

A new species of hood-displaying *Thamnodynastes* (Serpentes: Colubridae) from the Atlantic forest in southeast Brazil

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Abstract

A new species of *Thamnodynastes* (Serpentes: Colubridae) from the Atlantic forest in southeast Brazil is described herein. The new species is diagnosed by the following set of characters: slender body; very long tail (about 50% of body length); 19 scale rows in the mid-body; high subcaudal scale count (101–109); and a series of 5–6 black blotches in the fore-body, shown during defensive displays. The new species is known from moderate elevations of the Serra do Mar range and its features indicate that it is one of the most arboreal species within the genus.

Key words: Serpentes, Tachymenini, *Thamnodynastes longicaudus*, new species, Atlantic forest, defensive behaviour

Introduction

The species of the colubrid genus *Thamnodynastes* (Xenodontinae: Tachymenini) are small to medium-sized viviparous snakes, with opisthognathous dentition, and elliptic vertical pupils (Bailey 1967; Franco and Ferreira 2003). This South American genus is distributed from about 10°N in Colombia (Perez-Santos and Moreno 1989) to about 37°S in Argentina (Bellagamba and Vega 1996).

Twelve species of this genus are presently regarded as valid: *Thamnodynastes almae*, *T. chaquensis*, *T. chimanta*, *T. corocoroensis*, *T. duida*, *T. gambotensis*, *T. hypoconia*, *T. marahuaquensis*, *T. pallidus*, *T. rutilus*, *T. strigatus*, *T. yavi* (Franco and Ferreira 2003). These authors reevaluate the taxonomic status for these and several additional species

from Brazil, some of them still undescribed, and provide a comparative table for morphological characters for all of these species (Franco and Ferreira 2003).

In this paper we describe a remarkable, hood-displaying, new species of *Thamnodynastes* from the Atlantic forest of southeast Brazil. A colour photograph of this species is found in Marques *et al.* (2001) as *Thamnodynastes* sp. 2, and a summary of morphological features is found in Franco and Ferreira (2003) as *Thamnodynastes* sp. 4.

Material and methods

Specimens are preserved in the collection of Instituto Butantan in São Paulo (IB). Snout-vent length (SVL) and tail length (TAL) were measured to the nearest 1 mm with a flexible rule. Morphological description and scale counts follow Dowling (1951) and Peters (1964). In the counts (see variation) use of \pm denote standard deviation. Colour names follow Kornerup & Wanscher (1961).

Results

Thamnodynastes longicaudus sp. nov.

(Figures 1–3)

Thamnodynastes sp. 2 (colour photo of holotype) Marques *et al.*, 2001: 152.

Thamnodynastes sp. 4 (morphological characters) Franco and Ferreira, 2003: 57–74.

Type Material — Holotype: IB 59545, (male, 370 mm SVL, 204 mm TAL), BRAZIL, São Paulo, São Lourenço da Serra (23°51'S–46°56'W, 690 m a.s.l.), 22 Dez. 1998, M. D. Galante. Paratypes: IB 18676, (male, 289 mm SVL, 147 mm TAL), BRAZIL, São Paulo, Salesópolis, Estação Biológica de Boracéia (23°38'S–45°52'W, 900 m a.s.l.), 09 Jan. 1960, Medeiros; IB 20694, (male, 300 mm SVL, 155 mm TAL), BRAZIL, São Paulo, Itapeverica da Serra (23°43'S–46°50'W, 906 m a.s.l.), 04 Aug. 1961, C. Zanuzzi; IB 26561, (male, 144 mm SVL, 75 mm TAL), BRAZIL, São Paulo, Jquitiba (23°55'S–47°04'W, 685 m a.s.l.), 13 Sept. 1966, X. Langlada; IB 31890, (male, 334 mm SVL, 174 mm TAL), BRAZIL, São Paulo, Areias (22°34'S–44°41'W, 520 m a.s.l.), 11 Jan. 1971; collector unknown; IB 33702, (male, 351 mm SVL, 195 mm TAL), BRAZIL, São Paulo, Jquitiba (23°55'S–47°04'W, 685 m a.s.l.), 15 Jan. 1973, P. R. Lang; IB 33706, (male, 325 mm SVL, 182 mm TAL), BRAZIL, São Paulo, Guapiara (24°11'S–48°31'W, 750 m a.s.l.), 24 Jan. 1973, collector unknown; IB 41045, (male, 411 mm SVL, 219 mm TAL), BRAZIL, Rio de Janeiro, Teresópolis (22°24'S–42°57'W, 872 m), 29 Oct. 1976, R. W. Waltemath.

Diagnosis— *Thamnodynastes longicaudus* is a very slender, long-tailed snake (Figure

1), distinguished from all congeners and all other Tachymenini species by its high number of subcaudals (>101). Another very slender species with high number of subcaudals is the Amazonian *Thamnodynastes pallidus*, which has a maximum count of 99 subcaudal scales (Cunha and Nascimento 1978). Additionally, *T. longicaudus* has 19 scale rows in the mid body and a divided cloacal scale, whereas *T. pallidus* has 17 such rows and an entire cloacal scale. The characteristic dorsal series of dark blotches in the fore-body, fully shown in defensive displays (Figure 2), is another diagnostic feature of *T. longicaudus*.

Description— Holotype (Figures 1–3), adult male, snout-vent length 370 mm, tail length 204 mm, head length 16.2 mm. Body very slender, tail very long (55.1% of SVL). Mass in life 15 g. Dorsal scales smooth lacking apical pits; dorsal scale rows 19/19/13; ventrals 142; cloacal scale divided; subcaudals 105, paired. Nasal single; internasals slightly wider than long and smaller than prefrontals; prefrontals a little wider than long; frontal pentagonal, longer than wide; loreal almost square; preoculars 2 and postoculars 2; temporals 2+3; supralabials 8/8, fourth and fifth in contact with eye; right infralabials 9, left ones 10; anterior and posterior mentals about same size. Eye prominent, pupil elliptical.

Colour pattern— In life ground colour greyish yellow; discrete mid-dorsal stripe composed by light brown blotches from head to mid-body; rest of body with small light brown blotches and spots fading caudally. Series of 5–6 black blotches on fore-body shown during defensive display (Figure 2). Tail greyish yellow to brownish orange with scattered light brown spots, its terminal portion slightly darker. Dorsum of head light brown with scattered darker spots. Light brown postocular stripe from behind eye to corner of mouth. Lower labials, gular region and throat immaculate greyish yellow. Venter greyish yellow slightly lighter than dorsum, with three pairs of darker narrow greyish yellow stripes, the central one less conspicuous. In preservative (ethanol 70%) dark blotches on fore-body become conspicuous on anterior third of body.

Variation— The type series varies mainly in scale counts. Supralabials 7/8 (n = 1), 7/9 (n = 1), 8/8 (n = 2), 8/9 (n = 3), 9/9 (n = 1); right oculars 2+2 (n = 7), 3+2 (n = 1); right temporals 2+3 (n = 7), 3+4 (n = 1); infralabials 9/10 (n = 1), 10/9 (n = 2), 10/10 (n = 2), 11/9 (n = 1), 11/10 (n = 1), one specimen not counted; dorsal scale rows: 17/19/13 (n = 4), 19/17/13 (n = 1), 19/19/13 (n = 3); ventrals 143–149 (\bar{x} = 145 \pm 3); subcaudals 101–109 (\bar{x} = 104 \pm 3). In preservative (ethanol 70%) ground colour vary from yellowish white to brownish orange; black blotches on fore-body become more conspicuous on anterior third of body.

Etymology— The specific name is an adjective derived from the Latin words *longus* and *caudus*, alluding to the very long tail of the new species.

Geographic range— *Thamnodynastes longicaudus* is presently known from moderate elevations (520–906 m a.s.l.) in the Serra do Mar range, from Teresópolis (22°24'S, 42°57'W) in Rio de Janeiro in the North to Guapiara (24°11'S, 48°31'W) in São Paulo to the South.



FIGURE 1. *Thamnodynastes longicaudus* holotype in life, showing the slender body and long tail.



FIGURE 2. Hood-display and diagnostic black blotches on dorsal fore-body of *Thamnodynastes longicaudus*.

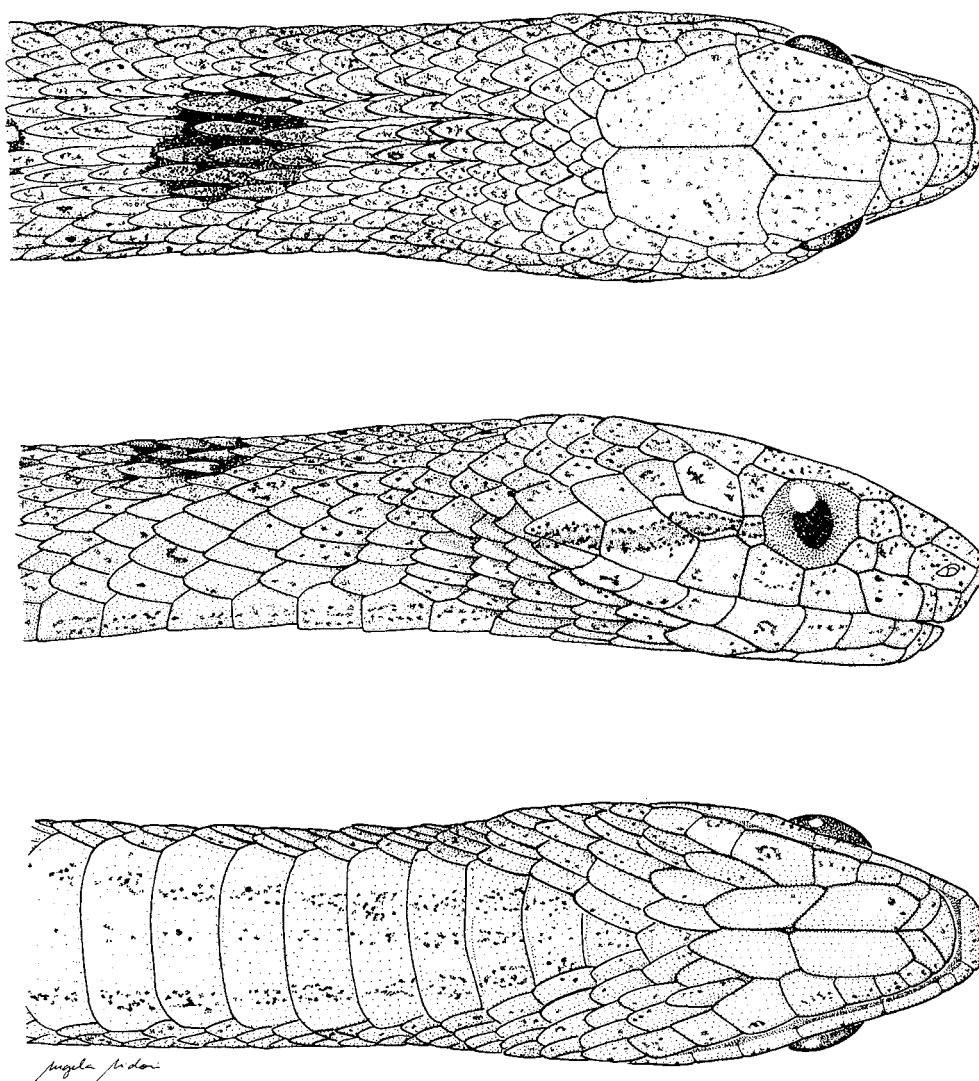


FIGURE 3. Head in dorsal, lateral, and ventral views of *Thamnodynastes longicaudus* (holotype). Scale equals 1 cm.

Remarks— The slender body and exceedingly long tail of *Thamnodynastes longicaudus*, besides its distribution restricted to the Atlantic forest, strongly indicate that this snake is among the most arboreal species within the genus. Species of *Thamnodynastes*, even the stouter species such as *T. strigatus*, are arboreal to some extent (Strüssmann & Sazima 1993; Bernarde *et al.* 2000; Marques *et al.* 2001), and thus arboreality in the slender, new species would not be surprising.

The striking defensive hood-display is currently unrecorded within the genus *Thamnodynastes* or other tachymenine taxa (pers. obs.). The series of bold markings on the flattened fore-body produce an impressive change in the snake's appearance, and is likely directed towards visually hunting predators (Greene, 1988). Among arboreal snakes, defensive displays involving the fore-body are limited to lateral flattening (Greene 1979; Marques 1999; Senter 1999). Thus, the hood-display of *T. longicaudus* seems a rare behaviour among arboreal snakes, possibly derived from the generalised dorso-ventral body flattening found in all Tachymenini and other terrestrial snakes in general (Greene 1979, pers. obs.). The restriction of the flattening to the fore-body in the new species may be related to its arboreal habits.

Acknowledgments

We thank to Valdir Germano for valuable help with the IB collection; Ricardo A. Kawashita Ribeiro for help in the laboratory; Angela M.F. Pacheco for skilful drawings; Ronaldo Fernandes, Hebert Ferrarezzi, and one anonymous referee for critical reading of the manuscript; the CNPq and FAPESP for essential financial support.

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