

Expanding the known range of *Trachycephalus imitatrix* (Anura: Hylidae) in the state of Minas Gerais, southeastern Brazil

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The genus *Trachycephalus* Tschudi, 1838 actually is composed of 17 species widely distributed from lowlands of Mexico, Central and South America east of the Andes, south to north Argentina and eastern Brazil (Frost, 2017; IUCN, 2017). It is noteworthy that five species [*Trachycephalus hadrocephus* (Duellman and Hoogmoed, 1992), *Trachycephalus jordani* (Stejneger and Test, 1891), *Trachycephalus macrotis* (Andersson, 1945), *Trachycephalus “vermiculatus”* (Cope, 1877), and *Trachycephalus quadrangulum* (Boulenger, 1882)] have not yet been registered in Brazil up to date (Frost, 2017; IUCN, 2017).

Actually 12 species of the genus *Trachycephalus* are known for Brazil (Frost, 2017), six of which [*Trachycephalus atlas* Bokermann, 1966, *Trachycephalus mambaiensis* Cintra, Silva-Jr., Garcia and Zaher, 2009, *Trachycephalus mesophaeus* (Hensel, 1867), *Trachycephalus nigromaculatus* Tschudi, 1838, *Trachycephalus typhonius* (Laurenti, 1768), and *Trachycephalus imitatrix* (Miranda-Ribeiro, 1926)] have already been record in the state of Minas Gerais (Cruz et al., 2009; IUCN, 2017).

Trachycephalus imitatrix (Miranda-Ribeiro, 1926) was originally described as *Hyla imitatrix* (holotype MNRJ 154, by original designation) based on two specimens collected at Parque Nacional da Serra dos Orgãos (22.4956 S, 43.0736 W) municipality of Teresópolis, Rio de Janeiro, Brazil (Frost, 2017). It is a poorly known

arboreal treefrog that has a large and robust body (female SVL 5.3 cm and male SVL 7.1 cm, on average), which exhibits an explosive breeding spawning in permanent water bodies of the forest, being considered a rare species (Cruz et al., 2009; Haddad et al., 2013; Frost, 2017; IUCN, 2017). This species is found in the canopy of the primary forest in mountainous parts of southern and southeastern Brazil (from southern Minas Gerais to northern Rio Grande do Sul) and Argentina (west to east-central Misiones Province) in altitudes from 400 to 1,700 meters a.s.l. (Bertoluci, 2001; Bertoluci and Rodrigues, 2002; Frost, 2017; IUCN, 2017). However, it is worth mentioning that *Trachycephalus imitatrix* was very confused with *Trachycephalus dibernardoi* in the southern region of Brazil prior to its description (Kwet, 1997a; Kwet, 1997b; Kwet, 1998; Kwet and Di-Bernardo, 1999; Kwet, 2001; Frost, 2017).



Figure 2. Geographic distribution of *Trachycephalus imitatrix* (Miranda-Ribeiro, 1926) in the state Minas Gerais, southeastern Brazil. Type locality (triangle), new record (star), and the only record known to the state (circle).

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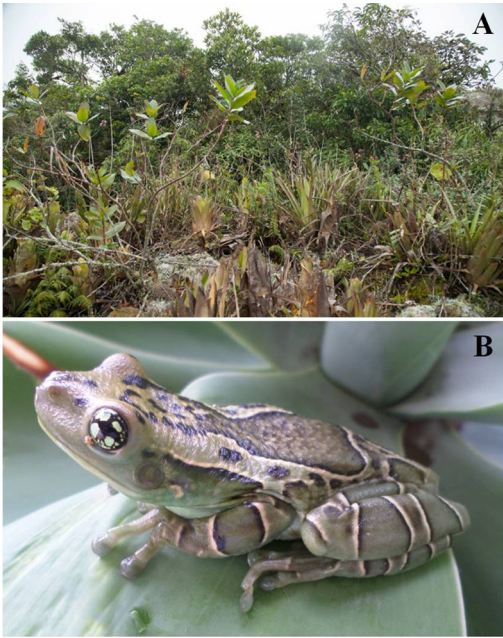


Figure 1. (A) Habitat where *Trachycephalus imitatrix* (Miranda-Ribeiro, 1926) was collected in the municipality of Caldas, southwestern Minas Gerais, Brazil. (B) Adult male of *T. imitatrix* (SVL 70.0 mm) in life.

Nevertheless, *T. imitatrix* has been recorded until now in the state of Minas Gerais only at Parque Estadual do Ibitipoca (21.7166 S, 43.9029 W), which is inserted in the Atlantic Forest domain (Cruz *et al.*, 2009). Here we report the second record of *T. imitatrix* (Miranda-Ribeiro, 1926) in the state Minas Gerais, southeastern Brazil.

During field surveys carried out on 21 February 2017, an adult male of *T. imitatrix* (Figure 1A) was found and captured between 22:00 and 22:30 h inside a bromeliad on a rocky outcrop (21.9796 S, 46.3678 W, 1,730 m a.s.l.) in a transition area (Figure 1B). This spot is a vegetational transition zone (see Rosa and Monteiro, 2012) that belongs to the Reserva Biológica da Pedra Branca, which is inserted at Área de Proteção Ambiental “Santuário Ecológico da Pedra Branca”, municipality of Caldas, southwestern of Minas Gerais state (Figure 2). Voucher specimen was euthanised with 5% xylocaine, fixed in 10% formalin, preserved in 70% alcohol and deposited in the herpetological collection of Escola Superior de Agricultura Luiz de Queiroz (VESALQ 1141), under the SISBio collection license number #48526-1.

This second record of *T. imitatrix* to Minas Gerais expands its distribution in approximately 345 km from the type locality (Parque Nacional da Serra dos Orgãos; Frost, 2017), and approximately 260 km from Parque Estadual do Ibitipoca, the only record in the state of Minas Gerais up to date (Cruz *et al.*, 2009).

T. imitatrix does not tolerate highly disturbed habitats, and the major threats are habitat loss due to agriculture, livestock grazing, wood plantations, logging, and human settlement and for these reasons the population of this species is probably decreasing (IUCN, 2017). In the study region the major threats to the diversity of the flora and fauna are agriculture, pasture areas, and mining, but currently disorderly tourism is also another problem (Rosa and Monteiro, 2012; Rezende *et al.*, 2013; Williams *et al.*, 2014).

Another important fact is that *Trachycephalus imitatrix* is not well-known in any protected areas in Brazil (IUCN, 2017), but it has already been recorded in different protection areas besides the type locality at Parque Nacional da Serra dos Orgãos (Frost, 2017), but also at Parque Nacional da Bocaina (Garey *et al.*, 2014), Parque Estadual do Intervalos (Bertoluci, 2001; Bertoluci and Rodrigues, 2002), Parque Estadual da Serra do Mar (Silva *et al.*, 2017), Parque Estadual do Ibitipoca (Cruz *et al.*, 2009), and now at Reserva Biológica da Pedra Branca, which reinforces the need for preservation of the different types of reserves in Brazil, which despite the poor management, still harbor a great diversity of endemic and rare species.

This new record is important because of the scarcity of data about this species, considered rare (Bertoluci, 2001; Bertoluci and Rodrigues, 2002; Haddad *et al.*, 2013; IUCN, 2017), corroborating with some authors that additional information on the geographical distribution of species is one of the most important criteria used to assess species conservation status and also to plan for future conservation strategies (Drummond *et al.*, 2005; Bressan *et al.*, 2009).

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