

Distribution extension, new state record and geographic distribution map of *Oreobates remotus* Teixeira-Jr, Amaro, Recorder, Sena and Rodrigues, 2012 (Amphibia, Anura, Strabomantidae) in Central Brazil

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The genus *Oreobates* Jiménez de la Espada currently comprises 17 species (Frost, 2011; Teixeira Jr et al., 2012) occurring in western South America, from southern Colombia to Central Brazil and northwestern Argentina. Most species occur in the Andes at elevations up to 2830 m. However, two species are associated with Dry Forests upon calcareous rock outcrops; *Oreobates heterodactylus* (Miranda-Ribeiro, 1937) and *O. remotus* Teixeira-Jr, Amaro, Recorder, Sena and Rodrigues, 2012. *Oreobates heterodactylus* are currently found in localities of Brazil (Mato Grosso state) and Bolivia (Hedges, Duellman and Heinicke, 2008; Padiál, Chaparro and De La Riva, 2008). A recently new described species, *Oreobates remotus*, has up to now only been reported from the type locality; Cavernas do Peruaçu National Park, in Januária municipality, Minas Gerais state, Brazil. This species inhabits the Dry Forests in the northwest of Minas Gerais state, Brazil (Teixeira-Jr et al., 2012).

In the present note, we report a new record for *Oreobates remotus* (Fig. 1) which considerably extends the known distribution. Voucher specimens have been deposited at the Coleção Zoológica da Universidade Federal de Goiás (ZUFG), under the labels ZUFG 5888–5892 (Collection permit SEMARH 010/2010). The specimens of *O. remotus* collected at the locality presented herein fully agree with the diagnosis presented by Teixeira-Jr et al. (2012).

During a field expedition on the 08th of April 2010 within the municipality of São Domingos, state of Goiás

(13°26'23.76" S, 46°25'52.62" W), two individuals of *O. remotus* were collected in a cave between 0.5 m and 1.0 m height from the floor. The cave is located in a deciduous forest fragment characterized by rocky outcrops. Subsequently, at the same locality, on the 16th of March 2011 we recorded 31 individuals and collected other specimens in similar environments nearby. The constant monitoring of these localities and resulting field sampling data indicate that these populations are apparently stable, despite strong anthropogenic pressure. Remaining fragments of deciduous forest and rocky outcrops sampled are mostly surrounded by pastures.

The record of *O. remotus* from São Domingos municipality represents the first record of this species in the state of Goiás, and extends its range 300 km to the northwest (Fig. 2). Considering that the Cerrado biome is an area of low Strabomantidae diversity, and that the new distribution records of *O. remotus* are located in relictuary Seasonally Dry Tropical Forests, this discovery has important implications for conservation. Data suggest that relictuary Seasonally Dry Tropical Forests

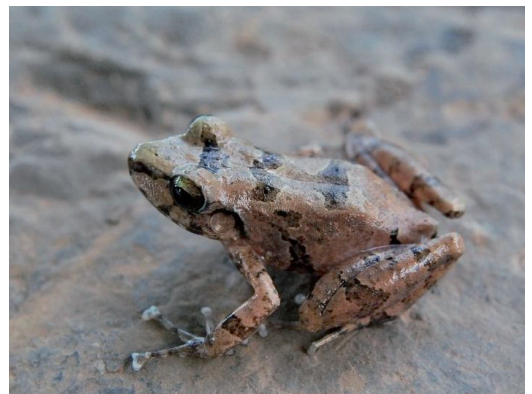


Figure 1. *Oreobates remotus* from São Domingos municipality, state of Goiás, Brazil. Photograph by Sheila P. Andrade (ZUFG 5890).

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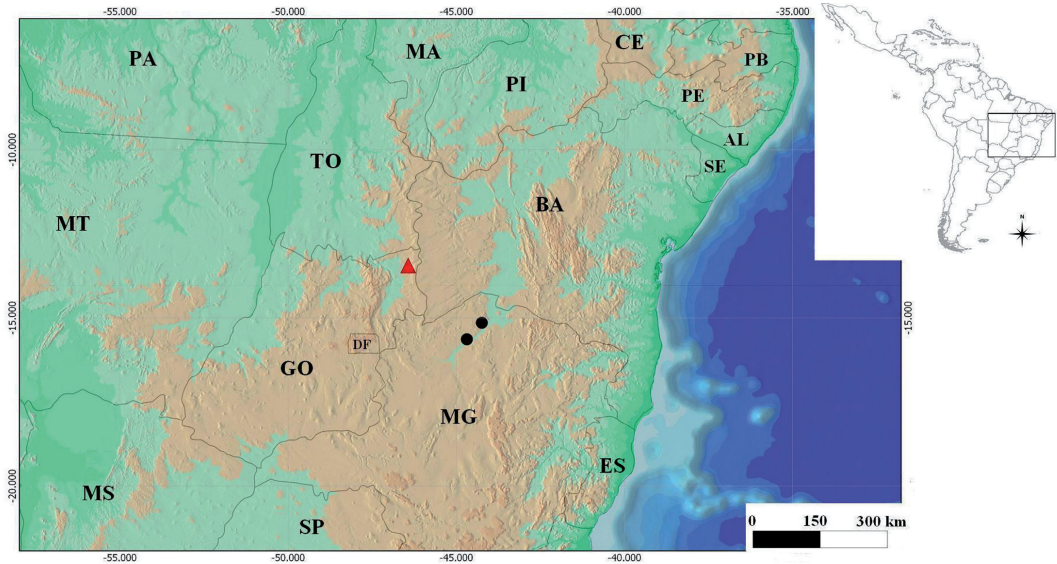


Figure 2. Distribution map of *Oreobates remotus*. Black circles = Januária municipality, Minas Gerais state, Brazil (type locality, literature record); red triangle = São Domingos municipality, state of Goiás, Brazil (new record).

may have a crucial role in biodiversity conservation, being key environments to the maintenance of viable populations of species associated to forest habitats in a regional context of the Cerrado savanna landscape (Silva and Bates, 2002; Werneck and Colli, 2006; Vaz-Silva, Valdujo and Pombal Jr., 2012). Thus, biological studies and conservation efforts of the remaining fragments of these forests are required for a better understanding of distribution patterns and natural history of species typical of this poorly-known and threatened domain.

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References

- Frost, D.R. (2011): Amphibian Species of the World: an online reference. Version 5.5. Electronic Database accessible at <http://research.amnh.org/vz/herpetology/amphibia/>. Captured on 5 May 2011.
- Hedges, S.B., Duellman, W.E., Heinicke, S.B. (2008): New World direct-developing frogs (Anura: Terrarana): Molecular phylogeny, classification, biogeography, and conservation. *Zootaxa* **1737**: 1-182.
- Miranda-Ribeiro, A. (1937): Alguns batrachios novos das coleções do Museo Nacional. *O Campo*. Rio de Janeiro **8**: 66-69.
- Padial, J.M., Chaparro, J.C., De La Riva, I. (2008): Systematics of *Oreobates* and the *Eleutherodactylus discoidalis* species group (Amphibia, Anura) based on two mtDNA genes and external morphology. *Zoological Journal of the Linnean Society* **152**: 737-773.
- Silva, J.M.C., Bates, J.M. (2002): Biogeographic patterns and conservation in the South American Cerrado: a tropical savanna Hotspot. *BioScience* **52**: 225-233.
- Teixeira, Jr., M, Amaro, R.C., Recorder, R.S., Sena, M.A., Rodrigues, M.T. (2012): A relict new species of *Oreobates* (Anura, Strabomantidae) from the Seasonally Dry Tropical Forests of Minas Gerais, Brazil, and its implication to the biogeography of the genus and that of South American Dry Forests. *Zootaxa* **3158**: 37-52.
- Vaz-Silva, W., Valdujo, P.H., Pombal Jr., J.P. (2012): New species of the *Rhinella crucifer* group (Anura, Bufonidae) from the Brazilian Cerrado. *Zootaxa* **3265**: 57-65.
- Werneck, F.P., Colli, G.R.. (2006): The lizard assemblage from Seasonally Dry Tropical Forest enclaves in the Cerrado biome, Brazil, and its association with the Pleistocenic Arc. *Journal of Biogeography* **33**: 1983-1992.