

BURIED IN THE SANDS OF TIME:
A NEW SPECIES OF *SEPSINA* BOCAGE, 1866,
FROM ANGOLA (SQUAMATA: SCINCIDAE)

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ABSTRACT

Burrowing skinks of the genus *Sepsina* Bocage, 1866 (Squamata: Scincidae) have a complex taxonomic history and are particularly diverse, although poorly known, in Angola. With elongated bodies and reduced limbs, the five recognized species of the genus can be diagnosed based on the presence or absence of forelimbs and the number and relative size of digits. *Sepsina bayonii* (Bocage, 1866) is the most distinctive species of the genus, being the only taxon without forelimbs and a single digit on the hind limbs. Revision of historical material from the collections of the California Academy of Sciences revealed the presence of two specimens without forelimbs, but differing from *S. bayonii* in the number of digits on each hind limb. Considering this unique combination of morphological diagnostic characters, we herein describe a **new species** from Angola, *Sepsina caluanda*. This discovery highlights the importance of natural history collections and the revision of historical material for the description of biodiversity and alerts to the threat of habitat loss due to rapid urban growth.

KEY WORDS: Africa, endemism, herpetofauna, Luanda, natural history collections, taxonomy.

INTRODUCTION

The genus *Sepsina* Bocage, 1866, is a poorly known group of burrowing skinks with a complex taxonomic history involving recurrent synonymization and resurrection of generic names (Bocage 1866; Peters 1874, 1875; Boulenger 1887; de Witte and Laurent 1943; Greer 1970; Marques et al. 2018). Five species and two subspecies are currently recognized: *Sepsina alberti* Hewitt, 1929; *S. angolensis* Bocage, 1866; *S. bayonii* (Bocage, 1866); *S. copei* Bocage, 1873; and *S. tetradactyla* Peters, 1874 with two subspecies, *S. t. tetradactyla* Peters, 1874 and *S. t. hemptinnei* de Witte, 1933. Angola hosts the greatest diversity within the genus, with four of the six known taxa—*S. alberti*, *S. angolensis*, *S. bayonii*, and *S. copei* (Marques et al. 2018; LMPC unpubl. data). With the exception of *S. alberti*, these species were originally described based on Angolan type material.

The different species of the genus can easily be separated in two main groups based on the presence (*S. alberti*, *S. angolensis*, *S. copei*, and *S. tetradactyla*) or absence (*S. bayonii*) of forelimbs, or in three groups based on the number of pedal digits—those that have four digits (*S. alberti* and *S. tetradactyla*), three digits (*S. angolensis* and *S. copei*), or one digit (*S. bayonii*) (Fig. 1). In this regard, *S. bayonii* is the most distinctive species of the genus. The species is characterized by the lack of forelimbs and presence of styliiform hind limbs with a single digit (Bocage 1866; de Witte and Laurent 1943; Greer 1970). It was originally described by José V.B. du Bocage (1866) as the type species of a new genus, *Dumerilia*, based on a single specimen collected in 1865 by Portuguese captain Francisco António Pinheiro Bayão (1833–1883) in “Loanda,” Angola. This specimen was lost in the fire that destroyed Museu Bocage in 1978 (Marques et al. 2018), and very few records of the species existed in either bibliographic sources or museum collections until very recently (Boulenger 1887; Ferreira 1906; Marques et al. 2018; this paper). A few years after the original description, Bocage (1882) provided more details regarding the collecting locality of the type specimen, noting that it had been collected in “Loanda dans le fort du Penedo sous l’affût d’un canon” [= Luanda, inside the Penedo fort under the lookout of a canon], and in his magnum opus *Herpétologie d’Angola et du Congo*, Bocage (1895) provided an illustration with details of its head and hind limbs (Fig. 2). This illustration was in fact a direct adaptation of the one published by the German zoologist Wilhelm K. Peters (1815–1883) in his own description of a new genus and species, *Scincodipus congicus* Peters, 1875 (Peters 1875). *Scincodipus congicus* was described based on three specimens from “Chinchoxo” in modern day Cabinda Province, northwestern Angola (two of these specimens are still extant in the Museum für Naturkunde, Berlin under the accession numbers ZMB 8606–8607; Bauer et al. 2003). Both Peters’ new genus and species were rapidly subsumed to the synonymy of *bayonii* by Bocage (1882, 1895) and have since been widely regarded as its synonym (Boulenger 1887; de Witte and Laurent 1943; Greer 1970; Marques et al. 2018)

due to the obvious resemblance of the two and their shared morphological characteristics, i.e., lack of forelimbs and the presence of styliiform hind limbs with a single digit (Fig. 2).

As a part of an ongoing revision of the genus (Parrinha et al. in prep), two specimens from the collections of the California Academy of Sciences, CAS 85971 and 85972, caught our attention due to their morphological singularities. Both specimens lack forelimbs, a diagnostic character of *S. bayonii*, but the hind limbs terminate in three digits as in *S. angolensis* or *S. copei* (versus the diagnostic single digit of *S. bayonii*). These two adult specimens are labelled as “*Scelotes angolensis*” [= *Sepsina angolensis*], collected in the vicinity of Luanda, the capital city of Angola, in early June 1958 by the American entomologist Edward S. Ross (1915–2016) and the American-born Canadian arachnologist Robin E. Leech (1937–2016). Ross, Leech, and Ross’ wife Wilda, a botanist, were participating in a year-long (June 1957 to June 1958) expedition across Southern Africa funded by the National Geographic Society and California Academy of Sciences (Ross 2009). These two specimens were collected almost at the end of the expedition, days before the team boarded a ship back to the USA. According to Edward Ross’ original field notes, the team camped for four nights about “6.6 km NE of Luanda,” the “stop 635” of the expedition, in a habitat dominated by “Bush, baobabs and palms” (Ross and Leech 1958). While at this “stop,” on 3 June 1958, Ross and Leech collected the two specimens of *Sepsina* “on sand,” according to the notes associated to the specimens themselves. According to the handwritten catalog of CAS herpetological collection, the specimens were received in the collection on 30 July of that year and were identified/labelled as “*Scelotes angolensis*.” These specimens have passed mostly unnoticed, except for when they were briefly cited by Griffith et al. (2000) as *Scelotes angolensis*.

Considering the unique combination of morphological characteristics, the specimens collected by Ross and Leech are here recognized as members of a yet unknown and undescribed species of *Sepsina*, which we describe herein.

MATERIALS AND METHODS

Material examined.—We examined a total of 162 specimens of the genus *Sepsina* (two *S. alberti*, 68 *S. angolensis*, 31 *S. bayonii*, 14 *S. copei*, 30 *S. tetradactyla tetradactyla*, 15 *S. tetradactyla hemptinnei*, plus the two specimens collected by Ross and Leech) deposited in several natural history collections in African, European, and North American museums. For mensural and meristic comparisons, we measured and scale-counted the two specimens collected by Ross and Leech and 14 specimens of *S. bayonii*. Specimens cited in this work are deposited in the collections of the American Museum of Natural History, New York, USA (AMNH); the California Academy of Sciences, San Francisco, USA (CAS); the Carnegie Museum of Natural History, Pittsburgh, USA (CM); the Field Museum of

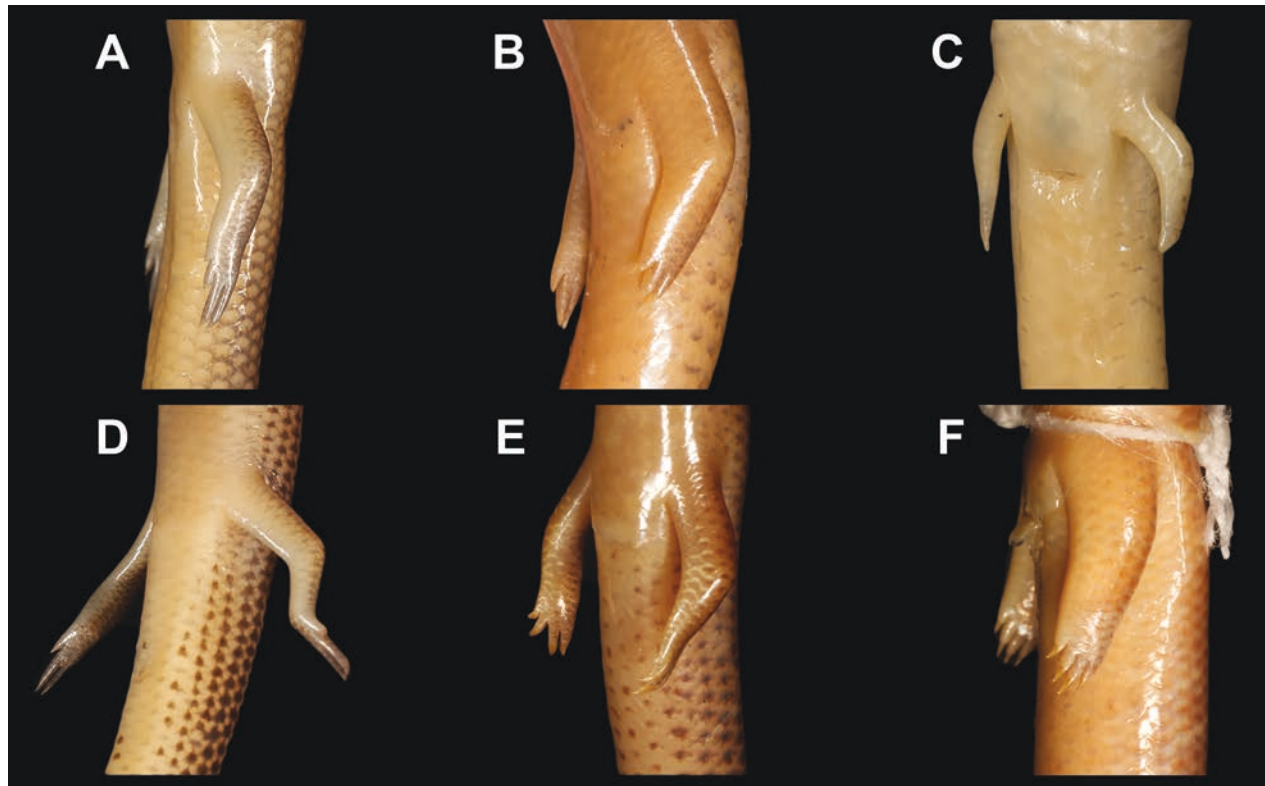


Fig. 1.—Typical hind limbs of *Sepsina* species (note different number and relative proportions of digits). **A**, *S. alberti* from Angola (CAS 263922); **B**, *S. angolensis* from Zambia (FMNH 142797); **C**, *S. bayonii* from Angola (CAS 267060); **D**, *S. copei* from Angola (CAS 263921); **E**, *S. t. hemptinnei* from the Democratic Republic of the Congo (CM 57801); **F**, *S. t. tetradactyla* from Malawi (MCZ R-50941).

Natural History, Chicago, USA (**FMNH**); the Museum of Comparative Zoology, Harvard University, Cambridge, USA (**MCZ**); the National Museum of Natural History, Smithsonian Institution, Washington, USA (**USNM**); the Natural History Museum (formerly British Museum of Natural History), London, UK (**BMNH**); the Instituto de Investigação Científica Tropical, Lisboa, Portugal (**IICT**); the Musée d'Histoire Naturelle de La Chaux-de-Fonds, La Chaux-de-Fonds, Switzerland (**LCFM**); the Museu de História Natural e da Ciência, Universidade do Porto, Porto, Portugal (**MHNC-UP**); the Museu Nacional de História Natural e da Ciência, Universidade de Lisboa, Lisboa, Portugal (**MUHNAC**); the Museum für Naturkunde (formerly Zoologisches Museum Berlin), Berlin, Germany (**ZMB**); the Instituto Nacional da Biodiversidade e Áreas de Conservação, Luanda, Angola (**INBAC**); the Museu Regional do Dundo, Dundo, Angola (**MD**); and the Ditsong National Museum of Natural History (formerly Transvaal Museum), Pretoria, South Africa (**TM**). A complete list of comparative material examined is presented as Appendix.

Locality data are presented in the form of decimal degrees and use the WGS-84 map datum, and elevations are reported in meters above sea level. Older records were derived from Marques et al. (2018) or georeferenced using the GEOLocate web tool (<https://www.geo-locate.org>).

Morphological data.—Specimens were measured with a digital caliper to the nearest 0.1 mm and lepidosis was observed with the help of a stereomicroscope. Scale counts and measurements follow those used in earlier *Sepsina* descriptions and diagnoses (e.g., Boulenger 1887; Hewitt 1927; de Witte 1933; Loveridge 1942; de Witte and Laurent 1943), and abbreviations were standardized following Darko et al. (2022). The following 12 mensural and meristic characters were recorded: snout-vent length (**SVL**), measured from tip of snout to vent; tail length (**TAL**), from vent to tip of tail, measured only in specimens with complete original tails; body width (**BW**), measured at midbody; head length (**HL**), from tip of snout to posterior margin of parietals; head width (**HW**), measured between external margins of parietals; head height (**HH**), maximum height of head, from occiput to underside of jaw; eye-nostril length (**EN**), from anterior margin of eye to nostril; eye-snout length (**ES**), from anterior margin of eye to tip of snout; nostril-snout length (**NS**), from nostril to tip of snout; number of scale rows around midbody (**MSR**); number of dorsal scales (**DSR**), from nuchals (excluded from count) to base of tail (above cloaca); number of ventral scales (**VSR**), from mental (excluded from count) to cloaca. The numbers of limbs and digits were also noted, as well as color pattern. High-resolution photographs of preserved specimens were taken.

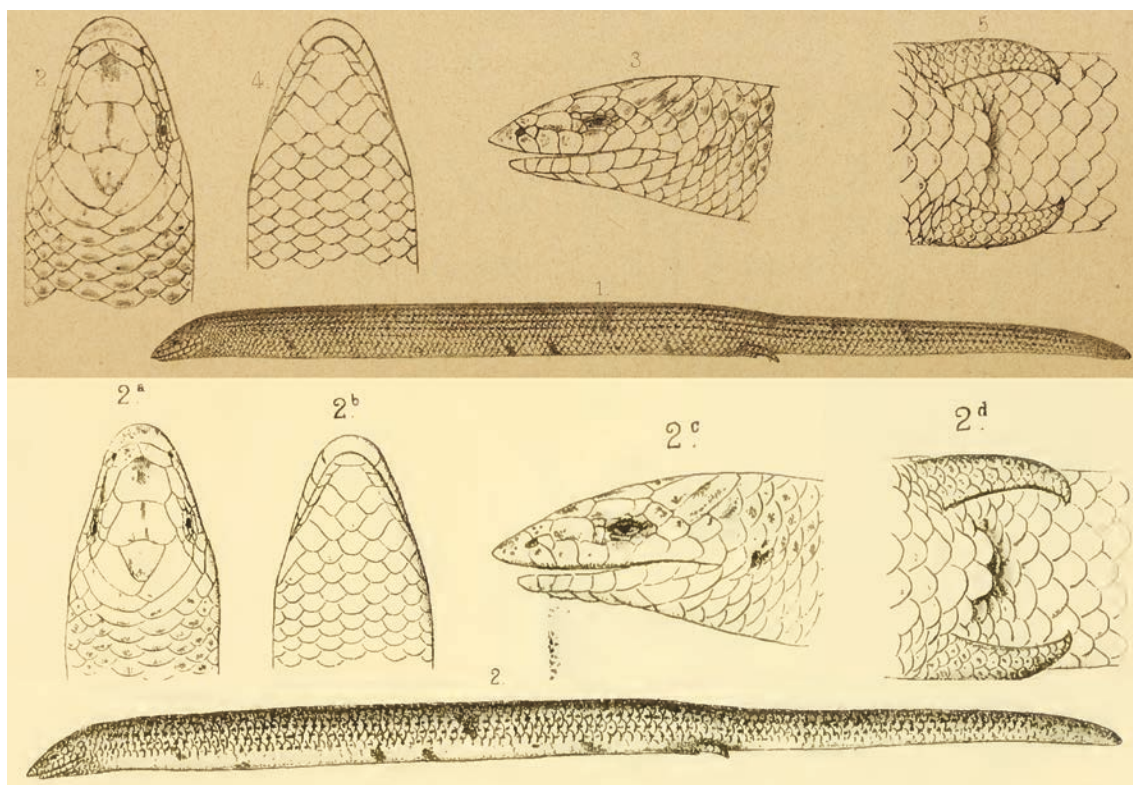


Fig. 2.—Original illustrations of *Scincodipus congicus* (above) and *Dumerilia bayonii* (below), adapted from Peters (1875) and Bocage (1895) respectively.

RESULTS

The specimens collected by Ross and Leech are readily distinguished from all the species of the genus except *S. bayonii* in lacking forelimbs. They are morphologically identical to *S. bayonii* in most aspects—cuneiform snout, extending well beyond mental; frontal wider than long; and most notably, the lack of forelimbs. No significant differences were observed in the examined mensural and meristic characters between the aforementioned specimens and *S. bayonii* (Table 1). However, these specimens have three digits on each hind limb, contrary to typical *S. bayonii* and most closely resembling *S. angolensis* (Fig. 3). Given that the presence/absence of forelimbs and the number and relative size of digits are the main diagnostic characters used to define species in the genus, the morphological results presented here provide sufficient evidence, following de Queiroz' (1999) General Lineage species concept, to recognize the three-toed "*bayonii*" specimens as belonging to a distinct taxonomic unit. The new species is described and diagnosed in the taxonomic account below.

SYSTEMATIC ZOOLOGY
Class Reptilia Laurenti, 1768
Order Squamata Oppel, 1811
Family Scincidae Gray, 1825

Subfamily Scincinae Gray, 1825
Genus *Sepsina* Bocage, 1866

Sepsina caluanda, sp. nov.

LSID: urn:lsid:zoobank.org:pub:9BB02E84-9DE4-4098-AC08-00BD79616C4D
(Figs. 4–5)

Scelotes angolensis: Griffith et al. (2000: 13)

Holotype.—Adult male with regenerated tail (CAS 85972; Fig. 4), collected by Edward S. Ross and Robin E. Leech on 3 June 1958.

Type Locality.—The CAS catalogue mentions the locality "Angola: Luanda," the remarks "In sand" and "Alt: 40 m," and the original reference "Stop 635." A more precise locality is available in the field notes of the expedition under "Stop 635," where Ross gave an elevation of "50 m" [where the number "5" is written over the number "4"] "at the 6.6 km N.E. of Luanda on the way to Ambriz," with a later correction written in pencil "[Ambriz]ete or more accurately on road to Caxito" (Ross and Leech 1958). We here confine the type locality to the area georeferenced to approximately -8.7770°, 13.3441°, in the surroundings of Cacucaco, Luanda Province.

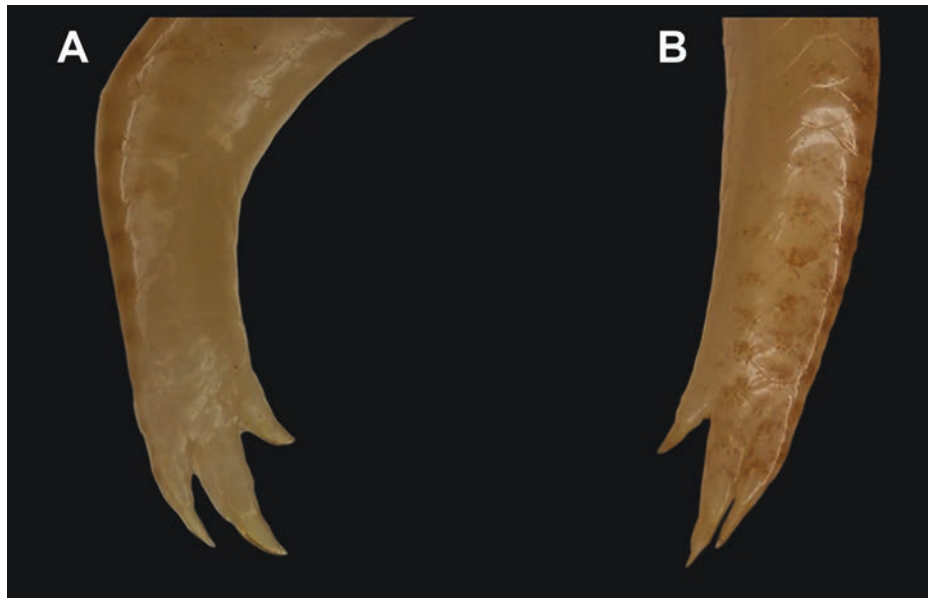


Fig. 3.—Detail of left pes of specimens collected by Ross and Leech. **A**, holotype of *S. caluanda*, sp. nov. (CAS 85972); **B**, paratype of *S. caluanda*, sp. nov. (CAS 85971).

Paratype.—Unsexed adult with broken tail (CAS 85971; Fig. 5), with same collecting data as the holotype.

Diagnosis.—A small- to medium-sized *Sepsina* (maximum SVL 68.6 mm) with a cuneiform snout, no forelimbs, and reduced, tridactyl hind limbs (Figs. 4–5). MSR 22, DSR 93–97, VSR 98–99. Dorsal scales dark centered, forming series of brown longitudinal lines, somewhat discontinuous at some points; ventral parts uniform. *Sepsina caluanda*, sp. nov., is easily diagnosed by the following combination of characters: 1) lack of external forelimbs (known otherwise only in *S. bayonii*), and 2) tridactyl hind limbs (known otherwise only in *S. angolensis* and *S. copei*).

Description (Holotype data followed by paratype data in square brackets when different).—Adult male with body elongate (SVL 68.6 [58.9] mm) and robust (BW/SVL 8%); regenerated [broken] tail short (TAL 33 [23.2] mm) and robust. No external forelimbs; hind limbs small, bearing three clawed digits, relative size I < III < II. MSR 22, DSR 97 [93], VSR 99 [98]. Head small (HL/SVL 10 %), indistinct from neck; snout cuneiform, projecting well beyond mental. Eye small, with scaly, semi-transparent lower eyelid; ear opening very small, barely visible, elliptical, positioned slightly above level of mouth. Rostral wider than deep; nostril pierced between four scales: rostral, first supralabial, postnasal and supranasal; supranasals in broad contact behind rostral, separated from first supralabial by postnasal. Six supralabials, fourth being subocular; loreal longer than high, touching postnasal, supranasal, frontonasal,

first supraocular, first supraciliary, preocular, and first, second and third supralabials. Prefrontals and frontoparietals absent; frontonasal wider than long, in contact with supranasals, loreal, first supraocular and frontal. Frontal wider than long, somewhat bell shaped, its length smaller than distance between its anterior margin and tip of snout. Interparietal small and subtriangular, separated from supraoculars, with visible parietal foramen. Parietals in broad contact behind interparietal, followed by a pair of enlarged nuchal scales. Four supraoculars, first distinctly longest. Mental small, wider than deep, touching postmental and first infralabial on each side; seven infralabials; postmental larger than mental. General body coloration creamy white, possibly due to bleaching from preservation; dorsal scales with brown spots in the center, forming series of longitudinal lines; ventral parts uniform.

Variation.—The paratype agrees entirely with the holotype.

Etymology.—The specific epithet “*caluanda*” is a name in apposition, referring to the occurrence of the species in Luanda, the capital city of Angola. The term “*caluanda*” originates from the Kimbundu expression “mukwa Luanda,” which denotes a native, inhabitant, or something relative to Luanda. We suggest the English and Portuguese common names “Luanda burrowing skink” and “lagartixa fossorial de Luanda,” respectively.

Distribution.—This species is so far only known from the type locality, in the Cacucio region of greater Luanda, Luanda Province, northwestern Angola (Fig. 6).

TABLE 1. Mensural and meristic comparisons between *Sepsina caluanda*, sp. nov., and *Sepsina bayonii*. Data presented as mean \pm S.D. [minimum–maximum].

	<i>S. caluanda</i> sp. nov. (<i>n</i> = 2)	<i>S. bayonii</i> (<i>n</i> = 14)
max. SVL	68.6	75.7
BW	5.2 \pm 0.4 [4.9–5.5]	4.8 \pm 0.9 [2.8–6]
HW	3.2 \pm 0.2 [3–3.3]	3.3 \pm 0.5 [2.5–4.2]
HL	5.5 \pm 0.5 [5.2–5.9]	6 \pm 0.8 [4.6–7.1]
HH	2.5 \pm 0.2 [2.4–2.6]	2.5 \pm 0.3 [2–3]
EN	1.8 \pm 0.2 [1.7–1.9]	1.7 \pm 0.3 [1.2–2.2]
ES	2.9 \pm 0.3 [2.7–3]	2.8 \pm 0.4 [2–3.8]
NS	1.1 \pm 0.1 [1–1.2]	1.2 \pm 0.2 [0.8–1.6]
No. digits	3	1
MSR	22	22 \pm 1 [20–23]
DSR	95 \pm 3 [93–97]	90 \pm 3 [85–95]
VSR	99 \pm 1 [98–99]	94 \pm 5 [85–106]

Habitat and natural history.—Very little is known about the natural history of *Sepsina caluanda*, sp. nov. The only known specimens were collected more than half a century ago in an area that is now occupied by neighborhoods of greater Luanda city. In the expedition field notes, Ross noted the presence of “Bush, baobabs and palms” at the type locality (Ross and Leech 1958). In another field note dated 18 July 1957, Ross described the native vegetation 6 km N of Luanda as “Ground sandy, no stones. Scrub and grass with scattered trees, esp. Baobab” (Ross 1959). This area has been classified as a sublittoral mosaic of dry savanna and steppe by Grandvaux-Barbosa (1970). The specimens were noted to have been collected in sand. Although no additional records are known, *Sepsina caluanda*, sp. nov., is expected to be found elsewhere in the coastal arid savannas of northwestern Angola (Huntley 2023), where habitat is still available. In the greater Luanda region, the new species is sympatric with three other members of the genus, namely *S. angolensis*, *S. bayonii*, and *S. copei* (Marques et al. 2018; this paper).

DISCUSSION

This description raises the total number of recognized species in the genus *Sepsina* to six, and those occurring in Angola to five. While most species of the genus occur in the country, the region of Luanda seems particularly diverse, with four species occurring in sympatry or close proximity

—*S. angolensis*, *S. bayonii*, *S. copei*, and *S. caluanda*, sp. nov. The mechanisms of ecological partitioning that allow the occurrence of such diversity in the same area remain unknown and should be investigated. *Sepsina caluanda*, sp. nov., also adds to the diversity of limb reduction forms found in the genus, being the only species with no forelimbs, and hind limbs bearing three digits. An ongoing revision of the group will aim to address some of these questions, putting limb and digit reduction at a broader phylogenetic and morphological context (Parrinha et al. in prep.). Nonetheless, the presence of four species of *Sepsina* in northwestern Angola is in line with observations on other genera of limb reduced skinks in southern Africa, where species with different digital combinations occur sympatrically in relatively small areas. This is the case of the genus *Typhlacontias* Bocage, 1873, in the Namib Desert of Angola and Namibia (Haacke 1997), and the genus *Scelotes* Fitzinger, 1826, in the KwaZulu-Natal region of South Africa (Tolley et al. 2023).

The discovery of a new species of *Sepsina* in historical natural history collections is another example to add to the list of recent species of amphibians and reptiles that have been described solely based on specimens deposited in natural history museums (Ceriaco 2015; Ceriaco et al. 2021; Marques et al. 2020; Weinell et al. 2020; Ceriaco and Passos 2023; Major et al. 2023; Parrinha et al. in press). Such discoveries are likely to continue, as natural history collections around the world hold vast collections of specimens, many of which have not been critically

examined by taxonomists expert in their respective groups. As noted by Fontaine et al. (2012), on average, specimens representing new species have a museum “shelf-life,” i.e., the time between their accession in natural history collections and their taxonomic description, of 21 years. But in some cases, as the one presented here, in which 66 years have passed since the collection of these two specimens to the present description, this “shelf-life” is much longer. In times of rapid human-induced changes on our planet, much has changed at the original sites of collection during the long period that has elapsed between discovery and description. Ceriaco and Passos (2023), Major et al. (2023), and Parrinha et al. (in press) provide examples of cases in which these newly described species based on specimens collected decades or even centuries ago, may have already become extinct or extremely rare due to the loss of habitat, presence of invasive species and/or other human-induced threats. This may also be the case of *Sepsina caluanda*, sp. nov., as it is known only from a single collecting event 66 years ago. The new species may be (or may have been) a rare and restricted species. However, given the burrowing behavior typical of the genus, the lack of more recent records may simply reflect its cryptic nature (i.e., difficulty of detection), or the fact that almost no research directed to the study of the genus *Sepsina* has been conducted in the region. The Luanda-region endemic amphisbaenid *Monopeltis luandae* Gans, 1976, had also not been recorded since its original collection in Luanda in the early 1970s (Gans 1976), until it was recently rediscovered by Branch et al. (2018) and Conradie and Vaz Pinto (2021). Prior to 2015, when our team collected new material during fieldwork at Kissama National Park in Luanda Province, the most recent known record of *S. bayonii* had been collected by Francisco Newton (1864–1909) in 1904 and published by Ferreira (1906) two years later (Ferreira 1906; Santos and Ceriaco 2021; Santos et al. 2021). Additional material was collected by Wulf D. Haacke (1936–2021) in the 1970s but remained unpublished in the collections of the



Fig. 4.—Preserved holotype of *Sepsina caluanda*, sp. nov. (CAS 85972).



Fig. 5.—Preserved paratype of *Sepsina caluanda*, sp. nov. (CAS 85971).

TM until now. Thus, there is a chance that this new species has simply escaped the attention of researchers, both in the CAS collection and in the field, for decades. However, the urban expansion of Luanda’s metropolitan area in recent decades should be a matter of concern regarding the survival of these regionally endemic species. Where 66 years ago Edward Ross observed “scrub and grass with scattered trees” just outside Luanda, there are today some of the busiest roads and most densely populated areas in the greater Luanda area, a region with more than eight million estimated inhabitants (Amaral 1968; Ngolo and Watanabe 2023; Fig. 7). This discovery highlights the need of “more boots on the ground” in taxonomic research as noted by Wilson (2017) and Engel et al. (2021), not only in the field but also in natural history collections.

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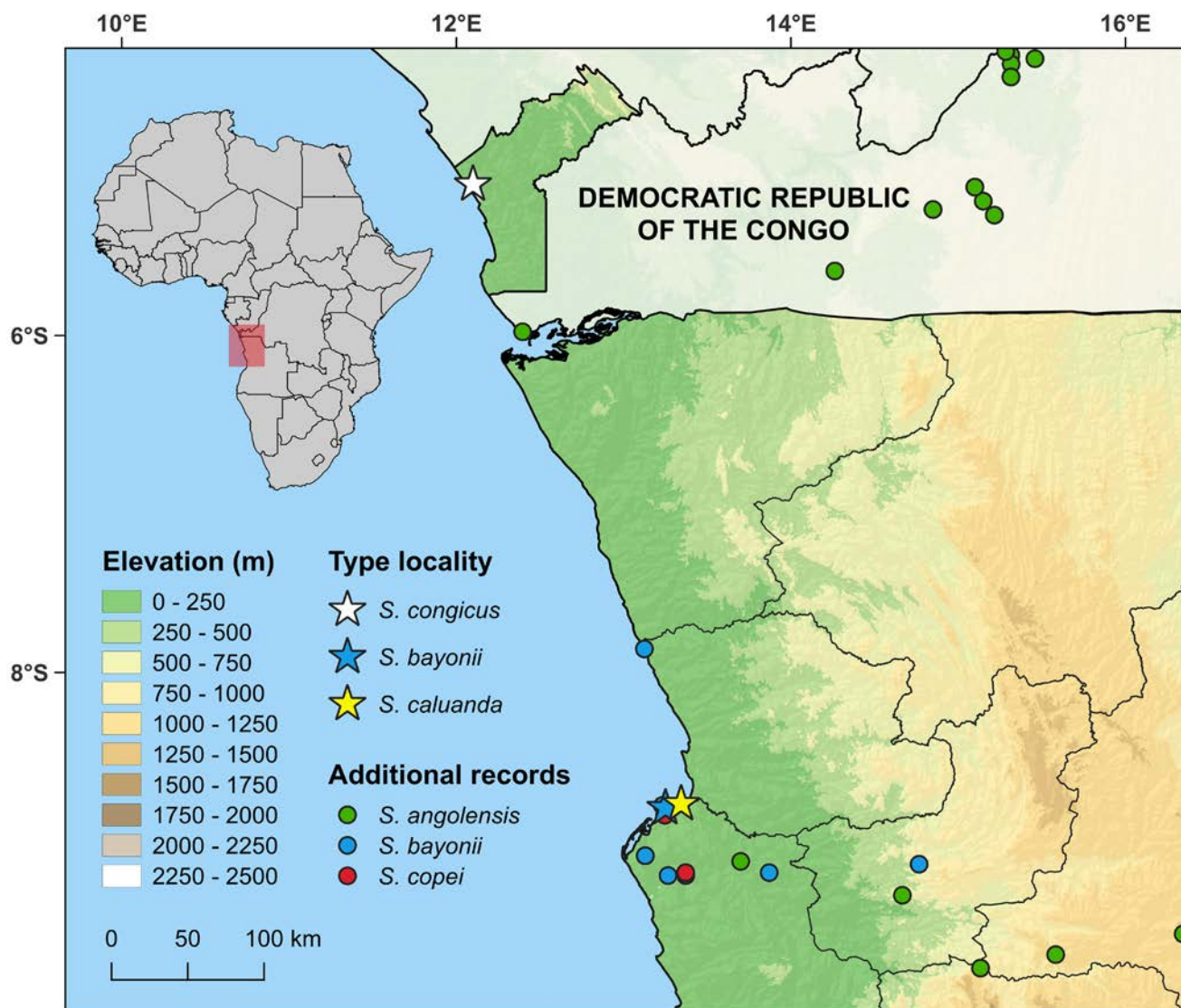


Fig. 6.—Map of northwestern Angola showing the type localities of *Sepsina bayonii* (blue star), *Scincodipus congicus* (white star), and *Sepsina caluanda*, sp. nov. (yellow star), and additional locality records for *S. angolensis* (green circles), *S. bayonii* (blue circles), and *S. copei* (red circles).

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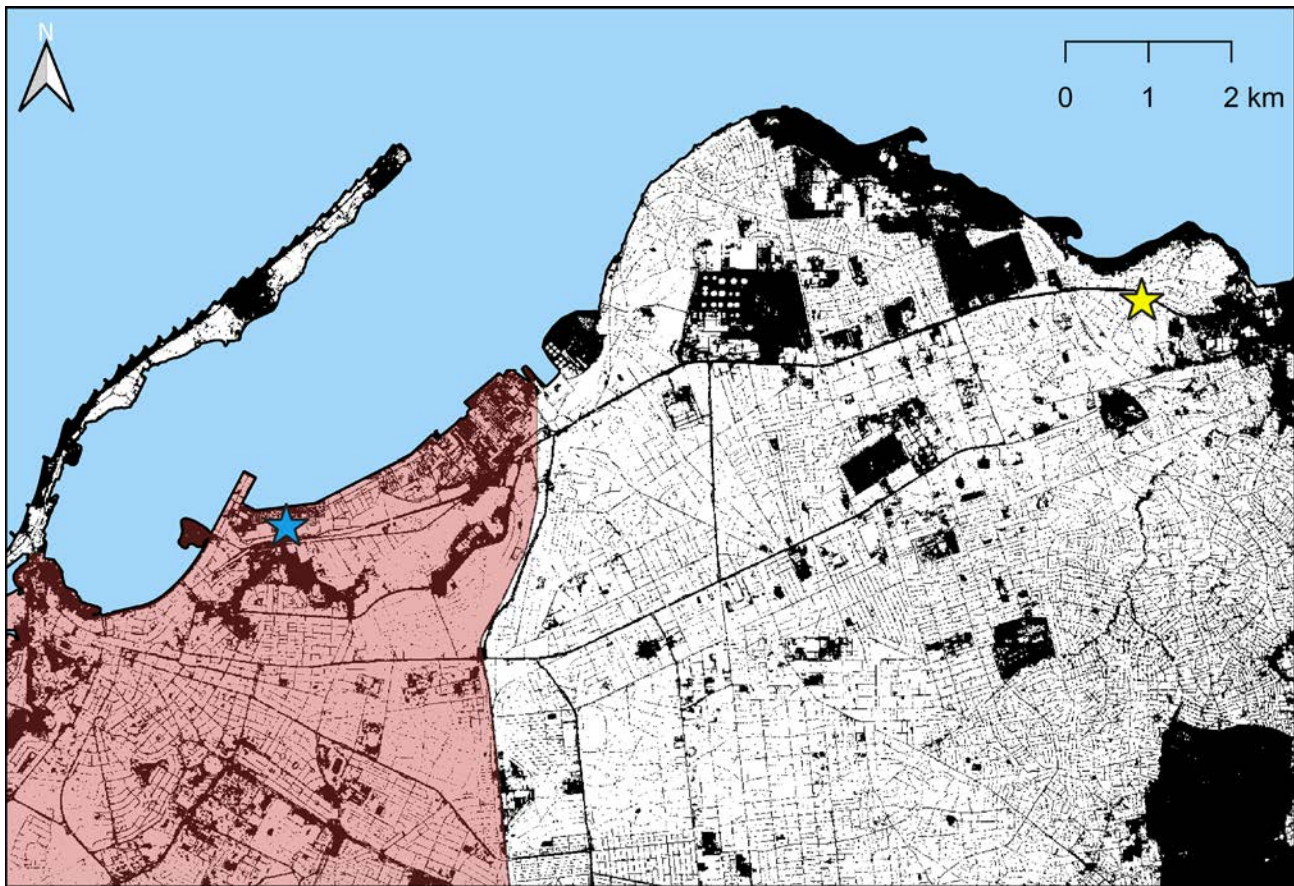


Fig. 7.—Partial map of Luanda outlining extent of human settlements in 2019 (data from World Settlement Footprint 2019, <https://download.geoservice.dlr.de/WSF2019/>) and type localities of *Sepsina bayonii* (blue star) and *S. caluanda*, sp. nov. (yellow star); red shaded area represents the approximate limits of the city in 1968 after Amaral (1968).

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APPENDIX 1: Complete list of comparative material examined. Specimens used for mensural and meristic comparisons are marked with an asterisk (*).

Sepsina alberti.—**ANGOLA. Namibe Province:** Chipumpo [-16.1923°, 12.8566°, 541 m] (CAS 263923); Virei-Chipumpo [-16.2793°, 12.9584°, 219 m] (CAS 263922).

Sepsina angolensis.—**ANGOLA. Benguela Province:** Hanha [-12.2506°, 13.7116°, 83 m] (AMNH 40764, 40737, 40741–43, 40749–51, 40757, 40760–61, 40763, 40765–66, 40769). **Bié Province:** 14 km ENE from Mumbué village [-13.8518°, 17.4689°, 1610 m] (CAS 266036). **Cunene Province:** Kuvelai superior [-15.2000°, 16.4330°, 1443 m] (LCFM 91.0628–30). **Huambo Province:** Bimbe [-11.8170°, 15.8330°, 1639 m] (LCFM 91.0624). **Huíla Province:** 24 mi SE of Chibia [-15.4317°, 13.9305°, 1322 m] (CAS 85951); Boca da Humpata [-14.9552°, 13.4774°, 2019 m] (MD 1854); Chibemba [-15.7500°, 14.0833°, 1297 m] (MD 4036.5); Huila [-15.0498°, 13.5494°, 1730 m] (FMNH 74294); Indungu [-14.8210°, 16.2600°, 1491 m] (LCFM 91.0627); Kalukembe [-13.7830°, 14.6830°, 1699 m] (LCFM 91.0626); Lubango, Tundavala [-14.8234°, 13.3925°, 1293 m] (CAS 263904; INBAC/AMB 10721); Viriambundo [-15.5500°, 14.0500°, 1341 m] (TM 45159). **Kwanza Norte Province:** Zembe [-9.3167°, 14.6667°, 539 m] (MHNCUP/REP 345). **Malanje Province:** AH Laúca [-9.7462°, 15.1338°, 776 m] (MUHNAC/AMB 9207, 9208, 9263); Pungo Andongo [-9.6667°, 15.5833°, 1038 m] (BMNH 1904.5.2.43). **Moxico Province:** Calombe [-11.8333°, 19.9333°, 1345 m] (IICT/R Angola 1, 199–201/1959, 264/1959, 386/1959, 409/1959, 415–16/1959, 431–32/1959, 436/1959, 438–39/1959, 79A–81A/1959); Lago Calundo [-11.8000°, 20.8600°, 1119 m] (MD 5630, 5704, 5714). **Namibe Province:** 16 km E of Caraculo [-15.0246°, 12.7854°, 434 m] (TM 23910, 23912–13). **Province unknown:** “Benguella to Bihé” (BMNH 1905.5.29.21); “Interior of Benguella” (BMNH 1906.10.8.3; MCZ R-112227). **DEMOCRATIC REPUBLIC OF THE CONGO. Congo Central Province:** Kifua [-5.6158°, 14.2630°, 335 m] (BMNH 1902.12.12.3). **Kinshasa Province:** near Leopoldville [-4.4600°, 15.3158°, 505 m] (BMNH 1904.6.10.12). **NA-MIBIA. Region unknown:** “SW Africa” (MCZ R-5787). **ZAMBIA. Western Province:** Behind Lukona [-15.3833°, 22.8833°, 1018 m] (FMNH 134547); Kalabo [-14.9700°, 22.6814°, 1024 m] (AMNH 114406; FMNH 142793, 142795–97; MCZ R-110303).

Sepsina bayonii.—**ANGOLA. Bengo Province:** Ambriz [-7.8600°, 13.1243°, 43 m] (BMNH 1967.79*, 1967.7980). **Cabinda Province:** Chinchoxo [-5.1000°, 12.1000°, 45 m] (ZMB 8606–07 [syntypes of *Scincodipus congicus*]). **Luanda Province:** Belas [-9.0831°, 13.1297°, 42 m] (TM 48184–91); Kissama National Park, vic. Kawa camp [-9.1830°, 13.8706°, 145 m] (CAS 263917); Kissama National Park, Kawa camp [-9.1999°, 13.3712°, 143 m] (CAS 267060*, 267061*, 267062*, 267063*, 263924*, 263925*, 263926*, 263927*, 263928*; INBAC/MCZ FS A-36400); Kissama National Park, Papa 5 [-9.2003°, 13.2660°, 122 m] (CAS 267108*, 267109*); Luanda [-8.8439°, 13.2464°, 71 m] (AMNH 113860; BMNH 1951.1.1.95; MCZ R-27098; TM 43212, 46429; USNM 20039–40, 20041*, 20042–43, 20133*, 20134–36); Luanda Island [-8.7867°, 13.2322°, 6 m] (TM 46430–37); Pousada da Quiçama [-9.1849°, 13.3704°, 5 m] (TM 46439–41). **Province unknown:** Carangigo (BMNH 1864.7.13.36*); Angola (BMNH 1876.7.1.3).

Sepsina copei.—**ANGOLA. Benguela Province:** Benguela [-12.5783°, 13.4072°, 11 m] (BMNH 1864.6.14.7); Dombe [-12.9517°, 13.1025°, 51 m] (ZMB 7763 [syntype]); Hanha [-12.2506°, 13.7116°, 83 m] (AMNH 40755, 50762, 40767–68, 40770). **Luanda Province:** Kissama National Park, Romeo 1 [-9.1832°, 13.3718°, 129 m] (CAS 267103). **Namibe Province:** 30 mi W Vila Arriaga [-14.7587°, 12.8987°, 651 m] (CAS 104568); Bumbo farm [-15.1679°, 13.1491°, 589 m] (MUHNAC/AMB 9823); Mamue riparian área [-13.8004°, 13.1246°, 732 m] (CAS 263918–21); vic. Ndolondolo [-13.8087°, 13.1352°, 754 m] (CAS 263916).

Sepsina tetradactyla hemptinnei.—**DEMOCRATIC REPUBLIC OF THE CONGO. Haut-Katanga Province:** Lukafu [-10.5167°, 27.5500°, 1100 m] (MCZ R-42884–85 [paratypes]); Lusinga, Upemba National Park [-8.9333°, 27.2000°, 1691 m] (CM 57801). **Haut-Lomami Province:** Mabwe, rive E du lac Upemba, Upemba National Park [-8.6500°, 26.5167°, 585 m] (AMNH 102170–71; BMNH 1968.644). **TANZANIA. Kigoma Region:** Kigoma [-4.9056°, 29.6761°, 804 m] (BMNH 1970.2168); Ruanda, near Ujiji [-4.9056°, 29.6761°, 1386 m] (MCZ R-47771, 47773–74, 200433–34). **Tabora Region:** Tabora [-5.0667°, 32.8167°, 1229 m] (AMNH 114407). **ZAMBIA. Northern Province:** Abercorn [-8.8402°, 31.3659°, 1621 m] (MCZ R-47139); Lake Chisi, Mweru Wantipa [-8.9019°, 29.8158°, 937 m] (MCZ R-47138).

Sepsina tetradactyla tetradactyla.—**MALAWI. Southern Region:** Beside Lujeri River [-16.0224°, 35.6568°, 677 m] (MCZ R-50941–42); Lujeri Tea Estate, Mt Mlanje [-16.0338°, 35.6545°, 700 m] (BMNH 1956.1.15.75); Shire Highlands [-15.5000°, 35.2500°, 732 m] (BMNH 1892.12.31.15); Zomba [-15.3649°, 35.3219°, 1212 m] (BMNH 1893.10.26.22, 1902.2.20.1). **TANZANIA. Lindi Region:** Kilwa [-8.9659°, 39.4971°, 14 m] (MCZ R-52480); Liwale [-9.7667°, 37.9333°, 495 m] (BMNH 1960.1.7.13–14; FMNH 129586–89; MCZ R-52481, 59170–71); Mtene, Rondo Plateau [-10.1500°, 39.3333°, 191 m] (BMNH 1960.1.7.10–12, 1960.1.7.7–9); Nchingidi, Rondo Plateau [-9.6000°, 39.4167°, 125 m] (MCZ R-47776–79); Rondo Plateau [-10.1167°, 39.3833°, 141 m] (BMNH 1961.743). **Morogoro Region:** Mkarazi, Uluguru Mtns [-7.1667°, 37.6667°, 290 m] (MCZ R-24203). **Ruvuma Region:** Songea [-10.6833°, 35.6500°, 977 m] (MCZ R-52482). **Region unknown:** “Southern Province (probably Liwale district)” (BMNH 1961.986).

