

# *Rhachidelus brazili* Boulenger, 1908 (Squamata: Serpentes: Dipsadidae): New records, range extension and distribution map in Mato Grosso and Mato Grosso do Sul states, Brazil

Luana A. G. Arruda<sup>1</sup>, Robson W. Ávila<sup>2</sup>, Drausio H. Morais<sup>3</sup> and Ricardo A. Kawashita-Ribeiro<sup>1,4\*</sup>

1 Universidade Federal de Mato Grosso, Instituto de Biociências, Coleção Zoológica de Vertebrados. Avenida Fernando Corrêa da Costa, 2367. CEP 78060-900. Cuiabá, MT, Brazil.

2 Universidade Regional do Cariri, Centro de Ciências Biológicas e da Saúde, Departamento de Ciências Biológicas, Campus do Pimenta. Rua Cel. Antonio Luiz, 1161, Bairro do Pimenta. CEP 63105-100, Crato, CE, Brazil.

3 Universidade Estadual Paulista, Instituto de Biociências, Departamento de Parasitologia, Programa de Pós-Graduação em Ciências Biológicas. Distrito de Rubião Júnior s/n. CEP 18618-000. Botucatu, SP, Brazil.

4 Universidade Federal de Mato Grosso, Instituto de Biociências, Departamento de Ecologia, Programa de Pós-Graduação em Ecologia e Conservação da Biodiversidade. Avenida Fernando Corrêa da Costa, 2367. CEP 78060-900. Cuiabá, MT, Brazil.

\* Corresponding author. E-mail: [serpentesbr@gmail.com](mailto:serpentesbr@gmail.com)

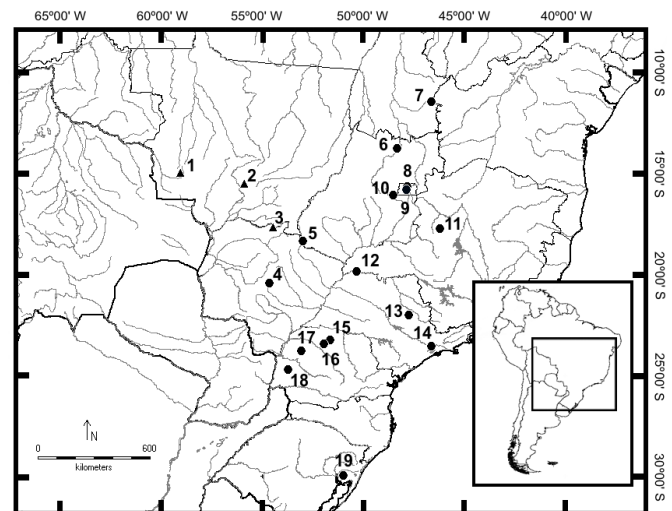
**ABSTRACT:** The present study reports new records of the Dipsadid snake *Rhachidelus brazili* Boulenger, 1908, from Mato Grosso and Mato Grosso do Sul states, Brazil. Our data extend the known geographical distribution ca. 713 km to the northwest and constitute the first record in the Upper Paraguay sub-basin.

The Dipsadid snake *Rhachidelus brazili* Boulenger, 1908 belongs to a monotypic genus of the Pseudoboini tribe (Peters and Orejas-Miranda 1986; Zaher 1999). It is distinguished by more than 24 dorsal scales around midbody, enlarged vertebral scales, uniformly dark brown or black dorsum, predominantly dark venter, (Peters and Orejas-Miranda 1986; Cei 1993; Giraud 2001) and by its relatively robust body compared to other Pseudoboini species.

Bibliographic records for *Rhachidelus brazili* include northeastern Argentina (Misiones; Peters and Orejas-Miranda 1986; Cei 1993; Giraud 2001; Giraud and Scrocchi 2002), southeastern Paraguay (Motte *et al.* 2009) and Brazil (Peters and Orejas-Miranda 1986) from Distrito Federal (Nogueira 2001; França and Araújo 2007; França *et al.* 2008), Goiás (Fernandes and Passos 2002; França and Araújo 2007; Moreira *et al.* 2009; Valdujo *et al.* 2009), São Paulo (Boulenger 1908; Lizaso 1984; Sawaya *et al.* 2008), Paraná (Moura-Leite *et al.* 1996), Minas Gerais (Silveira 2004), Rio Grande do Sul (Lema 1994) and Mato Grosso do Sul (Amaral 1978). *Rhachidelus brazili* has not been reported from Mato Grosso.

Herein we report three new records and a distribution map for *Rhachidelus brazili* in the states of Mato Grosso and Mato Grosso do Sul, Brazil (Figure 1), extending the known geographical distribution of the species to ca. 713 km northwestern from the nearest record in Brazil at Parque Nacional das Emas in the state of Goiás (Valdujo *et al.* 2009). Voucher specimens were obtained from donations of local people and collaborators or collected by the authors in the field (IBAMA permits number: 02001.007079/2010-03), and are housed in the Coleção Zoológica de Vertebrados do Instituto de Biociências da Universidade Federal de Mato Grosso, Cuiabá (UFMT-R): 1

– Cuiabá, Mato Grosso (15°35' S, 56°05' W) UFMT-R 5465; 2 – Vale de São Domingos, Mato Grosso (14°57' S, 59°02' W) UFMT-R 9385 (Figure 2); 3 – Sonora, Mato Grosso do Sul (17°34' S, 54°45' W) UFMT-R 1913.



**FIGURE 1.** Geographic distribution map of *Rhachidelus brazili* in Brazil. Triangles represent the new records, and circles bibliographical records: 1 – Vale de São Domingos, Mato Grosso (this paper); 2 – Cuiabá, Mato Grosso (this paper); 3 – Sonora, Mato Grosso do Sul (this paper); 4 – Campo Grande, Mato Grosso do Sul (Amaral 1978); 5 – Parque Nacional das Emas, Goiás (Valdujo *et al.* 2009); 6 – Serra da Mesa, Goiás (Moreira *et al.* 2009); 7 – São João da Aliança, Tocantins (Fernandes and Passos 2002); 8 – Fercal, Distrito Federal (França and Araújo 2007); 9 – Distrito Federal (França and Araújo 2007; França *et al.* 2008; Nogueira 2001); 10 – Alexânia, Goiás (França and Araújo 2007); 11 – João Pinheiro, Minas Gerais (Silveira 2004); 12 – UHE Água Vermelha, São Paulo (Lizaso 1984); 13 – Itirapina, São Paulo (Sawaya *et al.* 2008); 14 – São Paulo, São Paulo (Boulenger 1908); 15 – Astorga, Paraná (Moura-Leite *et al.* 1996); 16 – Maringá, Paraná (Moura-Leite *et al.* 1996); 17 – Cruzeiro do Oeste, Paraná (Moura-Leite *et al.* 1996); 18 – Toledo, Paraná (Moura-Leite *et al.* 1996); 19 – Gravataí, Rio Grande do Sul (Lema 1994).



**FIGURE 2.** A juvenile *Rhachidelus brazili* (UFMT-R 9385) collected in Vale de São Domingos, Mato Grosso, Brazil. Photo by R. W. Ávila.

The new records are in the plateaus of Pantanal in the Upper Paraguay sub-basin, constituting the first records of the species in the region, although Amaral has reported the occurrence of the species in the municipality of Campo Grande, Mato Grosso do Sul (in the past Mato Grosso; Amaral 1978) this locality is in the Paraná sub-basin. The municipalities of Sonora and Cuiabá are in the Cerrado biome and Vale de São Domingos is in a transitional area between Cerrado and Amazonian biomes.

**ACKNOWLEDGMENTS:** We thanks Marco André de Carvalho for access to the Coleção Zoológica de Vertebrados - UFMT under his care, Thiago Semedo for English review, Emiliane G. Pereira from BIODINÂMICA Rio Engenharia Consultiva Ltda for providing field information, and Ross MacCulloch and Renato S. Bérnils for providing helpful comments on the manuscript and for having kindly provided bibliographic material. L.A.G. Arruda thanks CNPq for financial support (Edital MCT/CNPq/MEC/CAPEF/FNDCT - Ação Transversal/FAPs nº 47/2010 - SISBIOTA BRASIL). R.A. Kawashita-Ribeiro thanks NIEFA - Núcleo Interdisciplinar de Estudos Faunísticos (FAPEMAT process 447441/2009).

#### LITERATURE CITED

Amaral, A. 1978. *Serpentes do Brasil – Iconografia Colorida*. São Paulo: Melhoramentos 248 p.  
 Boulenger, G.A. 1908. On a new genus of snake from Brazil. *Annals and Magazine of Natural History* 8(2): 31-32.  
 Cei, J.M. 1993. Reptiles Del noroeste, nordeste y este de La Argentina: herpetofauna de las selvas subtropicales, Puna y Pampas. *Museo Regionale di Scienze Naturali Torino, Monografie* 14: 1-949.

Fernandes, D.S. and P. Passos. 2002. *Rhachidelus brazili*. *Herpetological Review* 33(2): 150.  
 França, F.G.R. and A.F.B. Araújo. 2007. Are there co-occurrence patterns that structure snake communities in Central Brazil?. *Brazilian Journal of Biology* 67(1): 33-40.  
 França, F.G.R., D.O. Mesquita, C.C. Nogueira and A.F.B. Araújo. 2008. Phylogeny and ecology determine morphological structure in a snake assemblage in the Central Brazilian Cerrado. *Copeia* 2008(1): 23-38.  
 Giraud, A.R. 2001. *Serpientes de La selva Paranaense y Del Chaco húmedo*. Buenos Aires, L. O. L. A., 328 p.  
 Giraud, A.R. and G.J. Scrocchi. 2002. Argentinian snakes: an annotated checklist. *Smithsonian Herpetological Information Service* (132): 1-53.  
 Lema, T. 1994. Lista comentada dos répteis ocorrentes no Rio Grande do Sul, Brasil. *Comunicações do Museu de Ciências e Tecnologia da PUCRS, Série Zoológica* 7: 41-150.  
 Lizaso, N.M. 1984. Fauna acarológica ectoparásita de serpentes não venenosas da região de construção de hidrelétricas (Sudeste, Centro-Oeste e Sul) do Brasil. *Revista Brasileira de Zoologia* 2(2): 77-84.  
 Moreira, L.A., D.P. Fenolio, H.L.R. Silva and N.J. Silva-júnior. 2009. A preliminary list of the herpetofauna from termites mounds of the Cerrado in the Upper Tocantins River valley. *Papéis Avulsos de Zoologia* 49(15): 183-189.  
 Motte, M., K. Núñez, P. Cacciali, F. Brusquetti, N. Scott and A.L. Aquino. 2009. Categorización Del estado de conservación de los anfibios e reptiles de Paraguay. *Cuadernos de Herpetología* 23(1): 5-18.  
 Moura-Leite, J.C., S.A.A. Morato and R.S. Bérnils. 1996. New records of reptiles from the state of Paraná, Brazil. *Herpetological Review* 27(4): 216-217.  
 Nogueira, C.C. 2001. New records of Squamates reptiles in Central Brazilian Cerrado II: Brasília region. *Herpetological Review* 32(4): 285-287.  
 Peters, J.A. and B. Orejas-Miranda. 1986. *Catalogue of the Neotropical Squamata: Part I: Snakes*. Revisited edition (originally published in 1970), Addenda and corrigenda by P.E. Vanzolini. Washington, D.C.: Smithsonian Institution 347 p.  
 Sawaya, R.J., O.A.V. Marques and M. Martins. 2008. Composição e história natural das serpentes de Cerrado de Itirapina, São Paulo, sudeste do Brasil. *Biota Neotropica* 8(2):127-149.  
 Silveira, A.L. 2004. *Rhachidelus brazili*. *Herpetological Review* 35(4): 412.  
 Valdujo, P.H.; C.C. Nogueira, L. Baumgarten, F.L.G. Rodrigues, R.A. Brandão, A. Eterovic, M.B. Ramos-Neto and O.A.V. Marques. 2009. Squamate reptiles from Parque Nacional das Emas and surroundings, Cerrado of Central Brazil. *Check List* 5(3):405-417.  
 Zaher, H. 1999. Hemipenial morphology of the South American Xenodontine snakes, with a proposal for a monophyletic Xenodontinae and a reappraisal of Colubroid Hemipenes. *Bulletin of the American Museum of Natural History, New York* (240): 1-168.

RECEIVED: October 2011

REVISED: November 2011

ACCEPTED: November 2011

PUBLISHED ONLINE: December 2011

EDITORIAL RESPONSIBILITY: Ross MacCulloch