



## The tadpole of *Leptodactylus pentadactylus* (Anura: Leptodactylidae) from Central Amazonia

MARCELO MENIN<sup>1,4</sup>, ALBERTINA P. LIMA<sup>2</sup> & DOMINGOS J. RODRIGUES<sup>3</sup>

<sup>1</sup> Universidade Federal do Amazonas, Departamento de Biologia, Av. General Rodrigo Otávio Jordão Ramos 3000, 69077-000, Manaus – AM, Brazil

<sup>2</sup> Instituto Nacional de Pesquisas da Amazônia, Coordenação de Pesquisas em Ecologia, Av. André Araújo 2936, 69011-970, Manaus – AM, Brazil

<sup>3</sup> Universidade Federal de Mato Grosso, Instituto de Ciências Naturais, Humanas e Sociais, Av. Alexandre Ferronato 1200, 78557-267, Sinop – MT, Brazil

<sup>4</sup> Corresponding author: [menin@ufam.edu.br](mailto:menin@ufam.edu.br)

The *Leptodactylus pentadactylus* species group is composed of 19 species of medium to large-sized frogs with distributions in tropical forest, cerrado, and caatinga habitats of Central and South America (Frost 2010). Nine of them are associated with Amazonian Biome (Frost 2010). The larvae of five species have been formally described for species occurring in this region: *L. knudseni*, *L. lithonaetes*, *L. rhodomystax*, *L. rhodonotus*, and *L. rugosus* (Heyer 1979, 1995; Heyer & Thompson 2000; Heyer & Heyer 2006; Rodrigues *et al.* 2007). The majority of the species in the *L. pentadactylus* group deposits foam nests in excavated basins close to water bodies and the tadpoles complete their development in the water (see Silva & Giaretta 2009). But other species (*L. pentadactylus* and *L. stenodema*) deposit foam nests in burrows or cavities in the forest floor isolated from forest pools or swamps and the tadpoles complete their development in the nests (Hero & Galatti 1990). The tadpole of *L. pentadactylus* has been mentioned briefly in two papers, but has not yet been formally described. Hero & Galatti (1990) presented a brief description of specimens from Manaus, Brazil; and Hero (1990) described a few external features (*e.g.* LTRF and body coloration) for an identification key of tadpoles of the Brazilian central Amazon. In this paper we describe the tadpole of *L. pentadactylus* based on individuals from several stages of development and also provide comments on the spawning sites.

We collected tadpoles of *L. pentadactylus* on 12 November 2003 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, and on 15 January 2005 in the municipality of Careiro, near the city of Careiro da Várzea on the southern margin of Rio Amazonas, 34 km S of Manaus on Highway BR 319 (03°22'26.3"S; 59°52'06.4"W), Amazonas, Brazil. Five tadpoles were fixed (5 % formalin) after collection. Identification was based on newly metamorphosed individuals obtained after keeping two tadpoles of Careiro municipality in the laboratory (Fig. 1F and 1G). We obtained the tadpoles from one burrow found in the forest floor isolated from water bodies in RFAD; the other tadpoles were found by Natan da Silva Melo in one burrow in a small remnant of paleovárzea forest along the margin of a small river, the Paraná do Castanho. Another five individuals collected/fixed and identified by U. Galatti and J.-M. Hero in October 1987 at RFAD were obtained from the Herpetological Collection of the Instituto Nacional de Pesquisas da Amazônia (INPA-H 1359, 1360 and 10321). Descriptive terminology, morphometric variables and developmental stages follow Altig & McDiarmid (1999). Voucher specimens were deposited in the Herpetological Collection of the Instituto Nacional de Pesquisas da Amazônia (Tadpole lot: INPA-H 26010, 26011).

**Description of tadpoles:** The description is based on tadpoles at stage 36 (INPA-H 10321). Body ovoid and slightly compressed in lateral view (Fig. 1A); ovoid in dorsal view (Fig. 1B). Body 23.8 % of total length (at stage 36). Snout rounded in lateral and dorsal views. Eyes small, directed dorsolaterally. Nostrils small, rounded, dorsolaterally positioned. Spiracle single, sinistral, lateroventral, posteriorly directed, opening below the mid-level of body; visible in dorsal view. Vent tube broad, medial, fused to the ventral fin and opening posteriorly. Tail long, about 76.2 % of the total length (depending on the stage; see Table 1). Maximum tail height two times larger than tail muscle height. Caudal muscle heavy, higher than dorsal and ventral fins along the anterior two-thirds of the tail. Dorsal fin originating at the tail-body junction, gradually increasing for one-third of the tail length, and gradually diminishing after that toward the tip. 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, gradually diminishing toward the tip.

Oral disc (Fig. 1C) terminal, 3.0 mm wide. Marginal papillae uniseriate, with gap on anterior labium. Submarginal papillae absent. Marginal papillae of anterior labium greater than on posterior labium. Labial tooth row formula (LTRF)