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Herpetological Survey of Iona National Park and Namibe Regional Natural Park, with a Synoptic List of the Amphibians and Reptiles of Namibe Province, Southwestern Angola

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Namibe Province is the southernmost province of Angola and, as the result of several expeditions from the nineteenth century to the present, it is one of the most herpetofaunally well-known areas of the country. The Province harbors a high diversity of amphibians and reptiles, including roughly one-third of the reptile taxa reported for Angola as a whole. In this paper we present the results of a joint herpetological expedition to Namibe Province in 2013 by the California Academy of Sciences and the Instituto Nacional da Biodiversidade e Áreas de Conservação, as well as a synoptic list of all the herpetological bibliographic records for the taxa known from the Province. A total of 37 herpetological taxa was collected, including at least three (then) undescribed species, two new country records, and new records for rarely cited taxa in Angola. These taxa belong to four amphibian genera and 15 reptile genera. Species accounts are provided for each of the species collected. We also highlight biogeographic patterns, conservation issues, and possible future paths for the exploration and knowledge of the herpetofauna of Namibe.

A província do Namíbe situa-se no sudoeste de Angola e é uma das mais conhecidas relativamente à sua herpetofauna. Este conhecimento é resultado de várias expedições realizadas desde o século XIX até aos dias de hoje. A província alberga uma espetacular diversidade de anfíbios e répteis, que para estes últimos representa aproximadamente a um terço dos taxa que ocorrem no país. Neste artigo apresentamos os resultados da expedição herpetológica levada a cabo pela California Academy of Sciences e o Instituto Nacional da Biodiversidade e Áreas de Conservação em 2013, bem como uma lista sinóptica de todos os registos bibliográficos para os taxa conhecidos na província. Um total de 37 taxa de anfíbios e répteis foram colectados, incluindo pelo menos três espécies novas (uma já descrita e as outras em processo de descrição), dois novos registos de espécies para o país, bem como o registo de espé-

cies raramente citadas para o país. Estes taxa pertencem a 4 gêneros de anfíbios e a 15 gêneros de répteis. Todos os resultados são apresentados em fichas taxonômicas. São ainda apresentados alguns comentários relativos a padrões biogeográficos e questões ligadas à conservação, e futuros caminhos para a exploração e conhecimento da herpetofauna da província do Namibe.

KEYWORDS: amphibians, Angola, biogeography, conservation, geographic distribution, Namibe Province, reptiles.

The current knowledge of Angola's herpetofauna is incomplete in contrast to neighboring countries such as Namibia (Herrmann and Branch 2013, Marques 2015). Namibe is Angola's southwesternmost province and is one of the better explored provinces in terms of herpetological diversity (Branch et al. 2014). Namibe Province occupies an area of 57,097 km² and is bordered by Huíla Province to the northeast, Cunene Province to the southeast, Benguela Province to the north, Namibia to the south, and the Atlantic Ocean to the west. The province is geographically separated from Huíla by the great escarpment of Serra da Leba and Chela, which separates the lower elevation areas of the Namib Desert from the Huíla Plateau. Topographically, the majority of the province has an elevation lower than 500 m, rising to 1500 m at the escarpment in the east. The highest elevation is at the Serra da Neve inselberg (2403 m) in north of the province, almost at the border with Benguela. The province has two main conservation areas – Iona National Park (INP), the largest conservation area in the country with an area 15,150 km², and the smaller Namibe Regional Natural Park (NNP), with an area of 4,450 km². Namibe lies within the African southwest arid biome, mainly comprising Kaokoveld desert, Namibian savanna, miombo woodlands, and mopane forest. The Kaokoveld desert, which extends along the coastal regions from southern Benguela Province to the Skeleton Coast in Namibia, is mostly dominated by sandy dunes and the occasional presence of *Odysea paucinervis*, *Sporobolus spicatus*, and *Acanthosicyos horridus* dominated

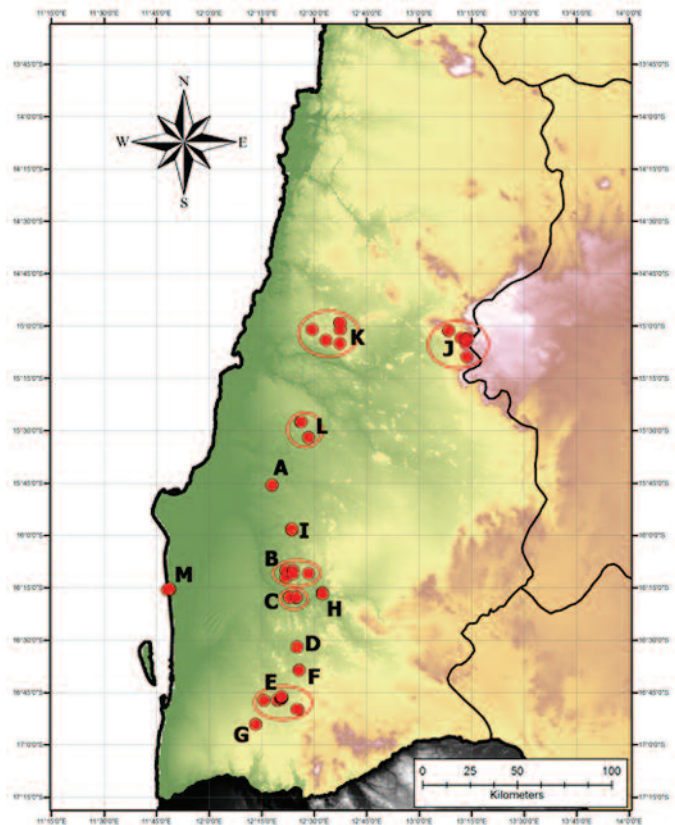


FIGURE 1. Map of the main sampled localities: A) Morro do Soba; B) Omauha Lodge; C) Rio Curoca; D) Entrada do Iona; E) Campo das espinheiras; F) Iona; G) Ford car Wreck; H) Pediva; I) Tambor; J) Serra da Leba; K) Pico do Azevedo; L) Caraculo; M) Praia do navio.

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vegetation. The Namibian savanna woodlands in the central areas of the province are dominated by herbaceous plants of the genera *Aristida* and *Eragrostis*, dispersed shrubs of *Acacia*, *Commiphora* and *Combretum*, and, towards the southwest, extensive populations of *Welwitschia mirabilis*. The eastern portions of the province support smaller areas of Angolan mopane woodlands, which are dominated by the deciduous tree *Colophospermum mopane*, and Angolan miombo woodlands, which are dominated by *Brachystegia* trees, but also typified by *Isobertlinia angolensis*, *Julbernardia paniculata* and *Baikiaea plurijuga* (Grandvaux-Barbosa 1970). The province is bounded in the south by the Cunene (Kunene) River, and crossed by the Curoca and Giraul Rivers. Geologically, the south of the province is mostly dominated by schists, sometimes interspersed with granites, while the north of the province is mainly comprises granites (Anonymous 1963).

Approximately 16 species of amphibians and 95 species of reptiles are known from Namibe Province (Table 1). In separate works we are preparing a complete review of the diversity and distribution (including an annotated checklist) of the Angolan herpetofauna based published bibliographic records prior to 2014 (Marques et al., in prep.), and an annotated checklist of the herpetofauna of Namibe Province, based on bibliographic material, unpublished museum records, and recent collections (Branch et al., in prep). This paper presents the results of an expedition conducted by a team from the California Academy of Sciences (CAS), San Francisco (USA), Villanova University (VU), Villanova (USA), and the Instituto Nacional da Biodiversidade e Áreas de Conservação (INBAC), Kilamba-Kiaxi (Angola). A total of 37 herpetological taxa were collected, including at least three new species, one of which has recently been described (Stanley et al. 2016), two new country records and new records for taxa rarely cited for the country. We then provide a brief discussion of the present status and future prospects for the study of the herpetofauna of Namibe.

HISTORY OF THE HERPETOLOGICAL EXPLORATION OF THE PROVINCE

Namibe Province was explored by several well documented expeditions in the nineteenth and twentieth centuries. The first herpetological surveys conducted were those of the Portuguese explorer José de Anchieta (1832–1897), who visited the region in the late nineteenth century. Anchieta's specimens were deposited in the Natural History Museum of Lisbon and largely studied by the Portuguese zoologist José Vicente Barbosa du Bocage (1823–1907), who published several papers on this material (e.g., Bocage 1867, 1873, 1896). Based on material from Anchieta, as well as others, Bocage described several herpetological taxa from Namibe Province, including Anchieta's Tree Frog, *Leptopelis anchietae* (Bocage, 1873), the Double-scaled Chameleon, *Chamaeleo anchietae* Bocage, 1872, Anchieta's Ground Agama, *Agama anchietae* Bocage, 1896, Anchieta's Shovel-snout Lizard, *Meroles anchietae* (Bocage, 1867), the Reticulate Sand Lizard, *Meroles reticulatus* (Bocage, 1867), the Speckled Sand Skink, *Trachylepis punctulata* (Bocage, 1872), the Speckled Western Burrowing Skink, *Typhlacontias punctatissimus* (Bocage, 1873), Anchieta's Worm-Lizard, *Monopeltis anchietae* (Bocage, 1873), a Skaapsteker, *Psammophylax ocellatus* Bocage, 1873 (currently a synonym of the Spotted Skaapsteker, *Psammophylax rhombeatus* (Linnaeus, 1758)), a new variety of Striped Sand Snake, *Psammophis sibilans* var. *stenocephalus* (Bocage, 1877), and a new species of Giant Blind Snake, *Onychocephalus petersii* Bocage, 1873 that is currently considered a synonym of *Afrotyphlops schlegelii* (Bianconi, 1847).

At the dawn of the twentieth century, the Portuguese explorer Francisco Newton (1864–1909) collected herpetological specimens in the province for the Natural History Museum of the Polytechnic University of Porto, during a three year mission from 1903 to 1905, exploring the provinces

of Kwanza-Norte, Kwanza-Sul and Namibe. The initial collections made by Newton in the two first provinces were studied and published upon by the Portuguese zoologist José Júlio Bettencourt Ferreira (1866–1948) on two different occasions (Ferreira 1906, 1906), but the Namibe Province material had remained unstudied until today (Ceriaco et al., in prep.). In 1925, the Vernay Angola Expedition explored central and southwestern Angola and collected specimens destined for the American Museum of Natural History. The herpetological results of this expedition were partly published upon by the American herpetologist Charles M. Bogert (1908–1992), in a paper dealing with the snakes (Bogert 1940). A second paper detailing the rest of the herpetological material collected on the expedition was never published. Some years later, two Swiss scientific expeditions to Angola, 1928–1929 and 1932–1933, led by the Swiss naturalist Albert Monard (1886–1952) also explored several locations in Namibe Province. The herpetological results of these expeditions were published in four different papers (Monard 1931, 1937a, b, 1938). In between the two Swiss expeditions, the Pulitzer-Carnegie Museum Expedition to Angola in 1930, led by influential American publisher Ralph Pulitzer (1879–1939) and conducted by Wilfrid Rudyerd Boulton (1901–1983) and his wife Laura Crayton Boulton (1899–1980), became one of the most important expeditions in terms of herpetological results. The material was studied and published upon by Karl Patterson Schmidt (1890–1957) in two papers — one dedicated to the reptiles (Schmidt 1933) and other to the amphibians (Schmidt 1936). These works resulted in the description of Pulitzer’s Thick-toed Gecko, *Chondrodactylus pulitzerae* (Schmidt, 1933), Boulton’s Namib Day Gecko, *Rhoptropus boultoni* Schmidt, 1933, and the Angolan endemic subspecies of White-Throated Monitor, *Varanus albigularis angolensis* Schmidt, 1933. More recently the Belgian herpetologist Raymond Laurent (1917–2005) published on a collection of amphibians and reptiles from Namibe (Laurent 1964) sent to him by the Portuguese entomologist and director of the former Museu do Dundo (northeast Angola), António Barros de Machado (1912–2002). This contribution was of utmost importance for the knowledge of the southwestern Angolan herpetofauna. In addition to the several new taxa added to the list of the provincial herpetofauna, he described four new taxa endemic to the southwest of the country — Bogert’s Speckled Western Burrowing Skink, *Typhlacontias bogerti* Laurent, 1964, Hellmich’s Wolf Snake, *Lycophidion hellmichi* Laurent, 1964, and two Namib Day Geckos, *Rhoptropus taeniostictus* Laurent, 1964 and *R. boultoni montanus* Laurent, 1964. Wulf Haacke conducted the last systematic field surveys in the Portuguese colonial period in 1971 and 1974 and deposited his collections in the Ditsong National Museum of Natural History (TM) in Pretoria, South Africa, though this material has not been fully published upon. After independence in 1975, Angola entered a long period of civil war, which ended only in 2002. This prevented further field surveys and studies. In the past decade, several field surveys have been conducted, including in Namibe. Teams from the Porth Elizabeth Museum — Bayworld (PEM) prospected the province in three different expeditions so far, and a team from CAS, INBAC and VU conducted the survey reported in this paper. These expeditions have increased our knowledge of the southern Angolan herpetofauna, and since 2008 five new taxa from southwestern Angola (2008–2013) have been described — the Chela Mountain Reed Frog, *Hyperolius chelaensis* Conradie, Branch, Measey and Tolley, 2012, the Namib Spiny Tailed Gecko, *Afrogecko plumicaudus* Haacke, 2008, subsequently made the type species of the monotypic genus *Kolekanos* Heinicke, Daza, Greenbaum, Jackman and Bauer, 2014, Haacke’s Sand Lizard, *Pedioplanis haackei* Conradie, Measey, Branch and Tolley, 2012, Huntley’s Sand Lizard, *Pedioplanis huntleyi* Conradie, Measey, Branch and Tolley, 2012, and the Kaokoveld Girdled Lizard, *Cordylus namakuiyus* Stanley, Ceriaco, Bandeira, Valério, Bates and Branch, 2016 — all but the first endemic to Namibe Province.

MATERIAL AND METHODS

We conducted herpetological surveys in Namibe Province from 28 November to 11 December 2013, including both Iona National Park and Namibe Regional Natural Park. A total of 13 areas were surveyed (Fig. 1). In each area, we attempted to sample a combination of habitat types. Overall conditions during this fieldwork were hot and dry as this was an unusually dry year. We captured specimens using long-nooses, rubber bands, or by hand during both diurnal and nocturnal visual surveys. All specimens were euthanized following an approved IACUC protocol (#2014-2), preserved in 10% buffered formalin in the field, and then transferred to 70% ethanol for storage. Liver tissues were preserved in 95% ethanol and RNALater. Voucher specimens and tissue samples are deposited in the herpetological collection of the California Academy of Sciences, with a subset of specimens deposited in the reference collection of INBAC. In some cases, we further confirmed species identifications by sequencing the mitochondrial 16S ribosomal RNA gene. As noted above, a complete list of all amphibians and reptile species reported from Namibe Province was assembled (Table 1). This list, including localities and associated bibliographic references was based on the ongoing project for the first atlas of the Angolan amphibians and reptiles (Marques 2015; Marques et al., in prep.). We do not include in the list unpublished museum records such as the large series in the Ditsong National Museum of Natural History collected by Wulf Haacke in the 1970s or the recent collections made by William R. Branch and Werner Conradie from the Port Elizabeth Museum (Bayworld). These specimens will be a part of a forthcoming publication (W.R. Branch, pers. comm.). However, museum material representing taxa vouchered on our expedition are noted when relevant in the species accounts.

RESULTS

A total of 411 specimens were collected during the expedition, representing four amphibian genera and 15 reptile genera. In the following species accounts, we provide information on CAS voucher specimens, localities, and natural history. Latitude, longitude and elevation (in meters) of the collection site are provided in each species account. In addition, when appropriate, we provide brief taxonomic or geographic notes.

SPECIES ACCOUNTS

Amphibia

Anura

Bufonidae

HALLOWELL'S TOAD

***Sclerophrys maculata* (Hallowell, 1854)**

MATERIAL.—Leba Pass, between river and highway, 5 December 2013, 15°04'13.2"S, 13°14'37.7"E, 1676 m (CAS 254877–254878).

COMMENTS.—In Angola this species mostly occurs in the southwestern provinces of Namibe, Benguela, Bié, and Huila (Marques 2015). The nearest records are in “Cainde” and “16 km W of Vila Nova” (Poynton and Haacke 1993; Ruas 1996, 2002). It is widespread in areas to the south, including much of northern Namibia (du Preez and Carruthers 2009). Ohler and Dubois (2016) recently presented evidence identifying the type species of *Sclerophrys* Tschudi, 1838 as referable to *Bufo rangeri* Hewitt, 1935, thus making *Sclerophrys* the oldest available name for the clade of African toads recently referred to as *Amietophrynus* Frost et al., 2006.

Pyxicephalidae

ANGOLA RIVER FROG

***Amietia angolensis* (Bocage, 1866)**

MATERIAL.—Leba Pass, between river and highway, 5 December 2013, 15°4'12.2"S, 13°14'38.9"E, 1676 m (CAS 254876).

COMMENTS.—This specimen represents the first record for the species for the province, although there are several records from the province of Huíla, in Boca de Humpata (Laurent 1964a; Ruas 1996; Channing and Baptista 2013), and Huila (Bocage 1895; Themido 1941; Perret 1976; Ruas 1996, 2002) less than 20 km east of Leba Pass. The species is widespread across the rest of the country (Marques 2015) as well as in much of the more mesic areas of southern Africa. In Namibia it occurs only where there are permanent rivers (du Preez and Carruthers 2009).

DAMARALAND SAND FROG

***Tomopterna damarensis* Dawood and Channing, 2002**

MATERIAL.—Pediva Hot Springs, 2 December 2013, 16°17'4.62"S, 12°33'47.86"E, 241 m (CAS 254855).

COMMENTS.—The specimen was collected by locals on the border of the largest pond at Pediva Springs. The lower jaw is broken, but the specimen is otherwise in good condition. A dark pigmentation is visible along the jaw-line, which identifies the specimen as a male, as is common in the genus. Comparing our specimen to the recently described *Tomopterna damarensis* Dawood and Channing, 2002, from Damaraland, northwestern Namibia, it agrees with the smooth dorsum and most important morphological characters. Comparison of 16S mtDNA sequence to the type specimen confirms the identification of this specimen as *T. damarensis* (GenBank KU662310; p-distance from GenBank AY255091.1, the holotype of *T. damarensis*, is 0.7 %). Additional details on the distribution of the species in Angola and Namibia are being prepared for publication (M. Heinicke et al., in prep.). This is the first record of the species for the country, extending the range of the species considerably northwards from the type locality at Khorixas, Namibia (Dawood and Channing 2002).

Microhylidae

MARBLED RUBBER FROG – Fig. 2

***Phrynomantis annectens* Werner, 1910**

MATERIAL.—Omauha Lodge, 3 December 2013, 16°11'55.4"S, 12°24'0.3"E, 338 m (CAS 255056).

COMMENTS.—Both this specimen and another now in the INBAC collections were collected inside a toilet water tank, one of few available sources of standing water in the area. These specimens represent the fourth record for the species in the country. The species reaches its northern distribution in Angola, in Novo Redondo/Gabela, Kwanza Sul Province (Poynton and Haacke 1993). *Phrynomantis annectens* has previously been recorded from the Mutiambo River and Caraculo in Namibe Province (Poynton and Haacke 1993). The current records represent the southernmost known distribution of the species in Angola, however it is common in Namibia and South Africa (Channing 2001; du Preez and Carruthers 2009) and is likely to occur throughout the province wherever water is available.



FIGURE 2. Marbled Rubber Frog, *Phrynomantis annectens* Werner, 1910, from Palmwag, Kunene Region, Namibia. Photo courtesy of Randall Babb.

Reptilia
Squamata
Agamidae

ANCHIETA'S GROUND AGAMA – Fig. 3
***Agama anchietae* Bocage, 1896**

MATERIAL.— INP, 29 November 2013, 16°39'27.12"S, 12°26'17.04"E, 459 m (CAS 254778); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254942); NNP, 28 November 2013, 15°46'27.4"S, 12°19'59.2"E, 264 m (CAS 254956).

COMMENTS.— These specimens have distinctive black-tipped spines on the palmar scales, which distinguish *A. anchietae* from the morphologically similar *A. aculeata* Merrem, 1820 that occurs sympatrically in Southern Angola and Namibia (Branch 1993). *Agama anchietae* was described from Angola by Bocage based on specimens from Catumbela, Benguela and Dombe (all in Benguela Province), and Moçamedes (currently Namibe, Namibe Province). In Angola, the species is known to occur in Namibe Province (Bocage 1896, 1897; Laurent 1964a), Benguela Province (Bocage 1863, 1896, 1897), and Bié Province (Schmidt 1933). Our specimens represent the southernmost localities of the species in Angola, although it is certainly distributed continuously across the entire province.

NAMIB ROCK AGAMA – Fig. 4
***Agama planiceps* Peters, 1862**

MATERIAL.— 'Lion Cave' at 3.4 km SW of Espinheira camp, 30 November 2013,



FIGURE 3. Anchieta's Ground Agama, *Agama anchietae* Bocage, 1866, from Sesfontein, Kunene Region, Namibia. Photo courtesy of Johan Marais.



FIGURE 4. Adult male Namib Rock Agama, *Agama planiceps* Peters, 1862, from Pico Azevedo. Photo by Luis Ceriaco.

16°48'45.0"S, 12°20'22.9"E, 463 m (CAS 254753); Omauha Lodge camp, 2 December 2013, 16°11'55.4"S, 12°24'0.3"E, 335 m (CAS 254832); INP, north of Tambor, 4 December 2013, 15°59'46.0"S, 12°24'24"E, 307 m (CAS 254839); INP, south side of Curoca River crossing, 29 November 2013, 16°18'15.6"S, 12°25'1.56"E, 209 m (CAS 254845), 1 December 2013, 16°18'14.8"S, 12°24'2159.8"E, 210 m (CAS 254848); Pediva Hot Springs, 2 December 2013, 16°7'19.7"S, 12°33'40.0"E, 244 m (CAS 254859); Namibe-Lubango road, road marker 59, 1.8 km west by road from Caraculo, north side of the road,

6 December 2013, 15°0'57.6"S, 12°38'36.8"E, 500 m (CAS 254900, CAS 254910); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254941).

COMMENTS.— The species has been cited throughout Angola, although many previous records remain doubtful. *Agama planiceps* appears to be restricted to arid savannas and Namibe Province, or perhaps Beguela, is most probably its northernmost limit. Mertens (1938) described the subspecies *Agama planiceps shackii* from Cubal (Benguela Province), and it is likely that the central and northern Angolan records of *planiceps* are in fact *shackii*. The status of this form remains in question, but preliminary examination of topotypical material suggests that it is specifically distinct. Our specimens fit the morphological description and current known distribution of nominal *planiceps*. The species is cited for several localities in Namibe Province, including Biballa (Bocage 1895), Fazenda Bumbo (Laurent 1964a), and Pico Azevedo (Schmidt 1933). Some of our records represent a southern range extension of the species in the Province, although a record from the Kwito region, in Cunene Province (Angel 1923) is the southernmost Angolan record. The species likely also occurs in rocky areas extending south to the Namibian border. The majority of these specimens were seen basking on the top of rocks. Males and females present a striking sexual dimorphism, with the males being considerably larger than the females, and having an intensely red head and a dark blue body (the posterior half of the tail is usually also red). Females are typically dark-grey on the dorsum with yellow marking on the head and dorsum.

Gekkonidae

FITZSIMONS' THICK-TOED GECKO – Fig. 5

Chondrodactylus fitzsimonsi (Loveridge, 1947)

MATERIAL.— Espinheira, 30 November 2013, 16°47'14.3"S, 12°21'29.4"E, 457 m (CAS 254814); INP, north of Tambor, 4 December 2013, 15°59'46.9"S, 12°24'24"E, 300 m (CAS 254841).

COMMENTS.— Only four records of this species are known for the country: Ongueria, 55 km from Sá da Bandeira (presently Lubango), in Huíla Province (Laurent 1964a), Praia das Conchas (Laurent 1964a), “around Moçâmedes in the road to Sá da Bandeira” (Laurent 1964a) and Pico Azevedo (Schmidt 1933), both in Namibe Province. Our records represent southern range extensions for the species in the country, although the species extends into west-central Namibia (Bauer et al. 1993). In both Namibia and Angola it can occur sympatrically with other, similarly sized congeners, but is generally more restricted to rocky habitats than either *C. pulitzerae* or *C. turneri*.

PULTZER'S THICK-TOED GECKO – Fig. 6

Chondrodactylus pulitzerae (Schmidt, 1933)

MATERIAL.— INP, 9.65 km (by air) west-south-west of Espinheira, 30 November 2013, 16°48'43.19"S, 12°16'16.55"E, 488 m (CAS 254790–CAS 254792); Espinheira, 29 November 2013, 16°47'11.01"S, 12°21'28.77"E, 457 m (CAS 254796–254798), 16°47'8.1"S, 12°21'16.44"E, 457 m (CAS 254804, 30 November, 16°47'14.3"S, 12°21'29.4"E, 457 m (CAS 254814–254815), 16°47'15.1"S, 12°21'23.8"E, 457 m (CAS 254816), 16°47'14.0"S, 12°21'29.6"E, 457 m (CAS 254817), 16°47'17.3"S, 12°21'25.1"E, 457 m (CAS 254818), 16°47'11.1"S, 12°21'30.2"E, 457 m (CAS 254819); Omauha Lodge, 28 November 2013, 16°11'55.01"S, 12°24'3.12"E, 338 m (CAS 254830), 2 December 2013, 16°11'55.4"S, 12°24'0.3"E, 338 m (CAS 254833), 28 November 2013, 16°11'54.19"S, 12°24'2.45"E, 338 m (CAS 254843); INP, Rio Curoca in Pediva Hot Springs area, 3 December 2013, 16°17'0.93"S, 12°33'39.81"E, 247 m (CAS 254854); Namibe-Lubango road, road marker 59, 1.8 km west (by road) of Caraculo, on the north side of the road, 6 December 2013,



FIGURE 5. Adult male FitzSimons' Thick-toed Gecko, *Chondrodactylus fitzsimonsi* (Loveridge, 1947), from northern Kaokoveld, Kunene Region, Namibia. Photo courtesy of Johan Marais.



FIGURE 6. Subadult male Pulitzer's Thick-toed Gecko, *Chondrodactylus pulitzerae*. (Schmidt, 1933), from Chimalavera, Benguela Province, Angola. Photo by Luis Ceriaco.

15°0'57.3"S, 12°38'32.6"E, 497 m (CAS 254915); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254920, CAS 254943).

COMMENTS.— This species occurs from the southern regions of Angola in Namibe (Bocage 1867, 1887, 1895; Laurent 1964a; Schmidt 1933) and Cunene (Monard 1937) provinces to Malange, where it reaches its northern distribution in Capanda (Ceríaco et al. 2014). There are records from the far northwest of Namibia as well, although these have been consistently treated as either *C. turneri* or *C. laevigatus*. This species was originally described as a subspecies of *C. bibronii* (now regarded as limited to South Africa, southern Namibia and adjacent areas; Benyr 1995; Bauer and Lamb 2005) based on material from Pico Azevedo (Schmidt 1933). Heinz (2011) provided evidence for the specific distinctness of *C. pulitzerae*; see Ceríaco et al. (2014) for brief discussion of the nomenclatural and taxonomic history of this taxon. One specimen (CAS 254920) represents topotypical material. The species was common and found hiding on shaded areas of rocky crevices, houses, and other structures.

LARGE-SCALED THICK-TOED GECKO

Pachydactylus scutatus Hewitt, 1927

MATERIAL.— Espinheira, 30 November 2013, 16°47'51.8"S, 12°21'15.2"E, 457 m (CAS 254826).

COMMENTS.— This specimen is the first published record of *Pachydactylus scutatus* for Angola. *Pachydactylus scutatus angolensis* is now recognized as a distinct species (see below; Bauer et al. 2002). Five additional specimens, all from Iona, are present in the Ditsong National Museum of Natural History (TM 40615–18 from Espinheira, TM 40751 from 16°54'S, 12°35'E).

ANGOLAN THICK-TOED GECKO – Fig. 7

Pachydactylus angolensis (Loveridge, 1944)

MATERIAL.— Namibe-Lubango road, 2 km E (by road) of Manguairas, south side of the road, 5 December 2013, 15°2'37"S, 13°9'36"E, 625 m (CAS 254887).

COMMENTS.— This poorly known taxon was described from Benguela Province (Loveridge



FIGURE 7. Juvenile Angolan Thick-toed Gecko, *Pachydactylus angolensis* (Loveridge, 1944), from Chimalavera, Benguela Province, Angola. Photo by Luis Ceríaco.

1944a). Laurent (1964a) subsequently reported additional specimens from the “environs de Moçâmedes” (now Namibe, Namibe Province). More recently, Wulf Haacke collected 16 specimens from both Benguela and Namibe Provinces. The Namibe localities include Lungo, Lucira, San Nicolau, and Saco de Giraul. There is a single record from extreme northern Namibia (J. Boone, pers. comm.), suggesting that the species actually has a fairly broad range from south of the Kunene to Hanha in Benguela (TM 46558).

SPECKLED THICK-TOED GECKO

Pachydactylus punctatus Peters, 1854

MATERIAL.— INP, 29 November 2013, 16°39'24.1"S, 12°26'12.2"E, 460 m (CAS 254781–254784); Espinheira, 29 November 2013, 16°47'11.01"S, 12°21'28.77"E, 457 m (CAS 254799–254800), 16°47'7.02"S, 12°21'16.86"E, 457 m (CAS 254806); 16°47'4.2"S, 12°21'16.62"E, 457 m (CAS 254809–254810), 16°47'12.71"S, 12°21'28.67"E, 457 m (CAS 254812), 16°47'20.3"S, 12°21'27.6"E, 457 m (CAS 254960).

COMMENTS.— The species is known from southwestern Angola in the provinces of Benguela (Bocage 1867, 1895; Boulenger 1885; Hellmich 1957b; Laurent 1954), Huila (Monard 1931, 1937, Laurent 1964a), Cunene (Laurent 1964a), and Namibe (Schmidt 1933, Laurent 1964a). Members of the *P. punctatus* complex have been confused with other southern African *Pachydactylus*, including *P. ocellatus* and *P. geitje* (Bocage 1867, 1885, 1895; Boulenger 1905; Frade 1963). The previous report of *P. serval* in Angola (Monard 1931) likely corresponds to *P. punctatus*. A phylogeographic study of *P. punctatus* is being currently undertaken (Heinz 2011) and it appears that this taxon comprises multiple unnamed cryptic species. At least two, possibly three, taxa in this complex occur in southwestern Angola. *Pachydactylus punctatus* sensu lato is the most common terrestrial gecko in most of northern Namibia as well as southern Angola.

KAOKOLAND ROCK GECKO

Pachydactylus cf. *oreophilus* McLachlan and Spence, 1967

MATERIAL.— Omauha Lodge, 28 November 2013, 16°11'55.01"S, 12°24'3.12"E, 338 m (CAS 254829).

COMMENTS.— *Pachydactylus oreophilus* was described from near Sesfontein in northwestern Namibia. Specimens assigned to this species extend northwards at least as far as the southern lowland portions of Benguela Province, Angola. Preliminary molecular phylogenetic data suggest that northern populations, including all of those in Angola and possibly those along the Kunene River in Namibia, are not conspecific with the nominotypic form. The specimen was collected at night, basking near a lamp 2.5 m off the ground, in Omauha Lodge.

BARNARD'S NAMIB DAY GECKO – Fig. 8

Rhoptropus barnardi Hewitt, 1926

MATERIAL.— Approximately 7.35 km north-west (by road) of Pico Azevedo, 7 December 2013, 15°28'30.7"S, 12°27'47.5"E, 420 m (CAS 254759, CAS 254761); Omauha Lodge, 4 December 2013, 16°12'1.2"S, 12°24'0.1"E, 343 m (CAS 254837); INP, Rio Curoca crossing, North side of the river, 1 December 2013, 16°18'6.8"S, 12°25'13.0"E, 206 m (CAS 254844); INP, Rio Curoca crossing, south side of the river, 1 December 2013, 16°18'14.7"S, 12°25'0.0"E, 210 m (CAS 254846–254847); INP, Rio Curoca in the Pediva Hot Springs area, 2 December 2013,



FIGURE 8. Adult Barnard's Namib Day Gecko, *Rhoptropus barnardi* Hewitt, 1926, from Kamanjab, Kunene Region, Namibia. Photo courtesy of Johan Marais.

16°17'0.93"S, 12°33'39.81"E, 247 m (CAS 254852), 16°17'14.3"S, 12°33'35.9"E, 238 m (CAS 254856), 16°17'24.01"S, 12°33'43.9"E, 270 m (CAS 254863), Namibe-Lubango road, 2 km east (by road) of Manguairas, south side of the road, 5 December 2013, 15°2'40.8"S, 13°9'32.6"E, 664 m (CAS 254890); NNP, 28 November 2013, 15°46'23.4"S, 12°19'58.9"E, 264 m (CAS 254954).

COMMENTS.— Until now, this species has been known only from one published locality in Angola. Laurent (1964a) cites the specimen from a locality “60 km on the road from Moçâmedes [presently Namibe] to Sá da Bandeira [presently Lubango]”, the same locality from which he described *R. taeniostictus*, which we also collected (see account below). This species is widely distributed in northwestern Namibia, occurring as far inland as the Otavi-Grootfontein region, due south of western Cuando Cubango Province. It is rupicolous and can be found on small rocky piles and ridges, as well as on larger boulders. The extent of its distribution in Angola is poorly known, in part because many records from Namibe and Huila are assignable to a morphologically similar, but undescribed congener (see *Rhoptropus* sp. below).

TWO-PORED NAMIB DAY GECKO – Fig. 9

***Rhoptropus biporosus* Fitzsimons, 1957**

MATERIAL.— INP, 29 November 2013, 16°32'0.48"S, 12°26'44.16"E, 378 m (CAS 254779, 16°39'26.04"S, 12°26'13.5"E, 460 m (CAS 254780); INP, 20 km south-south-west (by air) of Espi-nheira, 30 November 2013, 16°55'54.1"S, 12°14'42.0"E, 631 m (CAS 254786–254788),



FIGURE 9. Close-up of head of adult specimen of Two-Pored Namib Day Gecko, *Rhopropus biporosus* FitzSimons, 1957 from northwest of Palmwag, Kunene Region, Namibia. Photo courtesy of Johan Marais.

16°48'43.19"S, 12°16'16.55"E, 485 m (CAS 254959), Espinheira, 29 November 2013, 16°47'19.9"S, 12°21'27.4"E, 457 m (CAS 254794), 16°47'7.08"S, 12°21'16.02"E, 457 m (CAS 254802–254803), 16°47'7.02"S, 12°21'16.86"E, 457 m (CAS 254805), 16°47'4.26"S, 12°21'16.62"E, 457 m (CAS 254811), 16°47'12.71"S, 12°21'28.67"E, 457 m (CAS 254813), 16°47'20.2"S, 12°21'27.9"E, 457 m (CAS 254958), 30 November 2013, 16°47'14.3"S, 12°21'29.4"E (CAS 254820), 16°47'8.7"S, 12°21'30.3"E, 457 m (CAS 254821), 16°47'18.1"S, 12°21'26.2"E, 457 m (CAS 254822), 16°47'33.6"S, 12°21'19.0"E, 457 m (CAS 254823), 16°47'41.5"S, 12°21'17.3"E, 457 m (CAS 254824), 16°47'45.3"S, 12°21'15.9"E, 457 m (CAS 254825); NNP, 28 November 2013, 15°46'27.4"S, 12°19'59.2"E, 264 m (CAS 254957–254958).

COMMENTS.— The species occurs in the rocky outcrops in arid habitats inland of the northern Namib dune fields in the vicinity of Orupembe, in the Kaokoveld and across the Cunene River to Angola (Bauer and Good 1996). The only published record of this species for Angola is from the Pico Azevedo region (Bauer and Good 1996), although Wulf Haacke collected numerous specimens from localities across southern Namibe, as well as from near Otchinjau, Cunene Province (specimens in Ditsong National Museum of Natural History).

BOULTON'S NAMIB DAY GECKO – Fig. 10

***Rhopropus boultoni boultoni* Schmidt, 1933**

MATERIAL.— INP, 3.4 km southwest (by air) of Espinheira, vicinity of "Lion Cave", 30 November 2013, 16°48'73.5"S, 12°20'23.2"E, 463 m (CAS 254752); Approximately 7.35 km north-west (by road) of Pico Azevedo, 7 December 2013, 15°28'33.2"S, 12°27'45.7"E, 421 m (CAS 254757–254758); Espinheira, 16°47'29.4"S, 12°21'6.06"E, 457 m (CAS 254795); Omauha Lodge, 28 November 2013, 16°11'52.5"S, 12°23'59.3"E, 335 m (CAS 254828, 2 December 2013,



FIGURE 10. Adult Boulton's Namibe Day Gecko, *Rhopropus boultoni boultoni* Schmidt, 1933, from east of Kamanjab, Kunene Region, Namibia. Photo courtesy of Johan Marais.

16°12'1.2"S, 12°24'0.1"E, 343 m (CAS 254834); INP, Rio Curoca crossing, south side of river, 1 December 2013, 16°18'14.7"S, 12°25'0.0"E, 210 m (CAS 254849–254850), 2nd December 2013, 16°17'19.7"S, 12°33'40.0"E, 244 m (CAS 254857–254858, CAS 254861–254862), 29 November 2013, 16°18'15.6"S, 12°25'1.56"E, 209 m (CAS 254865); Leba Pass, between river and highway, 5 December 2013, 15°4'13.2"S, 13°14'37.7"E, 1676 m (CAS 254880); Namibe-Lubango road, 2.0 km east (by road) of Manguairas, south side of the road, 5 December 2013, 15°2'40.8"S, 13°9'32.6"E, 664 m (CAS 254892), 15°2'40.7"S, 13°9'31"E, 640 m (CAS 254894, 15°0'55.1"S, 12°38'32.8"E, 497 m (CAS 254902); Namibe-Lubango road, road marker 59, 1.8 km west by road of Caraculo, 6 December 2013, 15°00'55.1"S, 12°38'32.8"E, 497 m (CAS 254903); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254921–254926), 15°32'5.8"S, 12°29'29.5"E, 366 m (CAS 254946–254947, CAS 254949–254950); Espinheira, 29 November 2013, 16°47'20.2"S, 12°21'27.9"E, 457 m (CAS 254958).

COMMENTS.— This taxon is widespread from northwestern Namibia north at least to northern Namibe Province.

MONTANE NAMIBE DAY GECKO

Rhopropus boultoni montanus Laurent, 1964

MATERIAL.— Leba Pass overlook, 5 December 2013, 15°4'37.2"S, 13°13'58.5"E, 1682 m (CAS 254866, CAS 254867; 15°4'38.3"S, 13°13'57.0"E, 1682 m (CAS 254868); 15°4'36.0"S, 13°14'1.6"E, 1682 m (CAS 254869–254872); Leba Pass, between river and highway, 15°04'13.2"S, 13°14'37.3"E, 1676 m (CAS 254882).

COMMENTS.— The subspecies was described from the Leba Escarpment ("60 km on the road to Moçamedes [now Namibe, Namibe Province] from Sá da Bandeira [now Lubango, Huila

Province]”, Laurent 1964a). A large series of specimens in the Ditsong National Museum of Natural History are derived from localities near Lubango, in Huila. Our specimens are topotypical and were collected on the Namibe side of the provincial boundary. Specimens were found basking on high elevation granite rocks covered with bryophytes. Molecular phylogenetic studies (A. Kuhn, unpublished) reveal that this taxon is specifically distinct from *R. boultoni*. Its formal elevation to specific status will be justified in detail elsewhere.

ANGOLAN NAMIB DAY GECKO

Rhoptropus taeniostictus Laurent, 1964

MATERIAL.— Namibe-Lubango road, 2 km east (by road) of Mangueiras, south side of the road, 5 December 2013, 15°2'40.8"S, 13°9'32.6"E, 664 m (CAS 254889); Namibe-Lubango road, road marker 59, 1.8 km west (by road) of Caraculo, on the north side of the road, 6 December 2013, 15°0'58.0"S, 12°38'37.3"E, 490 m (CAS 254895); 15°0'57.9"S, 12°38'42.3"E, 472 m (CAS 254897–254898), 15°0'57.6"S, 12°38'36.8"E, 500 m (CAS 254901), 15°1'0.7"S, 12°38'31.9"E, 492 m (CAS 254904–254905), 15°0'58.8"S, 12°38'33.8"E, 491 m (CAS 254908), 15°0'58.9"S, 12°38'32.4"E, 497 m (CAS 254911), 15°0'57.3"S, 12°38'32.6"E, 497 m (CAS 254916), 15°1'0.1"S, 12°38'31.9"E, 497 m (CAS 254917–254918), 15°1'0.9"S, 12°38'30.4"E, 503 m (CAS 254919).

COMMENTS.— The Angolan endemic *R. taeniostictus* was described from a single specimen from “60 km on the road from Moçâmedes [presently Namibe] to Sá da Bandeira [presently Lubango]”. Laurent (1964a) also considered the populations of *R. barnardi* from Mucungo cited by Schmidt (1933) as referable to *R. taeniostictus*. The species appears restricted to Namibe Province and is represented by many specimens in our collection as well as more widespread Namibe localities in the Ditsong National Museum of Natural History.

Rhoptropus sp.

MATERIAL.— Espinheira, 29 November 2013, 16°47'32.7"S, 12°21'14.4"E, 562 m (CAS 254801); Omauha Lodge, 4 December 2013, 16°12'1.2"S, 12°24'0.1"E, 343 m (CAS 254836, CAS 254955); INP, north of Tambor, 4 December 2013, 15°59'46.9"S, 12°24'24.0"E, 300 m (CAS 254842, CAS 254762, CAS 254766), 15°28'31.7"S, 12°27'43.9"E, 408 m (CAS 254765, CAS 254760); Leba Pass, between river and highway, 5 December 2013, 15°4'12.1"S, 13°14'36.5"E, 1680 m (CAS 254873), 15°4'13.2"S, 13°14'37.7"E, 1676 m (CAS 254879, CAS 254881, CAS 254883); Namibe-Lubango road, 2 m east (by road) of Mangueiras, south side of the road, 5 December 2013, 15°2'40.8"S, 13°9'32.6"E, 664 m (CAS 254890–254891), 15°2'40.7"S, 13°9'31.0"E, 640 m (CAS 254893, CAS 254894).

COMMENTS.— This undescribed species is morphologically similar to both *R. barnardi* and *R. biporosus*, but appears to be endemic to southern Angola. Populations from the Escarpment are both morphologically and genetically different from those below the Escarpment. This taxon is currently under study as part of a phylogenetic analysis and revision of the genus as a whole (A. Kuhn and A. Bauer, in prep.).

Scincidae

BOGERT'S SPECKLED WESTERN BURROWING SKINK – Fig. 11

Typhlacontias punctatissimus bogerti Laurent, 1964

MATERIAL.— Espinheira, 29 November 2013, 16°47'7.02"S, 12°21'16.86"E, 457 m (CAS

254807); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254932–254938), 15°32'5.8"S, 12°29'29.5"E, 366 m (CAS 254944–254945).

COMMENTS.— Haacke (1997) reviewed the taxonomic and nomenclatural history of *Typhlacontias punctatissimus* and its subspecies and recognized two sympatric subspecies in southern Angola — *T. punctatissimus punctatissimus* Bocage, 1873, and the Angolan endemic *T. punctatissimus bogerti* Laurent, 1964. In all of our specimens, the second and third upper labials are in contact with the eye and there is a second supraocular. Both characters fit the description presented by Haacke (1997) as diagnostic for *T. punctatissimus bogerti*. The species is known to be viviparous and one female specimen (CAS 254945) contains an almost fully developed neonate.



FIGURE 11. Adult Bogert's Speckled Western Burrowing Skink *Typhlacontias punctatissimus bogerti* Laurent, 1964, from Pico Azevedo. Photo by Edward Stanley.

VARIABLE SKINK

Trachylepis varia (Peters, 1867)

MATERIAL.— Leba Pass, 5 December 2013, 15°4'12.1"S, 13°14'36.2"E, 1680 m (CAS 254874), 15°4'13.2"S, 13°14'37.7"E, 1676 m (CAS 254884).

COMMENTS.— The species occurs throughout Angola, with many records in the provinces of Benguela (Parker 1936; Bocage 1895, 1896; Monard 1937; Hellmich 1957a; Mertens 1938; Boulenger 1905) and Huila (Bocage 1895; Monard 1937). Although other records from Namibe are 12 km W of Humbia (TM 40128–29) and Chapeau Armado turnoff (TM 41131). This species is typically associated with relatively mesic microclimates and is, therefore, excluded from the hyper-arid areas of Namibe. This skink has a broad distribution across much of sub-Saharan Africa and includes several cryptic species, two of which are present in Angola. There are records from across Angola and from all bordering countries as well. The phylogeography of the *T. varia* complex is presently under study (J. Weinell, pers. comm.).

SPECKLED SAND SKINK – Fig. 12

Trachylepis punctulata (Bocage, 1872)

MATERIAL.— Espinheira, 29 November 2013, 16°47'20.6"S, 12°21'27.2"E, 457 m (CAS 254793); Namibe-Lubango road, road marker 59, 1.8 km west (by road) of Caraculo, on the north side of the road, 6 December 2013, 15°0'55.1"S, 12°38'32.8"E, 497 m (CAS 254903); Praia do Navio coastal dunes, ca 124 km SSW of Namibe, 8 December 2013, 16°16'20.4"S, 11°49'53.9"E, 8 m (CAS 254769–254771), 16°16'39.3"S, 11°49'20.5"E, 8 m (CAS 254775).

COMMENTS.— The species was originally described by Bocage based on material from “Rio Coroca, sur le littoral de Mossamedes, Angola” (Bocage 1872). The type locality is presumably the

region near the mouth of Curoca River, from the vicinity of Tombwa (formerly Porto Alexandre). Our specimens were collected among plants between dunes along the coast south of Tombwa, and these agree morphologically with the original description for the species. A comparison with the type material was impossible due to its destruction in the fire that destroyed the Lisbon Museum in 1978. Several uncatalogued specimens in the Museu Nacional de História Natural do Porto collected in 1905 by the Portuguese explorer Francisco Newton are congruent with the specimens collected by us. Newton's specimens are still in their original jar and are labeled "Mossamedes" (presumably referring to the province as a whole, not the city of Mossamedes = Namibe). They are part of a collection of vertebrates that the explorer made in the region. The herpetological specimens were only partly studied and published upon (Ferreira 1904, 1906; Ceriaco et al. 2014), in contrast to the bird and mammals collections (Seabra 1906a, 1906b, 1906c, 1906d, 1907). It is probable that these specimens are from Tombwa, as this was the main place where Newton collected while in the province (see bird records – Seabra 1906a). This is a common species in much of Namibia, Botswana, and central South Africa, as well as portions of Zambia, Zimbabwe, and Mozambique (Portik and Bauer 2012).



FIGURE 12. Adult Speckled Sand Skink, *Trachylepis punctulata* (Bocage, 1872), from Kamanjab, Kunene Region, Namibia. Photo courtesy of Johan Marais.

HOESCH'S SKINK – Fig. 13

***Trachylepis hoeschi* (Mertens, 1954)**

MATERIAL.— Rio Curoca in the Pediva Hot Springs area, 2 December 2013, 16°17'0.93"S, 12°33'39.81"E, 247 m (CAS 254851); NNP, 15°46'25.9"S, 12°19'59.0"E, 247 m (CAS 254952).

COMMENTS.— The only published Angolan record is from Laurent (1964a), from "Plage das Conchas," Namibe Province. Our specimens are, respectively, 75 and 135 km SE of Laurent's site. the Ditsong National Natural History Museum holds a small series of this species (TM 40733–37)



FIGURE 13. Adult Hoesch's Skink, *Trachylepis hoeschi* (Mertens, 1954), from Kamanjab, Kunene Region, Namibia. Photo courtesy of Johan Marais

from Iona National Park. The Angolan records extend the core distribution of its range in north-western Namibia (Branch 1998).

ANGOLAN BLUE-TAILED SKINK

Trachylepis laevis (Boulenger, 1907)

MATERIAL.— INP, north of Tambor, 4 December 2013, 15°59'47.1"S. 12°24'25.6"E, 314 m (CAS 254838).

COMMENTS.— The species was described by Boulenger from Maconjo, in northern Namibe Province (Boulenger 1907b). Laurent (1964a) recorded this species in Namibe Province from "Munhino 50 km west of Sá da Bandeira." Hellmich (1957a) cited the species for Piri-Dembos, Kwanza Norte Province, but this record is dubious. The Ditsong National Natural History Museum houses numerous specimens from localities in Namibe and southern Benguela below the Escarpment. The species occurs also in the Kamanjab area and Damaraland in northwestern Namibia (Bauer et al. 1993). This lizard is extremely dorsoventrally depressed in association with its crevice dwelling habits and was, for a time, placed in a monotypic genus, *Oelofisa*, in recognition of its highly autapomorphic morphology (Steyn and Mitchell 1965).

WESTERN THREE-STRIPED SKINK

Trachylepis occidentalis (Peters, 1867)

MATERIAL.— Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254931).

COMMENTS.— The species has been cited from 35 km south of the city of Namibe (Laurent 1964a) and from Curoca River (Bocage 1895). Three specimens in the Ditsong Natural National History Museum originate from the Rio Curoca mouth and from Namibe. In addition to our specimen from Pico Azevedo several individuals of the species were observed near Espinheira camp (specimens not collected). In Angola this skink takes refuge in holes it digs in the sand at the base of spiny shrubs of the genus *Blepharis*. It is widely distributed in western South Africa and much of central and western Namibia (Branch 1988).

WEDGED-SNOURED SKINK – Fig. 14

***Trachylepis acutilabris* (Peters, 1862)**

MATERIAL.— INP, 3.4 km south-west (by air) of Espinheira, vicinities of “Lion Cave”, 30 November 2013, 16°48'54.4"S, 12°20'13.7"E, 450 m (CAS 254751); INP, car wreck 20 km south-south-west (by air) of Espinheira, 30 November 2013, 16°55'53.81"S, 12°14'45.42"E, 616 m (CAS 254789); Namibe-Lubango road, road marker 59, 1.8 km (by road) of Caraculo, north side of the road, 6 December 2013, 15°0'59.3"S, 12°38'33.6"E, 488 m (CAS 254899), 15°0'58.8"S, 12°38'33.8"E, 491 m (CAS 254907); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254927–254931).

COMMENTS.— This species is similar to lacertid lizards in morphology and diet (Castanzo and Bauer 1992). Its elongate toes and countersunk lower jaw are consistent with its burrowing habits. It typically occupies burrows at the base of vegetation in sandy soils from Namibia through western Angola to the Democratic Republic of Congo and Cabinda (Branch 1998).

WESTERN ROCK SKINK

***Trachylepis sulcata* (Peters, 1867)**

MATERIAL.— INP, Rio Curoca in Pediva Hot Springs area, 3 December 2013, 16°17'0.93"S, 12°33'39.81"E, 247 m (CAS 254853); Leba Pass, 5 December 2013, 15°4'12.1"S, 13°14'36.2"E, 1680 m (CAS 254875); Namibe-Lubango road, 2 km east (by road) of Mangueiras, south side of the road, 5 December 2013, 15°2'40.7"S, 13°9'31"E, 625 m (CAS 254886), 15°2'40.8"S, 13°9'32.6"E, 664 m (CAS 254888).

COMMENTS.— *Trachylepis sulcata* is a rupicolous skink ranging from the Western Cape Province of South Africa north to southern Angola. *Trachylepis sulcata ansorgii* (Boulenger 1907b) was described from southern Angola to accommodate specimens with bright throat and infralabial coloration. Laurent (1964a) and Mertens (1971) considered it valid and the latter identified some Namibian specimens as intergrades between *T. s. ansorgii* and *T. s. sulcata*, whereas Haacke (1972) considered specimens on the Namibian side of the Kunene river to be referable to *T. s. ansorgii*. Some specimens from west of the Great Escarpment in northwestern Namibia exhibit the diagnostic coloration of *ansorgii*, but the two subspecies seem to have no fixed differences in scalation (Bauer et al. 1993). Although Portik et al. (2011) did not include typical *T. s. ansorgii* in their molecular sampling, preliminary integration of samples from our collection into their data set reveals no significant difference from putative *T. s. ansorgii* from Namibe and the nominotypical form. We therefore treat *T. sulcata* as a monotypic species.



FIGURE 14. Adult Wedged-Snouted Skink, *Trachylepis acutilabris* (Peters, 1862), from Kamanjab, Kunene Region, Namibia. Photo courtesy of Johan Marais.

Lacertidae

ANCHIETA'S SHOVEL-SNOOT LIZARD

Meroles anchietae (Bocage, 1867)

MATERIAL.—Praia do Navio coastal dunes, ca 124 km SSW of Namibe, 8 December 2013, 16°16'29.1"S, 11°49'05.0"E, 8 m (CAS 254773).

COMMENTS.—Bocage (1867) described this species from "Mossamedes" (Bocage 1867). Surprisingly, this remains the only published locality for this species in Angola (Bocage, 1867, 1895), despite it being common and widely distributed in barchan dunes from the Klinghardt Mountains north through the Namib of western Namibia. In the Newton collections in Porto, there are several uncatalogued specimens corresponding to this species from "Mossamedes" and the Ditsong National Natural History Museum has material collected by Wulf Haacke from Porto Alexandre and Foz de Cunene.

RETICULATE SAND LIZARD – Fig. 15.

Meroles reticulatus (Bocage, 1867)

MATERIAL.—Praia do Navio coastal dunes, ca 124 km SSW of Namibe, 8 December 2013, 16°16'39.3"S, 11°49'20.5"E, 8 m (CAS 254776).

COMMENTS.—Bocage (1867) described this species from "Mossamedes." Bocage (1895) subsequently clarified that the types had come from the littoral zone at Rio Coroca [= Rio Curoca, southern Namibe Province, Angola]. The range of this species extends towards Namibia to the area of Conception Bay on the central coast. Although it is well documented within its Namibian range, this specimen is only the third published locality for Angola. The species is, however, well represented from numerous localities in Namibe by specimens in the Ditsong National Museum of Natural History.



FIGURE 15. Adult specimen of Anchieta's Shovel-snout Lizard, *Meroles anchietae*, (Bocage, 1867) from gravel plains north of Henties Bay, Erongo Region, Namibia. Photo courtesy of Johan Marais.

HAACKE'S SAND LIZARD

Pedioplanis haackei Conradie, Measey, Branch and Tolley, 2012

MATERIAL.— 5 km NW (by road) of Pico Azevedo, 7 December 2013, 15°28'33.6"S, 12°27'41.4"E, 399 m (CAS 254767), 15°28'31.7"S, 12°27'43.9"E, 408 m (CAS 254763–253764); RNN, 28 November 2013, 15°46'22.5"S, 12°19'57.7"E, 262 m (CAS 254951), 15°46'25"S, 12°19'54.9"E, 262 m (CAS 254953); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254939); Peditiva Hot Springs, south side of the river, 2 December 2013, 16°17'37.7"S, 13°33'37.2"E, 235 m (CAS 254860), 16°17'24.01"S, 12°33'43.9"E, 270 m (CAS 254864); INP, north of Tambor, 4 December 2013, 15°59'43.4"S, 12°24'23.3"E, 306 m (CAS 254840); Omuaha Lodge, 4 December 2013, 16°12'1.2"S, 12°24'00.1"E, 343 m (CAS 254835).

COMMENTS.— *Pedioplanis haackei* is one of the latest additions to the herpetofauna of Angola, and is endemic to southern Angola. Each of our specimens has 10 to 12 longitudinal rows of ventral scales, a semi-transparent lower eyelid with a brille formed of two large scales, five to six supralabials anterior to the subocular, two rows of granules separating supraoculars from supraciliaries, and the typical coloration with dots on the flanks, concordant with the diagnostic characters presented by Conradie et al. (2012) in the species description. Genetically, our specimens (GenBank accession numbers KU662311–KU662318) have an average 16S p-distance of 1% from those of Conradie et al. (2012) (GenBank accession numbers HE794000, HE793999.1; HE793998.1; HE793997.1; HE793996.1; HE793995.1; HE793994.1; HE793994.3).

BENGUELA SAND LIZARD

Pedioplanis benguellensis (Bocage, 1867)

MATERIAL.— Namibe-Lubango road, road marker 59, 1.8 km W (by road) from Caraculo, north side of the road, 6 December 2013, 15°00'57.8"S, 13°38'41.4"E, 476 m (CAS 254909), 15°00'58.8"S, 13°38'33.8"E, 491 m (CAS 254906), 15°00'57.5"S, 12°38'38.3"E, 482 m (CAS 254896).

COMMENTS.— All of these specimens have ten to eleven longitudinal series of ventral plates and a single transparent scale in the lower eyelid. However, they also have two rows of granules separating supraoculars from supraciliaries, a character given by Conradie et al. (2012) as synapomorphic for *P. haackei*. The number of upper labials in front of the subocular is variable: CAS 254896 has three, CAS 254906 has five, and CAS 254909 has four. Molecular comparisons with specimens of *P. benguellensis* from Conradie et al. (2012) show these specimens to be conspecific (average uncorrected 16S p-distance of 1% from our specimens [GenBank accession numbers KU662319 to KU662321] from those of Conradie et al. [2012] [GenBank accession numbers HE794014.1, HE794012.1, HE794011.1, HE794010.1 and HE794013.1]).

BUSHVELD LIZARD

Heliobolus lugubris (Smith, 1838)

MATERIAL.— Namibe-Lubango road, 2 km E of Manguueiras, south side of the road, 5 December 2013, 15°02'37.0"S, 13°09'36.0"E, 625 m (CAS 254885).

COMMENTS.— The species is widespread over much of southern Africa, particularly on sandy substrates (Bauer et al. 1993). In Angola, the majority of both bibliographic (Bocage 1867, 1895; Monard 1937; Mertens 1938; Boulenger 1921) and museum records (e.g., TM 46525) are from Benguela. However, there are also records of the species for Namibe Province from "Maconjo"

(Bocage 1895), “Capangombe” (Bocage 1895), and “Konondoto” (Boulenger 1921). The species’ distribution in the country extends to the southeast in Huíla and Cunene Provinces. Our specimen is a sub-adult (55.5 mm SVL).

Cordylidae

KAOKOVELD GIRDLED LIZARD

Cordylus namakuiyus Stanley, Ceriaco, Bandeira, Valério, Bates and Branch, 2016

MATERIAL.— 7.5 km NW (by road) of Pico Azevedo, 7 December 2013, 15°28'33.2"S, 12°27'45.7"E, 421 m (CAS 254754–254755, CAS 256530–256531); Namibe-Lubango road, road marker 59, 1.8 km W (by road) from Caraculo, north side of the road, 6 December 2013, 15°00'59.4"S, 12°38'31.3"E, 503 m (CAS 254912–254914); 15°00'57.3"S, 12°38'32.6"E, 509 m (CAS 256529).

COMMENTS.— Based on a combination of morphological and molecular data, Stanley et al. (2016) described this new species endemic to the arid lowlands west of the southern Angolan escarpment. The majority of the type material of *C. namakuiyus* was collected during this trip. The new species is morphologically and genetically distinct from its sister taxon *Cordylus machadoi* Laurent, 1964, which occurs in the highlands of Huíla, not far from Namibe. In addition to an average 7.1% uncorrected p-distance for the mitochondrial marker ND2, the two species differ in the extent of osteodermal armament. The more complete body armor of *C. namakuiyus* may be an adaptation to the semi-arid and refuge-scarce habitat where the species occurs. Within the new species there is also a degree of internal genetic structure, with specimens from Iona (PEM R18005) and Pico Azevedo (CAS 254754, 254755, 256530, 256531) more closely related to one another than to the two specimens from Caraculo. Specimens in the American Museum of Natural History identified as *Cordylus cordylus* and collected in 1925 during the Vernay Expedition in Angola are assignable to *C. namakuiyus*. Although the Vernay specimens lack specific locality information, the expedition field notes mention that significant numbers of unidentified lizards were collected at “Pico Azevedo” and “100 km east of Moçâmedes” the same areas where we collected eight specimens of *C. namakuiyus*.

DWARF PLATED LIZARD – Fig. 16

Cordylosaurus subtessellatus (Smith, 1844)

MATERIAL.— INP, 20 km SSW of Espinheira, 30 November 2013, 16°55'54.1"S, 12°14'42.0"E, 631 m (CAS 254785).

COMMENTS.— The species is known from the coastal areas of Benguela Province (Bocage 1867, 1895; Boulenger 1887) and from the Curoca River in Namibe Province (Bocage 1895). This specimen represents the southernmost record for Angola. The specimen was found hiding



FIGURE 16. Adult Dwarf Plated Lizard, *Cordylosaurus subtessellatus* (Smith, 1844), from near Espinheira. Photo by Edward Stanley.

in a granite boulder crevice. Extralimitally, the species is widely distributed from the Little Karoo in the Western Cape of South Africa, north through the entire length of Namibia (Branch 1998).

Gerrhosauridae

DESERT PLATED LIZARD – Fig. 17

Gerrhosaurus skoogi (Andersson, 1916)

MATERIAL.— Praia do Navio coastal dunes, ca 124 km SSW of Namibe, 8 December 2013, 16°16'20.4"S, 11°49'53.9"E, 8 m (CAS 254772), 16°16'29.1"S, 11°49'50.0"E, 8 m (CAS 254774), 16°16'42.1"S, 11°49'21.7"E, 8 m (CAS 254777).

COMMENTS.— This species was encountered basking at the sun in the coastal dunes SSW of Namibe, especially in dune valleys areas. When approached, these lizards dive into the sand, disappearing rapidly. The species is easily identified by its unique morphology and peculiar ecology. Sand trails resulting from the specimens walking in the dunes were noted. A total of five specimens were collected, three of which are at CAS and two at INBAC. Several additional animals were observed in the area but not collected. Males have a distinct black throat and venter, and are considerably larger than the females. The only published Angolan records are from the type locality, Porto Alexandre, between Mossamedes and the mouth of the Cunene River (Andersson 1916; Fitzsimons 1953), approximately in the same area as our material. Although the species is the most distinctive of all *Gerrhosaurus* (Nance 2007), it is unambiguously nested among more typical taxa, implying its unique features are relatively recently derived autapomorphies (Lamb et al. 2003; Lamb and Bauer 2013).



FIGURE 17. Adult female Desert Plated Lizard, *Gerrhosaurus skoogi* Andersson, 1916, from the coastal dunes, near Praia do Navio. Photo by Arianna Kuhn

Varanidae

ANGOLAN ROCK MONITOR

Varanus albigularis angolensis Schmidt, 1933

MATERIAL.— 7.5 km NW (by road) of Pico Azevedo, adult, found in a rock crevice, 7 December 2013, 15°28'33.6"S, 12°27'41.4"E, 399 m (CAS 254768).

COMMENTS.— The subspecies was described from Gauca, Bihé (Bié) Province (Schmidt 1933). According to the original description, the subspecies differed from the nominotypic form by having larger scales everywhere on the body so that the scales around the body are about 125

instead of 150, and the transverse rows of scales from the collar to thighs are 75 instead of 100 (Schmidt 1933). Laurent (1964b) noted that the morphological differences between the nominotypic form and *angolensis* are quite subtle and that *angolensis* may, in fact, be a synonym of *albigularis*. However, Bayless (2002) considered the material from nearby localities, such as Bibala and Caraculo as *V. a. angolensis*. Given the currently accepted distribution of *angolensis* and the lower number of scales around the midbody and between the collar and the thighs, we tentatively identify our specimen as the Angolan subspecies. The subspecies appears to be the prevalent form in Angola (and possibly extending to some neighboring regions of the DRC, even if the nominotypic form occurs sympatrically, especially in the southern regions of the country (Bayless 2002).

Pythonidae

SOUTHERN AFRICAN ROCK PYTHON – Fig. 18 *Python natalensis* Smith, 1840

MATERIAL.— Beginning of the forested areas, at the start of the climb to Leba Pass (by road), near Bruco village, 5 December 2013, 15°07'15.82"S, 13°11'11.56"E. Individual observed but not collected.

COMMENTS.— A local at a site near Bruco village was selling a single live individual of *Python natalensis*, presumably collected nearby. In the province, this species is known from Maconjo (Bocage 1895; Broadley 1984) and from Giraul River (Bocage 1896; Broadley 1984). *Python natalensis* was for many years considered as a subspecies of *Python sebae* (Gmelin, 1789) (Broadley 1984), but was elevated to specific status by Broadley (1999) based on morphological differences as well the evidence of the overlapping distributions (Broadley and Cotterill 2004). Although the current taxonomic arrangement appears



FIGURE 18. Adult Southern Rock Python, *Python natalensis* (Gmelin, 1788), being sold by a local near Bruco village. Photo by Luis Ceriaco.

appropriate, molecular analyses are needed to conclusively resolve the relationship between *P. natalensis* and *P. sebae* (Alexander 2007). Spawls and Branch (1995) and Bellosa et al. (2007) provided maps with the distribution ranges for both species, with *P. natalensis* occurring in central and southern Angola, as far north as the Kwanza River, overlapping in Luanda Province with *P. sebae*, which occurs in northern regions of Angola, including Cabinda. According to the local selling this individual, this species is sometimes collected for food or sold to tourists as pets.

Lamprophiidae

KAROO SAND SNAKE – Fig. 19

Psammophis notostictus Peters, 1867

MATERIAL.— Espinheira, 30 November 2013, 16°47'13.8"S, 12°21'27.5"E, 457 m (CAS 254827); Pico Azevedo, 7 December 2013, 15°32'2.4"S, 12°29'31.1"E, 359 m (CAS 254940).

COMMENTS.— *Psammophis notostictus* is easily recognizable from all other southern African *Psammophis* by its single cloacal shield and the presence of two preoculars (Broadley 1975b, 1977, 2002). These two specimens have both of these diagnostic characters. The species is known for Angola, but only from Namibe Province. The closest published records of the species are in Rio São Nicolau (Loveridge 1940; Broadley 1975b, 2002), Moçamedes [Namibe city] (Bocage 1887; Loveridge 1940), and Curoca River (Loveridge 1940; Broadley 2002). Our records expand the known distribution of the species further south in the country, although it is continuous southwards throughout much of western southern Africa (Branch 1998).



FIGURE 19 – Adult Karoo Sand Snake, *Psammophis notostictus* Peters, 1867, from Espinheira. Photo by Luis Ceríaco.

DISCUSSION

Namibe Province hosts a high diversity of reptile taxa, with approximately one-third of all the reptile species known for Angola (see Table 1). Not surprisingly for an arid region, the diversity of amphibians is considerably lower in this province. However, the anuran species *Tomopterna damarensis*, adapted to drier climates, is reported here for the first time. The lizard families Scincidae and Gekkonidae are the most species-rich groups for the province with 21 and 20 species/subspecies known, respectively, and for the snakes the family Lamprophiidae has the highest diversity of taxa, with 13 species known for the province. These numbers, however, are underestimates. We did not take into account unpublished voucher specimens; as noted above, a more complete synopsis of the Namibe Province taxa will be provided elsewhere (W.R. Branch, pers. comm.). There are several examples of taxa not previously recorded for Namibe, but which are found both north and south of Namibe Province and can be expected to be found here in the

future. The presence of conspicuous species, such as Anchieta's Dwarf Python, *Python anchietae* Bocage, 1887, known from Benguela Province and from the northern regions of Namibia, is an excellent example of this pattern. Biogeographically, the province is interesting because it represents the northern limit of several southern African habitats and species. The entry of the coastal Namib Desert from Namibia into the southern coastal areas of the province as far north as the city of Namibe, as well as the continuation of the Kaokoveld and the Namibian savanna woodlands provides a clear dispersal path for southern African taxa. Likewise, the so-called Pro-Namib extends from northwestern Namibia, through Namibe, to the southern areas of Benguela Province. Despite these similarities, the influence of the Cunene River as a barrier should not be underestimated. There are a number of endemic Angolan species of widespread genera in southern Africa, such as *Pedioplanis haackei*, *P. huntleyi*, and the undescribed species of *Rhoptropus* collected in our expedition, as well as the endemic genus *Kolekanos*.

Given the concentration of reptile diversity in Namibe Province, conservation in this region is of special concern. Of the 95 species of reptiles that occur in the province (Table 1), several have small distributions within Namibe and ten are endemic, including the Slender Feather-tailed Gecko, *Kolekanos plumicaudus* and the recently described Kaokoveld Girdled-Lizard, *Cordylus namakuiyus*. As noted by Marques (2015), the majority of the amphibians and reptiles of Angola (1) have not been accessed by the IUCN or are listed as Data Deficient, and (2) are known from fewer than five published records for the country since the first studies published in early 1860s. Roughly one third of Namibe Province, 19,600 km² out of 57,091 km², is protected as either national park or nature reserve. In contrast to more populated provinces, human activities in Namibe that present significant threats to the herpetofauna are limited. The majority of the human population is concentrated around Namibe and Tombwa, and the main economic activities are fisheries and traditional pastoralism. While there are no studies of the impact of livestock on the herpetofauna within Namibe Province, negative impacts are known worldwide in other regions, including South Africa (Bauer and Branch 2003; Fabricius et al. 2003; Smart et al. 2005). Yet the low densities of livestock and the nomadic nature of the populations practicing pastoralism suggest that this is not a major threat to the amphibians and reptiles of Namibe. In contrast to neighboring Namibia (Herrmann and Branch 2013), there are no major mining activities in the province, even if these activities show recent signs of increase, which may in the future threaten some species. Other threats, such as climate change, are believed to have negative consequences on the distribution and abundance of southern African lizards (Erasmus et al. 2002; Bates et al. 2014). Extreme climatic events can facilitate wildfires, which unambiguously affect the availability of important habitats for reptiles (Meik et al. 2002). Lastly, for several taxa (e.g., pythons, chameleons, varanids), the impact of human harvesting for food, traditional medicine and the pet trade should not be overlooked. This is known from other African countries (Weldon et al. 2007; Alves et al. 2008; Segniabeto et al. 2013), and we did encounter one instance of a python being sold during our brief survey.

Additional faunal surveys are clearly still needed for Namibe Province. Even if this is one of the most herpetofaunally well known provinces in Angola, the new species recently described signal that diversity likely remains underestimated, especially for groups of species that are similar in external appearance. In addition to surveying new areas, it is also important to sample type localities of previously described species. Because many of the original topotypes were lost or destroyed, especially material described by Bocage and originally housed in the Lisbon Museum (Ceriaco 2014), new topotypic material with associated genetic resources will help to address many taxonomic issues, including for groups containing undescribed cryptic diversity. Angola sits at a crossroads of southern and central Africa and is important to understanding phylogenetic and biogeo-

graphic patterns across sub-Saharan Africa. The specimens reported here were collected in the first of an ongoing series of joint American-Angolan herpetofaunal expeditions that will build local capacity within Angola and provide accessible data resources to the scientific and conservation communities through georeferenced biodiversity informatics databases (e.g., GBIF.org, Vertnet.org), molecular databases (GenBank), and digitized morphological resources (high-resolution x-ray CT-scans). Combining data from new field surveys with information from both museum specimens and literature records (Marques et al., in prep.) will provide the first detailed picture of Angola's herpetofaunal diversity.

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Appendix

Table 1

Notes

¹ Because of the morphological similarity among many *Tomopterna* species, some older records might be referable to this taxon.

² Records attributed in the literature to *Tomopterna cryptotis*, e.g., 25 km W of Virei (Poynton and Haacke 1993; Ruas 1996, 2001) and Miranda (Boulenger 1907a; Poynton and Haacke 1993; Ruas 1996, 2001) are likely referable to *T. tandyi*, but this requires reexamination of the relevant material.

³ Some records may be referable to *L. bradfieldi* Hewitt, 1932.

⁴ *Lygodactylus lawrencei* Hewitt, 1926 is a rocky, dry savanna species from the Kaokoveld regions in northern Namibia, extending into southern Angola (Pasteur 1964:70 [Fig. 18]; Branch 1998:247; Uetz and Hošek 2014). New surveys and acquisition of new fresh material is absolutely required to clarify the extension range of *L. lawrencei* in Angola, given the lack of literature records for this species in the country.

⁵ Certainly in error, see Greer (1967).

⁶ It is plausible that these records correspond to the subspecies *angolensis*. However, due to the destruction of the specimens used by Bocage in the Lisbon Museum fire and the impossibility of confirming their identity, we opt to maintain the original identification.

⁷ The taxonomy of this species is in flux and a revisionary work on the *nigrolineatus* complex is underway (D.G. Broadley and M. Bates, pers. comm.).

⁸ The species was described by Broadley and Schätti (1997: 172), from Namibia, near the Cunene River at Ruacana, western Ovamboland. Bauer et al. (2001:75–76, 79) suggested that this species should be expected to occur in southern Angola, due to the continuity of the mopaneveld habitat of the species on either side of the Cunene River.

⁹ The species has an irregular distribution from eastern Zimbabwe and the Okavango Swampa, to Angola and Lake Malawi, through Cameroon (Hughes 1985:519 [Fig. 11]; Branch 1998:94; Chirio and LeBreton 2007:518; Wallach et al. 2014:546).

TABLE 1 – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
AMPHIBIANS	
ANURA	
Pipidae	
Genus <i>Xenopus</i> Wagler, 1827	
<i>Xenopus petersii</i> Bocage, 1895	Mossamedes [= Namibe] (Bocage 1867; Ruas 1996, 2002).
Bufonidae	
Genus <i>Sclerophrys</i> Tschudi, 1838	
<i>Sclerophrys gutturalis</i> (Power, 1927)	Mossamedes [= Namibe] (Bocage 1867); Cima [= Giraul de <i>Cima</i>] (Poynton and Haacke 1993; Ruas 1996, 2002); Saco do Giraul (Poynton and Haacke 1993; Ruas 1996, 2002); Curoca (Poynton and Haacke 1993; Ruas 1996, 2002).
<i>Sclerophrys maculata</i> (Hallowell, 1854)	Cainde (Poynton and Haacke 1993; Ruas 1996, 2002); 16 km W of Vila Nova (Poynton and Haacke 1993, Ruas 1996, 2002); this study.
<i>Sclerophrys garmani</i> (Meek, 1897)	Mossamedes [= Namibe] (Bocage 1895; Ruas 1996, 2001).
Genus <i>Poyntonophrynus</i> Frost, Grant, Falvovich, Bain, Haas, Haddad, de Sá, Channing, Wilkinson, Donnellan, Raxworthy, Campbell, Biotto, Moler, Drewes, Nussbaum, Lynch, Green and Wheeler, 2006	
<i>Poyntonophrynus dombensis</i> (Bocage 1895)	Assunção (Poynton and Haacke 1993; Ruas 1996).
<i>Poyntonophrynus grandisonae</i> (Poynton and Haacke 1993)	5 km E of Assunção (Poynton and Haacke 1993; Ruas 1996); Caraculo (Poynton and Haacke 1993; Ruas 1996); Salona [= Saiona] River, 2 km N of Cainde (Poynton and Haacke 1993; Ruas 1996); 20 km W of Virei (Poynton and Haacke 1993; Ruas 1996).
Microhylidae	
Genus <i>Phrynomantis</i> Peters, 1867	
<i>Phrynomantis annectens</i> Werner, 1910	Mutiambo River (Poynton and Haacke 1993; Ruas 1996); Caraculo (Poynton and Haacke 1993; Ruas 1996); this study.
Brevicipitidae	
Genus <i>Breviceps</i> Merrem, 1820	
<i>Breviceps adpersus</i> Peters, 1882	Biballa [= Bibala] (Bocage 1895; Ruas 1996, 2002); Mossamedes [= Namibe] (Bocage 1873b).
Hemisotidae	
Genus <i>Hemisis</i> Wagler, 1827	
<i>Hemisis guineensis</i> Cope, 1865	Mossamedes [= Namibe] (Bocage 1887b, 1895; Ruas 1996).
Arthroleptidae	
Genus <i>Leptopetlis</i> Gunther, 1859	
<i>Leptopetlis anchietae</i> (Bocage, 1873)	Mossamedes [= Namibe] (Bocage 1873b; Boulenger 1882; Loveridge 1957).
Phrynobatrachidae	
Genus <i>Phrynobatrachus</i> Gunther, 1862	
<i>Phrynobatrachus natalensis</i> (Smith 1849)	Cunene mouth (Poynton and Haacke 1993; Ruas 1996, 2002).

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
Pyxicephalidae	
Genus <i>Amietia</i> Dubois, 1987	
<i>Amietia angolensis</i> (Bocage, 1866)	This study.
Genus <i>Tomopterna</i> Duméril and Bibron, 1841	
<i>Tomopterna damarensis</i> Dawood and Channing, 1999	This study ¹ .
<i>Tomopterna krugerensis</i> Passmore and Carruthers, 1975	Namibe (Channing 2001).
<i>Tomopterna tandyi</i> Channing and Bogart, 1996	Namibe (Channing 2001) ² .
<i>Tomopterna tuberculosa</i> (Boulenger, 1882)	Biballa [= Bibala] (Bocage 1895; Ruas 1996); bottom of Leba Pass (Poynton and Haacke 1993; Ruas 1996).
REPTILES	
TESTUDINES	
Pelomedusidae	
Genus <i>Pelomedusa</i> Wagler, 1830	
<i>Pelomedusa subrufa</i> (Bonnaterre, 1789)	Mossamedes [= Namibe] (Bocage 1887, 1895; Loveridge 1941); Mucungo (Shmidt 1933; Loveridge 1941); Maconjo (Bocage 1895; Loveridge 1941); Capangombe (Bocage 1887, 1895; Loveridge 1941).
Testudinidae	
Genus <i>Kinixys</i> Bell, 1827	
<i>Kinixys belliana</i> Gray, 1830	Capangombe (Bocage 1895; Loveridge and Williams 1957).
Genus <i>Stigmochelys</i> Gray, 1873	
<i>Stigmochelys pardalis</i> (Bell, 1828)	Mossamedes [= Namibe] (Bocage 1895); Capangombe (Loveridge and Williams, 1957).
SQUAMATA	
Gekkonidae	
Genus <i>Afrogecko</i> Bauer, Good and Branch, 1997	
<i>Afrogecko ansorgii</i> (Boulenger, 1907).	Maconjo (Boulenger 1907b; Bauer et al. 1997).
Genus <i>Chondrodactylus</i> Peters, 1870	
<i>Chondrodactylus fitzsimonsi</i> (Loveridge, 1947)	Praia das Conchas (Laurent 1964a); around Moçâmedes [= Namibe] in the road to Sá da Bandeira [= Lubango] (Laurent 1964a); this study.
<i>Chondrodactylus pulitzeriae</i> (Schmidt, 1933)	Mossamedes [= Namibe] (Bocage 1867, 1895; Loveridge 1947; Laurent 1964a); Pico Azevedo (Schmidt 1933; Barbour and Loveridge 1946, 1947; Marx 1959); Curoca River (Bocage 1887; Loveridge 1947); this study.
Genus <i>Hemidactylus</i> Oken, 1817	
<i>Hemidactylus longicephalus</i> Bocage, 1873.	Capangombe (Bocage 1873b, 1895, 1897; Loveridge 1947); Curoca River (Bocage 1895, 1897; Loveridge 1947).

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
Genus <i>Kolekanos</i> Heinicke, Daza, Greenbaum, Jackman and Bauer, 2014	
<i>Kolekanos plumicaudus</i> (Haacke, 2008).	Tambor (Haacke 2008; Mashinini and Mahlangu 2013); Curoca River (Haacke 2008); 11 km NE of Iona along track towards Oncocua (Haacke 2008; Heinicke et al. 2014).
Genus <i>Lygodactylus</i> Gray, 1864	
<i>Lygodactylus capensis</i> (Smith, 1849)	Mucungu (Schmidt 1933; Loveridge 1947); Capangombe (Bocage 1895) ³ .
<i>Lygodactylus lawrencei</i> Hewitt, 1926	4
Genus <i>Pachydactylus</i> Wiegmann, 1834	
<i>Pachydactylus angolensis</i> Loveridge, 1944	Moçâmedes [= Namibe] to Sá da Bandeira [= Lubango] at Praia das Conchas (Laurent 1964a); Lucira (Bauer 1999); San Nicolau [= São Nicolau] (Bauer 1999); Lungo (Bauer 1999); Saco de Giraul (Bauer 1999); this study.
<i>Pachydactylus caraculicus</i> FitzSimons, 1959	Lungo (FitzSimons 1959); Caraculo (FitzSimons 1959; Haacke 1970; Mashinini and Mahlangu 2013); Giraul de Cima, river (FitzSimons 1959); 36 mi. northwest of Mocamedes [= Namibe] (Bauer 1999).
<i>Pachydactylus</i> cf. <i>oreophilus</i> McLachland and Spence, 1967	Assuñcao (= Assunção) (Bauer 1999); Caraculo (Bauer 1999); 20 km W Virei (Bauer 1999); 6 km S of Coroca River towards Iona (Bauer 1999); Saiona River, 25 km NW Cainde (Bauer 1999); Mutiambo River on road to Lucira (Bauer 1999); Tambor (Bauer 1999); 7 km from Iona towards Oncocau, Iona Reserve (Bauer 1999); Furnas (Bauer 1999).
<i>Pachydactylus punctatus</i> Peters, 1854	60 km of the road of Moçâmedes [= Namibe] to Sá da Bandeira (Laurent 1964a); Moçâmedes [= Namibe] (Laurent 1964a); 35 km south of Moçâmedes [= Namibe] (Laurent 1964a); Pico Azevedo (Schmidt 1933; Loveridge 1947); 11 mi NE of Mocamedes [= Namibe] (Bauer and Branch 1995).
<i>Pachydactylus rangei</i> (Andersson, 1908)	Mossamedes [= Namibe] (Haacke 1976b); Curoca River (Haacke 1976b); Porto Alexandre (Haacke 1976b); Cunene mouth (Haacke 1976b); Lacrau (Haacke 1976b); Namib Desert (Mertens 1937).
<i>Pachydactylus vanzyli</i> (Steyn and Haacke, 1966)	Espinheira (Haacke 1976a); Kakolo windmill (Haacke 1976a).
Genus <i>Rhoptropus</i> Peters, 1869	
<i>Rhoptropus afer</i> Peters, 1869	Maconjo (Bocage 1873b); Capangombe (Bocage 1873b, 1895, 1897b); Moçâmedes [= Namibe] (Boulenger 1885); Curoca River (Bocage 1887b, 1895, 1897b).
<i>Rhoptropus barnardi</i> Laurent 1964a	60 km from Moçâmedes [= Namibe] to Sá da Bandeira [= Lubango] (Laurent 1964a); this study.
<i>Rhoptropus biporosus</i> Fitzsimons, 1957	Pico Azevedo (Bauer and Good 1996); this study.
<i>Rhoptropus boultoni boultoni</i> Schmidt, 1933	60 km from Moçâmedes [= Namibe] to Sá da Bandeira [= Lubango] (Laurent 1964a); Pico do Azevedo (Schmidt 1933; Mertens 1938; Barbour and Loveridge 1946; Marx 1959; McCoy and Richmond 1966); this study.

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
<i>Rhoptropus boultoni montanus</i> Laurent, 1964	This study.
<i>Rhoptropus taeniosictus</i> Laurent 1964a	Mucungu (Schmidt 1933); “60 km from Moçâmedes [= Namibe] to Sá da Bandeira [= Lubango] (Laurent 1964a); this study.
Lacertidae	
Genus <i>Heliobolus</i> Fitzinger, 1843	
<i>Heliobolus lugubris</i> (A. Smith, 1838)	Maconjo (Bocage 1895); Capangombe (Bocage 1895); Konondoto (Boulenger 1921); this study.
Genus <i>Meroles</i> Gray, 1838	
<i>Meroles anchietae</i> (Bocage, 1867)	Moçâmedes (= Namibe) (Bocage 1867, 1895, 1897; Boulenger 1887; Loveridge 1936); this study.
<i>Meroles reticulatus</i> (Bocage, 1867)	Moçâmedes (= Namibe) (Bocage 1867; Boulenger 1887; Loveridge 1936); Coroca River (Bocage 1895, 1897; Boulenger 1887; Bauer and Günther 1995; this study.
Genus <i>Nucras</i> Gray, 1838	
<i>Nucras tessellata</i> (Smith 1838)	Maconjo (Bocage 1895; Broadley 1972); 34 km from Moçâmedes [= Namibe] to Sá da Bandeira [= Lubango] (Laurent 1964; Broadley 1972).
Genus <i>Pedioplanis</i> Fitzinger, 1843	
<i>Pedioplanis benguellensis</i> (Bocage, 1867)	Maconjo (Boulenger 1921; Bauer and Günther 1995; Conradie et al. 2012); Capangombe (Bocage 1895; Monard 1937); Mossamedes [= Namibe] (Bocage 1887, 1895; Monard 1937); this study.
<i>Pedioplanis haackei</i> Conradie, Measey, Branch and Tolley, 2012	Red Canyon at Lake Arco (Conradie et al. 2012); 10 km south of Lake Arco (Conradie et al. 2012); Road to Tambor at giant <i>Welwitschia</i> (Conradie et al. 2012); Road from Lake Arco to Espinheira (Conradie et al. 2012); Omauha Lodge (Conradie et al. 2012); Road to Tambor (Conradie et al. 2012); 20 km north of Omauha Lodge (Conradie et al. 2012); this study.
<i>Pedioplanis huntleyi</i> Conradie, Measey, Branch and Tolley, 2012	Omauha Lodge (Conradie et al. 2012). 14 km west of Moimba (Conradie et al. 2012); 23 km west of Moimba (Conradie et al. 2012); 26 km east of Iona (Conradie et al. 2012); 16 km east of Iona (Conradie et al. 2012); 8 km northeast of Iona (Conradie et al. 2012); Road to Onocua 7 km NE from Iona (Conradie et al. 2012); 26 km SE of Onocua (Conradie et al. 2012).
Scincidae	
Genus <i>Eumecia</i> Bocage, 1870	
<i>Eumecia anchietae</i> Bocage, 1870	Moçâmedes [= Namibe] (Boulenger 1887) ⁵ .
Genus <i>Mochlus</i> Günther, 1864	
<i>Mochlus sundevallii</i> (Smith, 1849)	Campangombe (Bocage 1895); Moçâmedes (= Namibe) (Bocage 1867; 1895); Curoca River (Bocage 1895); 10mls E of Caracul [= Caraculo] (Haacke 1965; Broadley 1966).

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
Genus <i>Panaspis</i> Cope, 1868	
<i>Panaspis cabindae</i> (Bocage, 1866)	Capangombe (Bocage 1895, 1897).
Genus <i>Sepsina</i> Bocage, 1866	
<i>Sepsina angolensis</i> Bocage, 1866	Capangombe (Bocage 1895; Monard 1937).
<i>Sepsina copei</i> Bocage, 1873	Biballa [= Bibala] (Bocage 1895, 1897).
Genus <i>Trachylepis</i> Fitzinger, 1843	
<i>Trachylepis acutilabris</i> (Peters, 1862)	Cahinde-Ongueira (Hellmich 1957a); Mossâmedes [= Namibe] desert, 35 km south from the city (Laurent 1964a); Curoca River (Bocage 1895); this study.
<i>Trachylepis bayonii bayonii</i> (Bocage, 1872)	Moçâmedes [= Namibe] (Boulenger 1887).
<i>Trachylepis binotata</i> (Bocage, 1867)	Capangombe (Bocage 1895); 50 km Moçâmedes [= Namibe] to Sá da Bandeira [= Lubango]" (Laurent 1964a); Maconjo (Bauer et al. 2003).
<i>Trachylepis chimbana</i> (Boulenger, 1887)	Chimba River (Boulenger 1887; Bocage 1872, 1895, 1897; Broadley 1975a); Assunção (Broadley 1975a); Maconjo (Bocage 1895, 1897; Broadley 1975a), Moçâmedes [= Namibe] (Boulenger 1887); Lucira (Broadley 1975a); Chapeau Armando [= Chapéu Armando] turnoff, Mossamedes [= Namibe] (Broadley 1975a); Caraculo (Broadley 1975a); 14 km NE Caraculo (Broadley 1975a); Capangombe (Bocage 1895, 1897; Broadley 1975a); Mossamedes [= Namibe] (Boulenger 1887); Saiona River, NW of Cainde (Broadley 1975a); Cainde (Broadley 1975a); Coroca River (Broadley 1975a).
<i>Trachylepis hoeschi</i> (Mertens, 1954)	Praia das Conchas, Moçâmedes [= Namibe] (Laurent 1964a); this study.
<i>Trachylepis lacertiformis</i> (Peters, 1854)	Cainde (Broadley 1975); 14 km NE of Caraculo (Broadley 1975a).
<i>Trachylepis laevis</i> (Boulenger, 1907)	Maconjo (Boulenger 1907b); Munhino (Laurent 1964a); this study.
<i>Trachylepis occidentalis</i> (Peters, 1867)	Curoca River (Bocage 1895), 35 km south of the city of Moçâmedes [= Namibe] (Laurent 1964a); this study.
<i>Trachylepis punctulata</i> (Bocage, 1872)	Inamango River on Lucira road (Broadley 1975a); Mucungu (Schmidt 1933; Broadley 1975a); Sao Nicolau [= São Nicolau] (Broadley 1975a); 17 km N of Sao Nicolau [= São Nicolau] (Broadley 1975a); Caraculo (Broadley 1975a); 15 km W of Caraculo (Broadley 1975a); Cima [= Giraul de Cima] (Broadley 1975a); Pico Azevedo (Broadley 1975a); 23 km W of Virei (Broadley 1975a); Coroca River (Bocage 1872, 1895, 1897; Boulenger 1887; Broadley 1975a, 2000); 6 km S of Rio Coroca on Iona road (Broadley 1975a); Porto Alexandre [= Tômbua] (Broadley 1975a); 30 km N of Tambor (Broadley 1975a); Octchinfengo River on Onocua road, Iona Reserve (Broadley 1975a); Cunene mouth (Broadley 1975a); this study.
<i>Trachylepis sulcata</i> (Peters, 1867)	Capangombe (Bocage 1895); Munhino (Laurent 1964a); this study.

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
<i>Trachylepis varia</i> (Peters, 1867)	Moçâmedes [= Namibe] (Bocage 1867); Biballa [= Bibala] (Bocage 1872); this study.
Genus <i>Typhlacontias</i> Bocage, 1873	
<i>Typhlacontias johnsonii</i> Anderson, 1916	Curoca River (Bocage 1895; Haacke 1997); Porto Alexandre (= Tombwa) [= Tômbua] (Haacke 1997); Lacrau (Haacke 1997).
<i>Typhlacontias punctatissimus punctatissimus</i> Bocage, 1873	Coroca River (Bocage 1873, 1887 1895, 1897); Mossamedes [= Namibe] (Boulenger 1887); Porto Alexandre [= Tômbua] (Haacke 1997).
<i>Typhlacontias punctatissimus bogerti</i> Laurent, 1964	Mossamedes [= Namibe] desert, 35 km south from the city (Laurent 1964a); Curoca River (Haacke 1997); Moçâmedes [= Namibe] (Haacke 1997); 10 km S of Moçâmedes [= Namibe] (Haacke 1997); 34 km S of Moçâmedes [= Namibe] (Haacke 1997); 8 km SE of Pico Azevedo (Haacke 1970); Kakolo windmill (Haacke 1997); this study.
<i>Typhlacontias rudebecki</i> Haacke, 1997	São Nicolau (Haacke 1997).
Varanidae	
Genus <i>Varanus</i> Merrem, 1820	
<i>Varanus albigularis angolensis</i> Schmidt, 1933	This study.
<i>Varanus albigularis albigularis</i> (Daudin, 1802)	Chimba River (Bocage 1895); Biballa [= Bibala] (Bocage 1895) ⁶ .
Chamaeleonidae	
Genus <i>Chamaeleo</i> Laurenti, 1768	
<i>Chamaeleo anchietae</i> Bocage, 1872	Namibe (Tilbury 2010: 451).
<i>Chamaeleo dilepis</i> Leach, 1819	Moçâmedes [= Namibe] (Bocage 1867b; 1887; 1895); Chimba (Hellmich 1957a).
<i>Chamaeleo namaquensis</i> Smith, 1831	Moçâmedes [= Namibe] (Günther 1865; Bocage 1867, 1872, 1895; Boulenger 1887).
Agamidae	
Genus <i>Agama</i> Daudin, 1802	
<i>Agama aculeata</i> Merrem, 1820	Biballa [= Bibala] (Bocage 1895); Moçâmedes [= Namibe] (Bocage 1887b, 1895); Virei-Cahinde (Hellmich 1957a); Molundo (Monard 1937); Chimpopo (Monard 1937).
<i>Agama anchietae</i> Bocage, 1896	Moçâmedes [= Namibe] (Bocage 1896, 1897); 100 km southeast of Moçâmedes [= Namibe] (Laurent 1964); Maconjo (Boulenger and Power 1921); this study.
<i>Agama planiceps planiceps</i> Peters, 1862	Biballa [= Bibala] (Bocage 1895); Pico Azevedo (Schmidt 1933); this study.
Cordylidae	
Genus <i>Cordylus</i> Laurenti, 1768	
<i>Cordylus namakuiyus</i> Stanley, Ceríaco, Bandeira, Valério, Bates and Branch, 2015	Caraculo, on the road from Lubango and Namibe (Stanley et al. 2016); Pico Azevedo (Stanley et al. 2016); road between Namibe and Omauha Lodge (Stanley et al. 2016); this study.

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
Gerrhosauridae	
Genus <i>Cordylosaurus</i> Gray, 1865 [1866]	
<i>Cordylosaurus subtessellatus</i> (Smith, 1844)	Curoca River (Bocage 1895); this study.
Genus <i>Gerrhosaurus</i> Wiegmann, 1828	
<i>Gerrhosaurus nigrolineatus</i> Hallowell, 1857	Capangombe (Bocage 1895; Loveridge 1942) ⁷ .
<i>Gerrhosaurus skoogi</i> Andersson, 1916	Porto Alexandre [= Tômboa] (FitzSimons 1953); this study.
Genus <i>Matobosaurus</i> Bates and Tolley, 2013	
<i>Matobosaurus maltzahni</i> (De Grys, 1938)	Chimba River (Bocage 1895); Moçâmedes [= Namibe] (Bocage 1895); Tambor (Bates et al. 2013); Omauha Lodge (Bates et al. 2013).
SERPENTES	
Typhlopidae	
Genus <i>Afrotrophlops</i> Broadley and Wallach, 2009	
<i>Afrotrophlops anomalus</i> (Bocage, 1873)	Biballa [= Bibala] (Bocage 1895; Broadley and Wallach 2009); Moçâmedes [= Namibe] (Bocage 1873).
<i>Afrotrophlops schlegelii</i> (Bianconi, 1847)	Biballa [= Bibala] (Bocage 1873, 1886, 1895, 1897a; Loveridge 1933).
Leptotyphlopidae	
Genus <i>Leptotyphlops</i> Fitzinger, 1843	
<i>Leptotyphlops scutifrons</i> (Peters, 1854)	Biballa [= Bibala] (Bocage 1873, 1895), Capangombe (Bocage 1895).
Pythonidae	
Genus <i>Python</i> Daudin, 1803	
<i>Python natalensis</i> Smith, 1840	Maconjo (Bocage 1895; Broadley 1984); Giraul River (Bocage 1896; Broadley 1984); this study.
Viperidae	
Genus <i>Bitis</i> Gray, 1842	
<i>Bitis arietans</i> (Merrem, 1820)	Moçâmedes (= Namibe) (Günther 1865; Manaças 1981).
<i>Bitis caudalis</i> (Smith, 1839)	Capangombe (Bocage 1895, Manaças 1981); Moçâmedes [= Namibe] (Günther 1865; Monard 1937; Manaças 1981); Mossamedes [= Namibe] Desert, 35 km south from the city (Laurent 1964a); Curoca River (Bocage 1895; Monard 1937; Manaças 1981).
Genus <i>Causus</i> Wagler, 1830	
<i>Causus resimus</i> (Peters, 1862)	Chimba River (Bocage 1895; Manaças 1981); Biballa [= Bibala] (Bocage 1895; Manaças 1981); Maconjo (Bocage 1895); Macujo [= Maconjo] (Manaças 1981).
<i>Causus rhombeatus</i> (Lichtenstein, 1823)	Cuce River (Ferreira 1897); Mossamedes [= Namibe] (Bocage 1887a, 1895).

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
Lamprophiidae	
Genus <i>Aparallactus</i> Smith, 1849	
<i>Aparallactus capensis capensis</i> Smith, 1849	Biballa [= Bibala] (Bocage 1895, 1897a; Loveridge 1944b; de Witte and Laurent 1947).
Genus <i>Boaedon</i> Duméril, Bibron and Duméril, 1854	
<i>Boaedon fuliginosus</i> complex	Biballa [= Bibala] (Bocage 1895); Capangombe (Bocage 1895).
Genus <i>Lycophidion</i> Fitzinger, 1843	
<i>Lycophidion hellmichi</i> Laurent, 1964	Capolopopo (Laurent 1964a; Broadley 1991, 1996).
<i>Lycophidion multimaculatum</i> Boettger, 1888	Moçâmedes [= Namibe] (Bocage 1895; Laurent 1968; Broadley 1996).
Genus <i>Hemirhagerrhis</i> Boettger, 1896	
<i>Hemirhagerrhis viperina</i> (Bocage, 1873)	Cuce River (Ferreira 1897); Munhino (Bogert 1940; Broadley 1995b; Broadley and Hughes 2000); Maconjo (Bocage 1895; Broadley 1995b; Broadley and Hughes 2000); Capangombe (Bocage 1895; Broadley 1995b; Broadley and Hughes 2000); Huxe (Broadley 1997b; Broadley and Hughes 2000); Lungo (Broadley 1997b; Broadley and Hughes 2000); Caraculo (Broadley 1997b; Broadley and Hughes 2000).
Genus <i>Psammophis</i> Boie, 1825	
<i>Psammophis leopardinus</i> Bocage, 1887	Capangombe (Bocage 1887; Broadley 2002); Moçâmedes [= Namibe] (Bocage 1887, 1895; Loveridge 1957); Iona (Broadley 2002; Hughes and Wade 2002).
<i>Psammophis mossambicus</i> Peters, 1882	Mossamedes [= Namibe] (Loveridge 1940; Broadley 2002); Coroca River (Bocage 1895); Porto Alexandre [= Tômboa] (Loveridge 1940).
<i>Psammophis namibensis</i> Broadley, 1975	Mossamedes [= Namibe] (Broadley 1975b, 2002b); Pico Azevedo (Broadley 2002); Coroca River (Broadley 1975b, 2002); Cunene mouth (Broadley 1975b, 2002b); Cunene Forde, 15 km NE, Iona Res. (Broadley 2002).
<i>Psammophis notostictus</i> Peters, 1867	São Nicolao River (Boulenger 1896; Loveridge 1940; Broadley 1975b; 2002); Coroca River (Bocage 1887, 1895; Monard 1937; Loveridge 1940; Broadley 1975b, 2002); this study.
<i>Psammophis subtaeniatus</i> Peters, 1882	Biballa [= Bibala] (Bocage 1895, 1897a; Loveridge 1940); Maconjo (1895, 1897a; Loveridge 1940; Broadley 2002); Chao de Chella (Broadley 2002).
<i>Psammophis trigrammus</i> Günther, 1865	Sao Nicolao [= São Nicolau] River (Bocage 1887; Loveridge 1940; Broadley 1977, 2002; Wallach et al. 2014); Catara River (Broadley 2002); Coroca River (Broadley 2002b); Iona Reserve, 7 km to Oncócuá (Broadley 2002).
Genus <i>Prosymna</i> Gray, 1849	
<i>Prosymna frontalis</i> (Peters, 1867)	Moçâmedes [= Namibe] (Boulenger 1893).
<i>Prosymna visseri</i> Fitzsimons, 1959	near Caracul [= Caraculo], S. Angola (Fitzsimons 1959; Bauer et al. 2001); Balabaia (Broadley 1980); 5 km S of Chibemba (Broadley 1980).

TABLE 1 (continued) – Only published records are included. Additional species known from the province based on unpublished museum records are not included unless also supported by published records.

Taxon	Occurrences & References
Elapidae	
Genus <i>Afronaja</i> Wallach, Wüster and Broadley 2009	
<i>Afronaja mossambica</i> (Peters, 1854)	Maconjo (Manaças 1981; Broadley 1974).
<i>Afronaja nigricincta</i> (Bogert, 1940)	Munhino (Bogert 1940; Manaças 1981); Maconjo (Manaças 1981); Capangombe (Bocage 1895); Cunene mouth (Manaças 1981).
<i>Afronaja nigricollis</i> (Reinhardt, 1843)	Capangombe (Ferreira 1900b; Manaças 1981).
Genus <i>Aspidelaps</i> A. Smith, 1849	
<i>Aspidelaps lubricus cowlesi</i> Bogert, 1940	Munhino (Bogert 1940; Manaças 1981; Broadley and Baldwin 2003).
Genus <i>Boulengerina</i> Dollo, 1886	
<i>Boulengerina melanoleuca</i> Hallowell, 1857	Capangombe (Ferreira 1900b; Manaças 1981).
Genus <i>Elapsoidea</i> Bocage, 1866	
<i>Elapsoidea semiannulata semiannulata</i> Bocage, 1882	Maconjo (Bocage 1895, 1897c; Loveridge 1944b; Broadley 1971, 1998b; Manaças 1981).
Colubridae	
Genus <i>Coluber</i> Linnaeus, 1758	
<i>Coluber zebrinus</i> Broadley and Schätti, 1997	8
Genus <i>Crotaphopeltis</i> Fitzinger, 1843	
<i>Crotaphopeltis hotamboeia</i> (Laurenti, 1768)	Biballa [= Bibala] (Bocage 1895).
Genus <i>Philothamnus</i> Smith, 1840	
<i>Philothamnus angolensis</i> Bocage 1882	Capangombe (Bocage 1882a, 1897a; Loveridge 1951, 1957; Chirio and LeBreton 2007; Wallach et al. 2014).
<i>Philothamnus irregularis</i> (Leach, 1819)	Capangombe (Bocage 1882a, 1887, 1895); Mossamedes [= Namibe] (Bocage 1887, 1895).
<i>Philothamnus ornatus</i> Bocage, 1872	9
<i>Philothamnus semivariegatus</i> (Smith, 1840)	Maconjo (Bocage 1882a); Capangombe (Bocage 1895; Haacke 1985).
Genus <i>Telescopus</i> Wagler, 1830	
<i>Telescopus finkeldeyi</i> Haacke, 2013	5 km north Namibé [= Namibe] (Haacke 2013).
Genus <i>Thelotornis</i> A. Smith, 1849	
<i>Thelotornis capensis oatesi</i> (Günther, 1881)	Biballa [= Bibala] (Bocage 1895; Loveridge 1944b).