

# AFRICAN HERP NEWS

No. 33

JULY 2001

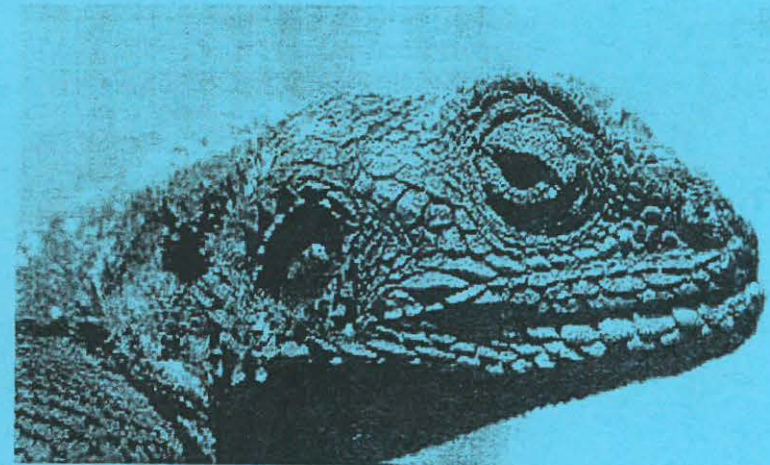
## CONTENTS

|   |    |
|---|----|
| EDITORIAL   | 1  |
| SHORT COMMUNICATIONS  |    |
| ANTHONY, B. Hungarian Amphibian Biodiversity Project  | 2  |
| YARNELL, R. and JONES, B.H. Behaviour and morphology of <i>Agama mwanzae</i> in Northern Tanzania | 4  |
| NATURAL HISTORY NOTES   |    |
| BARTS, M. AND W. D. HAACKE. <i>Pachydactylus tsodiloensis</i>                                     | 11 |
| GIRARD, F. <i>Pachydactylus austeni</i>   | 12 |
| PIETERSEN, E. AND PIETERSEN, D. <i>Acanthocercus atricollis</i>                                   | 14 |
| VAN WYK, J. <i>Naja mossambica</i>  | 15 |
| PIETERSEN, D. AND PIETERSEN, E. <i>Leptotyphlops longicaudus</i>                                  | 16 |
| GEOGRAPHICAL DISTRIBUTION   |    |
| POBLETE, A.G.H. <i>Pseudohaje goldi</i>   | 18 |
| RECENT AFRICAN HERPETOLOGICAL LITERATURE  | 19 |
| HERPETOLOGICAL BOOKS  | 27 |
| NEWS & ANNOUNCEMENTS  | 29 |
| RESEARCH NEWS   | 41 |

ISSN 1017-6187

# AFRICAN HERP NEWS

NEWSLETTER OF THE  
HERPETOLOGICAL ASSOCIATION OF AFRICA



No. 33

July 2001

# HAVE YOU PAID YOUR FEES?

Remember they are due  
on the 1st of each year.

Thank you  
  
Treasurer

## HERPETOLOGICAL ASSOCIATION OF AFRICA

### 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 newsletter, *African Herp News* (which includes short communications, life history notes, geographical distribution notes, venom and snakebite notes, short book reviews, bibliographies, husbandry hints, announcements and news items).

### NEWSLETTER EDITOR'S NOTE

Articles will be considered for publication provided they are original and have not been published elsewhere.

Articles may be submitted for peer review (at least two reviewers) at the Editor's discretion. Lists of reviewers will be published in the newsletter from time to time.

Authors are requested to submit long manuscripts on disc or by e-mail in Word 6.0/7.0 format.

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 the author's name and newsletter reference are given.

### TYPING AND PRODUCTION:

Alison Leslie and Marius Visser, Departments of Conservation Ecology and Zoology, University of Stellenbosch.

## COMMITTEE OF THE HERPETOLOGICAL ASSOCIATION OF AFRICA

### CHAIR AND NEWSLETTER EDITOR

Dr. A. J. Leslie, Department of Conservation Ecology, University of Stellenbosch, Private bag X1, Matieland, 7602, South Africa. E-mail: aleslie@land.sun.ac.za

### SECRETARY/TREASURER

Mr. F.L. Farguharson, P. O. Box 20142, Durban North, 4016, South Africa. E-mail: haasec@freemail.absa.co.za

### JOURNAL EDITOR

Dr. Graham Alexander, Department of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Private Bag 3, WITS, 2050, Gauteng, South Africa. E-mail: graham@gecko.biol.wits.ac.za

### ADDITIONAL COMMITTEE MEMBERS

DR. M. J. WHITING, Department of Animal, Plant and Environmental Sciences, University of the Witwatersrand, Private Bag 3, WITS, 2050, Gauteng, South Africa.

MR. M. F. BATES, Department of Herpetology, National Museum, P. O. Box 266, Bloemfontein, 9300, South Africa.

DR. W. R. BRANCH, Department of Herpetology, Port Elizabeth Museum, P. O. Box 13147, Humewood, 6013, South Africa.

MR. R. M. DOUGLAS, Department of Herpetology, National Museum, P. O. Box 266, Bloemfontein, 9300, South Africa.

MR. W. D. HAACKE, Department of Herpetology, Transvaal Museum, P. O. Box 413, Pretoria, 0001, South Africa.

COVER ILLUSTRATION: Mwanza agama (*Agama mwanzae*). Photograph by Richard Yarnell

## **EDITORIAL**

Even though the winter blues have arrived in the Western Cape region of South Africa, symposium fever has already hit the town of Stellenbosch! Approximately 60 delegates will be attending the 6<sup>th</sup> HAA Symposium in September and it promises to be a very successful event, what with a number of oral presentations, posters, slide shows and displays, and some overseas guests. Further conference details, including a preliminary programme, are available on the HAA's website (<http://www.wits.ac.za/haa>). Keep checking the site as a detailed programme will be available by mid-August. This issue of the *African Herp News* also contains some important conference details. See the section on 'News and Announcements' on page 31.

Please also take note of the "Research News" section on page 42 of this issue. Dr Colin Tilbury is carrying out a study entitled: "Hypersensitivity to snake venom – an occupational hazard" and he needs your help. Included in this issue is a questionnaire and self-addressed and stamped envelope. Please take a few minutes to answer the questionnaire and to return it to Dr Tilbury as soon as possible. Your help will be much appreciated!

Another important issue... we would like to update our current e-mail list for all members who are connected! Please send a short e-mail with all your current contact details to the Chair at: [aleslie@land.sun.ac.za](mailto:aleslie@land.sun.ac.za)

Once again, a big thank you to those who contributed to this issue.

See you all at the symposium in September.

Alison Leslie

*Chair and Newsletter Editor.*

**SHORT COMMUNICATIONS****"Monitor 2000"****Hungarian Amphibian Biodiversity monitoring and education project**

Brandon Anthony

Lead Instructor, Environmental Sciences & Policy Dept. Central European University, Nadoru. 9, Budapest 1051, Hungary

**Project Summary**

Because of a growing global concern over declining amphibian populations, and the recognition that amphibians are valuable indicators of biodiversity due to their bi-phasic lifestyle, a world-wide Declining Amphibians Population Task Force (DAPTF) was initiated by the IUCN Species Survival Commission in 1989 to research declines and monitor populations. Many countries, including the UK, USA, Canada, and Hungary are participating in this effort. Under the umbrella of this Task Force, an innovative technique utilizing volunteers to monitor amphibian calls along selected routes (termed "road call counts") was developed and initiated in North America in 1992. This program is supported both by the Canadian and US federal governments, and has been contributing to public environmental education and gaining volunteer participation. In Hungary, however, amphibian conservation is a relatively new focus of environmental education, and has been recognized as an area of need due to the prejudice, unwarranted fears and scarcity of information on this animal group.

To address this problem, the road call count method was tested in Hungary in 1998 through the CEU Environmental Sciences & Policy Department and the Toad Action Group (also serving as DAPTF HUNGARY) to examine its possible adoption. Both a technical and social study were conducted. The results indicate that this method is not only time- and cost-effective, but also has a wide interest among potential participants, and will greatly serve to increase environmental education in Hungary. This method has now also been recognized by the Ministry of Environment in Hungary, and will be adopted into the range of techniques to be promoted in its National Biodiversity Monitoring Program.

'MONITOR 2000' is a follow-up initiative designed to introduce this new amphibian monitoring method to volunteers in Hungary, and indeed to other

representatives of Central & Eastern European (CEE) countries. This initiative is of critical conservation importance, as:

1. Hungary was first in legally protecting its amphibian fauna but is far behind in knowledge collected on them, so general information is badly needed;
2. Hungary's amphibian fauna is internationally valuable. It contains three species from the International Red Data Book.
3. Hungary's amphibian fauna is endangered. In 1999, a 70% malformation rate was recorded of *B. bombina*, a Red Data Book species in a national park (!!!). Deformities were found in total with nine species!
4. Hungary's amphibian fauna nearly completely overlaps with those of the neighbouring countries, all species exist in at least five of them! Therefore, the standardisation of amphibian monitoring techniques in the CEE region will be greatly enhanced through MONITOR 2000.

The overall aim of 'MONITOR 2000' is to improve amphibian conservation by developing and equipping a network of volunteers participating in long-term monitoring in Hungary, and throughout the CEE region, in order to assess amphibian populations, pinpoint areas and habitats of concern, and to improve environmental education. In parallel, the overall scientific goal is to promote the intercontinental exchange, test, and implications of conservation methods for enhanced understanding and comparison of life processes, and to increase the survival options of threatened species.

The objectives of 'MONITOR 2000' include the following:

- To produce and distribute conservation materials, including a training cassette outlining anuran calls in Hungary and a manual outlining the methodology for conducting road call counts.
- To hold training workshops to introduce monitoring technique to selected regional coordinators and other volunteers, including a practical field session.
- To produce and distribute 2000 stickers, 1000 colour posters, and 500 brochures highlighting the MONITOR 2000 project and amphibian conservation issues, focusing on school groups.
- To present results and recommendations from project to Ministry of Environment and related National Biodiversity Monitoring Program officials. In addition, results will be presented at national and international conferences.
- To integrate results into a more comprehensive monitoring program, whereby identified areas or habitats of concern are targeted for more extensive investigation.

- To provide baseline data (currently lacking) on amphibian populations across a number of sites and habitats in Hungary.
- To encourage annual participation by volunteers along identified routes, thereby building a database of information on local amphibian populations which can be used to identify trends, and identify conservation 'hotspots'.

Environmental education will be one of the main pillars of MONITOR 2000. A number of schools (elementary, under-graduate and graduate universities) have committed to participating in this unique and pioneering project, which combines participants from a wide range of ages, and from seven countries. The launch of MONITOR 2000 will be announced through 1000 schools and national media (TV, radio, newspapers), with regular updates on its progress. Moreover, as the project develops, volunteer recruitment effort will be expanded, ensuring a strong network of volunteers monitoring amphibians across a wide variety of habitats in Hungary. Given the pioneering nature of this project, herpetologists and conservation enthusiasts from a number of CEE countries will be invited to adopt this program in their own jurisdictions, thus increasing the range of its impact.

#### Supported by

BP CONSERVATION PROGRAMME SILVER AWARD (£5000)  
BP, BIRDLIFE INTERNATIONAL, FAUNA & FLORA INTERNATIONAL

### NOTES ON THE BEHAVIOUR AND MORPHOLOGY OF *AGAMA MWANZAE* IN NORTHERN TANZANIA

By Richard W. Yarnell & Bethan Haf Jones

School of Biological Sciences, University of Wales, Bangor,  
Brambell Building, Bangor, Gwynedd, Wales, LL57 2UW, UK

#### INTRODUCTION

The Mwanza agama (*Agama mwanzae*) is a large agama distributed throughout northwestern Tanzania from the Serengeti National Park, to the heavily human populated areas around Lake Victoria. *A. mwanzae* belongs to the family agamidae, which comprises about 300 species in 30-40 genera, which are distributed throughout most of the world, being replaced in the new world by the Iguanidae (Branch, 1994).

No scientific work has been carried out on *A. mwanzae* and the aim of our study was three fold. Firstly, to study the sexual dimorphism in this

species. Secondly, to collect baseline behavioural and morphological data. And finally, to highlight the lack of research into the extensive herpetofauna of the region.

The study took place at Kissesa, near Mwanza, which is located on the Southern shores of Lake Victoria. To the best of our knowledge, this is the first behavioural account of this species.

#### ANATOMICAL DESCRIPTION

*A. mwanzae* is sexually dimorphic, with the males being bigger than the females. Breeding males are usually between 25-35 cm in total length (Mean SVL = 102.90 mm +/- 16.43 SD; N = 32) whereas the females rarely exceed 30 cm (Mean SVL = 94.95 mm +/- 12.27 SD; N = 31). The reason for this sexual dimorphism is likely to be due to sexual selection for larger males, however niche divergence between the sexes cannot be discounted [see Yarnell & Jones, In Prep., and for a good example of the evolution of sexual dimorphism in an anolis lizard see Perry (1996)].

Agamids are fairly robust creatures and *A. mwanzae* is no exception. It has a short body, with a tail one and a half times as long as the body, with long limbs and toes. The toes have large claws in which to grab and climb vertical rock surfaces with. The fourth toe is longest. They have a triangular head with a pineal eye [a primitive light sensitive organ (Branch, 1994)], which is visible under the occipital scale, in the crown of the head. Head scales are small and irregular. The tympanums are larger than the eyes and not covered by scales. The large eyes have scaly eyelids and round pupils. Both the upper and lower jaws have 2 sets of between 10-18 triangular teeth, which get smaller as they near the snout. In adults 4 large fangs are present, 2 each in the upper and lower jaws, and in between, 2 smaller fangs on each jaw. Larger individuals have larger teeth and fangs. Both sexes have small frills and spines around the head and neck. There are between 60-90 mid-body scales, which are strongly keeled. A single row of 8-12 pre-anal pores are present in males. About 10% of the individuals observed had external, small red mite parasites, mostly located under the skin folds on the neck. The tail cannot be shed or regenerated and many are seen with stumpy tails, which were possibly lost in combat or to predators (Harris 1964).

Breeding males have bright reddish pink heads, necks and trunks with blue limbs and tails. Juvenile males and females are more cryptic in colour, being olive to dark purple/grey in colour often with a pale dorsal streak. Bellies are pale white, with throats having a purple network. Hatchlings are especially well camouflaged, ranging from speckled olive to granite grey.

Breeding males can also change to a more cryptic dark grey/purple, if chased out of territory or feel threatened or if they are cool. They are also darker first thing when basking presumably to increase the rate in which they warm up by having a bigger albedo. Furthermore, they are better camouflaged when cold and sluggish thereby making it harder for predators to spot them. Contrary to local beliefs, these colourful lizards are not poisonous.

## BEHAVIOURAL ECOLOGY

The behavioural ecology of *A. mwanzae* is complex and interesting, especially regarding social interactions, which raised more questions than answers. The Mwanza agamids we observed lived exclusively on rock outcrops, sheltering in the spaces between large boulders or under the peeling skin of granite. Where human habitation has been built on or around the kopjes, the agamas find additional shelter in the spaces of the corrugated iron roofs and mud walls. Such shelters were shared by several agamas at anyone time and were consistently used by the same individuals. Indeed, at one crack we observed up to 20 juveniles and adults emerging from the same shelter every morning to bask in the sun. Therefore, *A. mwanzae* is a very gregarious and return to the same shelter every night. Living in large groups can give several benefits, such as; increased thermoregulation at night, and reduced predation risk. However, *A. mwanzae* is probably forced into a gregarious mode of life due to the limited number of crevasses which shelter provided. However, this hypothesis needs testing.

The fact that individuals return to the same shelter every night suggests they may be territorial. Further evidence for this comes from the cock lizard. Each group of lizards that shared a shelter had one male (the largest) that would develop conspicuous bright pink and blue colouration. Harris (1964) described the dominant male of Nigeria's *A. agama* as the cock lizard and we borrow his definition. Males in breeding colour were more often observed perched high up, scanning the surrounding area for possible rivals, displaying their bright colours and aggressive head bobbing actions. Any other male displaying the bright colours that was spotted by the resident cock male was first met with aggressive head bobbing movements, which can be interpreted as a warning, and if the warning was not headed the resident male would then advance and chase the intruder away. Therefore, the resident cock male defended an area from other cock lizards and we conclude that *A. mwanzae* is territorial.

Despite living in such close confines, very little aggressive behaviour was observed between individuals. Of the aggressive encounters observed, the

majority involved males. One reason why so few aggressive interactions were observed was because each individual in the group knew its place in a social hierarchy, and therefore avoided unnecessary aggressive encounters. This is backed up by the observation that the smaller of 2 rivals would yield rather than risk injury by fighting a larger more powerful rival. Further evidence for a hierarchy comes from the fact that only the largest male lizard in each group displayed bright colours, which possibly attracted females and warned rival males simultaneously. Other males were tolerated in the cock lizards territory as long as it maintained a cryptic colouration. Of the interactions in which 2 males clashed, the larger and more brightly coloured won. In contrast the females and juveniles of both sexes spent the majority of their time feeding and resting, preferring not to waste energy on costly antagonistic behaviours. Displaying in the males was the main difference between male and female behaviour.

In comparison to the cock lizards, females and juveniles spend the majority of their time foraging and resting. After emergence and basking, they would move to a boulder near by, where they would sit and watch for prey and predators. The boulders provide a suitable vantage point for both purposes. *A. mwanzae* is an opportunistic insectivore feeder, seizing any insect that comes its way. They can often be seen eating from a stream of ants, which make up the majority of their diet. They were also often seen making a short dash for other insects (usually about 30 cm – 1 m), that ranged from grasshoppers to flies, before dashing back to their rock to continue their watch and to devour their prey. One male was seen climbing up to a swarm of bees and grabbing one, before retreating to eat it. They were also observed supplementing their diet with succulents, herbs and flowers. One was also observed lapping at water. Harris (1964) noted that the Ground agama (*A. agama*) from Nigeria also took small snakes, scorpions, a small finch, and therefore took any reasonable sized animal they come across, which may also be the case for *A. mwanzae*, and further study would confirm this.

Only one predation event was observed. This involved a kingfisher taking a hatchling. This is probably their most vulnerable stage due to their small size. Other predators would include snakes, other birds and large conspecifics. However they are hard to catch due to their excellent vision and they are extremely quick once they have reached their optimum temperature. Harris (1964), documents cannibalism in the agamids (*Agama agama agama*) of Nigeria. Although we observed no cannibalism, we did notice that hatchlings or lizards under a total length of 10 cm never congregated with or shared the same retreats as juveniles and adults. This may support the idea that there is a risk of predation by their larger conspecifics. If a predator was observed they would make a dash for the nearest crevasse or crack they could get to by

sprinting directly to it – usually over open ground. A similar action was observed every evening as they headed back to their nightly shelter, where they would bask in the last of the sun's rays before retreating for the evening.

## CONCLUSION

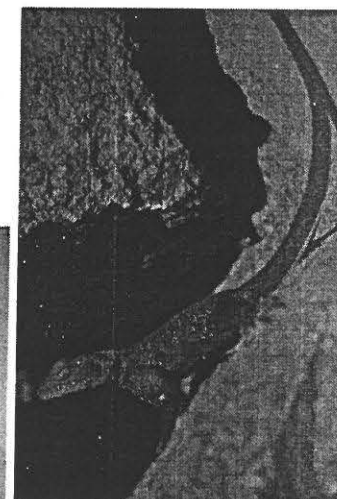
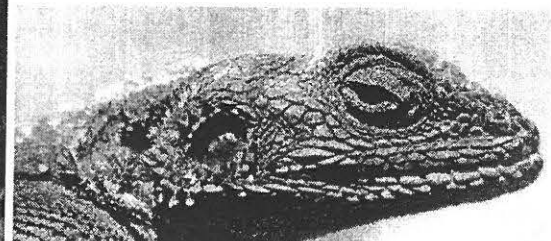
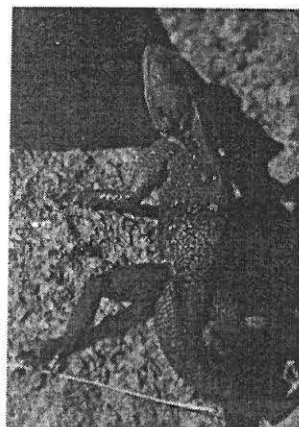
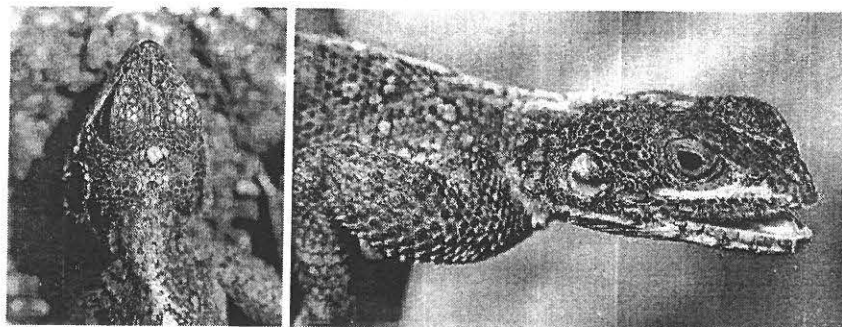
The behaviour of the Mwanza agama is just as colourful as a cock lizard in full breeding colour. They live in social groups of about 10 individuals, with a dominant cock lizard maintaining a territory. They are very common on the rock outcrops of the area and as this study has shown they are a very interesting animal in which to study. Insights into the evolution of sexual dimorphism, reptile mating and social systems, dominance hierarchies and mate selection could all be gained from further study of the Mwanza agama. Furthermore, by observing this lizard it became clear that in general, very little is known about the reptile fauna of the region, not only in terms of what can be found there, but also regarding the behaviour, morphology, and conservation status of many species of reptile and amphibian. Clearly, there is room for much more research to be carried out on the reptiles of North-western Tanzania both in terms of surveys and field studies.

## Acknowledgements

This work was made possible by a grant from the British Ecological Society (Small Ecological Project Grant No. 1722). We would also like to thank the people at the Sukoma museum Bujora, near Kissesa, for their friendship and co-operation during this study, especially Richard Paphael. We are also grateful to Tom Maddox for his inspiration and patience.

## References

- Branch, B.** (1994) A field guide to the snakes and other reptiles of Southern Africa. STRUIK Publishers.
- Harris, V.A.,** 1964 "The life of the rainbow lizard." Hutchinson Tropical Monographs.
- Perry, G** (1996) The evolution of sexual dimorphism in the lizard *Anolis polyblepis* (Iguania): Evidence from intraspecific variation in foraging behavior and diet. *Can. J. Zool.-Rev. Can. Zool.* **74**:1238-1245
- Yarnell, R.W. & Jones, B.H.** (In prep.) Sexual size dimorphism in the agamid lizard *Agama mwanzae* from North-western Tanzania.



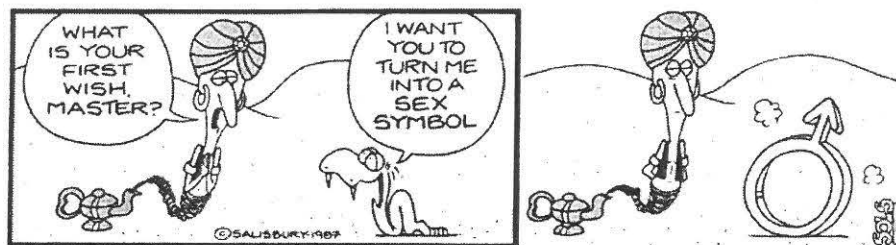
## NATURAL HISTORY NOTES

*African Herp News* publishes 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: **SCIENTIFIC NAME**; Common name (using Bill Branch's *Field Guide to Snakes and other Reptiles of Southern Africa*, third edn. 1998, for reptiles; and Passmore & Carruthers' *South African frogs*, 1995, for amphibians as far as possible); **KEYWORD** (this should be one or two words best describing the topic of the note, eg. Reproduction, Avian predation, etc.); the Text (in concise English with only essential references quoted and in abbreviated form); **Locality** (country, province or state, location, quarter-degree unit, and latitude and longitude if available; elevation above sea level; use metric units); **Date** (day, month, year); **Collector(s)**; **Place of deposition and museum accession number** (required if specimens are preserved).

Submitted by: **NAME**, Address (in parentheses).

NOTE: With reference to the Natural History Note by Richard Boycott in the previous issue of African Herp News (Vol 32, February 2001, Pp: 19-20), a Transvaal Museum accession number has now replaced his private collection number ie: RCBS1946 becomes TM83619.



## REPTILIA SAURIA

### GEKKONIDAE

#### *Pachydactylus tsodiloensis* Haacke, 1966.

#### Tsodilo Thick-toed Gecko.

#### MAINTENANCE AND REPRODUCTION.

For the past 5 years a breeding group (1 male, 3, later 2 females) of *Pachydactylus tsodiloensis* have been maintained in a terrarium in Berlin, Germany. This rock living species has an extremely restricted range on the Tsodilo Hills, which protrude from Kalahari sand in Ngamiland in north-western Botswana, southern Africa.

The dimensions of the terrarium are 25 x 25 x 30 cm (L x B x H). The rear wall has been pasted with stone flakes. The main retreats are upright sandstone plates leaning against the back wall. The floor is covered with a layer of sand 2 cm deep. The illumination is by means of a 25 W neon tube, 10 - 12 hours in summer and 8 - 10 hours in winter, with an additional 25 W spotlight for 4 - 6 hours during the winter months.

Any suitably sized prey item which moves is taken. This includes various crickets, mealworms, wax moths and their larvae, cockroaches, a.o. All food items are dusted with calcium and multi-vitamin powder. The entire terrarium is sprayed with water once a week.

Already during the first year in the northern hemisphere a batch of eggs was laid, which must have been due to a fertilization in nature. One of the two eggs was only found at a later stage, for which reason the exact date of deposition can not be given. (BARTS & HAACKE, 1996). During the second northern summer season all the females started producing eggs. Each female produced 4 batches of 2 eggs each per season. The eggs are white with a few substrate remnants which stick to the hard oval shaped shell. In most species of this genus the eggs are clean and smooth. The mean dimensions are 12.4 mm (range 10.6 - 13.7 mm, N = 18) x 9.2 mm (range 8.5 x 9.8 mm, N = 18). The eggs were removed from the terrarium and placed in an incubator with temperatures of 25 - 28° C at night and 30 - 32° C during the day. Under these conditions the young hatched after a maximum of 66 and minimum 49 days (average 57.3 days, N = 13), with a mean SVL of 23.3 mm, (range 19.8 mm x 28.0 mm, N = 9) and an average TL of 21.6 mm (range 16.5 mm x 26.0 mm, N = 9).



The youngsters are being reared in groups of 3 - 5 in terrariums similar to those of the adults. The same food items as offered to the adults are supplied, only smaller. At the age of 2 years females start laying, but not fertilizing eggs, which are stuck to the glass walls or the furniture. Within a day or two these eggs have been eaten. At the age of three these young geckos start to mate and then fertilized eggs are laid. The Tsodilo-Gecko's are therefore bred in the third generation.

### References

**Barts, M. & W. D. Haacke**, 1996. "Zur Reptilienfauna der Tsodilo-Berge und angrenzender Gebiete in NW-Botswana. Teil I: Testudinides: Testudinidae; Sauria I. SAURLA, Berlin, 9(1):3-12.

### Submitted by

Mirko Barts, Eiswaldstr.7e, 12249 Berlin, Germany ([pachydactylus@aol.com](mailto:pachydactylus@aol.com)) and Wulf Haacke, Transvaal Museum, P. O. Box 413, Pretoria, 0001 RSA ([haacke@nfi.co.za](mailto:haacke@nfi.co.za))

---

## GEKKONIDAE

### *Pachydactylus austeni*

#### Austen's Gecko

### HUSBANDRY

*Pachydactylus austeni* is a small ground dwelling gecko, which lives in sparsely vegetated coastal dunes from Yzerfontein to Port Nolloth on the South African west coast (Branch, 1998; Haacke, 1976; Visser, 1984), but it can also enter inland (Girard, 1997). Each morning it digs a short burrow in the sand.

In October 1998, we collected several specimens of the species in various areas of the west coast. (Veldrif, Vredendal and Port Nolloth). The geckos were easily caught between 20h00 and 22h00 due to the fact that they lie on the warmer road at night. It appears that two distinct local populations occur based on size alone (Girard, in press).

Animals from the 3 localities were brought back to Europe. Each specimen was housed separately in a terrarium measuring 20 x 15 x 12 cm. 2-3 cm of sand covered the base of the container. Bark provided for shelter, water was provided in a small dish and the terrarium was "misted" on a weekly basis. A hot-spot was provided during the day (30-35° C) and this was switched off at night. The temperature of the room ranged from 17-28° C at night and from

20-32° C during the day. The "hot-spot" was not provided in mid summer when temperatures would have been too high.

The geckos preferred to be kept alone and a pair in the same cage usually caused problems (for example: competition for food). Food items included crickets (*Acheta domestica*) and waxworms (*Galleria melonella*).

In the beginning the animals dug holes in the sand under the bark and stayed hidden throughout the day. Activity started to increase towards sunset. After a few days, only a few of the animals began to feed. Despite being offered small, soft and slow moving insects, the majority continued to fast and within a few weeks most of them were dead (particularly the animals from the Vredendal and Port Nolloth areas).

A few of the remaining females were gravid, although they did not attempt to lay their eggs which were clearly visible. The eggs totally filled the abdominal cavity, the females were unable to feed and as a result their fat reserves in their tails diminished rapidly. The eggs were however finally deposited at which time the females were weak and tired. A number of the females died shortly after egg laying. The same situation occurred with "long-term captive" females after mating occurred within the terrarium. Eggs were clearly visible one month after mating, but by the time laying took place, females were weak and tired. Only one specimen currently remains in the terrarium.

We have tried to reproduce the microclimate of the capture area in our terrariums but despite this we have still not had any success. The odd specimen thrives well, but the majority die after a few days or weeks, without obvious reason. Other gecko species collected in the same area breed very successfully in captivity ( For example: *P. mariquensis*, *P. geitjies* and *P. labialis*). However, the husbandry of the Austen's gecko remains a mystery to this day for us.

### Acknowledgements

We would like to thank Cape Nature Conservation who provided collection and export permits for the species.

### References

- Branch, W. R.** 1998. Field guide to snakes and other reptiles of Southern Africa. Struik Publishers, Cape Town.
- Girard, F.** 1997. African Herp News, Vol. 26, Pp. 32.
- Haacke, W. D.** 1976. The burrowing geckos of Southern Africa. Annals of the Transvaal Museum, 30, Pp. 14-28.
- Visser, J.** 1984. Farmers Weekly, 30<sup>th</sup> March. Pp. 48-53.

**Submitted by**

F. Girard (167 bd Vincent Auriol, 75013, Paris) and T. Heer (Albertstr. 6, 8005, Zurich, Switzerland).

**AGAMIDAE****ACANTHOCERCUS ATRICOLLIS****Southern tree Agama****REPRODUCTION**

South Africa, Northern province, Kruger National Park, 7 km east of Orpen Gate.

A female was observed laying eggs at Kingfisherspruit Ranger Station (2431 AD) on 21 October 1995. She was first observed starting to dig a hole at 13h00 and was observed covering up the hole at 15h50 – a total of 3 hours and 50 minutes. The nest was dug 2m from a large *Acacia nigrescens* and 40 cm from a large rock. The female frequently rested on the rock during the egg-laying process. The substrate in which she dug the hole, consisted of soft clay with plenty of organic matter and leaves. The hole was directly under the canopy of the *Acacia nigrescens*.

The nesting cavity was re-opened the day after the female laid the eggs and nest and egg measurements were taken. The nest chamber had a depth of 102 mm and a width of 70 mm. A total of 16 eggs were laid and these were measured using Vernier calipers. The average egg length and width (mm) was 20 x 14.5 mm.

The eggs hatched on 4 January 1996, a total incubation period of 76 days. Branch (Field Guide to Snakes and Other Reptiles of Southern Africa) states that the female lays 5 to 14 eggs, which take 90 days to hatch.

**Submitted by**

Errol and Darren Pietersen (Kingfisherspruit, Private Bag X402, Skukuza, 1350). E-mail: errolp@netactive.co.za

**SERPENTES****ELAPIDAE****Naja mossambica****Mozambique Spitting Cobra or M'fezi****DIET**

A female Mozambique Spitting Cobra was disturbed and then killed on the farm Schotskar (187 Thabazimbi district, Northern Province, 24°35'S; 26°58'E; 2426DB) about 15 km north-east of Dwaalboom and 40 km west of Thabazimbi in the Northern Province, South Africa. She had regurgitated a rodent, which was later identified as a juvenile multimammate mouse, *Mastomys coucha* (D. Macfadyen, Transvaal Museum, Pers. comm.). The dead snake was examined and a small puff adder *Bitis arietans* was also found in the stomach. The female had a total length of 109 cm, while the puff adder was 24.5 cm long. These specimens were deposited in the Transvaal Museum with TM 83655 & TM 83656 as their respective catalogue numbers. It happened on the 30 April 2001 at about 15h30. In the standard literature (Broadley, D.G. 1990. Fitzsimons' Snakes of Southern Africa, Jonathan Ball and AD. Donker Publishers, Parklands. p.387. ; Branch, W.R. 1998. Field guide to snakes and other reptiles of Southern Africa, Struik Publishers, Cape Town. p.399.) rodents and snakes are reported to be eaten by Mozambique spitting cobras, but no specific species are mentioned. Large individuals of other species of cobra, like the Cape cobra, *Naja nivea*, do frequently eat puff adders, but it may be the first record of a Mozambique spitting cobra eating a puff adder (Dr. W.R. Branch, Port Elizabeth Museum, pers. comm.)

**Submitted by**

Jaco van Wyk (Hoerskool Waterkloof, P.O. Box 25085, Monument Park, Pretoria, 0105, South Africa. E-Mail: klofies@klofies.co.za, Wulf Haacke (Herpetology, Transvaal Museum, P.O. Box 413, Pretoria, South Africa. E-mail: haacke@nfi.co.za) & Duncan Macfadyen (Mammology, Transvaal Museum, P.O. Box 413, Pretoria, South Africa. E-mail: Mcfadyen@nfi.co.za).

**SERPENTES**  
**LEPTOTYPHLOPIDAE**

**LEPTOTYPHLOPS LONGICAUDUS**  
**Long-tailed Thread Snake**

**MEASUREMENTS AND REPRODUCTION**

South Africa, Northern Province, Kruger National Park, 2431AD.

A single female was collected approximately 9 km west of Oprpen Gate, where the Nwatinhlaru firebreak meets the H& tarred road that turns between Orpen and Satara. She was collected by Errol, Jeff and Darrien Pietersen on 29 December 2000 while we were out looking for reptiles and amphibians. We placed her in a material collection bag until we got home, where we then transferred her to a large glass bottle half-filled with vermiculite. The following morning we confirmed the identity of the snake, and noted that she had 3 large white eggs in her.

On 3 January 2001 she laid her eggs. The eggs were measured and then placed into damp vermiculite. The vermiculite was mixed 1:1 with water. The vermiculite was then placed in an incubator, which kept the temperature constant at 31° C for 14 hours a day. For the remaining 10 hours it dropped below this temperature as we are dependent on a generator for our power, and thus is switched off at on average 22h00. The eggs had not hatched by 11<sup>th</sup> March 2001, and it is doubted that they will hatch.

The eggs were measured using Vernier callipers. They measured 22 x 0.4mm, 18 x 0.4 mm and 21 x 0.4 mm respectively. The female was measured by cooling her down in a freezer. She measured 196mm total length and 173.8 mm snout-vent length. Jacobsen, 1989 (A herpetological survey of the Transvaal, Vol 2) states that of the 5 snakes measured, the largest SVL was 169.0 mm. He also states that Broadley (1983) recorded a specimen of SVL = 217.0 mm, from Sentinel Ridge, Beit Bridge, Zimbabwe. He also states that this species lays only two eggs.

The female was released on 5 January 2001 at the same spot where she was captured.

**Submitted by**

Darren and Errol Pietersen (Kingfisherspruit, Private Bag X402, Skukuza, 1350, South Africa).

**GEOGRAPHICAL DISTRIBUTION**

*African Herp News* publishes brief notes of new geographical distributions (preferably at least 100 km from the nearest published record) of amphibians and reptiles on 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: **SCIENTIFIC NAME**; Common name (for sources, see Natural History Notes); **Locality** (country, province or state, location, quarter-degree unit, and latitude and longitude if available; elevation above sea level; use metric units); **Date** (day, month, year); **Collector(s)**; **Place of deposition and museum accession number** (required if specimens are preserved); **Comments** (including data on the size, colour and taxonomic characters, eg. Scallation, webbing, especially for taxonomically problematic taxa; and nearest published locality record(s) in km; references to be quoted in the text). Submitted by: **NAME**, Address (in parentheses).

Records submitted should be based on specimens deposited in a recognised collection. New South African province names must be used.

**Notes submitted in an incorrect format or style will be returned to the authors.**



**REPTILIA**  
**SAURIA**

**PSEUDHAJE GOLDI (BOUL.)**

**Gold's Tree Cobra**

Kenya, Rift Valley Province, Nandi District, Chemundu Location, Baraton, Sub-location, Chemisia, eastern end of North Nandi Forest (0° 15'06"N, 35° 01'08"E; 2011.68 m).

Numerous farmers have reported a very large big black snake. On November 12, 1999, the author collected a 2.5 m sloughed skin in Mr. Patrice Kilingoi's farm, 3 meters from Kombe to Danger Forest road, near Kimchen Bridge. Unfortunately, the anterior region of the skin was decayed beyond recognition, but the middle portion of the body was well-preserved for a mid-row scale count; the specimen had 15 scales at mid-body. According to de Witte (1962; Key to Snakes of Congo and Rwanda: Geneva des Serpentes du Congo et du Rwanda -Burundi. Musee Royal de L'Afrique Centrale - Tervuren, Relgique Annoles- Serie 80- Sciences Zoologique. No. 104) and Spawls and Branch (1995; Dangerous Snakes of Africa: Natural History, Species Directory, Venom and Snakebite. Blanford. London.), *Pseudohaje goldi* has 15 mid-row scales. The caudal region of the skin specimen was also intact to recognize the preanal scale, which was divided. According to John Goodman (pers. comm.) states that it is the only elapid with a divided preanal scale. According to a witness, Mr. David Chumba, it is a very large snake with a black shiny dorsal colour and a prominent yellow belly and it is regularly seen sleeping on a dead tree by the road. The hunt is still on for the specimen and hopefully we can get this specimen before the residents kill it. But luck is still on our side, because many residents are hesitant to approach it.

**Submitted by**

Armand G. H. Poblete (University of Eastern Africa, Baraton, Department of Biological Sciences, P. O. Box 2500, Eldoret, Kenya)

**RECENT AFRICAN HERPETOLOGICAL LITERATURE: 22**

W.R. Branch

Port Elizabeth Museum, P.O. Box 13147, Humewood 6013, South Africa

This survey covers the period 2000 to present, with a few earlier, overlooked papers. For brevity, no articles in any HAA publication are included, neither are peripheral publications using *Xenopus laevis* (or any other African species) as a model in biochemical or developmental studies, etc. To assist members, and where known, the following annotations are given: the distribution date (in brackets) if known to differ from the volume year; an English title for papers published in a foreign language; relevant African details from general articles; and the names of new taxa.

- Akani, G.C., Capizzi, D. & Luiselli, L.** 2001. Natural History Note: *Mehelya crossi* (West African File Snake), Diet. *Herpetol. Rev.* **32(1)**: 49-50.
- Akani, G.C. & Luiselli, L.** 2001. Some observations on diurnal activity patterns, habitat, and natural history of *Mabuya affinis* (Scincidae) in the Niger Delta, Nigeria. *Herpetol. Bull.* **73**: 2-7.
- Akani, G.C., Luiselli, L., Angelici, F.M. & Politano, E.** 1998. Bushmen and herpetofauna: notes on amphibians and reptiles traded in bush-meat markets of local people in the Niger Delta (Port Harcourt, Rivers State, Nigeria). *Anthropozoologica* **27**: 21-26.
- Akani, G.C., Luiselli, L., Angelici, F.M., Corti, C. & Zuffi, M.A.L.** 2001. The case of rainforest stiletto snakes (genus *Atractaspis*) in southern Nigeria. Evidence of diverging foraging strategies in grossly sympatric snakes with homogeneous body architecture. *Ethol. Ecol. Evol.* **13**: 89-94.
- Akani, G.C., Luiselli, L. & Tooze, Z.** 2001. Natural History Note: *Philothamnus heterodermus* (NCN), Reproduction. *Herpetol. Rev.* **32(1)**: 50-51.
- Ambrose, D.** 1999. Lesotho annotated bibliography. Section 165: Amphibians, including annotated species checklist. Institute of Education, National University of Lesotho, Roma, 20p.
- Ambrose, D.** 1999. Lesotho annotated bibliography. Section 166: Reptiles, including annotated species checklist. Institute of Education, National University of Lesotho, Roma, 26p.
- Amiet, J-L.** 2000. Les *Alexteroon* du Cameroun (Amphibia, Anura, Hyperoliidae). *Alytes* **17(3-4)**: 125-164. (Two new species from Cameroun, *A. jynx* and *A. hysiphonus*, are added to this previously monotypic genus)
- Amiet, J-L. & Dowsett-Lemaire, F.** 2000. Un nouveau *Leptodactylodon* de la Dorsale camerounaise (Amphibia, Anura). *Alytes* **18(1-2)**: 1-14. (A new

- species, *Leptodactylodon wildi*, is described from montane forest in the Bakoossi Mountains, Cameroon)
- Andreone, F., Vences, M. & Randrianirina, J.E.** 2000. Geographical distribution. *Heterixalus luteostriatus*. Madagascar. *Herpetol. Rev.* **31(4)**: 250.
- Andreone, F.** 2000. Herpetological observations on Cape Verde: a tribute to the Italian naturalist Leonardo Fea, with complimentary notes on *Macroscoincus coctei* (Duméril & Bibron, 1839) (Squamata: Scincidae). *Herpetozoa* **13(1/2)**: 15-26.
- Angelici, F.M., Invang, M.A., Effah, O. & Luiselli, L.** 2000. Analysis of activity patterns and habitat use of radiotracked African burrowing pythons, *Calabaria reinhardtii*. *Israel J. Zool.* **46(2)**: 131-142.
- Aresté, M.** 2000. *Geochelone sulcata*: African spurred tortoise (Miller, 1779). *Reptilia* (GB). **12**: 39-42.
- Attum, O., Earley, R.L., Bayless, M. & Easoni, P.**, 2001. The agonistic behaviour of Bosc's monitor (*Varanus exanthematicus* Bosc, 1792) in captivity. *Herpetol. Bull.* **73**: 22-26.
- Baha el Din, S.M.**, 2001. On the first report of *Rhamphotyphlops braminus* from Egypt: How many times can a flower-pot snake be run over for the first time? *Herpetol. Rev.* **32(1)**: 11.
- Baha el Din, S.M. & Attum, O.** 2001. The herpetofauna of Zaranik Protected Area, Egypt, with notes on their ecology and conservation. *Herpetol. Bull.* **73**: 17-21.
- Barbadillo, L.J. & Martinez-Salano, I.** 2000. Natural History Note. *Tarentola* (= *Makarioegecko*) *delanandii*. Maximum size. *Herpetol. Rev.* **31(4)**: 243.
- Bauer, A.M.** 2000. The Symbolae Physicae and the herpetology of Hemprich and Ehrenberg's expedition to Egypt and the Middle East. *Int. Soc. Hist. Bibliog. Herpetol.* **2(1)**: 8-16.
- Bayless, P.S.** 2001. Natural History Note: *Lamprophis fuliginosus* (Brown House Snake), Predation. *Herpetol. Rev.* **32(1)**: 48.
- Boistel, R. & Amiet, J-L.** 2001. Une nouvelle espèce de *Wolterstorffina* (Amphibia, Anura, Bufonidae) de l'étage afro-subalpin du Mont Okou (Cameroun). *Alytes* **18(3-4)**: 127-140. (A new species, *Wolterstorffina chirioi*, is described from the afro-subalpine zone of Mount Okou, Cameroon)
- Bossuyt, F. & Milinkovitch, C.** 2000. Convergent adaptive radiations in Madagascar and Asian anuran frogs reveal covariation between larval and adult traits. *Proc. Nat. Acad. Sci.* **97**: 6585-6590.
- Briingsøe, H.** 1998. Observations on growth and longevity in *Uromastix aegyptia* (Forsskal, 1775) in the Negev Desert, southern Israel (Reptilia: Sauria: Agamidae). pp 19-21. In: *Contributions to a "Herpetologia Arabica"*. U. Fritz, F.J. Obst & B. Andreas (eds.). *Faun. Abh. Mus. Tier., Dresden* **21** (Suppl.).

- Cejudo, D. & Márquez, 2001.** Sprint performance in the lizards *Gallotia simonyi* and *Gallotia stehlini* (Lacertidae): implications for species management. *Herpetologica* **57(1)**: 87-98.
- Chirio, L. & Ineich, I.** 2000. Description d'un nouveau scincidé endémique des montagnes du Cameroun (Lacertilia: *Mabuya mekuana*). *Bull. Soc. zool. Fr.* **125(3)**: 185-196. (Description of a new mountain skink endemic to Cameroon (Lacertilia: *Mabuya mekuana*)).
- Comins, T.** 2001. First hatching of a Seychelles terrapin (*Pelusios subniger parietalis*). *Tortuga Gaz.* **37(3)**: 4-5. (reprinted from *Brit. Chelonia Group Newsl.* No. 135, 2000)
- Cooper, W.E. Habegger, J.J.** 2001. Prey, but not plant, chemical discrimination by the lizard *Gerrhosaurus nigrolineatus*. *Afr. Zool.* **36(1)**: 55-62.
- De la Riva, I., Bosch, J. & Márquez, R.** 2001. Calls of three species of arthroleptid frogs from Rio Muni, Equatorial Guinea. *Afr. Zool.* **36(1)**: 107-110.
- Devaux, B.** 2001. Madagascar. 1. Avec les Trafiquants de tortues. *La Tortue* **57**: 12-25. (Madagascar. Part 1. Traffic in tortoise) (Discusses the increasing illegal trade in wild caught *Astrochelys radiata* and *Pyxis arachnoides*).
- Devaux, B.** 2001. Madagascar. 3. Ampijoroa. nouveaux programmes de conservation. *La Tortue* **57**: 32-37. (Madagascar. Part 3. Ampijoroa. new conservation programmes). (Discusses a captive breeding programme for *Erymnochelys madagascariensis*).
- Devaux, B.** 2001. Madagascar. 5. *Astrochelys radiata*. Lâcher expérimental de juvéniles. *La Tortue* **57**: 42-43. (Madagascar. Part 5. *Astrochelys radiata*. Experimental release of juveniles).
- Devaux, B.** 2001. Madagascar. 6. Etude sur la systématique et l'écologie de conservation de *Pyxis arachnoides*. *La Tortue* **57**: 45. (Madagascar. Part 6 Systematics, ecology and conservation of *Pyxis arachnoides*).
- Devaux, B.** 2001. La situation de *Testudo graeca* au Maroc. *La Tortue* **57**: 46-57. (The situation of *Testudo graeca* in Morocco).
- Dimaski, M., Valakos, E.D., Chondropoulos, B. & Legakis, A.** 2000. Morphometric analysis of the African chameleon *Chamaeleo africanus* Laurenti, 1768 from southwestern Peloponnese, Greece. *Israel J. Zool.* **46(3)**: 231-238.
- Drewes, R. C. & Perret, J-L.** 2000. A new species of giant, montane *Phrynobatrachus* (Anura: Ranidae) from the central mountains of Kenya. *Porc/ Cal. Acad. Sci.* **52(5)**: 55-64. (describes *Phrynobatrachus irangi*)
- Elepfandt, A., Eistetter, I., Fleig, A., Günther, E., Hainich, M., Hepperle, & Traub, B.** 2000. Hearing threshold and frequency discrimination in the purely aquatic frog *Xenopus laevis* (Pipidae): Measurement by means of conditioning. *J. Exp. Biol.* **203**: 3621-3629.
- Ensenyat, C.** 1999. *Uromastix*: a little known genus. *Reptilia* **8**: 26-32.
- Fleck, J.** 2000. Bemerkungen zur Kenia-Hornpuffotter, *Bitis worthingtoni*, sowie Beobachtungen bei der Haltung und Vermehrung. *Elaphe* **8(3)**: 20-23.

- (Remarks on the Kenyan horned puffadder, and observations on its husbandry and propagation)
- 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. Novit.* **3310**: 1-10. (Notes that the genera *Cordylus* and *Pseudocordylus* are paraphyletic, and conservatively transfers the genera *Pseudocordylus* and *Chamaesaura* to *Cordylus*.)
- Gaffney, E. S., Moody, R.T.J., & Walker, C. A.** 2001. *Azabberemys*, a new side-necked turtle (Pelomedusoides: Bothremydidae) from the Paleocene of Mali. *Amer. Mus. Novit.* **3320**: 1-16.
- Geniez, P., Mateo, J.A. & Bons, J.** 2000. A checklist of amphibians and reptiles of Western Sahara (Amphibia, Reptilia). *Herpetozoa*. **13(3/4)**:149-163.
- Girard, F.** 2000. Notes on three species of gecko endemic to the mountainous region of Cedarberg, Western Cape, South Africa. *Gekko* **1(2)**: 2-5.
- Greer, A.E. & Broadley, D.G.** 2000. Six characters of systematic importance in the scincid lizard genus *Mabuya*. *Hamadryad*. **25(1)**:1-12 (assesses over 100 species, including 49 from Africa and 8 from Madagascar).
- Griffin, M.** 2000 (2001). Annotated checklist of amphibians, reptiles and mammals of the Brandberg, central Namib Desert, Namibia. *Cimbebasia Mem.* **9**: 69-89.
- Hagen-Rijnsewijn, K.** 2001. A successful breeding effort with the East African Black Mud Turtle (*Pelusios subniger* Lacepede, 1788). *Tortuga Gaz.* **37(3)**: 1-2, 4. (translated from *De Schilpad* **24(1)**: 1998)
- Harm, I, L.J.** 2000. A translocation strategy for confiscated pancake tortoises. *Chel. Conser. Biol.* **3(4)**: 738-743.
- Harrison, J. & Burger, M.** 2001 Threatened riches. South Africa's frogs – a conservation challenge. *Afr. Wildlife* **55(2)**: 4-7.
- Herrmann, H-W, Herrmann, P.A. & Geniez, P.** 2000. Zur verbreitung von *Echis leucogaster* Roman, 1972 in Marokko. *Salamandra* **36(3)**: 203-207. (Describes two new localities for *Echis leucogaster* contiguous to the Oued Draa in Morocco)
- Heyling, H.E.** 2001. Natural History Note: *Mantella laevigata* (Climbing Mantella), Aborted predation. *Herpetol. Rev.* **32(1)**: 34.
- Hill, R.A.** 1999. Size-dependent tortoise predation by baboons at de Hoop nature reserve, South Africa. *S. Afr. J. Sci.* **95(3)**: 123-124.
- Ibrahim, A.** 2001. Geographical Distribution: *Coluber florulentus florulentus* (Flowered Racer), Egypt. *Herpetol. Rev.* **32(1)**: 59.
- Ineich, I. & Chirio, L.** 2000. Description d'un nouveau scincidé de République Centrafricaine (Lacertilia: *Mabuya pedeana*). *Bull. Soc. zool. Fr.* **125(3)**: 197-204. (Description of a new skink from the Central African Republic (Lacertilia: *Mabuya pedeana*)).
- Interessengemeinschaft Riesenschlangen e.V.** 2000. Erste Erkenntnisse über die Kennzeichnung von Riesenschlangen mittels Fotodokumentation am Beispiel der südlichen Madagaskarboa, *Acrantophis dumerili* (Jan, 1860). *Elaphe* **8(4)**: 65-70. (First results of the photodocumentation of colour pattern using the southern Madagascan boa, *Acrantophis dumerili*)
- Kabigumila, J.** 1998. Efficacy of leopard tortoise (*Geochelone pardalis babcocki*) farming in Tanzania. *Afr. Study Monog.* **19(4)**: 187-199.
- Kabigumila, J.** 1998. Community attitudes to tortoises (*Geochelone pardalis babcocki*) and their conservation in Northern Tanzania. *Afr. Study Monog.* **19(4)**: 201-216.
- Kark, S.** 1997. Polymorphism in the snake *Psammodphis schokari* on both sides of the desert edge in Israel and Sinai. *J. Arid Env.* **37(3)**: 513-527.
- Knietsch, V.** 2000. Der Westafrikanische Krallengecko (*Hemitheconyx caudicinctus*) sowie seine bunte Farbvariante. *Elaphe* **8(2)**: 13-15.
- Knoethig, M.** 1999. Distribution range, captive care and breeding of *Chondrodactylus angulifer* Peters, 1870. *Gekko* **1(1)**: 2-9.
- Kuller, Z.** 1999. Current status and conservation of marine turtles on the Mediterranean coast of Israel. *Mar. Turtle Newsl.* **86**: 3-5.
- Lanza, B. & Boscherini, S.** 2000. The gender of the genera *Podarcis* Wagler 1839 (Lacertidae), *Pelamis* Daudin 1803 (Hydrophiidae) and *Uropeltis* Cuvier 1829 (Uropeltidae). *Trop. Zool.* **13**: 327-329. (notes that the correct gender for these genera is feminine; the correct name for the yellow-bellied seasnake becomes *Pelamis platura*).
- Lawson, D. P.** 2000. Local harvest of hingeback tortoises, *Kinixys erosa* and *K. homeana*, in southwestern Cameroon. *Chel. Conser. Biol.* **3(4)**: 722-729.
- Leptien, R.** 1999. A rare guest in our cages *Asaccus gallagheri* Arnold 1972. *Gekko* **1(1)**: 38-39.
- Leslie, A. J.** 2001. Gently smiling jaws. New research into Botswana's Nile crocodile population. *Afr. Wildlife* **55(3)**: 18-20.
- Lötters, S., Grossmann, V & Obame, F.** 2000. Erfassung der Diversität der Amphibien und Reptilien Gabuns. *Elaphe* **8(3)**: 63-66. (Determination of the diversity of Gabon amphibians and reptiles)
- Louber, G.J.J., Mouton, P.le F.N., & Nel, J.A.J.** 2001. The ecotourism potential of herpetofauna in the Namaqua National Park, South Africa. *S. Afr. J. Wildl. Res.* **31(1-2)**: 13-23.
- Luiselli, L., Akani, G.C. & Angelici, F.M.** 2000. Observations on the biology of the African Emerald Snake *Gastropyxis smaragdina* (Schlegel, 1837), in southern Nigeria (Serpentes: Colubridae). *Herpetozoa* **13(1/2)**: 3-14.
- Luiselli, L. & Angelici, F.M.** 2000. Ecological relationships in two species of Afrotropical cobras (*Naja melanoleuca* and *Naja nigricollis*). *Can. J. Zool.* **78**: 191-198.
- Luiselli, L., Angelici, F.M., & Akani, G.C.** 2000. Large elapids and arboreality: the ecology of Jameson's green mamba, *Dendroaspis jamesoni* in an Afrotropical forested region. *Contrib. Zool.* **69**: 147-155.
- Mattison, C. & Davison, G.** 2000. Gecko spotting in southern Africa and Malaysia. *Gekko* **1(2)**: 6-9.
- Mausfeld, P. & Scmitz, A.** 2000.

- Geographical Distribution. *Mabuya albilabris*. Uganda. *Herpetol. Rev.* **31(4)**: 254.
- Meidinger, R.** 2000. Erfolgreiche Haltung und Erstnachsicht von *Atheris hispidus*, der Rauhschuppigen Buschviper. *Elaphe* **8(4)**: 5-10.
- Meyers, J.J. & Nishikawa, K.C.** 2000. Comparative study of tongue protrusion in three iguanian lizards, *Sceloporus undulatus*, *Pseudotrapelus sinitatus* and *Chamaeleo jacksonii*. *J. Exp. Biol.* **203(18)**: 2833-2849.
- Moravec, J.** 1998. Taxonomic and faunistic notes on the herpetofauna of Syria (Reptilia). pp 99-106. In: *Contributions to a "Herpetologia Arabica"*. U. Fritz, F.J. Obst & B. Andreas (eds.). *Faun. Abh. Mus. Tier.*, Dresden **21** (Suppl.).
- Mosseri-Marlio, C.** 2001. The ancient distribution of sea turtle nesting beaches: an archaeological perspective from Arabia. *Tortuga Gaz.* **37(4)**: 8-9. (reprinted from *Testudo* **5(2)**, 2000)
- Nathan, R. & Werner, Y.L.** 1999. Reptiles and breeding birds on Mt. Hermon: Patterns of altitudinal distribution and species richness. *Israel J. Zool.* **45(1)**: 1-34.
- Oatley, T.** 2001. Getting peckish. *Africa. Birds and Birding* **6(1)**: 14-15. (a series of photographs of an encounter between Burchell's coucals and a boomslang)
- Pedrono, M. & Sarovy, A.** 2000. Trial release of the world's rarest tortoise *Geochelone yniphora* in Madagascar. *Biol. Conser.* **95(3)**: 333-342.
- Pilcher, N.J.** 2000. The green turtle, *Chelonia mydas*, in the Saudi Arabian Gulf. *Chel. Conser. Biol.* **3(4)**: 730-734.
- Raselimanana, A. P., Raxworthy, C.J. and Nussbaum, R.A.** 2000. A revision of the dwarf *Zonosaurus* Boulenger (Reptilia: Squamata: Cordylidae) from Madagascar, including descriptions of three new species. *Sci. Pap. Nat. Hist. Mus. Univ. Kansas* **18**: 1-16. (includes descriptions of *Z. anelanelany*, *Z. bemaraha* and *Z. tsingy*, the two latter being rock-living forms and the last having fragile skin).
- Rösler, H.** 1998. Zur Taxonomie und Verbreitung von *Phelsuma madagascariensis* (Gray, 1831) in Nordost-Madagaskar (Sauria: Gekkonidae). *Gekkota* **1**: 21-32. (Taxonomy and distribution of *Phelsuma madagascariensis* in northeast Madagascar)
- Rösler, H.** 1998. Liste der während eines Aufenthalts vom 03.11.1997 bis 12.11.1997 auf Sokotra nachgewiesenen Geckos (Sauria: Gekkonidae). *Gekkota* **1**: 33-35. (List of geckos observed on Sokotro during the period 3-12 November 1997)
- Rösler, H.** 1998. Studien an den Begattungsorganen der Geckos (Reptilia: Gekkota) - 1. Externmorphologische Merkmale und ihre Terminologie sowie mögliche Ursachen für Fehldeutungen in der Merkmalsanalyse an evertierten Hemipenes. *Gekkota* **1**: 36-64. (Studies on the copulatory organs of geckos. External morphology and terminology, and possible reasons for the misinterpretation of the everted hemipenes)
- Rösler, H.** 1998. *Phyllodactylus riebeckii* (Peters, 1882) (Sauria: Gekkonidae) - ein Fruchtfresser. *Gekkota* **1**: 190-192. (*Phyllodactylus riebeckii* is a frugivore)
- Rösler, H.** 1998. Zur Behandlung einer Rachitis bei der Aufzucht von *Paroedura bastardi* (Sauria: Gekkonidae). *Gekkota* **1**: 193-198. (Treatment of rickets during the rearing of *Paroedura bastardi*)
- Rösler, H.** 2000. Kommentierte Liste der rezenten, subrezent und fossilen Gecko-Taxa (Reptilia: Gekkonomorpha). *Gekkota* **2**: 28-153. (Annotated list of recent, subrecent, and fossil gecko taxa)
- Rösler, H.** 2000. Studien an den Begattungsorganen der Geckos (Reptilia: Gekkonomorpha) - 2. Die Hemipenismorphologie von *Lygodactylus* Gray, 1864 (Gekkonidae: Gekkoninae). *Gekkota* **2**: 208-219. (Studies on the copulatory organs of geckos. 2. The hemipenial morphology of *Lygodactylus*)
- Rösler, H.** 2000. Studien an den Begattungsorganen der Geckos (Reptilia: Gekkonomorpha) - 4. Der Hemipenis von *Ptyodactylus hasselquistii* (Donndorff, 1798) (Gekkonidae: Gekkoninae). *Gekkota* **2**: 249-254. (Studies on the copulatory organs of geckos. 4. The hemipenial morphology of *Ptyodactylus hasselquistii hasselquistii*)
- Rösler, H.** 2000. Eine Anomalie (Duplicitas) bei *Phelsuma madagascariensis grandis* Gray, 1870. *Elaphe* **8(2)**: 20-21. (A doubling anomaly in *Phelsuma madagascariensis grandis*)
- Rösler, H. & Wranik, W.** 2000. Die Geckofauna des Sokotra-Archipels (Sauria: Gekkonidae). *Gekkota* **2**: 20-27. (The gecko fauna of the Sokotra archipelago)
- Rotich, D. & Wasonga, V.** 2000. Working with reptiles: searching for the rare bush viper. *NMK Horizons* **4(3)**: 20.
- Rudge, J.** 1999. An interview with Aaron Bauer. *Gekko* **1(1)**: 16-21.
- Schott, W.** 2000. Haltung und Vermehrung des Uganda-Dreihornchamäleons *Chamaeleo (Trioceros) johnstoni* Boulenger 1901. *Elaphe* **8(3)**: 2-10. (Husbandry and propagation of the Ugandan three-horned chameleons)
- Schlüter, U.** 2000. Zur Kenntnis von Blancs Fransenfinger (*Acanthodactylus blacki*). *Elaphe* **8(3)**: 70-72. (New information on *Acanthodactylus blacki*)
- Senter, P.** 2000. Natural History Note. *Hapsidophrys smaragdinus* (Emerald snake), *Philothamnus irregularis* (NCN), *Philothamnus heterodermus* (NCN), *Dasypeltis* sp. (Egg-eating snake), *Afronatrix anoscopus* (Brown water snake), *Grayia smythii* (Smyth's water snake), *Natriciteres variegatus* (NCN), *Boaedon lineatus* (House snake), and *Aparallactus niger* (Centipede-eater). Caudal prehension. *Herpetol. Rev.* **31(4)**: 246-247.

- Senter, P. 2001. Natural History Note: *Aparallactus niger* (NCN), Variation. *Herpetol. Rev.* **32(1)**: 35.
- Senter, P. 2001. Natural History Note: *Philothamnus irregularis irregularis* (Northern Green Snake), Reproduction. *Herpetol. Rev.* **32(1)**: 51.
- Senter, P. 2001. Natural History Note: *Psammophis phillipsii* (Olive Grass Snake), Reproduction. *Herpetol. Rev.* **32(1)**: 51.
- Sheil, C. A. 1999. Osteology and skeletal development of *Pyxicephalus adspersus* (Anura: Ranidae: Raninae). *J. Morphol.* **240**: 49-75.
- Thomas, B. & Thomas, J. 2001. A *Sulcata* commentary. *Tortuga Gazette* **37(1)**: 7.
- Thomas, B. & Thomas, J. 2001. The Egyptian tortoise (*Testudo kleinmanni*). *Tortuga Gazette* **37(2)**: 1-2.
- Vallan, D. 2000. Influence of forest fragmentation on amphibian diversity in the nature reserve of Ambohitantely, highland Madagascar. *Biol. Conser.* **96(1)**: 31-44.
- Vences, M. & Glaw, F. 2001. Geographical Distribution: *Laliostoma labrosum* (formerly *Tomopterna labrosa*), Madagascar. *Herpetol. Rev.* **32(1)**: 55.
- Watkins-Colwell, G. J. & Christman, S.C. 2000. Captive husbandry and propagation of two species of Tanzanian rough-skinned gecko *Pachydactylus tuberculatus* & *Hemidactylus tanganicus*. *Gekko* **1(2)**: 14-19.
- Webb, J.K., Shine, R., Branch, W. R. & Harlow, P. S. 2000. Life underground: Food habits and reproductive biology of two amphisbaenian species from Southern Africa. *J. Herpetol.* **34(4)**: 614- 617. (*Monopeltis anchietae* and *Zygaspis quadrifrons*).
- Werner, Y.L. 1998. The desert herpetofauna in and near Israel: a personal review of advances (1986-1997). pp 149-161. In: *Contributions to a "Herpetologia Arabica"*. U. Fritz, F.J. Obst & B. Andreas (eds.). *Faun. Abh. Mus. Tier.*, Dresden **21** (Suppl.).
- Werner, Y.L., Frankenberg, E. & Shy, E. 1998. Conservation-orientated herpetological research in Israel. *Russian J. Herpetol.* **5(1)**: 20-26.
- Wicker, R. & O'Brien, K. 1998. Mermaids and crocodiles in Borneo and West Africa. *Sarawak Mus. J.* n.s. **53(74)**: 19-35.
- Wilkinson, J.A. & Drewes, R.C. 2000. Character assessment, genus level boundaries, and phylogenetic analyses of the Family Rhacophoridae: a review and present day status. *Contemporary Herpetology*, 7 April 2000 (online journal: <http://eagle.cc.ukans.edu/~cnaar/CH/>)
- Wilms, T. & Böhme, W. 2000. A new *Uromastyx* species from south-eastern Arabia, with comments on the taxonomy of *Uromastyx aegyptia* (Forskål, 1775) (Squamata: Sauria: Agamidae). *Herpetozoa* **13(3/4)**: 133-148. (description of *U. leptieni* from northern Oman)
- York, D.S., Silver, T.M. & Smith, A.A.. 1998. Innervation of the Supranasal sac of the puff adder. *Anat. Rec.* **251**: 221-225.

- Young, B., Jagers, J., Nejman, N. & Kley, N.J. 2001. Buccal expansion during hissing in the puff adder, *Bitis arietans*. *Copeia* **2000(1)**: 270-273.
- Young, B.A., Meltzer, K. & Marsit, C. 1999. Scratching the surface of mimicry: sound production through scale abrasion in snakes. *Hamadryad* **24(1)**: 29-38. (discusses sound production in various African snakes of the genera *Dasypeltis*, *Bitis*, *Cerastes* and *Echis*).

## BOOKS and REPORTS

- Carruthers, V. 2001. *Frogs and frogging in Southern Africa*, New Holland Publ. (previously Struik), Cape Town, 96p.

## BOOK REVIEWS

- Amiet, J-L. 2000. Raniettes africaines. Book review. *Treefrogs of Africa* by A. Schiøtz, Edition Chimaira, Frankfurt-am-Main. In: *Alytes*. **17(3-4)**: 194-196.
- Hughes, B. 2001. Book Review. *Les Serpents d'Afrique Occidentale et Centrale*. by J-P. Chippaux. Faune et Flore Tropicales (35), IRD ed. 1999. 278 pp. Fr 170. In: *Herpetol. Bull.* **73**: 30-32.
- Janzen, P. 2000. Buchbesprechung: Chamäleons. Bunte Juwelen der Natur. *Elaphe* **8(1)**:60-61. (Book review: Chameleons. Colourful jewels of Nature)
- Schiøtz, A. 2000. Book Review. *Herpetofauna of West Africa. Vol. 1: Amphibians of the West African Savanna*. by M-O. Rodel. Edition Chimaira, Frankfurt-am-Main. In: *Herpetol. Rev.* **31(4)**: 268-269.

---

## NEW MILLENIUM BOOKS

### Krieger Publishing Company

<http://www.krieger-publishing.com>

---

### Amphibians and reptiles of Madagascar and the Mascarene, Seychelles and Comoro Islands.

By Friederich -Wilhelm Henkel and Wolfgang Schmidt  
English Ed 2000 324pp. ISBN: 1-57524-014-9 \$64.50

With their unique flora and fauna, Madagascar and the surrounding islands in the Indian Ocean region are among the most interesting destinations for professional and amateur naturalists, herpetologists, and for those keeping amphibians and reptiles as pets. This work is a very accessible guide to the herpetofauna of the area and comes complete with information on the



regional climate and vegetation, as well as with information on vivarium care. Descriptions of 240 species of frogs, turtles and tortoises, chameleons, geckos, iguanas and agamas, skinks and snakes are provided. For each species, the description includes information on distribution, habitat, characteristic features, as well as some general comments on natural history. Two hundred and sixty-nine high quality colour photographs are provided to simplify identification. Final translation and technical edit by Hinrich Kaiser, PhD.

---

### **Osteology of the Reptiles**

By Alfred Sherwood Romer

Orig. Ed. 1956                      800pp.                      ISBN: 0-89464-985-X      \$96.50

Based on the work of Samuel Wendell Williston and Dr. W. K. Gregory, author and editor of the original title published in 1925, this volume consists of two major portions – a structure-by-structure account of the reptile skeleton, followed by a classification of the various reptile groups based on osteological characters. It was designed to give an outline form an account of the nature of the skeletal system of numerous reptile types living and extinct.

---

### **Pythons of Australia**

By Geordie Torr

Orig. Ed. 2000                      128pp.                      ISBN: 1-57524-149-8      \$24.50

For thousands of years snakes have inspired both fear and fascination, and no serpent has proved more intriguing than the python. Long neglected by researchers, these remarkable reptiles have attracted increasing attention over the past few decades, and a clear picture of their ecology is now emerging. "Pythons of Australia: A natural history" is a first attempt to gather together everything we know about the biology of Australia's pythons into a single, accessible and easy to read volume. Illustrated with 34 spectacular colour photographs and some wonderfully detailed line drawings, this book covers the anatomy and physiology, behaviour, reproduction, ecology and conservation. It provides detailed accounts and descriptions of all the species, from the tiny pygmy python, the world's smallest, to the scrub python, which can reach up to five meters in length. Pythons are becoming increasingly popular as pets, and the book also contains a valuable overview of their captive care and breeding.

---

## **NEWS AND ANNOUNCEMENTS**

### **SYMPOSIA REMINDERS**

#### **1. Sixth HAA Symposium**

Department of Zoology, University of Stellenbosch, South Africa

9 – 12 September 2001

HAA website: <http://www.wits.ac.za/haa>

#### **\*\*\* IMPORTANT CONFERENCE INFORMATION \*\*\***

**Please check the HAA Website for continuous conference updates and news**

#### **Travel Guide**

Visas: As for all international travel, visitors to South Africa are required to be in possession of valid passports. Travellers from certain countries also need a visa. You are advised to contact your travel agent regarding these requirements.

Health: No special health and /or immunisation precautions need to be taken when visiting the Western Cape.

Insurance: It is advisable to take out comprehensive travel insurance for the duration of your stay in South Africa.

Currency: The currency unit is the South African Rand (R). At the time of preparing this document, the exchange rate was approximately R8.20 to the US dollar.

#### **Airport Shuttle**

An airport shuttle is available for delegates flying into and out of Cape Town. A round trip cost of R80.00 per person will be charged. Please send ALL necessary flight details, arrival/departure dates and times, and number of passengers to the Chair by the end of August at:

E-mail: [aleslie@land.sun.ac.za](mailto:aleslie@land.sun.ac.za) OR Fax: +27-(0)21-808-3304

#### **Registration**

John Ellerman Museum

Department of Zoology

2<sup>nd</sup> Floor

Natural Sciences Building (Natuurwetenskappe)

(see campus map on page 46)

Registration will take place on Sunday 9<sup>th</sup> September from 4-9pm and on Monday 10<sup>th</sup> September from 8-12 noon

**Social Functions**

There is a social function on each of the three conference evenings. The cost of these functions is included in the registration fee. Please see your conference pack for the necessary tickets.

Sunday 9<sup>th</sup> September: A Welcome and Ice Breaker Function, John Ellerman Museum, Dept Zoology.

Monday 10<sup>th</sup> September: Wine tasting and a light dinner at Bergkelder Visitors Centre

Tuesday 11<sup>th</sup> September: Conference Banquet, Simonsvlei Winery.

**Internet Services Available**

A limited number of network-linked computers will be available for delegates.

**Public telephone/faxing services/e-mail facilities**

Public telephones are available at the Langehoven Student Centre, a short walk from the conference venue. These phones can be operated by either coins or phone cards, which can be purchased in various places within the centre.

**Emergency Telephone Number:**

+27-(0)82-896-0068

(Mobile phone belonging to the Conference Organizer and Chair)

**Presenters:**

Oral presentations:

15 minutes plus 5 minutes for questions

A practise room will be available in the John Ellerman Museum, from 4pm on Sunday 9<sup>th</sup> September. Facilities available include: an overhead projector, slide-projector and power-point computer with overhead monitor. For those wishing to bring their own slide carousel – the round 100 slot type will be used.

Poster presentations:

Authors are requested to be at their poster during the lunch break on both Monday 10<sup>th</sup> and Tuesday 11<sup>th</sup> September.

**September in Stellenbosch**

Stellenbosch is situated in the Mediterranean subregion of South Africa and experiences cool, wet winters (June through August) and hot, dry summers (December through February). September heralds spring and warmer temperatures, but visitors are advised to bring along warm clothing, since morning and evening temperatures may still be fairly cool. It is advisable to pack a light rain-coat and /or umbrella too.

**PROGRAMME**

**Sunday 9<sup>th</sup> September**

4 - 9pm Registration. John Ellerman Museum  
Dept Zoology, 2<sup>nd</sup> Floor  
Natural Sciences Building  
University of Stellenbosch

6pm→ An Ice Breaker evening with plenty of food and wine! Come as you are.

John Ellerman Museum  
Dept. Zoology (see map on page 46 for details).

**Monday 10<sup>th</sup> September**

8:00am → Registration continued

9:00am Opening

9:15am Guest Lecture

10:00-10:30 Tea

10:30-12:10 Session I – Diversity and Conservation

12:10-1:30 Lunch

1:30-3:10 Session II – Phylogenetics A

3:10-3:30 Tea

3:30-4:50 Session III – Reproduction

6:00pm Evening Social at the Bergkelder Visitor's Centre.

Bus departs Dept Zoology @ 6pm sharp.

Slide presentation by Dr. Colin Tilbury

**Tuesday 11<sup>th</sup> September**

|            |   |
|------------|---|
| 9:00-10:00 | Session IV – Reproduction (cont.) and Behaviour |
|------------|---|

10:00-10:40 Photo and Tea

|              |                        |
|--------------|------------------------|
| 10:40 -12:15 | Session V - Physiology |
|--------------|------------------------|

12:15-1:30 Poster session/Lunch

|            |                      |
|------------|----------------------|
| 1:30- 3:10 | Session VI - Ecology |
|------------|----------------------|

3:10-3:30 Tea

|           |                               |
|-----------|-------------------------------|
| 3:30-4:50 | Session VII – Phylogenetics B |
|-----------|-------------------------------|

5:45pm • Banquet at Simonsvlei Winery  
Semi-formal attire  
Bus leaves Dept Zoology @ 5:45pm.

**Wednesday 12<sup>th</sup> September**

|            |                                |
|------------|--------------------------------|
| 9:00-11:30 | Session VIII – General session |
|------------|--------------------------------|

12:00 Final comments, acknowledgements and closure

**2. “Fourth World Congress of Herpetology”**

Colombo, Sri Lanka  
9-12 December 2001

For details and expressions of interest contact the Conference Director, Ansem de Silva, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka, or visit the updated website <<http://www.4wch.com>>

**3. International Turtle and Tortoise Symposium**

**Vienna, Austria, January 17-20, 2002**

**General information**

**Organizers:**

Schildkrötenfreunde Österreich (SFÖ), Nederlandse Schildpadden Vereniging (NSV), Chelonia 2002 Turtle Center, Other turtle societies / associations.

The symposium is dedicated to increase and distribute our knowledge and understanding of breeding of freshwater turtles and tortoises in captivity. More than 80 presentations, focusing on the breeding of more than 100 species will contribute to that purpose. Furthermore the international exchange of views and experiences between experts and dedicated hobbyists from different countries and continents will be strongly encouraged. There will also be presentations focusing on related subjects/topics such as biotope/habitat descriptions, travelogues and conservation projects. Speakers from 15 different countries are expected to come !

The program of the symposium is almost finalized, and many abstracts have already been submitted. We anticipate that this symposium will be among the most significant turtle breeding events ever and therefore should not be missed by anyone with a serious interest in breeding and conservation breeding of turtles. We have tried our best to keep prices for entrance fees as low as possible, especially for guests planning to attend all four days. In addition, the organizers will raise funds for a few guests from abroad in order to ensure their participation.

We also try to keep costs for food and accommodation low. For those, who wish to spend a vacation in sheer extravagance, Vienna offers a wide range of opportunities, too.

Conference languages will be English and German with simultaneous translation. Every participant will be provided with a pair of infrared-headphones with which (s)he will be able to follow the actual presentation in

the other language. Two of the presentations will be given in French with special translations.

A number of activities for accompanying persons will be offered each day of the symposium. These and the evening programs will have to be paid extra and are on a voluntary base.

### Registration for the symposium

As the costs for the symposium (rent of the conference room, interpreters, moderators, translator equipment like headphones, infrastructure, etc.) and with them the risks for the organizers are quite high, it is absolutely necessary that every participant must register in advance. Registration should be in a written form (letter, fax or e-mail) and must be received no later than August 31, 2001. Registration applications should be addressed to:

Dr. Harald Artner, Maria Ponsee 32, A-3454 Sitzenberg-Reidling, Austria  
Fax: +43-2276-6140, Email: [113142.3232@compuserve.com](mailto:113142.3232@compuserve.com)

**IMPORTANT:** participation cannot be guaranteed without registration in time

As soon as your registration has been received, you will be informed about payment methods. It will also be possible to pay by credit card (Eurocard/MasterCard and VISA). After we have received your payment, you will receive the final program with all information like routing, hotels, supporting programs, etc.).

### **Attendance fees in EURO (€; 1EURO = 0,88 USD, course fluctuates)**

|                           | payment until 31. 8.<br>2001 | payment until 30.<br>11. 2001 | payment after 30.<br>11. 2001 |
|---------------------------|------------------------------|-------------------------------|-------------------------------|
| 4-day ticket              | 70 €                         | 80 €                          | 100 €                         |
| 4-day ticket for members* | 35 €                         | 40 €                          | 50 €                          |
| day ticket                | 25 €                         | 30 €                          | 40 €                          |
| day ticket for members*   | 12 €                         | 15 €                          | 20 €                          |

\*= members of SFÖ, NSV, Chelonia 2002

The symposium is free of charge for all 4 days for speakers. Speakers are kindly requested to submit their abstracts before June 30, 2001 and to submit the whole manuscript for the proceedings before November 30, 2001 to the above mentioned address.

Well-known experts, who have committed to attend and who will mostly give lectures include: Markus Baur - Dr. Ron de Bruin - Dr. Peter Paul van Dijk - Andy Highfield - René Honegger - Urs Jost - Dr. Gerald Kuchling - Victor Loehr - Elmar Meier - Sébastien Métrailler - Hans-Dieter Philippen - Dr. Tamás Sátorhelyi - Alfred Schleicher - Dr. Ertan Taskavak - Paul Vanderschouw - Rudolf Wicker - Henk Zwartepoorte !

Preliminary program  
(as of March 31, 2001)

### **Thursday 17 January ASIA**

*Callagur borneoensis, Cuora aurocapitata, Cuora flavomarginata, Cuora g. galbinifrons, C. g. bourreti, Cuora mccordi, Cuora pani, Cuora zhoui, Geochelone elegans, Geoclemys hamiltonii, Geoemyda spengleri, Heosemys grandis, Indotestudo elongata, Indotestudo forstenii, Kachuga tecta, Manouria emys, Mauremys annamensis, Mauremys japonica, Mauremys mutica, Ocadia sinensis, Palea steindachneri, Pelodiscus sinensis, Pyxidea mouhotii obsti, Sacalia bealei, Sacalia quadricellata, Siebenrockiella crassivollis.*

### **Friday 18 January THE AMERICAS**

*Chelus fimbriatus, Chelydra serpentina, Clemmys guttata, Clemmys marmorata, Geochelone carbonaria, Geochelone denticulata, Geochelone nigra, Graptemys barbouri, Graptemys caglei, Graptemys flavimaculata, Graptemys gibbonsi, Graptemys nigrinoda, Graptemys oculifera, Kinosternon acutum, Kinosternon flavescens, Kinosternon hirtipes, Kinosternon leucostomum, Kinosternon scordioides, Kinosternon subrubrum, Phrynops gibbus, Phrynops tuberculatus, Platemyis platycephala, Podocnemis cayennensis, Pseudemys nelsoni, Rhinoclemmys areolata, Rhinoclemmys funerea, Rhinoclemmys pulcherrima, Rhinoclemmys punctularia, Staurotypus salvinii, Sternotherus carinatus, Sternotherus minor, Terrapene carolina, Terrapene coahuila, Terrapene ornata, Trachemys callirostris, Trachemys decussata, Trachemys stejnegeri.*

### **Saturday 19 January, morning session AFRICA & MADAGASCAR**

*Chersina angulata, Erymnochelys madagascariensis, Geochelone pardalis, Geochelone sulcata, Homopus areolatus, Homopus bergeri, Homopus s. signatus, Kinixys b. belliana, Kinixys spekii, Malacochersus tornieri, Pelomedusa s. subrufa, Pelusios bechuanicus, Pelusios castaneus, Pelusios sinuatus, Psammobates tentorius, Pyxis arachnoides, Pyxis planicauda.*

**Saturday 19 January, afternoon session**

**AUSTRALIA & NEW GUINEA**

*Carettochelys insculpta*, *Chelodina longicollis*, *Chelodina macleayi*, *Chelodina oblonga*, *Chelodina parkeri*, *Chelodina reimanni*, *Chelodina siebenrocki*, *Eelseya novaeguineae*, *Emydura macquarii*, *Pseudemydura umbrina*.

**Sunday 20 January, morning session**

**EUROPE, THE MIDDLE EAST & THE MEDITERRANEAN**

*Emys o. orbicularis*, *E. o. capolongoi*, *E. o. hellenica*, *E. o. luteofusca*, *Mauremys c. caspica*, *Mauremys rivulata*, *Rafetus euphraticus*, *Testudo g. graeca*, *T. g. anamurensis*, *T. g. armeniaca*, *T. g. nabeulensis*, *Testudo hermanni boettgeri*, *Testudo horsfieldii*, *Testudo kleinmanni*, *Testudo marginata*, *Trionyx triunguis*.

**Sunday 20 January, afternoon session**

**GENERAL LECTURES and VETERINARY SECTION**

program not yet available

So please go ahead and register for the symposium by sending a short message with your name, address, and a signed confirmation of your participation to the following address:

Dr. Harald Artner, Maria Ponsee 32, A-3454 Sitzenberg-Reidling, Austria  
Fax: +43-2276-6140, Email: [113142.3232@compuserve.com](mailto:113142.3232@compuserve.com)

**4. 15<sup>th</sup> Working Meeting of the Crocodile Specialist Group**

Gainesville, Florida, USA. 2002.

Watch this space for further details!

---

**OTHER NEWS**

**PRESS RELEASES**

**Blue-Tongued skinks arrive at the South African National Zoo, in Pretoria.**

The National Zoo recently received three blue-tongued skinks from a rescue centre in the Netherlands. This member of the skink family is native to

Australia, where it is found in areas ranging from the extreme north, through to the east and southeast.

This reptile gets its name from its brightly coloured tongue. When attacked or threatened, the blue-tongued skink extends or unfolds its tongue, which is almost as large as its head. The tongues bright blue colour serves to scare off and discourage any potential predators

---

**Customs foils fauna export attempt in Western Australia**

Customs officers in Western Australia have arrested a man and seized more than 80 native snakes and lizards following an alleged attempt to illegally export them from Australia. The Minister for Justice and Customs, Senator Amanda Vanstone, said that Customs investigators had arrested a man in Geraldton on Christmas Eve when an attempt was made to send a Postpak containing 59 skinks to Germany. The skinks were a species of Australian lizards native to the Pilbara and Murchison regions of Western Australia. "I am advised that further investigations and a search of a vehicle led to an assortment of 27 other Australian reptiles being discovered inside a portable cooler. The reptiles included monitors, skinks, geckoes and pythons," Senator Vanstone said. "Customs officers also intercepted a parcel containing a small monitor lizard, inside a video cassette case, which was posted from the Carnarvon Post Office on 23 December. It was also addressed to Germany."

Senator Vanstone said that the interception of the parcels followed a month-long investigation by Customs and extensive monitoring of the movements of a man in the Pilbara and Murchison areas. A 36-year-old unemployed German national is expected to appear before a Magistrate in East Perth today (Monday 27 December) charged with offences against the Wildlife Protection (Regulation of Exports and Imports) Act 1982. Under the Act it is an offence to export Australian native wildlife without a permit. The maximum penalty for individuals attempting to export native wildlife without the relevant permit is a fine of \$110 000 and/or 10 years imprisonment. Senator Vanstone said Customs investigators also expected to lay additional charges.

The WA arrest follows the arrest of a man earlier this month when 74 native lizards were found after Customs officers examined the baggage accompanying a man attempting to take a flight from Adelaide International Airport. Four of the lizards died shortly after their discovery. A German national was charged with breaches of wildlife regulations and was remanded in custody to face court early in the new year. The lizards were mainly geckos

and stumpy-tailed lizards. "This latest arrest is another warning to everyone that we treasure our unique wildlife in Australia and no matter what time of year it is. Customs officers are working hard to ensure that it does not end up in the hands of cruel smugglers." "At this time of rest and relaxation for most Australians we should give particular thanks to the men and women of Customs, the Australian Federal Police and all the other law enforcement and emergency service personnel who are on duty protecting us and our way of life," Senator Vanstone said.

**Supplied by**

Peter Overliese (Perth)

---

**Live snakes intercepted by customs**

Customs officers in Sydney have foiled an attempt to smuggle six live snakes into Australia, the Minister for Justice and Customs, Senator Amanda Vanstone, said today.

The reptiles, identified as Burmese Pythons, were discovered inside a large cardboard box which had been air freighted from the United States. It was being sent to a private residence in Sydney's southern suburbs.

Among the contents of the box, which had been declared as 'corn snacks', were three aluminium tins. Each tin contained snack food packets that held two snakes concealed within cloth bags.

The Minister praised the efforts of Customs and Environment Australia staff who had worked closely to detect and intercept the snakes. She said that the foreign species could have posed a major threat to the local environment.

"This was excellent work by the officers involved and again demonstrates the value of agencies working closely together to detect criminal activity.

"Australia's unique environment can be easily put at risk by backyard importers who attempt to smuggle animals such as reptiles into the country." Investigations are continuing into the importation of the six snakes.

Under the Wildlife Protection (Regulation of Imports and Exports) Act, it is an offence to import reptiles into Australia without a permit from Environment Australia. The offence carries a penalty of up to \$110,000 and 10 years' jail or both.

**Supplied by**

Peter Overliese (Perth)

---

**Male Komodo Dragon Found Dead**

23<sup>rd</sup> June 2001:

The National Zoological Gardens of South Africa is sad to announce the death of their male Komodo dragon (See AHN Vol 31). Staff found the animal dead in its enclosure on 23<sup>rd</sup> June 2001, and steps have been put into place to determine the cause of this unfortunate loss.

Upon receiving the news, the veterinarians of the National Zoo immediately started with the necessary pathological tests to determine the cause of death. A report will be made available after the results of the pathological tests are obtained. According to the veterinarians, no obvious marks, lesions or infections could be found on the animal and it appeared to be healthy.

The Komodo dragons arrived at the National Zoo a few years ago and in July last year were moved into their new, state-of-the-art enclosure, and adapted well to this environment. Mating behaviour was observed on several occasions. Conservation staff are currently closely monitoring the female for any possible behavioural changes. As Komodo dragons are solitary animals by nature, the loss of the male will hopefully not influence the female's behaviour.

The National Zoo has already started with negotiations through the appropriate channels for another male, due to the value of such animals in the collection.

27<sup>th</sup> June 2001:

The National Zoological Gardens of South Africa today announced that the results have been received to explain the sudden death of one of their Komodo dragons. According to the test results, the animal died as a result of severe internal infection that had already spread rapidly throughout its body. Further pathological tests will be carried out to determine the cause of the infection.

**Issued by**

Sarita Cronje, Deputy Director., National Zoological Gardens, South Africa.

---

**HAA Publications Available:**

Available Back Issues of the H.A.A. Journal – the African Journal of Herpetology.

At present the following numbers are still available as back issues. Prices include packaging and postage (surface mail only). They may be ordered from the H.A.A. Secretary, P.O. Box 20142, Durban North, 4016, SOUTH AFRICA.

#### ISSUE

- # 26 December 1981
- # 27 June 1982
- # 28 December 1982
- # 29 October 1983
- # 31 January 1985
- # 32 January 1986
- # 33 November 1987
- # 34 November 1988
- # 35 March 1989
- # 36 August 1989 (Proceedings 1st Symposium Stellenbosch)
- # 37 May 1990
- # 38 November 1990 (Proc. Husbandry Symposium Delta Park)
- # 41 December 1992
- # 42 September 1993
- # 43 June 1994
- # 44(i) April 1995
- # 44(ii) October 1995
- # 45(i) August 1996
- # 45(ii) December 1996
- # 46(i) September 1977
- no # September 1977 (Proc. Fitz. Com. Symposium Pretoria)
- # 46(ii) December 1997
- # 47(i) September 1998
- # 47(ii) March 1999
- # 48(i&ii) March 2000
- # 49(i) September 2000

We also have back issues of some NewsLetters:-

#2, #3, #5, #7, #8, #10, #14 #15 onwards

#17 Special Issue (Bibliographic Index to the Journal from 1965 to 1991 (#1 to #39))

## RESEARCH NEWS

*(anybody wishing to contribute to this section please contact the Editor)*

\*\*Please pay attention to the enclosed questionnaire and addressed/pre-stamped envelope. Dr Tilbury would greatly appreciate your participation – *ed.*

### **HYPERSENSITIVITY TO SNAKE VENOM – AN OCCUPATIONAL HAZARD**

Dr. Colin R. Tilbury

#### **INTRODUCTION**

Following the bite of a venomous snake and allowing for fear induced symptomatology, if envenomation occurs, the subsequent development of signs and symptoms are usually a direct result of the specific effects of venom fractions on local or distant targets. These effects manifest as generally recognisable clinical syndromes that mostly conform to what is known about the clinical effects of that particular venom. In general, the more venom that is injected, or the greater the venom : mass ratio, the more severe the clinical effects and vice versa.

Occasionally however, the unexpected occurs. There are many anecdotal reports of snakebite victims who succumb within minutes of a bite. Most of these stories are told around campfires, others have been published (1). These accounts are usually offered up as evidence of the direct toxicity of whatever species of snake was responsible for the bite. Doctors in southern Africa who treat “legitimate” snakebites on a regular basis in rural areas, might treat hundreds of cases and still never see a case of snakebite that dies within a few minutes of the bite.

It is often very difficult to make clinical sense out of a case where the victim of a snakebite rapidly succumbs in spite of energetic treatment and resuscitation, except that all these cases seem to be associated with the rapid onset of profound hypotension. Three possible scenarios causing rapid death following snakebite can be postulated. Firstly, but unlikely, a massive dose of venom is injected which overcomes the bodies auto-regulatory mechanisms. Vast accumulated local experience has shown this is only likely to be fatal within hours rather than minutes. Secondly, an intra-vascular injection of venom with subsequent catastrophic hypotension is a possibility, but one that has never been proven to occur following an incidental bite. Lastly, the

development of an acute hypersensitivity reaction to the venom proteins with subsequent anaphylaxis leading to death.

### Literature review

Although the syndrome of hypersensitivity to snake venoms has been previously recognised in America, Australia, Europe, and the Middle East (2-9), hypersensitivity to South African snake venom proteins has only rarely been recognised (10-13). Occasionally the manifestations of hypersensitivity may be misinterpreted as being due to the direct effects of the venom. Some snake venoms such as with some species of *Viperu*, *Bothrops* and *Atractaspis* may release vasodilating autacoids such as Histamine and other kinins giving rise to early anaphylactoid / autopharmacologic reactions (2-4). However, like bee sting hypersensitivity, the development of hypersensitivity to snake venoms has also been shown in several cases to be associated with elevated IgE levels (5,6,7,11), suggesting that acute reactions are probably truly anaphylactic in those cases.

Manifestations of hypersensitivity are usually associated with a well defined group of patients. The victim is often an adult male snake-handler, either a hobbyist or employed in a snake park with a history of previous bites (not always from the same species that results in his reaction), or a person who works with venom fractions in a laboratory. Following a further bite or other exposure to venom, within minutes to hours, the victim develops the onset of respiratory wheeze, urticarial skin rashes, nasal congestion, sneezing, angio-oedema and conjunctival injection. Severe cases develop marked hypotension with symptoms of dizziness, weakness, darkened vision, cold sweats, confusion and a decreased level of consciousness. If interventions are not immediate or effective, the victim spirals down to a state of profound shock and ultimately death. Descriptions of severe cases are few and far between, and are often flawed by lack of detail, and a focus on the resuscitation attempt and not on the clinical signs and symptoms that might give clues as to the underlying pathogenesis.

### Motivation for study

Because of the nature of the victims pre-exposure to venom proteins, this syndrome is as such, an occupational hazard for snake handlers and those people who work with venoms. There are no estimates for the prevalence of hypersensitivity amongst the South African herpetological community. There are many people in South Africa who work professionally with snakes and their venoms, either in snake parks, research laboratories, anti-venom production and museums. Additionally many people catch or keep snakes for a hobby. A history of multiple snakebites in the past within this group is

relatively common. This small group of "at risk" people has a high potential for severe and possibly life threatening reactions.

Notwithstanding this, there are some people who develop hypersensitivity and there are others that do not in spite of similar degrees of exposure. The factors that drive the development of hypersensitivity are at this time only conjecture, and the role of background conditions, past medical history or other influences in the development of hypersensitivity in these cases is uncertain.

In order to try and gain a better understanding of the factors that drive or underpin the development of this condition, I have embarked on a short study that will hopefully be able to shed some light on how and why hypersensitivity develops, and more importantly, who is more likely to become sensitive to venom proteins. The outcomes of this study will allow for informed advice and decisions on the management of the hypersensitive individual.

### Objectives

1. To establish the prevalence of hypersensitivity to coarse snake venom in the community of both professional and amateur herpetologists as well as research and laboratory staff.
2. To attempt to identify the significant risk factors leading to the development of venom hypersensitivity.
3. To assess current practice in the prevention and management of hypersensitivity in the workplace.

---

### Methods

#### Study Type

Questionnaire survey (see enclosed).

#### Study Population

A Questionnaire will be sent out to all registered members of the Herpetological Association of Africa, local and regional herpetological societies, and to the staff of all the snake parks and institutions that deal with snake venom in South Africa. The questionnaire will be distributed by various means and then returned in a stamped, self-addressed envelope back to the author. Any persons who are currently exposed to venoms by virtue of either handling venoms or venomous snakes themselves, or who have been exposed to venoms in the past are asked to complete the questionnaire.



Participation in this survey will be entirely voluntary and will be kept anonymous. Should individuals want to identify themselves for purposes of further contact or information they may write their name and contact details on the questionnaire.

### Data Analysis

The data will be used to construct the typical profile of the South African herpetologist or worker at risk for acute snake venom hypersensitivity reactions.

Specific areas that will be compared and commented on include the following

- To assess the correlation between the number of bites, duration of, degree of and types of exposure to venoms and the subsequent development of hypersensitivity.
- An assessment of the roles played by different groups of snake venoms (e.g. Vipers, elapids, colubrids) in promoting the development of hypersensitivity.
- Determine the incidence of incidental snake bites among the snake handler community.
- Establish a baseline prevalence rate of hypersensitivity within the herpetological and related venom worker communities.
- Assess the relevance of a previous history of allergy or atopy with regard to symptoms of hypersensitivity.

### Reporting of the results

This study will be submitted in partial fulfilment of the requirements for the final year of study for the Diploma of Occupational Health at the University of Witwatersrand.

Significant results emanating from the study will be communicated back to all interested respondents, to all the relevant institutions that were canvassed and a short report will be prepared for publication in the Journal of the Herpetological Association of Africa.

### References

1. GALLMAN, K. I dreamed of Africa –1991, Penguin Books pp 315 p 160 – 162 & 191 – 200.).
2. CHAJEK, RUBINGER et al 1974. Anaphylactoid reaction and tissue damage following bite by *Atractaspis engaddensis*. Trans Roy Soc Trop Med Hyg 1974; 68(4): 333 – 337.

3. JACKSON O. 1980. Effects of a bite by a sand viper (*Vipera ammodytes*). The Lancet 1980, II: 686 – 7.
4. REID H.A. 1976. Adder Bites in Britain. BMJ 1976;11:153 – 6.
5. PARRISH H.M. & POLARD C.B. 1959. Effects of repeated poisonous bites in man. Am J Med Sci 1959; 237 – 277.
6. PARRISH H.M. 1957. Survey of human allergy to North American snake venoms. Arizona Med 1957; 14: 461.
7. MENDES E, CINTRA A.U. & CORREA A. 1960. Allergy to snake venoms. J of Allergy 1960; 31: 68.
8. CLEMENT J.F & PIETRUSKO RG 1979. Pit Viper snakebite Envenomation in the United States. Clinical Toxicology 14(5): 515 – 538.
9. EFRATI P. 1969. Clinical manifestations and treatment of viper bites in Israel. Toxicon 1969; 7 : 29 – 31.
10. FITZSIMONS F.W. The Snakes of South Africa. London : Maskew Miller, 1912.
11. WADEE A.A. & RABSON A.R. 1987. Development of specific IgE antibodies after repeated exposure to snake venom. J Allergy Clin Immunol 1987; 80: 695 – 98.
12. MARAIS J 1981. Case history of a snouted night adder bite. J Herp Assoc Africa 26 : 6 - 7.
13. HAAGNER G.V. Mozambique Spitting Cobra Envenomation. J.Herp.Assoc.Afr. 1988,5:40.

---

### Interesting web addresses:

- World of Atheris: A guide to the African Bush Vipers  
<http://www.worldofatheris.net>
- The new HAA Website  
<http://www.wits.ac.za/haa>

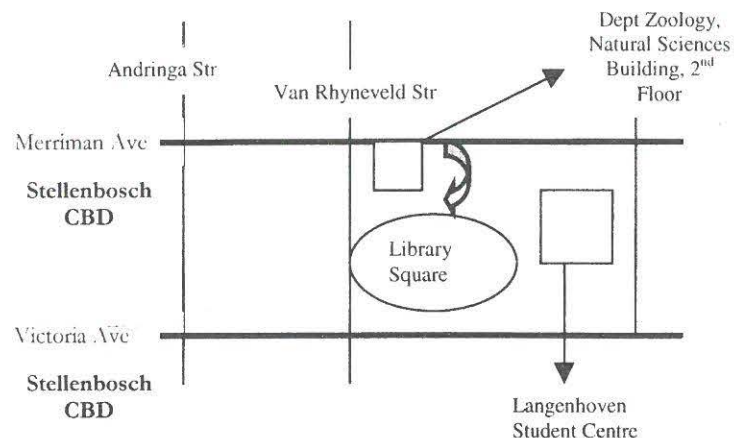
Froggy went a Courting.....

Once upon a time in a land far away,  
A beautiful, independent, self-assured princess  
Happened upon a frog as she sat  
Contemplating ecological issues on the shores  
Of an unpolluted pond in a verdant meadow near her castle....

The frog hopped into the princesses lap –  
And said: “Elegant lady, I was once a handsome prince,  
Until an evil witch cast a spell upon me.  
One kiss from you, however, and I will turn  
back into the dapper, young prince that I am  
and then my sweet, we can marry....  
And set-up housekeeping in your castle with my mother....  
Where you can prepare my meals, clean my clothes,  
bear my children...And forever feel grateful  
and happy doing so.

That night as the princess dines sumptuously  
on a repast of lightly sautéed frog legs,  
seasoned in a white wine and onion cream sauce....  
She chuckled and thought to herself.....  
...I don't think so!!!!!!

**Conference Venue Map – Dept Zoology, Natural Sciences Building,  
University of Stellenbosch Campus**



**HERPETOLOGICAL ASSOCIATION OF AFRICA  
MEMBERSHIP FEES AS OF 1 APRIL 2001**

AFRICAN MEMBERSHIP

ORDINARY MEMBERSHIP

1 year membership R100.00. Submit in Rand

3 year membership R270.00. Submit in Rand

STUDENT:

1 year membership R70.00. Submit in Rand.

OVERSEAS MEMBERSHIP

DOLLAR PAYMENTS

1 year membership \$30.00. Submit in US Dollars by personal cheque or money order.

3 year membership \$80.00. Submit in US Dollars by personal cheque or money order.

Note: Please, no U.S. “postal” money orders, U.S. Dollar “Eurocheques” or Rand Eurocheques. Members in Europe should submit the DM equivalent by Eurocheque.

RAND PAYMENTS FROM OVERSEAS

1 and 3 year memberships - Rand equivalent of US\$ rate payable by bankers draft or money order (NOT postal order).

Owing to numerous banking problems, members are kindly requested not to submit payments directly to any Building Society or Bank Account. All payments should be made out to the Herpetological Association of Africa and be submitted directly to:

**THE SECRETARY  
HERPETOLOGICAL ASSOCIATION OF AFRICA  
P. O. BOX 20142  
DURBAN NORTH 4016  
SOUTH AFRICA**