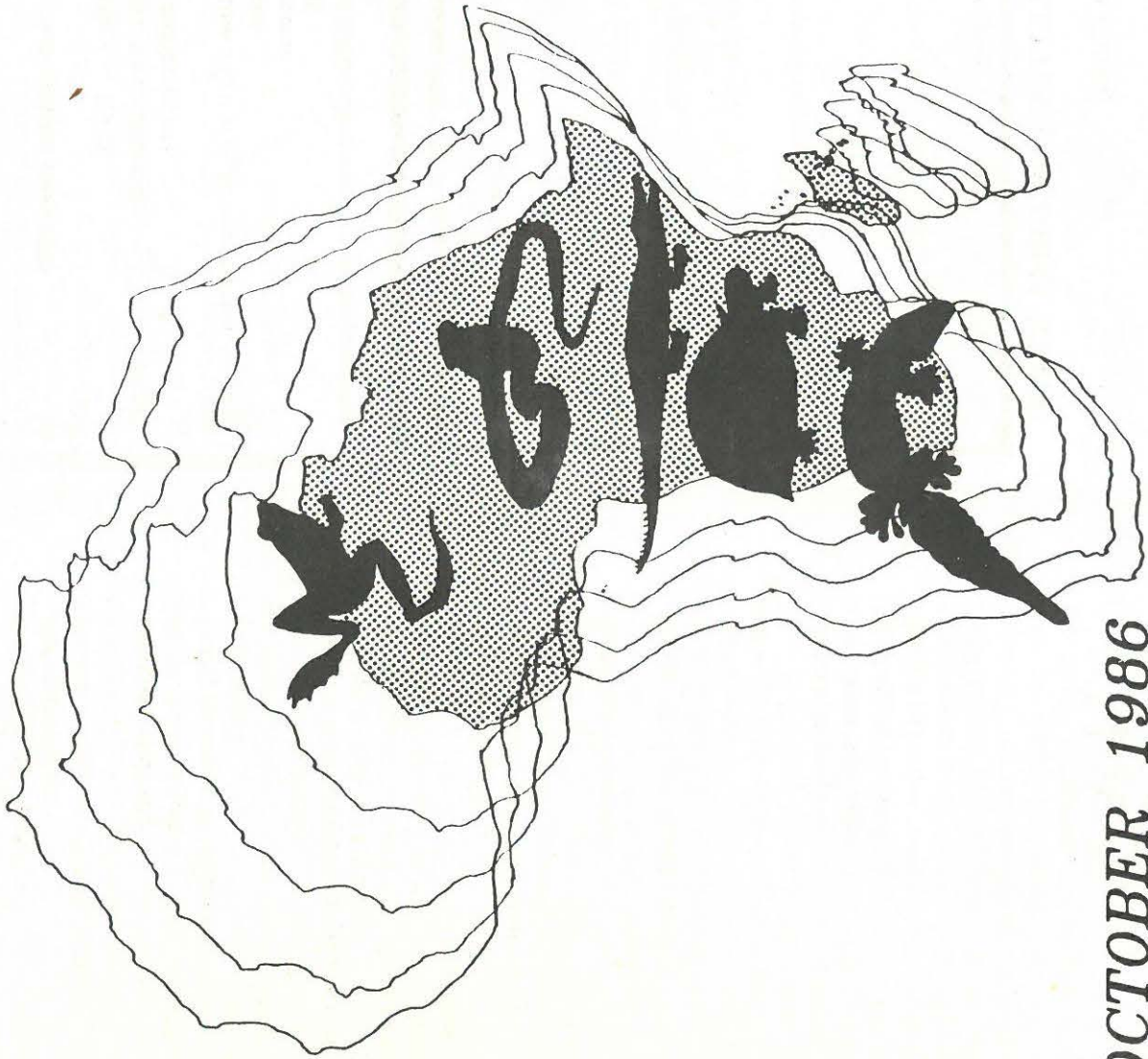


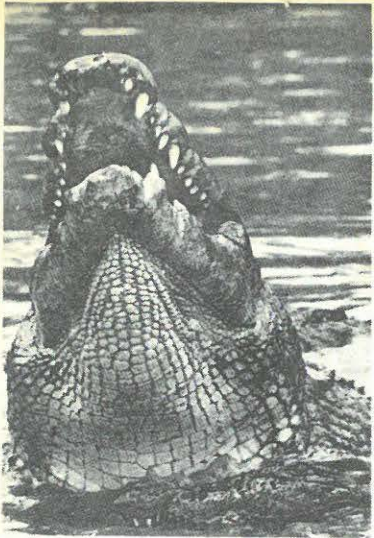
ISSN 0257-7054

H.A.A. NEWSLETTER 8



OCTOBER 1986

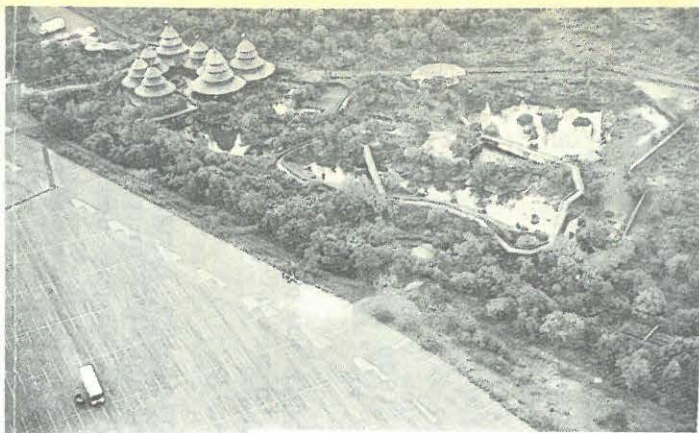
Herpetological Association of Africa



ENJOY our unique blend of entertainment, education and conservation.

THRILL to a step back in time when crocodiles and dinosaurs ruled the earth, 200 million years ago.

VIEW the full lifestory of the crocodile on film in our thatched roofed auditorium.



Open 7 days a week (including public holidays).
Guided trails daily
(Night trails for group bookings only)
Feeding daily.

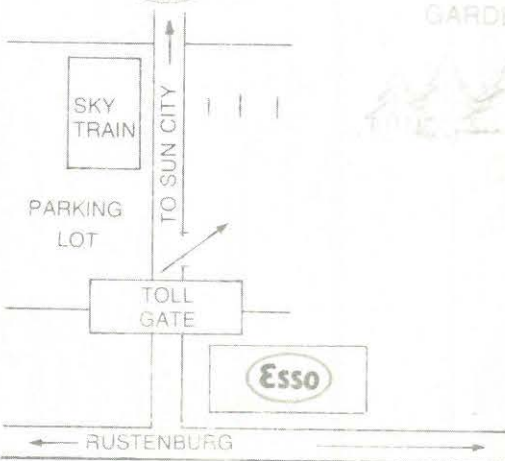
Only two and a half hours by road from Johannesburg.

See its unique thatched roofs reaching for the sky right by the gates of Sun City.

STROLL through pre-historic gardens and across a necklace of dams, home to more than 300 crocodiles of all ages, from 30 cm. hatchlings to monsters five metres long.

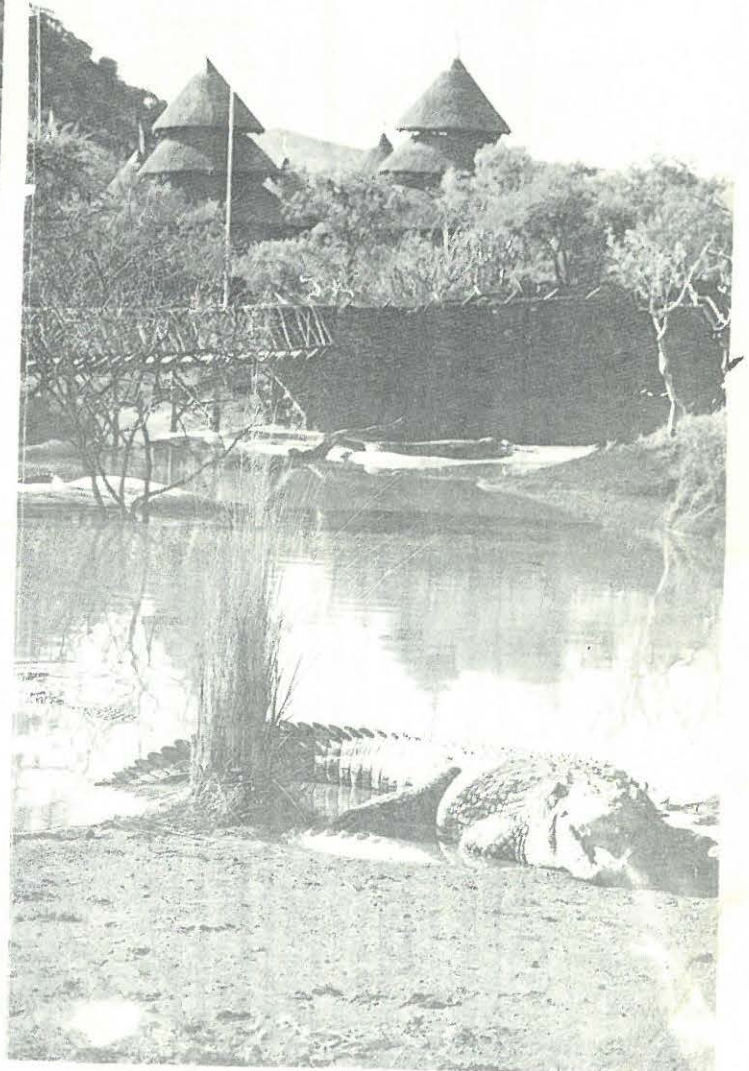
TASTE the delicious cream teas, snacks and cold drinks in our terrace coffee house, overlooking the dams.

RECALL your pleasure and enjoyment with a souvenir from our well-stocked curio shop.

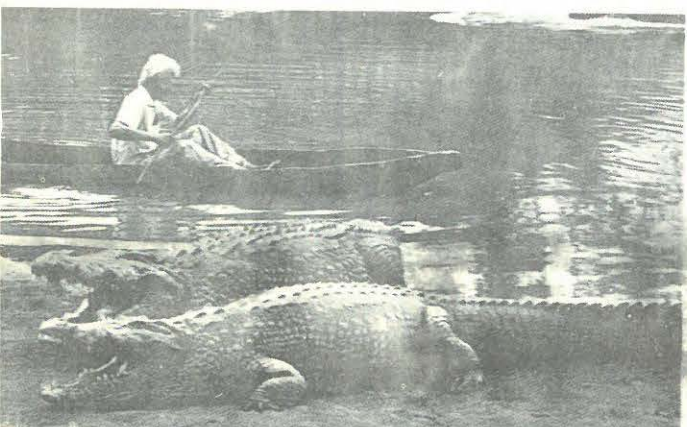


KWENA GARDEN

CROCODILE PARADISE
AT
SUN CITY



SEE THE LARGEST
CAPTIVE NILE CROCODILE
IN THE WORLD!



KWENA GARDENS
Crocodile Paradise at Sun City
P.O. Box 234
Sun City
Bophuthatswana
Tel: 014651-21262/3

HERPETOLOGICAL ASSOCIATION OF AFRICA

Founded 1965

The H.A.A. 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 *Journal of the Herpetological Association of Africa* (two issues per year) and the *H.A.A. Newsletter* (three issues per year).

Subscription rates 1986

African members — R9,00
Members from other continents — US \$ 10.00 (by international money order).

For information about H.A.A. membership, write to Mr R. Douglas
National Museum
P.O. Box 266
Bloemfontein 9300
South Africa

CONTENTS

| | |
|--------------------------------|----|
| Editorial | 2 |
| Institutional News | 3 |
| African Clawed Toad Survey ... | 7 |
| World Congress of Herpetology | 8 |
| Book Review | 13 |
| Geometric Tortoise Fund | 14 |
| Stamps | 15 |
| Herpetological Reading | 16 |
| New Members | 18 |

NEWSLETTER EDITORIAL STAFF

J.H. van Wyk (Editor)
R. Douglas
T. Saaiman

Department of Herpetology
National Museum
P O Box 266
Bloemfontein, 9300

Tel. 051-79609



H.A.A. COMMITTEE

1. **Chairman & Newsletter Editor:**
Mr J.H. van Wyk
National Museum
Bloemfontein
9300
2. **Hon. Secretary/Treasurer:**
Mr R.M. Douglas
National Museum
Bloemfontein
9300
3. **Journal Editor:**
Dr W.R. Branch
Port Elizabeth Museum
Humewood
4. Mr N. Jacobsen
Nature Conservation Division
Private Bag X209
Pretoria
0001
5. Mr J. Marais
Crocodile Farm in Sun City
P.O. Box 234
Sun City
Bophuthatswana
6. Dr H. Berger-Dell'mour
State Museum
Windhoek
S.W.A./Namibia
7. **Natal Branch**
Mr John Vorster
4 Jagger Road
Montclair
Durban
4001

EDITORIAL

Newsletter No. 7 was the first Newsletter to be printed by our printer. The practical implications in photocopying 500 copies of such "long" Newsletters made the printing unavoidable and also more expensive. As the time-lag after submitting the final copy, was unexpected you received the Newsletter No. 7 rather late!

Up to date the members of the H.A.A. responded well to the questionnaire issued. The statistics concerning this information will be presented in a future Newsletter. Similarly the response to the call-up to support the Geometric Tortoise Fund was overwhelming and may be a good indication of the commitment of the H.A.A. members to the conservation of reptiles and amphibians.

The H.A.A. Committee have unanimously decided to join as a sponsor of the first World Congress of Herpetology to be held in 1989. By supporting this International venture the H.A.A. could only benefit.

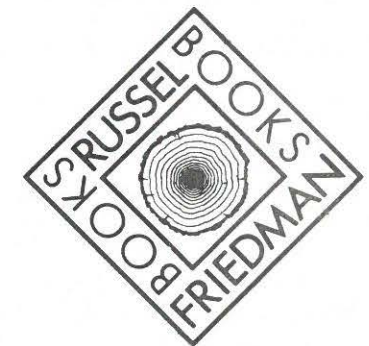
The financial statement for 1985 have just been made available to the members. It is your duty to study this document and see whether your membership moneys were put to good work. I am, however, convinced that the whole H.A.A. Membership will agree that the Honorary Secretary/ Treasurer, Mr Rod Douglas, has done a great job since he took over in 1984.

From the response to the questionnaire it is evident that some members demand more African writings and more Newsletters. The answer to them is simple:

Until you supply the material (any material) I have no real choice as to publish any news I can get. Although I have decided not to rely on material from members, it would result in more frequent Newsletters with more local news. If only the members demanding more Newsletters and/or local news would contribute, I could double the number of Newsletters. Remember the Newsletter was initiated by Dr Bill Branch in 1983. I took over the editorship and production (January 1985) mainly because of the workload on Dr Branch. During the period February 1985-September 1986 you have received 5 Newsletters, amounting to some 94 pages of reading!

OBITUARY - Mrs B.L. Bennefield
National Museum
Bulawayo, Zimbabwe

The H.A.A. Committee and members would like to extend their sympathy and condolences to the family and relatives of Mrs Bennefield who passed away on the 28th May 1986.



RUSSEL FRIEDMAN BOOK ENTERPRISES (PTY) LTD
PUBLISHING — DISTRIBUTION — DESIGN — MAIL ORDER —
P.O. BOX 73 HALFWAY HOUSE 1685 SOUTH AFRICA TEL. (011) 702 2300 & 1 TELEX 4-28133 SA

INSTITUTIONAL NEWS

REPTILES OF THE JOHANNESBURG ZOO

A variety of reptiles are housed and displayed at the Johannesburg Zoo. Six Nile crocodiles, three males and three females, are housed in three adjacent enclosures. We have not as yet attempted to breed them as we would like first to supply them with more spacious accommodation.

Just below the restaurant we have an open vivarium area in which we accommodate both mountain and water leguaans, together with Cape terrapins. We have had breeding success with both terrapins and leguaans.

On the path from the restaurant to the war museum one comes upon our newly completed constrictor complex nestling under a clump of oak trees. The enclosure is modern and attractive with a riverine scene which includes a waterfall. Here we house five species of the giant boid family, including African rock pythons, Indian rock pythons and yellow anacondas. So far, we have had success breeding the Indian rock pythons and yellow anacondas.

Near the children's farmyard area there is a pumpkin-shaped building which has been converted into a temporary herpetarium. Breeding colonies of Egyptian cobras, Western diamond-backed rattlesnakes, Mosambique spitting cobras, American rat snakes and brown house snakes are housed here. Also housed in this building are rinkhals, young boa constrictors, Florida king snakes, mole snakes, Sicilian vipers, Indian cobras and puff adders.

Now that our polar bear complex is nearing completion, Zoo personnel are looking forward to the construction of public display enclosures for many of our scaly friends.

On display to the public is also a group of Mountain tortoises whose population now stands at about forty individuals. Each year we get a number of clutches of eggs which we have hatched successfully. Many other species of tortoises have been housed here in the past, but most have been passed on to conservation authorities for release into the wild.

We also offer education programmes which include talks on many aspects of reptiles i.e. evolution, adaptations, habits, habitat, classification and snakebite.

These courses are offered mainly to school groups at the Zoo, but sometimes we go out to wildlife societies and clubs. Live specimens are always used and we encourage contact with the animals. Conservation is always emphasised as we are endeavouring to protect our indigenous herpetofauna for many generations to come.

With about 600 000 visitors passing through our Zoo every year, we hope to impress upon at least some of them the value and importance of our indigenous wildlife, reptiles included.

John Boberg
Technical Officer
Johannesburg Zoological Gardens

.....
Copies of an impressive and most worthwhile snake poster can be obtained from the Transvaal Branch, Wildlife Society of S.A., P.O. Box 44344, Linden, 2104, tel. (011) 7825461, at R3.00 each, plus GST and 50c for postage and packing, per poster.
.....

RIVER BEND FARMS

Partners: N. Kennett
and N.H. Kelly

November 1980 saw the start of my late father's brainchild, the first commercial crocodile farm in Natal and the reintroduction of the Nile crocodile after some 120 years to this location at Southbroom on the banks of the Imbezana River. The farm consists of a large breeding pool which has been specifically designed for this purpose, 2 smaller breeding pools facilitating breeding experiments, a nursery housing the hatchlings and one and two year olds and then finally an information centre and croc museum.

The farm now boasts a population of about 150 crocs of all sizes and shapes. The venture was initially started as a tourist attraction but we are fast reaching the stage where the breeding will be of primary importance. We have designed the farm so that in full production we'll be able to rear 3000 crocs annually. For the first time this year we've incubated eggs and the results have been good, we've actually cut the incubation period down by 10 days by maintaining static temperatures and humidity.

It is in our interests to promote the species and not to endanger them any further and every croc bred on the farm is sold as a live creature. We are able to supply new farms and wild life projects that may require crocodiles.

There are so many interesting facts and features about these incredible creatures, in fact far too much to cover in this letter, so please do not hesitate to inform me of specific details you may require.

NEW JOURNAL

HERPETOPATHOLOGIA

The journal of the International Group on Herpetopathology publishes research articles, reviews and short notes on diseases of reptiles and amphibians, covering physiology, immunology, neoplasia, microbiological and parasitic diseases, teratology and environmental injury.

Papers presented at the Colloquia organised by the International Group will also be published in Herpetopathologia.

Libraries or individuals interested in subscribing to the journal should contact:

Professor Gilbert Matz
Laboratoire de Biologie animale
Université d'Angers
2, Boulevard Lavoisier
49045 Angers Cedex
FRANCE

WANTED

.....
Scott Allen of the Ontario Herpetological Society is looking for, and prepared to pay for, the following back issues of the H.A.A. Journal: Numbers 1 to 7 and number 9. These can be originals you no longer need or Xerox copies. Scott is also looking for slides of African Herpetofauna for his collection. He will sign affidavits saying that these will not be copied without the photographer's permission. Any books, Journals or slides on North American Herpetofauna can also be traded. Contact Scott at 77 Baronwood Court, Brampton, Ontario, L6V 3H7 Canada.
.....

KWENA GARDENS - A NEW TOURIST SPARKLE

Kwena Gardens is a crocodile farm like no other in southern Africa for it offers a marvellous combination of entertainment and education in a stunning setting.

"Kwena" means "crocodile" in Setswana, but it has a majestic significance for Bophuthatswana as the crocodile is the emblem of the people of the Republic's President, His Excellency Lucas Mongope.

Situated in Sun City, and nesting against a ridge of the Pilansberg mountains, Kwena Gardens rambles across the veldt in a necklace of dams, ponds, waterfalls and streams, which are home to crocodiles ranging in age from a few weeks to over 100 years old.

They are set in an evocation of pre-historic landscape, planted with the modern-day descendants of primeval trees, reeds and flowering bushes, entirely appropriate for its inhabitants who trace their origins back more than 200 million years.

As the wooden bridge from the car park leads towards the Garden, the thatched tiered roofs of the reception and the restaurant rise into the sky like African pagodas, umbrellas of deep honey-gold spreading beneath the brilliant sunshine.

In the central courtyard, the sound of rushing water seems to spill over the encircling flagstones separated by tufts of grass, but in keeping with the ancient order of crocodiles, it comes from no fountain. Instead there is a well, set like an inverted cone into the earth, with water rushing round the rim and splashing down over the blocks of stone.

From here, paths flanked by rough stonewalls lead over wooden bridges, along the river bank and past the pools and dams which are home to the crocodiles. The bridges have cleverly designed angular sides covered with roped netting, so that visitors can look down with ease and safety.

Baobabs and swamp cypresses, tree ferns and floating morning glories, and the multi-coloured stemmed commiphora, help to create a glimpse of another aeon, when dinosaurs as well as crocodiles might be seen around the next rock.

In the first pond are about 30 baby crocodiles, but blacksmith plovers and cattle egrets have also set up home among the youngsters. In the second, about 120 of the two to three year age group bask on the banks of white sand, and further on about 60 crocs aged from four to ten are found happily swimming through the reeds.

The fourth dam holds only 26, because these monster crocodiles are aged between 11 and 150, and a five meter long croc needs room to manoeuvre among the little islands and past the group of dead leadwood trees, specially placed to resemble a drowned forest. Here and there on the banks of the dams are occasional animal skeletons, and on one sandy strip, a mokoro (a canoe hollowed from a single tree trunk) lies beached, as if still waiting for its early hunter.

As part of the educational process at Kwena, guides not only accompany parties of visitors, but discuss all aspects of crocodiles during the daily feeding, which takes place at 16h00. With the kind of attention to detail which characterises Kwena Gardens, there is even a reed covered shelter overlooking the main dam to shelter guests from the late afternoon sun.

Towards the end of the walkway, there is also an open-air bank of seating overlooking a small fenced pond. Here, visitors have a chance to view one of the younger crocodiles at close quarters, to examine the creature and learn more about how they live.

All visitors are recommended to visit the charming little auditorium, a thatched roof rondavel with steep wide steps which form the semi-circular seating, where a 25 minute film on crocodiles is continuously shown during opening hours. These are from 10h00 to 13h00 Sundays to Thursdays, and from 10h00 to 23h00 Fridays and Saturdays.

The evenings are perfect for the night trails which guides take through the gardens, where the lighting has been carefully designed not to intrude on the true sense of evening, with its natural softness and quiet. The eyes of a crocodile glow ruby-red at night, and seem like jewels slowly moving across the rippling moonlit water.

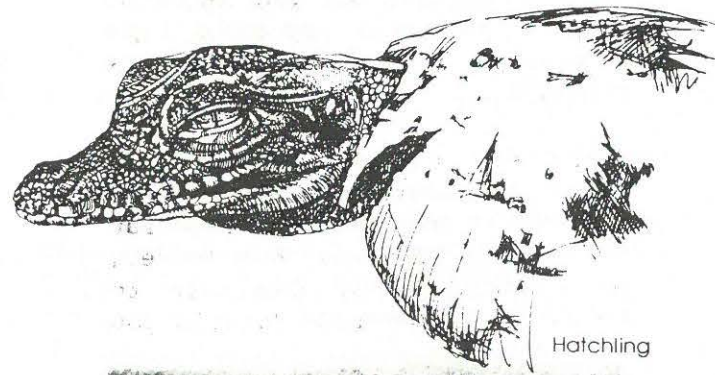
As Kwena Gardens has re-created a perfect mini ecosystem, it has quickly become the haunt of mammals, insects, a wide variety of birds, tortoises, frogs, fish and so on. In this way it is like a cameo zoo, where most of the inhabitants are free to come and go. The masked weavers have woven many homes on twigs dipping down towards the water, white-faced duck paddle among the crocodiles, and overhead soar the yellow-billed kites and eagles.

On one island in the large dam, the females seem to gather every morning for a gossip, often with gaping jaws held in long photographic poses as if enjoying all the attention:

After enjoying Kwena Gardens, the airy open-sided restaurant provides a grandstand view over the dams, and the huge curio shop has a tremendous range of souvenirs to delight people of every agegroup and nationality. These range from original paintings by artists such as Wallace Hulley and Kim Donaldson, to locally made pottery, carpets and carvings, T-shirts, bags and umbrellas and even locally made jams, pickles and preserves.

The pleasure of Kwena Gardens, however, will linger long in the memory in a completely natural way, for it is a unique treasure among the tourist attractions in Bophuthatswana.

Issued on behalf of :KWENA GARDENS
by: JEANNE BESTBIER PR
Editorial contact: Jeanne Bestbier (011) 646-4616
Client Contacts: Sarah Hill (011) 783-5202



EARLY WARNING



THE SIXTH SYMPOSIUM ON AFRICAN AMPHIBIA

(organized by the African Amphibian working group)

will be held during the week of APRIL 13, 1987

in the south Florida area, USA

under the sponsorship of the Department of Biology
University of Miami

Participation in the Symposium will be by invitation to scientists active in the study of African amphibians. Because you have been involved in one or more of the previous meetings of the group, this early notice is being sent to aid you in future planning. Please call it to the attention of appropriate colleagues and fill out the following form, if you or they wish additional information on the Symposium as it develops.

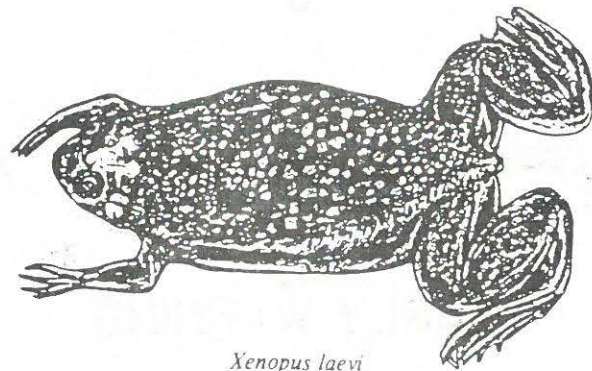
Name _____

Address _____

Telephone # _____

Specific area of interest _____

return to: **Jay M. Savage**
Department of Biology
University of Miami
Coral Gables, Florida 33124 USA

*Xenopus laevis*

AFRICAN CLAWED TOAD SURVEY

MARK P. SIMMONDS

Of the many species of amphibians introduced into the British Isles (see Lever, 1979) few, if any, would seem to have the potential for colonisation of the South African Clawed Toad *Xenopus laevis*.

Imported into many countries, once for use in pregnancy testing but more recently for schools and colleges, accidental and deliberate releases have led to the establishment of feral colonies. These exist in nine American States and on Ascension Isle (McCoid and Fritts, 1981) and in at least two areas of the British Isles. As there may well be others, a survey backed by the Nature Conservancy Council is in progress to determine the species' present distribution in the U.K.

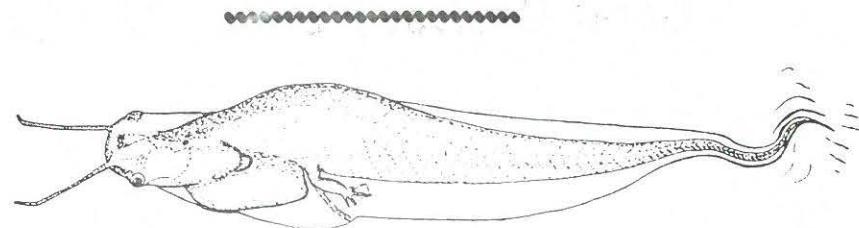
Xenopus laevis is naturally found in ponds, lakes and even cool mountain streams in its native home. Man made dams and ditches seem readily colonised but determining the animals' presence may be difficult. They are almost wholly aquatic, feeding and breeding underwater, and would appear to venture onto land only very rarely and then during heavy rain. They possess a sensitive lateral line system, also present in fish but usually lost after the larval stage in the anura, and this ensures that they are aware of any vibrations near by. Despite frequently needing to come to the surface to breathe they expose only the tips of their snouts and nostrils. Thus, even by the most patient observer they may be rarely seen and especially so where there are emergent or floating plants.

A further problem to the survey may be difficulty in distinguishing *Xenopus* from native species. During an on-going 4 year study of feral clawed toads in South Wales the animals have occasionally been glimpsed by local people and often not recognised as exotic. Nonetheless, in many ways they are distinctly different from *Bufo* and *Rana*. They do not sit upright and hop or run on land but lie on their ventral surfaces with limbs outstretched and push themselves forward with their large, very muscular, hind legs. They are well camouflaged, usually with a dark brown and spotted dorsal surface. Ventrally they are much lighter and the hind legs may be yellow. The head, eyes and forelimbs are comparatively small and the latter used only to scoop food into the

mouth. The large hind feet have veined membranes stretched between the toes; three of which bear small black claws. The filter-feeding tadpoles may prove useful in locating colonies. They can be visible in large shoals in clear water and the most obvious features of the largely transparent body are two tentacles, growing from the front of the head, two black eyes and a coiled, golden coloured, intestine. I would be most grateful for any reports of unusual "frogs or toads" in the British Isles and information may be sent to "Mark Simmonds, School of Biological Sciences, Queen Mary College, Mile End Road, London E1 4NS".

REFERENCES

- Lever, C. (1979). *The naturalised animals of the British Isles*. St. Albans: Granada Publishing Ltd. 600 pp.
- McCoid, M.J. and Fritts, T.H. (1960). Observations of feral populations of *Xenopus laevis* (Pipidae) in Southern California. *Bull. Southern California Acad. Sci.* 79(2), 82-86.



WORLD CONGRESS OF HERPETOLOGY

1. Choice of Congress Site and Date: Canterbury 1989.

Following two rounds of communications with the EC and the IHC, the criteria were established for selection of a congress venue and date, and the nominated sites were reduced from nearly 50 to a final 5 (Barcelona, Canterbury, Florence, Prague, and Vienna). In November 1984 I wrote to colleagues in each site to ask for official invitations. Vienna was not able to offer an invitation, but detailed proposals were submitted by the others. In March 1985 the EC voted and, by a very small margin, decided to hold the congress at the University of Kent at Canterbury, United Kingdom. The proposals were excellent ones, each having its own advantages, and the selection was therefore highly competitive.

Following the vote I visited Canterbury twice, once with Michael Lambert, member of the EC. Canterbury is one of the ancient cities of England, with its great cathedral and picturesque old town surrounded by a Norman fortress wall. The city is a leading tourist site and strategically located southeast of London yet just across the channel from France and the European continent. Location near London gives access to the world's first and fourth busiest international airports (Heathrow, Gatwick), thus providing many connections and competitive airfares. Canterbury is easily reached from London by regular train and coach service, and from the continent by numerous automobile ferries.

The university is separate, on a quiet hill overlooking the city. The facilities are excellent, both in terms of meeting rooms and eating/sleeping quarters. The University of Kent routinely hosts large congresses and the conference officials we met were quite knowledgeable. The local organizer will be Ian Swingland, a well-known reptile ecologist.

I am also happy to report that there is a widespread desire among the British herpetological community to provide active support for the Canterbury meeting. This will be essential to the success of the congress. In particular, the Earl of Cranbrook, a leading naturalist and currently President of The British Herpetological Society, has shown great interest. In the two meetings I held with him after the EC vote, Lord Cranbrook expressed a willingness to help with some of the major arrangements.

The meeting will be open to all persons who wish to attend. I anticipate that 600 to 800 people will attend, hopefully including many younger colleagues and students, and representatives from all countries in the world having herpetological research activity.

2. Format of the Congress.

Our first congress will set important precedents for later ones so we must plan it especially carefully. Since we are not bound by tradition we should try new approaches wherever they seem worth attempting. In designing our meeting, I think we need to be guided by certain goals. It seems obvious that one goal should be to maximize contact and exchange of information among participants. An international congress also ought to be the place to review herpetology as a world-wide discipline, to discuss its current status and also the most important prospects for future research.

3. Dates of Meeting.

September seems better than August, primarily because airfares are lower after the prime tourist season ends.

I believe that we should begin and end the congress on weekdays, in order to avoid the higher airfares and reduced schedules that exist on weekends. For example, we could arrive on a Tuesday, begin officially early on Wednesday, take a break on Saturday for an all-day group excursion, have a reduced meeting on Sunday, and finish with a final full day on Monday before departing Tuesday.

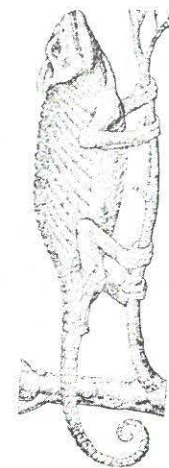
4. Main Program.

I propose that we have no oral contributed papers. This may seem radical, but I think there are compelling reasons. Oral papers can be replaced by posters, and oral sessions would be devoted to a series of plenary or keynote lectures plus several topical symposia. The main purpose of the congress ought to be an overview of our field (plenary lectures) and in-depth coverage of the most important current topics (symposia). To provide the time necessary to do this, contributed papers would have to be given as posters.

In many ways posters are the preferable way to communicate research information. They allow authors to give more detailed data; and interested persons can talk personally with the author and at length. This is more conducive to a productive exchange of information. Posters would be listed in the program as papers and authors would be present near their poster at the times announced in the program to talk with other persons.

The plenary lectures would be given on the first day of the congress. Everyone would be present for these lectures and thus provide a good opportunity to get acquainted with other participants during intermission periods. The 6 to 10 lectures would be 30- to 60-minute in-depth presentations of major topics, collectively covering the entire spectrum of herpetology. The lecturers would be the world's experts on their topics, chosen by the EC and IHC for their preeminence and speaking ability.

Two symposia would be held simultaneously on all other days of the meeting. Each symposium would last a single day, so that 6 to 8 topics could be covered during the meeting. Topics would be chosen from suggestions made by the EC and IHC. A list of the topics and organizers would be published so that potential participants could volunteer although final selection would be left to the symposium organizers in consultation with the EC.



Secretary-General
KRAIG ADLER
Cornell University
Section of Neurobiology and Behavior
Ithaca, New York 14853-0240 (U.S.A.)

Treasurer
MARINUS S. HOOGMOED
Rijksmuseum van Natuurlijke Historie
Postbus 9517
2300 RA Leiden (Netherlands)

Executive Committee
DONALD G. BROADLEY
The National Museum, Bulawayo (Zimbabwe)
ROBERT L. CARROLL
McGill University, Montreal (Canada)
GUSTAVO CASAS-ANDREU
Universidad Nacional Autónoma, México (Mexico)
JOSÉ M. CEI
Universidad Nacional, Córdoba (Argentina)
HAROLD G. COGGER
The Australian Museum, Sydney (Australia)
J. C. DANIEL
Bombay Natural History Society, Bombay (India)
ILYA S. DAREVSKY
Academy of Sciences, Leningrad (U.S.S.R.)
RAINER GÜNTHER
Zoologisches Museum, Berlin (German D.R.)
TOSHIRO KAWAMURA
Hiroshima University, Hiroshima (Japan)
MICHAEL R. K. LAMBERT
c/o Tropical Development and
Research Institute, London (U.K.)
BENEDETTO LANZA
Museo Zoologico de "La Specola," Firenze (Italy)
HUBERT SAINT GIRONS
Université Pierre et Marie Curie, Paris (France)
P. E. VANZOLINI
Universidade de São Paulo, São Paulo (Brazil)
DAVID B. WAKE
University of California, Berkeley (U.S.A.)
ZHAO ERMI
Academia Sinica, Chengdu (China)

International Herpetological Committee

JEAN-LOUIS AMIET (Cameroon)
E. N. ARNOLD (U.K.)
IBRAHIM BARAN (Turkey)
WILLY BEČAK (Brazil)
BEN D. BELL (New Zealand)
JAMES P. BOGART (Canada)
WOLFGANG BÖHME (F.R. Germany)
WILLIAM R. BRANCH (South Africa)
E. R. BRYGOO (France)
O. GY. DELY (Hungary)
ALAIN DUBOIS (France)
WILLIAM E. DUELLMAN (U.S.A.)
RICHARD ESTES (U.S.A.)
J. RAMÓN FORMAS (Chile)
ION E. FUHN (Romania)
HAJIME FUKADA (Japan)
CARL GANS (U.S.A.)
BRIAN GROOMBRIDGE (U.K.)
TIMOTHY R. HALLIDAY (U.K.)
HAROLD HEATWOLE (Australia)
RENÉ E. HONEGGER (Switzerland)
ROBERT F. INGER (U.S.A.)
M. S. KHAN (Pakistan)
KONRAD KLEMMER (F.R. Germany)
ABDEM R. LANCINI V. (Venezuela)
R. F. LAURENT (Argentina)
JEAN LESCURE (France)
MURRAY J. LITTLEJOHN (Australia)
SHOU-HSIAN MAO (China)
JUAN P. MARTÍNEZ RICA (Spain)
MARIAN MEYNARSKI (Poland)
GÖRAN NILSON (Sweden)
GEORGES PASTEUR (France)
ARMAND DE RICQLES (France)
OLIVIER RIEPPEL (Switzerland)
BORJA SANCHIZ (Spain)
JAY M. SAVAGE (U.S.A.)
YOSHIO SAWAI (Japan)
ZDENĚK V. ŠPINAR (Czechoslovakia)
N. N. SZCZERBAK (U.S.S.R.)
LEONID P. TATARINOV (U.S.S.R.)
FRANZ TIEDEMANN (Austria)
TING HAN-PO (China)
MICHAEL J. TYLER (Australia)
GARTH UNDERWOOD (U.K.)
YEHUDAH L. WERNER (Israel)
ROMULUS WHITAKER (India)
SUH-YUNG YANG (South Korea)
GEORGE R. ZUG (U.S.A.)
RICHARD G. ZWEIFEL (U.S.A.)

REPTILES

Breeding, behaviour, and veterinary aspects

Edited by
SIMON TOWNSON
and
KEITH LAWRENCE

A new book published by the British Herpetological Society.

Publication date : January 1985.

CONTENTS

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Breeding Colubrid Snakes, mainly <i>Lampropeltis</i> | Jon Coote |
| Snake Hibernation and Breeding: in and out of the zoo | Bern Tryon |
| The Captive Reproduction and Growth of the Yellow Anaconda (<i>Eunectes notaeus</i>) | Simon Townson |
| Thermoregulatory Behaviour of Reptiles in the Field and in Captivity | Roger Avery |
| The Management of Juvenile Telfair's Skinks <i>Leiopisma telairii</i> with Particular Reference to the Role of Ultra-Violet Light | Simon Tonge |
| Breeding Arrow Poison Frogs (<i>Dendrobates</i>) | Ernie Wagner and Frank Slavens |
| The Politics of Conservation: | |
| The Need for Rational Legislation | John Pickett |
| The Clinical Examination of Reptiles | Oliphant Jackson |
| The Significance of Bacterial Isolates from Reptiles | John Cooper |
| An Introduction to Haematology and Blood Chemistry of the Reptilia | Keith Lawrence |
| Laboratory Aspects of Reptilian Infections | Jeffery Needham |

To Order:

To BHS and BVZS Members £4.00 (if ordered in 1985)
Non-Members £6.00

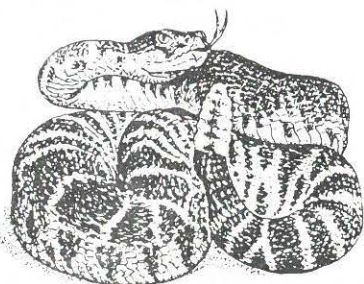
Postage and packing is an additional 75p worldwide (surface mail) or £2.80 (air mail).

International money orders and cheques should be made payable to:

The British Herpetological Society.

Orders should be addressed to:

Dr S. Townson, British Herpetological Society, c/o Zoological Society of London,
Regent's Park, London NW1 4RY, England.



BRITISH HERPETOLOGICAL SOCIETY

*c/o Zoological Society of London
Regent's Park, London NW1 4RY*

Correspondence, membership applications, subscription renewals and purchase orders for the British Journal of Herpetology should be sent to the above address.

The British Herpetological Society was founded in 1947 with the broad aim of catering for all aspects of interest in reptiles and amphibians. Initiated by a small number of enthusiastic and well-known naturalists, including the first President and author of the standard textbook on British herpetofauna Dr. Malcolm Smith, the Society expanded rapidly and today enjoys national status with many international connections.

Activities of members range over a number of interrelated fields. In many cases the prime interest is in maintaining, breeding and observing various species in captivity and the Society acts as a forum for the interchange of experiences in this area. Others are concerned with the observation of animals in the wild state. There are active sub-committees which help to cater for these various tastes, notably the Captive Breeding Committee and the Conservation Committee. The former encourages the development of effective breeding techniques for captive specimens, thus providing animals for observation and study in vivaria, and for conservation purposes, while simultaneously reducing the need to take fresh stock from wild and possibly declining populations. The Conservation Committee is actively engaged in field study, conservation management and political lobbying with a view to improving the status and future prospects for our native British species. It is the accepted authority on reptile and amphibian conservation in the U.K. and has an advisory role to the Nature Conservancy Council (the statutory Government body). There are also professional scientists within the ranks of the Society engaged in increasing our understanding of all aspects of reptile and amphibian biology.

Publications

The *Herpetological Journal*, published each June and December, contains papers or original research in herpetology.

British Herpetological Society Bulletin, published quarterly, contains notices, news items, articles and original papers on all aspects of herpetology.

The Care and Breeding of Captive Reptiles, a book containing a collection of papers on recent developments in breeding reptiles in captivity. This publication is not included in members' subscriptions, but is available to members at a price of £4.00 + £0.50 postage. Applications to purchase should be made to the Chairman of the Captive Breeding Committee.

Conserving Sea Turtles, by Nicholas Mrosovsky. A critical review of the current problems and controversies of sea turtle conservation. Price U.K. £5.00 + £0.75 postage (surface mail) or £2.80 (air mail), U.S.A. \$10.00 + \$1.00 postage (surface mail) or £5.00 (air mail).

Meetings

About ten meetings covering a broad sphere of interests are held each year.

Subscriptions

Ordinary Members £15. Junior Members £5. (Junior Members do not receive the *British Journal of Herpetology*). Institution rates £25 (U.S. \$40).

All subscriptions become due on the first day of January each year.

RATS! NO MORE SNAKES ON MENU

SEOUL, South Korea (AP) -- Restaurants will soon be banned from serving snake, dog meat or earthworm soups in downtown Seoul or near tourist hotels, the city government said.

City officials said the measure will take effect on Sept. 20 following hearings. It is aimed at sparing tourists from sights such as curled-up, hissing snakes in shop windows along downtown streets. Shop owners not complying with the ban might have water and electricity cut off.

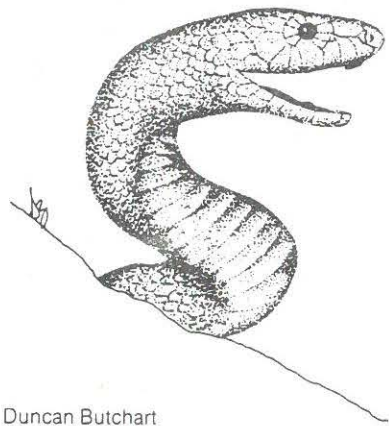
The frog is more intelligent than assumed

The frog has been incorrectly considered as stupid and simple in scientific circles. Biologist Dr Andreas Elefant, University of Constance, who tested the clawed toad (*Xenopus laevis*) for the first time in its natural environment, i.e. water, now credits it with learning ability and a long memory — equal to those of pigeons and rats.

Clawed toads instinctively snap at the centre of a swirling water wave as they frequently find tasty prey there. When conducting his investigations (funded by the German Research Association), Elefant succeeded, within a matter of days, in teaching the toads to react only to waves which came on at an oscillation frequency of 12 cps — and which the researcher had spliced with food. If the wave beat was increased, i.e. to 20 cps, the frogs suppressed their normal reflex action, because, at this wavelength, they were always punished with a slap on the head beforehand. The biologist points out that, remarkably enough, this ability to differentiate still persisted after a break of four weeks.

Moreover, the clawed toad was able to transfer what it had learnt in its lesson (in the sense of 'complex learning') to other situations. If it was suddenly rewarded in the case of wave oscillations where it had previously been punished whenever it reacted, it readjusted to the new conditions in half the original learning time. In the end, the toad understood considerably more quickly whenever the researcher changed the oscillations. In other words, if such research is to be purposive, animal intelligence should be explored in as realistic a situation as possible Dr Elefant states in an article in the journal *Naturwissenschaften*.

SPECTRUM 24₂



Duncan Butchart

NEW SUBSCRIPTION CATEGORY — HERP REVIEW ONLY

At SSAR's 1985 Annual Meeting, the Society approved the addition of a separate subscription to *Herpetological Review*. Recognizing that some members of the herpetological community may not find subscription to all of our publications equally useful, the SSAR Board established this category at a cost of \$10 per year. Individuals selecting this option will not be members of the Society nor will they receive the *Journal of Herpetology* or other publications offered with membership. However, subscribers are encouraged to register for and attend our annual meetings and may join the Society as regular members at any time.

A subscription form will appear in the next issue of *HR* and as part of the dues envelope which will be distributed in September. Please mention this new category to friends and colleagues whom you think will benefit from it.

HENRI SEIBERT, Department of Zoology
SSAR Treasurer Ohio University
Athens, Ohio 45701, U.S.A.

MAMBA

THE mid-morning orb bright-lit the trees
Warming the rocks and stilling the breeze.
Long past the chorus of pre-dawn calls
The hyrax now lined the wind-hewn walls.

Deep in the crevice — deep yet so near,
Death started moving, yet nothing showed fear.
Three metres of darkness coiled slowly away,
Slid silently upward to the brightness of day.

Movement was merging with leaf, stone and grass,
Dust-frosted motion, yet none saw it pass.
Young dassies scampered on rubber-soled feet
Away from their elders, bored with the heat.

A death wand was raised, fork-testing the air,
Eyes now jet-hard, knowing something was near.
Coffin head lowered, coils gathered tight,
A spring-loaded body, the timing was right.

Fur is no armour for needles of bone,
The dassie screamed once and then died alone.
Ironwoods sole witness to life that had passed,
A life lightly taken that another might last.

by Don Coutts

African Wildlife. Volume 39. No 6

DAD SAVES SON IN CROC FIGHT

By Don Jacobs, Harare.

South African businessman Mr Hugh Lloyd and his son, Jeremy, 13, underwent emergency surgery after being injured in a life and death battle with a crocodile in the Zambezi River.

Wildlife experts and game wardens have voiced immense admiration for the incredible courage of Mr Lloyd, from Sandton, Transvaal, who sacrificed an arm to wrest Jeremy from the jaws of the 4 m reptile.

SEIZED

A spokesman for Harare Parirenyatwa Hospital reported that the surgery had been a success, but both Mr Lloyd and Jeremy were too drowsy to receive visitors.

The crocodile attack occurred on Thursday when the Lloyds were on the last lap of a five-day canoe safari from Kariba to Mana Pools.

They were getting back into the canoes after a short rest when the shadow of death rose suddenly from the muddy waters.

The crocodile seized Jeremy by the elbow, but before it could drag him away an unidentified member of the safari party threw himself on top of the crocodile's lashing body.

Mr Lloyd then hurled himself against the crocodile's jaws and, using only his bare hands, forced them apart sufficiently for Jeremy to get his lacerated arm free.

But a second snap of the vicious teeth severed Mr Lloyd's arm

below the elbow.

The safari guide, Mr Simon Silcock, then dragged Mr Lloyd from the bloodstained water to the safety of the canoe before the crocodile could make another attack.

Sunday Times, May 4 1986

BROWN HOUSE SNAKE — A HEARTY APPETITE

I acquired a Brown House Snake *Boaedon fuligonsus* during the month of December 1984. Its length was approximately 25 cm and at the moment (August 1985) it is over 50 cm long.

During this period it has consumed 20 geckos *Hemidactylus mabouia*, 3 skinks *Mabuya striata* and 8 white mice *Mus musculus*.

On 18 April 1985 the snake fed on two geckos and one skink, one after the other. On 22 April 1985 it also fed on two mice simultaneously.

The above information does show that a juvenile snake does feed a lot, and grows rather fast.

Pritpal Singh Soorae, Box 44919, Nairobi.

NEW BOOK...NEW BOOK...NEW BOOK

The Evolution and Ecology of Mammal-Like Reptiles

From the most primitive reptile stage through transition to mammals, the development of mammal-like reptiles is examined by the contributors to this book. Available Aug./Sept.

352pp, 166 illustrations, - approx R115-00 (H/C), R65-50 (paper)

RUSSEL FRIEDMAN BOOKS (PTY) LTD

PO BOX 73

HALFWAY HOUSE 1685

SOUTH AFRICA

TELEPHONE (011) 702-2300/1

TELEX 4-28133

BOOK REVIEW

POISONOUS SNAKES OF EASTERN AFRICA AND THE TREATMENT OF THEIR BITES

By A. & J. MacKay, 1985. Nairobi: A. & J. MacKay.

This carefully produced little book, which will fit neatly into a backpack or suitcase, contains a wealth of information on a fascinating topic: poisonous snakes. The core of the book is an identification guide to 32 species of snakes from eastern Africa which could inflict a venomous bite on a human being. These range from the "mildly poisonous" montane viper to "extremely poisonous" species such as the puff adder and black mamba. Each species is illustrated with line drawings of the head from dorsal and lateral aspects and a small drawing of the general body shape. On the facing page is an outline of the diagnostic characteristics of the species based on size, colour and scale patterns, followed by brief notes on geographical distribution, habits and treatment for bites. The latter section can be very reassuring if the bite is from one of the less poisonous species, and for the highly poisonous species the reader is referred to a page where more detailed discussion can be found. The drawings, made from museum specimens, are technically impeccable, and some of them, for example those of the five species of bush vipers (genus *Atheris*), are beautiful.

Before packing the book away as a field guide, however, anyone who buys the book should study the text carefully. East Africa is home to some of the most highly poisonous snakes in the world, and a full envenomation from some

of them carries a high risk of death. Alex MacKay has drawn upon a lifetime of experience with East African snakes to present a step-by-step account of treatment procedures for snakebite. After a brief preamble, the introductory discussion begins with an account of the natural history of snakebite, a highly efficient prey capture system. This is followed by a general discussion of snake-human interactions and suggestions for first aid after a bite. Following the illustrations is a section on short cuts to identification which synthesizes a lot of detail. Because the treatment for a bite is dictated by the kind of snake involved, identification is very important. The next section of the book gives explicit information on the medical procedures for various kinds of bites, and the authors rightly emphasize that most of these procedures are appropriate only in a well-equipped hospital. Finally, for those people who spend a lot of time in the field, the book ends with an outline of the basic components of a snake bite kit.

Having worked for a few years on the ecology of non-poisonous snakes, I realize that many people will prefer to cling to their irrational ideas about snakes, but for those who wish to educate themselves this book is basic.

James J. Hebrard.

Eanhs Bulletin Nov/Dec 1985

SHE SUES OVER SNAKE

LINCOLN, Neb. (AP) -- A woman has sued the owners of a 6-foot boa constrictor, claiming she fainted when she saw the snake being carried outside a state fair exhibit and then needed medical treatment costing \$3,500.

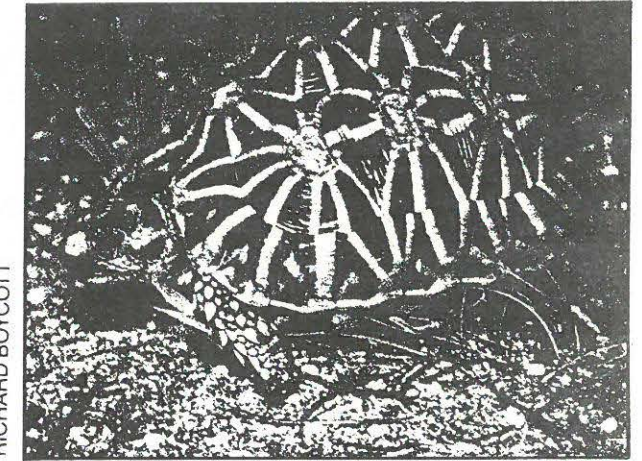
GEOMETRIC TORTOISE FUND

The Herpetological Association of Africa would like to thank the following donators for their contributions to the fund. The H.A.A. appreciate your assistance to help conserve the Geometric Tortoise.

| Donators | Amount |
|---------------------------------|---------|
| Dr A.G. Liebenberg | R 50-00 |
| Mr G. Alexander | R 10-00 |
| Miss P.R. Meakin | R 20-00 |
| Ms M. Rall | R 10-00 |
| Mr B.L. Washington | R 20-00 |
| Mr S. Spawls | R 10-00 |
| Ms T. Bodbiyl | R 15-00 |
| Mr C.J. van der Linde | R 10-00 |
| Mr G. Haagner | R 20-00 |
| L. Wessels, W. Haacke & friends | R 66-00 |
| A. Cockeran | R 5-00 |
| Dr. H. Berger-Dell'mour | R 50-00 |
| Mr M.C. Hart | R 20-00 |
| R. Ingle | R 20-00 |
| Mr J.L. Pabot | R 10-00 |
| Mr B. de Klerk | R 20-00 |
| Mr M.F. Bates | R 10-00 |
| K. Bismeyer | R 5-00 |
| Mr J.C. Vorster | R 10-00 |
| Miss S. Els | R 10-00 |
| Dr R.E. Swanepoel | R 10-00 |
| Mr P.J. Viljoen | R 10-00 |
| Mr J.J. Marais | R 50-00 |
| Mr B.W. Porter | R 10-00 |
| Dr R.S. Blaylock | R 20-00 |
| Mr A.J. van Schalkwyk | R 5-00 |
| Mr D.A. Newman | R 75-00 |
| Prof. J.C. Poynton | R100-00 |
| Mr J.H. van Wyk | R 20-00 |

I hope the other 90% of the H.A.A. membership will respond soon.

Editor



RICHARD BOYCOTT

Psammobates geometricus

Only one of southern Africa's twelve species of land tortoise is considered to be in any danger of extinction. This is the geometric tortoise of the south-west Cape, whose habitat has been almost completely destroyed by agriculture, urban sprawl, alien plants and industrial development. (See the Standard Bank advertisement on page 180 of *African Wildlife* Vol. 39 No. 5).

This attractive tortoise occurs in a private nature reserve near Wellington, as well as in three tiny "pocket-handkerchief" provincial nature reserves, but its future is by no means secure. It is imperative that more land be set aside for its conservation. After protracted negotiations, it now appears certain that another area of geometric tortoise habitat will now be conserved. The new reserve will be in the Strand/Gordon's Bay area and if it is of importance to the geometric tortoise, it is of crucial importance to several endangered plant species including the lovely *Ixia versicolor*. The Harmony Flats area between Strand and Gordon's Bay is considered by plant geographers to be a critically important relict habitat which has a very high priority for conservation.

The problem, as usual, is financial. The area must be adequately fenced to prevent theft of plants or tortoises, and fire-breaks of course are essential. The estimated costs at this stage are R30 000. So far, both the Southern African Nature Foundation and The Wildlife Society of Southern Africa have committed R5 000 each to the project. Another R20 000 is required.

African Wildlife, Volume 40, No. 1

STAMPS WANTED

I am looking for any Herpetological (frogs, salamanders, lizards, tortoises, snakes, etc.) stamps you might have lying around and might want to get rid of. If you have complete sets, these would also be welcome. I am prepared to swap your sets for local Herpetological sets such as the one on the back of Newsletter no. 7. Please send or write to: Rod Douglas, c/o National Museum, P.O. Box 266, Bloemfontein, 9300, South Africa.



RUSSEL FRIEDMAN BOOKS
(PTY) LIMITED
P O BOX 73
HALFWAY HOUSE 1685
SOUTH AFRICA

POSTAGE STAMPS AND FIRST DAY COVER

In May 1986 the Post Office will be producing a special postage stamp issue with the theme 'Nature conservation — endangered species'. Appropriately, one of the four different stamps will feature a natterjack toad (the others being pine martin, barn owl and Scottish wild cat). This stamp issue has been designated as the Europa issue for 1986 — what this means is that other European countries will also issue stamps with the same theme on the same date, so there could be other stamps produced of interest to herpetologists.

To coincide with the British stamp issue, the BHS is producing a first day cover, featuring herpetology, the BHS, and the special issue stamps. The first day cover will consist of a specially produced envelope, with a colour picture of a Lancashire sand lizard, and the special issue stamps franked with a unique hand stamp which will have a simple herpetological motif. Inside the envelope will be a card with a short description of the BHS and the urgent need for conservation of our herpetofauna.

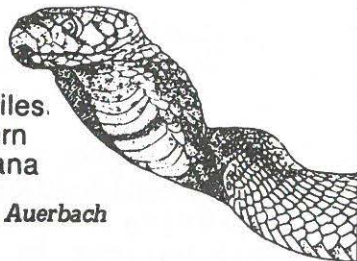
The costs of the first day covers will be as follows:

First day cover, with natterjack toad stamp £1.75 + 25p postage & packing
First day cover, with all four special issue stamps £3.75 + 25p postage & packing

The cost of the first day covers to BHS is nothing. However BHS will receive 50p for every one that is sold through the BHS, which could be a welcome sum in these days of ever rising costs. If you are not sure what a first day cover looks like, main post offices usually have a display showing the latest special stamp issues, often displayed on first day covers. First day covers are collectors' items, and often increase in value. So, if you are interested, watch out in the next Bulletin for more details.

NEW BOOK...NEW BOOK...NEW BOOK

THE REPTILES OF GABORONE



A guide to the Reptiles of the South-Eastern Hardveld of Botswana

R.D. Auerbach

A very useful and informative booklet describing and often illustrating all the reptiles occurring in south-east Botswana.

Do not be misled by the title, this book will be of use over a much broader area, including the NW Tvl.

150x210mm, paperback, 48pp, Available end May
Colour photographs R13-95

HERPETOLOGICAL READING

HERPETOLOGICA

Published by The Herpetologists' League, Inc.

(The Herpetologist's League, Inc)
(1041 New Hampshire Street,
Lawrence, Kansas 66044).

| | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------|
| Volume 41 | DECEMBER 1985 | Number 4 |
| Demography of Green Snakes (<i>Ophedrys aestivus</i>) | MICHAEL V. PLUMMER | 373 |
| Male Mate Choice for Large, Fecund Females in the Red-spotted Newt, <i>Notophthalmus viridescens</i> : How is Size Assessed? | PAUL A. VERRELL | 382 |
| Reproductive Dynamics of a Population of Smooth Newts, <i>Triturus vulgaris</i> , in Southern England | PAUL VERRELL AND TIM HALLIDAY | 386 |
| Reproductive Behavior and Male Mating Success in Two Species of Glass Frogs (Centrolenidae) | SUSAN K. JACOBSON | 396 |
| Call Rate and Aerobic Capacity in Woodhouse's Toad (<i>Bufo woodhousei</i>) | BRIAN K. SULLIVAN AND GLENN E. WALSBERG | 404 |
| Reproductive Biology of the Australian Lizard <i>Ctenotus taeniolatus</i> | JANET A. TAYLOR | 408 |
| The Relationship between Reproduction and Lipid Cycling in the Skink <i>Eumeces laticeps</i> with Comments on Brooding Ecology | LAURIE J. VITT AND WILLIAM E. COOPER, JR. | 419 |
| Sexual Cycle of the Male Freshwater Turtle <i>Trionyx gangeticus</i> (Cuvier) | R. J. RAO AND F. U. SHAAD | 433 |
| Energetics of Galapagos Land Iguanas: A Comparison of Two Island Populations | HOWARD L. SNELL AND KEITH A. CHRISTIAN | 437 |
| A New Species of <i>Eleutherodactylus</i> from Western Panama (Amphibia: Leptodactylidae) | JOHN D. LYNCH | 443 |
| A New <i>Eleutherodactylus</i> from the Amazonian Slopes of the Ecuadorian Andes | GLENN FLORES | 447 |
| Evolutionary Aspects of Isozyme Patterns, Number of Loci, and Tissue-Specific Gene Expression in the Prairie Rattlesnake, <i>Crotalus viridis viridis</i> | ROBERT W. MURPHY AND C. BEN CRABTREE | 451 |
| Volume 42 | MARCH 1986 | Number 1 |
| SMITH, HOBART M.—Chapman Grant, <i>Herpetologica</i> , and The Herpetologists' League | | 1 |
| GANS, CARL—Locomotion of Limbless Vertebrates: Pattern and Evolution (<i>Distinguished Herpetologist Lecture</i>) | | 33 |
| FRAZER, NAT B.—Survival from Egg to Adulthood in a Declining Population of Loggerhead Turtles, <i>Caretta caretta</i> | | 47 |
| MANAGEMENT OF THE DESERT TORTOISE IN CALIFORNIA: Proceedings of a Workshop | | |
| TURNER, FREDERICK B.—Foreword | | 56 |
| PEARSON, DANIEL C.—The Desert Tortoise and Energy Development in Southeastern California | | 58 |
| FOREMAN, LARRY D., JOHN M. BRODE, ROBERT HAUSSLER, AND KARLA KRAMER—The Responsibilities of Federal and State Agencies for Protection of the Desert Tortoise in California | | 59 |
| BERRY, KRISTIN H.—Desert Tortoise (<i>Gopherus agassizii</i>) Research in California, 1976-1985 | | 62 |
| SPOTILA, JAMES R. AND EDWARD A. STANDORA—Sex Determination in the Desert Tortoise: A Conservative Management Strategy is Needed | | 67 |
| NAGY, KENNETH A. AND PHILIP A. MEDICA—Physiological Ecology of Desert Tortoises in Southern Nevada | | 73 |
| TURNER, FREDERICK B., PAGE HAYDEN, BETTY L. BURGE, AND JAN B. ROBERSON—Egg Production by the Desert Tortoise (<i>Gopherus agassizii</i>) in California | | 93 |
| GIBBONS, J. WHITFIELD—Movement Patterns among Turtle Populations: Applicability to Management of the Desert Tortoise | | 104 |
| BERRY, KRISTIN H.—Desert Tortoise (<i>Gopherus agassizii</i>) Relocation: Implications of Social Behavior and Movements | | 113 |
| DIEMER, JOAN E.—The Ecology and Management of the Gopher Tortoise in the South-eastern United States | | 125 |
| SCHAMBERGER, MELVIN L. AND FREDERICK B. TURNER—The Application of Habitat Modeling to the Desert Tortoise (<i>Gopherus agassizii</i>) | | 134 |

THE HERPETOLOGICAL JOURNAL

Volume 1, Number 1 December 1985

(British Herpetological Society)
c/o Zoological Society of London,
Regent's Park, London.

CONTENTS

| | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----|
| Full Papers | | |
| Palmate newts (<i>Triturus helveticus</i>) on the Island of Rhum | R. V. COLLIER | 1 |
| A simple funnel trap for studying newt populations and an evaluation of trap behaviour in smooth and palmate newts <i>Triturus vulgaris</i> and <i>T. helveticus</i> | R. A. GRIFFITHS | 5 |
| Diel patterns of movement and aggregation in tadpoles of the common frog, <i>Rana temporaria</i> | R. A. GRIFFITHS | 10 |
| Salt tolerances of natterjack toad (<i>Bufo calamita</i>) eggs and larvae from coastal and inland populations in Britain | T. J. C. BEEBEE | 14 |
| An identification key to the geckos of the Seychelles, with brief notes on their distribution | A. S. GARDNER | 17 |
| Size increase in the common toad <i>Bufo Bufo</i> from Cheshire | C. P. WHEATER | 20 |
| <i>Agama gracilimembris</i> chabanaud, 1918 (Reptilia: Sauria: Agamidae) in Nigeria | M. E. GARTSHORE | 23 |
| Herpetofauna of the late pleistocene fissures near Ightham, Kent | J. A. HOLMAN | 26 |
| Seasonal changes in metabolism of the lizard <i>Lacerta vivipara</i> | M. K. AL-SADOON & I. F. SPELLERBERG | 32 |
| Short Notes | | |
| Optimal temperature for inner-ear performance agrees with field body temperature in <i>Phelsuma</i> (Reptilia: Gekkoninae) | Y. L. WERNER | 36 |
| The calcium cycle of female day-geckos (<i>Phelsuma</i>) | A. S. GARDNER | 37 |
| Getting into a pickle with preserved specimens: formalin and distortion in the smooth newt, <i>Triturus vulgaris</i> | P. A. VERRELL | 39 |

South African Journal of Zoology

21(2): 149-152 (April 1986).
(P.O. Box 1758, Pretoria, R.S.A.)

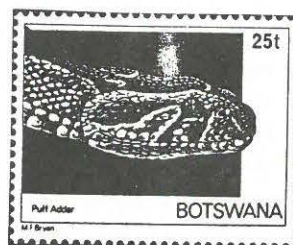
Hyperolius argus (Anura) in Natal: taxonomy, biogeography and conservation
J.C. Poynton 149

ANNALS OF THE TRANSVAAL MUSEUM

Volume 34 April 1986 Part 5

A NEW SUBSPECIES OF *AMBLYODIPSAS MICROPHTHALMA* (BIANCONI, 1850) (SERPENTES: COLUBRIDAE) FROM THE TRANSVAAL

N. H. G. JACOBSEN



PYTHONS AT \$50 PER METRE

Inflation is no protector of endangered species in Malaysia. A survey by Friends of the Earth, Sahabat Alam Malaysia (SAM), shows that although black market prices for exotic animals are rising, sales are still booming.

Many pet shops, according to SAM, not only openly sell protected birds and animals, but also provide restaurants with prestige exotic food. "Monkey brains and meat, snake soup, tortoise and turtle soup, monitor lizard meat or the meats of flying foxes, flying squirrels, bats and deer can be obtained on request," says SAM.

SAM's exotic food menu

| | Price | |
|------------------|-----------|-----------|
| | 1979 | 1982 |
| Monkey | \$25 & up | \$35 & up |
| Flying squirrel | \$13 | \$20 |
| Python | \$11/m | \$50/m |
| Owl | \$15 | \$15 |
| Porcupine | \$ 7 | \$10 |
| Malayan squirrel | \$10 | \$10 |
| Egret | \$ 4 | \$ 5 |
| Quail | \$ 3 | \$ 5 |
| Heron | \$ 4 | \$ 7 |

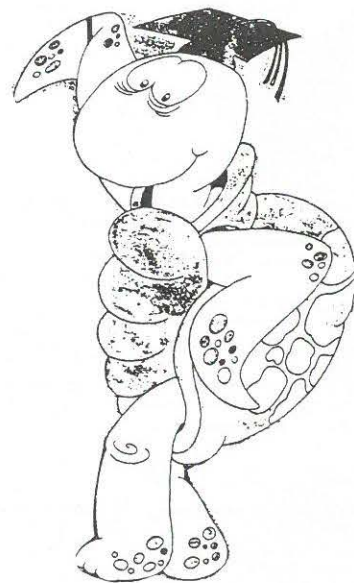
All species have been hit by inflation. In 1979 python cost \$11 per metre; today a metre of python will set you back at least \$50. Owls have held steady at about \$15 a piece, but herons, although still a bargain at \$7 each, have gone up from \$4 in 1979. Nonetheless, says SAM, "trade in wildlife is as active as ever".

The destruction of rain forests is the biggest threat to Malaysian wildlife. Malaysia has forest reserves, but between 1971 and 1978 these so-called protected areas accounted for more than a quarter of all deforestation. More than 20 Malaysian animals, as well as a number of birds, are, says the International Union for the Conservation of Nature (IUCN), in danger of extinction. Top of the list is the Sumatran rhinoceros. Only 40 are left. There are also fewer than 500 tigers left in peninsular Malaysia.

INFORMATION REQUESTED

Dale T. Bertram M.D.
One Virginia Terrace
Madison 53705
Wisconsin U.S.A.

Dale would like to correspond with anyone who has a particular interest in Hylid and Rhacophorid frogs. He is also looking for information on the availability of Hyperolius argentovittis.



NEW MEMBERS

Mr C. Day, 16 Neptune Street,
Atlasville Boksburg 1460, RSA.

Mr H. Grobler, P.O. Box 55,
Kammanjab, Namibia.

Mr R.A. Gentry, 121 Westminster
Drive, Mount Laurel, NJ 08054,
USA.

Mr K. Gibson, 63 Stableford Road,
Bluff, Durban 4052, RSA.

Harman Science Library, Kaplan
Building, Givath Ram, University
of Jerusalem, Jerusalem 91-904,
Israel.

Miss P.R. Meakin, P.O. Box 1901,
Brentwood Park 1505, RSA.

Mr W. Nesser, 94 Argyle Street,
Lynwood Glen 0081, Pretoria, RSA.

Mr J.L. Pabot, 1259 Arcadia
Street, Hatfield 0083, Pretoria,
RSA.

Ms R.A. Schroeder, 9 First
Avenue, Melville 2092, RSA.

Mr C. Smith, 6 Protea Place,
Westville 3630, RSA.

Mev. R. Smit, Posbus 990,
Phalaborwa 1390, RSA.

Mr K. Seeler, Am Anger 1, 8966
Altusried, West Germany.

Mr H.J. Vogeley, Henkel Stasse
16, 3500 Kassel, West Germany.

RUSSEL FRIEDMAN BOOK ENTERPRISES (PTY) LTD
PUBLISHING — DISTRIBUTION — DESIGN — MAIL ORDER —
P.O. BOX 73 HALFWAY HOUSE 1685 SOUTH AFRICA TEL (011) 702 2300 & 1 TELEX 4-28133 SA

IMPORTANT NOTE - TO ALL MEMBERS

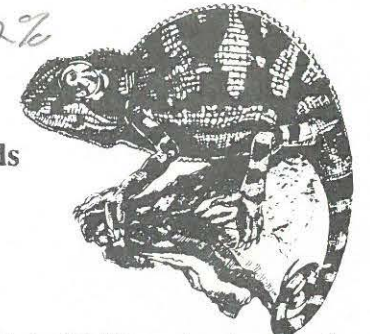
Please keep us informed of your change of address. We are having mail returned "address unknown". For example our very first letter to one of our new members, Ms R.A. Schroeder, was returned "address unknown".

If you know any of the following members, please ask them to write, giving details of their new address and which H.A.A. publications they are missing:

Mr B. Holton, Namibia
Ms R.A. Schroeder, Melville, RSA
Mr B. Dyer, Cape Town, RSA
Mr C.W. Reid, Durban, RSA
Mr S.P. Peltz, London, England
Mr J. Dwayne Atwell, Patagonia, USA

Rod Douglas

R50 + 12%
**Ecology and
Natural History
of Desert Lizards**
Analyses of the
Ecological Niche
and Community
Structure
Eric R. Pianka



Eric Pianka offers a synthesis of his life's work on the comparative ecology of lizard assemblages in the Great Basin, Mojave, and Sonoran deserts of western North America, the Kalahari semi-desert of southern Africa, and the Great Victoria desert of Western Australia. Prior to his efforts, lizard ecology in these areas was virtually uninvestigated. In Australia he discovered half a dozen new species, as well as the richest lizard faunas known. Perhaps the single most important aspect of his research is the fact that he has described three comparable but independently evolved ecological systems. Study of such widely spaced systems by a single researcher using identical field techniques provides unique material for understanding questions of community structure and ecological convergence.

About 288 pages. 4 pages of color illus., 12 line drawings, 64 figs.

Available August / Sept. - Approx. R150-00 (H/C) R65-50 (paper)

1986