



On the diagnosis and conservation of the poorly known bromeligenous *Scinax arduous* Peixoto, 2002 (Amphibia; Anura; Hylidae)

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Abstract

Since *Scinax arduous* description, many other populations belonging to the *Scinax perpusillus* group have been recorded for the States of Espírito Santo and Minas Gerais, Southeastern Brazil. Both in collections and publications most of these new specimens are identified as *S. arduous*, *Scinax* cf. *arduous*, *Scinax* cf. *perpusillus*, *Scinax* gr. *perpusillus*, *S. perpusillus* and *S. v-signatus*. Such state of affairs may be due to the lack of information on the original description of *S. arduous*. Only two individuals [the holotype (female) and the paratype (male)] were used in the original description and diagnosis, therefore, information on variation and distribution were not available. Furthermore, in *S. arduous* description, the section on coloration in life was based only on two juveniles raised in laboratory. Herein we redefine *Scinax arduous* based on 44 males and 17 females from the type locality, the Municipality of Santa Teresa, in the State of Espírito Santo. In addition, we provide information on its conservation status, distribution, natural history, vocalization, tadpoles, and detailed photographs of both adults and larvae.

Key words: *Alcantarea*, *Scinax perpusillus* group, tadpole, taxonomy, vocalization

Introduction

The treefrog genus *Scinax* Wagler ranges from Argentina and Uruguay to Mexico and is currently composed of 113 species (Faivovich *et al.* 2005; Frost 2015). Faivovich (2002) suggested that the genus is divided in two clades (*S. ruber* and *S. catharinae*). The second clade is composed by the *S. catharinae* and the *S. perpusillus* groups of species, but monophyly of the latter was not adequately tested due to the inclusion of only one species as representative of the group (Faivovich *et al.* 2005). Earlier, Lutz (1968) commented on the similarities exhibited in bromeliads usage by two of the species, *S. perpusillus* (Lutz & Lutz) and *S. v-signatus* (Lutz). Peixoto (1987) named the group “*perpusillus*”, to include close relatives of this bromeligenous group, which is currently composed by 13 species distributed along the Atlantic tropical forest from the State of Santa Catarina to the State of Espírito Santo (Alves-Silva & Silva 2009) and has its most inland record in the State of Minas Gerais (Lacerda *et al.* 2012). The number of species in the *Scinax perpusillus* group is certainly underestimated (Silva & Alves-Silva 2008). Vouchers used to document the occurrence of several specimens are tentatively identified as *Scinax perpusillus*, *Scinax* aff. *perpusillus* or *Scinax* gr. *perpusillus* (see Heyer *et al.* 1990; Pombal & Gordo 2004; Oliveira & Navas 2004; Ramos & Gasparini 2004; Carvalho-e-Silva *et al.* 2008). These uncertainties in properly identifying some of the material is usually related to the poor diagnosis for species of the group, which seems also related to difficulties in defining potential new species.

Scinax arduous Peixoto, 2002 is certainly one of these problematic species. Since its description many other populations of *S. perpusillus* group have been recorded in the State of Espírito Santo and Minas Gerais and referred