AFRICAN HERP NEWS

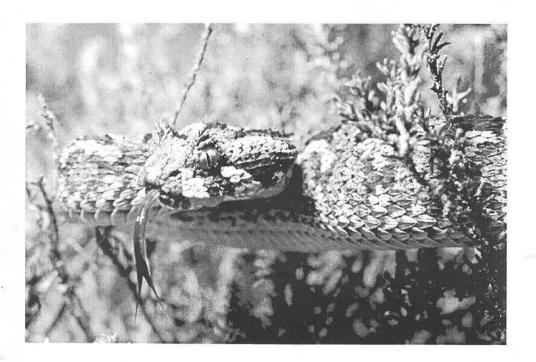
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African Herp News

Newsletter of the Herpetological Association of Africa



Number 40

June 2006

HERPETOLOGICAL ASSOCIATION OF AFRICA

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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, short communications and book reviews – subject to peer review) and *African Herp News*, the Newsletter (which includes short communications, life history notes, geographical distribution notes, herpetological survey reports, venom and snakebite notes, short 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 long manuscripts by e-mail or on disc in Word 6.0 or 7.0, or Windows XP format. Shorter articles may be submitted may be submitted as typescripts.

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

Articles and news items appearing in *African Herp News* may be reprinted, provided that the author's name and full Newsletter reference are given.

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Cover Photo

Southern Adder, Bitis armata. Photo: Tony Phelps

African Herp News Number 40 June 2006

EDITORIAL

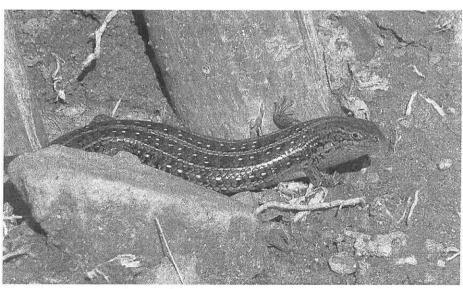
Elections for the new Committee of the Herpetological Association of Africa have been completed, and details of the members and their positions are given on the inside front cover of this issue of the Newsletter. Please consult this list to ensure that you have current names and contact details. Details concerning membership are given on the inside back cover.

This issue of the Newsletter has almost twice the number of contributions than the previous one, and I warmly thank those members who have sent in articles covering a wide range of subject-matter—this is precisely what makes our Association thrive. Please keep up the good work! Contributions of news of people and events of interest to the herpetological community are also welcome.

We also remind members of the 8th H.A.A. Symposium, to be held at Potchefstroom from the 24th to 27th November this year which will no doubt prove as enjoyable and as illuminating as previous ones.

I thank Frank Farquharson for his invaluable help in checking page proofs to ensure that the Newsletter is as free as possible from all the "glitches" that all too easily creep in undetected.

Angelo Lambiris Newsletter Editor.



Cape Skink, Trachylepis capensis.

Photo: Shirley Lambiris

THE ENIGMATIC ROUND ISLAND BURROWING BOA (BOLYERIA MULTOCARINATA): SURVIVAL IN THE WILD REMAINS UNCONFIRMED

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ABSTRACT

The Round Island Burrowing Boa of the monotypic genus *Bolyeria* was sighted only four times in the 20th century, in its only known habitat, the small Round Island, north of Mauritius in the Indian Ocean. The island is characterised with endemic reptiles and a tropical flora degraded due to the introduction of domestic herbivores. Only seven preserved Burrowing Boa specimens are known as museum material, and knowledge is limited about the biology and ecology of this snake in the wild. The last live specimen was encountered in 1974, and to reveal evidence about its survival or extinction, a search project, funded by Fauna & Flora International, was carried out in 2001. Although an intensive search programme was set out and carried through, no surviving specimens or signs of the snake could be revealed.

INTRODUCTION

The extremely rare Round Island Burrowing Boa *Bolyeria multocarinata* (Boie, 1827) was sighted only four times in the 20th century. This snake, one of the only two species in its family Bolyeriidae, is known to live only on the small Round Island, north of Mauritius in the Indian Ocean. The island itself shows an unusually high degree of reptile endemism: both of its two snake species and 3 out of the 6 lizards living there now have their range exclusively on this 151 ha volcanic island (Vinson 1975, Owadally & Lambert 1988, Tonge 1990, Korsós & Trócsányi 2002). The hardwood forest was clear-cut as early as in in the 18th century, then introduced goats and rabbits continued to destroy native vegetation (Bullock 1977, Bullock & North 1984, North & Bullock 1986, North et al. 1994). Only a proportion of the

original palm savanna, characterised by two endemic palm species (*Latania loddigesii* and *Pandanus vandermeerschii*) has survived until now (Merton et al. 1989). A search project for *Bolyeria* was carried out in 2001 by our Hungarian team, funded by Fauna & Flora International, in order to gain evidence about the survival or extinction of the Burrowing Boa.

THE BURROWING BOA

The Burrowing Boa was described by Heinrich Boie, German herpetologist, in 1827, according to the followings (p. 513):

"Eryx

In Paris findet sich annoch:

Multocarinata Peron vom Port-Jackson, der turcica sehr nahe stehend. Schuppen sehr klein, rundlich, gekielt. Auf dem Kopfe 2 Scuta frontalia anteriora, die zusammen ein Herz bilden, und ein hinteres grosses. Zwischen den Augen 4 geich lange Schilder, von denen die mittleren schmal sind. Dann folgen Schuppen. Unten 2 Paar Rinnenschilder. Bildung der Schwanz- und Bauchschilder wie bei turcica. Oben braun, unten dunkler marmoriert."

Altogether only seven specimens are known to be preserved as museum material, including the holotype in the Musee National d'Histoire Naturelle, Paris, three in The Natural History Museum, London, and one in the Mauritius Institute, Port Louis, Mauritius. Recently, an additional specimen was identified in the herpetological collection of the Museum für Naturkunde, Berlin (Bauer & Günther 2004). One more stuffed specimen has been mentioned in the literature (Vinson 1975), but its location is unknown. Knowledge of the biology and ecology of this snake in the wild is limited. Altogether four reliable sightings were reported during the 20th century (Vinson 1953, 1975). These date from 1937, 1953, 1963 and 1974, and describe a medium-sized (ca. 80 cm) snake with a shovel-shaped head and hence possibly with burrowing habit. The last live specimen was encountered in 1974 during the Edinburgh Expedition to Round Island, on the rocky surface of the western slope (Bullock & North 1975).

BOLYERIA EXPEDITION

The joint expedition of the Mauritian conservation authority (National Parks and Conservation Service), the Mauritian Wildlife Fund, and the Hungarian research team took place between 24 April–4 May 2001. A total of 15 locations were selected for distributing the traps. We put 20 traps inside or near a shaded, well-vegetated gully (Fig. 1), whereas the remaining 80 were taken to the palm savanna on the western slopes of the island and were organised in 10 groups (Fig. 2).

Fig. 1. View of "Camp Gully" on Round Island: supposed Burrowing Boa habitat.

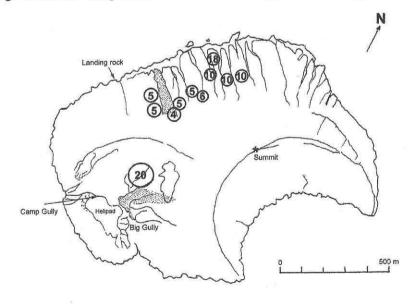


Fig. 2. Location of trap sites for *Bolyeria multocarinata* (figures in the circles indicate trap numbers at the particular locations).

The traps measured $26 \text{ cm} \times 14 \text{ cm} \times 14 \text{ cm}$, and a wire mesh funnel was attached to one end. The trap design was generated from the basic idea of commercial snake traps and box-type small mammal live traps, and was adapted to the case of a soil-dwelling snake. A mixture of moist soil and litter was scattered inside each box, and they were covered or disguised with plant material or loose soil (Fig. 3).

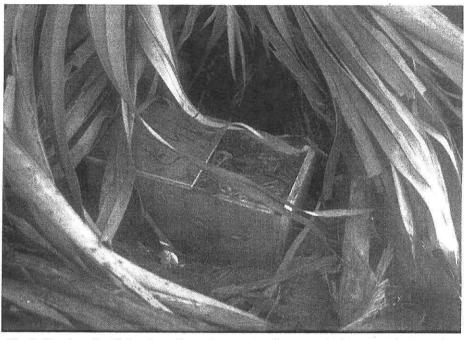


Fig. 3. Trapbox for *Bolyeria multocarinata* set up between the leaves and roots of a *Latania* palm.

Daily checkings covered approximately half of the traps, so eventually each trap was checked every other day. Checking walks were commenced usually in the morning hours, and were asociated with continuous looking for hints of Burrowing Boa presence in and around the following physical formations: used burrows in solid soil, subsurface tunnels in loose soil, openings of hollows under Latanias and Pandanuses, crevices between and below rock masses, hollow trunks of dead palm trees. Boulders, rock pieces, logs and palmtree trunks were lifted or turned over to reveal any reptile hiding underneath it.

It is known about several snake species in the tropics that they tend to occupy underground burrows where they may stay for a considerable amount of time between feedings. It is unknown if the Round Island Burrowing Boa has such a habit, nevertheless the abundance of natural subsurface earth cavities – i. e. burrows excavated by shearwaters – and the fact that they are abandoned by the birds for a considerable proportion of the year have been facts suggesting the likelihood of reptiles (preferably snakes) occupying them at least temporarily.

In selected places where there were high number of shearwater-burrows in the neighbourhood of palm patches (e.g. in the lower section of Camp Gully), we excavated the burrows as well as their entrance and connecting tunnels using hand shovels. We did not deal, however, with burrows in the extensive shearwater colonies (e.g. upper section of the Old Camp Gully, SE of the ridge line), because these were found in totally open areas without any palms, and were heavily grown over by high associations of invasive grasses and pioneer weeds.

CONCLUSIONS

Despite an intensive search programme applying various methods (traps, day and night search, digging), unfortunately no signs of any surviving specimens of the Round Island Burrowing Boa could be revealed. Based on our results and the regrettable history of this snake, the presumption that *Bolyeria multocarinata* is extinct from Round Island and the entire world, is becoming increasingly realistic. This is in accordance with the literal categorization by Baillie & Groombridge (1996).

ACKNOWLEDGEMENTS

The financial basis for our Mauritian expedition was provided by Fauna and Flora International. We want to express our sincere thanks to the scientific staff of National Park and Conservation Service and Mauritian Wildlife Fund for making the expedition possible. Special thanks are due to Yousseff Mungroo, Krishna Puttoo, Carl Jones, and Ashok Khadun, as well as to our wives, Zita Zachar and Ágnes Varga. Academic support was provided by the Hungarian Natural History Museum and the Danube-Drava National Park Directorate. We are grateful to Dr. Le Fras Mouton (Stellenbosch, South Africa) for useful comments on the manuscript.

REFERENCES

- BAUER, A. M. & GÜNTHER, R. 2004: On a newly identified specimen of the extinct bolyerid snake *Bolyeria multocarinata* (BOIE, 1827). *Herpetozoa* 17(3/4): 179-181.
- BAILLIE, J. & GROOMBRIDGE, B. (eds.), 1996: 1996 IUCN Red Data list of threatened animals. IUCN, Gland, 368 + [10] pp.

- BOIE, H. (1827): Bemerkungen über Merrem' Versuch eines Systems der Amphibien. Oken's Isis, p. 514.
- BULLOCK, D. J. (1977): Round Island A tale of destruction. Oryx 14(1): 51-58.
- BULLOCK, D. & NORTH, S. 1975: Report of the Edinburgh University Expedition to Round Island, Mauritius, July and August 1975. Unpublished report, University of Edinburgh, 82 pp.
- BULLOCK, D. & NORTH, S. 1984: Round Island in 1982. Oryx 18(1): 36-41.
- KORSÓS, Z. & TRÓCSÁNYI, B., 2002 (2003): Herpetofauna of Round Island, Mauritius. Biota 3(1/2): 77-84.
- MERTON, D. V., ATKINSON, I. A. E., STRAHM, W., JONES, C., EMPSON, R. A., MUNGROO, Y., DULLOO, E. & LEWIS, R. 1989: A management plan for the restoration of Round Island, Mauritius. Jersey Wildl. Preserv. Trust, 46 pp.
- NORTH, S. G. & BULLOCK, D. J. 1986: Changes in the vegetation and populations of introduced mammals of Round Island and Gunner's Quoin, Mauritius. *Biological Conservation* 37: 99-117.
- NORTH, S. G., BULLOCK, D. J. & DULLOO, M. E. 1994: Changes in the vegetation and reptile populations on Round Island, Mauritius, following eradication of rabbits. *Biological Conservation* 67(1): 21-28.
- OWADALLY, A. W. & LAMBERT, M. 1988: Herpetology in Mauritius. A history of extinction, future hope for conservation. Bull. British Herp. Soc. 23: 11-20.
- TONGE, S. 1990: The past, present and future of the herpetofauna of Mauritius. *Bull. Chicago Herp. Soc.* **25**(12): 220-226.
- VINSON, J. 1953: Some recent data on the fauna of Round and Serpent Islands. Proc. Roy. Soc. Arts Sci. Mauritius 1: 253-257.
- VINSON, J.-M. 1975: Notes on the reptiles of Round Island. Bull. Mauritius Inst. 8 (1): 49-67.

REPTILES AND AMPHIBIANS FROM A MONTANE GRASSLAND: GENDAWAKI VALLEY, UDZUNGWA MOUNTAINS, TANZANIA

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INTRODUCTION

The aim of this paper is to give a list of amphibians and reptiles found in a grassland habitat on southern Udzungwa plateau. In Southern Tanzania, afromontane grasslands are important water catchment areas. In addition, they have a great biological value for their high species diversity and rate of endemism. However montane grasslands are often under-sampled in comparison to rainforest environments.

SURVEY AREA

The study habitat was a swampy grassland located along the Gendawaki valley near Bomalang'ombe village, Kilolo District, at 1880 m above sea level (08° 11' 36.7" S, 35° 51' 52.7" E). In the central part of the valley, the water level is relatively high (> 0.5 m) and slow flowing. At the sampling site, water pH was acidic (pH < 6.12 – 6.18) and water conductance low (43 μ S cm $^{-1}$). On the valley margins, tussocks of grass vegetation were interspersed with small patches of standing water, and at the sampling site *Cyperus* cf. *donudentus* L. f. (Cyperacea), *Oldenlandia wiedemanni* K. Shuman (Rubiacea), *Helichrysum odoratissimum* (L) Less (Compositae), *Ectadiopsis oblongifilia* Bentu (Asclepiadacea), and *Ayris onceps* Lam. (Xyrioaceae) were the dominant grasses.

In this area, a grassland surface of about 1 km² was sampled opportunistically by one or two researchers in December 1998 (three sampling days), February 1999 (two sampling days) and August 2000 (two sampling days). Moreover, the site was extensively sampled during six consecutive days, from the 6th to the 11th of March

2002, by three researchers. During this latter survey, a 50-m long drift fence made by a plastic sheet one metre high and buried 20 cm into the soil was installed during six consecutive days. The fence bisected twelve 15-litre plastic buckets, and it was checked twice each day to extract and identify animals. In addition to day searches, two night searches were conducted from 21h00 to 24h00 p.m. to record and collect calling amphibians. All recorded males were captured and preserved to verify identification. The keys by Broadley & Howell (1991), Channing, (2001), Schiøtz, (1999), Spawls et al., (2002), Poynton & Broadley (1985a, b; 1987; 1988) were used for species and subspecies determination.

All captured specimens were photographed in the field to record their natural coloration; voucher specimens were killed with ether and preserved in 70% alcohol. Advertising calls were recorded using a Sharp MD-MT 877H minidisk and Sony C-76 directional microphone. Calls were analysed using Canary 1.2.4 (Cornell Bioacoustic Workstation) and compared with published (Schiøtz, 1999; Channing, 2001) and unpublished sonograms or calls descriptions (Channing; Menegon; Moyer, unpublished data). All collected specimens, pictures and recordings were deposited in the Museo Tridentino di Scienze Naturali (MTSN cod.), Trento, Italy.

ANNOTATED LIST OF AMPHIBIANS AND REPTILES COLLECTED IN GENDAWAKI VALLEY, UDZUNGWA MOUNTAINS.

AMPHIBIA

PIPIDAE

Xenopus cf. petersii Bocage 1895

Voucher specimens: MTSN 5401, 5483.

Xenopus petersi sensu Poynton & Broadley (1985) and Channing (2001). The taxonomic status of this species deserves further studies.

HYPEROLIIDAE

Hyperolius puncticulatus (Pfeffer, 1893)

Voucher specimen: MTSN 5313.

Hyperolius pictus Ahl, 1931

Voucher specimens: MTSN 5276, 5277.

Leptopelis bocagii (Günther, 1865)

Voucher specimens: MTSN 5059, 5060.

This terrestrial frog was only captured in pitfall traps.

BUFONIDAE

Bufo gutturalis Power, 1927

Voucher specimens: MTSN 5034, 5035, 5302, 5303, 5304.

Bufo uzunguensis Loveridge, 1932

Voucher specimens: MTSN 5037, 5038, 5039, 5040, 5041, 5042, 5043.

The species, previously known only from preserved specimens, had an uncertain taxonomic status because of a confused description given by Loveridge (1932) and later by Grandison (1972). A recent paper by Poynton *et al.*, (2005), allows this species to be distinguished from other East African species of dwarf earless toad. It is currently known for the southern Udzungwa Mountains and Southern Highlands of Tanzania.

RANIDAE

Rana angolensis (Bocage, 1866)

Voucher specimens: MTSN 5141, 5142.

Strongylopus fuelleborni (Nieden, 1911)

Voucher specimens: MTSN 5385.

Ptychadena uzungwensis (Loveridge, 1932)

Voucher specimens: MTSN 5369, 5370.

Ptychadena porosissima (Steindachner, 1867)

Voucher specimens: MTSN 5091.

Phrynobatrachus mababiensis FitzSimons, 1932

Voucher specimens: MTSN 5218 to 5226.

Phrynobatrachus parvulus (Boulenger, 1905)

Voucher specimens: MTSN pending.

Phrynobatrachus sp. nov.

Voucher specimens: MTSN 5349, 5350, 5351.

These specimens have been identified as undescribed (Martin Pickersgill pers. com.).

REPTILIA

SAURIA:

CHAMAELEONIDAE

Chamaeleo goetzei goetzei Tornier, 1899

Voucher specimens: MTSN 5233, 5234

This subspecies is endemic to Tanzania. In the surveyed area specimens were found during the day roosting on grass stems near marshes.

SCINCIDAE

Trachylepis megalura (Peters, 1878)

Voucher specimens: MTSN 5321, 5322.

Voucher specimens: MTSN 5323, 5324, 5325.

CORDYLIDAE

Chamaesaura miopropus Boulenger, 1894

Voucher specimen: MTSN 5311.

It is restricted to southern Tanzania and west to Zambia.

GERRHOSAURIDAE

Tetradactylus ellenbergeri (Angel, 1922)

Voucher specimens: MTSN 5386, 5387, 5388.

The sample consists of one adult male, one female and one juvenile. These records extend the known species range in Tanzania of about 500 km (Spawls et al., 2002).

Tetradactylus udzungwensis Salvidio, Menegon, Sindaco and Moyer, 2004

Voucher specimens: MTSN 5389, 5390.

The species has been discovered in the Gendawaki valley during preliminary surveys and to date is known only for the type locality. The presence of an narrow endemic and grassland specialized lizard, belonging to a group having a south African radiation, is further highlighting the importance of the studied site both in term of biological richness and under a biogeographical point of view.

SERPENTES:

COLUBRIDAE

Philothamnus hoplogaster Günther, 1863

Voucher specimens: MTSN pending.

Lycophidion uzungwense Loveridge, 1932

Voucher specimens: MTSN 5283, 5320.

This endemic and poorly known species is often associated to the moist forest of the southern part of the Udzungwas. Two specimens were collected at the edge of the surveyed area confirming the capacity to also live in plantations or lawn as already stated by Spawls *et al.* (2002)

Pseudaspis cana (Linnaeus, 1758)

Voucher specimen: MTSN 5278.

Duberria lutrix shirana (Boulenger, 1894)

Voucher specimens: MTSN 5300, 5312.

Psammophylax variabilis Günther, 1893

Voucher specimens: MTSN 5291, 5292, 5367.

Crotaphopeltis hotamboeia (Laurenti, 1768)

Voucher specimens: MTSN 5230, 5296, 5297.

The species is abundant throughout moist savannahs and woodlands of East Africa. On the Udzungwa plateau it seems to substitute the congeneric *C. tornieri* in montane grasslands.

Dasypeltis scabra (Linnaeus, 1758)

Voucher specimen: MTSN 5203.

VIPERIDAE

Bitis arietans (Merrem, 1820)

Voucher specimen: MTSN 5759.

SUMMARY

To date 27 species (13 amphibians and 14 reptiles) have been identified to the species level, one of them (Phrynobatrachus) being undescribed (Martin Pickersgill pers. com.). In any case, the present list should be considered as preliminary, since other grassland species know for Udzungwa areas, such as Cordylus ukingensis (Spawls et al., 2002) and Afrixalus morerei (Schiøtz, 1999), were not found at the study site. Moreover, the relatively small sampled area constitutes only a limited surface in relation to the entire available grassland habitat. The high diversity observed, the presence of endemic taxa and the co-occurrence of several highly specialised grass-dwelling species (e.g., Tetradactylus ellenbergeri, Tetradactylus udzungwensis.. Chamaesaura miopropus and Trachylepis megalura) suggest that these montane grasslands may have a long evolutionary history. Thus grasslands in the southern highlands of Tanzania in areas, such as the Kitulo Plateau and the Udzungwas, have a great biological value for their species diversity and deserve high conservation efforts. However, with the exception of those areas included in the Udzungwa Mountains National Park, mountain grasslands have no land-use action plan and no legal conservation status, and fall within the "Gaps in Tanzania's Protected Area Network" (Rodgers, 1998). Indeed, these environments are increasingly threatened by fragmentation due to crop cultivations or tree plantations. In fact, a recently established plantation of the allocthonous Pinus patula has modified the type locality of Tetradactylus udzungwensis that is also the only locality for which the species is known. The species is of great conservation concern because its extremely restricted known distribution area and the current threats that are making it at risk of extinction, it has been searched in similar grassland, further north, inside the Udzungwa Mountains National Park, with no results.

ACKNOWLEDGEMENTS

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REFERENCES

- BROADLEY, D.G., & HOWELL, K., 1991: A Check List of the Reptiles of Tanzania, with synoptic keys. *Syntarsus*, 1: 1-70.
- CHANNING, A., 2001: Amphibians of Central and Southern Africa. Cornell University Press, Ithaca and London.
- FROST, D., JANIES, D., MOUTON, P. LE F.N., & TITUS, T., 2001: A molecular perspective on the phylogeny of the girdled lizards (Cordylidae, Squamata). Amer. Mus. Nov. 3310: 1-10
- GRANDISON, A.C.G., 1972: The status and relationships of some East African earless toads (Anura, Bufonidae) with a description of a new species. *Zool. meded. Leiden*, 47: 30-48.
- HOWELL, K., 1993: Herpetofauna of the eastern African forests. In: J.C. Lovett & S. K. Wasser (eds.), *Biogeography and Ecology of the Rain Forests of Eastern Africa*. Cambridge University Press.
- LOVERIDGE, A., 1932: Eight new toads of the genus *Bufo* from east and central Africa. *Occ. Pap. Boston Soc. Nat. Hist.* 8: 43-53.
- MENEGON, M., & SALVIDIO, S., 2000: Nectophrynoides viviparus diet. Herpetolological Review 31: 41.
- MENEGON, M., SALVIDIO, S., & TILBURY, C., 2002: A new dwarf forest chameleon from the Udzungwa Mountains of Tanzania, East Africa, (Squamata: *Rhampholeon*, Günther 1874). *J. Herp.*, **36**: 51-57.
- MEADOWS, M.E., & H.P. LINDER, H.P., 1993: A paleoecological perspective on the origin of afromontane grasslands. *J. Biog.*, **20**: 345-355.
- POYNTON, J.C., & BROADLEY, D.G., 1985a: Amphibia Zambesiaca 1. Scolecomorphidae, Pipidae, Microhylidae, Hemisidae, Arthroleptidae. *Ann. Natal Mus.*, 26(2): 503-553.
- POYNTON, J.C., & BROADLEY, D.G., 1985b: Amphibia Zambesiaca 2. Ranidae. Ann. Natal Mus., 27(1): 115-181.
- POYNTON, J.C., & BROADLEY, D.G., 1987: Amphibia Zambesiaca 3. Rhacophoridae and Hyperoliidae. *Ann. Natal Mus.*, 28(1): 161-229.
- POYNTON, J.C., & BROADLEY, D.G., 1988: Amphibia Zambesiaca 4. Bufonidae. Ann. Natal Mus., 29(2): 447-490.

POYNTON, J.C., MENEGON, M., & SALVIDIO, S. 2005: *Bufo uzunguensis* of Southern Tanzania (Amphibia: Anura): a history of confusion. *Afr. J. Herp.*, 54(2): 159-170.

RODGERS, W.A., 1998: Planning a Protected Area Network for Tanzania. Kaka-kuona, Tanzania Wildlife Magazine, Dar es Salaam 8.

SALVIDIO, S., M. MENEGON, R. SINDACO, & D. MOYER. 2004: A new species of elongate seps from Udzungwa grasslands, southern Tanzania (Reptilia, Gerrhosauridae, *Tetradactylus* Merrem, 1820). *Amphibia-Reptilia* 25: 19-27.

SCHIØTZ, A., 1999: *Treefrogs of Africa*. Edition Chimaira, Frankfurt am Main, Germany.

SPAWLS, S., HOWELL, K., DREWES, R., & ASFIE, J., 2002. A Field Guide to the Reptiles of East Africa. Academic Press, San Diego, California.



Fig. 1. Geochelone pardalis having dressing changed two months after major surgery for trauma to shell, lungs and spine. Photo: Angelo Lambiris

PRELIMINARY NOTE ON MAJOR SHELL TRAUMA IN A LEOPARD TORTOISE, GEOCHELONE PARDALIS BABCOCKI

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INTRODUCTION

On the afternoon of 5 March 2006 an adult female Leopard Tortoise, *Geochelone pardalis babcocki*, was referred for urgent treatment. It had been found on a small-holding at Ifafa, and had apparently been hacked open by farm labourers using pangas. The motive for the assault was not clear.

On examination, there was a defect measuring approximately 11 cm x 14 cm, involving Vertebrals 2 and 3. Both lungs and pleura were widely exposed, as was the vertebral column, which was severely damaged although the spinal cord and nerve roots were intact. The wound was heavily caked with blood, mud and grass fragments, and some fly larvae under loose fragments of scutes suggested that the injuries were several days old. The tortoise was conscious, alert and responsive, but severely distressed.

TREATMENT

Benzyl penicillin 250 mg was given intramuscularly, the wound was flooded with Chlorhexidine, gently blotted, then covered with gauze soaked in Povidone Iodine and covered with a large wound dressing. The patient was stabilized overnight in preparation for surgery the following morning.

Anaesthesia was induced with Ketamine HCl 600 mg and Diazepam 8 mg intramuscularly, and maintained with 4% Halothane administered via a closely-fitting mask and Ayre's T-piece. Breathing was spontaneous throughout. Induction was slow, but smooth and uncomplicated. Surgery started at 11h30 and was completed by 14h02.

The lungs and vertebrae were protected with saline-soaked gauze packs and the wound cleaned of all debris by repeated irrigation with sterile saline, swabbing, and suction. Hydrogen peroxide 10 vols. in saline was necessary to dislodge some of the more refractory debris. Necrotic portions of shell margins were excised with bone rongeurs. The lungs and pleura, and the vertebrae, were then uncovered and cleaned. Small lacerations in the lungs and pleura were sutured with 8/0 Vicryl on curved round-bodied atraumatic needles. The vertebrae were stabilized with figure-8 patterns of circlage sutures and ligatures of 6/0 polyglycolic acid. After completion of surgery, the defect was covered with a modified colostomy bag to permit post-operative drainage, and the patient transferred to a recovery room where she was kept at 30°C and 75% R.H. A further 500 mg Benzyl penicillin was given i/m,

and a slow intramuscular infusion of 0.9% saline with 5% dextrose started; 60 ml were given.

Benzyl penicillin 500 mg i/m was given daily until 18 March, and dressings changed under sedation (Medetomidine 2 mg i/m). After three days the modified colostomy bag was replaced by a sheet of sterile clear plastic fixed with adhesive tape, as there was no significant oozing from the healing tissues. This caused excessive condensation within the wound cavity, and was replaced by a very close-woven adhesive strapping applied transversely across the defect, with 50% overlap. This proved ideal, and healing by granulation proceeded apace. The dressing could be easily removed without distress, and the wound inspected an irrigated with Betadine every second or third day. On two occasions small spots of superficial fungal growth were noted, but these were quickly eliminated by irrigation with F10.

CURRENT PROGRESS

The tortoise is has recovered completely. She is currently in the care of Teresa Loades, who has established a sanctuary for ill and injured tortoises in Hillcrest. The vertebral column is now stable, the lungs and pleura have healed, and there is a good covering of fibrous tissue over the entire surface of the soft tissues (Fig. 1). She is feeding avidly and there is no evidence of any neurological damage. After an initial mistrust of humans, she has now adjusted to life in the sanctuary.

DISCUSSION

Geochelone differs from many other chelonian genera in that the vertebrae are suspended from the spine by considerably elongated neural spines, which often protects the centra and spinal cord from damage in deeply depressed fractures of the carapace that would be fatal in other species. When defects are not too large, a temporary hard plastic patch glued in place will permit the regeneration of new bone within 12 – 18 months. Such an approach is preferable to the usual technique of covering the defect with an epoxy resin patch which will, after several years, cause damage or even necrosis to the underlying shell with which it is in contact. We are still considering possible ways of permanently closing this large defect, which poses some interesting technical problems. This case also illustrates the remarkable resilience which injured reptiles may display, and the effectiveness of ventilation by means of the pharyngeal pump mechanism and intra-pulmonary muscles.

ACKNOWLEDGEMENTS

I am grateful to Prof. Fredric Frye for discussions in dealing with this case; to Dr. Robin Gatley, who took over post-operative monitoring while I was temporarily incapacitated, and for his continuing support of our work on reptiles; and to Teresa Loades, who has devoted so much time and effort in caring for tortoises. I also thank two anonymous referees for their constructive comments.

NATURAL HISTORY NOTES

REPTILIA: SAURIA

GEKKONIDAE

Pachydactylus scutatus Hewitt, 1927 Large-scaled Thick-toed Gecko

MAXIMUM SIZE

On 3 June 2005 a large specimen of *Pachydactylus scutatus* was collected from the vertical surface of a 1.5 m diameter boulder adjacent to a northwest facing sandstone bluff near Gai-as, Khorixas District, Kunene Region, Namibia (20° 43'52.9"S, 14°07'38.5" E; 2014CA) in a semi-desert area between the Ugab and Huab Rivers. The female specimen (Museum of Comparative Zoology, Harvard University MCZ R-184253) measures 50.7 mm SVL and has a broken tail.

Branch (1998. Field Guide to Snakes and Other Reptiles. Struik Publishers, Cape Town) gave the typical size range of this species as 30-40 mm SVL, with a maximum of 40 mm for females and 42 mm for males. A maximum of 42 mm was also reported by Barts (2003. Pachydactylus scutatus Hewitt. Sauria 25(4): 2), although Mertens (1955. Die Amphibien und Reptilien Südwestafrikas, aus den Ergebnissen einer im Jahre 1952 ausgeführten Reise. Abhandlungen der Senckenbergische naturforschender Gesellschaft 490: 1-172) reported a specimen from the Brandberg measuring 44 mm SVL and Bauer et al. (2002. A revision of Pachydactylus scutatus (Reptilia: Squamata: Gekkonidae) with the description of a new species from northern Namibia. Proceedings of the California Academy of Sciences 53: 23-36) signaled specimens as large as 47 mm SVL. The new specimen represents an 8% increase in maximum length. In addition, the specimen was very-heavy bodied (although not gravid). This locality is at the southwestern periphery of the range of the species.

Submitted by

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SCINCIDAE

Acontias meleagris (Linnaeus, 1758) Cape Legless Skink

XANTHIC SPECIMEN

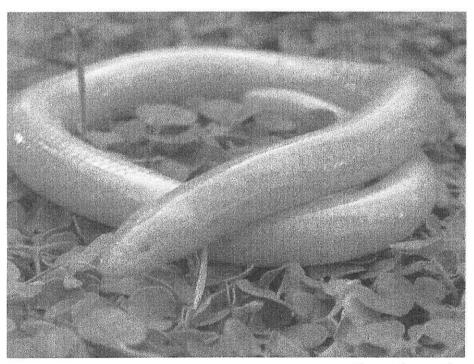
A xanthic morph of *Acontias meleagris* specimen was discovered in a garden at Baron van Reede Street, Oudtshoorn, Western Cape, South Africa (33°34' 48"S, 22°12'19"E; 3322CA), on 22 May 2005 (Fig 1).

This specimen lacked any markings, and had an SVL of 208 mm. Identification was based on distribution (Branch, 1998. Field Guide to Snakes and Other Reptiles. Struik Publishers, Cape Town). This specimen record was submitted into the South Africa Reptile Conservation Assessment (SARCA) database (Photo ref 465).

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Xanthic Acontias meleagris.

Photo: Johannes Els

LACERTIDAE

Pedioplanis inornata (Roux, 1907) Plain Sand Lizard

MAXIMUM SIZE

On 14 June 2005 an exceptionally large specimen of *Pedioplanis inornata* was collected on an exposed shale platform covered with loose shards and slabs of rock at Konkiep, Bethanie District, Karas Region, Namibia (26°44'56"S, 17° 13'16"E; 2617CA). The female specimen (Museum of Comparative Zoology, Harvard University MCZ R-184254) measures 56.0 mm SVL and has a tail length (partly regenerated) of 92.7 mm.

Branch (1998. Field Guide to Snakes and Other Reptiles. Struik Publishers, Cape Town) gave the average size range of this species as 45-50 mm SVL, with a maximum of 52 mm. The new specimen represents an 8% increase in maximum length. This specimen may be referred to the "southern form" of P. inornata (Mayer, W. & Berger-Dell'mour, H., 1986. The Pedioplanis undata complex (Sauria, Lacertidae) in Namibia. A system of parapatric species and subspecies, pp. 275-278 in van Gelder, J.J., Strijbosch, H. & Bergers, P.J.M., eds., Proceedings of the 4th Ordinary General Meeting of the Societas Europaea Herpetologica. Catholic University of Nijmegen, Nijmegen, The Netherlands).

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VARANIDAE

Varanus albigularis (Daudin, 1802) Rock Monitor

DIET

In September 2005, a large (540mm snout-vent length; 570mm tail, slightly truncated) male Rock Monitor, *Varanus albigularis* (Daudin, 1802) was brought to Bayworld by a member of the public, having been found dead-on-road in the Port Elizabeth region (exactly locality unrecorded).

Dissection of the gut revealed three subadult Angulate Tortoises, *Chersina angulata* (Schweigger, 1812), in the stomach, and the scutes of at least two other *Chersina* in the hind gut. The only other identifiable items in the gut included a single large tenebrionid beetle and a small piece of wood in the hind gut. The tortoises in the stomach measured 59-67mm total length, and all had been swallowed

whole with no obvious shell damage. One was slightly digested (the most posterior in the stomach), the other two were in perfect condition and had probably both been recently ingested. The numerous chelonian scutes in the hind gut were all referable to *Chersina* by virtue of their shape and colouration, and included two characteristically-shaped first vertebral scutes of different sizes (9 and 14mm wide).

Tortoises appear to form a significant component of the diet on the Rock Monitor in the Cape region of South Africa, but have only rarely been recorded in the species' diet elsewhere (Branch 1991). The presence of at least five tortoises in the gut of this individual, to the exclusion of almost all other prey, indicates that tortoises may have been selectively targeted for food. The monitor is relatively large (1110mm TL), and it had a maximum vertical gape of approximately 50mm, and 45mm horizontal gape. It is probable that the subadult Angulate Tortoises consumed constitute the maximum size that can be swallowed intact.

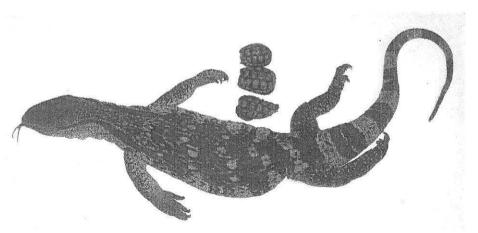
The *Varanus* was dissected as part of an educational lecture at Bayworld and was not retained. The *Chersina* prey items have been accessioned together in to the Port Elizabeth Museum herpetology collection (PEM R16848).

Literature cited

BRANCH, W.R. 1991. The Regenia Registers of "Gogga" Brown (1869 1909). "Memoranda on a species of Monitor or Varan". Early observations on the rock monitor *Varanus albigularis*, supplemented with additional notes on the biology of southern African monitors. In: W. BOHME and H G HORN (eds.). Advances in Monitor Research, Bonn, *Mertensiella* 2: 57-110.

Submitted by

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Varanus niloticus with three Chersina angulata recovered from the stomach. Photo: W.R. Branch

COLUBRIDAE

Lamprophis capensis Duméril & Bibron, 1854 Brown House Snake

FEEDING / MORTALITY

I was attracted to a commotion in my garden in Durban North one dusty spring day last September or October, by one of my Alsatians. A Brown House Snake (*Lamprophis capensis*) approximately 70 cm total length had seized a Speckled Mousebird (*Colius striatus*) from its dust-bath and was in the process of constricting it. I called off my dog and left the snake to its meal.

A few days later I was dismayed to discover, under the cover of some bushes, the otherwise undamaged House Snake long dead and with about 8 cm of the Mousebird's tail feathers protruding from its mouth. The barbs on the retrices were presumably sufficiently rigid to prevent regurgitation.

Had the snake been much larger, say 120-150 cm, the possibility of successful ingestion and digestion is open to conjecture. It seems that the tail of the Mousebird may have a previously unsuspected species survival value.

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ATRACTASPIDIDAE

Homoroselaps lacteus (Linnaeus, 1754) Spotted Harlequin Snake

DIET / PREDATION

On 21 January 2005, at 19h38, I observed a Spotted Harlequin Snake, *Homoroselaps lacteus* (total length 405.7 mm) eating a Russet Slug Eater, *Duberria lutrix lutrix* (total length 347 mm). The observation was made on a perfect summer evening in Campsbay, Cape Town (33° 57' 57" S, 18° 22' 44" E). Approximately 200 mm of the *Duberria* was swallowed before it was regurgitated, the body at this point being too thick for the *Homoroselaps* to swallow. The *Duberria* had died prior to regurgitation.

Branch (1988. Field Guide to the Snakes and Other Reptiles of Southern Africa. First ed., Struik, Cape Town) and Marais (A Complete Guide to Snakes of Southern Africa. Second ed., Struik Publishers, Cape Town) mention that Homoroselaps lacteus preys on other snakes, but do not specify the types of snakes eaten except for the Blind Snakes (Typhlops). They also mention that Duberria lutrix lutrix is eaten by other snakes, but again without indicating which species.

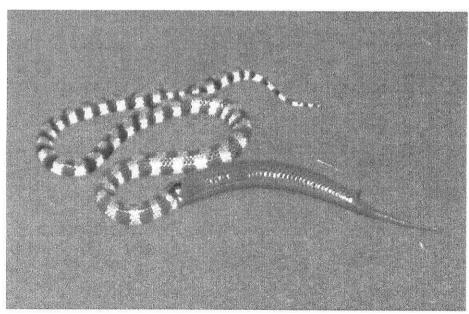
The EMBL Reptile Database http://www.embl-heidelberg.de/~uetz/LivingReptiles.html also gives no specific information in this respect.

Acknowledgement:

I would like to thank Marius Burger for the confirmation of the identification of the two species in this note, and for scrutinising the format and content of this note.

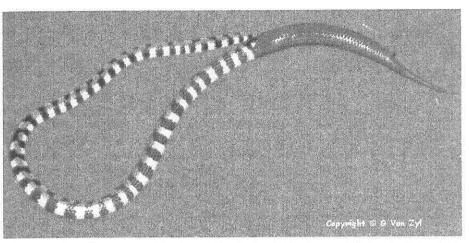
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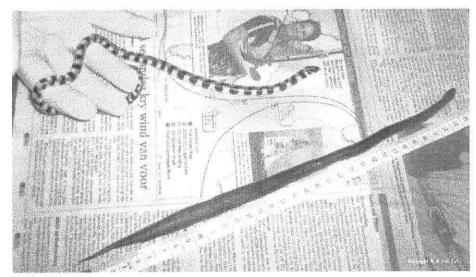
Homoroselaps lacteus sawallowing Duberria lutrix lutrix.

Photo: © G.Van Zyl



Homoroselaps lacteus sawallowing Duberria lutrix lutrix.

Photo: © G.Van Zyl



Homoroselaps lacteus and Duberria lutrix lutrix.

Photo: © G.Van Zyl

ELAPIDAE

Naja nivea (Linnaeus, 1758) Cape Cobra

SCAVENGING

On the 24 November, 2005, at 11h45, a Cape Cobra, *Naja nivea*, approximately 1.2m in length, was observed to approach a road-killed Skaapsteker, *Psammophylax rhombeatus*, and after a very brief inspection began to ingest the dead snake. The posterior half of the Skaapsteker was completely flattened, and with numerous pieces of small gravel adhering to the body. The cobra swallowed the entire snake, gravel included, in just over 55 seconds; the Skaapsteker was estimated to be 60cm in total length. The cobra then slowly moved off into the surrounding habitat, which consisted of limestone fynbos.

The observation was made at DeHoop Nature Reserve, on the main gravel road that runs from the entrance gate - 34°28'52"S, 20°25'56"E.

It is well known that *N. nivea*, and other cobras, prey on snakes, and this record follows on from the interesting observation of Loehr, 2005 (*Naja nigricollis woodi* (Pringle 1955) Black Spitting Cobra, Scavenging. *African Herp News* 38: 27) with regard to the scavenging behaviour of *N. nigricollis woodi*.

Submitted by

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VIPERIDAE

Bitis armata (Smith, 1826) Southern Adder

PREDATION

African snakes are subject to a wide range of predators, and some, especially a number of bird species, are specialist snake-eaters. Small snakes obviously attract a wider suite of predators, including smaller birds.

On 27 November, 16h30, at DeHoop Nature Reserve, a common Fiscal Shrike, Lanius collaris, was observed perched atop a bush with a small Southern Adder, Bitis armata, dangling from its bill, which it was holding by the head. The Southern Adder was approximately 20cm in total length, and was obviously already dead hanging limp from the bird's bill.

Interestingly, at around the same period, a Fiscal Shrike was seen to catch a small Striped Mouse, *Rhabdomys pumilio*. Although not snake-related, the interesting point about this observation was that the bird used its feet in the manner of a larger bird of prey. Not having actually observed the shrike seizing the Southern Adder, it is not known if it was caught by feet or bill; but it does emphasise that this

very common bird is obviously most efficient in dealing with small venomous snakes.

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Bitis armata (A. Smith, 1826) Southern Adder

SEDENTARY BEHAVIOUR

The Southern Adder is a rare and potentially endangered species which probably already deserves categorisation as vulnerable (Branch, 1999: Dwarf adders of the *Bitis cornuta-inornata* complex (Serpentes: Viperidae) in Southern Africa. *Kaupia*, 8: 39-63.). This author also states that this species status should be closely monitored, and toward this end a programme of ecological research was initiated in September, 2004 at DeHoop Nature Reserve in the Western Cape.

Individual adders were identified by photo ID and ventral scale clipping; the scale clippings were preserved for DNA analysis. From September, 2004 to November, 2005 eleven live individual adders were recorded; eight females and three males. During that time four of the females were recaptured on more than two occasions; the highest recapture was for two females which were both recaptured four times. One of the recaptures was a female in a bush at a height of 1.8 metres (Phelps, 2006a: *Bitis armata*, Southern Adder, Arboreal Behaviour. *African Herp News* 39: 14-16.). All recaptures were within twenty metres of the place of origin.

The recaptures strongly suggests a definitive, and comparatively small, home range for females at least. These early results also indicate three separate subpopulations within the general area; being separated by three, four, and six kilometres respectively, and representing both sand fynbos and limestone fynbos. Although we still know very little about how adders are distributed throughout any given habitat it may well be that sedentary behaviour is inherent for a number of species (Phelps, 2004: Population dynamics and spatial distribution of the adder *Vipera berus* in southern Dorset, England. *Mertensiella*. **15**: 241-258; 2006b: *Bitis arietans*, Puff Adder, Sedentary Behaviour. *African Herp News*, **39**: 13-14).

Knowing the location of these populations is also vital as an aid to management when considering controlled burning and other dynamic techniques.

Acknowledgment:

My thanks to CapeNature and the staff at DeHoop Nature Reserve.

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Bitis armata (A. Smith, 1826) Southern Adder

PREY ITEMS

Since a study of the Southern Adder was initiated in September 2004 at DeHoop Nature Reserve a number of observations have been made with regard to prey items including actual observations of feeding in the wild.

Three records consisted of regurgitated items. All the Southern Adders were adult females of between 28 and 31cm total length. Two items were lizards; an adult Red-sided Skink, *Trachylepis homalocephala*, and a sub-adult Cape Skink, *Trachylepis capensis*. The third item was a young mouse, probably *Rhabdomys pumilio*, regurgitated by a 32cm female.

Another record for an 18cm male road-killed southern adder was a small *Pedio-* planis sp.

Two observations were made of actual feeding. The first was an adult female of 28cm feeding on an adult *Trachylepis homalocephala*; the lizard was ingested in seven minutes. The second was another female of 32cm feeding on a young *Rhabdomys pumilio*; the mouse was a large meal, and took 22 minutes to consume.

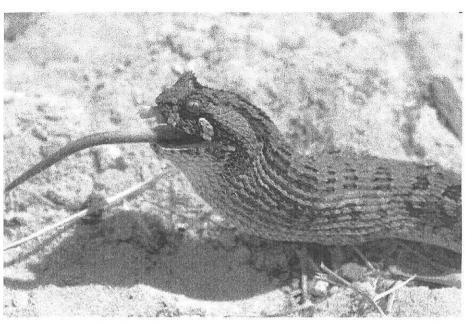
Interestingly, all feeding observations were made in the summer months and took place between 08h30 and 10h00.

Acknowledgement:

My thanks to CapeNature and the staff at DeHoop Nature Reserve.

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Bitis armata swallowing Rhabdomys pumilio.

Photo: Tony Phelps

GEOGRAPHICAL DISTRIBUTION

GEOGRAPHICAL DISTRIBUTION

AMPHIBIA: ANURA

BUFONIDAE

Bufo gutturalis Power, 1927 Guttural Toad

INTRODUCED POPULATION

South Africa, Western Cape Province, Cape Peninsula, Constantia Valley -10 km due S of central Cape Town $-34^{\circ}00'19.1"$ S, $18^{\circ}25'43.0"$ E (3418AB); 80 m above sea level; January 2000 to February 2006; K. Louw and A.L. de Villiers; CapeNature biodiversity record CNCH-6915.

This is the first and only recorded population of this species in the Western Cape Province. It was first noticed in January 2000 but there is uncertainty as to how this species came to establish itself in the Constantia valley. The population possibly originated from toads accidentally introduced with a consignment of garden plants from a source within this species' extensive distribution range. This extends from the Northern Cape Province and Eastern Cape Province area, north of 31°S latitude and east of 27°E longitude, to Uganda and Kenya in East Africa.

Since their discovery in the Constantia Valley, these toads have been seen and heard regularly in less than 2 km² of the residential area. This appears to be their total extent of distribution in the area at present; and is an area in which breeding only appears to be attempted in artificial water bodies such as garden ponds. Although a small stream flows through this area of the Constantia Valley (catchment of the Diep River), it reduces to a trickle in the summer months and does not provide suitable breeding habitat for this species. However, there is concern that it possibly provides a corridor area for this species to reach suitable breeding habitat downstream and in large wetland areas of the Cape Flats lowlands. Unfortunately, this would also, potentially, bring it into contact with the endangered Western Leopard Toad, *Bufo pantherinus*.

During the *B. gutturalis* breeding season of about September to March in the Constantia valley, the males have been heard calling from garden ponds off Norton Dingle Drive (Bel Ombre); Le Seur, Versveld; and Sun Valley Avenues (Hohenort). The biggest concentration of calling toads has been heard calling from a large garden pond off Norton Dingle Drive, and this is also where this species was first discovered in the Constantia Valley. At this pond, at least 10 calling males have been

heard at a time, but less have been heard calling at the other, smaller breeding sites. An attempt has been made to eradicate this population – about 30 adults have been destroyed up to now – but this is not easy and it has not yet been possible to organize access to some of the properties where the species occurs. This includes the property that has the main breeding site. The situation is being monitored and the attempt to eradicate the population must continue.

This distribution record was submitted to the Southern African Frog Atlas Project in 2003 but without the detail; and the nearest record within the natural distribution range of *B. gutturalis* is in the Vosburg area of the Northern Cape Province (3022DB), about 560 km due NE of the Constantia valley (Minter, L.R., Burger, M., Harrison, J.A., Braack, H.H., Bishop, P.J. and Kloepfer, D. (eds.), *Atlas and Red Data Book of the Frogs of South Africa, Lesotho and Swaziland*. SI/MAB Series #9, Smithsonian Institution, Washington, DC and the Avian Demography Unit, University of Cape Town, Cape Town).

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REPTILIA: SAURIA

GEKKONIDAE

Lygodactylus capensis capensis (A. Smith, 1849) Cape Dwarf Gecko

INTRODUCED POPULATION

South Africa, Western Cape Province, Stellenbosch district, Aspidistra Garden Centre at Lynedoch – 11 km due SW of Stellenbosch and 30 km due ESE of central Cape Town – 33°59'37.5"S, 18°45'48.4"E (3318DD); 20 m above sea level; 2004 and 9 March 2006; A.L. de Villiers and M.E. de Villiers; one specimen collected on 9 March 2006 – CapeNature biodiversity record CNCH-6914.

This is the first time this species has been recorded in the Western Cape Province. It is indigenous to the eastern half of the subcontinent but has established itself in the southwestern Cape after being accidentally introduced with, presumably, nursery plants. The author first spotted a few of these geckos at the Aspidistra Garden Centre in November 2004, but the owner has been aware of their presence since the beginning of 2004, at least. When inspecting this locality on 9 March 2006, a healthy colony of these geckos was evident with over 20 adults and juveniles being

observed in 30 minutes (personal observation). On the same date, two other nurseries were checked. At one of these, situated about 15 km due SE of Aspidistra Garden Centre, eight of these geckos were seen (Garden Pavilion, Somerset West (3418BB), 34°06′10.1"S, 18°51′15.1"E). Owing to its invasive potential, *Lygodactylus c. capensis* probably has a much wider distribution in this province and further inspections will be done at other Western Cape nurseries.

The nearest published locality is an introduced colony at Port Elizabeth, situated about 630 km to the east in the Eastern Cape Province; and other introduced colonies have been found at Grahamstown, also in the Eastern Cape Province, and in the Free State Province at Bloemfontein (Branch, Bill (W.R.) 1988. Field Guide to Snakes and Other Reptiles of Southern Africa. Third Edition. Struik Publishers, Cape Town).

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REPTILIA: SERPENTES

VIPERIDAE

Bitis caudalis (A. Smith, 1839) Horned Adder

South Africa, Oudtshoorn, Little Karoo, Western Cape, 33°33'57"S, 22° 12'51"E, (3222CA), altitude 300m a.s.l.

A male weighing 22g, and with a total length of 365mm (SVL 325 mm; T 40 mm) was found beneath leaf litter at 09h30, on 20 February 2006, at Cango Wildlife Ranch, Oudtshoorn. The general colouration was quite pale; the ground colour being light buff with pinkish brown markings. The ventral scales numbered 141, the anal was entire, and the paired subcaudals numbered 27.

The specimen was quite thin and infested with mites. There was also a healed wound approximately 4cm behind the head on the dorsal surface; (a possible predator attack?). Despite treatment the specimen subsequently died two days later, and was preserved in ethanol after extracting a tissue sample for DNA analyses. The specimen is now held at the Cape Reptile Institute, ref.no. PhX04.

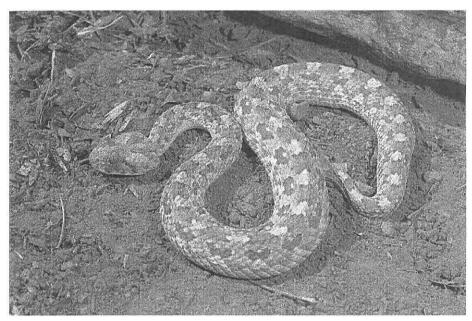
This appears to be the most southerly record for Bitis caudalis to date. Recorded localities in the Little Karoo, and southern Western Cape, include Prince Albert,

Rooiberg, Willowmore, and Worcester (FitzSimons, 1962, *Snakes of Southern Africa*. Purnell, Cape Town.) The nearest and most recent record for the species is 70 km north west at Gamaskloof (CapeNature, *pers. Comm.*).

The habitat adjacent to the Cango Wildlife Ranch is extensive karroid sandveld, and surveys will be conducted in the area in the near future.

Submitted by

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Bitis caudalis from Oudtshoorn.

Photo: Tony Phelps

HERPETOLOGICAL SURVEYS

A HERPETOLOGICAL SURVEY OF PIKETBERG, WESTERN CAPE PROVINCE, SOUTH AFRICA.

INTRODUCTION

A herpetological survey was carried out at Piketberg, Western Cape Province, 3218DA, 3218DB, 3218DC, 3218DD, from 16 – 18 August 2004.

Piketberg forms the most westerly extension of the Cape Fold Mountains but is separated from the main range by a broad, flat plain, ca. 15km across, with renosterveld fragments between farmland. The nearest mountain massif is the Olifants River Mountain. Piketberg rises sharply from the surrounding plain on the eastern edge peaking at 1458 meters. It is unusual in that it straddles the border of the winter rainfall area to the east and south, and the arid west coast, and contains a mosaic of montane fynbos and succulents. As such, its unique geographic position supports both arid and montane fynbos-adapted herpetofauna. None of the inselberg is under formal protection, although a number of orchards and vineyards have set aside private lands that are informally protected at the discretion of the owners.

SPECIES LIST

This species list is supplemented with the confirmed records in the CapeNature Biodiversity database. (Abbreviations: CNDB, CapeNature database; PEM, Port Elizabeth Museum). DNA samples were taken from all individuals unless otherwise noted.

Amphibia (Present Survey)

MICROHYLIDAE:

Breviceps gibbosus (Linnaeus, 1758)

One adult was found under a rock on sandy substrate in montane fynbos (32°46'48"S, 18°45'00"E, alt. 730m).

Breviceps montanus Power, 1926

One adult female was found under a rock on sandy substrate in montane fynbos (32°46'48"S, 18°44'24"E, alt. 840m). This is the first recorded occurrence of this species on the Piketberg.

RANIDAE:

Afrana fuscigula (Duméril & Bibron, 1841)

Abundant, calling continuously from the area near one of the dams that supplies Mouton's Valley with water (32°10'48"S, 18°57'36"E, alt. 733m).

Strongylopus grayii (Smith, 1849)

One adult male was found in an area of wet, sandy ground covered by restioid vegetation that was flooded due to heavy rains the night before (32°10'48"S 18°57'36"E, alt. 733m). Several others were heard calling in same vicinity.

Amphibia (Historical records)

Historical records of amphibian occurrences on Piketberg (prior to the current survey) as recorded in CapeNature's Biodiversity Database include the following:

BUFONIDAE:

Bufo angusticeps Smith, 1848

Nine records, five from the SAFAP. A species closely associated with Fynbos throughout its distribution.

Bufo rangeri Hewitt, 1935

Ten records, five from the SAFAP. A very widely distributed species in South Africa from the Western Cape to Gauteng and KwaZulu-Natal.

MICROHYLIDAE:

Breviceps gibbosus (Linnaeus, 1758)

Six records: one from 1978, five from the SAFAP. A species generally restricted to the south-western parts of the Western Cape, requiring Fynbos or Renosterveld with good cover.

Breviceps rosei Power, 1926

Three records, two from 1978, one during the SAFAP. This species occurs abundantly in the surrounding Sandveld.

RANIDAE:

Afrana fuscigula (Duméril & Bibron, 1841)

Two records both from the South African Frog Atlas Project (SAFAP). A very widely distributed species in South Africa from the Western Cape to Gauteng and KwaZulu-Natal.

Strongylopus grayii (Smith, 1849)

Twelve records, eight from the SAFAP. A very widely distributed species in

montane and coastal habitats from the Western Cape to Limpopo and KwaZulu-Natal provinces.

Tomopterna delalandii (Tschudi, 1838)

Ten records, five from the SAFAP.

Cacosternum capense Hewitt, 1925

A single record from the SAFAP. This species is restricted to low-lying Fynbos and Renosterveld and favours more open habitat.

Reptilia (Present Survey)

GEKKONIDAE:

Afrogecko porphyreus (Daudin, 1802)

One gravid female, one male, and one juvenile were found in rock cracks at three different localities. The juvenile was very wet when found. (32°46'12"S, 18°45'00"E, alt. 808m; 32°45'36"S, 18°44'24"E, alt. 807m; 32°46'48"S, 18°44'24"E, alt. 786m). This is the first recorded occurrence of this species on the Piketberg.

Pachydactylus bibronii A. Smith, 1846

A single adult-sized individual (SV 77.8mm) was caught in a dry rock crevice (32°46'48"S, 18°44'24"E, alt. 786m).

Pachydactylus formosus A. Smith, 1849

One juvenile and one adult male were found in rock crevices (32°46'12"S, 18°45'00"E, alt. 808m and 32°46'48"S, 18°44'24"E, alt. 786m, respectively).

Pachydactylus geitje (Sparmann, 1788)

Two juveniles were found at the same location under rocks in moist ground following heavy rain the previous evening (32°45'36'S, 18°45'00"E, alt. 802m). This is the first recorded occurrence of this species on the Piketberg.

Goggia hexapora (Branch, Bauer & Good, 1995)

One female, one male, and one juvenile were caught in rock cracks at three different locations. A fourth unsexed individual was also caught (32°46'12"S, 18°45'00"E, alt. 808m; 32°46'12"S, 18°45'00"E, alt. 808m; 32°46'48"S, 18°44'24"E; and 32°45'36"S, 18°45'00"E, alt. 786m respectively).

AGAMIDAE:

Agama atra atra (Daudin, 1802)

One male individual was observed on a large boulder and a juvenile was sam-

pled (32°46'48"S, $18^{\rm O}46'$ 52"E, 830m, and 32°46'12"S, $18^{\rm o}45'00$ "E 820m respectively).

SCINCIDAE:

Trachylepis homalocephala (Wiegmann, 1828)

A breeding male was observed running on the rocks and through the Fynbos, but was not obtained for sampling (32°46'48"S, 18°44'24"E, alt. 835m)

CORDYLIDAE:

Cordylus cordylus (Linnaeus, 1758)

One juvenile was found under a small rock. This individual was dark in colour, similar to the west coast form of this species (32°46'48"S, 18°44'24"E, alt. 820m). This is the first recorded occurrence of this species on the Piketberg.

Cordylus oelofseni Mouton & van Wyk, 1990

A number of individuals were observed and two were sampled from the same locality. All individuals were seen inside rock cracks usually on large boulders. Some individuals inhabited extensive crack systems with both vertical and horizontal cracks (32°46′48″S, 18°44′24″E 820m)

Cordylus polyzonus A. Smith, 1836

An adult female was found in a large horizontal rock crack in a large boulder. This individual was slate-black in colour on the dorsal side, and dull grey on the ventral side (32°46'48"S, 18°44'24"E, alt. 820m).

COLUBRIDAE:

Lamprophis guttatus (A. Smith, 1843)

A female or juvenile was found in a tight crack on a boulder surrounded by montane fynbos (SV 28.5mm, TL 56,8mm; 32°46'12"S, 18°45'00"E, alt. 820m)

Reptilia (Historical records)

Historical records of reptile occurrences on Piketberg (prior to the current survey) as recorded in CapeNature's Biodiversity Database include the following:

PELOMEDUSIDAE:

Pelomedusa subrufa (Lacépède, 1789)

A single record.

TESTUDINIDAE:

Chersina angulata (Schweigger, 1812) Eight records. Homopus areolatus (Thunberg, 1787)
Twelve records.

GEKKONIDAE:

Goggia hexapora (Branch, Bauer & Good, 1995) Seven records.

Pachydactylus bibronii A. Smith, 1846 Ten records.

Pachydactylus formosus A. Smith, 1849 Fourteen records.

AGAMIDAE:

Agama atra atra (Daudin, 1802)
Thirteen records from Mouton.

SCINCIDAE:

Acontias meleagris meleagris (Linnaeus, 1758) A single record.

Trachylepis capensis (Gray, 1830)
Two records.

Trachylepis variegata (Peters, 1869)
Five records.

LACERTIDAE:

Nucras tessellata (A. Smith, 1845) Four records.

Pedioplanis lineoocellata pulchella (Gray, 1845) A single record.

CORDYLIDAE:

Cordylus oelofseni Mouton & van Wyk, 1990 Eleven records.

Cordylus polyzonus A. Smith, 1836 Twenty-eight records.

Pseudocordylus capensis (A. Smith, 1838)

Two records from Keurboschfontein. Tissue samples of this species will be

valuable for comparisons of Cederberg and south Western Cape populations and should be a target for future surveys.

COLUBRIDAE:

Dasypeltis scabra (Linnaeus, 1758) A single record.

Lamprophis capensis Duméril & Bibron, 1854 A single record.

Lamprophis guttatus (A. Smith, 1843) A single record.

Psammophis namibensis Broadley, 1975

A single record from a road kill near Aurora. The taxonomy of the leightoni group of Psammophis still warrants further investigation as the snakes from this area appear to be intermediate between P. leightoni and P. namibensis.

Psammophis notostictus Peters, 1867 A single record.

VIPERIDAE:

Bitis arietans arietans (Merrem, 1820)
A single record.

DISCUSSION

The combination of species found in typically arid habitats, with those more typically found in fynbos on Piketberg makes this an area of particular interest from biogeographic perspective. Most notably, the dark form of *C. cordylus* is typical of the arid west coast, and the presence of this form on Piketberg indicates the association of this inselberg with the west. The melanistic form of *Cordylus polyzonus* is characteristic of cool, dry areas, as is the occurrence of *C. oeloefseni. Pachydactylus formosus* and *P. bibronii* are species that are normally found in dry fynbos and karroid vegetation. In apparent contrast, the presence of *Breviceps montanus* and *B. gibbosus* are indicative of typical winter rainfall montane fynbos regions more characteristic of the Cape Floristic Region. The occurrence of both arid adapted species and those more typical of the wetter fynbos probably indicates that Piketberg is situated in a transition zone between these two major biomes.

The bulk of the distribution data for this area is the result of formal surveys notably those of Mouton, Western Cape Nature Conservation (CapeNature) and the South African Frog Atlas Project. Given that Piketberg is the only major massif in

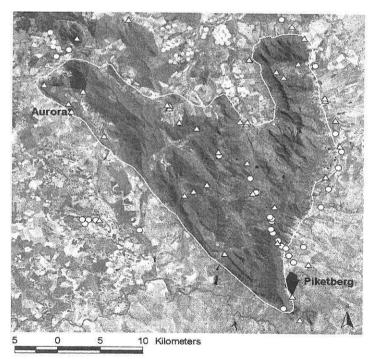
this transitional zone with this mosaic of habitats, a comprehensive survey of the herpetofauna of this inselberg focussing on species not yet known from this area will be valuable. Such a survey should include pitfall and funnel trapping on drift fences to improve the sampling of fossorial and species rarely encountered by active searching.

ACKNOWLEDGEMENTS

We would like to thank the owners of Mouton Valley orchard, especially Michele Stark, for access to the mountain. We are also grateful to CapeNature, Porterville office, for the loan of a 4x4 vehicle.

Submitted by:

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Map showing boundary of the Piketberg massif as defined in this note. Triangles indicate reptile records and circles indicate amphibian records.

INSTRUCTIONS TO AUTHORS

Contributions (preferably in Word 6.0, 7.0 or Windows XP) submitted in an incorrect style (see guide-lines below) will be returned to the authors.

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)^(1,2) (bold, centred); Author's address(es) (use superscripts with authors' names and addresses if more than one author); HEADINGS (bold, centred) and SUBHEADINGS (bold, aligned left) as required; REFERENCES, following the formats given below:

BRANCH, W.R., 1998: Field Guide to the Snakes and Other Reptiles of Southern Africa. Third edition. Struik, Cape Town.

BROADLEY, D.G. 1994: The genus *Scelotes* Fitzinger (Reptilia: Scincidae) in Mozambique, Swaziland and Natal, South Africa. *Ann. Natal Mus*, 35: 237-259.

COOK, C.L., & MINTER, L.R., 2004: Pyxicephalus adspersus Peters, 1854. pp. 303-305, in Minter, L.R., Burger, M., Harrison, J.A., Braack, H.H., Bishop, P.J., and Kloepfer, D. (eds.), Atlas and Red Data Book of the Frogs of South Africa, Lesotho and Swaziland. SI/MAB Series #9. Smithsonian Institution, Washington, DC.

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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.

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The *Bulletin* publishes sparsely 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.

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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).

PHOTOGRAPHS AND FIGURES

Photographs and figures should be submitted as separate JPEG files, and not embedded in the text. The name of the photographer should be given, if not the author or senior author of the article.

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