Amphibia, Anura, Leptodactylidae, *Leptodactylus cupreus* Caramaschi, Feio and São-Pedro, 2008: Distribution extension

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ABSTRACT: We provide the first record of *Leptodactylus cupreus* out of its type locality, as well the first record of this species in the State of Espírito Santo, southeastern Brazil. The record of *Leptodactylus cupreus* from municipality Santa Teresa extends in approximately 220 km to the northeastern of its geographic distribution and establishes the inferior limit of 800 m in its altitudinal distribution in the Serra da Mantiqueira.

The genus *Leptodactylus* Fitzinger, 1826, is composed of 81 species (Frost 2009) and presents a broad distribution in the American continent, predominantly in the Neotropical region (Ponssa 2008; Frost 2009). Recently, three new species were described: *Leptodactylus sertanejo* Giaretta and Costa, 2007, *Leptodactylus ajurauna* Berneck, Costa, and Garcia, 2008, and *Leptodactylus cupreus* Caramaschi, Feio, and São-Pedro, 2008.

Leptodactylus cupreus (Figure 1) belongs to the *L. fuscus* species group and is related to the *L. mystaceus* complex, being characterized by the large size for the group and color pattern (Caramaschi *et al.* 2008). *Leptodactylus cupreus* has a non-pulsed advertisement call with a rate of about 12 calls/s and dominant frequency between 2,800 and 3,058 Hz (Caramaschi *et al.* 2008). Its call is similar to the call of birds, as an example to the song of Russet-winged-Spadebill, *Platyrinchus leucoryphus* Wied, 1831, (Tyrannidae) (Rupp 2009).

Leptodactylus cupreus is recognized only from the type locality, Lagoa das Bromélias (20°25' S, 43°29' W; 1,227 m above sea level), Parque Estadual da Serra do Brigadeiro, municipality of Ervália, state of Minas Gerais, Brazil (Caramaschi *et al.* 2008).

During a field expedition on November 13^{th} , 2008 in the Municipality of Santa Teresa, state of Espírito Santo, southeastern Brazil ($19^{\circ}57'02''$ S, $40^{\circ}33'54''$ W; 680 m a.s.l.), four adult males were collected in a native forest, at about 20:00 h, during fine rain (air temperature = 25.9 °C; air relative humidity = 84 %). The specimens were deposited in the Museu de Biologia Prof. Mello Leitão (MBML), Santa Teresa, state of Espírito Santo, Brazil (MBML 6844 – 6847). The specimens collected and many others not collected individuals were found calling, hiding themselves in the litter leaves of the dry bed of a stream in this native forest. Collection permit was granted by Instituto Chico Mendes de Conservação da Biodiversidade - ICMBio (# 15.638-1).



FIGURE 1. Adult male of *Leptodactylus cupreus* (MBML 6844) from municipality of Santa Teresa, state of Espírito Santo, Brazil. Photo by J. E. Simon.

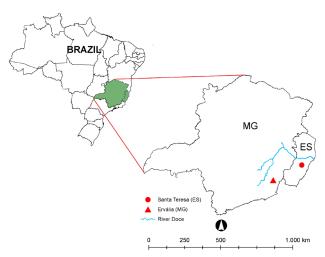


FIGURE 2. Geographic distribution of *Leptodactylus cupreus*: triangle, type locality (Ervália, state of Minas Gerais, Brazil: 20°25' S, 43°29' W, 1,227 m a.s.l.); dot, new record in Santa Teresa (19°57'02" S and 40°33'54" W, 680 m a.s.l.), state of Espírito Santo, Brazil.

This is the first record of *Leptodactylus cupreus* out of its type locality, and the first record in the state of Espírito Santo. The occurrence of the species extends in approximately 220 km (airline) to the northeastern of its previous geographic distribution and establishes the inferior limit of 680 m a.s.l. in its altitudinal distribution in the Serra da Mantiqueira (Figure 2). The Museu de Biologia Prof. Mello Leitão anuran collection contains a specimen of *L. cupreus* (MBML 170) collected by J. P. Abravaya at Reserva Biológica Augusto Ruschi, Santa Teresa, in 1972, before the formal description of the species. This specimen was identified as *Leptodactylus spixi*.

Santa Teresa is considered a world hotspot in amphibians diversity (Rödder *et al.* 2007). The inclusion of *L. cupreus* in the list of amphibians species of this municipality reinforces the importance of this region for the conservation of endemic Atlantic Forest anurans.

ACKNOWLEDGMENTS: We are grateful to Ednaldo Escotá, Lena Trindade, and Gustavo Magnago for the help in the field works. The authors are thankful to Luciano Cajaíba for the elaboration of Figure 2 and to Rogério Luiz Teixeira, Piero A. Ruschi and Rodrigo Lemes Martins for the revision of the manuscript. Three reviewers, Gustavo Prado, Ulisses Caramaschi and an anonymous, provided helpful comments on this manuscript. This study was carried out with financial support of the FAPES/FUNCITEC, municipality of Vitória, State of Espírito Santo, Brazil (Process n^g 38882558/2007).

LITERATURE CITED

- Caramaschi, U., R.N. Feio and V.A. São-Pedro. 2008. A new species of *Leptodactylus* Fitzinger (Anura, Leptodactylidae) from Serra do Brigadeiro, State of Minas Gerais, Southeastern Brazil. *Zootaxa* 1861: 44-54.
- Frost, D.R. 2009. Amphibian Species of the World: Version 5.1. Electronic Database accessible at http://research.amnh.org/herpetology/ amphibia/index.html. American Museum of Natural History, New York, USA. Captured on 12 December 2009.
- Ponssa, M.L. 2008. Cladistic analysis and osteological descriptions of the frog species in the *Leptodactylus fuscus* species group (Anura, Leptodactylidae). *Journal of Zoological Systematics & Evolutionary Research* 46(3): 249-266.
- Rödder, D., R.L. Teixeira, R.B. Ferreira, R.B. Dantas, W. Pertel and G.J. Guarneire. 2007. Anuran hotspots: the municipality of Santa Teresa, Espírito Santo, southeastern Brazil. *Salamandra* 43(2): 91-110.
- Rupp, A. 2009. Sounds of Russet-winged Spadebill (Platyrinchus leucoryphus). Electronic Database accessible at http://www. wikiaves.com.br/buscasimples.php?tm=s. Captured on 14 December 2009.

Received: May 2009 Revised: July 2010 Accepted: August 2010 Published online: October 2010 Editorial responsibility: Mara C. Kiefer