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***Rhachidelus brazili* (Squamata: Serpentes): first records from Paraguay and clarification of the correct spelling of the generic name**

PAUL SMITH^{1,2}, NORMAN SCOTT³, PIER CACCIALI² & KARINA ATKINSON²

¹⁾ Fauna Paraguay, Encarnación, Paraguay

²⁾ Para La Tierra, Reserva Natural Laguna Blanca, Santa Rosa del Aguaray. San Pedro, Paraguay

³⁾ Research Associate, Smithsonian Institution, P.O. Box 307, Creston, California, 93432, USA

Corresponding author: PAUL SMITH, e-mail: faunaparaguay@gmail.com

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Rhachidelus brazili BOULENGER, 1908 is a rarely-recorded pseudoboin snake in a monotypic genus. It is a large, robust snake unique amongst pseudoboines in having as many as 25 scale rows at mid-body. The vertebral scales are enlarged in comparison to other dorsal scales (CEI 1993) and the tail is 18–23% of the total length (GIRAUDO 2002). Little is known about the biology of the species, but it appears to be associated with Cerrado and Atlantic Forest habitats (MORATO pers. comm. in GIRAUDO 2002). New specimens from Mato Grosso State, Brazil, reported by ARRUDA et al. (2011) extended the distribution northward into a zone of Cerrado/Amazonian transition.

There has been a tendency in the recent literature to spell the generic name “*Rachidelus*” (SCROCCHI & MONGUILLOT 1992, CEI 1993, FERNANDES & PASSOS 2002, GIRAUDO 2002). The misspelling appeared as early as in IHERING (1911: 509) although it was later corrected in the same paper (IHERING 1911: 532). CEI (1993) made this error and repeated it throughout the synonymy, including the original citation of BOULENGER (1908). The generic name was, however, spelt correctly in the index. The error was again repeated by GIRAUDO (2002), once more incorrectly crediting BOULENGER (1908) with the name “*Rachidelus*”. The original and correct name spelling is *Rhachidelus brazili* BOULENGER, 1908.

Rhachidelus brazili is known from only two specimens in Argentina (Fig. 1): Provincia Misiones, Santa Ana (Museo Argentino de Ciencias Naturales: MACN 1256), and Provincia Córdoba, Tulumba (Fundación Miguel Lillo: FML 2320; SCROCCHI & MONGUILLOT 1992). GIRAUDO (2002) commented that the presence of the species in Provincia Córdoba, some 1000 km from the other Argentine localities, required further investigation given the major

range extension that it implied, and G. SCROCCHI (in litt. to NS, 2011) confirmed that the location given was “in error”.

The Brazilian distribution (Fig. 1) of the species was summarized by ARRUDA et al (2011) encompassing the states of Distrito Federal (NOGUEIRA 2001, FRANÇA & ARAÚJO 2007, FRANÇA et al. 2008), Goiás (FRANÇA & ARAÚJO 2007, VALDUJO et al. 2009, MOREIRA et al. 2009), Mato Grosso (ARRUDA et al 2011), Mato Grosso do Sul (AMARAL 1978), Minas Gerais (SILVEIRA 2004), Paraná (MOURA-LEITE et al. 1996), Rio Grande do Sul (LEMA 1994), São Paulo (BOULENGER 1908, LIZASO 1984, SAWAYA et al. 2008), and Tocantins (FERNANDES & PASSOS 2002).

The species was not listed by SERIÉ (1915), BERTONI (1914, 1939), SCHOUTEN (1931), TALBOT (1979) or CACCIALI (2009) in their respective reviews of the herpetofauna of Paraguay, although its presence close to the Paraguayan border in Brazil and Argentina meant that its occurrence in this country was probable. MOTTE et al. (2009) included this species in their conservation status assessment of the Paraguayan herpetofauna, but without providing specific specimen or locality data. Here we report on the first confirmed specimens of this species from Paraguay.

During a review of Paraguayan specimens in the British Museum, NS found a specimen of *R. brazili* (BM 1960.1.2.98) (Fig. 2), collected on 8 October 1959 in a house in Colonia Primavera, Departamento San Pedro (24°30' S, 56°41' W). Colonia Primavera was located in a habitat with a complex mixture of wet Chaco and semi-deciduous forest.

On 30 October 2010, fieldworkers from the Para La Tierra Research Station at the Reserva Natural Laguna Blanca, Departamento San Pedro, found a second specimen 10 km W of the reserve dead on the road to Santa

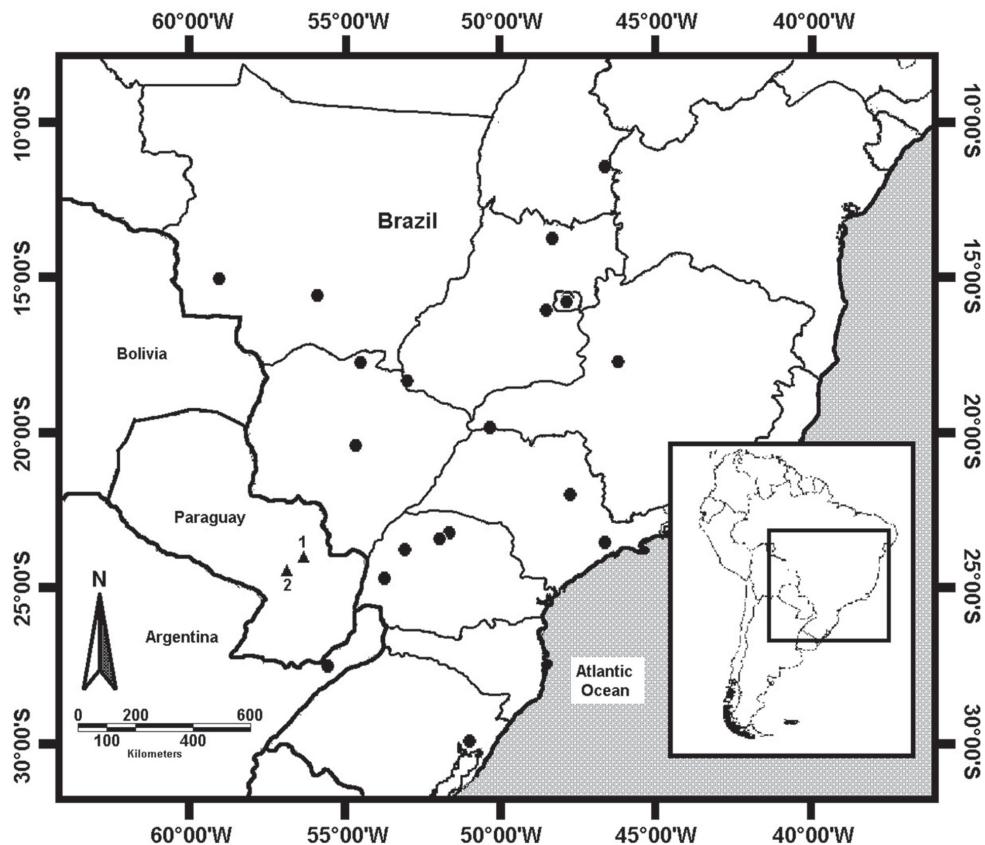


Figure 1. Map of the known distribution (circles) of *Rhachidelus brazili* (based in part on ARRUDA et al. 2011) including the new Paraguayan localities (triangles). 1) San Pedro, near Santa Rosa (CZPLT 069); 2) Primavera (BM 1960.1.2.98). The erroneous locality in Tucumán, Argentina is not mapped.

Rosa del Aguaray ($23^{\circ}49'20.6''$ S, $56^{\circ}27'50.5''$ W), in an area of agriculture punctuated by islands of Atlantic Forest (Fig. 1). The specimen is deposited in the Para La Tierra collection, Laguna Blanca, San Pedro (CZPLT 069). Images are stored in the Fauna Paraguay (2011) photo database (FPREP 490–496). The specimen was glossy black dorsally except for the pale white supralabials, and white ventrally, becoming darker to black posteriorly. CZPLT 069 is a male of 91.5 cm total length (73.7 cm snout–vent length), and the tail represents 19.5% of its total length. Scale counts are as follows: mid-dorsal scale rows 25, ventrals 187 (range 178–183, n = 2; GIRAUDO 2002), and subcaudals 72, the first 16 being entire (range 66–71, first 18–20 entire, n = 2; GIRAUDO 2002).

Specimens BM 1960.1.2.98 and CZPLT 069 represent the first documented records of this species in Paraguay and extend the species' known range within the Cerrado/Paranaense ecoregion and into the Paraguay River drainage. The species might reasonably be assumed to be present in suitable habitats in other areas in Paraguay, too, forming a more or less continuous distribution between its known Brazilian and Argentine ranges, or the San Pedro populations may be isolated from Atlantic Forest populations



Figure 2. Preserved Paraguayan specimen of *Rhachidelus brazili* (BM 1960.1.2.98). Photograph by NS.

some 200 km to the east. MOTTE et al. (2009) consider this species to be critically endangered in Paraguay, but given the limited sampling undertaken in the country it is probably just under-recorded.

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References

- AMARAL, A. DO (1978): Serpentes do Brasil, Iconografia Colorida. – Melhoramentos, São Paulo, 248 pp.
- ARRUDA, L. A. G., R. R. ÁVILA, D. H. MORAIS & R. A. KAWASHITA-RIBEIRO (2011): *Rhachidelus brazili* Boulenger, 1908 (Squamata: Serpentes: Dipsadidae): new records, range extension and distribution map in Mato Grosso and Mato Grosso do Sul states, Brazil. – Check List, 7: 854–855.
- BERTONI, A. W. (1914): Reptiles y Batracios. – pp. 17–30 in: Bertoni, M. S. (ed.): Fauna Paraguaya, catálogos sistemáticos de los vertebrados del Paraguay. Descripciones físicas y económicas de Paraguay, 59. – Asunción, Gráfica M. Brossa.
- BERTONI, A. W. (1939): Catálogos sistemáticos de los vertebrados de Paraguay. – Revista de la Sociedad Científica del Paraguay, 4: 3–60.
- BOULENGER, G. A. (1908): On a new genus of snake from Brazil. – Annals and Magazine of the Natural History Museum, 2: 31–32.
- BRANDÃO, R. R. & A. F. B. ARAÚJO. (2001): A herpetofauna asociado as matas de galeria no Distrito Federal. – pp. 561–604 in: Ribeiro, J. F., C. E. L. Fonseca & J. C. Sousa-Silva (eds.): Caracterização e recuperação de matas de galeria. – Embrapa, Planaltina, Goiás.
- CACCIALI, P. (2009): Guía para la identificación de 60 serpientes del Paraguay. – Guyra Paraguay, Asunción, 218 pp.
- CEI, J. J. (1993): Reptiles del noreste, nordeste y este de la Argentina. – Museo Regionale Scienze Naturale Torino, Monografie, 14: 1–949.
- Fauna Paraguay (2011): *Rhachidelus brazili*. – Electronic Image Database accessible at <http://www.faunaparaguay.com/rhachidelusbrazili.html>. Viewed 12 December 2012.
- FERNANDES, D. S. & P. PASSOS. (2002): Geographical distribution: *Rhachidelus brazili*. – Herpetological Review, 33: 150.
- FRANÇA, F. G. R. & A. F. B. ARAÚJO. (2007): Are there co-occurrence patterns that structure snake communities in Central Brazil? – Brazilian Journal of Biology, 67: 33–40.
- FRANÇA, F. G. R., D. O. MESQUITA, C. C. NOGUEIRA & A. F. B. ARAÚJO. (2008): Phylogeny and ecology determine morphological structure in a snake assemblage in the Central Brazilian Cerrado. – Copeia, 2008: 23–38.
- GIRAURO, A. (2002): Serpientes de la Selva Paranaense y del Chaco Húmedo. – Literature of Latin America, Buenos Aires, 285 pp.
- IHERING, A. VON (1911): Bibliografia 1908–1910: Anthropologia e zoologia do Brasil. – Revista do Museu Paulista, 8: 501–582.
- LEMA, T. (1994): Lista comentada dos répteis ocorrentes no Rio Grande do Sul, Brasil. – Comunicações do Museu de Ciências e Tecnologia da PUCRS, Série Zoologica, 7: 41–150.
- LIZASO, N. M. (1984): Fauna acarológica ectoparasita de serpentes não venenosas da região de construção de hidrelétricas (Sudeste, Centro-oeste e Sul) do Brasil. – Revista Brasileira de Zoologia, 2: 77–84.
- MOREIRA, L. A., D. B. FENOLIO, H. L. RODRIGUES-SILVA & N. J. DA SILVA JR. (2009): A preliminary list of the herpetofauna from termite mounds of the Cerrado in the Upper Tocantins River Valley. – Papéis Avulsos de Zoologia, 49: 183–189.
- MOTTE, M., K. NUÑEZ, P. CACCIALI, F. BRUSQUETTI, N. SCOTT & A. L. AQUINO. (2009): Categorización del estado de conservación de los anfibios y reptiles de Paraguay. – Cuadernos de Herpetología, 23: 5–18.
- MOURA-LEITE, J. C., S. A. A. MORATO & R. S. BÉRNILS. (1996): New records of reptiles from the state of Paraná, Brazil. – Herpetological Review, 27: 216–217.
- NOGUIERA, C. C. (2001): New records of Squamate reptiles in Central Brazilian Cerrado II: Brasília region. – Herpetological Review, 32: 285–287.
- SAWAYA, R. J., O. A. V. MARQUES & M. MARTINS. (2008): Composição e história natural das serpentes de Cerrado de Itirapina, São Paulo, sudeste do Brasil. – Biota Neotropica, 8: 127–149.
- SCHOUTEN, G. (1931): Contribuciones al conocimiento de la fauna herpetológica del Paraguay y de los países limítrofes. – Revista de la Sociedad Científica del Paraguay, 3: 5–32.
- SCROCCHI, G. & J. MONGUILLOT. (1992): *Rachidelus brazili* (Serpentes; Colubridae) en la región central de la Argentina. – Boletín de la Asociación Herpetológica Argentina, 8: 5–6.
- SERIÉ, P. (1915): Nota sobre la erpetología de Paraguay. – Physis, 1: 573–582.
- SILVEIRA, A. L. (2004): *Rhachidelus brazili*. – Herpetological Review, 35: 412.
- TALBOT, J. J. (1979): Una nueva lista sistemática de reptiles del Paraguay. – Informes Científicos del Instituto de Ciencias Básicas, 2: 76–94.
- VALDUJO, P. H., C. C. NOGUEIRA, L. BAUMGARTEN, F. L. G. RODRIGUES, R. A. BRANDÃO, A. ETEROVIC, M. B. RAMOS-NETO & O. A. V. MARQUES. (2009): Squamate reptiles from Parque Nacional das Emas and surroundings, Cerrado of Central Brazil. – Check List, 5: 405–417.