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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.

COVER PHOTOGRAPH: Harlan's Fire Skink (*Lepidothrys fernandi harlani*). Mt Nimba region, Liberia. Photograph by: Bill Branch. Nikon D300 (1/160, F32, ISO 200).

ARTICLES

STATUS OF THE SUNGAZER *SMAUG GIGANTEUS* IN KWAZULU-NATAL PROVINCE, SOUTH AFRICA

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The sungazer, *Smaug giganteus,* is listed as occurring in KwaZulu-Natal (Bourquin 1993, 2004; Lambiris & Bourquin 1993). One of the recommendations of Bourquin (1993) was to carry out a survey to ascertain the population distribution and abundance of *S. giganteus* in KwaZulu-Natal, because the distribution of this species, the number of populations, and the level of exploitation of the species in the medicinal and pet trades in the province were poorly known. To this end, I and two assistants embarked on a study to ascertain the distribution and status of *S. giganteus* in KwaZulu-Natal in 1998. Unfortunately the survey had to be prematurely and abruptly terminated owing to the sudden financial difficulties that were faced by the erstwhile Natal Parks Board at that time. Owing to the uncertainty of whether the species is indigenous to KwaZulu-Natal, I present the findings of the work in this article.

METHODS

A distribution model for *S. giganteus* in and immediately adjacent to KwaZulu-Natal was developed using information in Bourquin (1993), Groenewald (1992) and van Wyk (1988, 1994). The variables aspect (WNW - ENE), elevation (1200 - 2000 m), mean maximum daily temperature in January (23 - 29° C), mean annual precipitation (700 – 1200 mm), slope (0 - 10°) and veld type (Highland Sourveld, Southern Tall Grassveld and Natal Sour Sandveld) were included in the model. The survey region was delimited to be the region between the recorded localities for *S. giganteus* in KwaZulu-Natal northwards towards the borders of the Mpumalanga and Free State provinces, where *S. giganteus* is known to occur (van Wyk 1988). From the mapped potential habitat, a total of 90 sample areas (i.e. contiguous potential habitat patches) were available. The sites where records of *S. giganteus* were obtained (as indicated by the corporate Biodiversity Database of Ezemvelo KZN Wildlife) were to be among the first sites visited. Other sites would be chosen using the predicted distribution map as a guide.

RESULTS

The predicted distribution map for *S. giganteus* in KwaZulu-Natal to guide the searching, and the sampled sites, are indicated in Figure 1. On 23 March 1998, we found no

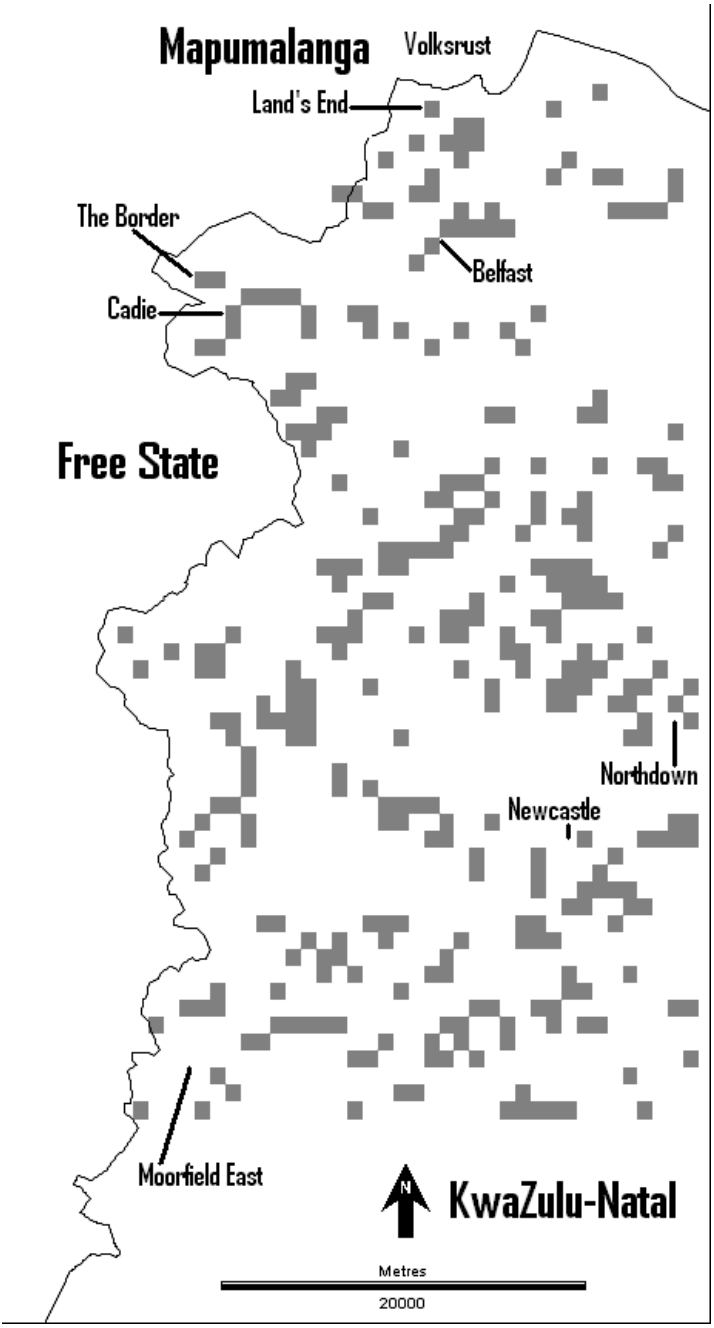

Figure 1: Predicted distribution (grey areas) of the Sungazer *Smaug giganteus* in the north-western part of KwaZulu-Natal.

S. giganteus nor any burrows on the hill on the farm Moorfield East (27°52'13" S, 29° 42'49" E) where Mr G. Clapham had recorded three *S. giganteus* on 28 October 1984. The farm owner, Mr Louis Cronjé, said that he had brought some *S. giganteus* in from near Vrede in the Free State as pets which subsequently escaped, and that he had not seen them again after three months. He also told us that he had not seen any *S. giganteus* on his farm prior to him bringing in the pets. On 25 March 1998, we visited the Van Vuuren Game Reserve on the farm Northdown (27°41'50" S, 29°59'28" E) in the company of the previous owner, Mr Henry Richards. A specimen of *S. giganteus* in the Ditsong National Museum of Natural History in Pretoria (TM 58029) was collected there by G. Clapham on 29 November 1983. According to Mr Richards, the *S. giganteus* that had been recorded there were brought in to the reserve to an area that he showed us that had subsequently been excavated by Iscor. Mr Richards had no knowledge of *S. giganteus* on his farm when he owned it nor when his father owned it before him, nor had he seen *S. giganteus* on his farm Land's End (29°51'25" S, 27°23'20" E) or elsewhere in KwaZulu-Natal for the forty years he had been in the north-western part of the province.

On 26 March 1998, we visited sites on the farms Land's End and Belfast (29° 51'25" S, 27°25'20" E), but found no signs of *S. giganteus*. We spoke to the owner of part of the farm Cadie (29°44'25" S, 27°28'20" E) and of the farm The Border (27° 27'58" S, 29°42'45" E), Mr Barney Uys, who as a boy used to keep *S. giganteus* as pets, and he said that he had never seen this species in KwaZulu-Natal. Both these farms have sites where *S. giganteus* was predicted to occur.

DISCUSSION

No verified records of *S. giganteus* as indigenous to KwaZulu-Natal appear to exist. Most records are of *S. giganteus* that have been released or that have escaped at the sites where they were recorded. Therefore I propose that *S. giganteus* is removed from the list of reptiles indigenous to KwaZulu-Natal until verified records of *S. giganteus* colonies native to KwaZulu-Natal are obtained.

ACKNOWLEDGEMENTS

I gratefully thank Dan Wood and Helen Murray for assisting me with the survey, and the farmers and others who allowed us to search for *S. giganteus* on their farms or accompanied us in the field. Mr Lemmy Mashinini provided the record details for the *S. giganteus* specimen in the Ditsong National Museum of Natural History (TM 58029).

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FIRST RECORD ON THE REPRODUCTION OF THE ARABIAN COBRA (*NAJA ARABICA*) (SCORTECCI, 1932) IN CAPTIVITY

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The Arabian cobra (*Naja arabica*) is found in the highlands of Arabia from Taif, in western Saudi Arabia, southward through to Aden and from there eastward to the Hadramawt and east to Dhofar (Gasperetti, 1988; Egan, 2007). The species was once considered to have been a subspecies of the Egyptian cobra (*Naja haje*) but Trape *et al* (2009) recognized it as a full species. To date nothing was known about the reproduction of the Arabian Peninsula's largest and most medically important venomous snake (Gasperetti, 1988; Leviton *et al*, 1992; O'Shea, 2005; Egan, 2007). It is speculated reproduction in the species is similar to that of the North African species, the Egyptian cobra (*Naja haje*) (Pitman, 1974 in Gasperetti, 1988). Here I report the first documented clutch size, neonatal description and reproduction of the species.

In April 2009 the author took over the curatorship of the live herpetological and freshwater fish collection at the Breeding Centre for Endangered Arabian Wildlife (BCEAW). The collection contained an adult pair of Arabian cobras (*Naja arabica*) which originated from Saudi Arabia and that had never bred. Both the specimens were acquired as wild caught adults. The female arrived at the BCEAW on 21 November 2000 and the male on 27 June 2001.

During late November 2009 the specimens were moved into a public exhibit together in the Arabia's Wildlife Centre. The enclosure measuring 2 x 1 x 0.8 m contained a natural setup with the required life support units. The female measured 1.8 m (total length) with a weight of 1.2 kg and the male 1.4 m (total length) with a weight of 0.96 kg.

In early December 2009 the male began displaying the typical pre-copular behaviour known in snakes (Greene, 1997). On 10 December, the first copulation occurred which

lasted several hours. The last recorded copulation was noted on 28 December. Throughout the copulation no biting or aggressive behaviour was noted between the pair.

On 31 March 2010 the female laid 11 eggs, of which one was infertile. The eggs were removed from the enclosure for artificial incubation at 26 °C. The eggs measured 65 mm x 30 mm and weighed between 25 - 28 g. On 26 May 2010 the clutch of eggs started to hatch, but a technical failure of the thermostat during the night resulted in the neonates overheating, ultimately resulting in their death.

On 17 December 2010 the pair was observed copulating again, resulting in a second clutch of 19 eggs being laid on 14 March 2011. From this clutch only 16 eggs were fertile. They were again removed for artificial incubation. The eggs were approximately the same size and mass as the previous clutch noted in March 2010. On 14 May 2011 this clutch started to hatch with the last neonate emerging on 19 May 2011.

The neonates were weighed and measured directly after hatching. They weighed between 10 - 13 g with a mean weight of 12 g. Their total length ranged between 315 - 355 mm with an average total length of 343 mm. All the females from both clutches were longer in total length than the males. Until their first ecdysis, neonates were light brown with the exception of the head and dorsal side of the neck which were black. After their first ecdysis the neonates changed colour. Specimens are then either yellow with black heads, yellow with faint brown bars dorsally or grey with thin black bars. The majority of the neonates also had black bars ventrally on the neck.

From this case the clutch size for this species which was previous unrecorded (O'Shea, 2005) can be summarized for adult female specimens as 11 - 19 eggs with a incubation period of around 59 - 62 days. Neonates, from hatching to their first ecdysis undergo colour changes and there are noticeable length differences between males and females of this species.

ACKNOWLEDGEMENTS

The author would like to express his sincere gratitude to His Highness Dr. Sheikh Sultan Bin Mohammed Al Qassimi (Member of the Supreme Council and Ruler of Sharjah) and Hana Saif Al Suwaidi (Director General of the Environment and Protected Areas Authority of Sharjah). Thanks to Paul Vercammen and Kevin Budd (Managers: BCEAW), Dr. Jane Edmonds (Veterinarian: BCEAW) and Jaco De Klerk (BCEAW) for his technical support. Special thanks to reptile keeper, Amara Suwa Arach'ge Don Dilan Sajeewa, for his invaluable assistance.

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Figure 1: Female *Naja arabica* with eggs (left), hatching *N. arabica* (top right), and juvenile *N. arabica* prior to first ecdysis (bottom right).

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BOOK REVIEWS

Chameleons of Africa. An Atlas – including the Chameleons of Europe, the Middle East and Asia. By Colin Tilbury. 2010. 831 pp., 802 colour photographs. Chimaira, Frankfurt am Main. (Hard cover). 98 Euros, ZAR 1000. ISBN 978-3-89973-451-5.

At long last Colin Tilbury's 'chameleon bible' is available to herpetologists in hard cover 21 x 15 x 5 cm format, but please don't use it as a door-stop! As indicated in the entertaining preface by Bill Branch, this *magnum opus* represents the culmination of nearly 30 years of study of these fascinating reptiles and is enriched by a wealth of marvellous colour photos, mostly by the author, and also his meticulous line drawings showing lateral views of chameleon heads. The text is remarkably free of typos. The distributions of every genus and all species are shown by neat point distribution maps. I liked the frontispiece of Sarah Tilbury holding an irate *Trioceros melleri.*

The comprehensive **Acknowledgements** and **Introduction** are followed by **An overview of the systematics of African chameleons**, which charts developments subsequent to the landmark publication of Klaver (1981) on lung morphology. It seems likely that the genera of chameleons are finally stabilised. It was perhaps unfortunate that when Matthee *et al.* (2004) described the new genus *Rieppeleon* and the subgenus *Rhinodigitum* of the genus *Rhampholeon,* they created problems when abbreviating three names all beginning with 'R'! The establishment of the new genera *Kinyongia* for the former '*fischeri group'* and *Nadzikambia* for *mlanjensis* (Tilbury *et al*., 2006) was a major breakthrough, and it was a relief to see *Trioceros* finally recognised as a full genus (Tilbury & Tolley, 2009). There follows a brief history of the major factors influencing the systematics of the Chamaeleonidae covering *External morphological character variation, Sexual dimorphism and ontogeny, Skull morphology, Karyology, Lung morphology, Hemipenal morphology, Display as a taxonomic character* and *Biochemical and molecular analysis.* The next chapter is entitled **Zoogeography and patterns of distribution in the Chamaeleonidae.** Fig. 42 shows the distribution of all chameleons (excluding Malagasy species), and Figs 43-80 show a wide range of chameleon biotopes, but note that Fig. 59 shows Maleme Dam in the Matobo National Park. Then **Environmental challenges and behavioural adaptations for survival** is illustrated by Figs 81-103 and **Myths and legends** by Figs 104-106. **Some aspects of the biology of the Chamaeleonidae** has sections on *Locomotion, Vision, Prey capture, The tongue, Colour change, Thermoregulation, The senses, Ecdysis (moulting), Hibernation* and *Dentition.* The chapter on **Reproductive Physiology** includes well illustrated sections on *Peritoneal pigmentation and infrared reflectance, Pre-copulatory behaviour and Copulation* and *Reproductive strategy.* There follow brief sections on *Shape, size and body patterns, Rostral processes and other head ornamentation, Sexual dimorphism, Claws, Palms and soles of the feet, Accessory plantar spines, Tarsal spurs, Scalation* and *Dermal pits.*

The systematic part of the book begins with **An overview of the systematics and biology of the African pygmy chameleons**, here still assigned to a subfamily Brookesiinae, which was originally proposed by Klaver & Böhme (1986), but subsequently aban-

doned (Klaver & Böhme 1997). The genus *Rhampholeon* now incorporates the subgenera *Bicuspis* (2 species), *Rhampholeon* (4 spp.) and *Rhinodigitum* (8 spp.), while the genus *Rieppeleon* contains three species. A key is provided for all the African pygmy chameleons combined. These present an amazing diversity, with more new taxa being described as additional small forested inselbergs are investigated in East Africa. Under *Rhampholeon (Bicuspis) marshalli,* note that Stapleford Forest is in Mutasa District north of Mutare and Castle Beacon Forest is on the Vumba.

Moving on to the 'typical chameleons', the genus *Bradypodion* (17 species, with more in the offing) again presents a bewildering, colourful, and complex diversity, which is demonstrated with a profusion of colour photos. The spectacular genus *Kinyongia* (17 species), and the monotypic *Nadzikambia mlanjensis* are also well covered by authoritative text and illustrations. The 'slimmed down' genus *Chamaeleo* now retains 13 species from Africa, the Mediterranean region, southern Arabia and the Indian subcontinent. No subspecies of *Chamaeleo dilepis* are recognised, although short separate descriptions are provided for the '*ruspolii* form', the '*roperi* form', and the '*quilensis* form'. Thirty-five species of *Trioceros* are described and profusely illustrated, these are assigned to five informal groups, with the *cristatus* (8 spp.) and monotypic *melleri* groups retaining oviparous reproduction, while the *affinis* (3 spp.), *bitaeniatus* (13 spp.) and *werneri* (6 spp.) groups have a viviparous reproductive strategy. Four other species (*oweni, ituriensis, deremensis* and *johnstoni*) are grouped together as an oviparous clade with probable affinities to the *cristatus* group.

In conclusion, *Chamaeleons of Africa* is a thoroughly researched, well written and superbly illustrated book, which every herpetologist with an interest in African reptiles will want to add to his bookshelf. Congratulations also to Chamaira for the impressive thirty-seventh volume in their Frankfurt Contributions to Natural History series.

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What's that Reptile? A starter's guide to reptiles of southern Africa. By Johan Marais. 2011. 144 pages, 444 colour photos. Struik, Cape Town. ZAR 170.00 (Soft cover). ISBN 978 1 77007 771 3

Another superbly illustrated book from Johan Marais, in 24.5 x 17 x 1 cm format, is essentially a condensed version of *A guide to the reptiles of southern Africa* by Alexander & Marais (2007), which I reviewed in *AJH* 57 (1): 51-55, so I shall here present a comparison of the two books, the latter hereafter abbreviated to 'A&M'.

The Introduction begins with a map showing the southern African ecoregions, with descriptions and illustrations of each, and brief lists of some characteristic reptiles. As previously noted (Broadley, 2008), the indication of extensive coastal forest along the coast of Mozambique is misleading, this is actually coastal mosaic, most forest having been replaced by 'cultivation steppe' or farm-bush. There follow brief sections on *Finding reptiles, Identifying reptiles, Reptile biology* and *Reptile conservation.* Thereafter concise species accounts indicate the distribution by provinces and adjacent countries, as there are no distribution maps.

The Adders are covered in four pages compared with 21 in A&M, so only the six common species (Puff Adder, Gaboon Adder, Berg Adder, Horned Adder, Peringuey's Adder and Common Night Adder) are covered in the text, but mini-portraits of four lesser-known adders are provided. The mambas are covered in only two pages (4 in A&M), but the photos are better! The cobras are covered in 3 pages (9 in A&M), with the Cape, Snouted, Forest and Mozambique Spitting Cobras covered by text and photos. It should be noted that fish form an important part of the diet of the Forest Cobra. The Rinkhals gets one page (3 in A&M), in Zimbabwe this species includes toads in its diet. The Shield Cobras get two pages (4 in A&M), but the African Garter Snakes are omitted. The Boomslang gets one page (3 in A&M), as do the Twig (Vine) Snakes (2 in A&M). Bibron's Stiletto Snake gets one page, whereas A&M covered three species in four pages. Grass and Sand Snakes get three pages (10 in A&M), six species are covered in the text. I have previously suggested that 'whip snake' is better substituted for those species of *Psammophis* previously called 'grass snakes' (Broadley, 2008). 'Grass Snake' should be reserved for *Psammophylax*, finally disposing of the inappropriate name 'skaapsteker'. Tiger Snakes and the Red-lipped (Herald) Snake have two pages (4 in A&M), and the Centipede-eaters two pages, the same as A&M, here I disagree with the description of the scales of the Reticulated Centipede-eater as 'dark edged', they are dark at the base and pale at the apex. The pythons get two pages (8 in A&M), but note that pythons take a fair number of birds. The Mole Snake gets one page (3 in A&M). House, Rock and Water Snakes are allocated three pages (12 in A&M), and it should be noted that subadult house snakes feed to a large extent on lizards. The Green Snakes get two

pages (4 in A&M), but 'Spotted Bush Snake' is better reserved for *Philothamnus punctatus*, and the 'Variegated Bush Snake' is blue-green. The Slug-eaters get two pages, as in A&M, but are better illustrated. Egg-eaters get two pages (3 in A&M), but only two species are covered. The Rhombic Egg-eater may exceed one metre in length, and to avoid confusion with the brown phase of *D. scabra, D. inornata* is better called the 'Plain Egg-eater'. Blind Snakes have two pages (7 in A&M) and Worm Snakes two (3 in A&M), but the lowest photo on p. 55 looks like a *Leptotyphlops,* not a *Myriopholis*! I am not surprised that the fossorial Natal Black Snake, Purple-glossed Snakes, Quill-snouted and Harlequin Snakes were omitted, but perhaps the Wolf and File Snakes, and the Shovel-snouts deserved some coverage. Other groups omitted are the Marsh and Swamp Snakes, Many Spotted and Mountain Snakes, Western Keeled Snake, Beaked Snakes, Bark Snakes, Cat-eyed Tree Snakes and Yellow-bellied Sea Snake.

Moving on to the lizards, the Amphisbaenians or worm lizards are nicely covered in two well illustrated pages (5 in A&M). However, at the foot of p. 57 is a brief reference to the 'Blunt-headed Worm Lizard', which I found on p.141 refers to *Dalophia pistillum*, but a better name is 'Pestle-tailed Worm Lizard', a direct translation of the specific name (Broadley, 2008). The Agamas are covered in 5 pages, as in A&M, but I am still confused by the change from 'spiny agama' to 'ground agama' for *A. aculeata* and *A. armata*. I prefer 'Kalahari Spiny Agama' and 'Tropical Spiny Agama' respectively. Monitor Lizards are comprehensively covered in two pages (6 in A&M). Sand and Rough-scaled Lizards get 6 pages (12 in A&M), with the omission of Mountain Lizards. I welcome the change to 'Ornate Rough-scaled Lizard' for *Ichnotropis capensis,* which does not occur in the Cape! Legless Burrowing Skinks get 2 pages (4 in A&M), Snake-eyed Skinks 2 pages (3 in A&M), Dwarf Burrowing Skinks 3 pages (7 in A&M) and Writhing Skinks 2/3 of a page (2 in A&M). The Typical Skinks get only two pages (5 in A&M), and the bright orange tail of the adult male Rainbow Skink is not mentioned. The Sungazer and other Girdled Lizards have six pages (8 in A&M), the Crag Lizards two (5) and the Flat Lizards two (5), but a striped female flat lizard should have been illustrated. Plated Lizards get two pages (13 in A&M), but the Grass Lizards are omitted. The geckos are covered in 26 pages (62 in A&M), this is perhaps excessive, being more than a third of the total pages allocated to lizards. Note that the Cape Gecko does not occur in Zimbabwe. For *Afroedura transvaalica,* the common name has been changed to 'Zimbabwe Flat Gecko' (as suggested by Bates, 2008), but a good alternative is 'Limpopo Flat Gecko', in view of the Njelele River type locality. I was unable to recognise the 'two common colour phases' of Wahlberg's Velvet Gecko, there seems to be continuous variation (after excluding the populations of Arnold's Velvet Gecko in Zimbabwe, eastern Botswana and Limpopo Province (Greenbaum *et al.,* 2007). The 'Ground Gecko' is a heterogeneous mix of the genera *Chondrodactylus* and *Colopus,* and the former (*C. angulifer*) is perhaps better associated with the Tubercled Geckos. The division of the genus *Pachydactylus* is fine, but perhaps each group should have been allocated one page, similarly with the Barking Geckos.

The Nile Crocodile is comprehensively covered in two pages (6 in A&M). The Tortoises are well covered in 8 pages (17 in A&M), but Zimbabwe is omitted from the range of the Leopard Tortoise. Only adult male Speke's Hinged Tortoises usually have uniform brown shells. It should be noted that the tricuspid beak is diagnostic for the Natal

Hinged Tortoise. The Terrapins get three pages (7 in A&M), and Zimbabwe is omitted from the range of the Serrated Hinged Terrapin. Sea turtles are well covered in three pages (11 in A&M). The book finishes with a short Glossary, a List of common and scientific names of species, and an Index of common names.

This little book is certainly a beautiful introduction to the tremendous variety of southern African reptiles, and every herpetologist will want to get it for the many superb new colour photos. However, the snakes seem to have been short-changed, being allocated only 37 pages, compared with 69 for lizards, including 26 for geckos alone.

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ERRATUM

Bourquin, O. (2011) The terrestrial reptiles of Sir Bani Yas Island, United Arab Emirates. African Herp News 53: 27-35.

The first paragraph, last sentence should read: “Eleven species of terrestrial reptiles were recorded during the March/April 2008 survey, and subsequently an additional two species were reported in an unpublished document to the TDIC by the Dome Oilfield and Engineering Services , 2009.”

The second paragraph, first sentence should read: “Seven of the thirteen species recorded here thus represent first published records for Sir Bani Yas Island, of which five species were recorded for the first time during this survey, and two species were recorded for the first time subsequent to this survey."

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NATURAL HISTORY NOTES

REPTILIA: CHELONIA

TESTUDINIDAE

***Stigmochelys pardalis* (Bell 1828)**
Leopard tortoise

DIET

The diet of leopard tortoises includes a wide variety of plants, with seasonal preferences for annuals such as *Hermannia quartiniana*, *Tribulus terrestris*, grasses such as *Eragrostis lemanniana*, and succulents such as *Crassula* spp. and spekboom (Branch 2008). Branch (2008) also reports that leopard tortoises may gnaw bones and hyaena faeces to obtain calcium. However, the literature is not conclusive about carnivorous habits in *Stigmochelys pardalis*, i.e., reported first-hand records appear to be extremely scarce, and our knowledge may benefit from the publications of observations.

On 7 February 2010 09:00 hrs., we observed a young leopard tortoise feeding on the remains of a bat-eared fox (*Otocyon megalotis*) on a dirt road between Hotazel and Van Zylsrus, Northern Cape Province, South Africa (Fig. 1). We did not take exact measurements but the approximate carapace length of the tortoise was 200 mm. Apparently, the bat-eared fox had been killed by road traffic days earlier, considering its appearance and smell. The tortoise was sitting next to the remains of the bat-eared fox ingesting a piece of flesh. Protein-rich road killed animals may help the tortoise to grow and survive. This behaviour may be rare, considering the lack of reports in the literature.

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Figure 1: A Leopard Tortoise (*Stigmochelys pardalis*) feeding on the remains of a Bat-eared Fox (*Otocyon megalotis*) in the Northern Cape Province

REPTILIA: SQUAMATA

VIPERIDAE

***Causus rhombeatus* (Lichtenstein, 1823)**
Rhombic Night Adder

DIET

On 12 March 2011 an adult Rhombic Night adder (*Causus rhombeatus*) was killed by 2 dogs in a suburban garden in St Winifreds, South of Durban, Kwazulu-Natal, South Africa (30º 05' 18" S; 30º 50' 38" E). When the owner of the dogs arrived, he found that the snake had regurgitated two Guttural Toads (*Amietophrynus gutturalus*). Upon closer inspection he noticed an object protruding from the snakes' mouth. With a pair of forceps he pulled out the remains of a young bird of unknown species. It would seem that the snake was in the process of regurgitating the contents of its stomach in an effort to make a faster getaway but was killed before it could do so entirely, leaving the bird still lodged in the snake's throat.

Causus rhombeatus are thought to feed exclusively on frogs and toads with Broadley (1990) and Auerbach (1987) mentioning rodents also being taken. I could find no prior instance of the species feeding on birds. Broadley and Cock (1982), Branch (1998), Jacobsen (2005), Marais (2004), Phelps (2010) and Spawls et al. (2002) list amphibians as the primary source of food for the species, with no mention being made of birds as a prey item. This record is thought to be the first documented instance of *Causus rhombeatus* having fed on a bird.

ACKNOWLEDGEMENTS

I thank Shelton Grant for noting the above as unusual and bringing it to my attention. I also thank Johan Marais for scrutinising the format and content of this note and also for the encouragement to submit this record.

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LAMPROPHIIDAE

***Lycodonomorphus rufulus* (Lichtenstein, 1823)**
Common/Brown Water Snake

DIET

On 28 February 2010 at 15h20, while hiking along 'Whiskey-spruit/Steenkamp' River (which flows into the Kliprots and Spekboom Rivers), Finsbury, Finsbury 156 JT (close to Formosa Mountain), Long Tom Pass/Lydenburg region (2530BA), Mpumalanga Province, South Africa (25°05′47″ S; 30°37′30″ E), at an altitude of 1 802m a.s.l., a *Lycodonomorphus rufulus* was discovered by Paige Matthews.

The snake (Field Reference Number: WRS R-736; Fig. 1) was completely submerged between riverbed rocks in the cold, fast-flowing water at a depth of approximately 200 mm, with its ventral surface upward facing. It was retrieved from the river and identified as a large female Brown Water Snake (*Lycodonomorphus rufulus*) of approximately 900 mm total length (snake not accurately measured). The snake had the left leg of an adult Natal Cascade Frog *Hadromophryne natalensis* (Heleophrynidae) [Field Reference Number: WRS A-244] firmly in its jaws. The snake was briefly handled and placed on the riverbank for photographs during which time it made no attempt to constrict the frog. When repositioned, it released its grip on the frog's leg which immediately leapt into the river and vanished between the riverbed rocks. The snake was released on the riverbank next to the capture site.

Although the frog was not consumed due to the disturbance, this observation demonstrates that *Hadromophryne natalensis* is probably preyed upon by *L. rufulus*. Although *L. rufulus* are well documented in the literature as feeding on frogs (Rose, 1962, p. 338

Figure 1: *Lycodonomorphus rufulus* (WRS R-736) with *Hadromophryne natalensis* (WRS A-244) in its jaws. Long Tom Pass, Mpumulanga, South Africa.

and fig. 187, 188 and 189; Broadley, 1990, p. 77 and Branch, 1998, p. 73), I can find no reference to this species feeding on heleophrynid amphibians. The six currently recognised species of *Heleophryne* and *Hadromophryne natalensis* (Family: Heleophrynidae) all fall within the geographical range of *Lycodonomorphus rufulus* and may form part of the natural diet of this snake. It is also interesting to note that this predominantly nocturnal species was hunting in the late afternoon in cold, fast-flowing water.

I have observed *Lycodonomorphus rufulus* feeding on frogs on two previous occasions. The first record was on 15 January 1994 (Field Reference Number: WRS (A) R-285 on the banks of the Klein Jukskei River (between Farmall and Chartwell Agricultural Holdings), Fourways, Gauteng Province. An adult snake was found ingesting a *Tomopterna cryptotis* Boulenger, 1907 (Family: Pyxicephalidae). The second observation was along a small stream on 25 December 1994 (Field Reference Number: WRS (A) R-334) in Southport, KwaZulu-Natal. A juvenile snake was observed hunting and feeding on *Cacosternum nanum* Boulenger, 1887 (Family: Pyxicephalidae). On both occasions, the snakes were hunting in the evening during warm, humid conditions.

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SCINCIDAE

***Lygosoma sundevalli* (Smith, 1849)**
Sundevall's Writhing Skink

ENDOPARASITES

Lygosoma sundevalli occurs throughout Kenya and Tanzania, north to Somalia, south-west to Angola and south to northern South Africa from sea level to 2000 m asl in a wide range of habitats (Spawls et al., 2004). We know of no reports of helminths for this species. In this note we establish the initial helminth list for *L. sundevalli*.

Four *L. sundevalli* (mean SVL = 100.1 mm ± 3.9 mm, range: 97-106 mm) from Kenya, Rift Valley Province, Samburu Central District, Maralal (1.1000°N, 36.7000°E, elevation 1966 m) collected in June 1971 and deposited in the herpetology collection of the Natural History Museum of Los Angeles County, Los Angeles, California, USA as LACM 66023, 66027-66029 were examined for helminths.

The body cavity was opened by a longitudinal incision, and the digestive tract was removed, opened longitudinally, and examined under a dissecting microscope. Helminths were placed in a drop of glycerol on a glass slide, a cover slip was placed on top and the preparation was studied under a compound microscope. Twenty-eight individuals of the nematode, *Parapharyngodon kenyaensis* (Bursey & Goldberg, 2005), were found in the large and small intestines of two hosts (prevalence [number infected lizards/total lizards examined X100] = 50%; mean intensity [mean number helminths per infected lizard ± 1 SD] = 14.0 ± 18.3 SD, range = 1-27); two acanthocephalan cystacanths (Centrorhynchidae) were also found, one each in the stomach wall and mesentery of one host (prevalence = 25%). Voucher helminths were deposited in the United States National Parasite Collection (USNPC), Beltsville, Maryland as: *Parapharyngodon kenyaensis* (USNPC 104677); centrorhynchid cystacanth (USNPC 104678).

Parapharyngodon kenyaensis was described from *Agama caudospina* from Kenya by Bursey & Goldberg (2005). It was also reported from *Trioceros jacksonii* from Kenya by Goldberg and Bursey (2008). *Parapharyngodon* are members of the Oxyurida, which have a direct life cycle (Anderson, 2000). Infection likely occurs by ingesting eggs while

feeding on soil contaminated with lizard feces. All acanthocephalans utilize an arthropod intermediate host in which the larval cystacanth occurs; transmission to the next host occurs when the infected arthropod is eaten (Kennedy, 2006). Since development beyond the cystacanth stage does not occur, lizards are considered as paratenic (= transport) hosts. *Parapharyngodon kenyaensis* and acanthocephalan centrorhynchid cystacanths in *L. sundevalli* are new host records.

ACKOWLEDGEMENTS

We thank Jeanette Arreolar (Whittier College) for assistance with dissections and Christine Thacker (LACM) for permission to examine specimens.

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CHAMELEONIDAE

Bradypodion transvaalense **(Fitzimons, 1930)**
Transvaal Dwarf Chameleon

REPRODUCTION

Five pairs of *Bradypodion transvaalense* were imported by a Paris pet shop in November 2010. These animals were collected in the Wolkberg area, Limpopo Province, South Africa (photos of specimens from this locality are in Tilbury, 2010 ; Tolley and Burger, 2007). All the females were heavily gravid and were similarly sized. The first female gave birth to 9 young on 13 November 2010. The second female gave birth to 11 young on 27 November 2010.

I purchased a pair of the imported chameleons, of which the female (SVL = 75 mm; TL = 155 mm; females of this species can reach SVL = 86 mm and TL = 200 mm - Tilbury, 2010) gave birth to 13 young on 4 December 2010. The two last females in the pet shop gave birth in December each one to 9 young. The end of November and beginning of December is the second half of spring in the south hemisphere. Branch (1998) reports that 7 to 17 young are produced at the end of winter to early spring, but does not report on the locality of these animals. The hatchlings were 20 mm SVL (n = 3) and 21 mm tail length (n = 3), and all brown in colour. Hatchlings of that species range from 43 mm to 49 mm TL according to Branch (1998), and are able to catch small insects (*Drosophila* and pin-head crickets) a few hours after birth.

After less than 2 months all the specimens successfully shed their skins. After 2 months (10 February), the colour of most of the specimens allowed an observer to distinguish males from females. In mid-February, snout-vent length was approximately 30mm (29 -32 mm, n = 4).

ACKNOWLEDGEMENTS

I thank the owner and the staff of the shop who provided me with information on these animals.

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GEOGRAPHICAL DISTRIBUTIONS

REPTILIA: SQUAMATA

CHAMELEONIDAE

***Rhampholeon boulengeri* (Steindachner, 1911)**
Boulenger's Pygmy Chameleon

On July 19th 2010, a pygmy chamaeleon was observed and photographed at the Budongo Conservation Field Station (Fig. 1). Consulting Spawls *et al.* (2004) and various recent treatments on pygmy chamaeleon taxonomy (Menegon *et al.* 2002, Mariaux & Tilbury 2006); it was subsequently identified as a Boulenger's pygmy chamaeleon; *Rhampholeon (Rhinodigitum) boulengeri* (Steindachner, 1911). No voucher specimens were collected, however, as the necessary permits were not in order.

Figure 1: *Rhampholeon (Rhinodigitum) boulengeri* (Steindachner, 1911) from Budongo Forest, Uganda.

Budongo Conservation Field Station is located at approximately 1.7229 degrees N, 31.5448 degrees E, and is located within Budongo Forest in the Western Region of Uganda. The Budongo area comprises about 428 km^2 of forest and is best known for its long traditions of chimpanzee research (see Reynolds 2005). It is also notable as the Ugandan forest with the highest number of recorded tree species, as well as an important site for bird diversity (Byaruhanga et al. 2001). The lizard fauna of Budongo forest has yet to be systematically surveyed.

Rhampholeon boulengeri is a widely distributed species which has been recorded from parts of Kenya, Rwanda, Burundi, Uganda and the DR Congo (Spawls *et al.* 2004). The present work represents the first record of *R. boulengeri* from Budongo forest and also its northernmost record yet. Previous Ugandan records of the species are from the forests Bwindi, Kibale and Mpumu.

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ABOUT THE COVER

Lepidothrys fernandi harlani (Hallowell, 1844)
Harlan's Fire Skink

Until 2009 only a single species of fire skink, then known as *Lygosoma fernandi*, was recognized. It was considered to be widespread in the Congo basin, with scattered records in the forests of West Africa, as well as Kakamega Forest (Kenya) and single records from both northern Angola and Zambia**.** Phillip Wagner, as part of his doctoral studies, reviewed the taxonomy and with several colleagues (Wagner et al. 2009) revived *Lepidothyris* Cope, 1892 for the *L. fernandi* species group, and showed that *L. fernandi* sensu lato was a species complex with an eastern (*L. fernandi)* and western (*L. hinklei*) species, each with a further subspecies. A third distinct species (*L. striatus*) was present in southwestern Central Africa.

The cover specimen, the first documented record for the Liberian Mt Nimba region, was collected in a funnel trap in riverine vegetation alongside a forest stream on Mount Tokedah (Nimba County, Liberia; 07˚27''21.0"N, 008˚39'45.0"W, 553m; 17 February 2011). It is a secretive species that I have never seen active on the forest floor, although I have trapped them in Gabon (*L. striatus*) and now Liberia, where it was even unknown to local forest hunters. Only two other Liberian records are known.

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The West African water snake (*Afronatrix anascopus*) feeding on the Cascade Frog (*Petropedetes natator*); Etke Stream, Grassfields region, Mt Nimba region, Liberia; 07˚29’’06.3”N, 008˚34’38.2”W, 508m). Photograph by Bill Branch.

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, Times New Roman font, 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).

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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 authors' 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.

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African Herp News publishes succinctly annotated species lists resulting from local surveys of amphibians and reptiles on the African continent and adjacent regions, including the Arabian peninsula, Madagascar, and other islands in the Indian Ocean. The area surveyed may be of any size but should be a defined geographic unit of especial relevance to the herpetological community. For example, surveys could address declared or proposed conservation reserves, poorly explored areas, biogeographically important localities or administrative zones. The relevance of survey results should be judged by the extent that these records fill distributional gaps or synthesise current knowledge. As far as possible survey records should be based on accessible and verifiable 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 for Articles (described above), and must additionally include a section titled **SYSTEMATIC ACCOUNT** (bold) comprising *Scientific name* (including author citation), location and habitat, evidence (including registration numbers and location of vouchers), and comments (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 DISTRIBUTION

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, webbing) used to identify the specimen, as well as the distance to the nearest published locality. **REFERENCES** should follow the standardised formats described below. **SUBMITTED BY: NAME**, Address, E-mail.

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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., AND POWELL, R. (eds.), *Biology of the Boas and Pythons*. Eagle Mountain Publishing, Utah.

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Note that author names are set as SMALL CAPS, not 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) without italicising "et al.". Cite unpublished data as in press, e.g., Marais (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 affiliation should appear under Acknowledgements. Unpublished reports should be cited as personal communications.

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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 figures should be submitted as separate JPEG files, and not embedded in the text. They should preferably be 500—800 KB in size, and not more than 1.5 MB. The name of the photographer should be given, if not taken by the author of the submission. Each table, figure, or photograph, needs to be associated with an appropriate caption that should follow the reference list in the submission.

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CONTENTS

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