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The advertisement call of the endemic *Bokermannohyla martinsi* (Bokermann, 1964) (Anura: Hylidae) from southern Espinhaço range, southeastern Brazil

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The Brazilian hylid genus *Bokermannohyla* Faivovich, Haddad, Garcia, Frost, Campbell & Wheeler, 2005 is currently composed of four (*B. circumdata*, *B. claresignata*, *B. martinsi*, and *B. pseudopseudis*) species groups (Faivovich *et al.* 2005). To date, the *Bokermannohyla martinsi* species group comprises only three species (Faivovich *et al.* 2009): *B. martinsi* (Bokermann, 1964), *B. langei* (Bokermann, 1965), and *B. juiju* Faivovich, Lugli, Lourenço & Haddad, 2009, whose advertisement calls remain unknown to science. *Bokermannohyla martinsi* is a narrowly distributed hylid frog species endemic to the southernmost portion of the Espinhaço range, known as Quadrilátero Ferrífero (QF). Located in the state of Minas Gerais, southeastern Brazil, the QF is considered an area of “special biological importance” (Drummond *et al.* 2005). Notwithstanding, because QF is one of the most important iron-ore mining districts in the world (Spier *et al.* 2003), it has increasingly been target of anthropogenic threats, being one of the most endangered Brazilian landscapes (Jacobi *et al.* 2007; Jacobi & Carmo, 2008). Herein, we describe for the first time the advertisement call of a member of *B. martinsi* group, *B. martinsi*.

Recordings from a single male were made in October 2010 at the Pico do Sol (20°6'42.5"S, 43°26'52.6"W, 1904 m a.s.l.), Private Natural Patrimony Reserve (RPPN) Serra do Caraça (type locality of *B. martinsi*; see Bokermann, 1964), municipality of Santa Bárbara, state of Minas Gerais. Additionally, four males were recorded at Serra da Calçada, municipality of Brumadinho, state of Minas Gerais (20°6'4.8"S, 43°59'19.5"W, 1439 m a.s.l.), three males were recorded in October 2009 and one male in February 2012. Vouchers specimens and their respective recordings are housed at the Coleção Herpetológica da Universidade Federal de Minas Gerais—UFMG—and calls at the accessory, vocalization collection—UFMG-V—under collection records UFMG 767–769, 5567, 10486 and UFMG-V 1–5.

Recordings were made using a Marantz PMD 660 digital recorder and a Sennheiser microphone ME66/K6. Digital recordings were carried out at a 44 kHz sampling rate, 16-bit sampling size, and saved in wav format. Calls were analyzed using the software Raven Pro 1.4 (Cornell Lab of Ornithology Research Program Bioacoustics Workstation). Spectrograms were produced with a FFT of 256 points, frame overlap = 75%, and Hann function. The parameters analyzed were: note duration (time from the beginning to the end of one note, measured on the oscillogram); number of pulses (number of pulse peaks in one note on the oscillogram); dominant frequency range (band of frequency with more energy in call, measured on the power spectrum, from the minimum to the maximum frequency of the higher energy region); dominant frequency (Cocroft & Ryan, 1995; on Raven Pro it is called peak frequency and was measured directly from the software). The note and pulse definitions follow Duellman & Trueb (1994).

The advertisement call of *Bokermannohyla martinsi* is composed of two notes, treated here as “A” and “B” (Fig. 1A). Values are presented as min–max (average ± standard deviation; n). Note A is composed of 20–28 pulses (23.9 ± 1.97; n = 42) with note duration of 49–129 ms (103 ± 20; n = 68); dominant frequency range varies from 963.7–2077.7 Hz. We found three values for dominant frequency that vary between the notes measured: 1312.5 Hz (n = 12), 1500 Hz (n = 51), and 1687.5 (n = 5). Note B is composed of 18–27 irregularly spaced pulses (22.3 ± 2.69; n = 15) with note duration varying between 350–809 ms (586 ± 140; n = 15); dominant frequency range varies from 291.4–986.9 Hz and dominant frequency is emitted at 562.5 Hz (n = 15). Note A is often emitted alone, without being followed by note B. In this case, the interval between notes A varies from 1808–10895 ms (5916 ± 1637; n = 53). When note A is followed by note B, the interval between them varies from 327–1155 ms (703 ± 227; n = 15).

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