



<http://dx.doi.org/10.11646/zootaxa.3683.1.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:7DAA6983-BC90-4CDD-99E8-DE2A060D552E>

The terrestrial tadpole of *Leptodactylus andreae* (Anura, Leptodactylidae), a member of the *Leptodactylus marmoratus* species group

MARCELO MENIN^{1,3} & DOMINGOS J. RODRIGUES²

¹Departamento de Biologia, Instituto de Ciências Biológicas, Universidade Federal do Amazonas, Av. General Rodrigo Otávio Jordão Ramos 3000, 69077-000, Manaus, AM, Brazil

²Universidade Federal de Mato Grosso, Instituto de Ciências Naturais, Humanas e Sociais, Av. Alexandre Ferronato 1200, 78557-267, Sinop – MT, Brazil

³Corresponding author. E-mail: menin@ufam.edu.br

The *Leptodactylus marmoratus* species group, as currently recognized (Almeida & Angulo 2006), is composed of fifteen nominal species (Frost 2013). Tadpoles of eight species have been described, including species awaiting formal descriptions (e.g. Kokubum & Giaretta 2005). The tadpoles of this species group can be divided into two types: exotrophic tadpoles with aquatic development (e.g. *Leptodactylus thomei*; Almeida & Angulo 2006) and endotrophic tadpoles with terrestrial development (e.g. *Leptodactylus hylaedactylus*; Menin *et al.* 2009). *Leptodactylus andreae* Müller, 1923 occurs in lowlands of northern South America east of the Andes, including and limited to Amazonia to the south and east (Frost 2013). The tadpole of this species was briefly described in diagrammatic drawings by Hero (1990). Herein, we describe the tadpole of *L. andreae* based on individuals at three stages of development and also provide comments on the spawning sites.

Seven tadpoles of *L. andreae* were collected on 04 May 2005 at Reserva Florestal Adolpho Ducke (RFAD) (02°55' and 03°01'S, 59°53' and 59°59'W), a 10,000 ha ecological reserve in Manaus. Tadpoles were preserved in formalin immediately after collection and deposited in the Herpetological Collection of the Instituto Nacional de Pesquisas da Amazônia (Tadpole lot: INPA-H 25383). Another two individuals from RFAD collected on November 02, 1985 (INPA-H 1590) were obtained from the same collection. Descriptive terminology, morphometric variables and developmental stages follow Altig & McDiarmid (1999). Measurements were taken with an ocular micrometer.

Tadpole description. Description based on one tadpole at stage 34 (INPA-H 25383). Body oval in both lateral (Figure 1A) and dorsal view (Figure 1B). Body length (BL) 4.92 mm; tail length (TAL) 8.40 mm; total length (TL) 13.32 mm; body and tail, 37% and 63 % of total length, respectively. Eyes lateral and laterally directed; eye diameter (ED) 0.90 mm; interorbital distance (IOD) 1.35 mm. Nares anterolateral, closer to snout than to eyes; internarial distance (IND) 0.70 mm. Oral disc anteroventral with a width of 0.95 mm; marginal papillae uniseriate, elongated and with a broad anterior and narrower posterior gaps; about 12–13 papillae in each side of oral disc; submarginal papillae absent; upper and lower jaw sheaths horny, broadly-arched, with serrated edge; labial teeth absent (Figure 1C). Spiracle absent. Vent tube medial, positioned along ventral midline, opening posteriorly, with wall attached directly to ventral fin. Dorsal fin arched, originating at tail-body junction; ventral fin originating at the posterior ventral terminus of the body, slightly arched and maintaining the same height throughout the proximal two-thirds of the tail; tail pointed. Maximum tail height (MTH) 3.00 mm; tail muscle height (TMH) 1.20 mm; tail muscle width (TMW) 0.95 mm.

Mean values (in mm), standard deviation and range (in brackets) of measurements of the collected tadpoles are as follows: Stage 41 ($N=4$), BL = 4.53 ± 0.11 (4.44–4.68), TAL = 7.56 ± 1.18 (6.12–9.00), TL = 12.09 ± 1.09 (10.80–13.44), IOD = 1.48 ± 0.16 (1.25–1.60), IND = 0.73 ± 0.03 (0.70–0.75), ED = 0.71 ± 0.06 (0.65–0.80), MTH = 1.89 ± 0.23 (1.65–2.15), TMH = 0.98 ± 0.05 (0.90–1.00), TMW = 0.98 ± 0.03 (0.95–1.00). Stage 43 ($N=4$), BL = 4.77 ± 0.38 (4.44–5.16), TAL = 4.35 ± 0.30 (4.20–4.80), TL = 9.12 ± 0.32 (8.64–9.36), IOD = 1.63 ± 0.09 (1.55–1.75), IND = 0.74 ± 0.03 (0.70–0.75), ED = 0.75 ± 0.04 (0.70–0.80), MTH = 1.10 ± 0.04 (1.05–1.15), TMH = 1.01 ± 0.03 (1.00–1.05), TMW = 0.94 ± 0.02 (0.90–0.95).

Coloration: In life, tadpoles have a brown dorsum, venter translucent yellow, fins translucent; tail whitish. In fixed specimens, dorsum brown, venter cream, tail whitish and fins translucent whitish.

Natural history. The tadpoles were collected in a foam nest inside a decomposing fallen log, placed in clayed soil in forested area. The nest was surrounded by foam and connected to the external environment by a small hole. Tadpoles