descriptions were provided by Hedges (2002) and Díaz et al. (2014), with the latter including data on additional specimens.

ILLUSTRATIONS. Color photographs were published by Díaz et al. (2014) and Hedges (2017). A **black-and-white photograph** of

the holotype was published by Hedges and Garrido (2002); the same photo was reprinted by Rodríguez Schettino and Garrido (2012).

DISTRIBUTION. *Tropidophis hendersoni* is known only from the type locality and a second location about 68 km to the northwest in and around the town of Gibara. The region is a sub-coastal karstic plateau (Díaz et al. 2014; Hedges and Garrido 2002) with abundant caves, many with sinkholes that allow sunshine to enter and shrubs and vines to grow in some chambers, including those where snakes were collected (Díaz et al. 2014). The range was illustrated previously by Hedges (2017), Rodríguez Schettino and Garrido (2012), Rodríguez Schettino et al. (2013), Uetz et al. (2016), but only Hedges (2017) included both localities.

FOSSIL RECORD. No fossils are known.

PERTINENT LITERATURE. The most comprehensive sources for the species are

the original description (Hedges and Garrido 2002) and a note covering both **ecology** (including predation on *Eleutherodactylus* cf. *Eleutherodactylus thomasi*) and **morphology** (Díaz et al. 2014). *Tropidophis hendersoni* was included in checklists, general works, articles focusing on other species, or faunal accounts by Anonymous (2004), Domínguez Díaz and Moreno García (2003), Estrada (2012), González Alonso et al. (2012), Hedges (2017), Henderson and Powell (2007, 2009), Hutchins et al. (2003), Rodríguez Schettino and Rivalta González (2003), Rodríguez Schettino et al. (2010, 2013, 2015), Uetz et al. (2016), and Wallach et al. (2014). See **Remarks** for information on the conservation status of the species.

REMARKS. Initially, the type specimen of *Tropidophis hendersoni* was assigned to *Tropidophis haetianus* (then thought to include snakes from Hispanola, Jamaica, and Cuba)

by Schwartz and Marsh (1960) and Schwartz and Garrido (1975). The specimen was tentatively assigned to *Tropidophis haetianus haetianus* by Schwartz and Marsh (1960), with this assignment confirmed by Schwartz (1975).

Tropidophis hendersoni was listed as Critically Endangered (CR) on the IUCN Red List by Powell et al. (2010) and on the Cuban Red List by both Rodríguez Schettino and Garrido (2012) and Rodríguez Schettino et al. (2015).

ETYMOLOGY. The specific epithet *hendersoni* is a patronym honoring Robert W. Henderson “for his many valued contributions to West Indian herpetology” (Hedges and Garrido 2002; Uetz et al. 2016).

ADDITIONAL VERNACULAR NAMES. Henderson’s Trope (Beolens et al. 2011); Majasito (Rodríguez Schettino and Garrido 2012), but note that “Majasito” is the general



FIGURE 3. An adult male *Tropidophis hendersoni* (Museo Nacional de Historia Natural de Cuba [MNHNCu] 5055) ingesting a frog (*Eleutherodactylus* cf. *Eleutherodactylus thomasi*) in Cueva del Santo, Gibara, Holguín Province. Photographs by Luis M. Díaz (from Díaz et al. 2014).



FIGURE 4. Adult male *Tropidophis hendersoni* (MNHNCu 5056; top) and subadult male (MNHNCu 5057; middle and bottom). Photographs by Luis M. Díaz (from Díaz et al. 2014).

name applied to all tropes in Cuba. Many websites (e.g., Midtgaard 2017; Wikipedia 2017) use the name "Cuban Khaki Dwarf Boa"; in general, "Dwarf Boa" is used for snakes in the genus *Tropidophis* (e.g., Uetz et al. 2016).

COMMENTS. The holotype of *Tropidophis*

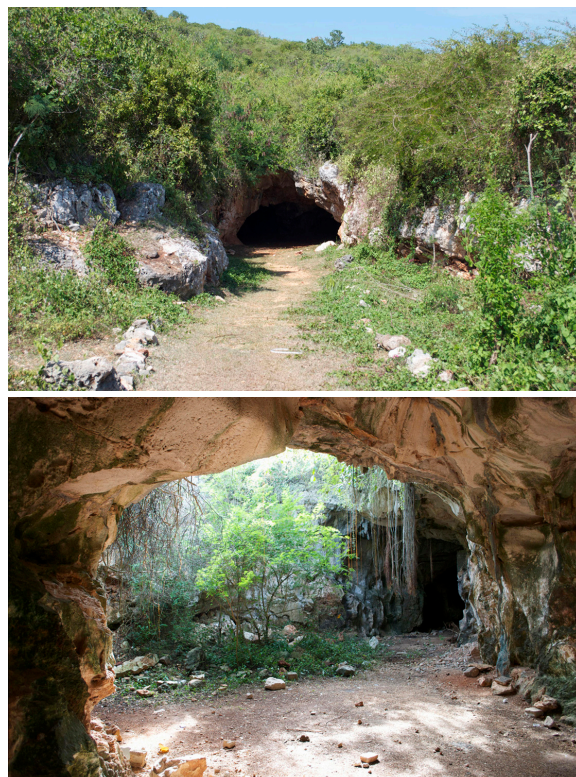


FIGURE 5. Habitat of *Tropidophis hendersoni* in Gibara, Holguín Province, Cuba. Entrance of Cueva de Los Panaderos (above) and an area under a sinkhole with vegetation, leaf litter, and rocks at Cueva del Santo (below). Photographs by Antonio Cádiz (from Díaz et al. 2014).

hendersoni was first obtained by Dr. Albert Schwartz during his first expedition to Cuba in December 1954. The specimen was deposited in the small private collection of the malacologist Miguel L. Jaume. When the Natural History Museum of Cuba was founded and Jaume named its director, he donated his entire collection to the museum. Schwartz had previously examined the specimen at Jaume's home and received it as a loan. However, Schwartz never returned the specimen to Cuba and after his death, it was deposited with part of his herpetological collection at the Museum of Comparative Zoology at Harvard University. Orlando Garrido, during one of his trips to Harvard, was asked by Dr. Ernest E. Williams, then curator of the collection, to reexamine the Cuban specimens deposited in the collection. Garrido redis-

covered the specimen, which he and S. Blair Hedges subsequently described as a species new to science.

Hoser (2013), based entirely on evidence presented in other studies, reassessed the family Tropicodophiidae, in the course of which he assigned *Tropicodphis hendersoni* to a new genus and a monotypic subgenus, thus creating the combination *Wellsboa* (*Tonysilvaboa*) *hendersoni*. Although technically adhering to rules set out by the International Code of Zoological Nomenclature (ICZN), the journal in which these innovations appeared is not peer-reviewed and the author has a history of exploiting the work of others to create new names that do little more than complicate the taxonomy of those groups he chooses to address (Kaiser 2014; Kaiser et al. 2013). Consequently, we choose not to recognize his taxonomic names.

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