

***Amphisbaena lumbricalis* Vanzolini, 1996 (Squamata: Amphisbaenidae): Distribution extension and map**

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RESUMO: *Amphisbaena lumbricalis* Vanzolini, 1996 (Squamata: Amphisbaenidae): extensão de distribuição e mapa. *Amphisbaena lumbricalis* é conhecida apenas da localidade tipo, a área da Usina Hidroelétrica de Xingó, em ambas as margens do rio São Francisco, nos estados de Alagoas e Sergipe. Aqui, registramos uma nova localidade para a espécie – o município de Traipu, Alagoas, estendendo por 100 km a sudeste a distribuição conhecida. **Palavras-chave:** anfisbenas, biogeografia, Nordeste brasileiro, Agreste, Traipu.

ABSTRACT: To date, *Amphisbaena lumbricalis* is known only from its type locality, in the area of Xingó Hydroelectric Power Plant, on both banks of the São Francisco River, in the states of Alagoas and Sergipe, Brazil. Here we add a new locality record for this species – the municipality of Traipu, Alagoas, extending the known distribution by 100 km to the southeast.

Key words: amphisbaenians, biogeography, northeastern Brazil, Agreste, Traipu.

Amphisbaenia is currently represented by about 190 nominal species (Uetz & Hosek, 2015) belonging to six families (Vidal & Hedges, 2009), with reduced or absent limbs (Crook & Parsons, 1980). Amphisbaenidae, the richest family (ca. 171 species), is distributed mainly in South America and Africa (Gans, 2005; Vidal *et al.*, 2008; Uetz & Hosek, 2015). Several aspects of amphisbaenian biology remain poorly understood, partly because the fossorial habit of these animals limits observation in nature (Navega-Gonçalves, 2009).

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Consequently, amphisbaenians are usually underrepresented in collections, and many species have been described based on a single or small number of specimens from imprecise localities (Gans, 2005; Roberto *et al.*, 2014; Teixeira Jr. *et al.*, 2014; Pinna *et al.*, 2014). In Brazil, which harbors the greatest diversity of *Amphisbaena* worldwide (Mott & Vieites, 2009), 72 species, two genera (*Amphisbaena* and *Mesobaena*) and one family (Amphisbaenidae) have been reported (Pyrón *et al.*, 2013; Costa & Bérnils, 2014).

Amphisbaena lumbricalis Vanzolini, 1996 was described based on 72 specimens from the type locality Xingó Hydroelectric Power Plant, on both banks of the San Francisco River, in the states of Alagoas and Sergipe, Brazil (09° 25' 00" S - 09°40' 00" S; 37° 45' 00" W - 38° 05' 00" W, Vanzolini, 1996). No other record of specimens was made after the type description. Climate at the type locality is semi-arid and hot. The maximum altitude is 256 m (Leal *et al.*, 2003).

During a herpetofaunal monitoring at the Xingó Hydroelectric Power Plant reservoir (1998–2001), we collected 26 specimens of *Amphisbaena lumbricalis* in the municipality of Canindé do São Francisco, state of Sergipe, one in Delmiro Gouveia and eight in Piranhas, both in the state of Alagoas. All 35 specimens of *Amphisbaena lumbricalis* were obtained in sandy soil areas. Those specimens are deposited in the Museu de História Natural da Universidade Federal de Alagoas (MUFAL) (Appendix, Table 1). Two additional specimens (MUFAL 9071, 9812) were collected at Serra da Mão, municipality of Traipu, Alagoas (9° 45' 33" S, 36° 56' 54" W; elevation 653 m; ICMBio collection permit #24083-2) (Figures 1 and 2). This site is 23 km from the left bank of the Rio São Francisco, about 100 km southeast of the type locality of *A. lumbricalis*. The new locality, an ecotone between Atlantic Forest and Caatinga biome (*sensu* IBGE, 2004), has vegetation physiognomies represented by seasonal forest and steppe savannah, besides rocky fields at higher elevations. The first specimen (MUFAL 9071) was collected on July 22, 2010, in sandy soil with pebbles, by digging among the roots of the macambira bromeliad (*Encholirium spectabile* Martius ex. Schultes f.). The second specimen (MUFAL 9812) was obtained occasionally on October 12, 2011, among roots of the bromeliad tank species *Aechmea aquilega* (Salisb.) Griseb in a non-sandy area of the Caatinga, a microhabitat different from that previously reported for the species.

All specimens of *Amphisbaena lumbricalis* later collected at type locality and at Serra da Mão had similar characteristics to the type series, except for the maximum number of body annuli (252 in MUFAL 2819) and the autotomic site in the tail was evident, occurring at the 9th annulus, different from that reported by Vanzolini (1996), which emphasizes no clearly visible autotomic site (Table 1).



Figure 1. *Amphisbaena lumbricalis* (MUFAL 9071; 99 mm snout venter length), collected on July 22, 2010 in the community of Santa Cruz, municipality of Traipu, Alagoas state. Photograph by Ubiratan Gonçalves.

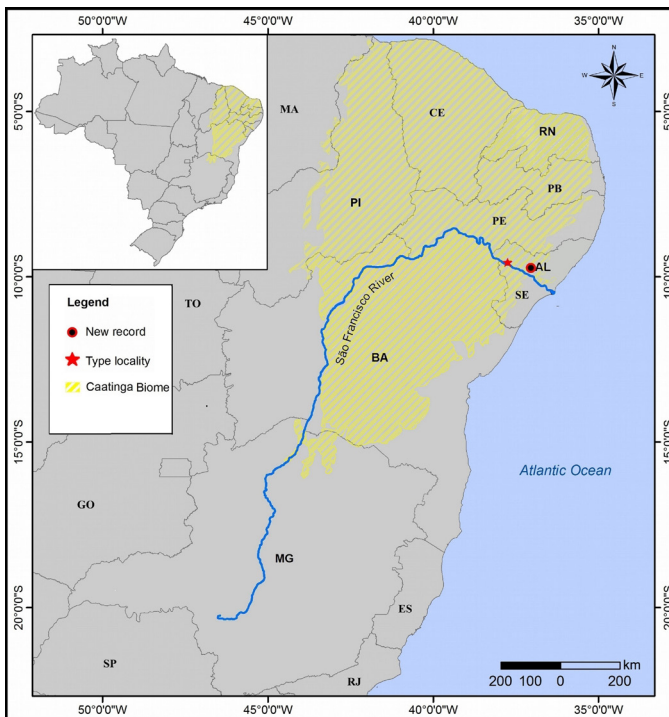


Figure 2. Distribution map of *Amphisbaena lumbricalis*. AL = Alagoas; BA = Bahia; CE = Ceará; MA = Maranhão; MG = Minas Gerais; PB = Paraíba; PE = Pernambuco; PI = Piauí; RN = Rio Grande do Norte; SE = Sergipe.

Table 1. Meristic features of specimens of *Amphisbaena lumbricalis*, based on examined specimens (Appendix) and the literature (Vanzolini, 1996). VO = vouchers of MUFAL; PO = number of precloacal pores; BA = number of body annuli; CA = number of caudal annuli; AU = autotomy sites on caudal annuli; DS = number of dorsal segments per annulus at midbody; VS = number of ventral segments per annulus at midbody, TL = tail length; DMB = diameter at midbody; DH = diameter of head; SL = supralabial scales; IL = infralabial scales; PG = first row of postgenais; CSF = municipality of Canindé do São Francisco, Sergipe; PI = municipality of Piranhas, Alagoas; DE = municipality of Delmiro Gouveia, Alagoas; TP = municipality of Traipu, Alagoas; ? = unknown.

VO	PO	BA	CA	DS	VS	AU	PG	SL	IL	SVL	TL	HD	DB	Locality
2777	4	237	22	14	19	8	2	3	3	110	15	2.42	2.3	CSF
2789	4	247	24	14	20	8	2	3	3	138	15	2.36	3.32	CSF
2800	4	249	25	14	18	6	2	4	3	146	19	2.81	3	CSF
2782	4	239	23	13	18	9	2	3	3	142	17	2.88	2.58	CSF
2779	4	234	24	12	19	9	2	3	3	122		2.48	2.64	CSF
2778	4	237	23	13	18	8	2	3	3	135	17	2.68	2.71	CSF
2781	4	249	24	14	20	9	2	3	3	134	15	2.4	3.03	CSF
2780	4	237	22	14	17	7	2	3	3	136	17	2.76	2.73	CSF
2783	4	243	22	13	18	9	2	3	3	146	18	2.74	2.86	CSF
2784	4	239	22	12	17	8	2	3	3	120	15	2.1	2.62	CSF
2796	4	243	22	12	18	8	2	3	3	86	10	2.15	1.97	CSF
2797	4	241	22	13	18	7	2	3	3	127	16	3.25	2.67	CSF
2798	4	237	22	12	18	8	2	3	3	121	15	2.87	2.92	CSF
2808	4	246	24	13	20	7	2	3	3	138	16	3.36	2.27	CSF
2807	4	239	23	14	18	9	2	3	3	128	15	3.06	2.91	CSF
2809	4	244	22	14	20	7	2	3	3	116	15	2.22	2.39	CSF
2806	4	239	23	13	20	8	2	3	3	136	17	2.92	2.8	CSF
2815	4	235	22	12	18	8	2	3	3	138	18	2.52	2.52	CSF

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Appendix

Specimens of *Amphisbaena lumbricalis* deposited in the Amphibian and Reptile Collection of the Museu de História Natural da Universidade Federal de Alagoas. (MUFAL 2777, 2778, 2779, 2780, 2781, 2782, 2783, 2784, 2789, 2796, 2797, 2798, 2800, 2806, 2807, 2808, 2809, 2811, 2812, 2813, 2814, 2815, 2816, 2817, 2818, and 2819), from the Canindé do São Francisco, Sergipe state, MUFAL 2785, 2786, 2787, 2802, 2803, 2804, 2805, and 9423 from Piranhas, MUFAL 2790 from Delmiro Gouveia, and MUFAL 9071 and 9812 from Traipu all in Alagoas state.