



<http://dx.doi.org/10.11646/zootaxa.3980.4.10>

<http://zoobank.org/urn:lsid:zoobank.org:pub:2F5905B0-A760-4AB2-8D7A-3983D2B0D489>

External morphology and oral cavity of the tadpole of *Trachycephalus atlas* Bokermann, 1966 (Amphibia, Anura, Hylidae)

GILVANA SANTOS BARRETO^{1,4}, JULIANA CONCEIÇÃO RAMOS¹, EDNEI DE ALMEIDA MERCÊS¹, MARCELO FELGUEIRAS NAPOLI², ADRIAN ANTONIO GARDA³ & FLORA ACUÑA JUNCÁ¹

¹Programa de Pós-graduação em Zoologia, Museu de Zoologia, Departamento de Ciências Biológicas, Universidade Estadual de Feira de Santana, Av. Transnordestina, 44036–900 Feira de Santana, Bahia, Brasil

²Museu de Zoologia, Departamento de Zoologia, Universidade Federal da Bahia, Rua Barão de Jeremoabo, Campus Universitário de Ondina, 40170–115 Salvador, Bahia, Brasil

³Programa de Pós-graduação em Sistemática e Evolução, Departamento de Botânica e Zoologia, Universidade Federal do Rio Grande do Norte, Av. Salgado Filho S/N, Lagoa Nova, 59072–970 Natal, Rio Grande do Norte, Brasil

⁴Corresponding author. E-mail: gilsantosbarreto@gmail.com

The Neotropical genus *Trachycephalus* Tschudi currently comprises 14 species distributed in lowlands of Mexico, Central and South America east of the Andes, south until northern Argentina (Frost 2014) and throughout Brazil (IUCN 2014). Seven species of the genus have tadpoles formerly described: *T. coriaceus* (Peters) (Schiesari & Moreira 1996; Lescure *et al.* 1996), *T. cunauaru* Gordo, Toledo, Suárez, Kawashita-Ribeiro, Ávila, Morais & Nunes (Grillitsch 1992 as *Phrynohyas resinifictrix* according to Gordo *et al.* 2013), *T. jordani* (Stejneger & Test) (McDiarmid & Altig 1989–1990), *T. mesophaeus* (Hensel) (Lutz 1973; Carvalho-e-Silva *et al.* 2002; Prado *et al.* 2003), *T. nigromaculatus* Tschudi (Wogel *et al.* 2000), *T. resinifictrix* (Goeldi) (Hero 1990; Schiesari *et al.* 1996), and *T. typhonius* (Linnaeus) (Pyburn 1967; Duellman 1970; Schiesari *et al.* 1996). The oral cavity is described only for *T. cunauaru* (Grillitsch 1992), *T. resinifictrix* (Schiesari *et al.* 1996), and *T. typhonius* (Schiesari *et al.* 1996; Fabrezi & Vera 1997).

Trachycephalus atlas is a large casque-headed treefrog distributed throughout the Tropical Atlantic and Caatinga morphoclimatic domains (see Ab'Sáber 1977 for morphoclimatic domains), known from the northeastern Brazilian states of Bahia, Pernambuco, Paraíba and Ceará (Frost 2014). Here, we describe the external morphology and the oral cavity of *T. atlas* tadpole obtained from its type locality, in the municipality of Maracás, state of Bahia, Brazil.

We collected *T. atlas* tadpoles ($n = 28$) on November 21, 2012, in a temporary pond ($13^{\circ}21'31.9''S$, $40^{\circ}26'01.6''W$; 790 m a.s.l.). To confirm the species identity, two tadpoles were raised in the laboratory until the occipital ridge was evident in the imago (Fig. 1E), which occurred 89 days after metamorphosis. Specimens are housed at the Museu de Zoologia da Universidade Estadual de Feira de Santana (MZFS lot 1195). The external morphological description, measurements, and labial tooth row formula follow Altig (1970) and Altig & McDiarmid (1999), except the interorbital distance that was taken between the inner margins of the eyes, and were based on seven tadpoles at stages 34 ($n = 5$ tadpoles) and 35 ($n = 2$ tadpoles) (*sensu* Gosner 1960). Description of the oral cavity follows Wassersug (1976) and was based on three specimens at stage 34. We compared the characteristics obtained with texts and illustrations provided in tadpole descriptions available in the literature for the genus.

The following measurements were taken in millimeters using a stereoscopic microscope and micrometrical lens (min–max, average \pm standard deviation): total length (TL = 38.0–45.7, 41.0 ± 2.9), body length (BL = 13.0–15.4, 14.0 ± 0.9), body maximum height (BH = 7.7–9.8, 8.7 ± 0.8), body maximum width (BW = 7.8–10.2, 8.9 ± 0.9), tail length (TaL = 24.9–30.4, 27.0 ± 2.1), maximum tail height (MTH = 10.0–12.6, 11.2 ± 1.1), tail musculature height (TMH = 3.7–4.5, 4.1 ± 0.3), dorsal fin height (DFH = 3.5–4.7, 4.1 ± 0.5), ventral fin height (VFH = 3.5–4.7, 4.0 ± 0.4), interorbital distance (IO = 6.5–8.4, 7.3 ± 0.6), eye diameter (E = 1.8–2.1, 1.9 ± 0.1), nostril major axis (N = 0.3–0.6, 0.4 ± 0.1), inter-nostril distance (IND = 4.0–4.8, 4.4 ± 0.3), nostril–snout distance (NS = 1.2–2.1, 1.7 ± 0.3), eye–nostril distance (EN = 1.15–1.73, 1.49 ± 0.2) oral disc width (ODW = 3.7–4.4, 4.0 ± 0.3), distance from snout to spiracle (DSS = 7.4–9.5, 8.1 ± 0.7). In the discussion EN refers to nardo-pupillar distance (NP).

Description. Body oval, elongate in dorsal view and globular depressed in lateral view (BH/BW = 0.90–1.02, 0.97 ± 0.05) (Fig. 1A, B); body height 62% of body length (BH/BL = 0.58–0.69, 0.62 ± 0.04); body length approximately one third of total length (BL/TL = 0.33–0.36, 0.34 ± 0.01). Snout rounded in dorsal and lateral views. Nostrils dorsolateral,