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AHN

AFRICAN HERP NEWS

HAA | Herpetological Association of Africa
www.africanherpetology.org

FOUNDED 1965

The HAA is dedicated to the study and conservation of African reptiles and amphibians. Membership is open to anyone with an interest in the African herpetofauna. Members receive the Association's journal, African Journal of Herpetology (which publishes review papers, research articles, and short communications – subject to peer review) and African Herp News, the Newsletter (which includes short communications, natural history notes, book reviews, bibliographies, husbandry hints, announcements and news items).

NEWSLETTER EDITOR'S NOTE

Articles shall be considered for publication provided that they are original and have not been published elsewhere. Articles will be submitted for peer review at the Editor's discretion. Authors are requested to submit manuscripts by e-mail in MS Word '.doc' or '.docx' format.

The views and opinions expressed in articles are not necessarily those of the Editor.

COVER PHOTOGRAPH: *Bitis inornata*. Photograph by: Shivan Parusnath (first prize - photography competition 13th HAA Conference).

AHN CONTENTS

AHN EDITORIAL

AHN EDITOR'S REPORT 2017

The African Herp News has undergone significant changes since 2015. The newsletter has been revamped with a new look, colour format, professional graphic design overhaul and format changes. While these changes have been positive in many respects and have resulted in significant positive feedback, there are a number of challenges that have arisen during the past two years.

COST

The new layout and colour printing of the newsletter has led to an increase in the cost of production. Layout costs of the newsletter vary slightly per issue and are not based on the copies printed, but on the number of pages in the issue. The print cost per copy is approximately R34, and the cost of postage varies between R7 (inside SA) to R28 (overseas). The total cost of a single issue of the newsletter thus varies between R41 and R62, which is a significant increase on the copy cost of the previous newsletter format (even excluding the layout costs). Unfortunately the SA Post Office has let the HAA down and there has been significant non-delivery of the copies entrusted to them. While it is not possible to obtain numbers of undelivered AHN 62 and AHN 63 copies, the biggest problem is that neither of the boxes of extra copies of the two issues specified for delivery to the HAA Secretary have been delivered. The loss of these 90 or so copies of AHN is a significant financial loss to the HAA (not even considering the cost of possible reprinting in order to supply new members with copies of these issues). Using standard mail postage, there is currently no way for me/the HAA to ensure the delivery of AHN copies via the SA Post Office. The cost of using registered mail was investigated and discussed by the HAA committee but unfortunately the cost is prohibitive given current membership fees. I think the HAA should consider the risk that non-delivery of an increasingly costly print copy of the AHN poses to the financial viability of the society over time. I am pleased to announce that as a result of the referendum the AHN will now be published as an e-publication only.

Gavin Masterson

Editor: Herpetological Association of Africa

AHN REPORTS

HAA CHAIRMAN'S REPORT 2017

The HAA's mandate is to promote herpetology in Africa. It does this through the production of the African Journal of Herpetology, African Herp News, the hosting of conferences, facilitation of workshops and acting as a forum for communication between herpetologists working on African herpetofauna and herpetology. Importantly, the HAA should be the home association for all professional and amateur herpetologists in Africa.

We are currently in a time of change and we need to discuss some significant items in this general meeting. The next elections will take place towards the end of 2017, but there are two significant changes that must take place before then:

1. John Measey will be stepping down as editor of the African Journal of Herpetology after the next issue (the Don Broadley memorial issue) comes out. John has been editor for eight years and was responsible for moving the journal from an in-house publication into one of the professional publication houses (Taylor & Francois). The HAA owes John a deep debt of gratitude for his dedication and selfless contributions to the journal over the last eight years.

2. The HAA has experienced some significant challenges with the production of the African Herp News. Many of these challenges relate to the production of hardcopies and associated postage problems. I am pleased to announce that the HAA membership overwhelmingly voted in favour of moving to e-publication only for the AHN in a recent referendum. This change will now result in some significant savings of money and effort for the HAA, and streamline the production of the newsletter. It is for this reason that the HAA Committee have decided to not raise membership fees for African members, and to reduce membership for international members by a third. Not only will this change result in members receiving their newsletters more timeously, they will do so at reduced membership costs.

I also intend introducing new portfolios to the HAA Committee at the next elections. Currently four of the nine committee members do not have explicit portfolios. I would like to add the following new portfolios: Webpage & Social Media, Membership, Conference Convener and Student Support. These are in addition to the current portfolios (Chairman, Treasurer, Secretary, Journal Editor and Newsletter Editor).

I believe that the HAA has the potential to increase its membership base significantly, but to do this, it must ensure that it is fulfilling its mandate. I will endeavour to make sure this happens over the remainder of my term as chairman.

Graham Alexander

Chairman: Herpetological Association of Africa

AFRICAN JOURNAL OF HERPETOLOGY EDITOR'S REPORT 2017

This report covers my fourth and final period as editor for African Journal of Herpetology (January 2015 to December 2016). Since my last report (African Herp News 53:5-7), the journal has continued in a steady fashion.

This year, 2017, we celebrate 60 years of AJH (volume 66) from the first volume and issue which appeared in 1957. Much has changed over this period (see *Afr. J. Herpetol* 60:89-100), and will continue to change as the journal moves into the future.

TAYLOR & FRANCIS PUBLISHING AJH

Our arrangements with Taylor & Francis (T&F) for publishing AJH have seen stability and quality in the appearance of the journal. After some difficulties in the printing by UNISA for the African members, we have signed a new deal with NISC which we hope will better cater for HAA members.

Our members continue to have free access to all AJH pdfs right back to Volume 1 in 1965 via the T&F website (http://www.tandfonline.com/toc/ther20/current). Each password changes annually, so make sure that you don't discard the emails that you receive from T&F issuing these. Contact the HAA secretary in case of doubt.

As anticipated, using T&F and their online platform has increased the visibility of AJH throughout the academic world. In total, during 2015 and 2016, there were 10 896 downloads of AJH articles from the Taylor & Francis online platform. North America was the top region of interest with 26% of downloads, followed by Africa (20%), North & Central Europe (15%), southern Europe (15%) and Asia (10%). Congratulations to Greenbaum et al (2015) for the highest download in 2015 with a massive 201 downloads of their paper describing a new central African Boaedon. For 2016 downloads, Rivero Suárez et al (2016) topped the group with 112 downloads. Most institutions currently subscribe to AJH in a package, bundled together with other life-sciences publications from T&F. From 2015 to 2016, our circulation rose from 2 249 to 2 403 libraries. In addition to subscriptions, downloads generate revenue for the HAA, and for the 2015-16 period the royalty payments amounted to R24 453.51.

For submissions, we continue to use an online system (ScholarOne: mc.manuscriptcentral.com/ther) which really helps ease the complexities of editorial work. The ScholarOne system produces its own metrics which were carried in the last report, and continue below. The following metrics relate to 2015 and 2016 activity for original manuscripts submitted

to AJH on ScholarOne:

Mini-reviews	Reviews	Original Articles	Short Communications
0	1	47	11

It should be noted that while submissions have increased compared to the last period (total = 42), this includes inappropriate submissions (n = 11), mostly on non-African herpetofauna.

ScholarOne Metrics	Days
Average time to first decision	35
Average referee turnaround time	20
Average time to final decision	41
Proportion Accepted	**53%**

ASSOCIATE EDITORS

As before, work on the journal has not been achieved by the editor alone but through a concerted effort from a committed editorial team. I'd like to take this opportunity to thank all the Associate Editors (AEs). Two new AEs were appointed during this period: Ed Stanley (Florida Museum of Natural History) and Jessica da Silva (SANBI). They join the now veteran AE: Jörn Khöler (Hessisches Landesmuseum Darmstadt). Two AEs stepped down from their duties: Eli Greenbaum (University of Texas at El Paso) and Bryan Maritz (University of the Western Cape). I'd like to take this opportunity to thank them for their important contribution to the journal over many years and many more manuscripts than is appreciated from the final product. AEs take on a vital role investing a lot of their time in reading and assessing manuscripts, reading reviewer's reports and making recommendations. Their work lies at the heart of the quality of outputs that we see when we read AJH.

SPECIAL EDITION

A new special edition of African Journal of Herpetology (Volume 66; Issue 2) will appear in October 2017. This will carry a series of papers as a memorial of the HAA founder, Don Broadley, who died in February 2016. This special edition is being edited by Graham Alexander, Aaron Bauer, Bill Branch, Mike Bates, Krystal Tolley, Martin Whiting and myself.

METRICS

As many members will be aware, the world of scientific publishing is now largely governed by metrics, and you'll be happy to know that African Journal of Herpetology continues to be well represented by the metrics. Our Impact Factor (IF) sunk some in 2015 to 0.444. (from 0.792 in 2014).

John Measey

Editor: African Journal of Herpetology

HAA TREASURER'S REPORT 2017

Financially the HAA is looking good with close on R480,000 in the bank after the HAA Conference in Hluhluwe.

When I took over the finances of the HAA no audits had been done since 2012 and the HAA documents were all with a Pretoria accounting firm. They were tasked with capturing all outstanding financials of the HAA and getting the financials prepared for auditing. After close on a year of chasing this company and supplying them with bank statements that they had requested, I removed all paperwork from them and handed everything to Structured Accounting, a company that I had had dealings with for more than 20 years. This was communicated to the HAA committee at every stage.

Structured Accounting made good progress in capturing the financials of the past five years when all of the paperwork belonging to the HAA was accidentally shredded during a major cleanout. The remaining transactions had to be captured using bank statements. This has now been completed and will be sent for auditing shortly.

Once audited and submitted to the South African Revenue Services, the HAA will be registered as a Non-Profit Organisation. At present we function as a club and have a tax free exemption from SARS but are unable to register a Paypal account for overseas payments.

Historically overseas subscriptions were paid to Zenscientist through Breck Bartholomew but this arrangement ceased in 2016. Electronic transfers from overseas are extremely expensive and the most suitable manner in receiving foreign payments will be via Paypal. This service will be available once the HAA is registered as a non-profit organisation. In the interim we can receive overseas payments via https://transferwise.com/.

With the African Herp News newsletters no longer appearing in hard copy, a decision will need to be made about subscription fees. It has been several years since we had an increase in subscription fees but at the same time we have had a drop in membership. Once we have made the calculations, the HAA committee will make the necessary announcement.

Johan Marais

Treasurer: Herpetological Association of Africa

HAA SECRETARIAL REPORT 2017

MEMBERSHIP STATS

At the end of 2016, HAA membership was as follow:

	2014	2016
African members	147	110
Overseas members	116	78
Subscriptions to African Herp News Only	4	5
TOTAL MEMBERSHIP	**258**	**193**

This is a significant decrease to 193 paid memberships since November 2014.

New members for 2016 (until 30 November 2016): 20 (13 African, 07 Overseas)

New members for 2015 (until 30 November 2015): 20 (17 African, 03 Overseas)

SUBSCRIPTION MANAGEMENT

Overseas membership is no longer handled by Breck Bartholomew (ZenScientist/ Bibliomania) and another payment system is being put into place to manage overseas payments.

Renewal notices were sent out to African members in 2015 and 2016. Breck handled reminders for the overseas members for these two years. There is a renewal drive planned for February 2017 for all members; a second reminder for 28 February 2017, and a final reminder for 30 March 2017. I anticipate a great response, especially from African members.

There are currently 18 student members (all African), a significant decrease in student membership by the end of 2016. Increased visibility of the HAA in social media is needed to attract more students. Another suggestion is for university professionals to promote the HAA among their students as the student rates are discounted. New members can be attracted this way.

Lapsed members will be removed from the database.

Buyi Makhubo

Secretary: Herpetological Association of Africa

A NOTE ON THE HERPETOFAUNA OF MODISA CAMP (BOTSWANA) AND ITS SURROUNDINGS

O. BOURQUIN & V. GRUENER

The herpetofauna of the east central Kalahari in Botswana is poorly known. This faunal list, although incomplete, helps by filling some major distribution gaps, and by confirming distribution boundaries. Because of major vegetation changes in the area surveyed, some of the species may well have occupied the area fairly recently, and future surveys during and after further habitat changes could establish the effect of such on the herpetofauna. Similar faunal lists made in relatively pristine areas nearby (e.g. Central Kalahari Game Reserve) would also enable possible reasons for changes to local and regional distribution patterns to be established.

AREA DESCRIPTION

The Modisa Camp is situated at Lat 21.7259 S; Long 22.3575 E (2122 CBC), altitude 1066 m, on the Grassland Game Farm (Ghanzi District, Botswana) some 10000 ha in extent, bordering the Okwa Wildlife Management Area , a buffer zone of the Central Kalahari Game Reserve. The landscape is gently undulating, with hollows, shallow valleys and low ridges, and also has extensive flat plains. Most of the area is covered by Kalahari sand of varying depths. In some restricted areas, especially depressions and valleys, the sand has been eroded away to expose underlying basalt. Altitudes above sea level are between 1,058 m to 1,077 m.

The climate is semi-arid. Mean maximum daily temperatures are 33-45°C in January and around 22°C in July, October being the hottest month. Mean minimum temperatures are 4 to -5°C in the winter months. Diurnal temperature fluctuations are extreme. A cold summer night may drop to 2°C, whereas the daytime temperature may exceed 46°C. The long-term mean annual rainfall is around 375 mm although this can vary by up to 50% year by year. Summer rains are expected between November and March, but as rainfall is erratic this is by no means certain. Rainstorms are frequent but fast, and rainfall is also remarkably patchy, with great differences occurring between sites only a few kilometers apart (based on local knowledge and from Wikipedia 2015 for the Ghanzi District).

The vegetation is Arid (Xeric) Savanna characterized by open, semi-open and closed shrubland/woodland communities, severely grazed by large game species and encroached by a number of woody species. Habitats include Bluethorn (*Acacia erubescens*) woodland, False Umbrella Thorn (*Acacia luederitzii*) woodlands, Blackthorn (*Acacia mellifera*) woodland/thicket, Trumpet Thorn (*Catophractes alexandri*) thickets, Silver Terminalia (*Terminalia sericea*) thickets/woodlands, encroached savanna with varying combinations of *Acacia* spp (including the already mentioned species and *A. fleckii*, *A. hebeclada*, *A.ataxacantha*, *A. erioloba* and *A. nebrowni*), *Combretum* spp (mainly *C. collinum*), *Grewia* spp (mainly *G. flava*), *Commiphora* spp (mainly *C.africana* and *C. glandulosa*), Kalahari Appleleaf (*Philenoptera nelsii*), Wild Coffee-bean (*Bauhinia petersiana*), Worm-bark False-thorn (*Albizia anthelmintica),* and perhaps the most widespread and numerically dominant shrub is Western Rhigozum (*Rhigozum brevispinosum*). There is virtually no grass, but a number of herbs and young woody plants occupy the bare areas of sand to some degree, especially in some areas where the unpalatable herb Ciliate Scorpions Tail (*Heliotropium ciliatum*) provides a fair ground cover.

There is no natural open water except after rain during the summer months when scattered pans can fill and hold water for several months. A large waterhole kept permanently full to partially full, a large raised concrete drinking trough for game animals and five small water points for penned carnivores provide water throughout the year. A small steep-sided "swimming pool" in Modisa camp acted as a trap for some amphibians.

Reptiles and amphibians were recorded in the camp and within a few kilometers of it during the building and management of a bush camp for staff and volunteers of the Modisa Wildlife Project, from 2011 to present for the second author, and during a working visit (October –December 2015) by the first author. Since neither of the authors had the necessary authority to collect voucher specimens, the animals were captured, photographed and released; or photographed without capture taking place. Some specimens killed by local Bushmen were preserved as noted in the text. No special searching for herpetofauna was undertaken. Nomenclature and taxonomic arrangement follows Bates *et al* 2014 for reptiles, and Du Preez and Carruthers (2009) for amphibians. When a species record falls within the known general distribution range this is indicated by "KDR" followed by the reference used. All species records are the first records for Quarter Degree Square 2122 CB; and those outside the known general distribution range are so indicated in the text.

SYSTEMATIC ACCOUNT

FAMILY: HYPEROLIIDAE

Kassina senegalensis
(Dumeril and Bibron, 1841)
Bubbling Kassina

One Bubbling Kassina (Fig. 1) was found at Modisa Camp in the small swimming pool, on 16th January, 2016 (Jack Ntema).

Figure 1. Bubbling Kassina (*Kassina senegalensis*), Modisa Camp, 16.1.2016, Jack Ntema.

This represents an extension of the known distribution range into west central Botswana by about 120 km SW from the nearest locality (Masalanyane, 2022 DA, Poynton & Broadley 1991).

FAMILY: PYXICEPHALIDAE

Pyxicephalus adspersus
(Tschudi, 1838)
Giant Bullfrog

The first Giant Bullfrogs (Fig. 2) for 2015 were found on the evening of 18 December in low lying areas near dry pans, following a 12 mm rainfall on the 17th. Their appearance was brief, and they were not seen during the next few weeks. KDR (Poynton & Broadley 1991).

Figure 2. African bullfrogs (*Pyxicephalus adspersus*) near Modisa camp 13.12.2012, V. Gruener.

Tomopterna cryptotis
(Boulenger, 1907)
Tremelo Sand Frog

A number of Tremelo Sand Frogs (Fig. 3) were found on the surface at night in Modisa Camp after a few millimeters of rain, 3 and 4 December 2015, and appeared throughout December and the beginning of January, often trapped in a small artificial swimming pool at Modisa Camp, but usually seen on the sand surface during the night. KDR (Poynton & Broadley 1991).

Figure 3. Tremelo Sand Frogs (*Tomopterna cryptotis*) , Modisa Camp. Top: 4.12.2015. Bottom: 6.12.15, O. Bourquin.

FAMILY: BREVICIPITIDAE

Breviceps adspersus
(Peters, 1882)
Bushveld Rainfrog

Some Bushveld Rainfrogs (Fig. 4) were found on the surface at night after 13 mm of rain at Modisa Camp on 9 November, 2015 and several were dug up in camp during the clearing of a site to build a boma during November, 2015. During and after 3mm rain on 3 December 2015 , males were heard calling in fairly high densities around Modisa Camp. KDR (Poynton & Broadley 1991).

Figure 4. Bushveld Rain-frogs (*Breviceps adspersus*), Modisa Camp, 9.11.2015, O. Bourquin.

FAMILY: PELOMEDUSIDE

Pelomedusa subrufa
(Bonnaterre, 1789)
Marsh Terrapin

One Marsh Terrapin (Fig. 5) was found on 25 January, 2015 in a drying pan between Modisa and the Grassland Lodge. KDR (Boycott and Bourquin 2000).

Figure 5. Marsh Terrapin (*Pelomedusa subrufa*), near Modisa Camp, 25.1.2016, Jack Ntema.

FAMILY: TESTUDINIDAE

Psammobates oculifer
(Kuhl, 1820)
Serrated Tent Tortoise

The first Serrated Tortoise (Fig. 6) for the summer of 2015, a female with a carapace of 116 mm (straight length), was found in Modisa Camp, 23 October 2015. Two young tortoises, probably hatchlings of 2014, had straight shell lengths of 51 mm and 68 mm respectively (Modisa camp, 5 November 2015). KDR (Boycott and Bourquin 2000).

Figure 6. Serrated Tortoise (*Psammobates oculifer*), Modisa Camp 23.10.2015. Top: Lateral view. Bottom: Ventral view. O. Bourquin.

Figure 7. Leopard Tortoise (*Stigmochelys pardalis*), Modisa Camp, 15.11.2015. Left: Lateral view. Right: Ventral view. O. Bourquin.

Stigmochelys pardalis
(Bell, 1828)
Leopard tortoise

Leopard Tortoises (Fig. 7) were fairly common in the area, appearing after first rains, and were first seen in 2015 on 15 November. Two hatchlings were found at Grassland Lodge (about 4km NE of Modisa camp) on 27 December 2015, both weighed about 20 g, one being slightly longer in straight shell length (43 mm) than the other (42 mm). KDR (Boycott and Bourquin, 2000).

FAMILY: GEKKONIDAE

Colopus wahlbergii wahlbergii
(Peters 1869)
Kalahari Ground Gecko

Kalahari Ground Geckoes (Fig. 8) were first seen at night on 20 October 2015 in disturbed mixed shrubland after a 13 mm rainfall in Modisa Camp. Thereafter they were seen frequently during late evening, night and early (before sunrise) mornings during November and December. KDR (Branch 1998).

Figure 8. Kalahari Ground Gecko (*Colopus wahlbergii wahlbergii*), Modisa Camp, 5.11.2015, O. Bourquin.

Chondrodactylus turneri
(Gray, 1864)
Turner's Gecko

Turner's Gecko (Fig. 9) was present in several buildings, containers and storage tents in the Modisa Camp, including the office building. Two were seen during the night resting 2.3 m above the ground on the trunk of a Worm-bark False-thorn (*Albizia anthelmintica)* tree in the camp. They were often seen at night on the floors and walls of buildings and tents, hunting invertebrates attracted to lights in the camp. Two very small juveniles were seen on 19 November 2015, Modisa Camp, probably hatched within the last day or so. KDR (Branch 1998).

Lygodactylus bradfieldi
(Hewitt, 1932)
Bradfield's Dwarf Gecko

Bradfield's Dwarf Geckoes (Fig. 10) were frequently seen on pole walls in Modisa Camp, during October and November 2015. General colour was from light greyish brown to dark brown, all had a pair of prominent dorsolateral white stripes flanked with black or dark brown, and reaching to mid-body or beyond. These had soft raised tubercular to spinous scales above the eyes. KDR (Branch 1998).

Figure 9. Turner's Gecko (*Chondrodactylus turneri*), Modisa Camp, 21.10.15, O. Bourquin

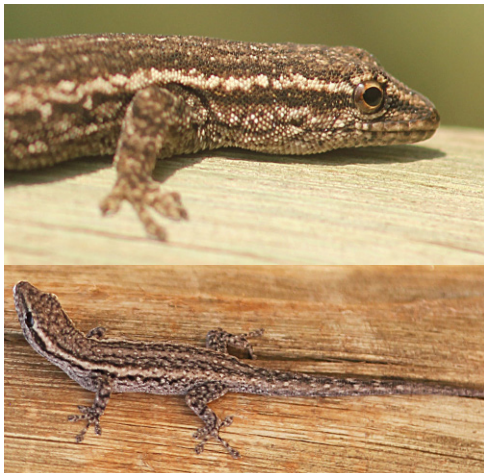

Figure 10. Bradfield's Dwarf Gecko (*Lygodactylus bradfieldi*), Modisa Camp, top: 4.12.2015, bottom: 7.11.2015. O. Bourquin.

Ptenopus garrulus garrulus
(A. Smith, 1849)
Common Barking Gecko

One Common Barking Gecko (Fig. 11) was found on a path between Modisa main camp and the Modisa office building, 11.30 pm, 23 December 2015. KDR (Branch 1998).

Figure 11. Common Barking Gecko (*Ptenopus garrulus garrulous*), Modisa Camp, 23.12.2015, O. Bourquin

FAMILY: AMPHISBAENIDAE

Monopeltis leonhardi
(Werner, 1910)
Kalahari Spade-snouted Worm Lizard

San staff brought in a fresh dead Kalahari Spade-snouted Worm Lizard (Fig. 12) on 14 November 2015. Its double "spade" (head shield), 6 pectorals and no preanal pores confirmed its identification. Total length was 234 mm, of which the tail was 10mm. It was preserved in 10% formalin, and stored in the Modisa office. KDR (Branch 1998).

Monopeltis mauricei
(Parker, 1935)
Maurice's Slender Worm Lizard

San staff brought in a fresh dead, but damaged, Maurice's Slender Worm Lizard (Fig. 13) on 14 November 2015. It's single "spade" (head shield), elongated pectorals and two preanal pores confirmed its identification. Its total length was 292 mm, of which the tail was 10.5 mm. It was preserved in 10% formalin and left in the Modisa office. KDR (Branch 1998).

Figure 12. Kalahari Spade-snouted Worm-lizard (*Monopeltis leonhardi*), Grassland Lodge area, 13.11.2015. Left: Dorsal view. Right: Lateral head and neck view. O. Bourquin.

Figure 13. Maurice's Slender Worm Lizard (*Monopeltis mauricei*) Grassland Lodge 14.11.15. Fig. Top left: Lateral view, head and neck. Top right: Ventral view, head and neck. Bottom left: Dorsal view, head and neck. Bottom right: Ventral view, tail and cloacal region. O. Bourquin.

Zygaspis quadrifrons
(Peters, 1862)
Kalahari Round-headed Worm Lizard

A dead Kalahari Round-headed Worm Lizard (Fig. 14) was brought to Modisa camp on 13 November 2015 by San staff of the Grassland Lodge and farm, the diagnostic head shields confirmed identification. Although it was in a damaged and decomposing state, it was preserved in 10% formalin, and stored at the Modisa office. KDR (Branch 1998).

Figure 14. Kalahari Round-headed Worm-lizard (*Zygaspis quadrifrons*). Grassland Lodge, 14.11.2015. Left: Dorso-lateral head and neck view. Right: Ventral head and neck view. O. Bourquin.

FAMILY: LACERTIDAE

Preliminary identification:

Pedioplanis lineoocellata lineoocellata
(Dumeril and Bibron, 1839)

Spotted Sand Lizard

What are thought to be Spotted Sand Lizards (Fig. 15) were seen around Modisa Camp, and in open scrub-land around the camp. The large, dark-edged spots on the flanks were white to yellow, as opposed to blue described by Branch (1998) and "blue to green" by Auerbach (1987). From photographs, this species was tentatively identified as Spotted Sand Lizards by Haacke, W (pers.comm. 1 January, 2016), and Broadley, D.G. (pers. comm. 1 February 2016). Although just outside the general distribution range given by Branch (1998), the record is within the range for the species given by Auerbach (1987), his nearest records being about 55 km north (2022CD, Mabeleapodi), about 50 km west (2121DA Ghanzi) and about 55 miles south-west (Ghanzi-Tswane, 55 km S of Ghanzi).

Pedioplanis namaquensis
(Dumeril and Bibron, 1839)
Namaqua Sand Lizard

Namaqua Sand Lizards (Fig. 16) were common and widely spread in the area, and were seen daily. KDR (Branch 1998).

FAMILY: GERRHOSAURIDAE

Gerrhosaurus auritus
(Boettger, 1887)
Kalahari Plated Lizard

A Kalahari Plated Lizard (Fig. 17) was found in Modisa Camp on 31 October 2015 under the ground canvas of a tent, and another was seen foraging in a semi-open area at Modisa camp on 28 December 2015, retreating into a hole in the heaped sand at the base of a *Terminalia sericea* shrub on being disturbed. KDR (Branch 1998).

Figure 15. Spotted Sand Lizard (*Pedioplanis lineoocellata lineoocellata*) Top left: Grassland west boundary, 17.11.2015. Top right: Modisa Camp, 29.11.2015, gravid female. Bottom: Near Modisa Camp, 23.12.2015. O. Bourquin.

Figure 16. Namaqua Sand Lizard (*Pedioplanis namaquensis*). Top: Modisa Camp, 27.10.2015. Bottom: Near Modisa camp, 13.12.2015. O. Bourquin.

Figure 17. Kalahari Plated Lizard (*Gerrhosaurus auritus*) Modisa Camp, 31.10.2015, O. Bourquin.

FAMILY: SCINCIDAE

Mochlus sundevallii sundevallii
(A. Smith, 1849)
Sundevall's Writhing Skink

Several Sundevall's Writhing Skinks (Fig. 18) were found under a tent flap lying on shallow sand, under a tent ground sheet, and in sand in shrub roots, in Modisa camp, October - November 2015. KDR (Branch 1998).

Figure 18. Sundevall's Writhing Skink (*Mochlus sundevallii sundevallii*), Modisa Camp, 22.10.2015. Left: Latero-dorsal view. Right: Latero-frontal view of head. O. Bourquin

Trachylepis punctulata
(Bocage, 1872)
Speckled sand skink

A Speckled Sand Skink (Fig. 19) was seen on a dry, relatively barren pan with little

Figure 19. Speckled Sand Skink (*Trachylepis punctulata*), near Modisa Camp, 30.10.2015. O. Bourquin.

cover except for some basalt stones, on 30 October 2015. KDR (Branch 1998).

Trachylepis varia
(Peters, 1867)
Variable Skink

Variable Skinks (Fig. 20) were seen in Modisa Camp during October, November and December 2015, near buildings. KDR (Branch 1998).

Figure 20. Variable Skink (*Trachylepis varia*), Modisa Camp. Top: 23.10.2015. Bottom: 18.11.2015. O. Bourquin.

Trachylepis wahlbergii
(Peters, 1869)
Wahlberg's striped skink

Wahlberg's Striped Skinks (Fig. 21) were common in Modisa Camp on and around buildings, tents, other structures and trees. They were also seen in mixed shrubland and in woodland, associated with dead or live tree trunks; or in areas with exposed basalt rock in and around dry pans. They regularly entered the Modisa office to forage for insects which had entered the night before. KDR (Branch 1998).

Figure 21. Wahlberg's Striped Skink (*Trachylepis wahlbergii*), Modisa Camp, 21.10.2015, O.Bourquin.

FAMILY: VARANIDAE

Varanus albigularis albigularis
(Daudin, 1802)
Southern Rock Monitor

A Southern Rock Monitor (Fig. 22) was seen during 2 January 2016 at Modisa Camp. KDR (Branch 1998).

Figure 22. Southern Rock Monitor (*Varanus albigularis albigularis*), Modisa Camp, 2.1.2016, Jack Ntema.

FAMILY: CHAMAELEONIDAE

Chamaeleo dilepis dilepis
(Leach, 1819)
Flap-neck Chameleon

Flap-neck Chameleons (Fig. 23) were infrequently seen, appearing after the first summer rain has fallen. Two were found on 3 and 11 December 2015, respectively, both walking across bare ground in shrubland. KDR (Branch 1998).

Figure 23. Flap-necked Chameleon (*Chamaeleo dilepis dilepis*), near Modisa Camp, 3.12.2015, O. Bourquin.

FAMILY: AGAMIDAE

Agama aculeata aculeata
(Merrem, 1820)
Western Ground Agama

Western Ground Agamas (Fig. 24) were common, foraging on the ground in scrubland and around the Modisa Camp. Males were seen on top of fence poles from 1.2 m to 2.5 m above ground level, and near tops of shrubs, where they were presumably displaying for females, or are watching for them. Individual females were seen climbing onto tree trunks up to about 40 cms above the ground, resting on the

shade side of the trunk during hot weather. A markedly gravid female was seen on 18 December 2015 and a nest with 13 eggs was found on 12 December 2015. KDR (Branch 1998).

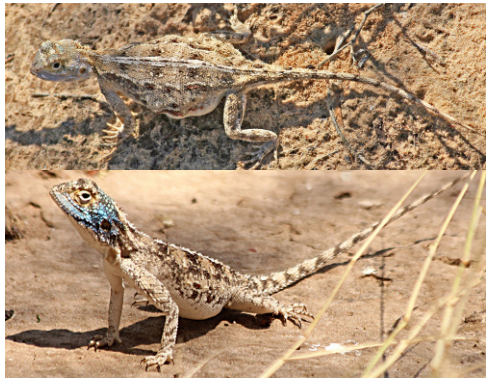

Figure 24. Western Ground Agama (*Agama aculeata aculeate*), Modisa Camp. Top: Gravid female, 18.12.2015. Bottom: Adult male 18.10.2015. O. Bourquin.

FAMILY: PYTHONIDAE

Python natalensis
(A. Smith, 1840)
Southern African Python

A sub-adult Southern African Python (Fig. 25) of about 1.2 m in length was found sheltering in the hollow trunk of a Worm-bark False-thorn *Albizia anthelmintica* in Modisa camp during November 2012, and it was recorded in the same place from the 1st November to at least the 6th, before disappearing. Further sightings have not been made. Not within recorded distribution range in Botswana (Auerbach 1987; Branch 1998; Broadley and Blaylock 2013), the nearest record to the north is at Toteng, Lake Ngami (2022 BD), about 115 km away, and to the east is at Orapa (2125 AD), about 230 km away (Auerbach 1987).

Figure 25. Southern African Python (*Python natalensis*), Modisa Camp, 1.11.2012, V. Gruener.

FAMILY: VIPERIDAE

Bitis arietans arietans
(Merrem, 1820)
Puff Adder

Puff Adders (Fig. 26) were seen on a number of occasions in *Terminalia* shrubland and mixed shrubland near Modisa Camp. KDR (Branch 1998).

Figure 26. Puff Adder (*Bitis arietans arietans*), Modisa Camp, 19.11.2015, O. Bourquin.

FAMILY: LAMPROPHIDAE

Atractaspis bibronii
(A. Smith, 1849)
Bibron's Burrowing Asp

A Bibron's Burrowing Asp (Fig. 27) with clearly demarcated black dorsal and white ventral pattern was caught from under the flap of a tent lying on shallow sand at Modisa Camp, 16 Oct 2015. KDR (Branch 1998).

Figure 27. Bibron's Stiletto Snake (*Atractaspis bibronii*), Modisa Camp, 16.10.2015, O. Bourquin.

Psammophis brevirostris
(Peters, 1881)
Short-snouted Grass Snake

Short-snouted Grass Snakes (Fig. 28) were seen several times in Modisa camp. During November 1915, a Western three-striped skink and a Variable Skink were seen being eaten by this species. KDR (Branch 1998).

Figure 28. Short-snouted Grass Snake (*Psammophis brevirostris*), 26.11.2015, Modisa camp. Left: Swallowing Wahlberg's Skink. Right: Lateral view of head and neck. O. Bourquin.

Psammophis trinasalis
(Werner, 1902)
Kalahari Sand Snake

Kalahari Sand Snakes (Fig. 29) were commonly seen in the area, moving off rapidly into cover when disturbed, then often "freezing" with the head and forepart of the body off the ground. After no further threats the head would be lowered and the animal would move off slowly; otherwise it would make off again at lightning speed. A fresh dead specimen brought in by San staff on 13 November 2015 had a total length 921 mm, of which the truncated tail was 223 mm. The scale counts were typical of the species. Another one of 840 mm in total length was found dead between the poles of a wall in Modisa Camp on 15 December 2015 – it appeared to have jammed itself between the poles while trying to weave through them, and had been killed by full and prolonged exposure to the sun. KDR (Branch 1998).

Figure 29. Kalahari Sand Snake (*Psammophis trinasalis*). Top left: Modisa Camp, 17.10.2015. Top right: Grassland Lodge, 13.11.2015, dorsal view. Bottom: Grassland Lodge, 13.11.2015, dorso-lateral view of head and parts of body. O. Bourquin.

Pseudaspis cana
(Linnaeus, 1758)
Mole Snake

Several fawn-yellow Mole Snakes (Fig. 30) were recorded from Modisa Camp during November 2015. These were found under canvas tent floors or in tents. The largest measured while hand-held was about 1.4 m. A black colour morph, about 1.2 m long, was caught at Grassland Lodge on 29 September 2016. KDR (Branch 1998).

Figure 30. Mole Snake (*Pseudaspis cana*), Modisa Camp, 19.11.2015, O. Bourquin.

FAMILY: ELAPIDAE

Aspidelaps scutatus scutatus
(A. Smith, 1849)
Western Shield Cobra

One Western Shield Cobra (Fig. 31) was found during early night on 30 September, 2016 in Modisa Camp. KDR (Branch 1998).

Figure 31. Western Shield Cobra *Aspidelaps scutatus scutatus*. Modisa Camp 30.9.2016. V. Gruener.

Dendroaspis polylepis
(Gunther, 1864)
Black Mamba

A Black Mamba (Fig. 32), estimated to be between 3-3.5 m in length, was captured on 31 October 2014. Few photographs were taken during its night release, but they helped to obtain the length estimate. The length, slender body, small head, and uniform grey-brown colour confirmed the identification. The Modisa record is along the NW edge of the known Botswana general distribution range, about 108 km from the nearest north-western record (Kwebe, 2023CA) and 120 km from nearest south-western record (80 km SW of Tswane, 2221CD (Auerbach 1987).

Figure 32. Black Mamba (*Dendroaspis polylepis*), Modisa camp, 31.10.2014, S. Wierdt.

Naja anchietae
(Bocage, 1879)
Anchieta's Cobra

An adult Anchieta's Cobra (banded phase; Fig. 33a & b) was caught on 27 March 2013 at Modisa Camp. Its length was estimated at about 2 m. This record is one of the most southern ones for the species in west central Botswana, the other being from Ghanzi, 2121 DA, some 60 km to the west.

Figure 33a. Anchieta's Cobra (*Naja anchietae*), Modisa Camp, 27.3.2013. Left: Dorso-lateral view. Right: Dorso view of head and neck. V. Gruener.

Figure 33b. Dorso-lateral view of hood of Anchieta's Cobra (*Naja anchietae*), Modisa Camp, 27.3.2013. V. Gruener.

Naja nivea
(Linnaeus, 1758)
Cape Cobra

A Cape Cobra (Fig. 34) was seen during 16 September 2012 at Modisa Camp. This is the most northern record for Botswana, about 40 km NW of the nearest known record (5 km N of Pink Pan, 2122DC, Auerbach 1987).

Figure 34. Cape Cobra (*Naja nivea*), Modisa Camp, 16.9.2012, V. Gruener.

FAMILY: COLUBRIDAE

Dispholidus typus
(A. Smith, 1828)
Boomslang

Boomslangs (Fig. 35) were occasionally seen in vegetation dominated by woody growth. The nearest known record is about 60 km to the WSW, at Okwa-Damaa Pan, 2121DD (Auerbach, 1987).

Figure 35. Boomslang (*Dispholidus typus*), Modisa Camp, 25.11.2012, V. Gruener.

Philothamnus semivariegatus
(A. Smith, 1847)
Variegated Bush Snake

A Variegated Bush Snake (Fig. 36) was seen during 29 December 2014. Nearest known record is 25 km N of Pink Pan, 2222BD (Auerbach, 1987), about 90 km SE of Modisa. KDR (Branch 1998).

Figure 36. Variegated Bush Snake (*Philothamnus semivariegatus*), Modisa Camp, 29.12.2014. Top: Dorsal view of head and neck. Bottom: Dorso-lateral view. V. Gruener.

Telescopus semiannulatus semiannulatus
(A. Smith, 1849)
Eastern Tiger Snake

An Eastern Tiger Snake (Fig. 37) was caught at night after a 13 mm rainfall, Modisa Camp, 4 November 2015. KDR (Branch 1998).

Figure 37. Eastern Tiger Snake (*Telescopus semiannulatus semiannulatus*), Modisa Camp, 4.11.2015. O.Bourquin.

POSSIBLE OTHER SPECIES

From literature indicating distribution of herpetofauna in Botswana the following 23 species may still be found in the Grassland area:

Family: Gekkonidae - Speckled gecko *Pachydactylus punctatus*

Family: Amphisbaenidae - Pestle-tailed worm lizard *Dalophia pistillum*

Family: Lacertidae - Bushveld lizard *Heliobolus lugubris,* Cape rough-scaled lizard *Ichnotropis capensis* , Common rough-scaled lizard *Ichnotropis squamulosa,* Spotted sandveld lizard *Nucras intertexta*

Family Gerrhosauridae - Yellow-throated plated lizard *Gerrhosaurus flavigularis*

Family: Scincidae - Cape skink *Trachylepis capensis,* Kgalagadi legless skink *Acontias k. kgalagadi*

Family: Typhlopidae - Boyle's beaked blind snake *Rhinotyphlops boylei,* Schinz's beaked blind snake *Rhinotyphlops schinzii*

Family: Leptotyphlopidae: Zambezi worm snake *Leptotyphlops scutifrons scutifrons*

Family: Lamprophidae - Kalahari purple-glossed snake *Amblyodipsas ventrimaculata,* Variable quill-snouted snake *Xenocalamus bicolor,* Brown house snake *Boaedon capensis,* Jalla's whip snake *Psammophis jallae,* Olive whip-snake *Psammophis mossambicus,* Western stripe-bellied sand snake *Psammophis subtaeniatus,* Twin-striped shovel-snout *Prosymna bivittata*

Family: Elapidae - Western shield-cobra *Aspidelaps scutatus scutatus* , Kalahari garter snake *Elapsoidea sundevallii fitzimonsi,* Mozambique spitting cobra *Naja mossambica*

Family: Colubridae - Eastern rhombic egg-eater *Dasypeltis scabra*

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ELAPIDAE

Naja mossambica
(Peters, 1854)
Mozambique Spitting Cobra

DIET

G. CANNING, S. DAVIDSON-PHILLIPS & P. MYRAM

On 24 January 2016 at 19.57 an adult Mozambique Spitting Cobra, *Naja mossambica* (Peters, 1854) was observed at the research centre, Koedoespoort, Welgevonden Game Reserve, Limpopo Province, South Africa (27º 43' 33'' E, 24º 14' 43'' S; 1226 m a.s.l.). The cobra had the head of a large, adult Schlegel's Beaked Blind Snake, *Megatyphlops schlegelii* (Broadley & Wallach 2009) in its mouth (Fig. 1) and was in the process of swallowing it. The Schlegel's Beaked Blind Snake was approximately three quarters the length of the Mozambique Spitting Cobra and had been dead for a minimum of 35 hours prior to it being consumed. It had been observed dead on 23 January at approximately 09.00 and had been left in the position where it was observed before being scavenged upon by the Mozambique Spitting Cobra. During feeding, the Schlegel's Beaked Blind Snake was in rigor mortis (Fig. 2) and decomposition had commenced with the odour of decay clearly evident while the Mozambique Spitting Cobra was feeding on it. It took the Mozambique Spitting Cobra approximately eight minutes to swallow its' prey before moving off and during this period paid scant regard to the observers.

Whilst it is known that many snake species accept carrion in captivity (DeVault & Krochmal 2002) it is considered an infrequent and opportunistic event in the wild (Dugan & Hayes 2012) rather than regular behaviour, with reports of carrion feeding generally being viewed as atypical foraging behaviour. Research however suggests that carrion feeding by snakes may be much more common than widely believed (Shivik & Clark 1997), with the scavenging of carcasses in an advanced state of decomposition also occurring (Mora 1999).

Figure 1. Mozambique Spitting Cobra (*Naja mossambica*) with the head of Schlegel's Beaked Blind Snake (Megatyphlops schlegelii) in mouth.

Figure 2. Mozambique Spitting Cobra (*Naja mossambica*) scavenging on Schlegel's Beaked Blind Snake (*Megatyphlops schlegelii*) with tail of blind snake bent in rigor mortis.

There are anecdotal reports of Cape Cobras *Naja nivea* (Linnaeus, 1758) feeding on carrion and it is highly likely that the scavenging of carrion by other South African snake species, including the Mozambique Spitting Cobra, is more common than currently considered.

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GERRHOSAURIDAE

Gerrhosaurus typicus
(A. Smith, 1837)
Karoo Plated Lizard

CLUTCH SIZE,INCUBATION PERIOD AND HATCHLING DESCRIPTION

W. CONRADIE, V. F. KING, M. PRESSLY & A. LEANDER

During a recent herpetological survey of the new expanded western Grantham section of the Karoo National Park, an adult female *Gerrhosaurus typicus* was captured in a drift fence array (-32.273374 S 22.155833 E, 862 m asl). The female later laid four oval shaped eggs (Fig. 1). The eggs were transferred to a container with moist vermiculite and looked after by the Port Elizabeth Museum Snake Park staff.

Table 1. Egg and hatchling data (measurements in millimetres).

Egg	Size	Date laid	Date hatched	Duration	SVL	TL
1	23.7 x 12.8	01.02.2016	10.04.2016	70 days	38.9	129
2	24.5 x 12.4	01.02.2016	12.04.2016	72 days	42.6	NA
3	23.7 x 12.3	01.02.2016	-			
4	23.4 x 13.0	01.02.2016	-			

Figure 1. Eggs of *Gerrhosaurus typicus*.

The four eggs were laid on 1 February 2016, averaging 23.8 x 12.6 mm (Table 1). Only two of the eggs hatched after 70 and 72 days respectively. The first hatchling measured 38.9 mm body length and 129 mm tail length. The second hatchling hatched with no tail and the body length measured 42.6 mm. After 60 days the tail of the second hatchling showed no regrowth.

Herewith the description of the hatchling colouration (Fig. 2): the dorsum is tan brown, with a pair of dark-edged dorsolateral white lines present from behind head through to tail, posterior two thirds of tail the white line becomes broken and fused to the end, flanks are darker brown to black with white scattered elongated spots, hind legs with scattered white spots, ventrum whitish, and ventral two thirds of tail is bright red.

This is the first known data on clutch size, incubation period and hatchling colouration for this species. Branch (1998) provides

Figure 2. Left: Live colouration of hatchling *Gerrhosaurus typicus.* Right: Ventral images of hatchling Gerrhosaurus typicus clearly showing the red tail.

no breeding information, but he does provide information for other *Gerrhosaurus* species, i.e. *G. flavigularis* (4-8 eggs, 16-19 x 9-14 mm, hatchlings measure 100 mm total length), *G. multilineatus* (12 eggs), *G. nigrolineatus* (4-9 eggs, 22-30 x 12-18 mm, 70-80 days incubation, hatchlings measure 160-180 mm total length).

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TESTUDINIDAE

Stigmochelys pardalis
(Bell, 1828)
Leopard tortoise

SURVIVAL OF RELEASED OR ESCAPED INDIVIDUAL

G. COOMBS

Leopard tortoises (*Stigmochelys pardalis*) are the largest species of terrestrial tortoises in South Africa. This species is currently classified as least concern (LC) by the IUCN (iucnredlist.org) and are considered to be abundant and common. The demeanour of *S. pardalis* is generally placid and even wild specimens quickly become habituated to human presence (pers. obs). Numerous individuals are housed and captivity in National Zoological Gardens throughout South Africa and *S. pardalis* also frequently breeds in captivity. The keeping of this species by private individuals is also popular and numerous internet articles, periodicals and books publish features on its captive husbandry and care (e.g. Fife, 2016; Fife and Fife, 2006). In South Africa, keeping individuals of *S. pardalis* is currently strictly regulated by government permits. Despite this, numerous individuals are illegally kept by private keepers and confiscated by nature conservation authorities (Wimberger et al. 2009). Due to the regular confiscation of illegally kept individuals, nature conservation authorities in the Kwazulu Natal province have developed a re-introduction protocol to release these individuals back into wild habitats (Wimberger et al. 2009). An important component of determining the success of this re-introduction is to monitor released individuals to determine rates of survival, animal condition, and breeding activities. Few studies have carried out such post-release survival monitoring and those that have indicate a high rate of mortality following the release of such individuals (Wimberger et al. 2009). In addition to

data collected formally, additional records and observations are needed to report on individuals that have been released into the wild or those that are known to have escaped captivity and naturally rewilded. These data contribute significantly to developing an understanding of the fate of re-introduced or escaped individuals of *S. pardalis*.

In this communication I report on the discovery of two separate individuals that were found roaming on farmland near Grahamstown, Eastern Cape. The first was located near a small village consisting of four homesteads situated 16km South from Grahamstown, near the Thomas Baines Reserve, Eastern Cape South Africa (GPS: 33° 25' 17.46"S, 26° 28' 41.22"E). This particular individual was medium sized (*ca.* 250 – 300mm carapace length) and showed signs of silver coloured acrylic paint (possibly to facilitate locating the animal) that had been painted over the upper carapace dome (Fig. 1 A & B). A hole of approximately 8mm was drilled in the supracaudal shield (Fig. 1B), which is a common, and considered inhumane manner of tethering tortoises under captive conditions (Divers and Mader, 1996). There was considerable damage to the front and rear marginal shields, particularly the shields closest to the nuchal and supracaudal shields. The damage consisted of the tips of the shields above the front and rear legs being chipped off and the shape of these scales being coarsely rounded. The plastron of this individual did not display any signs of severe wearing. It is hard to firmly conclude the cause of the carapace damage but it may be either due to the tethering chain presumably used to restrain the animal or this individual was also kept perhaps in a concrete enclosure leading to escaping attempts damaging the shields. The development of the carapace appeared normal and did not suggest any long term nutritional deficiencies caused by a poor diet (e.g. Gerlach, 2004). The behaviour of this individual appeared normal and it was feeding and moving around normally in the vicinity of the houses.

The second individual was discovered on 12 December 2016, approximately 6km outside of Grahamstown at Stones Hill (GPS: 33° 24' 30.4"S, 26° 43' 42.1"E). This individual was large (PL = 392 mm) and had walked from adjacent natural veldt into a suburban garden. Similar to the previous tortoise, there was substantial damage to the front and rear marginal scales, gullar scales, humeral scales the front limbs showed several of the forelimb tubercules either broken or worn off to expose the underlying skin. It was also evident that the skin tissue was bleeding (Fig. 1 D), indicating that this individual may have escaped relatively recently. These injuries seem to have most likely been causes by the tortoise having been kept in concrete or steel wire enclosure. This tortoise appeared healthy otherwise.

Wild individuals of *S. pardalis* are very common in the area, and were seen during the same time as the discovery of both these individuals, suggesting that its movement and feeding patterns were similar to other wild *S. pardalis*. I observed

Figure 1 Two individuals of *Stigmochelys pardalis* that were found surviving after either escaping from captivity or being released. The carapaces shows signs of being painted (A, B) and there was substantial damage to the marginal shields above the front and rear legs (A–D).

the first individual at least once prior to photographing it on 15 October 2015 and again since this observation. Judging by much of the paint on the shell, having worn off, and my observations, this individual had survived at least a few months since its escape or release. The survival of this individual has undoubtedly been aided by the suitability of the surrounding habitat. At the time of writing, the second tortoise had not been spotted again.

To date I have found three such individuals, the first being found in a suburb within Grahamstown, where an escaped individual was found roaming over a tar street. The tortoise was subsequently translocated to farmland outside of Grahamstown.

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GEKKONIDAE

Hemidactylus mabouia
(Moreau De Jonnès, 1818)
Wood Slave in Uganda

PARTIAL LEUCISM

D. F. HUGHES & M. BEHANGANA

Hemidactylus mabouia is a medium sized, nocturnal gecko that is widely distributed across Africa (Branch, 1998, 2005). It is commonly encountered in areas of human habitation, yet in natural settings it can be found on trees, rock piles, and caves, from sea level up to 2500 m altitude (Spawls *et al.*, 2006). Typical color pattern for this gecko is various shades of brown and grey, often with light spotting, and dark, wavy crossbars on the dorsum extending to distinct chevron-patterned crossbars on the tail (Spawls *et al.*, 2002). At night, these characteristic patterns fade and animals become pale with an overall pink to white appearance. This color change is most noticeable in animals found near artificial lights on buildings.

On 30 May 2015, we captured an adult female *H. mabouia* inside a hut from the Pian Upe Game Reserve, Nakapiripirit District, Karamoja sub-region, Northern Region, Uganda (1° 41’ 26.7” N, 34° 34’ 58.0074” E, 1157 m a.s.l.). Large portions of this gecko’s forelimbs, hindlimbs, and tail entirely lacked pigment (Fig. 1). This individual exhibited a variant of the condition known as leucism. Our initial observations occurred in daylight and the individual was then held in captivity for several days, and observations were repeated at various times (day and night) to ensure that the leucism was not the result of typical circadian color changes.

Leucism results from defects in pigment cells during early stages of development, which can produce a skin surface (or patches) incapable of making pigment. This gecko exhibited a localized loss of pigment cells (or partial hypopigmentism) displaying irregular patches of white on an animal that otherwise demonstrated a typical color pattern for the species. Despite its low occurrence, some reports exist regarding the extent of albinism in reptiles—see general reviews by Dyrkacz (1981) and McCardle (2012), and see brief review on lizards by Spadola & Toro (2006). Records of albinism or leucism in gecko species are uncommon, and the few instances include, *Tarentola boettgeri bischoffi* (Rocha and Rebelo, 2010), *Euleptes* (*Phyllodactylus*) *europaea* (Delaugerre, 1981), *Hemidactylus turcicus* (Rivera *et al*., 2001), and *Homonota taragui* (Courtis *et al*., 2015). To the best of our knowledge, this is the first report of partial leucism in *H. mabouia*. The specimen was deposited in the University of Texas at El Paso Biodiversity Collections (Field no. DFH 128).

Figure 1. Adult female *Hemidactylus mabouia* exhibiting partial leucism found at Pian Upe Game Reserve, Nakapiripirit District, Northern Region, Uganda.

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AGAMIDAE

Agama kirkii
(Boulenger 1885)
Kirk's Rock Agama

SAND-BATHING

SHIELA BROADLEY

On the 24 May 2014, at Khami Ruins World Heritage site (2028 A2; 200 8' 58" S and 280 25' 25" E 1280 m a.s.l.), close to the Khami Dam wall, in Bulawayo Metropolitan Province, south-western Zimbabwe, I observed three juvenile Kirk's Agamas, Agama kirkii, sand-bathing. The area is underlain with granite rocks interspersed with sandy areas. At the Khami Dam wall there is concentration of agamas of various sizes, from juveniles to adults. The smallest of the three observed agamas, approximately 60 mm total length, moved from a rock onto the ground where it immediately started throwing soil all over its body using both fore and hind-limbs. The second agama (about 70 mm total length) came down from the same rock, performed the same act; and then the third lizard (about 110 mm total length), which seemed to have been watching the second agama sand-bathing, waiting its turn, came down to do the same. Harris (1962), Branch (1998) and Wagner et al. (2009) do not report this behavior. All the three lizards performed their sand-bath on the same spot on the ground. Upon inspection, after the three had finished 'bathing', I found a depression suggesting that it is used as a regular sand-bathing area, similar to the sand-baths used by birds (Ristow, et al 1980; Harrison, et al. 1979). Possibly they do it to rid themselves of ectoparasites.

DEDICATION

I dedicate this note to my husband and mentor, Donald G. Broadley, who passed away on 10 March 2016.

ACKNOWLEDGEMENTS

I thank Michael Bates (National Museum, Bloemfontein) for commenting on a draft of this note.

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AHN
GEOGRAPHICAL DISTRIBUTIONS

MICROHYLIDAE
Phrynomantis microps
(Peters, 1875)

WEST AFRICAN RUBBER FROG IN GUINEA

M. F. BAREJ, L. SANDBERGER-LOUA, J. DOUMBIA, N. G. KOUAMÉ, M-O. RÖDEL & J. PENNER

The West African Rubber frog *Phrynomantis microps* Peters, 1875 is the only representative of the family Microhylidae in West and western Central Africa. It is a medium sized frog (maximum snout-urostyle length in males 47 mm, in females 62 mm) with an elongated and depressed body, blunt snout, red coloured dorsum with a thin black central stripe, black flanks and extremities that possess only occasionally red dots, a single subgular vocal sac in males, and rather short hind extremities that show no trace of webbing (Rödel 2000).

The species inhabits savannahs from Senegal and the Gambia in West Africa (e.g. Joger & Lambert 2002, Wanger 2005) eastwards to the north-eastern Democratic Republic of the Congo (Inger 1968) (Fig. 37). Due to a wide distribution range and absence of significant threats, the species is currently classified as being of "Least Concern" (IUCN SSC Amphibian Specialist Group 2013). According to Rödel (2000 and references therein) *P. microps* has been reported from Sierra Leone, Côte d'Ivoire, Ghana, Burkina Faso, Mali, Benin, Togo, Nigeria, Cameroon and the Central African Republic, thus leaving an obvious gap - Guinea. Despite various herpetological reports from this country, including savannah species (e.g. Chabanaud 1921, Greenbaum & Carr 2005), the species has not been recorded before.

During two surveys in the rainy season 2011 *Phrynomantis microps* was collected at three sites in savannahs from southern as well as south-eastern Guinea. Specimens were deposited in the Museum für Naturkunde Berlin (ZMB) and the Zoologisches Forschungsmuseum Alexander Koenig (ZFMK), both in Germany: ZMB 83011 (snout-vent length= 40.0 mm), ZMB 83012 (40.6 mm), along road south of Kerouané, Guinea 9°14' N, 8°59' W, app. 510 m a.s.l., 20 June 2011, coll. M.F. Barej & J. Penner; ZFMK 97286 (41.3 mm), ZMB 83013 (38.6 mm), ZMB 83014 (44.5 mm), near Foundougou, Guinea 8° 55' N, 8° 52' W, app. 710 m a.s.l., 28. June 2011, coll. M.F. Barej & J. Penner; ZMB 79962 (50.5 mm), ZMB 79963 (42.4 mm), ZMB 79964 (44.4 mm) Guinea 9° 58' N, 12° 21' W, app. 120 m a.s.l., 16 June 2011, coll. L. Sandberger-Loua, J. Doumbia, N.G. Kouamé.

The habitat of *P. microps* in southern Guinea corresponded to rocky savannah patches, surrounded by forest. The rocky surface was characterized by shallow to deep water-filled depressions. In south-eastern Guinea specimens were collected on an open meadow with flooded depressions, ponds and large puddles along the adjacent road. Males have been recognized by their advertisement call, a low melodic trill (see Schiøtz 1964, Rödel 2000), that could be heard from a far distance. Calling males were observed in small cavities or tufts of grass, however calling above the ground has been reported (Rödel 2000, Fig. 1). Additionally, calling males have been heard in a savannah patch in the Niger River area in Dantillia (9° 56' N, 10° 56' W; app. 440 m a.s.l.) however, no specimens were collected at this site.

Most probably the failure to report the species during past surveys results from a seasonal activity as e.g. Greenbaum & Carr (2005) conducted their survey during the end of the dry season while beginning of the rainy season plays an important role in reproduction of the species (Hirschfeld & Rödel 2011). Thus, we assume that the species is more widespread in the Republic of Guinea as well as in their overall distribution range (Fig. 1).

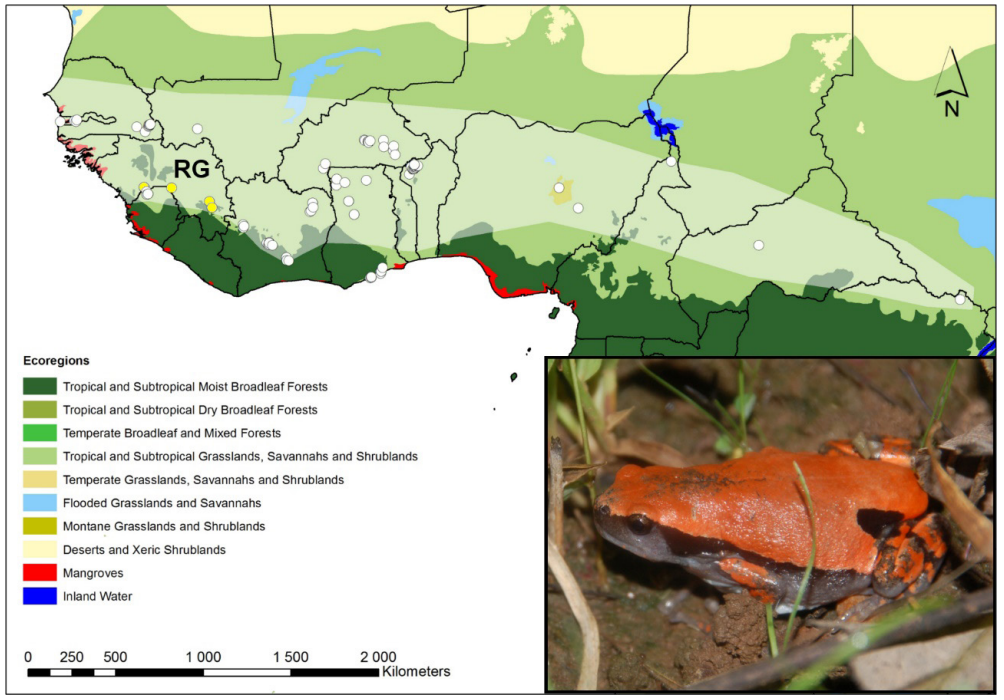

Figure 1. Distribution of *Phrynomantis microps* within the belt of subtropical grassland, savannah and shrubland in West and Central Africa. New localities in Guinea (RG) marked in yellow. Inset: Male *P. microps* (ZMB 83014).

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CORDYLIDAE

Cordylus cordylus

(Linnaeus, 1758)

CAPE GIRDLED LIZARD IN LESOTHO

M. F. BATES, T. CLARK & S. ABELL

While doing an ecological assessment of the Tsoeneng Landfill Facility site (29° 32' 58.9" S, 27° 26' 01.4"E, 2927CB; 1498 m a.s.l.) slightly west of the town of Rothe in Maseru district, south-western Lesotho, several Cape Girdled Lizards (*Cordylus cordylus*) were observed by a team from Natural Scientific Services CC (NSS 2016). Lizards were observed on two occasions (11–15 February 2013 and 14–16 March 2016) occupying a small sandstone outcrop (Molteno Formation) in gently undulating grassland (Eastern Free State Clay Grassland vegetation unit, Mesic Highveld Grassland Bioregion; Mucina & Rutherford 2006). On the second trip, while searching along the rocky outcrop in overcast weather at mid-day (12:37–13:04), 16 individuals of various sizes (from juveniles to adults) were observed, usually hiding in crevices or beneath loose rocks (Fig. 1). This is the only cordylid known to occur in this part of Lesotho. The superficially similar Karoo Girdled Lizard (*Karusasaurus polyzonus*) occurs to the west in Free State Province, South Africa, but can be easily distinguished from *C. cordylus* as, *inter alia*, most of its tail consists of alternating large and small whorls rather than large whorls only (Bates *et al.* 2014; Branch 1998).

Cordylus cordylus was first recorded from Lesotho by Bates (2007) from two localities (Takalatsa, 1625 m a.s.l.; Ha Sehlabo, 1675 m a.s.l.) in Mafeteng district in the south-west of the country. These localities represent the most north-easterly records of this species. The Tsoeneng locality extends the known range in Lesotho by 21 km to the NNW from the nearest other record at Takalatsa, and represents a new quarter-degree unit record (see Bates *et al.* 2014). *Cordylus cordylus* is likely to occur in several areas with similar topography and habitat in the Maseru and Mafeteng districts in the lower-lying western 'Lowlands' of Lesotho. This record was also submitted to ReptileMap of the Animal Demography Unit's (ADU) Virtual Museum (http://vmus.adu.org.za) with accession number 158282.

Other reptiles observed and photographed at this site during the field trips (as indicated above) include the lizards *Agama atra*, *Trachylepis punctatissima* and *Varanus niloticus*, and the snakes *Crotaphopeltis hotamboeia* and *Dasypeltis scabra*. Although these species are all fairly widespread in southern Africa and are

Figure 1. Adult (top) and subadult (bottom) *Cordylus cordylus* at the Tsoeneng Landfill Facility site west of Rothe in south-western Lesotho.

known to occur nearby in Lesotho and the adjacent Free State Province of South Africa (Bates *et al.* 2014), none have previously been recorded from this locality.

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GEKKONIDAE

Chondrodactylus pulitzerae (Schmidt, 1933)

PULITZER'S THICK-TOED GECKO IN ANGOLA

L. M. P. CERÍACO, A. M. BAUER, M. P. HEINECKE & D.C. BLACKBURN

The taxonomic status of the pad-bearing species of *Chondrodactylus* has been a subject of recent studies and clarifications (Benyr 1995; Branch 1998; Lamb & Bauer 2002; Bauer & Lamb 2005; Heinz 2011). Angolan species include *C. fitzsimonsi*, characterized by its flattened scales, and one or more tuberculate species that have variously been referred to *C. bibronii*, *C. turneri*, *C. laevigatus*, or *C. pulitzerae* (prior to 2003 all were considered to be part of *Pachydactylus*). Although members of the *C. turneri/laevigatus* group do occur in extreme southern Angola (Ceríaco *et al.* 2014), the majority of tuberculate specimens examined are assignable to *C. pulitzerae*, which was originally described as a subspecies of *C. bibronii* by Schmidt (1933) and subsequently regarded as a subspecies of *C. laevigatus* (Benyr 1995), before being raised to full species status based on molecular and morphological data (Heinz 2011; Ceríaco *et al.* 2014; formal revision of *Chondrodactylus* in preparation, H. Heinz & A.M. Bauer). Distributional data for *C. pulitzerae* are scant. The majority of known records are in southwestern Angola, chiefly in Benguela Province (Schmidt 1933, Parker 1936, Mertens 1938, Hellmich 1957a,b, Laurent 1964, Benyr 1995), but there are some records in more northern areas of the country. Monard (1937) reported the species (as *Pachydactylus bibronii*) from Kampulu and Humbi (Umbi) in Cuanza Sul, and Bocage (1895) reported them to be common south of the Kwanza River in general. Ceríaco *et al.* (2014) documented a series of specimens from Capanda, Malanje Province at approximately 9° 47' 41'' S, 15° 28' 09'' E. They also alluded to an even more northerly record from Cacuaco, for which we here provide detailed information.

At about 21h00 on 4 April 2012 Luis Ceríaco collected a specimen of *Chondrodactylus pulitzerae* (Museu Nacional de História Natural e da Ciência, Lisboa, Portugal MB03-000980; Fig. 1) at a height of 1.80 m from the ground on the walls of the main building of the campus of the Universidade Metodista de Angola, in Caop Velha, Cacuaco Municipality, Luanda Province (8° 47' 13.70" S, 13° 27' 48.54" E). This record is the northern known limit of the species, and extends its geographic range by 247 km northwest from Capanda (Ceríaco *et al.* 2014) and 42 km north from the Kwanza River (Bocage 1895).

Fig. 1. Subadult male specimen of *Chondrodactylus pulitzerae* from Caop Velha, Angola in dorsal (left) and ventral (right) view.

The occurrence of *C. pulitzerae* so far north is interesting in that *Chondrodactylus*

is characteristic of the southern African lizard fauna. In coastal Angola the species largely occurs south of 12° S, near the level of Lobito, Benguela Province, which roughly coincides with the northern extent of the desert biome in the country. Further inland the faunal turnover corresponds to the border between the savanna and arid woodland biome in the south and mesic woodland biome in the north. Given the commensal setting in which this gecko was found, it is possible that it was accidentally translocated from further south, however, the Capanda records (Ceríaco *et al.* 2014) document an established northern population in a much less anthropogenically disturbed area. The limits of the distribution of *C. pulitzerae* and its congeners remain poorly known and further collecting, particularly in the central and eastern portions of Angola is sorely needed.

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SCINCIDAE

Trachylepis perrotetii (Duméril & Bibron, 1839)

AFRICAN RED-SIDED SKINK IN CAPE VERDE

L. M. P. CERÍACO & A. C. SOUSA

Trachylepis perrotetii is a large-sized (maximum snout–vent length 157 mm) robust skink species with distinctive orange/red flanks (mostly during the nuptial period) bearing numerous white spots (Hoogmoed 1974; Trape *et al.* 2012). It has a widespread distribution in West, Central and East Africa. Several subspecies and varieties have been proposed since the description of the nominotypical form –*T. p. mongallensis*, *T. p. spatzi*, *T. p. upembae* and *T. p. keroanensis* (Hoogmoed 1974). Two former subspecies, *T. keroanensis* and *T. upembae*, are now considered valid species and the *T. p. mongallensis* and *T. p. spatzi* have been synonymized with the nominotypical form (Broadley and Cotterill 2004; Böhme *et al.* 2011; Trape *et al.* 2012). *T. perrotetii* has still not been assessed by IUCN. Examination of West African specimens of amphibians and reptiles at the Museu Nacional de História Natural e da Ciência, Lisbon, Portugal (MUHNAC, formerly Museu Bocage) revealed one specimen (MB03-000730a, Fig. 1A-B) corresponding to *T. perrotetii* from Santiago Island (14° 55' N; 23° 30' W) in the Cape Verde Archipelago. The individual was photographed and collected in July 1975 by G. Montalverne. The individual was transported to Portugal and kept alive as a pet at the collector's home until its death four years later. The individual was then fixed in 70 % ethanol and deposited in the MUHNAC collections. The specimen has a snout–vent length of 146 mm, 35 scales around the midbody, and 51 scales from the nuchal scales to the base of the tail, as usual

for *T. perrotetii*.

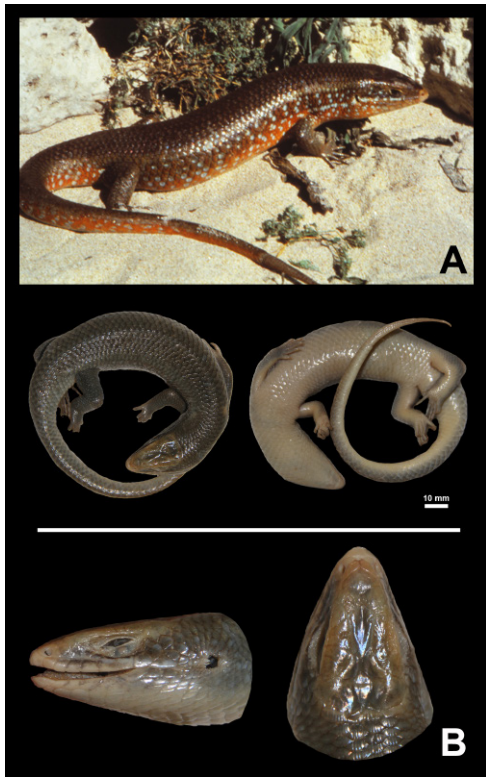

Figure 1. (A) Live photo of the specimens of *Trachylepis perroteti* from Santiago Island, Cape Verde, collected and kept alive by Gil Montalverne (Photo by Gil Montalverne). (B) Dorsal and ventral view of the whole body and close-ups of the lateral and top-side of the head of the preserved specimen MB03-000730A (Photo by L. Ceríaco).

This record represents the first known record of the species on the Cape Verde Archipelago. The islands of the archipelago are inhabited by skinks of the endemic genus *Chioninia* (formerly known as *Mabuya* and *Macroscincus*), which have colonized and diversified in these islands between 11.6 and 0.8 million years ago (Miralles *et al.* 2011), but this is also the first confirmed presence of a representative of the genus *Trachylepis* in the archipelago. Other non-endemic invasive reptiles and amphibians have been reported for the archipelago (Vasconcelos *et al.* 2009; Vasconcelos *et al.* 2013). One dead individual of the African

Rainbow Lizard *Agama agama* (Linnaeus, 1758) was collected at the port of Santo Antão Island in 2006 (Vasconcelos *et al.* 2009). The species has now been recorded for the islands of São Vicente and Santiago (Vasconcelos *et al.* 2014). The results of preliminary phylogenetic analyses using the mitochondrial 16S gene suggested that the referred animal might have originated in Mali, and been accidentally introduced on the island by boat (Vasconcelos *et al.* 2009). However, more recent analyses using a wider sampling of the continental species (Vasconcelos *et al.* 2014) have suggested that the origin of the Cape Verde population of *A. agama* may, in fact, be Liberia. The African Common Toad *Amietophrynus regularis* (Reuss, 1833) also occurs in the archipelago and is most likely a result of an introduction originating from Guinea-Bissau (Vasconcelos *et al.* 2010). It is plausible that the presence of *T. perrotetii* on the island is

the result of an accidental introduction by humans (possibly by boat) from West Africa. Further research is needed in order to: 1) understand if there is a putative invasive population of *T. perrotetii* on Santiago Island) (and if so, what is its current distribution and population trend) or if this specimen was a result of a single individual arrival to the island (and consequently extirpated by the collection of this specimen); and 2) determine the most likely point of origin and the pathway by which the species arrived inthe Cape Verde Archipelago.

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AHN
INSTRUCTIONS TO AUTHORS

AFRICAN HERP NEWS

publishes manuscripts in four categories, namely Articles, Herpetological Surveys, Natural History Notes, and Geographical Distributions.

CONTRIBUTIONS SUBMITTED IN AN INCORRECT STYLE (SEE GUIDELINES BELOW) WILL BE RETURNED TO THE AUTHORS

All submissions should be set in 10 pt, Calibri, with 1.15 line spacing throughout. Submitted manuscripts should not contain any consecutive space characters, nor should they contain tab characters. Every word in English common names should start with a capital letter (e.g., Namaqua Dwarf Adder).

ARTICLES

African Herp News publishes longer contributions of general interest that would not be presented as either Natural History Notes or Geographical Distributions. A standard format is to be used, as follows: **TITLE** (capitals, bold, centred); **AUTHOR(S)** (bold, centred); Author's address(es) (italicised; use superscript Arabic numerals with author's names and addresses if more than one author); **HEADINGS** (bold, aligned left) and Subheadings (bold, aligned left) as required; **REFERENCES** (bold), following the standardised formats described below.

HERPETOLOGICAL SURVEYS

African Herp News publishes succinctly annotated species lists resulting from local surveys of am- phibians and reptiles on the African continent and adjacent regions, including the Arabian Penin- sula, Madagascar, and other islands in the Indian Ocean. The area surveyed may be of any size but should be de ned geographic unit of special relevance to the herpetological community. For exam- ple, surveys should address declared or proposed conservation reserves, poorly explored areas, bio- geographically important localities or administrative zones. The relevance of survey results should be judged by the extent that these records ll distributional gaps or synthesise current knowledge. As far as possible survey records should be based on accessible and veri able evidence (specimens deposited in public collections, photos submitted illustrating diagnostic features, call recordings and

sonograms, or DNA sequences accessioned into international databases). Survey results should be presented in the same format as used for Articles (described above), and must additionally include a section titled ***SYSTEMATIC ACCOUNT*** (bold) comprising Scienti c name (including author citation), location and habitat, evidence (including registration numbers and location of vouchers), and com- ments (where required). **REFERENCES** should follow the standardised formats described below.

NATURAL HISTORY NOTES

Brief notes concerning the biology of the herpetofauna of the African continent and adjacent regions, including the Arabian Peninsula, Madagascar, and other islands in the Indian Ocean.

A standard format is to be used, as follows: **FAMILY**: **Scientific name (including author citation)**; English common name (using Bill Branch's Field Guide to Snakes and Other Reptiles of Southern Africa, third edition, 1998, for reptiles; and Du Preez & Carruthers' A Complete Guide to the Frogs of Southern Africa, 2009, for amphibians as far as possible); **KEYWORD** (this should be one or two words best describing the topic of the note, e.g., Reproduction, Avian predation, etc.); the Text (in concise English with only essential references quoted). The body of the note should include information describing the locality (Country; Province; quarter-degree locus; location; latitude and longitude in D° M' S" format; elevation above sea level), providing the date (day, month, year), naming the collector(s), and stating the place of deposition and museum accession number or describing the fate of the animal. **REFERENCES** should follow the standardised formats described below. **SUBMITTED BY**: **NAME**, Address, E-mail.

GEOGRAPHICAL DISTRIBUTIONS

Brief notes of new geographical distributions of amphibians and reptiles on the African continent and adjacent regions, including the Arabian Peninsula, Madagascar, and other islands in the Indian Ocean. Records submitted should be based on specimens deposited in a recognised collection.

A standard format is to be used, as follows: **FAMILY; Scientific name (including author citation)**; English common name (using Bill Branch's Field Guide to Snakes and Other Reptiles of Southern Africa, third edition, 1998, for reptiles; and Du Preez & Carruthers' A Complete Guide to the Frogs of Southern Africa, 2009, for amphibians as far as possible). The body of the note should include information describing the locality (Country; Province; quarter-degree locus; location; latitude and longitude in D° M' S" format; elevation above sea level), providing the date (day, month, year), naming the collector(s), and stating the place of deposition and museum accession number, or fate of the animal. The body should also include information on the size, colour and taxonomic characters (e.g., scalation,

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TABLES, FIGURES, AND PHOTOGRAPHS

Tables should be submitted as separate MS Excel files. Tables should be small enough to fit onto an **A5** page, and should **NOT** contain any vertical lines. Photographs and gures should be submitted as separate **JPEG** files, and not embedded in the text. They should preferably be over **1MB** in size, and not more than **5MB**. The name of the photographer should be given, if not taken by the author of the submission. Each table, gure, or photograph, needs to be associated with an appropriate caption that should follow the reference list in the submission.

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ALEXANDER, G.J. 2007. Thermal biology of the Southern African Python (Python natalensis): does temperature limit its distribution? Pp. 50-75. In HENDERSON, R.W., & POWELL, R. (Eds.). Biology of the Boas and Pythons. Eagle Mountain Publishing, Utah.

BRANCH, W.R. 1998. Field guide to the snakes and other reptiles of southern Africa. Third edition. Struik Publishers. Cape Town.

COTTONE, A.M. 2007. Ecological investigations of the Psammophiidae (Squamata: Serpentes). Unpubl. MSc thesis. Villanova University, Pennsylvania.

FROST, D.R. 2010. Amphibian Species of the World: an Online Reference. Version 5.4 (8 April, 2010). http://research.amnh.org/vz/herpetology/amphibia/ (accessed 27 April 2010).

LAMB, T., BISWAS, S. & BAUER, A. 2010. A phylogenetic reassessment of African fossorial skinks in the subfamily Acontinae (Squamata: Scincidae): evidence for parallelism and polyphyly. Zootaxa 2657: 33-46.

Note that author names are set as **ALL CAPS**, and that Journal Titles are not abbreviated. Formatting should be achieved using paragraph settings and **NOT** tabs or spaces. Citations should occur in chronological order: (Branch 1998, Alexander 2007, Cottone 2007, Frost 2010, Lamb et al. 2010). For papers with more than two authors, only the first author should be named in the text (e.g., Masterson *et al*. 2010) – italicising "et al.". Cite unpublished data as in press, e.g., (in press), which then appears in the list of references, or as J. J. Marais (pers. comm.), in which case Johan J. Marais's name and institutional af liation should appear under Acknowledgements. Unpublished reports should be cited as personal communications.

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