



## The Tadpole of *Vitreorana oyampiensis* (Anura, Centrolenidae) in Central Amazonia, Brazil

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The family Centrolenidae contains about 148 species (Frost 2009), 11 genera and two subfamilies, distributed from southern Mexico to Panama, through the Andes from Venezuela to Bolivia, with species in the Amazon and Orinoco river basins, the Guiana Shield region, and the Atlantic forests of southeastern Brazil and northeastern Argentina (Guayasamin *et al.* 2009). The subfamily Centroleninae contains nine genera (*Centrolene*, *Chimerella*, *Cochranella*, *Espadarana*, *Nymphargus*, *Rulyrana*, *Sachatamia*, *Teratohyla*, and *Vitreorana*; Guayasamin *et al.* 2009). In spite of the high diversity in this subfamily, only the larvae of 15 species are well known (*Centrolene altitudinale*, *C. daidaleum*, *C. geckoideum*, *C. hesperium*, *C. venezuelense*, *Cochranella granulosa*, *Espadarana andinum*, *E. prosoblepon*, *Teratohyla midas*, *T. pulverata*, *T. spinosa*, *Vitreorana castroviejoi*, *V. eurygnatha*, *V. helenae*, and *V. uranoscopa* - Starret 1960; Duellman 1978; Heyer 1985; Cadle & McDiarmid 1990; Mijares-Urrutia 1990; Rada de Matinez 1990; Rueda-Almonacid 1994; Hoffmann 2004; Señaris & Ayarzagüena 2005; Rada *et al.* 2007). Thirteen of them are associated with Amazonian forests or forested slopes of the Andes (Frost 2009). The tadpole of *Vitreorana oyampiensis* (= *Cochranella oyampiensis*) has not been formally described; it was mentioned briefly (diagrammatic drawings and larval color notes) in Hero's tadpole identification key from Central Amazonia (Hero 1990). In this paper we describe the tadpoles of *V. oyampiensis* and also provide comments on the spawning sites, clutch size, breeding periods and development site of tadpoles.

We collected two clutches of *Vitreorana oyampiensis* in a stream in October 2008 at Reserva Florestal Adolpho Ducke (RFAD) (02°55' and 03°01'S, 59°53' and 59°59'W) in Manaus, Amazonas, Brazil and sporadic observations on amplexant pairs and clutches were made from 2002 to 2005. We obtained one clutch from one amplexant pair found breeding on the vegetation above a stream (2 m of width); the other clutch was found 20 cm away from the first one, on the same plant on the margin of the stream. One clutch contained eggs and the other contained developing embryos. Clutches were maintained on the leaves of a plant inside a container with tap water until hatching. Tadpoles were reared in 40 x 60 x 10 cm plastic basins. Soil and leaf litter provided substrate for the basin. Rabbit chow was used as a supplementary food source. Most tadpoles died a few days after hatching, and only five tadpoles were preserved after 25 days. Another six individuals collected and identified by J.-M. Hero in April 15, 1986 in Acará stream at RFAD and fixed in formalin immediately after collection were obtained from the Herpetological Collection of the Instituto Nacional de Pesquisas da Amazônia (INPA-H 1592). *Vitreorana oyampiensis* is the unique species of the family Centrolenidae recorded in RFAD (Lima *et al.* 2006). Thus, the tadpoles collected in 1986 can be related to this species. Tadpole stages were defined following Gosner (1960). Descriptive terminology and morphometric variables follow Altig & McDiarmid (1999). Measurements were taken with millimetric oculars. Voucher specimens were deposited in the Herpetological Collection of the Instituto Nacional de Pesquisas da Amazônia (Tadpole lot: INPA-H 25382).

**Description of tadpoles:** The description is based on eleven tadpoles at stage 25. Body elongate and depressed in lateral view (Fig 1A) and rectangular and elongate in dorsal view (Fig 1B). Body and tail 27–28 % and 72–73 % of total length, respectively. Body wider than deep. Maximum body width behind eyes. Snout broad and truncate in dorsal and ventral view and flattened in lateral view. Eyes dorsal, small, close together, and faced dorsolaterally. Interorbital distance six times larger than maximum eye diameter. Narial openings very small, nearer snout than eyes. Spiracle single, short, sinistral, positioned on longitudinal axis of body, directed posteriorly. Vent tube short, positioned along