

REPTILIA: SQUAMATA: AMPHISBAENIDAE

AMPHISBAENA CEGEI

Catalogue of American Amphibians and Reptiles.

Montero, R. 2001. *Amphisbaena cegei*.

Amphisbaena cegei

Montero, Fernández, and González

Amphisbaena cegei Montero et al. 1997:218. Type locality, "Pampa Grande, Province of Florida, Department of Santa Cruz, Bolivia." Holotype, Museo "Noel Kempf Mercado" (MNKM) 580, a "juvenile, suspected to be a female," collected by a local from Pampa Grande, exact date of collection uncertain (examined by author).

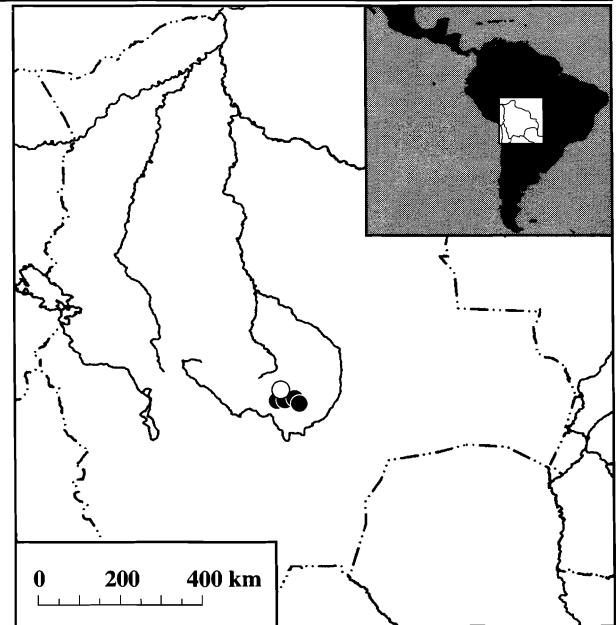
• **CONTENT.** No subspecies are recognized.

• **DEFINITION.** *Amphisbaena cegei* is a small amphisbaenian; known SVL ranges from 71–229 mm (see **Comments**) with a short prognathous snout. The relation of SVL and tail length is illustrated in Fig. 5.

Head shields are not fused. The rostral is scarcely visible from above. The frontals are wide and are the largest segment on the dorsal surface of the head. The parietals are triangular, nearly as wide as long. Annuli behind the parietal have enlarged middorsal scales, but these barely form occipitals. Nasals are large and quadrangular. Nostrils are located laterally in the middle of the anteroventral corner of each scale. The first of three supralabials is smallest, triangular, and in contact with the corresponding frontal in 13 of 23 specimens. The second supralabial has a long dorsal suture with the frontal, a shorter suture with the subquadrangular ocular, and usually is in contact with the nasal (although sometimes separated by the first supralabial). The third supralabial is trapezoidal, tall, and in broad contact with ocular. Behind the supralabials, an annulus contacts the parietals dorsally, passes behind the *angulus oris*, and continues ventrally. One or two supernumerary dorsal hemiannuli occur in the nape.

The lateral borders of the mental (= symphyseal, Vanzolini 1991) diverge anteriorly, whereas the posterior border is transverse and almost straight. The subcircular postmental (= postsphyseal) frequently is divided by a long median groove (in 10 of 23 specimens) and is in contact with the mental, infralabials 1 and 2, and the postgenial row. Three infralabials are present, the third is the smallest and the second is the largest, and is actually by far the largest segment on the ventral surface of the head. Behind the third infralabial, a slightly enlarged scale of the first body annulus (behind the *angulus oris*) appears to continue the infralabial series. Two rows (in 19 of 23 specimens) of postgenials are present, with the second row composed of 4–5 subequal scales. Malars (= lateral genials, Vanzolini 1991) have five unequal sides. A postmalar row is absent, although the lateral scales of the first body annulus may partially overlap the third infralabial. In one of 23 specimens, the third infralabial and a posterior scale are fused, forming a long third infralabial and defining a postmalar row (in 4 additional specimens, this condition occurs on only one side). "Gular" scales are irregular and aligned in annuli. In ventral view, the first 5 body annuli are normal to the midsagittal line, the following 5–6 annuli bend anteriorly (perhaps to facilitate the ventral flexion of the neck during excavation), and the posterior annuli are perpendicular to the sagittal line.

Body annuli number 179–199, are distinct, and have regular segments. Three or four half-annuli occur beside the cloaca. Midbody annuli contain 17–22 dorsal and 17–23 ventral scales, with total scales in a single annulus ranging from 38–44. Dorsal



MAP. Distribution of *Amphisbaena cegei*. The circle represents the type locality; dots indicate other known localities.

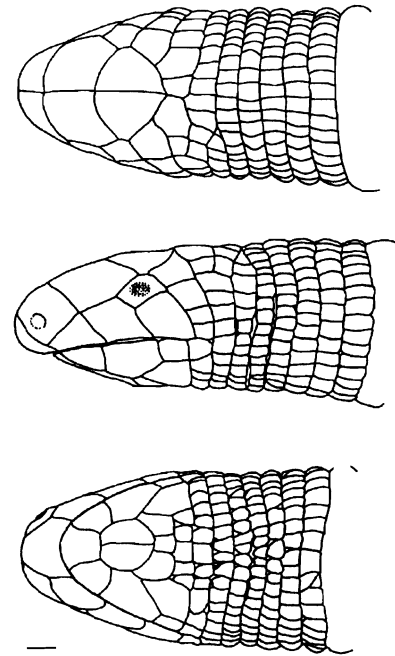


FIGURE 1. Dorsal, lateral, and ventral views of the head of the holotype of *Amphisbaena cegei* (from Montero et al. 1997). The line = 1 mm.

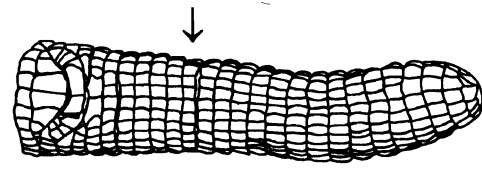


FIGURE 2. Ventral view of the tail of the holotype of *Amphisbaena cegei* (from Montero et al. 1997). The arrow indicates the autotomy annulus. The line = 1 mm.

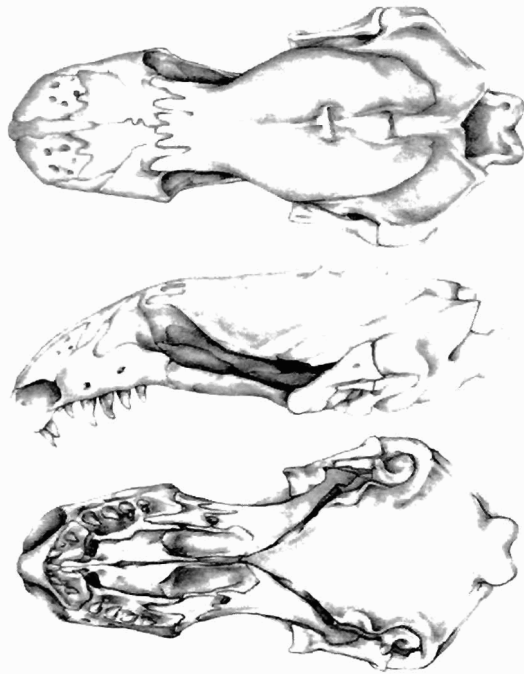


FIGURE 3. Dorsal, lateral, and ventral views of the skull of *Amphisbaena cegei* (FML 10165). The line = 1 mm.

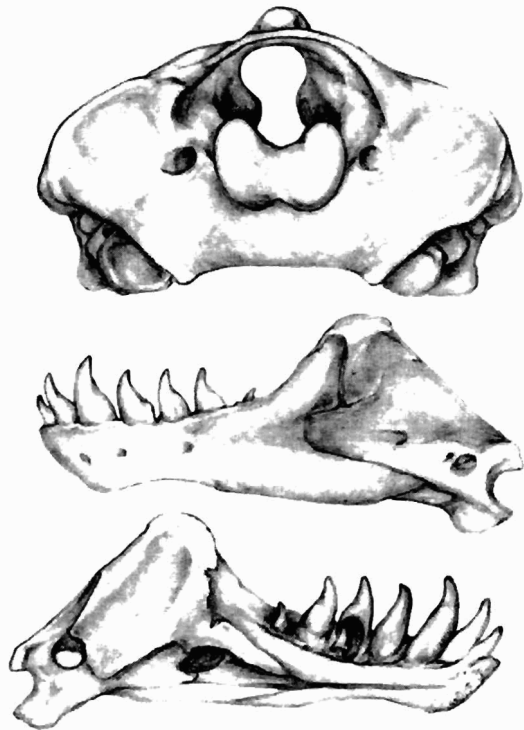


FIGURE 4. Posterior view of the skull and labial and lingual views of the mandibles of *Amphisbaena cegei* (FML 10165). The line = 1 mm.

body scales are near quadrangular anteriorly, but gradually become elongated near the cloaca. Ventral segments are only slightly larger than dorsal segments. Lateral grooves are distinct and form folds from the level of the 13th annulus to the cloaca. A dorsal groove is indistinct or absent. Four precloacal pores are often very faint or not apparent (variation possibly related

to gender). Cloacal segments are regular, with 6 precloacal and 13–15 postcloacal segments.

Caudal annuli number 21–24. An autotomic site varies from caudal annulus 6–8 and is defined by usually being narrower than other caudal annuli. The tail is horizontally oval in cross-section at its base, but becomes vertically oval behind the autotomy annulus. The tip of the tail is conical and regularly segmented.

The skull is generally similar to those of other species of *Amphisbaena*. A moderate flexure of the snout is evident. Although the species is round-snouted, the dorsal part of the snout forms a relatively small plane (compared to other species of *Amphisbaena*) that projects over the nares and contributes to the anterior extension of the snout. Dentition includes 7 premaxillary, 4 maxillary, and 7 mandibular subpleurodont teeth. Tooth replacement is anguimorph (Gans 1957). Nasals are heavily sculptured by depressions and foramina, similar to those of *A. alba* and *A. fuliginosa* (Montero and Gans 1999). The frontoparietal suture is wavy. Immediately anterior to the *processus anterior tecti synotici*, the parietal has a very conspicuous median dorsal area for muscle attachment. The ventral plate of the occipital complex is continued anteriorly by the fused element-X and parabasisphenoid. The occipital condyle is kidney-shaped.

The top of the head is dark brown, whereas the mandible, rostral, and some of the nasals are lighter. Dorsal color in small and large preserved specimens is light brown, but is dark brown in medium sized specimens. Pigment usually covers each scale evenly, but may be more concentrated anteriorly (most noticeable on the posterior third of the body). Dorsal scales in some specimens have lighter lateral borders. Ventral coloration is uniform and markedly lighter than the dorsum. Pigment is concentrated along the anterior border of each scale, the remainder of each scale is very light brown or beige. The underside of the tail is lighter than the venter, with some patches of scales without pigmentation.

• **DIAGNOSIS.** *Amphisbaena cegei* can be distinguished from most other species with four precloacal pores in having a high number (38–44) of segments per midbody annulus; most other species have 20–36 segments per annulus (exceptions are *A. a. angustifrons* with 41–61, *A. a. plumbea* with 38–57, *A. vermicularis* with 36–51, and *A. rozei* with 62). This species differs from *A. darwini* (with the same number of precloacal pores and a similar number of body annuli) in having more segments per midbody annulus (although *A. d. trachura* from Brasil has 14–21/17–23), the absence of a postmalar row, and by the pigmentation pattern of each scale (pigmentation in *A. darwini* varies from segments evenly colored to segments with a distinct central spot); and from *A. prunicolor* (with similar

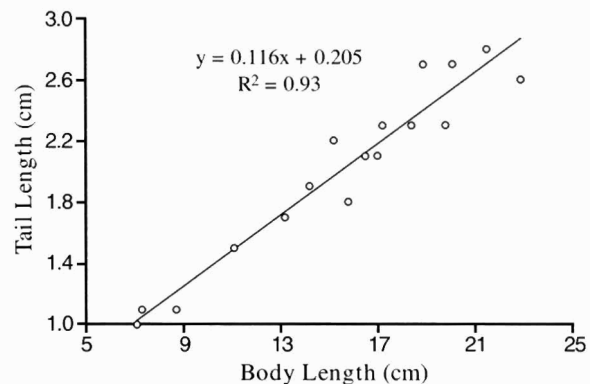


FIGURE 5. Snout-vent length versus tail length in *Amphisbaena cegei*.

numbers of precloacal pores and body annuli and a lack of a postmalar row) in having more segments per midbody annulus (24–35 segments in *A. prunicolor*) and in segmental pigmentation (pigmentation in *A. prunicolor* varies from entirely uniform coloration to a checkerboard pattern). Among species with similar numbers of segments per midbody annulus, *A. cegei* can be distinguished from *A. angustifrons* by the shape of its snout (the tip of the snout is spatulated in *A. angustifrons*), the high number of caudal annuli (12–18 caudal annuli in *A. angustifrons*), and by usually having 3 (versus 4) supralabial shields; and from *A. vermicularis*, *A. petrei*, and *A. mertensi* by the low number of body annuli (211–259, 231–251, and 210–250, respectively).

• **DESCRIPTION.** The only description of this species is the original (Montero et al. 1997).

• **ILLUSTRATIONS.** Montero et al. (1997) provided illustrations of the head and tail.

• **DISTRIBUTION.** *Amphisbaena cegei* is known only from the type locality and adjacent areas, all in the Departamento Santa Cruz. In Provincia Florida, specimens have been collected at Pampa Grande (64°06'W, 18°05'S, Becerros, Tembladeras), Mataral (64°12'W, 18°06'S, Laguna de Becerros), Mairana (63°57'W, 18°06'S, Venadillo), and Samaipata (63°52'W, 18°10'S, Venadillo); in Provincia Caballero, this species is known only from San Juan del Potrero.

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** The only published account of this species is that by Montero et al. (1997).

• **ETYMOLOGY.** The specific name, *cegei*, is derived from the initials of Carl Gans, to acknowledge his contributions to the knowledge of amphisbaenians.

• **COMMENTS.** The original description (Montero et al. 1997) was based on a single specimen. The variation described in this account is based on a new series of specimens from Santa Cruz de la Sierra, Bolivia (MNKM 580, 828, 908–9, 915, 994, 1233–4, 1239–41, 1511, 1595–6, 1600, 1602, 1622, 1691, 1693, 1695, 1712, 1792, 1794; MNKM 828 was donated to the Fundación Miguel Lillo and now bears the number FML 10165).

The very limited distribution makes this species very fragile from a conservation perspective. Because *Amphisbaena cegei*

was not described until after publication of the “red book” of Bolivian vertebrates (Ergueta and Morales 1996), it could not be included. I believe that, even without data pertaining to population sizes, that *A. cegei* at least should be classified as “vulnerable” according to the categories established by the International Union for the Conservation of Nature (IUCN-CSE 1994) and defined by Rivera (1996).

The smallest known specimen (MNKM 1240, SVL = 71 mm) appears to be a neonate; it was collected on 28 November 1996, which may be indicative of the eclosion period.

• **ACKNOWLEDGMENTS.** Lucindo Gonzales and María Esther Montaña, Museo “Noel Kempf Mercado,” provided access to the new specimens.

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