



## The advertisement call of *Rhinella granulosa* (Anura, Bufonidae)

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The *Rhinella granulosa* species group was taxonomically reviewed by Gallardo (1965) and most recently by Narvaes and Rodrigues (2009). This last review recognized twelve species (*Rhinella granulosa*, *R. pygmaea*, *R. bergi*, *R. major*, *R. mirandaribeiroi*, *R. azarai*, *R. nattereri*, *R. fernandezae*, *R. dorbignyi*, *R. merianae*, *R. humboldti*, *R. centralis*) distributed along the open habitats of South America and Panama (Narvaes & Rodrigues, 2009). Recently, a new species (*R. bernardoi*) was described from San Juan province, in Argentina (Sanabria et al., 2010). Both revisions and the description paper were based on morphological and morphometric characteristics. Despite the relevance of acoustic parameters in anuran taxonomy, the advertisement call of only one species of the *R. granulosa* group has been formally described. Köhler *et al.* (1997) described the vocalization of *Rhinella major* from Bolivia, considered at that moment as the subspecies *Bufo granulosis mini*. Herein we describe the advertisement call of *Rhinella granulosa*, a species occurring in the Caatinga domain of northeastern Brazil according to Narvaes and Rodriguez (2009).

**TABLE 1.** Call parameters of seven individuals of *Rhinella granulosa* recorded in Rio Grande do Norte State, Brazil. Duration is expressed in seconds and frequency in Hertz. SVL: snout-vent length. At: air temperature; Ct: calling site temperature.

Field number (SVL in mm)	Duration (Range)	Dominant frequency (Range)	Notes/call (Range)	Call/min	At [°C]	Ct [°C]
AAGARDA1741 (45.03)	5.29 ± 0.89 (3.83 – 6.78)	3040.48 ± 222.58 (2670.1 – 3186.9)	208.8 ± 29.32 (159 – 278)	2.4	28.6	28.8
AAGARDA1572 (39.84)	3.67 ± 0.72 (2.43 – 4.69)	2928.5 ± 0 (2928.5 – 2928.5)	137.3 ± 27.01 (91 – 175)	5.06	28.4	–
AAGARDA1574 (50.63)	3.53 ± 0.39 (3.02 – 4.09)	2678.74 ± 188.02 (2497.9 – 2928.5)	130.2 ± 14.05 (112 – 151)	9.65	27.1	–
AAGARDA1575 (39.62)	3.76 ± 0.63 (2.728 – 4.83)	2902.69 ± 107.81 (2842.4 – 3100.8)	136.2 ± 22.91 (98 – 175)	3.2	27.1	–
AAGARDA0107 (41.69)	4.76 ± 0.62 (3.90 – 6.04)	3014.61 ± 70.33 (2928.5 – 3186.9)	172.9 ± 23.56 (139 – 220)	5	–	27.2
AAGARDA0108 (43.47)	3.69 ± 0.71 (2.45 – 4.50)	2928.5 ± 0 (2928.5 – 2928.5)	130.7 ± 23.95 (89 – 157)	7.09	–	26.7
AAGARDA0106 (43.42)	3.51 ± 0.32 (3.07 – 3.93)	2850.99 ± 63.56 (2756.2 – 2928.5)	127.5 ± 12.92 (107 – 141)	7.2	28.6	–
Average	4.03 ± 0.61 (2.43 – 6.78)	2906.36 ± 93.18 (2497.9 – 3186.9)	149.08 ± 21.96 (89 – 278)	5.66		

Seven males of *Rhinella granulosa* were recorded with a Marantz® PMD 660 digital recorder coupled with a Sennheiser® e614 omni-directional microphone. Each male was recorded for five minutes using 44 kHz at 16 bit sampling size and the recordings saved in uncompressed .wav format. Six individuals were calling near an artificial permanent pond located in the urban area of the Natal municipality, Rio Grande do Norte State (RN), Brazil. An additional male was recorded at an anthropic floodplain located in the municipality of Macaíba, RN, Brazil. After recording, the calling males were collected, killed with 5% xylocain cream, individually tagged, and preserved in 10% formalin. Spectrograms were constructed with Raven Pro 1.3 for Windows (Cornell Lab of Ornithology) with the