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The tadpole of the hylodid frog *Hylodes ornatus* (Bokermann, 1967), including chondrocranium description, and advertisement call

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The genus *Hylodes* Fitzinger is composed of diurnal frogs that live associated to lotic streams in forests (Lingnau *et al*. 2008; Silva & Benmaman 2008). In Brazil, this genus occurs from the states of Espírito Santo to Rio Grande do Sul (Lingnau *et al*. 2008; Frost 2011). *Hylodes* currently comprises 24 species (Frost 2011) distributed in four species groups (Heyer 1982): *glaber*; *lateristrigatus*; *mertensi*; and *nasus*. *Hylodes ornatus* (Bokermann) are included in "*Hylodes lateristrigatus"* species group with other 17 species (Silva & Benmaman 2008; Canedo & Pombal 2007). Fourteen out of 24 species of *Hylodes* have their larvae described (Pirani *et al*. 2011).

Hylodes ornatus is known only from the type locality in high lands of Parque Nacional do Itatiaia, above 2000 m, municipality of Itatiaia, state of Rio de Janeiro, southeastern Brazil (Frost 2011). Data from tadpoles and vocalizations of this species are unknown. Only 11 species of *Hylodes* have their vocalization formally described (Lingnau & Bastos 2007; Silva & Benmaman 2008).

The tadpoles were collected in November 2007 in the same stream where a *H. ornatus* male was calling. The other species of the genus *Hylodes* which inhabits the Parque Nacional do Itatiaia and the adjacencies are *H. glaber* (Miranda-Ribeiro), *H. regius* Gouvêa and *H. sazimai* Haddad and Pombal (Miranda-Ribeiro; 1926 Gouvêa; 1979; Nuin & Garcia 2002). However, the stream in which the tadpoles were collected has been frequently visited by the third author in the last seven years, without any record of another species. The development stages follow Gosner (1960). The description was based on tadpoles in stage 25–27, 32 and 37. Thirteen tadpoles were anesthetized with 5% lidocaine, fixed and preserved in 5% formaline and housed at the amphibian collection of the Museu Nacional, Rio de Janeiro (MNRJ 35053). The description and measurements follow Altig & McDiarmid (1999). Measurements were taken with a caliper to the nearest 0.01 mm and with a milimetric ocular coupled to stereoscopic microscopy Zeiss Stemi SV8. For the description of the oral internal features, two specimens in stage 28 and one in stage 30 were dissected and stained with a 1% methylene blue solution. The terminology used here follows Wassersug (1976). Three specimens, one in stage 26, one in 28 and one in stage 37 were dissected and stained for description of the chondrocranium. The terminology used here follows Larson & Sá (1998).

The calls of one male (MNRJ 33405) were recorded at a streamlet near to the road between the municipality Itamonte and Brejo da Lapa, state of Minas Gerais, Brazil, in the Parque Nacional do Itatiaia, on 29 December 2002. Calls were recorded with a Panasonic RQ-L30 recorder, at an air temperature of 15ºC at 5:35 pm. Recordings were analyzed in a PC-Pentium with the software Avisoft-SASlab Light for Windows, version 3.74. The vocalizations were digitized at a sampling frequency of 16 kHz and 16 bit resolution. For the acoustic characterization and sonogram construction the following parameters were used: fft-length = 256; frame = 100%; Window = flat top; and overlap = 50%. Power spectrum graphics were built up using Sound Ruler with the following parameters: fft size = 128; Hamming.

Description of tadpole. (stage 25-27, 32 and 37, the proportion are in mean values and ranges are show in parentheses) The body is robust and elongated, ovoid in dorsal and lateral views (Fig. 1 A, B, C). Body length corresponds to 38.1% (34.4% – 41.1%) of total length. Body height corresponds to 101.3% (86.4% – 120.4%) of tail height. Tail represents about 62.8% (51.5% – 68.9%) of the total length. Snout rounded in dorsal and in lateral views, truncate in lateral view in some individuals. Body with a ventral depression anterior to the intestines. Eyes small, positioned dorsally and directed dorsolaterally, eyes diameter 5.9% (4.5% – 8.5%) of body length. Interorbital distance 87% (66.5% – 101.1%) of internostril distance. Distance between the eye and nostril 51.3% (47.7% – 59.5%) of the distance between the eye and snout.

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