



## Calls of five species of the *Scinax ruber* (Anura: Hylidae) clade from Brazil with comments on their taxonomy

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### Abstract

As currently defined, tree frogs of the genus *Scinax* comprises the most species-rich genus within Hylinae. Although in the last decades there have been an increasing number of taxonomic studies on *Scinax*, populations of several species still deserve further studies to assess their taxonomic status. The purpose of this paper is to contribute to the taxonomy and zoogeography of some species of *Scinax* from Brazil assigned to the *Scinax ruber* clade through the description/redescription of their advertisement calls. The advertisement call of *S. duartei* from topotypic specimens and the call of *S. acuminatus* are described here for the first time. The call of *S. duartei* is in disagreement with descriptions from the literature what suggests that an unnamed species is hidden under this specific name. Redescriptions of the calls of *S. crospeospilus*, *S. eurydice*, and *S. hayii* are also provided and compared with previous studies. In order to better assess the taxonomic status of species with advertisement calls that present more than one emphasized frequency, as in some species of the *Scinax ruber* clade, we recommend special attention in the descriptions of the spectral components of these calls.

**Key words:** Advertisement calls, *Scinax acuminatus*, *Scinax crospeospilus*, *Scinax duartei*, *Scinax eurydice*, *Scinax hayii*

### Introduction

Treefrogs of the genus *Scinax* Wagler are one of the most abundant and conspicuous groups of frogs in the Neotropics (De la Riva *et al.* 1994) and, as currently defined, it represents the most species-rich (104 spp.) genus within Hylinae (Frost 2011; Faivovich *et al.* 2010; Nunes & Pombal 2011). *Scinax* species range from southern Mexico to east-central Argentina occurring in almost all major tropical and subtropical ecosystems within this region (Faivovich 2002; Frost 2011).

In the last decade there have been an increasing number of taxonomic studies on *Scinax*, with the description of 18 new species (Frost 2011; Faivovich *et al.* 2010; Nunes & Pombal 2011). Even though, as pointed out by various authors, populations of several *Scinax* species still deserve further studies to assess their taxonomic status (e.g. *S. alter*, Pombal *et al.* 1995; *S. fuscomarginatus*, Cardoso & Pombal 2010; *S. perpusillus*, Silva & Alves-Silva 2008; *S. ruber*, Fouquet *et al.* 2007; *S. x-signatus*, Pugliese *et al.* 2009), what certainly will reveal a larger number of unnamed species.

The monophyletic nature of *Scinax* is well-supported mainly by morphological and molecular characters (Duellman & Wiens 1992; Faivovich 2002; Faivovich *et al.* 2005; Wiens *et al.* 2006; Wiens *et al.* 2010). Within *Scinax*, two major clades have been recognized (Faivovich 2002; Faivovich *et al.* 2005; Wiens *et al.* 2010), the *S. catharinae* clade (to date 37 species), biogeographically associated with the Atlantic rain forest biome of Brazil,