

# First record of *Amphisbaena mertensi* Strauch, 1881 (Squamata: Amphisbaenidae) in Minas Gerais state, Brazil

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**ABSTRACT:** We present here the first record of *Amphisbaena mertensi* in Minas Gerais state, southeastern Brazil. Through analysis of scientific collections, we found specimens of *A. mertensi* from municipalities of Patos de Minas, Uberaba, Indianópolis, Uberlândia and Araguari, in Triângulo Mineiro and Alto Paranaíba regions. These localities are inserted in the Cerrado biome, with Atlantic Forest enclaves, and represent an expansion of the previously known geographic distribution for the species.

The known geographic distribution of *Amphisbaena mertensi* Strauch, 1881 includes northeastern Argentina, southern Paraguay and Brazil, in southern Mato Grosso, south of Goiás, Mato Grosso do Sul, São Paulo, Paraná and northeast of Santa Catarina states (Gans 1966; Montero 1996; Montero and Terol 1999; Pramuk and Alamillo 2003; Ribeiro *et al.* 2007). A map showing the previously known geographic distribution of *A. mertensi* was presented by Ribeiro *et al.* (2007).

There are no records of *Amphisbaena mertensi* in the Brazilian state of Minas Gerais, where another seven species *Amphisbaena* are recorded: *A. alba* Linnaeus, 1758, *A. anaemariae* Vanzolini, 1997, *A. dubia* L. Müller, 1924, *A. pretrei* Duméril and Bibron, 1839, *A. prunicolor* (Cope, 1885), *A. vermicularis* Wagler, 1824 and *A. wiedi* Vanzolini, 1951 (cited as *A. fuliginosa wiedi*) (Amaral 1935; Vanzolini 1955; 2002; Gans 1962; 2005; Peters and Orejas-Miranda 1970; Vrcibradic and Soares 1999; Barros Filho *et al.* 2005; Evers Jr. *et al.* 2006; Recoder and Nogueira 2007; Silveira 2007). We present the first record of *A. mertensi* for Minas Gerais state, in the Triângulo Mineiro and Alto Paranaíba regions, which represents an expansion of the previously known geographic distribution for the species.

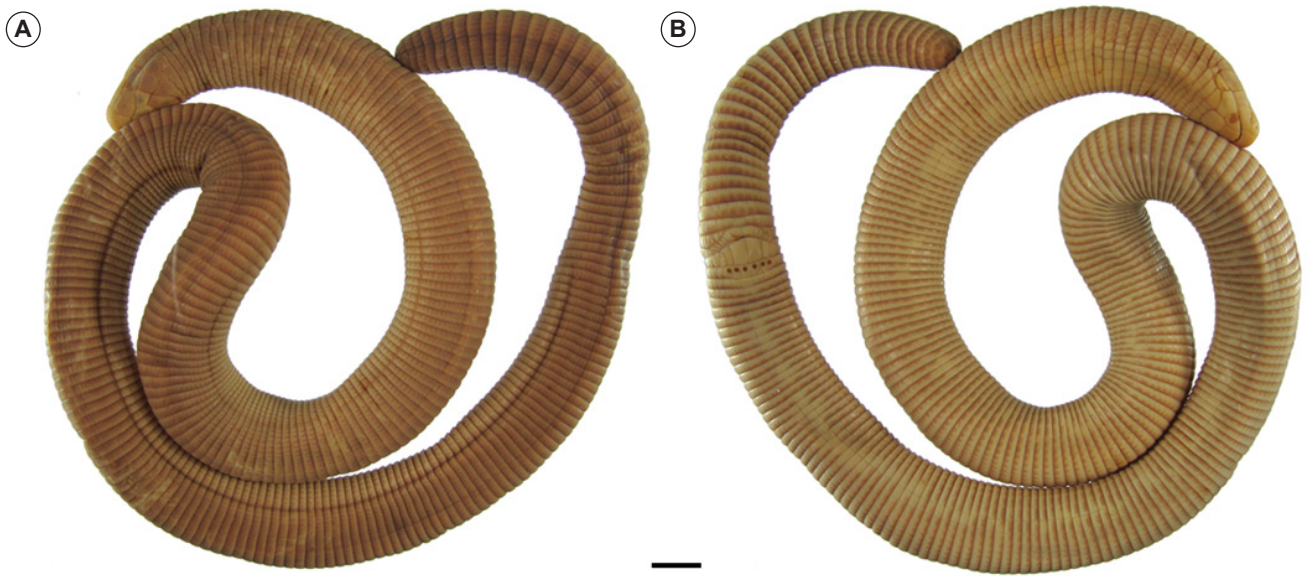
Analyzing the *Coleção de Répteis do Museu Nacional / Universidade Federal do Rio de Janeiro (MNRJ)*, we found the following specimens of *Amphisbaena mertensi* with their localities of origin in Minas Gerais state and collection data: MNRJ 17298 – Municipality of Patos de Minas: City of Patos de Minas: Caiçaras neighborhood (ca. 18°34' S, 46°30' W), collected in September, 2008 by R. V. Valinhas; MNRJ 12473 (Figure 1) – Municipality of Patos de Minas, collected in 15 August, 1947 by Egler and Feio; MNRJ 7219 – Municipality of Uberaba: District of Peirópolis (ca. 19°44' S, 47°44' W), collected in 1958 by Price; MNRJ 12471, 12472 – Municipality of Indianópolis: Miranda Hydroelectric Power Plant (ca. 18°55' S, 48°02' W), collected in August 1997 by L. B Nascimento; MNRJ 18271 – Municipality of Uberlândia: City of Uberlândia: Osvaldo Rezende

neighborhood, Marques Póvoa street (ca. 18°55' S, 48°17' W), collected in 13 January 1986 by M. C. V. Lemos; MNRJ 18272 (Figure 2) – Municipality of Uberlândia: City of Uberlândia: Lídice neighborhood (ca. 18°55' S, 48°16' W), collected in 04 April 1987; MNRJ 18274 – Municipality of Uberlândia: City of Uberlândia: Umuarama neighborhood (ca. 18°52' S, 48°16' W), collected in 11 September 1986 by W. P. Souza and H. P. Souza; MNRJ 18273 – Municipality of Araguari: City of Araguari: Tamoios street (ca. 18°39' S, 48°11' W), collected in 27 October 1987 by D. Couto.

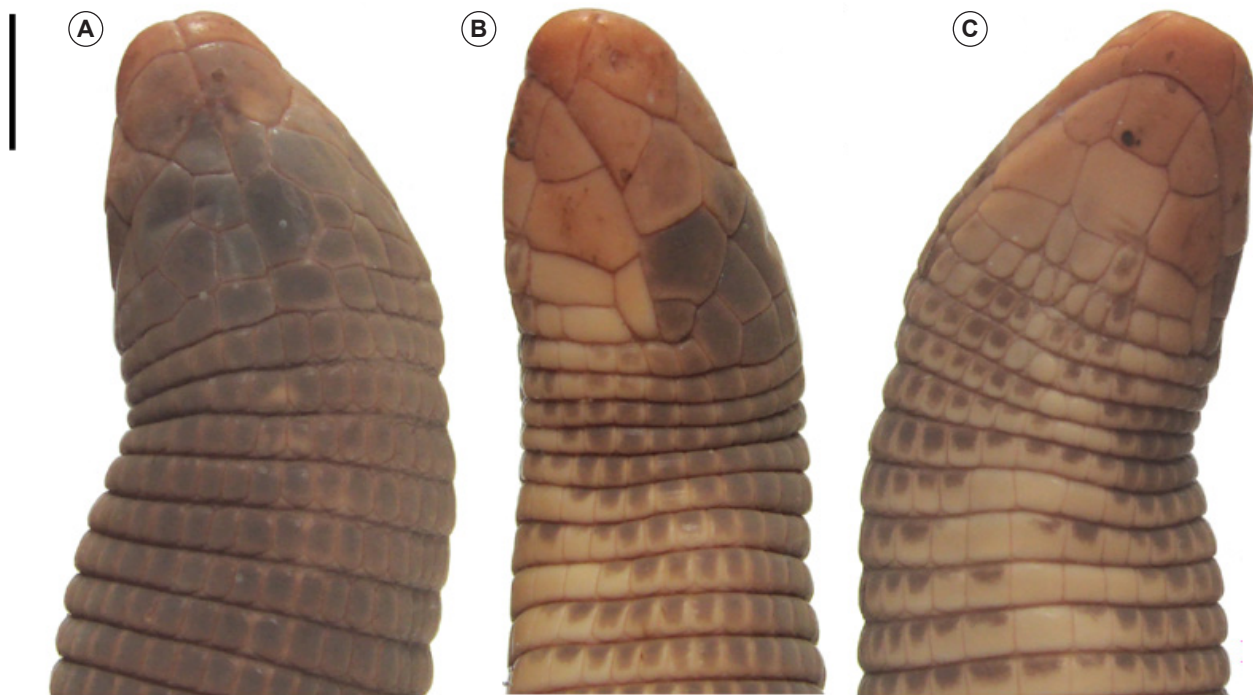
The region of these localities is inserted in the Cerrado biome (with its various phytophysiognomies), but has enclaves of the Atlantic Forest biome (semideciduous seasonal forest). The record of the species in Patos de Minas represents an expansion of its' known geographical distribution around 200 km northeast from the closest previous locality record (municipality of Igarapava, state of São Paulo; Gans 1966) (Figure 3).

We analyzed the main external morphologic characters of seven specimens recorded from localities in Minas Gerais state (Table 1). The other two specimens were not analyzed because they were loaned to another researcher. The variation found was within the known to *Amphisbaena mertensi* (Gans 1966; Vanzolini 2002; Ribeiro *et al.* 2007), except the number of tail scales of a specimen (32 scales) which was slightly larger (25-31 scales), and the tail length in another one (67 mm), higher than the described (17-65 mm; Gans 1966).

New records of Squamata, including amphisbaenians, have been frequent in the state of Minas Gerais in the recent years, resulting from wildlife surveys on the field and analysis of herpetological collections (*e.g.* Silveira 2004; Silveira *et al.* 2004a, b, c; Barros Filho *et al.* 2005; Silveira and Cotta 2006a, b; Silveira 2007). This shows the lack of knowledge about the composition of the Squamata fauna in this state, despite the existence of recent efforts to reverse this situation. In this context, new records of Squamata are still expected for Minas Gerais.



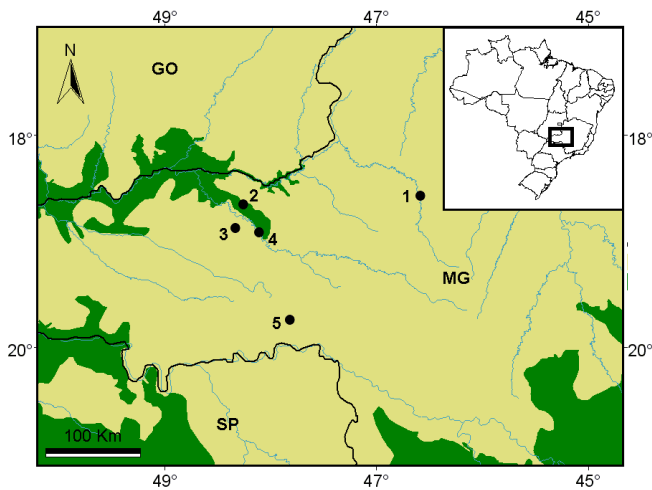
**FIGURE 1.** Specimen of *Amphisbaena mertensi* collected in Patos de Minas, Minas Gerais (MNRJ 12473). Dorsal (A) and ventral (B) overview. Scale bar: 5 mm.



**FIGURE 2.** Specimen of *Amphisbaena mertensi* collected in Uberlândia, Minas Gerais (MNRJ 18272). Head in dorsal (A), lateral (B) and ventral (C) view. Scale bar: 5 mm.

**TABLE 1.** Scales count and measurements (in millimeters) of *Amphisbaena mertensi* from Minas Gerais, based on specimens at the MNRJ collection and literature records (Gans 1966; Vanzolini 2002; Ribeiro et al. 2007). A bar distinguishes left and right counts of the specimen, respectively; modal values are in parentheses.

CHARACTERS	MNRJ 7219	MNRJ 12473	MNRJ 17298	MNRJ 18271	MNRJ 18272	MNRJ 18273	MNRJ 18274	LITERATURE
Pre-cloacal pores	6	6	6	6	6	6	5	5-8(6)
Body annuli	239	234	238	237	240	234	235	210-250
Tail annuli	31	32	30	*	30	30	31	25-31
Autotomy site	8	7	7	7	7	7	8	5-8(7)
Dorsal midbody segments	20	20	20	18	20	20	21	14-26
Ventral midbody segments	22	20	22	21	22	21	22	16-25
Supralabials	3/3	3/3	4/3	3/3	4/4	3/3	3/3	3-4
Infralabials	3/3	3/3	3/3	3/3	3/3	3/3	3/3	3-4
Snout-vent length	262	144	318	320	398	168	402	131-410
Tail length	45	22	49	*	64	26	67	17-65



**FIGURE 3.** Recorded localities (black circles) of *Amphisbaena mertensi* in the state of Minas Gerais, Brazil: 1 – Municipality of Patos de Minas, 2 – Municipality of Araguari, 3 – Municipality of Uberlândia, 4 – Municipality of Indianópolis: Miranda Hydroelectric Power Plant, 5 – Municipality of Uberaba: District of Peirópolis. The Cerrado biome is shown in yellow and the Atlantic Forest biome is shown in green. MG – State of Minas Gerais, SP – State of São Paulo, GO – State of Goiás.

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#### LITERATURE CITED

- Amaral, A. 1935. Collecta herpetologica no centro do Brasil. *Memórias do Instituto Butantan* 9: 233-246.
- Barros Filho, J.D., B.M. Sousa and R.M.H. Carvalho. 2005. Geographic distribution: *Amphisbaena dubia*. *Herpetological Review* 36(3): 335-335.
- Evers Jr, P.R., A.L. Silveira and D.S. Lima Filho. 2006. Geographic distribution: *Amphisbaena dubia*. *Herpetological Review* 37(2): 240.
- Gans, C. 1962. Notes on amphisbaenids (Amphisbaenia, Reptilia). 5. A redefinition and biogeography of *Amphisbaena alba* Linné. *American Museum Novitates* 2105: 1-31.
- Gans, C. 1966. Redescription of *Amphisbaena mertensi*, with comments on its geographic variation and synonymy (Amphisbaenia: Reptilia). *Copeia* 1966(3): 534-548.

- Gans, C. 2005. Checklist and bibliography of the Amphisbaenia of the world. *Bulletin of the American Museum of Natural History* 289: 1-130.
- Montero, R. 1996. Lista de localidades de Amphisbaenia de la República Argentina. *Cuadernos de Herpetología* 10(1/2): 25-45.
- Montero, R. and G.J. Terol. 1999. Los Amphisbaenidae en Paraguay, listado geográfico. *Cuadernos de Herpetología* 13(1/2): 89-95.
- Peters, J.A. and B. Orejas-Miranda. 1970. Catalogue of the Neotropical Squamata: part II lizards and amphisbaenians – with new material by P. E. Vanzolini. *United States National Museum Bulletin* 297: VIII+25+1-293.
- Pramuk, J.B. and H. Alamillo. 2003. An effective technique for collecting *Amphisbaena mertensi* with notes on its natural history. *Herpetological Review* 34(3): 221-223.
- Recoder, R. and C. Nogueira. 2007. Composição e diversidade de répteis na região sul do Parque Nacional Grande Sertão Veredas, Brasil Central. *Biota Neotropica* 7(3): 267-278.
- Ribeiro, S.L.B., A.P. Santos Jr. and W. Vaz-Silva. 2007. Reptilia, Squamata, Amphisbaenidae, *Amphisbaena mertensi*: distribution extension, new state record, geographic distribution map. *Check List* 3(2): 84-87.
- Silveira, A.L. 2004. Geographic distribution: *Rhachidelus brazili*. *Herpetological Review* 35(4): 412.
- Silveira, A.L. 2007. Geographic distribution: *Amphisbaena fuliginosa wiedi*. *Herpetological Review* 38(4): 481.
- Silveira, A.L. and G.A. Cotta. 2006a. Geographic distribution: *Clelia quimi*. *Herpetological Review* 37(2): 242.
- Silveira, A.L. and G.A. Cotta. 2006b. Geographic distribution: *Thamnodynastes sertanejo*. *Herpetological Review* 37(3): 364.
- Silveira, A.L., E.R. Costa and L.M. Salles. 2004a. Geographic distribution: *Lystrophis nattereri*. *Herpetological Review* 35(4): 412.
- Silveira, A.L., M.R.S. Pires and G.A. Cotta. 2004b. Geographic distribution: *Echinanthera melanostigma*. *Herpetological Review* 35(4): 410.
- Silveira, A.L., M.R.S. Pires and G.A. Cotta. 2004c. Geographic distribution: *Leptotyphlops dimidiatus*. *Herpetological Review* 35(4): 411.
- Vanzolini, P.E. 1955. Contribuições ao conhecimento dos lagartos brasileiros da família Amphisbaenidae Gray, 1825. 5. Distribuição geográfica e biometria de *Amphisbaena alba*. *Arquivos do Museu Nacional* 42(2): 683-705.
- Vanzolini, P.E. 2002. An aid to the identification of the South American species of *Amphisbaena* (Squamata, Amphisbaenidae). *Papéis Avulsos de Zoologia* 42(15): 351-362.
- Vrcibradic D. and M. Soares. 1999. Geographic distribution: *Amphisbaena anaemariae*. *Herpetological Review* 30(4): 233.

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