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The advertisement call of *Phyllodytes gyrinaethes* Peixoto, Caramaschi & Freire, 2003 (Anura, Hylidae)

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Phyllodytes gyrinaethes Peixoto, Caramaschi & Freire, 2003 is an endemic species from the Atlantic Forest of Northeast Brazil, occurring in the states of Alagoas and Pernambuco (Freire & Peixoto 2004). The red color pattern on the inguinal region and concealed surfaces of the hind limbs together with a highly modified tadpole makes *P. gyrinaethes* the most different species of the genus (Peixoto *et al*. 2003), being unique and in its own species group according to Caramaschi *et al.* (2004).

Despite the group arrangements for *Phyllodytes* proposed by Caramaschi *et al.* (2004), based only in color pattern, there are pronounced differences regarding vocalizations and tadpoles between the species. Faivovich *et al.* (2005) analyzed only *Phyllodytes luteolus* on the systematic review of the Hylidae family and found no synapomorphies for the species group proposed by Caramaschi *et al.* (2004), and mentioned that more tests were necessary to understand the phylogeny of the genus. Jowers *et al.* (2008) considered the genus paraphyletic, proposing a new genus (*Phytotriades*) for *Phyllodytes auratus*. Thus, an integrative taxonomy research, using molecular and vocalization approaches, is needed to evaluate the species relationships within *Phyllodytes* species. Herein, we described for the first time the advertisement call of *P. gyrinaethes*, in order to contribute for the elucidation of the genus phylogeny.

We recorded two males of *P. gyrinaethes* (Figure 1), one on December 4 of 2012 and the second on March 13 of 2013, both at RPPN Pedra D'Antas, municipality of Jaqueira (8°42'15.5" S, 35°51'06.2" W, 708 m.a.s.l.), state of Pernambuco, northeastern Brazil. The advertisement calls were recorded using a professional digital recorder Marantz PMD 660 equipped with a Yoga EM-9600 external directional microphone and saved as uncompressed files on flash memory cards. Digital recordings were sampled at 44 KHz and 16 bit resolution and saved in wave format. We analyzed calls with Raven Pro 1.2 for Windows (Cornell Lab of Ornithology). We constructed spectrograms with the following parameters: FFT 512, overlap 50, and DFT 512. The dominant frequency of the calls was measured through the notes which composed the calls.

Voucher specimens were captured after call recordings, euthanized, preserved in 70% ethanol, and deposited in the Coleção Herpetológica of the Universidade Regional do Cariri (URCA-H). Terminology for acoustic parameters follows Heyer *et al.* (1990) and Martins & Jim (2003).

We found individuals of *P. gyrinaethes* occurring in forest areas from 550 to 710 m.a.s.l. Calling activity was monitored for ten days on August (n=12 calling males), five days on December of 2012 (n=14 calling males), and six days on March of 2013 (n=22 calling males) with presence of females with mature eggs and presence of tadpoles in bromeliads. The calling males were found in bromeliads ranging from 0.1–10 meters high. We also found *P. edelmoi* in calling activity at the same area, however in lower abundance than *P. gyrinaethes*, being most commonly found in the forest edge habitats in lower altitudes.

The advertisement call of *Phyllodytes gyrinaethes* is composed by a series of multipulsed notes with a mean of 4.9 ± 0.6 (4–6; n=13) notes per call. The call duration has an average of 1.7 ± 0.3 s (1.3–2.3; n=13), and intercall interval is of 52.4 ± 25.7 s (21.2–88.7; n=11). The mean note duration of the calls was 0.04 ± 0.01 s (0.02–0.07; n=64), with an internote interval of 0.4 ± 0.03 s (0.3–0.5; n=51) (Figure 2). Dominant frequency of the call ranges from 2531.2–3093.8 Hz (2746.7 ± 158.2; n=67) (Table 1; Figure 2).

To date, only five species have their advertisement call described: *P. edelmoi*, *P. kautskyi*, *P. luteolus*, *P. melanomystax* and *P. tuberculosus* (Weygoldt 1981; Simon & Gasparini 2003; Nunes *et al.* 2007; Lima *et al.* 2008; Juncá

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