

# The Tree Boa (*Corallus enydris*) on Trinidad and Tobago

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## Introduction

*Corallus enydris* is a slender, nocturnally active, arboreal boa (known as “Cascabel” or “Cascabel Dormillon” on Trinidad) and one of the most geographically widespread of snakes in the Neotropics (Fig.1). As currently understood, its mainland distribution stretches from southern Costa Rica to southern Brasil just south of the Tropic of Capricorn in the state of Sao Paulo. Its insular distribution includes small islets off the Atlantic and Pacific shores of Panama, Isla Margarita (Venezuela), Trinidad, Tobago, Ilha Grande (southern Brasil), and in the West Indies, St. Vincent, at least nine of the Grenadine Islands and Grenada.

Over its extensive range, *Corallus enydris* exhibits tremendous variation in morphological characters (body proportions, scale characters, and colour and pattern). It also demonstrates considerable ecological plasticity, occurring in habitat that includes rain forest, mangroves, fruit orchards, and cactus-*Acacia* scrub. Its diet varies geographically: mainland snakes exhibit an ontogenetic shift from birds to rodents, whereas West Indian populations shift from *Anolis* lizards to rodents (Henderson 1991, 1993).

Over 500 preserved *Corallus enydris* collected from throughout its range over the past 100+ years,

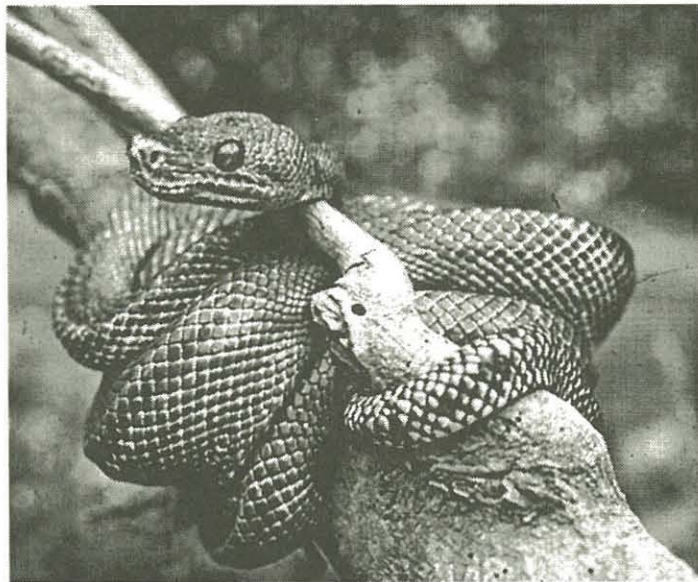


Fig. 1. *Corallus enydris* from Trinidad (photo by H. E. A. Boos).

including 41 from Trinidad-Tobago, have been examined. It is now possible to describe variation and define the species on Trinidad and, with less confidence, on Tobago.

## Methods

RWH examined 35 specimens of *Corallus enydris* from Trinidad and six specimens from Tobago; all are housed in collections in the USA (American Museum of Natural History, New York (AMNH); Field Museum of Natural History, Chicago (FMNH); Florida Museum of Natural History, Univ. of Florida, Gainesville (UF); Milwaukee Public Museum (MPM); Museum of Comparative Zoology, Harvard University (MCZ); National Museum of Natural History, Washington, DC (USNM).

Measurements and scale counts were taken by traditional methods (see Henderson, 1991), and colour and pattern characters are as described in Henderson (1991). Specimen examination usually included opening the stomach in order to determine if prey remains were present.

## Results

**Distribution:** *Corallus enydris* occurs over much of Trinidad from sea level to at least 360 m (Fig.2), although most specimens have been taken in forested areas in the northern half of the island (e.g., the Northern Range, Mt. Harris in the Central Range). It has

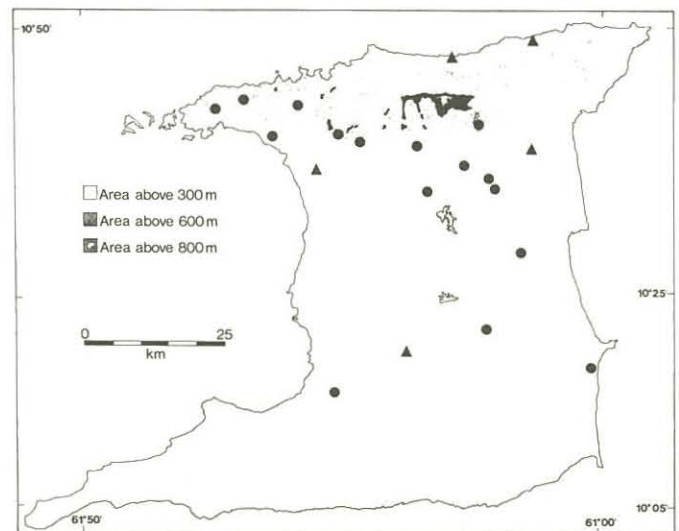


Fig. 2. Map of Trinidad indicating localities at which *Corallus enydris* was collected. Circles indicate records for specimens preserved and examined in this study and triangles indicate localities at which tree boas were collected by Boos but the snakes were not preserved.

been collected in habitats ranging from undisturbed rain forest to edificarian situations near Port of Spain. As elsewhere in its wide range, *C. enydris* is an edge species, usually encountered along bodies of water, road cuts, and other habitat margins.

On Tobago, *C. enydris* has been taken at Speyside, 1.5 km ENE of Charlottesville, ca. 5.0 km W of Charlottesville near Hermitage, near Roxborough and at Hillsborough Dam.

**Description:** The largest example from Trinidad that we have had the opportunity to measure was 1870 mm snout-vent length (SVL) (FMNH 49918 from San Rafael); the largest specimen recorded from Tobago was 1790 mm SVL (USNM) 228018 from Hillsborough Dam). A litter of Trinidad *C. enydris* had SVLs of 415-452 mm and weighed 18-20 g. In contrast, a very large female collected at Hollis Reservoir was 1857 mm SVL and weighed 2200 g. Table 1 summarizes meristic characteristics of *C. enydris* from Trinidad and Tobago; there are no statistically significant (*t*-test; *P*>.05) differences between the samples.

On Trinidad and Tobago, the dorsal ground colour in adults is usually some shade of brown (copper, bronze, taupe, khaki, tan, yellow-brown, brownish yellow, beige). Dorsally, juveniles or adults may (1) be patternless yellow-brown (20.6% in a sample of 34 snakes from Trinidad), (2) have a pattern of rhombic shapes that is usually more conspicuous posteriorly (20.6%), (3) have the free margin of each dorsal scale edged in dark brown or black (55.9%), or (4) a combination of 2 and 3 (2.9%). The ventral ground colour may be off-white, tan, pale creamy yellow, or a striking bright yellow. The venter of the body may be (1) immaculate, or (2) patterned. If flecks, smudges, and/or blotches of dark brown or black are present they are denser towards the posterior (anterior portions of the venter are frequently devoid of any pattern). Subcaudal scales may be (1) immaculate, (2) flecked lightly with dark brown or black, or (3) sometimes almost completely covered with dark brown or black.

Mole and Urich (1894) provided an accurate and lyrical description of *C. enydris*: "The adults attain a length of 7 or 8 feet, and are sometimes of a yellowish-brown colour More often they are of a deep dark brown...When the snake is in motion..., if he can be induced to move in sunlight he presents a remarkably beautiful appearance. The dull dark brown seems to change to a rich mosaic, over which shimmers a lovely bluish iridescence as he wends his sinuous way along the branches. Each scale is of a dark colour at the extremity furthest from its attachment to the skin, but underneath, where they are overlapped by the other scales, they are pale or bright yellow. The ventral scales are dark brown and rich yellow, sometimes punctured with black".

**Table 1.** Summary of meristic characters in *Corallus enydris* from Trinidad (upper series of figure) and Tobago (lower series of figures).

Character	n	Mean±SE	Range
Dorsal scale rows	33	41.6 ± .27	38-45
at midbody	6	42.3 ± .56	40-44
Ventrals	32	259.3± .67	252-268
	6	255.8 ± 1.92	250-264
Subcaudals	31	107.0± .57	100-112
	5	107.0 ± 1.70	101-111
Supralabials	35	10.6 ± .12	10-12
	6	10.5 ± .22	10-11
Infralabials	35	13.9 ± .13	12-15
	6	13.8 ± 1.17	13-16
No. of scales bordering nasals	18	4.8 ± .15	4-6
	4	5.5 ± .50	5-7
No. of scales between supraoculars	35	5.8 ± .22	3-9
	6	6.0 ± .68	4-8
Loreal rows	35	2.1 ± 3.98	2-3
	6	2.0 ± 0.0	2
Subloreal	35	3.1 ± .15	2-6
	6	3.0 ± .89	2-4
Loreolabials	35	5.1 ± .91	4-8
	6	5.0 ± .36	4-6
Scales around eye	35	13.8 ± .14	12-15
	6	13.2 ± .75	12-14
Dorsal body blotches	4	37.0 ± .71	36-39
	2	38.5 ± 3.54	36-41

**Foraging and Diet :** According to Mole and Urich (1894), during the day *Corallus enydris* will "lie in the slender twigs at the furthest extremities of the thick branches of the tree partially screened by the leaves" and they are "singularly inconspicuous." At Hollis Reservoir, Boos has observed large *C. enydris* coiled in tight balls using several support branches. Nocturnal observations of *C. enydris* on Trinidad indicate that they forage at heights comparable to tree boas in the West Indies (3-5 m above ground level; Henderson, 1993). They appear to be active foragers, although there is some question if extremely large examples may not use an ambush strategy. Two specimens from Tobago had, respectively, an unidentified bird (snake 1630 mm SVL) and a rodent (*Rattus?* snake 1420 mm SVL). The Trinidad sample of the diet is comprised of an unidentified bird (snake 815 mm SVL), a rodent (probably *Rattus*, about 25 cm; snake 852 mm SVL), ground-dwelling rodents (two *Akodon ?urichi*, about 40 cm and 35 cm, respectively; snake 1360 mm SVL), a mouse opossum (*Marmosa robinsoni*; snake 1510 mm SVL). In addition to these records, a just-captured snake regurgitated an unidentified bat (Boos, unpubl.) and Urich (1933) reported a "full-grown" mongoose (*Herpestes*

*auropunctatus*) in the stomach of “a full-grown specimen (6 ft. in length)”.

## Discussion

Based on a suite of characters (meristic, colour pattern), Henderson (1991), in a preliminary analysis, determined that *C. enydris* from Trinidad and Tobago had their closest affinities with populations in southern Central America, northern Colombia (north of the Cordillera Oriental de Colombia), Isla Margarita, and northern Venezuela (the Caribbean lowlands north of the Rio Orinoco and the Guiana Shield). The most common colour pattern that occurs in *C. enydris* on Trinidad and Tobago (dorsal ground colour yellowish-brown with the free margin of each dorsal scale edged in dark brown or black) also occurs in northern Venezuela. The diamond-shape element present in the dorsal pattern of some specimens from Trinidad and Tobago is common in *C. enydris* occurring in Panama, northern Colombia, and northern Venezuela.

The diet of *C. enydris* on Trinidad-Tobago is not, in basic composition, different from mainland populations (it includes birds, bats, and rodents). *Corallus enydris* attains a greater size on Trinidad and Tobago than elsewhere in its extensive range, rivaled only by specimens from northern Venezuela (known maximum SVL 1770 mm) and Isla Margarita (known maximum SVL 1725 mm). Correspondingly, the diet of *C. enydris*, on Trinidad at least, includes larger prey items than elsewhere, with representatives of mammalian orders (*Carnivora*, *Marsupialia*) that are not, to date, represented in the mainland sample (n = 44). Despite geographic differences in diet, adult *C. enydris* throughout their wide range prey on rodents.

In Grenada, tree boas are common in human-disturbed habitat (Henderson, 1988; Henderson and Winstel, 1992), and probably occur at higher densities in fruit orchards than in any other kind of habitat (Henderson, 1988; unpubl.). In agricultural areas, tree boas enhance the production of fruit by reducing the number of rodents that are attracted to the fruit and damage the crop. *Corallus enydris* occurs in disturbed habitats (including orchards) in Trinidad, and two founding members of the Trinidad and Tobago Field Naturalists' Club were so enlightened as to comment on the potential benefit that could be derived from encouraging the presence of *Corallus enydris* in agricultural areas: R. R. Mole (1924) suggested that “A

wise planter will take care that the Castabels [sic] found on his property are not molested”, and F. W. Urich (1933), upon discovering a mongoose in the stomach of a *C. enydris*, asked the logical question “Could agriculturists be persuaded not to slaughter these useful allies?” We would like to think that, today, people will heed the advice of these pioneering and respected naturalists.

## Acknowledgments

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