The Rhinella crucifer species group currently comprises six species of toads: *R. abei* (Baldissera, Caramaschi & Haddad, 2004); *R. crucifer* (Wied-Neuwied, 1821); *R. henseli* (A. Lutz, 1934); *R. ornata* (Spix, 1824); *R. pombali* (Baldissera, Caramaschi & Haddad, 2004); and, *R. inopina* Vaz-Silva, Valdujo & Pombal, 2012. Recent genetic studies suggest five species in the *R. crucifer* species group and show evidence of hybridization between *R. crucifer* and *R. ornata* (Thomé et al. 2012).

With an extensive geographical distribution (Thomé et al. 2012; Frost, 2014), the species of *Rhinella crucifer* group occur in the Atlantic rainforest, Cerrado and transitional areas between these domains (Baldissera et al. 2004; Thomé et al. 2010; Arruda et al. 2014). *Rhinella inopina* (Fig. 1A) was recently described, occurring in Seasonal Tropical Dry Forests enclaves of the northeastern of Cerrado domain within the limits of the States of Goiás, Tocantins and Bahia in Brazil. More recently this species was recorded in the northwest Minas Gerais state, in Parque Nacional Cavernas do Peruaçu, municipality of Januária and in the Área de Proteção Ambiental do Rio Pandeiros, municipality of Bonito de Minas, both inside the Cerrado biome (Arruda et al. 2014). Information on advertisement calls is available for *R. ornata*, *R. pombali*, and *R. crucifer* (Heyer et al. 1990, where the call described as *Bufo crucifer* represents *R. ornata*; Lourenço et al. 2010; Oliveira et al. 2014). Herein we describe the advertisement call of *R. inopina*, recorded at its type-locality in the municipality of São Domingos, State of Goiás, Brazil.

On September 9, 2013, we recorded 39 calls, from two males calling at the edge of the Galheiros Hydroelectric Power Plant reservoir, near a remaining of Seasonal Tropical Dry Forest in the Cerrado biome at the São Domingos municipality, northeastern Goiás (13°23′30″ S, 46°23′32″ W). Males were found calling at night, above partly submerged leaves, trunks and also at the edge of the reservoir. We used a Marantz PMD 671 digital audio recorder set at 44.1 kHz sample rate and 16 bits resolution coupled to a directional microphone Sennheiser ME66/K6. Call editing and analysis were performed using Sound Ruler 0.9.6.0 (Gridi-Papp, 2007) for frequency analysis and to generate figures of oscillograms and audiograms at Hanning window type, 256 FFT length and an overlap of 0.9 between FFTs. We measured temporal parameters manually, using Adobe Audition CS6. All measurements are given as mean ± SD (standard deviation), followed by range in parentheses. Terminology of temporal and acoustic parameters follows Heyer et al. (1990). Voucher specimens are deposited at the Zoological Collection of the Universidade Federal de Goiás (ZUFG), Goiânia, state of Goiás, Brazil (ZUFG 7959-7960).

The advertisement call of *Rhinella inopina* (Figure 1B, 1C) consists by a series of pulsed notes. The mean call duration was 3.40 ± 0.87 s (1.31–4.80 s; N = 39), and call interval was 6.12 ± 0.87 s (1.31–4.80 s; N = 39). The number of notes per call was 16–21 notes per second; the note rate was 62 ± 18 notes (23–89; N = 39), with mean duration 0.017 ± 0.003 s (0.013–0.025 s; N = 1562), and mean interval of 0.036 ± 0.003 s (0.033–0.043 s; N = 1482). The dominant frequency was 1.070 ± 0.03 kHz (0.940–1.100 kHz; N = 38). The number of pulses per note ranged from 1 to 3 and note rate was 16–21 notes per second.

Within the *Rhinella crucifer* species group, the advertisement call of *R. inopina* is more similar to that of *R. crucifer* given that some acoustic parameters in the two species overlap: number of notes per call (*R. inopina* 23–89; *R. crucifer* 31–104); number of pulses per note (*R. inopina* 1–3; *R. crucifer* 1–5); call duration (*R. inopina* 1.31–4.80s; *R. crucifer* 1.47–5.53 s); duration of notes (*R. inopina* 0.013–0.025 s; *R. crucifer* 0.017–0.036 s) and the note rate (*R. inopina* 16–21 notes per second; *R. crucifer* 17–25 notes per second). The difference between them is the dominant frequency that is higher in *R. inopina* (0.940–1.100 kHz) than that of *R. crucifer* (0.750–0.937 kHz) (Oliveira et al. 2014).
References


