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A NEW SPECIES OF *AMPHISBAENA* LINNAEUS, 1758 FROM A CERRADO REGION IN BAHIA, NORTHEASTERN BRAZIL (SQUAMATA: AMPHISBAENIDAE)

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ABSTRACT: A new species of *Amphisbaena* is described from a Cerrado area in the southwestern region of the state of Bahia, northeastern Brazil. The new species is distinguishable from all other congeners by having a rounded snout; slender body with visible lateral and dorsal sulci; two rounded precloacal pores medially located; 230–241 body annuli; 19–22 caudal annuli; 12–14 dorsal and 14 ventral segments to a midbody annulus; tail with a marked autotomic constriction at caudal annuli 6–8; tail tip laterally compressed; three supralabials followed by one postsupralabial, and three infralabials followed by one postinfralabial on each side of the head.

RESUMO: Uma nova espécie de *Amphisbaena* é descrita de uma região de Cerrado no sudoeste do estado da Bahia, nordeste do Brasil. A nova espécie se distingue dos demais congêneres por possuir o focinho arredondado; corpo delgado, com sulcos laterais e dorsal bem visíveis; dois poros pré-cloacais arredondados localizados medialmente; 230–241 anéis corporais; 19–22 anéis caudais; 12–14 segmentos dorsais e 14 segmentos ventrais contados em um anel no meio do corpo; plano de autotomia caudal bem marcado entre o anel caudal 6–8; extremidade da cauda comprimida lateralmente; três supralabiais seguidas por uma pós-supralabial e três infralabiais seguidas por uma pós-infralabial em cada lado da cabeça.

Key words: Amphisbaenia; Conservation; Hemipenis; Morphology; Taxonomy

AMPHISBAENIA is a group of about 180 living species (Uetz, 2013) of reptiles that are specialized for a fossorial life (Kearney, 2003). As a consequence of their fossorial habits and the scarcity of researchers studying this group, amphisbaenians are poorly known in many biological aspects (Kearney, 2003) including life-history (Andrade et al., 2006), morphology, taxonomy, and systematics (Kearney, 2003; Rodrigues et al., 2003; Mott and Vieites, 2009).

The group is comprised of six families of which Amphisbaenidae is the most diverse, containing about 170 species (Uetz, 2013) distributed throughout South America, islands within the Caribbean archipelago, and in sub-Saharan Africa (Vidal et al., 2008). In South America, only three genera are currently recognized for the family: *Amphisbaena* Linnaeus, 1758, *Leposternon* Wagler, 1824, and *Mesobaena* Mertens, 1925 (Ribeiro et al., 2011). Currently, 68 species are known from Brazil (Bérnils and Costa, 2012), of which at least 33 occur in the Cerrado biome (Nogueira et al., 2011).

Herein we describe a new species of *Amphisbaena* based on 10 specimens collected during a survey of a Cerrado region in Jatobá farm, municipality of Jaborandi, state of Bahia, northeastern Brazil.

MATERIALS AND METHODS

All the specimens from the type series were collected at pitfall traps using 60-L buckets (except for one paratype, MNRJ 23584, found at a pitfall trap using a smaller bucket for sampling arthropods) and were euthanized by the injection of general anesthetics. Comparisons for diagnostic purposes are based on data from the literature (Gans, 1962, 1963, 1964a,b,c; Vanzolini, 1971, 1991a,b,c, 1992,

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FIG. 1.—Dorsal (A) and ventral (B) views of the holotype of *Amphisbaena persephone* sp. nov. (MNRJ 23581) in preservative. Scale bar = 10 mm. (A color version of this figure is available online.)

1996, 1997, 2002; Strüssmann and Carvalho, 2001; Montero and Céspedez, 2002; Strüssmann and Mott, 2009; Mott et al., 2011) and on specimens examined (Appendix). Specimens examined are housed in Coleção Herpetológica, Universidade de Brasília (CHUNB), Brasília, Distrito Federal, Brazil; Museu de Ciência e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul (MCP), Porto Alegre, Rio Grande do Sul, Brazil; Museu de Zoologia, Universidade de São Paulo (MZUSP), São Paulo, São Paulo, Brazil; and Museu Nacional, Universidade Federal do Rio de Janeiro (MNRJ), Rio de Janeiro, Rio de Janeiro, Brazil.

When comparing specimens, we quantified characters of the hemipenis and external morphology. Techniques for hemipenis preparation followed Manzani and Abe (1988) as modified by Pesantes (1994). The hemipenis was stained by an alcoholic solution of Alizarin Red as suggested by Nunes et al. (2012) in an adaptation of the procedures described by Uzzell (1973). Hemipenis terminology follows Rosenberg (1967) and Thomas and Hedges (2006). Nomenclature for head and body shields follows Gans and Alexander (1962) and Vanzolini (1991a) as modified by Pinna et al. (2010). Meristic data follow Gans and Alexander (1962). Snout–vent length (SVL) and tail length (TL) were measured with a flexible ruler (±1 mm). Head width (HW) was measured with calipers (±0.1 mm). We also provide a measure of body slenderness proportion (BSP), which is obtained by dividing SVL by HW (see DISCUSSION for details).

RESULTS

Amphisbaena **persephone** *sp. nov*

Holotype (Figs. 1, 2).—Adult male (MNRJ 23581) collected at a fragment of Cerrado vegetation in Jatobá farm (13°53′S, 45°42′W, datum SAD 69), municipality of Jaborandi, southwestern region of the state of Bahia, close to the border with the state of Goiás, northeastern Brazil (Fig. 3), on 19 November 2008 by A.F. Mendonça and A. Bocchiglieri.

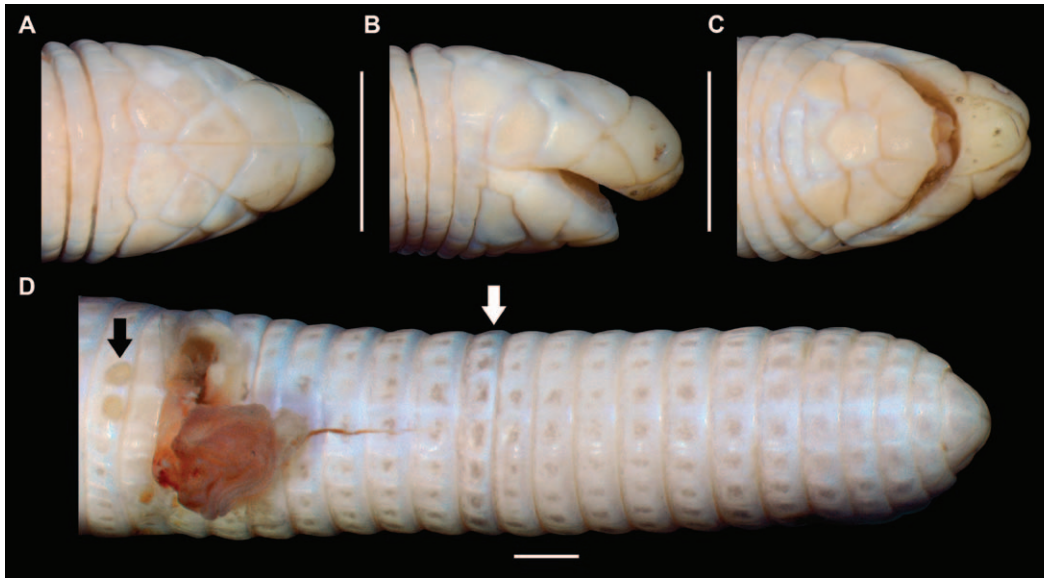

FIG. 2.—Dorsal (A), right lateral (B), and ventral (C) views of the head of the holotype of *Amphisbaena persephone* sp. nov. (MNRJ 23581) in preservative. (D) ventral view of the cloacal region and tail of the same specimen. The black arrow indicates the precloacal pores and the white arrow indicates the autotomy constriction at the 7th caudal annulus. Scale bars = 5 mm. (A color version of this figure is available online.)

Paratypes (Fig. 4).—Nine specimens collected at the type locality by A.F. Mendonça and A. Bocchiglieri: MNRJ 23582 (collected on 22 January 2008); MNRJ 23583 (collected on 23 January 2008); MNRJ 23584 (collected on 10 June 2008); MNRJ 23585 (collected on 26 July 2008); MNRJ 23586 (collected on 14 September 2008); MNRJ 23587–88 (collected

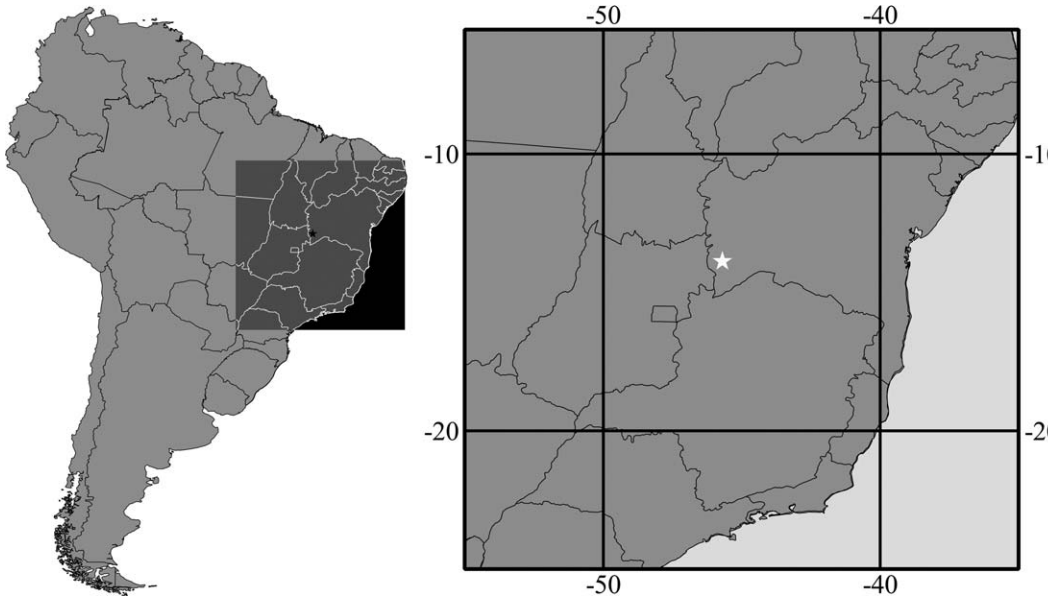

FIG. 3.—Map of South America showing the type locality of *Amphisbaena persephone* sp. nov.: Jatobá farm, municipality of Jaborandi, state of Bahia, Brazil (star in inset).

FIG. 4.—Dorsal view of a paratype of *Amphisbaena persephone* sp. nov. (MNRJ 23584) in life. (A color version of this figure is available online.)

on 18 November 2008); MNRJ 23589 (collected on 28 January 2009); MNRJ 23590 (collected in 2010). Most of the paratypes were collected at a large area of continuous Cerrado vegetation (MNRJ 23582, 23583, 23586, 23589, 23590), but two of them were collected at fragments of Cerrado vegetation (MNRJ 23587, 23588) and two were collected at a *Pinus* spp. plantation area (MNRJ 23584, 23585).

Diagnosis.—*Amphisbaena persephone* is diagnosable from all other congeners by the following combination of characters: (1) rounded snout; (2) slender body (Table 1); (3) lateral and dorsal sulci well visible; (4) two rounded precloacal pores medially located; (5) 230–241 body annuli; (6) 19–22 caudal annuli; (7) 12–14 dorsal and 14 ventral segments to a midbody annulus; (8) tail with a marked autotomic constriction at caudal annuli 6–8; (9) tail tip laterally compressed; (10) three supralabials followed by one postsupralabial, and three infralabials followed by one postinfralabial on each side of the head.

By the presence of two precloacal pores, *Amphisbaena persephone* differs from all the other rounded-snout species of *Amphisbaena*, except: *A. absaberi* (Strüssmann and Carvalho, 2001); *A. anaemariae* Vanzolini, 1997; *A. brevis* Strüssmann and Mott, 2009; *A. carli* Pinna, Mendonça, Bocchiglieri, and Fernandes, 2010; *A. crisae* Vanzolini, 1997; *A. cuiabana* (Strüssmann and Carvalho, 2001); *A. darwini* Duméril and Bibron, 1839; *A. dubia* Müller, 1924; *A. heterozonata* Burmeister, 1861; *A. hiata* Montero and Céspedez, 2002; *A. leeseri* Gans, 1964a; *A. lumbricalis* Vanzolini, 1996; *A. miringoera* Vanzolini, 1971; *A. mitchelli* Procter, 1923; *A. neglecta* Dunn and Piatt, 1936; *A. roberti* Gans, 1964c; and *A. silvestrii* Boulenger, 1902.

Among the species mentioned above, *Amphisbaena persephone* sp. nov. differs from *A. absaberi*, *A. carli*, and *A. hiata* by having no median hiatus between the precloacal pores (compared to pores separated from each other by a median hiatus in the latter species). The new species differs from *A. anaemariae*, *A. brevis*, *A. crisae*, *A. darwini*, *A. heterozonata*, *A. mitchelli*, *A. neglecta*, and *A. silvestrii* in having a greater number of body annuli (230–241, compared to fewer than 220 in the latter species). The new species differs from *A. cuiabana* in having a smaller number of body annuli (230–241, compared to more than 280 in the latter species). The presence of a well-marked dorsal sulcus (at least after the first third of the body) in *A. persephone* sp. nov. differentiates it from *A. dubia*, *A. leeseri*, and *A. lumbricalis* (wherein no dorsal sulcus is

TABLE 1.—Values for snout–vent length (SVL), head width (HW), and body slenderness proportion (BSP) of the type series of *Amphisbaena persephone* sp. nov. (data from the holotype in boldface), the specimens of the two-pored species to which the new species was compared, and specimens of the other species collected at Jatobá farm, Bahia, Brazil. Means (±1 SD) and ranges are given for species for which more than one specimen was analyzed.

Species	Institution number	SVL (mm)	HW (mm)	BSP	BSP ± 1 SD	Range of BSP
Amphisbaena alba	MNRJ 18632	269	9.3	29	—	—
Amphisbaena anaemariae	CHUNB 56376	164	4.7	35	34.0 ± 1.0	33–35
A. anaemariae	MNRJ 6463	154	4.7	33		
A. anaemariae	MZUSP 98293	179	5.2	34		
Amphisbaena carli	MNRJ 19256	264	6.9	38	39.7 ± 2.9	38–43
A. carli	MNRJ 19257	171	4.5	38		
A. carli	MNRJ 20922	269	6.2	43		
Amphisbaena darwini	MCP 4641	152	3.6	42	36.7 ± 4.6	34–42
A. darwini	MCP 4718	181	5.4	34		
A. darwini	MZUSP 82342	245	7.2	34		
Amphisbaena dubia	MNRJ 10574	256	6.1	42	41.5 ± 0.7	41–42
A. dubia	MZUSP 98632	268	6.5	41		
Amphisbaena heterozonata	MNRJ 12450	196	5.8	34	—	—
Amphisbaena leeseri	CHUNB 41352	146	2.3	63	50.9 ± 10.1	39–63
A. leeseri	CHUNB 41358	156	2.5	62		
A. leeseri	CHUNB 41364	113	1.9	59		
A. leeseri	MZUSP 73313	137	3.0	46		
A. leeseri	MZUSP 82539	112	2.5	45		
A. leeseri	MZUSP 82540	128	3.0	42		
A. leeseri	MZUSP 82541	66	1.7	39		
Amphisbaena mitchelli	MNRJ 4793	109	2.3	47	50.8 ± 2.4	47–53
A. mitchelli	MNRJ 12451	165	3.3	50		
A. mitchelli	MZUSP 102226	157	3.0	52		
A. mitchelli	MZUSP 102251	149	2.8	53		
A. mitchelli	MZUSP 102259	146	2.8	52		
Amphisbaena persephone	**MNRJ 23581**	**144**	**2.7**	**53**	54.1 ± 2.3	50–58
A. persephone	MNRJ 23582	161	3.1	52		
A. persephone	MNRJ 23583	126	2.2	57		
A. persephone	MNRJ 23584	154	2.8	55		
A. persephone	MNRJ 23585	95	1.9	50		
A. persephone	MNRJ 23586	121	2.2	55		
A. persephone	MNRJ 23587	143	2.7	53		
A. persephone	MNRJ 23588	141	2.6	54		
A. persephone	MNRJ 23589	158	2.9	54		
A. persephone	MNRJ 23590	134	2.3	58		
Amphisbaena silvestrii	MNRJ 12458	131	3.8	34	34.0 ± 3.9	29–39
A. silvestrii	MNRJ 12459	119	3.4	35		
A. silvestrii	MNRJ 12460	90	3.1	29		
A. silvestrii	MNRJ 12461	146	3.9	37		
A. silvestrii	MNRJ 12462	154	3.9	39		
A. silvestrii	MNRJ 12463	74	2.5	30		
Amphisbaena vermicularis	MNRJ 18655	267	7.2	37	—	—

present). Compared to *A. miringoera*, the new species has a smaller number of body annuli (250–264 and 230–241, respectively) and a laterally compressed tail tip (rounded in *A. miringoera*). Finally, *A. persephone* sp. nov. differs from *A. roberti* by having a laterally compressed tail tip (but without a distinct keel) composed of flat-surfaced segments and a marked autotomic constriction at caudal annuli 6–8 (compared to a distinct transversal keel composed of conical segments on the tip of the tail and a faint or absent autotomic constriction in *A. roberti*). Furthermore, *A. persephone* sp. nov. often presents a smaller number of body annuli (230–241) and dorsal segments (≈12) to a midbody annulus (compared to 232–265 body annuli and 13–16 dorsal segments in *A. roberti*).

Description of the holotype (Figs. 1, 2).—Adult male, SVL = 144 mm, HW = 2.7 mm, BSP = 53, TL = 14 mm. Head triangular in dorsal view and poorly distinguishable from

the body. Rostrum rounded, projecting forward beyond the jaw. Rostral shield triangular in ventral view, projecting dorsally towards the suture between the nasals; only the tip of this projection is visible in dorsal view; in lateral view, rostral forms a slightly concave curve which contacts mainly the anterior suture of the nasals, but that also has a small contact with the first pair of supralabials. Nasals large (second largest shields on the top of the head), meeting each other on the midline, well visible dorsally (nearly triangular), laterally (diamond shaped), and ventrally (nearly triangular); nasals contacting rostral, frontals, and first pair of supralabials; laterally, nasal forms a narrow posterior projection between the frontal and the first pair of supralabials; the tip of this projection forms a narrow contact with the second pair of supralabials; nostrils clearly visible laterally and ventrally. Frontals paired, nearly diamond shaped, and large (largest shields on the top of the head), touching each other on the midline and with posterolateral projections above the oculars toward the parietals; laterally, frontal is nearly triangular, forming a narrow ventral projection that contacts the first and second supralabials. Parietals paired, medium sized (third largest shields on top of the head), triangular, longer than broad, touching each other on the midline and with lateral projections towards the oculars; parietals in broad lateral contact with upper temporals and projecting posteriorly towards the suture between the occipitals. Occipitals paired and pentagonal; present a narrow anterior region and become progressively wider towards its posterior region. Immediately posterior to the occipitals is the first body annulus; its most dorsal segments are larger than the rest of the body segments (including lateral and ventral segments of the first body annulus). Oculars diamond shaped, slightly longer than high; eyes visible dorsally and laterally, located at the anterior portion of the oculars. Two subequal temporals on each side of the head; upper temporal squarish; lower temporal pentagonal with an anterior projection towards the ocular. On the right side of the head the lower temporal and the occipital prevent the upper temporal from touching the first body annulus, while on the left side of the head the upper temporal touches the first body annulus. Three supralabials: first supralabial triangular, longer than high; second supralabial higher than long and obliquely oriented; third supralabial largest, pentagonal (with a dorsal projection towards the upper temporal), and higher than long. Second and third supralabials touching ocular. On each side of the head, between the third supralabial and the first body annulus, there is a small and squarish postsupralabial.

In ventral view, symphysial nearly square (with anterior suture slightly wider than the posterior), separating the first pair of infralabials. Postsymphysial nearly pentagonal, separating the first and second pairs of infralabials. Three infralabials on each side of the head: first infralabial nearly triangular; second infralabial largest; third infralabial smallest and rectangular. On each side of the head, between the third infralabial and the first body annulus, there is a small and squarish postinfralabial. A pair of nearly triangular lateral genials separated from each other by two rows of median genials: anterior row with two nearly triangular scales; posterior row with four squarish, smaller scales. Nine squarish postgenials, the outermost pair somewhat broader than the seven inner scales.

Slender body (Table 1); lateral and dorsal sulci well visible, more noticeable after the first third of the body; ventral sulcus absent; 12 dorsal and 14 ventral segments (counted at a midbody annulus); dorsal segments regular, about twice as long as wide; ventral segments become progressively wider towards the median pair, which is about one and a half times as wide as long; 230 body annuli; last body annulus with two well-visible rounded precloacal pores medially located (with no median hiatus); cloacal shield with 10 precloacal segments; 2 lateral annuli; 9 postcloacal segments; 19 caudal annuli; autotomy constriction at the seventh caudal annulus; tail tip laterally compressed and with flat-surfaced segments.

Ground color pale brown. Head with very few slightly darker streaks, mainly at the posterior dorsal shields (parietal, occipitals, and upper temporals). Dorsal segments of the body and tail with centers darker than the edges and with a small darker dot at the

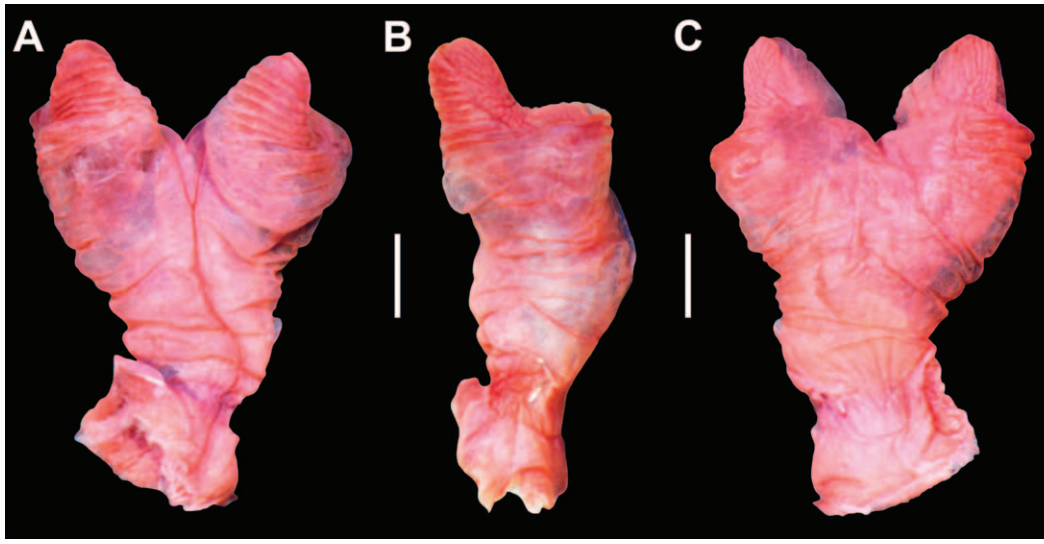

FIG. 5.—Sulcate (A), left lateral (B), and asulcate (C) sides of the hemipenis of the holotype of *Amphisbaena persephone* sp. nov. (MNRJ 23581). Scale bars = 1 mm. (A color version of this figure is available online.)

middle of each segment. Dorsally, the central regions of each segment gradually darken along the body and tail (first third of the body being the lightest and the tail being the darkest portions of the specimen). Ventral segments of the body almost homogeneous pale brown, but with centers slightly darker than the edges. Few lateral ventral segments with brown streaks. Ventral segments of the tail with brown centers darker than the edges.

Description of the hemipenis of the holotype (Fig. 5).—Hemipenial body with a narrow base, progressively broadening towards its apical portion. Sulcus spermaticus in a centripetal orientation. Two lobes (about one third of total hemipenial length) with apical portions that are longer at the sulcate side than at the asulcate side, resulting in strongly acuminate apices with lamellate structures.

Variation.—Most specimens have 12 dorsal segments per midbody annulus with no major reductions along the body ($n = 8$). Specimen MNRJ 23584 has 12 dorsal segments per midbody annulus, but after midbody there is a reduction to 10 dorsal segments in most of the body annuli. MNRJ 23585 is the only specimen showing 14 dorsal segments per midbody annulus, but after midbody there is a reduction to 12 dorsal segments in most of the body annuli. Most specimens have 2 temporals (upper temporal and lower temporal) and 1 occipital scale on each side of the head ($n = 7$), but MNRJ 23585 has the occipital and the upper temporal fused on the right side of the head; MNRJ 23589 has two occipitals on the left side of the head; and MNRJ 23590 has the occipitals and the upper temporals fused on both sides of the head. Autotomy constriction placement varies from the 6th ($n = 2$), 7th ($n = 6$), or 8th ($n = 2$) caudal annulus. Second row of median genials varies from 4 ($n = 4$) to 5 scales ($n = 6$). Postgenials row varies from 8 ($n = 7$) to 9 scales ($n = 3$). The number of precloacal segments on the cloacal shield equals 8 ($n = 7$), 9 ($n = 1$), or 10 ($n = 2$). Postcloacal segments equal 8 ($n = 1$), 9 ($n = 5$), or 10 ($n = 4$). Variation concerning color is restricted to the intensity of the tonalities (slightly lighter or darker than observed in the holotype), with all specimens presenting the same color pattern. Across all specimens examined, variation exists in the following meristic and morphometric characters: SVL, HW, BSP, TL, and the number of body annuli, lateral annuli, caudal annuli, autotomy constriction placement, dorsal segments, occipitals, median genials, postgenials, precloacal segments, and postcloacal segments (Tables 1, 2); other features are similar to those described for the holotype.

Table 2.—Meristic and morphometric variation for the type series of *Amphisbaena persephone* sp. nov. (data from the holotype in boldface). The letter "A" in the tail length (TL) column indicates that the specimen presented an autotomized tail. The symbol "*" indicates that the occipital scale is fused with the upper temporal.

MNRJ	Body annuli	Lateral annuli	Caudal annuli	Autotomy constriction	Dorsal segments	Occipitals (left | right)	Median genials	Postgenials	Precloacal segments	Postcloacal segments	TL (mm)
23581	**230**	**2**	**19**	**7th**	**12**	**1 | 1**	**2 + 4**	**9**	**10**	**9**	**14**
23582	235	2	21	8th	12	1 | 1	2 + 4	8	8	9	15
23583	241	2	A	7th	12	1 | 1	2 + 5	8	8	9	A
23584	234	2	22	8th	12	1 | 1	2 + 5	8	10	8	15
23585	237	3	20	7th	14	1 | *	2 + 5	9	9	10	9
23586	230	2	A	7th	12	1 | 1	2 + 5	9	8	10	A
23587	238	2	A	6th	12	1 | 1	2 + 4	8	8	10	A
23588	237	3	20	7th	12	1 | 1	2 + 4	8	8	9	13
23589	240	2	19	7th	12	2 | 1	2 + 5	8	8	9	15
23590	239	3	A	6th	12	* | *	2 + 5	8	8	10	A
Mean ± 1 SD	236.1 ± 3.8	2.3 ± 0.5	20.2 ± 1.2	7th ± 0.7	12.2 ± 0.6	—	—	8.3 ± 0.5	8.5 ± 0.8	9.3 ± 0.7	13.5 ± 2.3
Range of values	230–241	2–3	19–22	6th–8th	12 or 14	1–2 or * | 1 or *	2 + 4–5	8–9	8–10	8–10	9–15

Etymology.—The species is named after the goddess Persephone who, according to Greek mythology, became the queen of the underworld once she married Hades (the king of the underworld). The name is a reference to the fossorial habit of the species.

Distribution.—*Amphisbaena persephone* is known only from its type locality (Fig. 3). For a detailed description of the area see Bocchiglieri et al. (2010) and Pinna et al. (2010).

Discussion

Many species of *Amphisbaena* are considered slender-bodied, and this feature may be useful both for taxonomy and systematics. However, not all slender-bodied species show the same degree of slenderness (Vanzolini, 1996), and most studies describing these species are vague with respect to the degree of slenderness observed (because they do not quantify body slenderness). Vanzolini (1991a,b,c, 1992) calculated body slenderness in amphisbaenids as a linear regression of HW on total length (SVL + TL), as suggested by Schmidt (1977), who proposed HW (instead of body width) as a measure of body thickness in Scolecophidia because these taxa are practically cylindrical (with similar HW and body width values). Moreover, the skull is not affected by the diverse methods of preparing the specimens (which may result in artificially swollen specimens) and cannot be easily compressed during the measurement process (Schmidt, 1977). Later, Vanzolini (1997, 1999) calculated body slenderness as a regression of HW on SVL (instead of total length) because specimens of *Amphisbaena*, when collected, commonly present autotomized tails.

In order to enable future comparisons between different species of the genus *Amphisbaena*, we recommend that researchers provide the raw measures (mm) of the SVL and HW of the analyzed specimens. We also propose the usage of a direct body slenderness proportion (BSP) obtained by the division of the SVL by HW, so that slender-bodied specimens are identified as having higher BSP values than do specimens with thicker bodies. This measure allows a

primary comparison of the slenderness of any specimens or species of *Amphisbaena* whose SVL and HW are known, contributing to more-accurate morphological descriptions or diagnoses (or both) of these taxa.

Four amphisbaenid species were collected at Jatobá farm, of which *Amphisbaena persephone* is the most slender-bodied and *Amphisbaena alba* Linnaeus, 1758, is the most thick-bodied, while *Amphisbaena vermicularis* Wagler, 1824, and *Amphisbaena carli* present median values of BSP (Table 1). Since the 1980s, a large area of the Cerrado vegetation on Jatobá farm has been replaced by *Eucalyptus* spp. and *Pinus* spp. plantations (Fenger and Sevensson, 2004). Since 2008, the remaining Cerrado vegetation on the farm (as well as areas planted in *Eucalyptus* spp. and *Pinus* spp.) is being deforested to make room for soy plantation (Pinna et al., 2010). This situation is similar to what is happening throughout the Brazilian Cerrado biome, where agriculture, cattle ranching, and the construction of hydroeletric power plants are increasingly responsible for the loss of natural habitat (Strüssmann and Mott, 2009).

Based on the analysis of specimens housed at herpetological collections, data from the literature, and field sampling, Nogueira et al. (2011) identified 33 species of Amphisbaenidae occurring in the Cerrado biome. Of these, 20 (61%) species were considered endemic. Since then, three more species (*Amphisbaena persephone*; *A. maranhensis* Gomes and Maciel, 2012; and *Leposternon maximus* Ribeiro, Nogueira, Cintra, Silva-Jr., and Zaher, 2011) have been described for the Cerrado region and are known only from specimens collected in this habitat. Considered a global biodiversity hotspot, the Cerrado biome is now restricted to about 20% of its original extent (Myers et al., 2000), of which less than 2% is protected (Silva et al., 2006). Conservation policies are urgently needed to preserve this threatened biome and, for these policies to be effective, it is fundamental to enhance our knowledge of its associated fauna and flora.

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Appendix

Specimens Examined

Amphisbaena alba.—Brazil: Bahia: Jaborandi: MNRJ 18632.

Amphisbaena anaemariae.—Brazil: Goiás: Goiânia: CHUNB 56376; Minas Gerais: Nova Ponte: MNRJ 6463 Tocantins: São Salvador: MZUSP 98293.

Amphisbaena carli.—Brazil: Bahia: Cocos: CHUNB 51554; Jaborandi: MNRJ 19256, 19257, 20922; São Desidério: MZUSP 100658.

Amphisbaena darwini.—Brazil: Rio Grande do Sul: Canoas: MCP 4641; Dom Pedro de Alcântara: MCP 4718; Uruguai: Montevideo: Puntas de Manga: MZUSP 82342.

Amphisbaena dubia.—Brazil: São Paulo: Mauá: MNRJ 10574; São Paulo: MZUSP 73020, 83029, 98632.

Amphisbaena heterozonata.—Argentina: Salta: Sierra de Metán: MNRJ 12450.

Amphisbaena leeseri.—Brazil: Mato Grosso do Sul: Aquidauana: MZUSP 82539, 82540, 82541; Guia Lopes da Laguna: MZUSP 73313; Tocantins: Mateiros: CHUNB 41351, 41352, 41357, 41358, 41359, 41360, 41364, 41367; Palmas: CHUNB 17282.

Amphisbaena mitchelli.—Brazil: Pará: Belém: MNRJ 4793, 12451; Rondônia: Porto Velho: MZUSP 102226, 102251, 102259.

Amphisbaena persephone sp. nov.—Brazil: Bahia: Jaborandi: MNRJ 23581, 23582, 23583, 23584, 23585, 23586, 23587, 23588, 23589, 23590.

Amphisbaena silvestrii.—Brazil: Mato Grosso: Barra do Tapirapé: MNRJ 12458, 12459, 12460, 12461, 12462, 12463; Pontes e Lacerda: MZUSP 97886, 97891.

Amphisbaena vermicularis.—Brazil: Bahia: Jaborandi: MNRJ 18655.