



The advertisement call of *Gastrotheca fissipes* Boulenger, 1888 (Anura, Hemiphractidae) with comments on its distribution

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Hemiphractidae contains five genera (Frost 2011; Duellman *et al.* 2011), of which *Gastrotheca* Fitzinger is the most diverse with 60 species in Central and South America. Eight species of *Gastrotheca* occur in eastern and southeastern Brazil (Izecksohn *et al.* 2009; Frost 2011). According to Caramaschi and Rodrigues (2007) a comprehensive analyses of phylogenetic relationships between species of *Gastrotheca* from the Atlantic Rain Forest of Brazil still remains to be done. Thus, they separated the species of this genus in three phenetic assemblages, of which *Gastrotheca fissipes* is placed alone in a group. According to Duellman (1984) the distribution of *Gastrotheca fissipes* ranges from the state of Pernambuco to Espírito Santo. Recently, Izecksohn *et al.* (2009) suggested that the species formerly known as *G. fissipes* represented two distinct species. They described *G. megacephala* as a new species occurring from Espírito Santo to southern Bahia and restricted *G. fissipes* to occur only at the type locality, Igarassú, Pernambuco. In the present study we describe the advertisement call of *G. fissipes* and compare it with the advertisement call of *G. megacephala*. Additionally we provide new data on its geographical distribution.

Advertisement calls of one male of *G. fissipes* (Fig. 1.A) were recorded at “Reserva Ecológica da Michelin”, municipality of Igrapiúna (13°49' S, 39°08' W), state of Bahia, Brazil. New records of *G. fissipes* are shown in figure 1.B. Voucher specimens were deposited at the zoological collection of Universidade Estadual de Santa Cruz, Ilhéus (MZUESC 9291), Bahia, Brazil, and amphibian collection of the “Prof. Adão José Cardoso” Zoology Museum, Universidade Estadual de Campinas (ZUEC, 16611, 16612, 16643, 16644), São Paulo, Brazil. Specimens were identified by Luis Felipe de Toledo, curator of amphibians and reptiles at the Zoology Museum of Universidade de Campinas (UNICAMP).

Izecksohn *et al.* (2009) separated *Gastrotheca megacephala* from *G. fissipes* mainly through the relation between head width and snout-vent length. In *G. megacephala* the head width represents 41 ? 44% of the snout-vent length, while this relation corresponds to 37% in *G. fissipes*. The individuals examined in our study have a relation of 35 ? 37%, thus agreeing with the diagnosis provided by Izecksohn *et al.* (2009) for *G. fissipes*. The individuals collected in southern Bahia show slight differences in coloration: they do not have a light blotch under the eye as described for individuals from the type locality in Pernambuco.

Calls were recorded with a Marantz PMD 660 digital audio recorder with a unidirectional Sennheiser ME45 microphone positioned 2 m from the calling frog. Recordings were analysed at a resolution of 16 bit and 48 Hz sampling rate. Waveform and spectrogram (Fig. 1.C and D) were made using Raven Pro 1.3 and analyzed with a Fast Fourier Transformation of 256 points, 69% overlap for an entire call and Window Hamming. For all other configurations the “default” settings of Raven were used. Terminology follows Duellman and Trueb (1994).

From August 2010 until February 2011, we heard several *G. fissipes* vocalizing in the forest and in the rubber plantation in the study area. In most cases, males called from branches of trees at about four meter height. One male with snout-vent length (SVL) of 64.9 mm was recorded at 22:00 h on 26 February 2011 from herbaceous vegetation at 4.5 m above the ground at an air temperature of 24.3°C.